

- NOTES**
- AS-BUILT SURVEY PROVIDED BY ARNOLD W. CARSON PLS., P.C.
 - CONTRACTOR SHALL OVERLAY EXISTING CONCRETE DRIVE ISLES AND PARKING AREAS THAT ARE TO REMAIN WITH 1" OF SF95A ASPHALT. PROPOSED GRADES ARE BASED ON A 1" ASPHALT OVERLAY ON TOP OF EXISTING GRADES.
 - CONTRACTOR & DEVELOPER SHALL CONTACT PERVIOUS CONCRETE MANUFACTURER FOR PROPER INSTALLATION OF PERVIOUS CONCRETE. PERVIOUS CONCRETE THICKNESS SHOWN PER OWNER.
 - CONTRACTOR SHALL ENSURE THE PATH FROM EACH HANDICAP PARKING SPACE TO THE UNIT ASSOCIATED WITH THE RESPECTIVE SPACE MEETS ADA SPECIFICATIONS.
 - MALPASS ENGINEERING & SURVEYING, P.C. IS NOT RESPONSIBLE FOR ANY WATER OR SEWER LINE LOCATIONS OR SEPARATIONS.
 - MALPASS ENGINEERING & SURVEYING, P.C. IS NOT RESPONSIBLE FOR WALL, FENCE, OR GATE DESIGN.
 - OLD BOILER ROOM IN COMMUNITY BUILDING SHALL BE UPFITTED TO HOUSE BICYCLE & SCOTTER STORAGE (MINIMUM OF 35 SPACES).
 - PARKING SPACES SHALL BE NO CLOSER THAN 15' TO BUILDING ENTRY (EXCLUDING VEHICLE OVERHANG).
 - SANITARY SEWER MANHOLE LOCATIONS WERE TAKEN FROM AN AUGUST 10, 1939 PLAN TITLED "USHA PROJECT NO. NC 1-1R" & ARE APPROXIMATE, UNLESS NOTED AS "AS-BUILT". ALL SANITARY SEWER INVERTS, EXCEPT RUN THRU SITE ALONG MARTIN ST., & SIZES WERE TAKEN FROM ABOVE REFERENCED PLAN AND ARE APPROXIMATE. SEWER SERVICE LOCATIONS & SIZES WERE TAKEN FROM ABOVE REFERENCED PLAN & ARE APPROXIMATE. SANITARY SEWER LOCATIONS, INVERTS, & SIZES SHALL BE FIELD VERIFIED AS NECESSARY.
 - NO LAND DISTURBANCE INCLUDING TREE REMOVAL IS TO OCCUR OUTSIDE THE LIMITS OF DISTURBANCE SHOWN ON THE PLANS.
 - PROTECTIVE FENCING IS TO BE MAINTAINED THROUGHOUT THE DURATION OF THE PROJECT.
 - LAND CLEARING AND CONSTRUCTION CONTRACTORS SHALL RECEIVE ADEQUATE INSTRUCTION ON TREE PROTECTION REQUIREMENTS AND METHODS.
 - IF AN IRRIGATION SYSTEM IS INSTALLED IT SHALL BE EQUIPPED WITH A RAIN SENSOR.
 - INTERIOR LANDSCAPING ISLANDS ADJACENT TO CURB CUTS SHALL BE DEPRESSED TO RECEIVE FLOW FROM PARKING LOT.
 - ALL GATES USED FOR VEHICULAR INGRESS AND/OR EGRESS SHALL BE SIREN ACTIVATED.
 - REPLACE SANITARY SEWER & WATER MAIN WITH D.I.P. JO' ON EITHER SIDE OF STORM DRAIN CROSSING.
 - DOWNSPOUT PIPING SHOWN ON PLAN IS FOR INFORMATIONAL PURPOSES ONLY. DOWNSPOUT PIPING (SIZE, LOCATION, ETC) SHALL BE DESIGNED BY OTHERS, HOWEVER, DOWNSPOUTS SHALL DISCHARGE INTO INFILTRATION BASINS, INFILTRATION TRENCHES, AND PERVIOUS CONCRETE SECTIONS AS SHOWN ON PLAN. THE INVERT OF DOWNSPOUT PIPING THAT DISCHARGES INTO PERVIOUS CONCRETE SHALL MATCH THE TOP OF PERVIOUS CONCRETE ELEVATION AT THE DISCHARGE POINT.
 - THE PROPOSED LIMITS OF DISTURBANCE AREA SHALL INCLUDE ALL THE AREA WITHIN THE LIMITS OF DISTURBANCE LINE EXCEPT FOR THE BUILDING FOOTPRINTS AND SIDERS FOR BUILDINGS #1-22 & 25.
 - EXISTING STORM DRAIN PIPES SHOWN ON PLAN THAT WERE NOT SURVEYED (SEE LEGEND FOR LINE TYPES) WERE TAKEN FROM AN AUGUST 10, 1939 PLAN TITLED "USHA PROJECT NO. NC 1-1R" WITH A REVISION DATE OF MAY 1, 1961. LOCATION OF THESE STORM DRAIN PIPES & INVERTS ARE APPROXIMATE AND PIPE SIZES ARE BASED ON THE ABOVE REFERENCED PLAN.
 - LOCATION OF TREE PROTECTION FENCING SHOWN ON PLAN IS APPROXIMATE. TREE PROTECTION FENCING SHALL BE INSTALLED IN ACCORDANCE WITH DETAIL SD 15-08 ON SHEET 24, EXCEPT WHERE SITE IMPROVEMENTS ARE TO OCCUR AS SHOWN ON PLAN.
 - SILT FENCE SHALL BE INSTALLED AS SHOWN ON THE PLAN & ANYWHERE ELSE SEDIMENT HAS THE ABILITY TO LEAVE THE SITE.
 - HANDICAP RAMPS SHALL BE PROVIDED AT ALL PARKING AREAS TO SIDEWALK CONNECTIONS INTERNAL TO THE SITE.
 - ANY PARKING SPACE LESS THAN 8'5" IN WIDTH BY 18' IN LENGTH SHALL BE SIGNED ALERTING DRIVERS TO THE LIMITED SIZE.
 - CONSTRUCTION ENTRANCE AT GREENFIELD STREET DRIVEWAY SHALL BE INSTALLED ONLY IF ASPHALT IS REMOVED AND DRIVEWAY IS USED AS AN ENTRANCE.
 - ROOF LEADER PIPING SHALL HAVE A CLEANOUT AT EACH BEND.
 - PROPOSED SIDEWALK ADJACENT TO PARKING SPACES (EXCEPT SPACES #1-8, 211-213, 295-296, & 303-304) SHALL BE TURNDOWN SIDEWALK.
 - LANDSCAPE ISLANDS WITH CURB CUTS SHALL BE GRASS & DEPRESSED.
 - DISTURBED AREAS WITHIN RIGHT-OF-WAY OF GREENFIELD ST. & SOUTH FRONT ST. SHALL BE IMMEDIATELY SEEDED & STABILIZED WITH MULCH PRIOR TO ANY RAINFALL EVENT.

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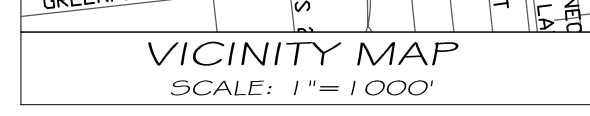
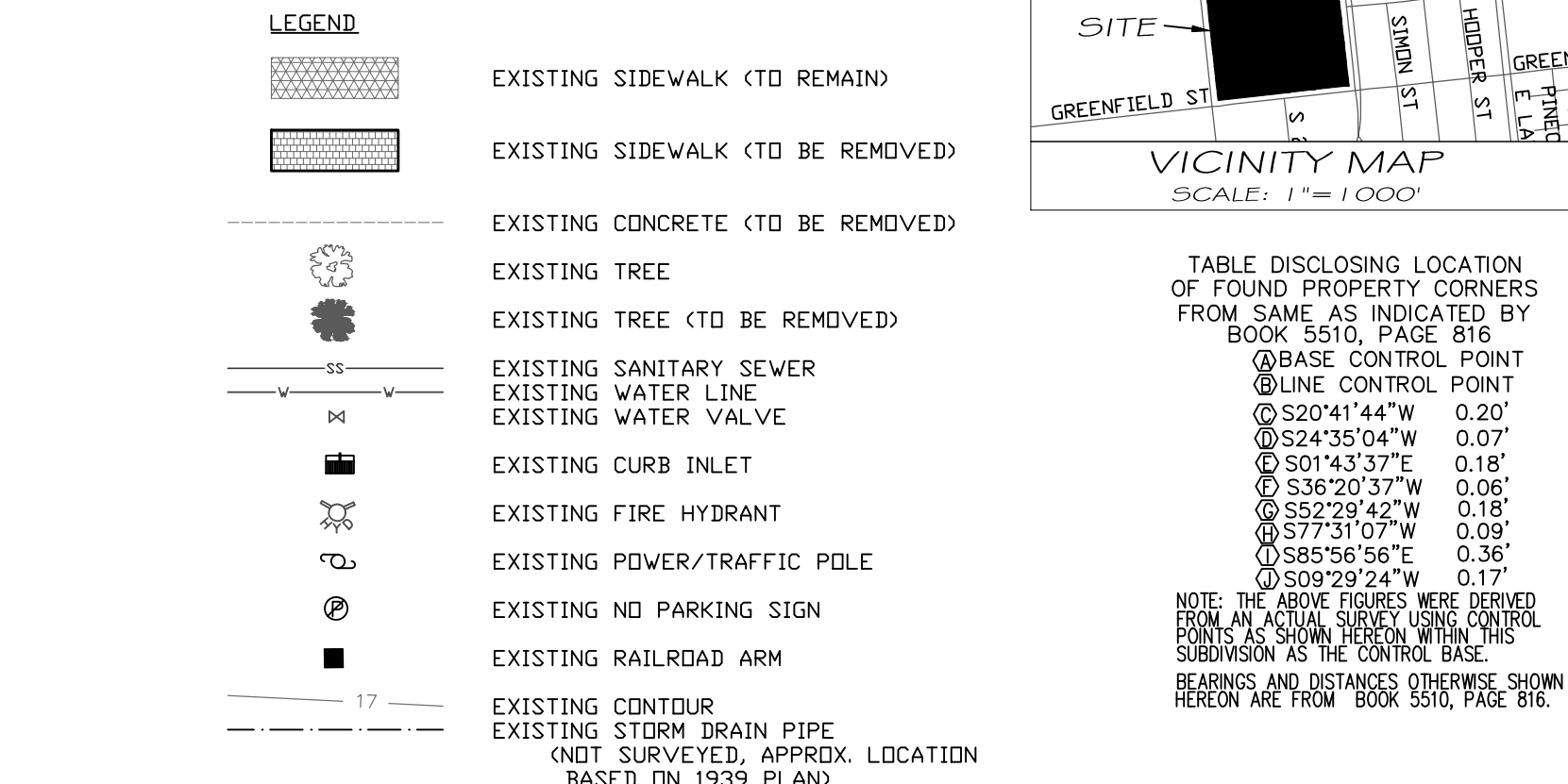


TABLE DISCLOSED LOCATION OF FOUND PROPERTY CORNERS FROM SAME AS INDICATED BY BOOK 5510, PAGE 818

POINT	COORDINATES
①	520°41'44" W 0.20'
②	524°35'04" W 0.07'
③	501°43'37" W 0.18'
④	536°20'37" W 0.06'
⑤	552°29'42" W 0.18'
⑥	577°31'07" W 0.09'
⑦	585°56'56" E 0.36'
⑧	509°29'24" W 0.17'

NOTE: THE ABOVE FIGURES WERE DERIVED FROM AN AS-BUILT SURVEY USING CONTROL POINTS SHOWN HEREIN USING THIS SUBDIVISION AS THE CONTROL BASE. BEARINGS AND DISTANCES OTHERWISE SHOWN HEREIN ARE FROM BOOK 5510.

- SOILS INVENTORY NOTES**
- SOILS ON SITE PER THE NEW HANOVER COUNTY SOIL SURVEY ARE B_h (BAYMEADE) AND U_r (URBAN LAND).
 - THIS PROPERTY IS NOT IMPACTED BY ANY AEC PER LAND MANAGEMENT GROUP, INC.
 - THERE ARE NO CONSERVATION OVERLAY RESOURCES AFFECTING THIS PROPERTY PER LAND MANAGEMENT GROUP, INC.
 - THIS SITE IS LOCATED WITHIN THE WILMINGTON NATIONAL REGISTER DISTRICT PER LAND MANAGEMENT GROUP, INC.
 - NO INDIVIDUAL CEMETERIES, BURIAL SITES, OR BURIAL GROUNDS WERE IDENTIFIED ON THIS SITE PER LAND MANAGEMENT GROUP, INC.
 - THERE ARE NO SIGNIFICANT FOREST RESOURCES OR ASSOCIATED FOREST HABITAT REMAINING ON THIS SITE PER LAND MANAGEMENT GROUP, INC.
 - THERE ARE NO ACDE REGULATED 404 WETLANDS OR SECTION 10 WATERS ON THIS SITE PER LAND MANAGEMENT GROUP, INC.
 - THERE IS NO EVIDENCE OF ENDANGERED SPECIES OR HABITAT ISSUES ON THIS SITE PER LAND MANAGEMENT GROUP, INC.
 - THIS TRACT IS WITHIN A FLOOD AREA- ZONE "X" & AE 1.9 ACCORDING TO FEMA FLOOD INSURANCE RATE MAP, COMMUNITY-PANEL NUMBER 372031700 K DATE 6/2/06 (INFORMATION PROVIDED BY ARNOLD W. CARSON PLS., P.C.)
 - RESEARCH BY THE CITY OF WILMINGTON TRANSPORTATION PLANNING WEBSITE RESULTED IN NO FINDINGS OF PROPOSED THROUGHFARES, BIKE ROUTES, PEDESTRIAN SIDEWALKS OR TRAILS, OR TRANSIT FACILITIES AFFECTING THIS PROJECT.
 - THE TRACT IS WITHIN THE CAPE FEAR RIVER BASIN & DRAINS TO GREENFIELD CREEK (CS/CW).
 - CAMA LAND USE CLASSIFICATION PER THE 2006 CAMA PLAN UPDATE LAND CLASSIFICATION MAP IS URBAN (495,553.24 SF = 11.376 ACRES) & CONSERVATION AREA (74,677.67 SF = 1.714 ACRES).

SITE DATA (EXISTING CONDITIONS PRIOR TO REDEVELOPMENT)

PROPERTY OWNER: SOUTH FRONT LLC
 PROJECT ADDRESS: 1400 S. 2ND ST.
 PIN NUMBER: 805413-035-002-000
 ZONING DISTRICT: MF-1H
 FLOOD AREA: ZONE "X" & AE 1.9 ACCORDING TO FEMA FLOOD INSURANCE RATE MAP, COMMUNITY-PANEL NUMBER 372031700 K DATE 6/2/06 (INFORMATION PROVIDED BY ARNOLD W. CARSON PLS., P.C.)
 BUILDING SETBACKS: REQUIRED: FRONT-30', REAR-25', INTERIOR SIDE-20', CORNER LOT SIDE-30'
 BUILDING SETBACKS: EXISTING (MIN): FRONT-19.97', REAR-18.71', INTERIOR SIDE-18.74', CORNER LOT SIDE-19.95'
 TOTAL SITE AREA: 570,230.91 SF = 13.09 ACRES
 EXISTING BUILDING AREA: 103,444.75 SF = 2.37 ACRES
 EXISTING BUILDING LOT COVERAGE: 103,444.75 / 570,230.91 * 100% = 18.14%
 EXISTING NUMBER OF UNITS: 261 (1 BEDROOM-133 UNITS, 2 BEDROOM-96 UNITS, 3 BEDROOM-32 UNITS)
 NUMBER OF EXISTING BUILDINGS: RESIDENTIAL-24 (94,437.06 SF), NON-RESIDENTIAL-1 (9,007.69 SF)
 NUMBER OF EXISTING BUILDINGS TO REMAIN: RESIDENTIAL-22 (80,477.50 SF), NON-RESIDENTIAL-1 (9,007.69 SF)
 BUILDING TYPE: EXISTING

BUILDING	SQUARE FOOTAGE	NUMBER OF EXISTING UNITS	NUMBER OF BEDROOMS (1/2/3)	USE (RESIDENTIAL/NON-RESIDENTIAL)	KEEP/REMOVE	BUILDING ADDRESS
1	3,883.30	10	4/3/3	RESIDENTIAL	KEEP	1402-1 S. 2ND ST.
2	3,591.65	10	4/6/0	RESIDENTIAL	KEEP	1402-2 S. 2ND ST.
3	3,577.22	10	4/6/0	RESIDENTIAL	KEEP	1402-3 S. 2ND ST.
4	3,907.51	10	4/3/3	RESIDENTIAL	KEEP	1402-4 S. 2ND ST.
5	2,792.76	8	4/4/0	RESIDENTIAL	KEEP	1402-5 S. 2ND ST.
6	3,907.93	10	4/3/3	RESIDENTIAL	KEEP	1402-6 S. 2ND ST.
7	3,578.27	10	4/6/0	RESIDENTIAL	KEEP	1402-7 S. 2ND ST.
8	3,581.33	10	4/6/0	RESIDENTIAL	KEEP	1402-8 S. 2ND ST.
9	3,898.99	10	4/3/3	RESIDENTIAL	KEEP	1402-9 S. 2ND ST.
10	2,790.11	8	4/4/0	RESIDENTIAL	KEEP	1402-10 S. 2ND ST.
11	2,789.50	8	4/4/0	RESIDENTIAL	KEEP	1402-11 S. 2ND ST.
12	2,787.83	8	4/4/0	RESIDENTIAL	KEEP	1402-12 S. 2ND ST.
13	3,891.30	10	4/3/3	RESIDENTIAL	KEEP	1402-13 S. 2ND ST.
14	3,661.98	10	4/3/3	RESIDENTIAL	KEEP	1402-14 S. 2ND ST.
15	3,673.34	10	4/5/1	RESIDENTIAL	KEEP	1402-15 S. 2ND ST.
16	3,886.97	10	4/3/3	RESIDENTIAL	KEEP	1402-16 S. 2ND ST.
17	4,550.24	12	4/6/2	RESIDENTIAL	KEEP	1402-17 S. 2ND ST.
18	3,895.71	12	4/6/2	RESIDENTIAL	KEEP	1402-18 S. 2ND ST.
19	3,895.71	10	4/3/3	RESIDENTIAL	KEEP	1402-19 S. 2ND ST.
20	3,691.50	10	4/5/1	RESIDENTIAL	KEEP	1402-20 S. 2ND ST.
21	3,652.35	10	4/5/1	RESIDENTIAL	KEEP	1402-21 S. 2ND ST.
22	3,914.72	10	4/3/3	RESIDENTIAL	KEEP	1402-22 S. 2ND ST.
23	6,314.94	25	25/0/0	RESIDENTIAL	REMOVE	1402-23 S. 2ND ST.
24	7,644.62	20	20/0/0	RESIDENTIAL	REMOVE	1402-24 S. 2ND ST.
25	9,007.69	-	-	NON-RESIDENTIAL	KEEP	1400 S. 2ND ST.
TOTAL	103,444.75	261	133/96/32			

NUMBER OF STORIES & SQUARE FEET PER FLOOR: 2 STORIES (SEE ABOVE CHART); SAME FOR BOTH STORIES/ TOTAL AMOUNT & PERCENT OF IMPERVIOUS SURFACE AREAS:

BEFORE DEVELOPMENT	AREA (CSF)	% OF SITE
BUILDINGS	103,444.75	18.14
BUILDING STORIES	13,769.99	2.41
PARKING & DRIVE ISLES	84,212.36	14.77
SIDEWALKS	62,388.64	10.94
OTHER	6,148.10	1.08
TOTAL	269,963.84	47.34

OFF STREET PARKING CALCULATIONS:
 EXISTING PARKING SPACES APPROXIMATELY 192 SPACES BASED ON INFORMATION PROVIDED BY WHA EXISTING OPEN SPACE: 297,251.90 SF = 6.824 ACRES (SEE EXISTING OPEN & RECREATION SPACE MAP)
 THIS SITE IS NOT WITHIN A SPECIAL HIGHWAY OVERLAY DISTRICT OR ANY OTHER ZONING OVERLAY DISTRICT WITHIN THE CITY OF WILMINGTON ZONING MAP (MAP 3117-4)
 WITHIN CITY OF WILMINGTON 1945 CORPORATE LIMITS

Approved Construction Plan

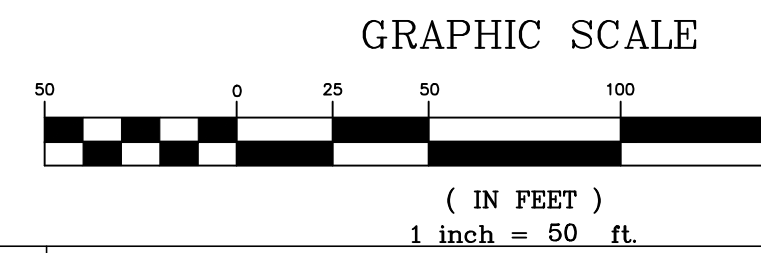
Name _____ Date _____

Planning _____

Traffic _____

Fire _____

City of Wilmington
 NORTH CAROLINA
 Public Services • Engineering Division
 APPROVED STORMWATER MANAGEMENT PLAN
 Date: _____ Permit # _____
 Signed: _____



REV. NO.	DESCRIPTION	DATE
1	REVISED PER CITY OF WILMINGTON TRC.	3-10-11
2	REVISED TO ADJUST SAW CUT LINES AT GREENFIELD STREET DRIVEWAY.	4-21-11
3	REVISED PER CITY OF WILMINGTON.	5-13-11
4	REVISED PER CLIENT.	6-7-11
5	REVISED PER CITY OF WILMINGTON.	7-25-11
6	REVISED TO NOT SHOW PROPOSED GATES.	8-11-11
7	REVISED TO SHOW ADDITIONAL SIDEWALK BEING REMOVED.	8-11-11
8	REVISED PER CITY OF WILMINGTON TRAFFIC.	8-11-11
9	REVISED TO ADJUST EXISTING SIDEWALK TO REMAIN & TO BE REMOVED.	5-22-12
10	REVISED TO ADJUST EXISTING SIDEWALK TO REMAIN & TO BE REMOVED.	6-13-12
11	REVISED PER CITY OF WILMINGTON ENGINEERING.	9-19-12
12	REVISED PER CLIENT.	6-7-17

EXISTING CONDITIONS MAP
 1-19-11
 SCALE: 1" = 50'
 DRAWN: JCB
 CHECKED: JEM
 PROJECT NO: 198

SOUTH FRONT APARTMENTS
 WILMINGTON TOWNSHIP NEW HANOVER COUNTY NORTH CAROLINA

MALPASS ENGINEERING & SURVEYING, P.C.
 1134 SHIPYARD BOULEVARD
 WILMINGTON, NORTH CAROLINA 28412
 Phone 910-392-6843
 Fax 910-392-6203 License No. C-2320

Owner: SOUTH FRONT LLC
 10 S. CAROLINA DR.
 WILMINGTON, NC 28403
 PHONE: 910-251-5030

PRELIMINARY DRAWING FOR REVIEW PURPOSES ONLY

SHEET NO: 1
 OF: 5

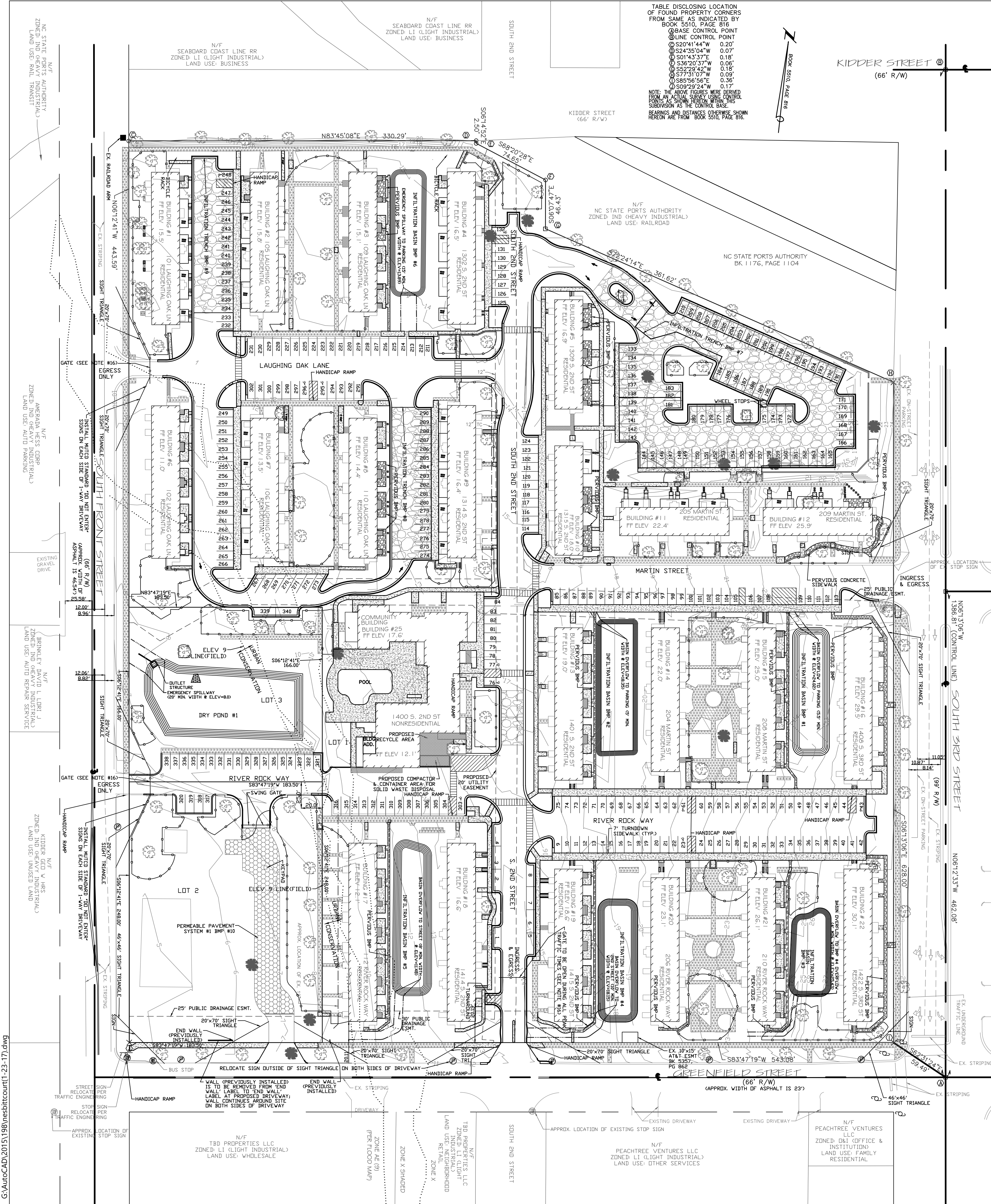
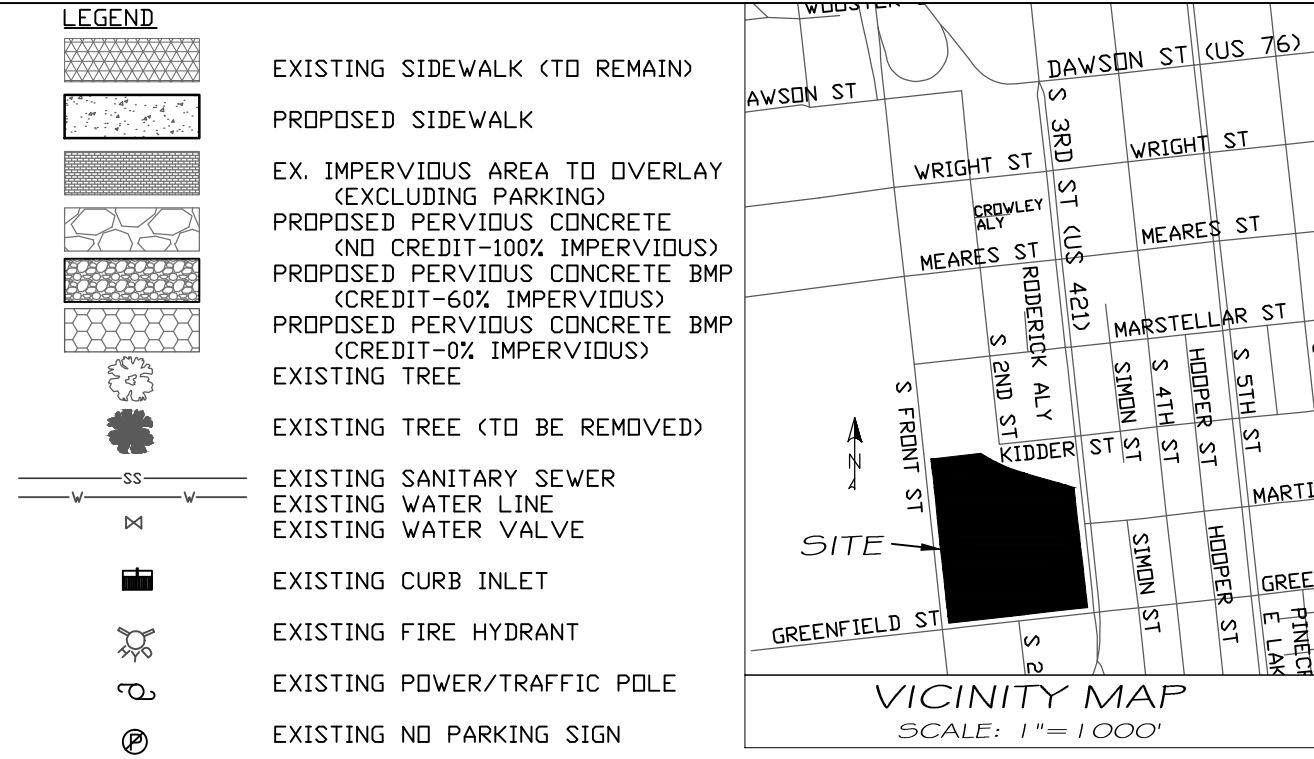


TABLE DISCLOSING LOCATION OF FOUND PROPERTY CORNERS FROM SAME AS INDICATED BY BOOK 5510, PAGE 816

LINE CONTROL POINT	COORDINATES
1	0252041.474 W 0.20'
2	0252453.004 W 0.07'
3	0250143.377 E 0.18'
4	0252229.422 W 0.18'
5	0257751.077 W 0.09'
6	0258758.985 E 0.36'
7	0259229.242 W 0.17'

NOTE: THE PROPERTY CORNERS SHOWN ABOVE ARE THE CONTROL POINTS FOR THE CONTROL BASE SUBMISSION AS THE CONTROL BASE POINTS. THE PROPERTY CORNERS SHOWN BELOW ARE FROM BOOK 5510, PAGE 816.

- CITY OF WILMINGTON STANDARD NOTES
- PRIOR TO ANY CLEARING, GRADING OR CONSTRUCTION ACTIVITY, TREE PROTECTION FENCING WILL BE INSTALLED AROUND PROTECTED TREES OR GROVES OF TREES AND NO CONSTRUCTION WORKERS, TOOLS, MATERIALS, OR VEHICLES ARE PERMITTED WITHIN THE TREE PROTECTION FENCING.
 - ALL PAVEMENT MARKINGS IN PUBLIC RIGHTS-OF-WAY AND FOR DRIVEWAYS ARE TO BE THERMOPLASTIC AND MEET CITY AND/OR NCDOT STANDARDS.
 - ONCE STREETS ARE OPEN TO TRAFFIC, CONTACT TRAFFIC ENGINEERING TO REQUEST INSTALLATION OF TRAFFIC STREET NAME SIGNS. PROPOSED STREET NAMES MUST BE APPROVED PRIOR TO INSTALLATION OF STREET NAME SIGNS.
 - TRAFFIC CONTROL DEVICES (INCLUDING SIGNS AND PAVEMENT MARKINGS) IN AREAS OPEN TO PUBLIC TRAFFIC ARE TO MEET MUTCD (MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES) STANDARDS.
 - CALL TRAFFIC ENGINEERING AT 341-7888 FORTY EIGHT HOURS PRIOR TO ANY EXCAVATION IN THE RIGHT OF WAY.
 - ANY BROKEN OR MISSING SIDEWALK PANELS WILL BE REPLACED.
 - CONTACT KAREN DIXON AT 341-7888 TO DISCUSS STREET LIGHTING OPTIONS.
 - PROJECT SHALL COMPLY WITH CITY OF WILMINGTON CROSS CONNECTION CONTROL REQUIREMENTS. WATER METERS(S) SHALL BE INSTALLED AT THE PROPERTY LINE. WATER METER(S) SHALL BE INSTALLED ON THE DEVELOPER'S SIDE OF THE WATER METER BOX.
 - IF THE CONTRACTOR DESIRES CITY WATER FOR CONSTRUCTION HE SHALL APPLY IN ADVANCE FOR THIS SERVICE & MUST PROVIDE A REDUCED PRESSURE ZONE (RPZ) BACKFLOW PREVENTION DEVICE ON THE DEVELOPER'S SIDE OF THE WATER METER BOX.
 - ANY IRRIGATION SYSTEM SUPPLIED BY CITY WATER SHALL COMPLY WITH THE CITY'S CROSS CONNECTION CONTROL REGULATIONS. CALL 343-3910 FOR INFORMATION.
 - ANY BACKFLOW PREVENTION DEVICES REQUIRED BY THE CITY WILL NEED TO BE ON THE LIST OF APPROVED DEVICES BY UNDERCOCHER OR ASSOC.
 - ALL TRAFFIC CONTROL SIGNS & MARKINGS OFF THE RIGHT-OF-WAY ARE TO BE MAINTAINED BY THE PROPERTY OWNER.
 - ALL PAVEMENT MARKINGS REGULATING TRAFFIC FLOW MUST BE THERMOPLASTIC.
 - A UTILITY CUT PERMIT IS REQUIRED FOR EACH OPEN CUT OF A CITY STREET.
 - TRAFFIC ENGINEERING MUST APPROVE OF PAVEMENT MARKING LAYOUT PRIOR TO ACTUAL STRIPING.
 - A LANDSCAPING PLAN INDICATING THE LOCATION OF REQUIRED STREET TREES SHALL BE SUBMITTED TO THE CITY OF WILMINGTON TRAFFIC ENGINEERING DIVISION AND PARKS AND RECREATION DEPARTMENT FOR REVIEW AND APPROVAL PRIOR TO THE RECORDING OF THE FINAL PLAT.



- NOTES
- ASBUILT SURVEY PROVIDED BY ARNOLD W. CARSON PLS, P.C.
 - CONTRACTOR SHALL VERIFY EXISTING CONCRETE DRIVE PILES AND PARKING AREAS THAT ARE TO REMAIN WITH 1" OF SF95 ASPHALT. PROPOSED GRADES ARE BASED ON A 1" ASPHALT OVERLAY ON TOP OF EXISTING GRADES.
 - CONTRACTOR & DEVELOPER SHALL CONTACT PERVIOUS CONCRETE MANUFACTURER FOR PROPER INSTALLATION OF PERVIOUS CONCRETE (PERVIOUS CONCRETE THICKNESS SHOWN PER DWG).
 - CONTRACTOR SHALL ENSURE THE PATH FROM EACH HANDICAP PARKING SPACE TO THE UNIT ASSOCIATED WITH THAT SPACE MEETS ALL SPECIFICATIONS.
 - MALPASS ENGINEERING & SURVEYING, P.C. IS NOT RESPONSIBLE FOR ANY WATER OR SEWER LINE LOCATIONS OR SEPARATIONS.
 - MALPASS ENGINEERING & SURVEYING, P.C. IS NOT RESPONSIBLE FOR WALL, FENCE, OR GATE DESIGNS.
 - OLD BOILER ROOM IN COMMUNITY BUILDING SHALL BE UPGRADED TO HOUSE CYCLE & SCOTER STORAGE (MINIMUM OF 95 SPACES).
 - PARKING SPACES SHALL BE NO CLOSER THAN 15' TO BUILDING ENTRY EXCLUDING VEHICLE OVERHAND.
 - SANITARY SEWER MANHOLE LOCATIONS WERE TAKEN FROM AN AUGUST 10, 1939 PLAN TITLED "U.S.H.A. PROJECT NO. NC 1-18" & ARE APPROXIMATE, UNLESS NOTED AS "ASBUILT". ALL SANITARY SEWER INVERTS, EXCEPT RUN THRU SITE UNDER MARTIN ST., & SIZES WERE TAKEN FROM ABOVE REFERENCED PLAN AND ARE APPROXIMATE. SEWER SERVICE LOCATIONS & SIZES WERE TAKEN FROM ABOVE REFERENCED PLAN & ARE APPROXIMATE. SANITARY SEWER LOCATIONS, INVERTS, & SIZES SHALL BE FIELD VERIFIED AS NECESSARY.
 - NO EQUIPMENT IS ALLOWED ON THE SITE UNTIL ALL TREE PROTECTION FENCING AND SILT FENCING HAS BEEN INSTALLED AND APPROVED.
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 - INTERIOR LANDSCAPING ISLANDS ADJACENT TO CURB CUTS SHALL BE DEPRESSED TO RECEIVE FLOOD FROM PARKING LOT.
 - ALL GATES USED FOR VEHICULAR INGRESS AND/OR EGRESS SHALL BE SIREN ACTIVATED.
 - REPLACE SANITARY SEWER & WATER MAIN WITH D.I.P. 10' ON EITHER SIDE OF STORM DRAIN CROSSING.
 - DOWNSPUT PIPING SHOWN ON PLAN IS FOR INFORMATIONAL PURPOSES ONLY. DOWNSPUT PIPING (SIZE, LOCATION, ETC) SHALL BE DESIGNED BY OTHERS. HOWEVER, DOWNSPUTS DEVICES TO BE INSTALLED AS SHOWN ON PLAN. THE INVERT OF DOWNSPUT PIPING THAT DISCHARGES TO PERVIOUS CONCRETE SHALL MATCH THE TOP OF PERVIOUS CONCRETE ELEVATION AT THE DISCHARGE POINT.
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 - EXISTING STORM DRAIN PIPES SHOWN ON PLAN THAT WERE NOT SURVEYED (SEE LEGEND FOR LINED PIPES) WERE TAKEN FROM AN AUGUST 10, 1939 PLAN TITLED "U.S.H.A. PROJECT NO. NC 1-18" WITH A REVISION DATE OF MAY 11, 1961. LOCATION OF THESE STORM DRAIN PIPES & INVERTS ARE APPROXIMATE AND PIPE SIZES ARE BASED ON THE ABOVE REFERENCED PLAN.
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 - EXISTING SHADING SHALL BE MAINTAINED AS SHOWN ON THE PLAN AND WHERE ELSE SEDIMENT HAS THE ABILITY TO LEAVE THE SITE. (94-43706 SF). NON-RESIDENTIAL-1 (9,007.69 SF) NUMBER OF EXISTING BUILDINGS TO REMAIN: RESIDENTIAL-22 (80,477.50 SF), NON-RESIDENTIAL-1 (9,007.69 SF) BUILDING SIZE, AFTER DEVELOPMENT:
 - ALERTING DRIVERS TO THE LIMITED SIZE
 - GREENFIELD STREET DRIVEWAY SHALL BE INSTALLED ONLY IF ASPHALT IS REMOVED AND DRIVEWAY IS USED AS AN ENTRANCE.
 - ROOF LEADER PIPING SHALL HAVE A CLEANOUT AT EACH END.
 - PROPOSED SIDEWALKS WITHIN RIGHT-OF-WAY SHALL BE CONCRETE SPACES #1-8, 211-213, 295-296, & 303-304) SHALL BE TURNDOWN SIDEWALK.
 - LANDSCAPE ISLANDS WITH CURB CUTS SHALL BE GRASS & DEPRESSED.
 - DISTURBANCE AREAS WITHIN RIGHT-OF-WAY SHALL BE STABILIZED WITH MULCH PRIOR TO ANY RAINFALL EVENT.

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4	GRADING & EROSION CONTROL PLAN
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7	PARKING DIMENSION PLAN
8	STORMWATER DETAIL SHEET
9	DETAIL SHEET
10	DETAIL SHEET
11	WATER & SEWER DETAIL SHEET
12	EXISTING OPEN SPACE MAP
13	PROPOSED OPEN SPACE, INTERIOR SHADING, & STREET YARD MAP
14	EXISTING PERVIOUS AREA TO REMAIN & NEW IMPERVIOUS AREA MAP
15	LANDSCAPE PLAN
16	LANDSCAPE PLAN
17	TREE INVENTORY MAP

WATER & SEWER CAPACITY

ITEM	UNIT	VALUE
WATER	261 UNITS x 400 GPD/UNIT	= 104,400 GPD (CURRENT USE)
WATER	(216 UNITS x 400 GPD/UNIT) + (3 SHIFTS x 25 GAL/SHIFT	= 86,475 GPD (PROPOSED USE)
SEWER	(229 UNITS x 240 GPD) + (32 x 360 GPD)	= 66,840 GPD (CURRENT USE)
SEWER	(216 UNITS x 240 GPD/UNIT) + (3 SHIFTS x 25 GAL/SHIFT)	= 51,915 GPD (PROPOSED USE)

SITE DATA

PROPERTY OWNER: SOUTH FRONT LLC (LOT 1 & 3) & SOUTH FRONT PROPERTIES, LLC (LOT 2)
 PROJECT ADDRESS: 1400 S. 2ND ST. (LOT 1), 100 RIVER ROCK WAY (LOT 2), & 101 RIVER ROCK WAY (LOT 3)
 PIN NUMBER: R05413-035-002-000 (LOT 1), R05413-035-005-000 (LOT 2), & R05413-035-006-000 (LOT 3)
 ZONING DISTRICT: WF-H
 FLOOD AREA: ZONE "X" & AE EL 9 ACCORDING TO FEMA FLOOD INSURANCE RATE MAP, COMMUNITY-PANEL NUMBER 372031700 K DATE 6/2/06 (INFORMATION PROVIDED BY ARNOLD W. CARSON PLS, P.C.)
 BUILDING SETBACKS: REQUIRED FRONT-30', REAR-25', INTERIOR SIDE-20', CORNER LOT SIDE-30'
 BUILDING SETBACKS, EXISTING (LOT 1): FRONT-19.97', REAR-21.48', INTERIOR SIDE-24.13', CORNER LOT SIDE-19.99'
 BUILDING SETBACKS, EXISTING (LOT 2 & 3): FRONT-30', REAR-25', INTERIOR SIDE-20', CORNER LOT SIDE-30'
 TOTAL SITE AREA (LOT 1, 2 & 3 COMBINED): 570,230.91 SF = 13.09 ACRES
 TOTAL ON-SITE AREA TO BE DISTURBED: 468,939 SF = 10.77 ACRES
 TOTAL AREA TO BE DISTURBED: 475,864 SF = 10.93 ACRES
 EXISTING BUILDING AREA: 103,444.75 SF = 2.37 ACRES
 AFTER DEVELOPMENT BUILDING AREA: 89,677.20 SF = 2.06 ACRES
 BUILDING SETBACKS: 103,444.75 SF / 570,230.91 SF = 18.14%
 AFTER DEVELOPMENT BUILDING LOT COVERAGE: 89,677.20 SF / 570,230.91 SF = 15.73%
 NUMBER OF PROPOSED UNITS: 216 (1 BEDROOM-184 UNITS, 2 BEDROOM-32 UNITS)
 NUMBER OF EXISTING BUILDINGS: RESIDENTIAL-24 (94,437.06 SF), NON-RESIDENTIAL-1 (9,007.69 SF)
 NUMBER OF EXISTING BUILDINGS TO REMAIN: RESIDENTIAL-22 (80,477.50 SF), NON-RESIDENTIAL-1 (9,007.69 SF) BUILDING SIZE, AFTER DEVELOPMENT:

BUILDING	SQUARE FOOTAGE	NUMBER OF UNITS	NUMBER OF BEDROOMS	USE (RESIDENTIAL/NON-RESIDENTIAL)	EXISTING/FUTURE	BUILDING ADDRESS
1	3,883.30	10	7/3	RESIDENTIAL	EXISTING	101 LAUGHING OAK LN
2	3,591.65	10	10/0	RESIDENTIAL	EXISTING	105 LAUGHING OAK LN
3	3,577.82	10	10/0	RESIDENTIAL	EXISTING	109 LAUGHING OAK LN
4	3,597.81	10	7/3	RESIDENTIAL	EXISTING	1302 S. 2ND ST.
5	2,792.76	8	8/0	RESIDENTIAL	EXISTING	102 LAUGHING OAK LN
6	3,907.93	10	7/3	RESIDENTIAL	EXISTING	106 LAUGHING OAK LN
7	3,578.27	10	10/0	RESIDENTIAL	EXISTING	110 LAUGHING OAK LN
8	3,581.33	10	10/0	RESIDENTIAL	EXISTING	114 S. 2ND ST.
9	3,898.79	10	7/3	RESIDENTIAL	EXISTING	1309 S. 2ND ST.
10	2,790.11	8	8/0	RESIDENTIAL	EXISTING	1315 S. 2ND ST.
11	3,789.60	10	10/0	RESIDENTIAL	EXISTING	205 MARTIN ST.
12	2,787.83	8	8/0	RESIDENTIAL	EXISTING	209 MARTIN ST.
13	3,891.30	10	7/3	RESIDENTIAL	EXISTING	1401 S. 2ND ST.
14	3,661.98	10	9/1	RESIDENTIAL	EXISTING	204 MARTIN ST.
15	3,674.34	10	7/3	RESIDENTIAL	EXISTING	208 MARTIN ST.
16	3,886.97	10	7/3	RESIDENTIAL	EXISTING	1408 S. 3RD ST.
17	4,950.24	12	10/2	RESIDENTIAL	EXISTING	112 RIVER ROCK WAY
18	3,789.60	10	10/2	RESIDENTIAL	EXISTING	1414 S. 2ND ST.
19	3,895.71	10	7/3	RESIDENTIAL	EXISTING	1415 S. 2ND ST.
20	3,691.50	10	9/1	RESIDENTIAL	EXISTING	206 RIVER ROCK WAY
21	3,652.35	10	9/1	RESIDENTIAL	EXISTING	210 RIVER ROCK WAY
22	3,914.72	10	7/3	RESIDENTIAL	EXISTING	1422 S. 3RD ST.
23	-	-	-	-	-	-
24	-	-	-	-	-	-
25	9,198.70	-	-	NON-RESIDENTIAL	EXISTING	1400 S. 2ND ST.
TOTAL	89,485.19	216	184/32	-	-	-

NUMBER OF STORIES & SQUARE FEET PER FLOOR, 2 STORIES (SEE ABOVE CHART, SAME FOR BOTH STORIES)
 TOTAL AMOUNT & PERCENT OF IMPERVIOUS SURFACE AREAS (ON-SITE)

BEFORE DEVELOPMENT		AFTER DEVELOPMENT	
BUILDINGS	% OF SITE	BUILDINGS	% OF SITE
103,444.75	18.14	89,677.20	15.73
13,769.99	2.41	17,781.72	3.12
13,979.99	2.45	1,000.44	0.17
84,212.36	14.77	140,485.51	24.64
62,388.64	10.94	45,009.28	7.89
6,148.10	1.08	2,506.13	0.44
TOTAL	269,963.84	47,344	8.31

OFF STREET PARKING CALCULATIONS

EXISTING PARKING SPACES = APPROXIMATELY 192 SPACES BASED ON INFORMATION PROVIDED BY WHA
 MINIMUM PARKING REQUIRED (LOTS 1-3 COMBINED) = (1.5 * 184 UNITS) + (2 * 32 UNITS) = 340 SPACES
 MINIMUM PARKING ALLOWED (LOTS 1-3 COMBINED) = (0.5 * 216 UNITS) = 108 SPACES
 NUMBER OF PROPOSED PARKING SPACES (LOTS 1-3 COMBINED) = 340 SPACES
 MINIMUM NUMBER OF REQUIRED HANDICAPPED SPACES PER ADA STANDARDS FOR ACCESSIBLE DESIGN
 MINIMUM TOTAL PARKING SPACES = 340 SPACES
 NUMBER OF PROPOSED HANDICAPPED SPACES (LOTS 1-3 COMBINED) = 10 SPACES

BICYCLE PARKING CALCULATIONS

MINIMUM SPACES REQUIRED (LOTS 1-3 COMBINED) = 5 * ((340-25) PARKING SPACES / 100 PARKING SPACES) = 80 SPACES (ROUNDED UP TO THE NEAREST 5 SPACES)
 MINIMUM NUMBER OF PROPOSED BICYCLE/SCOOTER PARKING SPACES IN COMMUNITY BUILDING = 35 SPACES
 CAMA LULU ASSASSINATION URBAN (495,532.24 SF = 11.374 ACRES) & CONSERVATION AREA (74,677 SF = 1.714 ACRES)

THIS SITE IS NOT WITHIN A SPECIAL HIGHWAY OVERLAY DISTRICT OR ANY OTHER ZONING OVERLAY DISTRICT PER CITY OF WILMINGTON ZONING MAP (MAP 317) & WILMINGTON ZONING MAP (MAP 317)
 THIS SITE IS WITHIN THE CITY OF WILMINGTON 1945 CORPORATE LIMITS

Approved Construction Plan

Name _____ Date _____

Planning _____

Traffic _____

Fire _____

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

Date: _____ Permit # _____

Signed: _____

UTILITY SEPARATION NOTES

- WATER MAINS SHALL HAVE A MINIMUM COVER OF 3'.
- SANITARY SEWER MAINS SHALL HAVE A MINIMUM COVER OF 3' DR.
- HORIZONTAL SEPARATION BETWEEN WATER AND SANITARY SEWER SHALL BE 10' BETWEEN EDGE OF PIPES.
- VERTICAL SEPARATION BETWEEN WATER AND SANITARY SEWER: WATER OVER SANITARY SEWER >18" OR USE D.I.P. ON WATER 10' ON EITHER SIDE OF CROSSING. SANITARY SEWER OVER WATER USE D.I.P. ON BOTH SIDES 10' ON EITHER SIDE OF CROSSING.
- A 24" VERTICAL SEPARATION SHALL BE PROVIDED BETWEEN STORM SEWER AND SANITARY SEWER OR USE D.I.P. ON SANITARY SEWER 10' ON EITHER SIDE OF CROSSING.
- VERTICAL SEPARATION BETWEEN WATER AND STORM SEWER: WATER OVER STORM SEWER >18" OR USE D.I.P. ON WATER 10' ON EITHER SIDE OF CROSSING. STORM SEWER OVER WATER USE D.I.P. ON EITHER SIDE OF CROSSING.
- ALL SANITARY SEWER MANHOLES MUST BE GREATER THAN 50" OR GREATER SHALL HAVE AN INSIDE DIAMETER OF 5" WITH AN INSIDE DROP STRUCTURE.
- GRAVITY SANITARY SEWER WITHIN 50' OF WETLANDS SHALL BE D.I.P. AND MEET WATER MAIN MATERIALS, TESTING METHODS AND ACCEPTABILITY STANDARDS (ISA NCAC 18C).
- SANITARY SEWER MANHOLES MUST BE GREATER THAN 50" FROM WETLANDS, AS MEASURED TO THE CLOSEST OUTSIDE EDGE.

GRAPHIC SCALE

1 inch = 60 ft.

REV. NO.	DESCRIPTION	DATE
1	REVISED PER CITY OF WILMINGTON INC.	3-10-11
2	REVISED TO LABEL PERVIOUS CONCRETE BMP	3-16-11
3	REVISED PER CITY OF WILMINGTON TO SHOW GREENFIELD ST. DRIVEWAY AS CITY STANDARD & ADJUST PARKING SPACES (113-213 & 317-323) TO SHOW STORM PILE ALONG SOUTHERN PORTION OF SITE	4-23-11
4	REVISED PER CITY OF WILMINGTON	5-13-11
5	REVISED PER CLIENT TO ADJUST LAYOUT TO ADD CURB HOUSE	6-7-11
6	REVISED PER CLIENT TO ADD SPACES	7-25-11
7	REVISED PER CITY OF WILMINGTON	8-11-11
8	REVISED PER CITY OF WILMINGTON DEPARTMENT	8-11-11
9	REVISED PER CITY OF WILMINGTON FIRE & LIFE SAFETY	8-12-11
10	REVISED TO ADD IMPERVIOUS AREA, REMOVE EXISTING IMPERVIOUS AREA, & SHOW EXISTING IMPERVIOUS AREA TO OVERLAY	5-22-12
11	REVISED TO ADD IMPERVIOUS AREA, REMOVE EXISTING IMPERVIOUS AREA, & SHOW EXISTING IMPERVIOUS AREA TO OVERLAY	6-13-12
12	REVISED PER CITY OF WILMINGTON ENGINEERING	9-19-12
13	REVISED PER CLIENT TO ADD DRIVEWAY OFF GREENFIELD ST. & RELOCATE 3 PARKING SPACES	6-7-17
14	REVISED PER CLIENT TO ADD DRIVEWAY OFF GREENFIELD ST. & RELOCATE 3 PARKING SPACES	6-7-17

SITE PLAN
SOUTH FRONT APARTMENTS
 WILMINGTON TOWNSHIP NEW HANOVER COUNTY NORTH CAROLINA

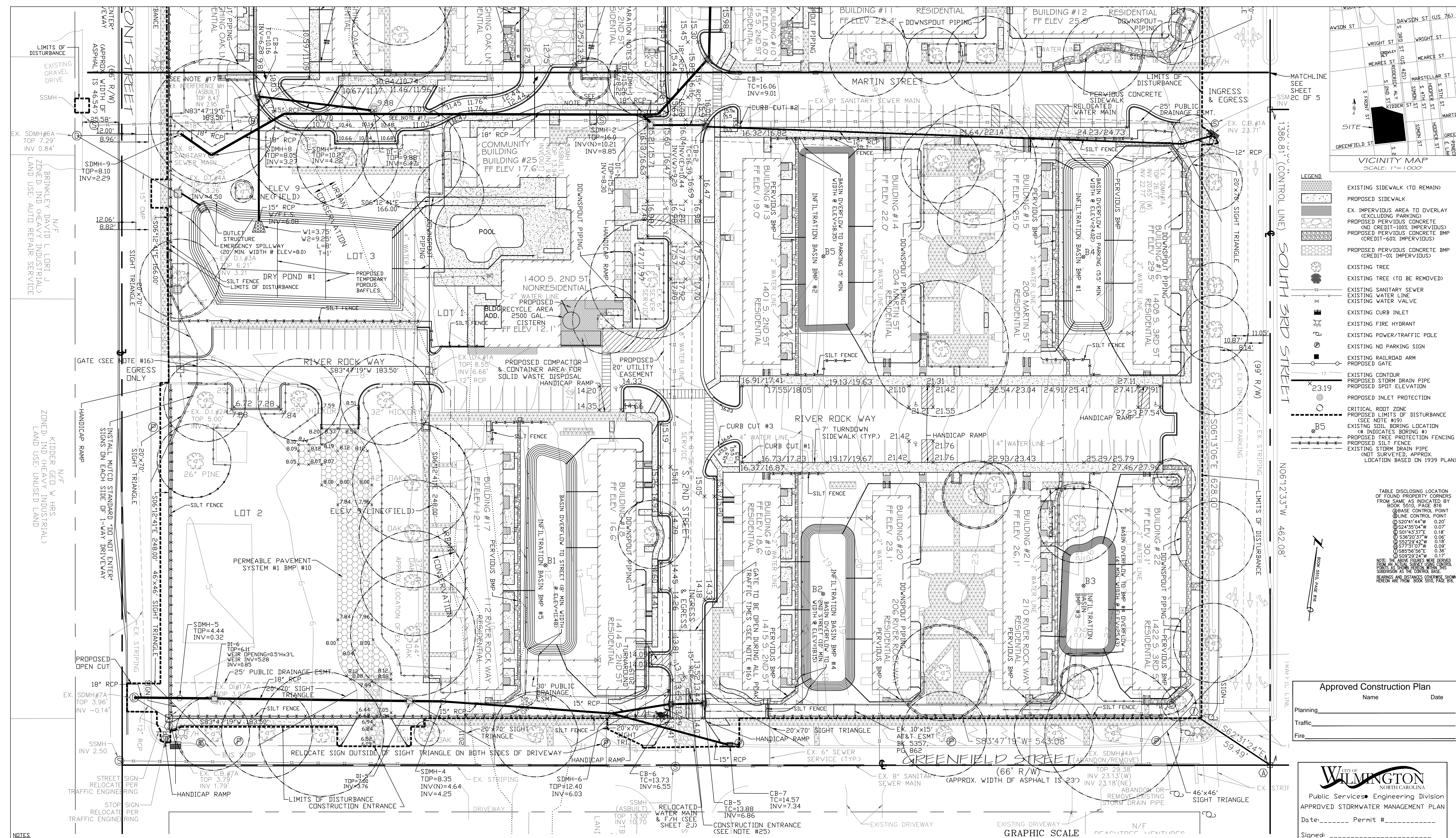
PRELIMINARY DRAWING FOR REVIEW PURPOSES ONLY

MALPASS ENGINEERING & SURVEYING, P.C.
 1134 SHIPWAY BOULEVARD
 WILMINGTON, NORTH CAROLINA 28412
 Phone 910-382-6343
 Fax 910-382-6203 License No. C-2380

Owner: SOUTH FRONT LLC
 10 S. CAROLINA DR
 WILMINGTON, NC 28403
 Phone: 910-251-5030

DATE: 1-19-11
 SCALE: 1"=50'
 DRAWN: JCB
 CHECKED: JEM
 PROJECT NO: 19B
 SHEET NO: 2A
 OF: 5

G:\AutoCAD\2011\98\mesbit\court\1-23-17.dwg



LEGEND

- EXISTING SIDEWALK (TO REMAIN)
- PROPOSED SIDEWALK
- EX. IMPERVIOUS AREA TO OVERLAY (EXCLUDING PARKING)
- PROPOSED PERVIOUS CONCRETE (NO CREDIT-100% IMPERVIOUS)
- PROPOSED PERVIOUS CONCRETE BMP (CREDIT-60% IMPERVIOUS)
- PROPOSED PERVIOUS CONCRETE BMP (CREDIT-60% IMPERVIOUS)
- EXISTING TREE (TO BE REMOVED)
- EXISTING TREE (TO BE REMOVED)
- EXISTING SANITARY SEWER
- EXISTING WATER LINE
- EXISTING WATER VALVE
- EXISTING CURB INLET
- EXISTING FIRE HYDRANT
- EXISTING POWER/TRAFFIC POLE
- EXISTING NO PARKING SIGN
- EXISTING RAILROAD ARM
- PROPOSED GATE
- EXISTING CONTOUR
- PROPOSED STORM DRAIN PIPE
- PROPOSED SPOT ELEVATION
- PROPOSED INLET PROTECTION
- CRITICAL ROOT ZONE
- PROPOSED LIMITS OF DISTURBANCE (SEE NOTE #19)
- EXISTING SOIL BORING LOCATION (4" INDICATES BORING #)
- PROPOSED TREE PROTECTION FENCING
- PROPOSED SILT FENCE
- EXISTING STORM DRAIN PIPE (NOT SURVEYED, APPROX. LOCATION BASED ON 1939 PLAN)

TABLE DISCLOSING LOCATION OF FOUND PROPERTY CORNERS FROM SAME AS INDICATED BY BOOK 5510, PAGE 816

LINE CONTROL POINT	COORDINATES	BEARING
1	52074144" W	0.20°
2	52435104" W	0.07°
3	50143337" W	0.18°
4	53620337" W	0.06°
5	58529567" W	0.18°
6	5773107" W	0.09°
7	58529567" W	0.18°
8	50529224" W	0.17°

NOTE: ALL CORNERS WERE WORKED FROM AN ADJACENT SUBDIVISION AS THE CONTROL BASE. BEARINGS AND DISTANCES OTHERWISE SHOWN HEREON ARE FROM BOOK 5510, PAGE 816.

Approved Construction Plan

Name: _____ Date: _____

Planning: _____

Traffic: _____

Fire: _____

CITY OF WILMINGTON
NORTH CAROLINA

Public Services Engineering Division

APPROVED STORMWATER MANAGEMENT PLAN

Date: _____ Permit # _____

Signed: _____

- NOTES**
- ASBUILT SURVEY PROVIDED BY ARNOLD V. CARSON PLS. P.C.
 - CONTRACTOR SHALL OVERLAY EXISTING CONCRETE DRIVE ISLES AND PARKING AREAS THAT ARE TO REMAIN WITH 1" OF SF9.5A ASPHALT. PROPOSED GRADES ARE BASED ON A 1" ASPHALT OVERLY ON TOP OF EXISTING GRADES.
 - CONTRACTOR & DEVELOPER SHALL CONTACT PERVIOUS CONCRETE MANUFACTURER FOR PROPER INSTALLATION OF PERVIOUS CONCRETE (PERVIOUS CONCRETE THICKNESS SHOWN PER OWNER).
 - CONTRACTOR SHALL ENSURE THE PATH FROM EACH HANDICAP PARKING SPACE TO THE UNIT ASSOCIATED WITH THE RESPECTIVE SPACE MEETS ADA SPECIFICATIONS.
 - MALPASS ENGINEERING & SURVEYING, P.C. IS NOT RESPONSIBLE FOR ANY WATER OR SEWER LINE LOCATIONS OR SEPARATIONS.
 - MALPASS ENGINEERING & SURVEYING, P.C. IS NOT RESPONSIBLE FOR WALL, FENCE, OR GATE DESIGNS.
 - OLD BOILER ROOM IN COMMUNITY BUILDING SHALL BE UPFITTED TO HOUSE BICYCLE & SCOTTER STORAGE (MINIMUM OF 35 SPACES).
 - PARKING SPACES SHALL BE NO CLOSER THAN 15' TO BUILDING ENTRY (EXCLUDING VEHICLE OVERHANG).
 - SANITARY SEWER MANHOLE LOCATIONS WERE TAKEN FROM AN AUGUST 10, 1939 PLAN TITLED "U.S.H.A. PROJECT NO. NC. 1-1R" & ARE APPROXIMATE, UNLESS NOTED AS "ASBUILT". ALL SANITARY SEWER INVERTS, EXCEPT RUN THRU SITE ALONG MARTIN ST., & SIZES WERE TAKEN FROM ABOVE REFERENCED PLAN & ARE APPROXIMATE. SEWER SERVICE LOCATIONS & SIZES WERE TAKEN FROM ABOVE REFERENCED PLAN & ARE APPROXIMATE. SANITARY SEWER LOCATIONS, INVERTS, & SIZES SHALL BE FIELD VERIFIED AS NECESSARY.
 - NO EQUIPMENT IS ALLOWED ON THE SITE UNTIL ALL TREE PROTECTION FENCING AND SILT FENCING HAS BEEN INSTALLED AND APPROVED.
 - NO LAND DISTURBANCE INCLUDING TREE REMOVAL IS TO OCCUR OUTSIDE THE LIMITS OF DISTURBANCE SHOWN ON THE PLANS.

- PROTECTIVE FENCING IS TO BE MAINTAINED THROUGHOUT THE DURATION OF THE PROJECT.
- LAND CLEARING AND CONSTRUCTION CONTRACTORS SHALL RECEIVE ADEQUATE INSTRUCTION ON TREE PROTECTION REQUIREMENTS AND METHODS.
- IF AN IRRIGATION SYSTEM IS INSTALLED IT SHALL BE EQUIPPED WITH A RAIN SENSOR.
- INTERIOR LANDSCAPING ISLANDS ADJACENT TO CURB CUTS SHALL BE DEPRESSED TO RECEIVE FLDW FROM PARKING LOT.
- ALL GATES USED FOR VEHICULAR INGRESS AND/OR EGRESS SHALL BE SIREN ACTIVATED.
- REPLACE SANITARY SEWER & WATER MAIN WITH D.I.P. 10" IN EITHER SIDE OF STORM DRAIN CROSSING.
- DOWNSPOUT PIPING SHOWN ON PLAN IS FOR INFORMATIONAL PURPOSES ONLY. DOWNSPOUT PIPING (SIZE, LOCATION, ETC.) SHALL BE DESIGNED BY OTHERS. HOWEVER, DOWNSPOUTS SHALL DISCHARGE INTO INFILTRATION BASINS, INFILTRATION TRENCHES, AND PERVIOUS CONCRETE SECTIONS AS SHOWN ON PLAN. THE INVERT OF DOWNSPOUT PIPING THAT DISCHARGES TO PERVIOUS CONCRETE SHALL MATCH THE TOP OF PERVIOUS CONCRETE ELEVATION AT THE DISCHARGE POINT.
- THE PROPOSED LIMITS OF DISTURBANCE AREA SHALL INCLUDE ALL THE AREA WITHIN THE LIMITS OF DISTURBANCE LINE EXCEPT FOR THE BUILDING FOOTPRINTS AND STOODS FOR BUILDINGS #1-2 & 25.
- EXISTING STORM DRAIN PIPES SHOWN ON PLAN THAT WERE NOT SURVEYED (SEE LEGEND FOR LINE TYPE) WERE TAKEN FROM AN AUGUST 10, 1939 PLAN TITLED "U.S.H.A. PROJECT NO. NC. 1-1R" WITH A REVISION DATE OF MAY 1, 1961. LOCATION OF THESE STORM DRAIN PIPES & INVERTS ARE APPROXIMATE AND PIPE SIZES ARE BASED ON THE ABOVE REFERENCED PLAN.
- LOCATION OF TREE PROTECTION FENCING SHOWN ON PLAN IS APPROXIMATE. TREE PROTECTION FENCING SHALL BE INSTALLED IN ACCORDANCE WITH DETAIL SD 15-08 ON

SHEET 21, EXCEPT WHERE SITE IMPROVEMENTS ARE TO OCCUR AS SHOWN ON PLAN.

22. SILT FENCE SHALL BE INSTALLED AS SHOWN ON THE PLAN & ANYWHERE ELSE SEDIMENT HAS THE ABILITY TO LEAVE THE SITE.

23. HANDICAP RAMPS SHALL BE PROVIDED AT ALL PARKING AREAS TO SIDEWALK CONNECTIONS INTERNAL TO THE SITE.

24. ANY PARKING SPACE LESS THAN 8.5' IN WIDTH BY 18' IN LENGTH SHALL BE SIGNED ALERTING DRIVERS TO THE LIMITED SIZE.

25. CONSTRUCTION ENTRANCE AT GREENFIELD STREET DRIVEWAY SHALL BE INSTALLED ONLY IF ASPHALT IS REMOVED AND DRIVEWAY IS USED AS AN ENTRANCE.

26. ROOF LEADER PIPING SHALL HAVE A CLEANDOUT AT EACH BEND.

27. PROPOSED SIDEWALK ADJACENT TO PARKING SPACES (EXCEPT SPACES #1-8, 211-213, 295-296, & 303-304) SHALL BE TURNDOWN SIDEWALK.

28. LANDSCAPE ISLANDS WITH CURB CUTS SHALL BE GRASS & DEPRESSED.

29. DISTURBED AREAS WITHIN RIGHT-OF-WAY OF GREENFIELD ST. & SOUTH FRONT ST. SHALL BE IMMEDIATELY SEEDED & STABILIZED WITH MULCH PRIOR TO ANY RAINFALL EVENT.

NOTE: HANDICAP RAMPS SHALL BE PROVIDED AT ALL PARKING AREAS TO SIDEWALK CONNECTIONS INTERNAL TO THE SITE. PARKING SPACES LESS THAN 8.5' IN WIDTH BY 18' IN LENGTH SHALL BE SIGNED ALERTING DRIVERS TO THE LIMITED SIZE.

GRAPHIC SCALE

(IN FEET)

1 inch = 30 ft.

REV. NO.	REVISIONS	DATE
1	REVISED TO LABEL PERVIOUS CONCRETE BMP	3-18-11
2	REVISED PER CITY OF WILMINGTON TO SHOW GREENFIELD ST. DRIVEWAY AS CITY STANDARD & ADJUST PARKING SPACES 211-304. RELOCATED STORM PIPE ALONG SOUTHERN PORTION OF SITE	4-21-11
3	REVISED PER CITY OF WILMINGTON	6-13-11
4	REVISED PER CLIENT TO ADJUST LAYOUT TO ADD QUARD HOUSE	6-7-11
5	REVISED PER CITY OF WILMINGTON TO NOT SHOW PROPOSED FENCING & ADJUST PARKING	7-5-11
6	REVISED PER CITY OF WILMINGTON	7-25-11
7	REVISED PER CLIENT TO ADD SIGN	8-4-11
8	REVISED PER CITY OF WILMINGTON ENGINEERING DEPARTMENT	8-11-11
9	REVISED PER CITY OF WILMINGTON FIRE & LIFE SAFETY	8-12-11
10	REVISED TO ADD IMPERVIOUS AREA, REMOVE EXISTING IMPERVIOUS AREA, & SHOW EXISTING IMPERVIOUS AREA TO OVERLAY	5-22-12
11	REVISED TO ADD IMPERVIOUS AREA, REMOVE EXISTING IMPERVIOUS AREA, & SHOW EXISTING IMPERVIOUS AREA TO OVERLAY	8-13-12
12	REVISED PER CITY OF WILMINGTON ENGINEERING	9-19-12
13	REVISED PER CLIENT TO ADD DRIVEWAY OFF GREENFIELD ST. & RELOCATE 3 PARKING SPACES.	6-7-17

GRADING & EROSION CONTROL PLAN

1405 S. 2ND STREET

SOUTH FRONT APARTMENTS

WILMINGTON TOWNSHIP NEW HANOVER COUNTY NORTH CAROLINA

PRELIMINARY DRAWING FOR REVIEW PURPOSES ONLY

MALPASS ENGINEERING & SURVEYING, P.C.
1134 SHIPPARD BOULEVARD
WILMINGTON, NORTH CAROLINA 28412
Phone 910-392-6343
Fax 910-392-6203 License No. C-2320

Owner: SOUTH FRONT LLC
10 S. CASWELL DR.
WILMINGTON, NC 28403
PHONE: 910-251-5030

DATE: 3-10-11
SCALE: 1" = 30'
DRAWN: JCB
CHECKED: JEM
PROJECT NO: 198
SHEET NO: 2B
OF: 5

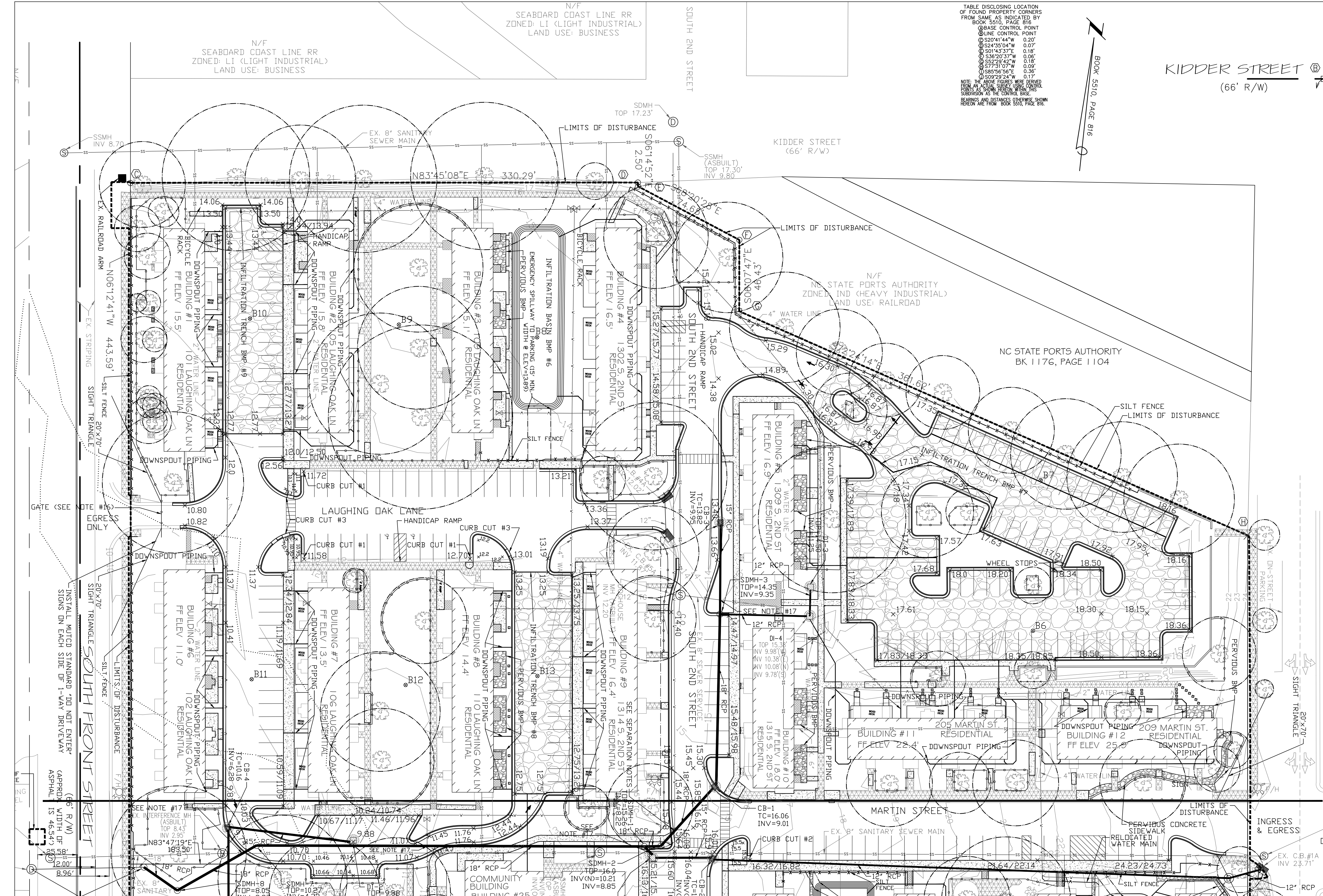


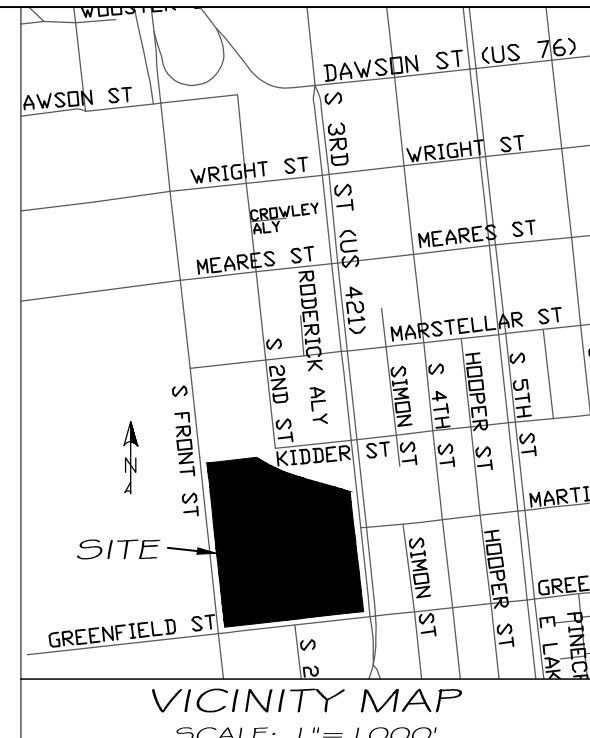
TABLE DISCLOSING LOCATION OF FOUND PROPERTY CORNERS FROM SAME AS INDICATED BY BOOK 5510, PAGE 816

BASE CONTROL POINT	LINE CONTROL POINT	BEARING	DISTANCE
CP-1	CP-2	S20°41'44"W	0.20'
CP-2	CP-3	S24°35'04"W	0.07'
CP-3	CP-4	S01°43'37"E	0.18'
CP-4	CP-5	S36°20'37"W	0.06'
CP-5	CP-6	S52°29'42"W	0.18'
CP-6	CP-7	S77°31'07"W	0.09'
CP-7	CP-8	S88°46'54"E	0.36'
CP-8	CP-9	S09°29'24"W	0.17'

NOTE: THE ABOVE TABLE WAS PROVIDED FROM AN Aerial Survey Using Control Substations AS THE CONTROL BASE. BEARINGS AND DISTANCES OTHERWISE SHOWN HEREON ARE FROM BOOK 5510, PAGE 816.

KIDDER STREET (66' R/W)

- LEGEND**
- EXISTING SIDEWALK (TO REMAIN)
 - PROPOSED SIDEWALK
 - EX. IMPERVIOUS AREA TO OVERLAY (EXCLUDING PARKING)
 - PROPOSED PERVIOUS CONCRETE (NO CREDIT-100% IMPERVIOUS)
 - PROPOSED PERVIOUS CONCRETE BMP (CREDIT-60% IMPERVIOUS)
 - PROPOSED PERVIOUS CONCRETE BMP (CREDIT-0% IMPERVIOUS)
 - EXISTING TREE
 - EXISTING TREE (TO BE REMOVED)
 - EXISTING SANITARY SEWER
 - EXISTING WATER LINE
 - EXISTING WATER VALVE
 - EXISTING CURB INLET
 - EXISTING FIRE HYDRANT
 - EXISTING POWER/TRAFFIC POLE
 - EXISTING NO PARKING SIGN
 - EXISTING RAILROAD ARM
 - PROPOSED GATE
 - EXISTING CONTOUR
 - PROPOSED STORM DRAIN PIPE
 - PROPOSED SPOT ELEVATION
 - PROPOSED INLET PROTECTION
 - CRITICAL ROOT ZONE
 - PROPOSED LIMITS OF DISTURBANCE (SEE NOTE #19)
 - EXISTING SOIL BORING LOCATION (# INDICATES BORING #)
 - PROPOSED TREE PROTECTION FENCING
 - PROPOSED SILT FENCE
 - EXISTING STORM DRAIN PIPE (NOT SURVEYED, APPROX. LOCATION BASED ON 1939 PLAN)



Approved Construction Plan

Name: _____ Date: _____

Planning: _____

Traffic: _____

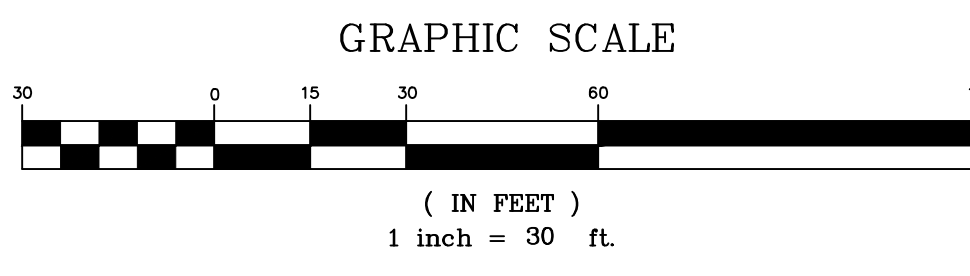
Fire: _____

City of Wilmington
Public Services • Engineering Division
APPROVED STORMWATER MANAGEMENT PLAN

Date: _____ Permit #: _____

Signed: _____

NOTE: HANDICAP RAMPS SHALL BE PROVIDED AT ALL PARKING AREAS TO SIDEWALK CONNECTIONS INTERNAL TO THE SITE. PARKING SPACES LESS THAN 8.5' IN WIDTH BY 18' IN LENGTH SHALL BE SIGNED ALERTING DRIVERS TO THE LIMITED SIZE.



REV NO.	DESCRIPTION	DATE
1	REVISED TO LABEL PERVIOUS CONCRETE BMP.	3-16-11
2	REVISED PER CITY OF WILMINGTON TO ADJUST PARKING SPACES #133-210.	4-21-11
3	REVISED PER CITY OF WILMINGTON.	5-13-11
4	REVISED PER CLIENT TO ADJUST LAYOUT TO ADD GUARD HOUSE.	6-7-11
5	REVISED PER CITY OF WILMINGTON TO NOT SHOW PROPOSED FENCING & ADJUST PARKING.	7-5-11
6	REVISED PER CITY OF WILMINGTON.	7-25-11
7	REVISED PER NCCOT TO ADD SIGNS.	8-4-11
8	REVISED PER CITY OF WILMINGTON ENGINEERING DEPARTMENT.	8-11-11
9	REVISED PER CITY OF WILMINGTON FIRE & LIFE SAFETY.	8-12-11
10	REVISED TO ADD IMPERVIOUS AREA, REMOVE EXISTING IMPERVIOUS AREA, & SHOW EXISTING IMPERVIOUS AREA.	8-22-12
11	REVISED TO ADD IMPERVIOUS AREA, REMOVE EXISTING IMPERVIOUS AREA, & SHOW EXISTING IMPERVIOUS AREA.	8-13-12
12	REVISED PER CITY OF WILMINGTON ENGINEERING.	9-19-12
13	REVISED PER CLIENT TO ADD DRIVEWAY OFF GREENFIELD ST. & RELOCATE 3 PARKING SPACES.	6-7-17

GRADING & EROSION CONTROL PLAN
1400 S. 2ND STREET
SOUTH FRONT APARTMENTS
WILMINGTON TOWNSHIP NEW HANOVER COUNTY NORTH CAROLINA

PRELIMINARY DRAWING FOR REVIEW PURPOSES ONLY

MALPASS ENGINEERING & SURVEYING, P.C.
1134 SHIPYARD BOULEVARD
WILMINGTON, NORTH CAROLINA 28412
Phone 910-392-6243 Fax 910-392-5203 License No. C-2820

Owner: SOUTH FRONT LLC
10 S. CAROLINA DR.
WILMINGTON, NC 28403
PHONE: 910-251-5030

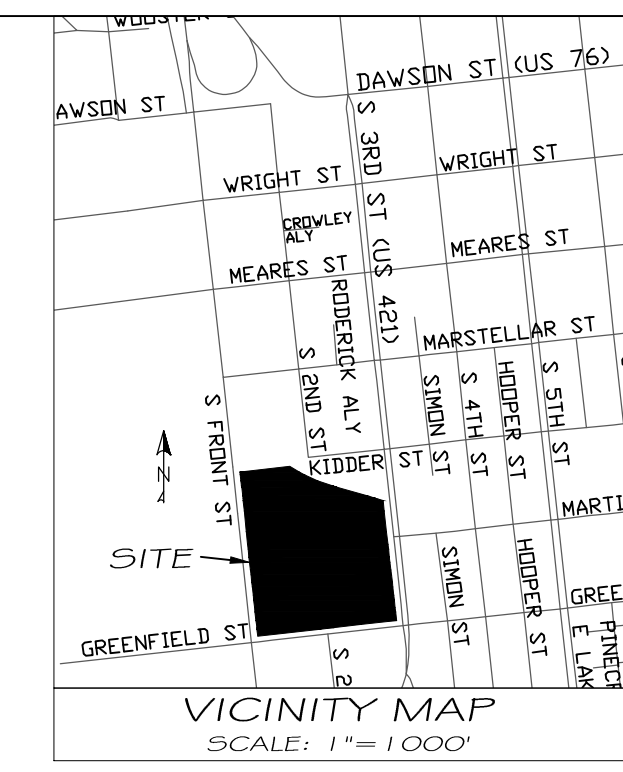
DATE: 3-16-11
SCALE: 1"=30'
DRAWN: JCB
CHECKED: JEM
PROJECT NO: 19B
SHEET NO: 2C
OF: 5

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TABLE DISCLOSING LOCATION OF FOUND PROPERTY CORNERS FROM SAME AS INDICATED BY BOOK 5510, PAGE 616

①	BASE CONTROL POINT	0.00
②	LINE CONTROL POINT	0.20
③	S20°41'44"W	0.07
④	S32°43'50"W	0.07
⑤	S01°43'37"E	0.18
⑥	S32°29'37"W	0.08
⑦	S52°29'42"W	0.18
⑧	S77°31'07"W	0.08
⑨	S85°34'56"E	0.36
⑩	S08°29'24"W	0.17

NOTE: THESE PROPERTY CORNERS WERE OBTAINED FROM AN Aerial SURVEY USING CONTROL SUBSTATION AS THE CONTROL BASE. AS SHOWN ON THIS PLAN, THESE CORNERS HEREIN ARE FROM BOOK 5510, PAGE 616.



LEGEND

[Symbol]	EXISTING SIDEWALK (TO REMAIN)
[Symbol]	PROPOSED SIDEWALK
[Symbol]	EX. IMPERVIOUS AREA TO OVERLAY (EXCLUDING PARKING)
[Symbol]	PROPOSED PERVIOUS CONCRETE BMP (CREDIT-60% IMPERVIOUS)
[Symbol]	PROPOSED PERVIOUS CONCRETE BMP (CREDIT-0% IMPERVIOUS)
[Symbol]	EXISTING TREE
[Symbol]	EXISTING TREE (TO BE REMOVED)
[Symbol]	EXISTING POWER/TRAFFIC POLE
[Symbol]	EXISTING NO PARKING SIGN
[Symbol]	EXISTING RAILROAD ARM
[Symbol]	PROPOSED GATE
[Symbol]	DRAINAGE AREA
[Symbol]	DRAINAGE FLOW ARROW
[Symbol]	INLET PROTECTION
[Symbol]	PROPOSED INFILTRATION TRENCH

NOTE: ALL RUNOFF WITHIN THE DESIGNATED DRAINAGE AREA FOR EACH BMP MUST BE DIRECTED TO THAT BMP.

BMP & INLET DRAINAGE AREAS	AREA (ACRES)
INFILTRATION BASIN BMP #1	0.412
INFILTRATION BASIN BMP #2	0.73
INFILTRATION BASIN BMP #3	0.417
INFILTRATION BASIN BMP #4	0.55
INFILTRATION BASIN BMP #5	0.45
INFILTRATION BASIN BMP #6	0.43
INFILTRATION TRENCH BMP #7	1.19
INFILTRATION TRENCH BMP #8	0.266
INFILTRATION TRENCH BMP #9	0.41
PERMEABLE PAVEMENT SYSTEM #1 BMP #10	0.116
EX. CB.#1A	0.54
EX. CB.#4A	0.16
EX. CB.#5A	0.20
EX. D.I.#1A	0.38
EX. D.I.#2A	0.40
EX. D.I.#3A	0.03
EX. D.I.#4A	0.21
CB-1	0.33
CB-2	0.40
CB-3	0.52
CB-4	0.35
CB-5	1.16
CB-6	0.16
CB-7	0.27
DI-1	0.13
DI-2	0.57
DI-3	0.09
DI-4	0.17
DI-5	0.46
DI-6	0.56
DRY POND #1	1.46

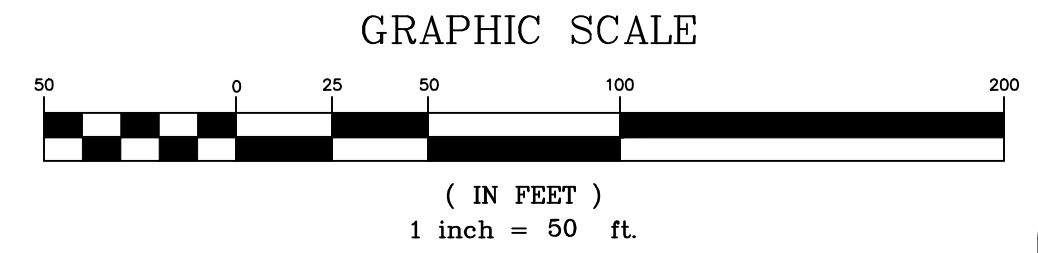
Approved Construction Plan

Name	Date
Planning	
Traffic	
Fire	

WILMINGTON
NORTH CAROLINA

Public Services • Engineering Division
APPROVED STORMWATER MANAGEMENT PLAN

Date: _____ Permit # _____
Signed: _____



REV NO.	DESCRIPTION	DATE
1	REVISED TO LAND DRAINAGE AREAS.	3-16-11
2	REVISED PER CITY OF WILMINGTON TO SHOW GREENFIELD ST DRIVEWAY AS CITY STANDARD & ADJUST PARKING SPACES 413-218 & 317-323. MOVED STORM PIPE ALONG SOUTHERN PORTION OF SITE.	4-20-11
3	REVISED PER CITY OF WILMINGTON.	5-10-11
4	REVISED PER CLIENT TO ADJUST LAYOUT TO ADD GUARD HOUSE.	6-7-11
5	REVISED PER CITY OF WILMINGTON TO NOT SHOW PROPOSED FENCING & ADJUST PARKING.	7-5-11
6	REVISED PER CITY OF WILMINGTON.	7-25-11
7	REVISED PER CITY OF WILMINGTON ENGINEERING DEPARTMENT.	8-11-11
8	REVISED PER CITY OF WILMINGTON FIRE & LIFE SAFETY.	8-12-11
9	REVISED TO ADD IMPERVIOUS AREA, REMOVE EXISTING IMPERVIOUS AREA, & SHOW EXISTING PERVIOUS CONCRETE BMP AREAS.	9-22-12
10	REVISED TO ADD IMPERVIOUS AREA, REMOVE EXISTING IMPERVIOUS AREA, SHOW EXISTING PERVIOUS CONCRETE BMP AREAS, & ADJUST DRAINAGE AREAS.	9-12-12
11	REVISED PER CITY OF WILMINGTON ENGINEERING.	9-18-12
12	REVISED PER CLIENT TO ADD DRIVEWAY OFF GREENFIELD ST. & RELOCATE 3 PARKING SPACES.	6-7-17

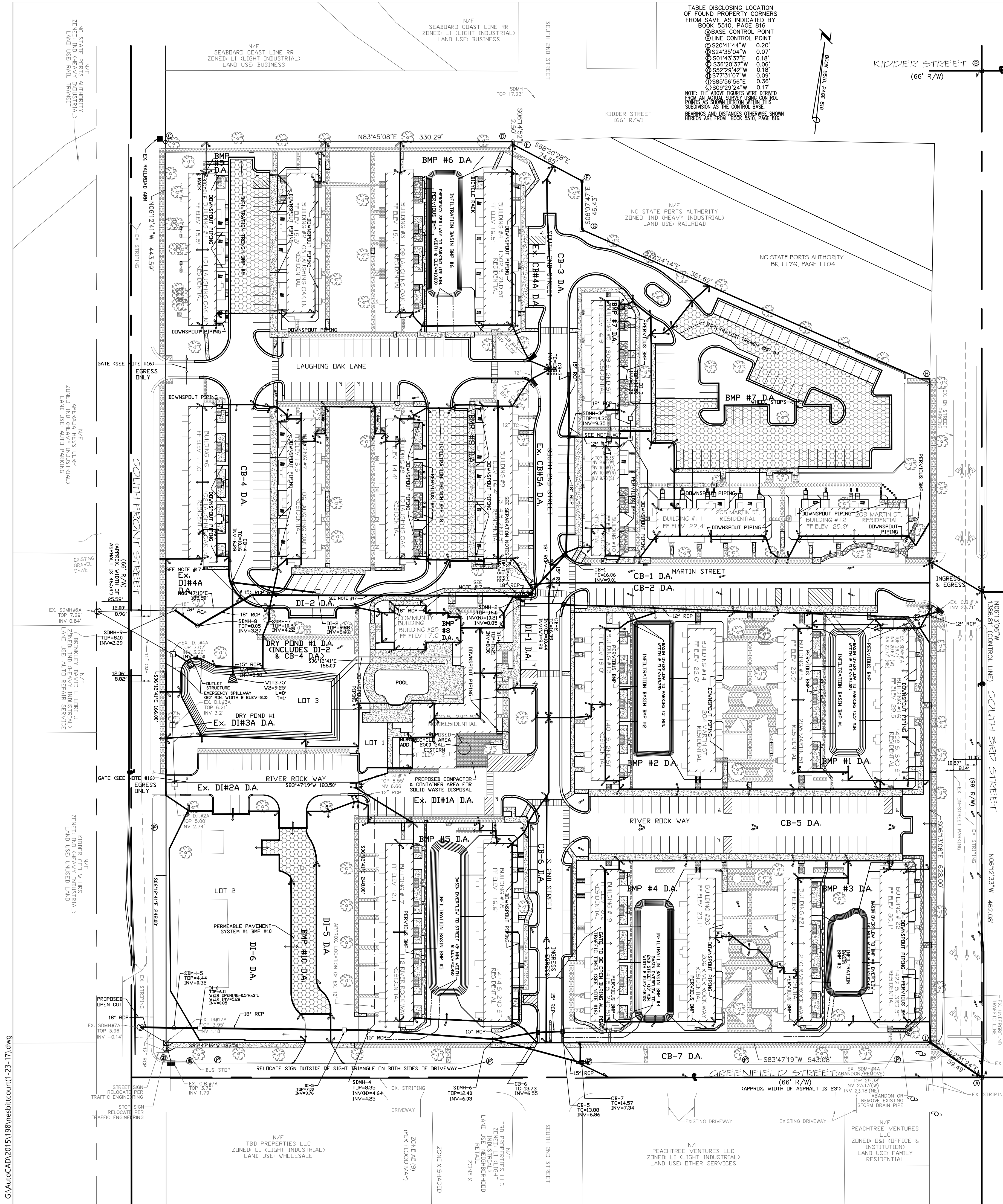
DRAINAGE AREA MAP
1400 S. 2ND STREET
WILMINGTON TOWNSHIP NEW HANOVER COUNTY NORTH CAROLINA

PRELIMINARY DRAWING FOR REVIEW PURPOSES ONLY

MALPASS ENGINEERING & SURVEYING, P.C.
1134 SHIPYARD BOULEVARD
WILMINGTON, NORTH CAROLINA 28412
Phone 910-392-6243 License No. C-2520
Fax 910-392-5203

Owner: SOUTH FRONT LLC
10 S. CAROLINA DR.
WILMINGTON, NC 28403
PHONE: 910-251-5030

DATE: 3-10-11
SCALE: 1"=50'
DRAWN: JCB
CHECKED: JEM
PROJECT NO: 198
SHEET NO: 20
OF: 5



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TABLE DISCLOSING LOCATION OF FOUND PROPERTY CORNERS FROM SAME AS INDICATED BY BOOK 5510, PAGE 616

1	5204144" W	0.20'
2	5243504" W	0.07'
3	5014337" E	0.18'
4	5243504" W	0.07'
5	5222942" W	0.18'
6	5773107" W	0.09'
7	5222942" W	0.18'
8	5092924" W	0.17'

NOTE: ALL PROPERTY CORNERS SHOWN HEREON ARE FROM BOOK 5510, PAGE 616.

INTERIOR LANDSCAPING ISLANDS

LANDSCAPE ISLAND	TOTAL AREA (SF)	IMPERVIOUS AREA (SF)	PERCENT IMPERVIOUS
LI-1	220.81	0	0
LI-2	408.44	99.64	14.60
LI-3	430.72	99.19	13.74
LI-4	582.56	0	0
LI-5	395.17	0	0
LI-6	327.08	0	0
LI-7	322.98	0	0
LI-8	326.54	44.83	13.73
LI-9	374.69	0	0
LI-10	541.93	37.34	6.89
LI-11	216.61	0	0
LI-12	216.21	0	0
LI-13	378.93	0	0
LI-14	345.10	0	0
LI-15	436.98	0	0
LI-16	302.57	0	0
LI-17	996.09	0	0
LI-18	475.55	0	0
LI-19	352.38	0	0
LI-20	250.18	0	0
LI-21	220.63	0	0
LI-22	216.61	0	0
LI-23	216.61	0	0
LI-24	330.54	47.30	13.85
LI-25	241.40	0	0
LI-26	218.44	0	0
LI-27	282.14	0	0
LI-28	218.06	0	0
LI-29	218.06	0	0
LI-30	543.08	36.43	10.62
LI-31	216.66	0	0
LI-32	349.39	0	0
LI-33	419.94	60.15	14.32
LI-34	396.56	48.82	12.31
LI-35	934.05	4.15	0.44
LI-36	376.81	0	0
LI-37	330.01	0	0
LI-38	255.45	0	0
LI-39	280.64	0	0
LI-40	224.71	0	0
LI-41	235.65	0	0
LI-42	222.63	0	0

PARKING SPACE SIZE CHART

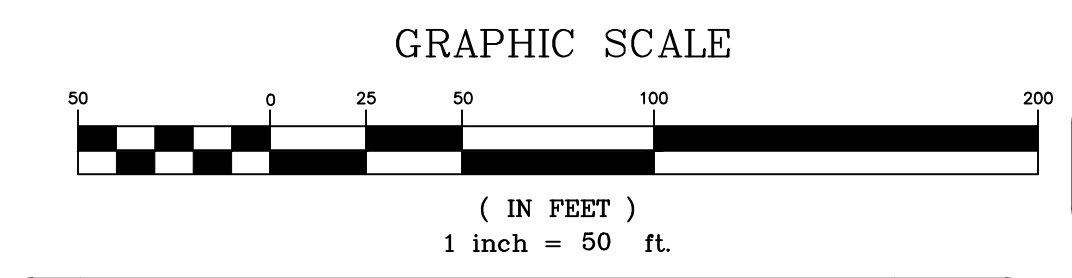
SPACE #	DIMENSION
1-8	8.5' x 22'
9-22	8.5' x 18' (INCLUDES 2' OVERHANG)
23	9' x 18' (INCLUDES 2' OVERHANG)
24-42	8.5' x 18' (INCLUDES 2' OVERHANG)
43	9' x 18' (INCLUDES 2' OVERHANG)
44-60	8.5' x 18' (INCLUDES 2' OVERHANG)
61	9' x 18' (INCLUDES 2' OVERHANG)
62-75	8.5' x 18' (INCLUDES 2' OVERHANG)
76-77	9' x 18' (INCLUDES 2' OVERHANG)
78-108	8.5' x 18' (INCLUDES 2' OVERHANG)
109-131	8.5' x 18' (INCLUDES 2' OVERHANG)
132	9' x 18' (INCLUDES 2' OVERHANG)
133-143	8.5' x 18' (MIN)
144-210	8.5' x 18'
211-231	8.5' x 18'
232-247	8.5' x 18' (INCLUDES 2' OVERHANG)
248	9' x 18' (INCLUDES 2' OVERHANG)
249-290	8.5' x 18' (INCLUDES 2' OVERHANG)
291-294	8.5' x 18'
295-296	9' x 18'
297-302	8.5' x 18'
303	9' x 18'
304-316	8.5' x 18'
317-320	8.5' x 18'
321	8.5' x 18' (INCLUDES 2.5' OVERHANG)
322-338	8.5' x 18' (INCLUDES 3' OVERHANG)
339-340	8.5' x 22'

LEGEND

- EXISTING SIDEWALK (TO REMAIN)
- PROPOSED SIDEWALK
- EX. IMPERVIOUS AREA TO OVERLAY (EXCLUDING PARKING)
- PROPOSED PERVIOUS CONCRETE BMP (CREDIT-60% IMPERVIOUS)
- PROPOSED PERVIOUS CONCRETE BMP (CREDIT-0% IMPERVIOUS)
- EXISTING TREE
- EXISTING TREE (TO BE REMOVED)
- EXISTING POWER/TRAFFIC POLE
- EXISTING NO PARKING SIGN
- EXISTING RAILROAD ARM
- PROPOSED GATE
- PROPOSED LANDSCAPE ISLAND



NOTE: HANDICAP RAMPS SHALL BE PROVIDED AT ALL PARKING AREAS TO SIDEWALK CONNECTIONS INTERNAL TO THE SITE. PARKING SPACES LESS THAN 8.5' IN WIDTH BY 18' IN LENGTH SHALL BE SIGNED ALERTING DRIVERS TO THE LIMITED SIZE.



REV. NO.	DESCRIPTION	DATE
1	REVISED PER CITY OF WILMINGTON TO SHOW GREENFIELD ST. DRIVEWAY AS CITY STANDARD & ADJUST PARKING SPACES #132-210 & 317-323.	4-21-11
2	REVISED PER CITY OF WILMINGTON.	5-13-11
3	REVISED PER CLIENT TO ADJUST LAYOUT TO ADD GARAGE HOUSE.	6-7-11
4	REVISED PER CITY OF WILMINGTON TO NOT SHOW PROPOSED FENCING & ADJUST PARKING.	7-5-11
5	REVISED PER NC DOT TO ADD SIGNS.	7-29-11
6	REVISED PER CITY OF WILMINGTON TO ADD SIGNS.	8-4-11
7	REVISED PER CITY OF WILMINGTON TO ADD FIRE & LIFE SAFETY.	8-12-11
8	REVISED PER CLIENT TO ADD DRIVEWAY OFF GREENFIELD ST. & RELOCATE 3 PARKING SPACES.	6-7-17

PARKING DIMENSION PLAN
1400 S. 2ND STREET
SOUTH FRONT APARTMENTS
WILMINGTON TOWNSHIP NEW HANOVER COUNTY NORTH CAROLINA

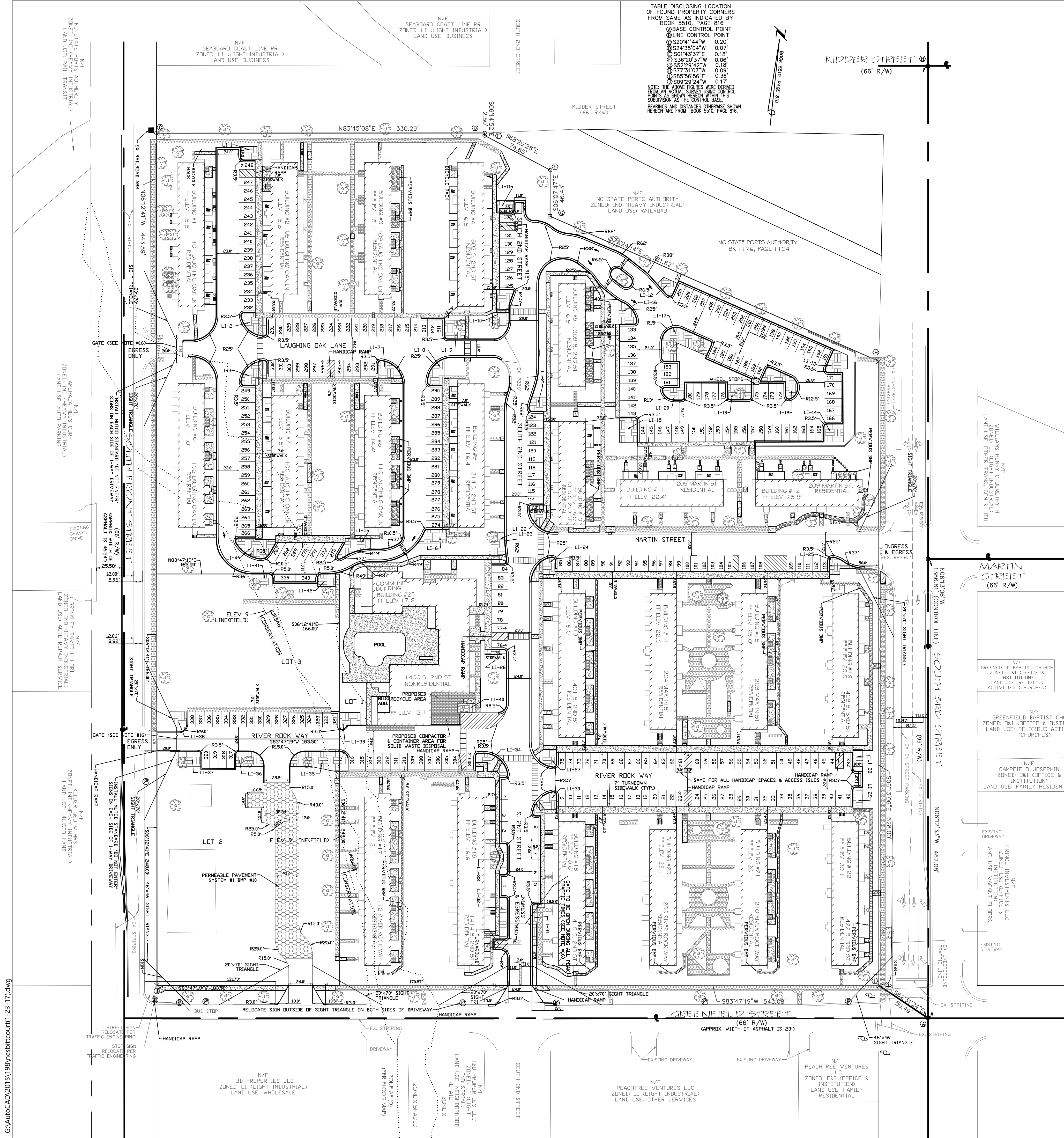
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SCALE: 1"=50'
DRAWN: JCB
CHECKED: JEM
PROJECT NO: 198

PRELIMINARY DRAWING FOR REVIEW PURPOSES ONLY

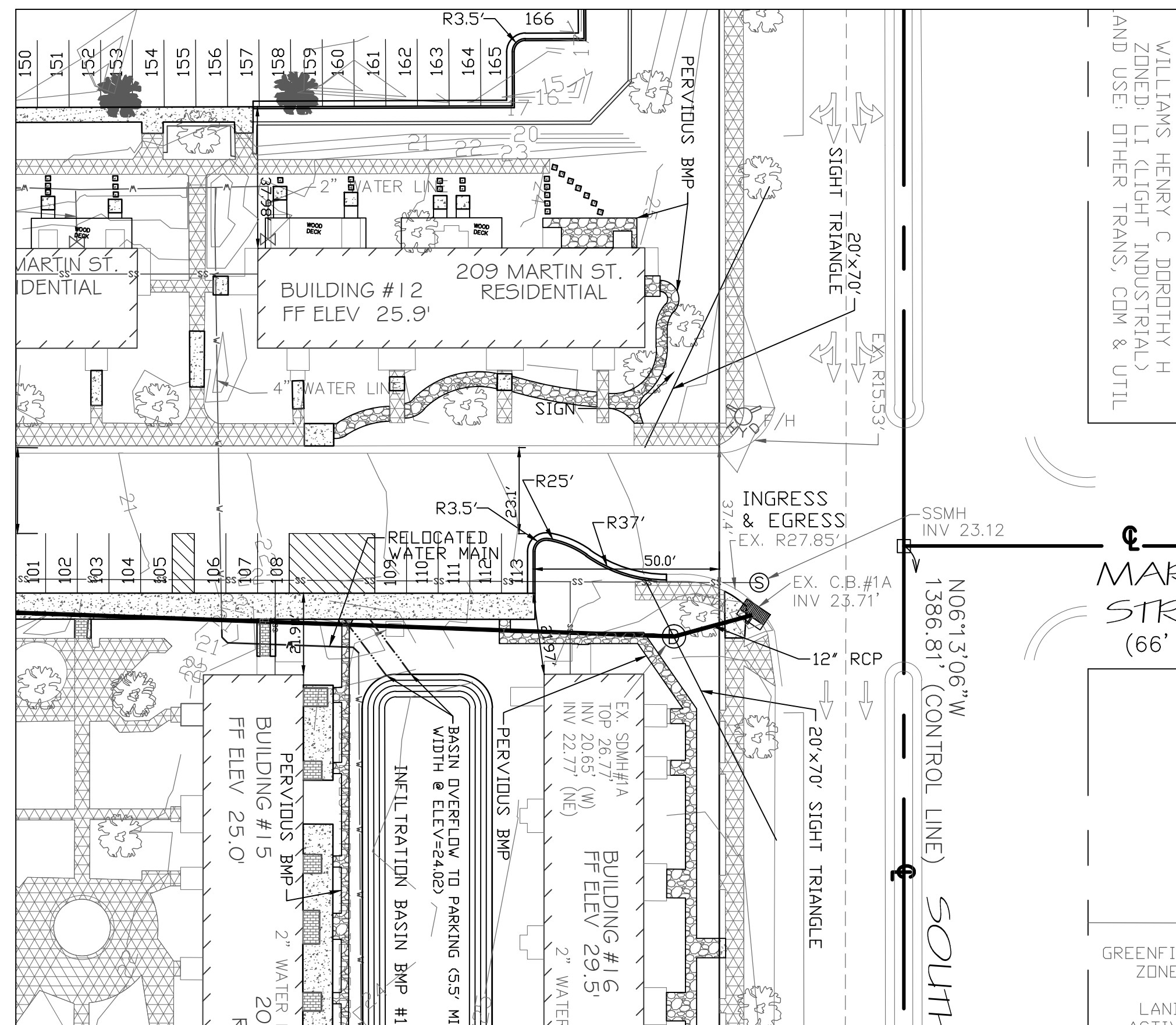
MALPASS ENGINEERING, P.C.
1134 SHIPYARD BOULEVARD
WILMINGTON, NORTH CAROLINA 28412
Phone 910-392-6343
Fax 910-392-5203 License No. C-2320

Owner: SOUTH FRONT LLC
10 S. CARDINAL DR.
WILMINGTON, NC 28403
PHONE: 910-251-5030

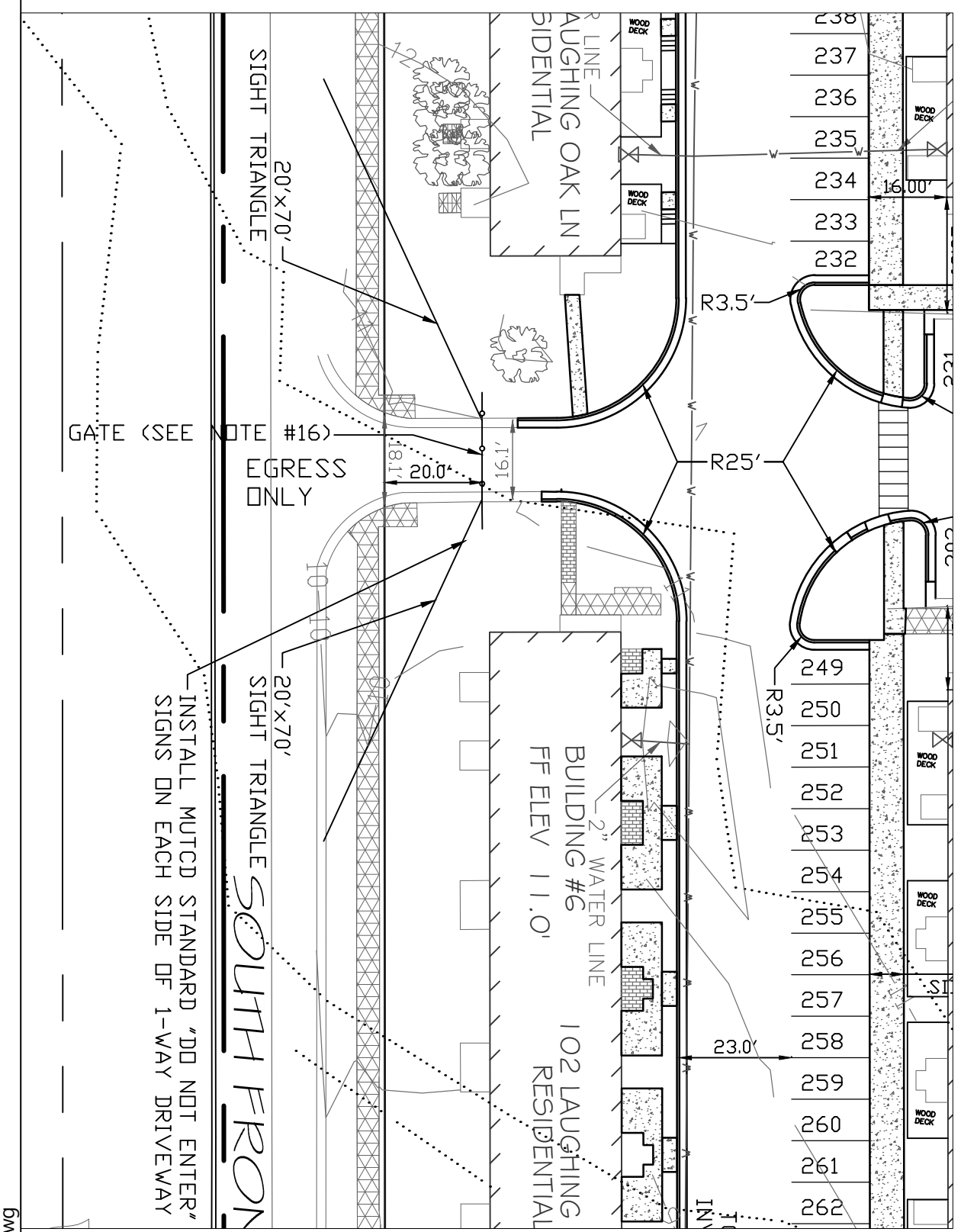
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OF: 5



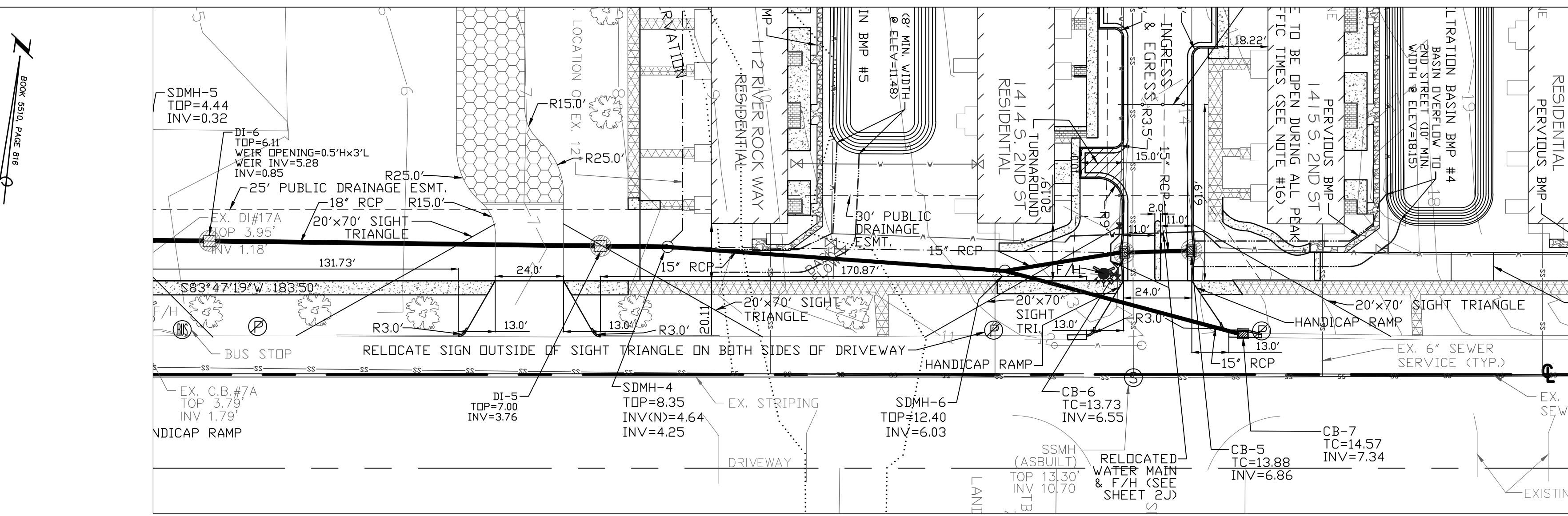
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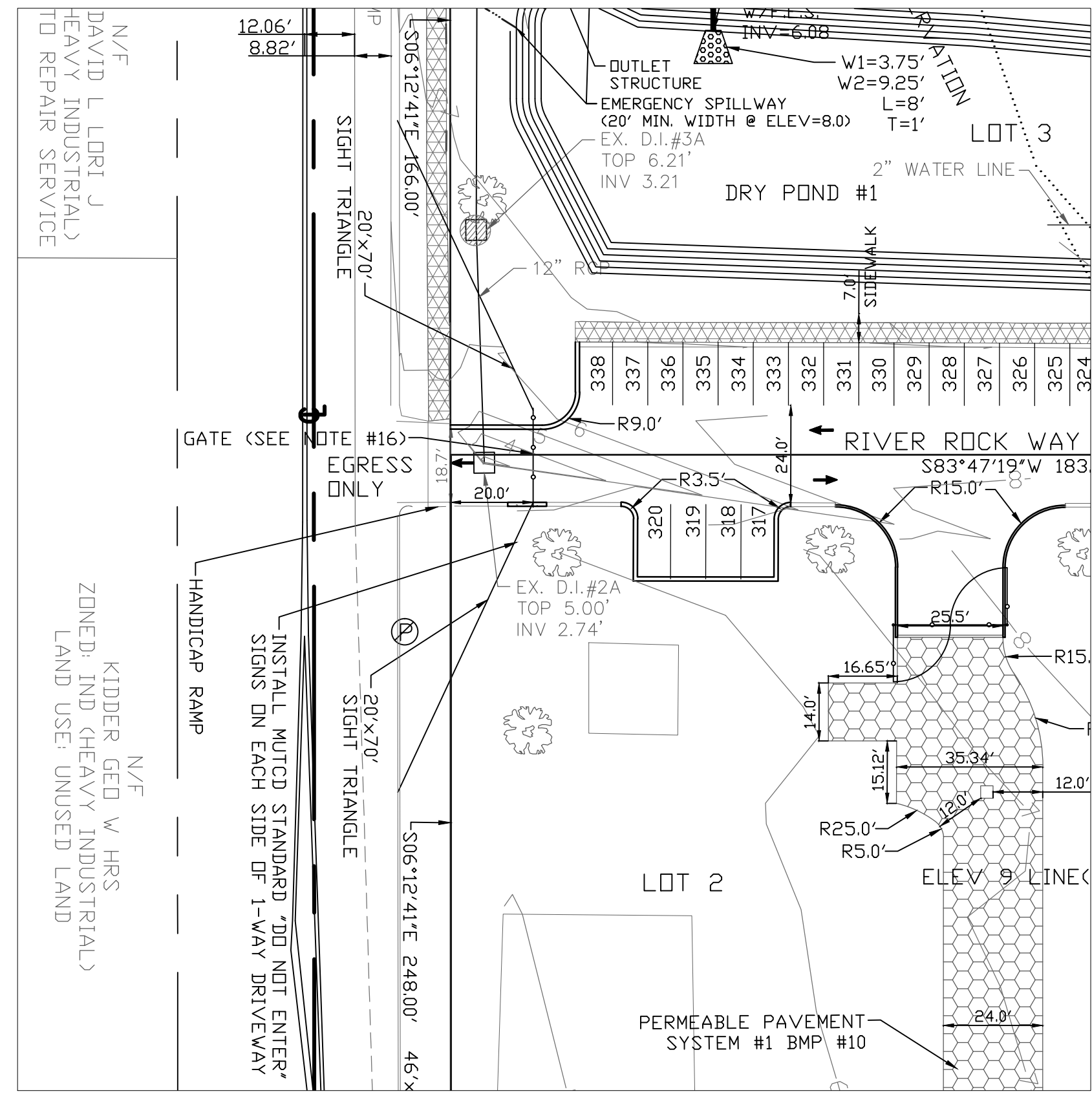
S. 3RD STREET & MARTIN STREET-INGRESS & EGRESS
SCALE: 1"=30'



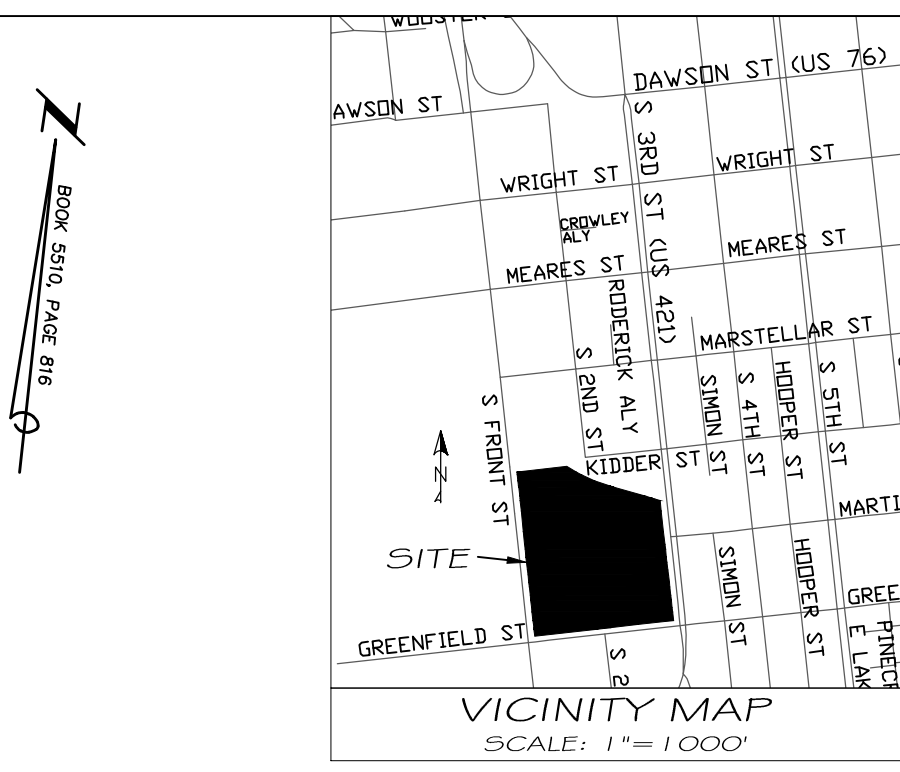
S. FRONT STREET & LAUGHING OAK LANE-EGRESS ONLY
SCALE: 1"=30'



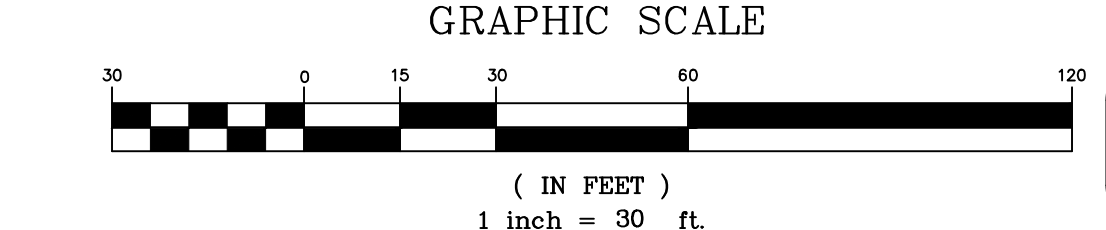
GREENFIELD STREET & S. 2ND STREET-INGRESS & EGRESS
SCALE: 1"=30'



S. FRONT STREET & RIVER ROCK WAY-EGRESS ONLY
SCALE: 1"=30'



- LEGEND**
- EXISTING SIDEWALK (TO REMAIN)
 - PROPOSED SIDEWALK
 - EX. IMPERVIOUS AREA TO OVERLAY (EXCLUDING PARKING)
 - PROPOSED PERVIOUS CONCRETE (NO CREDIT-100% IMPERVIOUS)
 - PROPOSED PERVIOUS CONCRETE BMP (CREDIT-60% IMPERVIOUS)
 - PROPOSED PERVIOUS CONCRETE BMP (CREDIT-0% IMPERVIOUS)
 - EXISTING TREE
 - EXISTING TREE (TO BE REMOVED)
 - EXISTING SANITARY SEWER
 - EXISTING WATER LINE
 - EXISTING WATER VALVE
 - EXISTING CURB INLET
 - EXISTING FIRE HYDRANT
 - EXISTING POWER/TRAFFIC POLE
 - EXISTING NO PARKING SIGN
 - EXISTING RAILROAD ARM
 - PROPOSED GATE
 - EXISTING CONTOUR
 - PROPOSED UTILITY EASEMENT
 - PROPOSED STORM DRAIN PIPE
 - PROPOSED INLET PROTECTION
 - EXISTING STORM DRAIN PIPE (NOT SHOWN)
 - APPROX. LOCATION BASED ON



REV. NO.	DESCRIPTION	DATE
1	REVISED PER CITY OF WILMINGTON TO SHOW GREENFIELD ST. DRIVEWAY AS CITY STANDBY & ADJUST PARKING SPACES #132-210 & 317-283. REVISED STORM PIPE ALONG SOUTHERN PORTION OF SITE.	4-21-11
2	REVISED PER CITY OF WILMINGTON.	5-13-11
3	REVISED PER CLIENT TO ADJUST LAYOUT TO ADD GUARD HOUSE.	6-7-11
4	REVISED PER CITY OF WILMINGTON TO NOT SHOW PROPOSED FENCING & ADJUST PARKING.	7-5-11
5	REVISED PER CITY OF WILMINGTON.	7-29-11
6	REVISED PER MCDOT TO ADD SIGNS.	8-4-11
7	REVISED PER CITY OF WILMINGTON FIRE & LIFE SAFETY.	8-12-11
8	REVISED PER CLIENT TO ADD DRIVEWAY OFF GREENFIELD ST. & RELOCATE 3 PARKING SPACES.	6-7-17

PARKING DIMENSION PLAN
1400 S. 2ND STREET
SOUTH FRONT APARTMENTS
WILMINGTON TOWNSHIP NEW HANOVER COUNTY NORTH CAROLINA

PRELIMINARY DRAWING FOR REVIEW PURPOSES ONLY

MALPASS ENGINEERING, P.C.
1134 SHIPYARD BOULEVARD
WILMINGTON, NORTH CAROLINA 28412
Phone 910-392-5243 Fax 910-392-5203 License No. C-2320

Owner: SOUTH FRONT LLC
10 S. CARDINAL DR.
WILMINGTON, NC 28403
PHONE: 910-251-5030

DATE: 3-10-11
SCALE: 1"=30'
DRAWN: JCB
CHECKED: JEM
PROJECT NO: 19B
SHEET NO: 2F
OF: 5

Approved Construction Plan

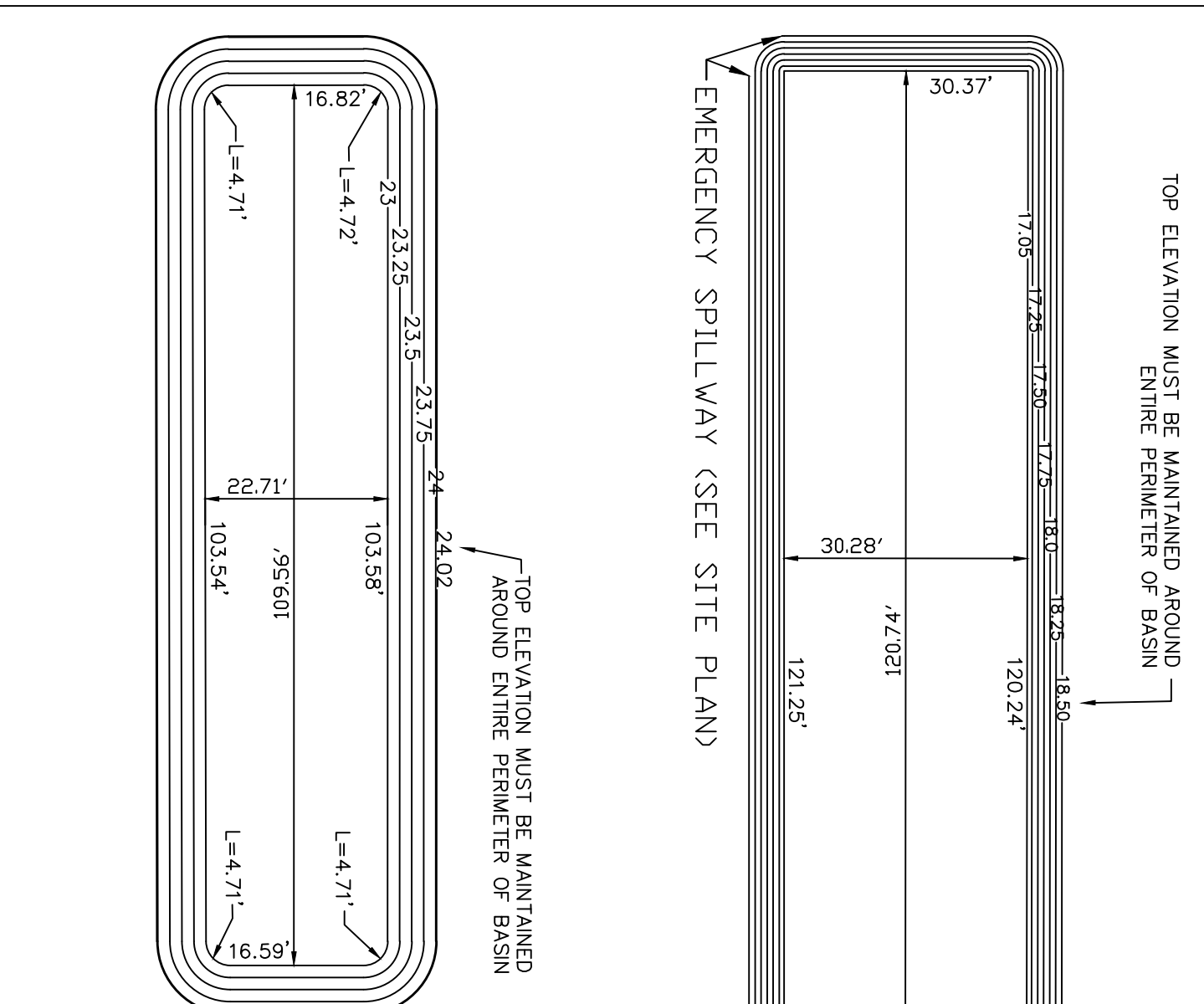
Name _____ Date _____

Planning _____

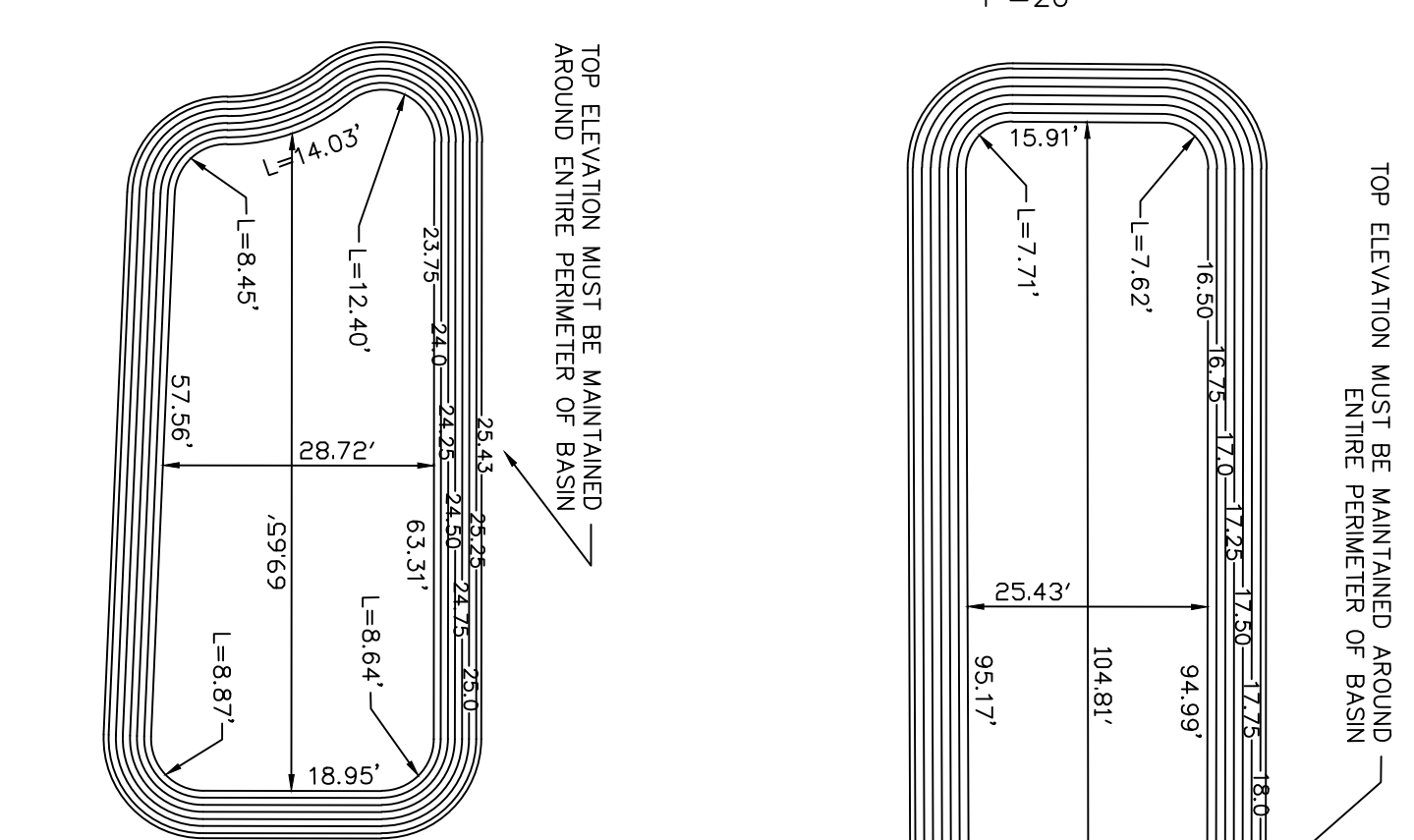
Traffic _____

Fire _____

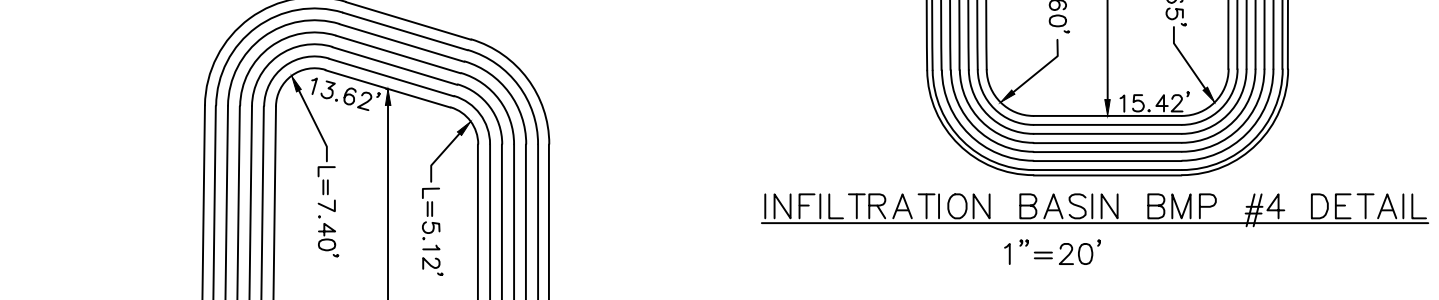
WILMINGTON
NORTH CAROLINA
Public Services • Engineering Division
APPROVED STORMWATER MANAGEMENT PLAN
Date: _____ Permit # _____
Signed: _____



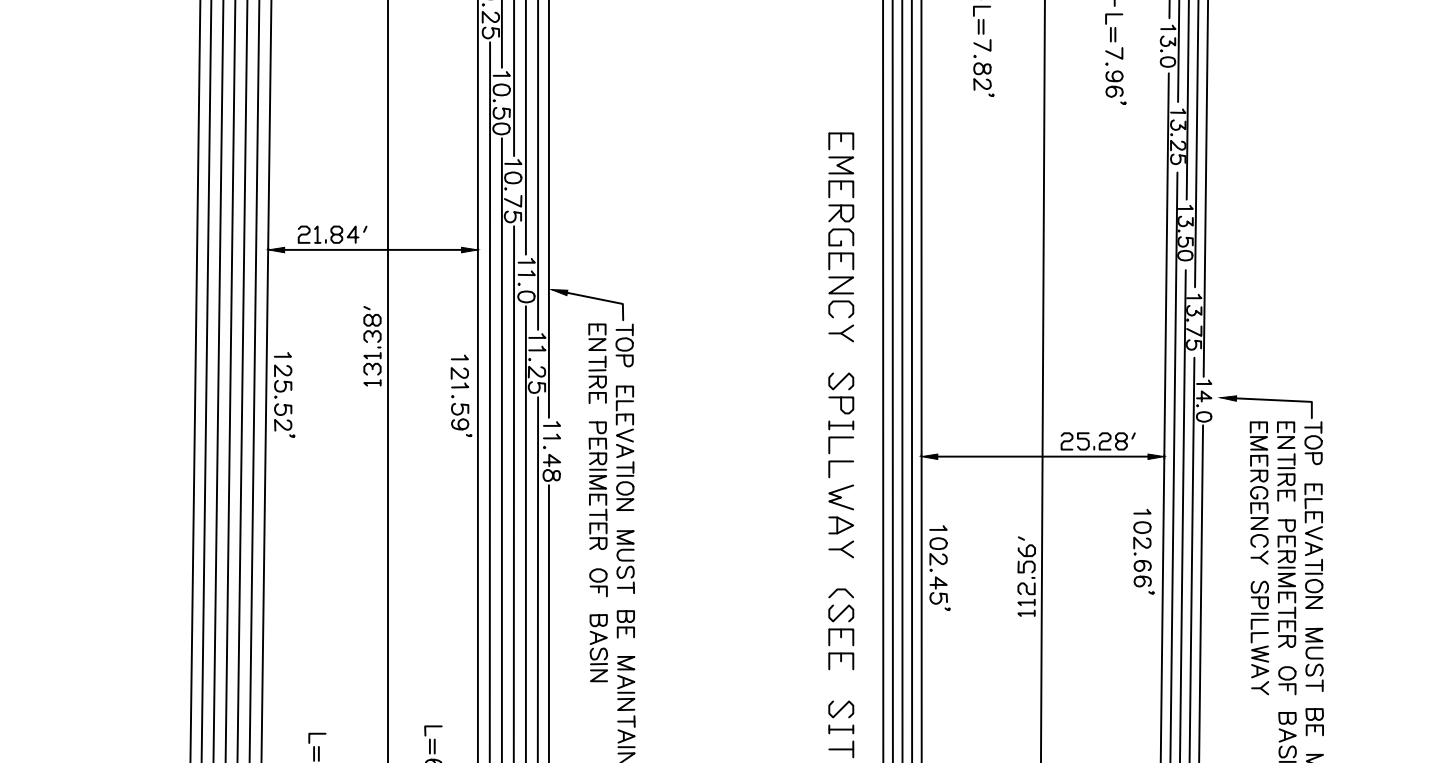
INFILTRATION BASIN BMP #1 DETAIL
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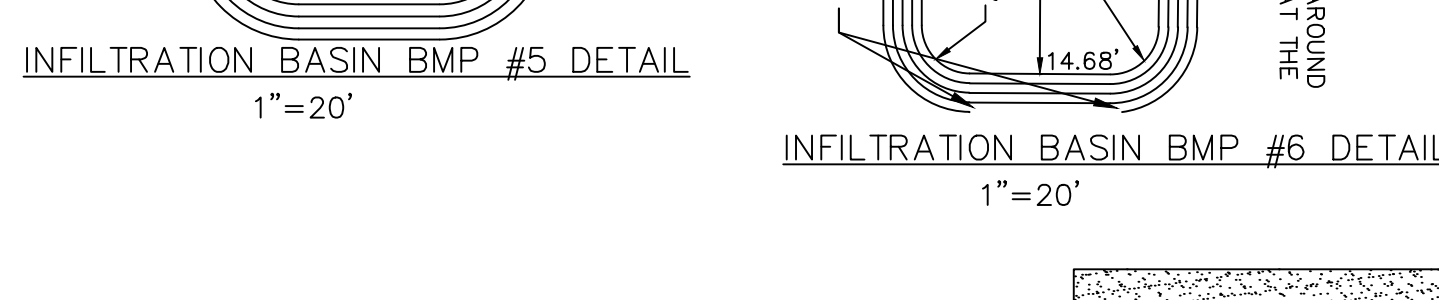
INFILTRATION BASIN BMP #2 DETAIL
1"=20'



INFILTRATION BASIN BMP #3 DETAIL
1"=20'



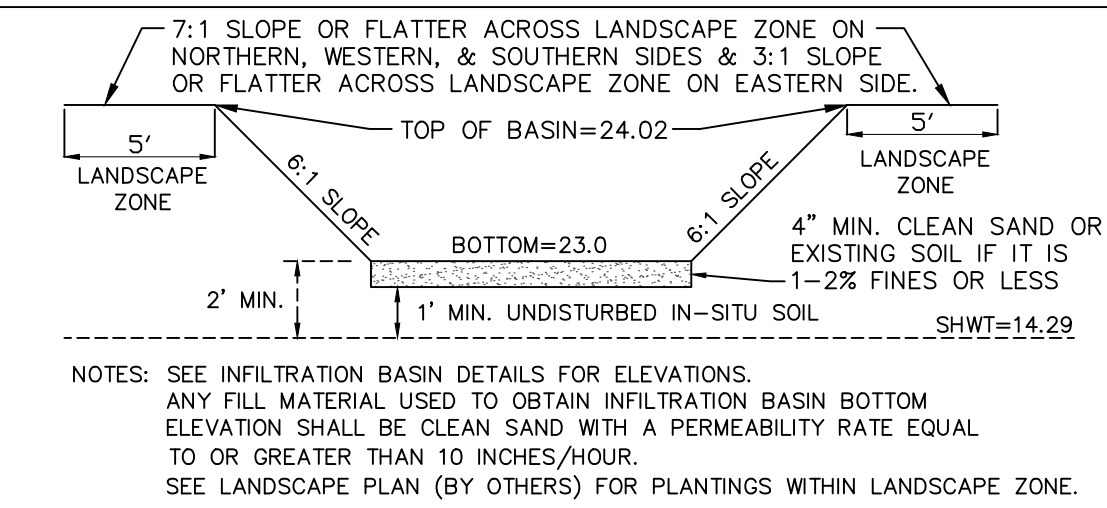
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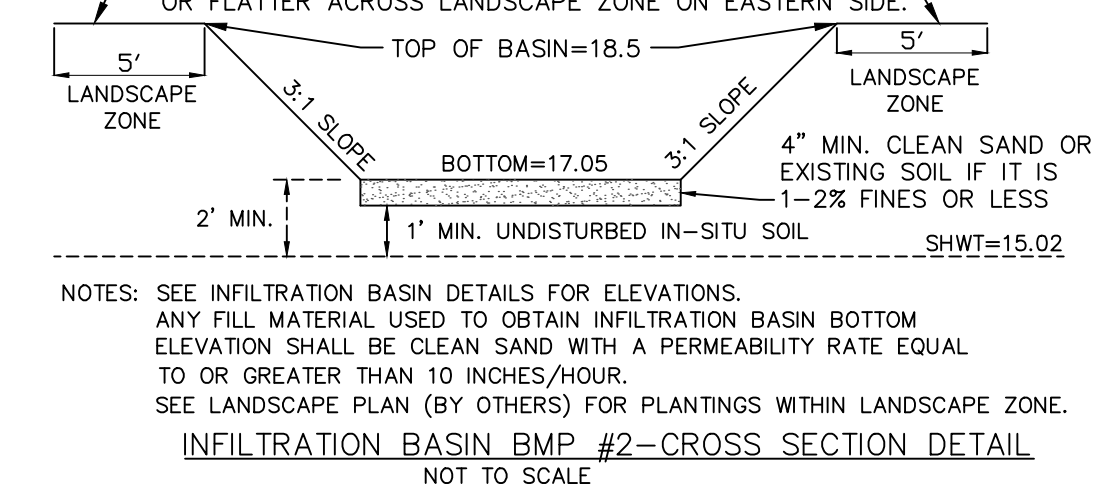
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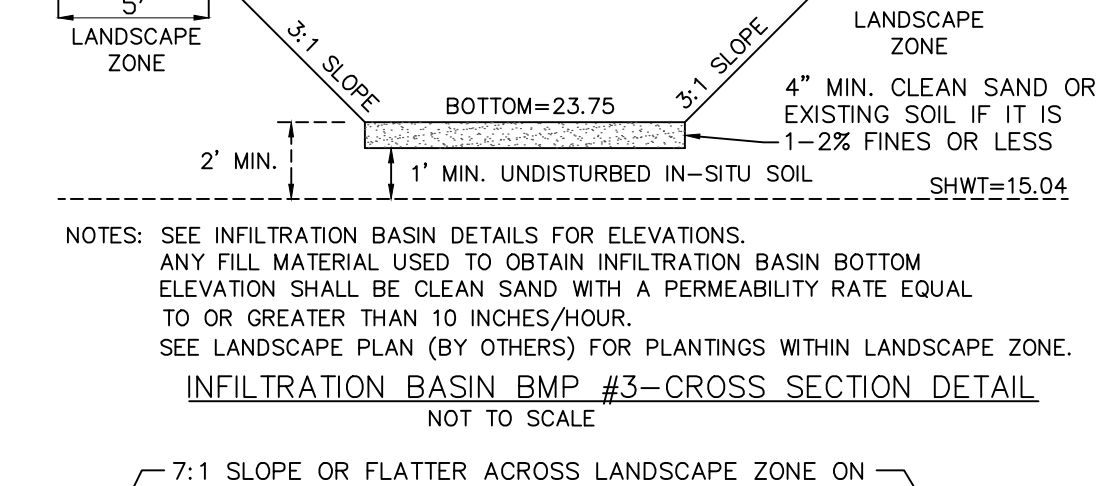
INFILTRATION BASIN BMP #6 DETAIL
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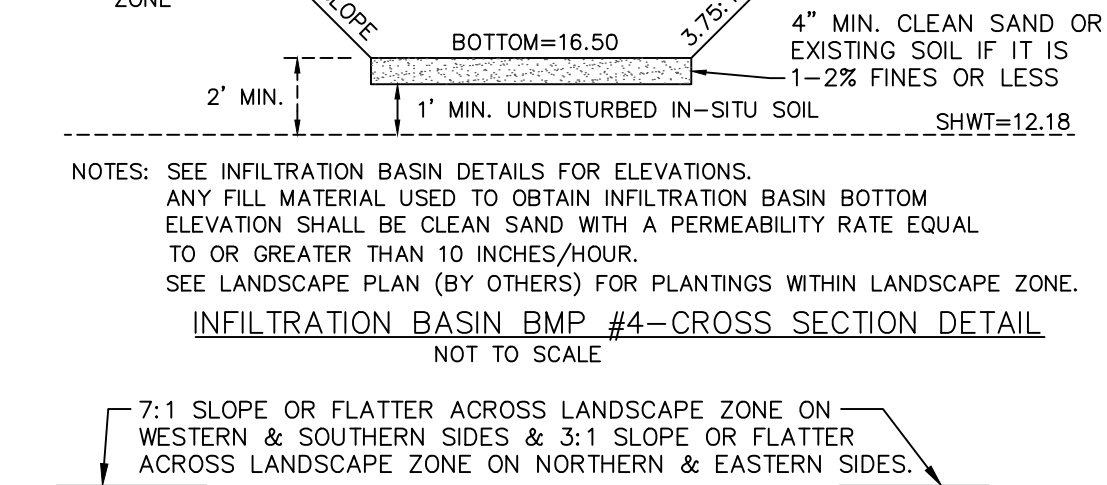
INFILTRATION BASIN BMP #1 - CROSS SECTION DETAIL
NOT TO SCALE



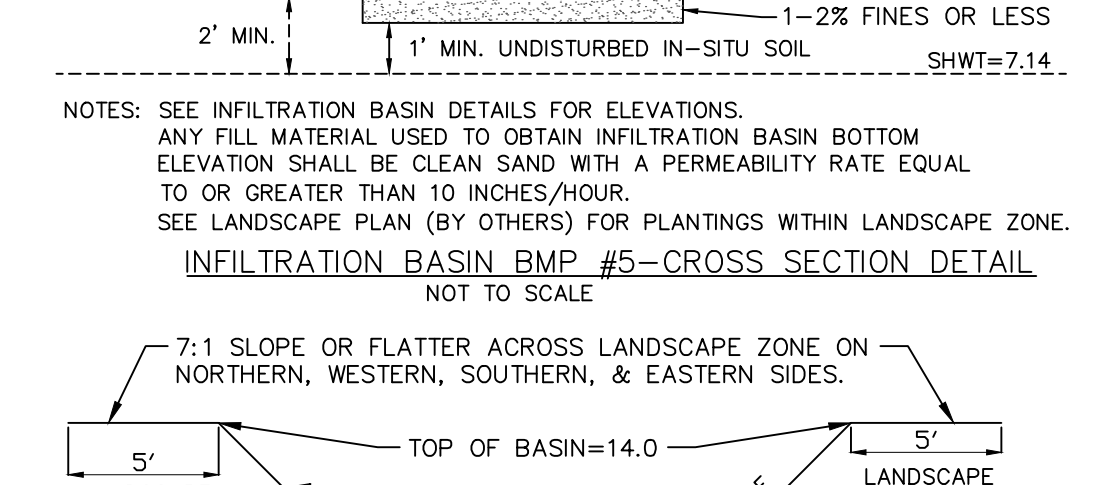
INFILTRATION BASIN BMP #2 - CROSS SECTION DETAIL
NOT TO SCALE



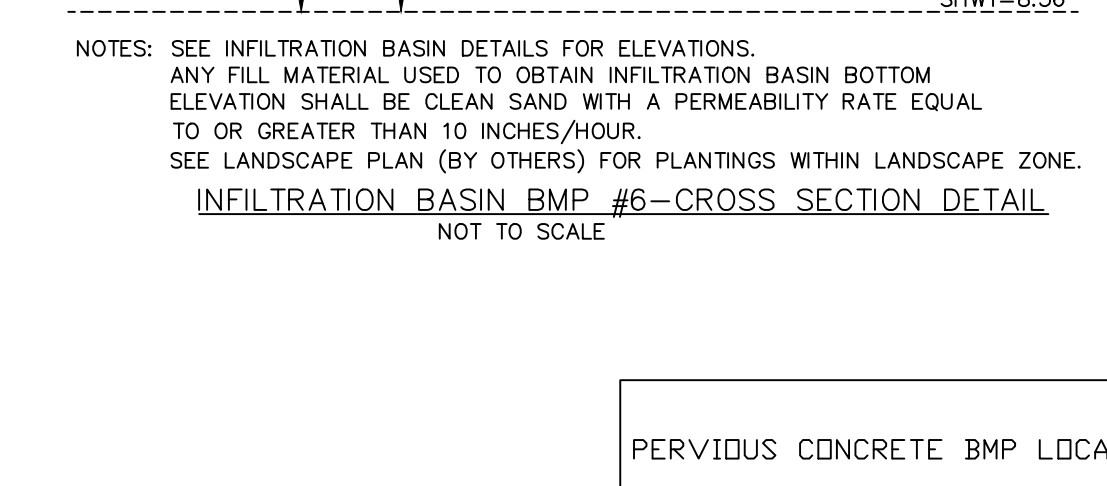
INFILTRATION BASIN BMP #3 - CROSS SECTION DETAIL
NOT TO SCALE



INFILTRATION BASIN BMP #4 - CROSS SECTION DETAIL
NOT TO SCALE



INFILTRATION BASIN BMP #5 - CROSS SECTION DETAIL
NOT TO SCALE



INFILTRATION BASIN BMP #6 - CROSS SECTION DETAIL
NOT TO SCALE

ELEV. (FT)	AREA (SQ. FT.)	INCREMENTAL VOLUME (CU. FT.)	CUMULATIVE VOLUME (CU. FT.)
23.0	2,480.01	0	0
23.25	2,876.15	669.52	669.62
23.50	3,286.44	770.32	1,439.84
23.75	3,710.86	874.66	2,314.50
24.0	4,149.41	982.53	3,297.03
24.25	4,615.11	83.35	3,380.38

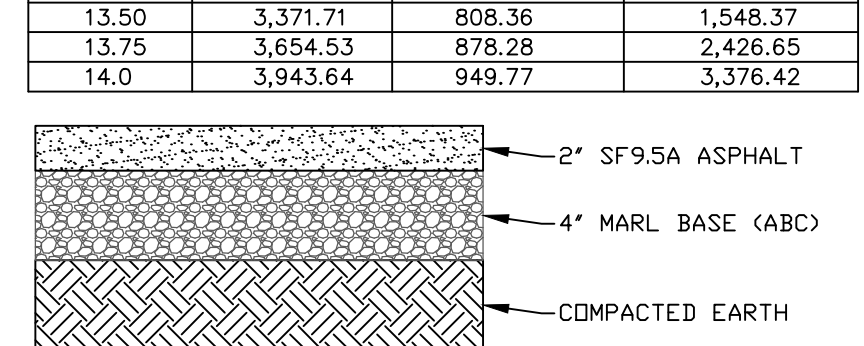
ELEV. (FT)	AREA (SQ. FT.)	INCREMENTAL VOLUME (CU. FT.)	CUMULATIVE VOLUME (CU. FT.)
17.05	3,656.11	0	0
17.25	3,838.48	749.46	749.46
17.50	4,069.62	988.51	1,737.97
17.75	4,304.30	1,046.74	2,784.71
18.0	4,542.51	1,105.85	3,890.56
18.25	4,784.26	1,165.85	5,056.41
18.50	5,029.54	1,226.72	6,283.13

ELEV. (FT)	AREA (SQ. FT.)	INCREMENTAL VOLUME (CU. FT.)	CUMULATIVE VOLUME (CU. FT.)
23.75	2,011.26	0	0
24.0	2,157.19	521.06	521.06
24.25	2,306.66	557.98	1,079.04
24.50	2,459.65	595.79	1,674.83
24.75	2,616.19	634.48	2,309.31
25.0	2,776.25	674.05	2,983.36
25.25	2,939.85	714.51	3,697.87
25.43	3,059.83	539.97	4,237.84

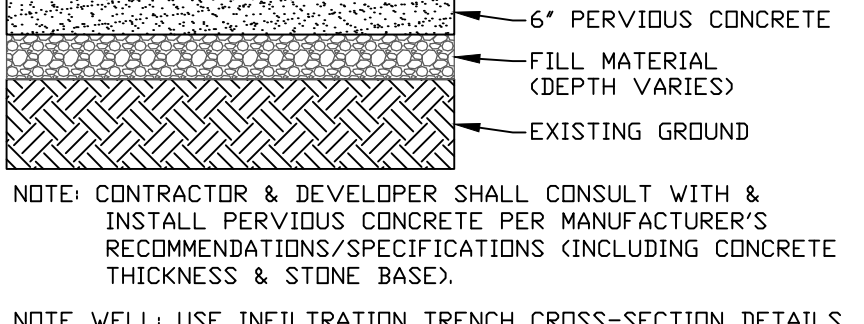
ELEV. (FT)	AREA (SQ. FT.)	INCREMENTAL VOLUME (CU. FT.)	CUMULATIVE VOLUME (CU. FT.)
16.50	2,644.62	0	0
16.75	2,883.71	691.04	691.04
17.0	3,128.32	751.50	1,442.54
17.25	3,378.45	813.35	2,255.89
17.50	3,634.11	876.57	3,132.46
17.75	3,895.29	941.17	4,073.63
18.0	4,161.99	1,007.16	5,080.79
18.15	4,324.66	636.50	5,717.29

ELEV. (FT)	AREA (SQ. FT.)	INCREMENTAL VOLUME (CU. FT.)	CUMULATIVE VOLUME (CU. FT.)
10.0	2,863.92	0	0
10.25	3,244.66	763.55	763.55
10.50	3,634.82	859.91	1,623.46
10.75	4,035.01	958.73	2,582.19
11.0	4,445.00	1,060.00	3,642.19
11.25	4,864.82	1,163.73	4,805.92
11.48	5,259.72	1,164.32	5,970.24

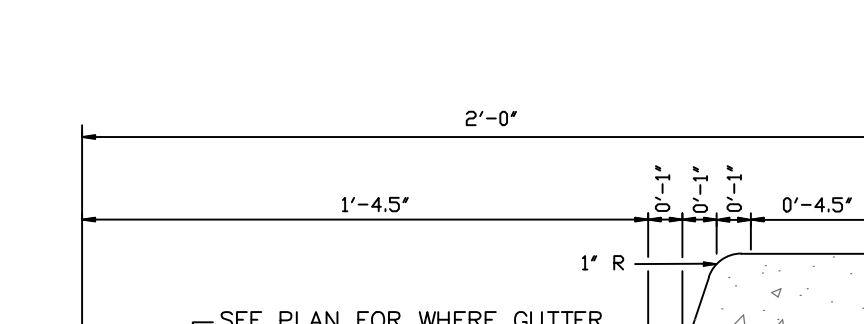
ELEV. (FT)	AREA (SQ. FT.)	INCREMENTAL VOLUME (CU. FT.)	CUMULATIVE VOLUME (CU. FT.)
13.0	2,824.92	0	0
13.25	3,095.17	740.01	740.01
13.50	3,371.71	808.36	1,548.37
13.75	3,654.53	878.28	2,426.65
14.0	3,943.64	949.77	3,376.42



ASPHALT PAVEMENT DETAIL
NOT TO SCALE



PERVIOUS CONCRETE (100% IMPERVIOUS) DETAIL
NOT TO SCALE



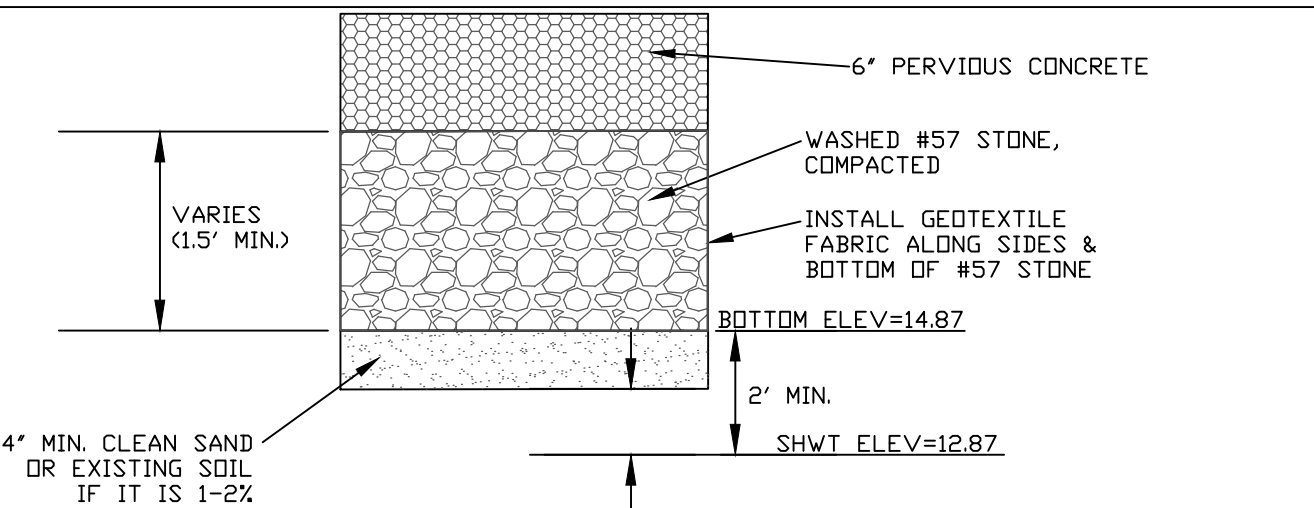
STANDARD CURB SECTION TYPE "A"
NOT TO SCALE

PERVIOUS CONCRETE BMP LOCATION	SHWT ELEVATION (FT)	BOTTOM OF CONCRETE ELEVATION (FT)
EAST OF BUILDING #16	19.44	>24.0
EAST OF BUILDING #15	14.29	>22.5
EAST OF BUILDING #13	15.92	>17.25
EAST OF BUILDING #22	19.07	>27.0
EAST OF BUILDING #21	15.04	>24.0
SOUTH OF BUILDING #20	15.71	>19.50
EAST OF BUILDING #19	12.18	>15.0
EAST OF BUILDING #17	7.14	>9.14
NORTH, EAST, & SOUTH OF BUILDING #12	16.08	>22.0
EAST OF BUILDINGS #5 & 10	12.50	>14.50
EAST OF BUILDING #3	8.56	>14.0
EAST OF BUILDING #8	8.64	>12.0

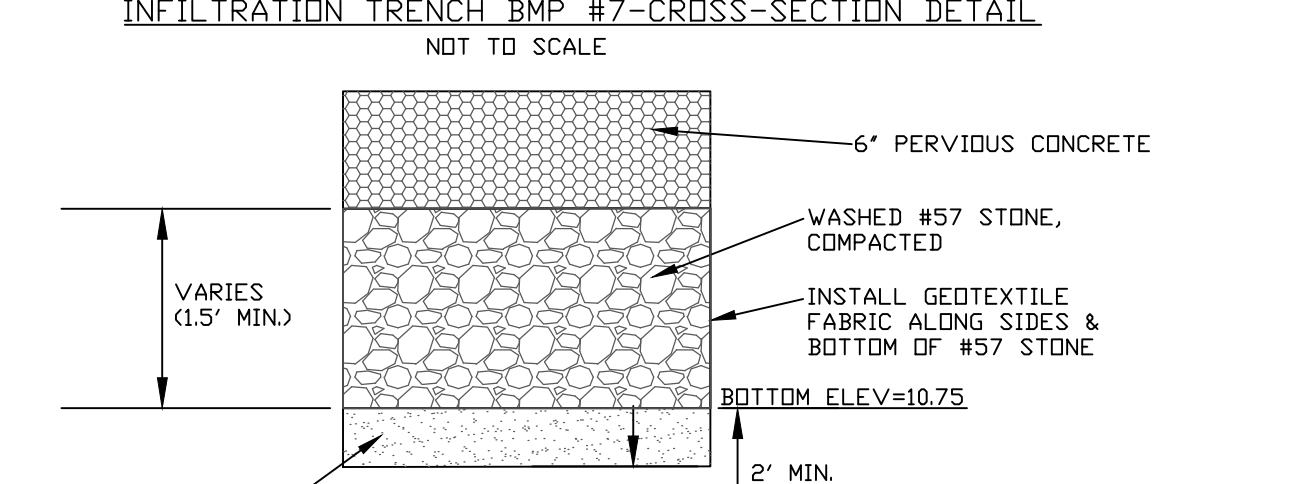
UTILITY SEPARATION NOTES

- WATER MAINS SHALL HAVE A MINIMUM COVER OF 3'.
- SANITARY SEWER MAINS SHALL HAVE A MINIMUM COVER OF 3' OR D.I.P. SHALL BE USED.
- HORIZONTAL SEPARATION BETWEEN WATER AND SANITARY SEWER SHALL BE 10' BETWEEN EDGE OF PIPES.
- VERTICAL SEPARATION BETWEEN WATER AND SANITARY SEWER: WATER OVER SANITARY SEWER: 18" OR USE D.I.P. (ON BOTH) 10' IN EITHER SIDE OF CROSSING. SANITARY SEWER OVER WATER: USE D.I.P. (ON BOTH) 10' IN EITHER SIDE OF CROSSING.
- A 24" VERTICAL SEPARATION SHALL BE PROVIDED BETWEEN STORM SEWER AND SANITARY SEWER OR USE D.I.P. ON SANITARY SEWER 10' IN EITHER SIDE OF CROSSING.
- VERTICAL SEPARATION BETWEEN WATER AND STORM SEWER: WATER OVER STORM SEWER: 18" OR USE D.I.P. ON WATER 10' IN EITHER SIDE OF CROSSING.
- ALL SANITARY SEWER MANHOLES WITH A DROP OF 30' OR GREATER SHALL HAVE AN INSIDE DIAMETER OF 9" WITH AN INSIDE DROP STRUCTURE.
- GRAVITY SANITARY SEWER WITHIN 50' OF WETLANDS SHALL BE D.I.P. AND MEET WATER MAIN MATERIALS, TESTING METHODS AND ACCEPTABILITY STANDARDS (ISA NCAC 18C).
- SANITARY SEWER MANHOLES MUST BE GREATER THAN 50" FROM WETLANDS, AS MEASURED TO THE CLOSEST OUTSIDE EDGE.

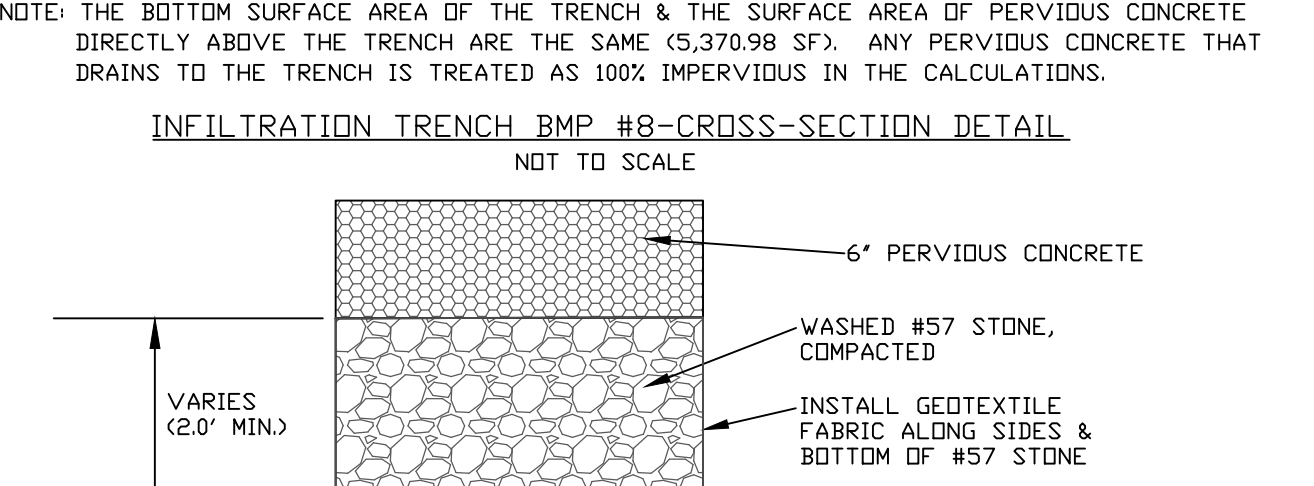
INFILTRATION DEVICE	BUILDINGS	BUILDING STOOPTS	IMPERVIOUS AREAS (SQ. FEET)	PARKING	SIDEWALK	PERVIOUS CONCRETE (CREDIT)	OTHER	TOTAL
BASIN BMP #1	5,724	1,320.27	-	120.57	541.83	147.91	-	7,854.58
BASIN BMP #2	7,445	1,682.80	-	3,840.35	255.05	-	-	13,223.20
BASIN BMP #3	5,741	1,364.93	-	39.60	531.0	140.99	-	7,817.52
BASIN BMP #4	6,853	1,485.38	-	1,990.12	241.02	-	-	10,570.52
BASIN BMP #5	6,849	1,446.97	-	154.59	273.11	-	-	8,723.67
BASIN BMP #6	5,697	901.79	-	898.04	142.93	60	-	6,699.76
TRENCH BMP #7	6,369.94	615	24,562.62	2,257.46	148.35	634.16	-	34,587.53
TRENCH BMP #8	6,225.53	543.96	5,725	1,047.44	285.30	-	-	13,827.23
TRENCH BMP #9	5,534	645.76	5,707	1,821.45	-	114	-	13,822.21



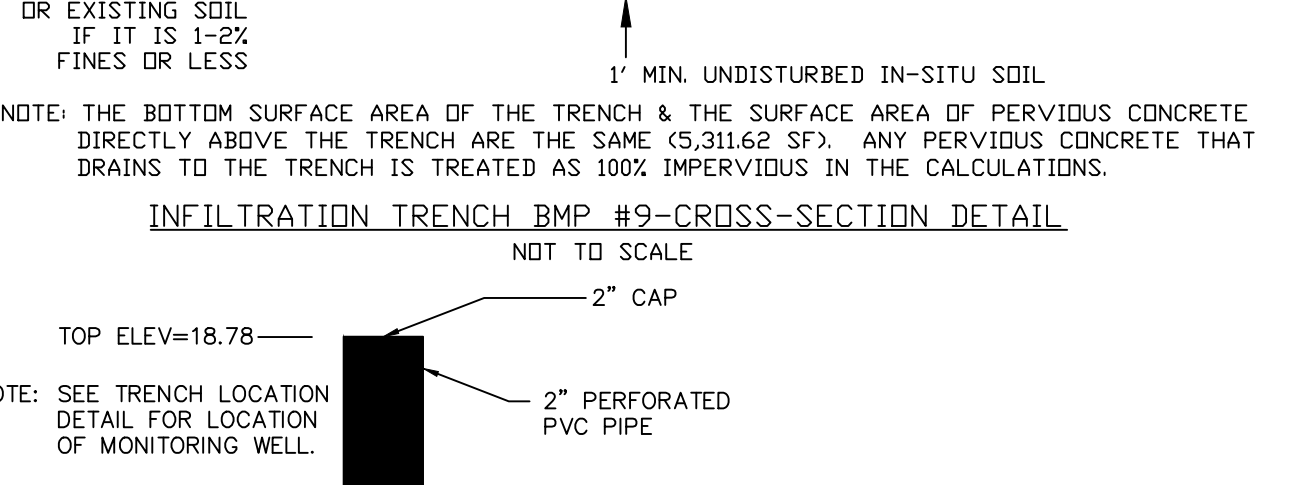
INFILTRATION TRENCH BMP #7 - CROSS SECTION DETAIL
NOT TO SCALE



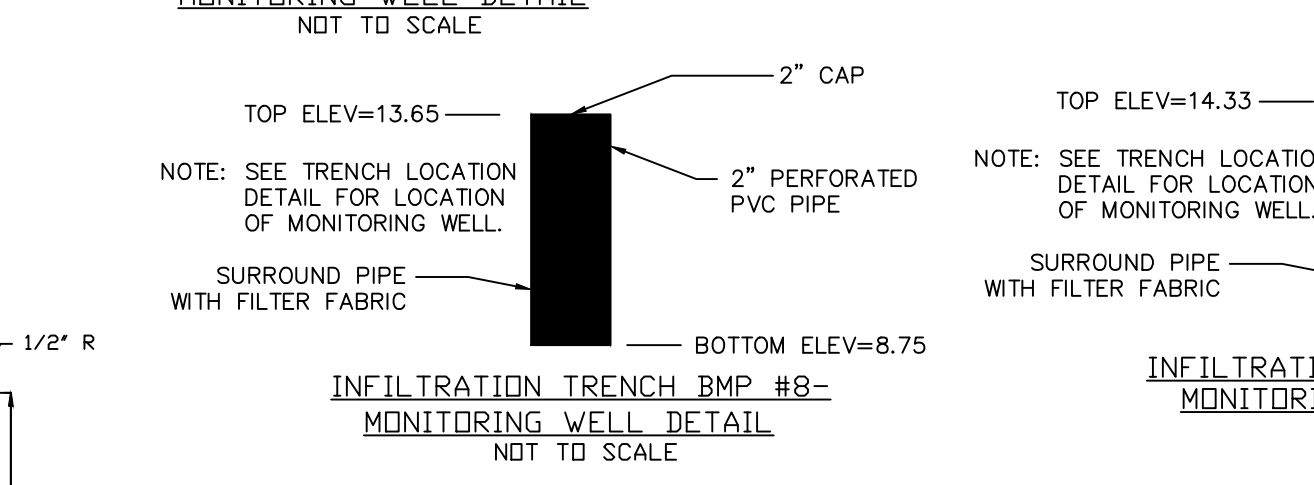
INFILTRATION TRENCH BMP #8 - CROSS SECTION DETAIL
NOT TO SCALE



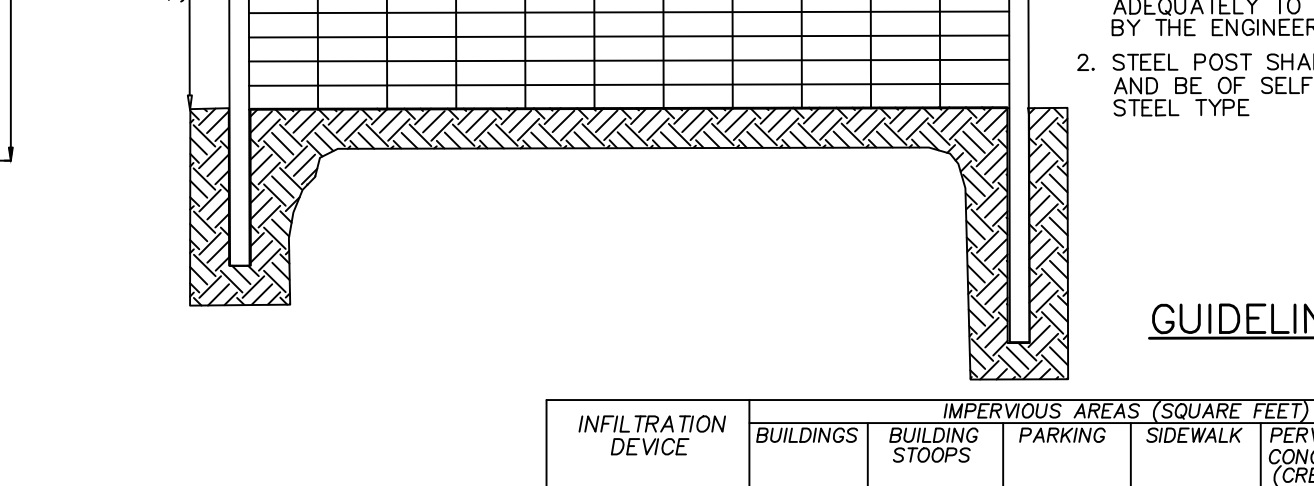
INFILTRATION TRENCH BMP #9 - CROSS SECTION DETAIL
NOT TO SCALE



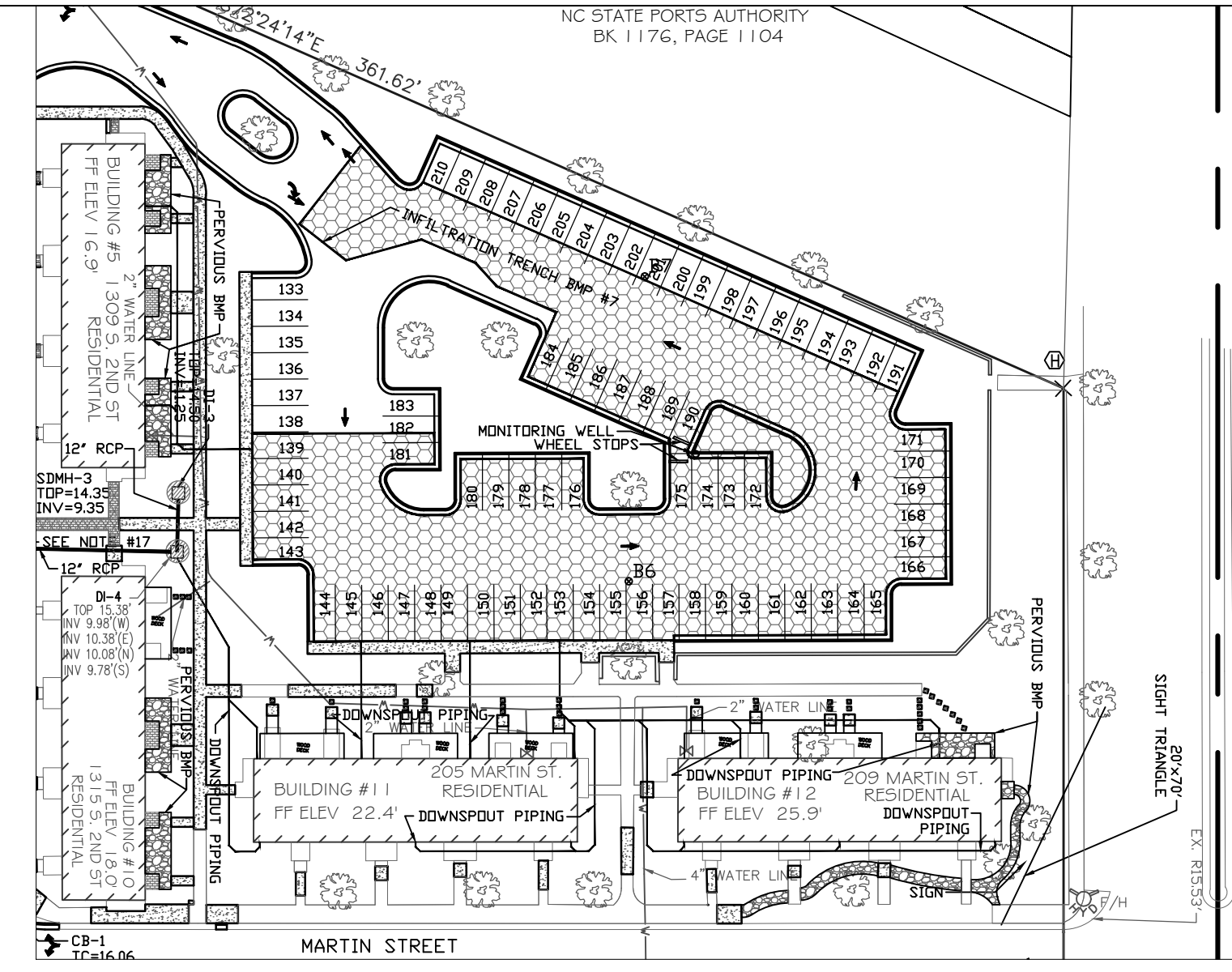
INFILTRATION TRENCH BMP #7 - MONITORING WELL DETAIL
NOT TO SCALE



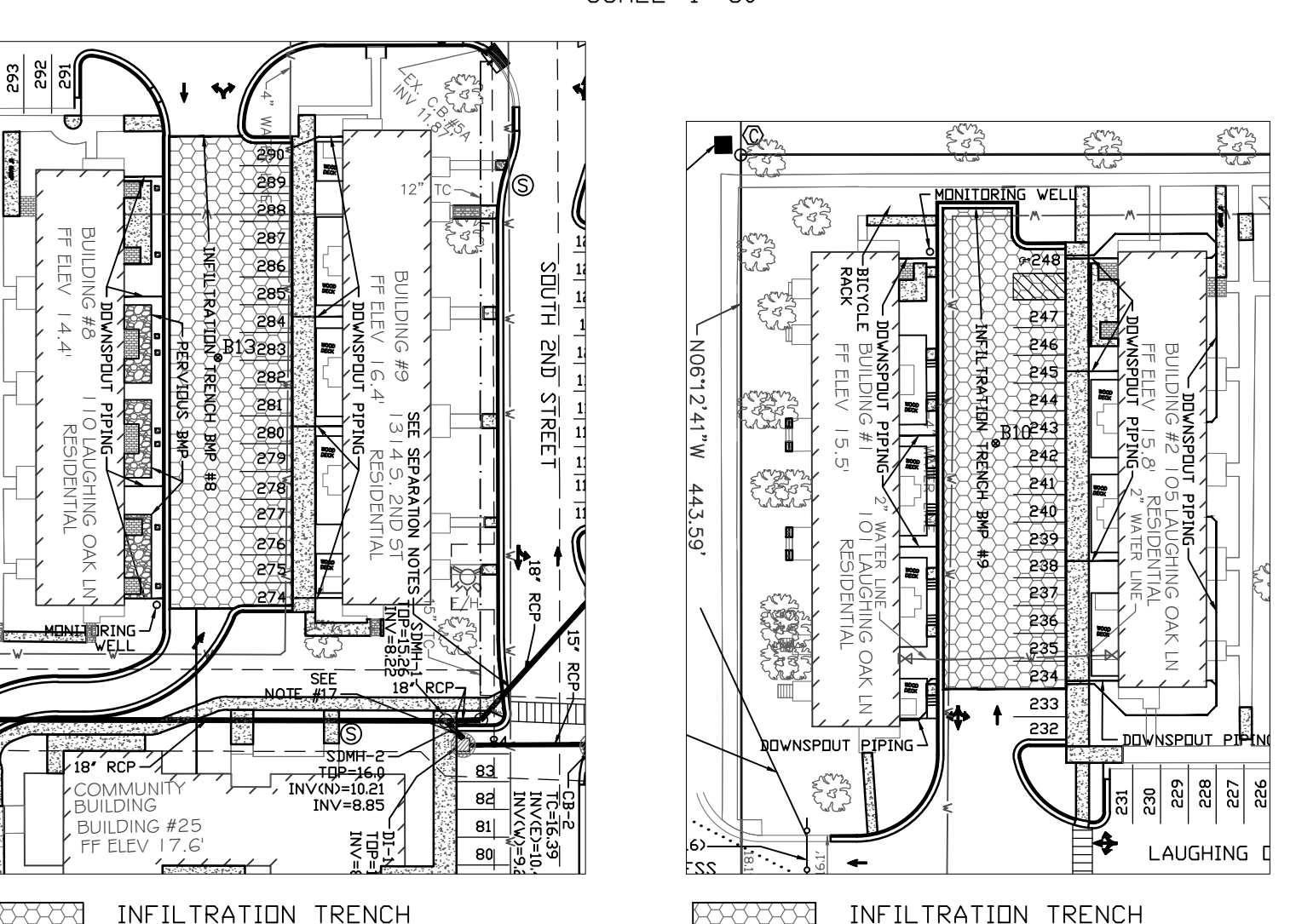
INFILTRATION TRENCH BMP #8 - MONITORING WELL DETAIL
NOT TO SCALE



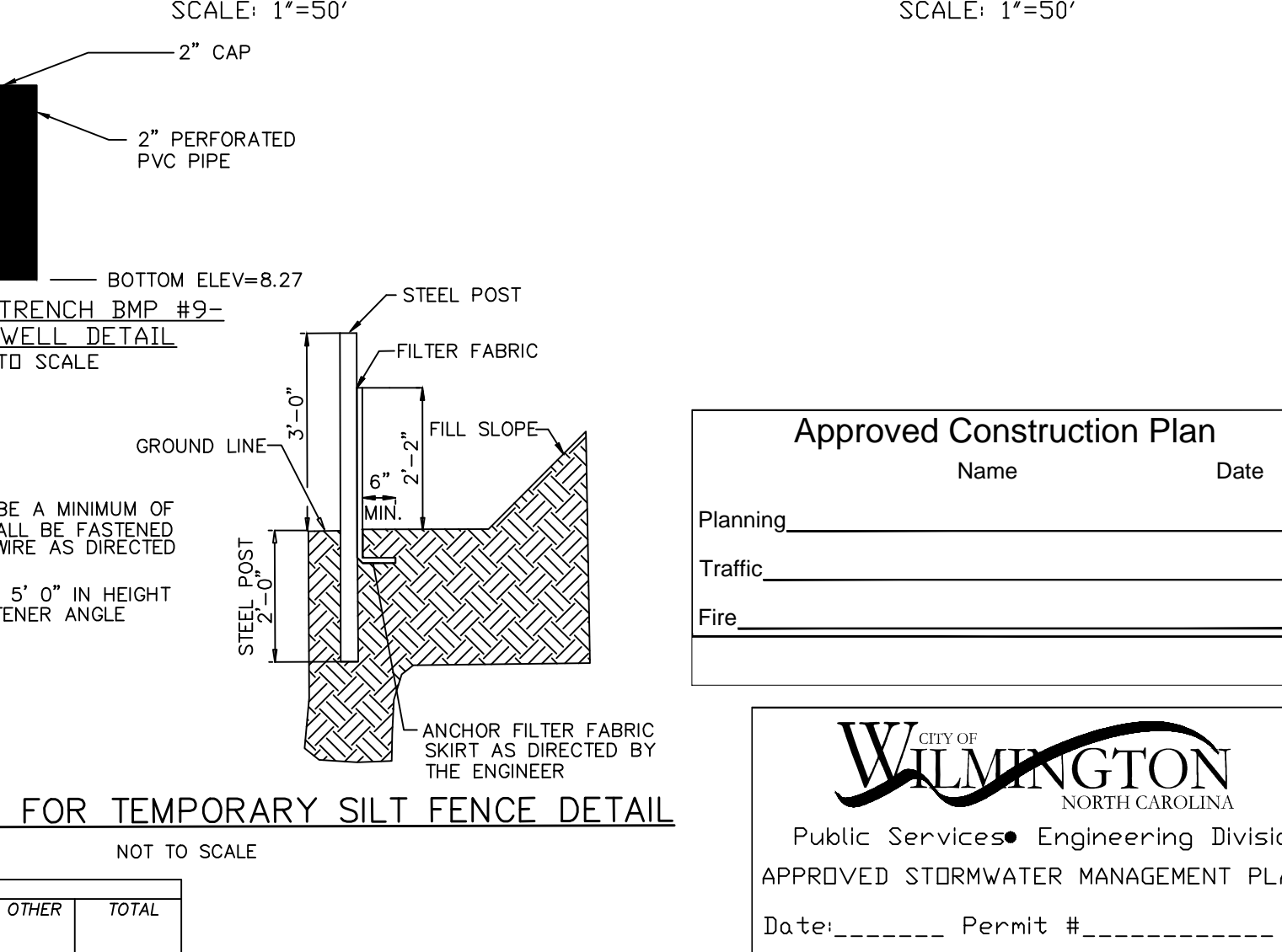
INFILTRATION TRENCH BMP #9 - MONITORING WELL DETAIL
NOT TO SCALE



INFILTRATION TRENCH BMP #7 - LOCATION DETAIL
SCALE: 1"=50'



INFILTRATION TRENCH BMP #8 - LOCATION DETAIL
SCALE: 1"=50'



INFILTRATION TRENCH BMP #9 - LOCATION DETAIL
SCALE: 1"=50'

Approved Construction Plan

Name: _____ Date: _____

Planning: _____

Traffic: _____

Fire: _____

WILMINGTON
NORTH CAROLINA

Public Services Engineering Division
APPROVED STORMWATER MANAGEMENT PLAN

Date: _____ Permit # _____

Signed: _____

STORMWATER DETAIL SHEET

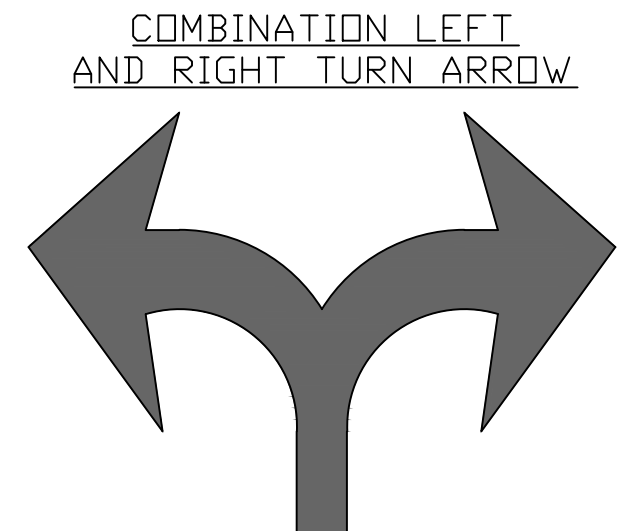
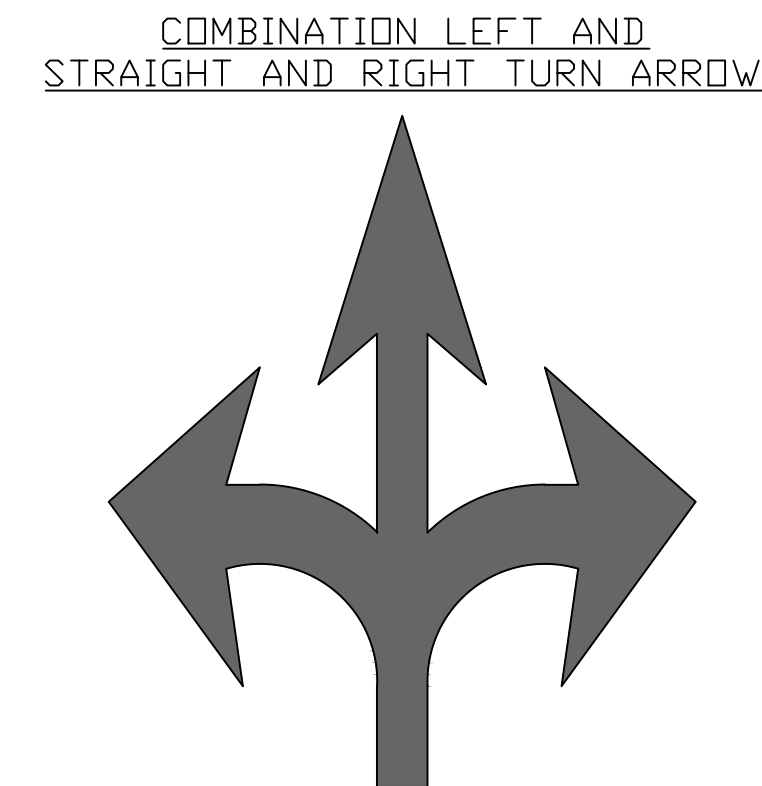
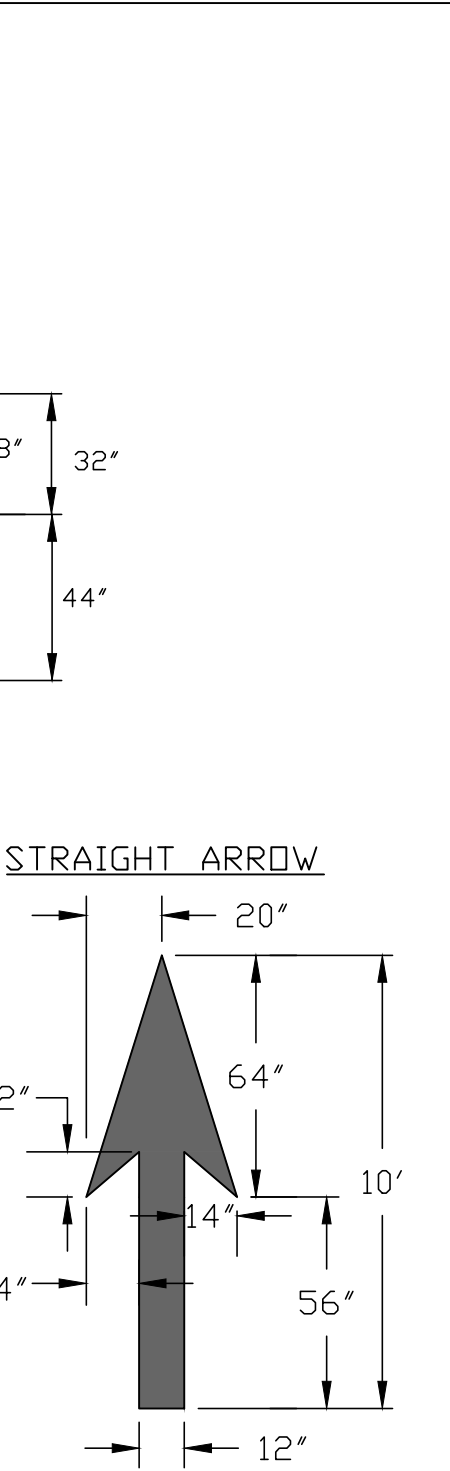
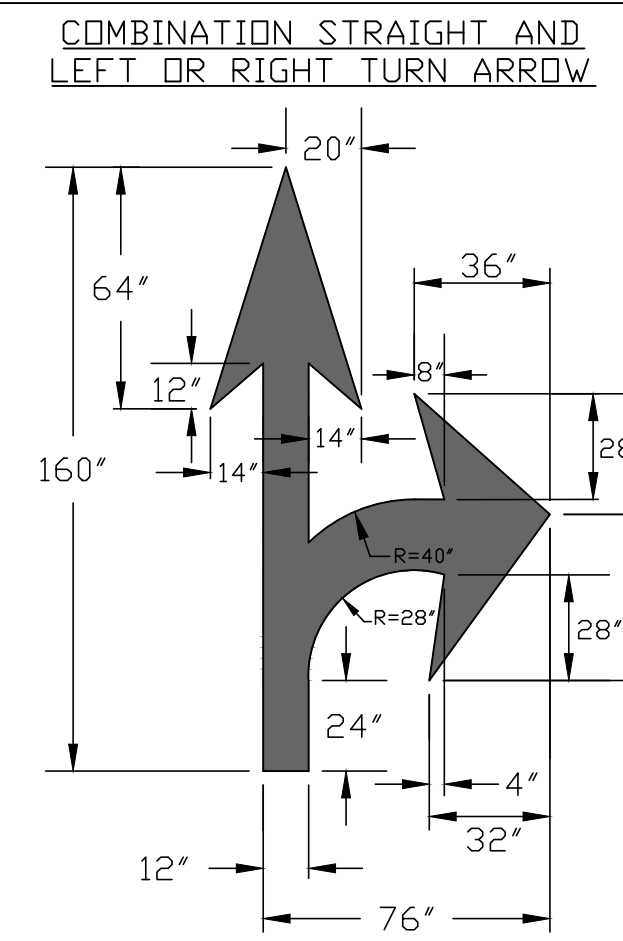
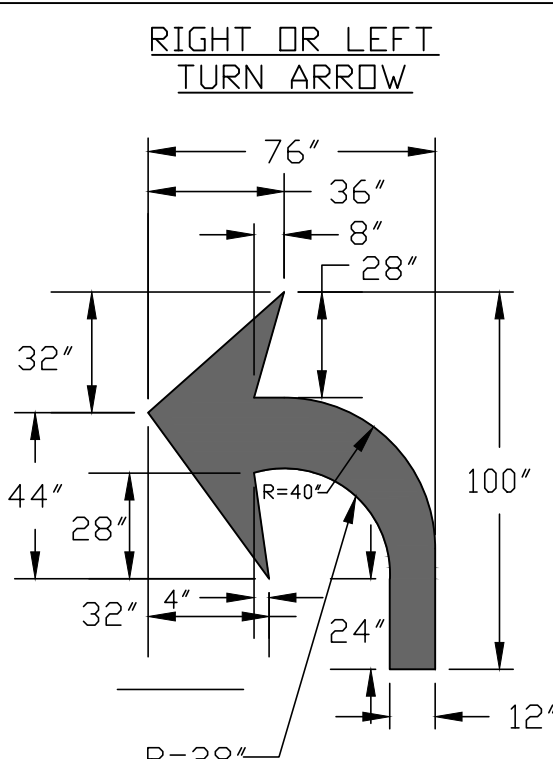
SOUTH FRONT APARTMENTS

WILMINGTON TOWNSHIP NEW HANOVER COUNTY NORTH CAROLINA

PRELIMINARY DRAWING FOR REVIEW PURPOSES ONLY

Owner: SOUTH FRONT LLC
1510-A SOUTH THIRD STREET
WILMINGTON, NC 28401
PHONE: 910-251-5030

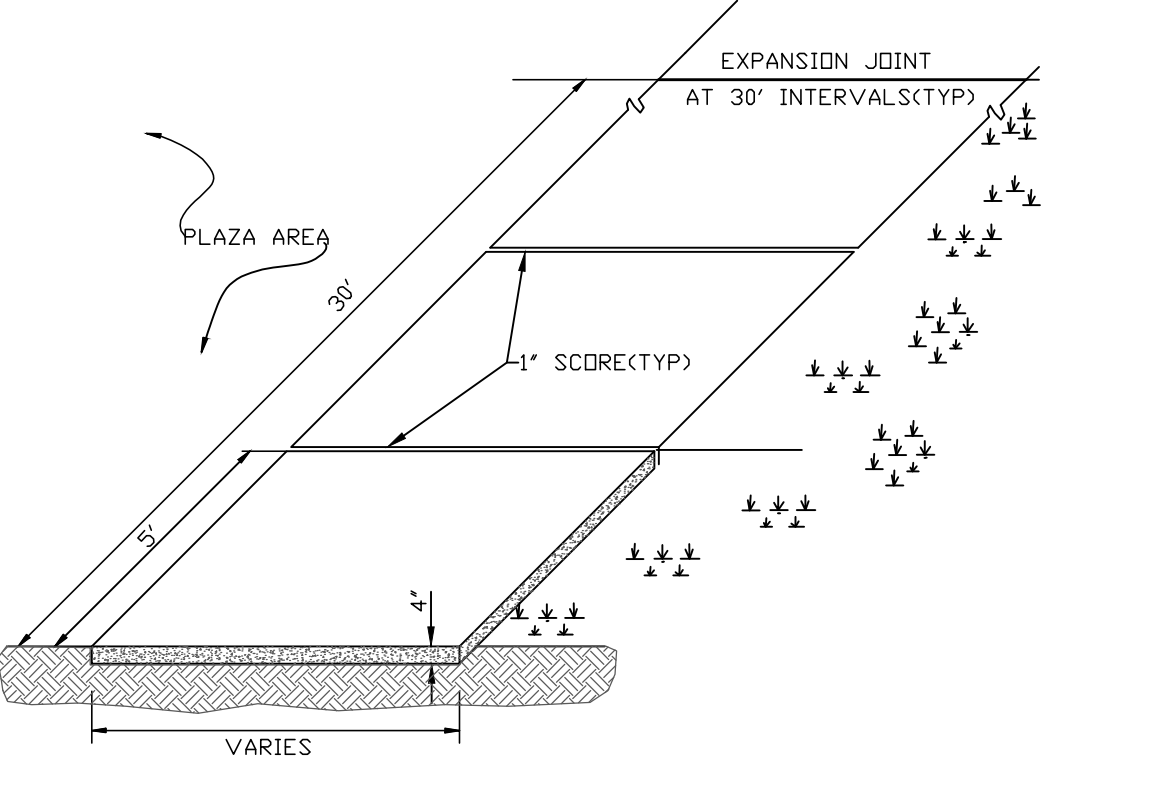
DATE: 1-11-11
SCALE: N.T.S.
DRAWN: JCB
CHECKED: JEM
PROJECT NO: 19B
SHEET NO: 20
OF: 5



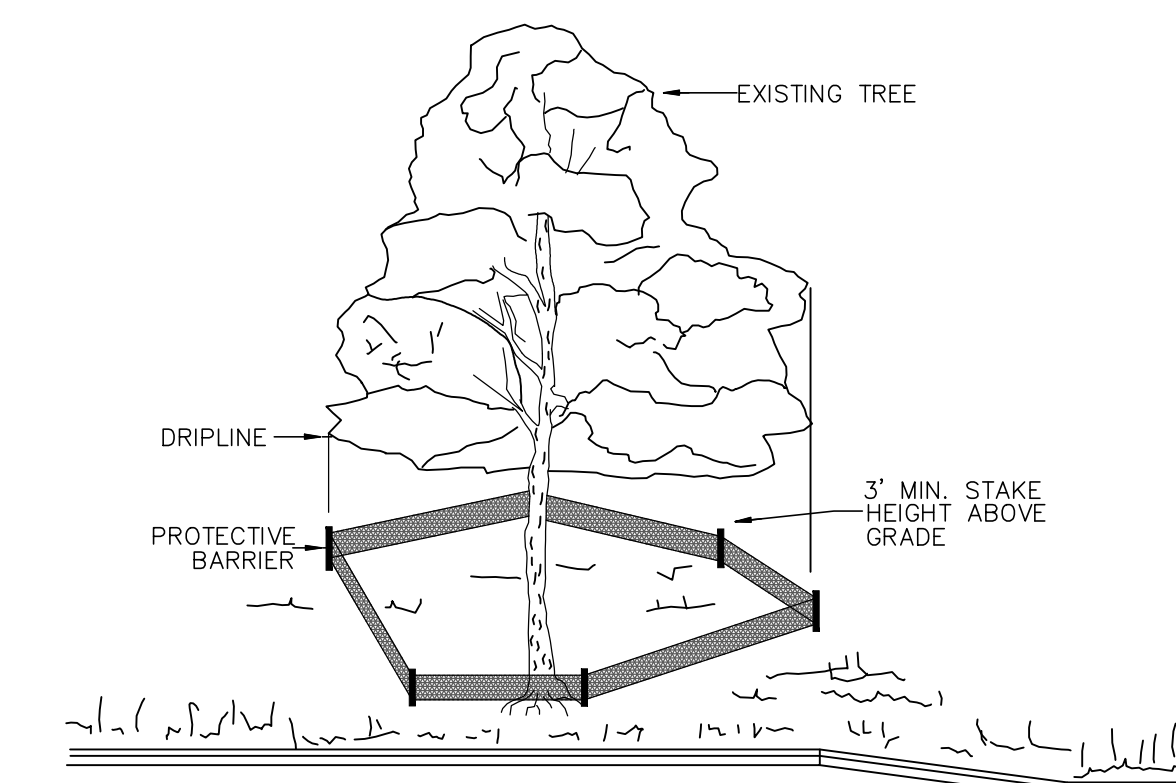
GENERAL NOTES

- ALL PAVEMENT MARKING SYMBOLS SHALL BE WHITE IN COLOR
- PAVEMENT MARKING SYMBOLS SHALL NOT BE LOCATED AS TO ENCRUST INTO INTERSECTION AREAS
- ON PORTLAND CEMENT CONCRETE PAVEMENTS, PAVEMENT MARKING SYMBOLS SHALL NOT BE PLACED ACROSS TRANSVERSE EXPANSION JOINTS UNLESS APPROVED BY THE ENGINEER.

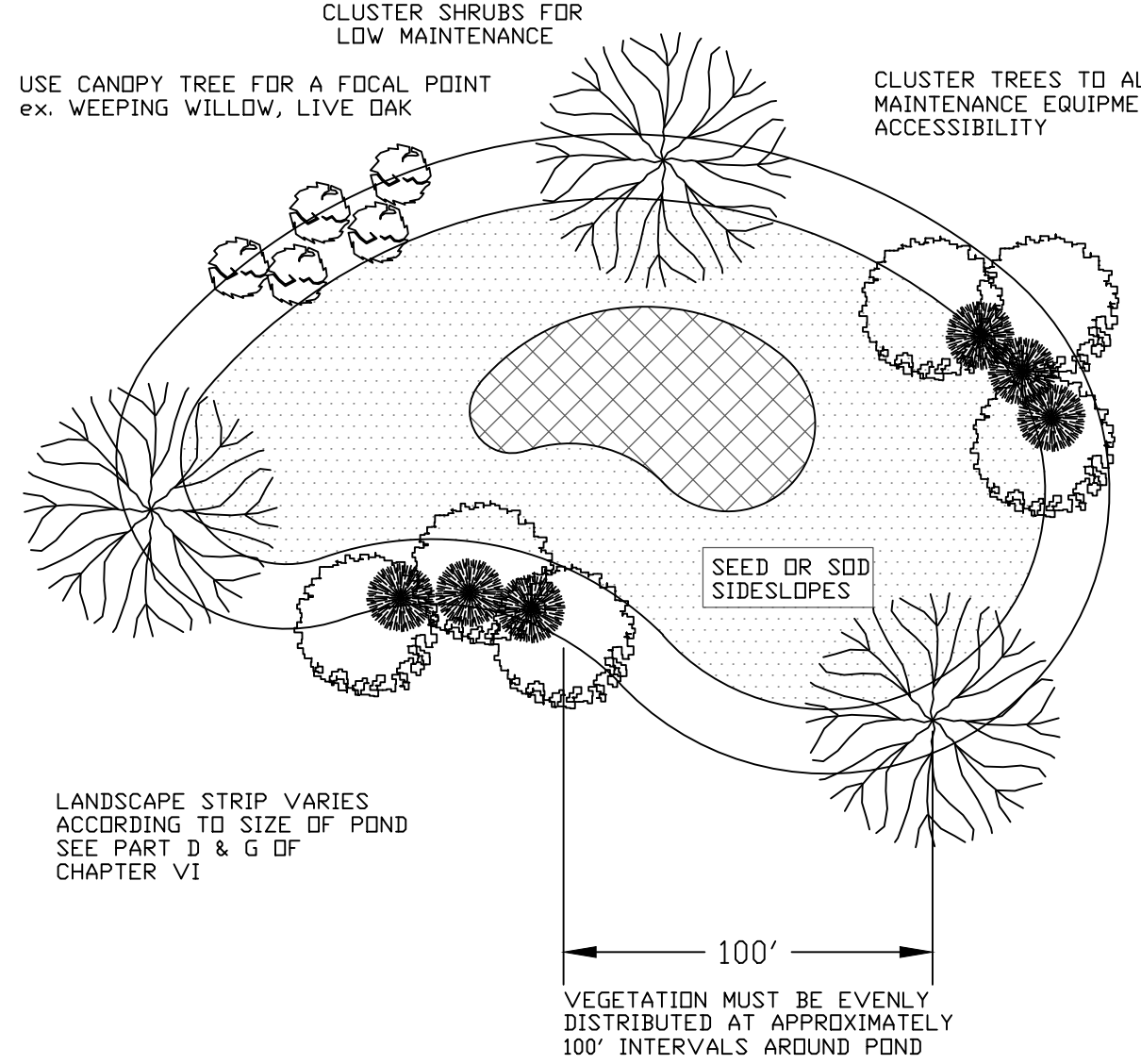
**PAVEMENT MARKINGS
ARROW SYMBOLS
SD 11-03**



**STANDARD SIDEWALK DETAIL
SD 8-15
NOT TO SCALE**

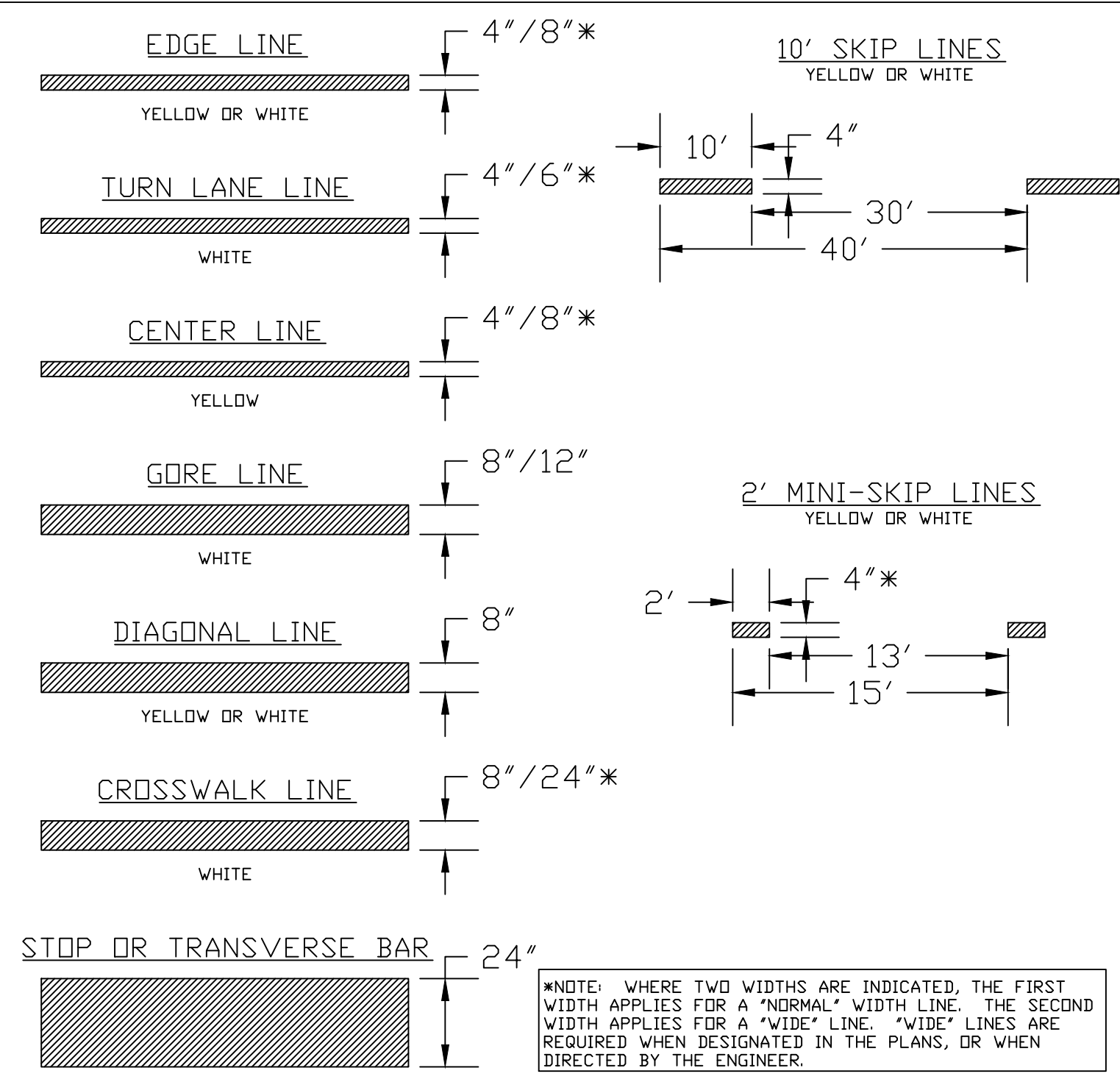


**METHOD OF TREE PROTECTION DURING CONSTRUCTION
SD 15-08
NOT TO SCALE**

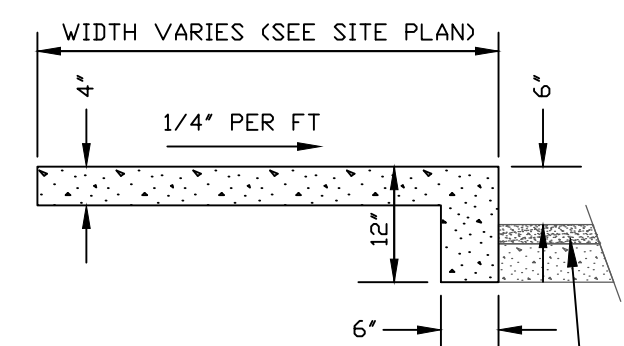


- Notes:
1. If possible, locate pond where vegetation exists.
 2. Suggest minimal clearing to conserve visual quality of site and minimize the additional of tree planting. An irregular shape provides a more natural appearance.
 3. Landscape strip shall be a maximum slope of 7:1 in order to plant vegetation.
 4. Provide a minimum of 3 inches of mulch around all vegetation.

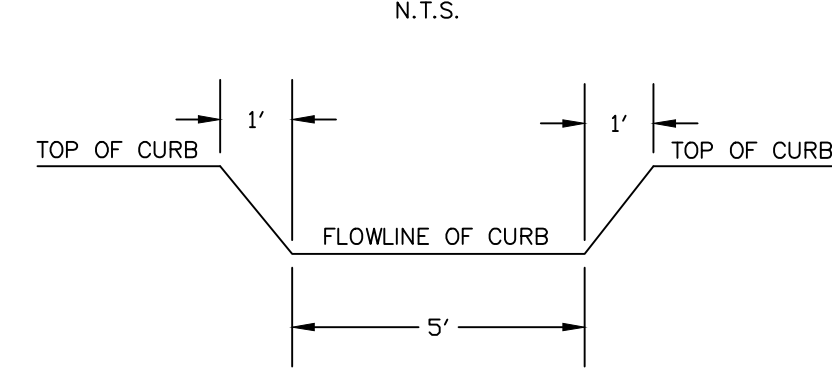
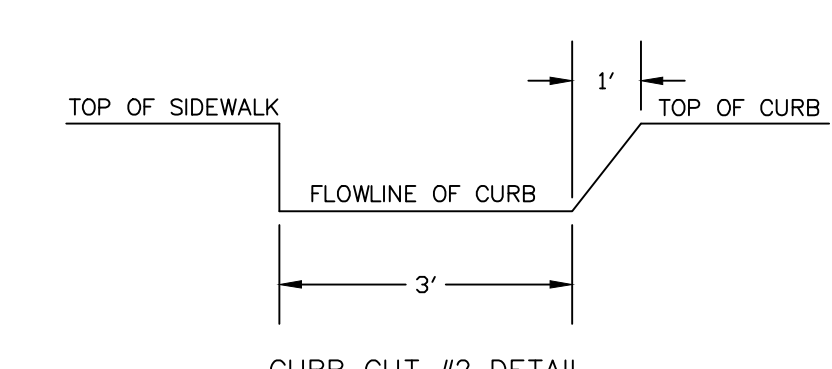
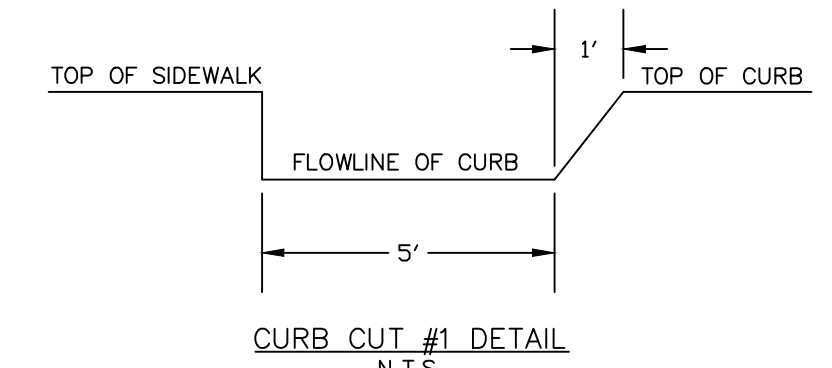
**TYPICAL STORM WATER FACILITY
LANDSCAPING PLAN
SD 15-16**



**PAVEMENT MARKINGS
LINE TYPES
SD 11-01**

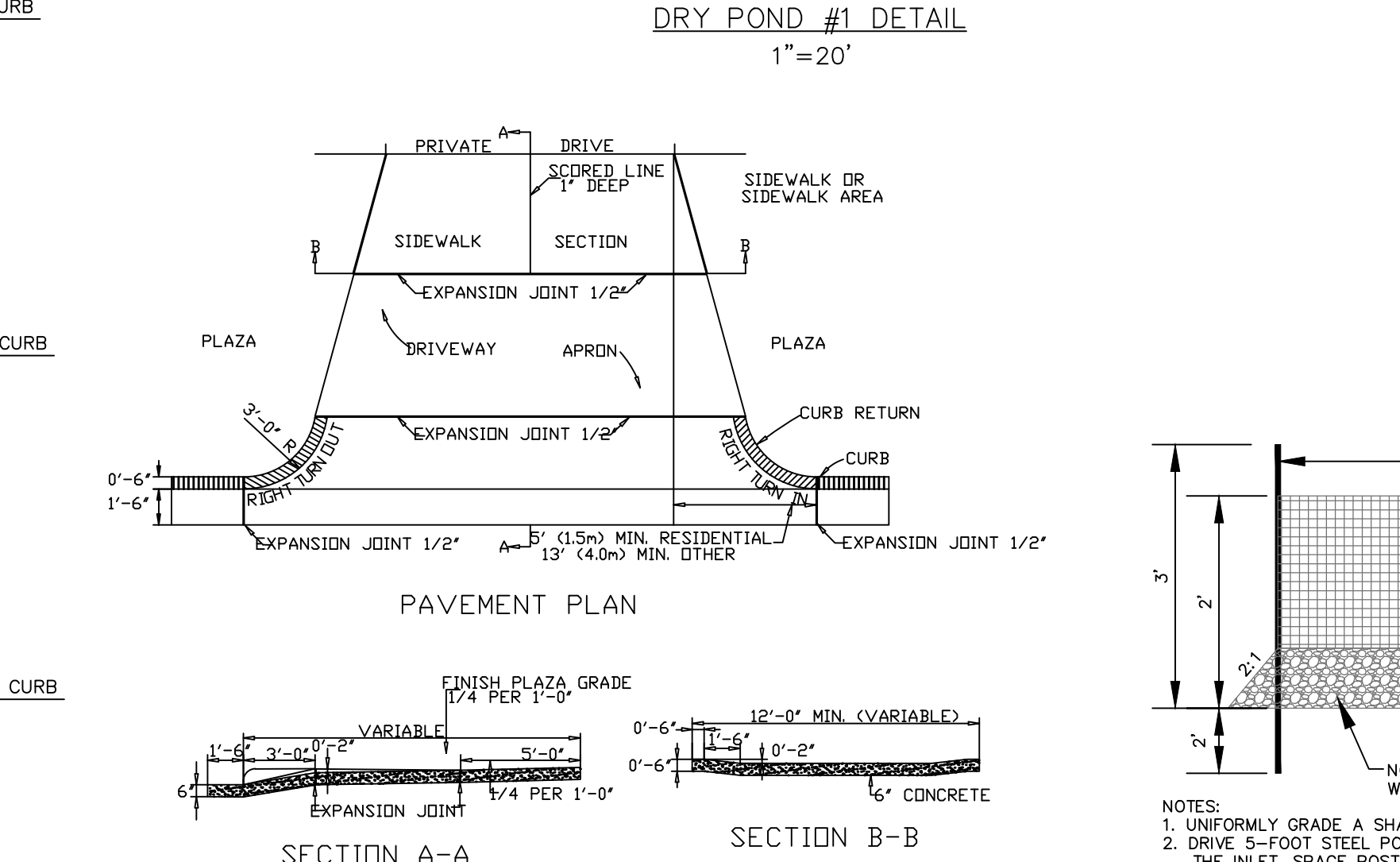
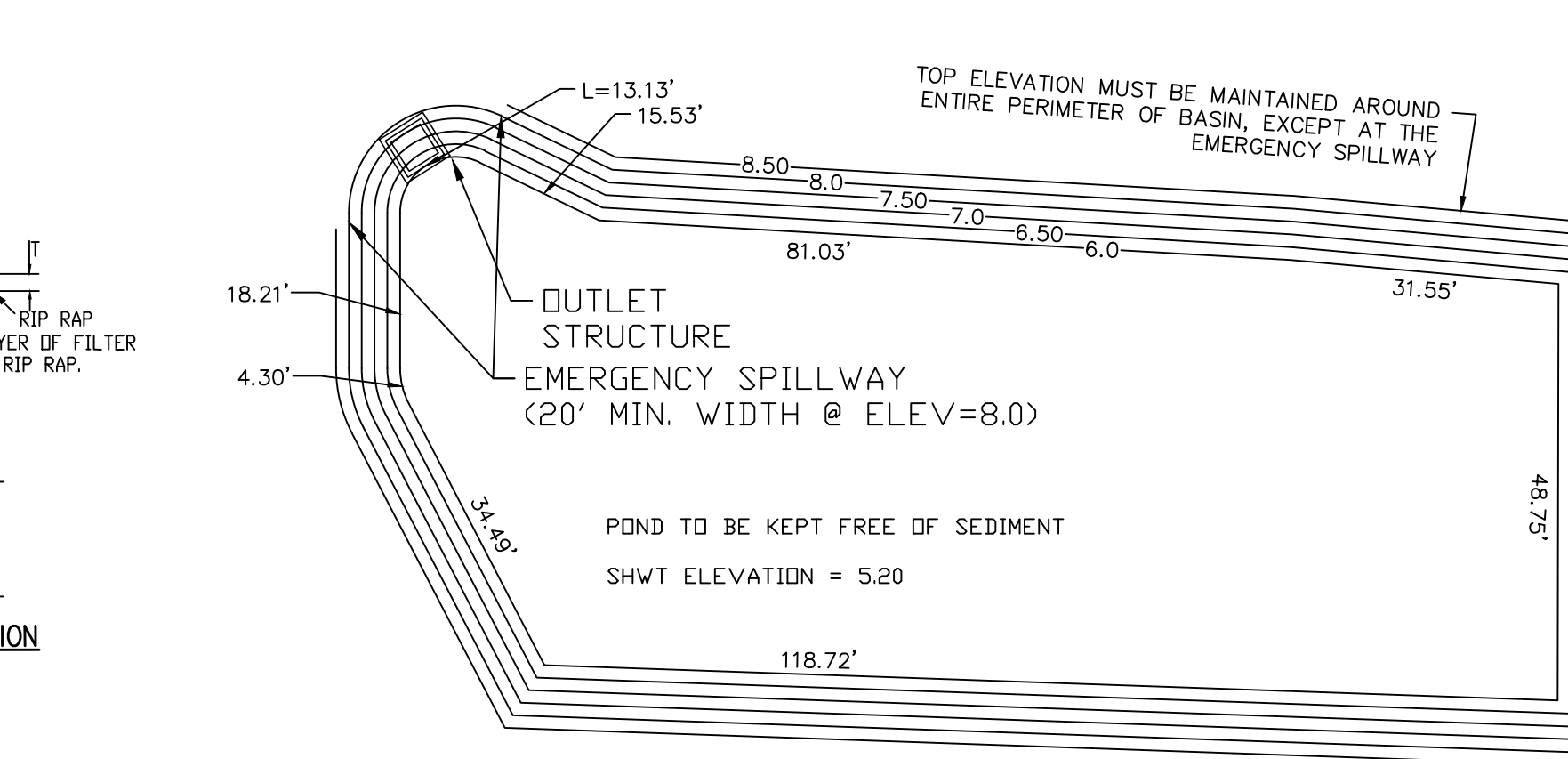
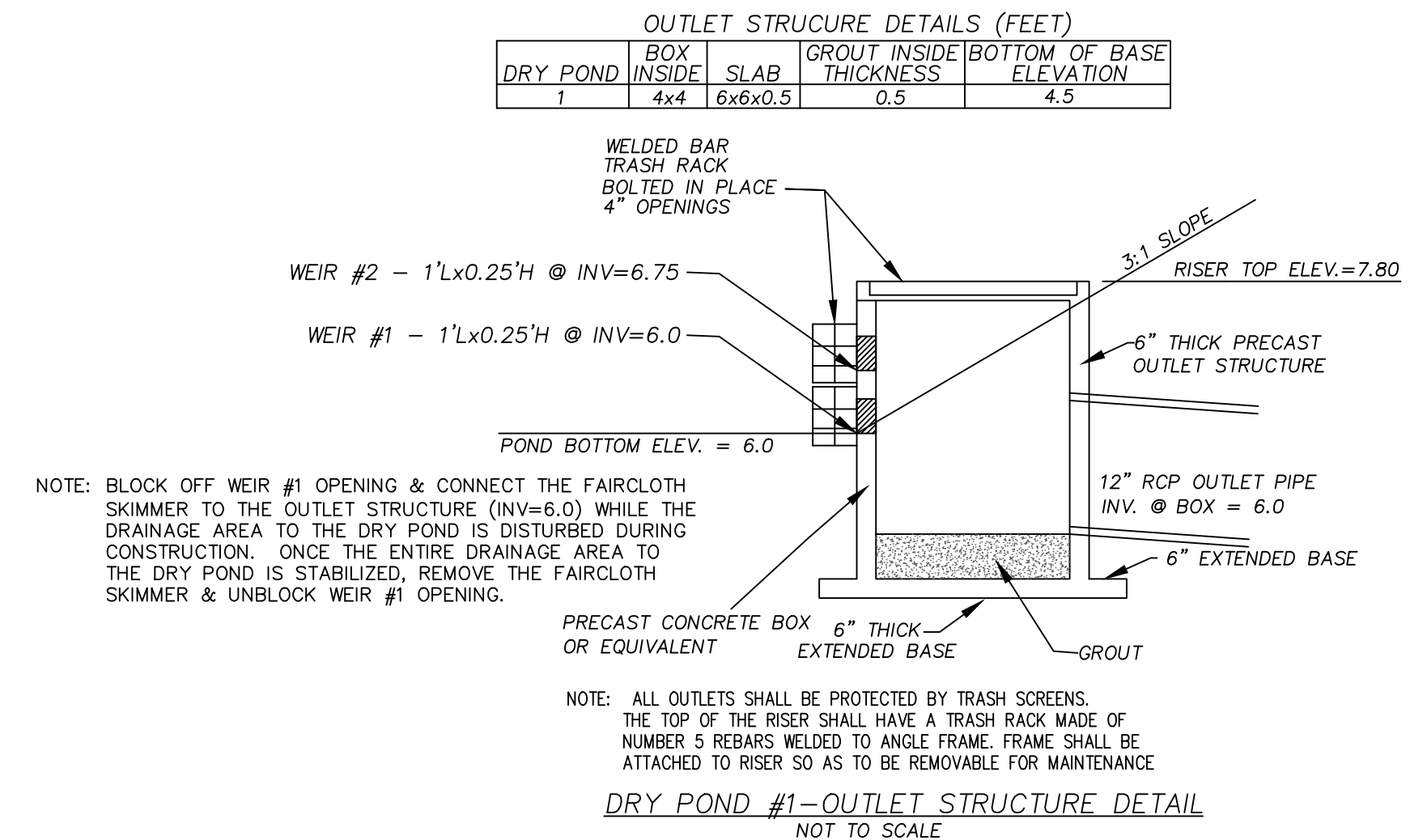
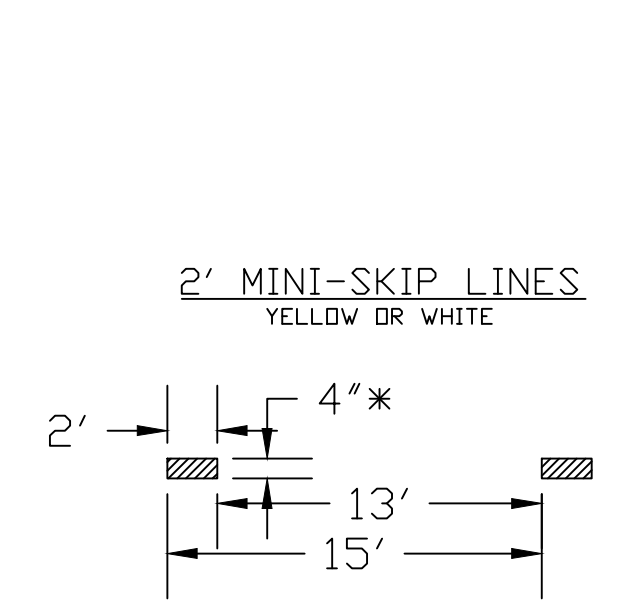


**TURNDOWN SIDEWALK DETAIL
NOT TO SCALE**



PIPE SYSTEM - PROPOSED PIPES

FROM	TO	SIZE (IN)	LENGTH (FT)	SLOPE (FT/FT)	U.S. INVERT (EL)	D.S. INVERT (EL)
DI-3	DI-4	12	17	0.06882	112.5	100.8
DI-4	SDMH-3	12	57	0.0111	9.98	9.35
CB-3	SDMH-3	15	59	.01017	9.95	9.35
SDMH-3	CB-1	18	112	0.00304	9.35	9.01
CB-1	SDMH-2	18	51	0.00314	9.01	8.85
SDMH-2	SDMH-1	18	11	0.0573	8.85	8.22
EX. SDMH1A	EX. SDMH1A	12	22	0.0427	23.71	22.77
EX. SDMH1A	EX. SDMH1A	12	371	0.0275	20.65	10.44
CB-2	DI-1	15	37	0.0243	9.20	8.30
DI-1	SDMH-1	15	8	0.01	8.30	8.22
SDMH-1	SDMH-7	18	253	0.0158	8.22	4.22
SDMH-7	SDMH-8	18	60	0.0158	4.22	3.27
SDMH-8	SDMH-9	18	27	0.0363	3.27	2.29
DI-2	CB-4	15	80	0.0024	6.47	6.28
CB-4	DRY POND #1	15	85	0.0023	6.28	6.08
CB-7	SDMH-6	15	86	0.0152	7.34	6.03
CB-5	CB-6	15	21	0.0148	6.86	6.55
CB-6	SDMH-6	15	42	0.0124	6.55	6.03
SDMH-6	SDMH-4	15	119	0.0150	6.03	4.25
SDMH-4	DI-5	18	24	0.0204	4.25	3.76
DI-5	DI-6	18	138	0.0211	3.76	0.85
DI-6	SDMH-5	18	25	0.0212	0.85	0.32
SDMH-5	EX. SDMH7A	18	32	0.0144	0.32	<->10.14

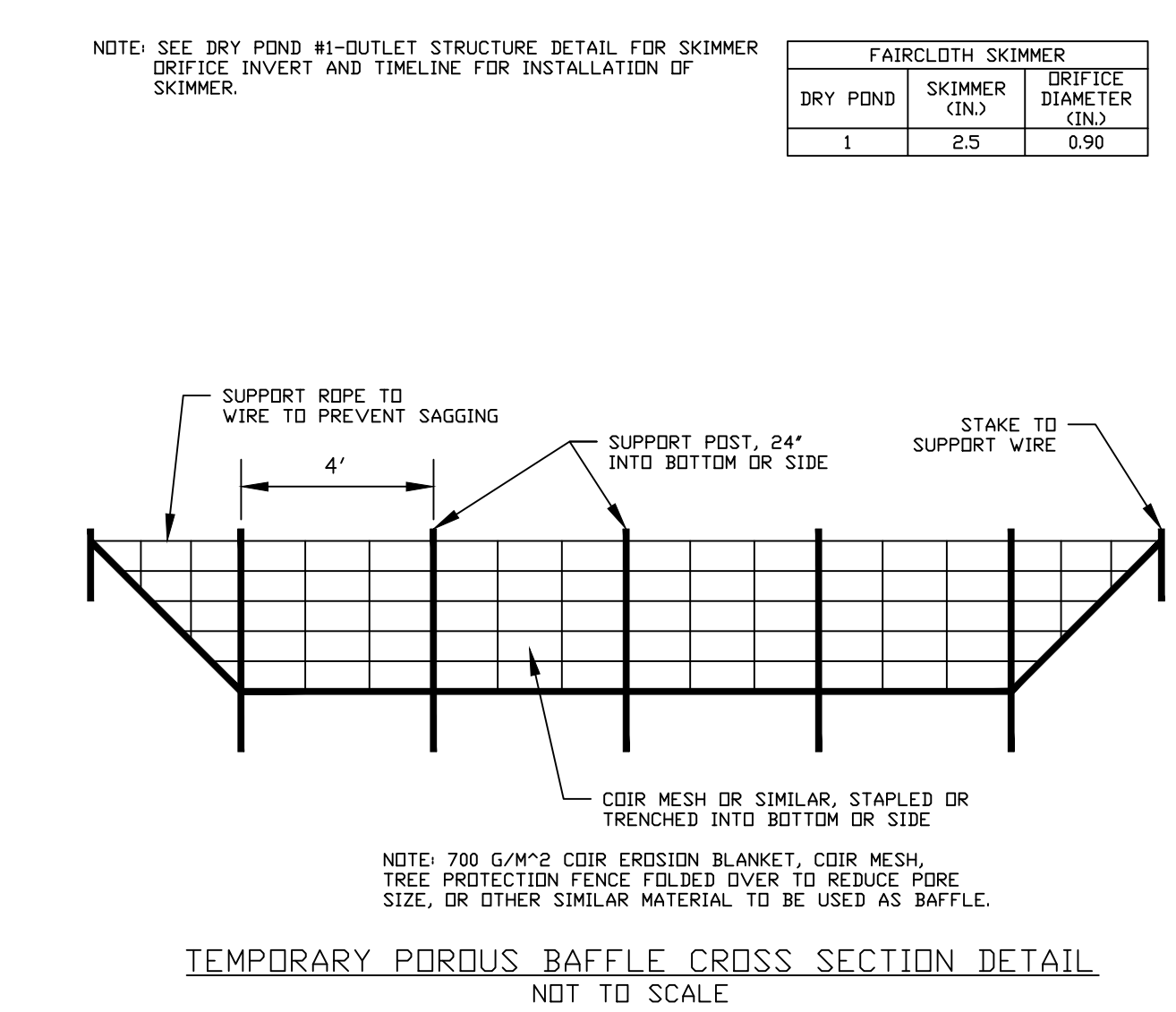


**STANDARD DRIVEWAY DETAIL
SD 8-02
NOT TO SCALE**

2.5' Faircloth Skimmer® Surface Drain Cut Sheet
J. W. Faircloth & Son, Inc.
www.FairclothSkimmer.com

1. Skimmer can be attached to a straight 4" sch 40 pipe through the dam but the pipe may need to be anchored to the bottom at the connection so it is secure. Coupling can be removed and hose attached to outlet using the threaded 2" fitting. Typical methods used: on a metal structure a steel stubout welded on the side at the bottom with a 2" threaded coupling or reducers; on a concrete structure with a hole or orifice at the bottom, use a steel plate with a hole cut in it and coupling welded to it that will fit over the hole in the concrete and bolted to the structure with sealant; grout a 4" pvc pipe in a hole in the concrete to connect the skimmer.
2. Dimensions are approximate, not intended as plans for construction.
3. Barrel (solid, not foam core pipe) should be 1.4 times the depth of water with a minimum length of 6' so the inlet can be pulled to the side for maintenance. If more than 8' long weight may have to be added to inlet to counter the increased buoyancy.
4. Inlet tapers down from 2 1/2" maximum inlet to a 1 1/2" barrel and hose. Barrel is smaller to reduce buoyancy and tendency to lift inlet but is sufficient for flow through inlet because of slope. The inlet orifice can be reduced using the plug and cutter provided to control the outflow rate.
5. Inlet is 5" pipe between the straps with aluminum screen door for access to the 2 1/2" inlet and orifice inside.
6. Capacity 6,234 cubic feet per day maximum with 2 1/2" inlet and 2.5 head. Inlet can be reduced by installing a smaller orifice using the plug and cutter provided to adjust flow rate for the particular basin volume and drawdown time required.
7. Shipped assembled. User glues inlet extension and barrel, installs vent, cut off in plug and attaches to outlet pipe or structure. Includes flexible hose, rope, orifice cutter, etc.

2-5inchCut TM 11-07 November 11, 2007



Approved Construction Plan

Name: _____ Date: _____

Planning: _____

Traffic: _____

Fire: _____

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

PRELIMINARY DRAWING FOR REVIEW PURPOSES ONLY

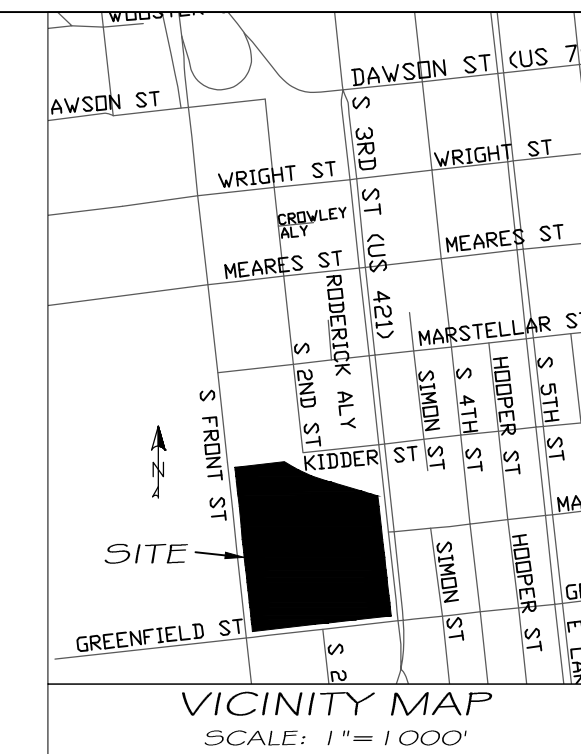
SOUTH FRONT APARTMENTS
WILMINGTON TOWNSHIP NEW HANOVER COUNTY NORTH CAROLINA

MALPASS ENGINEERING, P.C.
1134 SHIPYARD BOULEVARD
WILMINGTON, NORTH CAROLINA 28412
Phone 910-392-6843 Fax 910-392-6203 License No. C-2320

Owner: SOUTH FRONT LLC
1510-A SOUTH THIRD STREET
WILMINGTON, NC 28401
PHONE: 910-251-5030

DATE: 3-10-11
SCALE: N.T.S.
DRAWN: JCB
CHECKED: JEM
PROJECT NO: 19B
SHEET NO: 21
OF: 5

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- LEGEND**
- EXISTING OPEN SPACE (ACTIVE RECREATION SPACE)
 - EXISTING OPEN SPACE (RECREATION SPACE)
 - EXISTING OPEN SPACE
 - EXISTING TREE
 - EXISTING TREE (TO BE REMOVED)

OPEN SPACE (EXISTING)

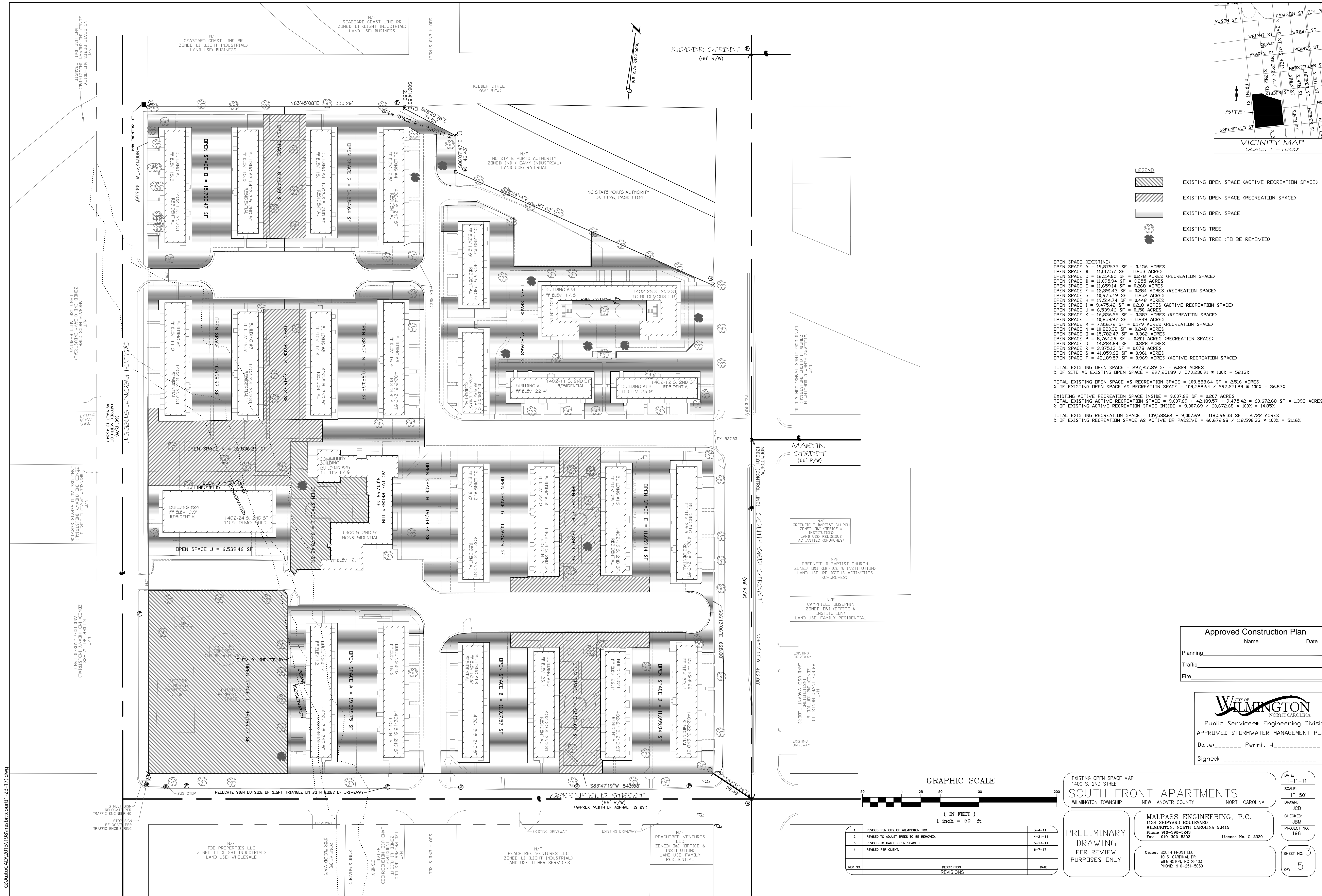
OPEN SPACE A = 19,879.75 SF = 0.456 ACRES
 OPEN SPACE B = 11,017.57 SF = 0.253 ACRES
 OPEN SPACE C = 12,114.65 SF = 0.278 ACRES (RECREATION SPACE)
 OPEN SPACE D = 11,095.94 SF = 0.253 ACRES
 OPEN SPACE E = 11,659.14 SF = 0.268 ACRES
 OPEN SPACE F = 12,391.43 SF = 0.284 ACRES (RECREATION SPACE)
 OPEN SPACE G = 10,975.49 SF = 0.252 ACRES
 OPEN SPACE H = 19,514.74 SF = 0.448 ACRES
 OPEN SPACE I = 9,475.42 SF = 0.218 ACRES (ACTIVE RECREATION SPACE)
 OPEN SPACE J = 6,539.46 SF = 0.150 ACRES
 OPEN SPACE K = 16,836.26 SF = 0.387 ACRES (RECREATION SPACE)
 OPEN SPACE L = 10,858.97 SF = 0.249 ACRES
 OPEN SPACE M = 7,816.72 SF = 0.179 ACRES (RECREATION SPACE)
 OPEN SPACE N = 10,820.32 SF = 0.248 ACRES
 OPEN SPACE O = 15,782.47 SF = 0.362 ACRES
 OPEN SPACE P = 8,764.59 SF = 0.201 ACRES (RECREATION SPACE)
 OPEN SPACE Q = 14,284.64 SF = 0.328 ACRES
 OPEN SPACE R = 3,375.13 SF = 0.078 ACRES
 OPEN SPACE S = 41,859.63 SF = 0.961 ACRES
 OPEN SPACE T = 42,189.57 SF = 0.969 ACRES (ACTIVE RECREATION SPACE)

TOTAL EXISTING OPEN SPACE = 297,251.89 SF = 6.824 ACRES
 % OF SITE AS EXISTING OPEN SPACE = 297,251.89 / 570,230.91 * 100% = 52.13%

TOTAL EXISTING OPEN SPACE AS RECREATION SPACE = 109,588.64 SF = 2.516 ACRES
 % OF EXISTING OPEN SPACE AS RECREATION SPACE = 109,588.64 / 297,251.89 * 100% = 36.87%

EXISTING ACTIVE RECREATION SPACE INSIDE = 9,007.69 SF = 0.207 ACRES
 TOTAL EXISTING ACTIVE RECREATION SPACE = 9,007.69 + 42,189.57 + 9,475.42 = 60,672.68 SF = 1.393 ACRES
 % OF EXISTING ACTIVE RECREATION SPACE INSIDE = 9,007.69 / 60,672.68 * 100% = 14.85%

TOTAL EXISTING RECREATION SPACE = 109,588.64 + 9,007.69 = 118,596.33 SF = 2.722 ACRES
 % OF EXISTING RECREATION SPACE AS ACTIVE OR PASSIVE = 60,672.68 / 118,596.33 * 100% = 51.16%



Approved Construction Plan		
Name	Date	
Planning		
Traffic		
Fire		

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

GRAPHIC SCALE

(IN FEET)
 1 inch = 50 ft.

REV NO.	DESCRIPTION	DATE
1	REVISED PER CITY OF WILMINGTON TRC.	3-4-11
2	REVISED TO ADJUST TREES TO BE REMOVED.	4-21-11
3	REVISED TO MATCH OPEN SPACE L.	5-15-11
4	REVISED PER CLIENT.	6-7-11

EXISTING OPEN SPACE MAP
 1400 S. 2ND STREET
SOUTH FRONT APARTMENTS
 WILMINGTON TOWNSHIP NEW HANOVER COUNTY NORTH CAROLINA

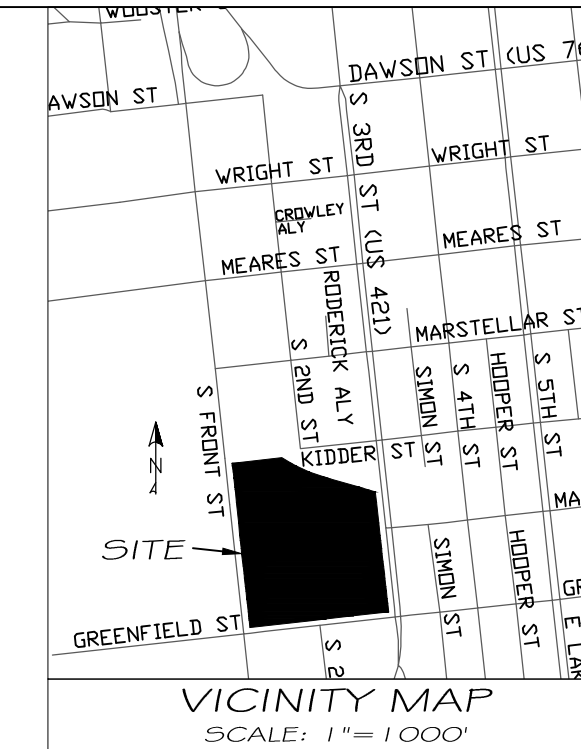
PRELIMINARY DRAWING FOR REVIEW PURPOSES ONLY

MALPASS ENGINEERING, P.C.
 1134 SHIPYARD BOULEVARD
 WILMINGTON, NORTH CAROLINA 28412
 Phone 910-392-6243
 Fax 910-392-6203 License No. C-2320

Owner: SOUTH FRONT LLC
 10 S. CAROLINA DR.
 WILMINGTON, NC 28403
 PHONE: 910-251-5030

SHEET NO: **3**
 OF: **5**

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LEGEND

- OPEN SPACE (ACTIVE RECREATION SPACE)
- OPEN SPACE (RECREATION SPACE)
- OPEN SPACE
- INTERIOR SHADING
- STREET YARD
- EXISTING TREE
- EXISTING TREE (TO BE REMOVED)

STREET YARD ALONG SOUTH 3RD STREET
 STREET FRONTAGE = 658' - 38.67' = 589.33 FT
 REQUIRED STREET YARD = 18' / 2' * 589.33 = 10,607.94 SF
 PROVIDED STREET YARD = 6,923.35 + 3,727.86 = 10,651.21 SF
 IMPERVIOUS AREA = 421.27 + 1,172.58 = 1,593.85 SF
 PERCENT IMPERVIOUS = 1,593.85 / 10,651.21 * 100% = 14.97%

STREET YARD ALONG GREENFIELD STREET
 STREET FRONTAGE = 726.58' - 25.0' - 20.53' - 24.0' = 657.05 FT
 REQUIRED STREET YARD = 18' / 2' * 657.05 = 5,913.45 SF
 PROVIDED STREET YARD = 1,193.28 + 1,765.56 + 3,115.12 = 6,073.96 SF
 IMPERVIOUS AREA = 329.06 + 841.3 = 1,170.36 SF
 PERCENT IMPERVIOUS = 1,170.36 / 6,073.96 * 100% = 19.27%

STREET YARD ALONG SOUTH FRONT STREET
 STREET FRONTAGE = 857.59' - 21.15' - 19.45' - 9' = 807.99 FT
 REQUIRED STREET YARD = 18' / 2' * 807.99 = 7,271.91 SF
 PROVIDED STREET YARD = 1,871.06 + 3,371.96 + 2,039.23 = 7,282.25 SF
 IMPERVIOUS AREA = 570.55 + 436.44 + 1,066.99 = 2,074.98 SF
 PERCENT IMPERVIOUS = 2,074.98 / 7,282.25 * 100% = 28.48%

OPEN SPACE
 REQUIRED OPEN SPACE = 0.35 * 570,230.91 = 199,580.82 SF = 4.581 ACRES

OPEN SPACE A = 19,663.76 SF = 0.451 ACRES (RECREATION SPACE)
OPEN SPACE B = 10,822.16 SF = 0.248 ACRES
OPEN SPACE C = 11,938.62 SF = 0.274 ACRES
OPEN SPACE D = 11,299.47 SF = 0.258 ACRES
OPEN SPACE E = 7,354.18 SF = 0.169 ACRES (ACTIVE RECREATION SPACE)
OPEN SPACE F = 16,069.09 SF = 0.369 ACRES
OPEN SPACE G = 11,463.36 SF = 0.263 ACRES
OPEN SPACE H = 7,608.93 SF = 0.173 ACRES
OPEN SPACE I = 9,034.44 SF = 0.208 ACRES (ACTIVE RECREATION SPACE)
OPEN SPACE J = 16,537.44 SF = 0.380 ACRES (ACTIVE RECREATION SPACE)
OPEN SPACE K = 9,836.76 SF = 0.226 ACRES (ACTIVE RECREATION SPACE)
OPEN SPACE L = 1,427.22 SF = 0.033 ACRES
OPEN SPACE M = 11,072.23 SF = 0.254 ACRES
OPEN SPACE N = 1,613.95 SF = 0.037 ACRES
OPEN SPACE O = 1,617.30 SF = 0.037 ACRES
OPEN SPACE P = 19,188.84 SF = 0.441 ACRES
OPEN SPACE Q = 8,369.66 SF = 0.191 ACRES (ACTIVE RECREATION SPACE)
OPEN SPACE R = 3,868.96 SF = 0.089 ACRES (RECREATION SPACE)
OPEN SPACE S = 23,011.09 SF = 0.528 ACRES (RECREATION SPACE)

INTERIOR SHADING
 PARKING SHADING AREA = 183,953.19 SF
 REQUIRED INTERIOR SHADING (IS) = 0.2 * 183,953.19 SF = 36,790.64 SF

IS-1 = 507.99 SF
IS-2 = 707.00 SF
IS-3 = 707.00 SF
IS-4 = 984.34 SF
IS-5 = 707.00 SF
IS-6 = 482.68 SF
IS-7 = 707.00 SF
IS-8 = 560.71 SF
IS-9 = 4,304.30 SF
IS-10 = 542.14 SF
IS-11 = 1,385.44 SF
IS-12 = 562.58 SF
IS-13 = 632.26 SF
IS-14 = 1,382.55 SF
IS-15 = 4,289.90 SF
IS-16 = 635.48 SF
IS-17 = 380.18 SF
IS-18 = 663.01 SF
IS-19 = 675.92 SF
IS-20 = 694.46 SF
IS-21 = 634.52 SF
IS-22 = 764.72 SF
IS-23 = 208.22 SF
IS-24 = 629.48 SF
IS-25 = 871.70 SF
IS-26 = 607.93 SF
IS-27 = 587.28 SF
IS-28 = 816.58 SF
IS-29 = 706.12 SF
IS-30 = 243.97 SF
IS-31 = 478.42 SF
IS-32 = 478.42 SF
IS-33 = 702.69 SF
IS-34 = 702.69 SF
IS-35 = 1,348.11 SF
IS-36 = 699.83 SF
IS-37 = 2,030.36 SF
IS-38 = 768.36 SF
IS-39 = 573.90 SF
IS-40 = 697.11 SF
IS-41 = 925.70 SF
IS-42 = 573.90 SF
IS-43 = 587.81 SF
IS-44 = 990.61 SF
IS-45 = 293.83 SF
IS-46 = 946.82 SF
IS-47 = 353.50 SF
IS-48 = 353.50 SF

TOTAL PROVIDED OPEN SPACE = 200,936.68 SF = 4.613 ACRES
% OF SITE AS OPEN SPACE = 200,936.68 / 570,230.91 * 100% = 35.24%

TOTAL OPEN SPACE AS RECREATION SPACE = 97,876.25 SF = 2.247 ACRES
% OF OPEN SPACE AS RECREATION SPACE = 97,876.25 / 200,936.68 * 100% = 48.71%

ACTIVE RECREATION SPACE INSIDE = 9,007.69 SF = 0.207 ACRES
TOTAL ACTIVE RECREATION SPACE = 9,007.69 + 7,354.18 + 9,034.44 + 16,537.44 + 9,836.76 + 8,569.62 = 60,340.13 SF = 1.385 ACRES
% OF ACTIVE RECREATION SPACE INSIDE = 9,007.69 / 60,340.13 * 100% = 14.93%

TOTAL RECREATION SPACE = 97,876.25 + 9,007.69 = 106,883.94 SF = 2.454 ACRES
% OF RECREATION SPACE AS ACTIVE = 60,340.13 / 106,883.94 * 100% = 56.45%

Approved Construction Plan

Name _____ Date _____

Planning _____

Traffic _____

Fire _____

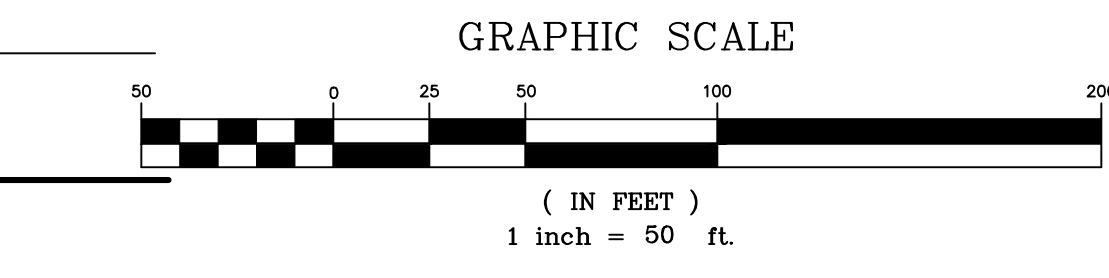
WILMINGTON
 NORTH CAROLINA

Public Services • Engineering Division

APPROVED STORMWATER MANAGEMENT PLAN

Date: _____ Permit #: _____

Signed: _____



REV NO.	DESCRIPTION	DATE
1	REVISED PER CITY OF WILMINGTON TO:	3-10-11
2	TO ADJUST STREET YARD & OPEN SPACE AREAS.	4-21-11
3	REVISED PER CITY OF WILMINGTON TO SHOW GREENFIELD ST. DRIVEWAY AS CITY STANDARD.	6-21-11
4	REVISED PER CLIENT TO ADJUST LAYOUT TO ADD GUARD HOUSE.	6-21-11
5	REVISED PER CITY OF WILMINGTON TO NOT SHOW PROPOSED FENCING & ADJUST PARKING.	7-5-11
6	REVISED PER CITY OF WILMINGTON.	7-25-11
7	REVISED PER CITY OF WILMINGTON FIRE & LIFE SAFETY.	8-12-11
8	REVISED PER CLIENT TO ADD DRIVEWAY OFF GREENFIELD ST. & RELOCATE 3 PARKING SPACES.	6-7-17

PROPOSED OPEN SPACE, INTERIOR SHADING, & STREET YARD MAP

SOUTH FRONT APARTMENTS

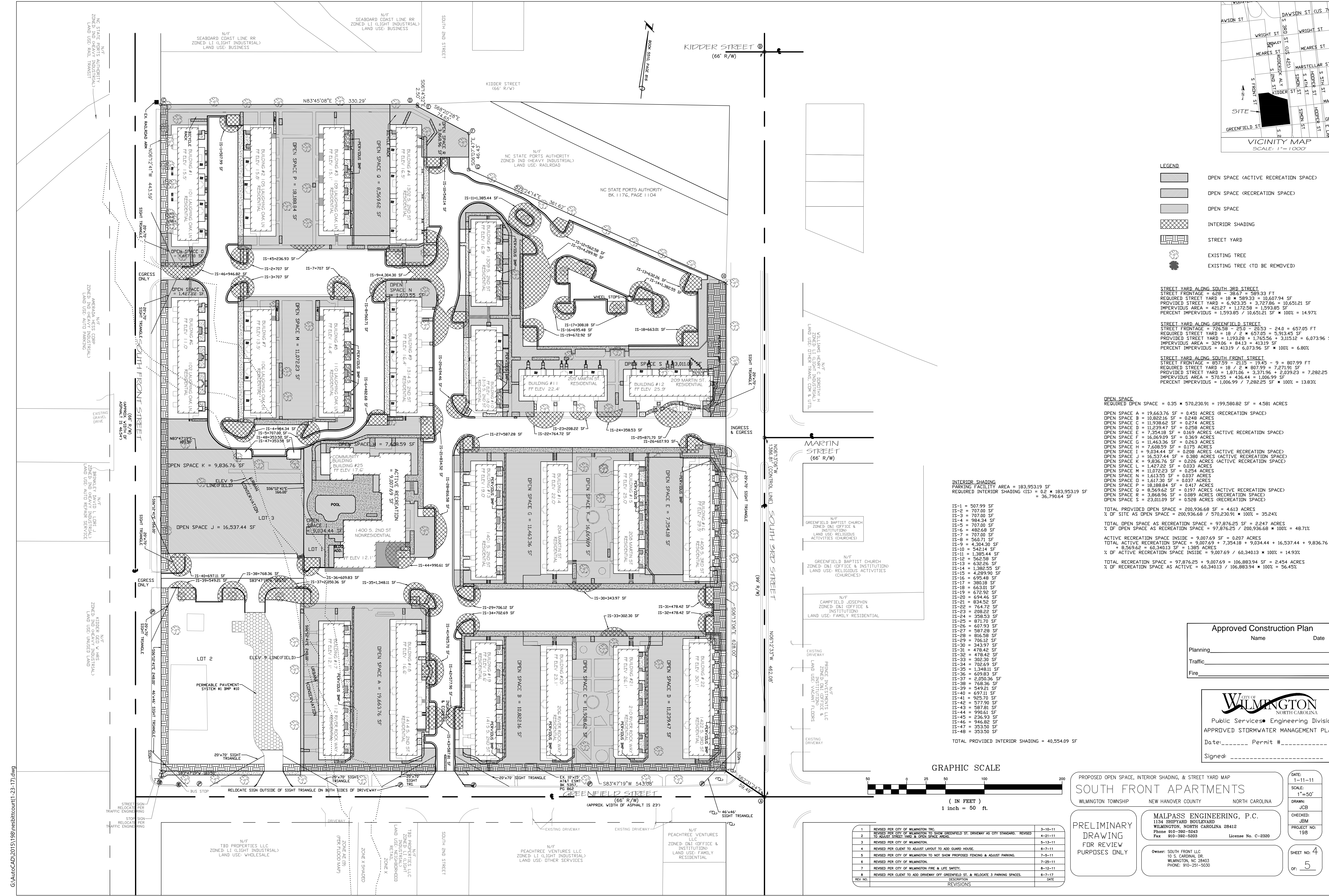
WILMINGTON TOWNSHIP NEW HANOVER COUNTY NORTH CAROLINA

PRELIMINARY DRAWING FOR REVIEW PURPOSES ONLY

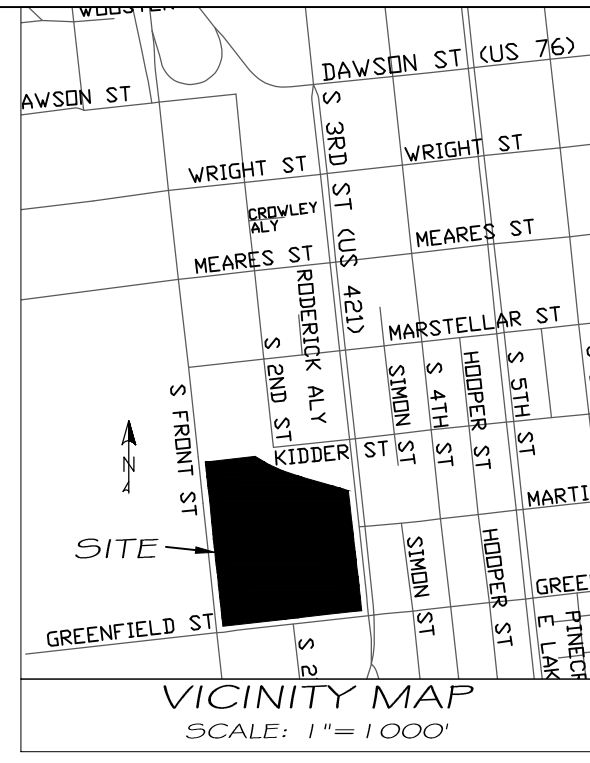
MALPASS ENGINEERING, P.C.
 1134 SHIPYARD BOULEVARD
 WILMINGTON, NORTH CAROLINA 28412
 Phone 910-392-6343 License No. C-2320
 Fax 910-392-6203

Owner: SOUTH FRONT LLC
 10 S. CAROLINA DR.
 WILMINGTON, NC 28403
 PHONE: 910-251-5030

DATE: 1-11-11
 SCALE: 1"=50'
 DRAWN: JCB
 CHECKED: JEM
 PROJECT NO: 19B
 SHEET NO: 4
 OF: 5



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- LEGEND**
- EXISTING IMPERVIOUS AREA TO REMAIN
 - EXISTING IMPERVIOUS AREA TO OVERLAY
 - NEW IMPERVIOUS AREA (100% IMPERVIOUS)
 - NEW PERIVIOUS AREA-BMP (60% IMPERVIOUS)
 - NEW PERIVIOUS AREA-BMP (0% IMPERVIOUS)
 - EXISTING TREE

POST DEVELOPMENT

EXISTING IMPERVIOUS AREA TO REMAIN ON-SITE
 BUILDINGS = 89,485.19 SF
 BUILDING STOODS = 12,612.10 SF
 PARKING & DRIVE ISLES = 64,606.13 SF
 SIDEWALKS, CONCRETE/BRICK SURFACES = 20,977.95 SF
 OTHER = 6,005.68 SF
 TOTAL EXISTING IMPERVIOUS AREA TO REMAIN ON-SITE = 193,687.05 SF

NEW IMPERVIOUS AREA ON-SITE
 BUILDINGS = 192.01 SF
 BUILDING STOODS = 5,169.62 SF
 PERVIOUS BUILDING STOODS = 0.6 * 1,667.39 = 1,000.44 SF
 PARKING & DRIVE ISLES = 75,879.38 SF
 SIDEWALKS = 24,031.33 SF
 PERVIOUS SIDEWALKS = 0.6 * 4,176.88 = 2,506.13 SF
 OTHER = 6,049.35 SF
 TOTAL NEW IMPERVIOUS AREA ON-SITE = 114,828.26 SF

NEW IMPERVIOUS AREA ON-SITE (EXISTING & NEW) = 308,515.31 SF
 50% OF TOTAL IMPERVIOUS AREA (EXISTING & NEW) = 0.5 * 308,515.31 = 154,257.66 SF

TOTAL ON-SITE IMPERVIOUS AREA TREATED IN INFILTRATION BASINS, TRENCHES, & PERMEABLE PAVEMENT SYSTEM #1 = 118,149.22 SF

NEW IMPERVIOUS AREA OFF-SITE
 DRIVEWAYS = 1,470 SF
 SIDEWALKS = 2,382 SF
 TOTAL NEW IMPERVIOUS AREA OFF-SITE = 3,852 SF

IMPERVIOUS AREAS ON LOTS 2 & 3

LOT 2
 CURRENT IMPERVIOUS AREA = 9,965 SF
 CURRENT IMPERVIOUS AREA (TO BE REMOVED) = 1,319 SF
 PROPOSED IMPERVIOUS AREA (NEW) = 1,168 SF
 TOTAL IMPERVIOUS AREA = 9,814 SF

LOT 3
 CURRENT IMPERVIOUS AREA = 5,823 SF
 CURRENT IMPERVIOUS AREA (TO BE REMOVED) = 212 SF
 PROPOSED IMPERVIOUS AREA (NEW) = 734 SF
 TOTAL IMPERVIOUS AREA = 6,345 SF

OFF-SITE
 CURRENT IMPERVIOUS AREA (TO BE REMOVED) = 135 SF
 PROPOSED IMPERVIOUS AREA (NEW) = 679 SF

Approved Construction Plan

Name _____ Date _____

Planning _____

Traffic _____

Fire _____

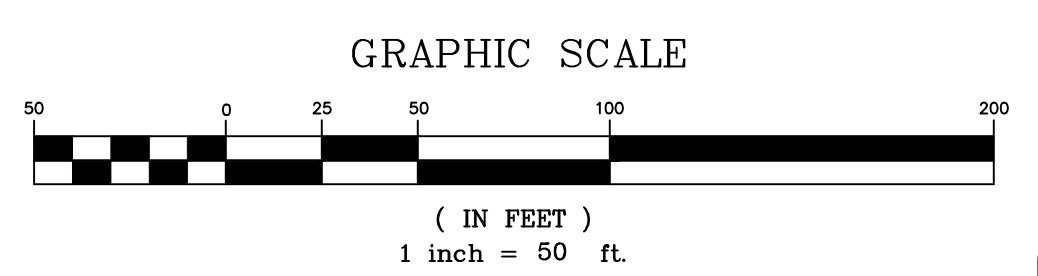
WILMINGTON NORTH CAROLINA

Public Services • Engineering Division

APPROVED STORMWATER MANAGEMENT PLAN

Date: _____ Permit # _____

Signed: _____



REV NO.	DESCRIPTION	DATE
1	REVISED DUE TO REVISIONS PER CITY OF WILMINGTON INC.	3-10-11
2	REVISED PER CITY OF WILMINGTON TO SHOW GREENFIELD ST. DRIVEWAY AS CITY STANDARD & ADJUST POST DEVELOPMENT IMPERVIOUS AREAS.	4-21-11
3	REVISED PER CITY OF WILMINGTON.	5-13-10
4	REVISED PER CLIENT TO ADJUST LAYOUT TO ADD GUARD HOUSE.	6-7-11
5	REVISED PER CITY OF WILMINGTON TO NOT SHOW PROPOSED FENCING & ADJUST PARKING.	7-5-11
6	REVISED PER CITY OF WILMINGTON.	7-25-11
7	REVISED PER CITY OF WILMINGTON ENGINEERING DEPARTMENT.	8-11-11
8	REVISED PER CITY OF WILMINGTON FIRE & LIFE SAFETY.	8-12-11
9	REVISED TO ADD IMPERVIOUS AREA, REMOVE EXISTING IMPERVIOUS AREA, & SHOW EXISTING IMPERVIOUS AREA TO REMAIN.	9-22-12
10	REVISED TO ADD IMPERVIOUS AREA, REMOVE/RETAIN EXISTING IMPERVIOUS AREA, & SHOW EXISTING IMPERVIOUS AREA TO REMAIN.	9-8-12
11	REVISED PER CITY OF WILMINGTON ENGINEERING.	9-19-12
12	REVISED PER CLIENT TO ADD DRIVEWAY OFF GREENFIELD ST. & RELOCATE 3 PARKING SPACES.	6-7-17

EXISTING IMPERVIOUS AREA TO REMAIN & NEW IMPERVIOUS AREA MAP

SOUTH FRONT APARTMENTS

WILMINGTON TOWNSHIP NEW HANOVER COUNTY NORTH CAROLINA

PRELIMINARY DRAWING FOR REVIEW PURPOSES ONLY

MALPASS ENGINEERING & SURVEYING, P.C.
 1134 SHIPYARD BOULEVARD
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 DRAWN: JCB
 CHECKED: JEM
 PROJECT NO: 19B
 SHEET NO: 5
 OF: 5



NC STATE PORTS AUTHORITY
 ZONED: L1 (LIGHT INDUSTRIAL)
 LAND USE: RAIL TRANSPORT

N/F SEABOARD COAST LINE RR
 ZONED: L1 (LIGHT INDUSTRIAL)
 LAND USE: BUSINESS

N/F SEABOARD COAST LINE RR
 ZONED: L1 (LIGHT INDUSTRIAL)
 LAND USE: BUSINESS

N/F NC STATE PORTS AUTHORITY
 ZONED: 2ND (HEAVY INDUSTRIAL)
 LAND USE: RAILROAD

N/F WILLIAMS RESIDENTIAL
 ZONED: L1 (LIGHT INDUSTRIAL)
 LAND USE: OTHER TRAMS, CPM & UTIL

N/F GREENFIELD BAPTIST CHURCH
 ZONED: O1 (OFFICE & INSTITUTION)
 LAND USE: RELIGIOUS ACTIVITIES (CHURCHES)

N/F GREENFIELD BAPTIST CHURCH
 ZONED: O1 (OFFICE & INSTITUTION)
 LAND USE: RELIGIOUS ACTIVITIES (CHURCHES)

N/F CAMPFIELD JOSEPHIN
 ZONED: O1 (OFFICE & INSTITUTION)
 LAND USE: FAMILY RESIDENTIAL

N/F PRIME INVESTMENTS LLC
 ZONED: O1 (OFFICE & INSTITUTION)
 LAND USE: VARIAN T. CHURCH

N/F TBD PROPERTIES LLC
 ZONED: L1 (LIGHT INDUSTRIAL)
 LAND USE: WHOLESALE

N/F PEACHTREE VENTURES
 ZONED: O1 (OFFICE & INSTITUTION)
 LAND USE: FAMILY RESIDENTIAL

N/F PEACHTREE VENTURES LLC
 ZONED: L1 (LIGHT INDUSTRIAL)
 LAND USE: OTHER SERVICES

N/F PEACHTREE VENTURES
 ZONED: O1 (OFFICE & INSTITUTION)
 LAND USE: FAMILY RESIDENTIAL