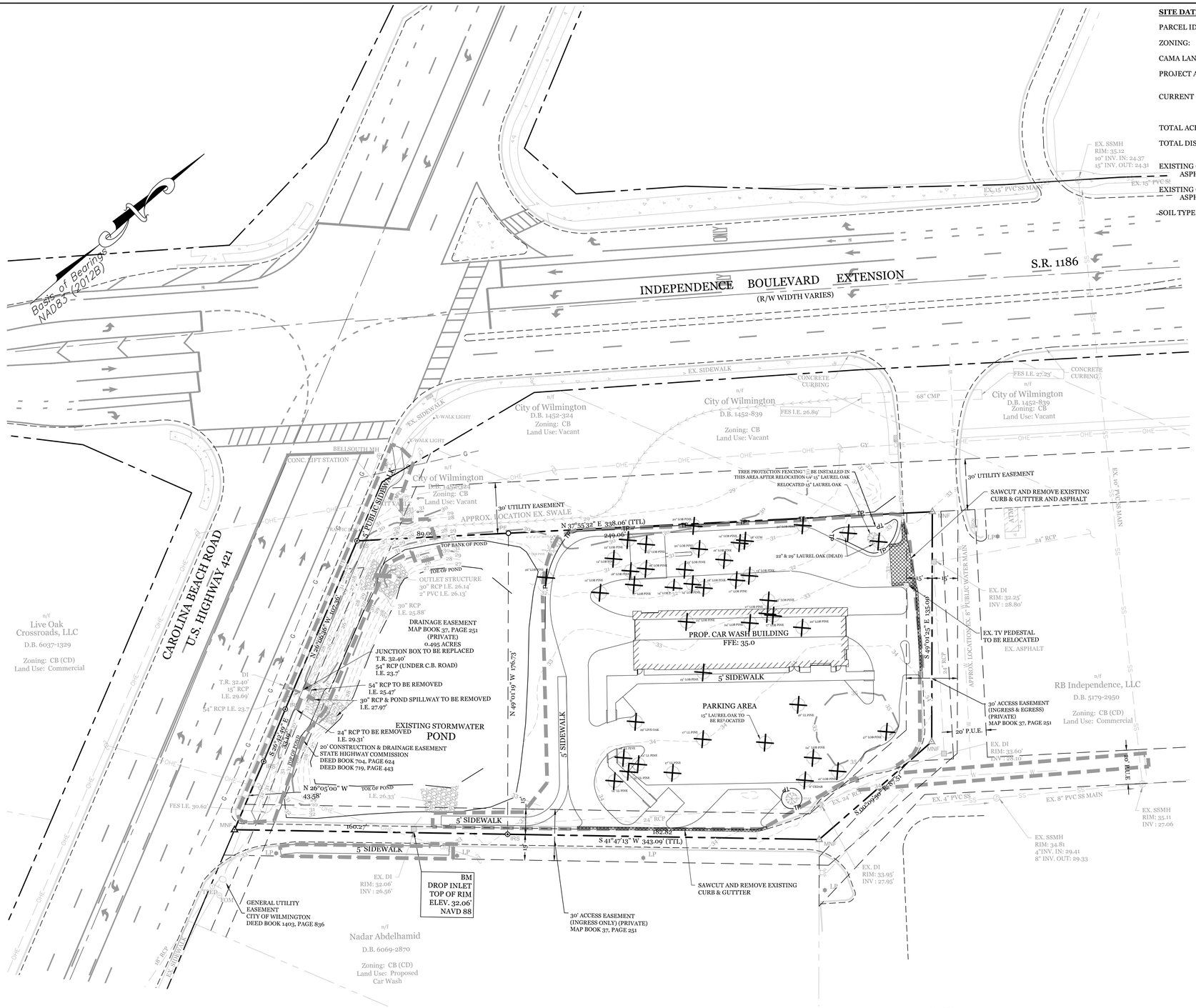
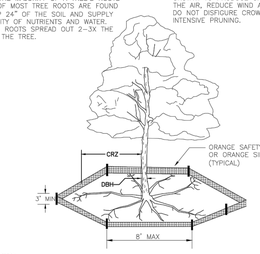


SITE DATA

PARCEL ID:	R06515-003-022-000
ZONING:	CB-(CD)
CAMA LAND USE CLASSIFICATION:	URBAN
PROJECT ADDRESS	3819 CAROLINA BEACH RD WILMINGTON, NC 28412
CURRENT OWNERS:	THREE GUYS CAR WASH, LLC 5520 OLEANDER DR. WILMINGTON, NC 28403
TOTAL ACREAGE IN PROJECT BOUNDARY	65,656 S.F. (1.51AC.)
TOTAL DISTURBED AREA:	0.9 AC.
EXISTING ONSITE IMPERVIOUS AREAS: ASPHALT	4,471 S.F. (6.8%)
EXISTING ONSITE IMPERVIOUS AREAS BEING REMOVED: ASPHALT	600 S.F.
SOIL TYPE:	Be (Baymeade Fine Sand) 100.0% *(Per the USDA websoil survey map)*

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.

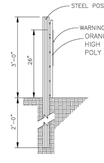


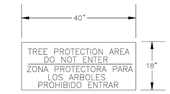
NOTES:
1. PROTECT CRITICAL ROOT ZONE (CRZ) OF TREES PRIOR TO CONSTRUCTION. CLEARLY MARK THE TREES AND ERECT A PROTECTIVE BARRIER AT THE CRZ. BARRIER SHALL BE MAINTAINED UNTIL CONSTRUCTION IS COMPLETE.
2. CRZ RADIUS IS 1 FT PER INCH OF TREE DIAMETER AT BREAST HEIGHT (DBH).
3. IF CONSTRUCTION OCCURS WITHIN THE CRZ, AT LEAST 12" OF MULCH AND/OR LOGGING MATTS 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	
DATE: JAN, 2015	TREE PROTECTION DURING CONSTRUCTION
DRAWN BY JSR	
CHECKED BY RDG, P.E.	
SCALE NOT TO SCALE	SHEET 1 of 2

CITY OF WILMINGTON ENGINEERING
PO BOX 1810
WILMINGTON, NC 28402
(910) 341-7807
SD 15-09

8' MAX.
VARIABLE AS DIRECTED BY THE ENGINEER
PLASTIC OR WIRE TIES
WARNING SIGN
TREE PROTECTION AREA DO NOT ENTER ZONA PROTECTORA PARA LOS ARBOLES PROHIBIDO ENTRAR
GRADE
ORANGE, UV RESISTANT HIGH – TENSILE STRENGTH POLY BARRICADE FABRIC (TYPICAL)
FRONT VIEW





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	
DATE: JAN, 2015	TREE PROTECTION DURING CONSTRUCTION
DRAWN BY JSR	
CHECKED BY RDG, P.E.	
SCALE NOT TO SCALE	SHEET 2 of 2

CITY OF WILMINGTON ENGINEERING
PO BOX 1810
WILMINGTON, NC 28402
(910) 341-7807
SD 15-09

REQUIRED TREE MITIGATION CHART				
QTY	SIZE	TYPE	% MITIGATION	REPLACEMENT TREE QTY
1	29"	LIVE OAK	100%	19.33
1	30"	LOB PINE	100%	20.00
TOTAL REPLACEMENT TREES				**39**

* SEE LANDSCAPE PLAN BY OTHERS FOR REQUIRED MITIGATION.

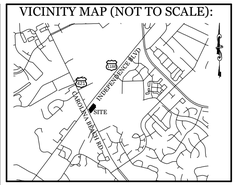
Approved Construction Plan
Date: 3/10/23
2021055
SWP #: 2022010R1
PO, ES, CW, MB, BM

NOTES:
1. EXISTING SURVEY DATA PROVIDED BY VERNON DEREK DANFORD, PLS # L-4528
2. NO WETLANDS EXIST ON SITE.
3. PROPERTY IS LOCATED IN ZONE "X" ACCORDING TO THE FEMA FLOOD INSURANCE RATE MAP 3720312500K, DATED 08/28/18
4. THIS PROPERTY IS NOT AFFECTED BY AN AEC.
5. NO CONSERVATION RESOURCES EXIST ON SITE.
6. THIS PROPERTY IS NOT AFFECTED BY ANY HISTORIC OR ARCHAEOLOGICAL SITES.
7. PRIOR TO ANY CLEARING, GRADING OR CONSTRUCTION ACTIVITY, A CONSTRUCTION ENTRANCE AND SILT FENCING SHALL BE INSTALLED.
8. PRIOR TO ANY CLEARING, GRADING OR CONSTRUCTION ACTIVITY, TREE PROTECTION FENCING WILL BE INSTALLED AROUND PROTECTED TREES OR GROVES OF TREES.
9. NO CONSTRUCTION WORKERS, TOOLS, MATERIALS OR VEHICLES ARE PERMITTED WITHIN THE TREE PROTECTION FENCING.
10. TREE PROTECTION SIGNAGE SHALL BE ADDED ALONG THE LIMITS OF DISTURBANCE ADJACENT TO TREES EVERY 100' TO PROTECT TREES ADJACENT TO THE CONSTRUCTION SITE.

LEGEND
- PROPERTY LINE ADJOINERS
- TP — TREE PROTECTION FENCE
- LIMITS OF DISTURBANCE
- EX. EOP
- W — EX. WATER MAIN
- SS — EX. SS MAIN
- EX. FIRE HYDRANT
- TREE TO BE REMOVED
- PROPOSED DEMO. AREAS

30' 15' 0' 30' 60'
Scale: 1"=30'

VICINITY MAP (NOT TO SCALE):



REVISIONS
4-12-22 ADDED DEAD 22" & 29" LAUREL OAKS TO BE REMOVED AND 15" LAUREL OAK TO BE RELOCATED.
6-9-22 REVISED SIDEWALK, PAY STATION AND DRIVE LOCATIONS.
10-4-22 REVISED SS AND WATER SERVICE LOCATIONS, REVISED C.B. RD. RIGHT OF WAY DRAINAGE.

INTRACOASTAL ENGINEERING, PLLC
5725 Oleander Dr. Unit E-7
Wilmington, North Carolina 28403
Phone: 910.859.8983
Email: Charlie@intracoastalengineering.com
License Number P-0662

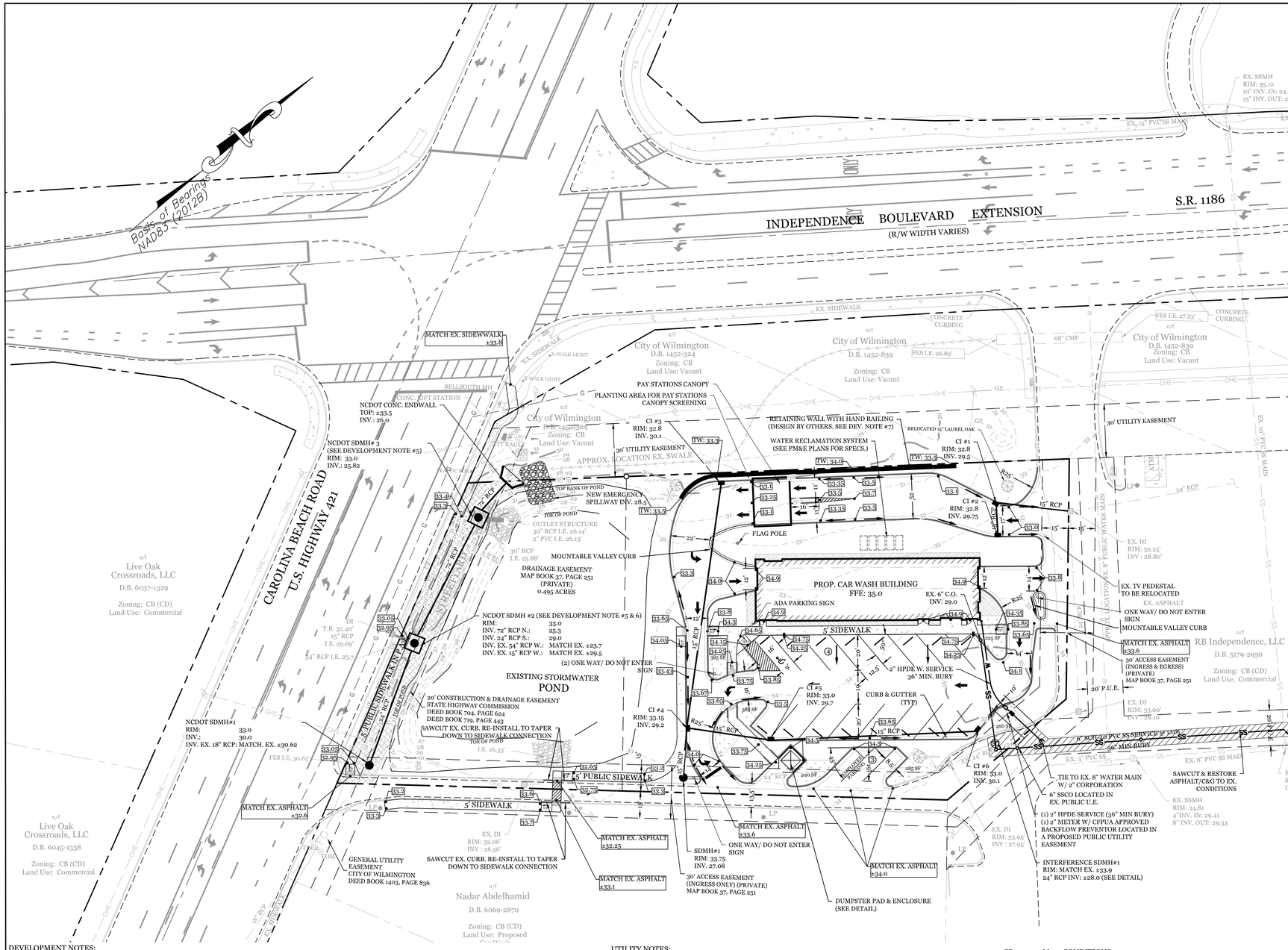
EXISTING CONDITIONS, TREE REMOVAL & PROTECTION PLAN
FOR
H2 TURBO WASH WEST
WILMINGTON, NORTH CAROLINA

[redacted]

CLIENT INFORMATION:
Andy Lazzaro
Three Guys Car Wash, Llc
5520 Oleander Dr.
Wilmington, NC 28403

DRAWN:	JAE	SHEET SIZE:	24 X 36
CHECKED:	CDC	DATE:	1/31/2022
APPROVED:	CDC	SCALE:	1" = 30'
PROJECT NUMBER:		2021-035	

DRAWING NUMBER:
C-0
1 OF 7



DEVELOPMENT NOTES:
1. ALL DEVELOPMENT SHALL BE IN ACCORDANCE WITH CITY OF WILMINGTON ZONING ORDINANCE.
2. PROJECT SHALL COMPLY WITH ALL FEDERAL, STATE & CITY OF WILMINGTON REGULATIONS.
3. RUNOFF FROM ALL IMPERVIOUS SURFACES, INCLUDING ROOF DRAINAGE, TO BE DIRECTED TO PIPED STORM DRAIN SYSTEM.
4. ALL "5' PUBLIC SIDEWALK" ON SITE TO BE PROVIDED A 5' PUBLIC PEDESTRIAN ACCESS EASEMENT.
5. CONTRACTOR TO SUBMIT SHOP DRAWINGS TO CITY ENGINEER AND NCDOT FOR APPROVAL.
6. CONTRACTOR TO COORDINATE WITH CITY ENGINEER AND NCDOT TO DETERMINE WHETHER EXISTING BOX CAN BE UTILIZED.
7. RETAINING WALL LOCATION IS SHOWN AS A REPRESENTATION. ACTUAL LOCATION AND DESIGN TO BE DETERMINED ON STRUCTURAL DRAWINGS.

FIRE & SAFETY NOTES:
1. PROPOSED BUILDING WILL NOT BE SPRINKLED
2. PARKING AND LANDSCAPING CANNOT BLOCK FIRE HYDRANTS.
3. ALL WEATHER ACCESS ROAD MUST BE MAINTAINED AROUND CONSTRUCTION SITE AT ALL TIMES.
4. HYDRANTS SHALL BE OF SUFFICIENT NUMBERS TO ACCOMMODATE BASE FIRE FLOW REQUIREMENTS OF STRUCTURE.
5. IN ADDITION TO THE STANDARD COMMENTS, ADDITIONAL FIRE PROTECTION AND ACCESSIBILITY REQUIREMENTS MAY BE REQUIRED DUE TO ANY SPECIAL CIRCUMSTANCES CONCERNING THE PROJECT.
6. CONTRACTOR SHALL SUBMIT A RADIO SIGNAL STRENGTH STUDY FOR ALL COMMERCIAL BUILDINGS ON THE SITE THAT DEMONSTRATES THAT EXISTING EMERGENCY RESPONDER RADIO SIGNAL LEVELS MEET THE REQUIREMENTS OF SECTION 510 OF THE 2018 NC FIRE CODE.

GENERAL TRAFFIC NOTES:
1. ALL TRAFFIC CONTROL SIGNS AND PAVEMENT MARKINGS OFF THE R/W TO BE MAINTAINED BY THE PROPERTY OWNER IN ACCORDANCE WITH MUTCD STANDARDS.
2. ALL PAVEMENT MARKINGS IN PUBLIC RIGHTS-OF-WAY AND FOR DRIVEWAYS ARE TO BE THERMOPLASTIC AND MEET CITY AND/OR NCDOT STANDARDS. [DETAIL SD 15-13 & SD 11-3 COFW TECH STDS]
3. ALL SIGNS AND PAVEMENT MARKINGS OFF RIGHT OF WAY ARE TO MEET/BE MAINTAINED TO MUTCD (MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES) STANDARDS. [DETAIL SD 15-13 & SD 11-3 COFW TECH STDS]
4. A UTILITY CUT PERMIT IS REQUIRED FOR EACH OPEN CUT OF A CITY STREET. NOTE THIS ON THE PLAN AND CONTACT 341-5899 FOR MORE DETAILS. IN CERTAIN CASES AN ENTIRE RESURFACING OF THE AREA BEING OPEN CUT MAY BE REQUIRED.
5. ANY BROKEN OR MISSING SIDEWALK PANELS, DRIVEWAY PANELS AND CURBING WILL BE REPLACED.
6. CONTACT 811 PRIOR TO CONTACTING CITY OF WILMINGTON, TRAFFIC ENGINEERING REGARDING THE UTILITIES IN ROW.
7. ALL PROPOSED VEGETATION WITHIN SIGHT TRIANGLES SHALL NOT INTERFERE WITH CLEAR VISUAL SIGHT LINES FROM 30" TO 10'.
8. STREET TREES MUST BE LOCATED A MINIMUM OF 15 FEET FROM STREET LIGHTS. [COFW SD 15-17]
9. A UTILITY CUT PERMIT IS REQUIRED FOR EACH OPEN CUT OF A CITY STREET. NOTE THIS ON THE PLAN AND CONTACT 341-5899 FOR MORE DETAILS. IN CERTAIN CASES AN ENTIRE RESURFACING OF THE AREA BEING OPEN CUT MAY BE REQUIRED.

UTILITY NOTES:
1. EXISTING WATER AND SANITARY SEWER SERVICES ARE CURRENTLY AVAILABLE TO THE SITE FROM CAPE FEAR PUBLIC UTILITY AUTHORITY PUBLIC MAINS.
2. ALL PROPOSED UTILITY SERVICES, SUCH AS ELECTRIC POWER, CATV, GAS & TELEPHONE SHALL BE INSTALLED UNDERGROUND.
3. ALL WATER & SEWER UTILITIES TO BE INSTALLED PER CFPUA TECHNICAL SPECIFICATIONS & STANDARDS.
4. ANY BACKFLOW PREVENTION DEVICES REQUIRED BY THE CFPUA WILL NEED TO BE ON THE LIST OF APPROVED DEVICES BY USCFCCCHR OR ASSE.
5. IF 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.
6. WHEN PVC WATER MAINS AND SERVICES ARE PROPOSED, THE PIPES ARE TO BE MARKED WITH NO. 10 INSULATED, SINGLE-STRAND COPPER WIRE INSTALLED & STRAPPED TO THE PIPES WITH DUCT TAPE. THIS IS TO BE ACCESSIBLE IN ALL VALVES AND METER BOXES TO AID IN FUTURE LOCATION OF FACILITIES.
7. THE CONTRACTOR IS RESPONSIBLE FOR THE LOCATION AND PROTECTION OF EXISTING UTILITIES DURING CONSTRUCTION. CALL NC811 AT 811 OR 1-800-632-4949. CONTRACTOR IS RESPONSIBLE FOR THE REPAIR AND REPLACEMENT OF ANY UTILITIES, CURB & GUTTER, PAVEMENT, ETC. THAT MAY BE BE DAMAGED DURING CONSTRUCTION. DAMAGED ITEMS SHALL BE REPAIRED TO AT LEAST THE QUALITY OR WORKMANSHIP FOUND IN THE ORIGINAL ITEM.
8. THE PROCESS FOR TELEPHONE CABLE PLACEMENT: * FINAL GRADE WILL NEED TO BE ESTABLISHED. * POWER WILL PLACE THEIR CABLE FIRST - APPROXIMATELY 3' DEEP. * TELEPHONE & CABLE TV WILL THEN PLACE THEIR CABLE AT APPROXIMATELY 2' DEEP.
9. SOLID WASTE DISPOSAL BY PRIVATE DUMPSTER SERVICE.
10. 3' SEPARATION REQUIRED BETWEEN ALL JOINTS, FITTINGS AND SERVICE SADDLES.
11. NO FORMAL SITE LIGHTING IS PROPOSED. THERE MAY BE SOME SMALL LIGHTS INSTALLED ON THE BUILDING ITSELF.

CD-15-520-M521 CONDITIONS:
1. The use and development of the subject property shall comply with all regulations and requirements imposed by the Land Development Code, the City of Wilmington Technical Standards and Specifications Manual and any other applicable federal, state or local law, ordinance or regulation, as well as any condition stated below. In the event of a conflict, the more stringent requirement or higher standard shall apply.
2. Approval of this conditional district rezoning does not constitute technical approval of the site plan. Final approval by the Technical Review Committee and the issuance of all required permits must occur prior to release of the project for construction.
3. If, for any reason, any condition for approval is found to be illegal or invalid or if the applicant should fail to accept any condition following approval, the approval of the site plan for the district shall be null and void and of no effect and proceedings shall be instituted to rezone the property to its previous zoning classification.
4. The use and development of the subject property shall be in accordance with the site plan as submitted and approved by City Council June 1, 2021.
5. The proposed use shall be limited to a 4,160 square foot automotive service (vehicle wash).
6. Signs shall be installed to promote safe vehicular travel along the access easement and interconnectivity to the adjacent property.
7. Pedestrian network shall connect the proposed building to the existing sidewalk network along Independence Boulevard. The internal sidewalk will be located along the existing access easement.
8. Any freestanding sign(s) on the site shall be a maximum of 6 feet in height, monument style with landscaping around the base of the sign; no pole signs shall be permitted.
9. Plantings, in excess of the streetyard requirements, shall be installed along Carolina Beach Road, between the existing stormwater pond and proposed building, in accordance with TRC approval.
10. The vehicle wash is required to have operational recycled water systems where a minimum of 50 percent of the water utilized is recycled.
11. All City, State and Federal regulations shall be met.
12. Additional plantings shall be provided to achieve an opaque screen for the payment station, located on the northwestern side of the vehicle wash building, and for the entrance bay door, located on the southwestern side of the vehicle wash building, to screen from the Independence Boulevard and Carolina Beach Road rights-of-way.

SITE DATA

PARCEL ID:		R06515-003-022-000
ZONING:		CB-(CD)
CAMA LAND USE CLASSIFICATION:		URBAN
PROJECT ADDRESS		3819 CAROLINA BEACH RD WILMINGTON, NC 28412
CURRENT OWNERS:		THREE GUYS CAR WASH, LLC 5520 OLEANDER DR. WILMINGTON, NC 28403
TOTAL ACREAGE IN PROJECT BOUNDARY		65,656 S.F. (1.51 AC.)
PROPOSED USE:		AUTOMOBILE SERVICES (CAR WASH)
PROPOSED CONSTRUCTION TYPE:		III-B (COMMERCIAL)
BUILDING SIZE:		4,305 S.F. (ROOF)
BUILDING HEIGHT:		±16'/1 STORY (25' MAX PER ZONING)
BUILDING SETBACKS:		
FRONT:	REQUIRED= 20'	PROPOSED= 162'
SIDE:	REQUIRED= 0'	PROPOSED= 46'L/108'R
REAR:	REQUIRED= 10'	PROPOSED= 50'

CALCULATION FOR BUILDING COVERAGE:

PROPOSED COVERAGE	4,305 S.F. ÷ 65,656 S.F. = 6.6%

PROPOSED ON-SITE IMPERVIOUS AREAS:

BUILDING	4,305 S.F.
PAY STATION CANOPY	560 S.F.
CONCRETE PARKING AREA	19,595 S.F.
CONCRETE SIDEWALK	2,075 S.F.
CONCRETE RETAINING WALL	420 S.F.
FUTURE	3,219 S.F.
TOTAL:	30,174 S.F. (46.0%)

TOTAL ON-SITE IMPERVIOUS AREA:

EXISTING TO REMAIN:	3,871 S.F.
PROPOSED:	30,174 S.F.
TOTAL:	34,045 S.F. (51.9%)

PROPOSED OFF-SITE IMPERVIOUS AREAS: CONCRETE SIDEWALK	1,720 S.F.
PARKING REQUIRED (4,000 S.F. CAR WASH): MIN: 1 PER 600 S.F. G.F.A: MAX: 1 PER 400 S.F. G.F.A:	7 SPACES (1 H.C.) 10 SPACES
PARKING PROVIDED=	7 SPACES (1 H.C.)
BICYCLE PARKING REQUIRED: (MIN. 5 PER 25-125 VEHICLE SPACES) REQUIRED: PROVIDED:	 0 SPACES 0 SPACES
STREETYARD (MULTIPLIER: 18' MAX: 27' MIN: 9') REQUIRED: 184'-6'=178' X 18'= PROVIDED:	 3,204 S.F 3,500 S.F.
FOUNDATION PLANTINGS: EAST FACE REQUIRED (130 LF): PROVIDED: WEST FACE REQUIRED (130 LF): PROVIDED: NORTH FACE REQUIRED (31.5 LF): PROVIDED: SOUTH FACE REQUIRED (31.5 LF): PROVIDED:	 250 SF (2,080 SF X 12%) 300 SF 250 SF (2,080 SF X 12%) 390 SF 61 SF (504 SF X 12%) 105 SF 61 SF (504 SF X 12%) 75 SF
EXISTING SEWER AND WATER DEMAND:=	0 GPD
PROPOSED SEWER AND WATER DEMAND: SEWER @ 25 GAL/PERSON = WATER @ 140% SEWER USAGE =	 150 GPD 210 GPD

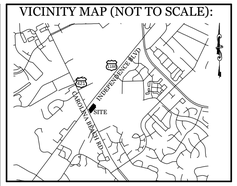
ESTIMATED TRIP GENERATION: (Per Trip Generation Manual, 10th Edition):
4,000 AUTOMATED CAR WASH (ITE CODE 948)
AM PEAK: 49* PM PEAK: 57 DAILY: 228**

* ITE does not publish AM peak hour trip rates for this land use, therefore these are assumed values based on engineering judgement.
** ITE does not publish daily trip rates for this land use, therefore it was assumed that 25% of the daily trips occur during the PM peak hour.

Approved Construction Plan
Date: 3/10/23
2021055
SWP #: 2022010R1
PO, ES, CW, MB, BM

LEGEND
- PROPERTY LINE
- EASEMENT
- CENTER LINE
- EXISTING WATERLINE
- EXISTING SANITARY SEWER LINE
- RUNOFF FLOW DIRECTION
- 25.5 SPOT ELEVATION
- INTERIOR PARKING LANDSCAPING
- FOUNDATION PLANTINGS
- STREETYARD LANDSCAPING

30' 15' 0' 30' 60'
Scale: 1"=30'

VICINITY MAP (NOT TO SCALE):


REVISIONS

4-12-22 ADDED DEAD 22" & 29" LAUREL OAKS TO BE REMOVED AND 15" LAUREL OAK TO BE RELOCATED.
6-9-22 REVISED SIDEWALK, PAY STATION AND DRIVE LOCATIONS.
6-21-22 REVISED SS TIE-IN LOCATION.
10-4-22 REVISED SS AND WATER SERVICE LOCATIONS, REVISED C.B. RD. RIGHT OF WAY DRAINAGE.
10-26-22 REVISED SS AND WATER SERVICES.
12-1-22 REVISED RETAINING WALL

INTRACOASTAL ENGINEERING, PLLC
5725 Oleander Dr. Unit E-7
Wilmington, North Carolina 28403
Phone: 910.859.8983
Email: Charlie@intracoastalengineering.com
License Number P-0662

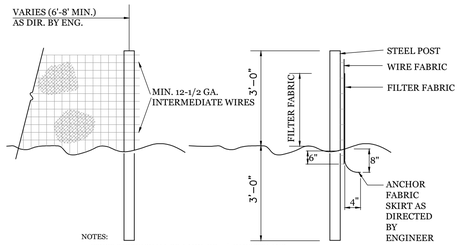
SITE, GRADING, DRAINAGE, & UTILITIES PLAN
FOR
H2 TURBO WASH WEST
WILMINGTON, NORTH CAROLINA

[redacted]

CLIENT INFORMATION:
Andy Lazzaro
Three Guys Car Wash, Llc
5520 Oleander Dr.
Wilmington, NC 28403

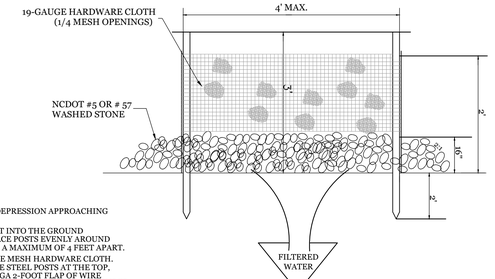
DRAWN:	JAE	SHEET SIZE:	24 X 36
CHECKED:	CDC	DATE:	1/31/2022
APPROVED:	CDC	SCALE:	1" = 30'
PROJECT NUMBER:		2021-035	

DRAWING NUMBER: C-1
2 OF 7



NOTES:
1. FENCE FABRIC SHALL BE A MIN. OF 32" IN WIDTH AND SHALL HAVE A MIN. OF SIX LINE WIRES WITH 12" STAY SPACING.
2. FABRIC SHALL BE FOR EROSION CONTROL AND MIN. OF 36" IN WIDTH. FABRIC SHALL BE FASTENED ADEQUATELY TO THE WIRE FABRIC AS DIRECTED BY THE ENGINEER.
3. STEEL POST SHALL BE 5'-0" IN HEIGHT AND BE OF THE SELF-FASTENER STEEL ANGLE TYPE.

TEMPORARY SILT FENCE
NTS



CONSTRUCTION SPECIFICATIONS:
1. UNIFORMLY GRADE A SHALLOW DEPRESSION APPROACHING THE INLET.
2. DRIVE 5-FOOT STEEL POSTS 2 FEET INTO THE GROUND SURROUNDING THE INLET. SPACE POSTS EVENLY AROUND THE PERIMETER OF THE INLET, A MAXIMUM OF 4 FEET APART.
3. SURROUND THE POSTS WITH WIRE MESH HARDWARE CLOTH. SECURE THE WIRE MESH TO THE STEEL POSTS AT THE TOP, MIDDLE, AND BOTTOM. PLACINGA 2-FOOT FLAP OF WIRE MESH UNDER THE GRAVEL FOR ANCHORING IS RECOMMENDED.
4. PLACE CLEAN GRAVEL (NCDOT #5 OR #57 STONE) ON A 2:1 SLOPE WITH A HEIGHT OF 16 INCHES AROUND THE WIRE, AND SMOOTH TO AN EVEN GRADE.
5. ONCE THE CONTRIBUTING DRAINAGE AREA HAS BEEN STABILIZED, REMOVE ACCUMULATED SEDIMENT, AND ESTABLISH FINAL GRADING ELEVATIONS.
6. COMPACT THE AREA PROPERLY AND STABILIZED IT WITH GROUNDCOVER.

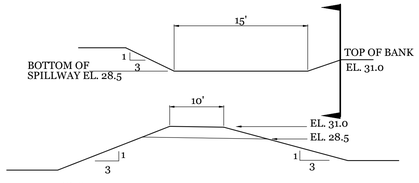
MAINTENANCE:
INSPECT INLETS AT LEAST WEEKLY AND AFTER EACH SIGNIFICANT (1 INCH OR GREATER) RAINFALL EVENT. CLEAR THE MESH WIRE OF ANY DEBRIS OR OTHER OBJECTS TO PROVIDE ADEQUATE FLOW FOR SUBSEQUENT RAINS. TAKE CARE NOT TO DAMAGE OR UNDERCUT THE WIRE MESH DURING SEDIMENT REMOVAL. REPLACE STONE AS NEEDED.

HARDWARE CLOTH AND GRAVEL INLET PROTECTION
NTS

Approved Construction Plan
Date: 3/10/23
2021055
SWP #: 2022010R1
PO, ES, CW, MB, BM

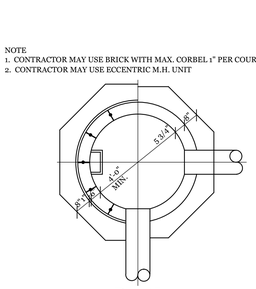
SITE WORK NOTES:

1. THE CONTRACTOR SHALL VISIT THE SITE AND BECOME FAMILIAR WITH EXISTING CONDITIONS BOTH ON AND ADJACENT TO THE SITE.
2. CLEARING: CONTRACTOR SHALL REMOVE ALL TREES AND VEGETATION WITHIN LIMITS OF CONSTRUCTION UNLESS OTHERWISE DESIGNATED TO REMAIN.
3. GRUBBING AND STRIPPING: CONTRACTOR SHALL RAKE AND REMOVE ROOTS, STUMPS, VEGETATION, DEBRIS, EXISTING STRUCTURES ABOVE AND BELOW GRADE, ORGANIC MATERIAL OR ANY OTHER UNSUITABLE MATERIAL WITHIN LIMITS OF CONSTRUCTION.
4. MUCKING: CONTRACTOR SHALL COORDINATE WITH OWNER AND THEIR GEOTECHNICAL REPRESENTATIVE TO COORDINATE REMOVAL OF ANY SOFT AREAS.
5. DISPOSAL: CLEARED, GRUBBED, STRIPPED OR OTHER WASTE MATERIAL SHALL BE REMOVED FROM SITE AND DISPOSED OF IN A PROPERLY PERMITTED FACILITY.
6. FILL AND COMPACTION SHOULD COMPLY WITH GEOTECHNICAL RECOMMENDATIONS.
7. THE CONTRACTOR SHALL NOTE THAT THE GRADING PLAN MAY NOT REPRESENT A BALANCED EARTHWORK CONDITION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CUT AND FILL QUANTITIES AND COMPLETE INSTALLATION TO SPECIFIED GRADES.
8. THE CONTRACTOR SHALL FURNISH SUITABLE BORROW MATERIAL FROM AN OFF-SITE PROPERLY PERMITTED FACILITY AS REQUIRED.
9. INFORMATION CONCERNING UNDERGROUND UTILITIES WAS OBTAINED FROM AVAILABLE RECORDS. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE THE EXACT ELEVATIONS AND LOCATIONS OF ALL EXISTING UTILITIES AT ALL CROSSINGS PRIOR TO COMMENCING TRENCH EXCAVATION. IF ACTUAL CLEARANCES ARE LESS THAN INDICATED ON PLAN, THE CONTRACTOR SHALL CONTACT THE DESIGN ENGINEER BEFORE PROCEEDING WITH CONSTRUCTION. ANY CONDITION DISCOVERED OR EXISTING THAT WOULD NECESSITATE A MODIFICATION OF THESE PLANS SHALL BE BROUGHT TO THE ATTENTION OF THE DESIGN ENGINEER BEFORE PROCEEDING WITH CONSTRUCTION.
10. NO CONSTRUCTION IS TO BEGIN BEFORE LOCATION OF EXISTING UTILITIES HAS BEEN DETERMINED. CALL "NC ONE-CALL" AT LEAST 48 HOURS BEFORE COMMENCING CONSTRUCTION.
11. THE CONTRACTOR IS RESPONSIBLE FOR THE LOCATION AND PROTECTION OF ALL EXISTING UTILITIES DURING CONSTRUCTION. BEFORE COMMENCING ANY EXCAVATIONS IN OR ALONG ROADWAYS OR RIGHT-OF-WAYS, PUBLIC AREAS OR IN PRIVATE EASEMENTS, THE CONTRACTOR SHALL NOTIFY ALL APPROPRIATE PERSONNEL OF THEIR INTENT TO EXCAVATE, IN WRITING, NOT LESS THAN 10 DAYS PRIOR TO EXCAVATING.
12. THE CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE DISCONNECTION/ RECONNECTION AND/OR THE RELOCATION OF ALL EXISTING UTILITIES WITH APPROPRIATE PERSONNEL.
13. CONTRACTOR SHALL ADJUST ALL MANHOLES, VALVE & CURB BOXES TO FINAL GRADE UPON COMPLETION OF ALL CONSTRUCTION. ANY BOXES DAMAGED OR OTHERWISE DISTURBED BY THE CONTRACTOR SHALL BE REPAIRED AT THE EXPENSE OF THE CONTRACTOR.
14. THE CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS AT THE SITE. FURTHERMORE THE CONTRACTOR SHALL REPORT ALL DISCREPANCIES OR QUESTIONS TO THE ENGINEER PRIOR TO INSTALLATION.
15. THE CONTRACTOR SHALL PROVIDE ANY AND ALL LAYOUT REQUIRED TO CONSTRUCT HIS WORK UNLESS OTHERWISE DIRECTED BY OWNER.
16. ALL SERVICE CONNECTIONS SHALL BE INSTALLED TO MEET ALL LOCAL, STATE, AND CFPUA CODES. METERS, TAPS, MATERIALS, WORKMANSHIP AND ALL FEES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL COMPLY WITH ALL REQUIREMENTS.
17. ALL BACKFILL FROM UTILITY INSTALLATION MUST BE COMPACTED OR AMENDED TO PROVIDE TRAFFIC BEARING CAPACITY. GEOTECHNICAL ENGINEER TO BE CONSULTED AT CONTRACTORS COST AS NECESSARY.
18. ALL AREAS SHALL BE GRADED FOR POSITIVE DRAINAGE. CONTRACTOR SHALL REPORT ANY DISCREPANCIES TO THE ENGINEER PRIOR TO INSTALLATION. ALL AREAS SHALL BE SLOPED TO DRAIN AWAY FROM BUILDINGS AT ALL TIMES.
19. CONCRETE FOR WALKS, CURBS AND DRIVES SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI @ 28 DAYS - AIR ENTRAINED.
20. FIELD TESTING SHALL BE DONE BY AN INDEPENDENT TESTING LABORATORY PAID FOR BY THE OWNER. FURTHER TESTING REQUIRED DUE TO A FAILED TEST WILL BE PAID FOR BY THE CONTRACTOR.
21. ALL SIDEWALKS SHALL BE FREE OF CRACKS, BREAKS, OR ANY OTHER DEFECT PRIOR TO RECEIVING A CERTIFICATE OF OCCUPANCY.

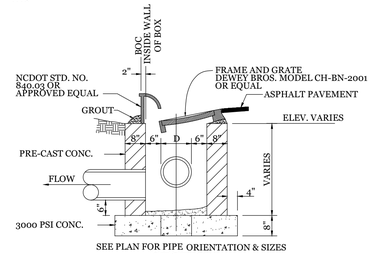


NOTES:
1. WIDTH OF SPILLWAY TO BE PROTECTED WITH RIP-RAP AS SHOWN ON PLAN.

EMERGENCY SPILLWAY DETAIL
NTS



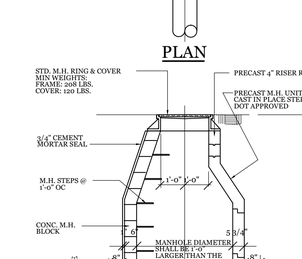
PLAN



SEE PLAN FOR PIPE ORIENTATION & SIZES

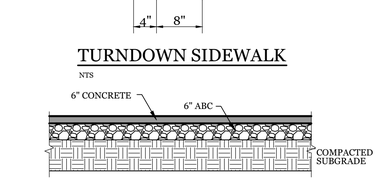
SECTION

CURB INLET DETAIL
NTS

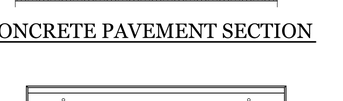


SECTION

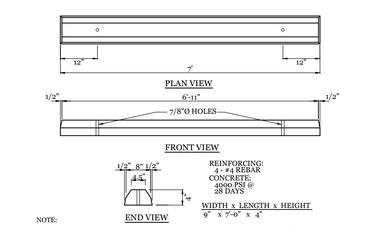
STORM DRAIN MANHOLE DETAIL
NTS



TURNDOWN SIDEWALK
NTS

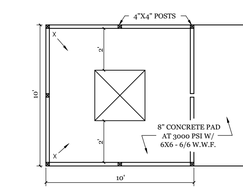


CONCRETE PAVEMENT SECTION
NTS

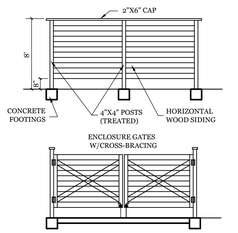


NOTE:
1. CONTRACTOR SHALL INSTALL PER CITY OF WILMINGTON TECHNICAL STANDARD PER SD 15-13
2. CONTRACTOR SHALL INSTALL WHEEL STOP 2.5' FROM SIDEWALK.

WHEEL STOP DETAIL
NTS

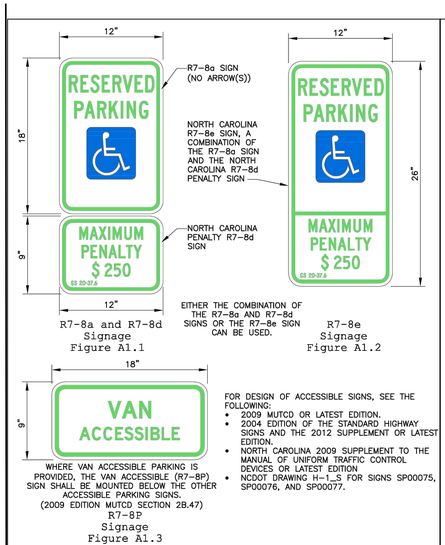


PLAN

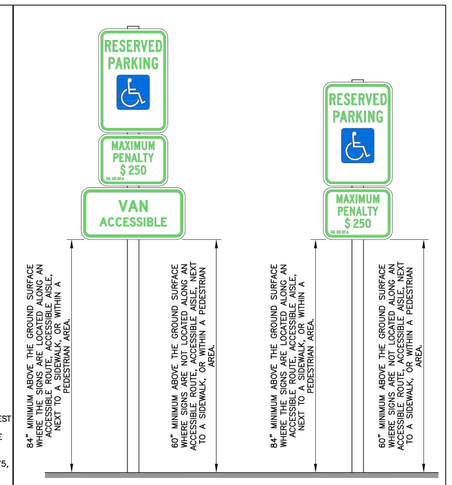


ELEVATIONS

DUMPSTER PAD & ENCLOSURE DETAIL
NTS

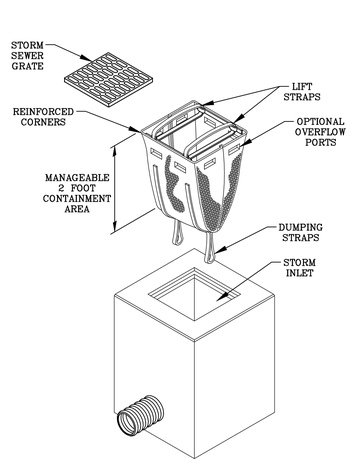


DATE:	NOVEMBER 8, 2016	ACCESSIBLE PARKING SIGNS AND INSTALLATION DETAILS SHEET A1 OF 5	CITY OF WILMINGTON TRAFFIC ENGINEERING
DRAWN BY:	DALE THOMPSON		
CHECKED BY:	RANDALL GLAZIER		
SCALE:	NOT TO SCALE		

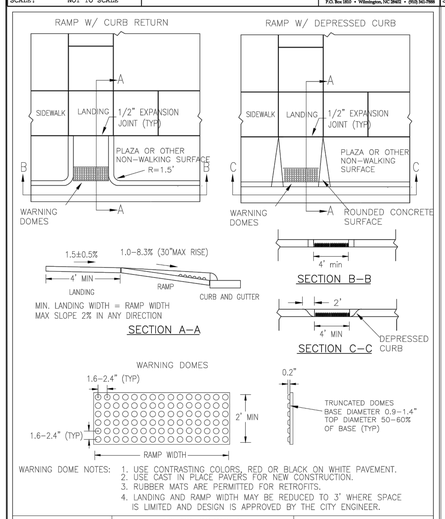


Signage Height
Figure A2.1

DATE:	NOVEMBER 8, 2016	ACCESSIBLE PARKING SIGNS AND INSTALLATION DETAILS SHEET A2 OF 5	CITY OF WILMINGTON TRAFFIC ENGINEERING
DRAWN BY:	DALE THOMPSON		
CHECKED BY:	RANDALL GLAZIER		
SCALE:	NOT TO SCALE		

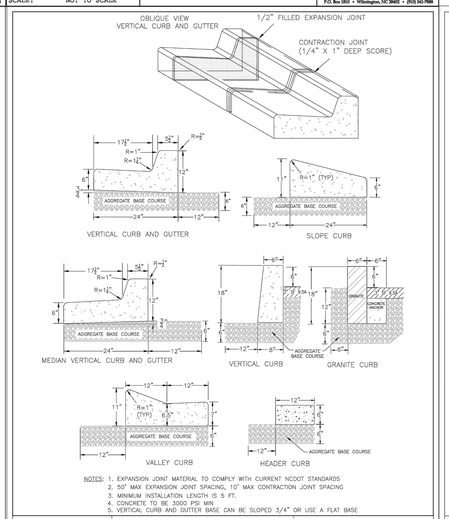


DANDY SACK™DETAIL



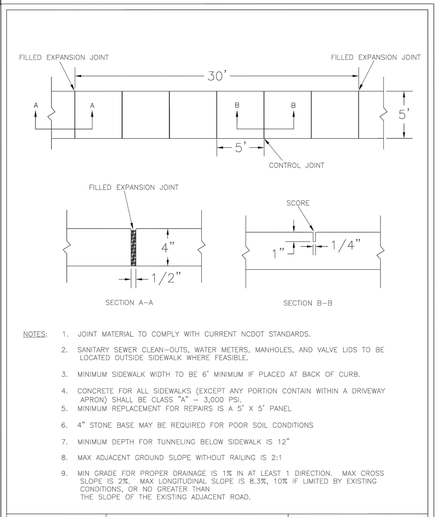
WARNING DOME NOTES:
1. USE CONTRASTING COLORS, RED OR BLACK ON WHITE PAVEMENT.
2. USE CAST IN PLACE PAVERS FOR NEW CONSTRUCTION.
3. RUBBER MATS ARE PERMITTED FOR RETROFITS.
4. LANDING AND RAMP WIDTH MAY BE REDUCED TO 3' WHERE SPACE IS LIMITED AND DESIGN IS APPROVED BY THE CITY ENGINEER.

STANDARD DETAIL			CITY OF WILMINGTON NORTH CAROLINA
DATE:	DECEMBER, 2010	PERPENDICULAR CURB RAMP ADJACENT TO PLAZA	CITY OF WILMINGTON ENGINEERING PO. BOX 1810 WILMINGTON N.C. 28402 (910) 341-7807
DRAWN:	PB/JSR		
CHECKED:	DEC		
SCALE	NOT TO SCALE		SD3-08



NOTES:
1. EXPANSION JOINT MATERIAL TO COMPLY WITH CURRENT NCDOT STANDARDS
2. 50' MAX EXPANSION JOINT SPACING, 10' MAX CONTRACTION JOINT SPACING
3. MINIMUM INSTALLATION LENGTH IS 5 FT.
4. CONCRETE TO BE 3000 PSI MIN
5. VERTICAL CURB AND GUTTER BASE CAN BE SLOPED 3/4" OR USE A FLAT BASE

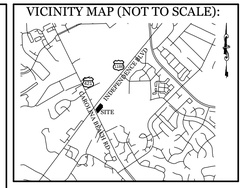
STANDARD DETAIL			CITY OF WILMINGTON NORTH CAROLINA
DATE:	AUGUST, 2011	CURBING	CITY OF WILMINGTON ENGINEERING PO. BOX 1810 WILMINGTON N.C. 28402 (910) 341-7807
DRAWN:	PB/JSR		
CHECKED:	DEC		
SCALE	NOT TO SCALE		SD 3-11



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			CITY OF WILMINGTON NORTH CAROLINA
DATE:	OCTOBER, 2010	SIDEWALK	CITY OF WILMINGTON ENGINEERING PO. BOX 1810 WILMINGTON N.C. 28402 (910) 341-7807
DRAWN:	PB/JSR		
CHECKED:	DEC		
SCALE	NOT TO SCALE		SD 3-10

VICINITY MAP (NOT TO SCALE):



REVISIONS

7-14-21 REVISED TO SINGLE DUMPSTER PAD & ENCLOSURE DETAIL.
10-4-22 MOVED TEMP. CONST. ENTRANCE DETAIL TO SHEET C2 AND ADDED EMERGENCY SPILLWAY DETAIL.

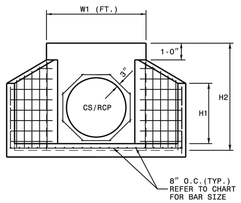
INTRACOASTAL ENGINEERING, PLLC
5725 Oleander Dr. Unit E-7
Wilmington, North Carolina 28403
Phone: 910.859.8983
Email: Charlie@intracoastalengineering.com
License Number P-0662

DETAILS
FOR
H2 TURBO WASH WEST
WILMINGTON, NORTH CAROLINA

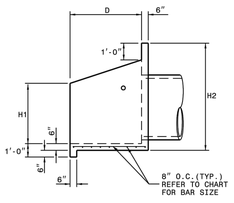
CLIENT INFORMATION:
Andy Lazzaro
Three Guys Car Wash, Llc
5520 Oleander Dr.
Wilmington, NC 28403

DRAWN:	JAE	SHEET SIZE:	24 X 36
CHECKED:	CDC	DATE:	1/31/2022
APPROVED:	CDC	SCALE:	NTS
PROJECT NUMBER:	2021-035		

DRAWING NUMBER: C-3



ELEVATION

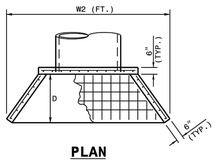


SIDE

NOTES:

* THIS PRECAST ENDWALL MAY BE USED FOR THE FOLLOWING STANDARDS: 838.01, 838.11, 838.21, 838.27, 838.33, 838.39, 838.51, 838.57, 838.63 AND 838.69.
* INSTALL PRECAST ENDWALLS WITH WINGS AND PAY FOR IN ACCORDANCE WITH SPECIFICATION SECTION 838.
* USE 4000 PSI CONCRETE.
* PROVIDE ALL REINFORCING STEEL WHICH MEETS ASTM A615 FOR GRADE 60 AND WELDED WIRE FABRIC CONFORMING TO ASTM A185 WITH 2" MIN. CLEARANCE.
* PLACE LIFT HOLES OR PINS IN ACCORDANCE WITH OSHA STANDARD 1926.704.
* PIPE TO BE GROUTED INTO HEADWALL AT JOB SITE BY CONTRACTOR
* ALL ELEMENTS PRECAST TO MEET ASTM C913.
* WELDED WIRE FABRIC MAY BE SUBSTITUTED FOR REBAR AS LONG AS THE SAME AREA OF STEEL IS PROVIDED.
* CHAMFER ALL CORNERS 1" OR HAVE A RADIUS OF 1".

NOTE: THE MINIMUM BAR SIZE SHALL BE #5 BARS AT 8" CTS.THE CONTRACTOR WILL HAVE THE OPTION TO INCREASE THIS BAR SIZE AS NEEDED.



PLAN

ENDWALL DIMENSIONS

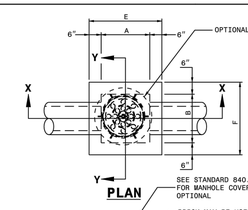
FT.	MINIMUM	MIN./MAX.	MIN./MAX.	MIN./MAX.	MIN./MAX.	MIN./MAX.
PIPE DIA.	BAR SIZE	H1(FT.)	H2(FT.)	D (FT.)	W1	W2
1.0	#5 @ 8"	1.25/2.00	2.00/3.75	1.25/1.75	3.00/3.75	5.50/6.00
1.25	#5 @ 8"	1.25/2.00	3.00/3.75	1.25/2.00	3.50/3.75	6.50/6.75
1.50	#5 @ 8"	1.25/2.00	3.00/4.25	1.50/2.50	3.50/3.75	6.50/6.75
2.0	#5 @ 8"	1.50/2.50	4.00/4.75	1.75/2.50	4.00/4.25	7.50/8.25
2.5	#5 @ 8"	2.50/3.50	4.00/6.00	2.00/3.00	4.50/5.50	10.00/11.50
3.0	#5 @ 8"	3.00/3.50	5.00/6.00	2.75/3.50	5.25/5.75	11.50/11.75
3.5	#5 @ 8"	3.25/4.50	6.00/6.75	3.25/3.50	6.00/6.75	12.00/13.25
4.0	#5 @ 8"	3.50/4.50	6.50/7.00	3.25/3.50	6.50/6.75	13.00/13.25
4.5	#5 @ 8"	4.00/5.00	6.50/8.50	3.25/4.00	7.00/9.25	13.50/15.75
5.0	#5 @ 8"	4.50/5.00	7.00/8.50	3.25/4.00	7.25/9.25	13.75/15.75
5.5	#5 @ 8"	4.50/5.00	7.50/8.50	3.25/4.00	7.25/9.25	14.00/15.75
6.0	#5 @ 8"	4.50/5.00	7.50/8.50	3.25/4.00	7.75/9.25	14.75/16.75

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

1-18

ROADWAY STANDARD DRAWING FOR
PRECAST CONCRETE ENDWALL
FOR SINGLE 12" THRU 72" PIPE - 90° SKEW

SHEET 1 OF 1
838.80



PLAN

GENERAL NOTES:

CHAMFER ALL EXPOSED CORNERS 1".

USE CLASS "B" CONCRETE THROUGHOUT.

OPTIONAL CONSTRUCTION - MONOLITHIC POUR, 2" KEYWAY, OR #4 BAR DOWELS AT 12" CENTERS AS DIRECTED BY THE ENGINEER.

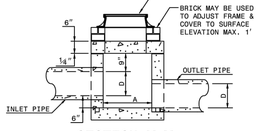
USE FORMS TO CONSTRUCT THE BOTTOM SLAB.

IF REINFORCED CONCRETE PIPE IS SET IN BASE SLAB OF BOX, ADD TO BASE AS SHOWN ON STANDARD NO. 840.00.

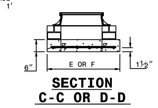
PROVIDE ALL JUNCTION BOXES OVER 3'-6" IN DEPTH WITH STEPS 12" ON CENTERS IN ACCORDANCE WITH STD. NO. 840.66.

ADJUST THE STEEL, CONCRETE AND BRICK MASONRY QUANTITIES TO INCLUDE THE ADDITION OF THE MANHOLE (I.E. DIAGONAL BARS SHORTENED AROUND OPENING IN TOP SLAB, ADDITIONAL VARIABLE HEIGHT BRICK MASONRY, OPENING IN TOP SLAB.)

MAX. DEPTH OF THIS STRUCTURE FROM TOP OF BOTTOM SLAB TO TOP ELEVATION IS 12 FEET.

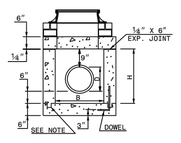


SECTION X-X



SECTION C-C OR D-D

DOWEL



SECTION Y-Y

DIMENSIONS AND QUANTITIES FOR CONCRETE JUNCTION BOXES

DIMENSIONS OF BOX AND PIPE				REINFORCEMENT BARS "A"		TOP SLAB DIMENSIONS		CUBIC YARDS IN BOX			TOTAL QUANTITIES BOX AND SLABS		DEDUCTIONS FOR ONE PIPE CU.YDS.	
PIPE	SPAN	WIDTH	HEIGHT											
D	A	B	H	NO.	LENGTH	E	F	TOP SLAB	BOTTOM SLAB	WALL/ FT. OF HT.	LBS. REINF	CU. YDS. MIN. "H"	C.S.	R.C.
12"	2'-0"	2'-0"	2'-3"	12	2'-9"	3'-0"	3'-0"	0.167	0.167	0.185	22	0.750	0.015	0.024
15"	2'-3"	2'-3"	2'-6"	12	3'-0"	3'-3"	3'-3"	0.196	0.196	0.204	24	0.902	0.023	0.036
18"	2'-6"	2'-6"	2'-9"	14	3'-3"	3'-6"	3'-6"	0.227	0.227	0.222	30	1.065	0.033	0.049
24"	3'-0"	3'-0"	3'-3"	16	3'-9"	4'-0"	4'-0"	0.296	0.296	0.259	40	1.434	0.059	0.085
30"	3'-6"	3'-6"	3'-9"	18	4'-3"	4'-6"	4'-6"	0.375	0.375	0.296	51	1.860	0.092	0.127
36"	4'-0"	4'-0"	4'-3"	20	4'-9"	5'-0"	5'-0"	0.463	0.463	0.333	64	2.341	0.132	0.178
42"	4'-6"	4'-6"	4'-9"	22	5'-3"	5'-6"	5'-6"	0.560	0.560	0.370	77	2.878	0.180	0.243
48"	5'-4"	5'-4"	5'-3"	26	6'-3"	6'-4"	6'-4"	0.743	0.743	0.407	111	3.623	0.235	0.317
54"	5'-10"	5'-10"	5'-9"	28	6'-7"	6'-10"	6'-10"	0.865	0.865	0.444	126	4.283	0.297	0.401
60"	6'-6"	6'-6"	6'-3"	30	7'-3"	7'-6"	7'-6"	1.042	1.042	0.481	145	5.090	0.367	0.495
66"	7'-1"	7'-1"	6'-9"	32	7'-10"	8'-1"	8'-1"	1.210	1.210	0.518	169	5.917	0.444	0.589

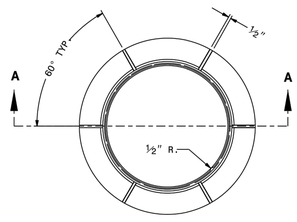
STATE OF
NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

1-18

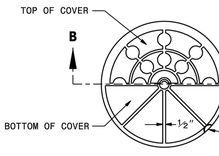
ROADWAY STANDARD DRAWING FOR
CONCRETE JUNCTION BOX
(WITH OPTIONAL MANHOLE)
12" THRU 66" PIPE

SHEET 1 OF 1
840.31

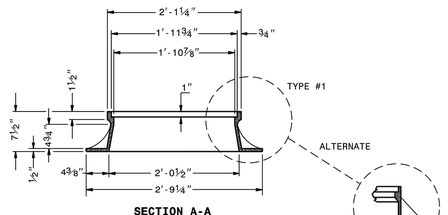
SOLID COVER SHOWN PERFORATED. PERFORATED AVAILABLE IF SPECIFIED.
STATE USE OF SYSTEM ON COVER
(I.E.: SEWER, STORM DRAIN, ELECTRICAL)



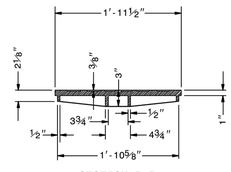
PLAN OF FRAME



PLAN OF COVER



SECTION A-A



SECTION B-B

MINIMUM WEIGHTS - LBS.
FRAME - 180
COVER - 120
TOTAL - 300

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

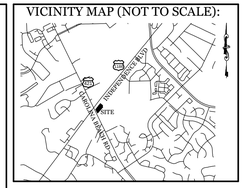
1-18

ROADWAY STANDARD DRAWING FOR
MANHOLE FRAME AND COVER

SHEET 1 OF 1
840.54

Approved Construction Plan
Date: 3/10/23
2021055
SWP #: 2022010R1
PO, ES, CW, MB, BM

VICINITY MAP (NOT TO SCALE):



REVISIONS

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Wilmington, North Carolina 28403
Phone: 910.859.8983
Email: Charlie@intracoastalengineering.com
License Number P-0662

DETAILS
FOR
H2 TURBO WASH WEST
WILMINGTON, NORTH CAROLINA

[redacted]

CLIENT INFORMATION:
Andy Lazzaro
Three Guys Car Wash, Llc
5520 Oleander Dr.
Wilmington, NC 28403

DRAWN:	JAE	SHEET SIZE:	24 X 36
CHECKED:	CDC	DATE:	1/31/2022
APPROVED:	CDC	SCALE:	NTS
PROJECT NUMBER:		2021-035	

DRAWING NUMBER:
C-5

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.

SECTION E: GROUND STABILIZATION

Required Ground Stabilization Timeframes

Site Area Description	Stabilize within this many calendar days after ceasing land disturbance	Timeframe variations
(a) Perimeter dikes, swales, ditches, and perimeter slopes	7	None
(b) High Quality Water (HQW) Zones	7	None
(c) Slopes steeper than 3:1	7	If slopes are 10' or less in length and are not steeper than 2:1, 14 days are allowed
(d) Slopes 3:1 to 4:1	14	-7 days for slopes greater than 50' in length and with slopes steeper than 4:1 -7 days for perimeter dikes, swales, ditches, perimeter slopes and HQW Zones -10 days for Falls Lake Watershed
(e) Areas with slopes flatter than 4:1	14	-7 days for perimeter dikes, swales, ditches, perimeter slopes and HQW Zones -10 days for Falls Lake Watershed unless there is zero slope

Note: After the permanent cessation of construction activities, any areas with temporary ground stabilization shall be converted to permanent ground stabilization as soon as practicable but in no case longer than 90 calendar days after the last land disturbing activity. Temporary ground stabilization shall be maintained in a manner to render the surface stable against accelerated erosion until permanent ground stabilization is achieved.

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
• 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	• 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 • Rolled erosion control products with grass seed

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 and size of waste containers (e.g dumpster, trash receptacle) on site to contain construction and domestic wastes.
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 or provide secondary containment. 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. Clean up immediately if containers overflow.
8. Dispose waste off-site at an approved disposal facility.
9. On business days, clean up and dispose of waste in designated waste containers.

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.

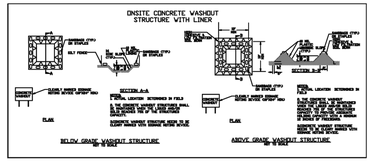
PORTABLE TOILETS

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.

NORTH CAROLINA Environmental Quality



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: 04/01/19

Approved Construction Plan
Date: 3/10/23
2021055
SWP #: 2022010R1
PO, ES, CW, MB, BM

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 equal to or 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:
(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 (anc 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. Description, evidence, and date of corrective 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. Description, evidence, and date of corrective 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. Description, evidence, and date of corrective 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. Description, evidence and date of corrective actions taken, and 2. Records of the required reports to the appropriate Division Regional Office per Part III, Section C, Item (2)(a) of this permit.
(6) Ground stabilization measures	After each phase of grading	1. The phase of grading (installation of perimeter E&SC measures, clearing and grubbing, installation of storm drainage facilities, completion of all land-disturbing activity, construction or redevelopment, permanent ground cover). 2. Documentation that the required ground stabilization measures have been provided within the required timeframe or an assurance that they will be provided as soon as possible.

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 kept on site and available for inspection at all times during normal business hours.

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 to be Kept on Site

In addition to the E&SC plan documents above, the following items shall be kept on the site and available for 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 twelve months. 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.

3. Documentation to be Retained for Three Years

All data used to complete the e-NOI and all 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).

(c) 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.

(d) Anticipated bypasses and unanticipated bypasses.

(e) 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 Department's Environmental Emergency Center personnel at (800) 858-0368.

Occurrence	Reporting Timeframes (After Discovery) and Other Requirements
(a) Visible sediment deposition in a stream or wetland	• ***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	• ***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)]	• ***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)]	• ***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)]	• ***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.

PART II, SECTION G, ITEM (4)
DRAW DOWN OF SEDIMENT BASINS FOR MAINTENANCE OR CLOSE OUT

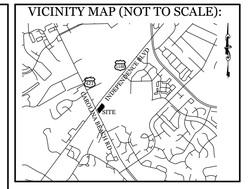
Sediment basins and traps that receive runoff from drainage areas of one acre or more shall use outlet structures that withdraw water from the surface when these devices need to be drawn down for maintenance or close out unless this is infeasible. The circumstances in which it is not feasible to withdraw water from the surface shall be rare (for example, times with extended cold weather). Non-surface withdrawals from sediment basins shall be allowed only when all of the following criteria have been met:

(a) The E&SC plan authority has been provided with documentation of the non-surface withdrawal and the specific time periods or conditions in which it will occur. The non-surface withdrawal shall not commence until the E&SC plan authority has approved these items,
(b) The non-surface withdrawal has been reported as an anticipated bypass in accordance with Part III, Section C, Item (2)(c) and (d) of this permit,
(c) Dewatering discharges are treated with controls to minimize discharges of pollutants from stormwater that is removed from the sediment basin. Examples of appropriate controls include properly sited, designed and maintained dewatering tanks, weir tanks, and filtration systems,
(d) Vegetated, upland areas of the sites or a properly designed stone pad is used to the extent feasible at the outlet of the dewatering treatment devices described in Item (c) above,
(e) Velocity dissipation devices such as check dams, sediment traps, and riprap are provided at the discharge points of all dewatering devices, and
(f) Sediment removed from the dewatering treatment devices described in Item (c) above is disposed of in a manner that does not cause deposition of sediment into waters of the United States.

NORTH CAROLINA Environmental Quality

NCG01 SELF-INSPECTION, RECORDKEEPING AND REPORTING | EFFECTIVE: 04/01/19

VICINITY MAP (NOT TO SCALE):



REVISIONS

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Phone: 910.859.8983
Email: Charlie@intracoastalengineering.com
License Number P-0662

NCG01 NOTES FOR H2 TURBO WASH WEST WILMINGTON, NORTH CAROLINA

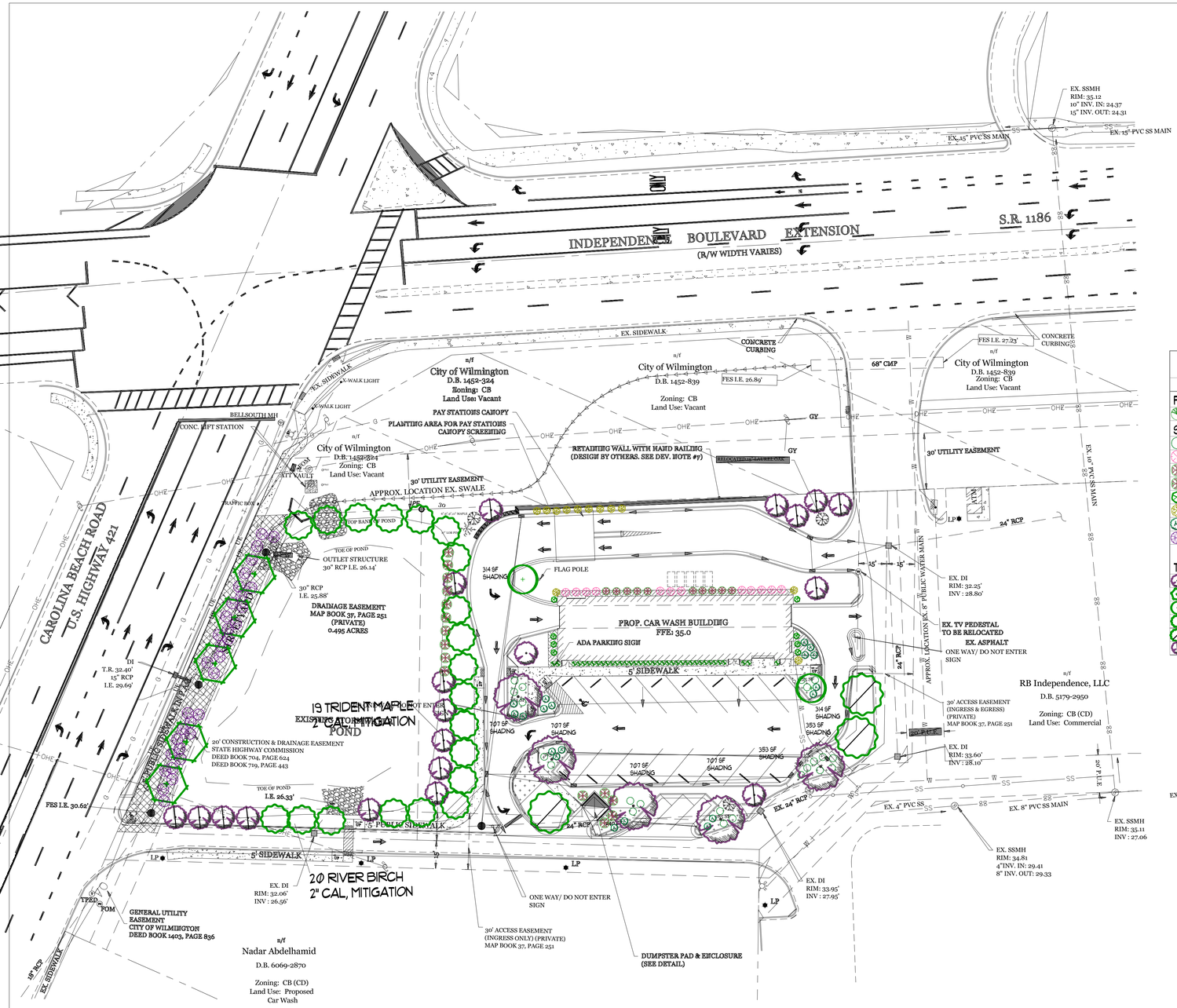
[redacted]

CLIENT INFORMATION:
Andy Lazzaro
Three Guys Car Wash, Llc
5520 Oleander Dr.
Wilmington, NC 28403

DRAWN:	JAE	SHEET SIZE:	24 X 36
CHECKED:	CDC	DATE:	1/31/2022
APPROVED:	CDC	SCALE:	NTS
PROJECT NUMBER:		2021-035	

DRAWING NUMBER: C-6

7 OF 7



REQUIRED TREE MITIGATION CHART

QTY	SIZE	TYPE	% MITIGATION	REPLACEMENT TREE QTY
1	29"	LIVE OAK	100%	19.33
1	30"	LOB PINE	100%	20.00
TOTAL REPLACEMENT TREES				39

* SEE LANDSCAPE PLAN BY OTHERS FOR REQUIRED MITIGATION.

LANDSCAPE NOTES:

1. 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.
2. THE AREAS WITHIN THE TRIANGULAR SIGHT DISTANCE SHALL BE MAINTAINED FREE OF ALL OBSTRUCTIONS BETWEEN 30" AND 10'.
3. A RAIN/FREEZE SENSOR SHALL BE USED IF THERE IS AN IRRIGATION SENSOR.
4. USING THE CREATIVE STANDARD OF THE CODE, 50% OF THE STREETYARD SHALL BE PLANTED AS CALLED OUT.
5. ALL PLANT BEDS ARE TO RECEIVE 3-4" OF PINESTRAW OR MULCH.
6. LANDSCAPING SHALL BE COMPLETE BEFORE ISSUANCE OF A CO.

LEGEND

	COMMON NAME	QTY	SIZE	HEIGHT	
	FLOWER, PERENNIAL				
	LIRIOPE, EMERALD GODDESS	38	1 GAL.	12"	
	SHRUBS				
	HOLLY, YAUPON, DWARF	23	3 GAL.	NOT REQ'D.	
	BREEZE GRASS	13	3 GAL.	12"	
	LIGUSTRUM, VARIEGATED	10	3 GAL.	12"	THESE 2 VARIETIS OF LIGUSTRUM ARE NOT LISTED AS INVASIVE ON THE WEBSITE LISTED. LIGUSTRUM SINESE IS THE VARIETY THAT IS INVASIVE.
	LIGUSTRUM RECURVE	15	3 GAL.	24"	
	PITTOSPORUM COMPACTA	8	3 GAL.	12"	
	YEW, UPRIGHT JAPANESE	12	7 GAL.	3'	
	DRIFT ROSE	19	3 GAL.	NOT REQ'D.	
	MISCANTHUS ADAGIO	34	3 GAL.	12"	
	TREES				
	TRIDENT MAPLE	5	2" CAL.		
	BALD CYPRESS	5	2" CAL.		
	EAGLESTON HOLLY, TREE FORM	2		8'	
	RIVER BIRCH	20	2" CAL.		MITIGATION
	RIVER BIRCH	3	2" CAL.		
	TRIDENT MAPLE	19	2" CAL.		MITIGATION

SITE DATA

PARCEL ID:		R06515-003-022-000
ZONING:		CB-(CD)
CAMA LAND USE CLASSIFICATION:		URBAN
PROJECT ADDRESS		3819 CAROLINA BEACH RD WILMINGTON, NC 28412
CURRENT OWNERS:		THREE GUYS CAR WASH, LLC 5520 OLEANDER DR. WILMINGTON, NC 28403
TOTAL ACREAGE IN PROJECT BOUNDARY		65,656 S.F. (1.51 AC.) X 15 = 23 Trees 2" Cal. Req'd & Prov'd
PROPOSED USE:		AUTOMOBILE SERVICES (CAR WASH)
PROPOSED CONSTRUCTION TYPE:		III-B (COMMERCIAL)
BUILDING SIZE:		4,305 S.F. (ROOF)
BUILDING HEIGHT:		±16'/1 STORY (25' MAX PER ZONING)
BUILDING SETBACKS:		
FRONT:	REQUIRED= 20'	PROPOSED= 162'
SIDE:	REQUIRED= 0'	PROPOSED= 46'L/108'R
REAR:	REQUIRED= 10'	PROPOSED= 50'

CALCULATION FOR BUILDING COVERAGE:

PROPOSED COVERAGE	4,305 S.F. ÷ 65,656 S.F. = 6.6%

PROPOSED ON-SITE IMPERVIOUS AREAS:

BUILDING	4,305 S.F.
PAY STATION CANOPY	560 S.F.
CONCRETE PARKING AREA	19,595 S.F.
CONCRETE SIDEWALK	2,075 S.F.
CONCRETE RETAINING WALL	420 S.F.
FUTURE	3,219 S.F.
TOTAL:	30,174 S.F. (46.0%)

TOTAL ON-SITE IMPERVIOUS AREA:

EXISTING TO REMAIN:	3,871 S.F.
PROPOSED:	30,174 S.F.
TOTAL:	34,045 S.F. (51.9%)

STREETYARD (MULTIPLIER: 18' MAX: 27' MIN: 9')

REQUIRED: 184'-6'=178' X 18'=	3,204 S.F
PROVIDED:	3,500 S.F.

FOUNDATION PLANTINGS:

EAST FACE REQUIRED (130 LF):	250 SF (2,080 SF X 12%)
PROVIDED:	300 SF
WEST FACE REQUIRED (130 LF):	250 SF (2,080 SF X 12%)
PROVIDED:	390 SF
NORTH FACE REQUIRED (31.5 LF):	61 SF (504 SF X 12%)
PROVIDED:	105 SF
SOUTH FACE REQUIRED (31.5 LF):	61 SF (504 SF X 12%)
PROVIDED:	75 SF

19,595 S.F. Impervious x .20 = 3,919 sf Shading req'd.
2 x 314 = 628 sf shading
2 x 353 = 706 sf
4 x 707 = 2828 sf
4162 sf Total Shading Provided

STREETYARD: 3204 SF / 600 = 5 TREES 2" CAL. & 32 SHRUBS 12" HT. REQ'D. & PROV'D

Approved Construction Plan
Date: 3/10/23
2021055
SWP #: 2022010R1
PO, ES, CW, MB, BM
Plann
Traffi
Fire

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

FREEMAN LANDSCAPE, INC.
Landscape Installation Professionals
james@freemanlandscape.com
(910) 796-1166

Revision #: 4

Date: 12/1/2022

Scale: 1" = 30'

30' 15' 0' 30' 60'

Landscape Plan:

H2 Turbo Carwash

Landscape Design by: James Freeman - NCLC# 1955

Freeman Landscape