

TABLE 1
BOW/RAFTER FRAME, END POST, GROUND ANCHOR AND PANEL FASTENER SPACING SPECIFICATIONS

WIND EXPOSURE CATEGORY	ULTIMATE WIND SPEED (MPH)	NOMINAL WIND SPEED (MPH)	MAXIMUM GROUND SNOW LOAD (PSF)	MAXIMUM POST/RAFTER SPACING (FEET)	AVERAGE FASTENER SPACING ON-CENTERS ALONG RAFTERS OR PURLINS, AND POSTS OR GIRTS (INCHES)	
					METAL PANELS	SPACING
B or C	105 TO 150	82 TO 117	35	5.0	29 Gauge	8
			40	4.0		
			50	4.0 (12 Ga.)		

NOTES: 1. Specifications applicable to 29 gauge metal panels fastened directly to 12 or 14 gauge steel tube bow frames.
 2. Fasteners consist of #12 x 3/4" self-drilling screws without control seal washers.
 3. Specifications applicable only for mean roof height of 24 feet or less and roof slopes of 7 to 27 degrees (1.5:12 to 6:12 pitch). Spacing requirements for other roof heights and/or slopes may vary.

TABLE 1 (HIGH WIND REGION)
BOW/RAFTER FRAME, END POST, GROUND ANCHOR AND PANEL FASTENER SPACING SPECIFICATIONS

WIND EXPOSURE CATEGORY	ULTIMATE WIND SPEED (MPH)	NOMINAL WIND SPEED (MPH)	MAXIMUM GROUND SNOW LOAD (PSF)	MAXIMUM POST/RAFTER SPACING (FEET)	AVERAGE FASTENER SPACING ON-CENTERS ALONG RAFTERS OR PURLINS, AND POSTS OR GIRTS (INCHES)	
					METAL PANELS	SPACING
B or C	151 TO 170	118 TO 132	20	4.0	26 Gauge	6

NOTES: 1. Specifications applicable to 29 gauge and 26 gauge metal panels fastened directly to 12 or 14 gauge steel tube bow frames.
 2. Fasteners consist of #12 x 3/4" self-drilling screws without control seal washer.
 3. Specifications applicable only for mean roof height of 24 feet or less and roof slopes of 7 to 27 degrees (1.5:12 to 6:12 pitch). Spacing requirements for other roof heights and/or slopes may vary.

GENERAL NOTES:
 THESE PLANS PERTAIN ONLY TO THE STRUCTURE, INCLUDING MAIN WIND FORCE RESISTING SYSTEM (MWFRS), COMPONENTS AND CLADDING, AND BASE RAIL ANCHORAGE. OTHER DESIGN ISSUES, INCLUDING, BUT NOT LIMITED TO, PLUMBING, ELECTRICAL, INGRESS/EGRESS, PROPERTY SET-BACKS, OR OTHER LOCAL ZONING REQUIREMENTS ARE THE RESPONSIBILITY OF OTHERS.

THESE STRUCTURES ARE DESIGNED AS UTILITY/STORAGE BUILDINGS CAPABLE OF SUPPORTING THE DEAD LOAD OF THE STRUCTURE AND APPLICABLE LIVE AND WIND LOADS. IMPROVEMENTS NOT SPECIFICALLY ADDRESSED HEREIN, WHICH EXERT ADDITIONAL LOADS ON THE STRUCTURE SHALL BE AT THE OWNER'S RISK. CAROLINA CARPORTS SHALL NOT BE RESPONSIBLE FOR STRUCTURAL DAMAGE OR FAILURE DUE TO THE APPLICATION OF ADDITIONAL LOADS.

THE SPACING INDICATED IN THE ABOVE TABLE IS THE MAXIMUM SPACING FOR THE MAIN WIND FORCE RESISTING SYSTEM. A CLOSER SPACING MAY BE NEEDED TO MEET LOCAL BUILDING CODE AND/OR SITE SPECIFIC REQUIREMENTS.

ALL STEEL TUBING SHALL BE 55 KSI STEEL OR BETTER. ALL METAL PANELS SHALL BE 80 KSI STEEL OR BETTER.

FASTEN METAL ROOF AND WALL PANELS TO FRAMING WITH #12" x 3/4" SELF DRILLING FASTENERS WITH CONTROL SEAL WASHERS AT AN AVERAGE SPACING OF 8" FOR 29 GAUGE PANELS AND 6" FOR 26 GAUGE PANELS.

ALL FIELD CONNECTIONS SHALL BE #12 x 3/4" SELF DRILLING FASTENERS (SDF) UNLESS NOTED OTHERWISE.

ALL WELDED CONNECTIONS SHALL BE SHOP WELDED UNLESS NOTED OTHERWISE.

GROUND ANCHOR REQUIREMENTS: INSTALL HELICAL ANCHORS ALONG SIDE BASE RAIL WITHIN 6" OF EACH CORNER POST AND AT A MAXIMUM SPACING OF 25' ALONG THE BASE RAIL. INSTALL GROUND ANCHORS (#4 THREADED REBAR) BETWEEN THE HELICAL ANCHORS WITHIN 6" OF EACH POST ALONG THE BASE RAIL. HELICAL ANCHORS AND GROUND ANCHORS ARE NOT REQUIRED FOR CONCRETE FOOTING AND/OR CONCRETE SLAB CONSTRUCTION.

INSTALL CONCRETE ANCHORS WITHIN 6" OF EACH VERTICAL POST ALONG SIDE AND END BASE RAILS. USE ITW RAMSET/ REDHEAD TRUBOLT OR SIMPSON STRONG-TIE STRONG BOLT-2 WEDGE ANCHORS, OR ITW REDHEAD TAPCON+ OR TITEN HD SCREW ANCHORS OR AN APPROVED EQUAL.

POST/RAFTER BRACING: BRACE ON EVERY POST/RAFTER CONNECTION, EXCEPT FOR END WALLS AND HEADERS.



GALVANIZATION: METAL ACCESSORIES FOR USE IN EXTERIOR WALL CONSTRUCTION AND NOT DIRECTLY EXPOSED TO THE WEATHER SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A 153, CLASS B-2. METAL PLATE CONNECTORS, SCREWS, BOLTS AND NAILS EXPOSED DIRECTLY TO THE WEATHER SHALL BE STAINLESS STEEL OR HOT DIPPED GALVANIZED.

STANDARD CARPORT DETAILS

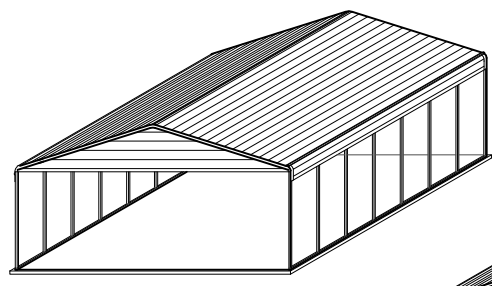
26 ft to 30 ft SPAN

LIGHT FRAME CONSTRUCTION

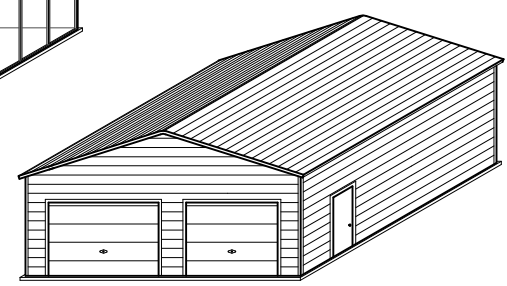
NOTE: THESE PLANS MAY BE USED FOR SPANS LESS THAN 26 FEET.

NOTE: USE  1 1/2" x 1 1/2" 14 Ga.
 2 1/4" x 2 1/4" 12 Ga.
 STEEL TUBE FOR ALL FRAME AND BASE
 RAIL MEMBERS UNLESS OTHERWISE SHOWN.

NOTE: THESE PLANS INCLUDE STANDARD DETAILS THAT CAN BE USED FOR A WIDE RANGE OF APPLICATIONS. IF SITE SPECIFIC PLANS ARE REQUIRED, A SEPARATE SET OF PLANS WILL NEED TO BE PREPARED.



ISOMETRIC



ISOMETRIC

CONCRETE FOUNDATION DESIGN RECOMMENDATIONS:
 CONCRETE INFORMATION AND DETAILS SHOWN IN THESE PLANS ARE FOR INFORMATION ONLY. THE CONCRETE SLAB AND FOUNDATION ARE BY OTHERS. THE OWNER IS RESPONSIBLE FOR PROVIDING A SUITABLE FOUNDATION FOR THE PROPOSED STRUCTURE AND COORDINATING CONCRETE STRENGTH AND FOUNDATION DEPTH REQUIREMENTS WITH THE LOCAL BUILDING CODE OFFICIALS.

CONCRETE SHALL HAVE A MINIMUM SPECIFIED COMPRESSIVE STRENGTH OF 3000 PSI AT 28 DAYS OR AS REQUIRED BY LOCAL BUILDING CODE. THE USE OF HIGHER STRENGTH CONCRETE IS ACCEPTABLE.

COVER OVER REINFORCING STEEL:
 MINIMUM CONCRETE OVER REINFORCING BARS SHALL BE 3 INCHES WHERE CONCRETE IS CAST AGAINST AND PERMANENTLY IN CONTACT WITH THE EARTH OR EXPOSED TO THE EARTH OR WEATHER AND 1 1/2" ELSEWHERE.

REINFORCING STEEL:
 THE REINFORCING STEEL SHALL BE MINIMUM GRADE 40. THE USE OF FIBER REINFORCED CONCRETE (FRC) OR WELDED WIRE FABRIC (WWF) IS ACCEPTABLE.



CAROLINA CARPORTS INC.
 P.O. BOX 1263
 DOBSON, NC 27017
 TOLL FREE 1-800-670-4262
 LOCAL 336-367-6400
 FAX 336-367-6410

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METAL CARPORT INSTALLATION PLANS AND DETAILS AND FRAMING AND FASTENER SPECIFICATIONS

CAROLINA CARPORTS, INC.
 187 Cardinal Ridge Trail
 DOBSON, NORTH CAROLINA 27017

THE OWNER IS RESPONSIBLE FOR OBTAINING A BUILDING PERMIT, IF NEEDED, AND FOR COMPLYING WITH ALL LOCAL BUILDING CODE REQUIREMENTS.

THIS IS TO CERTIFY THAT THE CALCULATIONS AND SPECIFICATIONS HEREIN HAVE BEEN PREPARED BY THE UNDERSIGNED PROFESSIONAL ENGINEER, AND ARE IN ACCORDANCE WITH THE REQUIREMENTS OF THE 2015 INTERNATIONAL BUILDING CODES AND THE 2018 NORTH CAROLINA BUILDING CODE.

BUILDING CODE INFORMATION		
OCCUPANCY CATEGORY	I	II
USE GROUP	U or S	
CONSTRUCTION TYPE	2B	
IMPORTANCE FACTORS		
WIND Iw	1.0	
SNOW Is	0.8	1.0
EARTHQUAKE Ie	1.0	

DESIGN LOADS	
MIN. DEAD LOAD	5 PSF
MIN. FLOOR LIVE LOAD	125 PSF
MIN. ROOF LIVE LOAD	20 PSF
MIN. GROUND SNOW LOAD	SEE TABLE 1
MAX. GROUND SNOW LOAD	
MIN. ULTIMATE WIND SPEED	
MAX. ULTIMATE WIND SPEED	
EXPOSURE CATEGORY	
MAX. SEISMIC DESIGN CATEGORY	D2

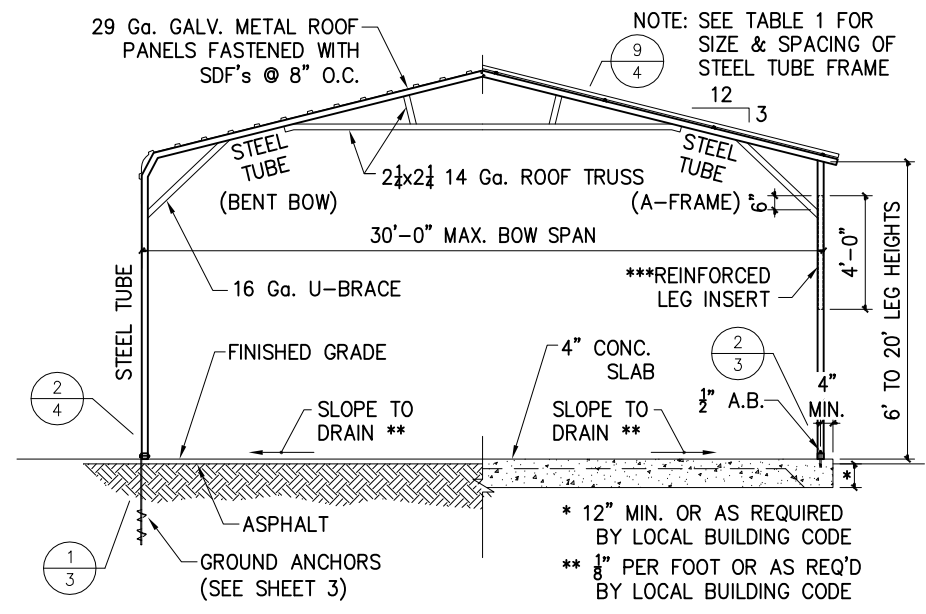
These plans have been provided for the purpose of obtaining a building permit for the construction of the building for:

Name: Carolina Club (Keith Hall)
 Address: 127 Carolina Club Dr
 City: Grandy State: NC
 Zip: 27939

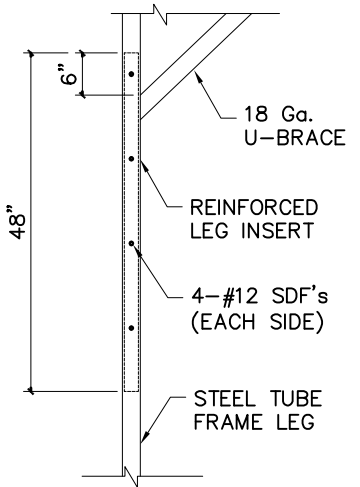
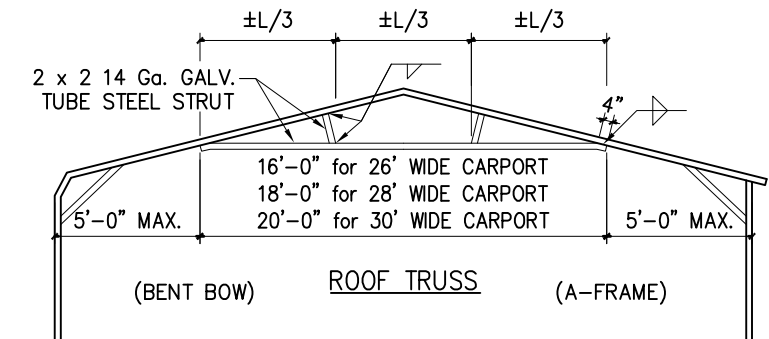
Use of these plans by anyone else or for any other purpose is prohibited.



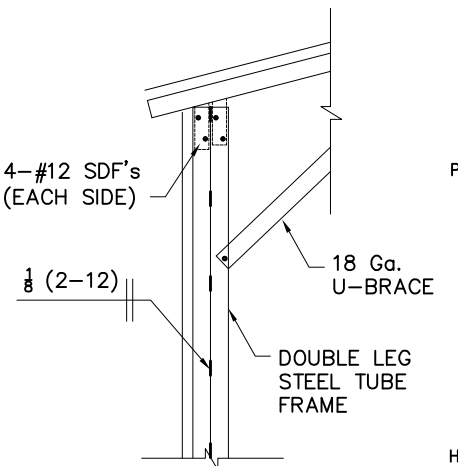
06/13/2023



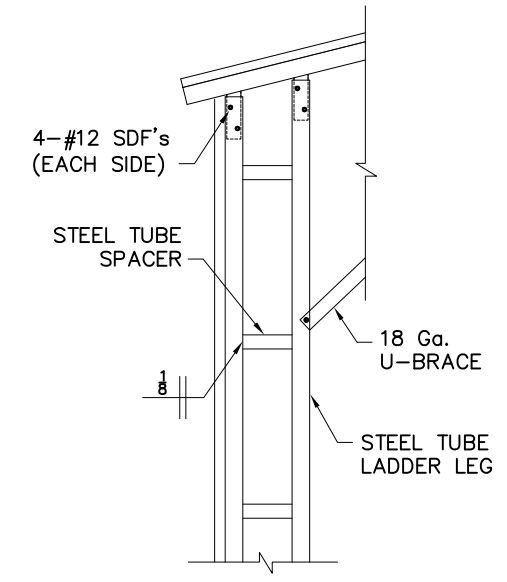
1 TYPICAL BOW SECTION



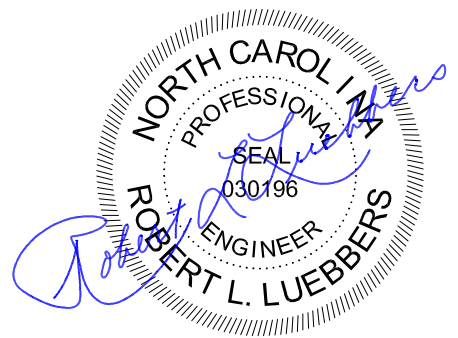
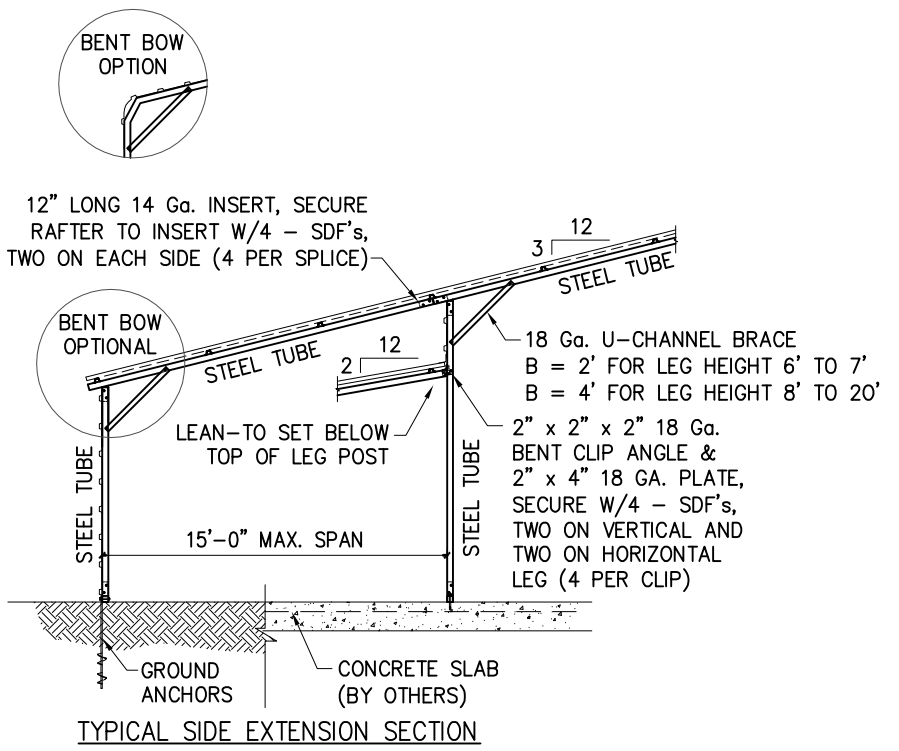
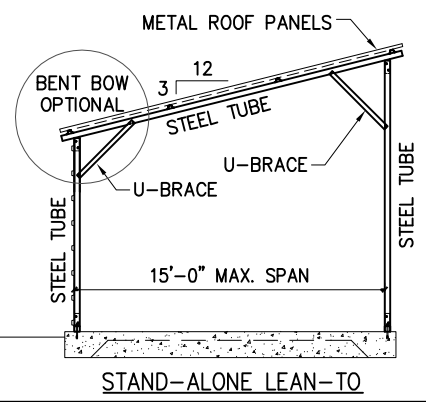
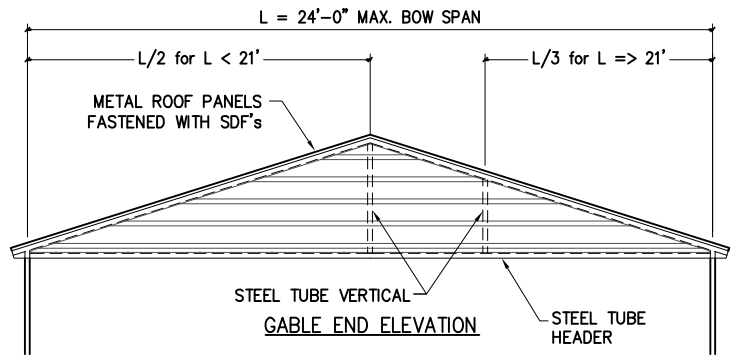
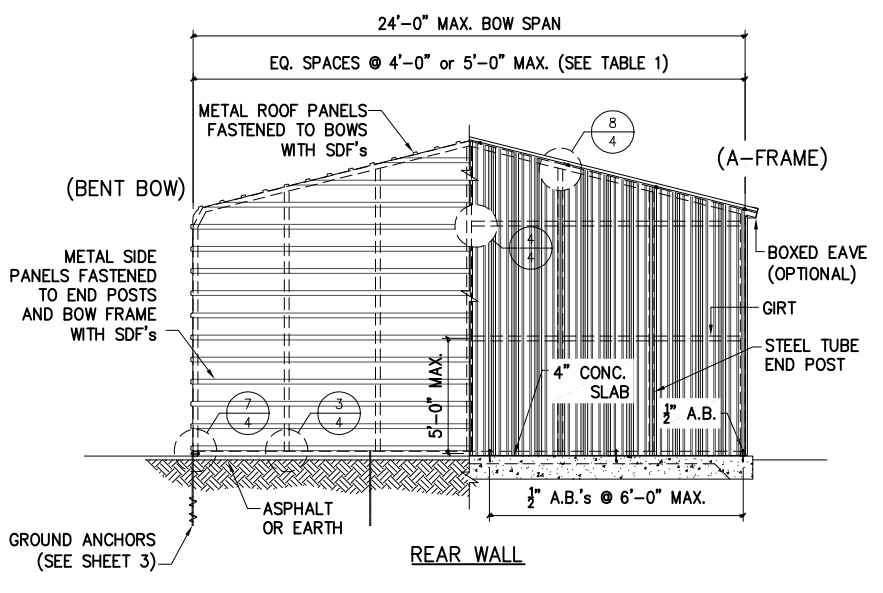
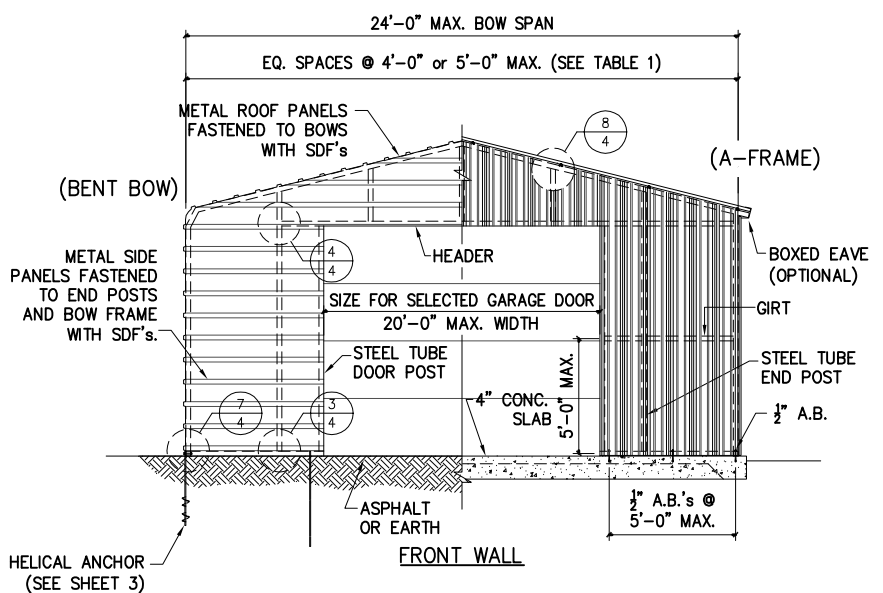
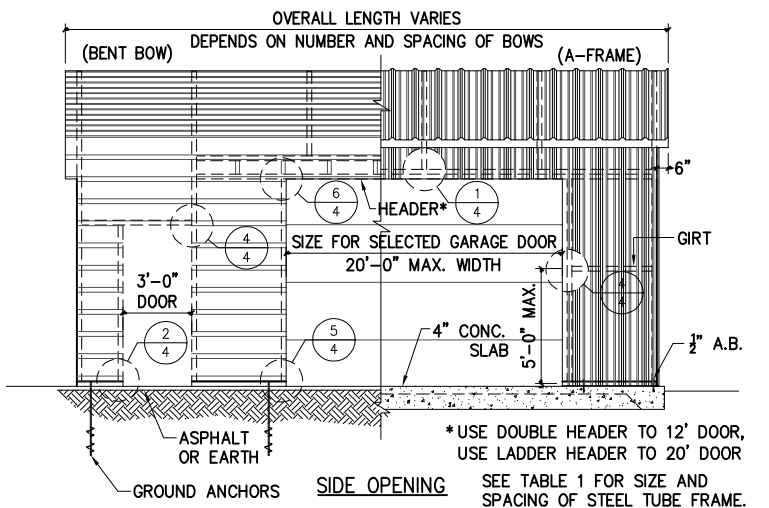
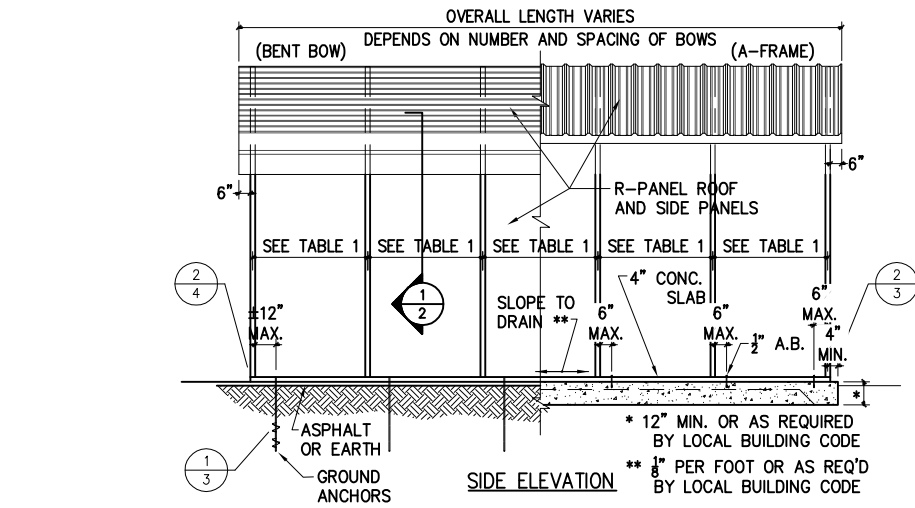
*** REINFORCED LEG INSERT (LEG HEIGHTS 13' to 14')



*** DOUBLE LEG (LEG HEIGHTS 15' to 16')



*** LADDER LEG (LEG HEIGHTS 17' to 20')



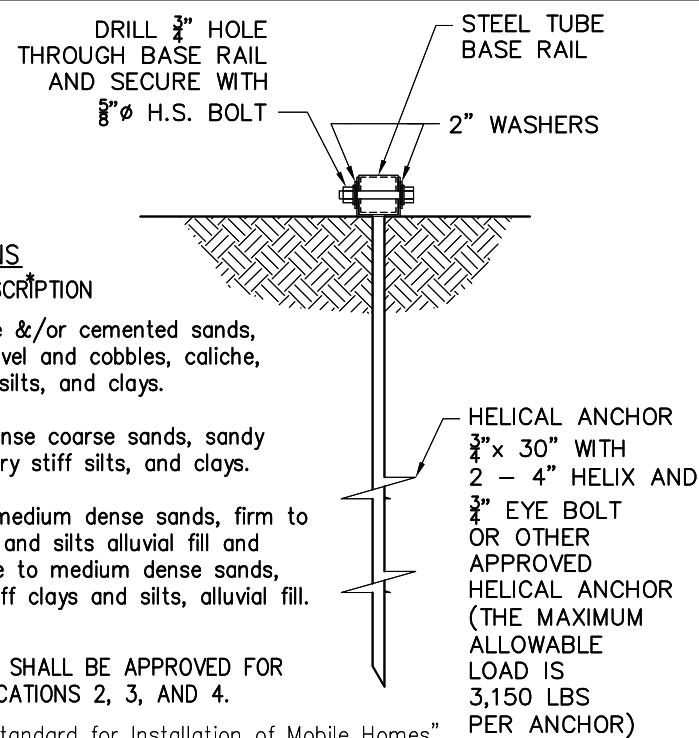
06/13/2023

SOIL CLASSIFICATIONS

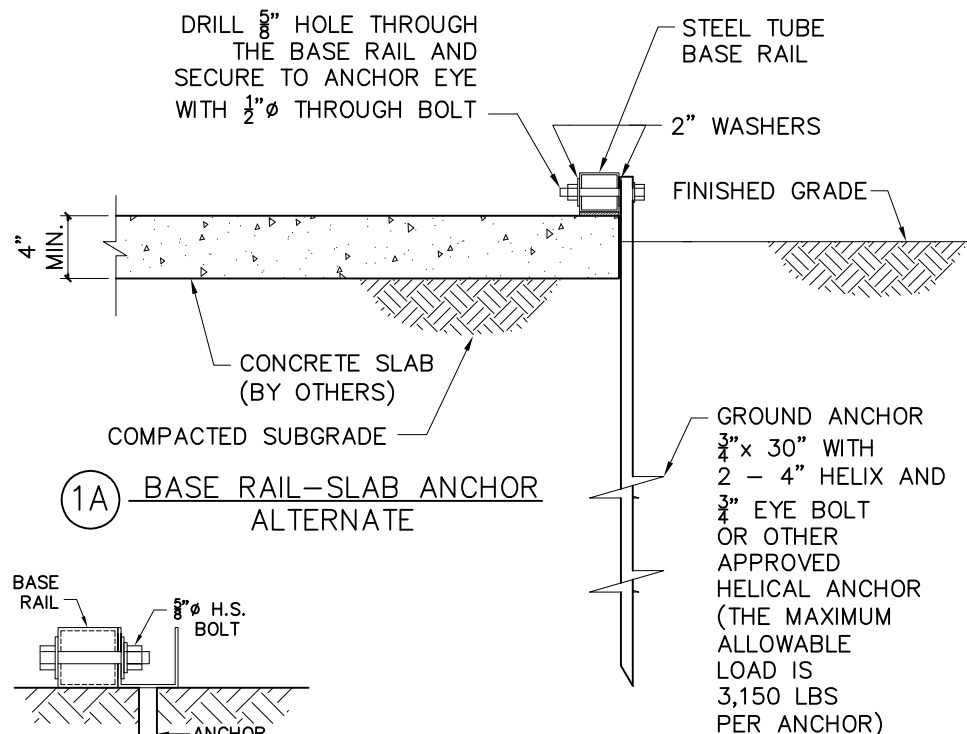
SOIL CLASS	SOIL DESCRIPTION
2	Very dense &/or cemented sands, coarse gravel and cobbles, caliche, preloaded silts, and clays.
3	Medium dense coarse sands, sandy gravels, very stiff silts, and clays.
4	Loose to medium dense sands, firm to stiff clays and silts alluvial fill and VERY loose to medium dense sands, firm to stiff clays and silts, alluvial fill.

THE HELICAL ANCHOR SHALL BE APPROVED FOR USE IN SOIL CLASSIFICATIONS 2, 3, AND 4.

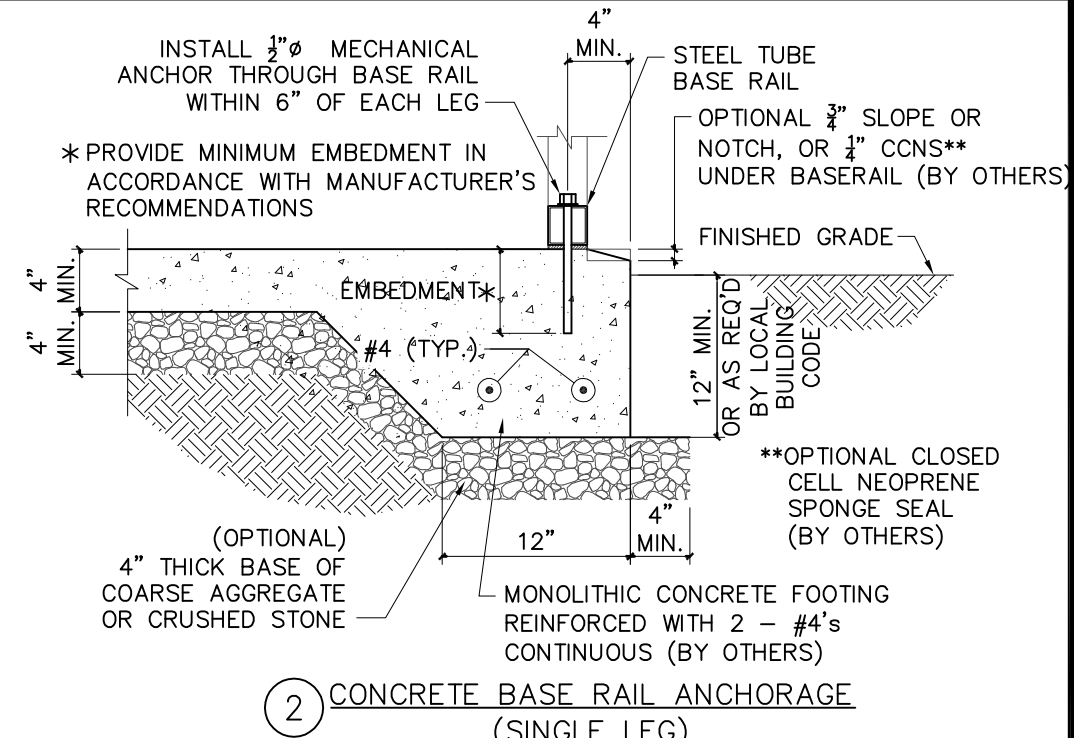
* Taken from HUD "Standard for Installation of Mobile Homes"



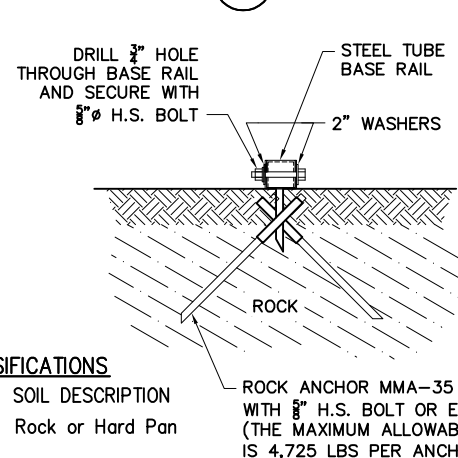
1 SOIL BASE RAIL ANCHOR DETAIL



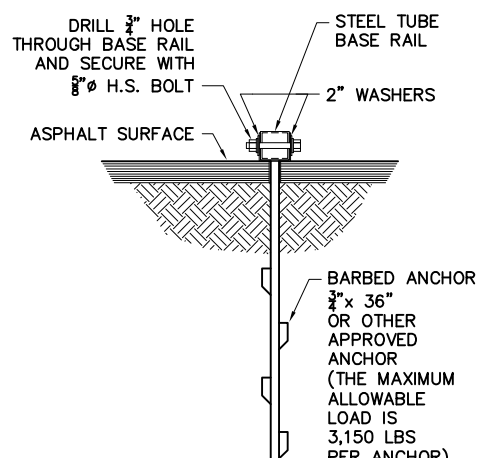
1A BASE RAIL-SLAB ANCHOR ALTERNATE



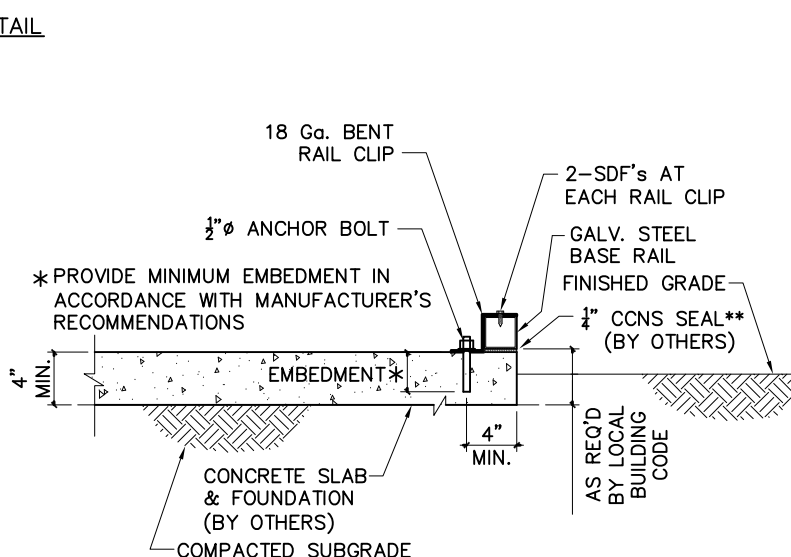
2 CONCRETE BASE RAIL ANCHORAGE (SINGLE LEG)



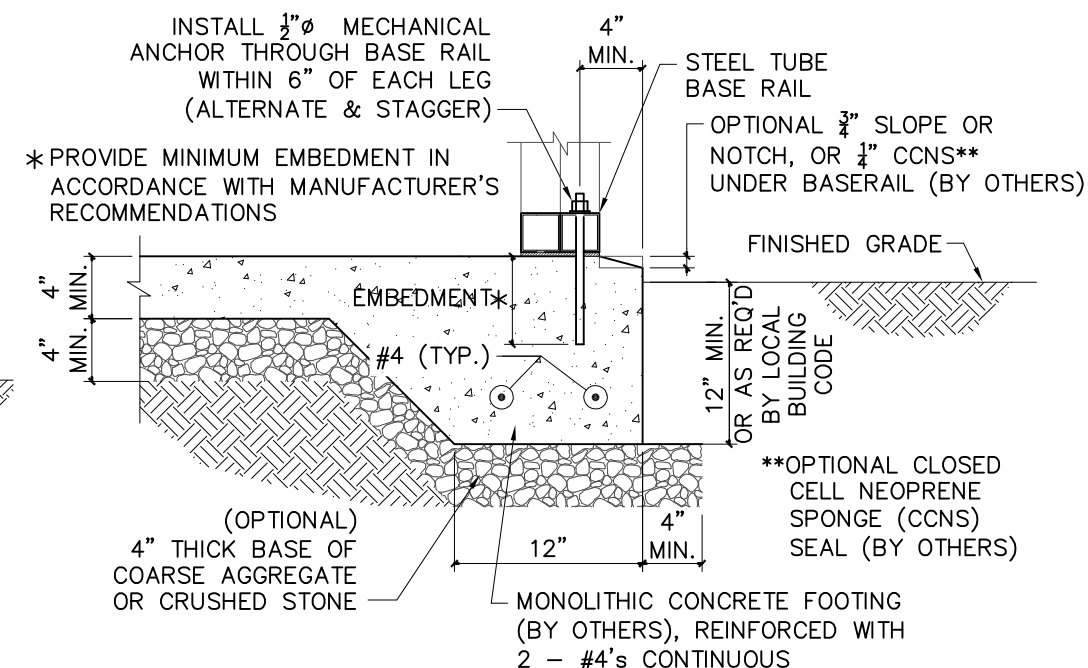
1C ROCK BASE RAIL ANCHOR DETAIL



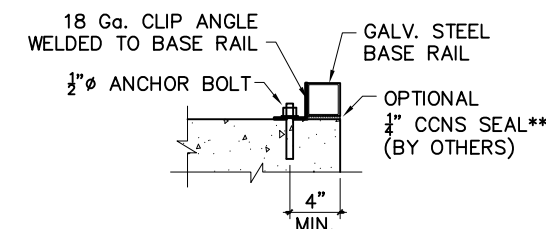
1B ASPHALT ANCHOR DETAIL



2C ALTERNATE BASE RAIL ANCHORAGE



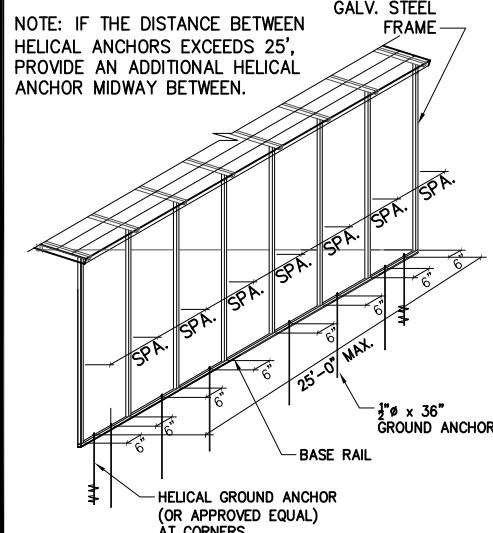
2B CONCRETE BASE RAIL ANCHORAGE (DOUBLE LEG)



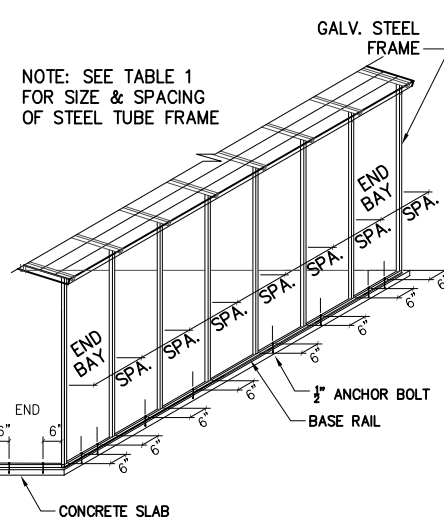
2D ALTERNATE BASE RAIL CLIP

SOIL CLASSIFICATIONS

SOIL CLASS	SOIL DESCRIPTION
1	Rock or Hard Pan

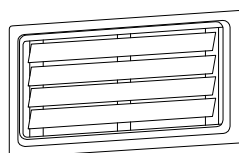


HELICAL GROUND ANCHORS



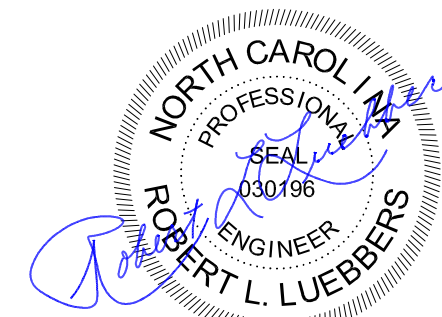
ANCHOR BOLTS

BREAKAWAY

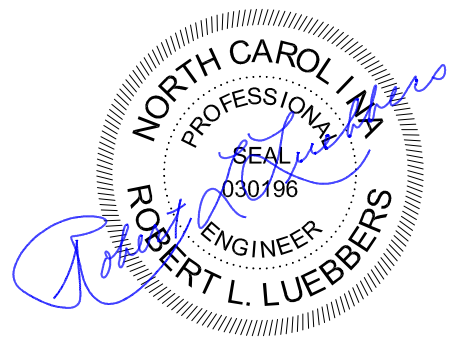
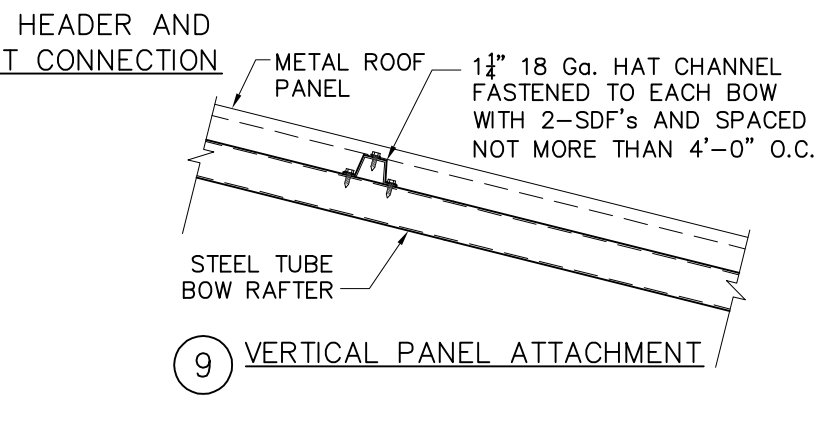
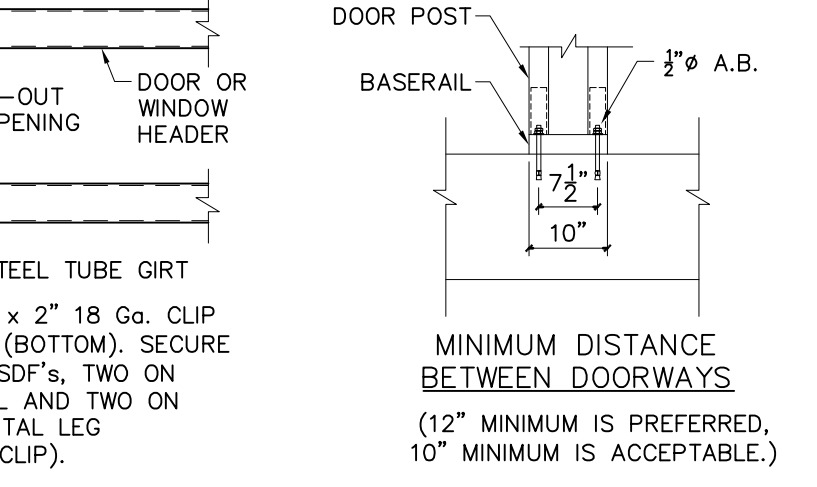
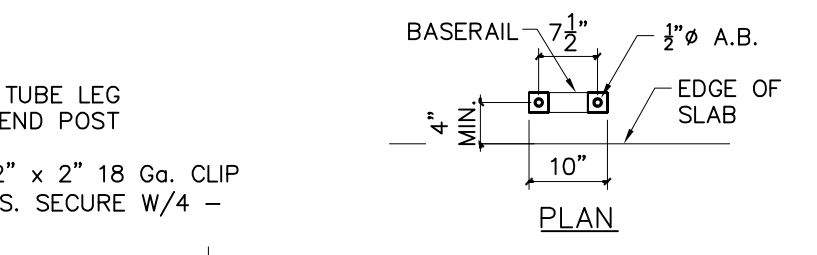
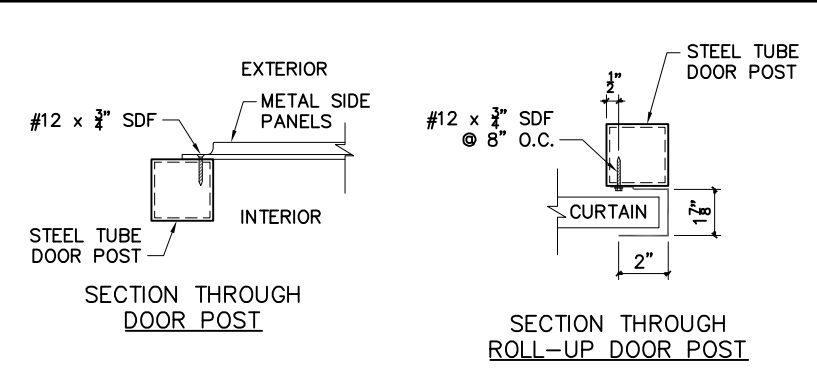
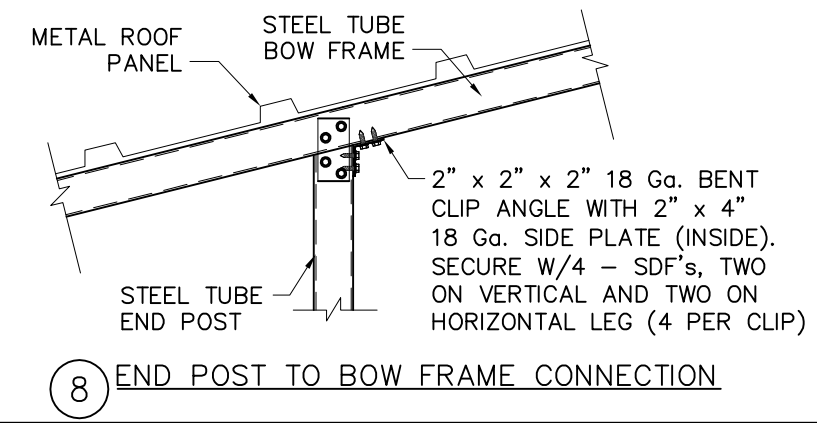
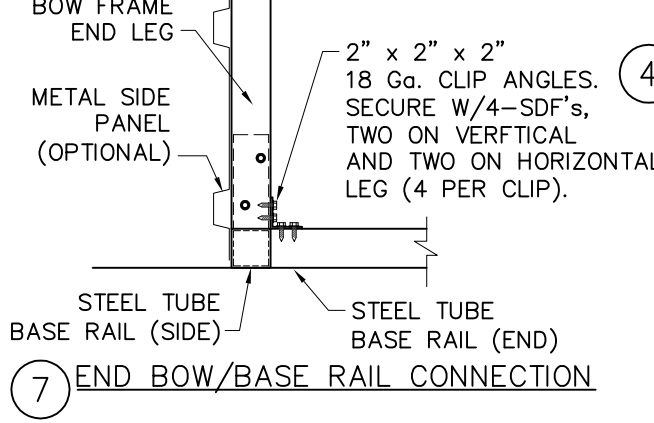
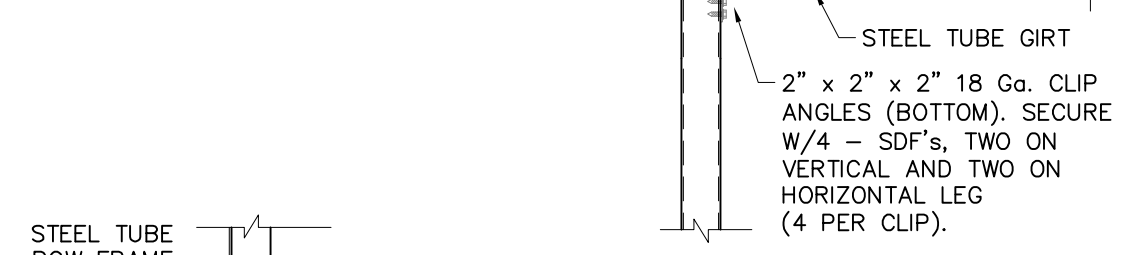
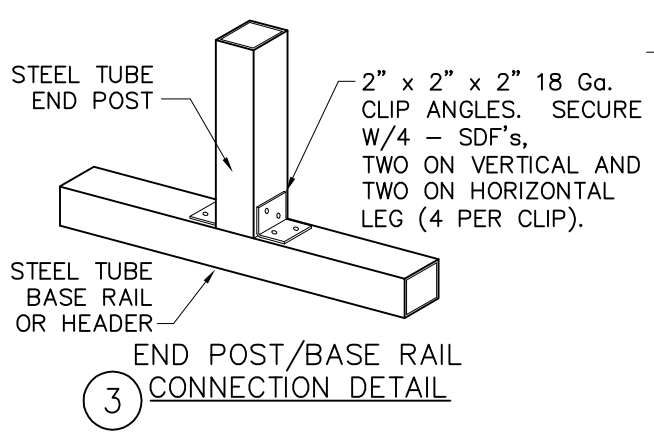
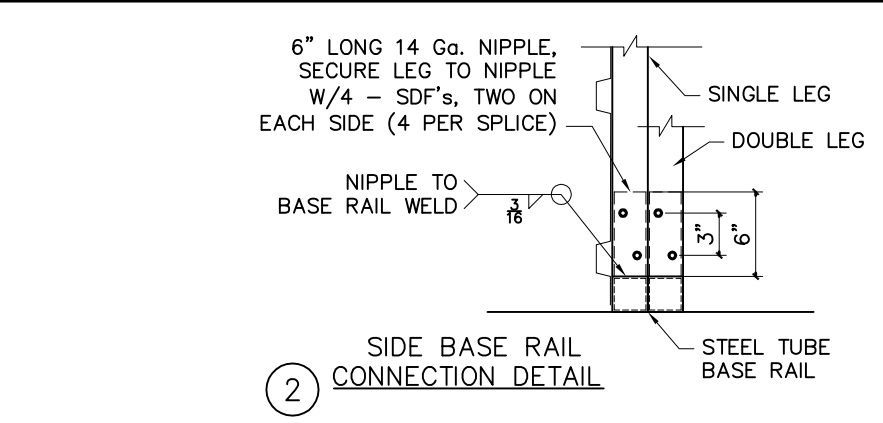
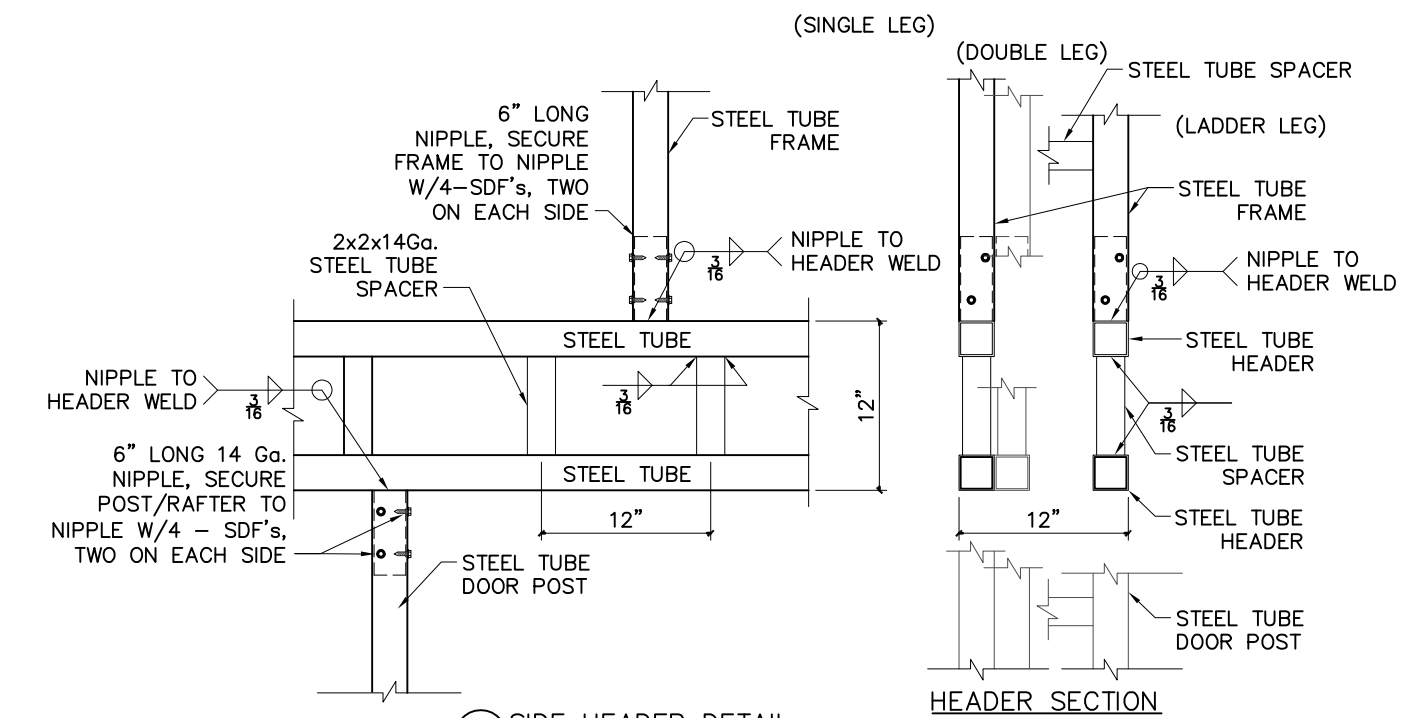
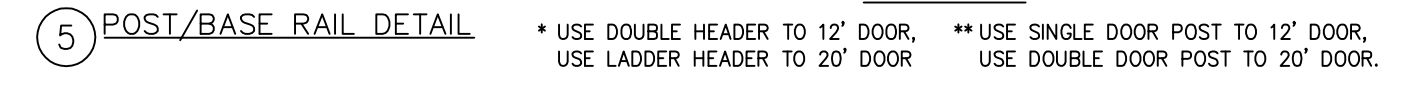
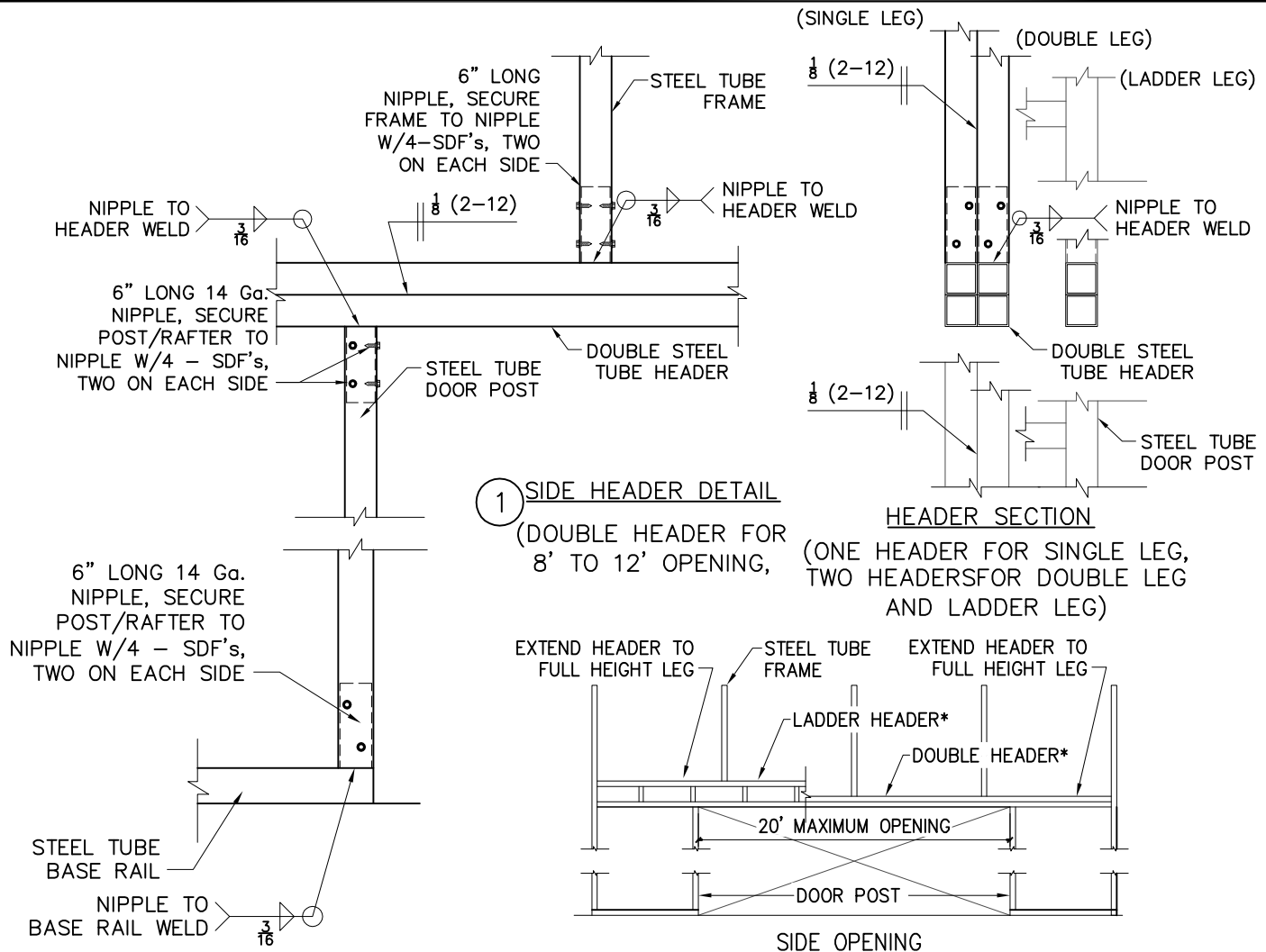


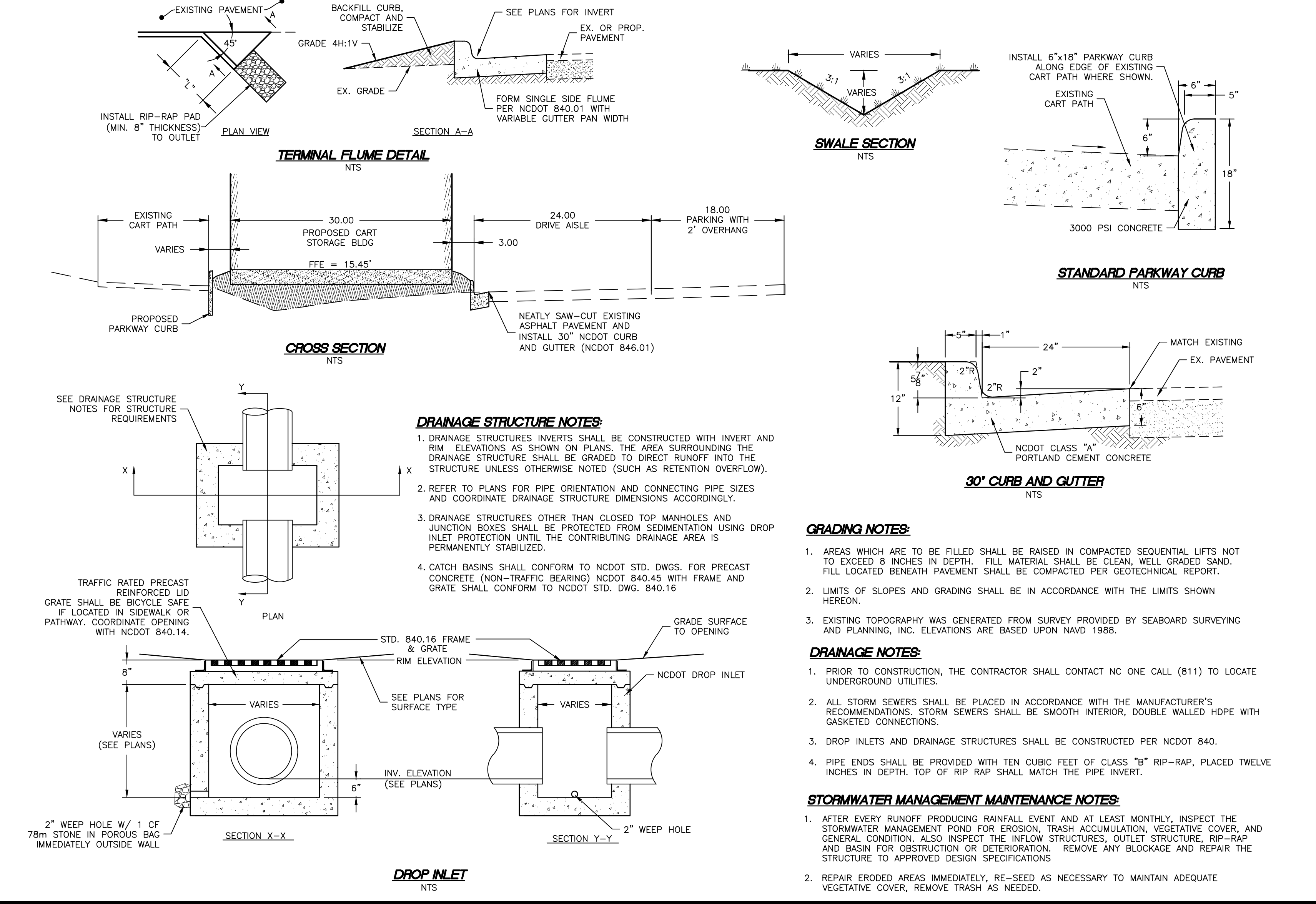
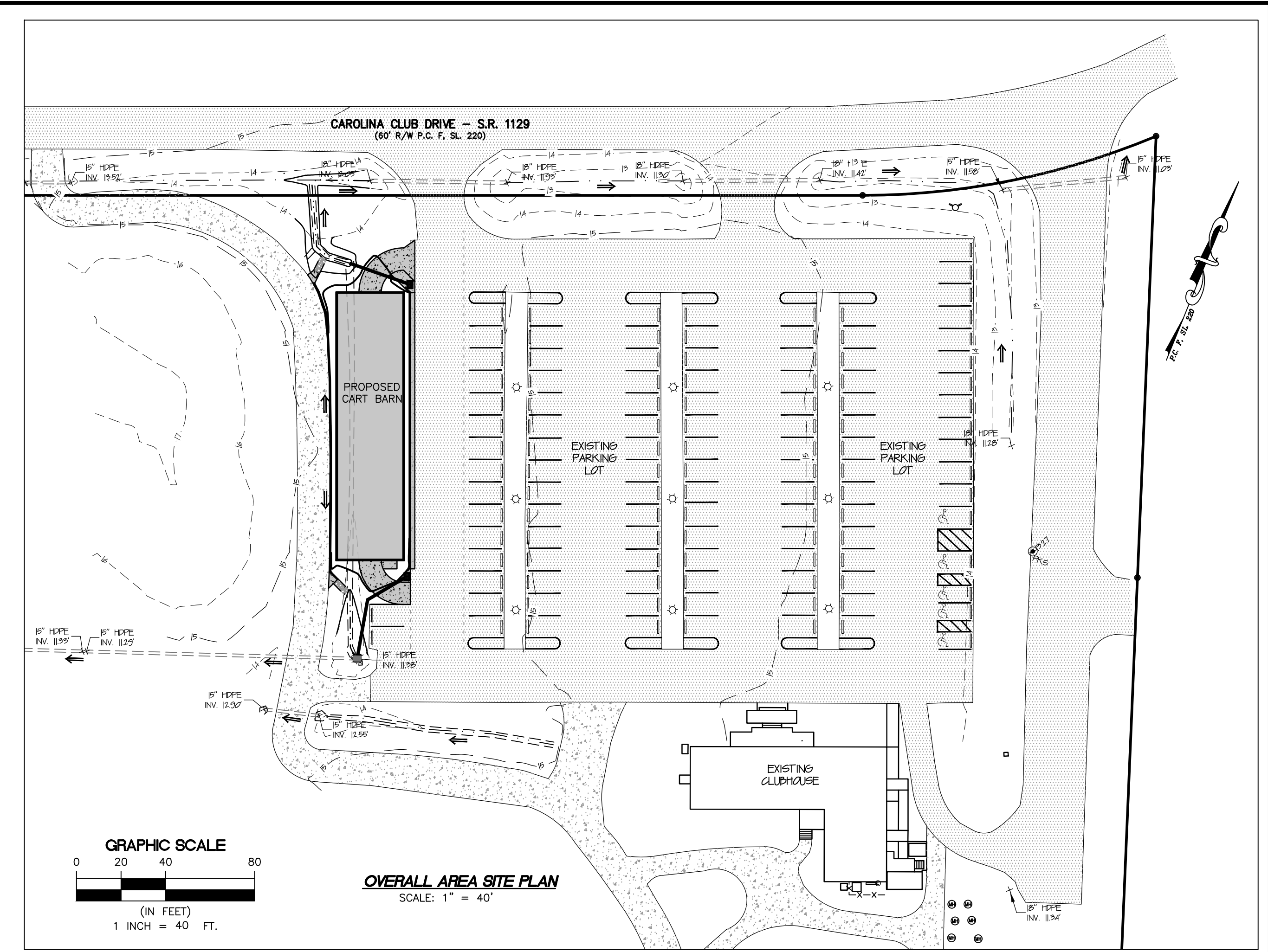
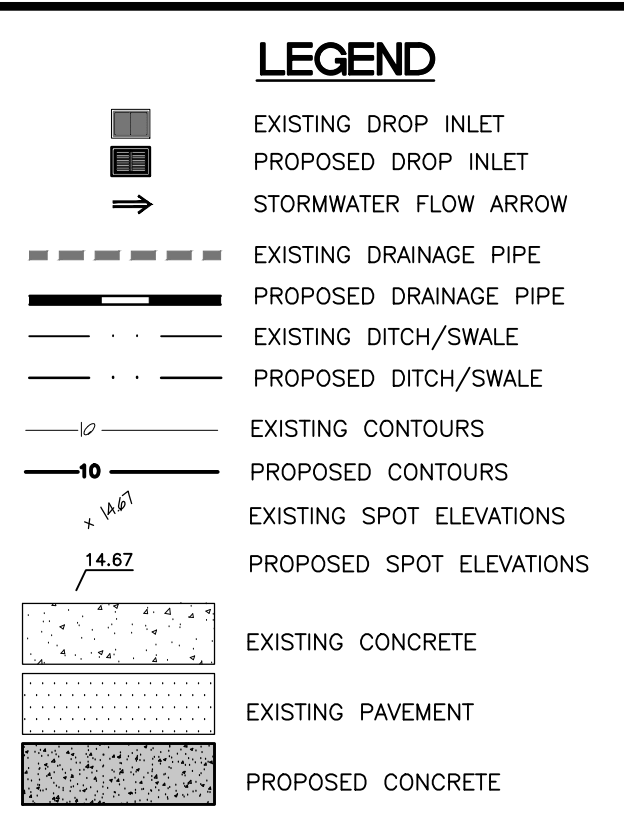
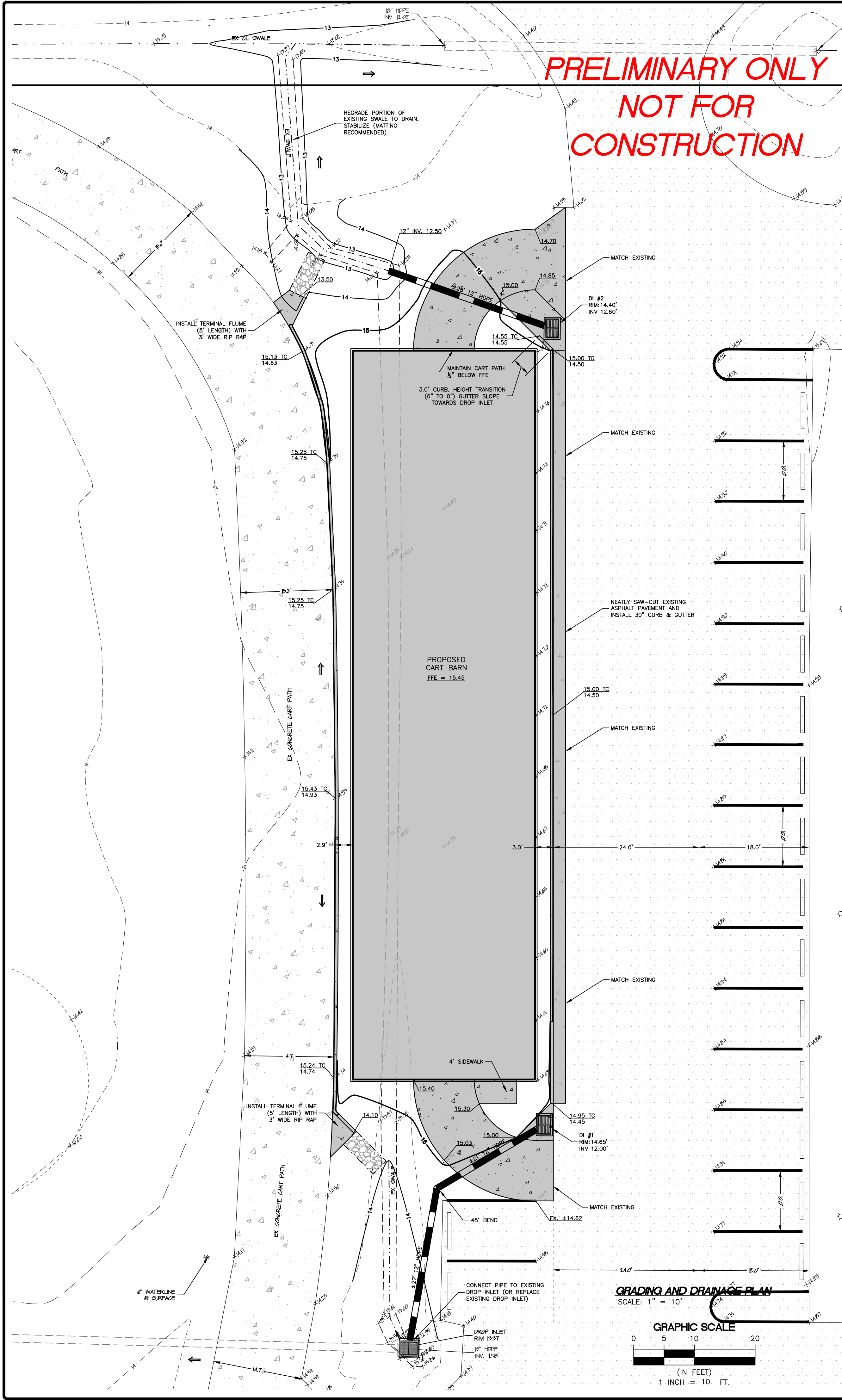
CRAWL SPACE DOOR SYSTEMS, INC.
5741 Bayside Road, #105
Virginia Beach, VA 23455
Engineered Flood Vent
Model CSBA816

OR Approved Equal
FLOOD VENTS



06/13/2023





- DRAINAGE STRUCTURE NOTES:**
- DRAINAGE STRUCTURES INVERTS SHALL BE CONSTRUCTED WITH INVERT AND RIM ELEVATIONS AS SHOWN ON PLANS. THE AREA SURROUNDING THE DRAINAGE STRUCTURE SHALL BE GRADED TO DIRECT RUNOFF INTO THE STRUCTURE UNLESS OTHERWISE NOTED (SUCH AS RETENTION OVERFLOW).
 - REFER TO PLANS FOR PIPE ORIENTATION AND CONNECTING PIPE SIZES AND COORDINATE DRAINAGE STRUCTURE DIMENSIONS ACCORDINGLY.
 - DRAINAGE STRUCTURES OTHER THAN CLOSED TOP MANHOLES AND JUNCTION BOXES SHALL BE PROTECTED FROM SEDIMENTATION USING DROP INLET PROTECTION UNTIL THE CONTRIBUTING DRAINAGE AREA IS PERMANENTLY STABILIZED.
 - CATCH BASINS SHALL CONFORM TO NCDOT STD. DWGS. FOR PRECAST CONCRETE (NON-TRAFFIC BEARING) NCDOT 840.45 WITH FRAME AND GRATE SHALL CONFORM TO NCDOT STD. DWG. 840.16

- GRADING NOTES:**
- AREAS WHICH ARE TO BE FILLED SHALL BE RAISED IN COMPACTED SEQUENTIAL LIFTS NOT TO EXCEED 8 INCHES IN DEPTH. FILL MATERIAL SHALL BE CLEAN, WELL GRADED SAND. FILL LOCATED BENEATH PAVEMENT SHALL BE COMPACTED PER GEOTECHNICAL REPORT.
 - LIMITS OF SLOPES AND GRADING SHALL BE IN ACCORDANCE WITH THE LIMITS SHOWN HEREON.
 - EXISTING TOPOGRAPHY WAS GENERATED FROM SURVEY PROVIDED BY SEABOARD SURVEYING AND PLANNING, INC. ELEVATIONS ARE BASED UPON NAVD 1988.

- DRAINAGE NOTES:**
- PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL CONTACT NC ONE CALL (811) TO LOCATE UNDERGROUND UTILITIES.
 - ALL STORM SEWERS SHALL BE PLACED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. STORM SEWERS SHALL BE SMOOTH INTERIOR, DOUBLE WALLED HDPE WITH GASKETED CONNECTIONS.
 - DROP INLETS AND DRAINAGE STRUCTURES SHALL BE CONSTRUCTED PER NCDOT 840.
 - PIPE ENDS SHALL BE PROVIDED WITH TEN CUBIC FEET OF CLASS "B" RIP-RAP, PLACED TWELVE INCHES IN DEPTH. TOP OF RIP-RAP SHALL MATCH THE PIPE INVERT.

- STORMWATER MANAGEMENT MAINTENANCE NOTES:**
- AFTER EVERY RUNOFF PRODUCING RAINFALL EVENT AND AT LEAST MONTHLY, INSPECT THE STORMWATER MANAGEMENT POND FOR EROSION, TRASH ACCUMULATION, VEGETATIVE COVER, AND GENERAL CONDITION. ALSO INSPECT THE INFLOW STRUCTURES, OUTLET STRUCTURE, RIP-RAP AND BASIN FOR OBSTRUCTION OR DETERIORATION. REMOVE ANY BLOCKAGE AND REPAIR THE STRUCTURE TO APPROVED DESIGN SPECIFICATIONS.
 - REPAIR ERODED AREAS IMMEDIATELY, RE-SEED AS NECESSARY TO MAINTAIN ADEQUATE VEGETATIVE COVER, REMOVE TRASH AS NEEDED.

Albemarle & Associates, Ltd.
 Engineering - Environmental - Land Planning

GRADING AND DRAINAGE PLAN
CAROLINA CLUB OF NC, LLC
127 CAROLINA CLUB DRIVE
 NORTH CAROLINA
 CURRITUCK COUNTY
 POPLAR BRANCH TOWNSHIP
 GRANDY

NO.	DATE	DESCRIPTION

DATE: 03/12/2024
 SURVEYED: SEE NOTES
 DESIGNED: MJM
 DRAWN: RGA
 CHECKED: MJM
 FILE: 08796A

SCALE:
AS SHOWN
C301
 PROJ. NO. 08796A

