PLAN REVIEW COMMENTS FOR DP-06-24-019190

Town of Bluffton
Department of Growth Management
20 Bridge Street P.O. Box 386 Bluffton, South Carolina 29910
Telephone 843-706-4522

Plan Type:	**Development Plan**	**Apply Date:**	**06/18/2024**
Plan Status:	**Active**	**Plan Address:**	**4 Parkside Drive BLUFFTON, SC 29910**
Case Manager:	**Dan Frazier**	**Plan PIN #:**	**R610 022 000 1073 0000**

Plan Description: **A request by Joel C. Taylor of Tenet Healthcare, on behalf of Parcel C5 LLC, for approval of a Preliminary Development Plan. The project consists of a free-standing emergency department and medical offices in a single building to include approximately 50,250 SF. Proposed drives, parking, landscaping, utilities and supporting infrastructure. The property is zoned Buckwalter PUD and consists of approximately 10.9 acres identified by tax map numbers R610 022 000 1073 0000, R610 022 000 1081 0000, R610 022 000 1082 0000, R610 022 000 1084 0000 and located on the southeast corner of Buckwalter Parkway and Parkside Drive within the Buckwalter Commons.**
Status: The preliminary development plan application will be heard at the July 24, 2024 meeting of the Development Review Committee.

Technical Review

Submission #: 1 Received: 06/18/2024 Completed: 07/18/2024

Reviewing Dept.	*Complete Date*	*Reviewer*	*Status*
Watershed Management Review DRC	07/12/2024	Samantha Crotty	Revisions Required

Comments:

1. 220 trees were entered into the compliance calculator for SWRv credit. If the area of these trees is considered "Forest Cover/Open Space" in the post-development land cover totals, they must be removed from the tree credit section. Revise accordingly.
2. Clarify if the "infiltration" BMP in the compliance calculator are the dry detention basins. Dry detention basins are considered Storage Practices per SWDM 4.11. Revise compliance calculator to reflect this.
3. Provide proposed contours on the grading plan.
4. Remove curb cuts from dumpster pads.
5. Provide missing surface coverage data on sheet C002, and pond 2 spillway & dry detention basin dimension data details on sheet C602.
6. Frame elevations on dry detention basins 1, 2, and 3 are higher than the top of bank.
7. At time of stormwater submittal, provide a 10-year exhibit.

Beaufort Jasper Water and Sewer Review	07/18/2024	Matthew Michaels	Approved with Conditions

Comments:

1. Pending submittal of the project by the engineer of record to BJWSA's Design Review Team in accordance with the Development Policy and Procedure Manual.

Fire Department Review	07/18/2024	Dan Wiltse	Approved with Conditions

Comments:

1. Relocate the Fire Department Connection to provide direct access that is not obstructed by parking.

Planning Review - Principal	07/18/2024	Dan Frazier	Approved with Conditions

Comments:

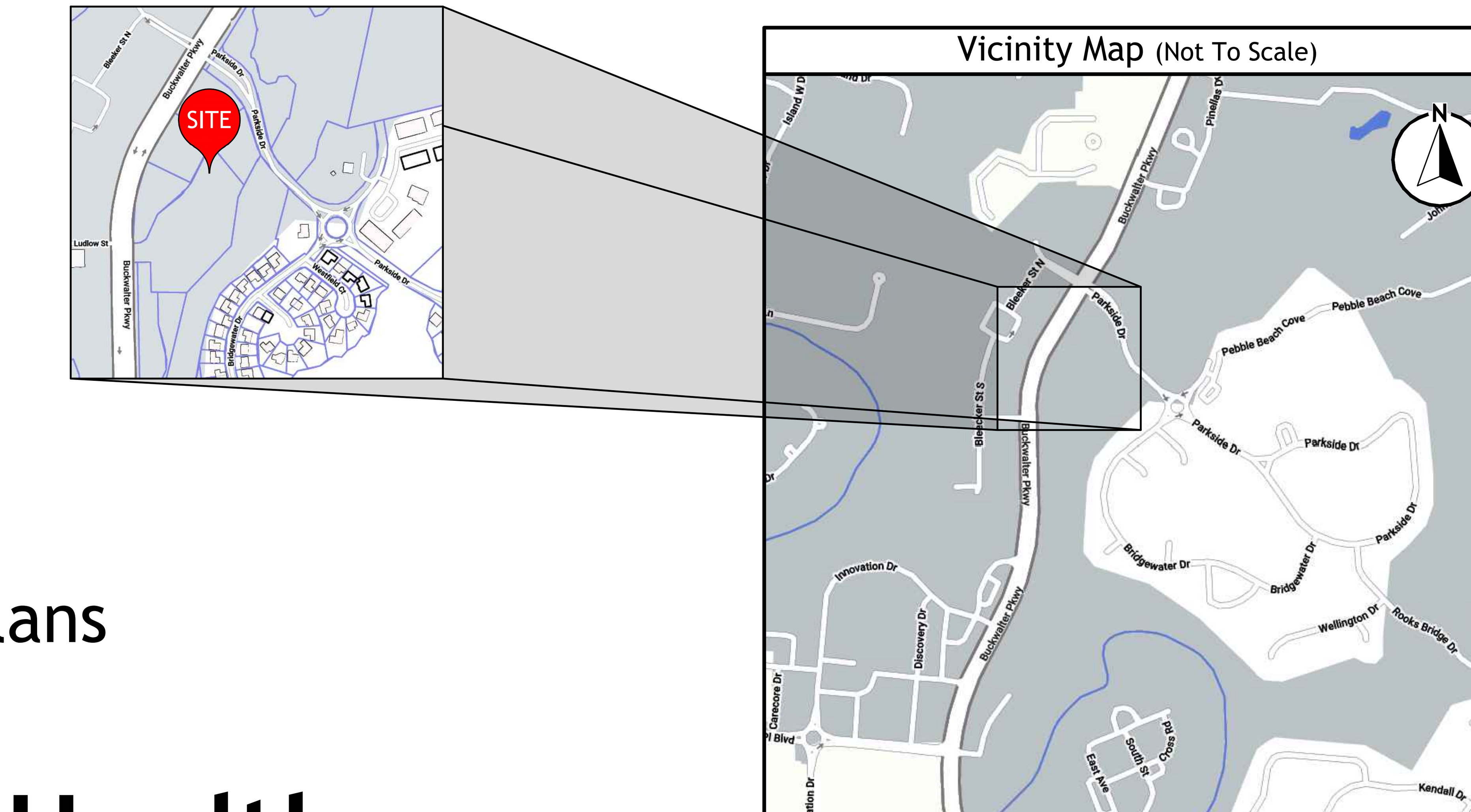
1. The Buckwalter Parkway Access Management Plan prepared for Beaufort County calls for a traffic signal to be installed at the intersection of Buckwalter Parkway and Parkside Drive, and for the access to the parkway at the Ludlow Street intersection to become a right-in/right-out access only. Coordinate with Beaufort County Engineering on timing and responsibilities with regard to these planned transportation improvements.

Building Safety Review	07/18/2024	Marcus Noe	Approved
Planning Commission Review	07/18/2024	Angie Castrillon	Approved
Planning Review - Address	07/18/2024	Diego Farias	Approved
Police Department Review	07/18/2024	Bill Bonhag	Approved
Transportation Department Review	06/18/2024	Megan James	Approved

Comments:
No comments

Plan Review Case Notes:

Attachment 4



Vicinity Map (Not To Scale)

Site Development Plans

for

Buckwalter Parkway Healthcare

Usage: commercial

Town of Bluffton, South Carolina

Tax Map #: R610 022 000 1073 0000

R610 022 000 1083 0000

R610 022 000 1081 0000

R610 022 000 1082 0000

R610 022 000 1084 0000

2 Parkside drive

GIS coord: N32° 16' 49", W80° 54' 43"

Release Schedule

Rel #	Description	Date
A.	Released for Permitting	05-13-24
B.	Released for Permitting	06-17-24

Schedule of Drawings

Sht No.	Description
C001	Cover Sheet
C002	Construction Notes
C003	Phasing Plan
C101	Existing Conditions Plans
C201	Initial Erosion Control Plans
C202	Initial Erosion Control Details
C301	Clearing & Demolition Plans
C401	Site Layout Plans
C501	Grading Plans
C601	Drainage Plans
C602-C604	Drainage Plans Details
C701	Utility Plans
C702-C704	Utility Details
C705	Utility Profiles
C801	Intermediate & Final Erosion Control Plans
C802	Intermediate & Final Erosion Control Details
C901	Paving Plans
C902-C903	Paving Details
C1001	ADA Accessible Route Plan

Design Team

Geotechnical Engineer:	Landscape Architect:	Architect:	Land Surveyor:
Terracon	Witmer Jones Keefer ltd.	e4h Environments for Health	Atlas Surveying, Inc.
912.629.4000	843.757.7411	888.781.8441	843.645.9277

Project Name
BJWSA Project #: 2024-XXX

Permit Set - NOT FOR CONSTRUCTION

Plan Revisions

No.	Description	Date
1		
2		
3		
4		
5		
6		
7		
8		

Ward Edwards ENGINEERING
119C Palmetto Way
P.O. Box 381, Bluffton, South Carolina 29910
(843) 837-5250
www.WardEdwards.com

Buckwalter Parkway Healthcare
Town of Bluffton, South Carolina

Prepared for
e4h Environments for Health Architecture

Cover Sheet

Vert. Datum:	NAVD88
Horiz. Datum:	NAD83

Project #:	230640
Date:	06/17/24
Designed by:	LYJ
Checked by:	CPB

Not to Scale

C001

General Notes:

1. Boundary information provided by A Boundary, tree and topographic survey of lot c5 (c1-c6, a & b) woodbridge commons, dated 05/22/20, by Atlas Surveying Inc.
2. Topographic data provided by Atlas Surveying Inc., dated 05/22/20.
3. Approximate location of certain existing underground utility lines and structures are shown on the plans for information only. Additional underground lines or structures may exist that are not shown. Call South Carolina 811 at 811 or 1-888-721-7877 between the hours of 7:00 am and 7:00 pm Monday thru Friday at least three working days before commencing construction. Request underground utilities to be located and marked within and near the construction site.
4. Comply with 'South Carolina Underground Facility Damage Prevention Act (effective June 7, 2012). Notification of Intent to excavate may be given by calling the toll free number: 1-800-922-0983.
5. Protect bench marks and property monuments from damage during construction operations. Replace any bench marks or monuments damaged or destroyed as a result of contractor's operations, at no cost to the owner, by a licensed surveyor in the state of South Carolina.
6. Off-street parking for the contractor's employees and authorized visitors to the site must be provided and maintained throughout construction.
7. The contractor is responsible for adhering to weight limits prescribed for all public roads when hauling equipment and materials to and from the project site. Damages to existing pavement due to the contractor's construction operations or improper transportation of materials and equipment shall be the responsibility of the contractor.
8. At least one driving lane on public roads shall remain open to traffic at all times. Traffic lanes will only be closed with the express written consent of the agency having jurisdiction over the roadway. Notify agency having jurisdiction at least 5 days before closing any driving lanes to traffic. Provide traffic control devices, signs and flagmen as required to ensure public safety.
9. Contractor shall coordinate demolition, clearing and construction of improvements to minimize interference with vehicular and pedestrian traffic and with operations of existing facilities.

Water and Sewer Line Construction:

1. All water and sewer line construction shall conform to applicable state and Beaufort Jasper Water and Sewer Authority (BJWSA) requirements, standards and specifications.
2. BJWSA will be responsible for inspection and approval of all water and sewer system construction and for acceptance for operation and maintenance.
3. All utilities shown are approximate locations. The contractor is responsible for notification of all utility owners and for field verification of both horizontal and vertical locations prior to commencing construction. Any damages to existing utilities due to this construction shall be the responsibility of the contractor.
4. Notify the project engineer if conflicts with existing structures require that proposed utilities be relocated.
5. The contractor must notify BJWSA forty-eight (48) hours prior to any construction, inspection or testing of the water distribution system.
6. Pipe, fittings, valves and appurtenances for water and sewer lines shall all be in accordance with the requirements contained in the BJWSA technical specifications.
7. Installation of water and sewer lines and appurtenances shall be in accordance with the BJWSA standard construction details and specifications.
8. Contractor shall install mechanical restraints on all bends, plugs and tees, 2" or larger, on waterlines and sanitary sewer force mains.
9. All water mains shall be sterilized and pressure tested in accordance with BJWSA specifications.
10. Separation of water mains and sewers:
    A. Parallel installation: unless otherwise specifically shown in a special detail on the plans, install water mains at least 10-ft. Horizontally from any existing or proposed sanitary sewer or sanitary sewer force main, the distance being measured in a horizontal plane between the outside surfaces of the pipes.
    B. Crossings: unless otherwise specifically shown in a special detail on the plans, install water lines crossing sanitary sewers or sanitary sewer force mains to provide a minimum vertical separation of 18-inches between the outside surfaces of the pipes. This shall be the case whether the water line is above or below the sanitary sewer line. Whenever possible locate the water line above the sewer line. Where a new water line crosses a new sewer line, place a full length of ductile iron pipe for water line at the crossing with pipe positioned so that the joints are as far as possible from the point of crossing. Where a new water line crosses an existing sewer line, place one full length of ductile iron pipe water line so that the joints are as far from the point of crossing as possible.
11. The contractor shall cut and patch existing pavement as required for the installation of utility lines.
12. Sanitary manhole rim grades shown are approximate. Adjust rim elevations to be flush with finished grade.
13. The contractor under this contract shall not make any connections to the existing water or sanitary sewer systems unless expressly authorized to do so by the BJWSA. all water and sewer improvements under this contract must be constructed complete, tested, inspected and approved by the BJWSA before any authorization to connect will be given. Coordination of testing, inspection and connections with the BJWSA is the responsibility of the contractor under this contract.
14. All water mains shall be installed with thirty-six inches (36") minimum cover (from finished grade). Maximum depth shall be five feet (5'). Where water mains may conflict with other utilities, the water main crossing shall be constructed with ductile iron pipe, mechanical joint 45-deg. bends and mechanical restraints.

Work on South Carolina Department of Transportation Right-of-Way:

1. Contractor shall review and comply with all conditions and special provisions contained in the SCDOT encroachment permit(s) issued for this project.
2. Contractor to refer to the most current edition of the SCDOT standard drawings.
3. Contractor is responsible for submitting construction notification form (48 hour minimum) and coordination of all work within SCDOT rights-of-way with the local and/or district SCDOT engineering representative.
4. Contractor is responsible for preparing and submitting a traffic control plan to SCDOT for approval minimum 48 hours prior to conducting work in the right-of-way. All traffic control plans shall conform to current MUTCD and current SCDOT guidelines and specifications.
5. All signage, pavement markings, and markers shall conform to current MUTCD guidelines and current SCDOT standard specifications and drawings.
6. All paving and drainage construction shall conform to current SCDOT standard specifications and drawings.
7. All pavement markings in SCDOT right-of-way shall be thermoplastic and conform to current MUTCD guidelines and current SCDOT standard specifications and drawings.
8. Removal of pavement markings shall conform to current SCDOT standard specifications for highway construction section 609.4.1.2.

Tree Protection-Bluffton

1. All trees having a trunk diameter of 8-inches (dbh) or larger, and endangered or valued trees having a trunk diameter of 4-inches (dbh) or larger must be preserved unless specifically approved for removal in accordance with Town of Bluffton development standards ordinance and indicated on the plans to be removed.
2. The contractor is responsible for marking the trees designated to be preserved in accordance with the requirements contained in the Town of Bluffton development standards ordinance.
3. Prior to commencing any clearing or construction operations on the site, the contractor shall erect tree protection barriers around each tree or group of trees designated for preservation in accordance with the details on the plans and the requirements contained in the Town of Bluffton unified ordinance 5.3.3.
4. A tree protection zone shall be established in accordance with the provisions contained in the Town of Bluffton unified ordinance 5.3.3 for each existing tree designated for preservation. The minimum tree protection zone as defined in the ordinance is a circular area centered on the tree and having a radius of the greater of 10-ft. or one and one-half foot per inch dbh (diameter at breast height). The size or configuration of the tree protection zone may be modified only upon approval by Town of Bluffton.
5. The area within the tree protection zone must remain open and unpaved. No change of grade will be allowed within the tree protection zone except for a 2-inch cut or 2-inch fill of topsoil, sod or mulch. Any activity within the tree protection zone is subject to approval by Town of Bluffton. The following activities are prohibited within the tree protection zone:
    A. Placement or storage of any soil, debris, oils, fuel, paints, building materials or any other materials.
    B. Burning
    C. Vehicle parking
    D. Paving
    E. Trenching for utilities
6. Where utility lines must pass thru the tree protection zone, they shall be installed by horizontal boring beneath the roots of the tree.
7. Where it is necessary for machinery and equipment to pass within the tree protection zone, approval must be obtained from Town of Bluffton. special measures will be required to protect the roots from excessive compaction.
8. The contractor is responsible for obtaining all tree removal permits and for coordinating all inspections required by Town of Bluffton in connection with tree preservation and removal activities during construction.

BJWSA Utility As-Built Survey Requirements

1. Contractor shall provide engineer with electronic file of surveyed utility as-built points. Point descriptions shall be clear and understandable.
2. Contractor shall also provide corresponding redline drawing to supplement or clarify electronic file content.
3. Contractor shall schedule surveyor to be present during installation in order to obtain accurate information on underground fittings and sanitary/storm crossing elevations. Multiple surveyor mobilizations may be needed. If surveyor is not present during installation, contractor shall ensure surveyor has access to all utility components listed in these notes.
4. Contractor's surveyor shall be a professional land surveyor licensed in South Carolina. Contractor's surveyor will review and sign the BJWSA certification on the utility as-built drawing prepared by engineer upon completion.
5. Utility as-built points shall be based upon the SC NAD83 coordinate system and the elevations shall be based upon the same vertical datum used in the engineering plans.
6. As built survey shall include, but not necessarily be limited to, the following:
    a. **GRAVITY SEWER**
        i. Manhole locations, frame elevation, all invert elevations
        ii. Cleanout locations, ground elevation, invert elevation
        iii. Points for permanent visible structures nearby manholes and cleanouts for reference (pavement, buildings, manholes, catch basins, power poles, or property corners)
    b. **FORCE MAIN**
        i. Elevation on top of force main connection to manhole or force main manifold
        ii. Air release valves
        iii. Simple force main alignments on 100 lf increments
        iv. Arcs, bends on 50 lf increments
    c. **WATER**
        i. Horizontal and vertical location of all valves, bends, tees, and storm/sanitary crossing points (for as-built separation calculations)
        ii. Fire hydrants
        iii. Concrete markers, connections to existing lines, backflow preventors, air release valves
        iv. Points for permanent visible structures near water system elements described above for reference (pavement, buildings, manholes, catch basins, power poles, or property corners). Two surveyed reference point locations are required for each fitting.
    d. **PUMP STATIONS**
        i. Complete layout of pump station
        ii. Manhole locations, frame elevation, all invert elevations
        iii. Fencing & gates, control panel
        iv. Top of slab (incl. brass benchmark) & bottom of wetwell
        v. Influent line invert
        vi. Float levels (pump off, pump on, lead/lag, both pumps on, high water)
        vii. Property corners, yard hydrant, light pole, discharge piping/valves
        viii. Bypass pump
        ix. Electrical power service from meter to transformer

NOTES:
1. Gate valves shown for graphical purposes only. Contractor to place all valves at 18' from tee. see BJWSA detail G-15.
2. Contractor to provide 18' of separation between tapping saddles for all water laterals.
3. See construction notes sheet for BJWSA as-built survey requirements

Site Grading and Drainage:

1. All utilities shown are approximate locations. The contractor shall be responsible for providing 72-hour notice to all respective utility companies for field verification of existing utilities prior to construction. Any damages to existing utilities due to this construction shall be the responsibility of the contractor.
2. Temporary control of storm water drainage shall be the responsibility of the contractor. Sequencing and construction techniques shall prevent obstruction of storm sewers, ponding in traffic areas or rising of water levels which would enter adjacent buildings or structures.
3. Full width of street and road rights-of-way must be cleared and graded as shown in the details on the drawings.
4. Subgrade preparation: top soil shall be removed from paved areas to a minimum depth as recommended in the project's geotechnical report. All excavation shall be to subgrade limits.
5. All utility pipe lines, conduits and sleeves under paved areas must be in place prior to completion of the roadway subgrade compaction.
6. Finish grading shall include the placement of topsoil over all unpaved areas not occupied by buildings or structures and fine grading around buildings, adjacent to walks, curbs, gutters and structures to assure positive drainage.

SCDHEC/OCRM Sediment and Erosion Control Standard Notes (Revised Dec-2012):

1. If necessary, slopes, which exceed eight (8) vertical feet should be stabilized with synthetic or vegetative mats, in addition to hydroseeding. It may be necessary to install temporary slope drains during construction. Temporary berms may be needed until the slope is brought to grade.
2. Stabilization measures shall be initiated as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, but in no case more than fourteen (14) days after work has ceased, except as stated below.
    A. Where stabilization by the 14th day is precluded by snow cover or frozen ground conditions stabilization measures must be initiated as soon as practicable.
    B. Where construction activity on a portion of the site is temporarily ceased, and earth-disturbing activities will be resumed within 14 days, temporary stabilization measures do not have to be initiated on that portion of the site.
3. All sediment and erosion control devices shall be inspected once every calendar week. If periodic inspection or other information indicates that a BMP has been inappropriately, or incorrectly installed, the permittee must address the necessary replacement or modification required to correct the BMP within 48 hours of identification.
4. Provide silt fence and/or other control devices, as may be required, to control soil erosion during utility construction. All disturbed areas shall be cleaned, graded, and stabilized with grassing immediately after the utility installation. Fill, cover, and temporary seeding at the end of each day are recommended. If water is encountered while trenching, the water should be filtered to remove sediment before being pumped back into any waters of the state.
5. All erosion control devices shall be properly maintained during all phases of construction until the completion of all construction activities and all disturbed areas have been stabilized. Additional control devices may be required during construction in order to control erosion and/or offsite sedimentation. All temporary control devices shall be removed once construction is complete and the site is stabilized.
6. The contractor must take necessary action to minimize the tracking of mud onto paved roadway(s) from construction areas and the generation of dust. The contractor shall daily remove mud/soil from pavement, as may be required.
7. Residential subdivisions require erosion control features for infrastructure as well as for individual lot construction. Individual property owners shall follow these plans during construction or obtain approval of an individual plan in accordance with s.c reg. 72-300 et seq. and scr100000.
8. Temporary diversion berms and/or ditches will be provided as needed during construction to protect work areas from upslope runoff and/or to divert sediment-laden water to appropriate traps or stable outlets.
9. All waters of the state (WOS), including wetlands, are to be flagged or otherwise clearly marked in the field. A double row of silt fence is to be installed in all areas where a 50-foot buffer can't be maintained between the disturbed area and all WOS. A 10-foot buffer should be maintained between the last row of silt fence and all WOS.
10. Litter, construction debris, oils, fuels, and building products with significant potential for impact (such as stockpiles of freshly treated lumber) and construction chemicals that could be exposed to storm water must be prevented from becoming a pollutant source in storm water discharges.
11. A copy of the SWPPP, inspections records, and rainfall data must be retained at the construction site or a nearby location easily accessible during normal business hours, from the date of commencement of construction activities to the date that final stabilization is reached.
12. Initiate stabilization measures on any exposed steep slope (3H:1V or greater) where land-disturbing activities have permanently or temporarily ceased, and will not resume for a period of 7 calendar days.
13. Minimize soil compaction and, unless infeasible, preserve topsoil.
14. Minimize the discharge of pollutants from equipment and vehicle washing, wheel wash water, and other wash waters. Wash waters must be treated in a sediment basin or alternative control that provides equivalent or better treatment prior to discharge.
15. Minimize the discharge of pollutants from dewatering of trenches and excavated areas. These discharges are to be routed through appropriate BMPs (sediment basin, filter bag, etc.).
16. The following discharges from sites are prohibited:
    A. Wastewater from washout of concrete, unless managed by an appropriate control.
    B. Wastewater from washout and cleanout of stucco, paint, form release oils, curing compounds and other construction materials.
    C. Fuels, oils, or other pollutants used in vehicle and equipment operation and maintenance.
    D. Soaps or solvents used in vehicle and equipment washing.
17. After construction activities begin, inspections must be conducted at a minimum of at least once every calendar week and must be conducted until final stabilization is reached on all areas of the construction site.
18. If existing BMPs need to be modified or if additional BMPs are necessary to comply with the requirements of this permit and/or SC's water quality standards, implementation must be completed before the next storm event whenever practicable. If implementation before the next storm event is impracticable, the situation must be documented in the SWPPP and alternative BMPS must be implemented as soon as reasonably possible.
19. A pre-construction conference must be held for each construction site with an approved on-site SWPPP prior to the implementation of construction activities. For non-linear projects that disturb 10 acres or more this conference must be held on-site unless the department has approved otherwise.

Dry Utility Conduits for Electric, Telephone and Cable TV:

1. All dry utility conduit ends shall be capped and marked with a steel rebar stake imbedded one (1) foot below ground surface.
2. 48" Minimum bury depth for all electrical conduits.
3. Maintain minimum 12" vertical clearance when crossing water, sewer, and storm drain lines.
4. Maintain minimum 18" horizontal clearance when paralleling water, sewer and storm drain lines.
5. Extend conduit beyond pavement, curb, and sidewalks.
6. The contractor shall be responsible for coordination of the installation of all utility service connections. Refer to approved building plans for the exact location of all service connections. The contractor must install all conduits, as shown on the plans or as required by respective utility companies. The contractor shall be responsible to ensure strict compliance with all applicable codes and regulations with regards to the installation of utilities and conduit.
7. Locations shown on the plans for proposed dry utility conduits are approximate only. All dimensioning and staking should be based on economical and practical construction. The contractor shall be responsible for coordination with the respective utility representatives, prior to any conduit installation.
8. Transformer pads shall be located as directed by the respective utility representative. The contractor shall be responsible for compliance with applicable code requirements.
9. Notify the engineer if conflicts with existing or proposed structures require proposed utilities be relocated.

Site Clearing and Demolition:

1. No clearing shall occur within designated buffer zones, tree protection zones, outside of the property lines or beyond the clearing limits unless otherwise specifically shown on the plans.
2. Only those trees designated on the drawings for removal are to be removed as part of the site clearing operations.
3. The contractor shall install a continuous line of flagging or fencing along the limits of clearing prior to commencing any clearing, demolition, or construction work on the project.
4. Exercise caution during clearing operations to avoid felling trees into designated tree protection zones.
5. No burning will be allowed within 50 feet of a tree protection zone or tree drip line. Contractor shall coordinate any burning operations with local jurisdiction and fire departments.
6. Selective clearing areas shall be cleared of all brush and understory growth.

Sequence of Construction Activities

Estimated Start Date: 05-01-25 Estimated Completion Date: 05-01-26

Items must occur in the order listed; items cannot occur concurrently unless specifically noted.

Phase 1: (initial)

1. Receive NPDES coverage from DHEC.
2. Hold pre-construction meeting.
3. Notify DHEC EQC regional office or OCRM office 48 hours prior to beginning land-disturbing activities.
4. Installation of construction entrance.
5. Clearing & grubbing only as necessary for installation of perimeter controls.
6. Installation of perimeter controls (e.g. silt fence).
7. Install tree protection.
8. Install inlet protection.
9. Install sediment tubes.
10. Clearing & grubbing only in areas of basin.

Phases 2 & 3: (Intermediate & Final)

11. Installation of basin and installation of diversions to those structures (outlet structures must be completely installed as shown on the details before proceeding to next step; areas draining to these structures cannot be disturbed until the structures & diversions to the structures are completely installed). Install surface dewatering skimmer prior to moving to next step.
12. Clearing & grubbing of site or demolition (sediment & erosion control measures for these areas must already be installed).
13. Rough grading.
14. Installation of storm drain system and placement of inlet protection as each inlet is installed.
15. Install all required utilities and curbing.
16. Fine grading, paving, etc.
17. Place topsoil & establish finish grades.
18. Permeable pavers shall be laid when all heavy construction is completed.
19. Clean-out of detention basins that were used as sediment control structures and re-grading of detention pond bottoms; if necessary, modification of sediment basin riser to convert to detention basin outlet structure.
20. Install permanent seeding.
21. Flush any sediment from storm sewer pipes and inlets.
22. Removal of temporary sediment & erosion control measures (including skimmer) after entire area draining to the structure is finally stabilized (the department recommends that the project owner / operator have the SWPPP preparer or registration equivalent approve the removal of temporary structures).
23. Perform as-built surveys of all detention structures and submit to DHEC or MS4 for acceptance.
24. Submit notice of termination (NOT) to DHEC as appropriate.

- NOTE: Perform weekly site inspections during land disturbing activities and make recommendations for additional BMPs or maintenance of existing BMPs
- NOTE: All pumped dewatering shall be performed using an appropriately sized pumped water filter bag.

Project Information

Source of Title:
Beaufort county register of deeds,
deed book 2745 page 1129

Use:
Existing: undeveloped
Proposed: Commercial
1 Building
50,250 sq ft

Surface Coverage:
Max impervious allowed: XX %
Min open space required: XX %
Existing impervious: XX,XXX sq. ft. (XX %)
Proposed impervious: XX,XXX sq. ft. (XX %)
Open space provided: XX,XXX sq. ft. (XX %)
Wetlands/nat. resource: XX,XXX sq. ft. (XX %)

Parking Summary:
Parking use types
Use type = 3.5 spaces/1,000 sq. ft.
Parking required:
Use type = 176 spaces
Parking provided:
Total = 228 spaces
Accessible parking required: 7 spaces
Accessible parking provided: 14 spaces

Property Owner:
Parcel C5 llc
PO Box 1726

Flood Zone:
"C"

Property Zoning:
Planned Unit Development PUD

Site Area:
Total: 10.903 acres
Disturbed: 6.9 acres

Required Buffers:
Front: 50 Feet Hwy Corridor Buffer
Rear: 50 Feet PUD Buffer
Side: 10 Feet

Utility Contacts:

Palmetto Electric	843-208-5512	1 Cooperative Way, Hardeeville, SC 29927
Dominion Energy	800-251-7234	PO Box 100255 Columbia, SC 29202
BJWSA	843-987-9200	6 Snake Road, Okatie, SC 29909
Hargray Communications	843-815-1675	PO Box 3380, Bluffton, SC 29910
Century Link	843-525-0044	2127 Boundary ST #16, Beaufort, SC 29902
Santee Cooper	843-761-8000	1 Riverwood Drive, Moncks Corner, SC 29461

Contractor Note:
Contractor to obtain and become familiar with geotechnical report #_____prepared by_____.

All work must conform to project technical specifications for Buckwalter Parkway Healthcare prepared by Ward Edwards Engineering. The contractor is responsible for obtaining a copy of the technical specifications if not provided with the drawings.

Permits

Permit	Permit #	Issued	Expires
BJWSA			
Fire Marshal			
SCDHEC/MS4 Stormwater			
SCDHEC Water			
SCDHEC Wastewater			
County Driveway Encroachment			
Municipality Development			

SCDHEC-OCRM Certification:

"I have placed my signature and seal on the design documents submitted signifying that I accept responsibility for the design of the system. Further, I certify to the best of my knowledge and belief that the design is consistent with the requirements of title 48, chapter 14 of the code of laws of SC, 1976 as amended, pursuant to regulation 72-300 et seq. (if applicable), and in accordance with the terms and conditions of scr100000."

STANDARD ABBREVIATIONS

Ac	Acre
ADT	Average Daily Traffic
ASPH	Asphalt
BEG	Begin
BL	Baseline
BM	Benchmark
BOB	Bottom Of Bank
BOTT	Bottom
BRG	Bearing
BT	Buried Telephone
B/C	Back of Curb
C	Rate of Change in Slope
C & G	Curb and Gutter
CATV	Cable Television
CB	Catch Basin
CI	Curb Inlet
CL	Clearance or Centerline
CONST	Construction
CORR	Correction
CF	Cubic Feet
CY	Cubic Yard
DA	Drainage Area
DBI	Ditch Bottom Inlet
DBL	Double
DHV	Design Hourly Volume
DI	Drop Inlet
DIA or D	Diameter
DIP	Ductile Iron Pipe
DT	Ditch
e	Superelevation
E	East or External distance
EGL	Existing Grade Line
EL or ELEV	Elevation
EMBK	Embankment
ENGR	Engineer
EQ	Equal
ESMT	Easement
EW	Endwall
EXIST	Existing
F & I	Furnish and Install
FES	Flared End Section
FFE	Finish Floor Elevation
FH	Fire Hydrant
FM	Force Main
FT	Foot or Feet
FUT	Future
GI	Grate Inlet
GRD	Grade
H or HT	Height
HDPE	High Density Polyethylene
HDWL	Headwall
HORIZ	Horizontal
HP	High Point
HW	Highwater
HWY	Highway
HYD	Hydrant or Hydraulic
ID	Inside Diameter
IE	Invert Elevation
IN	Inch
INSTL	Install
JB	Junction Box
LF	Linear Feet
LGTH	Length
LOW	Limit Of Work
LP	Low Point
LT	Left
MES	Mitred End Section
MH	Manhole
MHW	Mean High Water
MJ	Mechanical Joint
N	North
NBR	North Bound Roadway
NC	Normal Crown
NGVD	National Geodetic Vertical Datum
NIC	Not In Contract
OD	Outside Diameter
OH	Overhead
OHP	Overhead Power
PAVT	Pavement
PC	Point of Curvature
PCC	Point of Compound Curvature
PERF	Perforated
PG	Profile Grade
PGE	Profile Grade Elevation
PGL	Profile Grade Line
PI	Point of Intersection
PL	Property Line
PR	Point of Rotation
PRC	Point of Reverse Curvature
PRCST	Precast
PT	Point of Tangency
PVC	Polyvinyl Chloride
PVI	Point of Vertical Intersection
Q	Peak discharge or flow volume (CFS)
R	Rate of change in elevation
R or RAD	Radius
RCP	Reinforced Concrete Pipe
RDWY	Roadway
REQ or REQD	Required
RT	Right
R/W	Right Of Way
S	Speed or South or Slope
SAHM	Sand-asphalt hot mix
SAN	Sanitary
SF	Square Foot or Silt Fence
SY	Square Yard
SBR	South Bound Roadway
SD	Storm sewer
SED	Sediment
SHW	Seasonal High Water
SS	Sanitary Sewer
SSMH	Sanitary Sewer Manhole
STA	Station
SUBGR	Subgrade
SUR	Survey
SW OR SWK	Sidewalk
TC	Top of Curb
TCE	Temporary Construction Easement
TEL	Telephone
TEMP	Temperature or temporary
TG	Top of Grate
TOB	Top of Bank
TP	Top of Pavement
TW	Top of Sidewalk
TYP	Typical
UNDDR	Underdrain
UG	Underground
UE	Underground Electric
UT	Underground Telephone
UTIL	Utilities
VERT	Vertical
W	Width or West
WL	Water Line
WM	Water Main
WT	Water Table or weight
WV	Water Valve
WWF	Welded Wire Fabric
YI	Yard Inlet

Paving Hatch Legend

Proposed Concrete Paving	4"
Proposed Pervious Concrete Paving	4"
Proposed Sidewalk/Concrete	4"
Reinforced Grass Fire Lane	
Proposed Aggregate/Stones	
Proposed Asphalt (light duty)	
Proposed Asphalt (heavy duty)	
Mill & Overlay Asphalt	
Proposed Concrete Pavers	

Clearing / Demolition Legend

Demolition	
Milling	
Tree to be Removed	
Tree Protection	

Storm Sewer/Drainage Legend

	Proposed
Drop Inlet	DI: A1
Curb Inlet (with Grate)	CI: A1
Type 16 Curb Inlet	CI: A1
Valley Gutter Inlet	VI: A1
Trench Drain	TD: A1
Weir Inlet	WI: A1
Yard Inlet	YI: A1
Junction Box	JB: A1
Cleanout	CO
Downspout	
Storm Drain	
Underdrain	
Roof Drain Collector	
Flared End Section	
Headwall	
Headwall with Wings	
Outlet Control Structure	
Ditch Centerline	
Direction of Flow	

Sanitary Sewer Legend

	Proposed
Sanitary Sewer Manhole	MH: A1
Sanitary Sewer Cleanout	CO
Sanitary Sewer Wye	
Check Valve in Manhole	
Plug Valve	
Air Release Valve	
Sewer Line	S
Force Main	F
Reuse Main	R
Service Lateral	

Water System Legend

	Proposed
Water Meter	
Water Valve	
Reducer	
Post Indicator Valve	
Fire Hydrant	
Blowoff Hydrant	
Yard Hydrant	
Fire Depart. Connection (FDC)	
Cap	
Plug	
Backflow Preventor	
Butterfly Valve	
Fittings	
Water Line	W
Service Lateral	

Grading Legend

	Proposed
Top of Pavement Elevation	TP: 22.50
Top of Walk Elevation	TW: 22.50
Top of Curb Elevation	TC: 22.50
Finish Grade	FG: 22.5
High Point	HP
Low Point	LP
Contour	19
Ditch Centerline	
Direction of Flow	

Limits of Disturbance:	NPDES

Erosion Prevention

Land Grading:	LG OR
Surface Roughening:	
Topsoiling:	
Temporary Seeding:	TS
Mulching:	M
ECB or TRM:	
FGM:	FGM
BFM:	BFM
Permanent Seeding:	PS
Sodding:	SO
Riprap:	
Outlet Protection:	RIPRAP / ECB or TRM
Dust Control:	DC
Polyacrylamide (PAM):	PAM

Runoff Conveyance Measures

Vegetated Channels:	PC PC PC
Riprap-Lined Channels:	PC PC PC
ECB OR TRM-Lined Channels:	
Paved Channels:	PC PC PC
Pipe Slope Drains:	
Temporary Stream Crossing:	
Temporary Diversion Ditch or Swale:	TD TD
Permanent Diversion Ditch:	PD PD
Diversion Dike or Berm:	DD DB
Level Spreader:	
Subsurface Drain:	SSD SSD

Sediment Control

Sediment Basin:	
Temporary Sediment Trap:	
Rock Sediment Dike:	
Rock Check Dam:	OR
Sediment Tube:	
Silt Fence:	
Reinforced Silt Fence:	
Type A-Fabric Inlet Protection:	A
Type A-Sediment Tube Inlet Protection:	A
Type B - Wire Mesh and Stone Drop Inlet Protection:	B
Type C - Block and Gravel Inlet Protection:	C
Type D - Rigid Inlet Filters:	D
Type E - Surface Course Curb Inlet Filter:	E
Type F - Inlet Tube:	F
Type FC - Filter Bag Curb Inlet Protection:	FC
Type FB - Filter Bag Grate Inlet Protection:	FG
Concrete Washout	CWS

ADA Accessible Route

NOTE:
The accessible route shall comply with the current version of the ADA Standards for Accessible Design.

No.	Description	Date
1	Plan Revisions	
2		
3		
4		
5		
6		
7		
8		

Attachment 4

Permit Set - NOT FOR CONSTRUCTION

SOUTH CAROLINA PROFESSIONAL ENGINEER No. 22816 06/17/2024 PAUL MOORE

SOUTH CAROLINA WARD EDWARDS, INC. No. C00152 CERTIFICATE OF AUTHORIZATION

Ward Edwards ENGINEERING
119C Palmetto Way
P.O. Box 381, Bluffton, South Carolina 29910
(843) 837-5250
www.WardEdwards.com

Buckwalter Parkway Healthcare
Town of Bluffton, South Carolina

Prepared for
e4h Environments for Health Architecture

Construction Notes

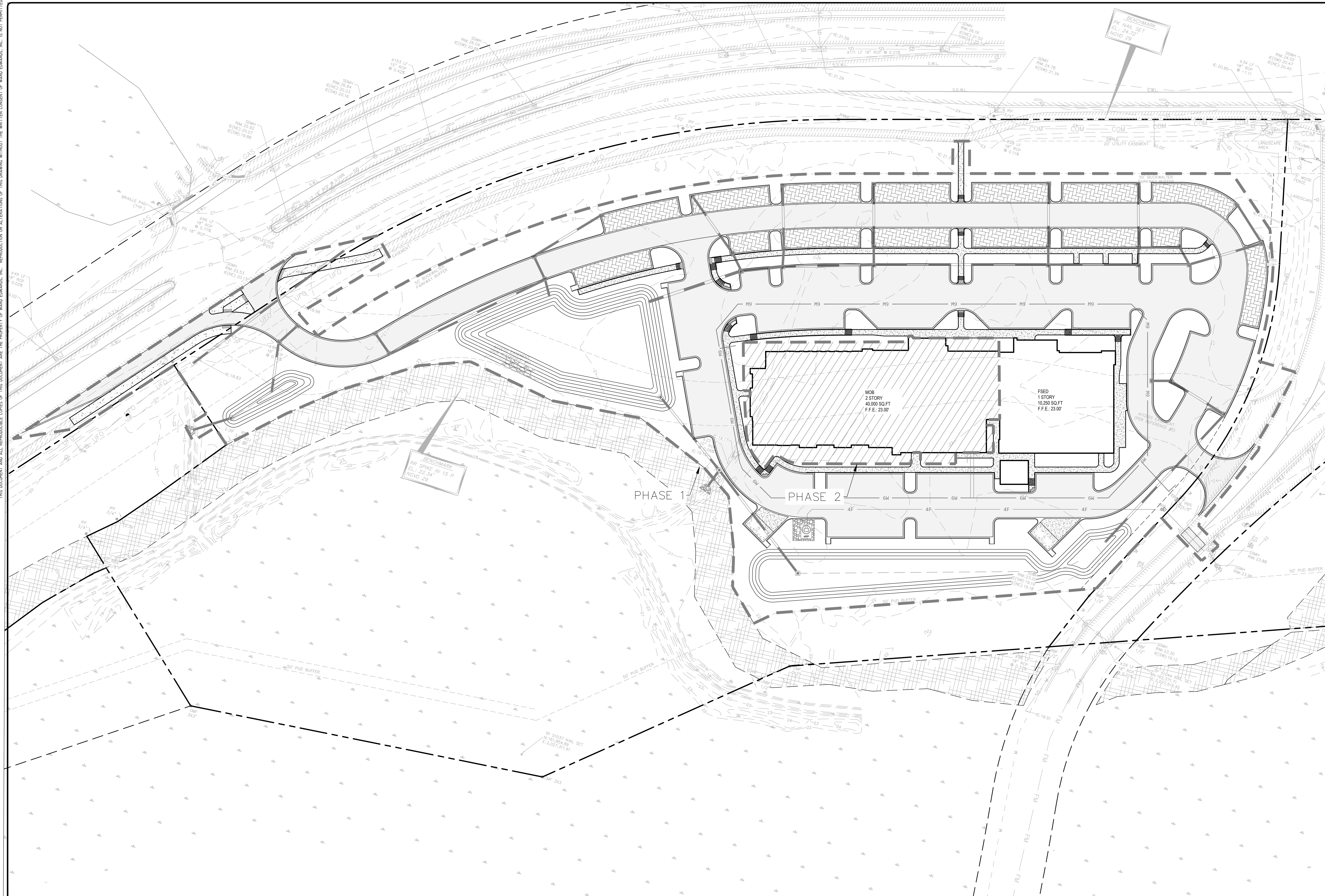
Vert. Datum:	NAVD88
Horiz. Datum:	NAD83
Project #:	230640
Date:	06/17/24
Designed by:	LYJ
Checked by:	CPB

Not to Scale

C002

Attachment 4

Permit Set - NOT FOR CONSTRUCTION



South Carolina Professional Engineer, Paul R. Moore, No. 22816, 06/17/24

South Carolina, Ward Edwards, Inc., No. C00152, Certificate of Authorization

No.	Description	Date
	Plan Revisions	

Ward Edwards Engineering
119C Palmetto Way
P.O. Box 381, Bluffton,
South Carolina 29910
(843) 837-5250
www.WardEdwards.com

Buckwalter Parkway Healthcare
Town of Bluffton, South Carolina

Prepared for
e4h Environments for Health Architecture

Phasing Plan

Vert. Datum:	NAVD88
Horiz. Datum:	NAD83

Project #:	230640
Date:	06/17/24
Designed by:	LYJ
Checked by:	CPB

Scale: 1" = 40' — 0, 40, 80 Feet

C003

Attachment 4

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SOUTH CAROLINA PROFESSIONAL ENGINEER No. 22816 PAUL R. MOORE 06/17/24

SOUTH CAROLINA WARD EDWARDS, INC. No. C00152 CERTIFICATE OF AUTHORIZATION

Permit Set - NOT FOR CONSTRUCTION

No.	Description	Date
1		
2		
3		
4		
5		
6		
7		
8		

Plan Revisions

Ward Edwards ENGINEERING
119C Palmetto Way
P.O. Box 381, Bluffton,
South Carolina 29910
(843) 837-5250
www.WardEdwards.com

Buckwalter Parkway Healthcare
Town of Bluffton, South Carolina

Prepared for
e4h Environments for Health Architecture

Existing Conditions Plan

Vert. Datum:	NAVD88
Horiz. Datum:	NAD83
Project #:	230640
Date:	06/17/24
Designed by:	LYJ
Checked by:	CPB

Scale: 1"= 30' Feet (0, 30, 60)

C101

Attachment 4

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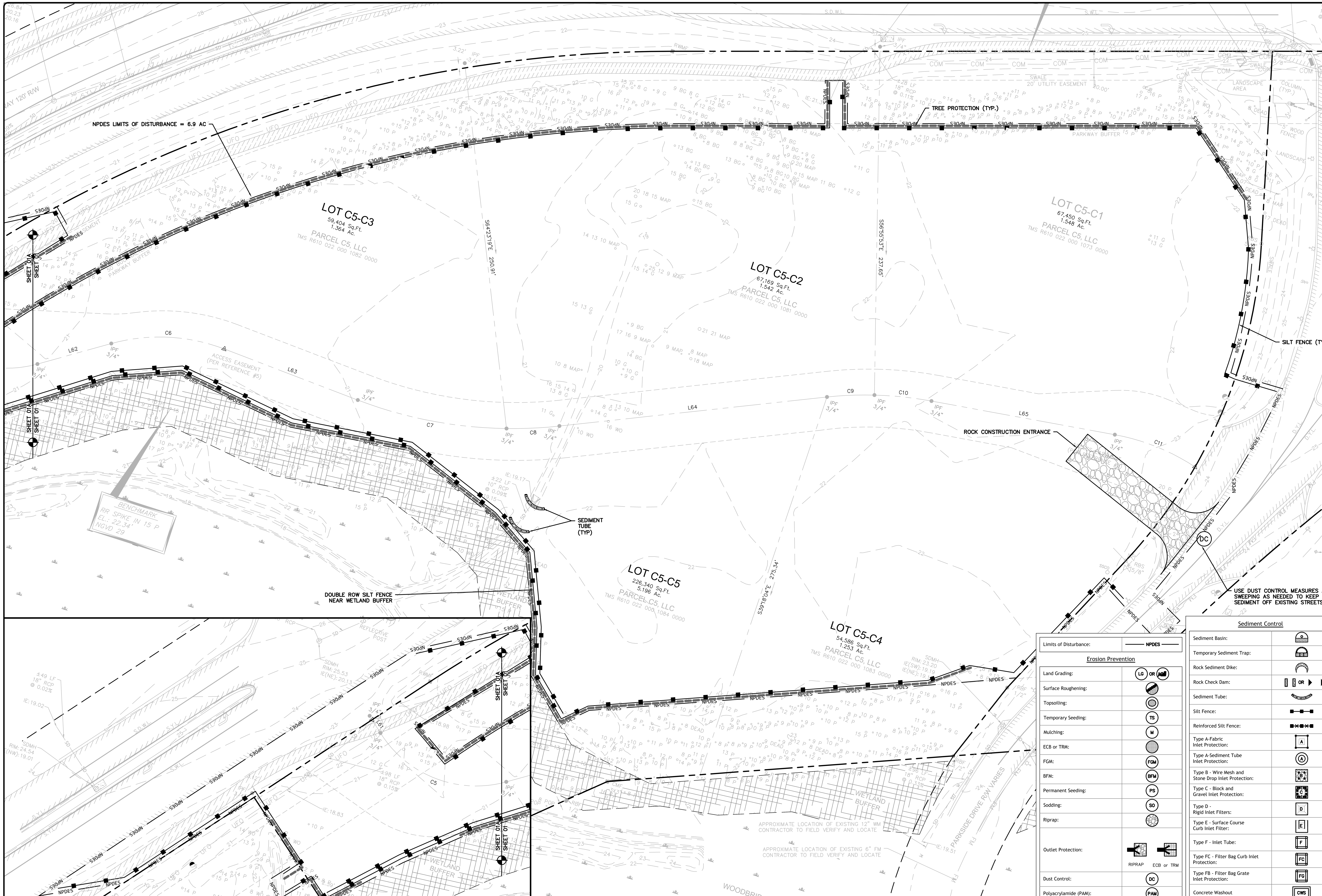

Limits of Disturbance:	NPDES

Erosion Prevention

Land Grading:	LG OR
Surface Roughening:	
Topsoiling:	
Temporary Seeding:	TS
Mulching:	M
ECB or TRM:	
FGM:	FGM
BFM:	BFM
Permanent Seeding:	PS
Sodding:	SO
Riprap:	
Outlet Protection:	RIPRAP ECB or TRM
Dust Control:	DC
Polyacrylamide (PAM):	PAM

Sediment Control

Sediment Basin:	
Temporary Sediment Trap:	
Rock Sediment Dike:	
Rock Check Dam:	OR
Sediment Tube:	
Silt Fence:	
Reinforced Silt Fence:	
Type A-Fabric Inlet Protection:	A
Type A-Sediment Tube Inlet Protection:	A
Type B - Wire Mesh and Stone Drop Inlet Protection:	B
Type C - Block and Gravel Inlet Protection:	C
Type D - Rigid Inlet Filters:	D
Type E - Surface Course Curb Inlet Filter:	E
Type F - Inlet Tube:	F
Type FC - Filter Bag Curb Inlet Protection:	FC
Type FB - Filter Bag Grate Inlet Protection:	FG
Concrete Washout	CWS

SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER No. 22816 PAUL R. MOORE 06/17/24

SOUTH CAROLINA CERTIFICATE OF AUTHORIZATION WARD EDWARDS, INC. No. C00152

No.	Description	Date
1		
2		
3		
4		
5		
6		
7		
8		

Plan Revisions

Ward Edwards ENGINEERING
119C Palmetto Way
P.O. Box 381, Bluffton,
South Carolina 29910
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Buckwalter Parkway Healthcare

Town of Bluffton, South Carolina

Prepared for

e4h Environments for Health Architecture

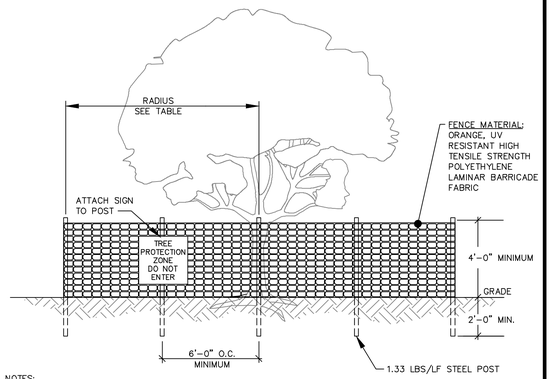
Initial Erosion Control Plan

Vert. Datum:	NAVD88
Horiz. Datum:	NAD83

Project #:	230640
Date:	06/17/24
Designed by:	LYJ
Checked by:	CPB

0 30 60
Scale: 1"= 30' Feet

C201



NOTES:
1. ALL TREES DESIGNATED TO BE SAVED SHALL BE PROTECTED BY FENCING.
2. INSTALL TREE PROTECTION FENCE TO RADIUS INDICATED IN TABLE UNLESS OTHERWISE INDICATED ON PLANS.
3. WARNING SIGNS TO BE MADE OF DURABLE WATERPROOF MATERIAL.
4. ALL WARNING SIGN LETTERS TO BE AT LEAST 3 INCHES HIGH, CLEARLY LEGIBLE AND SPACED A MINIMUM OF ONE EVERY 40 FT. FOR PROTECTION AREAS LESS THAN 40 FT IN PERIMETER, PROVIDE NO LESS THAN ONE SIGN PER SIDE.
5. THE SIZE OF EACH WARNING SIGN MUST BE A MINIMUM OF 2' x 2' AND BE VISIBLE FROM BOTH SIDES OF THE FENCE.
6. ATTACH SIGNS SECURELY TO FENCE POSTS AND FABRIC.
7. THERE SHALL BE NO STORAGE OF MATERIAL WITHIN THE BOUNDARIES OF THE TREE PROTECTION FENCING.
8. TREE PROTECTION FENCING SHALL BE MAINTAINED THROUGHOUT THE DURATION OF THE PROJECT. FENCING MUST REMAIN UPRIGHT AND SLACK FREE.

TABLE – RADIUS OF TREE PROTECTION ZONE (TPZ)

JURISDICTION	RADIUS OF CIRCULAR TPZ
BEAUFORT COUNTY BEAUFORT CO. DEV. CODE 5.11.100	1 FOOT PER INCH OF TRUNK DBH
TOWN OF BLUFFTON UDO 5.3.3	1.5 FEET PER INCH OF TRUNK DBH OR 10 FEET WHICHEVER IS GREATER
TOWN OF HILTON HEAD LMO 16-6-104, J-3A	FENCING AT DRIP LINE FOR ALL TREES TO BE RETAINED
CITY OF BEAUFORT BEAUFORT CODE 5.3.3	0.5 FOOT PER INCH OF TRUNK DBH
JASPER COUNTY ZONING ORD. ART. 13.5	FENCING AT DRIP LINE FOR ALL TREES TO BE RETAINED
TOWN OF PORT ROYAL PORT ROYAL CODE 5.7.70	1.5 FEET PER INCH OF TRUNK DBH OR 5 FEET WHICHEVER IS GREATER
CITY OF HARDEEVILLE MZ&DO 4.8, F-3	FENCING AT DRIP LINE FOR ALL TREES TO BE RETAINED

DBH = TRUNK DIAMETER AT BREAST HEIGHT

TREE PROTECTION FENCE

DETAIL #02915-008

ADHESIVE	WATER DILUTION	NOZZLE TYPE	APPLICATION (GAL./ACRE)
ANIONIC ASPHALT EMULSION	7:1*	COARSE SPRAY	1,200
LATEX EMULSION	12.5:1*	FINE SPRAY	235
RESIN-IN-WATER EMULSION	4:1*	FINE SPRAY	300

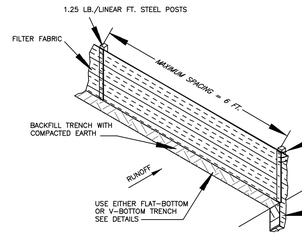
*USE MANUFACTURER'S RECOMMENDATIONS WHEN AVAILABLE.

MAINTENANCE:
- PROHIBIT TRAFFIC ON SURFACE AFTER SPRAYING.
- SUPPLEMENT SURFACE COVERING AS NEEDED.

INSTALLATION:
- APPLY ACCORDING TO APPROVED PLAN.
- MULCH DISTURBED AREAS AMD TACKIFY WITH RESINS SUCH AS ASPHALT, CURASOL OR TERRATACK ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.
- STABILIZE DISTURBED AREAS WITH TEMPORARY OR PERMANENT VEGETATION.
- IRRIGATE DISTURBED AREAS UNTIL SURFACE IS WET.
- COVER SURFACES WITH CRUSHED STONE OR GRAVEL.
- APPLY CALCIUM CHLORIDE AT A RATE TO KEEP SURFACES MOIST.
- APPLY SPRAY-ON ADHESIVES TO MINERAL SOILS (NOT MUCK SOILS) AS DESCRIBED IN TABLE 1.

(DC) DUST CONTROL ON DISTURBED AREAS

SILT FENCE INSTALLATION

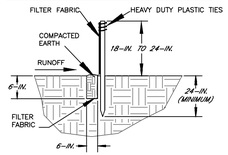


PLAN SYMBOL

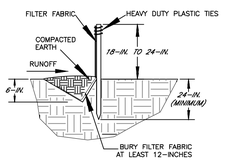
—SF —SF—

SILT FENCE – GENERAL NOTES
1. Do not place silt fence across channels or in other areas subject to concentrated flows. Silt fence should not be used as a velocity control BMP. Concentrated flows are any flows greater than 0.5 cfs.
2. Maximum sheet or overland flow path length to the silt fence shall be 100-feet.
3. Maximum slope steepness (normal [perpendicular] to the fence line) shall be 2:1.
4. Silt fence joints, when necessary, shall be completed by one of the following options:
   - Wrap each fabric together at a support post with both ends fastened to the post, with a 1-foot minimum overlap;
   - Overlap silt fence by installing 3-feet passed the support post to which the new silt fence roll is attached. Attach old roll to new roll with heavy-duty plastic ties; or,
   - Overlap entire width of each silt fence roll from one support post to the next support post.
5. Attach filter fabric to the steel posts using heavy-duty plastic ties that are evenly spaced within the top 8-inches of the fabric.
6. Install the silt fence perpendicular to the direction of the stormwater flow and place the silt fence the proper distance from the toe of steep slopes to provide sediment storage and access for maintenance and cleanout.
7. Install Silt Fence Checks (Tie-Backs) every 50-100 feet, dependent on slope, along silt fence that is installed with slope and where concentrated flows are expected or are documented along the proposed/installed silt fence.

FLAT-BOTTOM TRENCH DETAIL



V-SHAPED TRENCH DETAIL



South Carolina Department of Health and Environmental Control

SILT FENCE

STANDARD DRAWING NO. SC-03 Page 1 of 2

NOT TO SCALE — FEBRUARY 2014 DATE

SILT FENCE – POST REQUIREMENTS

1. Silt Fence posts must be 48-inch long steel posts that meet, at a minimum, the following physical characteristics.
   - Composed of a high strength steel with a minimum yield strength of 50,000 psi.
   - Include a standard "T" section with a nominal face width of 1.38-inches and a nominal "T" length of 1.48-inches.
   - Weigh 1.25 pounds per foot (± 8%)
2. Posts shall be equipped with projections to aid in fastening of filter fabric.
3. Steel posts may need to have a metal soil stabilization plate welded near the bottom when installed along steep slopes or installed in loose soils. The plate should have a minimum cross section of 17-square inches and be composed of 15 gauge steel, at a minimum. The metal soil stabilization plate should be completely buried.
4. Install posts to a minimum of 24-inches. A minimum height of 1- to 2-inches above the fabric shall be maintained, and a maximum height of 3 feet shall be maintained above the ground.
5. Post spacing shall be at a maximum of 6-feet on center.

SILT FENCE – FABRIC REQUIREMENTS

1. Silt fence must be composed of woven geotextile filter fabric that consists of the following requirements:
   - Composed of fibers consisting of long chain synthetic polymers of at least 85% by weight of polyolefins, polyesters, or polyamides that are formed into a network such that the filaments or yarns retain dimensional stability relative to each other;
   - Free of any treatment or coating which might adversely alter its physical properties after installation;
   - Free of any defects or flaws that significantly affect its physical and/or filtering properties; and,
   - Have a minimum width of 36-inches.
2. Use only fabric appearing on SC DOT's Qualified Products Listing (QPL), Approval Sheet #34, meeting the requirements of the most current edition of the SC DOT Standard Specifications for Highway Construction.
3. 12-inches of the fabric should be placed within excavated trench and toed in when the trench is backfilled.
4. Filter Fabric shall be purchased in continuous rolls and cut to the length of the barrier to avoid joints.
5. Filter Fabric shall be installed at a minimum of 24-inches above the ground.

SILT FENCE – INSPECTION & MAINTENANCE

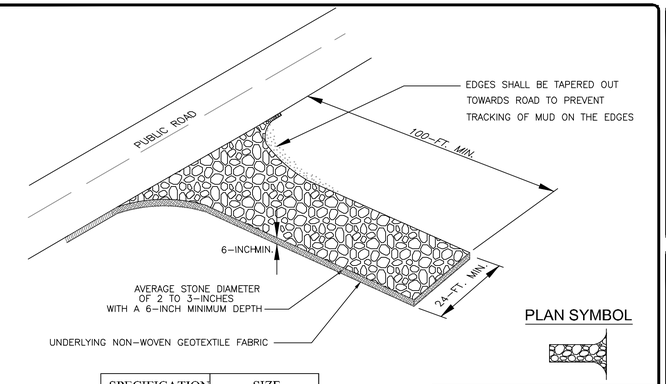
1. The key to functional silt fence is weekly inspections, routine maintenance, and regular sediment removal.
2. Regular inspections of silt fence shall be conducted once every calendar week and, as recommended, within 24-hours after each rainfall even that produces 1/2-inch or more of precipitation.
3. Attention to sediment accumulations along the silt fence is extremely important. Accumulated sediment should be continually monitored and removed when necessary.
4. Remove accumulated sediment when it reaches 1/3 the height of the silt fence.
5. Removed sediment shall be placed in stockpile storage areas or spread thinly across disturbed area. Stabilize the removed sediment after it is relocated.
6. Check for areas where stormwater runoff has eroded a channel beneath the silt fence, or where the fence has sagged or collapsed due to runoff overtopping the silt fence. Install checks/tie-backs and/or reinstall silt fence, as necessary.
7. Check for tears within the silt fence, areas where silt fence has begun to decompose, and for any other circumstance that may render the silt fence ineffective. Removed damaged silt fence and reinstall new silt fence immediately.
8. Silt fence should be removed within 30 days after final stabilization is achieved and once it is removed, the resulting disturbed area shall be permanently stabilized.

South Carolina Department of Health and Environmental Control

SILT FENCE

STANDARD DRAWING NO. SC-03 PAGE 2 of 2

GENERAL NOTES — FEBRUARY 2014 DATE



PLAN SYMBOL

SPECIFICATION	SIZE
ROCK PAD THICKNESS	6 INCHES
ROCK PAD WIDTH	24 FEET
ROCK PAD LENGTH	100 FEET
ROCK PAD STONE SIZE	D = 2-3 INCHES

South Carolina Department of Health and Environmental Control

CONSTRUCTION ENTRANCE

STANDARD DRAWING NO. SC-06 PAGE 1 of 2

NOT TO SCALE — FEBRUARY 2014 DATE

CONSTRUCTION ENTRANCE – GENERAL NOTES

1. Stabilized construction entrances should be used at all points where traffic will egress/ingress a construction site onto a public road or any impervious surfaces, such as parking lots.
2. Install a non-woven geotextile fabric prior to placing any stone.
3. Install a culvert pipe across the entrance when needed to provide positive drainage.
4. The entrance shall consist of 2-inch to 3-inch D50 stone placed at a minimum depth of 6-inches.
5. Minimum dimensions of the entrance shall be 24-feet wide by 100-feet long, and may be modified as necessary to accommodate site constraints.
6. The edges of the entrance shall be tapered out towards the road to prevent tracking at the edge of the entrance.
7. Divert all surface runoff and drainage from the stone pad to a sediment trap or basin or other sediment trapping structure.
8. Limestone may not be used for the stone pad.

CONSTR. ENTRANCE – INSPECTION & MAINTENANCE

1. The key to functional construction entrances is weekly inspections, routine maintenance, and regular sediment removal.
2. Regular inspections of construction entrances shall be conducted once every calendar week and, as recommended, within 24-hours after each rainfall even that produces 1/2-inch or more of precipitation.
3. During regular inspections, check for mud and sediment buildup and pad integrity. Inspection frequencies may need to be more frequent during long periods of wet weather.
4. Reshape the stone pad as necessary for drainage and runoff control.
5. Wash or replace stones as needed and as directed by site inspector. The stone in the entrance should be washed or replaced whenever the entrance fails to reduce the amount of mud being carried off-site by vehicles. Frequent washing will extend the useful life of stone pad.
6. Immediately remove mud and sediment tracked or washed onto adjacent impervious surfaces by brushing or sweeping. Flushing should only be used when the water can be discharged to a sediment trap or basin.
7. During maintenance activities, any broken pavement should be repaired immediately.
8. Construction entrances should be removed after the site has reached final stabilization. Permanent vegetation should replace areas from which construction entrances have been removed, unless area will be converted to an impervious surface to serve post-construction.

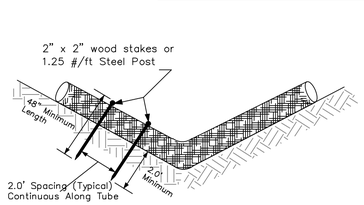
South Carolina Department of Health and Environmental Control

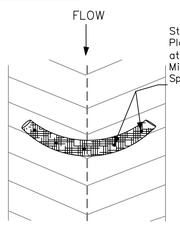
CONSTRUCTION ENTRANCE

STANDARD DRAWING NO. SC-06 PAGE 2 of 2

GENERAL NOTES — FEBRUARY 2014 DATE

SEDIMENT TUBE INSTALLATION





PLAN SYMBOL

SEDIMENT TUBE SPACING

SLOPE	MAX. SEDIMENT TUBE SPACING
LESS THAN 2%	150-FEET
2%	100-FEET
3%	75-FEET
4%	50-FEET
5%	40-FEET
6%	30-FEET
GREATER THAN 6%	25-FEET

SEDIMENT TUBES – GENERAL NOTES

1. Sediment tubes may be installed along contours, in drainage conveyance channels, and around inlets to help prevent off-site discharge of sediment-laden stormwater runoff.
2. Sediment tubes are elongated tubes of compacted geotextiles, curled excelsior wood, natural coconut fiber, or hardwood mulch. Straw, pine needle, and leaf mulch-filled sediment tubes are not permitted.
3. The outer netting of the sediment tube should consist of seamless, high-density polyethylene photodegradable materials treated with ultraviolet stabilizers or a seamless, high-density polyethylene non-degradable material.
4. Sediment tubes, when used as checks within channels, should range between 18-inches and 24-inches depending on channel dimensions. Diameters outside this range may be allowed where necessary when approved.
5. Curled excelsior wood, or natural coconut products that are rolled up to create a sediment tube are not allowed.
6. Sediment tubes should be staked using wooden stakes (2-inch X 2-inch) or steel posts (standard "U" or "T" sections with a minimum weight of 1.25 pounds per foot) at a minimum of 48-inches in length placed on 2-foot centers.
7. Install all sediment tubes to ensure that no gaps exist between the soil and the bottom of the tube. Manufacturer's recommendations should always be consulted before installation.
8. The ends of adjacent sediment tubes should be overlapped 6-inches to prevent flow and sediment from passing through the field joint.
9. Sediment tubes should not be stacked on top of one another, unless recommended by manufacturer.
10. Each sediment tube should be installed in a trench with a depth equal to 1/5 the diameter of the sediment tube.
11. Sediment tubes should continue up the side slopes a minimum of 1-foot above the design flow depth of the channel.
12. Install stakes at a diagonal facing incoming runoff.

SEDIMENT TUBES – INSPECTION & MAINTENANCE

1. The key to functional sediment tubes is weekly inspections, routine maintenance, and regular sediment removal.
2. Regular inspections of sediment tubes shall be conducted once every calendar week and, as recommended, within 24-hours after each rainfall even that produces 1/2-inch or more of precipitation.
3. Attention to sediment accumulations in front of the sediment tube is extremely important. Accumulated sediment should be continually monitored and removed when necessary.
4. Remove accumulated sediment when it reaches 1/3 the height of the sediment tube.
5. Removed sediment shall be placed in stockpile storage areas or spread thinly across disturbed area. Stabilize the removed sediment after it is relocated.
6. Large debris, trash, and leaves should be removed from in front of tubes when found.
7. If erosion causes the edges to fall to a height equal to or below the height of the sediment tube, repairs should be made immediately to prevent runoff from bypassing tube.
8. Sediment tubes should be removed after the contributing drainage area has been completely stabilized. Permanent vegetation should replace areas from which sediment tubes have been removed.

South Carolina Department of Health and Environmental Control

SEDIMENT TUBES

STANDARD DRAWING NO. SC-05 PAGE 1 of 2

NOT TO SCALE — FEBRUARY 2014 DATE

South Carolina Department of Health and Environmental Control

SEDIMENT TUBES

STANDARD DRAWING NO. SC-05 PAGE 2 of 2

GENERAL NOTES — FEBRUARY 2014 DATE

SOUTH CAROLINA PROFESSIONAL ENGINEER No. 22816 — 06/17/24 — PAUL R. MOORE

SOUTH CAROLINA CERTIFICATE OF AUTHORIZATION — WARD EDWARDS, INC. No. C00152

No.	Description	Date
1	Plan Revisions	
2		
3		
4		
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8		

Ward Edwards ENGINEERING
119C Palmetto Way
P.O. Box 381, Bluffton, South Carolina 29910
(843) 837-5250
www.WardEdwards.com

Buckwalter Parkway Healthcare
Town of Bluffton, South Carolina

Prepared for
e4h Environments for Health Architecture

Initial Erosion Control Details

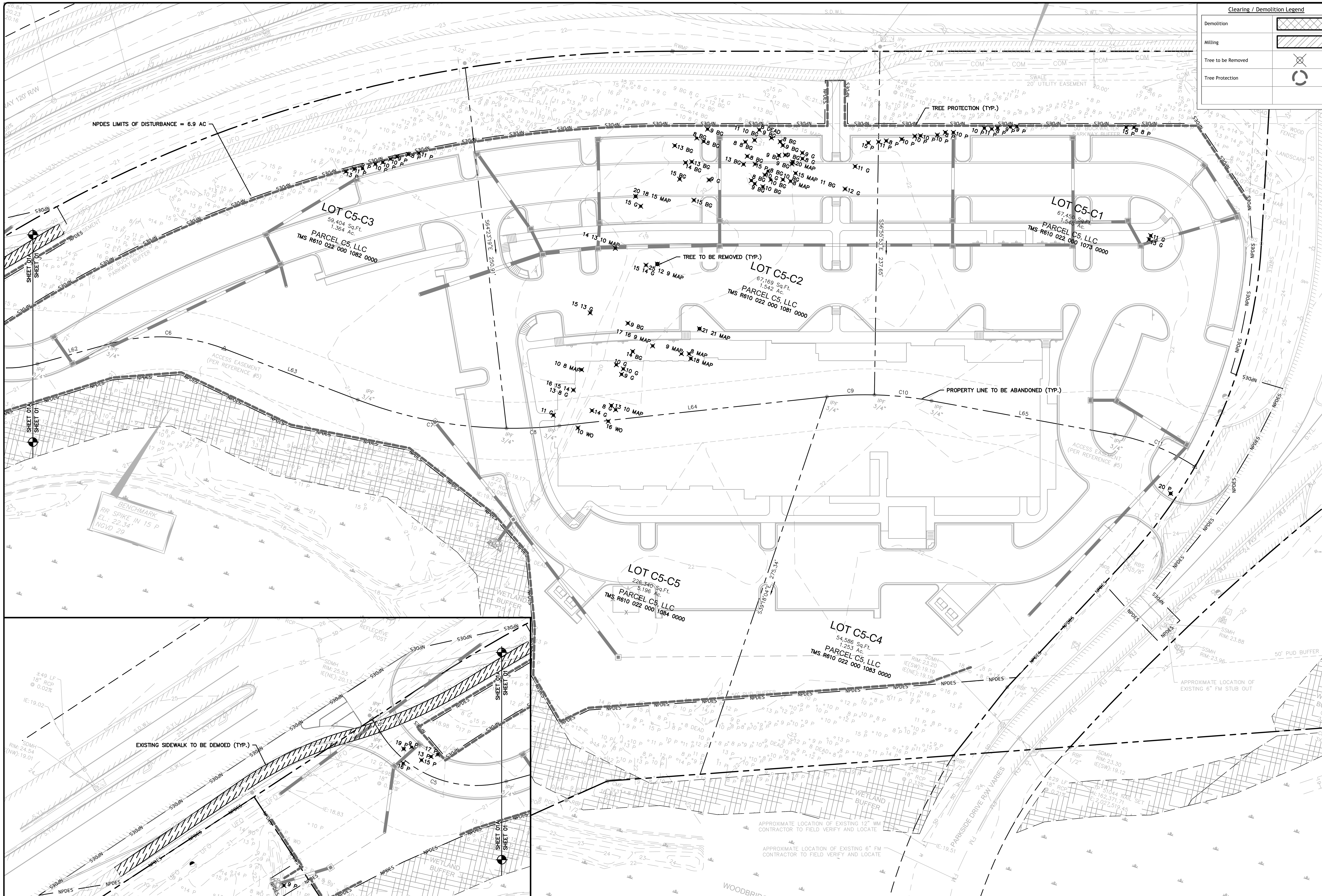
Vert. Datum:	NAVD88
Horiz. Datum:	NAD83
Project #:	230640
Date:	06/17/24
Designed by:	LYJ
Checked by:	CPB

Not to Scale

C202

Attachment 4

Permit Set - NOT FOR CONSTRUCTION



SOUTH CAROLINA PROFESSIONAL ENGINEER No. 22816 PAUL R. MOORE 06/17/24

SOUTH CAROLINA WARD EDWARDS, INC. No. C00152 CERTIFICATE OF AUTHORIZATION

No.	Description	Date
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Plan Revisions

Ward Edwards ENGINEERING
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Buckwalter Parkway Healthcare
Town of Bluffton, South Carolina

Prepared for
e4h Environments for Health Architecture

Clearing & Demolition Plan

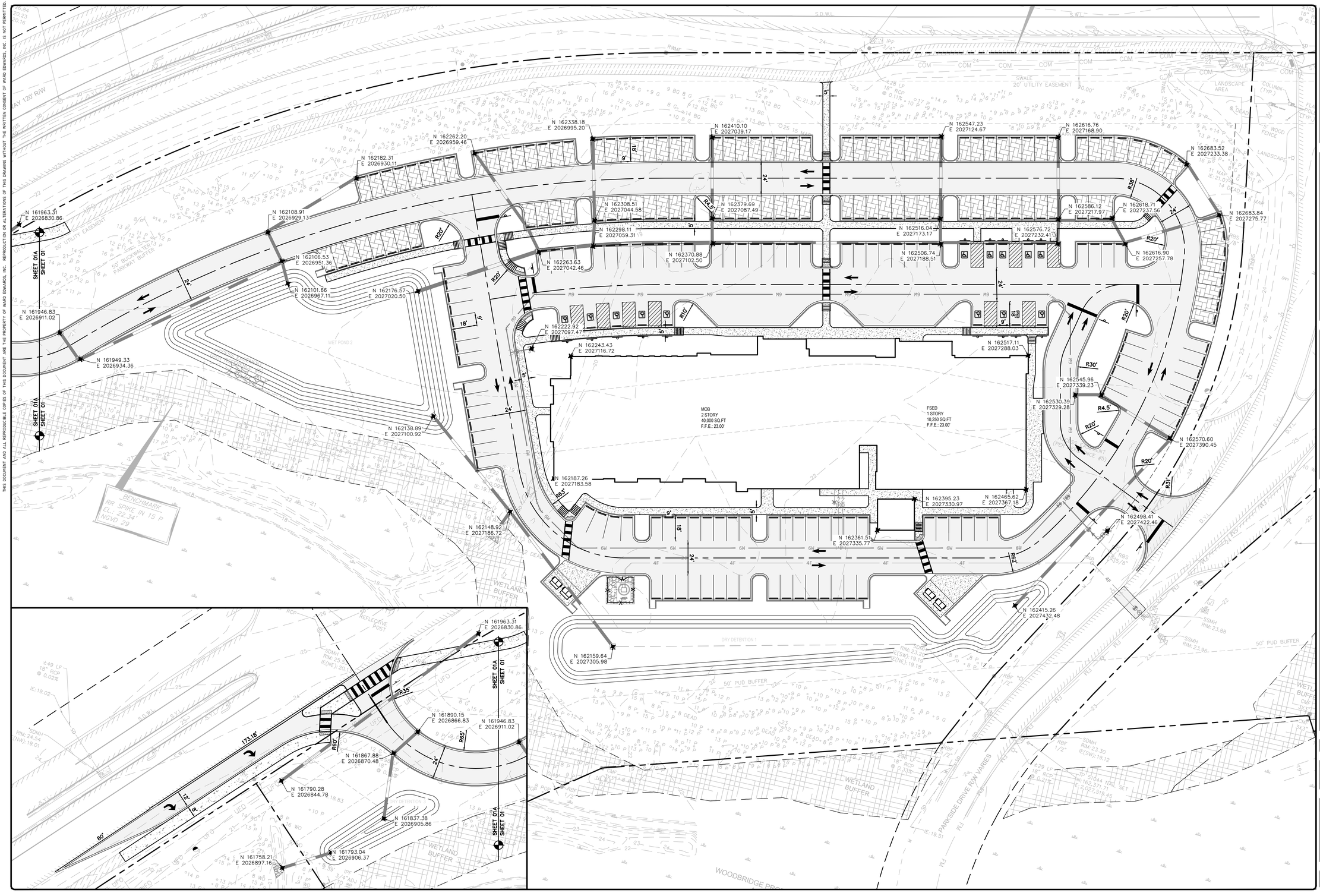
Vert. Datum:	NAVD88
Horiz. Datum:	NAD83
Project #:	230640
Date:	06/17/24
Designed by:	LYJ
Checked by:	CPB

Scale: 1"= 30' — 0, 30, 60 Feet

C301

Attachment 4

Permit Set - NOT FOR CONSTRUCTION



SOUTH CAROLINA PROFESSIONAL ENGINEER
No. 22816
06/17/24
PAUL R. MOORE

SOUTH CAROLINA
WARD EDWARDS, INC.
No. C00152
CERTIFICATE OF AUTHORIZATION

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Buckwalter Parkway Healthcare

Town of Bluffton, South Carolina

Prepared for
e4h Environments for Health Architecture

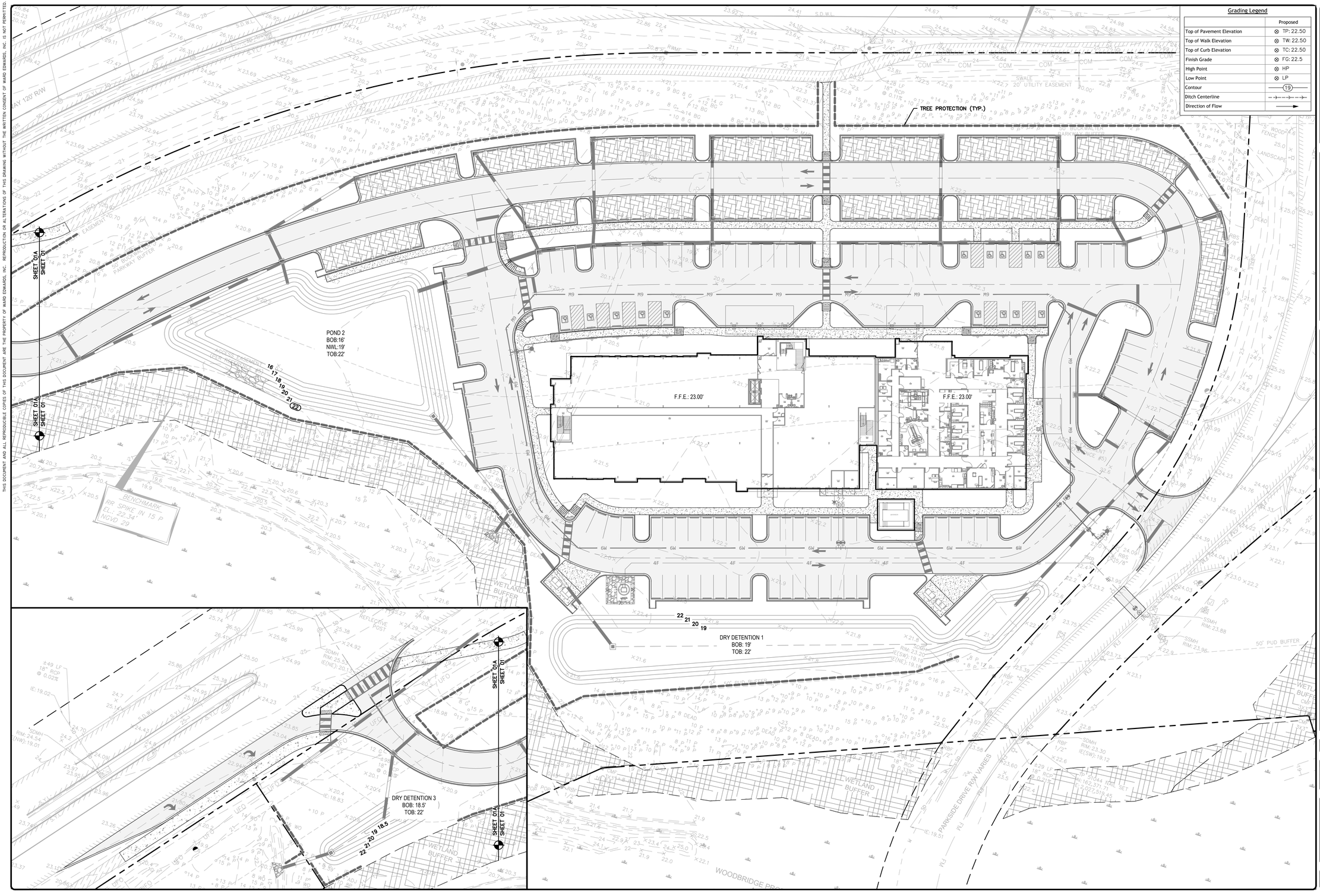
Site Layout Plan

Vert. Datum:	NAVD88
Horiz. Datum:	NAD83

Project #:	230640
Date:	06/17/24
Designed by:	LYJ
Checked by:	CPB

0 30 60
Scale:1"= 30' Feet

C401



SOUTH CAROLINA PROFESSIONAL ENGINEER
No. 22816
06/17/24
PAUL B. MOORE

SOUTH CAROLINA
WARD EDWARDS, INC.
No. C00152
CERTIFICATE OF AUTHORIZATION

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Buckwalter Parkway Healthcare
Town of Bluffton, South Carolina

Prepared for
e4h Environments for Health Architecture

Grading Plan

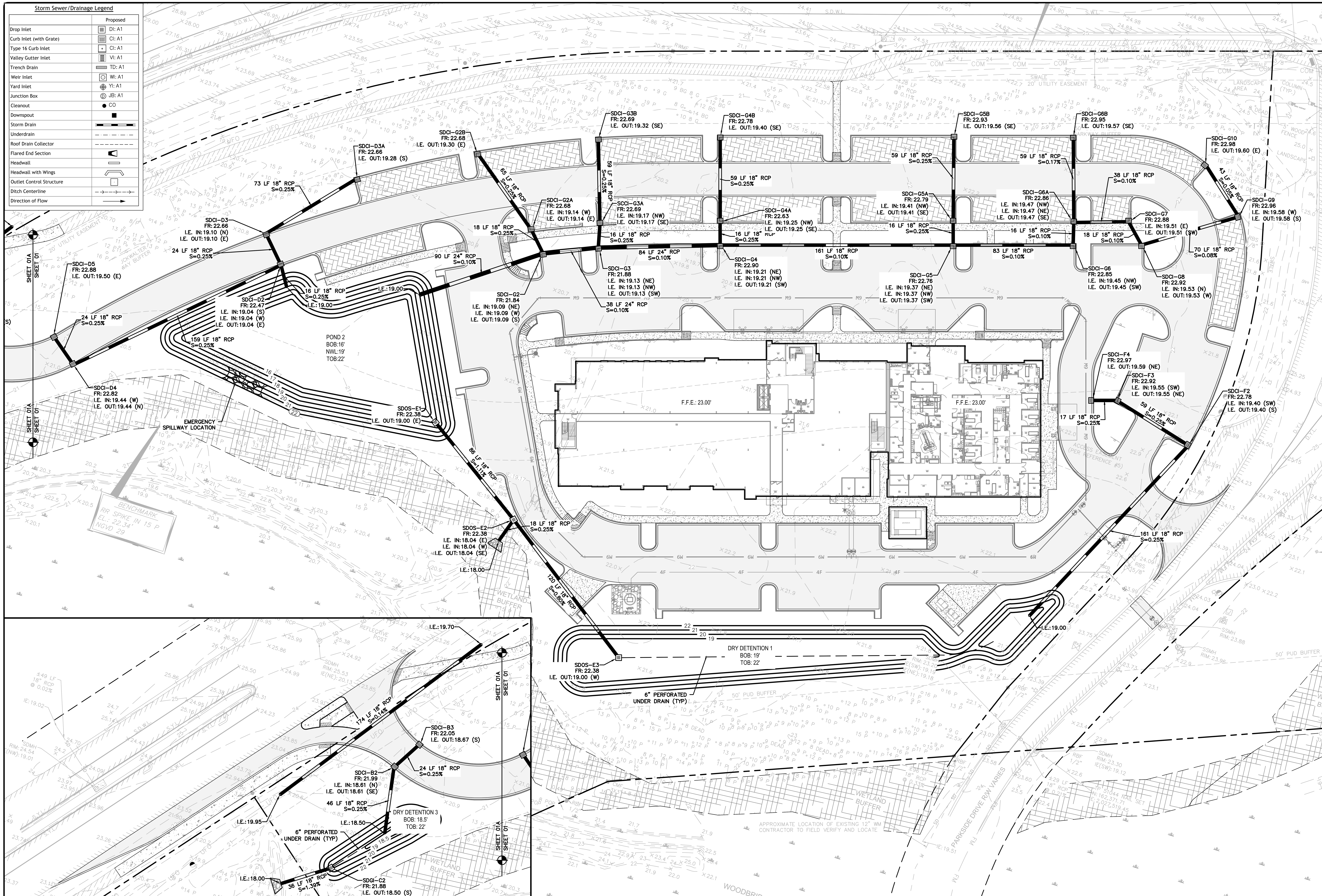
Vert. Datum:	NAVD88
Horiz. Datum:	NAD83
Project #:	230640
Date:	06/17/24
Designed by:	LYJ
Checked by:	CPB

0 30 60
Scale:1"= 30' Feet

C501

Permit Set - NOT FOR CONSTRUCTION

Attachment 4



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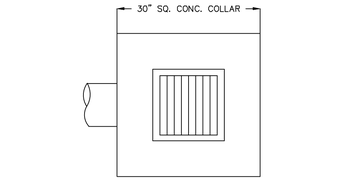
Buckwalter Parkway Healthcare
Town of Bluffton, South Carolina
Prepared for
e4h Environments for Health Architecture

Drainage Plan

Vert. Datum:	NAVD88
Horiz. Datum:	NAD83
Project #:	230640
Date:	06/17/24
Designed by:	LYJ
Checked by:	CPB

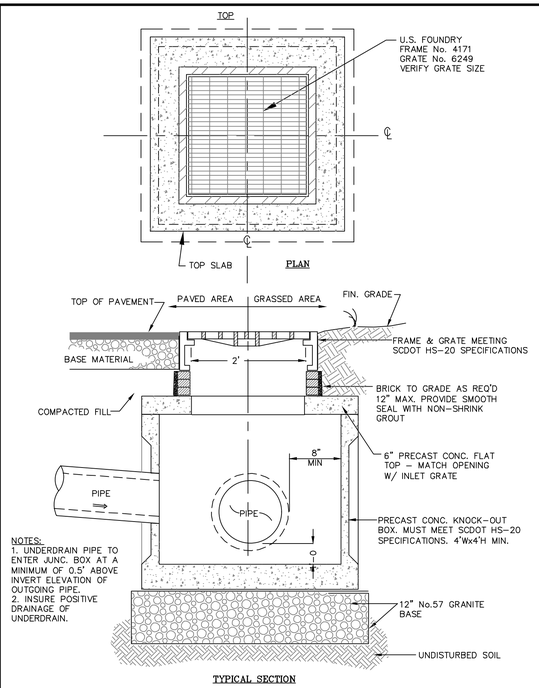
Scale: 1"= 30'

C601



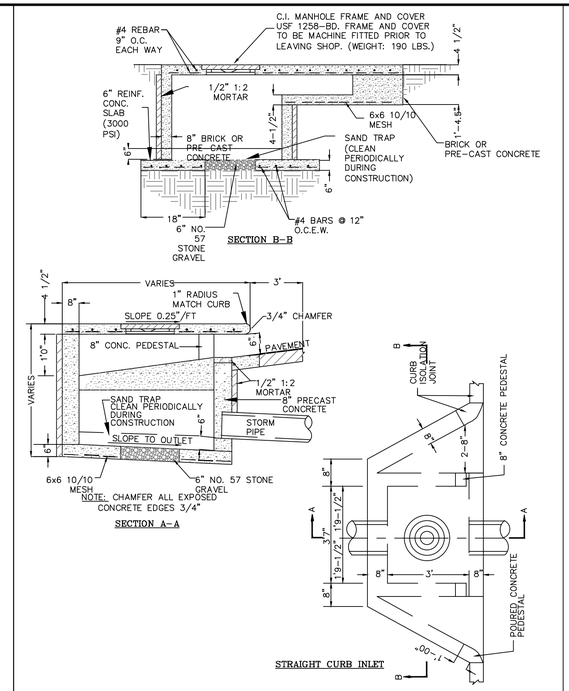
YARD INLET

DETAIL 02630-020



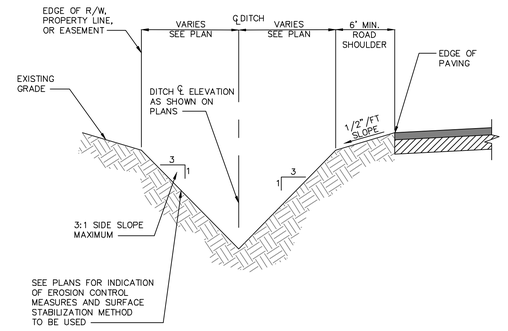
GRATE INLET

DETAIL 02630-027



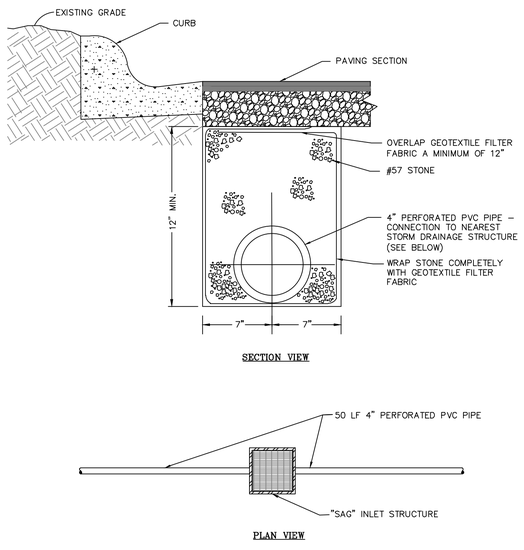
CURB INLET

DETAIL 02630-009



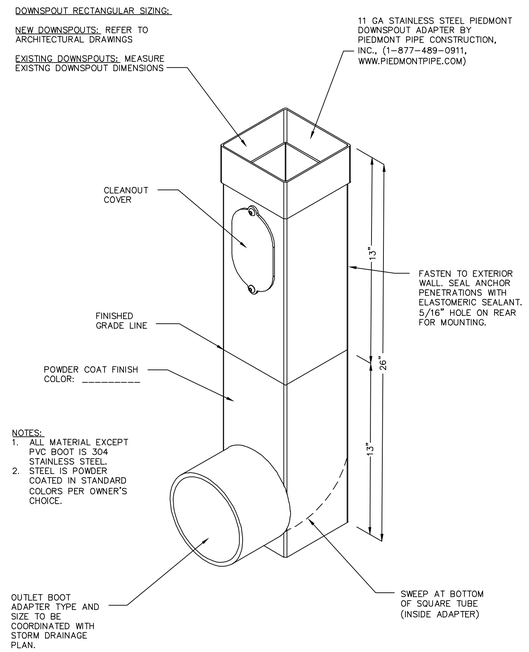
TYPICAL V-SHAPED DITCH CROSS SECTION

DETAIL 02630-024

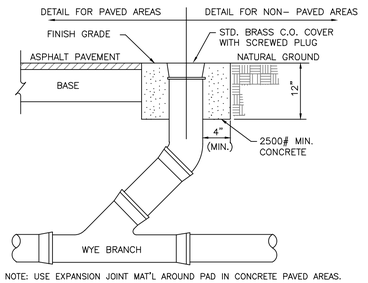


UNDERDRAIN DETAIL

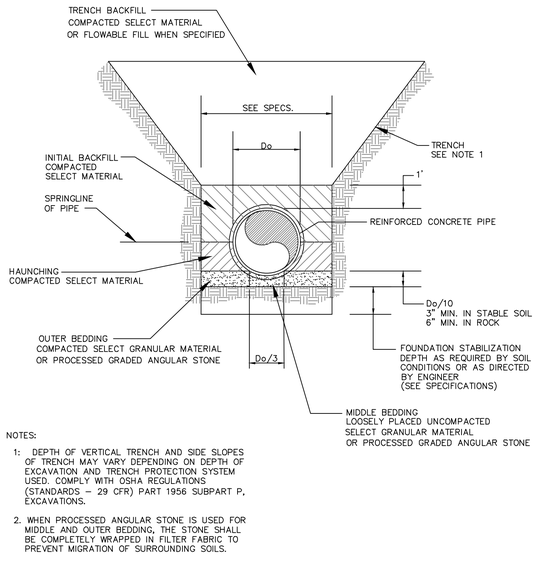
DETAIL 02630-025



GUTTER DOWNSPOUT ADAPTER



CLEANOUT DETAIL



NOTES:

1: DEPTH OF VERTICAL TRENCH AND SIDE SLOPES OF TRENCH MAY VARY DEPENDING ON DEPTH OF EXCAVATION AND TRENCH PROTECTION SYSTEM USED. COMPLY WITH OSHA REGULATIONS (STANDARDS - 29 CFR) PART 1956 SUBPART P, EXCAVATIONS.

2. WHEN PROCESSED ANGULAR STONE IS USED FOR MIDDLE AND OUTER BEDDING, THE STONE SHALL BE COMPLETELY WRAPPED IN FILTER FABRIC TO PREVENT MIGRATION OF SURROUNDING SOILS.

EMBEDMENT DETAIL FOR REINFORCED CONCRETE PIPE

SOUTH CAROLINA PROFESSIONAL ENGINEER LICENSE No. 22816 06/17/24 PAUL P. MOORE

SOUTH CAROLINA WARD EDWARDS, INC. No. C00152 CERTIFICATE OF AUTHORIZATION

No.	Description	Date
	Plan Revisions	
1		
2		
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(843) 837-5250 | www.WardEdwards.com

Buckwalter Parkway Healthcare
Town of Bluffton, South Carolina

Prepared for
e4h Environments for Health Architecture

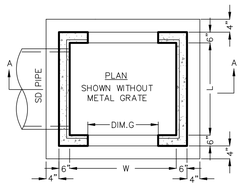
Drainage Details

Vert. Datum:	NAVD88
Horiz. Datum:	NAD83
Project #:	230640
Date:	06/17/24
Designed by:	LYJ
Checked by:	CPB

Not to Scale

C602

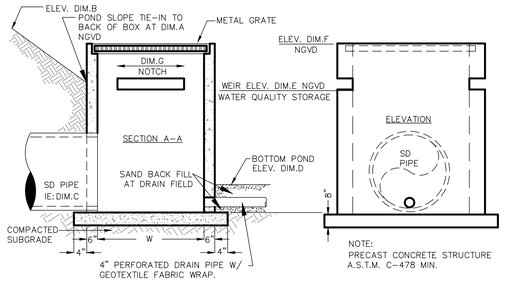
Permit Set - NOT FOR CONSTRUCTION



DIMENSIONS

A =	11.0'	SLOPE TIE-IN
B =	17.0'	TOP OF BERM
C =	12.11'	INV. OUT
D =	15.00'	POND BOTTOM
E =	16.25'	WEIR INVERT
F =	17.00'	TOP OF BOX
G =	3.00'	WEIR NOTCH
L =	4.0'	BOX LENGTH
W =	4.0'	BOX WIDTH

NOTE:
TYPICAL SIDE-SLOPE OF POND MAY VARY IN THE VICINITY OF CONTROL BOX AS DIRECTED BY ENGINEER IN FIELD.



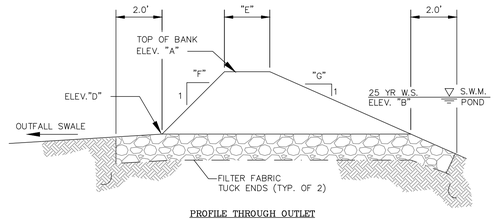
NOTE:
PRECAST CONCRETE STRUCTURE A.S.T.M. C-478 MIN.

POND 1 OUTFALL CONTROL STRUCTURE

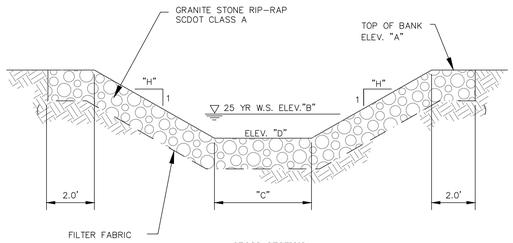
DETAIL 02630-031

DIMENSION DATA

a	22.0'	top of bank
b	XX.XX'	25-yr. peak
c	XX.XX'	width of outlet weir
d	XX.XX'	outlet weir elevation
e	XX.XX'	top width
f	3.0'	slope
g	3.0'	slope
h	3.0'	slope



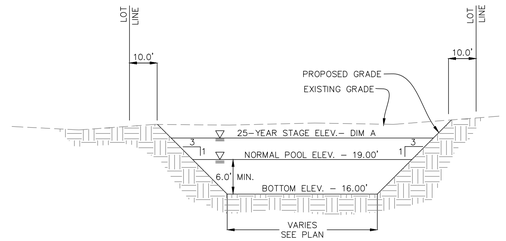
PROFILE THROUGH OUTLET



CROSS SECTION

POND 2 SPILLWAY DETAILS

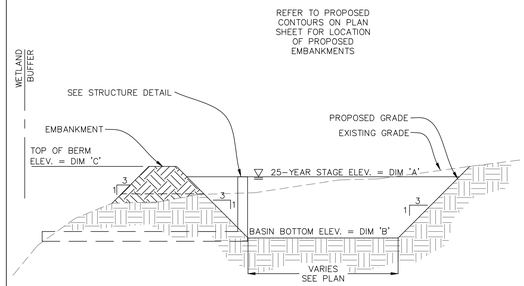
DETAIL 02660-003



EROSION & SEDIMENT CONTROL NOTE:
1. SEE PLANS FOR INDICATION OF EROSION CONTROL MEASURES AND SURFACE STABILIZATION METHOD TO BE USED

WET DETENTION BASIN CROSS SECTION

DETAIL 02630-034



DIMENSION DATA

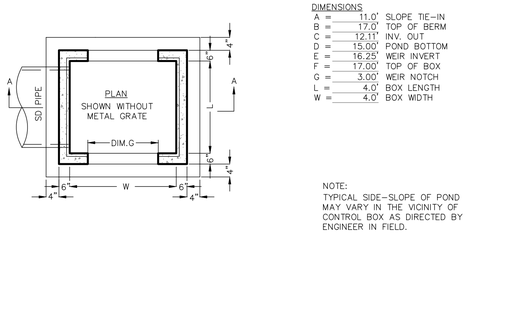
	BASIN 1	BASIN 3	
DIM 'A'	xx.xx'	xx.xx'	25 YR. PEAK
DIM 'B'	19.00'	18.50'	BOTTOM ELEV
DIM 'C'	22.00'	22.00'	TOP OF BERM

EMBANKMENT CONSTRUCTION NOTES:
1. ALL VEGETATION ROOTS, BRUSH, SOD, RUBBISH, DEBRIS, AND ALL OTHER UNSUITABLE MATERIALS SHALL BE STRIPPED AND REMOVED FROM THE LIMITS OF THE PROPOSED EMBANKMENT CONSTRUCTION.
2. THE MATERIAL FOR THE EMBANKMENT CONSTRUCTION SHALL CONSIST OF SAND-CLAY OR CLAYEY SAND. THE SOIL FILL SHALL BE FREE OF ORGANICS AND SENSITIVE CLAY MATERIALS.
3. THE EMBANKMENT AND BACKFILL MATERIAL SHALL BE COMPACTED TO 95% MAXIMUM DRY DENSITY, AS DETERMINED BY THE STANDARD PROCTOR TEST. ALL FILL SHALL BE COMPACTED TO THE LINES, DEPTHS, AND GRADES AS INDICATED. EXCESS EXCAVATION OF THE EXISTING SOILS MAY BE NECESSARY TO OBTAIN THE REQUIRED DENSITY AT THE LIMITS OF EXCAVATION.

EROSION & SEDIMENT CONTROL NOTE:
1. SEE PLANS FOR INDICATION OF EROSION CONTROL MEASURES AND SURFACE STABILIZATION METHOD TO BE USED

DRY DETENTION BASIN CROSS SECTION

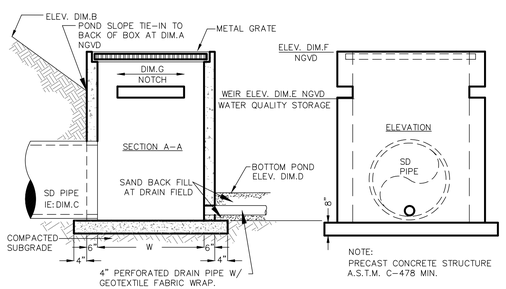
DETAIL 02630-033



DIMENSIONS

A =	11.0'	SLOPE TIE-IN
B =	17.0'	TOP OF BERM
C =	12.11'	INV. OUT
D =	15.00'	POND BOTTOM
E =	16.25'	WEIR INVERT
F =	17.00'	TOP OF BOX
G =	3.00'	WEIR NOTCH
L =	4.0'	BOX LENGTH
W =	4.0'	BOX WIDTH

NOTE:
TYPICAL SIDE-SLOPE OF POND MAY VARY IN THE VICINITY OF CONTROL BOX AS DIRECTED BY ENGINEER IN FIELD.



NOTE:
PRECAST CONCRETE STRUCTURE A.S.T.M. C-478 MIN.

POND 2 OUTFALL CONTROL STRUCTURE

DETAIL 02630-031

WET DETENTION POND

Installation:

A forebay shall be provided for all inlets to a wet water quality pond and shall be placed upstream of the main wet pond area. The forebay is separated from the larger wet detention pond area by barriers or baffles that may be constructed of earth, stones, riprap, gabions, or geotextiles. The top of the forebay barrier shall be a maximum of one (1)-foot below the normal pool elevation, and may extend above the elevation of the permanent pool.

The permanent pool shall be four (4) to six (6) feet in depth.

Acceptable trash guards include:

Hoods that extend at least 6-inches below the permanent pool water surface elevation.

Reverse flow pipes where the outlet structure inlet is located at least 6-inches below the permanent pool water surface elevation.

Trash boxes made of sturdy wire mesh.

Inspection and Maintenance:

The side slopes of the pond shall be mowed monthly.

Since decomposing vegetation captured in the wetpond can release pollutants, especially nutrients, it may be necessary to harvest dead vegetation annually. Otherwise the decaying vegetation can export pollutants out of the pond and also can cause nuisance conditions to occur.

Debris shall be cleared from all inlet and outlet structures monthly.

All eroded or undercut areas shall be repaired as needed.

A sediment marker shall be placed in the forebay to determine when sediment removal is required.

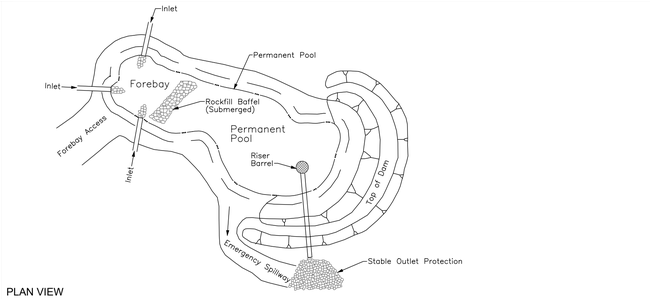
Sediment accumulations in the main pond area shall be monitored and sediment shall be removed when the permanent pool volume has been significantly filled and/or the pond becomes eutrophic.

South Carolina Department of Health and Environmental Control

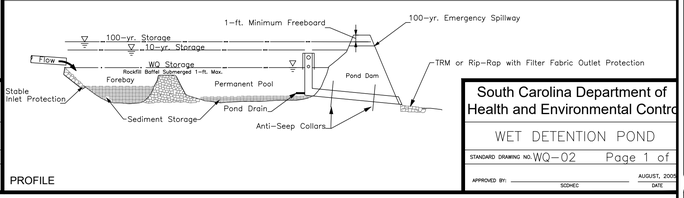
WET DETENTION POND

STANDARD DRAWING NO. WQ-02 Page 2 of 2

APPROVED BY: SCDHEC DATE: AUGUST, 2005



PLAN VIEW



PROFILE

South Carolina Department of Health and Environmental Control

WET DETENTION POND

STANDARD DRAWING NO. WQ-02 Page 1 of

APPROVED BY: SCDHEC DATE: AUGUST, 2005

SOUTH CAROLINA PROFESSIONAL ENGINEER No. 22816 6/17/24 PAUL R. MOORE

SOUTH CAROLINA CERTIFICATE OF AUTHORIZATION WARD EDWARDS, INC. No. C00152

No.	Description	Date
1	Plan Revisions	
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Buckwalter Parkway Healthcare
Town of Bluffton, South Carolina

Prepared for
e4h Environments for Health Architecture

Drainage Details

Vert. Datum:	NAVD88
Horiz. Datum:	NAD83
Project #:	230640
Date:	06/17/24
Designed by:	LYJ
Checked by:	CPB

Not to Scale

C603

AS-BUILT SURVEY REQUIREMENTS

Contractor is responsible for providing an as-built topographic survey of the constructed project site. the survey shall conform to scdhec and local government as-built requirements including, but not necessarily limited to the following:

The survey shall be prepared and signed by a south carolina licensed land surveyor.

A signed hard copy and autocad file shall be provided to the engineer.

Elevations shall be based upon the same vertical datum used in the engineering plans.

The drawing shall be on the sc nad83 state plane coordinate system.

The survey shall include the following as-built information to include location and elevations:

a. Property lines
b. Building(s) with finished floor elevations
c. Paving to include elevations along edges and internal ridges and valleys (i.e. road crowns, inverted crown flow lines)
d. ADA-accessible ramps
e. Curb and gutter
f. Sidewalks
g. Signage
h. Storm inlets with pipe diameter(s), frame, and invert
i. Junction boxes with pipe diameter(s), frame, and invert
j. Sanitary sewer manholes with frame and invert
k. Pump stations to include fencing, controls, driveway, wetwell top/bottom elevations
l. Ditches to include top of bank, bottom of bank, and centerline
m. Ponds to include contours from top of bank to water surface and measured depth from water surface to pond bottom
n. Weir elevations and dimensions
o. Outlet control structures to include elevations and dimensions of all risers, grates, orifices, weirs, and outlet pipe inverts and diameters
p. Emergency spillway dimensions and elevations
q. Locations and inverts for all pipes discharging into the pond
r. All other visible site features to include valves, fdcs, hydrants, transformers, light poles, clean-outs, pedestals, service yards, fencing, hvac/mechanical devices, and bollards.

SOUTH CAROLINA PROFESSIONAL ENGINEER No. 22816 06/17/24 PAUL C. MOORE, III

SOUTH CAROLINA WARD EDWARDS, INC. No. C00152 CERTIFICATE OF AUTHORIZATION

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Vert. Datum:	NAVD88
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Project #:	230640
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Checked by:	CPB

Not to Scale

C604

Permit Set - NOT FOR CONSTRUCTION

Attachment 4

Permit Set - NOT FOR CONSTRUCTION

1,080 LF 6" PVC C900, DR18
LOOPED WATER LINE

6" 45° BEND WITH MARKER

FIRE HYDRANT ASSEMBLY
#XXXXXX/??
6"X6" MJ SWIVEL TEE
6" G.V., TRAFFIC BOX & COVER
15 LF 6" DIP CL350

6" DIP FIRE LINE 2013 NFPA 13 REQUIREMENTS– SEE FIRE PROTECTION DESIGN (BY OTHERS) FOR SPECIFICATIONS OF PIPE AND BACKFLOW PREVENTION (INSIDE OF RISER ROOM) ON BUILDING SIDE OF P.I.V.

REMOTE FDC TO BUILDING
SEE FIRE PROTECTION DESIGN
(BY OTHERS) FOR SPECIFICATIONS

6" 11.25° BEND WITH MARKER
6" 22.5° BEND WITH MARKER
6" 45° BEND WITH MARKER

6" MJ TEE
2–6" G.V. & TRAFFIC RATED BOX
10"X 6" REDUCER
6" G.V. IN BOX W/ MARKER

FIRE HYDRANT ASSEMBLY
#XXXXXX/??
10"X6" MJ SWIVEL TEE
6" G.V., BOX & COVER
10 LF 6" DIP CL350

WATERLINE CONNECTION TO EXISTING 10" STUB–OUT
EXISTING 10" G.V. VALVE BOX WITH MARKER, & 12"X 10" TEE (TAPPING SLEEVE)
108 LF 6" PVC C900, DR18 FROM STUB–OUT TO LOOP
CONTRACTOR TO FIELD LOCATE AND VERIFY LOCATION OF 10" WATER STUBOUT

400 LF 4" PVC C900 DR25
PRIVATE FORCEMAIN

FM OVER SD, SEPARATION XX'

FIRE LINE
6"X6" M.J. TEE
6" G.V. IN BOX W/ LOCKING LID
6" POST INDICATOR VALVE (P.I.V.)
42 LF 6" DIP CL350 (LOCATION TO BE DETERMINED BY FIRE PROTECTION ENGINEER)
RPZ SIZED BY EOR
IN RISER ROOM WITH EXTERNAL ACCESS

PROPOSED LOCATION OF PRIVATE PUMP STATION
FR: XX.XX
I.E. IN: XX.XX
I.E. OUT: XX.XX

DOMESTIC WATER SERVICE
6"X 4" M.J. TEE
4" G.V. & COVER
WATER METER VAULT
WATER METER PURCHASED AND SIZED BY BJWSA (TBD)
4" RPZ BACKFLOW PREVENTER
IN RISER ROOM WITH EXTERNAL ACCESS
42 LF 4" HDPE SDR11

CONNECT TO FORCE MAIN
FLUSHING STATION AT POINT OF CONNECTION.
BJWSA POINT OF DEMARCATION
CONTRACTOR TO VERIFY LOCATION OF EXISTING FORCEMAIN

INSTALL 6"X 4" TAPPED PLUG
4" G.V. IN BOX
4" DIRECT BURY CHECK VALVE

APPROXIMATE LOCATION OF EXISTING 12" WM
CONTRACTOR TO FIELD VERIFY AND LOCATE

APPROXIMATE LOCATION OF EXISTING 6" FM
CONTRACTOR TO FIELD VERIFY AND LOCATE

APPROXIMATE LOCATION OF EXISTING 6" FM STUB OUT

SHEET 01A
SHEET 01

BENCHMARK
RR SPIKE IN 15 P
EL.: 22.34'
NGVD 29

Water System Legend

	Proposed
Water Meter	
Water Valve	
Reducer	
Post Indicator Valve	
Fire Hydrant	
Blowoff Hydrant	
Yard Hydrant	
Fire Depart. Connection (FDC)	
Cap	
Plug	
Backflow Preventor	
Butterfly Valve	
Fittings	
Water Line	W
Service Lateral	

Sanitary Sewer Legend

	Proposed
Sanitary Sewer Manhole	MH: A1
Sanitary Sewer Cleanout	CO
Sanitary Sewer Wye	
Check Valve in Manhole	
Plug Valve	
Air Release Valve	ARV
Sewer Line	S
Force Main	F
Reuse Main	R
Service Lateral	

SOUTH CAROLINA
PROFESSIONAL ENGINEER
No. 22816
06/17/24
PAUL B. MOORE

SOUTH CAROLINA
WARD EDWARDS, INC.
No. C00152
CERTIFICATE OF AUTHORIZATION

No.	Description	Date
1	Plan Revisions	
2		
3		
4		
5		
6		
7		
8		

Ward Edwards ENGINEERING
119C Palmetto Way
P.O. Box 381, Bluffton, South Carolina 29910
(843) 837-5250
www.WardEdwards.com

Buckwalter Parkway Healthcare

Town of Bluffton, South Carolina

Prepared for
e4h Environments for Health Architecture

Utility Plan

Vert. Datum:	NAVD88
Horiz. Datum:	NAD83
Project #:	230640
Date:	06/17/24
Designed by:	LYJ
Checked by:	CPB

0 30 60
Scale:1"= 30' Feet

C701

BJWSA UTILITY AS-BUILT SURVEY REQUIREMENTS

1. Contractor shall provide engineer with electronic file of surveyed utility as-built points. point descriptions shall be clear and understandable.
2. Contractor shall also provide corresponding redline drawing to supplement or clarify electronic file content.
3. Contractor shall schedule surveyor to be present during installation in order to obtain accurate information on underground fittings and sanitary/storm crossing elevations. multiple surveyor mobilizations may be needed. if surveyor is not present during installation, contractor shall ensure surveyor has access to all utility components listed in these notes.
4. Contractor's surveyor shall be a professional land surveyor licensed in south carolina. contractor's surveyor will review and sign the bjwsa certification on the utility as-built drawing prepared by engineer upon completion.
5. Utility as-built points shall be based upon the sc nad83 coordinate system and the elevations shall be based upon the same vertical datum used in the engineering plans.
6. As built survey shall include, but not necessarily be limited to, the following:

a. GRAVITY SEWER

i. Manhole locations, frame elevation, all invert elevations
ii. Cleanout locations, ground elevation, invert elevation
iii. Points for permanent visible structures nearby manholes and cleanouts for reference (pavement, buildings, manholes, catch basins, power poles, or property corners)

b. FORCE MAIN

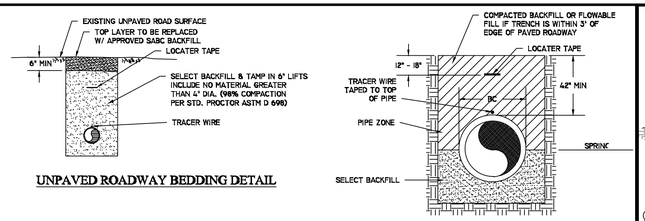
i. Elevation on top of force main connection to manhole or force main manifold
ii. Air release valves
iii. Simple force main alignments on 100 lf increments
iv. Arcs, bends on 50 lf increments

c. WATER

i. Horizontal and vertical location of all valves, bends, tees, and storm/sanitary crossing points (for as-built separation calculations)
ii. Fire hydrants
iii. Concrete markers, connections to existing lines, backflow preventors, air release valves
iv. Points for permanent visible structures near water system elements described above for reference (pavement, buildings, manholes, catch basins, power poles, or property corners). two surveyed reference point locations are required for each fitting.

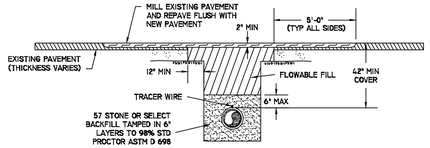
d. PUMP STATIONS

i. Complete layout of pump station
ii. Manhole locations, frame elevation, all invert elevations
iii. Fencing & gates, control panel
iv. Top of slab (incl. brass benchmark) & bottom of wetwell
v. Influent line invert
vi. Float levels (pump off, pump on, lead/lag, both pumps on, high water)
vii. Property corners, yard hydrant, light pole, discharge piping/valves
viii. Bypass pump
ix. Electrical power service from meter to transformer



UNPAVED ROADWAY BEDDING DETAIL

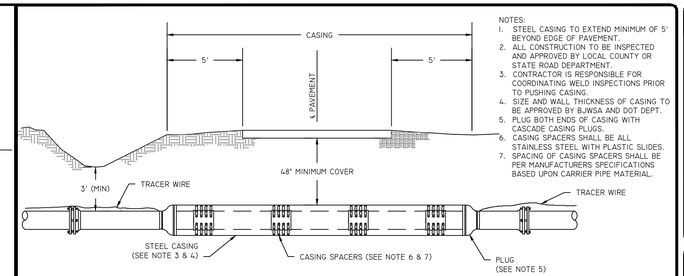
TYPICAL BEDDING DETAIL



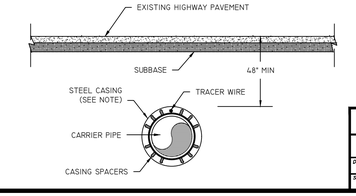
PAVED AREA DETAIL

NOTES:
1. PAVEMENT CUT TO EXTEND 12" BEYOND EDGES OF TRENCH AS SHOWN.
2. MILL AND REPLACE OF ASPHALT TO EXTENTS SHOWN SHALL BE BY SCDOT CERTIFIED PAVING CONTRACTOR. MINIMUM THICKNESS OF ASPHALT REPLACEMENT SHALL BE 2 INCHES.
3. FLOWABLE FILL SHALL BE PLACED FLUSH WITH BOTTOM OF EXISTING PAVEMENT MILL. NO VOIDS OR FILL SHALL BE EVIDENT BETWEEN FLOWABLE FILL AND NEW ASPHALT PAVEMENT.
4. LANE STRIPING SHALL ONLY BE REPLACED ON NEW ASHPALT PAVEMENT AND ANY AREAS OF EXISTING ROADWAY DAMAGED BY CONSTRUCTION ACTIVITIES.
5. ALL INSTALLATIONS IN PUBLIC ROADWAYS SHALL COMPLY WITH CONDITIONS OUTLINED ON THE APPLICABLE ENCROACHMENT PERMIT.

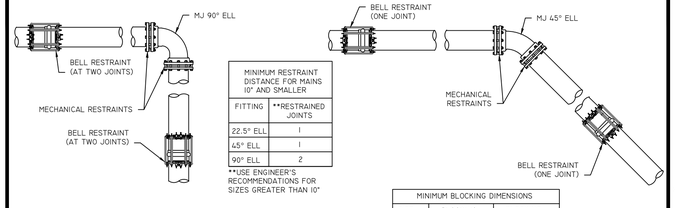
BEAUFORT - JASPER WATER & SEWER AUTHORITY		
BEDDING PRESSURE PIPE DETAIL		
DATE: 05/07/18	DRAWN BY: SBF	DRAWING #: G-02
SCALE: N.T.S.	APPROVED BY: BMC	



NOTES:
1. STEEL CASING TO EXTEND MINIMUM OF 5' BEYOND EDGE OF PAVEMENT.
2. ALL CONSTRUCTION TO BE INSPECTED AND APPROVED BY LOCAL COUNTY OR STATE ROAD DEPARTMENT.
3. CONTRACTOR IS RESPONSIBLE FOR COORDINATING WELD INSPECTIONS PRIOR TO PUSHING CASING.
4. SIZE AND WALL THICKNESS OF CASING TO BE APPROVED BY BJWSA AND DOT DEPT.
5. PLUG BOTH ENDS OF CASING WITH CASCADE CASING PLUGS.
6. CASING SPACERS SHALL BE ALL STAINLESS STEEL WITH PLASTIC SLIDES.
7. SPACING OF CASING SPACERS SHALL BE PER MANUFACTURERS SPECIFICATIONS BASED UPON CARRIER PIPE MATERIAL.



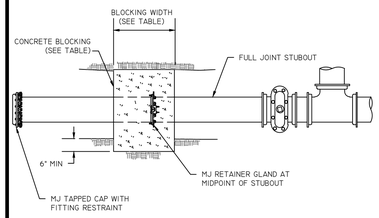
BEAUFORT-JASPER WATER & SEWER AUTHORITY		
BORE AND JACK DETAIL		
DATE: 07/01/09	DRAWN BY: BMC	DRAWING #: G-03
SCALE: N.T.S	APPROVED BY: ERS	



MINIMUM RESTRAINT DISTANCE FOR MAINS 10" AND SMALLER	
FITTING	**RESTRAINED JOINTS
22.5° ELL	1
45° ELL	1
90° ELL	2

**USE ENGINEER'S RECOMMENDATIONS FOR SIZES GREATER THAN 10"

TYPICAL FITTING AND JOINT RESTRAINT

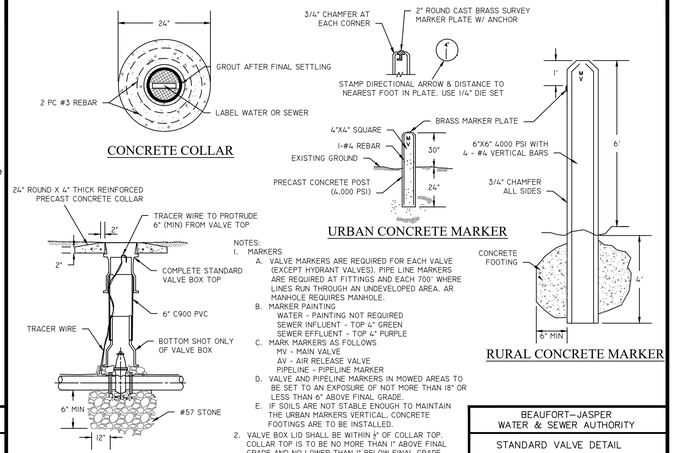


TYPICAL FUTURE STUBOUT

MINIMUM BLOCKING DIMENSIONS		
PIPE SIZE (IN)	BLOCKING BEARING AREA (FT²)	BLOCKING WIDTH (IN)
4	2	24
6	4	24
8	7	36
10	11	36
12	15	36
OVER 12" BY THE DESIGN ENGINEER		

NOTE:
1. THE MINIMUM DIMENSIONS TABLE IS BASED ON AN ASSUMED SOIL BEARING OF 2000 LBS PER SQ. FT. IF BEARING VALUE FOR SOIL IS LESS THAN AREA SHOWN HEREIN SHOULD BE INCREASED ACCORDINGLY.
2. JOINT IS DEFINED TO BE A MINIMUM OF 18" IN LENGTH.

BEAUFORT-JASPER WATER & SEWER AUTHORITY		
MECHANICAL RESTRAINT		
DATE: 07/01/09	DRAWN BY: BMC	DRAWING #: G-08
SCALE: N.T.S	APPROVED BY: ERS	



CONCRETE COLLAR

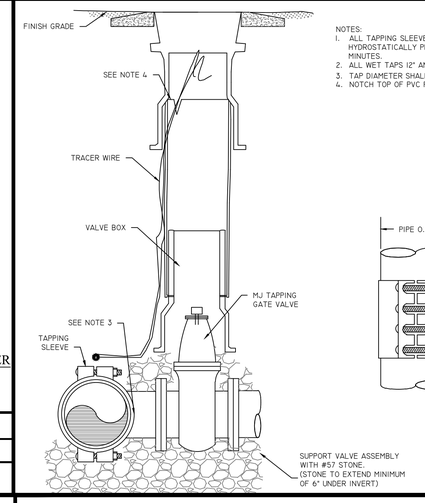
URBAN CONCRETE MARKER

RURAL CONCRETE MARKER

VALVE AND VALVE BOX

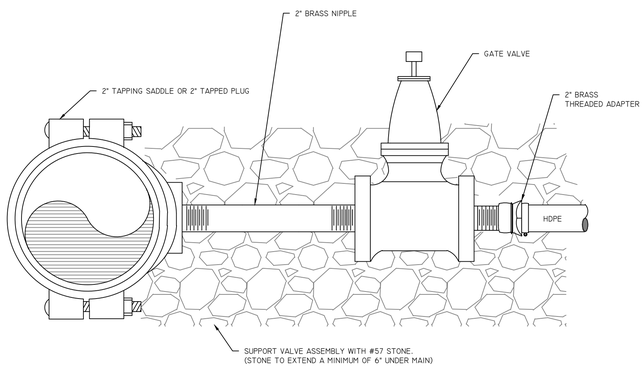
NOTES:
1. MARKERS
   A. VALVE MARKERS ARE REQUIRED FOR EACH VALVE (EXCEPT HYDRANT VALVES). PIPE LINE MARKERS ARE REQUIRED AT FITTINGS AND EACH 700' WHERE LINES RUN THROUGH AN UNDEVELOPED AREA. AR MANHOLE REQUIRES MANHOLE.
   B. MARKER PAINTING
      WATER - PAINTING NOT REQUIRED
      SEWER INFLUENT - TOP 4" GREEN
      SEWER EFFLUENT - TOP 4" PURPLE
   C. MARK MARKERS AS FOLLOWS
      MV - MAIN VALVE
      AV - AIR RELEASE VALVE
      PIPELINE - PIPELINE MARKER
   D. VALVE AND PIPELINE MARKERS IN MOWED AREAS TO BE SET TO AN EXPOSURE OF NOT MORE THAN 18" OR LESS THAN 6" ABOVE FINAL GRADE.
   E. IF SOILS ARE NOT STABLE ENOUGH TO MAINTAIN THE URBAN MARKERS VERTICAL, CONCRETE FOOTINGS ARE TO BE INSTALLED.
2. VALVE BOX LID SHALL BE WITHIN ½" OF COLLAR TOP. COLLAR TOP IS TO BE NO MORE THAN 1" ABOVE FINAL GRADE AND NO LOWER THAN 1" BELOW FINAL GRADE.
3. CONCRETE COLLAR NOT REQUIRED IN PAVEMENT. VALVE BOX TOP IS TO BE TRAFFIC RATED.

BEAUFORT-JASPER WATER & SEWER AUTHORITY		
STANDARD VALVE DETAIL		
DATE: 07/01/09	DRAWN BY: BMC	DRAWING #: G-12
SCALE: N.T.S	APPROVED BY: ERS	

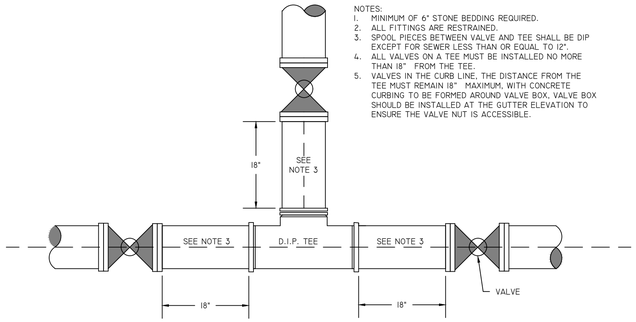


NOTES:
1. ALL TAPPING SLEEVES GREATER THAN 2" SHALL BE HYDROSTATICALLY PRESSURE TESTED TO 150 PSI FOR 20 MINUTES.
2. ALL WET TAPS 12" AND UNDER SHALL BE PERFORMED BY BJWSA.
3. TAP DIAMETER SHALL BE WITHIN ½" OF LINE DIAMETER.
4. NOTCH TOP OF PVC PIPE TO AVOID PINCHING TRACER WIRE.

BEAUFORT-JASPER WATER & SEWER AUTHORITY		
TAPPING SLEEVE & VALVE DETAIL		
DATE: 07/01/09	DRAWN BY: BMC	DRAWING #: G-13
SCALE: N.T.S	APPROVED BY: ERS	



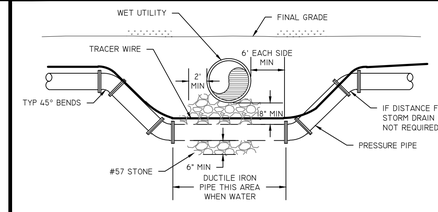
BEAUFORT-JASPER WATER & SEWER AUTHORITY		
2" CONNECTION		
DATE: 07/01/09	DRAWN BY: BMC	DRAWING #: G-14
SCALE: N.T.S	APPROVED BY: ERS	



NOTES:
1. MINIMUM OF 6" STONE BEDDING REQUIRED.
2. ALL FITTINGS ARE RESTRAINED.
3. SPOOL PIECES BETWEEN VALVE AND TEE SHALL BE DIP EXCEPT FOR SEWER LESS THAN OR EQUAL TO 12".
4. ALL VALVES ON A TEE MUST BE INSTALLED NO MORE THAN 18" FROM THE TEE.
5. VALVES IN THE CURB LINE, THE DISTANCE FROM THE TEE MUST REMAIN 18" MAXIMUM, WITH CONCRETE CURBING TO BE FORMED AROUND VALVE BOX, VALVE BOX SHOULD BE INSTALLED AT THE GUTTER ELEVATION TO ENSURE THE VALVE NUT IS ACCESSIBLE.

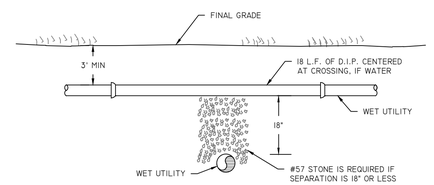
REVISED BY WARD EDWARDS 07/19/21 TO INCLUDE NOTES 4 & 5.

BEAUFORT-JASPER WATER & SEWER AUTHORITY		
TEE AND VALVES		
DATE: 07/01/09	DRAWN BY: BMC	DRAWING #: G-15
SCALE: N.T.S	APPROVED BY: ERS	



PRESSURE PIPE UNDER WET UTILITY FOR FINAL DEPTH 5' OR GREATER

NOTES:
1. WRITTEN AUTHORIZATION FROM BJWSA IS REQUIRED FOR LESS THAN 18" SEPARATION.
2. NORMAL JOINT RESTRAINT IS REQUIRED.



WET UTILITY CROSSING

BEAUFORT-JASPER WATER & SEWER AUTHORITY		
WET UTILITY CROSSING		
DATE: 07/01/09	DRAWN BY: BMC	DRAWING #: G-16
SCALE: N.T.S	APPROVED BY: ERS	

SOUTH CAROLINA PROFESSIONAL ENGINEER No. 22816 — 06/17/24 — PAUL J. MOORE

SOUTH CAROLINA WARD EDWARDS, INC. No. C00152 CERTIFICATE OF AUTHORIZATION

No.	Description	Date
1	Plan Revisions	
2		
3		
4		
5		
6		
7		
8		

Ward Edwards ENGINEERING
119C Palmetto Way
P.O. Box 381, Bluffton, South Carolina 29910
(843) 837-5250
www.WardEdwards.com

Buckwalter Parkway Healthcare
Town of Bluffton, South Carolina

Prepared for
e4h Environments for Health Architecture

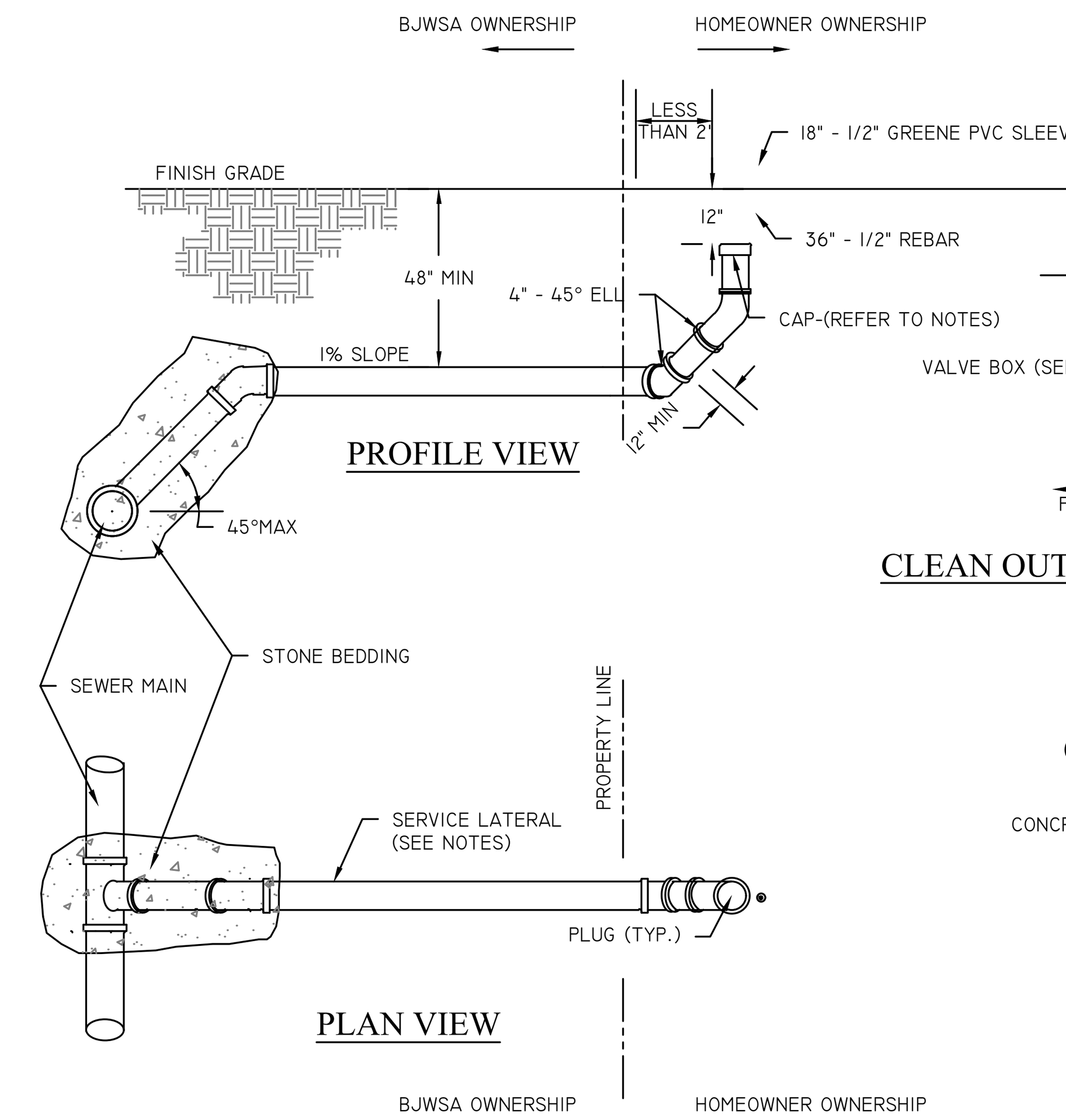
Utility Details

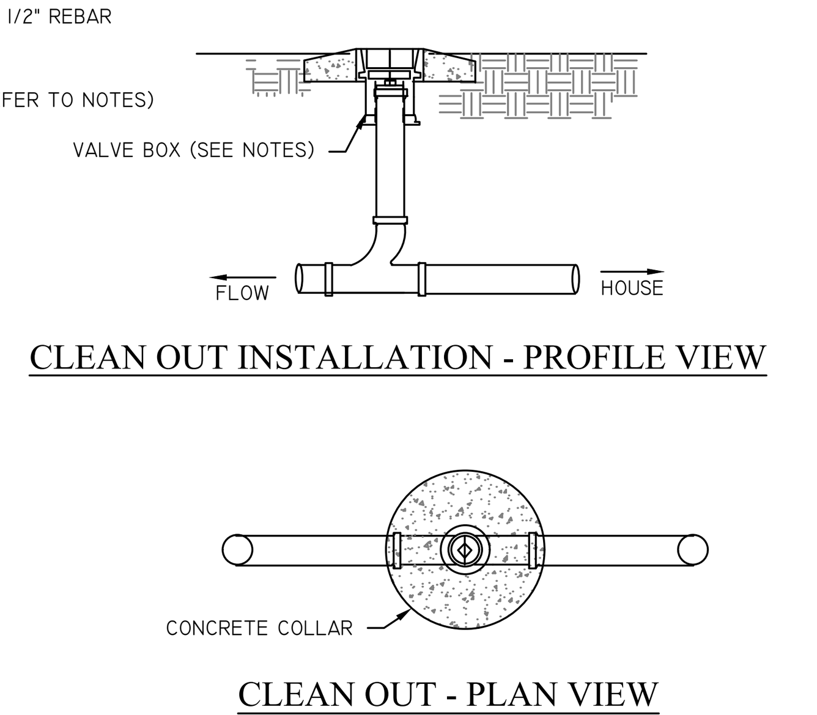
Vert. Datum:	NAVD88
Horiz. Datum:	NAD83
Project #:	230640
Date:	06/17/24
Designed by:	LYJ
Checked by:	CPB

Not to Scale

C702

Attachment 4

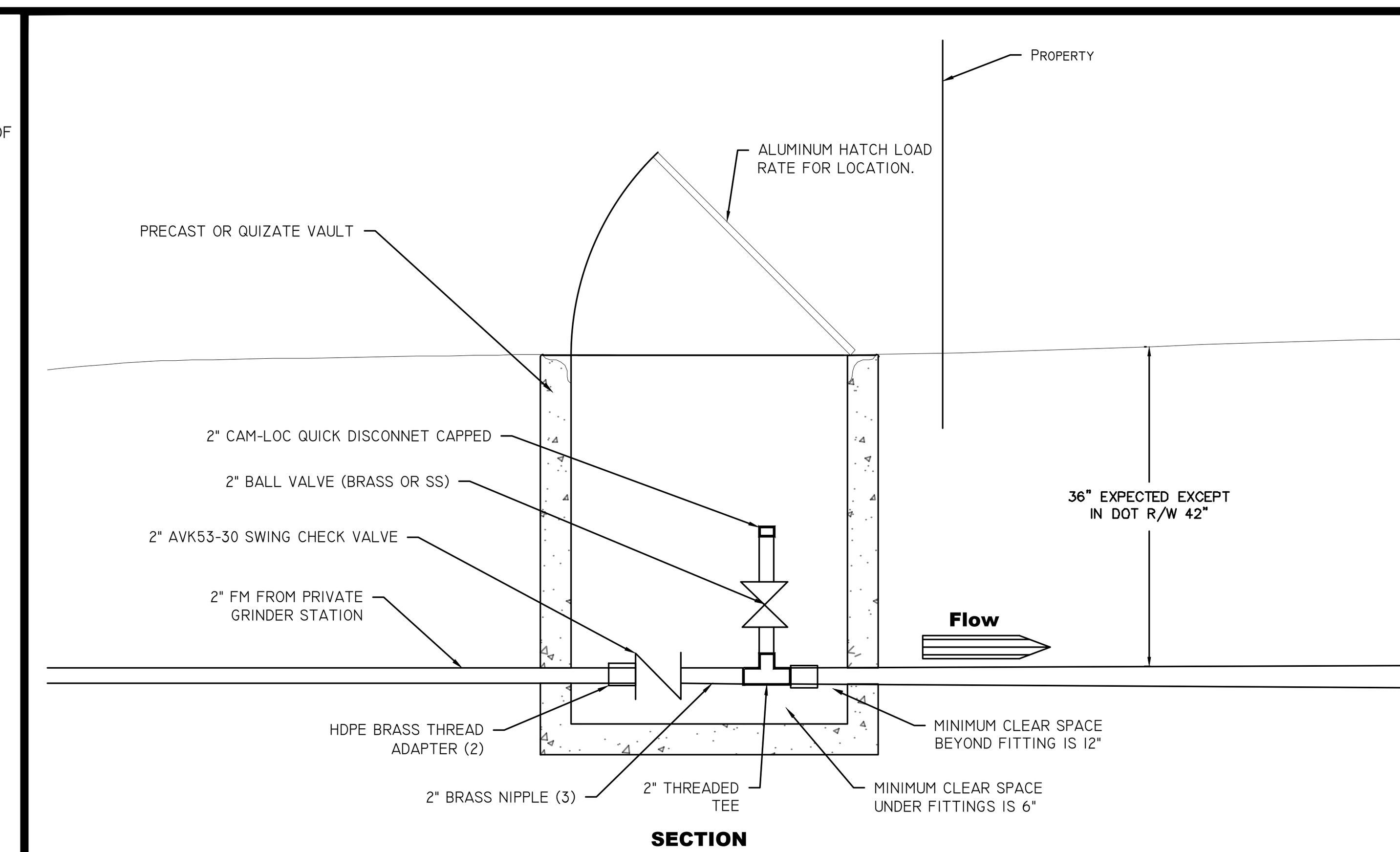




NOTES:
1. SERVICE LATERAL SHALL BE INSTALLED 12" BELOW FINISHED GRADE AND CAPPED IN A MANNER SUITABLE FOR PRESSURE TESTING.
2. CLEAN OUTS INSIDE GRASSED AREA SHALL CONSIST OF PVC PLUG IN SEWER LIDDED VALVE BOX SURROUNDED BY A CONCRETE COLLAR. COLLAR SHALL BE FLUSH WITH FINISHED GRADE. VALVE BOX LID SHALL NOT PROTRUDE ABOVE COLLAR TOP.
3. ALL CLEAN OUTS ARE TO BE 4", INCLUDING CLEAN OUTS ON 6" SEWER LATERALS.

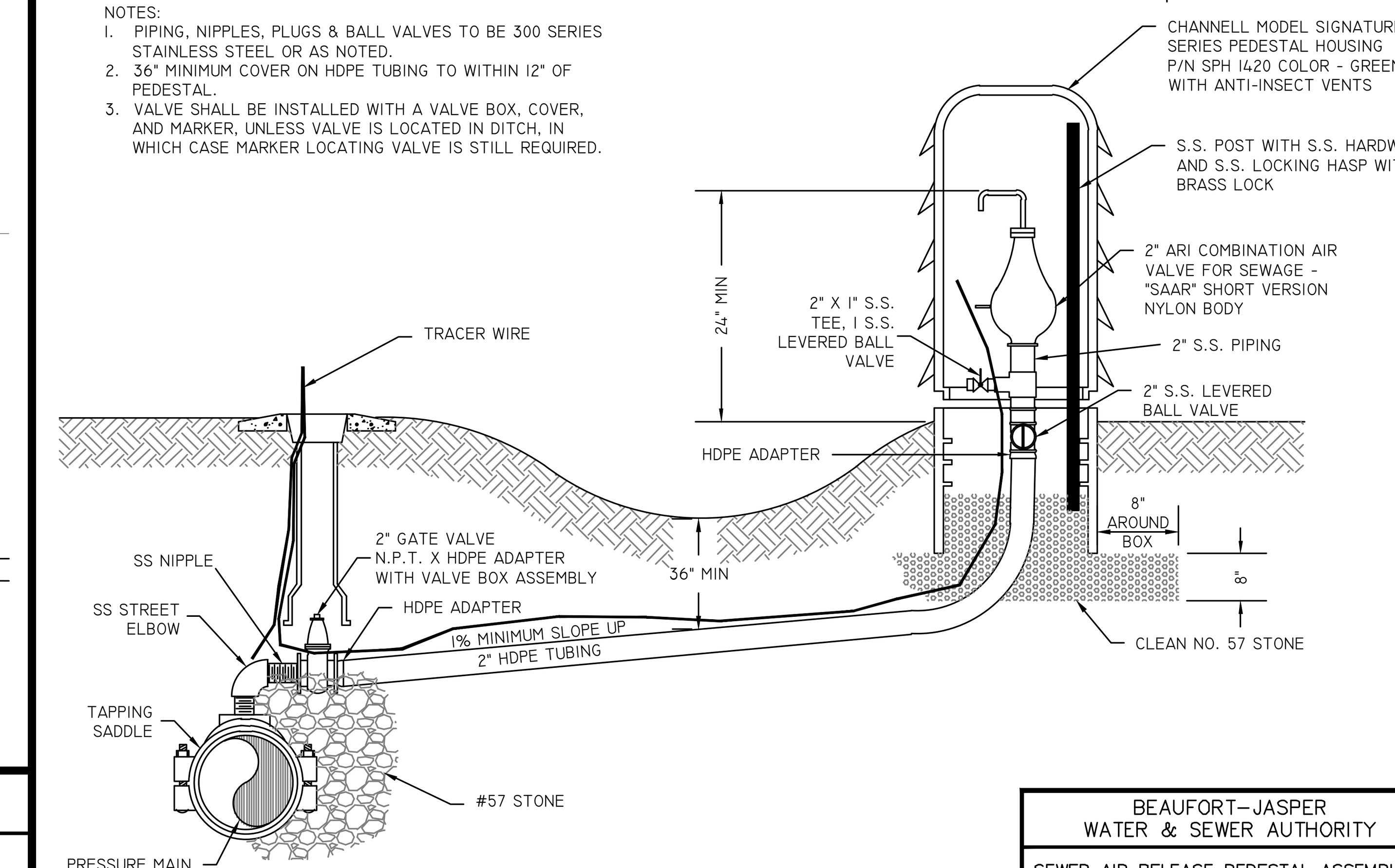
BJWSA OWNERSHIP HOMEOWNER OWNERSHIP

BEAUFORT-JASPER WATER & SEWER AUTHORITY		
SEWER SERVICE, SINGLE		
DATE: 07/01/09	DRAWN BY: BMC	DRAWING #: S-11
SCALE: N.T.S	APPROVED BY: ERS	

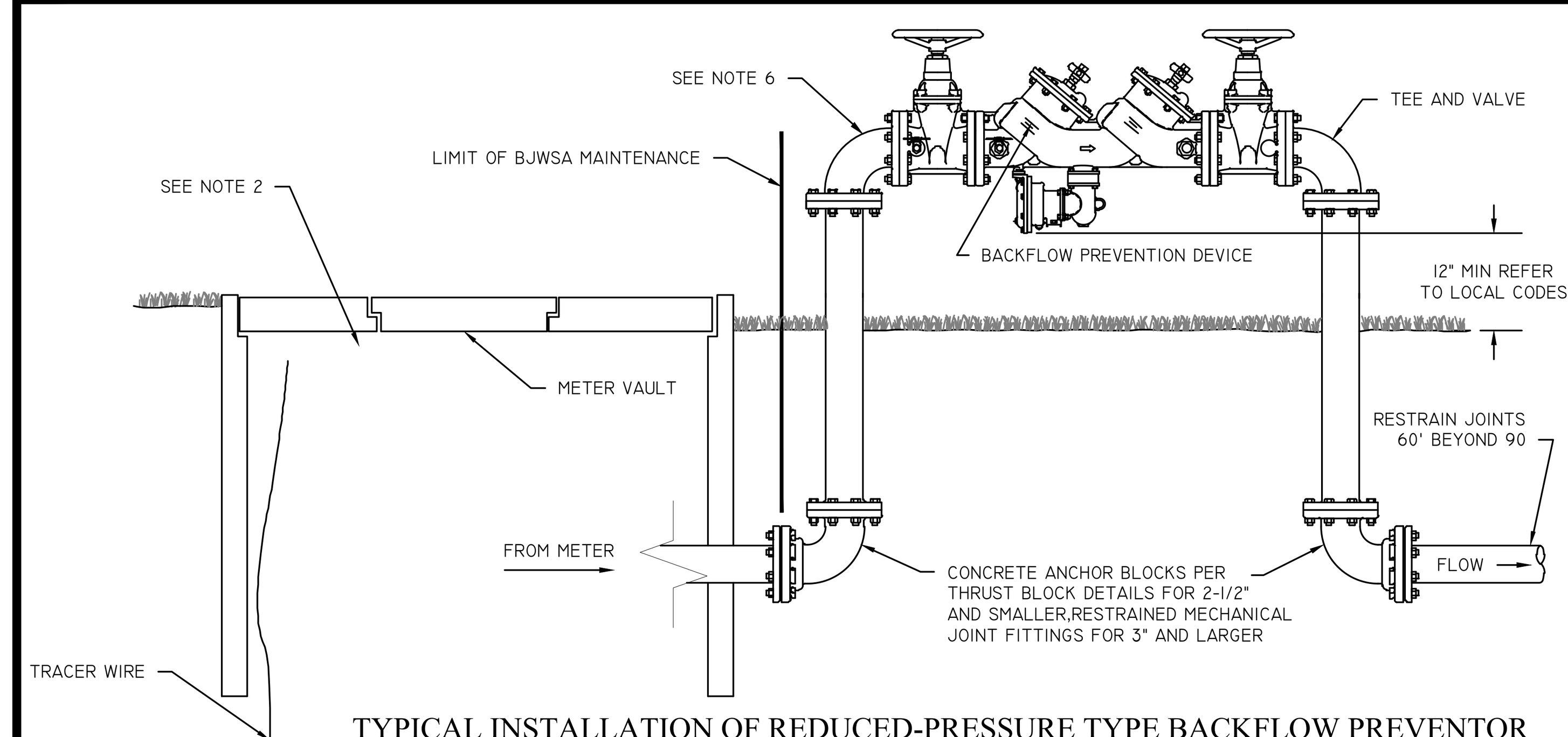


BEAUFORT - JASPER WATER & SEWER AUTHORITY		
2" FORCE MAIN FLUSHING STATION		
DATE: 07/01/17	DRAWN BY: TA	DRAWING #: S-22
SCALE: N.T.S.	APPROVED BY: ERS	

NOTES:
1. PIPING, NIPPLES, PLUGS & BALL VALVES TO BE 300 SERIES STAINLESS STEEL OR AS NOTED.
2. 36" MINIMUM COVER ON HDPE TUBING TO WITHIN 12" OF PEDESTAL.
3. VALVE SHALL BE INSTALLED WITH A VALVE BOX, COVER, AND MARKER, UNLESS VALVE IS LOCATED IN DITCH, IN WHICH CASE MARKER LOCATING VALVE IS STILL REQUIRED.



BEAUFORT-JASPER WATER & SEWER AUTHORITY		
SEWER AIR RELEASE PEDESTAL ASSEMBLY		
DATE: 07/01/09	DRAWN BY: BMC	DRAWING #: S-25
SCALE: N.T.S	APPROVED BY: ERS	

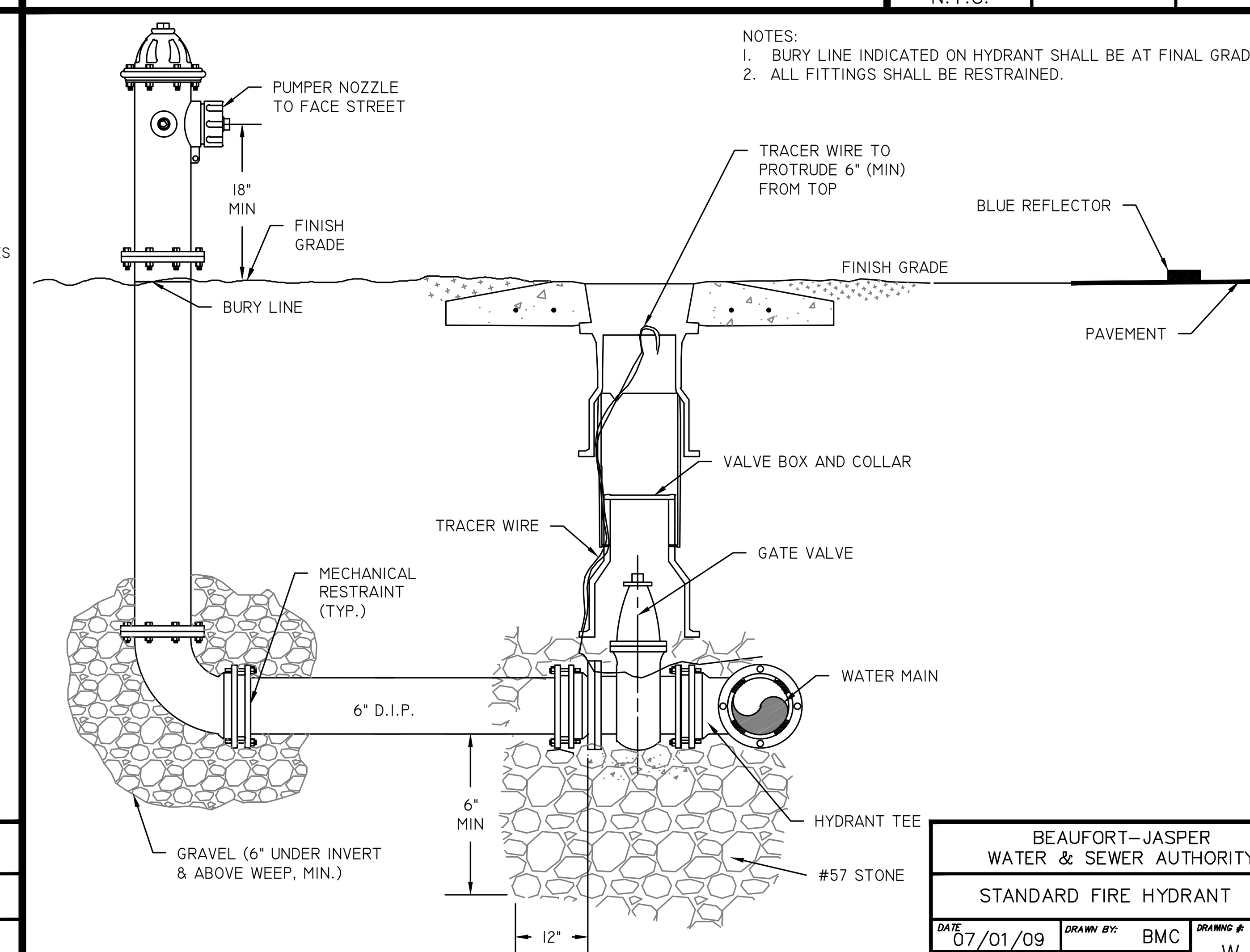


TYPICAL INSTALLATION OF REDUCED-PRESSURE TYPE BACKFLOW PREVENTOR

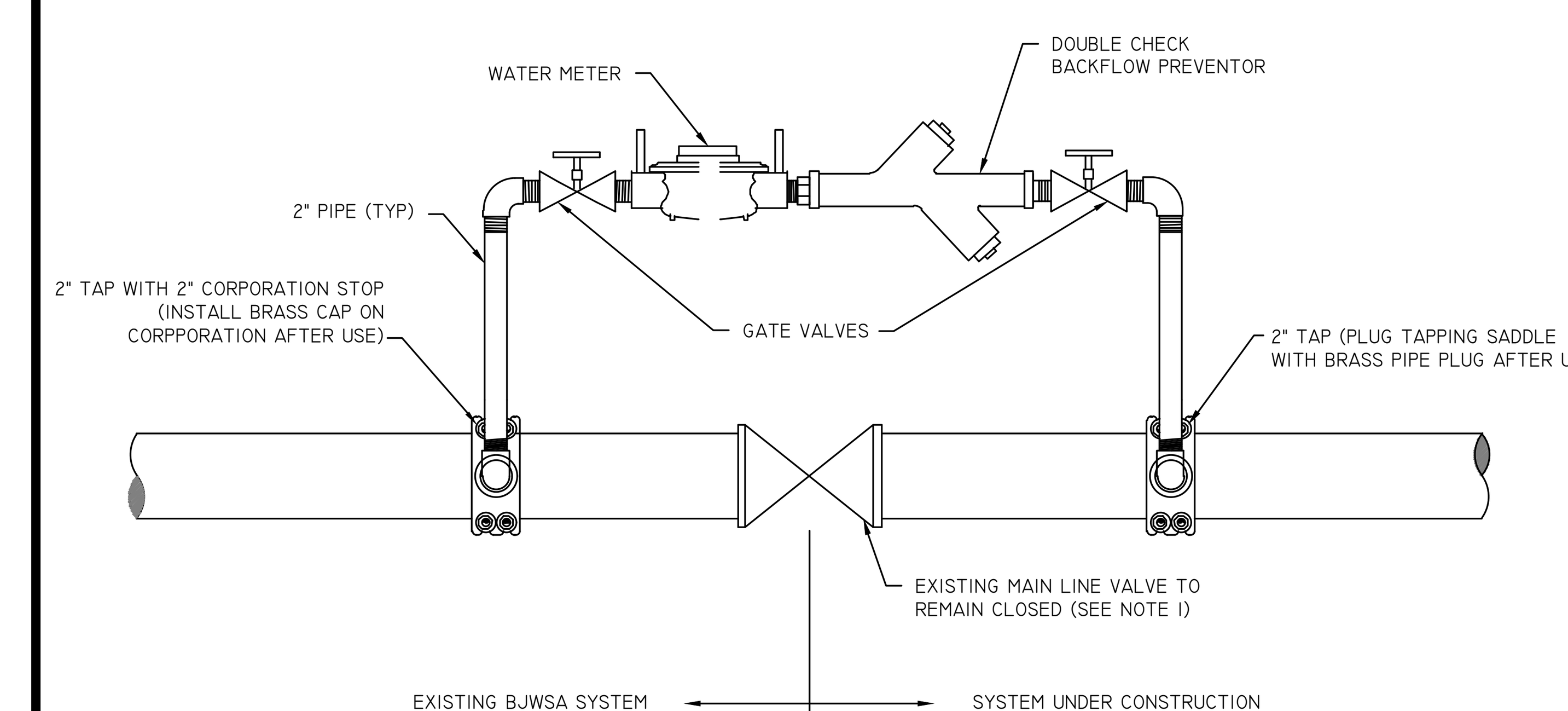
NOTES:
1. REDUCED-PRESSURE BACKFLOW PREVENTION DEVICES SHALL BE REQUIRED FOR ANY SERVICE WHERE TOXIC MATERIALS ARE USED OR WHERE POSITIVE PROTECTION FOR THE PUBLIC WATER SUPPLY IS REQUIRED. TYPICAL APPLICATIONS INCLUDE: HOSPITALS, MEDICAL & DENTAL LABS, MORTUARIES, INDUSTRIAL PLANTS, DRY CLEANERS, IRRIGATION SYSTEMS, OR AS DETERMINED BY BJWSA.
2. SEE SPECIFIC METER DETAIL FOR MORE INFORMAION.
3. BACKFLOW PREVENTION DEVICES SHALL BE INSTALLED ADJACENT TO AND ON PROPERTY SIDE OF SIDEWALK WHERE APPLICABLE. WHERE NO SIDEWALKS EXISTS, THE ASSEMBLY SHALL BE INSTALLED BEFORE ANY BRANCH AND AS CLOSE AS POSSIBLE TO THE WATER METER LOCATION. FINAL LOCATION TO BE APPROVED BY BJWSA PRIOR TO INSTALLATION.
4. SCREENING AND LANDSCAPING PLACES AROUND DEVICE SHALL ALLOW FOR ACCESS BY BJWSA PERSONNEL.
5. FREEZE PROTECTION IS THE OWNERS RESPOSIBILTY .
6. PIPING AND FITTINGS THROUGH 2 1/2" SHALL BE SCHD 40 GALVANIZED STEEL. PIPING AND FITTINGS 3" AND LARGER SHALL BE FLANGED DUCTILE IRON.
7. REFER TO SCDHEC APPROVED LIST OF BACKFLOW PREVENTION DEVICES.
8. DUAL CHECK VALVES MAY BE INSTALLED IN UNDERGROUND VAULT (PRIOR APPROVAL BY BJWSA REQUIRED).

BEAUFORT-JASPER WATER & SEWER AUTHORITY		
BACKFLOW PREVENTION DETAIL		
DATE: 07/01/09	DRAWN BY: BMC	DRAWING #: W-01
SCALE: N.T.S	APPROVED BY: ERS	

NOTES:
1. BURY LINE INDICATED ON HYDRANT SHALL BE AT FINAL GRADE.
2. ALL FITTINGS SHALL BE RESTRAINED.

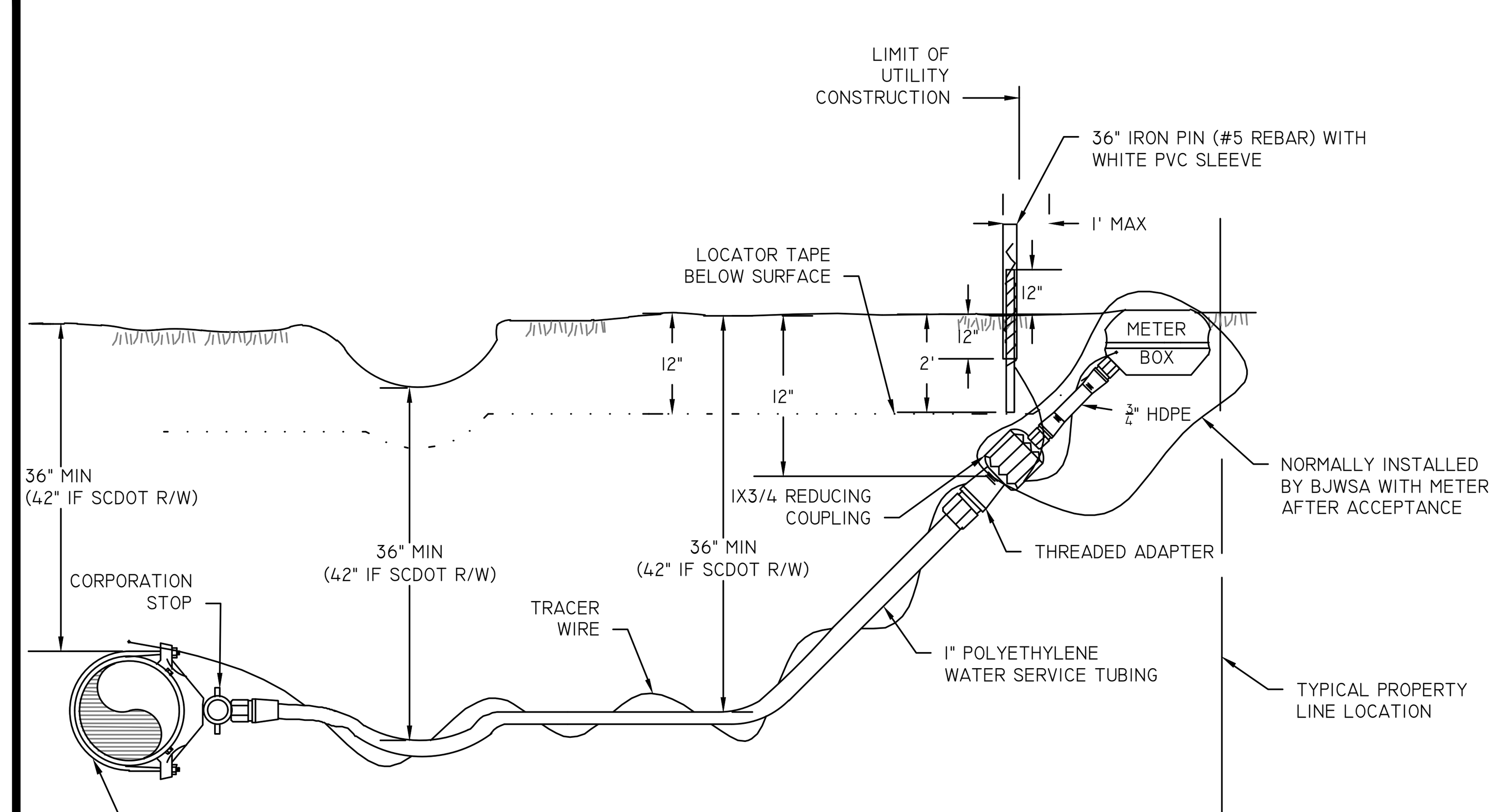


BEAUFORT-JASPER WATER & SEWER AUTHORITY		
STANDARD FIRE HYDRANT		
DATE: 07/01/09	DRAWN BY: BMC	DRAWING #: W-03
SCALE: N.T.S	APPROVED BY: ERS	

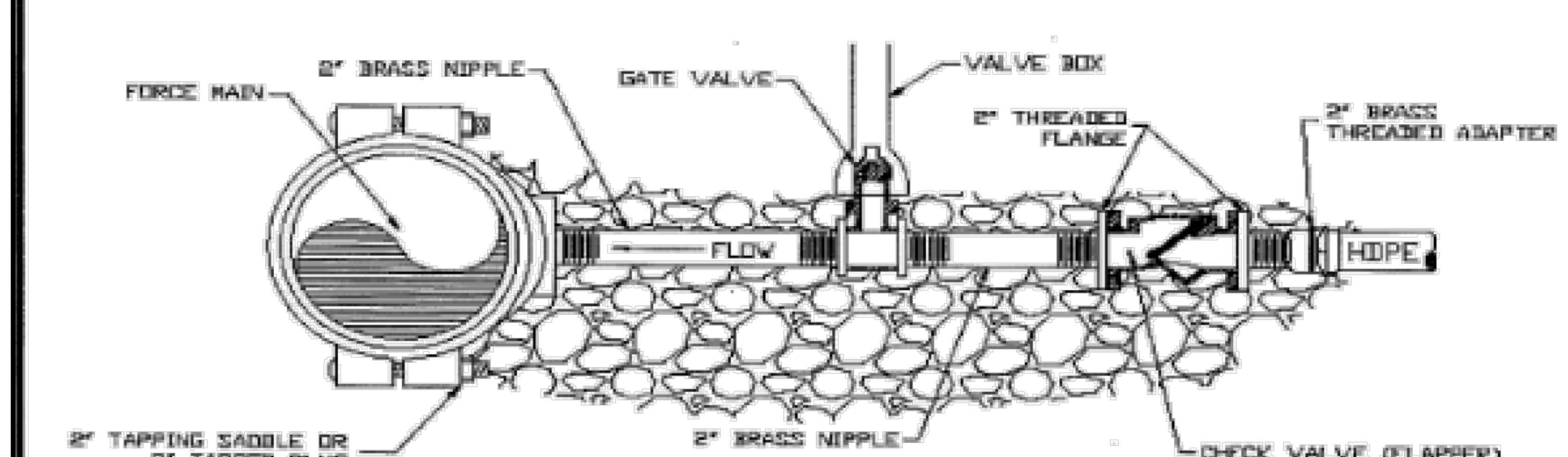


NOTES:
1. MAIN LINE VALVE SHALL REMAIN CLOSED AT ALL TIMES UNTIL PERMIT TO OPERATE IS ISSUED BY SC DHEC. MAINLINE VALVE SHALL ONLY BE OPERATED BY BJWSA PERSONNEL. VIOLATION OF THIS POLICY IS PUNISHABLE BY A FINE OF NOT LESS THAN $500 PLUS ESTIMATED WATER USAGE AND POSSIBLE CRIMINAL PROSECUTION.
2. ALL WATERLINE EXTENSIONS MUST CONTAIN A JUMPER CONNECTION FOR FILLING/CHLORNIATION REQUIREMENTS.
3. METER AND BACKFLOW ASSEMBLY MUST BE OBTAINED FROM BJWSA.
4. TAPPING SADDLES AND CORPPRATION STOPS SHALL COMPLY WITH BJWSA SPECIFICATIONS.
5. ALL TAPS ON MAINLINE SHALL BE HORIZONTAL.

BEAUFORT-JASPER WATER & SEWER AUTHORITY		
JUMPER CONNECTION DETAIL		
DATE: 07/01/09	DRAWN BY: BMC	DRAWING #: W-05
SCALE: N.T.S	APPROVED BY: ERS	



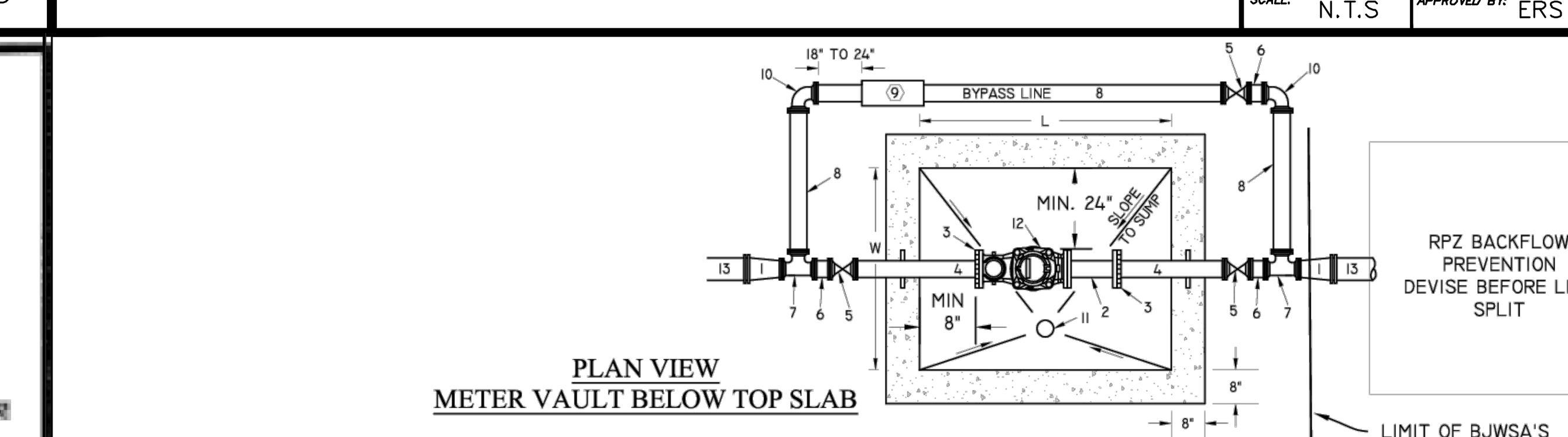
BEAUFORT-JASPER WATER & SEWER AUTHORITY		
WATER SERVICE PROFILE		
DATE: 07/01/09	DRAWN BY: BMC	DRAWING #: W-09
SCALE: N.T.S	APPROVED BY: ERS	



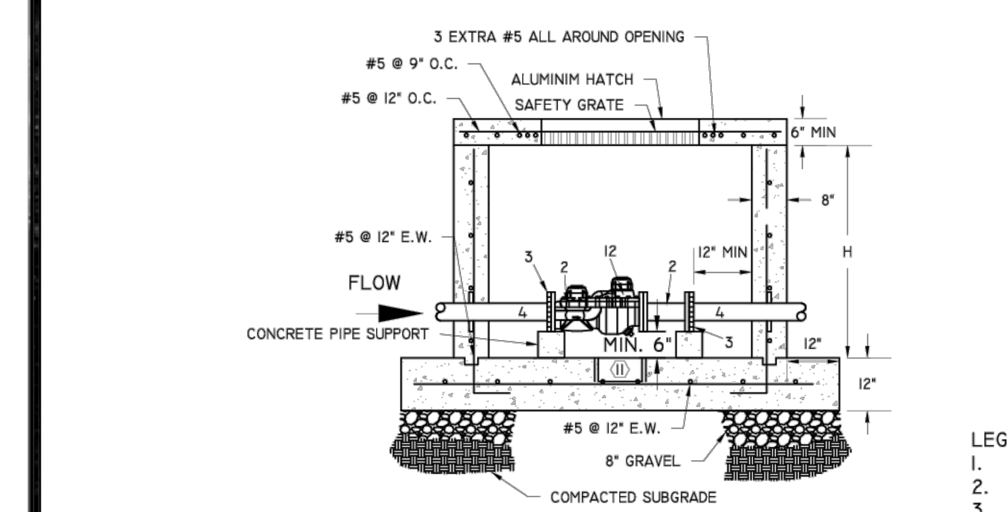
NOTES:

1. SUPPORT VALVE ASSEMBLY WITH #57 STONE. (STONE TO EXTEND MINIMUM OF 6" UNDER MAIN)

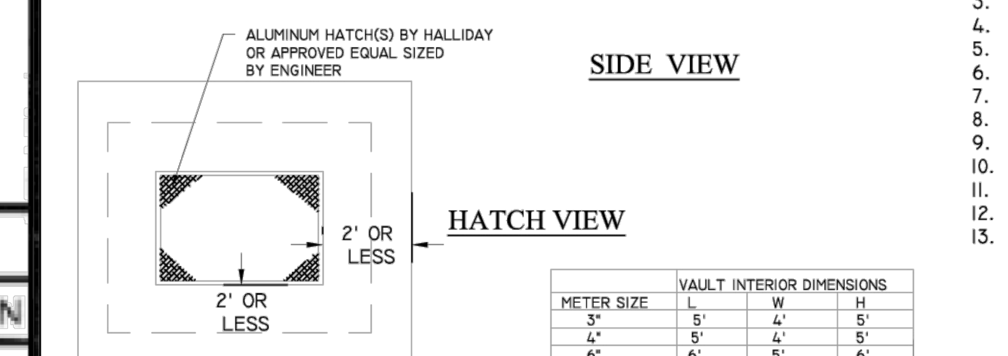
BEAUFORT-JASPER WATER & SEWER AUTHORITY		
2" CONNECTION TO FORCE MAIN		
DATE: 5/25/2012	DRAWN BY: TIA	DRAWING #: AS-2
SCALE: N.T.S.	APPROVED BY:	



PLAN VIEW
METER VAULT BELOW TOP SLAB



SIDE VIEW



HATCH VIEW

NOTES:
1. THIS DETAIL IS TO BE USED FOR 3", 4", 6" & 8" METERS ONLY.
2. HATCHES IN POSSIBLE TRAFFIC AREAS SHALL BE H20 TRAFFIC RATED.
3. VAULT INTERIOR DIMENSIONS SHOWN SHALL BE THE ACCEPTABLE MINIMUM.
4. ALL PIPING INSIDE METER BOX SHALL BE DIP.
5. HATCHES ARE TO BE EQUIPPED WITH A PAD-LOCKABLE LOCKING MECHANISM.
6. TRACER WIRE TO BE PRESENT AT VALVES AND AROUND BYPASS LINE.

LEGEND
1. MJ REDUCER LARGER BELL X SMALLER SPIGOT
2. DIP SPOOL PIECE FLG X FLG
3. FLANGE ADAPTER
4. WALL PIPE WITH INTEGRAL WATER STOP PE X PE
5. GATE VALVE MJ X MJ, VALVE BOX, COLLAR, AND MARKER
6. 18" SPOOL PIECE PE X PE
7. MJ TEE
8. DUCTILE IRON PIPE PE X PE
9. DIP SLEEVE
10. MJ 90° BEND
11. 12" Ø SUMP
12. COMPOUND METER
13. WATER MAIN

BEAUFORT - JASPER WATER & SEWER AUTHORITY		
3", 4", 6", & 8" METER DETAIL		
DATE: 07/04/17	DRAWN BY: TA	DRAWING #: W-01.1
SCALE: N.T.S.	APPROVED BY: ERS	

SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER No. 22816 PAUL R. MOORE 06/17/24

SOUTH CAROLINA CERTIFICATE OF AUTHORIZATION WARD EDWARDS, INC. No. C00152

No.	Description	Date
1		
2		
3		
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Plan Revisions

Ward Edwards ENGINEERING
119C Palmetto Way
P.O. Box 381, Bluffton,
South Carolina 29910
(843) 837-5250
www.WardEdwards.com

Buckwalter Parkway Healthcare
Town of Bluffton, South Carolina

Prepared for
e4h Environments for Health Architecture

Utility Details

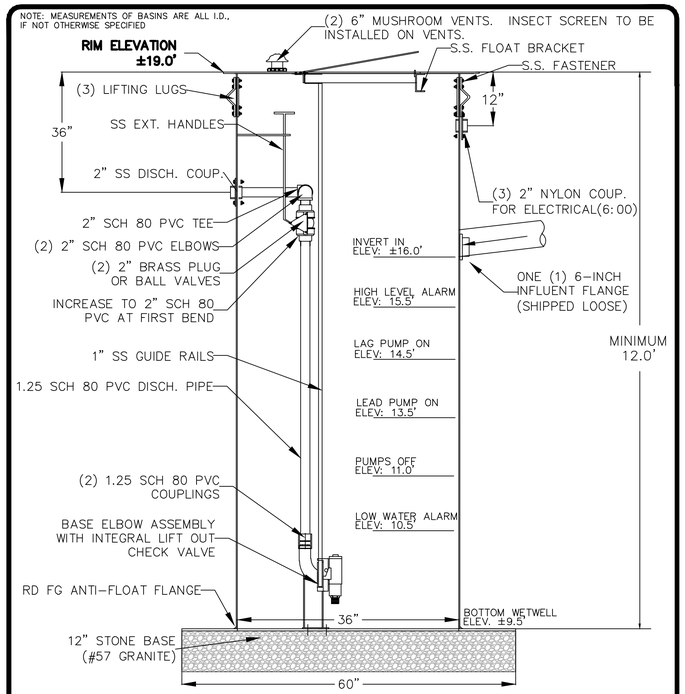
Vert. Datum:	NAVD88
Horiz. Datum:	NAD83

Project #:	230640
Date:	06/17/24
Designed by:	LYJ
Checked by:	CPB

Not to Scale

C703

Permit Set - NOT FOR CONSTRUCTION



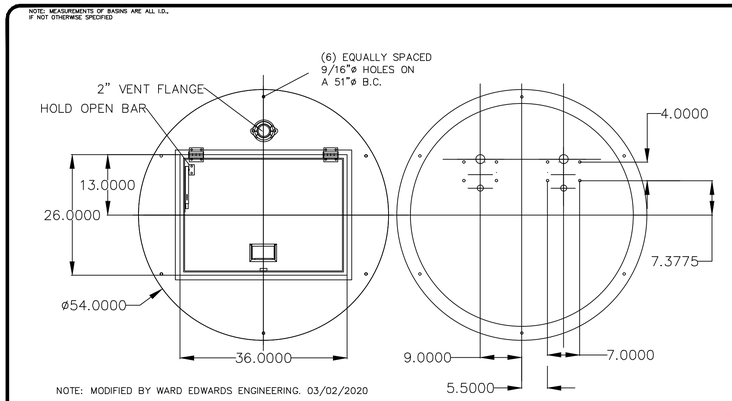
NOTE: DETAIL MODIFIED BY WARD EDWARD ENGINEERING. 03/02/2020

TO CUSTOMER:
EXAMINE THIS DRAWING CAREFULLY. VERIFY ALL DIMENSIONS, LOCATIONS, AND ELEVATIONS FOR ACCURACY. SIGN AND DATE AT LINE. ANY MODIFICATIONS OR CHANGES TO THIS DRAWING OR FINISHED PRODUCT, AFTER IT HAS BEEN SIGNED, MAY RESULT IN ADDITIONAL CHARGES AND SHIPPING DELAYS. NO JOB WILL BE STARTED UNTIL CONFIRMATION THROUGH SIGNATURE.

(REQUESTED SIGNATURE & DATE PER ABOVE)

CONFIRMATION THROUGH SIGNATURE RELEASES ORDER FOR PRODUCTION

Carolina Pumpworks Beaufort, SC 29902 (843) 522-9600	---	DRAWN BY: CAROLINA PUMPWORKS		
BASIN DESCRIPTION: 36 X 132	PIPING: 1.5" Schedule 80 PVC Piping	DRAWN & CHECKED BY: R. Pruit	DATE: 09/07/10	DISCONNECT DESIGN: -
COVER DESCRIPTION: 48" ALUMINUM HDC	PUMP FOR MAINTENANCE BUILDING	Revision 0	SHEET 1 OF 2	PUMP MODEL NUMBER: SULZER PIRANHA 90



NOTE: MODIFIED BY WARD EDWARDS ENGINEERING. 03/02/2020

TO CUSTOMER:
EXAMINE THIS DRAWNG CAREFULLY. VERIFY ALL DIMENSIONS, LOCATIONS, AND ELEVATIONS FOR ACCURACY. SIGN AND DATE AT LINE. ANY MODIFICATIONS OR CHANGES TO THIS DRAWING OR FINISHED PRODUCT, AFTER IT HAS BEEN SIGNED, MAY RESULT IN ADDITIONAL CHARGES AND SHIPPING DELAYS. NO JOB WILL BE STARTED UNTIL CONFIRMATION THROUGH SIGNATURE.

(REQUESTED SIGNATURE & DATE PER ABOVE)

CONFIRMATION THROUGH SIGNATURE RELEASES ORDER FOR PRODUCTION

Carolina Pumpworks Beaufort, SC 29902 (843) 522-9600	Notes: ---	DRAWN BY: CAROLINA PUMPWORKS		
DESCRIPTION: 48 X 84	Piping: 1.5" Sch 80 PVC Piping	DRAWN & CHECKED BY: R. Pruit	DATE: 09/07/10	Revision: 0 — DISCONNECT DESIGN: Keen KL Series
COVER DESCRIPTION: 48" ALUMINUM W/ HINGED DOOR		PART NO: N/A	SHEET 2 OF 2	PUMP MODEL NUMBER: Keen KG2

DUPLEX SEWAGE GRINDER LIFT STATIONS TO INCLUDE THE FOLLOWING:

1. TWO SULZER 2.3-HORSEPOWER, 3390-RPM, 230-VOLT, SINGLE-PHASE, 60-HERTZ SUBMERSIBLE SEWAGE GRINDER PUMP. THE PUMP INCLUDES THE FOLLOWING: CAST IRON CONSTRUCTION, DUCTILE IRON RECESSED VORTEX STYLE IMPELLER, STAINLESS STEEL SHAFT, UPPER AND LOWER SILICON CARBIDE MECHANICAL SHAFT SEALS, SEAL FAILURE SENSOR, MOTOR WINDING THERMAL SENSOR, STAINLESS STEEL FASTENERS, STAINLESS STEEL LIFTING BAIL, STAINLESS STEEL SHREDDING RING AND GRINDING IMPELLER AND 40-FOOT LONG POWER/CONTROL CABLES.
2. ONE 36" DIAMETER BY MINIMUM 138" (11.5-FOOT) DEEP DUPLEX FIBREGLASS BASIN SYSTEM INCLUDING THE FOLLOWING: 60"DIAMETER ANTI-FLOAT FLANGE, LIFTING LUGS, ALUMINIUM COVER WITH HINGED PAD-LOCKABLE ACCESS HATCH, HATCH HOLD OPEN ARM AND 2-INCH MUSHROOM VENT, STAINLESS STEEL FLOAT MOUNTING BRACKET, TWO (2) PUMP GUIDE SYSTEMS WITH CAST IRON BASE ELBOWS, STAINLESS STEEL GUIDE RAILS AND STAINLESS STEEL GUIDE RAIL BRACKETS, 1.5"SCHEDULE 80 PVC DISCHARGE PIPING WITH A COMMON 2"STAINLESS STEEL DISCHARGE HUB LOCATED 36" DOWN FROM THE TOP OF THE BASIN, 2"BALL CHECK VALVES AND 2"GATE VALVES WITH STAINLESS STEEL EXTENSION HANDLES AND BRACKETS AND ONE (1) 6" ADAPTA-FLEX INFLUENT GROMMET SHIPPED LOOSE FOR ACCURATE FIELD LOCATION..
3. TWO STAINLESS STEEL PUMP LIFTING CHAIN AND SHACKLE KITS
4. DUPLEX PUMP CONTROL PANEL SIZED FOR 2-HORSEPOWER, 208-VOLT, SINGLE PHASE, 60-HERTZ SERVICE. THE CONTROL PANEL IS HOUSED INSIDE A NEMA 4X FIBERGLASS ENCLOSURE WITH DEAD FRONT, PAD-LOCKABLE ENTRY LATCH, INNER DOOR, POWER AND GROUND TERMINAL BLOCKS, PUMP CIRCUIT BREAKERS, CONTROL CIRCUIT BREAKERS, IEC RATED MOTOR STARTERS WITH ADJUSTABLE OVERLOADS, PHASE MONITOR, LIGHTENING/SURGE PROTECTION, ELAPSED TIME METERS, PUMP RUN LIGHTS, PUMP FAULT LIGHTS, DUPLEX FLOAT SWITCH ACTIVATED PUMP CONTROLLER WITH ALTERNATOR AND AUTO/1-2/2-1 SEQUENCE SELECTOR SWITCH, HAND-OFF-AUTO SWITCHES, HIGH WATER ALARM, FLASHING ALARM LIGHT MOUNTED ON TOP OF THE CONTROL PANEL AND AN AUDIBLE ALARM BUZZER WITH EXTERNAL PUSH TO SILENCE BUTTON.
5. FIVE FLOATS WITH 40-FOOT CORDS AND CORD WEIGHTS

SOUTH CAROLINA PROFESSIONAL ENGINEER No. 22818 DATE 06/17/24 PAUL C. MOORE

SOUTH CAROLINA WARD EDWARDS, INC. No. C00152 CERTIFICATE OF AUTHORIZATION

No.	Description	Date
8		
7		
6		
5		
4		
3		
2		
1	Plan Revisions	

Ward Edwards ENGINEERING
119C Palmetto Way
P.O. Box 381, Bluffton, South Carolina 29910
(843) 837-5250
www.WardEdwards.com

Buckwalter Parkway Healthcare
Town of Bluffton, South Carolina

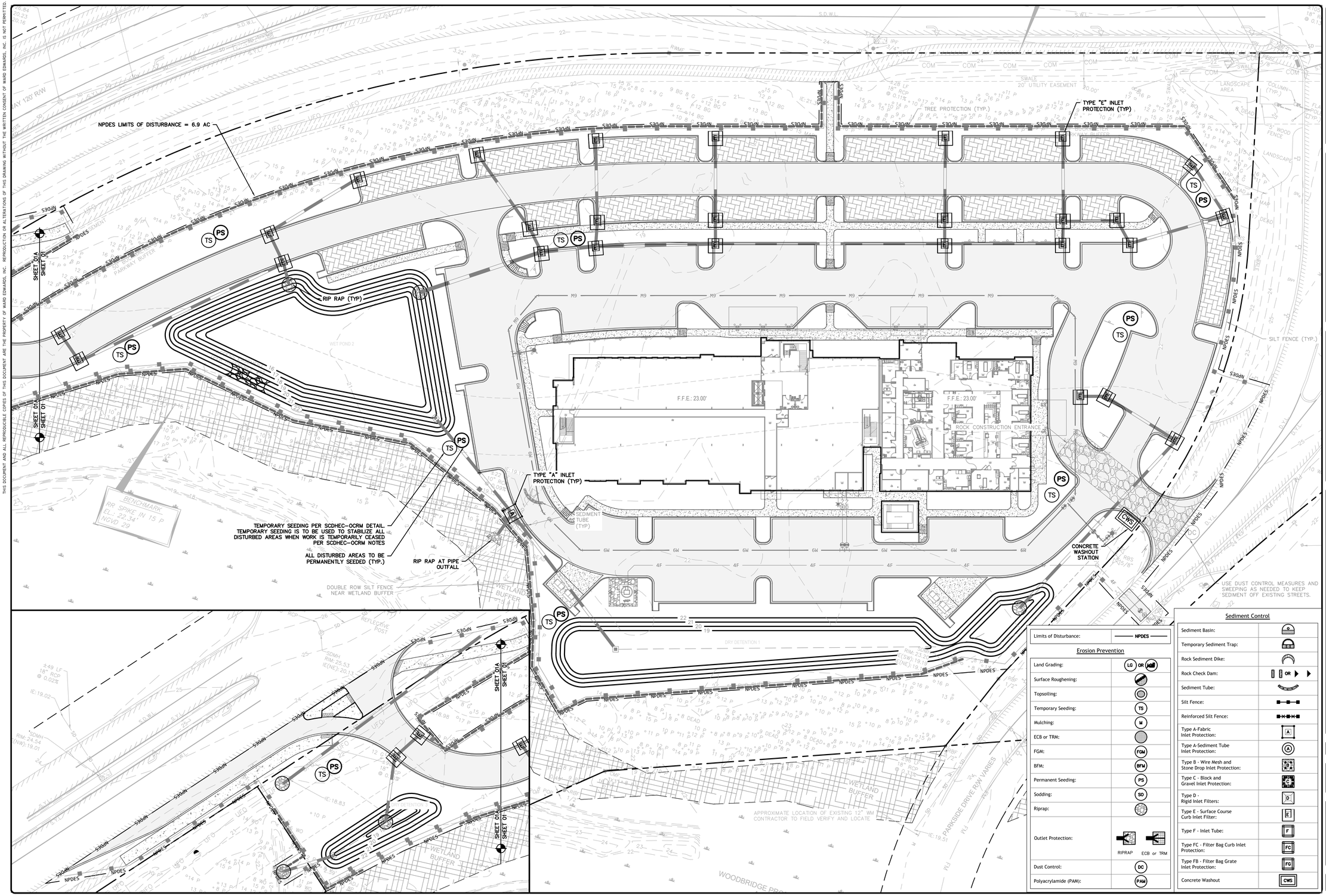
Prepared for
e4h Environments for Health Architecture

Utility Details

Vert. Datum:	NAVD88
Horiz. Datum:	NAD83
Project #:	230640
Date:	06/17/24
Designed by:	LYJ
Checked by:	CPB

Not to Scale

C704



Limits of Disturbance: NPDES

Erosion Prevention

Land Grading:	LG OR AGM
Surface Roughening:	SR
Topsoiling:	TS
Temporary Seeding:	TS
Mulching:	M
ECB or TRM:	
FGM:	FGM
BFM:	BFM
Permanent Seeding:	PS
Sodding:	SO
Riprap:	
Outlet Protection:	RIPRAP ECB or TRM
Dust Control:	DC
Polyacrylamide (PAM):	PAM

Sediment Control

Sediment Basin:	
Temporary Sediment Trap:	
Rock Sediment Dike:	
Rock Check Dam:	OR
Sediment Tube:	
Silt Fence:	
Reinforced Silt Fence:	
Type A-Fabric Inlet Protection:	A
Type A-Sediment Tube Inlet Protection:	A
Type B - Wire Mesh and Stone Drop Inlet Protection:	B
Type C - Block and Gravel Inlet Protection:	C
Type D - Rigid Inlet Filters:	D
Type E - Surface Course Curb Inlet Filter:	E
Type F - Inlet Tube:	F
Type FC - Filter Bag Curb Inlet Protection:	FC
Type FB - Filter Bag Grate Inlet Protection:	FG
Concrete Washout	CWS

PROFESSIONAL ENGINEER
LICENSE No. 22816
06/17/24
PAUL R. MOORE
SOUTH CAROLINA
WARD EDWARDS, INC.
No. C00152
CERTIFICATE OF AUTHORIZATION

No.	Description	Date
1	Plan Revisions	
2		
3		
4		
5		
6		
7		
8		

Ward Edwards ENGINEERING
119C Palmetto Way
P.O. Box 381, Bluffton, South Carolina 29910
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Buckwalter Parkway Healthcare

Town of Bluffton, South Carolina

Prepared for
e4h Environments for Health Architecture

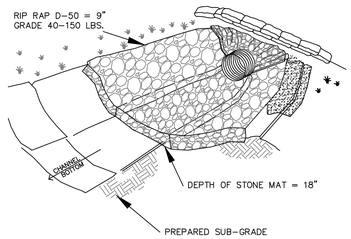
Intermediate & Final Erosion Control Plan

Vert. Datum:	NAVD88
Horiz. Datum:	NAD83
Project #:	230640
Date:	06/17/24
Designed by:	LYJ
Checked by:	CPB

0 30 60
Scale:1"= 30' Feet

C801

Permit Set - NOT FOR CONSTRUCTION



NOTES:

1. PLACE ALL RIP RAP ON 8 OUNCE NON-WOVEN FILTER CLOTH.
2. STAKING OF FILTER CLOTH PER MANUFACTURER'S SPECIFICATIONS.
3. LENGTH OF OUTLET STABILIZATION = 8 TIMES PIPE DIA.
   TOP WIDTH OF OUTLET STABILIZATION = 3 TIMES PIPE DIA.
   BOTTOM WIDTH OF OUTLET STABILIZATION = 6 TIMES PIPE DIA.

RIP RAP OUTLET STABILIZATION DETAIL

DETAIL #02370-009

TEMPORARY SEEDING – COASTAL

SPECIES	LBS/AC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
SANDY, DROUGHTY SITES													
BROWNTOP MILLET	40 LBS/AC			■	■	■	■	■	■				
RYE, GRAIN	56 LBS/AC	■	■	■						■	■	■	■
RYEGRASS	50 LBS/AC	■	■	■						■	■	■	■
WELL DRAINED, CLAYEY/LOAMEY SITES													
BROWNTOP MILLET OR JAPANESE MILLET	40 LBS/AC			■	■	■	■	■	■				
RYE, GRAIN OR OATS	56 LBS/AC 75 LBS/AC	■	■	■						■	■	■	■
RYEGRASS	50 LBS/AC	■	■	■						■	■	■	■

TS TEMPORARY SEEDING - COASTAL

DETAIL 02370-011

TYPE A – FILTER FABRIC REQUIREMENTS

1. Silt fence must be composed of woven geotextile filter fabric that consists of the following requirements:
   - Composed of fibers consisting of long chain synthetic polymers of at least 85% by weight of polyolefins, polyesters, or polyamides that are formed into a network such that the filaments or yarns retain dimensional stability relative to each other;
   - Free of any treatment or coating which might adversely alter its physical properties after installation;
   - Free of any defects or flaws that significantly affect its physical and/or filtering properties; and,
   - Have a minimum width of 36-inches.
2. Use only fabric appearing on SC DOT's Qualified Products Listing (QPL), Approval Sheet #34, meeting the requirements of the most current edition of the SC DOT Standard Specifications for Highway Construction.
3. 12-inches of the fabric should be placed within excavated trench and toed in when the trench is backfilled.
4. Filter Fabric shall be purchased in continuous rolls and cut to the length of the barrier to avoid joints.
5. Filter Fabric shall be installed at a minimum of 24-inches above the ground.

TYPE A – POST REQUIREMENTS

1. Silt Fence posts must be 48-inch long steel posts that meet, at a minimum, the following physical characteristics.
   - Composed of a high strength steel with a minimum yield strength of 50,000 psi.
   - Include a standard "T" section with a nominal face width of 1.38-inches and a nominal "T" length of 1.48-inches.
   - Weigh 1.25 pounds per foot (± 8%)
2. Posts shall be equipped with projections to aid in fastening of filter fabric.
3. Install posts to a minimum of 24-inches. A minimum height of 1- to 2- inches above the fabric shall be maintained, and a maximum height of 3 feet shall be maintained above the ground.
4. Post spacing shall be at a maximum of 3-feet on center.

TYPE A – INSPECTION & MAINTENANCE

1. The key to functional inlet protection is weekly inspections, routine maintenance, and regular sediment removal.
2. Regular inspections of inlet protection shall be conducted once every calendar week and, as recommended, within 24-hours after each rainfall even that produces 1/2-inch or more of precipitation.
3. Attention to sediment accumulations along the filter fabric is extremely important. Accumulated sediment should be continually monitored and removed when necessary.
4. Remove accumulated sediment when it reaches 1/3 the height of the filter fabric. When a sump is installed in front of the fabric, sediment should be removed when it fills approximately 1/3 the depth of the sump.
5. Removed sediment shall be placed in stockpile storage areas or spread thinly across disturbed area. Stabilize the removed sediment after it is relocated.
6. Check for areas where stormwater runoff has eroded a channel beneath the filter fabric, or where the fabric has sagged or collapsed due to runoff overtopping the inlet protection.
7. Check for tears within the filter fabric, areas where fabric has begun to decompose, and for any other circumstance that may render the inlet protection ineffective. Removed damaged fabric and reinstall new filter fabric immediately.
8. Inlet protection structures should be removed after all the disturbed areas are permanently stabilized. Remove all construction material and sediment, and dispose of them properly. Grade the disturbed area to the elevation of the drop inlet structure crest. Stabilize all bare areas immediately.

South Carolina Department of Health and Environmental Control

Type A
FILTER FABIC INLET PROTECTION

STANDARD DRAWING NO. SC-07 PAGE 2 of 2

GENERAL NOTES — FEBRUARY 2014 DATE

TYPE F – INLET TUBES INLET PROTECTION

GENERAL NOTES

1. Inlets tubes should be composed of compacted geotextiles, curled excelsior wood, natural coconut fibers, a hardwood mulch, or a mix of these materials enclosed by a flexible netting material.
2. Inlets tubes should utilize an outer netting that consists of seamless, high-density polyethylene photodegradable materials treated with ultraviolet stabilizers or a seamless, high-density polyethylene non-degradable material. Curled wood excelsior fiber, or natural coconut fiber rolled erosion control products rolled up to create an inlet tube device are not allowed.
3. Do not use straw, straw fiber, straw bales, pine needles, or leaf mulch as fill material within inlet tubes.
4. Weighted inlet tubes must be capable of staying in place without external stabilization measures and may have a weighted inner core or other weighted mechanism to keep them in place.
5. Install weighted tubes lying flat on the ground, with no gaps between the underlying surface and the inlet tube. Do not stack inlet tubes. Do not completely block inlet with tube.
6. Non-weighted inlet tubes require staking or other stabilization methods to keep them safely in place.
7. Overflow or overtopping of inlet tubes must be allowed to flow into inlet unobstructed.
8. To avoid possible flooding, two or three concrete cinder blocks may be placed between the tube and the inlet.

INSPECTION AND MAINTENANCE

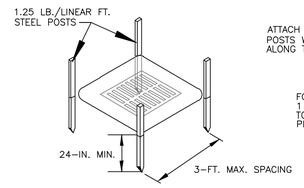
1. The key to functional inlet protection is weekly inspection, routine maintenance, and regular sediment removal.
2. Regular inspections of all inlet protection shall be conducted once every calendar week and, as recommended, within 24-hours after each rainfall event that produces 1/2-inch or more of precipitation.
3. Attention to sediment accumulations in front of the inlet protection is extremely important. Accumulated sediment should be continually monitored and removed when necessary.
4. Remove accumulated sediment when it reaches 1/3 the height of the blocks. If a sump is used, sediment should be removed when it fills approximately 1/3 the depth of the hole.
5. Removed sediment shall be placed in stockpile storage areas or spread thinly across disturbed area. Stabilize the removed sediment after it is relocated.
6. Large debris, trash, and leaves should be removed from in front of tubes when found.
7. Replace inlet tube when damaged or as recommended by manufacturer's specifications.
8. Inlet protection structures should be removed after the disturbed areas are permanently stabilized. Remove all construction material and sediment, and dispose of them properly. Grade the disturbed area to the elevation of the drop inlet structure crest. Stabilize all bare areas immediately.

South Carolina Department of Health and Environmental Control

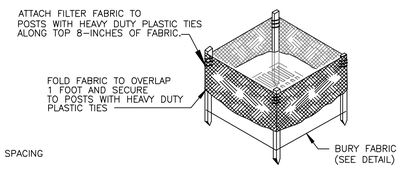
Type F
INLET TUBES

STANDARD DRAWING NO. SC-11 PAGE 2 of 2

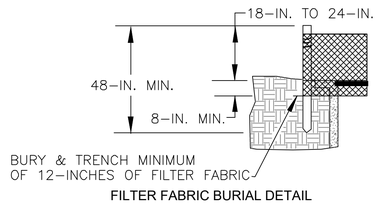
GENERAL NOTES — FEBRUARY 2014 DATE



POST INSTALLATION DETAIL



FILTER FABRIC INSTALLATION DETAIL



FILTER FABRIC BURIAL DETAIL

PLAN SYMBOL

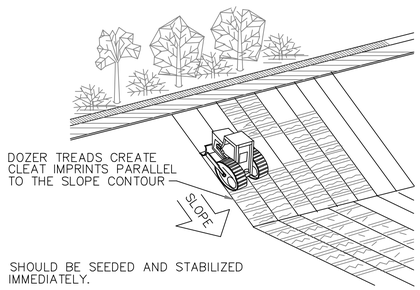
A

South Carolina Department of Health and Environmental Control

Type A
FILTER FABIC INLET PROTECTION

STANDARD DRAWING NO. SC-07 PAGE 1 of 2

NOT TO SCALE — FEBRUARY 2014 DATE



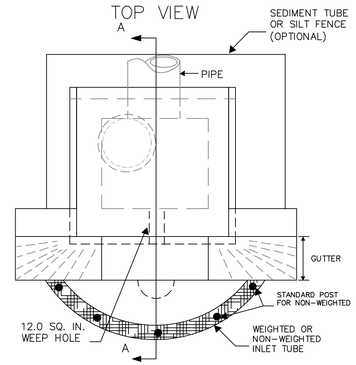
TRACKING

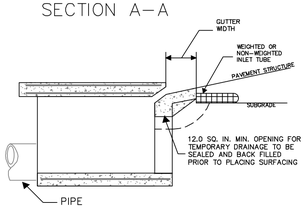
South Carolina Department of Health and Environmental Control

TRACKING

STANDARD DRAWING NO. EC-01 Page 1

APPROVED BY: _____ SCDHEC — AUGUST, 2005 DATE





PLAN SYMBOL

F

South Carolina Department of Health and Environmental Control

Type F
INLET TUBES

STANDARD DRAWING NO. SC-11 PAGE 1 of 2

NOT TO SCALE — FEBRUARY 2014 DATE

PAUL J. MOORE — SOUTH CAROLINA PROFESSIONAL ENGINEER — No. 22816 — 06/17/24

WARD EDWARDS, INC. — No. C00152 — SOUTH CAROLINA CERTIFICATE OF AUTHORIZATION

No.	Description	Date
1	Plan Revisions	
2		
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4		
5		
6		
7		
8		

Ward Edwards
ENGINEERING
119C Palmetto Way
P.O. Box 381, Bluffton, South Carolina 29910
(843) 837-5250
www.WardEdwards.com

Buckwalter Parkway Healthcare
Town of Bluffton, South Carolina

Prepared for
e4h Environments for Health Architecture

Intermediate Erosion Control Details

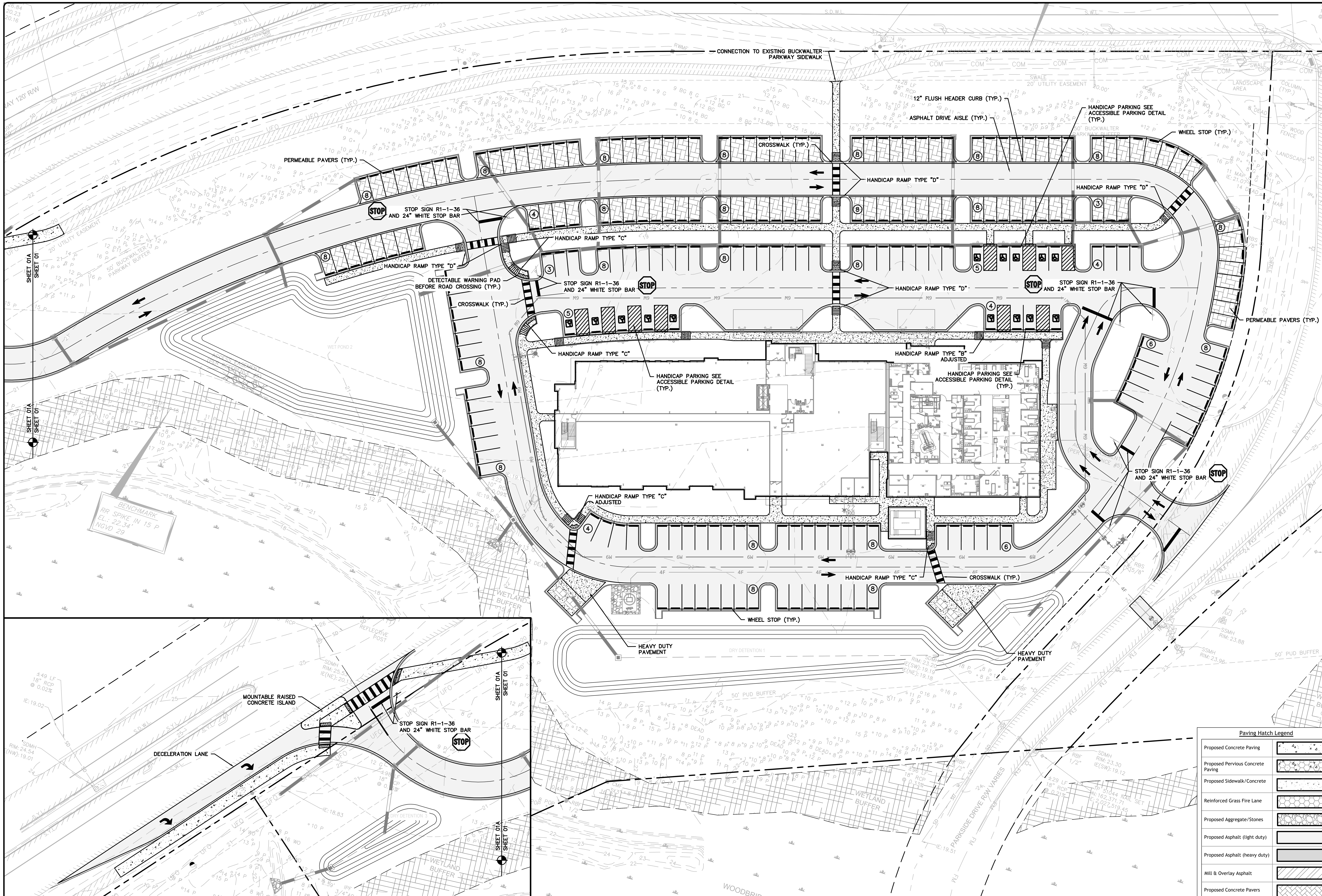
Vert. Datum:	NAVD88
Horiz. Datum:	NAD83
Project #:	230640
Date:	06/17/24
Designed by:	LYJ
Checked by:	CPB

Not to Scale

C802

Attachment 4

Permit Set - NOT FOR CONSTRUCTION



SOUTH CAROLINA PROFESSIONAL ENGINEER No. 22816 PAUL R. MOORE 06/17/24

SOUTH CAROLINA WARD EDWARDS, INC. No. C00152 CERTIFICATE OF AUTHORIZATION

No.	Description	Date
1		
2		
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Plan Revisions

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P.O. Box 381, Bluffton, South Carolina 29910
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Buckwalter Parkway Healthcare

Town of Bluffton, South Carolina

Prepared for
e4h Environments for Health Architecture

Paving Plan

Vert. Datum:	NAVD88
Horiz. Datum:	NAD83

Project #:	230640
Date:	06/17/24
Designed by:	LYJ
Checked by:	CPB

N
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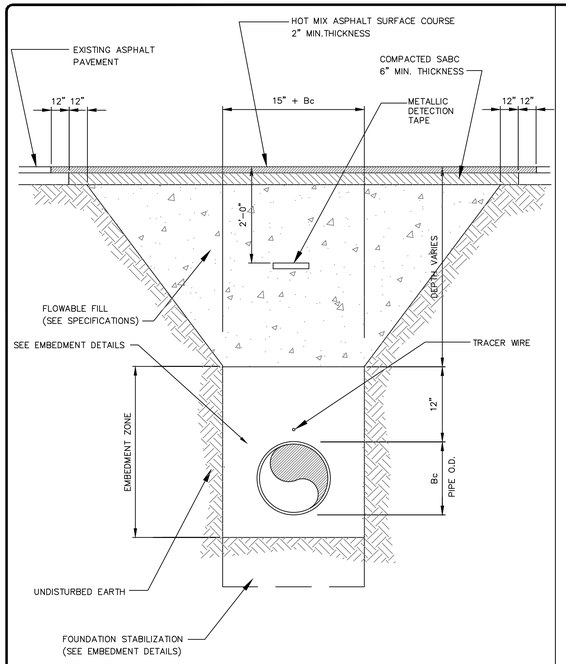
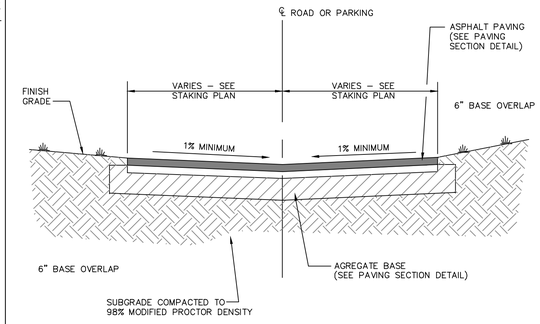
Scale:1"= 30 ' Feet

C901



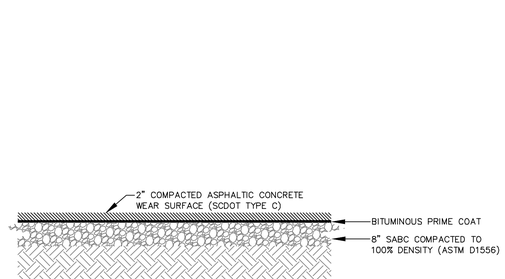
TRENCH DETAIL- UNDER PAVED ROADWAY

DETAIL 02630-043



INVERTED CROWN ASPHALT PAVING SECTION

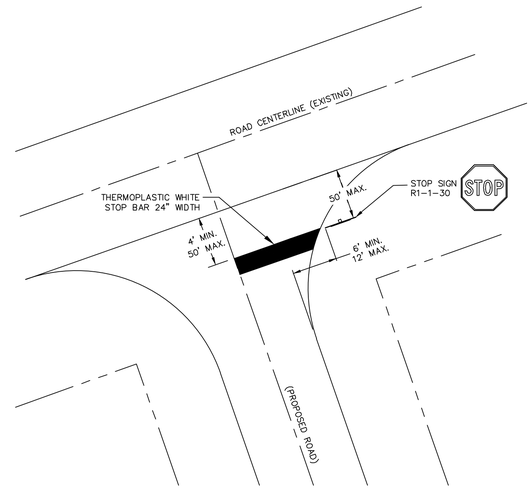
DETAIL 02740-002



LIGHT DUTY ASPHALT PAVING SECTION

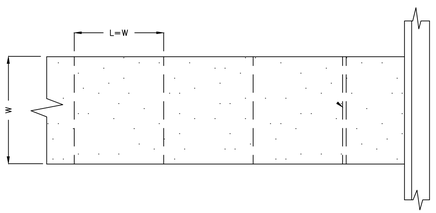
TYPICAL PAVING SECTIONS

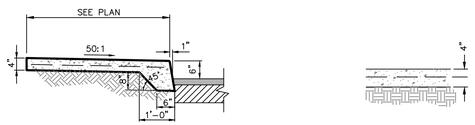
DETAIL 02740-016



TYPICAL STOP SIGN & STOP BAR STRIPING AT INTERSECTION

DETAIL #02740-018





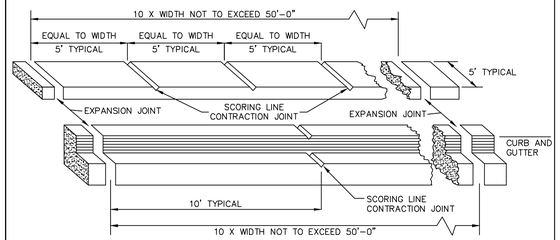
TURNED DOWN SIDEWALK

REINFORCED SIDEWALK

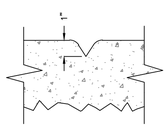
NOTES:
1. W = VARIES, REFER TO STAKING PLAN FILL IN BASED ON SITE PLAN
2. L = WIDTH OF PAVING UNLESS OTHERWISE INDICATED ON PLAN.
3. SLOPE = AS INDICATED ON GRADING PLAN, NOT TO EXCEED 2% CROSS OF 8.33% LONGITUDINAL
4. ALL CONCRETE SHALL BE CLASS A 3000 PSI
5. FINISH BROOM WITH HAND TOOLED JOINTS AND EDGES.

CONCRETE SIDEWALK

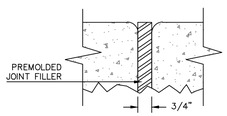
DETAIL 03300-006



ISOMETRIC



CONTRACTION JOINT
SCORING LINE

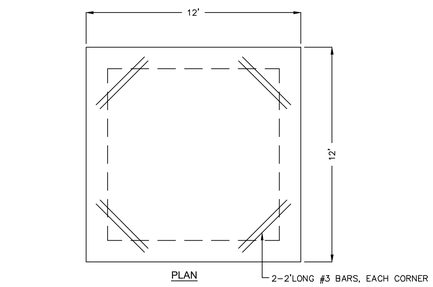


EXPANSION JOINT

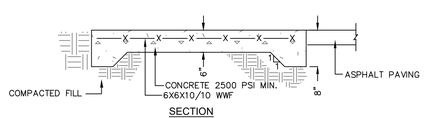
NOTES:
1. EXPANSION JOINTS, 3/4 INCH THICK, SHALL BE PLACED IN THE SIDEWALK AND CURBING AT THE POINT OF CURVATURE (PC) AND POINT OF TANGENCY (PT) OF ALL CURVES, AT THE OUTER EDGES OF DRIVEWAYS, AND AT UNIFORM INTERVALS AS SHOWN. EXPANSION JOINTS SHALL MEET SCDOT SPECIFICATION SECTION 702.2.2.1.
2. TRANSVERSE SCORING LINES (CONTRACTION JOINTS) IN THE SIDEWALK SHALL BE PLACED BETWEEN EXPANSION JOINTS AT UNIFORM INTERVALS EQUAL TO THE WIDTH OF THE WALK AS SHOWN.
3. LONGITUDINAL SCORING LINES WILL BE REQUIRED IN WALKS WIDER THAN 5 FEET OR AS DIRECTED BY THE ENGINEER.
4. TRANSVERSE CONTRACTION JOINTS IN THE CURBING SHALL BE PLACED BETWEEN EXPANSION JOINTS AT UNIFORM 10' INTERVALS.
5. TRANSVERSE AND LONGITUDINAL SCORING LINES SHALL BE A DEPTH OF 1" AND NOT LESS THAN 1/4 INCH OR MORE THAN 1/2 INCH IN WIDTH. THE CORNERS OF THE SCORING LINES SHALL HAVE A 1/2 INCH MINIMUM RADII.
6. JOINTS IN THE CURB AND GUTTER SHALL ALIGN WITH CORRESPONDING JOINTS IN THE SIDEWALK.

EXPANSION JOINTS AND SCORING LINES

DETAIL 03300-007A



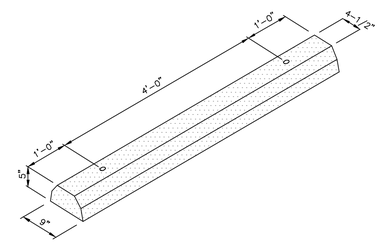
PLAN



SECTION

HEAVY DUTY CONCRETE DUMPSTER PAD

DETAIL 03300-017



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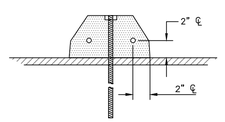
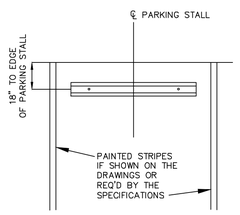


SECTION



INSTALLATION PLAN

NOTES:
1. WHEEL STOPS SHALL BE STEEL REINFORCED PRECAST UNITS CONSISTING OF SCDOT CLASS 3000 CONCRETE, MINIMUM. ALTERNATE MATERIAL COMPOSITION MUST BE APPROVED BY THE ENGINEER PRIOR TO INSTALLATION.
2. WHEEL STOPS SHALL BE INSTALLED PERPENDICULAR TO PARKING STALL AND SHALL BE PLACED A MINIMUM OF 18" FROM END OF PARKING STALL OR OBSTRUCTION.
3. ANCHORING PINS SHALL BE DRIVEN FLUSH TO THE TOP OF THE WHEEL STOP AND PIN HOLES SHALL BE GROUTED UPON INSTALLATION.

PRECAST CONCRETE WHEEL STOP

DETAIL #03300-018

SOUTH CAROLINA PROFESSIONAL ENGINEER No. 22816 06/17/24 PAUL R. MOORE

SOUTH CAROLINA WARD EDWARDS, INC. No. C00152 CERTIFICATE OF AUTHORIZATION

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Ward Edwards ENGINEERING
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P.O. Box 381, Bluffton, South Carolina 29910
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Buckwalter Parkway Healthcare
Town of Bluffton, South Carolina

Prepared for
e4h Environments for Health Architecture

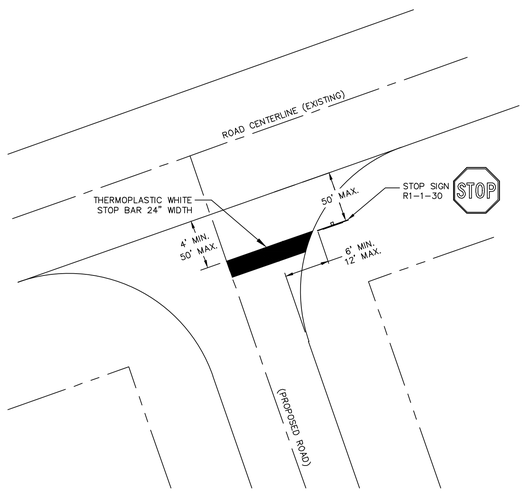
Paving Details

Vert. Datum:	NAVD88
Horiz. Datum:	NAD83
Project #:	230640
Date:	06/17/24
Designed by:	LYJ
Checked by:	CPB

Not to Scale

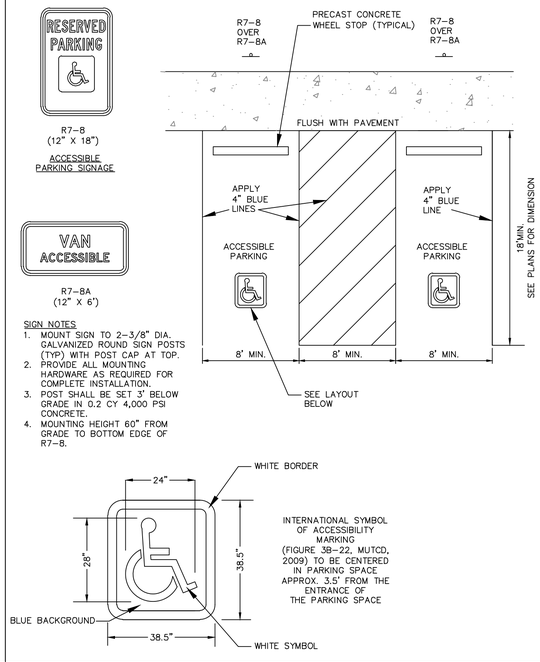
C902

Permit Set - NOT FOR CONSTRUCTION



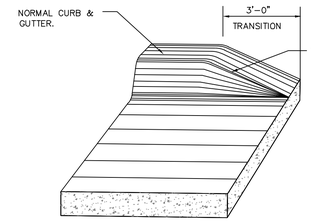
TYPICAL STOP SIGN & STOP BAR STRIPING AT INTERSECTION

DETAIL #02740-018



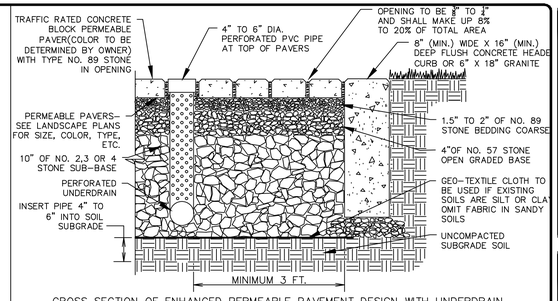
SIGN NOTES
1. MOUNT SIGN TO 2-3/8" DIA. GALVANIZED ROUND SIGN POSTS (TYP) WITH POST CAP AT TOP.
2. PROVIDE ALL MOUNTING HARDWARE AS REQUIRED FOR COMPLETE INSTALLATION.
3. POST SHALL BE SET 3' BELOW GRADE IN 0.2 CY 4,000 PSI CONCRETE.
4. MOUNTING HEIGHT 60" FROM GRADE TO BOTTOM EDGE OF R7-8.

ACCESSIBLE PARKING DETAIL



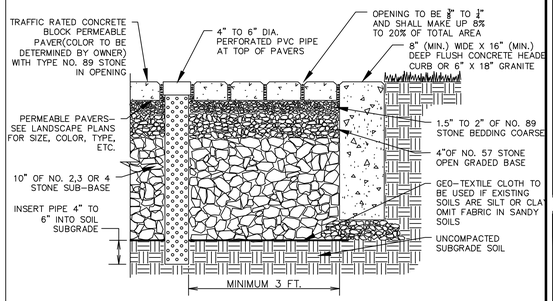
CURB AND GUTTER TRANSITION DETAIL

DETAIL 03300-020



CROSS SECTION OF ENHANCED PERMEABLE PAVEMENT DESIGN WITH UNDERDRAIN

NOTE:
1. INSTALL PER THE "LOW IMPACT DEVELOPMENT IN COASTAL SOUTH CAROLINA GUIDE" AND PER ICPI SPECIFICATIONS



CROSS SECTION OF ENHANCED PERMEABLE PAVEMENT DESIGN WITHOUT UNDERDRAIN

NOTE:
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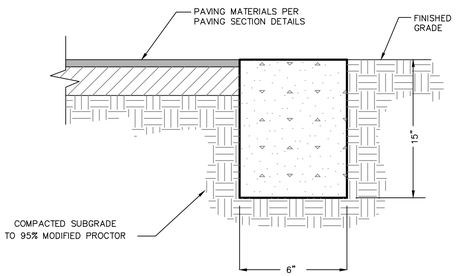
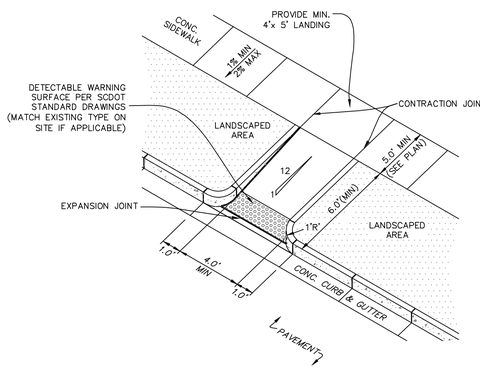
ENHANCED PERMEABLE PAVING DETAIL



NOTES:
1. ALL CONCRETE SHALL BE 3,000 PSI.
2. PROVIDE CONTRACTION JOINTS EVERY TEN FEET (10').
3. PROVIDE EXPANSION JOINTS EVERY FIFTY (50') FEET AND AT ALL TANGENT POINTS.
4. PROVIDE EXPANSION JOINTS WHERE CURB ABUTS SIDEWALKS OR OTHER RIGID STRUCTURES.
5. EXPANSION JOINTS SHALL BE 1/2" WITH PRE-MOLDED JOINT FILLER.
6. TOOL ALL EXPOSED EDGES & JOINTS TO 1/4" RADIUS.
7. PROVIDE LIGHT BROOM FINISH.

FLUSH HEADER CURB

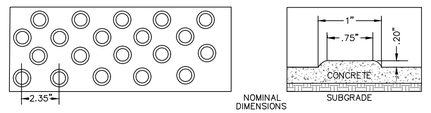
DETAIL 03300-005A



NOTES:
1. ALL CONCRETE SHALL BE CLASS A, 3,000 PSI.
2. REFER TO STANDARD DETAILS FOR SIDEWALKS, CURB & GUTTER, AND CONCRETE JOINTS.
3. CURB RAMP SHALL BE BROOM-FINISHED TO PROVIDE A ROUGH, SKID-RESISTANT SURFACE. ALL JOINTS AND EDGES SHALL BE HAND TOOLED.
4. GUTTER FLOW LINE AND PLAN PROFILE SHALL BE MAINTAINED THROUGH THE RAMP AREA. THE SURFACE OF THE RAMP SHALL BE FLUSH WITH THE FLOWLINE OF THE CURB AND GUTTER.
5. PLACE DETECTABLE WARNING IN LINE AND FLUSH WITH BACK OF "DROPPED CURB".
6. SIDE SLOPES OF THE RAMP ARE NOT TO EXCEED 12:1 (8.33%) AT ANY LOCATION WHERE PEDESTRIAN TRAFFIC CROSSES THE RAMP.
7. CROSS SLOPES OF SIDEWALK, RAMP, AND LANDING TO BE BETWEEN 100:1 (1%) AND 50:1 (2%).

CONCRETE CURB RAMP- TYPE D

DETAIL 03300-033



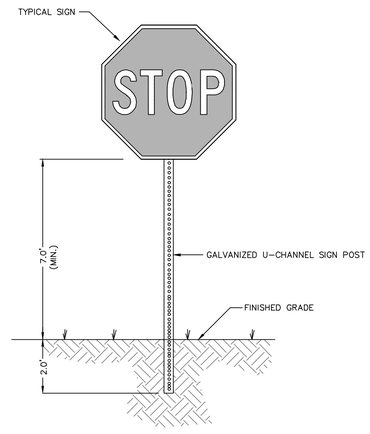
MATRIX OF TRUNCATED DOMES

TRUNCATED DOME DETAIL

NOTE: Detectable Warning Pavement shall be constructed where shown on the plans as a cast in place colored concrete system, and shall meet the nominal dimensional and color contrast requirements of Section 4.29.2 of Title III of the Americans With Disabilities Act. The color of the detectable warning pavement shall be selected by the Architect. The concrete surface shall be broom-finished for increased slip-resistance.

DETECTABLE WARNING PAVEMENT

DETAIL 02740-012



NOTE:
ALL SIGNS AND PAVEMENT MARKINGS SHALL CONFORM TO THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS" (LATEST EDITION) AND THE DEPARTMENT OF TRANSPORTATION STANDARDS AT THE LOCATIONS SHOWN ON THE PLANS.

TYPICAL SIGNAGE

DETAIL #02890-0020

SOUTH CAROLINA PROFESSIONAL ENGINEER No. 22816 DATE 06/17/24 PAUL J. MOORE

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119C Palmetto Way
P.O. Box 381, Bluffton, South Carolina 29910
(843) 837-5250
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Buckwalter Parkway Healthcare
Town of Bluffton, South Carolina

Prepared for
e4h Environments for Health Architecture

Paving Details

Vert. Datum:	NAVD88
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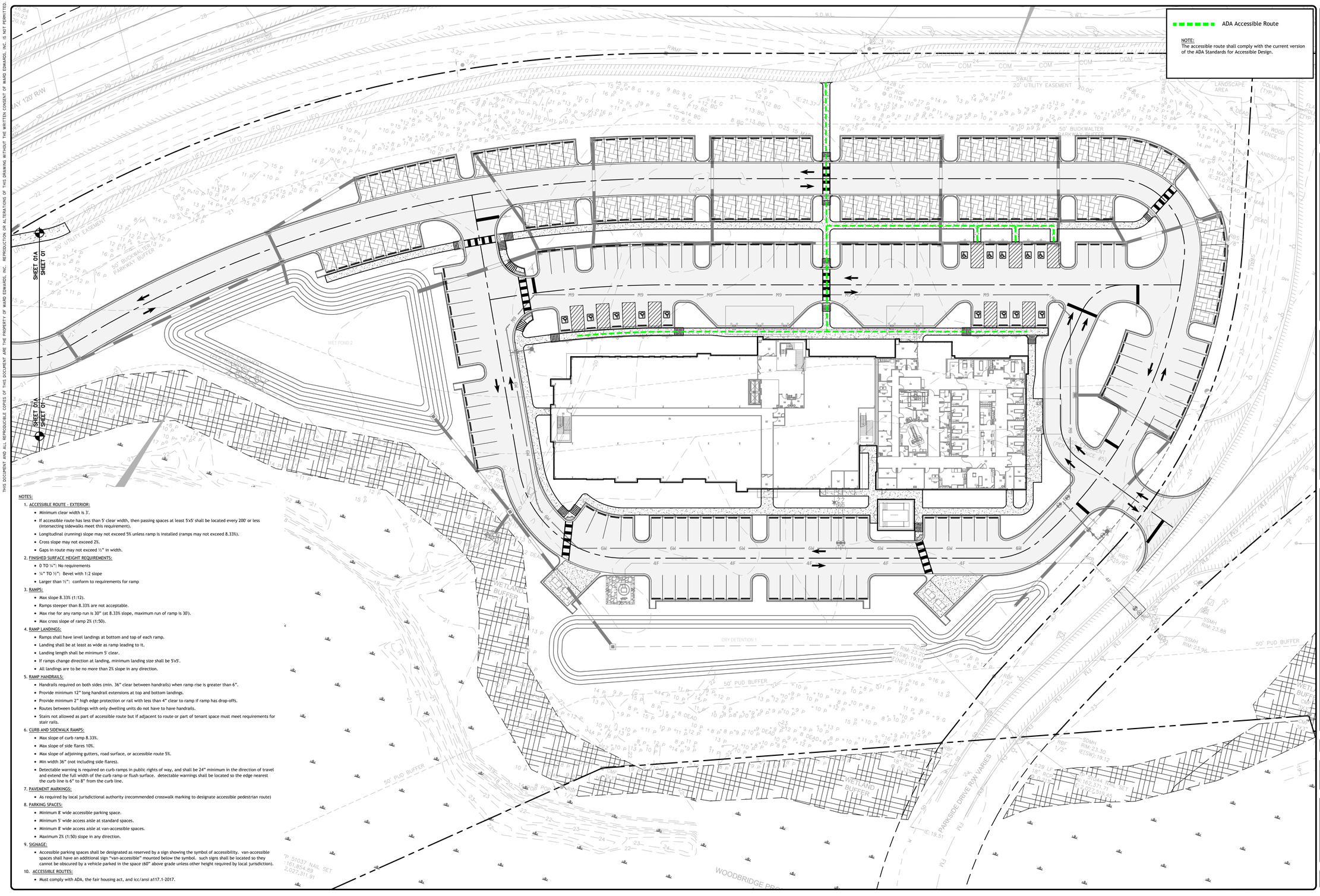
C903



NOTES:

1. ACCESSIBLE ROUTE - EXTERIOR:
   - *Minimum* clear width is 3'.
   - If accessible route has less than 5' clear width, then passing spaces at least 5'x5' shall be located every 200' or less (intersecting sidewalks meet this requirement).
   - Longitudinal (running) slope may not exceed 5% unless ramp is installed (ramps may not exceed 8.33%).
   - Cross slope may not exceed 2%.
   - Gaps in route may not exceed ½" in width.
2. FINISHED SURFACE HEIGHT REQUIREMENTS:
   - 0 TO ¼": No requirements
   - ¼" TO ½": Bevel with 1:2 slope
   - Larger than ½": conform to requirements for ramp
3. RAMPS:
   - *Max* slope 8.33% (1:12).
   - Ramps steeper than 8.33% are not acceptable.
   - *Max* rise for any ramp run is 30" (at 8.33% slope, maximum run of ramp is 30').
   - *Max* cross slope of ramp 2% (1:50).
4. RAMP LANDINGS:
   - Ramps shall have level landings at bottom and top of each ramp.
   - Landing shall be at least as wide as ramp leading to it.
   - Landing length shall be minimum 5' clear.
   - If ramps change direction at landing, minimum landing size shall be 5'x5'.
   - All landings are to be no more than 2% slope in any direction.
5. RAMP HANDRAILS:
   - Handrails required on both sides (min. 36" clear between handrails) when ramp rise is greater than 6".
   - Provide minimum 12" long handrail extensions at top and bottom landings.
   - Provide minimum 2" high edge protection or rail with less than 4" clear to ramp if ramp has drop-offs.
   - Routes between buildings with only dwelling units do not have to have handrails.
   - Stairs not allowed as part of accessible route but if adjacent to route or part of tenant space must meet requirements for stair rails.
6. CURB AND SIDEWALK RAMPS:
   - *Max* slope of curb ramp 8.33%.
   - *Max* slope of side flares 10%.
   - *Max* slope of adjoining gutters, road surface, or accessible route 5%.
   - *Min* width 36" (not including side flares).
   - Detectable warning is required on curb ramps in public rights of way, and shall be 24" minimum in the direction of travel and extend the full width of the curb ramp or flush surface. detectable warnings shall be located so the edge nearest the curb line is 6" to 8" from the curb line.
7. PAVEMENT MARKINGS:
   - As required by local jurisdictional authority (recommended crosswalk marking to designate accessible pedestrian route)
8. PARKING SPACES:
   - *Minimum* 8' wide accessible parking space.
   - *Minimum* 5' wide access aisle at standard spaces.
   - *Minimum* 8' wide access aisle at van-accessible spaces.
   - *Maximum* 2% (1:50) slope in any direction.
9. SIGNAGE:
   - Accessible parking spaces shall be designated as reserved by a sign showing the symbol of accessibility. van-accessible spaces shall have an additional sign "van-accessible" mounted below the symbol. such signs shall be located so they cannot be obscured by a vehicle parked in the space (60" above grade unless other height required by local jurisdiction).
10. ACCESSIBLE ROUTES:
    - Must comply with ADA, the fair housing act, and icc/ansi a117.1-2017.

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ADA Accessible Route Plan

Vert. Datum:	NAVD88
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Project #:	230640
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Designed by:	LYJ
Checked by:	CPB

0 30 60
Scale:1"= 30' Feet

C1001

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