SITE DEVELOPMENT PLANS FOR:

HOME 2 SUITES BY HILTON

475 HOSPITALITY BOULEVARD
GREENWOOD, SOUTH CAROLINA

CONTACT INFORMATION

GREENWOOD COUNTY ENGINEERING
COMPANY: GREENWOOD COUNTY ENGINEERING
ADDRESS: 528 MONUMENT ST, ROOM B-03, GREENWOOD, SC 29646
PHONE: 864 942-8639
CONTACT: RETT TEMPLETON

GREENWOOD COUNTY PLANNING
COMPANY: GREENWOOD COUNTY PLANNING DEPARTMENT
ADDRESS: 538 MONUMENT ST, ROOM B-01, GREENWOOD, SC 29646
PHONE: 864 942-8631
CONTACT: CHRISTOPHER HUDSON

SCDHEC - STORMWATER
COMPANY: SCDHEC - STORMWATER PERMITTING
ADDRESS: 2600 BULL ST, COLUMBIA, SC 29201
PHONE: 864 898-4300
CONTACT:

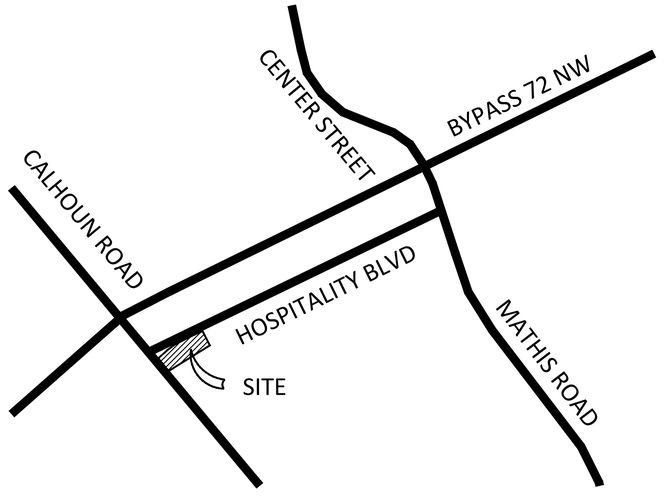
SANITARY SEWER
COMPANY: GREENWOOD METROPOLITAN SEWER DISTRICT
ADDRESS: 110 METRO DR, GREENWOOD, SC 29646
PHONE: 864 942-3901
CONTACT: BRIAN WALDROP

WATER DISTRIBUTION
COMPANY: GREENWOOD COMMISSIONERS OF PUBLIC WORKS
ADDRESS: P.O. BOX 549, GREENWOOD, SC 29648
PHONE: 864 942-8199
CONTACT: RUSSELL HOLLEY

ELECTRIC DISTRIBUTION
COMPANY: DUKE ENERGY
ADDRESS:
PHONE: 864 227-5433
CONTACT: NEIL ANDERSON

FIRE DISTRICT
COMPANY: GREENWOOD COUNTY STATION 30
ADDRESS: 201 OAKWOOD DR, GREENWOOD, SC 29649
PHONE: 864 223-8075
CONTACT: CHIEF CHAD KELLUM

LOCATION MAP



(NOT TO SCALE)

SHEET INDEX

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811 Know what's below. Call before you dig.

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OWNER
HOSPITALITY HOTEL GROUP LLC
475 HOSPITALITY BLVD
ANDERSON, SC 29621
864-907-0252

NOTES:
ALL NECESSARY INSPECTIONS AND/OR CERTIFICATIONS REQUIRED BY CODES AND/OR UTILITY SERVICE COMPANIES SHALL BE PERFORMED PRIOR TO ANY BUILDING POSSESSION AND THE FINAL CONNECTION OF SERVICES.

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.

I hereby certify that these plans were prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the laws of the state of South Carolina and that I am competent to prepare this document.

South Carolina Registration No. 40522

NO.	DATE	BY	REVISION
A	-	-	-

Gray Engineering
132 PILGRIM ROAD - GREENVILLE, SC 29607
PH: (864) 297-3027 - FAX: (864) 729-8747
WWW.GRAYENGINEERING.COM
- SC C.O.A.# C00060 - NC C.O.A.# C-1217 - GA C.O.A.# PEF001941 - TN C.O.A.# 0410819 -

GRAY ENGINEERING CONSULTANTS, INC. No. C00060 CERTIFICATE OF AUTHORIZATION NO. CAROLINA

JOSHUA D. BAKER No. 40522 REGISTERED ENGINEER SOUTH CAROLINA

TITLE SHEET

PROPOSED HOME 2 SUITES BY HILTON

GREENWOOD COUNTY SOUTH CAROLINA

475 HOSPITALITY BOULEVARD

SCALE:	
PROJECT MANAGER:	ZDJ
DRAWN BY:	MSG
PROJECT DATE:	5/3/2023
JOB No.:	2023104
PLOT DATE:	3/26/25

SHEET
T-1

2023104-Details.dwg

DEMOLITION NOTES

1. DEMOLITION INCLUDES THE COMPLETE WRECKING OF STRUCTURES AND THE REMOVAL AND DISPOSAL OF DEMOLISHED MATERIALS, AS SHOWN ON THE DRAWINGS AND HEREIN SPECIFIED.

2. CONDITION OF STRUCTURES: THE OWNER ASSUMES NO RESPONSIBILITY FOR THE ACTUAL CONDITION OF STRUCTURES TO BE DEMOLISHED.

3. CONDITIONS EXISTING AT THE TIME OF INSPECTION FOR BIDDING PURPOSES WILL BE MAINTAINED BY THE OWNER IN SO FAR AS PRACTICABLE, HOWEVER, VARIATIONS WITHIN THE STRUCTURE MAY OCCUR BY OWNER'S REMOVAL AND SALVAGE OPERATION PRIOR TO THE START OF THE DEMOLITION WORK.

4. PARTIAL REMOVAL: ITEMS OF SALVABLE VALUE TO THE CONTRACTOR MAY BE REMOVED FROM THE STRUCTURE AS THE WORK PROGRESSES. SALVAGED ITEMS MUST BE TRANSPORTED FROM THE SITE AS THEY ARE REMOVED. STORAGE OR SALE OF REMOVED ITEMS ON THE SITE WILL NOT BE PERMITTED.

5. THE USE OF EXPLOSIVES WILL NOT BE PERMITTED.

6. CONDUCT DEMOLITION OPERATIONS AND THE REMOVAL OF DEBRIS TO ENSURE MINIMUM INTERFERENCE WITH ROADS, STREETS, WALKS, AND OTHER ADJACENT OCCUPIED OR USED FACILITIES.

7. DO NOT CLOSE OR OBSTRUCT STREETS, WALKS OR OTHER OCCUPIED OR USED FACILITIES WITHOUT PERMISSION FROM AUTHORITIES HAVING JURISDICTION. PROVIDE ALTERNATE ROUTES ROUND CLOSED OR OBSTRUCTED TRAFFIC WAYS IF REQUIRED BY GOVERNING REGULATIONS.

8. ENSURE THE SAFE PASSAGE OF PERSONS AROUND THE AREA OF DEMOLITION. CONDUCT OPERATIONS TO PREVENT INJURY TO ADJACENT BUILDINGS, STRUCTURES, OTHER FACILITIES, AND PERSONS.

9. PROMPTLY REPAIR DAMAGES CAUSED TO ADJACENT FACILITIES BY DEMOLITION OPERATIONS AT NO COST TO THE OWNER.

10. MAINTAIN EXISTING UTILITIES, INDICATED TO REMAIN, KEEP IN SERVICE, AND PROTECT AGAINST DAMAGE DURING DEMOLITION OPERATIONS.

11. DO NOT INTERRUPT EXISTING UTILITIES SERVING OCCUPIED OR USED FACILITIES, EXCEPT WHEN AUTHORIZED IN WRITING BY AUTHORITIES HAVING JURISDICTION. PROVIDE TEMPORARY SERVICES DURING INTERRUPTIONS TO EXISTING UTILITIES, AS ACCEPTABLE TO THE GOVERNING AUTHORITIES.

12. COMPLY WITH GOVERNING REGULATIONS PERTAINING TO ENVIRONMENTAL PROTECTION.

13. DEMOLISH BUILDINGS COMPLETELY AND REMOVE FROM THE SITE. USE SUCH METHODS AS REQUIRED TO COMPLETE THE WORK WITHIN THE LIMITATIONS OF GOVERNING REGULATIONS.

14. PROCEED WITH DEMOLITION IN A SYSTEMATIC MANNER, FROM THE TOP OF THE STRUCTURE TO THE GROUND. COMPLETE DEMOLITION WORK ABOVE EACH FLOOR OR TIER BEFORE DISTURBING SUPPORT MEMBERS ON LOWER LEVELS.

15. DEMOLISH CONCRETE AND MASONRY IN SMALL SECTIONS.

16. REMOVE STRUCTURAL FRAMING MEMBERS AND LOWER TO GROUND BY MEANS OF HOIST, DERRECKS, OR OTHER SUITABLE METHODS.

17. BREAK UP AND REMOVE CONCRETE SLABS-ON-GRADE, CURBS, AND ASPHALT PAVEMENT UNLESS OTHERWISE SHOWN TO REMAIN.

18. LOCATE DEMOLITION EQUIPMENT THROUGHOUT THE STRUCTURE AND REMOVE MATERIALS SO AS NOT TO IMPOSE EXCESSIVE LOADS TO SUPPORTING WALLS, FLOORS AND FRAMING.

19. DEMOLISH AND REMOVE BELOW-GRADE CONSTRUCTION CONCRETE SLABS ON GRADE, CATCH BASINS, MANHOLES AND MISCELLANEOUS PIPING.

20. COMPLETELY FILL BELOW-GRADE AREAS AND VOIDS RESULTING FROM THE DEMOLITION OF STUCTURES.

21. PLACE FILL MATERIALS IN HORIZONTAL LAYERS NOT EXCEEDING 6" IN LOOSE DEPTH. COMPACT EACH LAYER AT OPTIMUM MOISTURE CONTENT OF THE FILL MATERIAL TO A DENSITY EQUAL TO THE ORIGINAL ADJACENT GROUND, UNLESS SUBSEQUENT EXCAVATION FOR NEW WORK IS REQUIRED. AFTER FILL PLACEMENT AND COMPACTION, GRADE THE SURFACE TO MEET ADJACENT CONTOURS AND TO PROVIDE FLOW TO SURFACE DRAINAGE STRUCTURES.

22. REMOVE FROM THE SITE DEBRIS, RUBBISH, AND OTHER MATERIALS RESULTING FROM DEMOLITION OPERATIONS, OR AS DIRECTED BY OWNER'S REPRESENTATIVE AND LEGALLY DISPOSE OF DEBRIS "OFF-SITE".

23. ALL PIPING, FENCING AND OTHER MATERIALS THAT INTERFERE WITH NEW CONSTRUCTION SHALL BE REMOVED OR ABANDONED AS DIRECTED BY THE OWNER'S REPRESENTATIVE.

24. ALL SALVAGEABLE MATERIALS WILL REMAIN THE PROPERTY OF THE OWNER. THE CONTRACTOR SHALL REMOVE AND STORE THIS MATERIAL AS DIRECTED BY THE OWNER'S REPRESENTATIVE.

25. TRANSPORT MATERIALS REMOVED FROM DEMOLISHED STRUCTURES AND DISPOSE OF "OFF" SITE AS REQUIRED. DEBRIS SHALL NOT BE "BURIED" OR LEFT ON SITE EXCEPT AS ALLOWED BY ALL APPLICABLE LAWS AND BY THE GEOTECHNICAL ENGINEER.

26. THE CONTRACTOR MUST VISIT SITE PRIOR TO SUBMITTING BID AND INCLUDE IN HIS PRICE ALL DEMOLITION AND DISPOSAL COSTS TO REMOVE/RELOCATE ANY AND ALL ITEMS THAT MAY INTERFERE WITH NEW CONSTRUCTION.

DUST CONTROL NOTES

CONSTRUCTION TRAFFIC MUST ENTER AND EXIT THE SITE AT THE STABILIZED CONSTRUCTION EXIT. THE PURPOSE IS TO TRAP DUST AND MUD THAT WOULD OTHERWISE BE CARRIED OFF-SITE BY CONSTRUCTION TRAFFIC. WATER TRUCKS OR OTHER DUST CONTROL AGENTS WILL BE USED AS NEEDED DURING CONSTRUCTION TO REDUCE DUST GENERATED ON THE SITE. DUST CONTROL MUST BE PROVIDED BY THE GENERAL CONTRACTOR TO A DEGREE THAT IS ACCEPTABLE TO THE OWNER'S CONSTRUCTION MANAGER, AND IN COMPLIANCE WITH APPLICABLE LOCAL, STATE, AND FEDERAL DUST CONTROL REGULATIONS. AFTER CONSTRUCTION, THE SITE WILL BE STABILIZED, WHICH WILL REDUCE THE POTENTIAL FOR DUST GENERATION.

MINIMIZING WIND EROSION AND CONTROLLING DUST WILL BE ACCOMPLISHED BY ONE OR MORE OF THE FOLLOWING METHODS:

* COVERING 30% OR MORE OF THE SOIL SURFACE WITH A NON-ERODIBLE MATERIAL.
* ROUGHENING THE SOIL TO PROIDUCE RIDGES PERPENDICULAR TO THE PREVAILING WIND. RIDGES SHOULD BE ABOUT 6" IN HEIGHT.
* FREQUENT WATERING OF EXCAVATION AND FILL AREAS.
* PROVIDING GRAVEL OR PAVING AT ENTRANCE/EXIT DRIVES, PARKING AREAS, ANDTRANSIT PATHS.

THE USE OF PETROLEUM RESINS FOR DUST/WIND EROSION CONTROL WILL NOT BE PERMITTED.

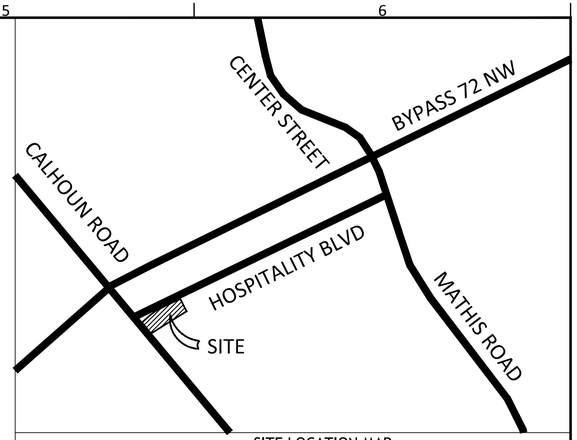
THE CONTRACTOR MUST MAINTAIN DUST CONTROL FOR ALL DEMOLITION OPERATIONS TO ALL LOCAL, STATE, AND FEDERAL REQUIREMENTS.

IMPORTANT NOTES

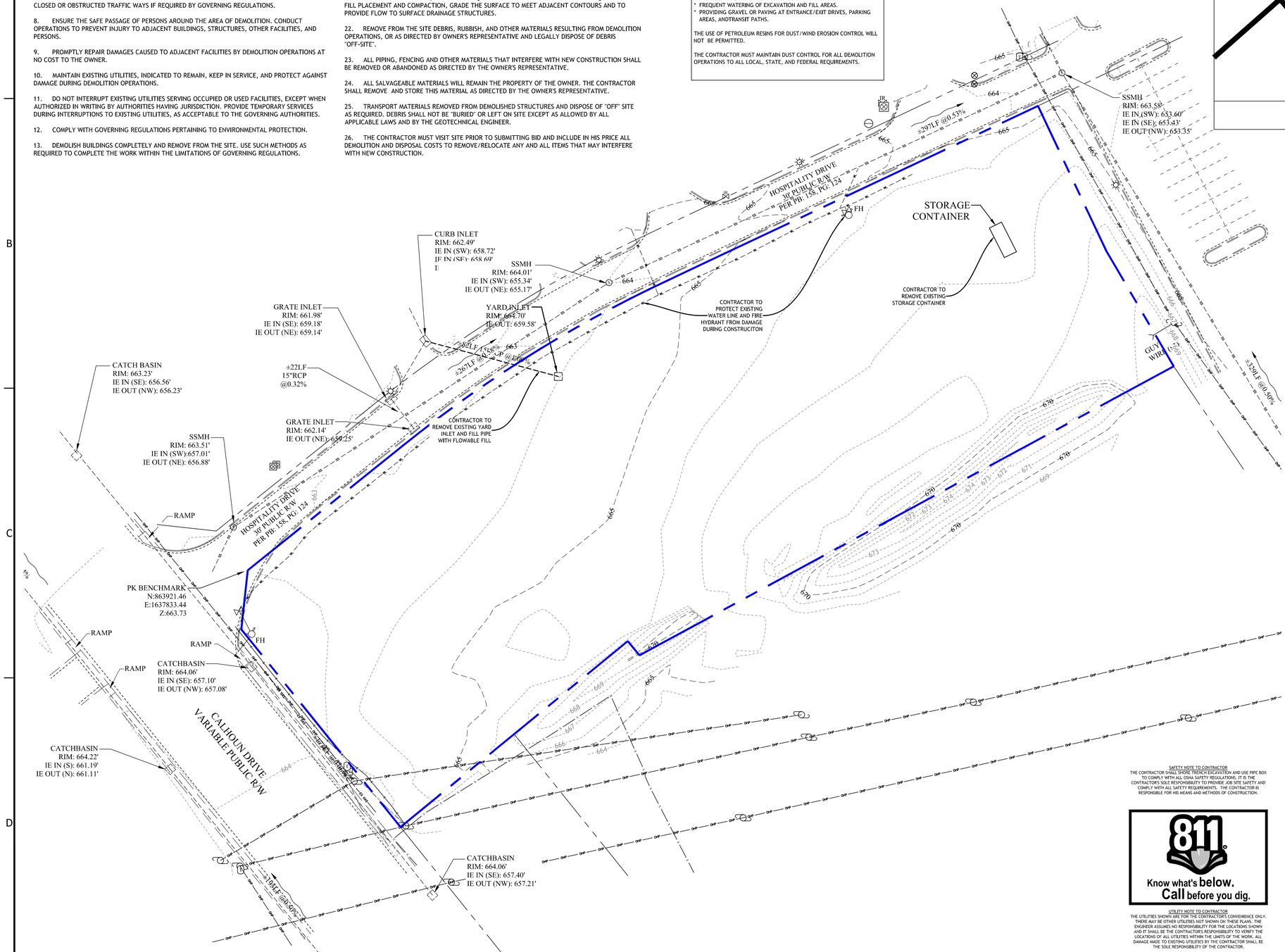
THE CONTRACTOR IS RESPONSIBLE FOR HIS MEANS AND METHODS OF DEMOLITION/CONSTRUCTION AND COMPLETELY RESPONSIBLE FOR THE JOB SITE.

THE CONTRACTOR IS RESPONSIBLE FOR SITE SAFETY, THIS INCLUDES CONTRACTOR'S PERSONNEL, CUSTOMERS, AND THE GENERAL PUBLIC.

ANY DAMAGE CAUSED BY THE DEMOLITION/CONSTRUCTION TO VEHICLES IS THE CONTRACTORS RESPONSIBILITY.



SITE LOCATION MAP
(NOT TO SCALE)



DEMOLITION PLAN LEGEND

904	EXISTING MINOR CONTOUR
900	EXISTING MAJOR CONTOUR
18" RCP IE: 656.66 / 18" RCP IE: 652.38	EXISTING STORM DRAINAGE
EX ELEC / EX ELEC	EXISTING POWER
	OBJECTS TO BE REMOVED/RELOCATED
	PROPERTY BOUNDARY
R/W	SCDOT RIGHT-OF-WAY

SPECIAL GRAY ENGINEERING NOTES:

1. SITE CONTRACTOR SHALL HAVE AN ACCEPTABLE SOIL TESTING FIRM/GEOTECH TEST ALL EARTHWORK COMPACTION. PROOF ROLL ALL AREAS AND SUBMIT REPORTS TO THE OWNER ON A WEEKLY BASIS.
2. SITE CONTRACTOR TO SUBMIT A WEEKLY TIME LOG OF CONSTRUCTION EVENTS INCLUDING DATE STARTED AND COMPLETED EACH WEEK ALONG WITH SITE PHOTOS SENT OR E-MAILED TO THE OWNER.
3. NO CLEARING DEBRIS OR TOPSOIL TO BE BURIED ON SITE. ALL FILL TO BE FREE OF ORGANICS AND ROCK.
4. FRONT LOT PINS SHALL BE SET BY R.L.S. (REGISTER LAND SURVEYOR) BEFORE STORM DRAINAGE, WATER LINES AND SEWER LINES ARE INSTALLED.
5. ALL BUILDING DOWNSPOUTS MUST BE PIPED TO EXISTING CATCH BASINS, DRAINAGE SWALES, OR SLOPE DRAINS. INSTALL TO ELIMINATE RUNOFF OVER SLOPES AND PONDING AROUND BUILDING.
6. A BUFFER SHOULD BE MAINTAINED BETWEEN ALL WQS AND CLEARLY DELINEATED BY FLAG, TAPE OR SIMILAR MAKING DEVICES TO ENSURE THE BUFFER AREA(S) ARE VISIBLE.
7. SWALES TO BE CONSIDERED STORMWATER FEATURES AND TO BE INCLUDED IN THE MAINTENANCE OF ALL STORMWATER FEATURES AND TO BE INCLUDED ON FINAL PLAT.
8. ALL FILL SHALL BE COMPACTED TO 95% STD. PROCTOR PER ASTM D-698. THE BUILDING PAD AREA SHALL BE PROFF-ROLLED (20t PUMP TRUCK). ALL SOFT SPOTS (IF ANY) SHALL BE UNDERCUT AND COMPACTED TO 98% STANDARD UNDER BUILDING. THIS INCLUDES ALL TRENCH COMPACTION AFTER EXISTING UTILITY IS REMOVED AND ALL NEW TRENCH UNDER BUILDING.
9. SECONDARY PERMITEE (BUILDER) SHALL ENSURE POSITIVE DRAINAGE FOR EACH INDIVIDUAL LOT AND IS RESPONSIBLE FOR INDIVIDUAL LOT SWALES NOT SHOWN ON PLANS. SWALES SHOWN ON PLANS ARE FOR OVERALL DRAINAGE PATTERNS DEEMED NECESSARY BY THE ENGINEER.

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PROPOSED HOME 2 SUITES HOTEL

DEVELOPER	ENGINEER
PARAGON HOTEL COMPANY RICKY PATEL 109 DESTINATION BLVC. ANDERSON, SC 29621 864-375-0037	GRAY ENGINEERING JOSHUA D BAKER, P.E. 132 PILGRIM ROAD GREENVILLE, SC 29607 864-297-3027

TAX MAP#: 6836-796-391

NO. OF ACRES: 2.29 DATE: 5/26/2023

NO.	DATE	BY	REVISION
A	7/19/24	MSG	REVISIONS - RESUBMITTAL
B	9/20/24	MSG	REVISE POOL PATIO & FIRE PROTECTION - IFA
C	11/22/24	MSG	REVISE WATER LINES PER CPW - IFA
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-

Gray Engineering
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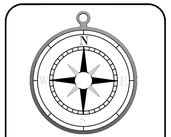
- SC C.O.A.# C00060 - NC C.O.A.# C1217 - GA C.O.A.# PE003941 - TN C.O.A.# 0410819 -

SOUTH CAROLINA PROFESSIONAL ENGINEER No. 40520 JOSHUA D. BAKER
CERTIFICATE OF AUTHORIZATION
GRAY ENGINEERING CONSULTANTS, INC.
No. C00060

EXISTING CONDITIONS PLAN

PROPOSED
HOME 2 SUITES
BY HILTON

475 HOSPITALITY BOULEVARD
GREENWOOD COUNTY
SOUTH CAROLINA



SCALE:	1" = 30 '
PROJECT MANAGER:	ZDJ
DRAWN BY:	MSG
PROJECT DATE:	5/3/2023
JOB No.:	2023104
PLOT DATE:	3/26/25

SHEET
CV-0

2023104 - Greenwood Home2Suites - D86.dwg

STAKEOUT PLAN LEGEND

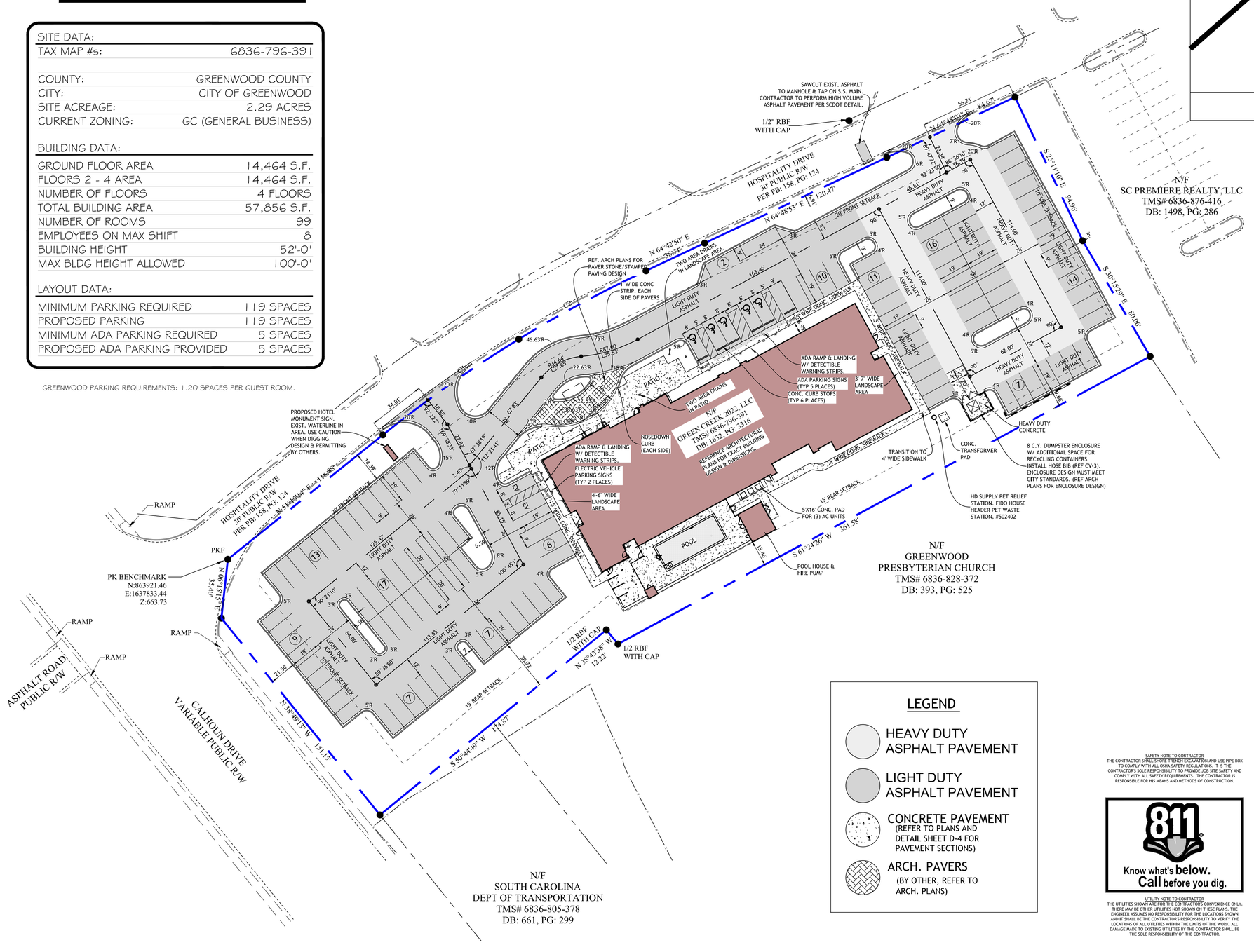
	PROPERTY BOUNDARY
R/W	RIGHT-OF-WAY
	NEW PARKING LOT
	SETBACK

SITE DATA:	
TAX MAP #s:	6836-796-391
COUNTY:	GREENWOOD COUNTY
CITY:	CITY OF GREENWOOD
SITE ACREAGE:	2.29 ACRES
CURRENT ZONING:	GC (GENERAL BUSINESS)

BUILDING DATA:	
GROUND FLOOR AREA	14,464 S.F.
FLOORS 2 - 4 AREA	14,464 S.F.
NUMBER OF FLOORS	4 FLOORS
TOTAL BUILDING AREA	57,856 S.F.
NUMBER OF ROOMS	99
EMPLOYEES ON MAX SHIFT	8
BUILDING HEIGHT	52'-0"
MAX BLDG HEIGHT ALLOWED	100'-0"

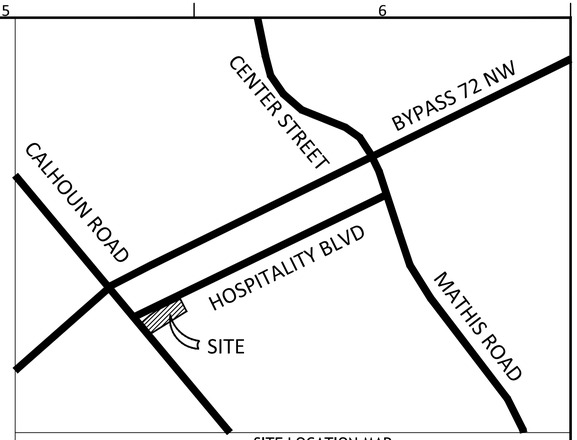
LAYOUT DATA:	
MINIMUM PARKING REQUIRED	119 SPACES
PROPOSED PARKING	119 SPACES
MINIMUM ADA PARKING REQUIRED	5 SPACES
PROPOSED ADA PARKING PROVIDED	5 SPACES

GREENWOOD PARKING REQUIREMENTS: 1.20 SPACES PER GUEST ROOM.



LEGEND

- HEAVY DUTY ASPHALT PAVEMENT
- LIGHT DUTY ASPHALT PAVEMENT
- CONCRETE PAVEMENT (REFER TO PLANS AND DETAIL SHEET D-4 FOR PAVEMENT SECTIONS)
- ARCH. PAVERS (BY OTHER, REFER TO ARCH. PLANS)



SITE LOCATION MAP
(NOT TO SCALE)

SETBACKS:

HOSPITALITY DRIVE: 20'
CALHOUN DRIVE: 30'
SIDE: 10'
REAR: 15'

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SOUTH CAROLINA PROFESSIONAL ENGINEER No. 40522 JOSHUA D BAKER
GRAY ENGINEERING CONSULTANTS, INC. No. C00060
CERTIFICATE OF AUTHORIZATION

PRELIMINARY SKETCH PLAN

PROPOSED HOME 2 SUITES BY HILTON

GREENWOOD COUNTY
SOUTH CAROLINA

475 HOSPITALITY BOULEVARD

0 30 60
Feet

SCALE: 1" = 30'

PROJECT MANAGER:	ZDJ
DRAWN BY:	MSG
PROJECT DATE:	5/3/2023
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SHEET
CV-1

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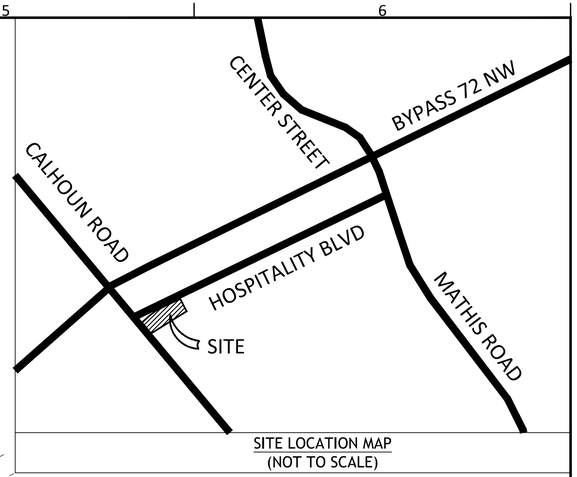
2023104 - Greenwood Home2Suites - D16.dwg

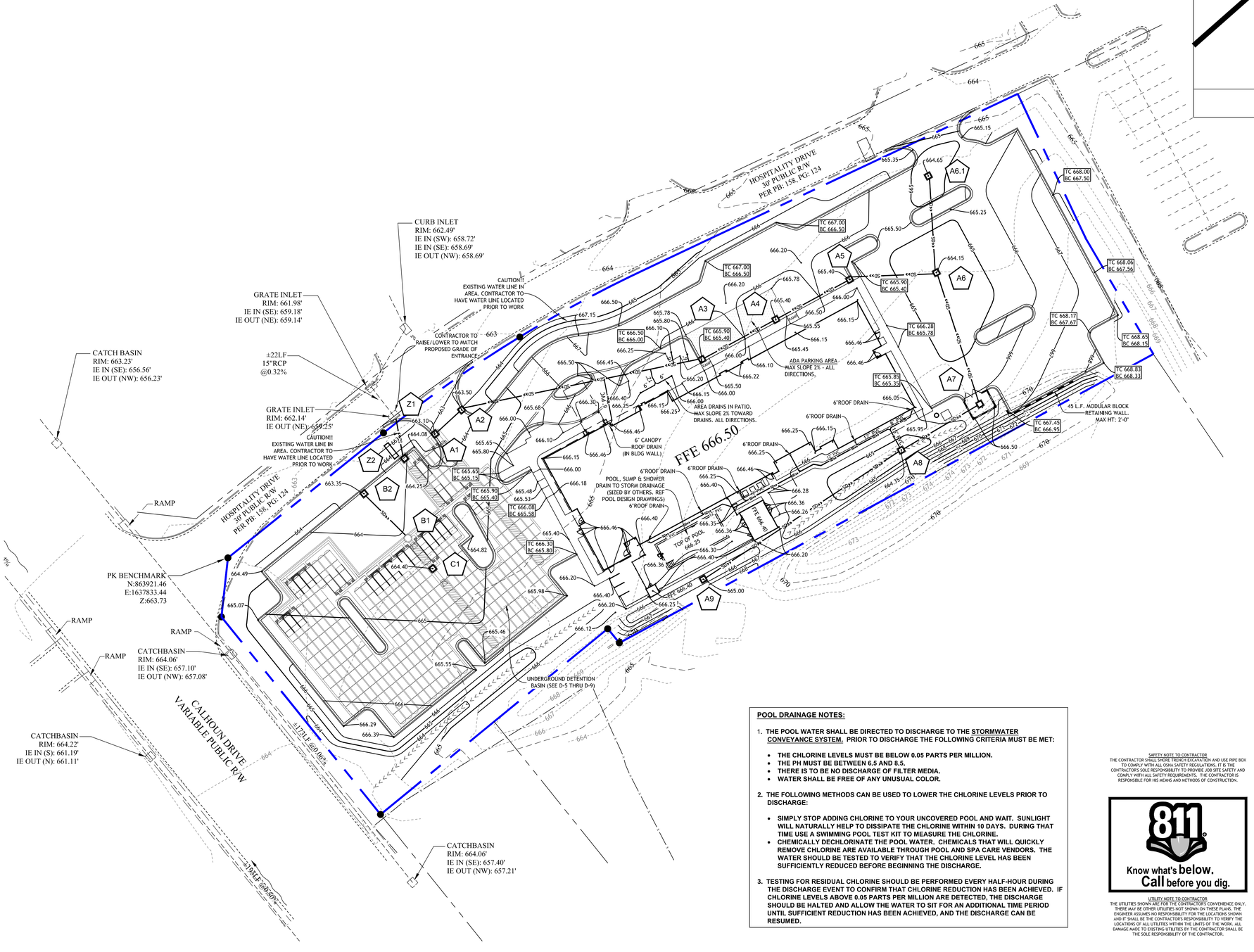
PROHIBITED DISCHARGES

PERMITTEES, CONTRACTORS, AND ALL OTHER RESPONSIBLE PARTIES FOR CONDUCTING AND-DISTURBING ACTIVITIES ARE PROHIBITED TO DISCHARGES, FROM THE CONSTRUCTION SITE, THE FOLLOWING ITEMS:

- **WASTEWATER FROM WASHOUT OF CONCRETE, UNLESS IN DESIGNATED CONCRETE WASHOUT AREA.**
- **WASTEWATER FROM WASHOUT AND CLEANOUT OF STUCCO, PAINT, FORM RELEASE OILS, CURING COMPOUNDS AND OTHER CONSTRUCTION MATERIALS;**
- **FUELS, OILS, OR OTHER POLLUTANTS USED IN VEHICLE AND EQUIPMENT OPERATION AND MAINTENANCE; AND**
- **SOAPS OR SOLVENTS USED IN VEHICLE AND EQUIPMENT WASHING.**



SITE LOCATION MAP
(NOT TO SCALE)



GRADING PLAN
LEGEND

B6	CATCH BASIN
SD»»	STORM DRAINAGE
> > > > > > > >	DRAINAGE ARROWS
960	PROPOSED CONTOUR
960	EXISTING CONTOUR
	EASEMENT
	FOREBAY
	PROPERTY LINE

POOL DRAINAGE NOTES:

1. **THE POOL WATER SHALL BE DIRECTED TO DISCHARGE TO THE STORMWATER CONVEYANCE SYSTEM. PRIOR TO DISCHARGE THE FOLLOWING CRITERIA MUST BE MET:**
   - **THE CHLORINE LEVELS MUST BE BELOW 0.05 PARTS PER MILLION.**
   - **THE PH MUST BE BETWEEN 6.5 AND 8.5.**
   - **THERE IS TO BE NO DISCHARGE OF FILTER MEDIA.**
   - **WATER SHALL BE FREE OF ANY UNUSUAL COLOR.**
2. **THE FOLLOWING METHODS CAN BE USED TO LOWER THE CHLORINE LEVELS PRIOR TO DISCHARGE:**
   - **SIMPLY STOP ADDING CHLORINE TO YOUR UNCOVERED POOL AND WAIT. SUNLIGHT WILL NATURALLY HELP TO DISSIPATE THE CHLORINE WITHIN 10 DAYS. DURING THAT TIME USE A SWIMMING POOL TEST KIT TO MEASURE THE CHLORINE.**
   - **CHEMICALLY DECHLORINATE THE POOL WATER. CHEMICALS THAT WILL QUICKLY REMOVE CHLORINE ARE AVAILABLE THROUGH POOL AND SPA CARE VENDORS. THE WATER SHOULD BE TESTED TO VERIFY THAT THE CHLORINE LEVEL HAS BEEN SUFFICIENTLY REDUCED BEFORE BEGINNING THE DISCHARGE.**
3. **TESTING FOR RESIDUAL CHLORINE SHOULD BE PERFORMED EVERY HALF-HOUR DURING THE DISCHARGE EVENT TO CONFIRM THAT CHLORINE REDUCTION HAS BEEN ACHIEVED. IF CHLORINE LEVELS ABOVE 0.05 PARTS PER MILLION ARE DETECTED, THE DISCHARGE SHOULD BE HALTED AND ALLOW THE WATER TO SIT FOR AN ADDITIONAL TIME PERIOD UNTIL SUFFICIENT REDUCTION HAS BEEN ACHIEVED, AND THE DISCHARGE CAN BE RESUMED.**

SAFETY NOTE TO CONTRACTOR
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811
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SPECIAL GRAY ENGINEERING NOTES:

1. SITE CONTRACTOR SHALL HAVE AN ACCEPTABLE SOIL TESTING FIRM/GEOTECH TEST ALL EARTHWORK COMPACTION. PROOF ROLL ALL AREAS AND SUBMIT REPORTS TO THE OWNER ON A WEEKLY BASIS.
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5. ALL BUILDING DOWNSPOUTS MUST BE PIPED TO EXISTING CATCH BASINS, DRAINAGE SWALES, OR SLOPE DRAINS. INSTALL TO ELIMINATE RUNOFF OVER SLOPES AND PONDING AROUND BUILDING.
6. A BUFFER SHOULD BE MAINTAINED BETWEEN ALL WOS AND CLEARLY DELINEATED BY FLAG, TAPE OR SIMILAR MAKING DEVICES TO ENSURE THE BUFFER AREA(S) ARE VISIBLE.
7. SWALES TO BE CONSIDERED STORMWATER FEATURES AND TO BE INCLUDED IN THE MAINTENANCE OF ALL STORWWATER FEATURES AND TO BE INCLUDED ON FINAL PLAT.
8. ALL FILL SHALL BE COMPACTED TO 95% STD. PROCTOR PER ASTM D-698. THE BUILDING PAD AREA SHALL BE PROFF-ROLLED (20t PUMP TRUCK). ALL SOFT SPOTS (IF ANY) SHALL BE UNDERCUT AND COMPACTED TO 98% STANDARD UNDER BUILDING. THIS INCLUDES ALL TRENCH COMPACTION AFTER EXISTING UTILITY IS REMOVED AND ALL NEW TRENCH UNDER BUILDING.
9. SECONDARY PERIMTEE (BUILDER) SHALL ENSURE POSITIVE DRAINAGE FOR EACH INDIVIDUAL LOT AND IS RESPONSIBLE FOR INDIVIDUAL LOT SWALES NOT SHOWN ON PLANS. SWALES SHOWN ON PLANS ARE FOR OVERALL DRAINAGE PATTERNS DEEMED NECESSARY BY THE ENGINEER.

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PROPOSED HOME 2 SUITES HOTEL

DEVELOPER	ENGINEER
PARAGON HOTEL COMPANY RICKY PATEL 109 DESTINATION BLVC. ANDERSON, SC 29621 864-375-0037	GRAY ENGINEERING JOSHUA D BAKER, P.E. 132 PILGRIM ROAD GREENVILLE, SC 29607 864-297-3027

TAX MAP#: 6836-796-391

NO. OF ACRES: 2.29 DATE: 5/26/2023

NO.	DATE	BY	REVISION
A	7/29/24	MSG	REVISIONS - RESUBMITTAL
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-	-	-	-
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Gray Engineering
132 PILGRIM ROAD - GREENVILLE, SC 29607
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- SC C.O.A.# C00060 - NC C.O.A.# C1217 - GA C.O.A.# PE001941 - TN C.O.A.# 0410819 -

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 40522 JOSHUA D BAKER
SOUTH CAROLINA PROFESSIONAL ENGINEER No. 40522
REGISTERED
CERTIFICATE OF AUTHORIZATION
GRAY ENGINEERING CONSULTANTS, INC.
No. C00060

GRADING, DRAINAGE, AND EROSION CONTROL PLAN

PROPOSED
HOME 2 SUITES
BY HILTON

GREENWOOD COUNTY
SOUTH CAROLINA

475 HOSPITALITY BOULEVARD

0 30 60
Feet

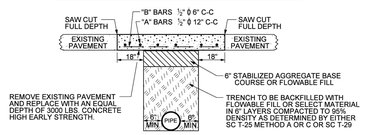
SCALE:	1" = 30'
PROJECT MANAGER:	ZDJ
DRAWN BY:	MSG
PROJECT DATE:	5/3/2023
JOB No.:	2023104
PLOT DATE:	3/26/25

SHEET
CV-2

2023104 - Greenwood Home2Suites - D16.dwg

Appendix B: Pipelines
Figure 4 – Pavement Repairs

OPEN CUT REPAIR FOR CONCRETE PAVEMENT



OPEN CUT REPAIR FOR HIGH VOLUME ASHALT PAVEMENT

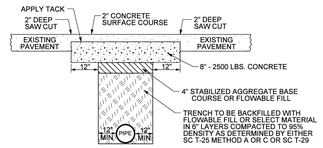
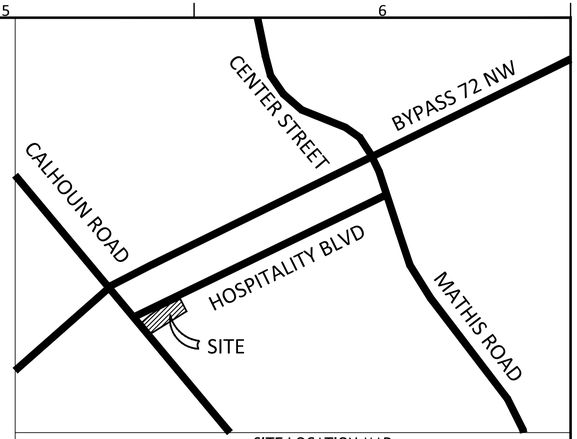


FIGURE 4
PAVEMENT REPAIRS

DISTRICT 3

UTILITY NOTES

1. REFERENCE ARCHITECTURAL/MECHANICAL PLANS FOR EXACT UNDERGROUND UTILITY CONNECTION POINTS AND FOR INTERNAL UNDERGROUND UTILITY UNIONS.
2. SANITARY SEWER SERVICE LINES ARE TO BE 6" PVC WITH A MINIMUM SLOPE OF 1.00%, UNLESS OTHERWISE NOTED.
3. SITE LIGHTING SHOWN FOR REFERENCE ONLY.
4. REFERENCE MECHANICAL DESIGN FOR SIZES, FITTINGS, AND DESIGN OF POOL DRAIN, OUTDOOR SHOWER DRAIN, AND SUMP DRAIN. CONNECT ALL DRAINS TOGETHER VIA 6" PVC, INCLUDE SANITARY SEWER CLEANOUT AS SHOWN, AND DRAIN TO EXISTING SANITARY SEWER SYSTEM.
5. CONTRACTOR SHALL PROVIDE A PRIVATE UTILITY LOCATE SERVICE TO MARK ALL EXISTING UTILITY SERVICES TO THE EXISTING BUILDING ON THE SITE PRIOR TO ANY DEMOLITION OR NEW CONSTRUCTION.



SITE LOCATION MAP
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UTILITY PLAN LEGEND

PROPERTY BOUNDARY	
R/W	SCDOT RIGHT-OF-WAY
LOT LINES	
NEW ROAD/CURB & GUTTER	
DRAINAGE/UTILITY EASEMENTS	
EX ELEC	EXISTING OVERHEAD ELECTRIC
EX GAS	EXISTING GAS
OHP	EXISTING OVERHEAD POWER
EXISTING STORM DRAINAGE	
SD	PROPOSED STORM DRAINAGE
WL	PROPOSED WATERLINE
SS	EXISTING SANITARY SEWER
SS	PROPOSED SANITARY SEWER
SS	PROPOSED SANITARY SEWER SERVICE LINE

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WATER LINE CONNECTION NOTES:

GREENWOOD COMMISSION OF PUBLIC WORKS WILL MAKE THE WATER LINE TAP ON THEIR WATER MAIN. CPW WILL PROVIDE AND SET THE VAULT WITH ASSOCIATED APPURTENANCES & PROVIDE STUB OUTS FOR THE CONTRACTOR TO CONNECT TO. OWNER MUST MAKE A FORMAL REQUEST TO CPW AND CPW WILL PROVIDE AN AGREEMENT WITH ESTIMATED COSTS ASSOCIATED WITH THEIR WORK. ONCE OWNER SIGNS THE AGREEMENT, CPW WILL ORDER MATERIALS AND SET AN INSTALL DATE.

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GRAY ENGINEERING CONSULTANTS, INC.
No. C00060

SOUTH CAROLINA PROFESSIONAL ENGINEER
No. 40522
JOSHUA D. BAKER

UTILITY PLAN
PROPOSED HOME 2 SUITES BY HILTON
GREENWOOD COUNTY SOUTH CAROLINA
475 HOSPITALITY BOULEVARD

0 30 60 Feet

SCALE:	1" = 30'
PROJECT MANAGER:	ZDJ
DRAWN BY:	MSG
PROJECT DATE:	5/3/2023
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SHEET
CV-3

2023104 - Greenwood Home2Suites - D16.dwg

PHASE 1 EROSION CONTROL PLAN CONSTRUCTION SEQUENCE

1. DESIGN ENGINEER SHALL NOTIFY SCDHEC AND SET UP PRE-CON MEETING PRIOR TO ANY LAND DISTURBING ACTIVITIES. ENGINEER, SCDHEC INSPECTOR, AND CONTRACTOR REQUIRED TO ATTEND MEETING. CEPSCI INSPECTOR AND DEVELOPER STRONGLY ENCOURAGED TO ALSO ATTEND MEETING.
2. CONTRACTOR TO SIGN CONTRACTOR CERTIFICATION AND BE KEPT AT JOBSITE AT ALL TIMES. PLEASE UPDATE AS NEEDED FOR ADDITIONAL SUBCONTRACTORS.
3. COMPLETE 2021 CGP, CITY OF GREER GRADING PERMIT, NPDES COVERAGE LETTER, CONTRACTOR CERTIFICATION, STAMPED APPROVED SET OF PLANS, AND C-SWPPP TO BE KEPT AT JOBSITE AT ALL TIMES.
4. CEPSCI INSPECTIONS REQUIRED AT LEAST ONCE EVERY 7 CALENDAR DAYS ONCE CONSTRUCTION BEGINS AND WITHIN 24 HOURS OF EVERY STORM EVENT OF OVER 1/2 INCH OF RAINFALL. RAIN GAUGE TO BE KEPT AT JOBSITE AND LOG UPDATED AFTER ALL RAIN EVENTS OVER 1/2 INCH.
5. CONTRACTOR MAY BEGIN INSTALLATION OF ALL PERIMETER SILT FENCING AND INSTALL STONE CONSTRUCTION ENTRANCE MUD-MAT. DISTURBANCE LIMITED TO ONLY WHAT IS NEEDED TO INSTALL SILT FENCE, NO DIRT OR MUD ALLOWED ON HOSPITALITY DRIVE OR CALHOUN DRIVE, CLEAN ROADS DAILY.
6. CONTRACTOR TO INSTALL TEMPORARY SEDIMENT BASIN WITH OUTLET CONTROL STRUCTURE AND SKIMMER PER DETAILS
7. CONTRACTOR SHALL NOTIFY SCDHEC INSPECTOR ONCE PRELIMINARY EROSION CONTROLS ARE INSTALLED.
8. CONTRACTOR SHALL DEMOLISH (IF) ANY EXISTING STRUCTURES ON PROPERTY IN ACCORDANCE WITH ALL LOCAL AND FEDERAL REGULATIONS.
9. CONTRACTOR SHALL CAP AND PLUG (IF) ANY WELL IN ACCORDANCE WITH LOCAL AND FEDERAL REGULATIONS.
10. ONCE PERIMETER SILT FENCE, TEMPORARY SEDIMENT BASIN, DIVERSION DITCHES/BERMS, ROCK CHECK DAMS, SILT FENCE ROCK OUTLET AND CONSTRUCTION EXITS ARE INSTALLED ACCORDING TO SPECIFICATIONS, CONTRACTOR MAY BEGIN CLEARING AND GRUBBING SITE.
11. TEMPORARY SEEDING AROUND SITE AS NECESSARY.
12. PHASE 2 NOT ALLOWED UNTIL ALL BMPS ARE VERIFIED INCLUDING SILT FENCE, AND CONSTRUCTION EXIT.
13. WEEKLY INSPECTIONS ARE TO CONTINUE TO CLOSELY MONITOR ALL DOWNSTREAM AREAS WHERE STORMWATER IS LEAVING SITE TO CHECK FOR ANY SEDIMENT NOT BEING CAPTURED ONSITE.

POLLUTION PREVENTION NOTES

- **MINIMIZE THE DISCHARGE OF POLLUTANTS FROM DEWATERING TRENCHES AND EXCAVATIONS** BY MANAGING RUNOFF WITH THE APPROPRIATE CONTROLS SUCH AS THE ONSITE SEDIMENT BASINS OR ADDITIONAL SILT FENCE WITH APPROVAL OF ENGINEER/COUNTY. OTHERWISE THESE DISCHARGES ARE PROHIBITED;
- **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;
- **MINIMIZE THE EXPOSURE OF BUILDING MATERIALS, BUILDING PRODUCTS, CONSTRUCTION WASTES, TRASH**, LANDSCAPE MATERIALS, FERTILIZERS, PESTICIDES, HERBICIDES, DETERGENTS, SANITARY WASTE AND OTHER MATERIALS PRESENT ON THE SITE TO PRECIPITATION AND TO STORMWATER; AND
- **MINIMIZE THE DISCHARGE OF POLLUTANTS FROM SPILLS AND LEAKS** AND IMPLEMENT CHEMICAL SPILL AND LEAK PREVENTION AND RESPONSE PROCEDURES. **ONSITE FUEL CLEANUP KIT REQUIRED AT ALL TIMES DURING CONSTRUCTION. MINIMUM 10 GALLON CAPACITY.**

PORTABLE TOILETS

PORTABLE TOILET FACILITIES MUST BE PROVIDED AND MAINTAINED IN A SAFE AND SANITARY MANNER IN ACCORDANCE WITH ALL APPLICABLE FEDERAL, STATE AND LOCAL REQUIREMENTS OR PERMIT CONDITIONS.

WHEN PLACED AT A WORK SITE, THE TOILETS MUST BE PLACED IN ACCORDANCE WITH OSHA REQUIREMENTS AND SERVICED IN ACCORDANCE WITH INDUSTRY STANDARDS.

THE TOILET UNIT MUST BE SET ON A LEVEL STABLE BASE MATERIAL, AWAY FROM STORM DRAINS, WATERWAYS, AND AREAS WITH HIGH VEHICULAR TRAFFIC. THE PORTABLE TOILET SHALL NOT BE PLACED ON THE PUBLIC ROAD PAVEMENT, A PUBLIC SIDEWALK, SEWER MANHOLE, CATCH BASIN OR CURB INLET.

PORTABLE TOILETS SHALL BE POSTED WITH PROPER SIGNAGE TO DISPLAY THE TELEPHONE NUMBER AND CONTACT INFORMATION FOR THE COMPANY RESPONSIBLE FOR CLEANING, SERVICING OR REPAIR OF THE TOILET UNITS.

SURFACE WATER BMP MAINTENANCE NOTES

ALL BMPS WHOSE DISCHARGES REACH ADJACENT SURFACE WATERS SHOULD BE MAINTAINED UNTIL FINAL STABILIZATION IS REACHED.

ALL BMPS DISCHARGING TO A SURFACE WATERS MUST BE MAINTAINED TO PREVENT THE DISCHARGE OF SEDIMENT-LADEN STORMWATER TO TEH BEST EXTENT POSSIBLE.

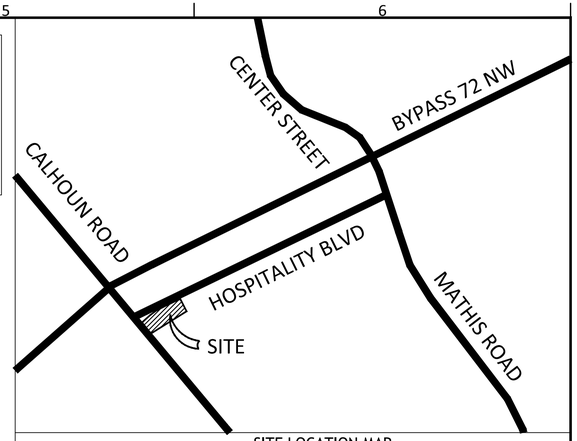
ANY ACCUMULATED SEDIMENT WITHIN BMPS ADJACENT TO SURFACE WATER IS TO BE REMOVED WHEN THE SEDIMENT DEPTH REACHES THE CLEANOUT HEIGHT OF EACH SPECIFIC BMP.

RECORDS OF MAINTENANCE OF ALL BMPS DISCHARGING TO SURFACE WATERS MUST BE KEPT WITHIN THE SWPPP'S MAINTENANCE LOG.

PROHIBITED DISCHARGES

PERMITTEES, CONTRACTORS, AND ALL OTHER RESPONSIBLE PARTIES FOR CONDUCTING AND-DISTURBING ACTIVITIES ARE PROHIBITED TO DISCHARGES, FROM THE CONSTRUCTION SITE, THE FOLLOWING ITEMS:

- **WASTEWATER FROM WASHOUT OF CONCRETE, UNLESS IN DESIGNATED CONCRETE WASHOUT AREA.**
- **WASTEWATER FROM WASHOUT AND CLEANOUT OF STUCCO, PAINT, FORM RELEASE OILS, CURING COMPOUNDS AND OTHER CONSTRUCTION MATERIALS;**
- **FUELS, OILS, OR OTHER POLLUTANTS USED IN VEHICLE AND EQUIPMENT OPERATION AND MAINTENANCE; AND**
- **SOAPS OR SOLVENTS USED IN VEHICLE AND EQUIPMENT WASHING.**



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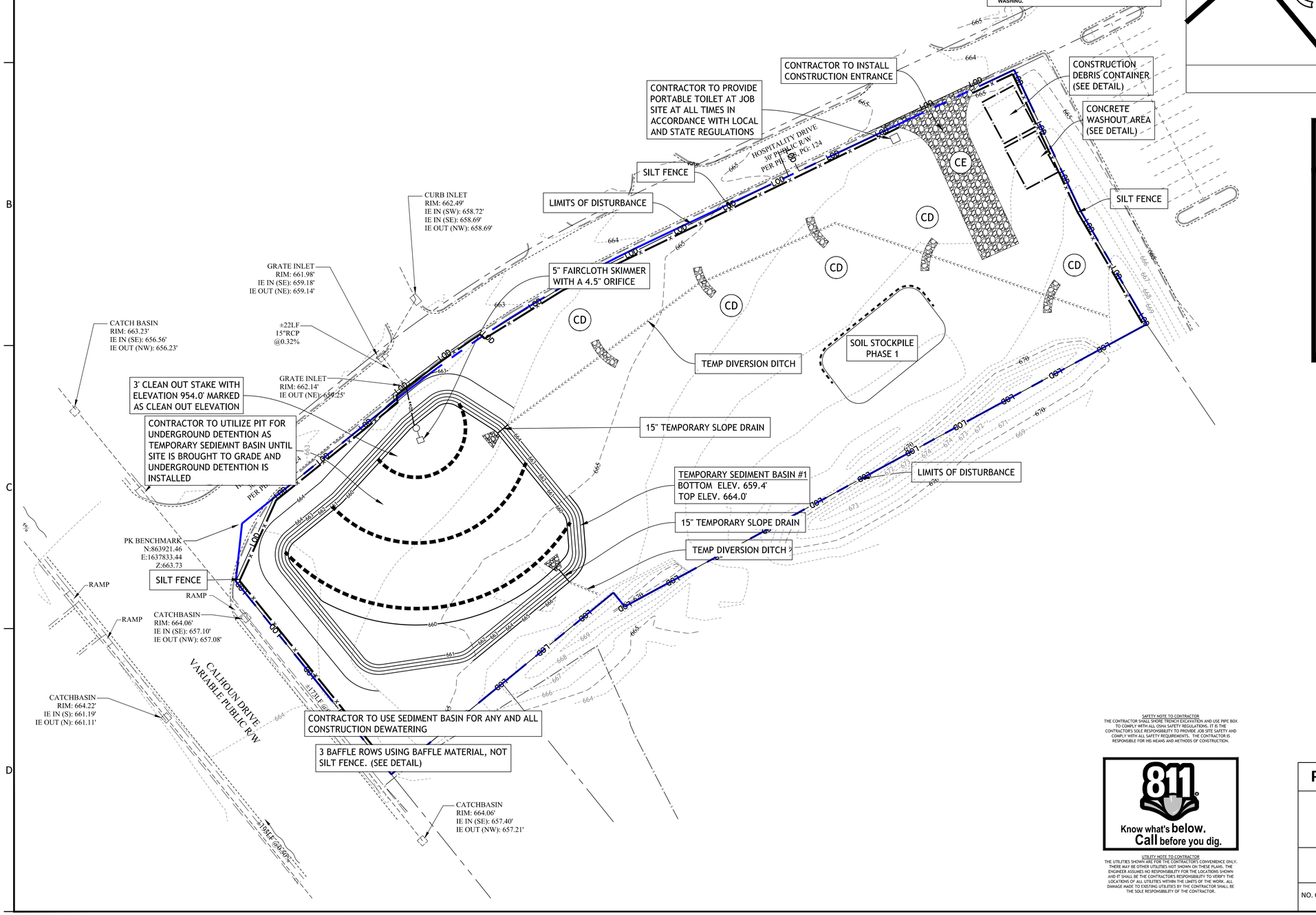

EROSION AND SEDIMENTATION CONTROLS LEGEND - PHASE 1

x — x	SF	SILT FENCING
LOD		LIMITS OF DISTURBANCE
		PROPERTY LINE
	IP1	WIRE MESH AND STONE INLET PROTECTION
	IP2	SEDIMENT TUBE INLET PROTECTION
CE	CE	CONSTRUCTION EXIT RIPRAP
	RR	OUTLET PROTECTION

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- SC C.O.A.# C00060 - NC C.O.A.# C1217 - GA C.O.A.# PE003941 - TN C.O.A.# 0410819 -

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 40522 JOSHUA D BAKER
NORTH CAROLINA CORPORATE CERTIFICATE OF AUTHORIZATION GRAY ENGINEERING CONSULTANTS, INC. No. C00060

EROSION & SEDIMENTATION CONTROL PLAN-PHASE 1

PROPOSED
HOME 2 SUITES
BY HILTON

GREENWOOD COUNTY
SOUTH CAROLINA

475 HOSPITALITY BOULEVARD

0 30 60 Feet

SCALE:	1" = 30'
PROJECT MANAGER:	ZDJ
DRAWN BY:	MSG
PROJECT DATE:	5/3/2023
JOB No.:	2023104
PLOT DATE:	3/26/25

SHEET
EC-1

2023104 - Greenwood Home2Suites - D16.dwg

PHASE 2 EROSION CONTROL PLAN CONSTRUCTION SEQUENCE

1. CONTRACTOR NOT TO BEGIN GRADING (PHASE 2) OF SITE UNTIL ALL BMPS INCLUDING SILT FENCE, PERIMETER CONTROLS, AND CONSTRUCTION EXIT HAVE BEEN INSTALLED.
2. WEEKLY INSPECTIONS ARE TO CONTINUE TO CLOSELY MONITOR ALL DOWNSTREAM AREAS WHERE STORMWATER IS LEAVING SITE TO CHECK FOR ANY SEDIMENT NOT BEING CAPTURED ONSITE.
3. MASS GRADING TO BEGIN TO ESTABLISH ELEVATIONS AS SHOWN ON GRADING PLAN.
4. CONTRACTOR CAN BEGIN INSTALLING STORMWATER, SANITARY SEWER, AND WATER PIPE AS DEEMED APPROPRIATE. (NO TIE INTO EXISTING WATER MAIN OR SEWER MANHOLE WITHOUT PRIOR APPROVAL AND TIE-IN INSPECTION)
5. AS STORM PIPE AND CATCH BASINS ARE INSTALLED, INLET PROTECTION TO BE IMMEDIATELY INSTALLED AS SHOWN. PLEASE ALSO SEE DETAILS FOR PIPE INLET PROTECTION DURING CONSTRUCTION.
6. CONTRACTOR TO BEGIN INSTALLING UNDERGROUND DETENTION SYSTEM AND REMOVING TEMPORARY SEDIMENT BASIN
7. CONTRACTOR TO TIE STORM DRAINAGE INTO UNDERGROUND DETENTION ONCE SYSTEM IS INSTALLED AND FUNCTIONING
8. ALL SILT FENCE TO BE CLEARED OF ACCUMULATED SILT ONCE SILT HAS REACHED 1/3 HEIGHT OF SILT FENCE.
9. AS SLOPES BECOME FINALIZED, PERMANENT GRASSING TO BE INSTALLED. FOR ALL SLOPES OVER 6 FEET IN HEIGHT, EROSION CONTROL MATTING BLANKET IS TO BE INSTALLED PER DETAIL SHEETS.
10. INSTALLATION OF CONCRETE WASHOUT AREA BMP REQUIRED PRIOR TO POURING CONCRETE/CURBING ONSITE.
11. FINE GRADING.
12. INSTALLATION OF CURB AND GUTTER CAN BEGIN ONCE ALL UTILITIES IN ROADWAY HAVE BEEN INSTALLED AND FILL PROPERLY COMPACTED.
13. ONCE CATCH BASIN INLETS HAVE BEEN TIED INTO NEW CURBING, SEDIMENT TUBES ARE TO BE INSTALLED IMMEDIATELY IN PLACE OF STONE AND WIRE MESH.
14. ALL SEDIMENT AND EROSION CONTROL DEVICES TO CONTINUE TO BE MAINTAINED WHILE ALL FINAL GRADING IS COMPLETED PRIOR TO FINAL STABILIZATION.
15. FINE GRADING TO CONTINUE AND PERMANENT SEEDING APPLIED TO AREAS THAT WILL NOT BE DISTURBED DURING THE BUILDING CONSTRUCTION. TEMPORARY GRASSING AS NEEDED FOR ALL AREAS, WHERE CONSTRUCTION ACTIVITIES HAVE CEASED FOR MORE THAN 14 DAYS.
16. ENSURE NO SEDIMENT ON ADJACENT ROADWAYS. STABLIZE IMMEDIATELY.
17. ROADWAYS TO BE PAVED AND REMAINING UTILITIES TO BE INSTALLED.
18. ALL UTILITY PROVIDERS TO SIGH BLANKET UTILITY NOI AND INCLUDE IN ONSITE SWPPP.
19. ONCE ALL UTILITIES HAVE BEEN INSTALLED, FINAL GRASSING CAN BE ESTABLISHED.
20. ALL INLET PROTECTION TO REMAIN AND TO BE MAINTAINED BY FOLLOWING MANUFACTURERS MAINTENANCE INSTRUCTIONS.
21. AS CONSTRUCTION BEGINS, PRIMARY PERMITTEE IS STILL RESPONSIBLE FOR ALL EROSION CONTROL MATTERS AND IS TO LIST ALL CONTRACTORS AND SUBCONTRACTORS IN ONSITE SWPPP. ALL BUILDERS AND SUBCONTRACTORS ARE TO SIGN CONTRACTORS CERTIFICATION SO THEY ARE AWARE OF THEIR RESPONSIBILITY IN REGARDS TO EROSION CONTROL.
22. ONCE FINAL STABILIZATION OF SITE INCLUDING PERMANENT GRASSING HAS TAKEN PLACE, ALL TEMPORARY SILT FENCE MUST BE REMOVED.
23. DEVELOPER TO SUBMIT APPROPRIATE AS-BUILT CERTIFICATIONS. 80% STABILIZATION IS REQUIRED FOR CLOSE OUT.
24. CONTACT SCDHEC FOR CLOSEOUT/TERMINATION INSPECTION.
25. CONSULT WITH ENGINEER TO SUBMIT FOR NOT WITH DHEC ONCE CLOSEOUT INSPECTION ITEMS HAVE BEEN ADDRESSED.

POLLUTION PREVENTION NOTES

- **MINIMIZE THE DISCHARGE OF POLLUTANTS FROM DEWATERING TRENCHES AND EXCAVATIONS** BY MANAGING RUNOFF WITH THE APPROPRIATE CONTROLS SUCH AS THE ONSITE SEDIMENT BASINS OR ADDITIONAL SILT FENCE WITH APPROVAL OF ENGINEER/COUNTY. OTHERWISE THESE DISCHARGES ARE PROHIBITED;
- **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;
- **MINIMIZE THE EXPOSURE OF BUILDING MATERIALS, BUILDING PRODUCTS, CONSTRUCTION WASTES, TRASH**, LANDSCAPE MATERIALS, FERTILIZERS, PESTICIDES, HERBICIDES, DETERGENTS, SANITARY WASTE AND OTHER MATERIALS PRESENT ON THE SITE TO PRECIPITATION AND TO STORMWATER; AND
- **MINIMIZE THE DISCHARGE OF POLLUTANTS FROM SPILLS AND LEAKS** AND IMPLEMENT CHEMICAL SPILL AND LEAK PREVENTION AND RESPONSE PROCEDURES. **ONSITE FUEL CLEANUP KIT REQUIRED AT ALL TIMES DURING CONSTRUCTION. MINIMUM 10 GALLON CAPACITY.**

NOTE: ALL AREAS DISTURBED MUST BE STABILIZED WITHIN 14 DAYS.

PORTABLE TOILETS

PORTABLE TOILET FACILITIES MUST BE PROVIDED AND MAINTAINED IN A SAFE AND SANITARY MANNER IN ACCORDANCE WITH ALL APPLICABLE FEDERAL, STATE AND LOCAL REQUIREMENTS OR PERMIT CONDITIONS.

WHEN PLACED AT A WORK SITE, THE TOILETS MUST BE PLACED IN ACCORDANCE WITH OSHA REQUIREMENTS AND SERVICED IN ACCORDANCE WITH INDUSTRY STANDARDS.

THE TOILET UNIT MUST BE SET ON A LEVEL STABLE BASE MATERIAL, AWAY FROM STORM DRAINS, WATERWAYS, AND AREAS WITH HIGH VEHICULAR TRAFFIC. THE PORTABLE TOILET SHALL NOT BE PLACED ON THE PUBLIC ROAD PAVEMENT, A PUBLIC SIDEWALK, SEWER MANHOLE, CATCH BASIN OR CURB INLET.

PORTABLE TOILETS SHALL BE POSTED WITH PROPER SIGNAGE TO DISPLAY THE TELEPHONE NUMBER AND CONTACT INFORMATION FOR THE COMPANY RESPONSIBLE FOR CLEANING, SERVICING OR REPAIR OF THE TOILET UNITS.

SURFACE WATER BMP MAINTENANCE NOTES

ALL BMPS WHOSE DISCHARGES REACH ADJACENT SURFACE WATERS SHOULD BE MAINTAINED UNTIL FINAL STABILIZATION IS REACHED.

ALL BMPS DISCHARGING TO A SURFACE WATERS MUST BE MAINTAINED TO PREVENT THE DISCHARGE OF SEDIMENT-LADEN STORMWATER TO TEH BEST EXTENT POSSIBLE.

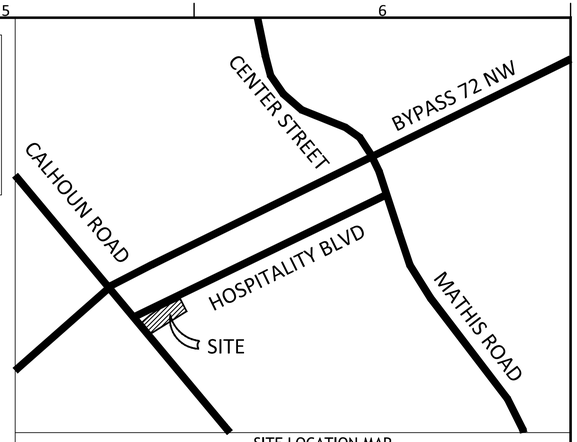
ANY ACCUMULATED SEDIMENT WITHIN BMPS ADJACENT TO SURFACE WATER IS TO BE REMOVED WHEN THE SEDIMENT DEPTH REACHES THE CLEANOUT HEIGHT OF EACH SPECIFIC BMP.

RECORDS OF MAINTENANCE OF ALL BMPS DISCHARGING TO SURFACE WATERS MUST BE KEPT WITHIN THE SWPPP'S MAINTENANCE LOG.

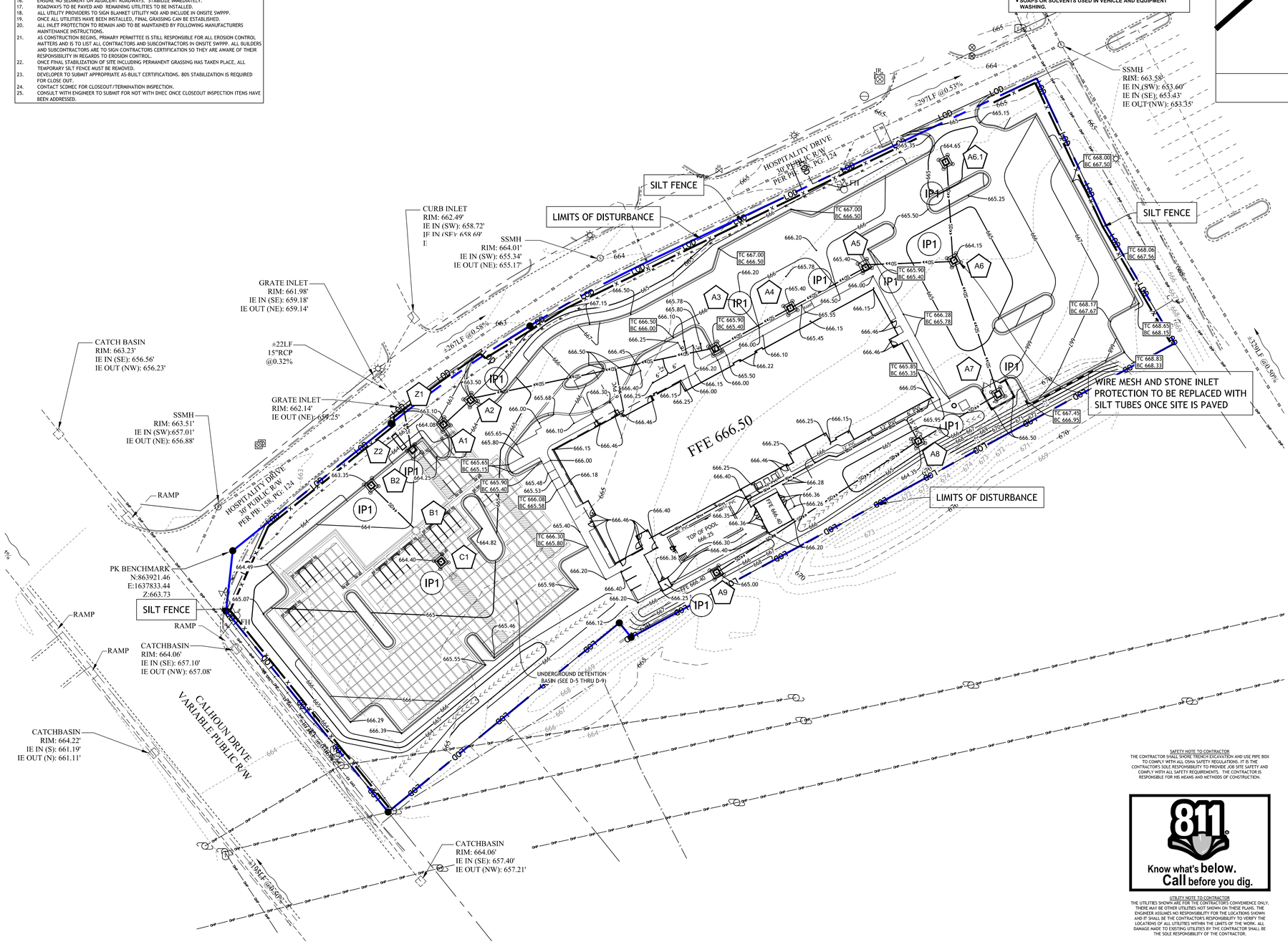
PROHIBITED DISCHARGES

PERMITTEES, CONTRACTORS, AND ALL OTHER RESPONSIBLE PARTIES FOR CONDUCTING AND-DISTURBING ACTIVITIES ARE PROHIBITED TO DISCHARGES, FROM THE CONSTRUCTION SITE, THE FOLLOWING ITEMS:

- **WASTEWATER FROM WASHOUT OF CONCRETE, UNLESS IN DESIGNATED CONCRETE WASHOUT AREA.**
- **WASTEWATER FROM WASHOUT AND CLEANOUT OF STUCCO, PAINT, FORM RELEASE OILS, CURING COMPOUNDS AND OTHER CONSTRUCTION MATERIALS;**
- **FUELS, OILS, OR OTHER POLLUTANTS USED IN VEHICLE AND EQUIPMENT OPERATION AND MAINTENANCE; AND**
- **SOAPS OR SOLVENTS USED IN VEHICLE AND EQUIPMENT WASHING.**



SITE LOCATION MAP
(NOT TO SCALE)



EROSION AND SEDIMENTATION CONTROLS LEGEND - PHASE 2

x x	SF	SILT FENCING
LOD		LIMITS OF DISTURBANCE
		PROPERTY LINE
	IP1	WIRE MESH AND STONE INLET PROTECTION
	IP2	SEDIMENT TUBE INLET PROTECTION
CE	CE	CONSTRUCTION EXIT RIPRAP
	RR	OUTLET PROTECTION

SPECIAL GRAY ENGINEERING NOTES:

1. SITE CONTRACTOR SHALL HAVE AN ACCEPTABLE SOIL TESTING FIRM/GEOTECH TEST ALL EARTHWORK COMPACTION. PROOF ROLL ALL AREAS AND SUBMIT REPORTS TO THE OWNER ON A WEEKLY BASIS.
2. SITE CONTRACTOR TO SUBMIT A WEEKLY TIME LOG OF CONSTRUCTION EVENTS INCLUDING DATE STARTED AND COMPLETED EACH WEEK ALONG WITH SITE PHOTOS SENT OR E-MAILED TO THE OWNER.
3. NO CLEARING DEBRIS OR TOPSOIL TO BE BURIED ON SITE. ALL FILL TO BE FREE OF ORGANICS AND ROCK.
4. FRONT LOT PINS SHALL BE SET BY R.L.S. (REGISTER LAND SURVEYOR) BEFORE STORM DRAINAGE, WATER LINES AND SEWER LINES ARE INSTALLED.
5. ALL BUILDING DOWNSPOUTS MUST BE PIPED TO EXISTING CATCH BASINS, DRAINAGE SWALES, OR SLOPE DRAINS. INSTALL TO ELIMINATE RUNOFF OVER SLOPES AND PONDING AROUND BUILDING.
6. A BUFFER SHOULD BE MAINTAINED BETWEEN ALL WOS AND CLEARLY DELINEATED BY FLAG, TAPE OR SIMILAR MAKING DEVICES TO ENSURE THE BUFFER AREA(S) ARE VISIBLE.
7. SWALES TO BE CONSIDERED STORMWATER FEATURES AND TO BE INCLUDED IN THE MAINTENANCE OF ALL STORWWATER FEATURES AND TO BE INCLUDED ON FINAL PLAT.
8. ALL FILL SHALL BE COMPACTED TO 95% STD. PROCTOR PER ASTM D-698. THE BUILDING PAD AREA SHALL BE PROFF-ROLLED (20t PUMP TRUCK). ALL SOFT SPOTS (IF ANY) SHALL BE UNDERCUT AND COMPACTED TO 98% STANDARD UNDER BUILDING. THIS INCLUDES ALL TRENCH COMPACTION AFTER EXISTING UTILITY IS REMOVED AND ALL NEW TRENCH UNDER BUILDING.
9. SECONDARY PERMITEE (BUILDER) SHALL ENSURE POSITIVE DRAINAGE FOR EACH INDIVIDUAL LOT AND IS RESPONSIBLE FOR INDIVIDUAL LOT SWALES NOT SHOWN ON PLANS. SWALES SHOWN ON PLANS ARE FOR OVERALL DRAINAGE PATTERNS DEEMED NECESSARY BY THE ENGINEER.

NOTE:
IF DISCREPANCY IS DISCOVERED ON SITE, CONTACT ENGINEER IMMEDIATELY FOR REVIEW

SAFETY NOTE TO CONTRACTOR
THE CONTRACTOR SHALL SHORE TRENCH EXCAVATION AND USE PIPE BOX TO COMPLY WITH ALL OSHA SAFETY REGULATIONS. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO PROVIDE JOB SITE SAFETY AND COMPLY WITH ALL SAFETY REQUIREMENTS. THE CONTRACTOR IS RESPONSIBLE FOR HIS MEANS AND METHODS OF CONSTRUCTION.

811
Know what's below.
Call before you dig.

UTILITY NOTE TO CONTRACTOR
THE UTILITIES SHOWN ARE FOR THE CONTRACTOR'S CONVENIENCE ONLY. THERE MAY BE OTHER UTILITIES NOT SHOWN ON THESE PLANS. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THE LOCATIONS SHOWN AND IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE LOCATIONS OF ALL UTILITIES WITHIN THE LIMITS OF THE WORK. ALL DAMAGE MADE TO EXISTING UTILITIES BY THE CONTRACTOR SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

PROPOSED HOME 2 SUITES HOTEL

DEVELOPER	ENGINEER
PARAGON HOTEL COMPANY RICKY PATEL 109 DESTINATION BLVC. ANDERSON, SC 29621 864-375-0037	GRAY ENGINEERING JOSHUA D BAKER, P.E. 132 PILGRIM ROAD GREENVILLE, SC 29607 864-297-3027

TAX MAP#: 6836-796-391

NO. OF ACRES: 2.29 DATE: 5/26/2023

NO.	DATE	BY	REVISION
-	-	-	-
A	7/29/24	MSG	REVISIONS - RESUBMITTAL
B	9/20/24	MSG	REVISE POOL PATIO & FIRE PROTECTION - IFA
C	11/22/24	MSG	REVISE WATER LINES PER CPW - IFA

Gray Engineering
132 PILGRIM ROAD - GREENVILLE, SC 29607
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SC C.O.A.# C00060 - NC C.O.A.# C1217 - GA C.O.A.# PE003941 - TN C.O.A.# 0410819

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL No. 40522 JOSHUA D BAKER CERTIFICATE OF AUTHORIZATION GRAY ENGINEERING CONSULTANTS, INC. No. C00060

EROSION & SEDIMENTATION CONTROL PLAN-PHASE 2

PROPOSED
HOME 2 SUITES
BY HILTON

GREENWOOD COUNTY
SOUTH CAROLINA

475 HOSPITALITY BOULEVARD

0 30 60 Feet

SCALE:	1" = 30'
PROJECT MANAGER:	ZDJ
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2023104 - Greenwood Home2Suites - D16.dwg

GENERAL NOTES

1. TOPOGRAPHIC AND BOUNDARY SURVEY BY PRECISION LAND SURVEYING
2. THE CONTRACTOR SHALL VERIFY THE LOCATION AND INVERT ELEVATION OF ALL UNDERGROUND UTILITIES, AND VERIFY PROPERTY CORNERS AND TOPO BEFORE ANY CONSTRUCTION IS BEGUN. CALL UTILITY COMPANIES BEFORE EXCAVATION TO LOCATE ALL BURIED CABLES AND UNDERGROUND UTILITIES.
3. THE CONTRACTOR SHOULD NOTIFY THE ENGINEERS FOR A REVIEW SHOULD DISCREPANCIES BE DISCOVERED AT THE SITE OR ON THE DRAWINGS BEFORE AND DURING CONSTRUCTION. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE BETWEEN ALL CIVIL DRAWINGS WITH GRADING AND UTILITY CONTRACTORS IN ORDER TO AVOID PROBLEMS DURING CONSTRUCTION.
4. CONTRACTOR TO SCHEDULE A PRECONSTRUCTION MEETING WITH ALL UTILITY COMPANIES PRIOR TO CONSTRUCTION. CONTRACTOR SHALL NOTIFY THE ENGINEER AND UTILITY COMPANIES DURING CONSTRUCTION OF WATER AND SEWER SO PERIODIC OBSERVATIONS CAN BE MADE. CONTRACTOR WILL CERTIFY TO THE ENGINEER IN WRITING THAT WATER AND SEWER LINES HAVE BEEN TESTED AND CONSTRUCTED ACCORDING TO THE ENGINEER'S AND UTILITY COMPANY'S DRAWINGS AND SPECIFICATIONS.
5. ALL REFERENCE TO SPECIFICATIONS FOR HIGHWAY CONSTRUCTION OR MATERIALS ARE MADE FROM SOUTH CAROLINA STATE HIGHWAY DEPARTMENT'S STANDARD SPECIFICATION, LATEST EDITION.
6. THE CONTRACTOR SHALL BE SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITIONS OF THE JOB SITE, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY DURING PERFORMANCE OF THE WORK. THIS REQUIREMENT WILL APPLY CONTINUOUSLY AND WILL NOT BE LIMITED TO NORMAL WORKING HOURS. THE DUTY OF THE ENGINEER TO CONDUCT CONSTRUCTION REVIEW OF THE CONTRACTOR'S PERFORMANCE IS NOT INTENDED TO INCLUDE REVIEW OF THE ADEQUACY OF THE CONTRACTOR'S SAFETY MEASURES, IN, ON, OR NEAR THE CONSTRUCTION SITE. THE CONTRACTOR WILL BE RESPONSIBLE FOR PROVIDING AND MAINTAINING ALL BARRICADES, WARNING SIGNS, FLASHING LIGHTS, AND TRAFFIC CONTROL DEVICES DURING CONSTRUCTION. THE CONTRACTOR IS TO COMPLY WILL ALL OSHA REGULATIONS, REQUIREMENTS, AND SAFETY MEETING REQUIREMENTS.
7. TOPSOIL SHALL BE STRIPPED TO A DEPTH AS REQUIRED AND STOCKPILED AS DIRECTED BY THE OWNER'S REPRESENTATIVE.
8. THE CLASSIFICATION OF SOILS INCLUDE: TOPSOIL, FILL MATERIAL, UNSUITABLE MATERIAL, AND ROCK EXCAVATION. THE CLASSIFICATION OF SOILS IS THE RESPONSIBILITY OF THE OWNER'S SOIL TESTING FIRM.
9. ALL EXISTING SLOPES STEEPER THAN 4:1 THAT WILL RECEIVE FILL SHALL BE PLOWED AND SCARIFIED SO NEW FILL WILL BOND WITH EXISTING SURFACE.
10. ALL REINFORCED CONCRETE PIPE (RCP) SHALL BE CLASS III, UNLESS NOTED ON DRAWINGS WITH BELL & SPIGOT ENDS AND SHALL CONFORM TO ALL REQUIREMENTS OF ASTM C 76, LATEST EDITION, INSTALLED WITH FLEXIBLE PLASTIC (BITUMEN) GASKETS AT ALL JOINTS. GASKETS SHALL COMPLY WITH AASHTO M-198 751, TYPE B, AND SHALL BE INSTALLED IN STRICT ACCORDANCE WITH PIPE MANUFACTURER'S RECOMMENDATIONS.
11. ANY REINFORCED CONCRETE PIPE WITH MORE THAN 15 FOOT OF COVER SHALL BE CLASS IV WITH O-RING JOINTS.
12. ALL STORM PIPE LENGTH AND ELEVATIONS (TOPS AND INVERTS) OF STORM DRAINAGE STRUCTURES SHOWN ON THE DRAWINGS ARE APPROXIMATE. CONTRACTOR MAY HAVE TO FIELD ADJUST AS NECESSARY DURING CONSTRUCTION.
13. ANY REINFORCED CONCRETE PIPE STEEPER THAN 10 PERCENT MUST HAVE CONCRETE COLLARS. THE NUMBER OF CONCRETE COLLARS AND TYPE OF STORM PIPE WILL BE DETERMINED TOGETHER BY THE CONTRACTOR AND THE ENGINEER.
14. MAINTAIN ALL SEDIMENT AND EROSION CONTROL FEATURES THROUGHOUT THE LIFE OF THE PROJECT. INSPECTIONS TO BE EVERY 7 CALENDAR DAYS AND WITHIN 24 HOURS AFTER EACH RAINFALL EVENT THAT PRODUCES 1/2 INCH OR MORE OF PRECIPITATION.
15. ALL AREAS NOT COVERED BY BUILDINGS AND PAVEMENT SHALL RECEIVE TOPSOIL AND BE GRASSED IN ACCORDANCE WITH STATE SPECIFICATIONS (OR GRASSED IN ACCORDANCE WITH OWNER'S SPECIFICATIONS).
16. THE GRADING CONTRACTOR SHALL MAINTAIN POSITIVE DRAINAGE AWAY FROM BUILDING AT ALL TIMES. CONTRACTOR SHALL BRING TO THE ATTENTION OF THE ENGINEER ANY AREAS THAT MAY NOT DRAIN PROPERLY DURING CONSTRUCTION.
17. GRADING CONTRACTOR SHALL INCLUDE IN COST ALL CUT/FILL NECESSARY FOR EARTHWORK BALANCE. CONTRACTOR SHALL INCLUDE IN COST ALL WETTING/DRYING OF SOILS NECESSARY TO ACHIEVE COMPACTION PER SPECIFICATIONS.
18. THE SEQUENCE OF WORK SHALL CONFORM TO THE EROSION CONTROL NARRATIVE.
19. THE CONTRACTOR SHALL CONSTRUCT THE DETENTION POND TO ACT AS A SEDIMENT POND BEFORE OTHER SITE GRADING AND SITEWORK IS BEGUN. THE DETENTION POND AND SEDIMENT CONTROL DURING CONSTRUCTION SHALL COMPLY WITH ALL LOCAL CODES AND REGULATIONS. AFTER ALL SITEWORK IS COMPLETED AND GRASSING ESTABLISHED, THE GRADING CONTRACTOR SHALL REMOVE ALL SILT FROM THE POND AND LEGALLY DISPOSE OF ALL SILT OFF-SITE AT NO ADDITIONAL COST TO THE OWNER.
20. THE CONTRACTOR SHALL RETAIN THE SERVICES OF A REGISTERED LAND SURVEYOR TO PROVIDE TO THE OWNER'S REPRESENTATIVE AN AS-BUILT TOPOGRAPHIC MAP DEPICTING ALL GRADES, ALIGNMENTS, AND STRUCTURAL INFORMATION INVOLVED IN THE DETENTION POND.
21. THE CONTRACTOR SHALL NOTIFY THE OWNER'S REPRESENTATIVE WHEN INSTRUCTIONS FROM REGULATORY AGENCIES ARE RECEIVED AND COMPLY WITH INSTRUCTIONS AS DIRECTED BY THE OWNER'S REPRESENTATIVE.
22. THE CONTRACTOR SHALL CAREFULLY STUDY AND COMPARE THE CONSTRUCTION DOCUMENTS AND SHALL AT ONCE REPORT TO THE ENGINEER ANY INCONSISTENCIES OR OMISSIONS DISCOVERED. THE CONTRACTOR SHALL TAKE FIELD MEASUREMENTS TO VERIFY THAT ALL LOCATIONS ARE CORRECT PRIOR TO COMMENCING CONSTRUCTION.
23. THE CONTRACTOR SHALL NOT PERFORM ANY WORK ON ANY UTILITIES OR IN ANY PUBLIC RIGHT-OF-WAYS UNTIL HE HAS OBTAINED COPIES OF ALL NECESSARY ENCROACHMENT AND CONSTRUCTION PERMITS.
24. ROCK EXCAVATION SHALL BE CLASSIFIED AS FOLLOWS:
    A. MASSIVE ROCK EXCAVATION - ANY MATERIAL WHICH CANNOT BE EXCAVATED WITH A SINGLE TOOTH RIPPER DRAWN BY A CRAWLER TRACTOR HAVING A MINIMUM DRAW BAR RATED AT NOT LESS THAN 53,000 POUNDS (CATERPILLAR D-8 OR EQUIVALENT) AND OCCUPYING AN ORIGINAL VOLUME OF AT LEAST ONE CUBIC YARD OR MORE.
    B. TRENCH EXCAVATION - ANY MATERIAL WHICH CANNOT BE EXCAVATED WITH A POWER SHOVEL HAVING THE CAPACITY OF AT LEAST THAT OF A CATERPILLAR 225 AND OCCUPYING AN ORIGINAL VOLUME OF AT LEAST 1/2 CUBIC YARD OR MORE.
25. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RELOCATING ANY EXISTING UTILITIES NECESSARY FOR SITE CONSTRUCTION INCLUDING ALL PERMITS AND FEES.
26. THE CONTRACTOR SHALL VERIFY BENCH MARK LOCATION AND ELEVATION WITH SURVEYOR BEFORE BEGINNING CONSTRUCTION.
27. THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL EASEMENTS ON THE SITE BEFORE PROCEEDING WITH CONSTRUCTION.
28. IN THE CASE OF A CONFLICT IN SPECIFICATIONS, NOTES, OR DETAILS, THE STRICTER SHALL GOVERN.

NOTE:
ANY UNSUITABLE MATERIAL ENCOUNTERED UNDER PROPOSED ROADWAYS AND BUILDING PADS SHALL BE REMOVED AND REPLACED WITH SUITABLE MATERIAL AT NO COST TO THE OWNER.

CONTRACTOR TO ENSURE POSITIVE DRAINAGE TO PROPOSED DRAINAGE INLETS SO THAT PONDING DOES NOT OCCUR AT INTERSECTION

NOTE:
CONTRACTOR TO CONSTRUCT PERMANENT SWALES AS SHOWN ON PLANS TO DIRECT STORMWATER TO PROPOSED CATCH BASINS/INLETS.

NOTE
SHOULD THE CONTRACTOR ENCOUNTER CONFLICTING SITEWORK THE NOTES, THE MORE STRINGENT NOTE SHALL APPLY.

MANAGEMNENT STRATEGIES

1. *CONSTRUCTION WILL BE SEQUENCED SO THAT GRADING OPERATIONS CAN BEGIN AND END AS QUICKLY AS POSSIBLE.*
2. *SEDIMENT TRAPPING MEASURES WILL BE INSTALLED AS A FIRST STEP IN GRADING AND WILL BE SEEDED AND MULCHED IMMEDIATELY FOLLOWING INSTALLATION.*
3. *TEMPORARY SEEDING OR OTHER STABILIZATION WILL FOLLOW IMMEDIATELY AFTER GRADING.*
4. *STOCKPILE HEIGHTS MUST NOT EXCEED 25 FEET. STOCKPILE SLOPES MUST BE 2:1 OR FLATTER.*
5. *THE JOB SUPERINTENDENT SHALL BE RESPONSIBLE FOR THE INSTALLATION AND MAINTENANCE OF ALL EROSION AND SEDIMENT CONTROL PRACTICES.*
6. *AFTER ACHIEVING ADEQUATE STABILIZATION, THE TEMPORARY E&S CONTROLS WILL BE CLEANED UP AND REMOVED, AND THE SEDIMENT BASINS WILL BE CLEANED OUT AND CONVERTED TO A PERMANENT STORMWATER MANAGEMENT BASINS.*

SCDHEC STANDARD NOTES

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.
- WHERE STABILIZATION BY THE 14TH DAY IS PRECLUDED BY SNOW COVER OR FROZEN GROUND CONDITIONS STABILIZATION MEASURES MUST BE INITIATED AS SOON AS PRACTICABLE.
- 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 BEINITIATED ON THAT PORTION OF THE SITE.

3. ALL SEDIMENT AND EROSION CONTROL DEVICES SHALL BE INSPECTED ONCE CALENDAR EVERY WEEK. IF PERIODIC INSPECTION OR OTHER INFORMATION INDICATES THAT A BMP HAS BEEN INAPPROPRIATELY, OR INCORRECTLY, 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 STORMWATER 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:
__ WASTEWATER FROM WASHOUT OF CONCRETE, UNLESS MANAGED BY AN APPROPRIATE CONTROL;
__ WASTEWATER FROM WASHOUT AND CLEANOUT OF STUCCO, PAINT, FORM RELEASE OILS, CURING COMPOUNDS AND OTHER CONSTRUCTION MATERIALS;
__ FUELS, OILS, OR OTHER POLLUTANTS USED IN VEHICLE AND EQUIPMENT OPERATION AND MAINTENANCE; AND 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.

EROSION CONTROL NOTES

1. SILT BASINS TO BE CLEANED OUT AFTER EACH RAIN BEFORE GRASS IS ESTABLISHED. AFTER GRASS IS ESTABLISHED, AS REQUIRED TO PROVIDE MINIMUM OF 75% OF REQUIRED VOLUME.
2. GRADING CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SEDIMENT CONTROL MEASURES (IMPLEMENTATION AND MAINTENANCE). GENERAL CONTRACTOR SHALL HAVE SUPERVISORY RESPONSIBILITIES OVER GRADING CONTRACTOR.
3. ALL RIP-RAP SHALL BE DUMPED RIP-RAP IN ACCORDANCE WITH STATE HIGHWAY DEPARTMENT STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, LATEST EDITION. PIECES SHALL BE NO LARGER THAN 24 INCHES. THIS WORK SHALL ALSO CONSIST OF PLACING AN APPROVED GEOTEXTILE FABRIC, CAPABLE OF REDUCING SOIL EROSION, ON A PREPARED SLOPE BENEATH THE RIP-RAP.
4. ALL SLOPES THAT ARE 3:1 OR STEEPER SHALL BE STABILIZED WITH EROSION CONTROL FABRIC (JUTE MATTING OR EQUAL) IN ACCORDANCE WITH THE STATE HIGHWAY DEPARTMENT STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, LATEST EDITION. ALL SLOPES ARE TO BE MAINTAINED UNTIL A HEALTHY STAND OF GRASS IS ESTABLISHED.
5. GRASSING SHALL BEGIN AS SOON AS GRADING IS COMPLETED. TEMPORARY GRASSING MAY BE REQUIRED SHOULD EMBANKMENTS BE UNDER CONSTRUCTION FOR EXTENDED PERIODS.
6. FAILURE TO COMPLETE AND MAINTAIN ALL EROSION CONTROL MEASURES WILL RESULT IN THE ISSUANCE OF A STOP WORK ORDER UNTIL SUCH ITEMS ARE INSTALLED.
7. ALL TEMPORARY SILT BASINS WILL BE REMOVED AT PROJECT COMPLETION AND PERMANENTLY GRASSED.
8. ALL EXCAVATED MATERIALS TO BE USED ON SITE. ALL DEMOLISHED MATERIALS AND WASTE MATERIAL TO BE TRUCKED OFF SITE.
9. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL PERMITS REQUIRED FOR HIS BORROW AREA.

TEMPORARY DIVERSION BERMS AND/OR DITCHES WILL BE PROVIDED DURING CONSTRUCTION TO PROTECT WORK AREAS FROM UPSLOPE RUNOFF AND/OR TO DIVERT SEDIMENT LADEN WATER TO APPROPRIATE TRAPS OR STABLE OUTLETS.

NOTE:
CONTRACTOR TO ENSURE ALL STORM DRAINAGE PIPE OUTSIDE ROAD R/W HAS A MINIMUM 1' OF COVER. CONTRACTOR TO CONTACT SITE ENGINEER IF A PROBLEM SHOULD OCCUR.

NOTE:
CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGES CAUSED TO EXISTING ROADS/DRIVES AS A RESULT OF CONSTRUCTION TRAFFIC AND REPAIR THEM AS REQUIRED. COORDINATE ALL WORK WITH OCONEE COUNTY.

MAINTENANCE OF STRUCTURAL CONTROLS

IN GENERAL, ALL EROSION AND SEDIMENT CONTROL MEASURES WILL BE CHECKED DAILY AND AFTER EACH SIGNIFICANT RAINFALL. THE FOLLOWING ITEMS WILL BE CHECKED IN PARTICULAR:

1. *THE SEDIMENT TRAPS WILL BE CLEANED OUT WHEN THE LEVEL OF SEDIMENT BUILDUP REACHES THE CLEANOUT POINT INDICATED ON THE CLEANOUT STAKE.*
2. *THE SEDIMENT TRAPS WILL BE CHECKED REGULARLY FOR SEDIMENT CLEANOUT.*
3. *THE GRAVEL OUTLETS WILL BE CHECKED REGULARY FOR SEDIMENT BUILDUP WHICH WILL PREVENT DRAINAGE. IF THE GRAVEL IS CLOGGED BY SEDIMENT, IT SHALL BE REMOVED AND CLEANED OR REPLACED.*
4. *THE SILT FENCE BARRIER WILL BE CHECKED AT LEAST ONCE EVERY SEVEN (7) CALENDAR DAYS AND WITHIN 24 HOURS OF A RAINFALL EXCEEDING 0.5 INCHES. FOR UNDERMINING OR DETERIORATION OF THE FABRIC. SEDIMENT SHALL BE REMOVED WHEN THE LEVEL OF SEDIMENT DEPOSITION REACHES ONE-QUARTER TO THE TOP OF THE BARRIER.*
5. *THE SEEDED AREAS WILL BE CHECKED AT LEAST ONCE EVERY SEVEN (7) CALENDAR DAYS AND WITHIN 24 HOURS OF A RAINFALL EXCEEDING 0.5 INCHES TO ENSURE THAT A GOOD STAND IS MAINTAINED. AREAS SHOULD BE FERTILIZED AND RE-SEEDED AS NEEDED.*

SEEDING DATES AND RATES OF APPLICATION

PERFORM SEEDING DURING THE PERIODS AND AT THE RATES SPECIFIED IN THE SEEDING TABLES. DO NOT USE TEMPORARY COVER BY SEEDING OR PERMANENT SEEDING FOR PROJECTS WHEN:

- THE GROUND IS FROZEN AND/OR WHEN THE 10-DAY FORECASTED LOW TEMPERATURE REMAINS BELOW 35 DEGREES FAHRENHEIT;
- THE GROUND IS EXCESSIVELY WET; OR
- THE GROUND IS EXCESSIVELY DRY (PERIODS OF DROUGHT) UNLESS WATERING IS SPECIFIED.

DURING PERIODS OF ADVERSE CONDITIONS, USE TEMPORARY COVER BY MULCH.

SEEDBED PREPARATION

- ENSURE THAT THE AREAS RECEIVING PERMANENT SEEDING ARE UNIFORM AND CONFORM TO THE FINISHED GRADE OF THE PROJECT.
- PERFORM MINOR SHAPING AND EVENING OF UNEVEN AND ROUGH AREAS OUTSIDE OF THE GRADED AREA IN ORDER TO PROVIDE FOR MORE EFFECTIVE EROSION CONTROL AND FOR EASE OF SUBSEQUENT MOWING OPERATIONS.
- LOOSEN THE SEEDBED (INCLUDING CUT SLOPES) TO A MINIMUM DEPTH OF THREE (3) INCHES BEFORE INITIATING PERMANENT SEEDING AND TEMPORARY SEEDING.
- AN ACCEPTABLE METHOD OF PREPARING THE SEEDBED ON SLOPES IS VERTICALLY TRACKING THE SEEDBED UP AND SEEDBED UP AND DOWN THE SLOPE WITH PROPER EQUIPMENT.
- REMOVE STONES LARGER THAN TWO AND ONE-HALF (2½) INCHES IN ANY DIMENSION, LARGE DIRT CLODS, ROOTS, OR OTHER DEBRIS BROUGHT TO THE SURFACE.
- USE COMPOST IF GOOD SEEDBED MATERIAL IS NOT LOCATED ON SITE OR RESULTS OF THE SOIL TEST SHOW THE SEEDBED IS EXCESSIVELY NUTRIENT DEFICIENT TO THE EXTENT OF REQUIRING COSTLY FERTILIZER ADDITIONS AND OR HAVE EXCESSIVELY LOW PH VALUES (LOWER THAN 5.0).
- CONSIDER THE USE OF MECHANICAL SEED DRILLS TO PERFORM PERMANENT SEEDING ON AREAS WHERE TEMPORARY SEEDING OR TEMPORARY COVER BY MULCH WAS PREVIOUSLY UTILIZED.

MULCH

REQUIRED FOR ALL PERMANENT SEEDING, TEMPORARY SEEDING, AND TEMPORARY COVER APPLICATIONS. DO NOT USE MULCH IN AREAS WHERE CONCENTRATED FLOW IS EXPECTED. USE HECP MULCH FOR TEMPORARY SEEDING AND TEMPORARY COVER APPLICATIONS WHEN THE APPLICATION AREA WILL REQUIRE ADDITIONAL GRADING PRIOR TO PERMANENT SEEDING. DO NOT USE EROSION CONTROL BLANKETS (ECB) OR TURF REINFORCEMENT MATTING (TRM) IN THIS SITUATION.

WOOD CHIP MULCH
WOOD CHIP MULCH IS NOT ACCEPTABLE FOR SEEDING APPLICATIONS. IF WOOD CHIP MULCH IS USED FOR TEMPORARY COVER BY MULCH, IT MUST BE REMOVED PRIOR TO PERFORMING PERMANENT SEEDING

STRAW OR HAY MULCH WITH TACKIFIER
USE MATERIAL THAT IS CERTIFIED WEED. DO NOT USE ON SLOPES STEEPER THAN 4H:1V. ANCHOR USING ONE OF THE FOLLOWING TACKING AGENTS:
- ORGANIC OR CHEMICAL TACKIFIER
- HYDRAULIC STRAW TACKIFIERS
- EMULSIFIED ASPHALT

APPLYING STRAW OR HAY MULCH
UNIFORMLY APPLY MATERIAL AT THE RATE OF 2,000 POUNDS PER ACRE.

COMPOST MULCH
ONLY USE FROM PRODUCER THAT PARTICIPATES IN THE USCC STA PROGRAM. DO NOT USE MATERIALS THAT HAVE BEEN TREATED WITH CHEMICAL PRESERVATIVES AS A COMPOST MULCH. DO NOT USE MIXED MUNICIPAL SOLID WASTE COMPOST.

HYDRAULIC EROSION CONTROL PRODUCTS (HECPS)
USE AS AN ALLOWABLE MULCH FOR TEMPORARY COVER BY MULCH, TEMPORARY COVER BY SEEDING OR PERMANENT COVER BY SEEDING APPLICATIONS. DO NOT USE AS A CHANNEL LINER OR FOR AREAS RECEIVING CONCENTRATED FLOW.

TEMPORARY EROSION CONTROL BLANKETS (ECB) AND TURF REINFORCEMENT MATTING (TRM)
CONSIDER FOR PERMANENT SEEDING APPLICATION AREAS WITH STEEP SLOPES OR AREAS WHERE THERE IS A SIGNIFICANT EROSION PROBLEM OR POTENTIAL FOR EROSION. USE IN AREAS WHERE CONCENTRATED FLOW IS EXPECTED. DO NOT USE FOR TEMPORARY SEEDING APPLICATIONS WHEN THE APPLICATION AREAS WILL REQUIRE ADDITIONAL GRADING OR MODIFICATIONS PRIOR TO PERMANENT SEEDING.

PROTECTION OF STRUCTURES
COVER ANY PARTS OF BRIDGES, CULVERTS, GUARDRAILS, SIGNS, SIDEWALKS, CURB AND GUTTERS, CATCH BASINS, PIPE ENDS, AND OTHER STRUCTURES AS NECESSARY TO PREVENT DISCOLORATION BEFORE SPRAYING HECPS, ORGANIC OR CHEMICAL TACKIFIERS.

Non Slope Areas

Spring / Summer Non Slope Areas (during establishment, mow when Millet reaches 18-inches in height)

	Common Name[4]	Botanical Name	Planting Rate (lbs/acre)	Planting Rate (lbs/1000sf)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
✓	Common Bermudagrass[1] (hulled = hull absent)	*Cynodon dactylon*	50	1.15				•	•	•	•					
✓	White Clover	*Trifolium repens*	5	0.11			•	•				•				
✓	Browntop Millet	*Panicum ramosum*	10	0.23				•	•	•	•	•				

Fall / Winter Non Slope Areas (during establishment, mow when Rye reaches 6 to 8-inches in height)

	Common Name[4]	Botanical Name	Planting Rate (lbs/acre)	Planting Rate (lbs/1000sf)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
✓	Tall Fescue (KY-31)	*Festuca arundinacea*	50	1.15	•	•	•	•					•	•	•	•
✓	Common Bermudagrass[1] (unhulled = hull present)	*Cynodon dactylon*	15	0.34	•	•	•					•	•	•	•	•
✓	White Clover	*Trifolium repens*	5	0.11		•	•	•					•	•	•	
✓	Crimson Clover[2]	*Trfolium incarnatum*	20	0.46	•	•	•	•					•	•	•	•
✓	Rye Grain[3]	*Secale cereale*	15	0.34	•	•	•	•					•	•	•	•

[1] Common Bermudagrass: Do not use Giant Bermudagrass(NK-37).
[2] Only use pre-inoculated legumes or use an appropriate inoculant with the seed at planting.
[3] Mow Rye Grain (no lower than 3 inches) once it reaches a height of 6-8 inches to reduce competitiveness with permanent vegetation.
[4] If the Common Name of the seed listed in the Tables is not available, use seed with the listed Botanical Name.

Road Medians & Shoulders

Spring / Summer Road Median & Shoulders (during establishment, mow when Millet reaches 18-inches in height)

	Common Name[4]	Botanical Name	Planting Rate (lbs/acre)	Planting Rate (lbs/1000sf)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
✓	Common Bermudagrass[1] (hulled = hull absent)	*Cynodon dactylon*	25	0.57				•	•	•	•					
✓	Browntop Millet	*Panicum ramosum*	10	0.23				•	•	•	•	•				

Fall / Winter Road Median & Shoulders (during establishment, mow when Rye reaches 6 to 8-inches in height)

	Common Name[4]	Botanical Name	Planting Rate (lbs/acre)	Planting Rate (lbs/1000sf)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
✓	Tall Fescue (KY-31)	*Festuca aruninacea*	50	1.15	•	•	•	•					•	•	•	•
✓	Common Bermudagrass[1] (unhulled = hull present)	*Cynodon dactylon*	15	0.34	•	•	•						•	•	•	•
✓	Crimson Clover[2]	*Trfolium incarnatum*	20	0.46	•	•	•					•	•	•	•	•
✓	Rye Grain[3]	*Secale cereale*	15	0.34	•	•	•					•	•	•	•	•

[1] Common Bermudagrass: Do not use Giant Bermudagrass(NK-37).
[2] Only use pre-inoculated legumes or use an appropriate inoculant with the seed at planting.
[3] Mow Rye Grain (no lower than 3 inches) once it reaches a height of 6-8 inches to reduce competitiveness with permanent vegetation.
[4] If the Common Name of the seed listed in the Tables is not available, use seed with the listed Botanical Name.

Slopes & Buffers

Spring / Summer Slopes (during establishment, mow when Millet reaches 18-inches in height. After establishment, only mow at end of winter season)

	Common Name[4]	Botanical Name	Planting Rate (lbs/acre)	Planting Rate (lbs/1000sf)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Pick 1	Tall Fescue (KY-31)	*Festuca aruninacea*	50	1.15			•	•								
Pick 1	Bahiagrass	*Paspalum notatum*	30	0.69			•	•	•	•	•					
Pick 1	Common Bermudagrass[1] (hulled = hull absent)	*Cynodon dactylon*	15	0.34				•	•	•	•					
✓	White Clover	*Trifolium repens*	5	0.11			•	•				•				
✓	Weeping Lovegrass	*Erograstis curvula*	5	0.11			•	•	•	•	•	•				
✓	Hairy Vetch[2]	*Vicia villosa*	10	0.23				•								
✓	Browntop Millet	*Panicum ramosum*	10	0.23				•	•	•	•	•				

Fall / Winter Slopes (during establishment, mow when Rye reaches 6 to 8-inches in height. After establishment, only mow at end of winter season)

	Common Name[4]	Botanical Name	Planting Rate (lbs/acre)	Planting Rate (lbs/1000sf)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
✓	Tall Fescue (KY-31)	*Festuca aruninacea*	50	1.15	•	•	•						•	•	•	•
✓	Common Bermudagrass[1] (unhulled = hull present)	*Cynodon dactylon*	15	0.34	•	•	•						•	•	•	•
✓	White Clover[2]	*Trifolium repens*	5	0.11		•	•						•	•	•	
✓	Weeping Lovegrass	*Erograstis curvula*	5	0.11	•	•	•						•	•	•	•
Pick 1	Crimson Clover[2]	*Trfolium incarnatum*	20	0.46	•	•	•						•	•	•	•
Pick 1	Hairy Vetch[2]	*Vicia villosa*	10	0.23	•	•	•						•	•	•	•
✓	Rye Grain[3]	*Secale cereale*	15	0.34	•	•	•						•	•	•	•

[1] Common Bermudagrass: Do not use Giant Bermudagrass(NK-37).
[2] Only use pre-inoculated legumes or use an appropriate inoculant with the seed at planting.
[3] Mow Rye Grain (no lower than 3 inches) once it reaches a height of 6-8 inches to reduce competitiveness with permanent vegetation.
[4] If the Common Name of the seed listed in the Tables is not available, use seed with the listed Botanical Name.

NO.	DATE	BY	REVISION
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SOUTH CAROLINA CERTIFICATE OF AUTHORIZATION GRAY ENGINEERING CONSULTANTS, INC. No. C00060

SOUTH CAROLINA PROFESSIONAL ENGINEER No. 40522 REGISTERED JOSHUA D. BAKER

MISCELLANEOUS NOTES AND DETAILS

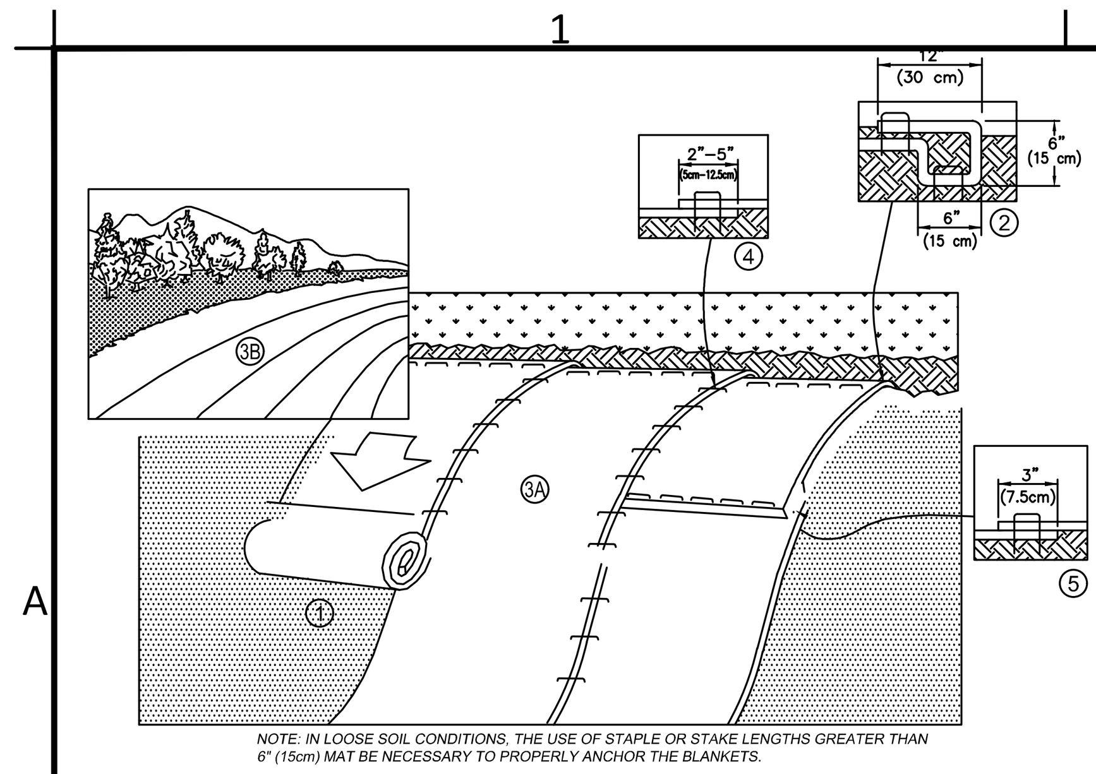
PROPOSED
HOME 2 SUITES
BY HILTON

GREENWOOD COUNTY
SOUTH CAROLINA

475 HOSPITALITY BOULEVARD

SCALE:	
PROJECT MANAGER:	ZDJ
DRAWN BY:	MSG
PROJECT DATE:	5/3/2023
JOB No.:	2023104
PLOT DATE:	

SHEET
D-1



EROSION CONTROL BLANKET DETAIL

NOTE: IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" (15cm) MAT BE NECESSARY TO PROPERLY ANCHOR THE BLANKETS.

MB

Installation:

1. PREPARE SOIL BEFORE INSTALLING BLANKETS, INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED. NOTE: WHEN USING CELL-O-SEED DO NOT SEED PREPARED AREA. CELL-O-SEED MUST BE INSTALLED WITH PAPER SIDE DOWN.
2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE BLANKET IN A 6" (15cm) WIDE TRENCH WITH APPROXIMATELY 12" (30cm) OF BLANKET EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE BLANKET WITH A ROW OF STAPLES/STAKES APPROXIAMATELY 12" (30cm) APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" (30cm) PORTION OF THE BLANKET BACK OVER SEED AND COMPACTED SOIL. SECURE BLANKET OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" (30cm) APART ACROSS THE WIDTH OF THE BLANKET.
3. ROLL THE BLANKETS (A.) DOWN OR (B.) HORIZONTALLY ACROSS THE SLOPE. BLANKETS WILL UNROLL WITH THE APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL BLANKETS MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE. WHEN USING OPTIONAL DOT SYSTEM, STAPLES/STAKES SHOULD BE PLACED THROUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN.
4. THE EDGES OF PARALLEL BLANKETS MUST BE STAPLED WITH APPROXIMATELY 2"-5" (5cm-12.5cm) OVERLAP DEPENDING ON BLANKET TYPE. TO ENSURE PROPER SEAM ALIGNMENT, PLACE THE EDGE OF THE OVERLAPPING BLANKET (BLANKET BEING INSTALLED ON TOP) EVEN WITH THE COLORED SEAM STITCH ON TEH PREVIOUSLY INSTALLED BLANKET.
5. CONSECUTIVE BLANKETS SPLICED DOWN THE SLOPE MUST BE PLACED END OVER END (SHINGLE STYLE) WITH AN APPROXIAMTE 3" (7.5cm) OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" (30cm) APART ACROSS ENTIRE BLANKET WIDTH.

INSPECTION AND MAINTENANCE:

· Inspect areas protected by ECBs for dislocation or failure every 7 calendar days and within 24-hours after each storm that produces ½-inch or more of rain.
· Conduct regular inspections until grasses are firmly established.
· Adhere to the pinning or stapling pattern as shown on the Manufacturer's installation sheet.
· If there is evidence that the ECB is not securely fastened to the soil, require extra pins or staples to inhibit the ECB from becoming dislodged.
· If washout or breakage occurs, repair all damaged areas immediately by restoring the soil on slopes or channels to its finished grade, reapply fertilizer and seed, and replacing the appropriate ECB material as needed.

MATERIAL SPECS:

All acceptable Class A and Class B erosion control blankets consisting of straw, coconut, or straw-coconut blends meet the following requirements:

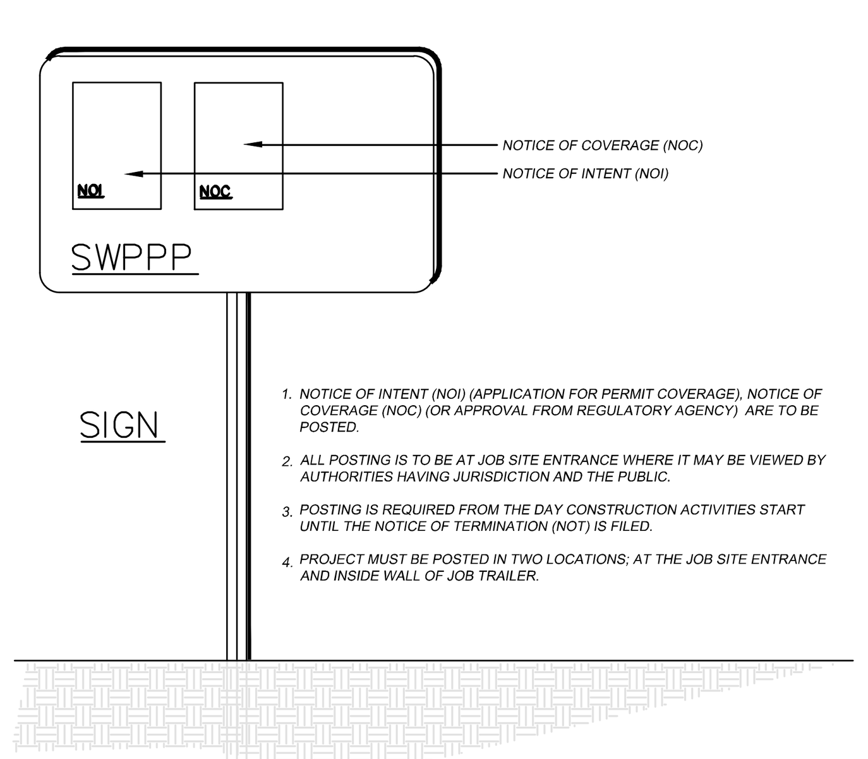
· Use non-organic, photodegradable or biodegradable polypropylene netting.
· Consist of double netted matting, defined as matting with netting on both sides of the blanket. The top netting is degradable polypropylene with a maximum mesh opening of 0.75 inches by 0.75 inches. The bottom is degradable polypropylene with a maximum mesh opening of 0.5 inches by 0.5 inches.
· Be sewn on center a maximum of 2.0 inches

All acceptable Class A and Class B erosion control blankets consisting of curled excelsior fibers meet the following requirements:

· Use non-organic, photodegradable or biodegradable polypropylene netting
· Consist of double netted matting. Double netted matting is matting with netting on both sides of the blanket. The degradable polypropylene top netting requires a maximum mesh opening of 1.0-inches by 1.0-inches. The degradable polypropylene bottom netting requires a maximum mesh opening of 1.0-inches by 1.0-inches.
· Consist of curled excelsior interlocking fibers with 80% of the fibers a minimum of 6-inches long
· Sewn on center a maximum of 4.0-inches.

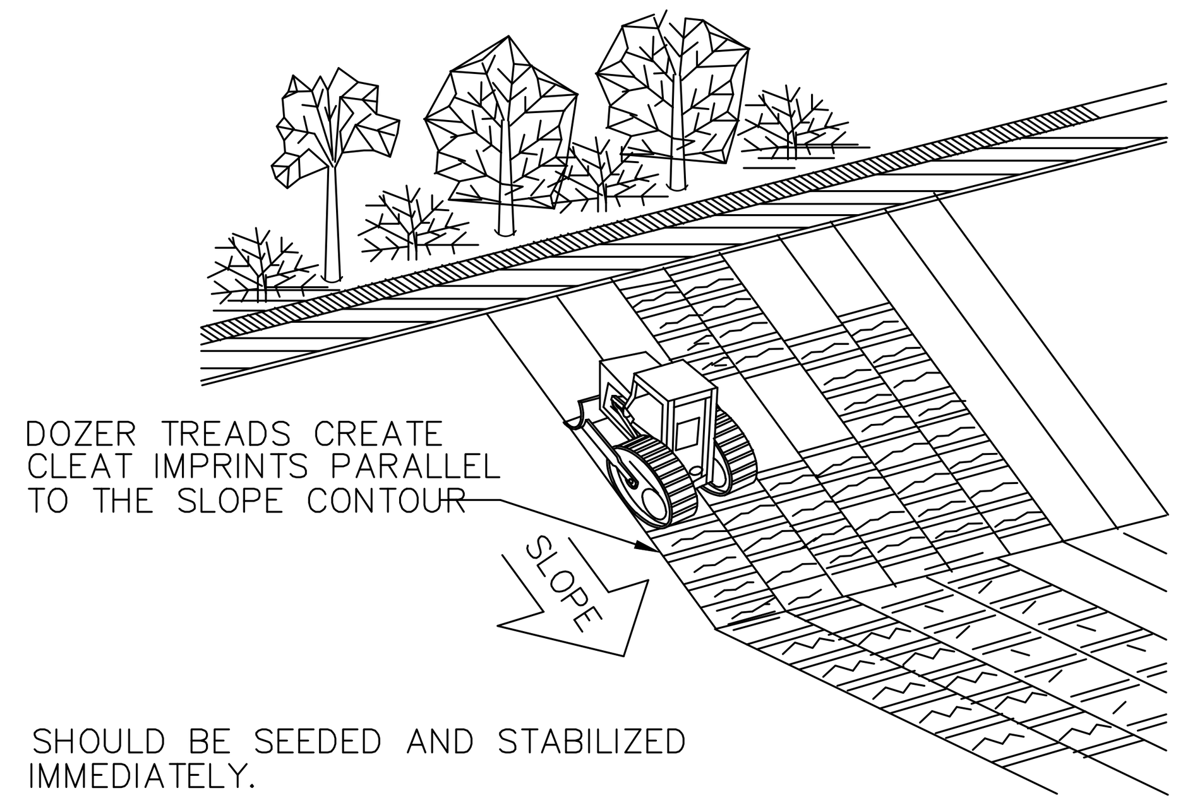
Use Class A and Class B Erosion control blankets having the following Minimum Average Roll Values (MARV) for physical properties, as derived from quality control testing performed by a Geosynthetic Accreditation Institute – Laboratory Accreditation Program (GAI-LAP) accredited laboratory:

· Minimum mass per unit area (ASTM D6475) of 6 oz/yd 2 (203 g/m 2)
· Minimum thickness (ASTM D6525) of 0.25-inches (6 mm)
· Minimum initial grab tensile strength (ASTM D6818) of 75x75 lb/ft. (1x1 kN/m)
· Minimum roll width of 48-inches (1.22 m)



1. NOTICE OF INTENT (NOI) (APPLICATION FOR PERMIT COVERAGE), NOTICE OF COVERAGE (NOC) (OR APPROVAL FROM REGULATORY AGENCY) ARE TO BE POSTED.
2. ALL POSTING IS TO BE AT JOB SITE ENTRANCE WHERE IT MAY BE VIEWED BY AUTHORITIES HAVING JURISDICTION AND THE PUBLIC.
3. POSTING IS REQUIRED FROM THE DAY CONSTRUCTION ACTIVITIES START UNTIL THE NOTICE OF TERMINATION (NOT) IS FILED.
4. PROJECT MUST BE POSTED IN TWO LOCATIONS; AT THE JOB SITE ENTRANCE AND INSIDE WALL OF JOB TRAILER.

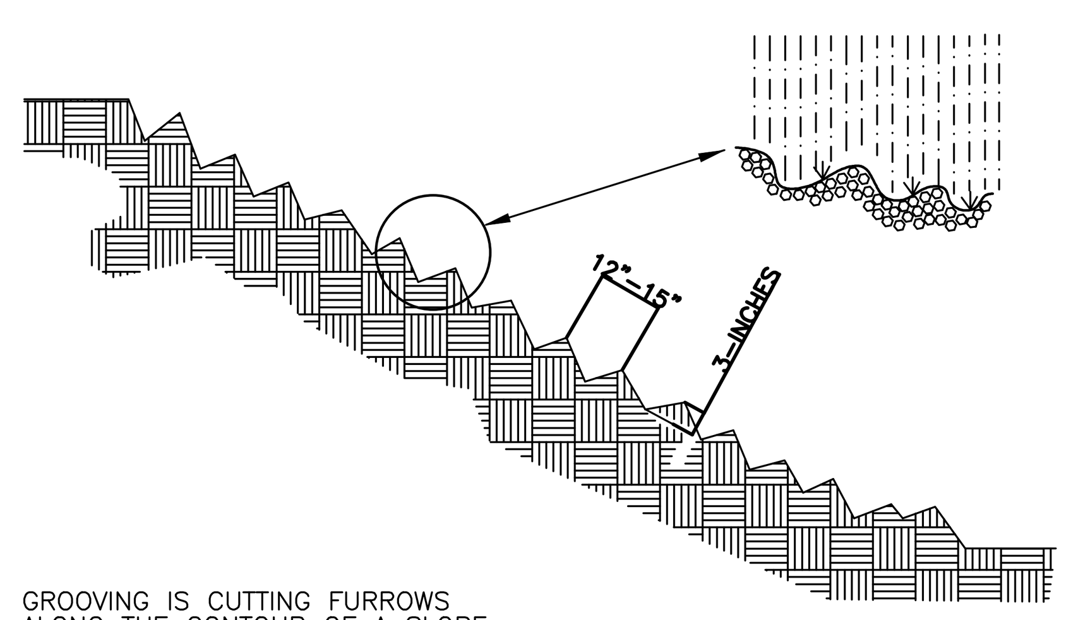
JOB SITE PERMIT POSTING DETAIL
(NOT TO SCALE)



SHOULD BE SEEDED AND STABILIZED IMMEDIATELY.

TRACKING

South Carolina Department of Health and Environmental Control
TRACKING
STANDARD DRAWING NO. EC–01 Page 1
APPROVED BY: SCDHEC AUGUST, 2005 DATE

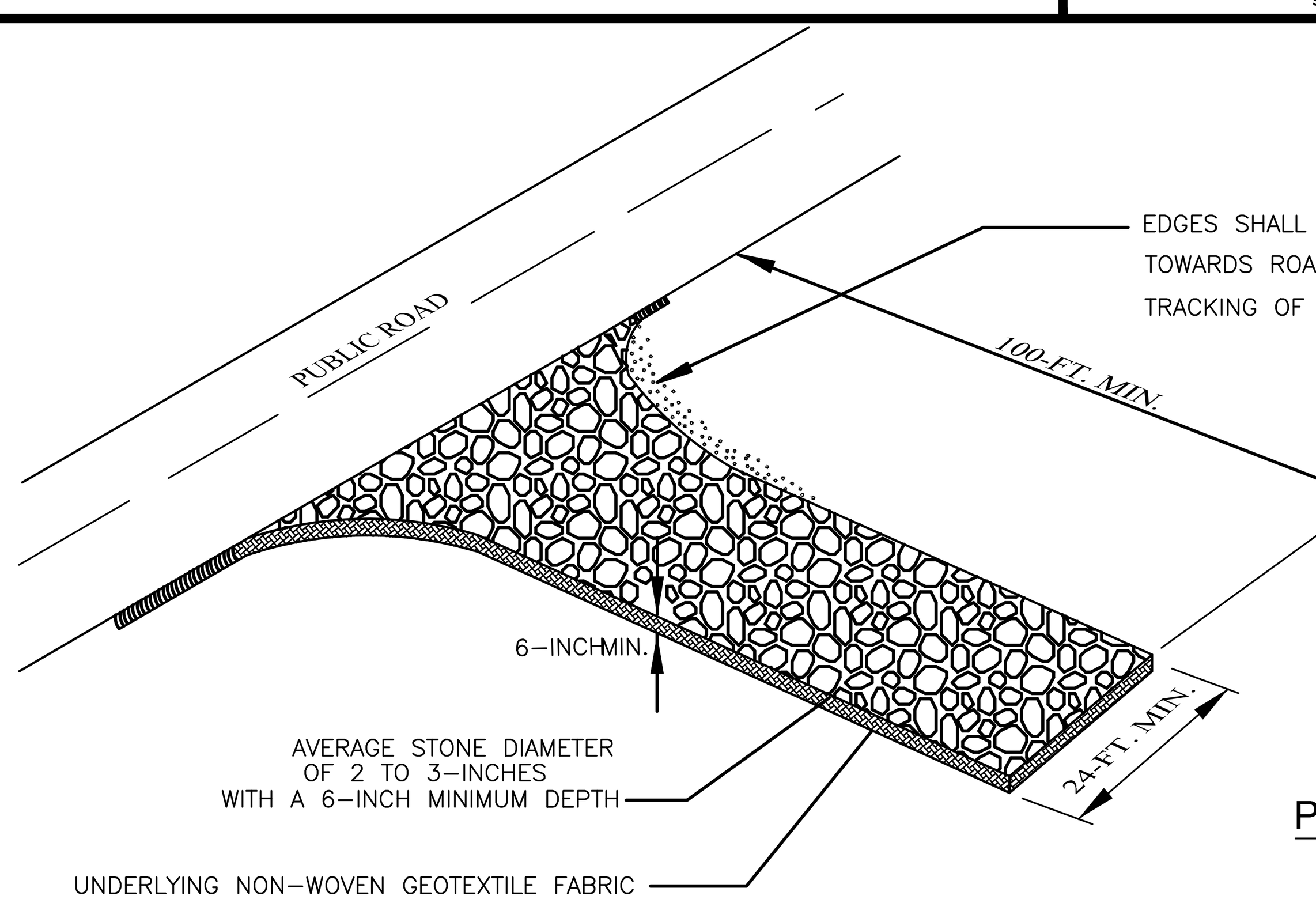


GROOVING IS CUTTING FURROWS ALONG THE CONTOUR OF A SLOPE. IRREGULARITIES IN THE SOIL SURFACE CATCH RAINWATER AND PROVIDE SOME COVERAGE OF LIME, FERTILIZER AND SEED.

SHOULD BE SEEDED AND STABILIZED IMMEDIATELY.

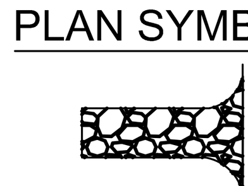
SLOPE GROOVING

South Carolina Department of Health and Environmental Control
SLOPE GROOVING
STANDARD DRAWING NO. EC–03 Page 1
APPROVED BY: SCDHEC AUGUST, 2005 DATE



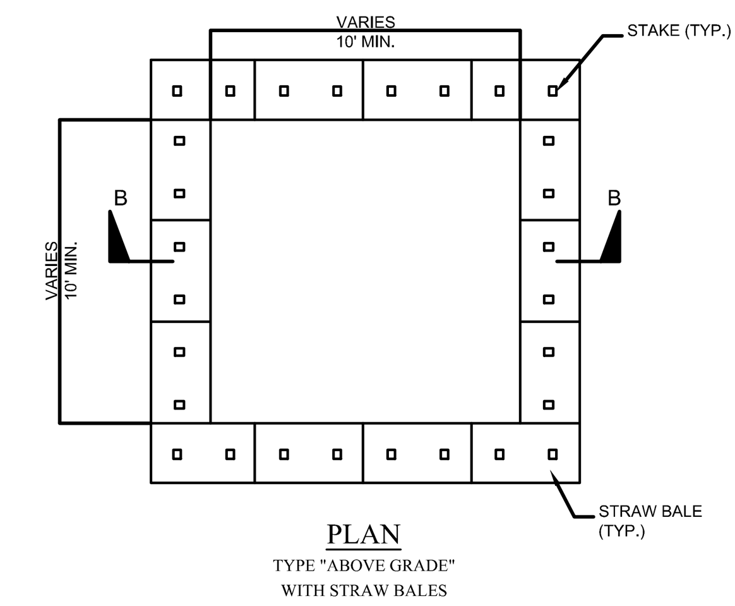
SPECIFICATION	SIZE
ROCK PAD THICKNESS	6 INCHES
ROCK PAD WIDTH	24 FEET
ROCK PAD LENGTH	100 FEET
ROCK PAD STONE SIZE	D = 2–3 INCHES

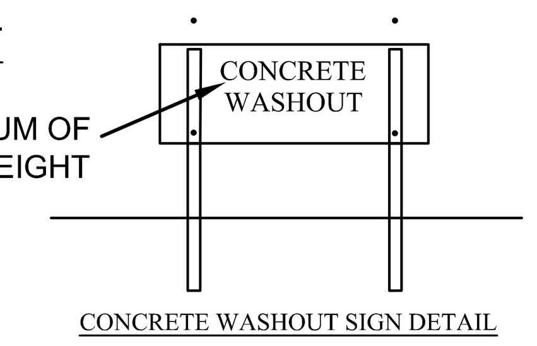
PLAN SYMBOL

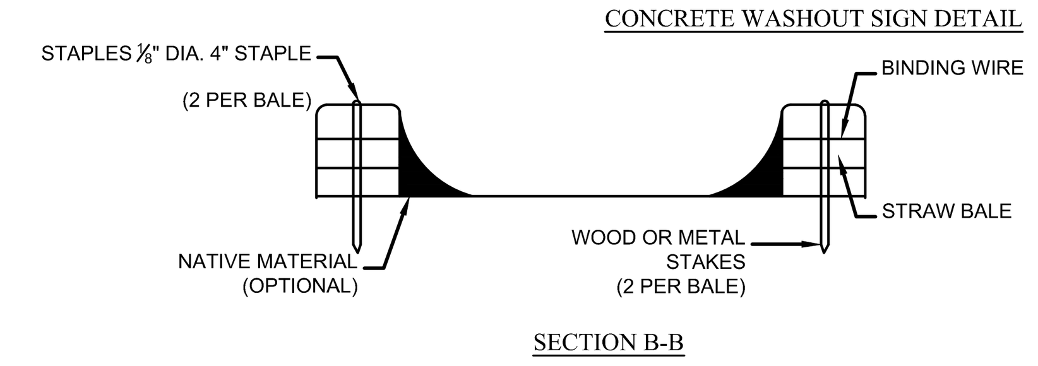


South Carolina Department of Health and Environmental Control
CONSTRUCTION ENTRANCE
STANDARD DRAWING NO. SC–06 PAGE 1 of 2
NOT TO SCALE FEBRUARY 2014 DATE

STRAW BALE BARRIER CONCRETE WASHOUT





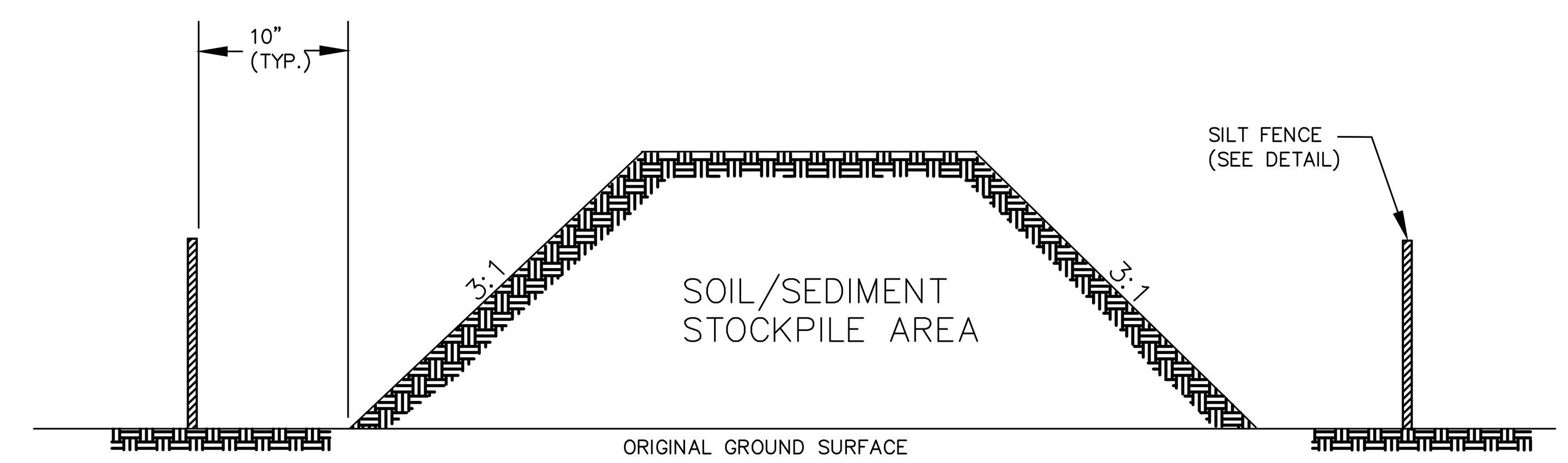


NOTES:

1. ACTUAL LAYOUT DETERMINED IN FIELD.
2. INSTALL CONCRETE WASHOUT SIGN (24"X24", MINIMUM) WITHIN 30' OF THE TEMPORARY CONCRETE WASHOUT FACILITY.
3. TEMPORARY WASHOUT AREA MUST BE AT LEAST 50' FROM A STORM DRAIN, CREEK BANK OR PERIMETER CONTROL.
4. CLEAN OUT CONCRETE WASHOUT AREA WHEN 50% FULL.
5. THE KEY TO FUNCTIONAL CONCRETE WASHOUTS IS WEEKLY INSPECTIONS, ROUTINE MAINTENANCE, AND REGULAR CLEAN OUT.
6. SILT FENCE SHALL BE INSTALLED AROUND PERIMETER OF CONCRETE WASHOUT AREA EXCEPT FOR THE SIDE UTILIZED FOR ACCESSING THE WASHOUT.
7. A ROCK CONSTRUCTION ENTRANCE MAY BE NECESSARY ALONG ONE SIDE OF THE WASHOUT TO PROVIDE VEHICLE ACCESS.

South Carolina Department of Health and Environmental Control
CONCRETE WASHOUT
STRAW BALES OR ABOVE GROUND
STANDARD DRAWING NO. RC–07 PAGE 1 of 1
NOT TO SCALE FEBRUARY 2014 DATE

TEMPORARY STOCKPILE AREA



NOTES:

1. SILT FENCE TO EXTEND AROUND ENTIRE PERIMETER OF STOCKPILE, OR IF STOCKPILE AREA IS LOCATED ON/NEAR A SLOP THE SILT FENCE IS TO EXTEND ALONG CONTOURS OF THE DOWN–GRADIENT AREA.
2. IF STOCKPILE IS TO REMAIN FOR MORE THAN 14 DAYS, TEMPORARY STABILIZATION MEASURES MUST BE IMPLEMENTED.
3. SILT FENCE SHALL BE MAINTAINED UNTIL STOCKPILE AREA HAS EITHER BEEN REMOVED OR PERMANENTLY STABILIZED.
4. THE KEY TO FUNCTIONAL TEMPORARY STOCKPILE AREAS IS WEEKLY INSPECTIONS, ROUTINE MAINTENANCE, AND REGULAR SEDIMENT REMOVAL.

South Carolina Department of Health and Environmental Control
TEMPORARY STOCKPILE
STANDARD DRAWING NO. SC–15 PAGE 1 of 1
NOT TO SCALE FEBRUARY 2014 DATE

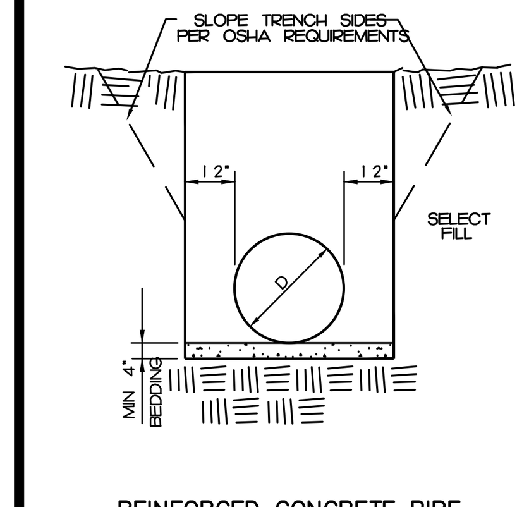
CONSTRUCTION ENTRANCE – GENERAL NOTES

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

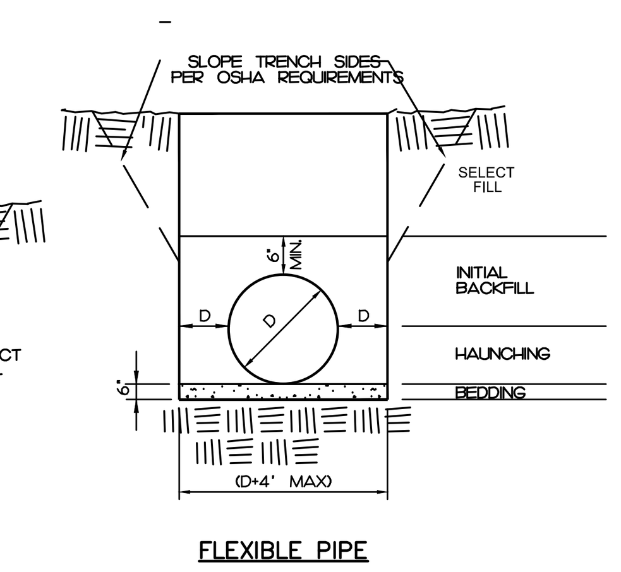
1. The key to functional construction entrances is weekly inspections, routine maintenance, and regular sediment removal.
2. Regular inspections of construction entrances shall be conducted once every calendar week and, as recommended, within 24–hours after each rainfall even that produces 1/2–inch or 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



REINFORCED CONCRETE PIPE

1. BEDDING SHALL BE COMPACTED CRUSHED STONE AND SHALL BE SHAPED TO THE BOTTOM OF THE PIPE.
2. SELECT FILL SHALL BE SELECT MATERIAL FREE OF LARGE ROCKS (3"+) AND SHALL BE PLACED IN 8" MAX. LOOSE LIFTS AND COMPACTED TO 95% STANDARD PROCTOR.

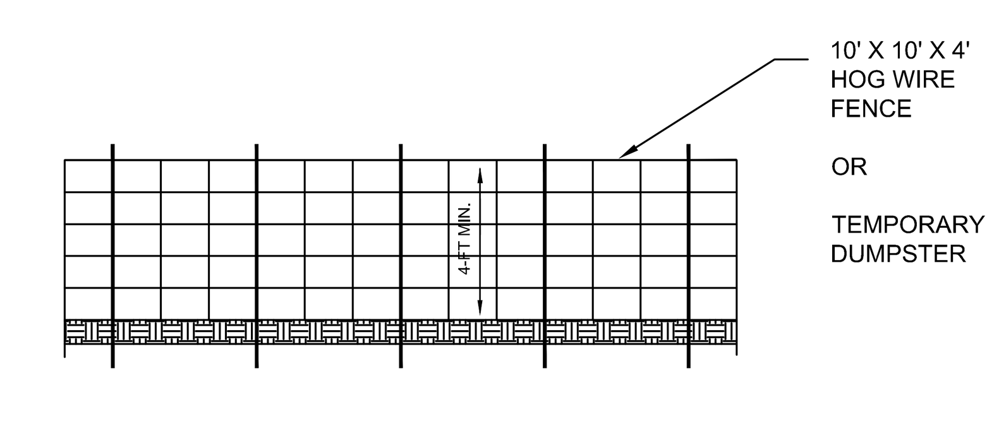


FLEXIBLE PIPE

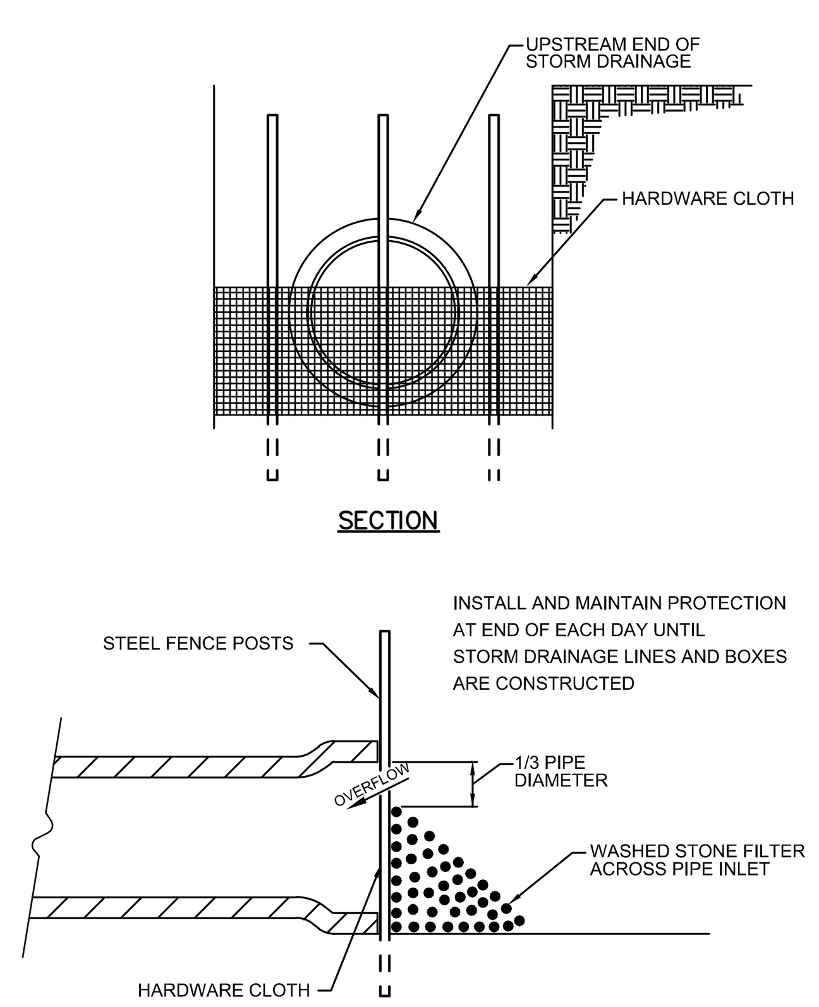
INCLUDES CORRUGATED METAL PIPE, CORRUGATED POLYETHELENE PIPE AND/OR POLYVINYL CHLORIDE PIPE

1. BEDDING SHALL BE COMPACTED CRUSHED STONE AND SHALL BE SHAPED TO THE BOTTOM OF THE PIPE.
2. HAUNCHING AND INITIAL BACKFILL MATERIAL AND SHALL BE COMPACTED MATERIAL SHALL BE CLASS I OR II (REF. ASTM D2321) GRANULAR TO 95% STANDARD PROCTOR.
3. SELECT FILL PLACEMENT AND COMPACTION SAME AS FOR RCP.

TRENCH AND BEDDING DETAILS
(N.T.S.)

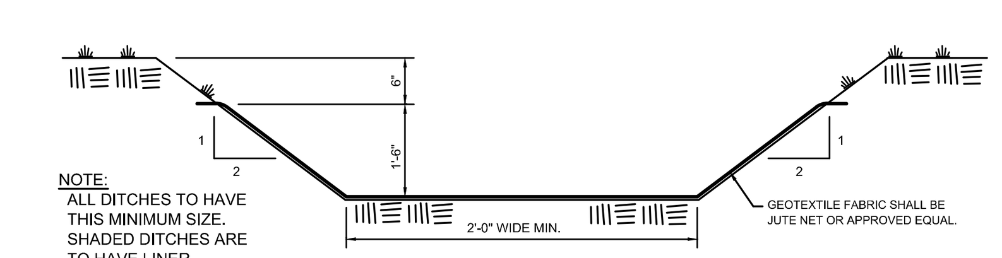


CONSTRUCTION DEBRIS ENCLOSUE
(N.T.S.)



TEMPORARY STORM DRAINAGE PROTECTION (DURING CONSTRUCTION)
(NOT TO SCALE)

1. APPLY LIME, FERTILIZER AND SEED BEFORE LAYING THE NET OR MAT. IF OPEN-WEAVE NETTING IS USED, LIME MAY BE INCORPORATED BEFORE INSTALLING THE NET AND FERTILIZER AND SEED SPRAYED ON AFTERWARD.
2. START LAYING THE NET FROM THE TOP OF THE CHANNEL OR SLOPE AND UNROLL IT DOWN THE GRADE. ALLOW NETTING TO LAY LOOSELY ON THE SOIL BUT WITHOUT WRINKLES-DO NOT STRETCH.
3. TO SECURE THE NET, BURY THE UPSLOPE END IN A SLOT OR TRENCH NO LESS THAN 6" DEEP, COVER WITH SOIL, AND TAMP FIRMLY. STAPLE THE NET EVERY 12" ACROSS THE TOP END AND EVERY 3' AROUND THE EDGES AND BOTTOM. WHERE 2 STRIPS OF NET ARE LAID SIDE BY SIDE, THE ADJACENT EDGES SHOULD BE OVERLAPPED 3" AND STAPLED TOGETHER. EACH STRIP OF NETTING SHOULD ALSO BE STAPLED DOWN THE CENTER, EVERY 3'. DO NOT STRETCH THE NET WHEN APPLYING STAPLES.
4. TO JOIN 2 STRIPS, CUT A TRENCH TO ANCHOR THE END OF THE NEW NET. OVERLAP THE END OF THE PREVIOUS ROLL 18", AND STAPLE EVERY 12" JUST BELOW THE ANCHOR SLOT.



PERMANENT DITCH DETAIL
(N.T.S.)

NO.	DATE	BY	REVISION

Gray Engineering
132 PILGRIM ROAD · GREENVILLE, SC 29607
PH: (864) 297-3027 · FAX: (864) 729-8747
WWW.GRAYENGINEERING.COM
· SC C.O.A.# C00060 · NC C.O.A.# C-1217 · GA C.O.A.# PEF001941 · TN C.O.A.# 0410819 ·

SOUTH CAROLINA CERTIFICATE OF AUTHORIZATION GRAY ENGINEERING CONSULTANTS, INC. No. C00060

SOUTH CAROLINA REGISTERED PROFESSIONAL ENGINEER No. 40522 JOSHUA D. BAKER

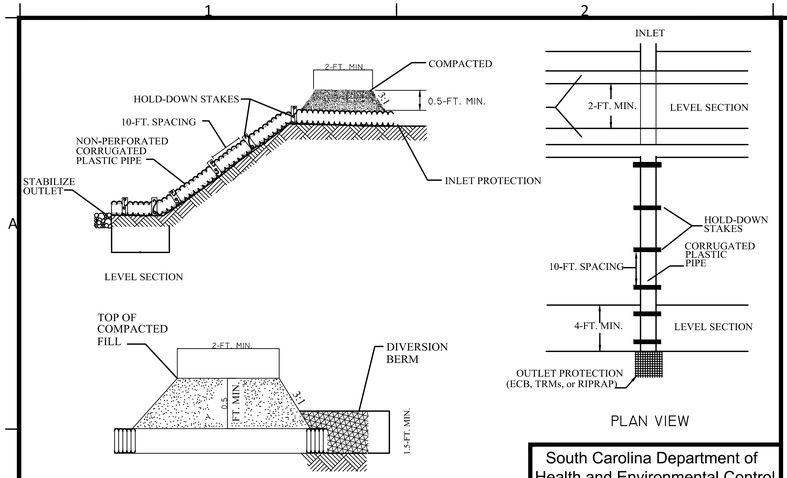
MISCELLANEOUS NOTES AND DETAILS

PROPOSED HOME 2 SUITES BY HILTON

475 HOSPITALITY BOULEVARD
GREENWOOD COUNTY
SOUTH CAROLINA

SCALE:	
PROJECT MANAGER:	ZDJ
DRAWN BY:	MSG
PROJECT DATE:	5/3/2023
JOB No.:	2023104
PLOT DATE:	

SHEET
D-2



TYPICAL PIPE SLOPE DRAIN LAYOUT

South Carolina Department of Health and Environmental Control

PIPE SLOPE DRAIN

STANDARD DRAWING NO. RC-01 PAGE 1 of 2

NOT TO SCALE JULY 31, 2005 DATE

PIPE SLOPE DRAIN

When and Where to Use It

Pipe slope drains are used when it is necessary for water to flow down a slope without causing erosion, especially before a slope has been stabilized or
before permanent drainage structures are installed.

Installation:

Typical pipe slope drains are made of non-perforated corrugated plastic pipe.

Slope drain sections should be securely fastened together, have gasket watertight fittings, and be securely anchored into the soil.

Diversion berms or dikes should direct runoff to slope drains. The minimum depth of these dikes or berms should be 1.5-feet. The height of the
berm around the pipe inlet should be a minimum of 1.5-feet high and at least 0.5-feet higher than the top of the pipe. The berm at the pipe
inlet shall be compacted around the pipe. The area around the inlet shall be properly stabilized with ECBs, TRMs, riprap or other applicable stabilization techniques.

The area below the outlet must be properly stabilized with ECBs, TRMs, riprap or other applicable stabilization technique.

If the pipe slope drain is conveying sediment-laden water, direct all flows into the sediment trapping facility.

Permanent slope drains should be buried beneath the soil surface a minimum 1.5-feet.

Inspection and Maintenance:

Inspect pipe slope drain inlet and outlet points every seven (7) calendar days and within 24-hours after each rainfall event that produces ½-inches or more of precipitation.

The inlet should be free from undercutting, and no water should be going around the point of entry. If there are problems, the headwall should be reinforced with compacted earth or sandbags. The outlet point should be free of erosion and installed with appropriate outlet protection.

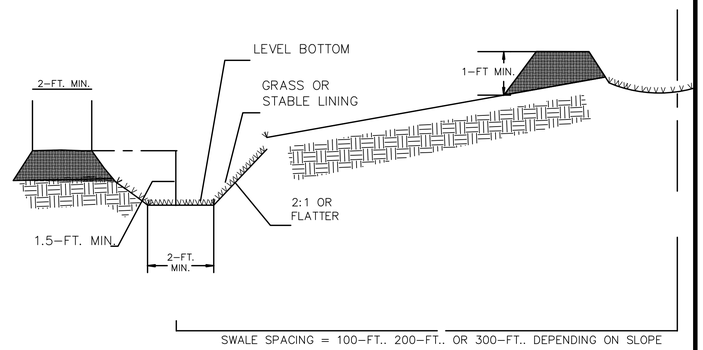
All temporary pipe slope drains should be removed within 30 days after final site stabilization is achieved or after the temporary BMP is no longer needed. Disturbed soil areas resulting from removal should be permanently stabilized.

South Carolina Department of Health and Environmental Control

PIPE SLOPE DRAIN

STANDARD DRAWING NO. RC-01 PAGE 2 of 2

GENERAL NOTES JULY 31, 2005 DATE



** REQUIRES SC250 TURF REINFORCEMENT MATTING

South Carolina Department of Health and Environmental Control

DIVERSION SWALE

STANDARD DRAWING NO. RC-03 Page 1 of 2

NOT TO SCALE JULY 31, 2005 DATE

REVISION

NO.	DATE	BY

Gray Engineering

132 PILGRIM ROAD - GREENVILLE, SC 29607
PH: (864) 297-3027 - FAX: (864) 729-8747
WWW.GRAYENGINEERING.COM

- SC C.O.A.# C00060 - NC C.O.A.# C-1217 - GA C.O.A.# PEF001941 - TN C.O.A.# 0410819 -

SOUTH CAROLINA PROFESSIONAL ENGINEER JOSHUA D. BAKER No. 40522 REGISTERED

GRAY ENGINEERING CONSULTANTS, INC. No. COC0060 CERTIFICATE OF AUTHORIZATION

MISCELLANEOUS NOTES AND DETAILS

PROPOSED HOME 2 SUITES BY HILTON

GREENWOOD COUNTY SOUTH CAROLINA

475 HOSPITALITY BOULEVARD

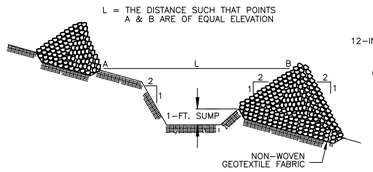
SCALE:

PROJECT MANAGER:	ZDJ
DRAWN BY:	MSG
PROJECT DATE:	5/3/2023
JOB No.:	2023104
PLOT DATE:	

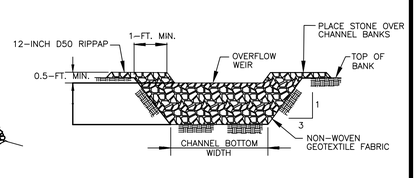
SHEET

D-3

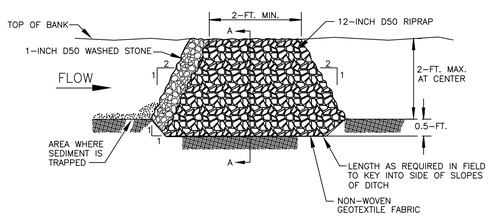
SPACING BETWEEN DITCH CHECK



CROSS SECTION A-A THRU STONE DITCH CHECK



TYPICAL DITCH CHECK SECTION



South Carolina Department of Health and Environmental Control

ROCK DITCH CHECK

STANDARD DRAWING NO. SC-04 PAGE 1 of 2

NOT TO SCALE FEBRUARY 2014 DATE

ROCK DITCH CHECK – GENERAL NOTES

1. Rock Ditch Checks should not be placed in Waters of the State
or USGS blue-line streams (unless approved by Federal Authorities).

2. Rock Ditch Checks should be installed in steeply sloped channels where adequate vegetation cannot be established. This BMP measure should only be used in small open channels.

3. A non-woven geotextile fabric shall be installed over the soil surface where the rock ditch check is to be placed.

4. The body of the rock ditch check shall be composed of 12-inch D50 Riprap. The upstream face may be composed of 1-inch D50 washed stone.

5. Rock Ditch Checks should not exceed a height of 2-feet at the centerline of the channel.

6. Rock Ditch Checks should have a minimum top flow length of
2-feet.

7. Riprap should be placed over channel banks to prevent water from cutting around the ditch check.

8. The riprap should be placed by hand or mechanical placement
(no dumping of rock to form dam) to achieve complete coverage of the channel. Doing so will also ensure that the center of the check is lower than the edges.

9. The maximum spacing between the dams should be such that
the toe of the upstream check is at the same elevation as the top of the downstream check.

ROCK DITCH CHECK – INSPECTION & MAINTENANCE

1. The key to functional rock ditch check is weekly inspections, routine maintenance, and regular sediment removal.

2. Regular inspections of rock ditch checks 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 rock ditch
check 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 rock ditch check.

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. Inspect Rock Ditch Checks' edges for erosion and evidence of runoff bypassing the installed check. If evident repair promptly as necessary to prevent erosion and bypassing.

7. In the case of grass-lined ditches, channels, and swales, rock ditch checks should be removed when the grass has matured sufficiently to protect the ditch or swale unless the slope of the swale is greater than 4%.

8. After construction is completed and final stabilization is reached, the entirety of the rock ditch check should be removed if vegetation will be used for permanent erosion control measures. The area beneath the removed rock ditch check must be addressed with permanent stabilization measures.

South Carolina Department of Health and Environmental Control

ROCK DITCH CHECK

STANDARD DRAWING NO. SC-04 PAGE 2 of 2

GENERAL NOTES FEBRUARY 2014 DATE

DIVERSION SWALE

Installation

The bottom width should be a minimum of 2-feet, and the bottom should be level.

The depth should be a minimum of 1.5-feet and the side slopes should be 2H:1V or flatter.

The maximum grade shall be 5%, with positive drainage to a suitable outlet.

Slopes shall be stabilized immediately using vegetation, sod, and erosion control blankets or turf reinforcement mats to prevent erosion.

The upslope side of the swale should provide positive drainage so no erosion occurs at the outlet. Provide energy dissipation measures as necessary.

Sediment-laden runoff shall be directed to a sediment trapping facility.

Inspection and Maintenance:

Swales should be inspected, every seven (7) calendar days and within 24-hours after each rainfall event that produces ½-inches or more of precipitation and repairs made as necessary.

Damage caused by construction traffic or other activity must be repaired before the end of each working day.

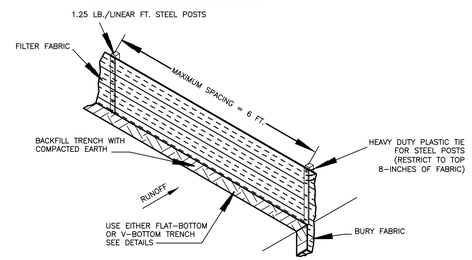
South Carolina Department of Health and Environmental Control

DIVERSION SWALE

STANDARD DRAWING NO. RC-03 PAGE 2 of 2

GENERAL NOTES JULY 31, 2005 DATE

SILT FENCE INSTALLATION



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.

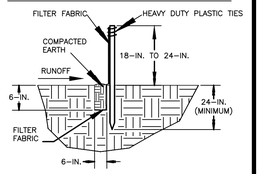
4. Silt fence joints, when necessary, shall be completed by one of the following options:
- Wrap each fabric together at a support post with both ends fastened to the post, with a 1-foot minimum overlap;
- Overlap silt fence by installing 3-feet passed the support post to which the new silt fence roll 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.

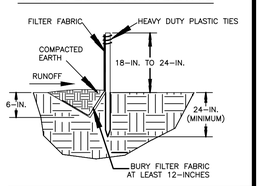
6. Install the silt fence perpendicular to the direction of the stormwater flow and place the silt fence the proper distance from the toe of steep slopes to provide sediment storage and access for maintenance and cleanout.

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.

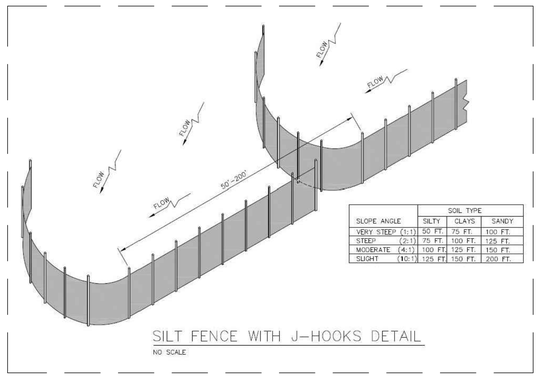
4. Remove accumulated sediment when it reaches 1/3 the height of the silt fence.

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.



SLOPE ANGLE	SOIL TYPE		
	SILTY	CLAYS	SANDY
VERY STEEP (5:1)	50 FT.	75 FT.	100 FT.
STEEP (2:1)	75 FT.	100 FT.	125 FT.
MODERATE (4:1)	100 FT.	125 FT.	150 FT.
SLIGHT (10:1)	125 FT.	150 FT.	200 FT.

SILT FENCE WITH J-HOOKS DETAIL

NO SCALE

USE J-HOOK SILT FENCE ANYWHERE SILT FENCE RUNS NON – PARALLEL TO GRADE

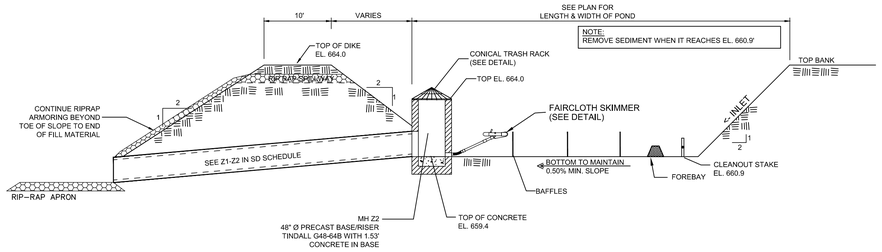
Inspection and Maintenance:
Inspect every seven calendar days. Check for sediment buildup and fence integrity. Check where runoff has eroded a channel beneath the fence, or where the fence has sagged or collapsed by fence overtopping. If the fence fabric tears, begins to decompose, or in any way becomes ineffective, replace the section of fence immediately. Remove sediment accumulated along the fence when it reaches 1/3 the height of the fence, especially if heavy rains are expected. Remove trapped sediment from the site or stabilize it on site. Remove silt fence within 30 days after final stabilization is achieved or after temporary best management practices (BMPs) are no longer needed. Permanently stabilize disturbed areas resulting from fence removal

South Carolina Department of Health and Environmental Control

SILT FENCE

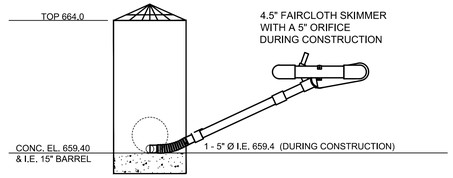
STANDARD DRAWING NO. SC-03 PAGE 2 of 2

GENERAL NOTES FEBRUARY 2014 DATE



SECTION THRU TEMPORARY SEDIMENT BASIN 1

(N.T.S.)

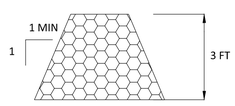


ORIFICE CONFIGURATION (TEMP SED BASIN 1)

(N.T.S.)

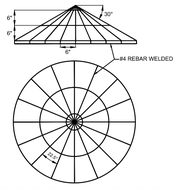
Stage (FT)	Area (FT^2)	Volume (FT^3)	Cum. Volume (FT^3)	Surface Area (AC)
659.40	500	0	0	0.01
660.00	14,659	4,548	4,548	0.34
661.00	17,563	16,111	20,659	0.40
662.00	18,537	18,050	38,709	0.43
663.00	19,572	19,055	57,763	0.45
664.00	20,633	20,103	77,866	0.47

FOREBAY TO BE CONSTRUCTED OF RIPRAP OR RIPRAP LINED EARTH WITH RIPRAP KEYWAY.



RIPRAP FOREBAY

(N.T.S.)



NOTE: PRE-FABRICATED EQUIVALENTS MUST BE APPROVED.

TYPICAL CONICAL TRASH RACK

(N.T.S.)

NOTES:

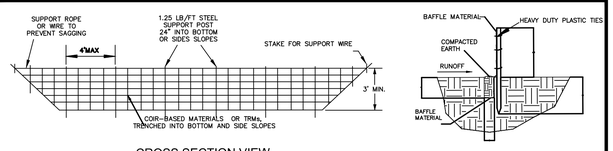
1. THE SEDIMENT BASIN/PONDS MUST BE INSTALLED AND OPERATING BEFORE ANY MASS CLEARING OR GRUBBING OF THE REMAINDER OF THE SITE.
2. MAINTENANCE OF SEDIMENT AND EROSION CONTROL MEASURES MUST CONTINUE UNTIL THE SITE IS PERMANENTLY STABILIZED AND THE CONTROLS ARE REMOVED.
3. IF DISCREPANCY IS DISCOVERED ON SITE, CONTACT ENGINEER IMMEDIATELY FOR REVIEW.
4. CONTRACTOR TO SEE DETAIL PROVIDED FOR SIZING OF ALL OUTLET STABILIZATION.
5. ALL RIP RAP FOR CHECK DAMS, EMERGENCY SPILLWAYS, AND OUTLET STABILIZATION PROTECTION TO BE UNDERLAIN WITH FILTER FABRIC.
6. ALL STONE CHECK DAMS ARE TEMPORARY. CONTRACTOR TO REMOVE CHECK DAMS ONCE SITE IS 80% STABILIZED. SITE TO BE APPROVED BY OCONEE COUNTY & SITE ENGINEER.
7. CONTRACTOR TO TAKE NECESSARY STEPS TO CLEAN POND WHEN SEDIMENT REACHES THE MAXIMUM LEVEL WITHIN THE POND. CONTRACTOR TO PUMP AND DISPOSE OF ANY WATER IN POND IN A LEGAL MANNER. CONTRACTOR TO CLEAN OUT SEDIMENT AND RESTORE POND BOTTOM AND SIDE SLOPES TO THE DIMENSIONS SHOWN ON SHEET CV-2 AND POND CROSS-SECTION DETAIL. ONCE SITE IS STABILIZED, SEDIMENT BASIN MAY BE REMOVED AND POND AS-BUILT MAY BE SURVEYED, OCONEE COUNTY PRIOR TO PROJECT CLOSE-OUT.

DETENTION POND MAINTENANCE PLAN:

1. **GRASSING & MOWING**
   - a. OWNER TO MAINTAIN PROPER VEGETATIVE COVER ON SIDE SLOPES, TOP OF DAM, AND BOTTOM OF PONDS.
   - b. OWNER TO MOW GRASS IN DETENTION AREAS 3 TIMES A YEAR.
2. **TREE AND BRUSH MAINTENANCE**
   - c. OWNER MUST KEEP ALL TREES & BRUSH OUT OF DETENTION AREA INCLUDING THE BOTTOM OF POND, SIDE SLOPES, AND THE TOP OF THE DAM.
3. **TRASH MAINTENANCE**
   - d. OWNER MUST REMOVE ALL TRASH ACCUMULATED IN THE DETENTION POND, OUTLET STRUCTURE, AND OUTFALL PIPE AREAS.
   - e. OWNER MUST ENSURE ORIFICES ARE CLEANED AND UNCLOGGED.
4. **PIPE OUTFALL PROTECTION**
   - f. OWNER TO INSPECT PIPE OUTFALL PERIODICALLY. ANY EROSION/STRUCTURAL PROBLEMS ARE TO BE REPAIRED IMMEDIATELY.
5. SWALE MAINTENANCE
   - g. SWALES MUST BE INSPECTED AND MAINTAINED WHEN OTHER STORMWATER FEATURES ARE INSPECTED AND REPAIRED.

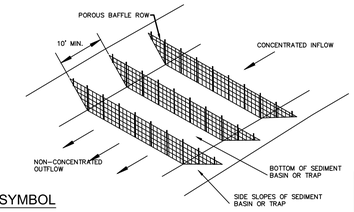
CONSTRUCTION SEQUENCE FOR DETENTION/SEDIMENT POND:

1. DEMOLISH, CLEAR, AND GRUB AREA FOR SEDIMENT PONDS AS SHOWN ON EC-1.
2. EXCAVATE THE POND AS SHOWN ON EC-1 AND USE OUTLET CONTROL CONFIGURATION AS SHOWN ON SHEET D-4 INCLUDING SKIMMER.
3. ENGINEER TO VERIFY INSTALLATION OF PERIMETER CONTROLS AND POND BEFORE PROJECT PROCEEDS
4. MAINTAIN SEDIMENT POND BY REMOVING ACCUMULATED SEDIMENT
5. CONVERT THE SEDIMENT POND TO PERMANENT DETENTION POND ONCE SITE HAS REACHED 80% STABILIZATION. AS SHOWN ON EC-3
6. INSTALL JUTE MATTING ON THE SLOPES OF THE POND AS SOON AS POSSIBLE
7. REMOVE ACCUMULATED SEDIMENT FROM ALL EROSION CONTROL DEVICES AND POND PRIOR TO FINAL CLOSEOUT.

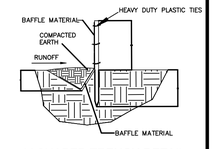


CROSS SECTION VIEW

FLAT-BOTTOM TRENCH DETAIL



PERSPECTIVE VIEW



V-SHAPED TRENCH DETAIL

PLAN SYMBOL

—PB —PB—

South Carolina Department of Health and Environmental Control

POROUS BAFFLES

STANDARD DRAWING NO. EC-13 PAGE 1 of 2

NOT TO SCALE FEBRUARY 2014 DATE

BAFFLES – POST REQUIREMENTS

1. Porous baffle posts must be 60-inch to 96-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 baffle material.
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 4-feet on center.

BAFFLES – MATERIAL REQUIREMENTS

1. Baffle material must be composed of coir-based materials or Turf Reinforcement Matting (TRM) that consists of the following requirements:
   - Have a light penetration (% openings) between 10–35%;
   - Free of loose straw material;
   - Have a minimum tensile strength of 145 lb/ft; and,
   - Have a minimum width of 48-inches.
2. 12-inches of the fabric should be placed within excavated trench and toed in when the trench is backfilled or baffle material may be stapled into ground by using 12-inch staples with a maximum spacing of 12-inches.
3. Baffle material shall be purchased in continuous rolls and cut to the width of the sediment basin or trap to avoid joints.

BAFFLES – GENERAL NOTES

1. Attach baffle to the steel posts using heavy-duty plastic ties that are evenly spaced along the above ground portion of each post.
2. Install the baffle rows perpendicular to the direction of the stormwater flow and place each baffle the proper distance from inlet and outlets to allow access for maintenance and clean-out.

BAFFLES – INSPECTION & MAINTENANCE

1. The key to functional porous baffles is weekly inspection, routine maintenance, and regular sediment removal.
2. Regular inspections of porous baffles 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 each row of baffles 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 baffle row or when it reaches the clean-out height of the sediment basin or trap, whichever is reached first.
5. Removed sediment shall be placed in stockpile storage areas or spread thinly across disturbed areas. Stabilize the removed sediment after it is relocated.
6. Check for areas where stormwater runoff has eroded a channel beneath each row of baffles, or where the baffle has sagged or collapsed due to runoff overtopping the baffle.
7. Check for tears/rips within the baffles, areas where the baffle has begun to decompose, and for any other circumstance that may render the baffle ineffective. Removed damaged baffles and reinstall new baffles immediately.
8. Porous baffles should be removed within 30 days after final stabilization is achieved and once it is removed, the resulting disturbed area shall be permanently stabilized.

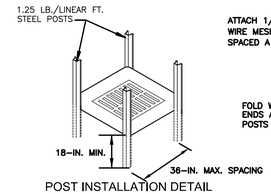
South Carolina Department of Health and Environmental Control

POROUS BAFFLES

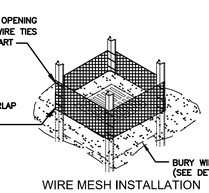
STANDARD DRAWING NO. SC-13 PAGE 2 of 2

GENERAL NOTES FEBRUARY 2014 DATE

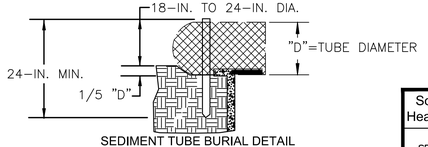
IF THE CONTRACTOR SHOULD ENCOUNTER CONFLICTING SITEWORK NOTES, THE MORE STRINGENT NOTE SHALL APPLY.



POST INSTALLATION DETAIL



SEDIMENT TUBE INSTALLATION DETAIL



SEDIMENT TUBE BURIAL DETAIL

GENERAL NOTES

1. 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.
2. 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.
3. Sediment tube diameters shall range from 18–inches to 24–inches. Sediment tunes with smaller diameters are prohibited when used as inlet protection.
4. Curled excelsior wood, or natural coconut products that are rolled up to create a sediment tube are not allowed.
5. Sediment tubes should be staked using wooden oak 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.
6. Install all sediment tubes to ensure that no gaps exist between the soil and the bottom of the tube. Manufactuer's recommendations should always be consulted before installation.
7. The ends of adjacent sediment tubes should be overlapped 6–inches to prevent flow and sediment from passing through the field joint.
8. Sediment tubes should not be stacked on top of one another.
9. Each sediment tube should be installed in a trench with a depth equal to 1/5 the diameter of the sediment tube.
10. Install stakes at a diagonal facing incoming runoff.

INSPECTION & MAINTENANCE

1. The key to functional inlet protection is weekly inspections, routine maintenance, and regular sediment removal.
2. Regular inspections of sediment tube 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 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. When a sump is installed in front of the inlet protection, sediment shall 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. Large debris, trash, and leaves should be removed from in front of tubes when found.
7. 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 A

SEDIMENT TUBE INLET PROTECTION

STANDARD DRAWING NO. SC–07A PAGE 1 of 2

NOT TO SCALE FEBRUARY 2014 DATE

South Carolina Department of Health and Environmental Control

Type A

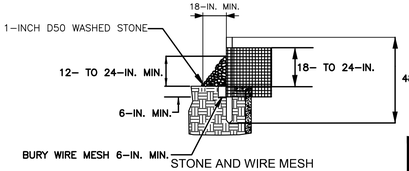
SEDIMENT TUBE INLET PROTECTION

STANDARD DRAWING NO. SC–07A PAGE 2 of 2

NOT TO SCALE FEBRUARY 2014 DATE

POST INSTALLATION DETAIL

WIRE MESH INSTALLATION DETAIL



STONE AND WIRE MESH INSTALLATION DETAIL

PLAN SYMBOL

B

WIRE MESH & STONE INLET PROTECTION

GENERAL NOTES

1. Use hardware fabric or comparable wire mesh with maximum openings of 0.5–inches x 0.5–inches as the supporting material.
2. Use steel posts that meet the following physical requirements: –Be composed of high strength steel with a minimum yield of 50,000 psi.
   –Have a standard "T" section with a nominal face width of
   1.38 inches and a nominal "T" width of 1.48–inches.
   – Weigh 1.25 pounds per foot (±8%)
3. Use heavy–duty wire ties to attach the wire mesh material to the steel posts.
4. Space the steel posts a maximum of 3–feet apart around the perimeter of the inlet and drive them into the ground a minimum of 18–inches.
5. Excavate a trench 6–inches deep around the outside perimeter of the inlet to install wire mesh. Backfill the trench with soil or crushed stone and compact over the wire mesh.
6. Place Aggregate No. 5 washed stone (or 1–inch D50 stone) to a minimum height of 12–inches, and a maximum of 24–inches against the wire mesh on all sides.

INSPECTION & MAINTENANCE

1. The key to functional inlet protection is weekly inspections, routine maintenance, and regular sediment removal.
2. Regular inspections of wire mesh and stone 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 in front of the inlet protection is extremely important. Accumulated sediment should be continually monitored and removed when necessary.
4. Remove accumulated sediment when the sediment reaches 1/3 height of the stone fill or when stone becomes clogged. When a sump is installed in front of inlet protection, 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. Large debris, trash, and leaves should be removed from in front of the inlet protection when found.
7. After accumulated sediment is removed, pull stones from around wire mesh to wash or to replace with fresh stones as necessary.
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 crest. Stabilize all bare areas immediately.

South Carolina Department of Health and Environmental Control

Type B

WIRE MESH & STONE INLET PROTECTION

STANDARD DRAWING NO. SC–08 PAGE 1 of 2

NOT TO SCALE FEBRUARY 2014 DATE

South Carolina Department of Health and Environmental Control

Type B

WIRE MESH & STONE INLET PROTECTION

STANDARD DRAWING NO. SC–08 PAGE 2 of 2

GENERAL NOTES FEBRUARY 2014 DATE

NO.	DATE	BY	REVISION
			"NOTE"

Gray Engineering
132 PILGRIM ROAD - GREENVILLE, SC 29607
PH: (864) 297-3027 - FAX: (864) 729-8747
WWW.GRAYENGINEERING.COM
- SC C.O.A.# C00060 - NC C.O.A.# C-1217 - GA C.O.A.# PEF001941 - TN C.O.A.# 0410819 -

SOUTH CAROLINA REGISTERED LANDSCAPE ARCHITECT No. 406 — JOSHUA D. BYRD — CERTIFICATE OF AUTHORIZATION — GRAY ENGINEERING CONSULTANTS, INC. No. C00060

MISCELLANEOUS NOTES AND DETAILS

PROPOSED HOME 2 SUITES BY HILTON

GREENWOOD COUNTY
SOUTH CAROLINA

475 HOSPITALITY BOULEVARD

SCALE:	
PROJECT MANAGER:	ZDJ
DRAWN BY:	MSG
PROJECT DATE:	5/3/2023
JOB No.:	2023104
PLOT DATE:	

SHEET

D-4

PROJECT INFORMATION	
ENGINEERED PRODUCT MANAGER	
ADS SALES REP	
PROJECT NO.	

Advanced Drainage Systems, Inc.

SiteAssist™
FOR STORMTECH
INSTALLATION INSTRUCTIONS
VISIT OUR APP

GREENWOOD HOTEL

GREENWOOD, SC, USA

SC-800 STORMTECH CHAMBER SPECIFICATIONS

1. CHAMBERS SHALL BE STORMTECH SC-800.
2. CHAMBERS SHALL BE ARCH-SHAPED AND SHALL BE MANUFACTURED FROM VIRGIN, IMPACT-MODIFIED POLYPROPYLENE COPOLYMERS.
3. CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
4. CHAMBER ROWS SHALL PROVIDE CONTINUOUS, UNOBSTRUCTED INTERNAL SPACE WITH NO INTERNAL SUPPORTS THAT WOULD IMPEDE FLOW OR LIMIT ACCESS FOR INSPECTION.
5. THE STRUCTURAL DESIGN OF THE CHAMBERS, THE STRUCTURAL BACKFILL, AND THE INSTALLATION REQUIREMENTS SHALL ENSURE THAT THE LOAD FACTORS SPECIFIED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SECTION 12.12, ARE MET FOR: 1) LONG-DURATION DEAD LOADS AND 2) SHORT-DURATION LIVE LOADS, BASED ON THE AASHTO DESIGN TRUCK WITH CONSIDERATION FOR IMPACT AND MULTIPLE VEHICLE PRESENCES.
6. CHAMBERS SHALL BE DESIGNED AND ALLOWABLE LOAD CONFIGURATIONS DETERMINED IN ACCORDANCE WITH ASTM F2787, "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS". LOAD CONFIGURATIONS SHALL INCLUDE: 1) INSTANTANEOUS (<1 MIN) AASHTO DESIGN TRUCK LIVE LOAD ON MINIMUM COVER 2) MAXIMUM PERMANENT (75-YR) COVER LOAD AND 3) ALLOWABLE COVER WITH PARKED (1-WEEK) AASHTO DESIGN TRUCK.
7. REQUIREMENTS FOR HANDLING AND INSTALLATION:
   - TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.
   - TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 2".
   - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT SHALL BE GREATER THAN OR EQUAL TO 550 LBS/FT/%. THE ASC IS DEFINED IN SECTION 6.2.8 OF ASTM F2418. AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.
8. ONLY CHAMBERS THAT ARE APPROVED BY THE SITE DESIGN ENGINEER WILL BE ALLOWED. UPON REQUEST BY THE SITE DESIGN ENGINEER OR OWNER, THE CHAMBER MANUFACTURER SHALL SUBMIT A STRUCTURAL EVALUATION FOR APPROVAL BEFORE DELIVERING CHAMBERS TO THE PROJECT SITE AS FOLLOWS:
   - THE STRUCTURAL EVALUATION SHALL BE SEALED BY A REGISTERED PROFESSIONAL ENGINEER.
   - THE STRUCTURAL EVALUATION SHALL DEMONSTRATE THAT THE SAFETY FACTORS ARE GREATER THAN OR EQUAL TO 1.95 FOR DEAD LOAD AND 1.75 FOR LIVE LOAD, THE MINIMUM REQUIRED BY ASTM F2787 AND BY SECTIONS 3 AND 12.12 OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS FOR THERMOPLASTIC PIPE.
   - THE TEST DERIVED CREEP MODULUS AS SPECIFIED IN ASTM F2418 SHALL BE USED FOR PERMANENT DEAD LOAD DESIGN EXCEPT THAT IT SHALL BE THE 75-YEAR MODULUS USED FOR DESIGN.
9. CHAMBERS AND END CAPS SHALL BE PRODUCED AT AN ISO 9001 CERTIFIED MANUFACTURING FACILITY.

IMPORTANT - NOTES FOR THE BIDDING AND INSTALLATION OF THE SC-800 SYSTEM

1. STORMTECH SC-800 CHAMBERS SHALL NOT BE INSTALLED UNTIL THE MANUFACTURER'S REPRESENTATIVE HAS COMPLETED A PRE-CONSTRUCTION MEETING WITH THE INSTALLERS.
2. STORMTECH SC-800 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH SC-310/SC-740/SC-800/DC-780 CONSTRUCTION GUIDE".
3. CHAMBERS ARE NOT TO BE BACKFILLED WITH A DOZER OR AN EXCAVATOR SITUATED OVER THE CHAMBERS. STORMTECH RECOMMENDS 3 BACKFILL METHODS:
   - STONESHOOTER LOCATED OFF THE CHAMBER BED.
   - BACKFILL AS ROWS ARE BUILT USING AN EXCAVATOR ON THE FOUNDATION STONE OR SUBGRADE.
   - BACKFILL FROM OUTSIDE THE EXCAVATION USING A LONG BOOM HOE OR EXCAVATOR.
4. THE FOUNDATION STONE SHALL BE LEVELED AND COMPACTED PRIOR TO PLACING CHAMBERS.
5. JOINTS BETWEEN CHAMBERS SHALL BE PROPERLY SEATED PRIOR TO PLACING STONE.
6. MAINTAIN MINIMUM - 6" (150 mm) SPACING BETWEEN THE CHAMBER ROWS.
7. EMBEDMENT STONE SURROUNDING CHAMBERS MUST BE A CLEAN, CRUSHED, ANGULAR STONE 3/4-2" (20-50 mm).
8. THE CONTRACTOR MUST REPORT ANY DISCREPANCIES WITH CHAMBER FOUNDATION MATERIALS BEARING CAPACITIES TO THE SITE DESIGN ENGINEER.
9. ADS RECOMMENDS THE USE OF "FLEXSTORM CATCH IT" INSERTS DURING CONSTRUCTION FOR ALL INLETS TO PROTECT THE SUBSURFACE STORMWATER MANAGEMENT SYSTEM FROM CONSTRUCTION SITE RUNOFF.

NOTES FOR CONSTRUCTION EQUIPMENT

1. STORMTECH SC-800 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH SC-310/SC-740/SC-800/DC-780 CONSTRUCTION GUIDE".
2. THE USE OF CONSTRUCTION EQUIPMENT OVER SC-800 CHAMBERS IS LIMITED:
   - NO EQUIPMENT IS ALLOWED ON BARE CHAMBERS.
   - NO RUBBER TIRED LOADERS, DUMP TRUCKS, OR EXCAVATORS ARE ALLOWED UNTIL PROPER FILL DEPTHS ARE REACHED IN ACCORDANCE WITH THE "STORMTECH SC-310/SC-740/SC-800/DC-780 CONSTRUCTION GUIDE".
   - WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT CAN BE FOUND IN THE "STORMTECH SC-310/SC-740/SC-800/DC-780 CONSTRUCTION GUIDE".
3. FULL 36" (900 mm) OF STABILIZED COVER MATERIALS OVER THE CHAMBERS IS REQUIRED FOR DUMP TRUCK TRAVEL OR DUMPING.

USE OF A DOZER TO PUSH EMBEDMENT STONE BETWEEN THE ROWS OF CHAMBERS MAY CAUSE DAMAGE TO THE CHAMBERS AND IS NOT AN ACCEPTABLE BACKFILL METHOD. ANY CHAMBERS DAMAGED BY THE "DUMP AND PUSH" METHOD ARE NOT COVERED UNDER THE STORMTECH STANDARD WARRANTY.

CONTACT STORMTECH AT 1-888-892-2694 WITH ANY QUESTIONS ON INSTALLATION REQUIREMENTS OR WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT.

NO.	DATE	BY	REVISION

Gray Engineering
132 PILGRIM ROAD - GREENVILLE, SC 29607
PH: (864) 297-3027 - FAX: (864) 729-8747
WWW.GRAYENGINEERING.COM
- SC C.O.A.#C00060 - NC C.O.A.#C-1217 - GA C.O.A.#PEF001941 - TN C.O.A.#4108819 -

GRAY ENGINEERING CONSULTANTS, INC. No. C00060 CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA PROFESSIONAL ENGINEER JOSHUA D. BAKER No. 40582 CERTIFICATE NUMBER

MISCELLANEOUS NOTES AND DETAILS

PROPOSED
HOME 2 SUITES
BY HILTON

GREENWOOD COUNTY
SOUTH CAROLINA

475 HOSPITALITY BOULEVARD

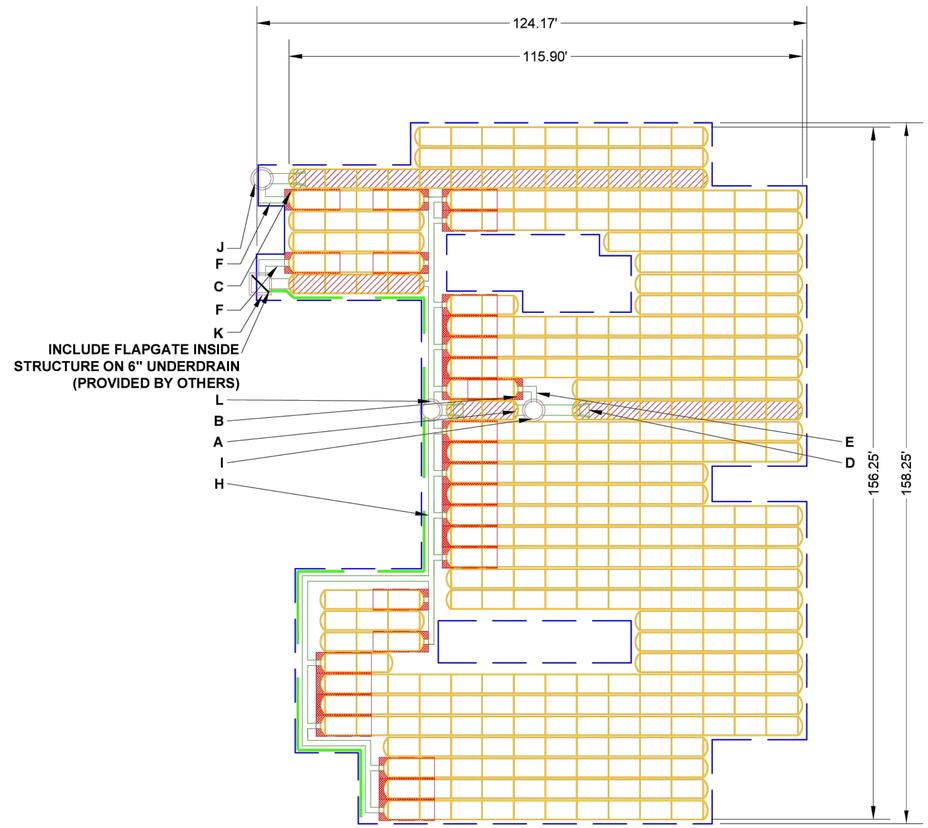
SCALE:	
PROJECT MANAGER:	ZDJ
DRAWN BY:	MSG
PROJECT DATE:	5/3/2023
JOB No.:	2023104
PLOT DATE:	

SHEET
D-5

PROPOSED LAYOUT		PROPOSED ELEVATIONS:	
351	STORMTECH SC-800 CHAMBERS	MAXIMUM ALLOWABLE GRADE (TOP OF PAVEMENT/UNPAVED):	670.47
90	STORMTECH SC-800 END CAPS	MINIMUM ALLOWABLE GRADE (UNPAVED WITH TRAFFIC):	664.22
6	STONE ABOVE (in)	MINIMUM ALLOWABLE GRADE (UNPAVED NO TRAFFIC):	663.72
6	STONE BELOW (in)	MINIMUM ALLOWABLE GRADE (TOP OF RIGID CONCRETE PAVEMENT):	663.72
40	STONE VOID	MINIMUM ALLOWABLE GRADE (BASE OF FLEXIBLE PAVEMENT):	663.72
30262	INSTALLED SYSTEM VOLUME (CF) (PERIMETER STONE INCLUDED) (COVER STONE INCLUDED) (2" OF BASE STONE INCLUDED)	TOP OF STONE:	662.97
		TOP OF SC-800 CHAMBER:	662.47
		12" x 12" TOP MANIFOLD INVERT:	660.92
		12" x 12" TOP MANIFOLD INVERT:	660.92
14342	SYSTEM AREA (SF)	15" x 15" TOP MANIFOLD INVERT:	660.66
897.3	SYSTEM PERIMETER (ft)	24" x 24" BOTTOM MANIFOLD INVERT:	659.91
		24" ISOLATOR ROW PLUS INVERT:	659.91
		24" ISOLATOR ROW PLUS INVERT:	659.91
		24" BOTTOM CONNECTION INVERT:	659.91
		BOTTOM OF SC-800 CHAMBER:	659.72
		6" UNDERDRAIN INVERT:	659.55
		BOTTOM OF STONE:	659.22

*INVERT ABOVE BASE OF CHAMBER

PART TYPE	ITEM ON LAYOUT	DESCRIPTION	INVERT*	MAX FLOW
PREFABRICATED END CAP	A	24" BOTTOM CORED END CAP, PART#: SC800EPE24BPC / TYP OF ALL 24" BOTTOM CONNECTIONS AND ISOLATOR PLUS ROWS	2.30"	
PREFABRICATED END CAP	B	12" TOP CORED END CAP, PART#: SC800EPE12TPC / TYP OF ALL 12" TOP CONNECTIONS	14.40"	
PREFABRICATED END CAP	C	15" TOP CORED END CAP, PART#: SC800EPE15TPC / TYP OF ALL 15" TOP CONNECTIONS	11.30"	
FLAMP	D	INSTALL FLAMP ON 24" ACCESS PIPE / PART#: SC74024RAMP (TYP 3 PLACES)		
MANIFOLD	E	12" x 12" TOP MANIFOLD, ADS N-12	14.40"	
MANIFOLD	F	15" x 15" TOP MANIFOLD, ADS N-12	11.30"	
MANIFOLD	G	24" x 24" BOTTOM MANIFOLD, ADS N-12	2.30"	
MANIFOLD	H	12" x 12" TOP MANIFOLD, ADS N-12	14.40"	
CONCRETE STRUCTURE	I	(DESIGN BY ENGINEER / PROVIDED BY OTHERS)		2.3 CFS IN
CONCRETE STRUCTURE	J	(DESIGN BY ENGINEER / PROVIDED BY OTHERS)		2.8 CFS IN
CONCRETE STRUCTURE	K	OCS (DESIGN BY ENGINEER / PROVIDED BY OTHERS)		14.0 CFS OUT
CONCRETE STRUCTURE	L	(DESIGN BY ENGINEER / PROVIDED BY OTHERS)		5.9 CFS IN



ISOLATOR ROW PLUS
(SEE DETAIL)

PLACE MINIMUM 12.50' OF ADSPLUS125 WOVEN GEOTEXTILE OVER BEDDING STONE AND UNDERNEATH CHAMBER FEET FOR SCOUR PROTECTION AT ALL CHAMBER INLET ROWS

BED LIMITS

NOTES

- MANIFOLD SIZE TO BE DETERMINED BY SITE DESIGN ENGINEER. SEE TECH NOTE #6.32 FOR MANIFOLD SIZING GUIDANCE.
- DUE TO THE ADAPTATION OF THIS CHAMBER SYSTEM TO SPECIFIC SITE AND DESIGN CONSTRAINTS, IT MAY BE NECESSARY TO CUT AND COUPLE ADDITIONAL PIPE TO STANDARD MANIFOLD COMPONENTS IN THE FIELD.
- THE SITE DESIGN ENGINEER MUST REVIEW ELEVATIONS AND IF NECESSARY ADJUST GRADING TO ENSURE THE CHAMBER COVER REQUIREMENTS ARE MET.
- THIS CHAMBER SYSTEM WAS DESIGNED WITHOUT SITE-SPECIFIC INFORMATION ON SOIL CONDITIONS OR BEARING CAPACITY. THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR DETERMINING THE SUITABILITY OF THE SOIL AND PROVIDING THE BEARING CAPACITY OF THE INSITU SOILS. THE BASE STONE DEPTH MAY BE INCREASED OR DECREASED ONCE THIS INFORMATION IS PROVIDED.

GREENWOOD HOTEL
GREENWOOD, SC, USA
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ADS

60
30
0

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GRAY ENGINEERING CONSULTANTS, INC. No. C00060 CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA PROFESSIONAL ENGINEER No. 40522 JOSHUA D. BYER 5/3/2023

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SOUTH CAROLINA

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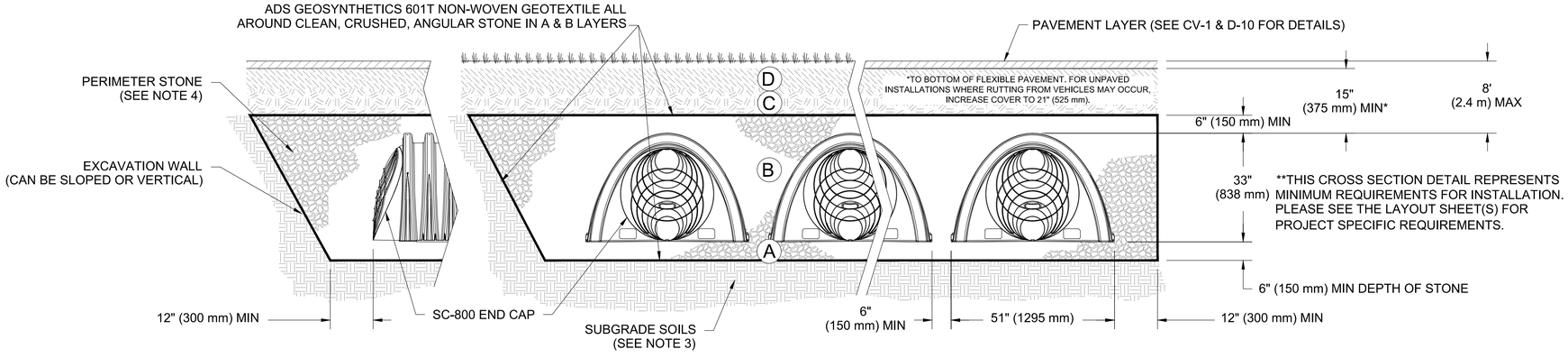
ACCEPTABLE FILL MATERIALS: STORMTECH SC-800 CHAMBER SYSTEMS

MATERIAL LOCATION		DESCRIPTION	AASHTO MATERIAL CLASSIFICATIONS	COMPACTION / DENSITY REQUIREMENT
D	FINAL FILL: FILL MATERIAL FOR LAYER 'D' STARTS FROM THE TOP OF THE 'C' LAYER TO THE BOTTOM OF FLEXIBLE PAVEMENT OR UNPAVED FINISHED GRADE ABOVE. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THE 'D' LAYER.	ANY SOIL/ROCK MATERIALS, NATIVE SOILS, OR PER ENGINEER'S PLANS. CHECK PLANS FOR PAVEMENT SUBGRADE REQUIREMENTS.	N/A	PREPARE PER SITE DESIGN ENGINEER'S PLANS. PAVED INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS.
C	INITIAL FILL: FILL MATERIAL FOR LAYER 'C' STARTS FROM THE TOP OF THE EMBEDMENT STONE ('B' LAYER) TO 15" (375 mm) ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUBBASE MAY BE A PART OF THE 'C' LAYER.	GRANULAR WELL-GRADED SOIL/AGGREGATE MIXTURES, <35% FINES OR PROCESSED AGGREGATE. MOST PAVEMENT SUBBASE MATERIALS CAN BE USED IN LIEU OF THIS LAYER.	AASHTO M145[1] A-1, A-2-4, A-3 OR AASHTO M43[1] 3, 357, 4, 467, 5, 56, 57, 6, 67, 68, 7, 78, 8, 89, 9, 10	BEGIN COMPACTIONS AFTER 12" (300 mm) OF MATERIAL OVER THE CHAMBERS IS REACHED. COMPACT ADDITIONAL LAYERS IN 6" (150 mm) MAX LIFTS TO A MIN. 95% PROCTOR DENSITY FOR WELL GRADED MATERIAL AND 95% RELATIVE DENSITY FOR PROCESSED AGGREGATE MATERIALS. ROLLER GROSS VEHICLE WEIGHT NOT TO EXCEED 12,000 lbs (53 kN). DYNAMIC FORCE NOT TO EXCEED 20,000 lbs (89 kN).
B	EMBEDMENT STONE: FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE ('A' LAYER) TO THE 'C' LAYER ABOVE.	CLEAN, CRUSHED, ANGULAR STONE OR RECYCLED CONCRETE5	AASHTO M43[1] 3, 357, 4, 467, 5, 56, 57	NO COMPACTION REQUIRED.
A	FOUNDATION STONE: FILL BELOW CHAMBERS FROM THE SUBGRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER.	CLEAN, CRUSHED, ANGULAR STONE OR RECYCLED CONCRETE5	AASHTO M43[1] 3, 357, 4, 467, 5, 56, 57	PLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE.[2,3]

PLEASE NOTE:
1. THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "CLEAN, CRUSHED, ANGULAR NO. 4 (AASHTO M43) STONE".
2. STORMTECH COMPACTION REQUIREMENTS ARE MET FOR 'A' LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 6" (150 mm) (MAX) LIFTS USING TWO FULL COVERAGES WITH A VIBRATORY COMPACTOR.
3. WHERE INFILTRATION SURFACES MAY BE COMPROMISED BY COMPACTION, FOR STANDARD DESIGN LOAD CONDITIONS, A FLAT SURFACE MAY BE ACHIEVED BY RAKING OR DRAGGING WITHOUT COMPACTION EQUIPMENT. FOR SPECIAL LOAD DESIGNS, CONTACT STORMTECH FOR COMPACTION REQUIREMENTS.
4. ONCE LAYER 'C' IS PLACED, ANY SOIL/MATERIAL CAN BE PLACED IN LAYER 'D' UP TO THE FINISHED GRADE. MOST PAVEMENT SUBBASE SOILS CAN BE USED TO REPLACE THE MATERIAL REQUIREMENTS OF LAYER 'C' OR 'D' AT THE SITE DESIGN ENGINEER'S DISCRETION.
5. WHERE RECYCLED CONCRETE AGGREGATE IS USED IN LAYERS 'A' OR 'B' THE MATERIAL SHOULD ALSO MEET THE ACCEPTABILITY CRITERIA OUTLINED IN TECHNICAL NOTE 6.20 "RECYCLED CONCRETE STRUCTURAL BACKFILL".



NOTES:

1. CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
2. SC-800 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
3. THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR ASSESSING THE BEARING RESISTANCE (ALLOWABLE BEARING CAPACITY) OF THE SUBGRADE SOILS AND THE DEPTH OF FOUNDATION STONE WITH CONSIDERATION FOR THE RANGE OF EXPECTED SOIL MOISTURE CONDITIONS.
4. PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.
5. REQUIREMENTS FOR HANDLING AND INSTALLATION:
   - TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.
   - TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 2".
   - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT AS DEFINED IN SECTION 6.2.8 OF ASTM F2418 SHALL BE GREATER THAN OR EQUAL TO 550 LBS/FT/%. AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.

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GREENWOOD, SC, USA
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THIS DRAWING HAS BEEN PREPARED BASED ON INFORMATION PROVIDED TO ADS UNDER THE DIRECTION OF THE SITE DESIGN ENGINEER OR OTHER PROJECT REPRESENTATIVE. THE SITE DESIGN ENGINEER SHALL REVIEW THIS DRAWING PRIOR TO CONSTRUCTION. IT IS THE ULTIMATE RESPONSIBILITY OF THE SITE DESIGN ENGINEER TO ENSURE THAT THE PRODUCT(S) DEPICTED AND ALL ASSOCIATED DETAILS MEET ALL APPLICABLE LAWS, REGULATIONS, AND PROJECT REQUIREMENTS.

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SOUTH CAROLINA PROFESSIONAL ENGINEER — GRAY ENGINEERING CONSULTANTS, INC. No. C00060 — CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA PROFESSIONAL ENGINEER — No. 40522 — ZACHARY D. JOSEPH

MISCELLANEOUS NOTES AND DETAILS

PROPOSED HOME 2 SUITES BY HILTON

GREENWOOD COUNTY SOUTH CAROLINA

475 HOSPITALITY BOULEVARD

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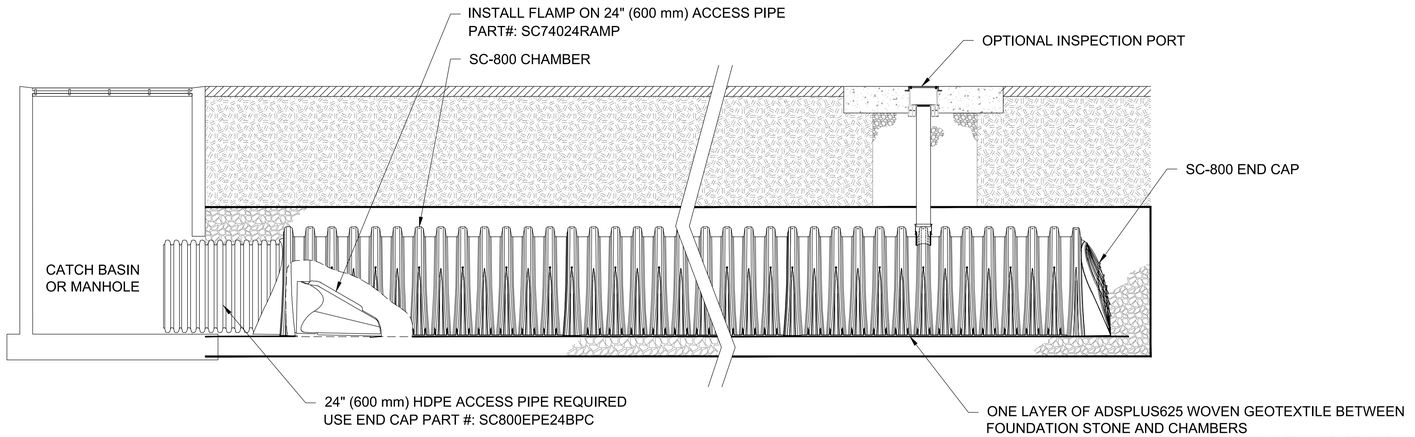


SC-800 ISOLATOR ROW PLUS DETAIL

NTS

INSPECTION & MAINTENANCE

STEP 1) INSPECT ISOLATOR ROW PLUS FOR SEDIMENT
- A. INSPECTION PORTS (IF PRESENT)
  - A.1. REMOVE/OPEN LID ON NYLOPLAST INLINE DRAIN
  - A.2. REMOVE AND CLEAN FLEXSTORM FILTER IF INSTALLED
  - A.3. USING A FLASHLIGHT AND STADIA ROD, MEASURE DEPTH OF SEDIMENT AND RECORD ON MAINTENANCE LOG
  - A.4. LOWER A CAMERA INTO ISOLATOR ROW PLUS FOR VISUAL INSPECTION OF SEDIMENT LEVELS (OPTIONAL)
  - A.5. IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.
- B. ALL ISOLATOR PLUS ROWS
  - B.1. REMOVE COVER FROM STRUCTURE AT UPSTREAM END OF ISOLATOR ROW PLUS
  - B.2. USING A FLASHLIGHT, INSPECT DOWN THE ISOLATOR ROW PLUS THROUGH OUTLET PIPE
    - i)MIRRORS ON POLES OR CAMERAS MAY BE USED TO AVOID A CONFINED SPACE ENTRY
    - ii)FOLLOW OSHA REGULATIONS FOR CONFINED SPACE ENTRY IF ENTERING MANHOLE
  - B.3. IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.

STEP 2) CLEAN OUT ISOLATOR ROW PLUS USING THE JETVAC PROCESS
- A. A FIXED CULVERT CLEANING NOZZLE WITH REAR FACING SPREAD OF 45" (1.1 m) OR MORE IS PREFERRED
- B. APPLY MULTIPLE PASSES OF JETVAC UNTIL BACKFLUSH WATER IS CLEAN
- C. VACUUM STRUCTURE SUMP AS REQUIRED

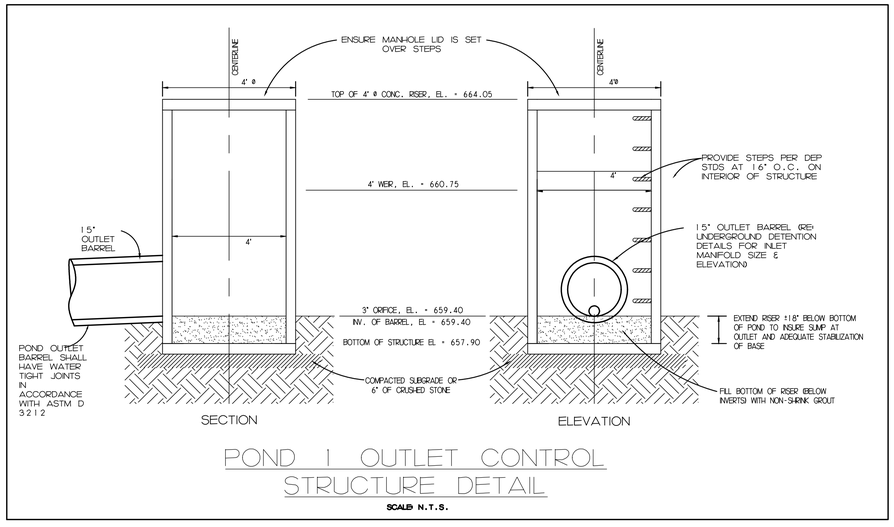
STEP 3) REPLACE ALL COVERS, GRATES, FILTERS, AND LIDS; RECORD OBSERVATIONS AND ACTIONS.

STEP 4) INSPECT AND CLEAN BASINS AND MANHOLES UPSTREAM OF THE STORMTECH SYSTEM.

NOTES

1. INSPECT EVERY 6 MONTHS DURING THE FIRST YEAR OF OPERATION. ADJUST THE INSPECTION INTERVAL BASED ON PREVIOUS OBSERVATIONS OF SEDIMENT ACCUMULATION AND HIGH WATER ELEVATIONS.

2. CONDUCT JETTING AND VACTORING ANNUALLY OR WHEN INSPECTION SHOWS THAT MAINTENANCE IS NECESSARY.



POND 1 OUTLET CONTROL STRUCTURE DETAIL

SCALE: N.T.S.

NO.	DATE	BY	REVISION

GREENWOOD HOTEL
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SOUTH CAROLINA REGISTERED ENGINEER No. 40582 JOSHUA D. LAYER CERTIFICATE OF AUTHORIZATION GRAY ENGINEERING CONSULTANTS, INC No. C00060

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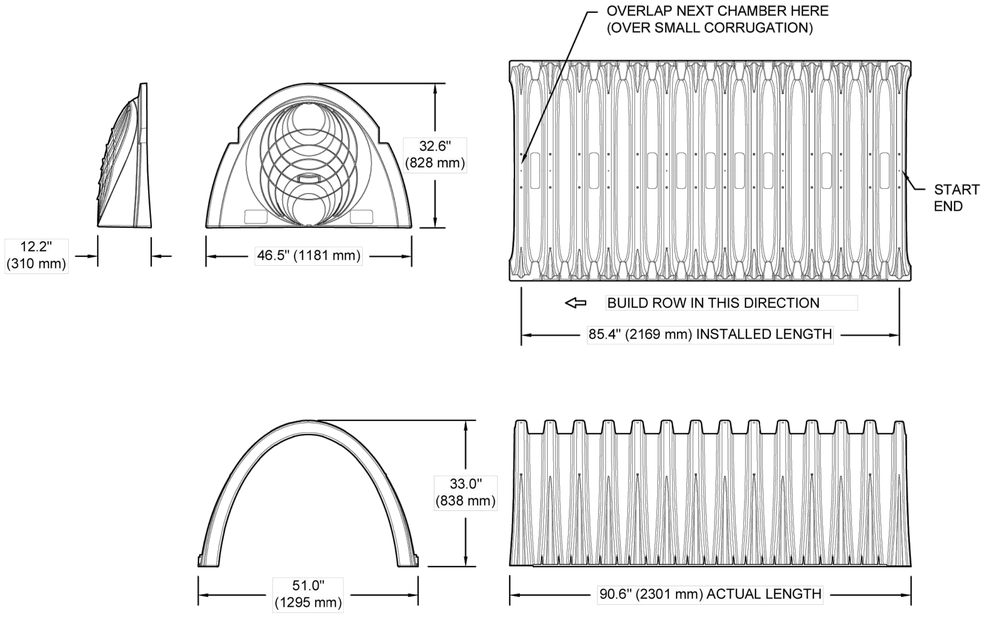
SC-800 TECHNICAL SPECIFICATION

NTS



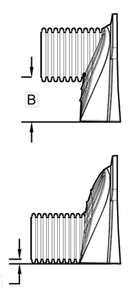
NOMINAL CHAMBER SPECIFICATIONS

SIZE (W X H X INSTALLED LENGTH)	51.0" X 33.0" X 85.4"	(1295 mm X 838 mm X 2169 mm)
CHAMBER STORAGE	50.6 CUBIC FEET	(1.43 m³)
MINIMUM INSTALLED STORAGE*	81.0 CUBIC FEET	(2.29 m³)
WEIGHT	81.8 lbs.	(37.1 kg)

*ASSUMES 6" (152 mm) STONE ABOVE, BELOW, AND BETWEEN CHAMBERS

PRE-CORED HOLES AT BOTTOM OF END CAP FOR PART NUMBERS ENDING WITH "B"
PRE-CORED HOLES AT TOP OF END CAP FOR PART NUMBERS ENDING WITH "T"

PART #	STUB	B	C
SC800EPE06TPC	6" (150 mm)	21.4" (544 mm)	---
SC800EPE06BPC		---	0.9" (23 mm)
SC800EPE08TPC	8" (200 mm)	19.2" (488 mm)	---
SC800EPE08BPC		---	1.0" (25 mm)
SC800EPE10TPC	10" (250 mm)	17.0" (432 mm)	---
SC800EPE10BPC		---	1.2" (30 mm)
SC800EPE12TPC	12" (300 mm)	14.4" (366 mm)	---
SC800EPE12BPC		---	1.6" (41 mm)
SC800EPE15TPC	15" (375 mm)	11.3" (287 mm)	---
SC800EPE15BPC		---	1.7" (43 mm)
SC800EPE18TPC	18" (450 mm)	8.0" (203 mm)	---
SC800EPE18BPC		---	2.0" (51 mm)
SC800EPE24BPC	24" (600 mm)	---	2.3" (58 mm)
SC800EPE	NONE	SOLID END CAP	



NOTE: ALL DIMENSIONS ARE NOMINAL

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GRAY ENGINEERING CONSULTANTS, INC. No. C00060 CERTIFICATE OF AUTHORIZATION NORTH CAROLINA PROFESSIONAL ENGINEER No. 40522 JOSHUA D. BYERS SEAL 040522 REGISTERED

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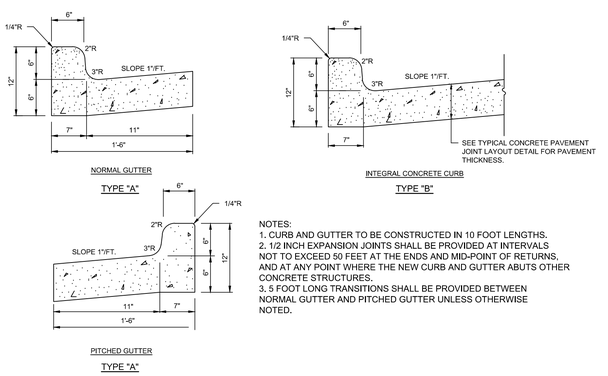
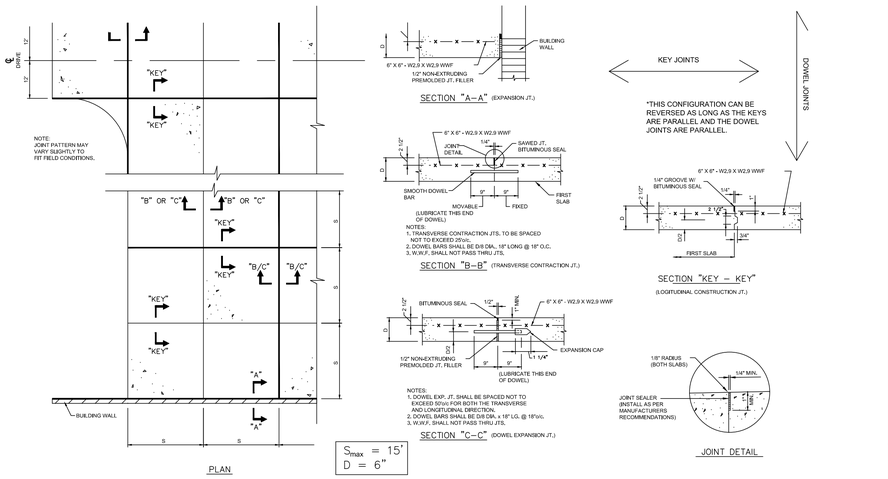


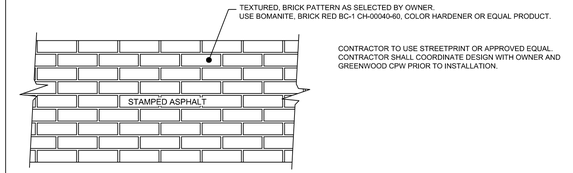
NOTES:
1. CURB AND GUTTER TO BE CONSTRUCTED IN 10 FOOT LENGTHS.
2. 1/2 INCH EXPANSION JOINTS SHALL BE PROVIDED AT INTERVALS NOT TO EXCEED 50 FEET AT THE ENDS AND MID-POINT OF RETURNS, AND AT ANY POINT WHERE THE NEW CURB AND GUTTER ABUTS OTHER CONCRETE STRUCTURES.
3. 5 FOOT LONG TRANSITIONS SHALL BE PROVIDED BETWEEN NORMAL GUTTER AND PITCHED GUTTER UNLESS OTHERWISE NOTED.

- COMBINATION CONCRETE CURB AND GUTTER
(N.T.S.)



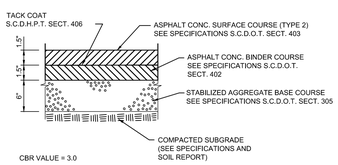
S_{max} = 15'
D = 6"

TYP. CONC. PAVEMENT JOINT LAYOUT
(N.T.S.)

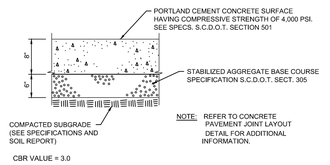


NOTES:
1) PROVIDE CONTROL JOINTS SPACED EVERY 10 FEET ON CENTER.
2) PROVIDE EXPANSION JOINTS AT ALL RIGID OBJECTS.

STANDARD STAMPED COLORED ASPHALT OR CONCRETE

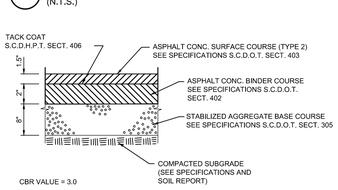


- LIGHT DUTY ASPHALT PAVEMENT
(N.T.S.)

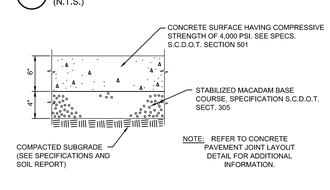


NOTE: REFER TO CONCRETE PAVEMENT JOINT LAYOUT DETAIL FOR ADDITIONAL INFORMATION.

- HEAVY DUTY RIGID PAVEMENT
(N.T.S.)

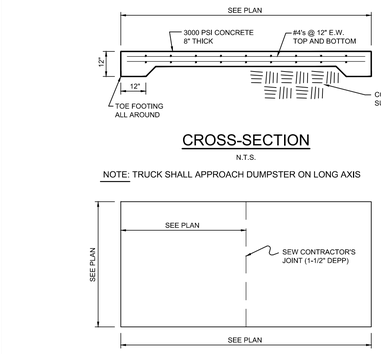


- HEAVY DUTY ASPHALT PAVEMENT
(N.T.S.)



NOTE: REFER TO CONCRETE PAVEMENT JOINT LAYOUT DETAIL FOR ADDITIONAL INFORMATION.

- LIGHT DUTY RIGID PAVEMENT
(N.T.S.)

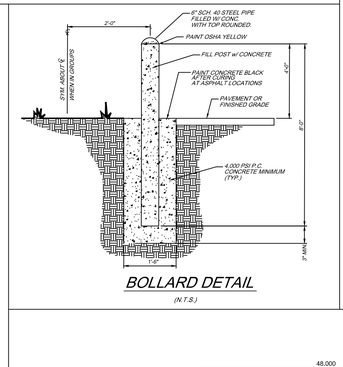


CROSS-SECTION
N.T.S.

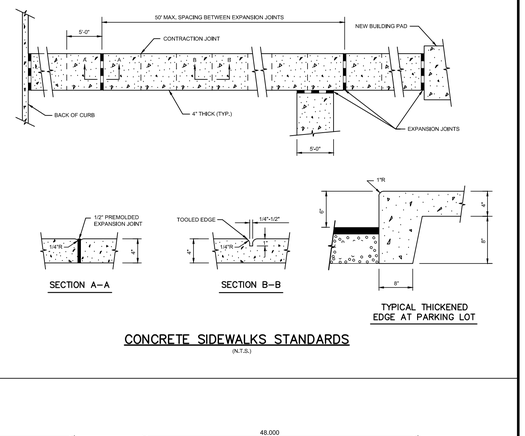
NOTE: TRUCK SHALL APPROACH DUMPSTER ON LONG AXIS

PLAN
N.T.S.

- DUMPSTER PAD DETAIL
(N.T.S.)

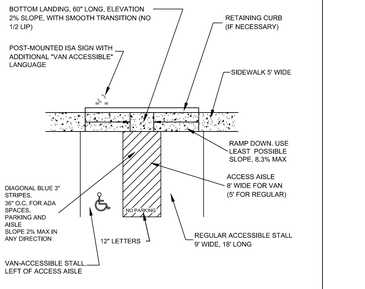


BOLLARD DETAIL
(N.T.S.)

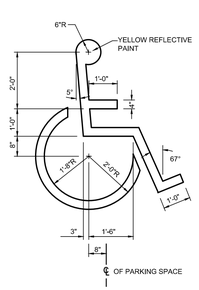


SECTION A-A | SECTION B-B | TYPICAL THICKENED EDGE AT PARKING LOT

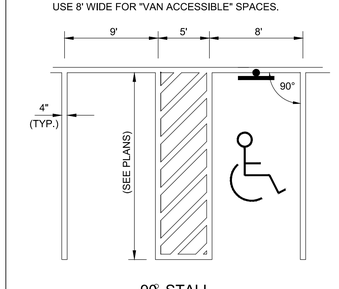
CONCRETE SIDEWALKS STANDARDS
(N.T.S.)



TYPICAL DEPRESSED CURB RAMP AT ACCESSIBLE PARKING DETAIL
(N.T.S.)

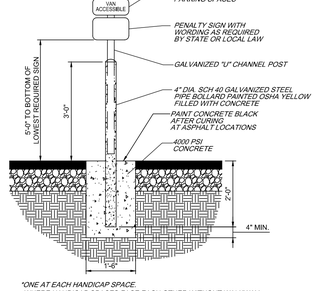


- INTERNATIONAL A.D.A. SYMBOL
(N.T.S.)



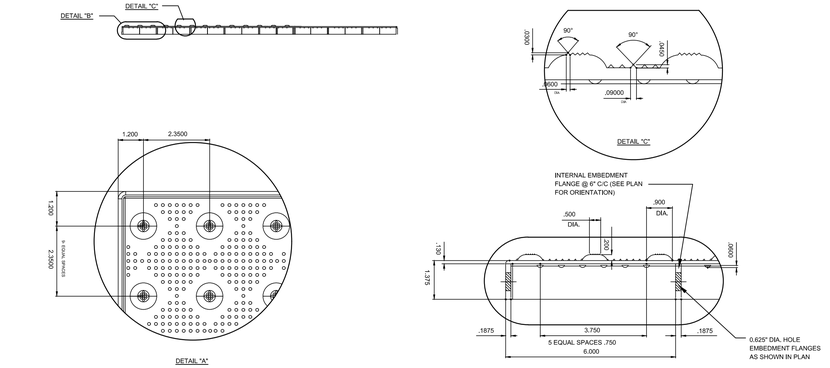
90° STALL

- TYP. PARKING STRIPING DETAIL
(N.T.S.)



"ONE AT EACH HANDICAP SPACE. WHERE HANDICAP SPACES FACE EACH OTHER WITHOUT WALKWAY, THERE SHALL BE ONE POST WITH SIGNS MOUNTED BOTH SIDES

- HANDICAP PARKING SIGN
(N.T.S.)



EMBEDMENT PANEL WARNING SURFACE SYSTEM
24"X48" SOUND ATTENUATING CURB RAMP TILE (INLINE DOME)
(N.T.S.)

NO.	DATE	BY	REVISION
A			

Gray Engineering
132 PILGRIM ROAD - GREENVILLE, SC 29607
PH: (864) 297-3027 - FAX: (864) 729-8747
WWW.GRAYENGINEERING.COM
- SC C.O.A.# C00060 - NC C.O.A.# C-1217 - GA C.O.A.# PEF001941 - TN C.O.A.# 0410819 -

JOSHUA D. BAKER No. 40522 REGISTERED PROFESSIONAL ENGINEER SOUTH CAROLINA

MISCELLANEOUS NOTES AND DETAILS

PROPOSED HOME 2 SUITES BY HILTON

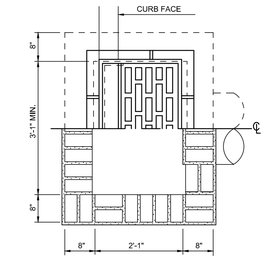
GREENWOOD COUNTY
SOUTH CAROLINA

475 HOSPITALITY BOULEVARD

SCALE:	AS NOTED
PROJECT MANAGER:	ZDJ
DRAWN BY:	MSG
PROJECT DATE:	5/3/2023
JOB No.:	2023104
PLOT DATE:	3/26/25

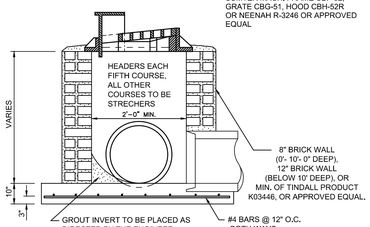
SHEET
D-10

2023104-Details.dwg



PLAN & SECTION

DEWEY BROS. NO. CH-BN-74D OR SUMTER MACH. FRAME CBF-52, GRATE CBG-51, HOOD CBH-52R OR NEENAH R-3246 OR APPROVED EQUAL

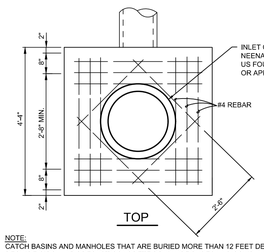


SECTION

S.C.D.O.T. TYPE 1 C.B.

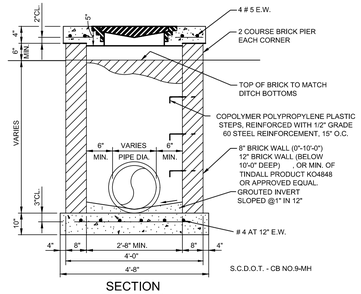
TYPE "D" CATCH BASIN

(N.T.S.)



TOP

NOTE:
CATCH BASINS AND MANHOLES THAT ARE BURIED MORE THAN 12 FEET DEEP WILL REQUIRE CIRCULAR PRECAST CONCRETE DRAINAGE BASES AND SOLID WALL RISERS AS DETAILED IN SC DOT STANDARD DRAWING 719-420-00.



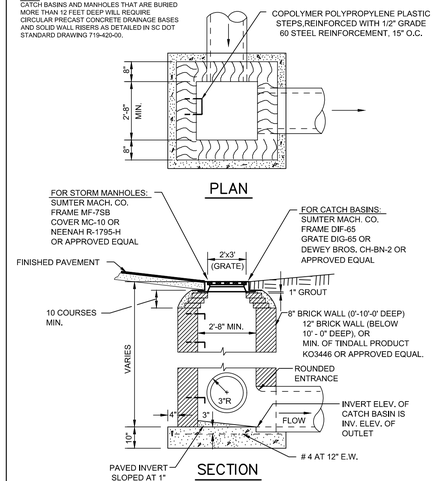
SECTION

S.C.D.O.T. - CB NO.9-MH

TYPE "A" CATCH BASIN

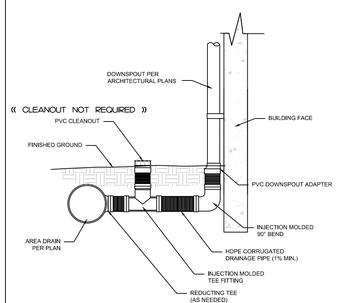
(N.T.S.)

NOTE:
CATCH BASINS AND MANHOLES THAT ARE BURIED MORE THAN 12 FEET DEEP WILL REQUIRE CIRCULAR PRECAST CONCRETE DRAINAGE BASES AND SOLID WALL RISERS AS DETAILED IN SC DOT STANDARD DRAWING 719-420-00.

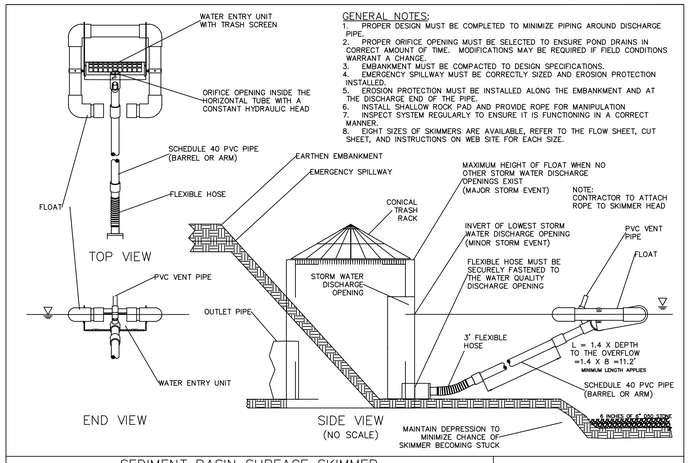


TYPE B – STANDARD CATCH BASIN
TYPE C – STORM DRAIN MANHOLE

(N.T.S.)



ROOF DRAIN CONNECTION



GENERAL NOTES:
1. PROPER DESIGN MUST BE COMPLETED TO MINIMIZE PIPING AROUND DISCHARGE PIPE.
2. PROPER ORIFICE OPENING MUST BE SELECTED TO ENSURE POND DRAINS IN CORRECT AMOUNT OF TIME. MODIFICATIONS MAY BE REQUIRED IF FIELD CONDITIONS WARRANT A CHANGE.
3. EMBANKMENT MUST BE COMPACTED TO DESIGN SPECIFICATIONS.
4. EMERGENCY SPILLWAY MUST BE CORRECTLY SIZED AND EROSION PROTECTION INSTALLED.
5. EROSION PROTECTION MUST BE INSTALLED ALONG THE EMBANKMENT AND AT THE DISCHARGE END OF THE PIPE.
6. INSTALL SHALLOW ROCK PAD AND PROVIDE ROPE FOR MANIPULATION
7. INSPECT SYSTEM REGULARLY TO ENSURE IT IS FUNCTIONING IN A CORRECT MANNER.
8. EIGHT SIZES OF SKIMMERS ARE AVAILABLE, REFER TO THE FLOW SHEET, CUT SHEET, AND INSTRUCTIONS ON WEB SITE FOR EACH SIZE.

SEDIMENT BASIN SURFACE SKIMMER (FAIRCLOTH, NO SUBSTITUTES)

SEE WEB SITE FOR MORE DETAILS
www.faircloth skimmer.com

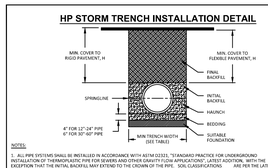
Storm Drainage Schedule					
Line ID	Line Length (ft)	Line Size (in)	Line Slope (%)	Invert Down (ft)	Invert Up (ft)
A1-A2	22.0	18	0.50	659.89	660.00
A2-A3	146.6	18	0.50	660.00	660.73
A3-A4	50.0	18	0.50	660.73	660.98
A4-A5	49.8	18	0.50	660.98	661.23
A5-A6	51.9	18	0.50	661.23	661.49
A6-A7	82.5	15	0.51	661.49	661.91
A7-A8	54.1	15	0.50	661.91	662.18
A8-A9	140.2	15	0.50	662.18	662.88
A6-A6.1	57.0	15	0.51	661.49	661.78
B1-B2	36.6	15	0.55	659.89	660.09
Z1-Z2	26.2	15	0.57	659.25	659.40

Structure Schedule					
Structure ID	Structure Type	Top Elev. (ft)	Weir/Rim Elev. Up (ft)	Bottom Elev. (ft)	Structure Depth (ft)
A1	'D'	663.60	663.10	659.89	3.71
A2	'D'	664.00	663.50	660.00	4.00
A3	'D'	665.90	665.40	660.73	5.17
A4	'D'	665.90	665.40	660.98	4.92
A5	'D'	665.90	665.40	661.23	4.67
A6	'B'	664.15	664.15	661.49	2.66
A7	'B'	666.27	666.27	661.91	4.36
A8	'B'	664.35	664.35	662.18	2.17
A9	'B'	665.00	665.00	662.88	2.12
A6.1	'B'	664.65	664.65	661.78	2.87
B1	'MH-C'	664.07	664.07	659.89	4.18
B2	'D'	663.85	663.35	660.09	3.76
C1	'B'	664.40	664.40	659.89	4.51
EXIST Z1	B	662.14	662.14	659.25	2.89
Z2	'D'	664.50	664.00	659.40	5.10

STORM DRAINAGE NOTES:
1. CALCULATIONS BASED ON ESTIMATED PIPE LENGTHS. CONTRACTOR SHALL VERIFY ALL PIPE LENGTHS. ALL LENGTHS ARE APPROXIMATE. CONTRACTOR IS RESPONSIBLE FOR COST OF PIPING DUE TO FIELD VARIANCES.
2. PIPE SYSTEM HAS BEEN SIZED FOR A 10 YEAR STORM USING HYDRAFLOW STORM SEWER 2019 UNLESS OTHERWISE NOTED.
3. ALL PIPES SHALL BE REINFORCED CONCRETE PIPE (RCP), CLASS III, UNLESS OTHERWISE NOTED.

STRUCTURE LEGEND
"A" - AREA INLET
"SW-A" - SINGLE WING CURB INLET
"DW-A" - DOUBLE WING CURB INLET
"DOUBLE A" - DOUBLE AREA INLET
"HW" - HEADWALL
"MH-C" - JUNCTION MANHOLE

HP STORM TRENCH INSTALLATION DETAIL



NOTES:
1. ALL PIPE SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH ASTM D2321, "STANDARD PRACTICE FOR UNDERGROUND INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY-FLOW APPLICATIONS", LATEST ADDITION, WITH THE EXCEPTION THAT THE INITIAL BACKFILL MAY EXTEND TO THE CROWN OF THE PIPE. SOIL CLASSIFICATIONS ARE PER THE LATEST VERSION OF ASTM D2321. CLASS I MATERIALS SHALL CONSIST OF ANGULAR, CRUSHED STONE OR ROCK, ALL SIZES PASSING A 2" SIEVE AND NOT MORE THAN 10% PASSING A NO. 4 SIEVE. CLASS II MATERIALS SHALL CONSIST OF SAND, GRAVEL, OR CRUSHED STONE WITH LESS THAN 12% PASSING A NO. 200 SIEVE. CLASS III MATERIALS SHALL CONSIST OF SAND AND GRAVEL OR CRUSHED STONE WITH LESS THAN 35% PASSING A NO. 200 SIEVE. CLASS IV MATERIALS SHALL CONSIST OF SOFT, FINE SOILS, CLAY OR ORGANIC SOILS AND SHALL NOT BE USED AS BEDDING MATERIAL. CLASS I OR II MATERIAL SHALL BE USED FOR HAUNCHING AND INITIAL BACKFILL UNLESS CLASS III OR IV MATERIAL IS APPROVED BY THE ENGINEER. CLASS III MATERIAL MAY BE USED FOR INITIAL BACKFILL IN TRENCHES WITH SLOPED SIDES WHERE THE ANGLE OF REPOSE OF THE MATERIAL IS GREATER THAN THE SIDE SLOPE OF THE TRENCH. CLASS IV MATERIAL SHALL NOT BE USED FOR INITIAL BACKFILL.
2. MEASURES SHOULD BE TAKEN TO PREVENT MIGRATION OF NATIVE FINES INTO BACKFILL MATERIAL, WHEN REQUIRED.
3. FOUNDATION: WHERE THE TRENCH BOTTOM IS UNSTABLE, THE CONTRACTOR SHALL EXCAVATE TO A DEPTH REQUIRED BY THE ENGINEER AND BACKFILL WITH SUITABLE FOUNDATION MATERIAL AS DETERMINED BY THE ENGINEER. ALTERNATIVE AND AT THE DISCRETION OF THE DESIGN ENGINEER, THE TRENCH BOTTOM MAY BE STABILIZED USING A GEOTEXTILE MATERIAL.
4. BEDDING: SUITABLE MATERIAL SHALL BE CLASS I, II, III, OR IV. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL CLASSIFICATION TO ENGINEER. COMPACTION SHALL BE SPECIFIED BY THE ENGINEER IN ACCORDANCE WITH TABLE 3 FOR THE APPLICABLE CLASS OF BEDDING MATERIAL AND THE STIFFNESS OF THE FOUNDATION MATERIAL. FOR TRAFFIC APPLICATIONS, 4" (100mm) FOR 12"-24" (300mm-600mm) DIAMETER PIPE, 6" (150mm) FOR 30"-60" (750mm-1500mm) DIAMETER PIPE, THE MIDDLE 1/3 BENEATH THE PIPE INVERT SHALL BE LOOSELY PLACED. PLEASE NOTE, CLASS IV MATERIAL HAS LIMITED APPLICATION AND CAN BE DIFFICULT TO PLACE AND COMPACT. USE ONLY WITH THE APPROVAL OF A SOIL EXPERT.
5. INITIAL BACKFILL: SUITABLE MATERIAL SHALL BE CLASS I, II, III, OR IV IN THE PIPE ZONE EXTENDING TO THE CROWN OF THE PIPE. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL CLASSIFICATION TO ENGINEER. MATERIAL SHALL BE INSTALLED AS REQUIRED IN ASTM D2321, LATEST EDITION. COMPACTION SHALL BE SPECIFIED BY THE ENGINEER IN ACCORDANCE WITH TABLE 3 FOR THE APPLICABLE CLASS OF BEDDING MATERIAL AND THE STIFFNESS OF THE FOUNDATION MATERIAL. FOR TRAFFIC APPLICATIONS, 4" (100mm) DIAMETER PIPE AND 24" (600mm) OF COVER FOR 60" (1500mm) DIAMETER PIPE, MEASURED FROM TOP OF PIPE TO BOTTOM OF FLEXIBLE PAVEMENT OR TO TOP OF RIGID PAVEMENT. APPLICATION AND CAN BE DIFFICULT TO PLACE AND COMPACT. USE ONLY WITH THE APPROVAL OF A SOIL EXPERT.
6. MINIMUM COVER: MINIMUM COVER, H, IN NON-TRAFFIC APPLICATIONS (GRASS OR LANDSCAPE AREAS) IS 12" (300mm) FROM THE TOP OF THE PIPE TO THE GROUND SURFACE. ADDITIONAL COVER MAY BE REQUIRED TO PREVENT FLOTATION. FOR TRAFFIC APPLICATIONS, CLASS I OR II MATERIAL COMPACTED TO 90% SPD AND CLASS III COMPACTED TO 95% SPD IS REQUIRED. MINIMUM COVER, H, IS 12" (300mm) UP TO 48" (1,200mm) DIAMETER PIPE AND 24" (600mm) OF COVER FOR 60" (1500mm) DIAMETER PIPE, MEASURED FROM TOP OF PIPE TO BOTTOM OF FLEXIBLE PAVEMENT OR TO TOP OF RIGID PAVEMENT.
7. FOR ADDITIONAL INFORMATION SEE TECHNICAL NOTE 2.04.

TABLE 1. RECOMMENDED MINIMUM TRENCH WIDTHS

PIPE DIAM.	MIN. TRENCH WIDTH
12" (300mm)	24" (600mm)
15" (375mm)	24" (600mm)
18" (450mm)	24" (600mm)
21" (525mm)	24" (600mm)
24" (600mm)	24" (600mm)
30" (750mm)	24" (600mm)
36" (900mm)	24" (600mm)
42" (1050mm)	24" (600mm)
48" (1200mm)	24" (600mm)
54" (1350mm)	24" (600mm)
60" (1500mm)	24" (600mm)

TABLE 2. MINIMUM RECOMMENDED COVER BASED ON VEHICLE LOADING CONDITIONS

PIPE DIAM.	SURFACE (NY) LOADING CONDITION	
	H-25	CONSTRUCTION (1ST AXLE LOAD) *
12" - 18" (300mm - 450mm)	12" (300mm)	30" (750mm)
21" - 60" (525mm - 1500mm)	24" (600mm)	36" (900mm)

* INCREASE IN DEPTH OF 1FT (300MM) ADDITIONAL COVER

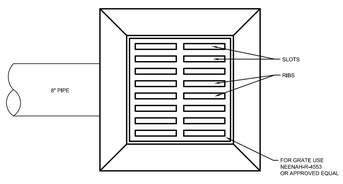
TABLE 3. MAXIMUM COVER FOR 90% OF STORM PIPE, ft

PIPE DIA	CLASS I		CLASS II		CLASS III		CLASS IV	
	COMPACTED		85%	90%	85%	95%	90%	95%
12"	61		28	31	18	21	9	18
(300mm)	(13.5m)		(8.4m)	(9.5m)	(5.4m)	(6.5m)	(2.8m)	(5.5m)
15"	62		28	31	18	21	9	18
(375mm)	(12.8m)		(8.6m)	(9.5m)	(5.4m)	(6.5m)	(2.8m)	(5.5m)
18"	62		28	31	18	21	9	18
(450mm)	(13.5m)		(8.5m)	(9.5m)	(5.5m)	(6.5m)	(2.8m)	(5.5m)
24"	61		28	31	18	21	9	18
(600mm)	(13.2m)		(8.6m)	(9.5m)	(5.5m)	(6.5m)	(2.8m)	(5.5m)
30"	61		27	31	18	21	9	18
(750mm)	(13.2m)		(8.2m)	(9.5m)	(5.5m)	(6.5m)	(2.8m)	(5.5m)
36"	61		28	31	18	21	9	18
(900mm)	(8.5m)		(8.5m)	(9.5m)	(5.5m)	(6.5m)	(2.8m)	(5.5m)
42"	70		27	31	18	21	9	18
(1050mm)	(8.1m)		(8.4m)	(9.5m)	(5.5m)	(6.5m)	(2.8m)	(5.5m)
48"	61		28	31	18	21	9	18
(1200mm)	(8.5m)		(8.5m)	(9.5m)	(5.5m)	(6.5m)	(2.8m)	(5.5m)
54"	61		28	31	18	21	9	18
(1350mm)	(8.8m)		(8.5m)	(9.5m)	(5.5m)	(6.5m)	(2.8m)	(5.5m)

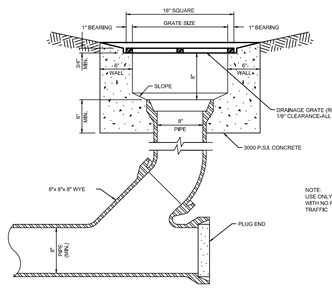
FILL HEIGHT TABLE GENERATED USING AASHTO SECTION 12, LOAD RESISTANCE FACTOR DESIGN (LRFD) PROCEDURE WITH THE FOLLOWING ADJUSTIONS:
NO HYDROSTATIC PRESSURE
UNIT WEIGHT OF SOIL (γs) = 120 PCF

NO.	REVISION	BY	DATE
6	REV. MAXIMUM COVER HEIGHTS	PMD	01/11/21
5	DESCRIPTION	BY	06/05/17 (rev7)
	DW, DIT/RET SYSTEM		
	STORMTECH CHAMBER SYSTEM		
	DETAIL (HP STORM)		
DRAWING NUMBER:	STD-1010		

NOTES: ALL DIMENSIONS IN INCHES (mm) UNLESS OTHERWISE NOTED
ADS, Inc. 4640 Trueman Blvd. Hilliard, Ohio 43026
SCALE: NTS
SHEET 1 OF 1



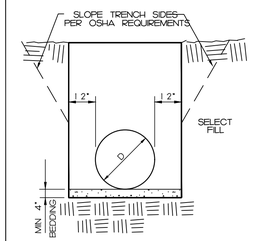
PLAN



SECTION

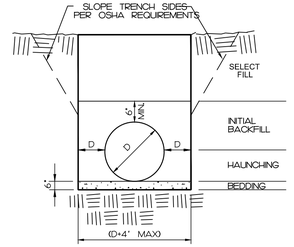
AREA DRAIN DETAIL

(N.T.S.)



REINFORCED CONCRETE PIPE

1. BEDDING SHALL BE COMPACTED CRUSHED STONE AND SHALL BE SHAPED TO THE BOTTOM OF THE PIPE.
2. SELECT FILL SHALL BE SELECT MATERIAL FREE OF LARGE ROCKS (3"+) AND SHALL BE PLACED IN 8" MAX. LOOSE LIFTS AND COMPACTED TO 95% STANDARD PROCTOR.



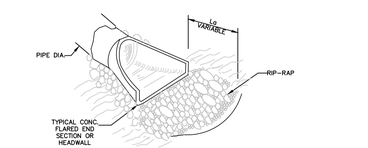
FLEXIBLE PIPE

INCLUDES CORRUGATED METAL PIPE, CORRUGATED POLYETHELENE PIPE AND/OR POLYVINYL CHLORIDE PIPE

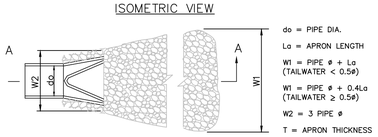
1. BEDDING SHALL BE COMPACTED CRUSHED STONE AND SHALL BE SHAPED TO THE BOTTOM OF THE PIPE.
2. HAUNCHING AND INITIAL BACKFILL MATERIAL AND SHALL BE COMPACTED MATERIAL SHALL BE CLASS I OR II (REF. ASTM D2321) GRANULAR TO 95% STANDARD PROCTOR.
3. SELECT FILL PLACEMENT AND COMPACTION SAME AS FOR RCP.

TRENCH AND BEDDING DETAILS

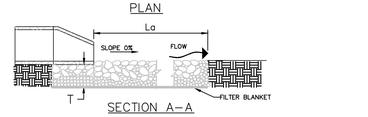
(N.T.S.)



ISOMETRIC VIEW



PLAN



SECTION A–A

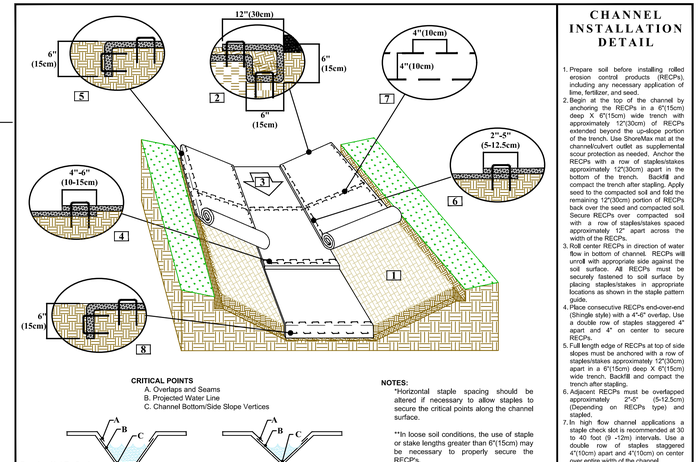
NOTES:
SEE APPROPRIATE PLAN OR SCHEDULE BELOW FOR DIMENSIONS

1. *La IS THE LENGTH OF THE RIP RAP APRON.*
2. *T = 2.0 TIMES THE MAXIMUM STONE DIAMETER BUT NOT LESS THAN 6".*
3. *A FILTER BLANKET OR FILTER FABRIC SHOULD BE INSTALLED BETWEEN THE RIP-RAP AND SOIL FOUNDATION.*

RIP RAP APRON - OUTLET CHANNEL

(NOT TO SCALE)

CHANNEL INSTALLATION DETAIL



1. Prepare soil before installing rolled erosion control products (RECPs), including any necessary application of lime, fertilizer, and seed.
2. Begin at the top of the channel by anchoring the RECPs in a 6"(15cm) deep X 6"(15cm) wide trench with approximately 12"(30cm) of RECPs extended beyond the up-slope portion of the trench. Use ShoreMax mat at the channel/culvert outlet as supplemental scour protection as needed. Anchor the RECPs with a row of staples/stakes approximately 12"(30cm) apart in the bottom of the trench. Backfill and compact the trench after stapling. Apply seed to the compacted soil and fold the remaining 12"(30cm) portion of RECPs back over the seed and compacted soil. Secure RECPs over compacted soil with a row of staples/stakes spaced approximately 12" apart across the width of the RECPs.
3. Roll center RECPs in direction of water flow in bottom of channel. RECPs will unroll with appropriate side against the soil surface. All RECPs must be securely fastened to soil surface by placing staples/stakes in appropriate locations as shown in the staple pattern guide.
4. Place consecutive RECPs end-over-end (Shingle style) with a 4"-6" overlap. Use a double row of staples staggered 4" apart and 4" on center to secure RECPs.
5. Full length edge of RECPs at top of side slopes must be anchored with a row of staples/stakes approximately 12"(30cm) apart in a 6"(15cm) deep X 6"(15cm) wide trench. Backfill and compact the trench after stapling.
6. Adjacent RECPs must be overlapped approximately 2"-0" (5-12.5cm) (Depending on RECPs type) and stapled.
7. In high flow channel applications a staple check slot is recommended at 30 to 40 foot (9 -12m) intervals. Use a double row of staples staggered 4"(10cm) apart and 4"(10cm) on center over entire width of the channel.
8. The terminal end of the RECPs must be anchored with a row of staples/stakes approximately 12" (30cm) apart in a 6"(15cm) deep X 6"(15cm) wide trench. Backfill and compact the trench after stapling.

CRITICAL POINTS
A. Overlaps and Seams
B. Projected Water Line
C. Channel Bottom/Side Slope Vertices

Drawing Not To Scale

NOTES:
*Horizontal staple spacing should be altered if necessary to allow staples to secure the critical points along the channel surface.

**In loose soil conditions, the use of staple or stake lengths greater than 6"(15cm) may be necessary to properly secure the RECP's.

NORTH AMERICAN GREEN
5401 St. Wendel - Cynthiana Rd.
Poseyville, IN 47633
PH: 800-722-2040
www.nagreen.com

Disclaimer:
The information presented herein is general design information only. For specific applications, consult an independent professional for further design guidance.

Drawn on: 5-4-17

Gray Engineering
132 PILGRIM ROAD - GREENVILLE, SC 29607
PH: (864) 297-3027 - FAX: (864) 729-8747
WWW.GRAYENGINEERING.COM
- SC C.O.A.# C00060 - NC C.O.A.# C-1217 - GA C.O.A.# PEO01941 - TN C.O.A.# 0410819 -

GRAY ENGINEERING CONSULTANTS INC. No. 4052 CERTIFICATE OF AUTHORIZATION NO. C00060 NORTH CAROLINA PROFESSIONAL ENGINEER SOUTH CAROLINA PROFESSIONAL ENGINEER

MISCELLANEOUS NOTES AND DETAILS

PROPOSED HOME 2 SUITES BY HILTON

475 HOSPITALITY BOULEVARD

GREENWOOD COUNTY
SOUTH CAROLINA

SCALE:	
PROJECT MANAGER:	ZDJ
DRAWN BY:	MSG
PROJECT DATE:	5/3/2023
JOB No.:	2023104
PLOT DATE:	

SHEET
D-11

MISCELLANEOUS SITE UTILITY NOTES

1. THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING ALL LOCAL UTILITIES (GAS, POWER, TELEPHONE, TELECABLE, ETC.) AND INCLUDING IN HIS PRICE ALL WORK NECESSARY TO COORDINATE THE RELOCATION OF ANY EXISTING UTILITIES THAT INTERFERE WITH NEW CONSTRUCTION. UTILITIES SHOWN, OTHER THAN WATER AND SEWER, HAVE NOT BEEN DESIGNED AND ARE SHOWN FOR INFORMATION ONLY.
2. CONTRACTOR SHALL CONTACT ALL LOCAL UTILITIES BEFORE BEGINNING WORK AT SITE TO COORDINATE INSTALLATION, INSPECTIONS, AND PAY ALL ASSOCIATED FEES. INCLUDE ALL TAP, INSPECTION, AND METER FEES FOR WATER AND SEWER IN BID PRICE.
3. SITE LIGHTING DESIGN BY OTHERS. THE SITE LIGHTING SHOWN ON SITE PLANS IS FOR INFORMATION ONLY. REFERENCE ELECTRICAL PLANS FOR CIRCUITRY.
4. SEE SITE ELECTRICAL PLANS FROM ELECTRICAL ENGINEER FOR SITE ELECTRICAL ROUTING, SITE ELECTRICAL RE-LOCATION, SITE LIGHTING, TELEPHONE ROUTING, ETC.
5. ALL MATERIALS MUST MEET STATE AND LOCAL SPECIFICATIONS FOR THE WATER AND SANITARY SEWER SYSTEM.
6. THE CONTRACTOR SHALL HAVE A PRE-CONSTRUCTION CONFERENCE WITH ALL UTILITIES (WATER, SEWER, ELECTRIC, TELEPHONE, TELECABLE, ETC.), AND THE FIRE CHIEF PRIOR TO BEGINNING CONSTRUCTION.
7. AS-BUILT PLANS AND PROFILES SHALL BE CREATED FOR THE WATER AND SANITARY SEWER BY A PROFFESSIONAL LAND SURVEYOR (P.L.S.). THE AS-BUILT DRAWINGS AND ASSOCIATED EASEMENT PLATS SHALL BE REVIEWED BY THE RESPECTIVE UTILITY AUTHORITY AND RECORDED WITH PICKENS COUNTY PRIOR TO THE STORE OPENING.
8. RISER AND FIRE SERVICE SIZES FOR INFORMATION ONLY. CONTRACTOR SHALL VERIFY SIZES AND INCLUDE COSTS IN BID PRICE.
9. GRAY ENGINEERING ACCEPTS NO RESPONSIBILITY FOR THE ACCURACY OF THE FLOW TEST DATA. THE SPRINKLER CONTRACTOR SHALL PERFORM THEIR OWN FLOW TEST PRIOR TO DESIGNING SPRINKLER SYSTEM.
10. ALL SANITARY SEWER SERVICE PIPING SHALL BE POLYVINYL CHLORIDE (PVC) SDR 35. 4" SEWER SERVICES SHALL HAVE A MINIMUM SLOPE OF 2.08% AND 6" SEWER SERVICES SHALL HAVE A MINIMUM SLOPE OF 1.04%.
11. ALL 2", 2.5" AND 3" WATER SERVICES SHALL BE PVC, C900, CLASS 150 MATERIAL. ALL WATER MAINS 4", 6", 8" AND 12" SHALL BE "CLASS 350" DUCTILE IRON PIPE (D.I.P.). ALL WATER LINES TO FIRE HYDRANTS SHALL BE 6" "CLASS 350" DUCTILE IRON PIPE (D.I.P.). CONTRACTOR SHALL REFER TO LOWES SPECS AND GREENWOOD CPW SPECS. CONTACT ENGINEER IF ANY CONFLICTS.

GENERAL UTILITY NOTE:
THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING ALL LOCAL UTILITIES AND COORDINATING ALL UTILITY SERVICES AND RELOCATIONS. UTILITIES SHOWN, OTHER THAN WATER AND SEWER, ARE SHOWN FOR INFORMATION ONLY AND HAVE NOT BEEN DESIGNED. THE CONTRACTOR IS RESPONSIBLE FOR ALL COORDINATION AND CONSTRUCTION NECESSARY TO PROVIDE A FULLY OPERATIONAL UTILITY SYSTEM PER THE STORE'S LOAD REQUIREMENTS ,THE STATE AND ANY LOCAL REQUIREMENTS. THE CONTRACTOR IS TO INCLUDE ALL FEES AND REIMBURSABLE COSTS IN HIS ORIGINAL PRICE TO THE OWNER. CONTRACTOR SHALL CONTACT THE LOCAL UTILITY COMPANIES BEFORE BEGINNING WORK AT SITE TO COORDINATE INSTALLATION, INSPECTIONS AND PAY ALL ASSOCIATED FEES.

SITE UTILITY NOTES

1. LOCATION OF SITE UTILITIES SHALL BE VERIFIED BY GENERAL CONTRACTOR AND THE UTILITY COMPANY PROVIDING SERVICE.
2. GENERAL CONTRACTOR SHALL PROVIDE 2' x 2' x 6" THICK CONCRETE APRON AT ALL CLEANOUTS, VALVES AND METERS OUTSIDE OF BUILDING.
3. CONTRACTOR WILL BE RESPONSIBLE FOR ALL TAP AND TIE ON FEES REQUIRED, AS WELL AS COST OF UNDERGROUND SERVICE CONNECTIONS TO THE BUILDING.
4. ELECTRICAL SERVICE TO PAD MOUNTED TRANSFORMER SHALL BE RUN UNDERGROUND, FROM ROAD RIGHT-OF-WAY TO TRANSFORMER LOCATION. ASSOCIATED COST BY CONTRACTOR.
5. GENERAL CONTRACTOR SHALL FURNISH (2) - 4" TELEPHONE CONDUIT(S) AS SHOWN ON PLAN, VERIFY LOCATION OF TIE IN AT TELEPHONE COMPANY'S SERVICE LINE. PROVIDE NYLON PULL CORDS INSIDE CONDUIT.
6. THRUST BLOCKS SHALL BE PROVIDED AT ALL BENDS, TEES, AND FIRE HYDRANTS.
7. DIMENSIONS SHOWN ARE TO CENTERLINE OF PIPE OR FITTING.
8. ALL WATER AND SANITARY LEADS TO BUILDING SHALL END 5' OUTSIDE THE BUILDING LIMITS AS SHOWN ON PLAN AND SHALL BE PROVIDED WITH A TEMPORARY PLUG AT END.
9. ALL FIRE HYDRANTS SHALL BE PROVIDED WITH AN APPROVED GATE VALVE A MAXIMUM OF 5'-0" FROM HYDRANT.
10. ALL TRENCHING, PIPE LAYING, AND BACKFILLING SHALL BE IN ACCORDANCE WITH FEDERAL OSHA REGULATIONS.
11. CONTRACTOR SHALL HAVE APPROVAL OF ALL GOVERNING AGENCIES HAVING JURISDICTION OVER THIS SYSTEM PRIOR TO INSTALLATION.
12. ALL WORK SHALL BE DONE IN STRICT ACCORDANCE WITH DIVISION 2 OF LOWE'S STANDARD SITE SPECIFICATIONS.
13. REFER TO FIRE PROTECTION SHEETS FOR LOCATION AND DETAIL OF FIRE LINE LEAD IN.
14. FIRE LINE SHALL BE STUBBED UP 1' ABOVE FFE IN SPRINKLER ROOM.
15. REFER TO PLUMBING SHEETS FOR LOCATION OF SEWER, DOMESTIC, AND IRRIGATION CONNECTIONS.

SANITARY SEWER SPECIFICATIONS

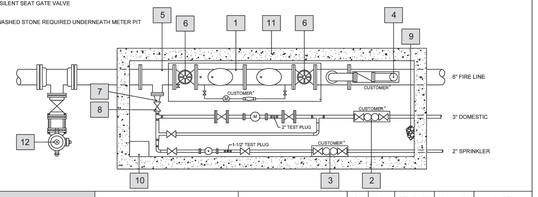
1. All sanitary sewer work shall be constructed to lines and grades shown and as detailed on the drawings. The contractor shall provide GREENWOOD CPW approved standard pre-cast manholes at all bends and changes in grade in sewer lines and connections to existing sewer lines. Pipe bedding and backfill shall be carefully controlled. All sanitary sewer work shall comply with local codes and ordinances, and OSHA regulations. The design engineer, GREENWOOD CPW and South Carolina Department of Health and Environmental Control, (SC DHEC), must inspect and approve and permit all sewer work before being put in service.
2. All work shall be constructed in strict accordance with the plans, specifications and instructions given by the owner's representative, SCDHEC, and GREENWOOD CPW. GREENWOOD CPW has delegated review authority and the City's written approval must be obtained before plans are submitted to SCDHEC.
3. A pre-construction conference with the contractor, design engineer, GREENWOOD CPW Utilities/Engineering and SCDHEC will be held prior to sewer line construction.
4. All work shall be inspected by GREENWOOD CPW and SCDHEC before the approval to operate is issued. AS-BUILT drawings shall be supplied to GREENWOOD CPW in both paper and electronic format before GREENWOOD CPW's final utility approval is issued.
5. All work shall carry minimum of one year warranty of as prescribed by GREENWOOD CPW before the City assumes line maintenance.
6. An encroachment permit for street right-of way shall be filed with the Department of Public Works before construction starts.
7. The contractor shall be responsible for repairs to existing roads used by his operation. The contractor shall remove dirt, mud and debris from highway/roadway.
8. All sanitary sewer pipe shall be ductile iron pipe (DIP) or poly-vinyl chloride (P.V.C.) pipe type SDR 35 unless specified by GREENWOOD CPW. All sewer service taps shall be DIP or Schedule 40 depending upon application.
9. Each joint shall be clearly and legibly marked with the manufacturer's name or identifying symbol.
10. GREENWOOD CPW shall be furnished with a letter of certification from the pipe supplier that all P.V.C. has been stored inside from the time of manufacture.
11. A minimum of 4 feet of cover shall be maintained over all P.V.C. pipe.
12. Only manhole taps will be acceptable, unless approved by GREENWOOD CPW.
13. Ductile iron pipe, class 50, shall be used in all above ground or shallow line installations and road crossings. Ductile iron pipe may be required on other projects at GREENWOOD CPW's discretion, (at depths over 12' & other specified times.)
14. All excavation shall be compacted in 1' layers and shall be clean. Backfill in road R/W shall be 95% Std. Proctor. Backfill out of road R/W shall be 90% Std. Proctor.
15. All sewer lines shall be air tested and must conform to ASTM C828. Certain or all lines may require water testing in conjunction with air testing. A mandrel may be required to be used in all sewer lines at GREENWOOD CPW's discretion.
16. Reinforced pre-cast manholes with formed inverts shall be used whenever possible. Manholes shall have pre-cast inverts and rubber manhole pipe boots for the appropriate pipe sizes. Manholes shall be vacuum tested.
17. Requirements for manholes without pre-cast inverts and rubber manhole pipe boots. Straight (grade and alignment) through M.H. P.V.C. pipe shall be laid instead of brick invert. Pipe shall be cut so joint does not hit M.H. The top of fourth section of pipe shall be evenly cut out after bench is poured.
18. If an invert must be poured in a manhole the bench may contain concrete bricks in concrete mix.
19. Reinforced riser rings shall be used for adjustment of ring to surface. In no case may this riser section be over 12 inches.
20. Traffic duty rated M.H. frames and covers shall be used and weigh approximately 200 pounds and 12-pounds, respectively. All covers shall be vented unless otherwise specified. All surfaces of frame and cover shall be bituminous coated.
21. All steps shall be plastic/rubber covered steel at 16" O.C.
22. The contractor is responsible for top elevation of all M.H. covers to meet the finish grade of the asphalt.
23. Any manhole located off the road or highway shall be raised approximately one foot above finish grade.
24. A drop of 18 inches maximum from the point of sewage entrance to the point of sewage overflow is permitted provided the invert is sloped from the entrance point to the outflow point.
25. Service taps shall be ductile iron pipe or Schedule 40 PVC pipe. All taps shall be clearly marked and stubbed up on a 45 degree angle at the appropriate lot. Metal stakes/fence posts shall be used to mark the location of each tap.
26. GREENWOOD CPW shall be legally granted a 25' easement for off public rights-of-way sewer lines. Greater widths may be required due to depths of bury of the lines.

NOTE:
CONTRACTOR SHALL USE "MEGALUG" RESTRAINT SYSTEM FOR M.J. DUCTILE IRON PIPE UNDERGROUND FIRE LINE. IN ADDITION, ALL FIRE HYDRANTS SHALL BE INSTALLED WITH BOTH TIE-RODS AND THRUST BLOCKS AS PER DETAILS ON DRAWING D-6.

NOTE:
CONTRACTOR SHALL INSTALL JOINT RESTRAINTS AS SHOWN IN THE SHOP DRAWINGS ON THIS SHEET, AS PER NFPA 24 10.8, TO BE RESTRAINED JOINT SYSTEMS, (1) LOCKING MECHANICAL OR PUSH-ON JOINTS, (2) MECHANICAL JOINTS UTILIZING SETSCREW RETAINER GLANDS.

1 DOUBLE DETECTOR CHECKBACK FLOW PREVENTER (SCDHEC APPROVED)
2 SCDHEC APPROVED DOUBLE CHECK VALVE ASSEMBLY
3 SCDHEC APPROVED DOUBLE CHECK VALVE ASSEMBLY
4 STORZ CONNECTION FOR FIRE DEPT. USE*
5 (1) 6" x 6" x 6" TEE
6 (2) RESILIENT SEAT FLANGE GATE VALVES w/ WHEELS (CHAINED TOGETHER IN OPEN POSITION
7 (1) 6" x 3" FLANGED REDUCER
8 (1) 3" RESILIENT SEAT GATE VALVE
9 12" OF WASHED STONE REQUIRED UNDERNEATH METER PIT.
10 12" x 12" OPENING IN BOTTOM OF PIT (ONE EACH CORNER)
11 10' x 8' x 6" PRECAST CONCRETE VAULT w/ 4' SQUARE ALUMINUM HATCH (w/ STEPS)
12 FIRE HYDRANT ASSEMBLY (REFER TO CPW STANDARD HYDRANT DETAIL)

NOTES:
1) TYPICAL INSTALLATION SHOWN FOR REFERENCE. ACTUAL METER PIT WILL BE DESIGNED TO MEET THE NEEDS OF THE SPECIFIC PROJECT
2) ITEMS 1-4 ARE THE PROPERTY OF THE CUSTOMER AND, AS SUCH, MUST BE PROPERLY MAINTAINED BY THE CUSTOMER. ALL OTHER APPURTENANCES TO BE MAINTAINED BY CPW.
3) ALL PIPING IN THE PIT SHALL BE DIP OR COPPER.
4) ANY PIPE ENTERING OR EXITING THE PIT SHALL UTILIZE LINKSEALS.
5) GREENWOOD CPW WILL INSTALL PIT AND ALL APPURTENANCES AT CUSTOMERS REQUEST. CUSTOMER HAS THE RIGHT TO CONTRACT OUT ITEMS 1-4 ONLY. PREFERENCE MUST BE RELAYED TO CPW UPON REQUEST OF SERVICE.

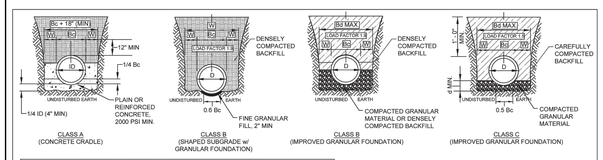


GREENWOOD, S.C.

REV.	DRAWN	REVIEWED	APPROVED	DATE
0	WRH	DMW	AHW	01/2022

DRAWING: DET-W-5

TYPICAL 6" METER VAULT INSTALLATION EXAMPLE
N.T.S.

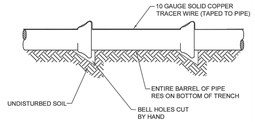


DITCH BEDDING DIMENSIONS FOR CLASS "B" AND CLASS "C"

PIPE SIZE (ID)	Bc (OUT. DIA)	W MAX (WORK SPACE)	Bd MAX (DITCH WIDTH)	(DEPTH OF BEDDING/MATERIAL UNDER PIPE) IMPROVED BEDDING	STANDARD BEDDING
3"	4"	8"	2'-4"	4"	4"
4"	5"	8"	2'-4"	4"	4"
6"	7"	8"	2'-4"	4"	4"
8"	10"	9"	2'-4"	4"	4"
10"	12"	9"	2'-6"	4"	4"
12"	14"	9"	2'-9"	4"	4"
15"	18"	10"	3'-2"	4"	4"
18"	22"	10"	3'-8"	6"	4"
21"	24"	10"	3'-8"	6"	4"
24"	27"	10"	4'-0"	9"	4"

NOTES:
1) DITCH WIDTH NOT TO EXCEED Bd MAX. AT 1'-0" OVER TOP OF PIPE
2) PIPE SIZE 8" TO 30" DESIGN BASED ON (Bd. MAX. DITCH WIDTH) NOT USING TRENCH BOX.
3) PIPE SIZE 36" TO 54" DESIGN BASED ON (Bd. MAX. DITCH WIDTH) USING TRENCH BOX.
4) BACKFILL TO BE COMPACTED IN 6" LIFTS.
5) FOR CLASS "B" AND "C" BEDDINGS, SUBGRADES SHALL BE EXCAVATED (OR OVER EXCAVATED, IF NECESSARY) TO ALLOW FOR A UNIFORM FOUNDATION, FREE OF PROTRUDING ROCKS.

MAGNETICALLY DETECTABLE TAPE 18" TO 24" BELOW GRADE, FOR ALL TYPES OF PIPE



GREENWOOD, S.C.

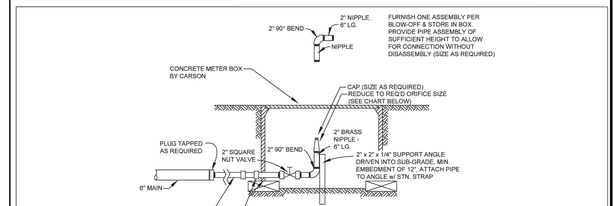
REV.	DRAWN	REVIEWED	APPROVED	DATE
0	WRH	DMW	AHW	01/2022

DRAWING: DET-W-8

TYPICAL BEDDING REQUIREMENTS
N.T.S.

GENERAL NOTES:

1 VERIFY LOCATION OF ALL EXISTING UTILITIES CALL P.U.P.S. BEFORE YOU DIG (811)
2 4'-0" MINIMUM COVER BELOW FINISH GRADE 4'-0" MINIMUM COVER BELOW EDGE OF PAVEMENT ALSO IF PIPE IS LAID IN AN EXISTING DITCH LINE OR A POSSIBLE DITCH LINE: MINIMUM COVER IS 3'-6" BELOW DITCH BOTTOM.
3 CONTRACTOR TO PROVIDE ALL MATERIALS, LABOR AND EQUIPMENT, UNLESS NOTED OTHERWISE.
4 THE CONTRACTOR IS RESPONSIBLE FOR ALL CLEARING, GRUBBING AND ASPHALT DISPOSAL.
5 ALL WATER AND SEWER LINE CONSTRUCTION TO CONFORM WITH CURRENT CPW SPECIFICATIONS, DETAILS, DESIGN CRITERA, CONSTRUCTION PROCEDURES AND SCDOT REGULATIONS. USE DOMESTIC MEGALUGS/FIELD LOCK GASKETS.
6 ALL AREAS DISTURBED ARE TO BE SEEDED IN ACCORDANCE WITH ACCEPTED PRACTICES OF THE LOCAL SCDOT AND COUNTY REGULATIONS. SEEDED AREAS ARE TO BE MULCHED OR HYDRO-SEEDED.
7 THE CONTRACTOR IS RESPONSIBLE FOR CONDUCTING WORK IN ACCORDANCE WITH THE LATEST OSHA REQUIREMENTS AND REGULATIONS; AND SCDOT PERMIT REQUIREMENTS.
8 THE CONTRACTOR IS RESPONSIBLE FOR DISINFECTING AND PRESSURE TESTING PIPE, INCLUDING ALL NECESSARY PIPING REQUIRED.



NOTES:
1) ALL MATERIALS SHALL BE CERTIFIED LEAD FREE.
2) WATER MAINS 6" IN DIAMETER AND LARGER SHALL UTILIZE STRATEGICALLY PLACED HYDRANTS AND FIRE FLOW CRITERIA TO MEET THE REGULATORY BLOW-OFF REQUIREMENTS.
3) MINIMUM WATER LINE SIZE FOR RESIDENTIAL SUBDIVISIONS SHALL BE 6". 2" LINES WILL ONLY BE ALLOWED AROUND THE END OF A CUL-DE-SAC AFTER A HYDRANT, AS SHOWN IN THE CUL-DE-SAC DETAIL. 3" & 4" LINES ARE NOT ACCEPTABLE.
4) BLOW-OFFS SHALL NOT BE DIRECTED TOWARDS ROADS OR ORIENTED TO CAUSE WATER TO FLOW INTO CREEKS. AT STREAM CROSSINGS, DIRECT AWAY FROM STREAMS, OVER GROUND. NO FLUSHING DEVICE SHALL BE CONNECTED TO ANY SEWER.

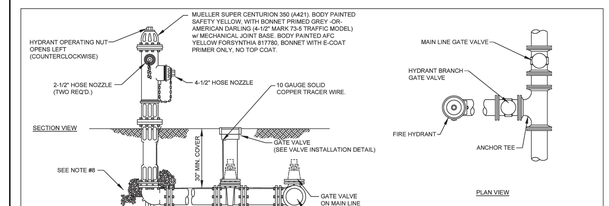
SCDHEC RECOMMENDED ORIFICE SIZES		
PIPE DIAMETER	MIN. FLOW REQUIR.	ORIFICE SIZE
2"	25 GPM	3/4"
2-1/2"	40 GPM	1"
3"	60 GPM	1-1/4"
4"	100 GPM	1-1/2"
6"	220 GPM	2"
8"	450 GPM	2-1/2"
10"	810 GPM	FIRE HYDRANT
12"	980 GPM	FIRE HYDRANT
14"	1200 GPM	SPECIAL BLOW-OFF
16"	1570 GPM	SPECIAL BLOW-OFF

GREENWOOD, S.C.

REV.	DRAWN	REVIEWED	APPROVED	DATE
0	WRH	DMW	AHW	01/2022

DRAWING: DET-W-10

TYPICAL BLOW-OFF ASSEMBLY
N.T.S.



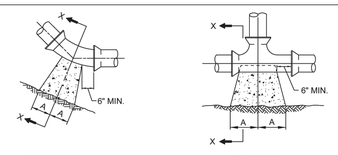
NOTES:
1). ALL FIRE HYDRANT LEGS TO BE DUCTILE IRON PIPE WITH JOINT RESTRAINTS. CONCRETE THRUST BLOCKING NOT PERMITTED FOR JOINT RESTRAINT.
2). ALL FITTINGS SHALL BE RESTRAINED MECHANICAL JOINT AT TEES AND GATE VALVES.
3). EACH HYDRANT SHALL BE CONTROLLED BY AN INDEPNDANT 6" GATE VALVE. THIS VALVE SHALL BE LOCATED A MAXIMUM DISTANCE OF 2' FROM THE BRANCH & A MINIMUM DISTANCE OF 3' FROM THE HYDRANT.
4). HYDRANTS SHALL BE LOCATED TO PROVIDE COMPLETE ACCESIBILITY AND TO MINIMIZE THE POSSIBILITY OF DAMAGE FROM VEHICLES OR INJURY TO PEDESTRIANS.
5). UNLESS NOTED OR INSTRUCTED OTHERWISE, THE BOWL OF HYDRANT SHALL BE PLACED BEHIND THE CURB AND SET SO THAT THE STREET SIDE HYDRANTHOSE NOZZLE CAPS ARE 6"-12" FROM THE FACE OF CURB.
6). ALL HYDRANTS SHALL STAND PLUMB. PUMPER NOZZLES SHALL BE AT RIGHT ANGLES TO AND FACING THE CURB AND SHALL BE A MINIMUM OF 15" ABOVE GRADE. ALL HOSE NOZZLES SHALL BE PARALLEL TO CURB.
7). HYDRANTS SHALL BE SET WITH A DRAINAGE PIT 2' IN DIAMETER & 2' BELOW EACH HYDRANT. THE PIT SHALL BE FILLED WITH No. 5 STONE UNDER & AROUND THE BOWL OF HYDRANT TO A LEVEL 6" ABOVE WASTE OPENING. NO HYDRANT DRAINAGE PIT SHALL BE CONNECTED TO A SEWER.
8). MAXIMUM DISTANCE BETWEEN HYDRANT LOCATIONS SHALL BE 1000' UNLESS NOTED OTHERWISE.
9). NO HYDRANT/DRAIN SHALL BE LOCATED WITHIN 10' OF A SANITARY SEWER.
10). FOR EACH HYDRANT, A GATE VALVE SHALL BE INSTALLED ON THE MAIN LINE, AS INDICATED IN THE PLAN VIEW ABOVE.

GREENWOOD, S.C.

REV.	DRAWN	REVIEWED	APPROVED	DATE
0	WRH	DMW	AHW	01/2022

DRAWING: DET-W-11

FIRE HYDRANT ASSEMBLY (COMPLETE)
N.T.S.



SIZE	90° BENDS		45° BENDS		22.5° BENDS		TEES		PLUGS	
PIPE	A	B	A	B	A	B	A	B	A	B
UP TO 6"	16"	10"	9"	10"	6"	8"	10"	12"	10"	21"
8"	22"	13"	12"	13"	8"	10"	13"	16"	12"	29"
10"	26"	17"	14"	17"	10"	13"	16"	20"	14"	36"
12"	29"	21"	16"	21"	11"	16"	18"	24"	16"	41"
14"	35"	24"	19"	24"	12"	20"	22"	27"	18"	48"
16"	38"	27"	21"	27"	13"	24"	24"	30"	20"	54"
18"	42"	30"	24"	30"	14"	28"	28"	33"	22"	60"
20"	45"	33"	27"	32"	15"	32"	28"	38"	24"	64"
24"	48"	36"	30"	36"	16"	36"	30"	42"	26"	66"

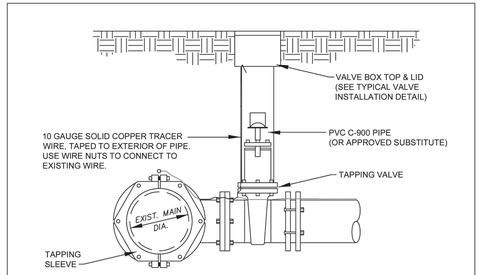
NOTES:
1). SIZED ON 2000 PSF SOIL AND 100 PSI STATIC PRESSURE PLUS AWWA WATER HAMMER, ALLL BEARING SURFACE TO BE CARRIED TO UNDISTURBED GROUND.
2). CONCRETE THRUST BLOCKING TO ONLY BE USED IN SELECT CIRCUMSTANCES AND AS DIRECTED BY GREENWOOD CPW. ALL OTHER THRUST RESTRAINTS SHALL BE MEGALUG OR APPROVED EQUAL.

GREENWOOD, S.C.

REV.	DRAWN	REVIEWED	APPROVED	DATE
0	WRH	DMW	AHW	01/2022

DRAWING: DET-W-6

STANDARD THRUST BLOCKING
N.T.S.



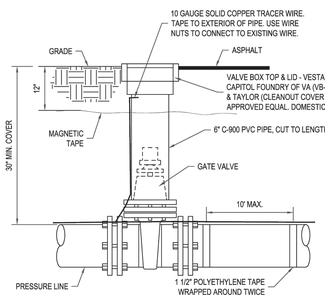
NOTES:
1). TAPPING SADDLES ARE NOT ALLOWED FOR MAIN-ON-MAIN TAPS.
2). THE END OF THE TAPPING SLEEVE SHALL BE NO CLOSER THAN 4 FEET TO A JOINT.
3). TAPPING SLEEVES SHALL BE CONSTRUCTED OF DUCTILE IRON OR HIGH-STRENGTH STAINLESS STEEL AND IN TWO HALVES FOR REDUCED SIZE TAPS. FULL BODY DUCTILE IRON MECHANICAL JOINT TAPPING SLEEVES SHALL BE PROVIDED FOR SIZE-ON-SIZE TAPS (SIZE-ON-SIZE TAPS ARE NOT RECOMMENDED AND SHALL BE APPROVED BY CPW). ALL TAPPING SLEEVES SHALL BE SUITABLE FOR ALL PIPE MANUFACTURED IN ACCORDANCE WITH ANSI A 21 STANDARDS.
4). TAPPING SLEEVES SHALL SEAL TO THE PIPE BY USE OF A CONFINED "O" RING GASKET AND ABLE TO WITHSTAND A PRESSURE TEST OF 150 PSI WITH NO LEAKAGE, IN ACCORDANCE WITH AWWA C110. A 3/4" NPT TEST PLUG SHALL BE PROVIDED FOR PRESSURE TESTING. ALL BOLTS JOINING THE TWO HALVES SHALL BE HIGH-STRENGTH, LOW ALLOY 304 STEEL, IN ACCORDANCE WITH AWWA C111 AND SHALL BE INCLUDED WITH THE SLEEVE. THE OUTLET BRANCH FLANGE SHALL BE CLASS 125 FLANGE JOINT SUITABLE FOR ATTACHMENT BY ALL OTHER MAKES OF TAPPING VALVES MEETING AWWA STANDARDS.
5). ALL DUCTILE IRON SLEEVES SHALL HAVE AN OUTSIDE BITUMINOUS COATING IN ACCORDANCE WITH AWWA C110 AND INSIDE CEMENT-MORTAR LINING IN ACCORDANCE WITH AWWA C104. ALL STEEL SLEEVES SHALL BE FINISHED WITH AN EPOXY COATING BOTH INSIDE AND OUTSIDE.
6). PRODUCT SHALL BE MECHANICAL JOINT, MANUFACTURED BY MUELLER/HYMAX (H304), FORD (FTSS), ROMAC (SSTII), JCM INDUSTRIES (439), OR APPROVED EQUAL.

GREENWOOD, S.C.

REV.	DRAWN	REVIEWED	APPROVED	DATE
0	WRH	DMW	AHW	01/2022

DRAWING: DET-W-7

TAP TO EXISTING MAINS
N.T.S.



NOTES:
1). GATE VALVES SHALL BE AWWA C509/C515, DUCTILE IRON BODY, BRONZE TRIM, SINGLE RESILIENT WEDGE.

2). GATE VALVES 3" AND LARGER TO BE AMERICAN FLOW CONTROL, MUELLER, M&H VALVE COMPANY, OR CPW APPROVED EQUAL. VALVES SHALL HAVE NON-RISING STEM WITH 2" SQUARE NUT, MECHANICAL JOINT ENDS, INTERIOR AND EXTERIOR FUSION BONDED EPOZY COATING, AND OPEN LEFT. VALVES SHALL BE UL LISTED, FM APPROVED, AND CERTIFIED TO ANSI/NSF 61 & 372.

3). 2" GATE VALVES SHALL BE MUELLER, AMERICAN FLOW CONTROL, OR CPW APPROVED EQUAL. VALVES SHALL HAVE NON-RISING STEM WITH SQUARE NUT, THREADED JOINT ENDS, INTERIOR AND EXTERIOR FUSION BONDED EPOXY COATING, AND OPEN LEFT. SQUARE NUT FOR STEM SHALL BE MANGANESE BRONZE WITH THREADS ACCURATELY CUT TO GAGE CONFORMING TO ASTM B 138/138M ALLOY A.

4). UNLESS OTHERWISE NOTED, PROVIDE CIRCULAR CAST IRON VALVE BOX TOP SECTION, WITH DROP TYPE COVER FOR ALL BURIED GATE VALVES, INCLUDING BYPASS VALVES. THE VALVE BOX MUST BE SUITABLE FOR TRAFFIC LOADING IN ACCORDANCE WITH ASTM 48, CLASS 35. DO NOT REST THE VALVE BOX BASE ON FLANGED JOINTS OF THE VALVE BONNET. CASE THE WORD "WATER" IN RAISED LETTERS ON THE VALVE BOX COVER. DOMESTIC ONLY.

GREENWOOD, S.C.

REV.	DRAWN	REVIEWED	APPROVED	DATE
0	WRH	DMW	AHW	01/2022

DRAWING: DET-W-9

TYPICAL VALVE INSTALLATION
N.T.S.

REVISION				
NO.	DATE	BY		
A	.	.	.	.

Gray Engineering
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WWW.GRAYENGINEERING.COM
- SC C.O.A.# C00060 - NC C.O.A.# C-1217 - GA C.O.A.# PEF001941 - TN C.O.A.# 0410819 -

GRAY ENGINEERING CONSULTANTS, INC. NO. C00060 CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA PROFESSIONAL ENGINEER JOSHUA D. BYER No. 40522 REGISTERED

THIS DRAWING AND ASSOCIATED CAD FILES ARE AN INSTRUMENT OF SERVICE AND SHALL NOT BE USED OR REPRODUCED IN ANY WAY THAN AUTHORIZED BY GRAY ENGINEERING CONSULTANTS, INC. IN WRITING

MISCELLANEOUS NOTES AND DETAILS

PROPOSED HOME 2 SUITES BY HILTON

GREENWOOD COUNTY SOUTH CAROLINA

475 HOSPITALITY BOULEVARD

SCALE:	AS NOTED
PROJECT MANAGER:	ZDJ
DRAWN BY:	MSG
PROJECT DATE:	5/3/2023
JOB No.:	2023104
PLOT DATE:	3/26/25

SHEET
D-12

2023104-Details.dwg

MINIMUM LENGTH OF PIPE TO BE RESTRAINED ON EACH SIDE OF BENDS, TEES, DEAD ENDS/VALVES, AND REDUCERS. TEES, HORIZONTAL BENDS, DEAD ENDS/ISOLATION VALVES, AND REDUCERS CALCULATED USING EBAA IRON'S RESTRAINT LENGTH CALCULATOR (10/10/2022). VERTICAL BENDS CALCULATED USING DIPRA THRUST RESTRAINT CALCULATOR (10/10/2022)

DIAMETER OF FITTING	TYPE OF FITTING	MINIMUM LENGTH OF RESTRAINT REQUIRED (FEET)				
		STANDARD LENGTH OR HORIZONTAL BEND	VERTICAL UP BEND	VERTICAL DOWN BEND	VERTICAL OFFSET (DIVERT UNDER OBJECT)	VERTICAL OFFSET (DIVERT OVER OBJECT)
in	12"x12" TEE (W/NO RESTRAINT ALONG RUN)	87	-	-	-	-
12"	12"x12" TEE (W/1F RESTRAINT ALONG RUN)	65	-	-	-	-
12"	12"x6" TEE (W/NO RESTRAINT ALONG RUN)	62	-	-	-	-
12"	12"x6" TEE (W/1F RESTRAINT ALONG RUN)	28	-	-	-	-
12"	12"x4" TEE (W/NO RESTRAINT ALONG RUN)	47	-	-	-	-
12"	12"x4" TEE (W/1F RESTRAINT ALONG RUN)	5	-	-	-	-
12"	12"x8" REDUCER	46	-	-	-	-
12"	12"x6" REDUCER	63	-	-	-	-
12"	90 DEG. BEND	52	52	90	179	103
12"	45 DEG. BEND	22	22	36	74	41
12"	22.5 DEG. BEND	11	11	18	35	20
12"	11.25 DEG. BEND	6	6	9	17	10
12"	DEAD END OR ISOLATION VALVE	87	-	-	-	-
8"	8"x8" TEE (W/NO RESTRAINT ALONG RUN)	62	-	-	-	-
8"	8"x8" TEE (W/1F RESTRAINT ALONG RUN)	28	-	-	-	-
8"	8"x6" TEE (W/NO RESTRAINT ALONG RUN)	44	-	-	-	-
8"	8"x6" TEE (W/1F RESTRAINT ALONG RUN)	6	-	-	-	-
8"	8"x6" REDUCER	26	-	-	-	-
8"	8"x4" REDUCER	44	-	-	-	-
8"	90 DEG. BEND	37	37	64	127	73
8"	45 DEG. BEND	16	16	26	52	30
8"	22.5 DEG. BEND	8	8	13	25	14
8"	11.25 DEG. BEND	4	4	7	12	7
8"	DEAD END OR ISOLATION VALVE	62	-	-	-	-
6"	6"x6" TEE (W/NO RESTRAINT ALONG RUN)	47	-	-	-	-
6"	6"x6" TEE (W/1F RESTRAINT ALONG RUN)	15	-	-	-	-
6"	6"x4" TEE (W/NO RESTRAINT ALONG RUN)	34	-	-	-	-
6"	6"x4" TEE (W/1F RESTRAINT ALONG RUN)	1	-	-	-	-
6"	6"x4" REDUCER	25	-	-	-	-
6"	90 DEG. BEND	29	29	50	98	57
6"	45 DEG. BEND	12	12	20	40	23
6"	22.5 DEG. BEND	6	6	10	19	11
6"	11.25 DEG. BEND	3	3	5	9	5
6"	DEAD END OR ISOLATION VALVE	47	-	-	-	-
4"	4"x4" TEE (W/NO RESTRAINT ALONG RUN)	31	-	-	-	-
4"	4"x4" TEE (W/1F RESTRAINT ALONG RUN)	3	-	-	-	-
4"	90 DEG. BEND	21	21	35	69	40
4"	45 DEG. BEND	9	9	14	28	16
4"	22.5 DEG. BEND	5	5	7	13	8
4"	11.25 DEG. BEND	2	2	4	6	3
4"	DEAD END OR ISOLATION VALVE	34	-	-	-	-

* IF FIELD CONDITIONS DIFFER FROM THOSE LISTED ON THIS TABLE, ADDITIONAL RESTRAINT LENGTH MAY BE REQUIRED

NOTES:
1. WHEN A FITTING OR VALVE IS WITHIN 10 FEET OF BORED CASING, RESTRAINT REQUIREMENTS FOR THAT FITTING OR VALVE INCREASES BY THE LENGTH OF THE CASING PLUS 10 FEET ON THE CASING SIDE.
2. CONSULT ENGINEER FOR PIPE SIZES AND FITTINGS NOT LISTED.
3. WHEN A NEW LINE IS BEING TIED INTO AN EXISTING LINE, EXISTING LINE MAY REQUIRE JOINT RESTRAINT. USE SPLIT BELL RESTRAINT METHODS, IF REQUIRED, TO ENSURE EXISTING LINES ARE ADEQUATELY RESTRAINED.

CALCULATION CONDITIONS:

MATERIAL:	DIP
MIN. DEPTH OF BURY:	3 FT
SAFETY FACTOR:	1.5 TO 1
TEST PRESSURE:	175 PSI
TRENCH TYPE:	TYPE 3
SOIL TYPE:	WORST CASE SCENARIO

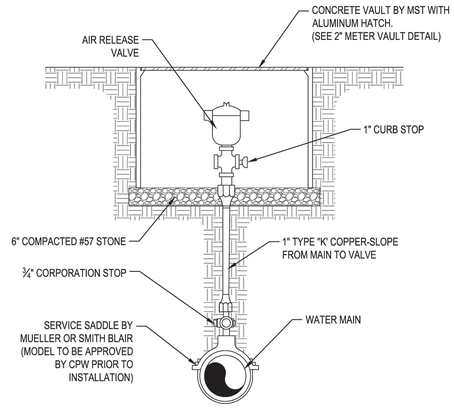
GREENWOOD, S.C.

DRAWING: DET-W-12

REV.	DRAWN	REVIEWED	APPROVED	DATE
0	WRH	DMW	AHW	02/2023

JOINT RESTRAINT DETAIL

N.T.S.



NOTE:
AIR RELEASE VALVE SHALL BE CRISPIN TYPE "N", MODEL NO. PL10 ½" ORIFICE, 0 TO 150 PSI WORKING PRESSURE, 1" NPT CONNECTION OR APPROVED EQUAL.

PIPE SIZES 4"-12" SHALL HAVE 1" VALVE

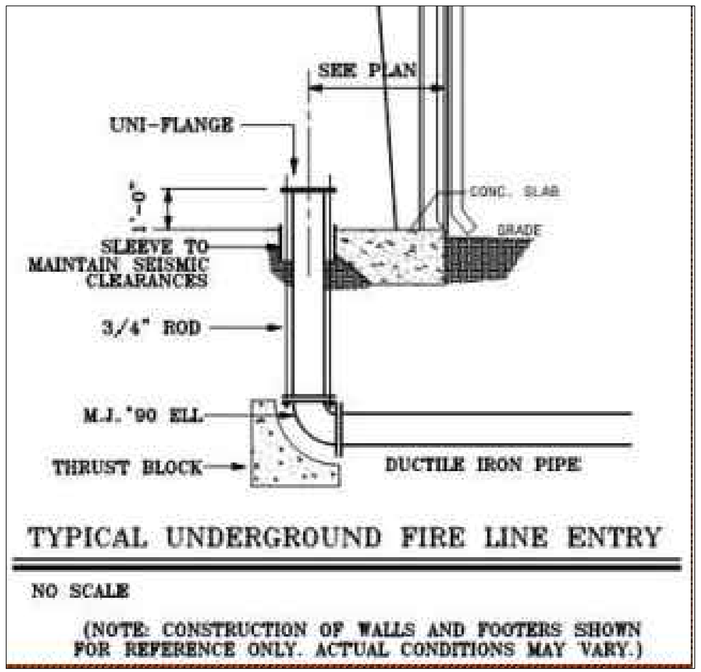
GREENWOOD, S.C.

DRAWING: DET-W-16

REV.	DRAWN	REVIEWED	APPROVED	DATE
0	JSA	DMW	AHW	02/2023

AIR RELEASE VALVE

N.T.S.



TYPICAL UNDERGROUND FIRE LINE ENTRY

NO SCALE

(NOTE: CONSTRUCTION OF WALLS AND FOOTERS SHOWN FOR REFERENCE ONLY. ACTUAL CONDITIONS MAY VARY.)

NO.	DATE	BY	REVISION
A			

Gray Engineering
132 PILGRIM ROAD - GREENVILLE, SC 29607
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SOUTH CAROLINA PROFESSIONAL ENGINEER JOSHUA D. BAKER No. 40522 CERTIFICATE OF AUTHORIZATION GRAY ENGINEERING CONSULTANTS, INC No. C00060

MISCELLANEOUS NOTES AND DETAILS

PROPOSED
HOME 2 SUITES
BY HILTON

GREENWOOD COUNTY
SOUTH CAROLINA

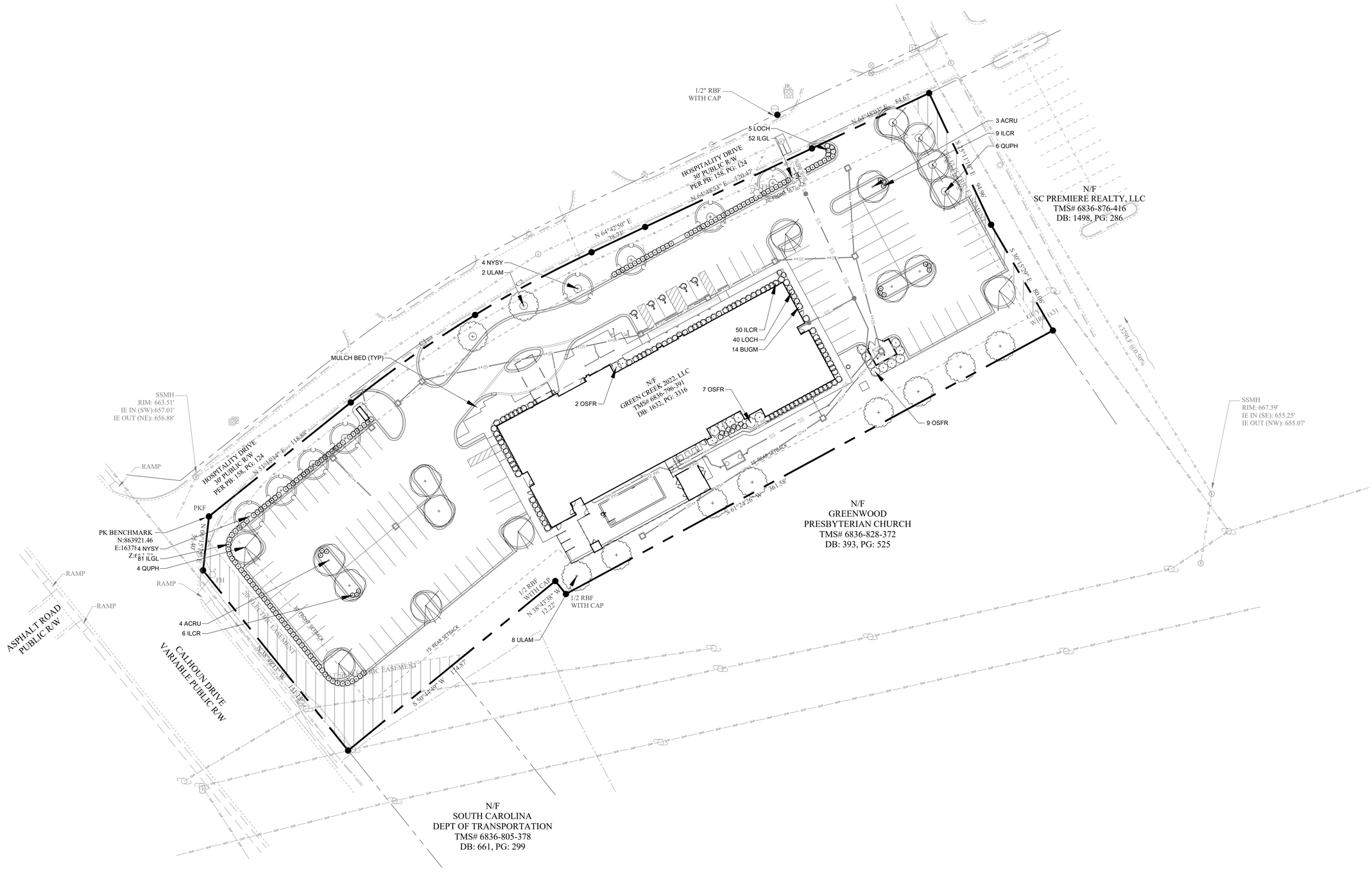
475 HOSPITALITY BOULEVARD

SCALE:	AS NOTED
PROJECT MANAGER:	ZDJ
DRAWN BY:	MSG
PROJECT DATE:	5/3/2023
JOB No.:	2023104
PLOT DATE:	3/26/25

SHEET

D-13

2023104-Details.dwg



DESIGNED: BS
REVIEWED: BS
DRAWN: BS
2024-057 PROJECT NO. 09-12-2024 DATE
1"=30'-0" SCALE

REVISIONS

NO	DATE	ITEM
1	9.12.24	ISSUED FOR PERMIT
2	9.22.24	PERMIT REVISION 1

STUDIO MAIN
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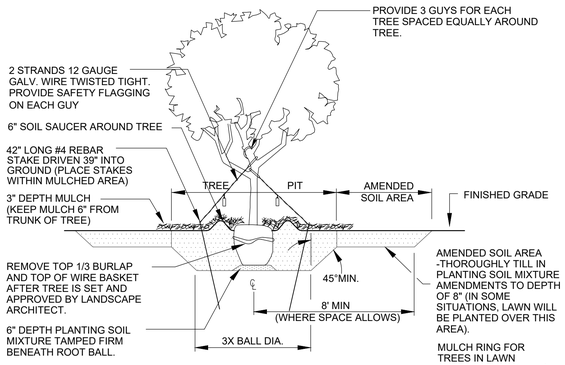
PROPOSED GREENWOOD HOTEL

CITY OF GREENWOOD, SC

LANDSCAPE PLAN

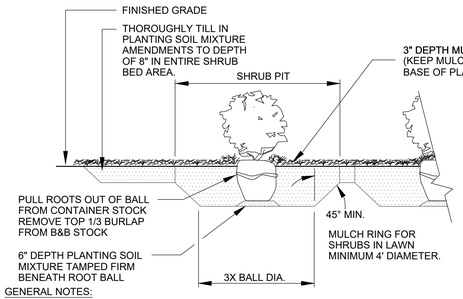
SHEET NO. 1.0



GENERAL NOTES:

1. PLANT SO THAT TOP OF ROOT BALL IS 2" ABOVE FINISH GRADE.
2. SCARIFY SIDES AND BOTTOM OF PIT.
3. BACKFILL TREE PIT WITH SPECIFIED PLANTING SOIL MIXTURE IN 8" LAYERS, HAND TAMP TO REMOVE VOIDS.
4. WHEN 2/3 BACKFILLED, FILL WITH WATER.
5. AFTER PLACING AND AND-TAMPING FINAL LAYERS, WATER AGAIN UNTIL NO MORE IS ABSORBED.
6. STAKE AND GUY TREES IF APPLICABLE
7. DO NOT WRAP TREE TRUNKS.

1 TYPICAL TREE PLANTING



GENERAL NOTES:

1. PLANT SO THAT TOP OF ROOT BALL IS 1" ABOVE FINISH GRADE.
2. SCARIFY SIDES AND BOTTOM OF PIT.
3. BACKFILL SHRUB PIT WITH SPECIFIED PLANTING SOIL MIXTURE IN 6" LAYERS, HAND-TAMP TO REMOVE VOIDS.
4. WHEN 2/3 BACKFILLED, FILL WITH WATER.
5. AFTER PLACING AND HAND-TAMPING FINAL LAYERS, WATER AGAIN UNTIL NO MORE IS ABSORBED.

2 SHRUB DETAIL

LANDSCAPE NOTES

1. CONTRACTOR SHALL VERIFY ALL DIMENSIONS, ELEVATIONS AND UTILITY LOCATIONS PRIOR TO BEGINNING WORK.
2. CONTRACTOR SHALL NOTIFY LANDSCAPE ARCHITECT OF ANY DISCREPANCIES PRIOR TO BEGINNING OR CONTINUING WORK.
3. THERE WILL BE NO SUBSTITUTIONS, DELETIONS OR ADDITIONS WITHOUT APPROVAL OF THE LANDSCAPE ARCHITECT UNLESS OTHERWISE NOTED.
4. CONTRACTOR SHALL MEET WITH LANDSCAPE ARCHITECT PRIOR TO BEGINNING WORK SO THAT THERE IS A CLEAR UNDERSTANDING OF PROJECT REQUIREMENTS. FAILURE TO DO SO JEOPARDIZES FINAL ACCEPTANCE OF WORK.
5. ALL CONSTRUCTION SHALL CONFORM TO CITY, COUNTY, STATE AND FEDERAL REQUIREMENTS.
6. LANDSCAPE ARCHITECT TO INSPECT QUALITY OF PLANT MATERIAL UPON ARRIVAL AT JOB SITE AND LAYOUT OF HARDSCAPE ELEMENTS AND PLANT MATERIAL PRIOR TO INSTALLATION.
7. DOUBLE SHREDDED HARDWOOD MULCH TO BE INSTALLED TO A MINIMUM 3" THICKNESS. MULCH ALL DISTURBED AREAS NOT COVERED BY PAVEMENT, SODDING OR SEEDING. SEE PLAN FOR OTHER MULCH MATERIALS REQUIRED.
8. THIS PLAN IS SCHEMATIC AND, DUE TO THE NATURE OF CONSTRUCTION, SLIGHT FIELD MODIFICATIONS MAY BE NECESSARY TO IMPLEMENT THIS PLAN.
9. CONTRACTOR TO INSTALL PROPER DRAINAGE MEASURES (SWALE, YARD INLETS) TO ENSURE THAT THERE IS NO STANDING WATER OR SATURATED SOILS.
10. CONTRACTOR TO PROVIDE AND INSTALL A FULLY CONTROLLED AUTOMATIC IRRIGATION SYSTEM FOR ALL LANDSCAPE AREAS IDENTIFIED ON THIS DRAWING. PROVIDE HEAD-TO-HEAD EVEN PRECIPITATION RATE COVERAGE. PROVIDE SHOP DRAWINGS FOR LANDSCAPE ARCHITECT'S REVIEW.
11. THERE SHALL BE NO IRRIGATION, BOXES, BACKFLOW PREVENTERS, RAIN SENSORS, VALVES, ETC. IN THE SCDOT RIGHT-OF-WAY. ANY IMPROVEMENTS IN THE RIGHT OF WAY REQUIRE SCDOT ENCROACHMENT PERMIT APPROVAL.

3 LANDSCAPE NOTES

PLANT SCHEDULE

FWF FULL WELL FORMED
SP SPECIMEN MATERIAL
TF TREE FORM HABIT
MS MULTI-STEMMED TRUNK (3 MIN.)
CAL TRUNK CALIPER
GAL GALLON CONTAINER
EGG EGG CAN CONTAINER
B&B BALLED AND BURLAPPED MATERIAL
CON CONTAINERIZED MATERIAL
BR BARE ROOT MATERIAL
ESP ESPALIER

CODE	BOTANICAL NAME	COMMON NAME	QUANTITY	HEIGHT	SPREAD/CALIPER	SPACING	REMARKS
	TREES						
QUPH	QUERCUS PHELLOS 'HIGHTOWER'	HIGHTOWER WILLOW OAK	10	12'-14'	2-1/2" CAL	AS SHOWN	FWF SP B&B
ACRU	ACER RUBRUM 'AUTUMN FLAME'	AUTUMN FLAME RED MAPLE	7	12'-14'	2-1/2" CAL	AS SHOWN	FWF SP B&B
NYSY	NYSSA SYLVATICA	BLACK GUM	8	12'-14'	2-1/2" CAL	AS SHOWN	FWF SP B&B
ULAM	ULMUS PARVIFOLIA 'BOSQUE'	BOSQUE LACELEAF ELM	10	12'-14'	2-1/2" CAL	AS SHOWN	FWF SP B&B
	SHRUBS/EVERGREENS						
ILCR	ILEX CRENATA 'COMPACTA'	COMPACTA HOLLY	65	24" HT	3 GAL	36" O.C.	FWF SP CON
ILGL	ILEX GLABRA 'DENSA'	DENSA HOLLY	133	24" HT	3 GAL	36" O.C.	FWF SP CON
OSFR	OSMANTHUS FRAGRANS	FRAGRANT TEA OLIVE	18	36" HT	7 GAL	60" O.C.	FWF SP CON
BUGM	BUXUS X GREEN MOUNTAIN	GREEN MOUNTAIN BOXWOOD	14	24" HT	3 GAL	36" O.C.	FWF SP CON
LOCH	LOROPETALUM CHINENSIS 'DARUMA'	DARUMA LOROPETALUM	45	24" HT	3 GAL	36" O.C.	FWF SP CON
	MULCH	DOUBLE-GROUND HARDWOOD MULCH					
	SEED	BERMUDA HYDROSEED	DISTURBED AREAS				

LANDSCAPE REQUIREMENTS

ROADSIDE BUFFER AND BUFFERYARD

HOSPITALITY DRIVE: 546 LF
CALHOUN DRIVE: 154 LF

TREES REQUIRED: 18
TREES PROVIDED: 11 ON-STREET (7 LOCATED ON-SITE)

PARKING LOT LANDSCAPING
TOTAL NUMBER OF SPACES: 99

TREES REQUIRED: 14 (2 PER 15 SPACES)
TREES PROVIDED: 15

SHRUBS REQUIRED: 12 (3 PER 25 SPACES)
SHRUBS PROVIDED: 15

FOUNDATION PLANTINGS
REQUIRED AS SHOWN PER PLANS

4 LANDSCAPE REQUIREMENTS

DESIGNED: BS
REVIEWED: BS
DRAWN: BS
2024-057 PROJECT NO. 09-12-2024 DATE
SCALE

REVISIONS

NO	DATE	ITEM
1	9.12.24	ISSUED FOR PERMIT
2	9.22.24	PERMIT REVISION 1

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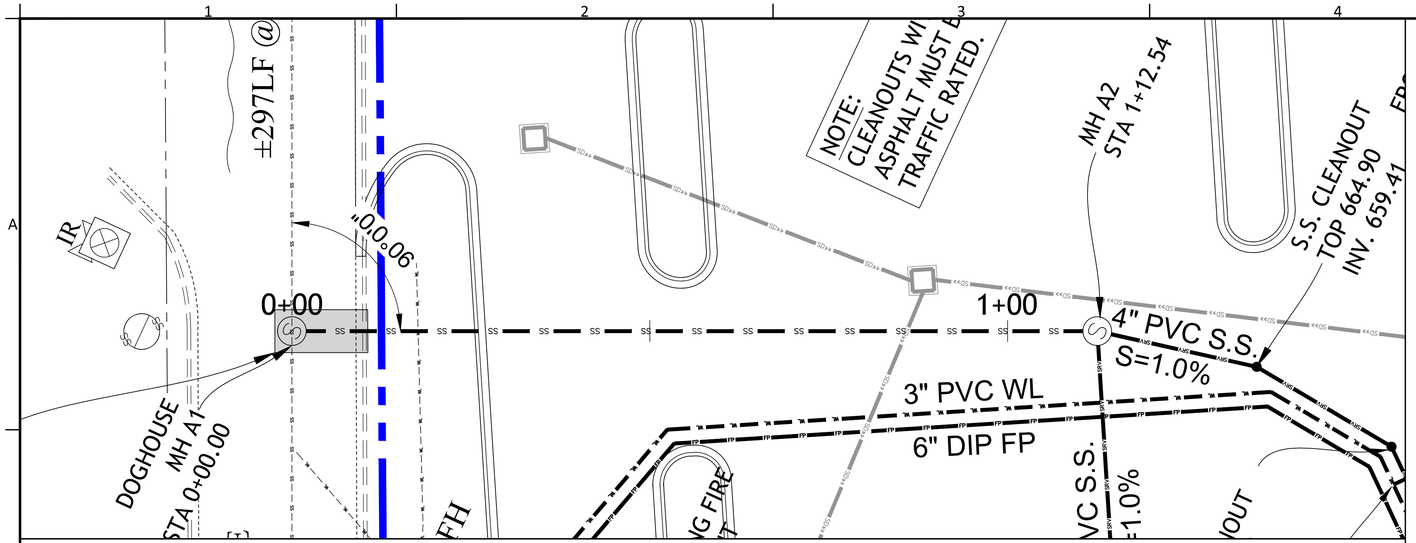
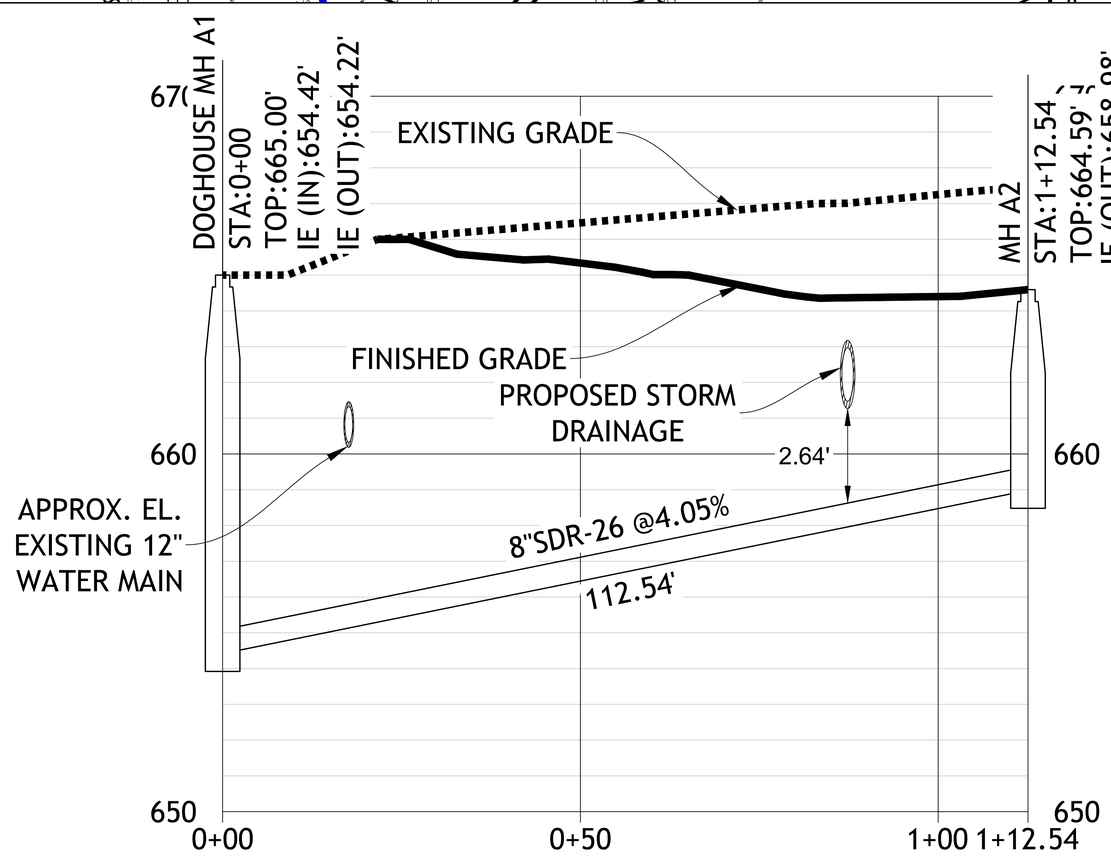
P. 864.617.0347 | E. blake@studiomainllc.com

PROPOSED GREENWOOD HOTEL
CITY OF GREENWOOD, SC

LANDSCAPE SCHEDULE AND DETAILS

SHEET NO.
2.0





SEWER LINE-A

SCALE:
HORIZONTAL: 1"=10'
VERTICAL: 1"=2'

SANITARY SEWER LINES NOTES

1. M.H. FRAME AND COVER SHALL BE MF-11 AND MC-18 RESPECTIVELY AS MANUFACTURED BY SUMTER MACHINERY COMPANY OR SEWER AUTHORITY APPROVED EQUAL. FRAME SHALL WEIGH 208 POUNDS AND COVER SHALL WEIGH 120 POUNDS. ALL SURFACES OF FRAME AND COVER SHALL BE BITUMINOUS COATED.
2. STEPS SHALL BE COPOLYMER POLYPROPYLENE PLASTIC, REINFORCED WITH 1/2" GRADE 60 REINFORCEMENT OR SEWER DISTRICT APPROVED
3. THE CONTRACTOR IS RESPONSIBLE FOR TOP ELEVATION OR ALL M.H. COVER TO ALLOW FOR THICKNESS OF ASPHALT PAVEMENT, STONE OR TOPSOIL IN GRASSED AREAS TO MEET FINISH GRADE ELEVATIONS.
4. BENCH MAY CONTAIN BROKEN BRICKS, TILE, ETC., IN MORTAR MIX.
5. REINFORCED PRECAST M.H. WITH FORMED INVERTS AS MANUFACTURED BY TINDALL CONCRETE COMPANY ('G' SERIES) CONFORMING TO ASTM C-478, OR APPROVED EQUAL MAY BE USED. PRECAST CONCRETE RINGS, NOT EXCEEDING 12 INCHES MAY BE USED FOR ADJUSTMENT OF RING TO SURFACE. ADJUSTMENTS GREATER THAN 12 INCHES REQUIRE ADDITIONAL BARREL RISER SECTIONS INSTALLED BELOW THE CONE SECTION.
6. FOR STRAIGHT (GRADE AND ALIGNMENT) THROUGH M.H., P.V.C. PIPE SHALL BE LAID INSTEAD OF BRICK INVERT. PIPE SHALL BE CUT SO JOINT DOES NOT HIT IN M.H. TOP ONE-FOURTH SECTION OF PIPE SHALL BE EVENLY BROKEN OUT AFTER BENCH IS POURED.
7. A DROP OF 24 INCHES MAXIMUM FROM THE POINT OF SEWAGE ENTRANCE TO THE POINT OF SEWAGE OUTFLOW IS PERMITTED PROVIDED THE INVERT IS SLOPED FROM THE ENTRANCE POINT TO THE OUTFLOW POINT. CONTRACTOR SHALL MATCH "CROWN OF PIPE" WHEN CONNECTING NEW SEWER LINE TO EXISTING.
8. ANY MANHOLES LOCATED OFF OF ROADS OR HIGHWAY RIGHT-OF-WAY SHALL BE RAISED APPROXIMATELY ONE (1) FOOT ABOVE FINISHED GRADE.
9. POLYVINYL CHLORIDE (PVC) SEWER PIPE SHALL CONFORM TO ASTM D-3034, SDR-35, INSTALLED IN ACCORDANCE WITH ASTM D-2321. ELASTOMERIC JOINTS SHALL COMPLY WITH ASTM D-3212. SDR-35 SHALL BE INSTALLED IN CLASS 'B' BEDDING AS DETAILED ON DRAWINGS. NO ULTRARIB PIPE ALLOWED.
10. DUCTILE IRON PIPE SHALL BE CLASS 50, CONFORMING TO AWWA C151, FURNISHED AND INSTALLED IN ACCORDANCE WITH THE SPECIFICATIONS. ALL DUCTILE IRON PIPE SHALL BE LINED WITH PROTECTO 401 (INSTALLATION OF GRAVITY SEWER), JOINTS IN D.I.P. AT THE CREEK CROSSING SHALL BE RESTRAINED FROM MOVEMENT (LOK-TIGHT OR APPROVED EQUAL).
11. EACH JOINT SHALL BE CLEARLY AND LEGIBLY MARKED WITH THE MANUFACTURER'S NAME OR IDENTIFYING SYMBOL WITH THE LETTERS E.S. APPEARING ON THE EXTERIOR OF THE PIPE NEAR THE SOCKET.
12. MECHANICAL JOINT COUPLINGS SHALL BE USED AT ALL PIPE TRANSITIONS.
13. A MIN. OF 4 FT. OF COVER SHALL BE MAINTAINED OVER ALL PVC PIPE LINES.
14. ALL SANITARY SEWER LINES SHALL BE AIR TESTED AND MUST CONFORM TO ASTM C828, LATEST REVISION.
15. ALL FLEXIBLE PIPE SHALL BE TESTED BY PULLING A MANDREL, GO/NO GO, DEVICE BY HAND NO EARLIER THAN 30 DAYS AFTER THE TRENCHING HAS BEEN COMPLETELY BACKFILLED. THE MAXIMUM ALLOWABLE PIPE DEFLECTION SHALL NOT EXCEED 5 PERCENT OF NOMINAL INSIDE PIPE DIAMETER.
16. WATER LINES SHALL BE INSTALLED AFTER ALL GRAVITY SEWER LINES ARE INSTALLED.
17. THIS CONTRACTOR SHALL FIELD VERIFY THE LOCATION OF ALL EXSTING UNDERGROUND UTILITIES BEFORE COMMENCING WORK. CONTACT WATER, TELEPHONE, POWER AND GAS COMPANY BEFORE EXCAVATION IS BEGUN.
18. THIS CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SURVEY WORK NECESSARY TO STAKE SEWER LINES. THE CENTERLINE AND ALL MANHOLE LOCATIONS SHALL BE STAKED IN THE FIELD. THE OWNER'S SURVEYOR WILL SET ALL LOT CORNERS. CONTRACTOR SHALL PROTECT ALL PROPERTY MARKERS.
19. ALL UTILITY TRENCHES SHALL BE THOROUGHLY COMPACTED TO PREVENT SETTLEMENT AND DAMAGE TO FUTURE PAVEMENT AND STRUCTURES.
20. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRS TO EXSTING ROADS USED BY HIS OPERATION. THE CONTRACTOR SHALL REMOVE MUD AND DEBRIS FROM HIGHWAY AND NOT ALLOW DUST TO BECOME A NUISANCE OR SAFETY HAZARD.
21. ALL SANITARY SEWER WORK SHALL BE CONSTRUCTED TO LINES AND GRADES SHOWN AS DETAILED ON THE DRAWING. THE CONTRACTOR SHALL PROVIDE STANDARD MANHOLES AT ALL BENDS AND CHANGES IN GRADE IN SEWER LINES AND CONNECTIONS TO EXISTING SEWER LINES. PIPE BEDDING AND BACKFILL SHALL BE CAREFULLY CONTROLLED. ALL SANITARY SEWER WORK SHALL COMPLY WITH LOCAL CODES AN ORDINANCES. THE ENGINEER, THE LOCAL AUTHORITY AND THE STATE HEALTH AUTHORITY MUST INSPECT ALL SEWER WORK AS REQUIRED BEFORE BEING PUT IN SERVICE.
22. ALL WORK SHALL BE CONSTRUCTED IN STRICT ACCORDANCE WITH THE PLANS AND SPECIFICATIONS AND INSTRUCTIONS GIVEN BY THE OWNER'S REPRESENTATIVE, THE STATE HEALTH AUTHORITY AND THE LOCAL GOVERNING AUTHORITY.
23. CONTRACTOR SHALL NOT TIE NEW SEWER LINE TO EXSTING MANHOLE UNTIL ALL CONSTRUCTION IS APPROVED, TESTED AND ACCEPTED BY THE LOCAL GOVERNING AUTHORITY.
24. ALL SEWER LINES IN RELATION TO WATER LINES MUST CONFORM TO "TEN STATES STANDARDS", SECTION 38.3, 1990 EDITION, AT A MINIMUM
25. THE CONTRACTOR SHALL GRASS ALL RIGHT-OF-WAY IN ACCORDANCE WITH SPECIFICATIONS FOR GRASSING.
26. A PRE-CONSTRUCTION CONFERENCE WITH THE CONTRACTOR, SEWER AUTHORITY, STATE HEALTH AUTHORITY, AND THE ENGINEER WILL BE HELD PRIOR TO SEWER LINE CONSTRUCTION.
27. CONTRACTOR TO ASSUME CLASS 'B' BEDDING FOR SDR-35 PVC IN HIS BID PROPOSAL. CLASS "A" BEDDING WILL BE PAID FOR AS AN "EXTRA" SHOULD FIELD CONDITIONS REQUIRE THIS BEDDING.
28. COUPLINGS SHALL BE HYMAX COUPLING 984-260 OR 1200-260 AS MANUFACTURED BY TOTAL PIPING SOLUTIONS, OLEAN, NEW YORK, OR APPROVED EQUAL.
29. SANITARY SEWER SERVICES SHALL BE INSTALLED PER DETAILS. LOCATION OF SERVICE LINES SHALL BE MEASURED FROM MANHOLES AND FURNISHED WITH "AS-BUILT" DRAWINGS TO THE ENGINEER. EACH LOT OR BUILDING SHALL HAVE (1) 6" OR 4" SERVICE LINE, AS SPECIFIED FOR ON THE DRAWINGS, PLUGGED AT R\W LINE OR WITHIN 5' OF THE BUILDING. NEW SERVICE LINES SHALL BE INSTALLED AS REQUIRED ON EXSTING SEWER LINES FOR APPLICABLE LOTS OR BUILDINGS. MINIMUM SLOPE ON ALL 6" SERVICE LINES SHALL BE 1% AND ON ALL 4" SERVICE LINES SHALL BE 2%
30. ALL WATER AND SEWER LINE BACKFILL IN ROAD R\W OR PAVED AREAS SHALL BE COMPACTED TO 95% STD. PROCTOR BY CONTRACTOR. THE OWNER'S REPRESENTATIVE SHALL TEST COMPACTION.
31. THE UTILITY CONTRACTOR SHALL BLADE ROADS SMOOTH READY FOR PAVING AFTER ALL UTILITY CONSTRUCTION IS COMPLETE.
32. ALL SEWER LINE WORK SHALL BE "APPROVED" BY THE STATE HEALTH AND LOCAL AUTHORITY, AND "APPROVED" AS-BUILT DRAWINGS SHALL BE FURNISH TO THE OWNER BEFORE CONTRACTOR RECEIVES FINAL PAYMENT
33. THE CONTRACTOR SHALL PAY ALL SEWER TAP FEES TO THE LOCAL GOVERNING AUTHORITY. THE CONTRACTOR SHALL INSTALL TEE AND RUN THE SERVICE LINES TO ROAD RIGHT-OF-WAY.
34. THE CONTRACTOR SHALL NOT PERFORM ANY WORK UNTIL HE HAS OBTAINED COPIES OF ALL NECESSARY ENCROACHMENT AND CONSTRUCTION PERMITS.
35. THIS CONTRACTOR SHALL SHORE TRENCH EXCAVATION AND USE PIPE BOX TO COMPLY WITH ALL OSHA SAFETY REGULATIONS. IT IS THE CONTRACTORS SOLE RESPONSIBILITY TO PROVIDE JOB SITE SAFETY AND COMPLY WITH ALL SAFETY REQUIREMENTS. THE CONTRACTOR IS RESPONSIBLE FOR HIS MEANS AND METHODS OF CONSTRUCTION.

CONTRACTOR NOTE:
CONTRACTOR TO VERIFY EXISTING INVERTS AND ELEVATIONS IN THE FIELD. IF ANY DISCREPANCY IS OBSERVED, CONTRACTOR TO NOTIFY ENGINEER.

1. D.I.P. IS REQUIRED WHERE COVER IS LESS THAN FOUR FEET.
2. D.I.P. IS REQUIRED WHERE CLEARANCE BETWEEN STORM DRAINAGE AND SEWER IS LESS THAN 18". IF SEPARATION IS LESS THEN 18" ONE 18' OR 20' DIP CENTERED AT CROSSING SHALL BE USED.
3. SEWER LINE WILL BE INSTALLED AFTER FINISH GRADE HAS BEEN ESTABLISHED.
4. MANHOLES RIMS OUTSIDE ROAD R/W MUST BE A MINIMUM OF 24" ABOVE FINISHED GRADE.
5. CONTRACTOR TO CORE DRILL THE EXISTING MANHOLES AT THE TIE-IN CONNECTIONS AND INSTALL A FLEXIBLE RUBBER BOOT. CONNECTION SHALL BE WATERTIGHT. CONTRACTOR SHALL CORE DRILL THE TABLE OF THE EXISTING MANHOLE TO FORM AN INVERT OR CHANNEL ON TOP OF THE TABLE. GREER CPW SHALL BE CONTACTED TO INSPECT THE INSIDE AND OUTSIDE OF THE MANHOLE PRIOR TO BACKFILL.
6. PRECAST CONCRETE RINGS, NOT EXCEEDING 12-INCHES, SHALL BE USED TO ADJUST THE HEIGHT OF THE MANHOLE FRAME AND COVER TO SURFACE. NO MORE THAN TWO (2) RINGS SHALL BE USED. ADJUSTMENTS GREATER THAN 12-INCHES SHALL REQUIRE AN ADDITIONAL BARREL RISER SECTION INSTALLED BELOW THE CONE SECTION.
7. D.I.P. SHALL BE USED FOR A SANITARY SEWER SERVICE WITH LESS THAN 24-INCHES (2-FEET) OF FINAL GRADE (GROUND COVER) OR IF SEPARATION BETWEEN THE STORM DRAINAGE PIPE AND SANITARY SEWER SERVICE IS LESS THAN 18-INCHES.
8. C900 PVC PIPE SHALL BE USED FOR A SANITARY SEWER SERVICE WITH AT LEAST 18-INCHES AND 24-INCHES (2-FEET) OF SEPARATION BETWEEN THE STORM DRAIN PIPE AND SANITARY SEWER SERVICE. THE SERVICE SHALL BE BEDDED WITH STONE - AT LEAST 6-INCHES ABOVE THE TOP OF PIPE/SANITARY SEWER SERVICE.
9. D.I.P. SHALL BE LINED WITH PROTECTO 401

LEGEND
- EXISTING GRADE
- FINISHED GRADE
- STORMDRAINAGE (RCP UNLESS NOTED)

SAFETY NOTE TO CONTRACTOR
THE CONTRACTOR SHALL SHORE TRENCH EXCAVATION AND USE PIPE BOX TO COMPLY WITH ALL OSHA SAFETY REGULATIONS. IT IS THE CONTRACTORS SOLE RESPONSIBILITY TO PROVIDE JOB SITE SAFETY AND COMPLY WITH ALL SAFETY REQUIREMENTS. THE CONTRACTOR IS RESPONSIBLE FOR HIS MEANS AND METHODS OF CONSTRUCTION.

811 Know what's below. Call before you dig.

UTILITY NOTE TO CONTRACTOR
THE UTILITIES SHOWN ARE FOR THE CONTRACTOR'S CONVENIENCE ONLY. THERE MAY BE OTHER UTILITIES NOT SHOWN ON THESE PLANS. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THE LOCATIONS SHOWN AND IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE LOCATIONS OF ALL UTILITIES WITHIN THE LIMITS OF THE WORK. ALL DAMAGE MADE TO EXISTING UTILITIES BY THE CONTRACTOR SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

NO.	DATE	BY	REVISION
A	-	-	-

Gray Engineering
132 PILGRIM ROAD · GREENVILLE, SC 29607
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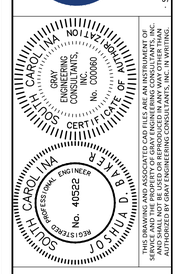
- SC C.O.A.# C00960 - NC C.O.A.# C1217 - GA C.O.A.# PEF001941 - TN C.O.A.# 0410819 -



SANITARY SEWER PROFILES

PROPOSED
HOME 2 SUITES
BY HILTON

GREENWOOD COUNTY
SOUTH CAROLINA

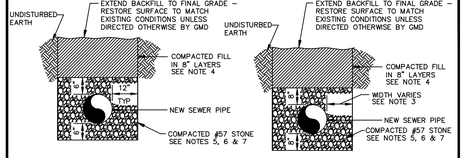
475 HOSPITALITY BOULEVARD

0 10 20
Feet

SCALE:	1" = 10 '
PROJECT MANAGER:	ZDJ
DRAWN BY:	MSG
PROJECT DATE:	5/3/2023
JOB No.:	2023104
PLOT DATE:	3/26/25

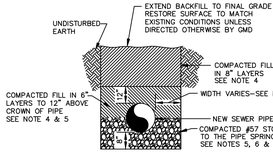
SHEET
SS-1

2023104 - Greenwood Home2Suites - D16.dwg



PIPE BEDDING FOR SERVICE LATERALS (4" AND 6" PIPE, ANY PIPE MATERIAL)

PIPE BEDDING FOR PVC PIPE (8" AND LARGER)



PIPE BEDDING FOR DUCTILE IRON PIPE (8" AND LARGER)

NOTES:

1. PIPE BEDDING DETAIL APPLIES TO ALL NEW SEWER PIPES INSTALLED.
2. THE CONTRACTOR SHALL USE A TRENCH BOX OR SHEETING AND SHORING IN ACCORDANCE WITH OSHA REGULATIONS WHILE INSTALLING NEW SEWERS. THE CONTRACTOR WILL NOT BE ALLOWED TO SLOPE TRENCH WALLS.
3. TRENCH WIDTH SHALL BE LIMITED TO THE FOLLOWING UNLESS OTHERWISE APPROVED BY GMD:

4" AND 6" PIPE —	12" EACH SIDE
8" TO 15" PIPE —	15" EACH SIDE
16" TO 30" PIPE —	18" EACH SIDE
36" AND LARGER —	21" EACH SIDE

4. IN GRASSED AREAS, COMMON FILL MAY BE USED AS BACKFILL IN PAVED AREAS, #57 STONE SHALL BE IMPORTED AND USED AS BACKFILL AND/OR THE EXCAVATION SHALL BE FILLED WITH SCIDOT FLOWABLE FILL. IF FLOWABLE FILL IS USED, BACKFILL WITH #57 STONE TO MIN 12" ABOVE THE TOP OF THE PIPE. REMOVE ALL EXCAVATED MATERIAL AND DISPOSE OF OFFSITE.
5. COMPACTION OF STONE AND COMMON FILL TO 12" ABOVE PIPE TO BE WITH "JUMPING JACK" HAND MECHANICAL TAMPS ONLY.
6. MAINTAIN GROUND WATER LEVEL AT LEAST 1 FOOT BELOW THE BOTTOM OF STONE BEDDING AT ALL TIMES.
7. IN ROCK, REDUCE STONE BEDDING UNDER PIPE AND STRUCTURES TO 6 INCHES.

GREENWOOD METROPOLITAN DISTRICT GREENWOOD, SOUTH CAROLINA				
PIPE BEDDING				
NONE				DETAIL NO. SS–1
Scale	Approved By		Date	

No.	Date	By	Revision

MANHOLE SCHEDULES

MH DIAMETER	LARGEST PIPE DIAMETER
4 FEET	8" TO 15"
5 FEET	16" TO 27"
6 FEET	30" TO 45"
8 FEET	48"
SPECIAL DESIGN	> 48"

PIPE DIAMETER	MAX MH SPACING
8" TO 12"	400 FEET
15" TO 27"	450 FEET
30" TO 45"	550 FEET
48" AND LARGER	600 FEET

DETAIL NO.	MANHOLE TYPE	WHEN TO USE
SS–3	PRECAST WITH CONE SECTION	(1) USE FOR 4–FOOT AND 5–FOOT DIAMETER MANHOLES ONLY (2) MANHOLES WILL TERMINATE AT GRADE IN LANDSCAPED AREAS AND 16 TO 24 INCHES ABOVE GRADE IN EASEMENT AREAS. NO GRADE ADJUSTMENTS ALLOWED FOR MANHOLES ABOVE GRADE.
SS–4	PRECAST WITH FLAT TOPS	(1) USE FOR ALL 6–FOOT AND 8–FOOT DIAMETER MANHOLES. (2) USE FOR ALL 4–FOOT AND 5–FOOT MANHOLES THAT TERMINATE MORE THAN 2 FEET ABOVE GRADE. (3) USE FOR SHORT MANHOLES (4–FOOT AND 5–FOOT) WHERE A CONE SECTION WILL NOT WORK.

MANHOLE COVER ELEVATIONS:

(1) FLUSH WITH FINISHED GRADE WITHIN STREET R/Ws AND IN LANDSCAPED/LAWN AREAS UNLESS OTHERWISE SPECIFIED.

(2) 16 INCHES ABOVE GRADE IN EASEMENTS EXCEPT TO ACCOMMODATE FLOOD ELEVATIONS PER (3) BELOW.

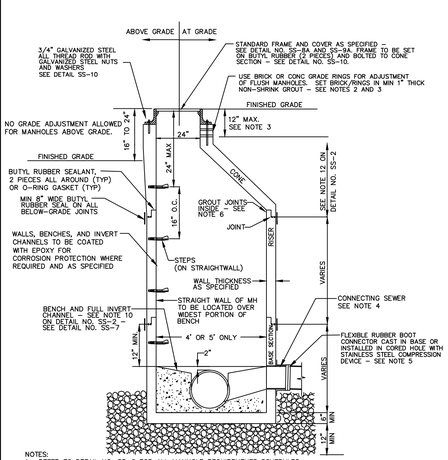
(3) COVERS TO TERMINATE AT LEAST 1 FOOT ABOVE THE 100–YEAR FLOOD ELEVATION BUT NO GREATER THAN 4 FEET ABOVE GRADE TOTAL. WHERE THE FLOOD ELEVATION IS 4 FEET OR MORE ABOVE GROUND, WATERTIGHT COVERS SHALL BE USED, THE MANHOLE COVER SHALL TERMINATE 2 FEET ABOVE GRADE, AND A VENT PIPE SHALL BE INSTALLED TO 2 FEET ABOVE THE 100–YEAR FLOOD ELEVATION.

GENERAL SPECIFICATIONS AND REQUIREMENTS

1. MANHOLE TO CONFORM WITH ASTM C478 EXCEPT AS MODIFIED BELOW.
2. MANHOLE BASE TO BE REINFORCED WITH A MINIMUM AREA OF 0.20 SQ. IN. PER LINEAL FOOT EACH WAY. WALL REINFORCING TO BE MINIMUM OF 0.12 SQ. IN. PER LINEAL FOOT. EITHER TONGUE OR GROOVE SHALL HAVE REINFORCING EQUAL IN AREA TO MINIMUM OF WALL SECTION.
3. STEPS SHALL CONFORM WITH ASTM C443.
4. SEE SHEET SS–2 FOR DETAIL NO. SS–11.
5. ALL PIPE OPENINGS TO BE NO GREATER THAN 3" LARGER THAN OUTSIDE DIAMETER OF PIPE ALL AROUND AND ADDITIONALLY REINFORCED WITH A MINIMUM OF 0.20 SQ. IN. OF STEEL AT 90 DEGREES (ADDITIONAL REINFORCING NOT REQUIRED FOR CORED OPENINGS).
6. ALL SURFACES SHALL BE SMOOTH EVEN TEXTURED WITH A MINIMUM OF HONEYCOMB, FINS AND OTHER DEFECTS WHICH AFFECT STRUCTURE. GMD RESERVES THE RIGHT TO REJECT MANHOLES.
7. NON–PENETRATING LIFTING HOLES SHALL BE PLUGGED WITH EXPANSION GROUT. PENETRATING LIFTING HOLES SHALL NOT BE ALLOWED.
8. PIPES SHALL BE CONNECTED TO MANHOLES WITH FLEXIBLE RUBBER BOOT CONNECTORS AS SHOWN ON THE DETAILS. WHERE REQUIRED AND/OR NECESSARY, CORED HOLES FOR SEWERS MAY BE USED. FOR CORED HOLES, FILL VOIDS WITH NON–SHRINK GROUT AND POUR A CONCRETE COLLAR OUTSIDE OF THE MANHOLE PER DETAIL NO. SS–20.
9. STEPS TO BE OVER WIDEST PORTION OF BENCH.
10. BENCHING AND INVERT CHANNELS SHALL BE PRECAST BY THE MANHOLE MANUFACTURER. FORMED AND POURED IN PLACE BENCHES AND INVERTS MAY BE APPROVED IN CERTAIN SITUATIONS BY THE ENGINEER AND SHALL BE USED WHERE SPECIFICALLY REQUIRED SUCH AS FOR A DOGHOUSE MANHOLE. BENCHING CONCRETE SHALL BE MIN 4000 PSI – ADD FIBER REINFORCING FOR POURED–IN–PLACE BENCHING. FOR PRECAST INVERTS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING EXACT INVERT ELEVATIONS PRIOR TO MANUFACTURING THE MANHOLE INCLUDING WHERE REQUIRED FOR DROP CONNECTIONS. SEE DETAIL NO. SS–7 FOR ADDITIONAL REQUIREMENTS.
11. ALL MANHOLE SECTIONS SHALL BE DESIGNED FOR H–20 LOADING.
12. MINIMUM HEIGHT FOR CONCENTRIC CONES ON MANHOLES WITH BOLT DOWN FRAME AND COVER IS 36".
13. MATCH PIPE CROWN ELEVATIONS OF CONNECTING/INFLUENT SEWERS AND MAIN SEWER.
14. VACUUM TEST MANHOLES PER THE STANDARD SPECIFICATIONS.
15. ALL FRAMES SHALL BE SET IN BED TO THE FLAT TOP OF CONE SECTION PER DETAIL NO. SS–10. TWO (2) COMPLETE CIRCLES OF MASTIC SHALL BE INSTALLED UNDER THE FRAME BEFORE SETTING ON THE CONE SECTION OR FLAT TOP.

GREENWOOD METROPOLITAN DISTRICT GREENWOOD, SOUTH CAROLINA				
MANHOLE SCHEDULES AND GENERAL REQUIREMENTS				
NONE				DETAIL NO. SS–2
Scale	Approved By		Date	

No.	Date	By	Revision

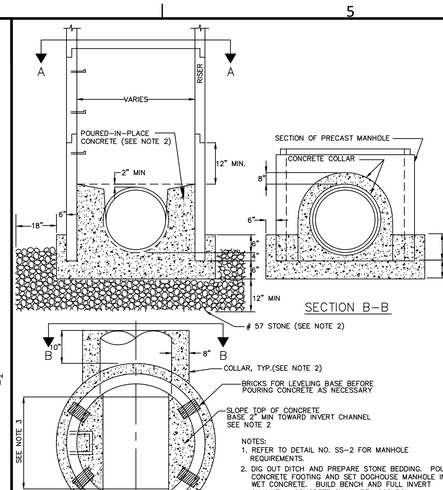


NOTES:

1. REFER TO DETAIL NO. SS–2 FOR ALL MANHOLE REQUIREMENTS SCHEDULES.
2. NON–SHRINK GROUT SHALL COMPLETELY COVER THE BRICK/GRADE RINGS ON THE OUTSIDE, SHALL OVERLAP THE CONE SECTION A MINIMUM OF 6 INCHES AND SHALL COVER THE FRAME FLANGE COMPLETELY. SEE DETAIL NO. SS–10
3. MANHOLE SHALL BE ORDERED WITH MINIMUM GRADE ADJUSTMENT. ORDER BASE, RISER, AND CONE HEIGHTS TO STACK OUT MANHOLE AS CLOSE AS POSSIBLE TO FINAL GRADE. CONTRACTOR TO SUPPLY ENGINEER WITH A SCHEDULE OF EACH MANHOLE SHOWING THE HEIGHTS OF EACH SECTION. MAXIMUM ADJUSTMENT SHALL BE 6 INCHES UNLESS APPROVED OTHERWISE. SEE PAGE 02700–6 IN THIS DESIGN MANUAL.
4. MATCH PIPE CROWN ELEVATIONS OF CONNECTING/INFLUENT SEWERS AND MAIN SEWER.
5. IF HOLE FOR PIPE MUST BE CORE DRILLED IN THE FIELD, REFER TO DETAIL SS–20 FOR REQUIREMENTS.
6. ALL JOINTS SHALL BE GROUTED INSIDE THE MANHOLE WITH NON–SHRINK, HYDROGEN SULFIDE RESISTANT GROUT.

GREENWOOD METROPOLITAN DISTRICT GREENWOOD, SOUTH CAROLINA				
STANDARD PRECAST MANHOLES WITH CONE SECTIONS (4' AND 5' ONLY)				
NONE				DETAIL NO. SS–3
Scale	Approved By		Date	

No.	Date	By	Revision



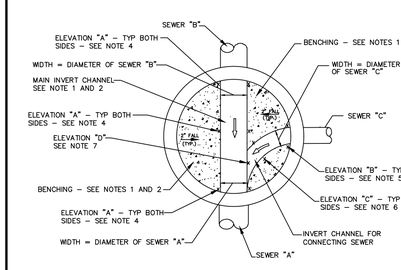
NOTES:

1. REFER TO DETAIL NO. SS–2 FOR MANHOLE REQUIREMENTS.
2. DIG OUT DITCH AND PREPARE STONE BEDDING. POUR CONCRETE FOOTING AND SET DOGHOUSE MANHOLE IN WET CONCRETE. BUILD BENCH AND FULL INVERT CHANNEL. CONCRETE SHALL BE 4000 PSI FIBER–REINFORCED CONCRETE. REFER TO DETAIL SS–7.
3. NEATLY SAW–CUT THE EXISTING SEWER 6" INSIDE THE NEW MANHOLE WALLS AND 1/2 WAY DOWN THE EXISTING PIPE. THEN FORM CONCRETE BENCH AND FULL INVERT CHANNEL. SEE DETAIL NO. SS–7.

SECTION A–A

GREENWOOD METROPOLITAN DISTRICT GREENWOOD, SOUTH CAROLINA				
PRECAST DOGHOUSE MANHOLE INSTALLED OVER EXISTING SEWER				
NONE				DETAIL NO. SS–5
Scale	Approved By		Date	

No.	Date	By	Revision



NOTES:

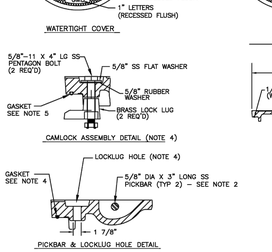
1. THIS DETAIL DEPICTS A TYPICAL BENCHING AND INVERT CHANNEL CONFIGURATION. IT IS IMPOSSIBLE TO DETAIL AND DESCRIBE ALL CONFIGURATIONS THAT WILL BE ENCOUNTERED/REQUIRED. THIS DETAIL IS INTENDED TO PROVIDE GENERAL GUIDELINES AND REQUIREMENTS FOR BENCHING AND INVERT CHANNEL CONSTRUCTION. THE CONTRACTOR SHALL ACCOMMODATE ALL EXISTING CONFIGURATIONS AND CONSTRUCT BENCHING AND INVERT CHANNELS TO THE SATISFACTION OF GMD. ADJUSTMENTS AND REPAIRS TO THE BENCHING AND INVERT CHANNELS SHALL BE PERFORMED AS REQUIRED BY GMD AT NO ADDITIONAL COST. ALL REPAIRS AND ADJUSTMENTS MUST BE MADE WITH AN APPROVED NON–SHRINK GROUT.
2. BENCHING AND INVERT CHANNELS SHALL BE PRECAST BY THE MANHOLE MANUFACTURER. FORMED AND POURED–IN–PLACE BENCHES AND INVERTS MAY BE APPROVED IN CERTAIN SITUATIONS BY THE ENGINEER AND SHALL BE USED WHERE SPECIFICALLY REQUIRED SUCH AS FOR A DOGHOUSE MANHOLE.

   BENCHING AND INVERT CHANNELS SHALL BE CONSTRUCTED USING MINIMUM 4,000 PSI CONCRETE. ADD FIBER REINFORCING FOR POURED–IN–PLACE BENCHES/INVERTS. ELEVATIONS OF BENCHING AND CHANNELS SHALL BE AS DEFINED IN NOTES 1 AND 2 ABOVE. BENCHING SHALL BE SLOPED 1" PER FOOT FROM THE TOP OF THE BENCHING FROM THE MANHOLE WALLS TO THE INVERT CHANNELS.

   INVERT CHANNELS SHALL BE U–SHAPED CHANNELS FOLLOWING THE SHAPE AND DIAMETER OF THE CONNECTING SEWER PIPE FROM THE BOTTOM TO THE SPRINGLINE OF THE PIPE AND THEN EXTENDING VERTICAL TO THE REQUIRED HEIGHT. THUS, THE WIDTH OF THE TOP OF THE INVERT CHANNEL WILL BE THE DIAMETER OF THE SEWER PIPE. THE HEIGHT SHALL BE AS DEFINED IN THESE NOTES WITH THE MINIMUM HEIGHT IN ALL CASES EQUAL TO THE CORRESPONDING SEWER DIAMETER. INVERT CHANNELS SHALL BE SMOOTH, UNIFORM, FREE OF BURRS AND BRIARS THAT MAY CATCH DEBRIS, AND CONSTANTLY SLOPING FROM INLET SEWERS TO THE OUTLET SEWER.
3. CONSTRUCT INVERT CHANNEL FOR CONNECTING SEWERS WITH A CONSTANT CURVE FROM THE EDGE OF THE MANHOLE WALL TO THE MAIN INVERT CHANNEL. PROVIDE MAXIMUM CURVATURE SUCH THAT FLOW FROM CONNECTING SEWERS WILL FREELY DISCHARGE INTO THE MAIN INVERT CHANNEL AND ALL FLOWS WILL FREELY EXIT THE MANHOLE. CHANNEL SHALL BE CONSTANTLY SLOPING WITH THE MAXIMUM POSSIBLE SLOPE. SEE NOTES 2 AND 7.
4. ELEVATION "A" TO EQUAL THE CROWN ELEVATION OF SEWER "B".
5. ELEVATION "B" TO EQUAL THE CROWN ELEVATION OF SEWER "C".
6. ELEVATION "C" SHALL EQUAL AT LEAST THE INVERT CHANNEL ELEVATION AT THE POINT OF CONNECTION. IF NECESSARY, ADJUST THE ELEVATION UPWARD AS NECESSARY TO AT LEAST EXCEED THE BENCHING ELEVATION AT THE NEARBY MAIN INVERT CHANNEL.
7. ELEVATION "D" REPRESENTS THE ELEVATION OF THE INVERT CHANNEL FOR THE CONNECTING SEWER WHERE IT JOINS THE MAIN INVERT CHANNEL. IF SEWER "A" IS THE SAME SIZE AS SEWER "B", THE CHANNELS SHALL MEET AT THE SAME ELEVATION WHEREVER POSSIBLE. IF SEWER "A" IS A SERVICE LATERAL, THE CONNECTING SEWER INVERT CHANNEL SHALL JOIN THE MAIN CHANNEL A MINIMUM OF 3 INCHES ABOVE THE MAIN CHANNEL INVERT ELEVATION AT THE POINT OF JOINING. THE MAIN CHANNEL SHALL BE SMOOTH AND ROUNDED SO THAT DEBRIS WILL FREELY DISCHARGE INTO THE MAIN CHANNEL.

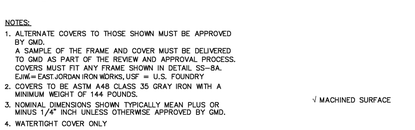
GREENWOOD METROPOLITAN DISTRICT GREENWOOD, SOUTH CAROLINA				
BENCH AND INVERT PLAN				
NONE				DETAIL NO. SS–7
Scale	Approved By		Date	

No.	Date	By	Revision



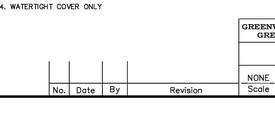
WATERTIGHT COVER

SOLID COVER



CAMLOCK ASSEMBLY DETAIL (NOTE 4)

COVER DETAIL



PICKBAR & LOCKLUG HOLE DETAIL

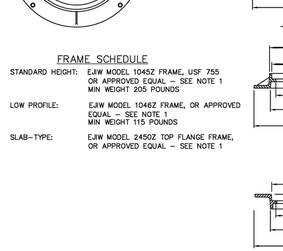
NOTES:

1. ALTERNATE COVERS TO THOSE SHOWN MUST BE APPROVED BY GMD.
   A SAMPLE OF THE FRAME AND COVER MUST BE DELIVERED TO GMD AS PART OF THE REVIEW AND APPROVAL PROCESS. COVERS MUST FIT ANY FRAME SHOWN IN DETAIL SS–8A.
   EJIW = EAST JORDAN IRON WORKS, USF = U.S. FOUNDRY
2. COVERS TO BE ASTM A48 CLASS 35 GRAY IRON WITH A MINIMUM WEIGHT OF 144 POUNDS.
3. NOMINAL DIMENSIONS SHOWN TYPICALLY MEAN PLUS OR MINUS 1/4" INCH UNLESS OTHERWISE APPROVED BY GMD.
4. WATERTIGHT COVER ONLY

√ MACHINED SURFACE

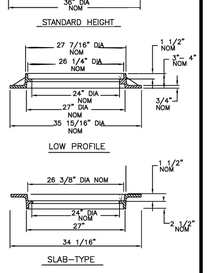
GREENWOOD METROPOLITAN DISTRICT GREENWOOD, SOUTH CAROLINA				
STANDARD MANHOLE COVERS				
NONE				DETAIL NO. SS–9A
Scale	Approved By		Date	

No.	Date	By	Revision



FRAME SCHEDULE

STANDARD HEIGHT:	EJIW MODEL 1045Z FRAME, USF 755 OR APPROVED EQUAL – SEE NOTE 1 MIN WEIGHT 205 POUNDS
LOW PROFILE:	EJIW MODEL 1046Z FRAME, OR APPROVED EQUAL – SEE NOTE 1 MIN WEIGHT 115 POUNDS
SLAB–TYPE:	EJIW MODEL 2450Z TOP FLANGE FRAME, OR APPROVED EQUAL – SEE NOTE 1

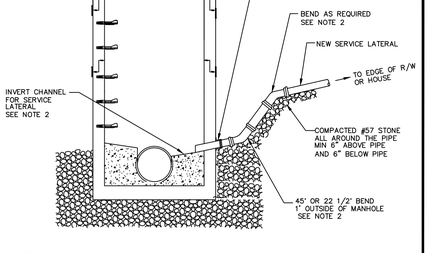


NOTES:

1. ALTERNATE FRAMES TO THOSE SHOWN MUST BE APPROVED BY GMD.
   A SAMPLE OF THE FRAME AND COVER MUST BE DELIVERED TO GMD AS PART OF THE REVIEW AND APPROVAL PROCESS. FRAMES MUST BE SUITABLE FOR USE WITH ANY COVER SPECIFIED IN DETAIL SS–9A.
   EJIW = EAST JORDAN IRON WORKS, USF = U.S. FOUNDRY
2. COVERS TO BE ASTM A48 CLASS 35 GRAY IRON WITH MINIMUM WEIGHTS SPECIFIED IN THE FRAME SCHEDULE.
3. NOMINAL DIMENSIONS SHOWN TYPICALLY MEAN PLUS OR MINUS 1/4" INCH UNLESS OTHERWISE APPROVED BY GMD.

GREENWOOD METROPOLITAN DISTRICT GREENWOOD, SOUTH CAROLINA				
STANDARD MANHOLE FRAMES FOR COVERS				
NONE				DETAIL NO. SS–8A
Scale	Approved By		Date	

No.	Date	By	Revision



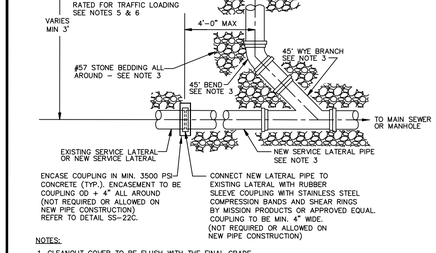
NOTES:

1. REFER TO THIS DETAIL WHEN INSTALLING NEW SERVICE LATERALS TO NEW MANHOLES.
2. ROUTE ALL NEW SERVICE LATERALS BEING INSTALLED TO NEW MANHOLES SUCH THAT THE SERVICE LATERAL CROWN ELEVATION MATCHES THE HIGHEST CROWN ELEVATION OF THE CONNECTING SEWER(S). CONTRACTOR SHALL USE BENDS AS NECESSARY. DROP PIPES INSIDE MANHOLES SHALL NOT BE ALLOWED.

   THE INVERT CHANNEL FOR THE NEW LATERAL SHALL BE FORMED AND POURED AS PART OF THE MAIN PRECAST INVERT CHANNEL AND SHALL MEET ALL REQUIREMENTS SHOWN IN DETAIL SS–7.
3. IF THE HOLE FOR THE SERVICE LATERAL MUST BE CORE–DRILLED IN THE FIELD, REFER TO DETAIL SS–20 FOR REQUIREMENTS.

GREENWOOD METROPOLITAN DISTRICT GREENWOOD, SOUTH CAROLINA				
NEW SERVICE LATERAL INSTALLATION TO NEW MANHOLE				
NONE				DETAIL NO. SS–17A
Scale	Approved By		Date	

No.	Date	By	Revision



NOTES:

1. CLEANOUT COVER TO BE FLUSH WITH THE FINAL GRADE.
2. LOCATION OF CLEANOUT TO BE APPROVED BY GMD. CLEANOUTS SHALL BE INSTALLED AT ALL BENDS IN THE LATERAL, AT LEAST EVERY 100 FEET (OR CLOSER IF REQUIRED BY CITY/COUNTY REGULATIONS) AND/OR AS REQUIRED BY GMD.
3. LATERAL PIPE AND FITTINGS SHALL BE THE SAME PIPE MATERIAL UNLESS APPROVED OTHERWISE BY GMD. SERVICE LATERAL PIPE AND FITTINGS SHALL BE COMPLETELY ENCAPSULATED IN SCDOT NO. 57 STONE. REFER TO DETAIL SS–1.
4. ALTERNATE CLEANOUT CAPS MUST BE APPROVED BY GMD.
5. VALVE BOXES SHALL BE GRAY IRON CONFORMING TO ASTM A48 CLASS 35 AND SHALL BE FULLY BITUMINOUS SEAL COATED. MIN LENGTH OF TOP SECTION TO BE 16 INCHES.
6. INSTALL AN 18" X 18" CONCRETE COLLAR (MIN 3500 PSI CONCRETE, 6" THICK) AROUND ALL CAST IRON VALVE BOXES LOCATED IN ANY ASPHALT OR CONCRETE PAVED AREA.

GREENWOOD METROPOLITAN DISTRICT GREENWOOD, SOUTH CAROLINA				
TYPICAL CLEANOUT				
NONE				DETAIL NO. SS–21
Scale	Approved By		Date	

No.	Date	By	Revision

NO.	DATE	BY	REVISION
A	-	-	-

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GREENWOOD COUNTY
SOUTH CAROLINA

PROPOSED HOME 2 SUITES BY HILTON

475 HOSPITALITY BOULEVARD

SANITRAY SEWER NOTES AND DETAILS

SCALE:	
PROJECT MANAGER:	ZDJ
DRAWN BY:	MSG
PROJECT DATE:	5/3/2023
JOB No.:	2023104
PLOT DATE:	3/26/25

SHEET

SS–2

2023104 - Greenwood Home2Suites - D16.dwg