



LEGEND

| EXISTING | | PROPOSED | |
|--------------------------|-----|---------------------------|-----|
| SANITARY MANHOLE | ○ | PROPOSED STORM SEWER PIPE | — |
| SANITARY SEWER LINE | — | LIMITS OF CONSTRUCTION | --- |
| SANITARY SEWER SERVICE | — | CURB AND GUTTER | --- |
| SEWER FORCE MAIN | — | PROPOSED SWALE/DITCH | --- |
| AIR RELEASE VALVE | ○ | | |
| FIRE HYDRANT | ○ | | |
| WATER SERVICE | — | | |
| WATER VALVE | ○ | | |
| TEE | — | | |
| TAP | — | | |
| REDUCER | — | | |
| BLOWOFF | — | | |
| STUBOUT | — | | |
| WATERLINE | — | | |
| FRONT YARD | — | | |
| REAR YARD | — | | |
| WELL | ○ | | |
| TYPE 1 CATCH BASIN | ○ | | |
| TYPE 9 CATCH BASIN | ○ | | |
| DROP INLET | ○ | | |
| STORM DRAIN JUNCTION BOX | ○ | | |
| STORM DRAIN | — | | |
| MAJOR CONTOUR | — | | |
| MINOR CONTOUR | — | | |
| SPOT ELEVATION | ○ | | |
| TOP OF WALL ELEVATION | ○ | | |
| BOTTOM OF WALL ELEVATION | ○ | | |
| ROAD CENTER LINE | — | | |
| PROPERTY LINE | --- | | |
| PERMANENT EASEMENT | --- | | |
| ROAD OF WAY | --- | | |
| TREES | ○ | | |
| MAIL BOX | ○ | | |
| POWER POLE | ○ | | |
| GUY WIRE | — | | |
| ELECTRICAL TRANSFORMER | ○ | | |
| TELEPHONE PEDESTAL | ○ | | |
| TRANSMISSION TOWER | ○ | | |
| OVERHEAD ELECTRIC | — | | |
| UNDERGROUND ELECTRIC | — | | |
| GAS VALVE | ○ | | |
| GAS LINE | — | | |
| UNDERGROUND TELEPHONE | — | | |
| SIGN | ○ | | |

GENERAL GRADING & STORM DRAINAGE NOTES

- PRIOR TO INSTALLATION OF STORM OR SANITARY SEWER, WATER MAIN, OR ANY OTHER UTILITIES, THE CONTRACTOR SHALL EXCAVATE, VERIFY, AND CALCULATE ALL POINTS OF CONNECTION AND ALL UTILITY CROSSING AND INFORM THE OWNER AND THE ENGINEER OF ANY CONFLICTS OR REQUIRED DEVIATIONS FROM THE PLAN PRIOR TO CONSTRUCTION. NOTIFICATION SHALL BE MADE A MINIMUM OF 72 HOURS PRIOR TO CONSTRUCTION. THE ENGINEER AND ITS CLIENTS SHALL BE HELD HARMLESS IN THE EVENT THAT THE CONTRACTOR FAILS TO MAKE SUCH NOTIFICATION.
- ALL SLOPES AND AREAS DISTURBED BY CONSTRUCTION SHALL BE GRADED SMOOTH AND FOUR INCHES OF TOPSOIL APPLIED. IF ADEQUATE TOPSOIL IS NOT AVAILABLE ON SITE, THE CONTRACTOR SHALL PROVIDE TOPSOIL, APPROVED BY THE OWNER, AS NEEDED. THE AREA SHALL THEN BE SEED/SODDED, FERTILIZED, MULCHED, WATERED AND MAINTAINED UNTIL HARDY GRASS GROWTH IS ESTABLISHED IN ALL AREAS. ANY LOCATED TREES SHALL BE MAINTAINED UNTIL SUCH POINT AS TREE IS RE-ESTABLISHED. ANY AREAS DISTURBED FOR ANY REASON PRIOR TO FINAL ACCEPTANCE OF THE PROJECT SHALL BE CORRECTED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
- THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES, AND WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES.
- REFER TO GEOTECHNICAL REPORT FOR SPECIFIC SITE SOIL CONDITIONS AND CONSIDERATIONS.
- CONTRACTOR SHALL COMPLY COMPLETELY WITH THE LATEST STANDARDS OF OSHA DIRECTIVES OR ANY OTHER AGENCY HAVING JURISDICTION FOR EXCAVATION AND TRENCHING PROCEDURES. THE CONTRACTOR SHALL USE SUPPORT SYSTEMS, SLOPING, BENCHING AND OTHER MEANS OF PROTECTION. THIS IS TO INCLUDE, BUT NOT LIMITED TO, ACCESS AND EGRESS FROM ALL EXCAVATION AND TRENCHING. CONTRACTOR IS RESPONSIBLE FOR COMPLYING WITH PERFORMANCE CRITERIA AS REQUIRED BY OSHA.
- ALL HDPE PIPE IN SANDY OR HIGHLY EROSION, OR EXPANSIVE SOILS SHALL BE N-12 WT IB (OR EQUIVALENT WITH SMOOTH INTERIOR AND ANNULAR EXTERIOR CORRUGATIONS. 4'-48" PIPE SHALL MEET ASTM F2948 (OR AASHTO M252 TYPE S) REQUIREMENTS AND SHALL HAVE A MINIMUM MANNINGS "N" DESIGN VALUE OF 0.012. JOINTS SHALL BE WATERTIGHT ACCORDING TO ASTM D3212 (OR AASHTO M252, M294) REQUIREMENTS. GASKETS SHALL MEET THE REQUIREMENTS OF ASTM F477. JOINT PERFORMANCE, FITTINGS, MATERIAL PROPERTIES AND INSTALLATION SHALL BE DONE PER THE COMPLETE ADS SPECIFICATION FOR ADS N-12 WT IB PIPE FOUND IN THE ADS, INC. DRAINAGE HANDBOOK, LATEST EDITION.
- ALL OTHER HDPE PIPE SHALL BE N-12 ST B (OR EQUIVALENT WITH SMOOTH INTERIOR AND ANNULAR EXTERIOR CORRUGATIONS. 4'-48" SHALL MEET ASTM F2948 (OR AASHTO M252 TYPE S OR SP) REQUIREMENTS AND SHALL HAVE A MINIMUM MANNINGS "N" DESIGN VALUE OF 0.012. JOINT PERFORMANCE, FITTINGS, MATERIAL PROPERTIES AND INSTALLATION SHALL BE DONE PER THE COMPLETE ADS SPECIFICATIONS FOR ADS N-12 ST B PIPE FOUND IN THE ADS, INC. HANDBOOK, LATEST EDITION.
- IF USING HDPE PERFORATED PIPE FOR SUBSURFACE DRAINAGE AND DETENTION/RETENTION SYSTEMS, THE PERFORATION SHALL MEET THE AASHTO CLASS II STANDARD PERFORATION PATTERN REQUIREMENTS.
- ALL STORM SEWER LINES 18"-54" DIAMETER ARE TO BE REINFORCED CONCRETE PIPE ACCORDING TO ASTM C-76 TYPE III UNLESS OTHERWISE INDICATED.
- CORRUGATED METAL PIPE, WHERE SPECIFICALLY SPECIFIED ON PLAN, SHALL BE TYPE II OF AASHTO M 36 GALVANIZED WITH TYPE 3 JOINTS.
- CONTRACTOR SHALL ESTABLISH GRADES OF FINISH PAVEMENT TO ENSURE PROPER (POSITIVE) DRAINAGE AND PREVENT PUDDLING OF WATER, SPECIFICALLY IN PEDESTRIAN WALKWAYS, UNPAVED AREAS OF SITE SHALL ALSO BE GRADED FOR POSITIVE DRAINAGE. CONSULT ENGINEER SHOULD THERE BE CONFLICTS WITH CRITICAL GRADES SHOWN HEREON.

GENERAL CANOPY DRAINAGE NOTES

- DRAINAGE PIPING AND FITTINGS FOR CANOPY DRAINAGE SHALL BE SOLVENT WELD PVC SCH. 40 (MIN.)
- REFER TO CLEANOUT DETAIL FOR REQUIRED HEAVY DUTY COVER.
- DRAINAGE PIPING SHALL BE ROUTED BELOW PRODUCT PIPING (MIN. 6" VERTICAL SEPARATION), COORDINATE WITH TANK/PIPING PLANS.

CONTRACTOR TO VERIFY ALL ELEVATIONS AND CONFLICTS PRIOR TO INSTALLING BUILDING AND CANOPY DRAINAGE

ALL CANOPY DRAINAGE TO HAVE MIN. 6" SEPARATION FROM PRODUCT PIPING

I HAVE PLACED MY SIGNATURE AND SEAL ON THE DESIGN DOCUMENTS SUBMITTED SIGNIFYING THAT I ACCEPT THE 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.

WATER QUALITY NOTES

- CONTRACTOR TO INSTALL CATCH BASIN INSERTS (FLEXSTORM 62MHDP OR APPROVED EQUAL) IN CB #1, 2, 3 & 6.
- CONTRACTOR TO ENSURE CATCH BASIN INSERTS WILL FIT CATCH BASINS BEFORE ORDERING.

South Carolina 811

0 20' 40'

SCALE: 1" = 20'

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