

CITY STANDARD NOTES:

- Prior to any clearing, grading or construction activity, tree protection fencing shall be installed around protected trees or groves of trees. No construction workers, tools, materials, or vehicles are permitted within the tree protection fencing.
- Any trees and/or areas designated to be protected must be properly barricaded with fencing and protected throughout construction to insure that no clearing, grading or staging of materials will occur in those areas.
- No equipment is allowed on site until all tree protection fencing and silt fencing is installed and approved. Protective
- fencing is to be maintained throughout the duration of the project, and contractors shall receive adequate instruction on tree protection methods. All pavement markings in public rights-of-way and for driveways are to be thermoplastic and meet
- City and/or NCDOT standards. Once streets are open to traffic, contact Traffic Engineering regarding the installation of traffic and street name signs. Proposed street names must be approved prior to installation of street name
- Traffic control devices (including signs and pavement markings) in areas open to public traffic are
- to meet MUTCD (Manual on Uniform Traffic Control Devices) standards. Contact Traffic Engineering at 910-341-7888 to ensure that all traffic signal facilities and
- equipment are shown on the plan. Call Traffic Engineering at 910-341-7888 forty-eight (48) hours prior to any excavation in the
- Traffic Engineering must approve of pavement marking prior to actual striping.
- 10. All parking stall markings and lane arrows within the parking areas shall be white.
- All traffic control signs and markings off the right-of-way are to be maintained by the property
- Stop signs and street signs to remain in place during construction.
- Tactile warning mats will be installed on all wheelchair ramps.
- A utility cut permit is required for each open cut of a city street. 15. Any broken or missing sidewalk panels will be replaced.
- 16. Contact Karen Dixon at 910-341-7888 to discuss street lighting options. Water and sewer service shall meet Cape Fear Public Utility Authority (CFPUA) details and
- specifications 18. Project shall comply with CFPUA Cross Connection Control requirements. Water meter(s) cannot be released until all requirements are met and the State has given their final approval. Call
- 910-343-3910 for information 19. If the contractor desires CFPUA water for construction, he shall apply in advance for this service and must provide a reduced pressure zone (RPZ) backflow prevention device on the developer's
- side of the water meter box 20. Any irrigation system supplied by CFPUA water shall comply with the CFPUA Cross Connection
- Control regulations. Call 919-343-3910 for information. Any irrigation system shall be equipped with a rain and freezer sensor. 22. Any backflow prevention devices required by the CFPUA will need to be on the list of approved
- devices by USCFCCCHR or ASSE. 23. Contractor to field verify existing water and sewer service locations, sizes and materials prior to
- construction. Engineer to be notified of any conflicts. 24. Contractor shall maintain all-weather access for emergency vehicles at all times during
- 25. Underground fire line(s) must be permitted and inspected by the Wilmington Fire Department
- from the public right-of-way to the building. Contact the Wilmington Fire Department Division of Fire and Life Safety at 910-341-0696. 26. No obstructions are permitted in the space between thirty (30) inches and ten (10) feet above the
- ground within the triangular sight distance. 27. Contact the North Carolina One Call Center at 1.800.632.4949 prior to doing any digging, clearing,
- 28. Landscaping plan will be provided prior to building permit application.

GENERAL NOTES

- 1. INFORMATION CONCERNING UNDERGROUND UTILITIES WAS OBTAINED FROM AVAILABLE RECORDS. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE THE EXACT ELEVATIONS AND LOCATIONS OF ALL EXISTING UTILITIES AT ALL CROSSINGS PRIOR TO COMMENCING TRENCH EXCAVATION. IF ACTUAL CLEARANCES ARE LESS THAN INDICATED ON PLAN, THE CONTRACTOR SHALL CONTACT THE DESIGN ENGINEER BEFORE PROCEEDING WITH CONSTRUCTION. ANY CONDITION DISCOVERED OR EXISTING THAT WOULD NECESSITATE A MODIFICATION OF THESE PLANS SHALL BE BROUGHT TO THE ATTENTION OF THE DESIGN ENGINEER BEFORE PROCEEDING WITH CONSTRUCTION.
- 2. NO CONSTRUCTION IS TO BEGIN BEFORE LOCATION OF EXISTING UTILITIES HAS BEEN DETERMINED. CALL "NC ONE-CALL" AT LEAST 48 HOURS BEFORE COMMENCING CONSTRUCTION.
- 3. ALL TREES WHICH ARE NOT REQUIRED TO BE CLEARED FOR CONSTRUCTION SHALL BE PRESERVED WHEREVER POSSIBLE UNLESS OTHERWISE DIRECTED.
- 4. CONTRACTOR SHALL ADJUST ALL MANHOLES, VALVE AND CURB BOXES TO THE FINAL GRADE UPON COMPLETION OF ALL CONSTRUCTION. ANY BOXES DAMAGED OR OTHERWISE DISTURBED BY THE CONTRACTOR SHALL BE REPAIRED AT THE EXPENSE OF THE CONTRACTOR.
- 5. THE CONTRACTOR IS RESPONSIBLE FOR CONTROLLING DUST AND EROSION DURING CONSTRUCTION AT HIS EXPENSE. PARKING AREAS SHALL BE WATERED TO CONTROL DUST WHEN ORDERED BY THE ENGINEER.
- 6. NO GEOTECHNICAL TESTING HAS BEEN PERFORMED ON SITE. NO WARRANTY IS MADE FOR SUITABILITY OF SUBGRADE, AND UNDERCUT AND ANY REQUIRED REPLACEMENT WITH SUITABLE MATERIAL SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- CONTRACTOR RESPONSIBLE FOR GEOTECHNICAL TESTING AS NECESSARY. 7. EXTREME CARE SHALL BE TAKEN TO ENSURE MINIMUM SEPARATIONS AT ALL UTILITY CROSSINGS.
- 8. CONTRACTOR TO ENSURE THAT STREET PAVEMENT IS PLACED SO AS TO DRAIN POSITIVELY TO THE ROADWAY INLETS AND CATCH BASINS.
- 9. CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL REQUIRED PERMITS.
- 10. THIS PLAN IS FOR SITE UTILITIES, GRADING, ROADWORK, AND DRAINAGE ONLY. 11. AFFECTED NON-MUNICIPAL UTILITIES SHALL BE CONTACTED AND PROVIDED
- WITH PLANS AND OTHER PERTINENT INFORMATION, WHEN FEASIBLE, TO COORDINATE APPROPRIATE SCHEDULING AND PLACEMENT. AT THE MINIMUM
- THIS SHOULD INCLUDE AT&T AND DUKE (PROGRESS) ENERGY. 12. ALL CONSTRUCTION TO CONFORM TO CITY OF WILMINGTON STANDARDS APPLICABLE STATE & LOCAL CODES.
- 13. CONTRACTOR TO COORDINATE ANY REQUIRED TRAFFIC CONTROL WITH THE STATE AND THE TOWN. CONTRACTOR RESPONSIBLE FOR ANY ADDITIONAL REQUIRED PERMITS.
- 14. CARE SHALL BE TAKEN DURING FINAL GRADING TO ENSURE POSITIVE DRAINAGE TO RECEIVING STRUCTURES. ALL STORM WATER RUNOFF FROM BUILT UPON AREAS (i.e. IMPERVIOUS SURFACES and ROOF DRAINAGE) TO BE DIRECTED TO STORM SEWER COLLECTION SYSTEM (i.e. STORM INLETS OR PONDS) BY SWALES, OVERLAND FLOW, ADDITIONAL GRADING, OR LANDSCAPING INLETS
- 15. CONTRACTOR IS RESPONSIBLE FOR COORDINATION OF ANY RELOCATIONS, REALIGNMENTS, DISCONNECTIONS OR CONNECTIONS OF EXISTING UTILITIES WITH APPLICABLE AUTHORITIES.
- 16. CLEARING AND GRUBBING OF SITE TO INCLUDE REMOVAL OF EXISTING CURB, ASPHALT, INLETS, AND ANY OTHER STRUCTURES INCLUDING TREES, STUMPS AND DEBRIS EXISTING ON SITE. TREES NOT REQUIRED TO BE CLEARED FOR CONSTRUCTION SHALL REMAIN UNLESS OTHERWISE DIRECTED.
- 17. CLEARING AND GRUBBING OF SITE TO INCLUDE REMOVAL OF EXISTING CURB. ASPHALT. INLETS. AND ANY OTHER STRUCTURES INCLUDING TREES. STUMPS AND DEBRIS EXISTING ON SITE. TREES NOT REQUIRED TO BE CLEARED FOR CONSTRUCTION SHALL REMAIN UNLESS OTHERWISE DIRECTED.
- 18. ALL SIGNS AND PAVEMENT MARKINGS SHALL MEET NCDOT AND MUTCD STANDARDS
- 19. CONTRACTOR SHALL KEEP AND MAINTAIN A RED LINE SET OF DRAWINGS SHOWING ANY DEVIATIONS MADE FROM THE ORIGNINAL DESIGN. THIS SET SHALL BE PROVIDED TO THE

UTILITY NOTES

SEWER AND WATER TO BE PUBLIC AND PROVIDED BY CFPUA. SPECIFIC LOCATION, SIZING, AND DETAILS WILL BE PROVIDED ON THE CONSTRUCTION PLANS AND ARE TO BE APPROVED BY CFPUA AND CITY ENGINEERS.

1. CFPUA STANDARD DETAIL SHEETS FOR SEWER AND WATER TAPS TO BE INCLUDED AS A PART OF THIS PLAN, ATTACHED.

2. 48-HOUR NOTICE AND 3 COMPLETE SETS OF PLANS REQUIRED

FOR PRE-CONSTRUCTION MEETING BY CONTRACTOR.

3. NCDOT ENCROACHMENT REQUIRED FOR ANY WORK IN PUBLIC R/W.

4. ALL FEES TO BE PAID PRIOR TO PRE-CONSTRUCTION MEETING. CAPE FEAR PUBLIC UTILITY AUTHORITY STANDARD NOTES:

- 1. SEWER GUARDS REQUIRED AT ALL MANHOLES. STAINLESS STEEL SEWER GUARDS REQUIRED AT MANHOLES LOCATED IN TRAFFIC AREAS.
- WATER AND SEWER SERVICES SHALL BE PERPENDICULAR TO MAIN AND TERMINATE AT RIGHT-OF-WAY LINE. SEWER SERVICES IN CUL-DE-SACS ARE REQUIRED TO BE PERPENDICULAR, OR MUST ORIGINATE IN THE END OF LINE MANHOLE AND TERMINATE AT RIGHT-OF-WAY LINE.
- 3. ALL SERVICES TYING INTO DUCTILE IRON MAINS SHALL BE CONSTRUCTED OF CLASS 50, DIP, WITH PROTECTO 401 CERAMIC EPOXY LINING.
- 4. MINIMUM 10' UTILITIES EASEMENT PROVIDED ALONG THE FRONTAGE OF ALL LOTS AND AS SHOWN FOR NEW DEVELOPMENTS
- 5. NO FLEXIBLE COUPLINGS SHALL BE USED.
- 6. ALL STAINLESS STEEL FASTENERS SHALL BE 316.
- 7. CLEANOUTS SHALL BE LOCATED A MINIMUM OF 12 FEET FROM
- 8. ALL PROPERTY CORNERS. WATER METER BOXES ARE TO BE A MINIMUM OF 5 FEET FROM THE PROPERTY CORNER.

ADDITIONAL NOTES:

CFPUA PERMIT REQUIRED FOR ANY UTILITY SERVICES WORK. CONTRACTOR RESPONSIBLE FOR PERMIT AND COORDINATION WITH CFPUA. ALL SERVICES TO BE INSTALLED IN ACCORDANCE WITH CITY and CFPUA TECHNICAL STANDARDS.

ADDITIONAL UTILITY/GRADING NOTES

- 1. ALL WATER MAINS TO BE SDR18 PVC PIPE WITH PUSH ON JOINTS UNLESS NOTED OTHERWISE ON PLANS. SEE SPECIFICATIONS FOR ADDITIONAL MATERIALS REQUIRED.
- 2. 3' MINIMUM COVER ON ALL WATER MAINS 3. LOCATE ALL METER SETTINGS 5' FROM LOT LINE UNLESS OTHERWISE NOTED.
- 4. ALL COMMERCIAL WATER SERVICE LINES TO BE 2" UNLESS OTHERWISE NOTED. 5. FIRE HYDRANTS SHALL BE INSTALLED IN ACCORDANCE WITH THE DETAIL. 6. BLOW OFF ASSEMBLIES SHALL BE IN ACCORDANCE WITH THE DETAIL.
- 7. ALL BENDS AND TEES SHALL BE ADEQUATELY BLOCKED (SEE DETAIL).
- 8. ALL CONNECTIONS TO EXISTING WATER LINE AND BORES TO BE DONE ACCORDING TO CFPUA SPECIFICATIONS.
- 9. ALL MAINS SHALL BE ADEQUATELY FLUSHED, PRESSURE TESTED. AND DISINFECTED IN ACCORDANCE WITH THE SPECIFICATIONS.
- 10. ALL WORK SHALL BE SUBJECT TO INSPECTION BY THE ENGINEER, CEPUA AND THE N.C. DEPT, OF ENVIRONMENTAL
- HEALTH AND NATURAL RESOURCES. A PRE-CONSTRUCTION CONFERENCE IS REQUIRED. CONTACT: CFPUA.
- 11. MINIMUM SEPARATION SHALL BE MAINTAINED AS FOLLOWS: a. HORIZONTAL CLEARANCE OF 10 FEET BETWEEN SANITARY SEWER AND WATER MAINS
- b. HORIZONTAL CLEARANCE OF 10 FEET BETWEEN STORM SEWER AND WATER MAINS. c. WHERE VERTICAL CLEARANCE IS LESS THAN 18" BETWEEN SANITARY SEWER AND WATER OR WHERE SEWER LINE CROSSES ABOVE WATER
- MAIN, BOTH PIPES SHALL BE DUCTILE IRON PIPE FOR A MINIMUM OF 10' EITHER SIDE OF CROSSING. d. WHERE VERTICAL CLEARANCE IS LESS THAN 24" BETWEEN SANITARY SEWER AND STORM DRAIN, SANITARY SEWER SHALL BE DUCTILE IRON
- PIPE FOR A MINIMUM OF 10' EITHER SIDE OF CROSSING. e. WHERE VERTICAL CLEARANCE IS LESS THAN 18" BETWEEN WATER MAIN AND STORM DRAIN. WATER MAIN SHALL BE DUCTILE IRON PIPE FOR A MINIMUM OF 10' EITHER SIDE OF CROSSING.
- 12. SEE DETAIL SHEETS FOR TYPICAL UTILITIES HOOKUPS. 13. ALL STREETS ARE PROPOSED TO BE PUBLIC (BUILT TO TOWN OF LELAND STANDARDS/ N.C.D.O.T. PAVEMENT AND SUBGRADE STANDARDS).
- 14. ALL SANITARY SEWER MAINS TO BE 8" UNLESS OTHERWISE INDICATED.
- 15. ALL WATER MAINS TO BE 8" UNLESS OTHERWISE INDICATED. 16. TWO VALVES ARE REQUIRED AT "T" INTERSECTIONS AND ONE VALVE ON
- THE WATER LINE TO FIRE HYDRANTS. 17. A BLOW-OFF VALVE IS REQUIRED AT THE TERMINUS OF ALL "DEAD END"

TOWN OF LELAND INSPECTIONS OFFICE.

- WATER LINES. 18. INSTALLATION AND CONNECTION OF ALL UTILITY SERVICES, OUTSIDE UTILITY EASEMENTS, SUCH AS SEWER, STORM, AND WATER MUST BE INSPECTED BY THE
- 19. SANITARY SERVICES SMALLER THAN 8" SHALL HAVE CLEANOUTS AT INTERVALS OF NOT MORE THAN 100'. CLEANOUTS SHALL BE PROVIDE FOR SERVICE LINES AND BUILDING DRAINS THAT HAVE HORIZONTAL DIRECTION CHANGES GREATER
- 20. SEE 2018 IPC FOR FURTHER GUIDANCE ON UTILITY SERVICE REQUIRMENTS.

ADA NOTES

- . LOCATION OF WHEELCHAIR RAMPS: 1. IN ACCORDANCE WITH THE RATIFIED HOUSE BILL 1296, ALL STREET CURBS IN NORTH CAROLINA BEING CONSTRUCTED OR RECONSTRUCTED FOR MAINTENANCE PROCEDURES, TRAFFIC OPERATIONS, REPAIRS, CORRECTION OF UTILITIES OR ALTERED FOR ANY REASON AFTER SEPTEMBER 1973 SHALL PROVIDE WHEELCHAIR RAMPS FOR THE PHYSICALLY HANDICAPPED AT ALL INTERSECTIONS WHERE BOTH CURB AND GUTTER AND SIDEWALKS ARE PROVIDED AND AT OTHER MAJOR POINTS OF PEDESTRIAN FLOW.
- 2. WHEELCHAIR RAMPS SHOULD BE LOCATED AS INDICATED IN DETAIL DRAWINGS, HOWEVER EXISTING LIGHT POLES, FIRE HYDRANTS, DROP INLETS, ETC. MAY AFFECT PLACEMENT.
- 3. REFER TO 2018 NCDOT ROADWAY STANDARD DRAWINGS NUMBER 848.05 -848.06 FOR RAMP DESIGN AND DETAILS.
- 4. ALL RAMPS RAMPS, HANDICAP PARKING, AND ACCESSIBLE ROUTES SHALL COMPLY WITH THE LATEST ADA GUIDELINES RUNNING SLOPES ALONG AN ACCESSIBLE ROUTE EXCEEDING $\frac{1}{50}$ SHALL BE CONSIDERED A RAMP
- 5 8 33% (12·1) MAX RAMP SLOPE . MAXIMUM CROSS SLOPE ALLOWED ALONG ACCESSIBLE ROUTES: 2.00%
- 7. ALL CURB RAMPS REQUIRE A (4'-0") MINIMUM LANDING WITH A MAXIMUM CROSS SLOPE AND LONGITUDINAL SLOPE OF 2.00% WHERE PEDESTRIANS PERFORM TURNING MANEUVERS. SLOPE TO DRAIN TO CURB.
- 8. CONTRACTOR TO ENSURE SLOPES IN HANDICAP PARKING STALLS AND ACCESS ISLES DO NOT TO EXCEED 2% IN ANY DIRECTION.

ADDITIONAL STORM WATER NOTES:

1. ALL STORM WATER RUNOFF FROM BUILT UPON AREAS (I.E. IMPERVIOUS SURFACES AND ROOF DRAINAGE) TO BE DIRECTED TO THE STORM SEWER COLLECTION SYSTEM (I.E. STORM INLETS OR PONDS) BY SWALES, OVERLAND FLOW, ADDITIONAL GRADING OR LANDSCAPE INLETS.

2. CONTRACTOR TO ENSURE THAT STREET PAVEMENT AND CURBING IS PLACED TO DRAIN POSITIVELY TO CURB INLETS AND DRAINAGE STRUCTURES. 3. FOR STORM PIPE MATERIAL AND INSTALLATION SEE DETAILS AND NCDOT STANDARD DRAWINGS 300.01 SHEETS 1-3. FOR RIGID PIPE WITH LESS THAN 2' OF COVER USE CLASS IV RCP.

AND SHALL CONFORM TO ANY LOCAL REQUIREMENTS 5. ANY ROOF DRAIN LOCATIONS SHOWN HERE ARE APPROXIMATE AND MAY BE FIELD ADJUSTED AS LONG AS THE MINIMUM REQUIRED SLOPE IS MAINTAINED.

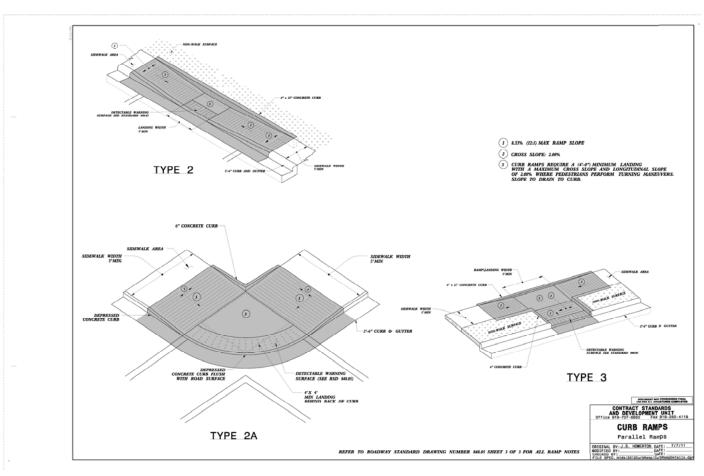
4. ROOF DRAINS SHALL BE SIZED ACCORDING TO THE 2018 INTERNATIONAAL PLUMBING CODE AND ALL

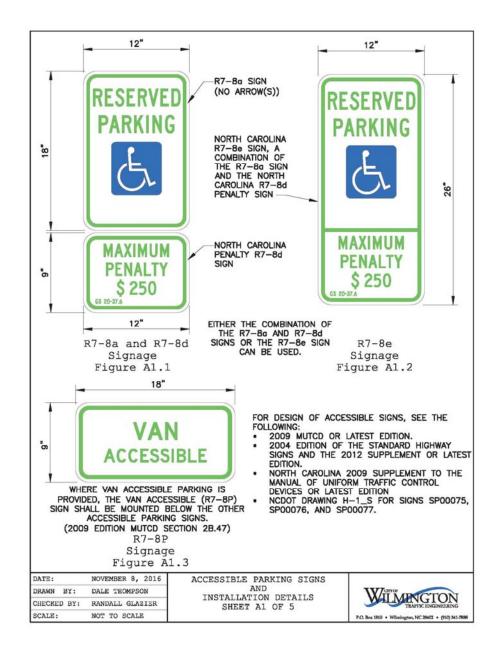
ADDITIONAL FIRE DEPARTMENT NOTES:

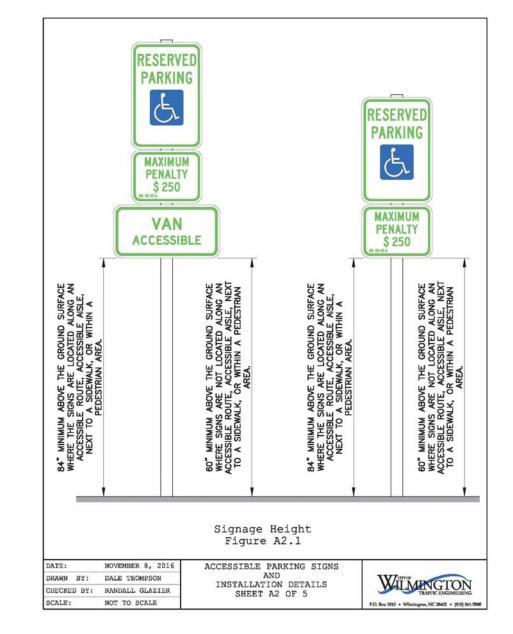
- HYDRANTS MUST BE WITHIN 150' OF THE FDC - THE FDC MUST BE WITHIN 40' OF FIRE APPARATUS PLACEMENT - LANDSCAPING MAY NOT BLOCK ANY FDC OR HYDRANT WITH A 3' CLEAR SPACE
- MAINTAINED AROUND THE CIRCUMFERENCE OF THE HYDRANT AND FDC - CONTRACTOR TO MAINTAIN ALL WEATHER ACCESS FOR EMERGENCY **VEHICLES DURING CONSTRUCTION**

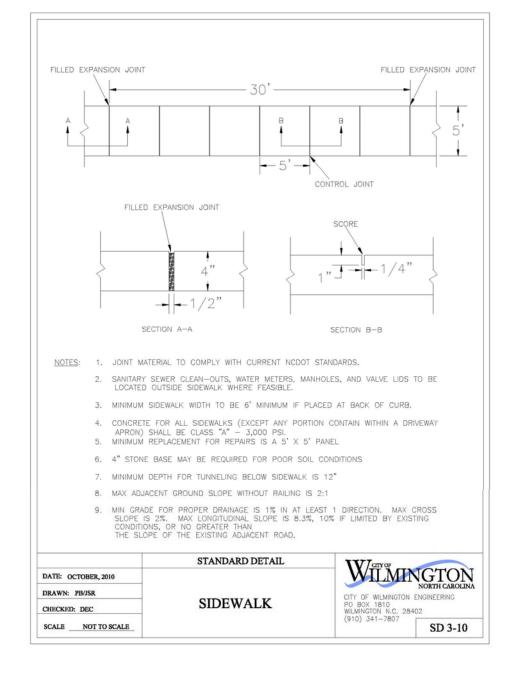
- HYDRANTS MUST BE LOCATED WITHIN 8' OF THE CURB - NEW HYDRANTS MUST BE AVAILABLE FOR USE PRIOR TO BUILDING CONSTRUCTION

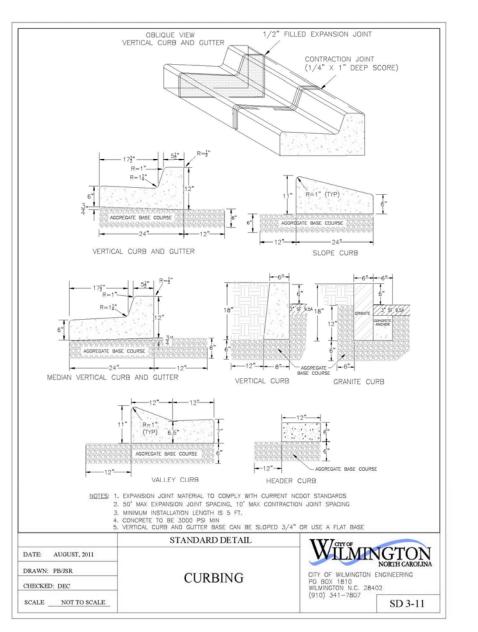
> CONCTRETE OR TIMBER WHEEL 4" WHITE STRIPES

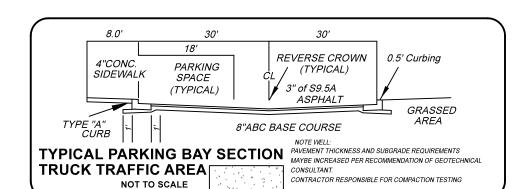




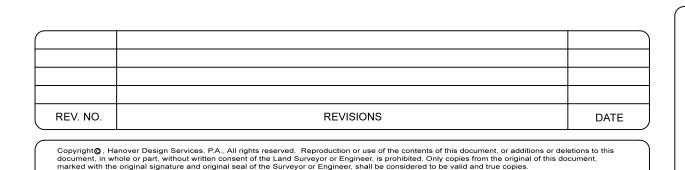


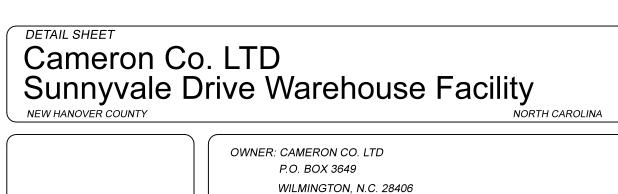






PRELIMINARY PLAN **NOT FOR RECORDATION OR CONVEYANCE**





11499 HANOVER DESIGN SERVICES, P.A. LAND SURVEYORS, ENGINEERS & LAND PLANNERS

1123 FLORAL PARKWAY WILMINGTON, N.C. 28403

STORMWATER MANAGEMENT

PLAN

APPROVED

CITY OF WILMINGTON

ENGINEERING DEPARTMENT

PERMIT#_____

Approved Construction Plan

For each open utility cut of

City streets, a \$325 permit

shall be required from the

City prior to occupancy

and/or project acceptance.

DATE __

SIGNED_

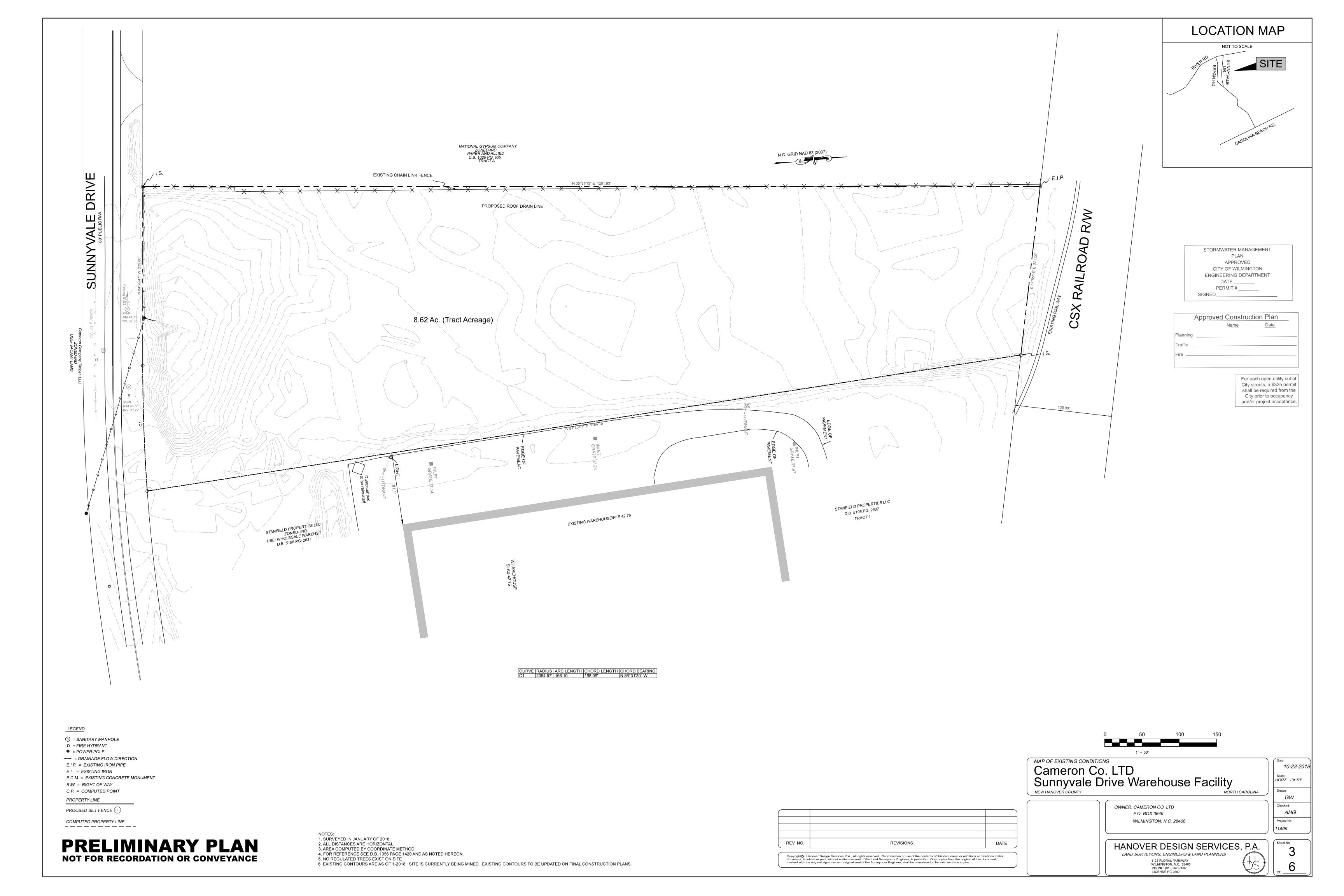
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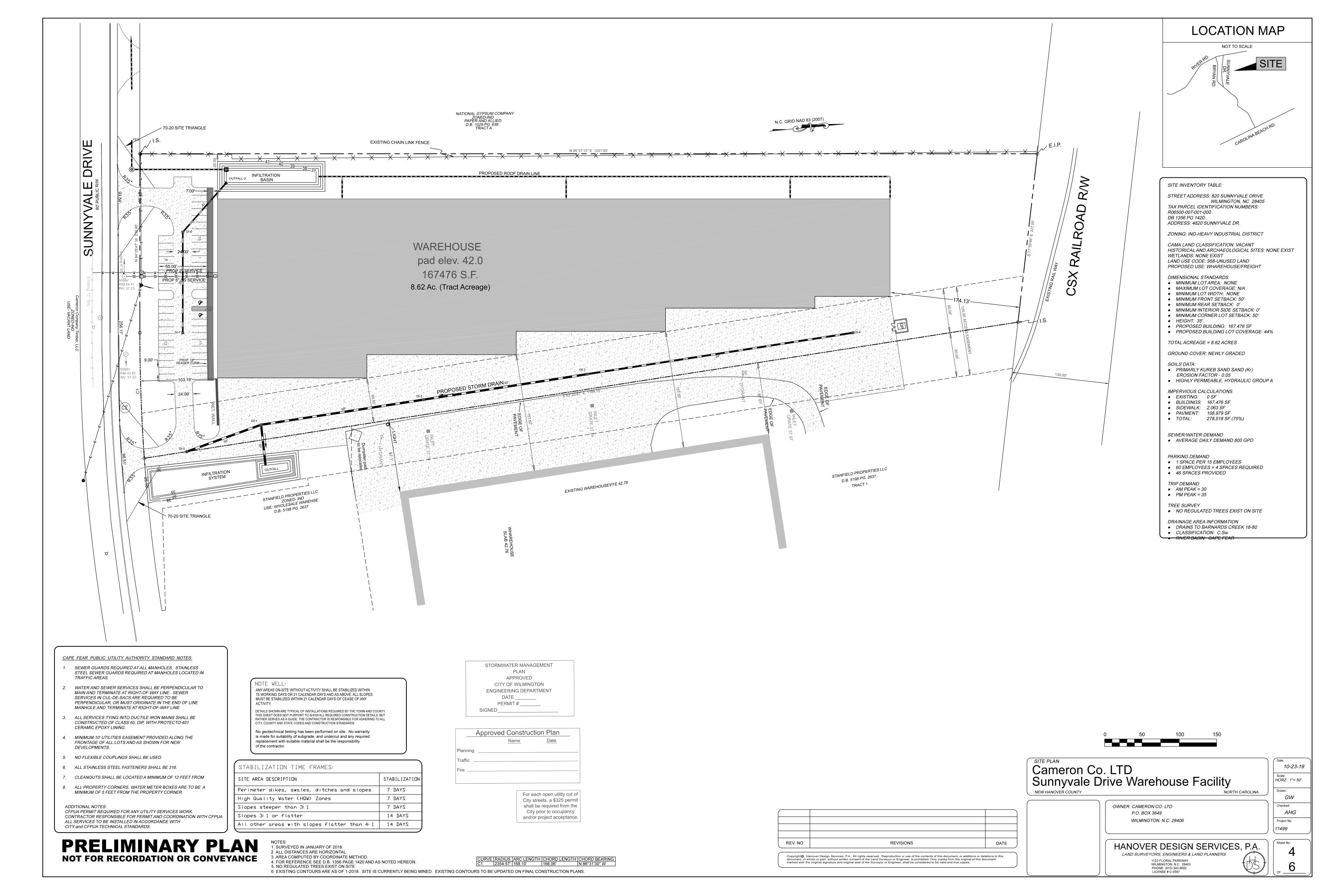
HORZ.: 1"= 50'

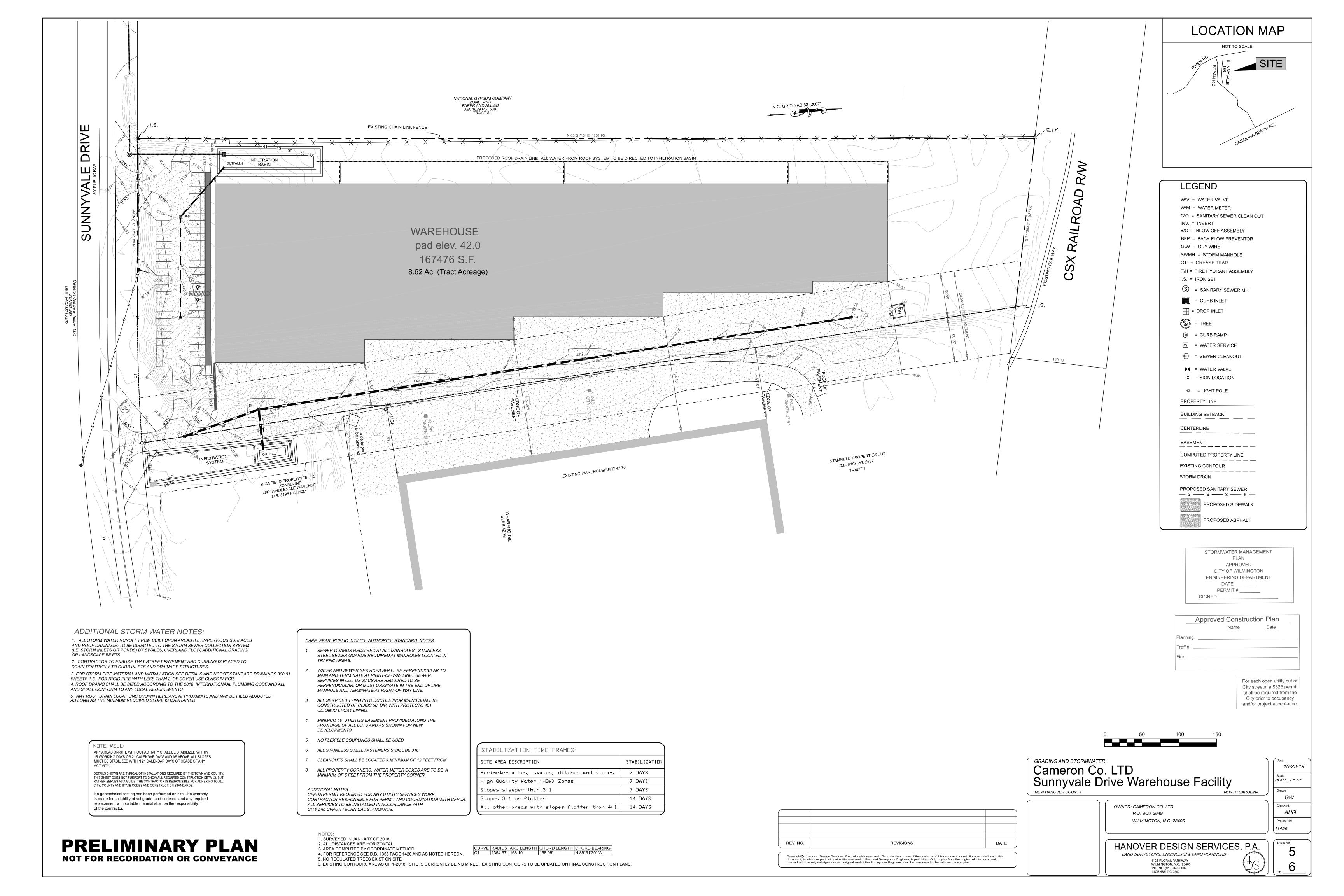
GW

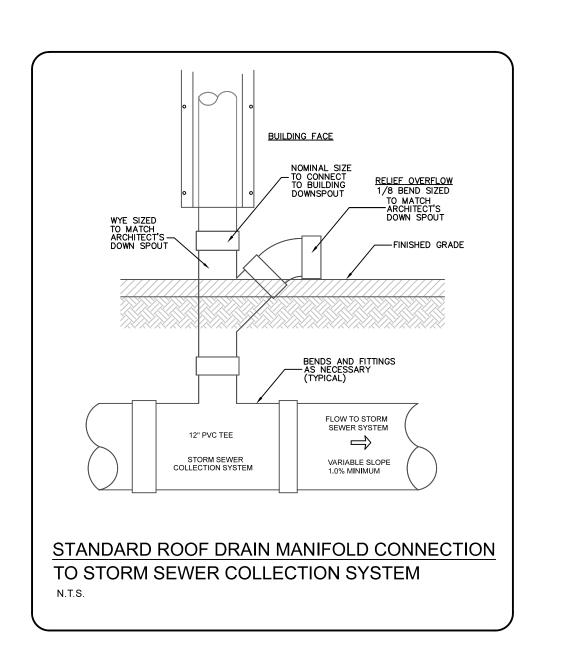
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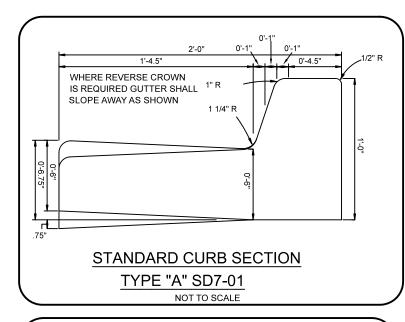
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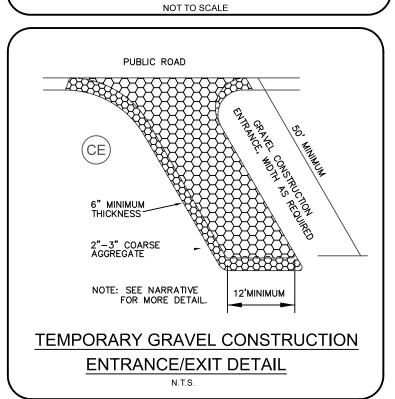


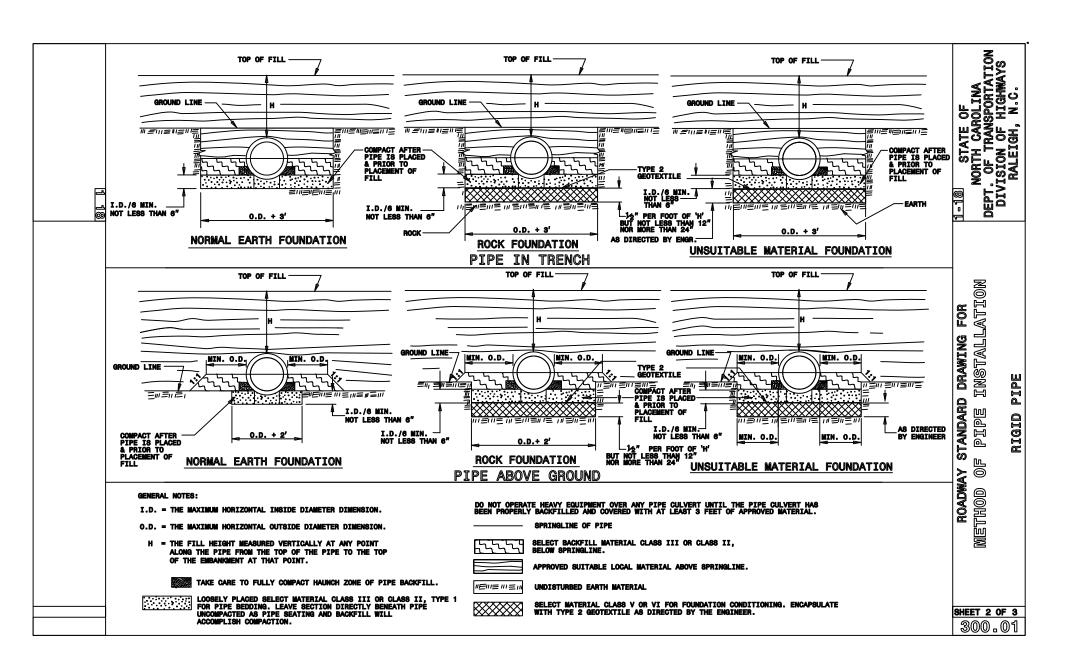


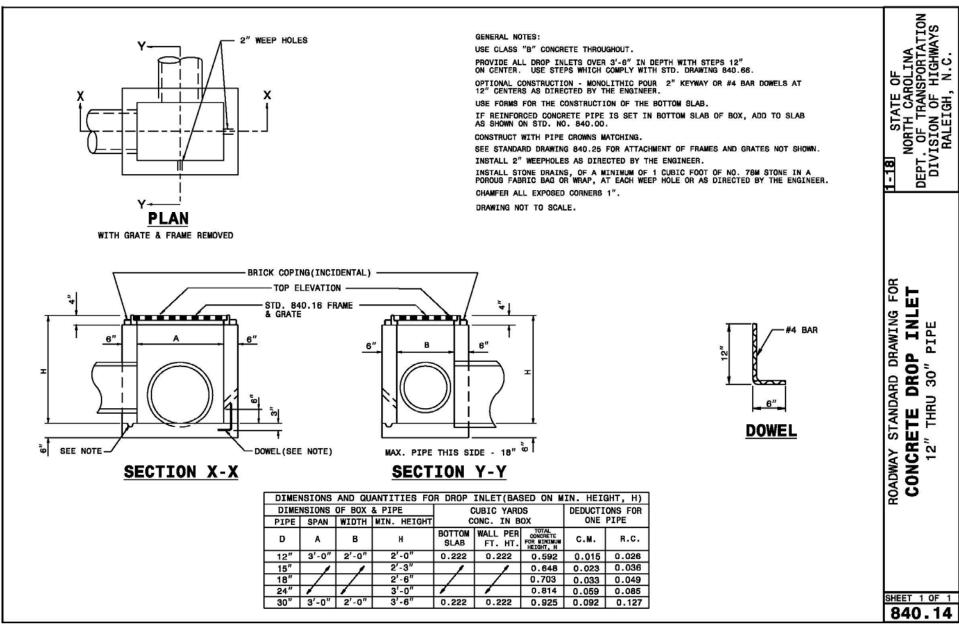


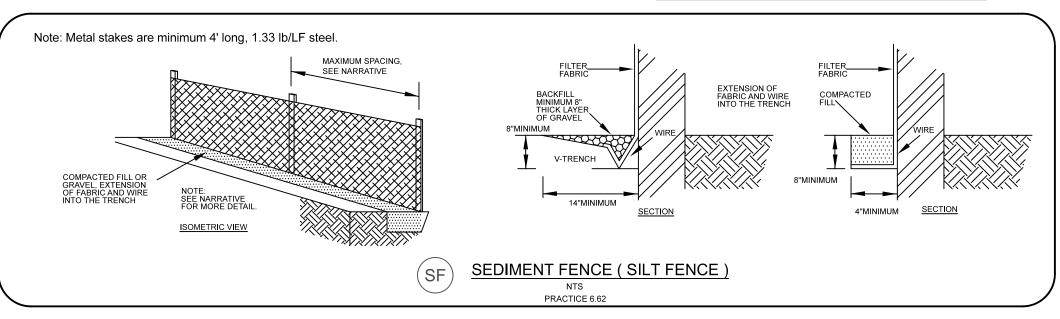


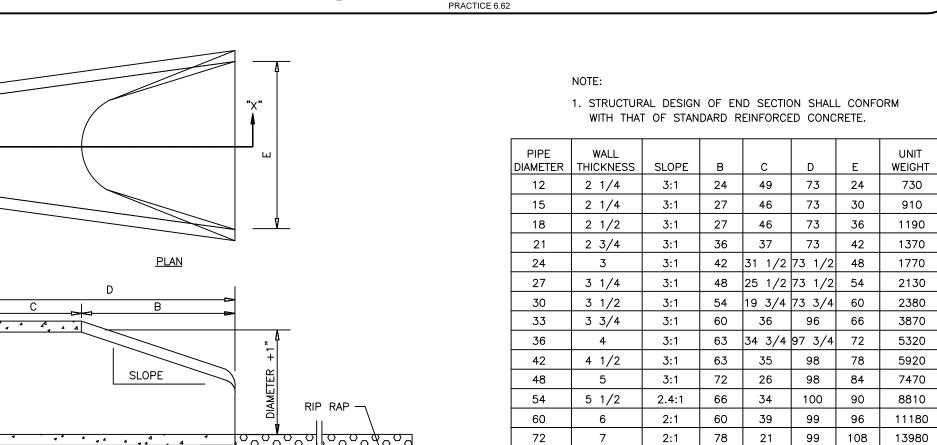


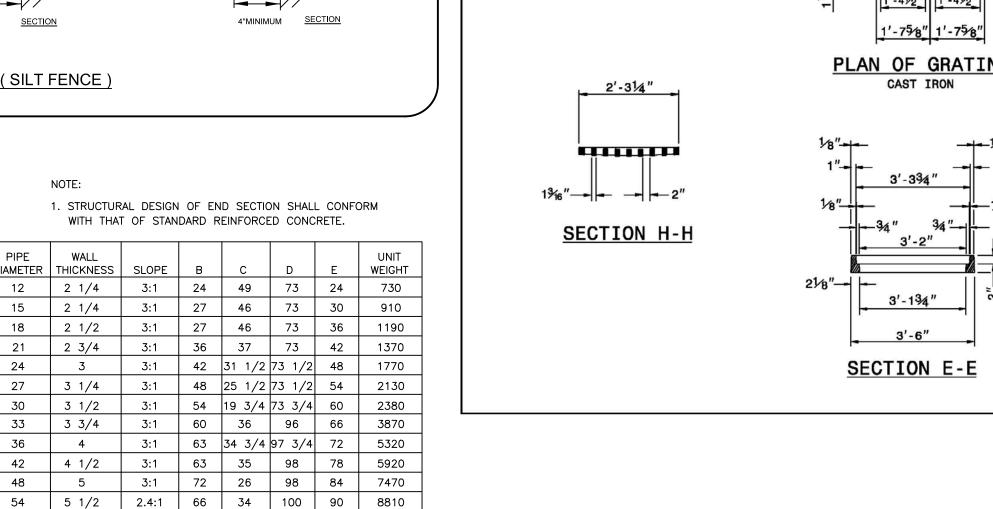


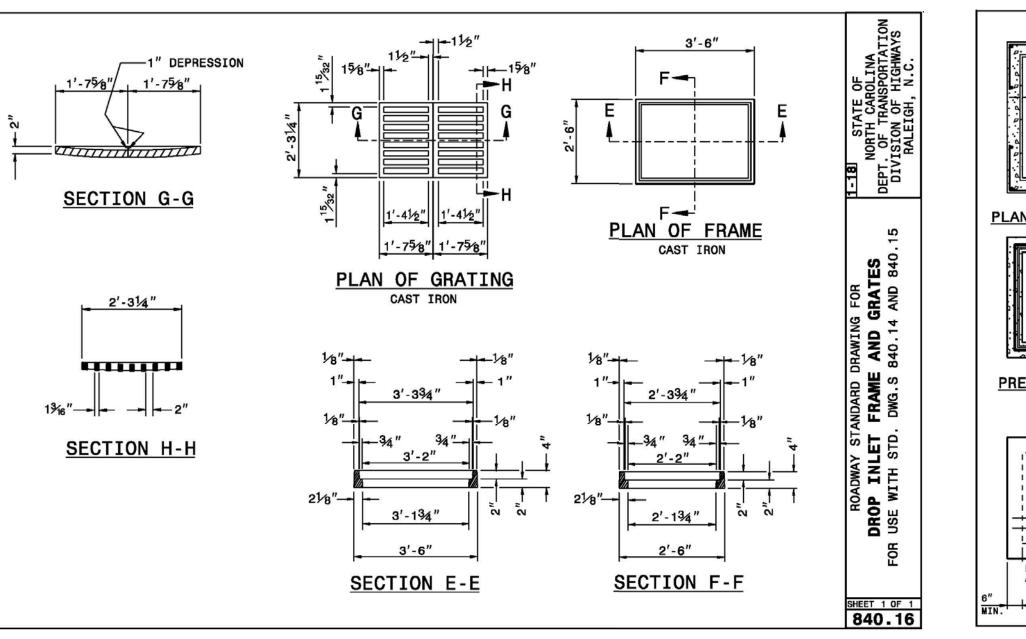


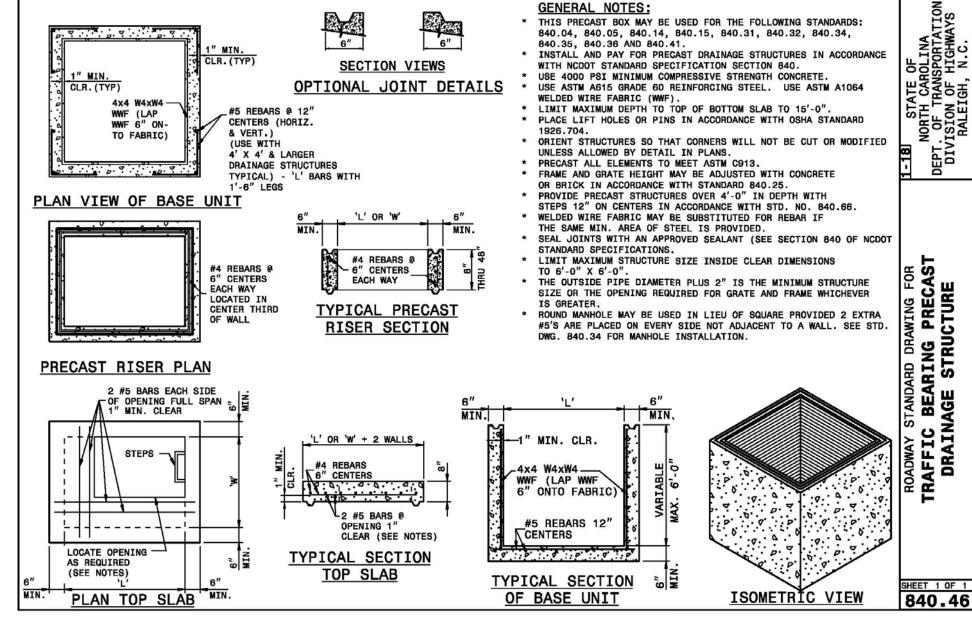


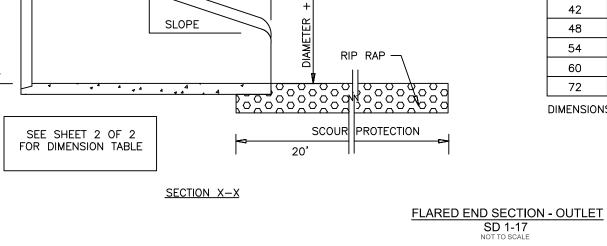


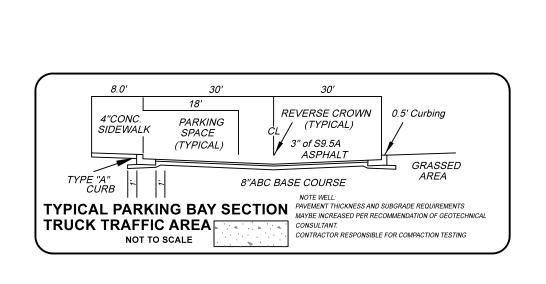




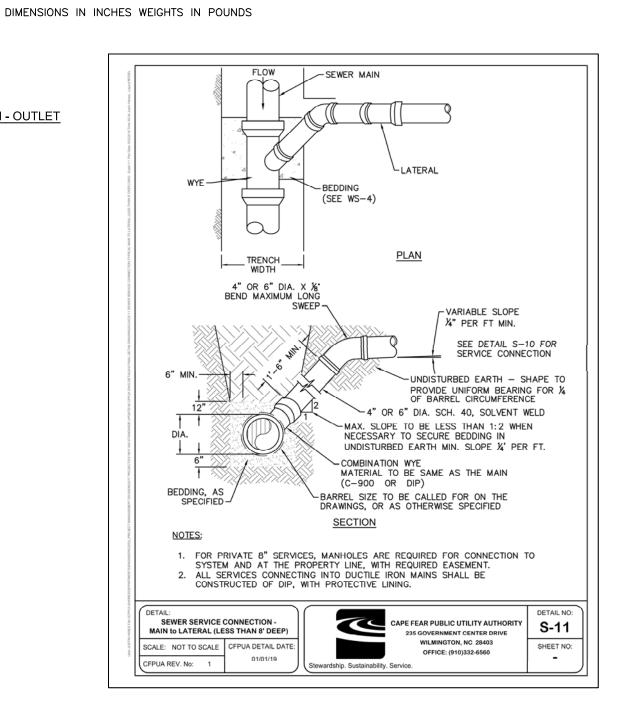


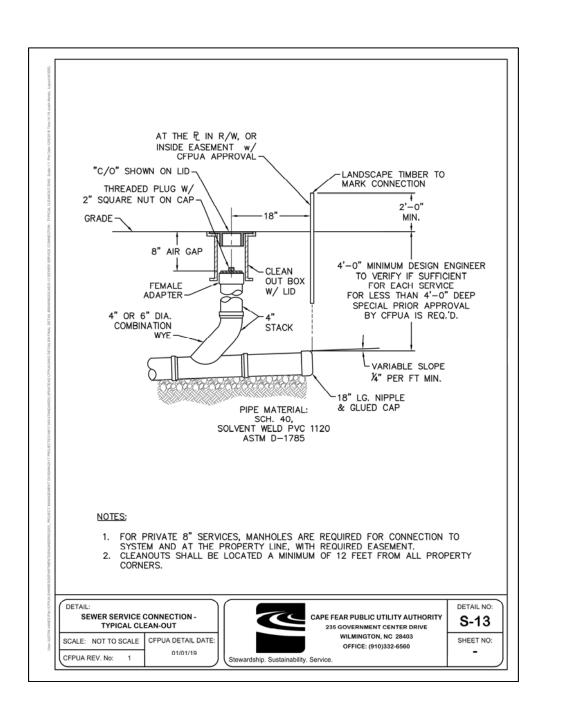


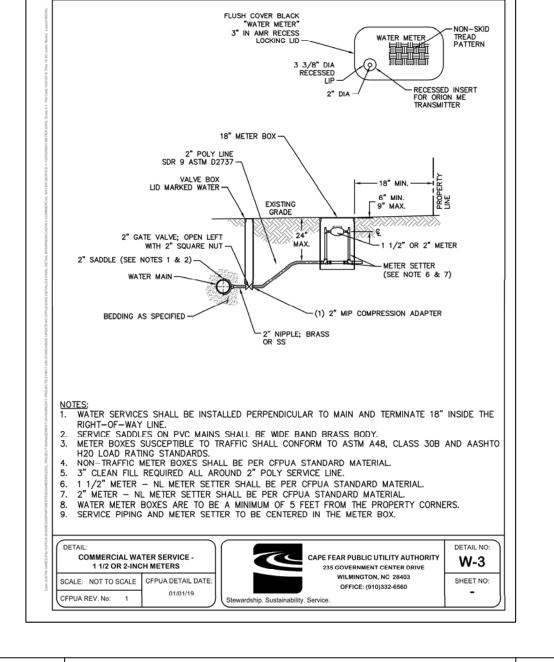








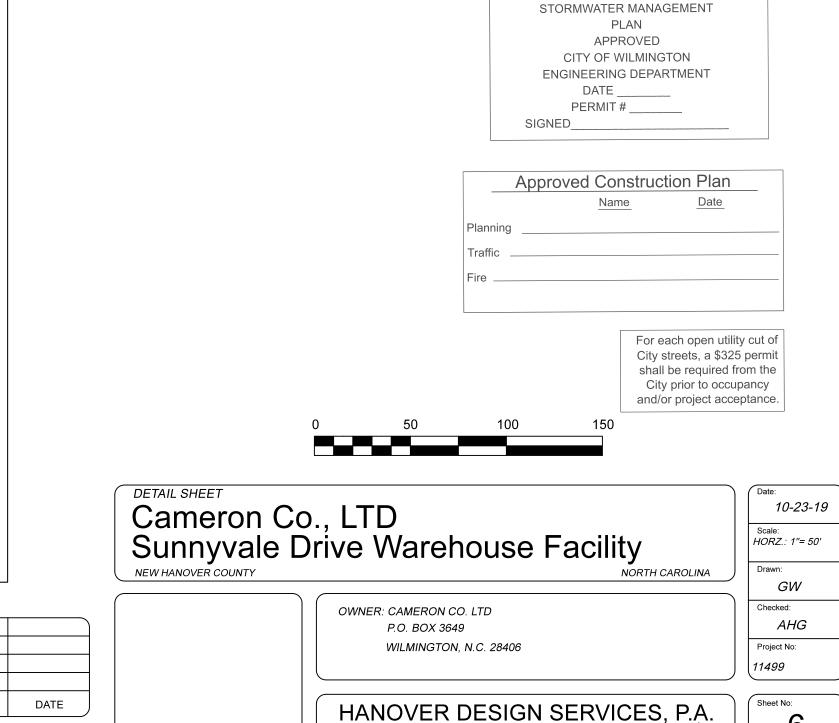




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REV. NO.



WILMINGTON, N.C. 28403