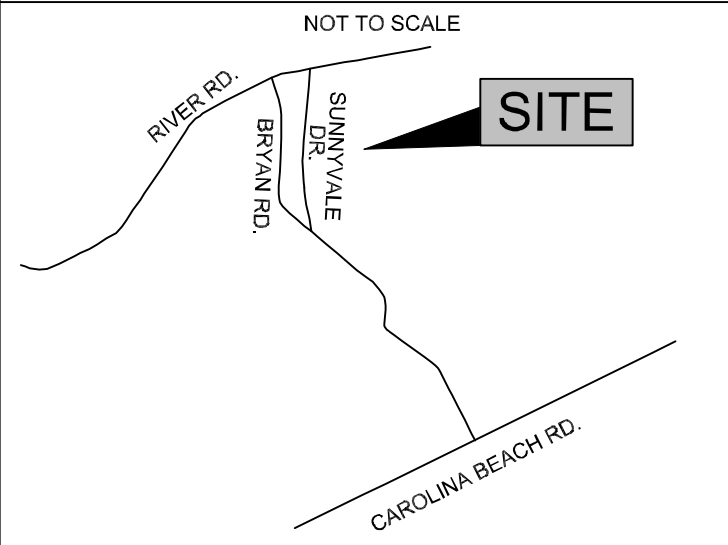


Sunnyvale Drive Warehouse Facility

820 SUNNYVALE DRIVE
 LOCATED IN THE CITY OF WILMINGTON, NEW HANOVER COUNTY, NORTH CAROLINA
 DESCRIPTION OF WORK: WAREHOUSE FACILITY GRADING, PAVING, DRAINAGE, AND UTILITIES
 OWNER: CAMERON COMPANY LTD
 P.O. BOX 3649
 WILMINGTON, N.C. 28406

LOCATION MAP



LEGEND

- WV = WATER VALVE
 - WM = WATER METER
 - C/O = SANITARY SEWER CLEAN OUT
 - INV. = INVERT
 - B/O = BLOW OFF ASSEMBLY
 - BFP = BACK FLOW PREVENTOR
 - GW = GUY WIRE
 - SWMH = STORM MANHOLE
 - GT. = GREASE TRAP
 - FH = FIRE HYDRANT ASSEMBLY
 - I.S. = IRON SET
 - ⊙ = SANITARY SEWER MH
 - ⊞ = CURB INLET
 - ⊞ = DROP INLET
 - ⊞ = TREE
 - ⊞ = CURB RAMP
 - ⊞ = WARNING MAT
 - ⊞ = WATER SERVICE
 - ⊞ = SEWER CLEANOUT
 - ⊞ = WATER VALVE
 - = POWER POLE
 - ⊞ = SIGN LOCATION
 - ⊞ = LIGHT POLE
- PROPERTY LINE**
- BUILDING SETBACK**
- CENTERLINE**
- EASEMENT**
- COMPUTED PROPERTY LINE**
- EXISTING CONTOUR**
- STORM DRAIN**
- PROPOSED SANITARY SEWER**
- PROPOSED SIDEWALK**
- PROPOSED ASPHALT**

NOTE WELL:

ANY AREAS ON-SITE WITHOUT ACTIVITY SHALL BE STABILIZED WITHIN 15 WORKING DAYS OR 21 CALENDAR DAYS AND AS ABOVE. ALL SLOPES MUST BE STABILIZED WITHIN 21 CALENDAR DAYS OF CEASE OF ANY ACTIVITY.

DETAILS SHOWN ARE TYPICAL OF INSTALLATIONS REQUIRED BY THE TOWN AND COUNTY. THIS SHEET DOES NOT PURPORT TO SHOW ALL REQUIRED CONSTRUCTION DETAILS, BUT RATHER SERVES AS A GUIDE. THE CONTRACTOR IS RESPONSIBLE FOR ADHERING TO ALL CITY, COUNTY AND STATE CODES AND CONSTRUCTION STANDARDS.

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.

STABILIZATION TIME FRAMES:

SITE AREA DESCRIPTION	STABILIZATION
Perimeter dikes, swales, ditches and slopes	7 DAYS
High Quality Water (HQW) Zones	7 DAYS
Slopes steeper than 3:1	7 DAYS
Slopes 3:1 or flatter	14 DAYS
All other areas with slopes flatter than 4:1	14 DAYS

GENERAL NOTES:

- This map is not for conveyance, recordation, or sales.
- This property is not located in a special flood hazard area.
- This property is zoned IND-HEAVY INDUSTRIAL DISTRICT, City of Wilmington.
- Water service to be CFFUA (public).
- Sewer service to be CFFUA (public).
- Topographic data furnished by Hanover Design Services, PA.

CURVE	RADIUS	ARC LENGTH	CHORD LENGTH	CHORD BEARING
C1	2354.57'	168.10'	168.06'	N 86°31'30" W

NOTES:

- SURVEYED IN JANUARY OF 2018.
- ALL DISTANCES ARE HORIZONTAL.
- AREA COMPUTED BY COORDINATE METHOD.
- FOR REFERENCE SEE D.B. 1356 PAGE 1420 AND AS NOTED HEREON.

SHEET No.	DESCRIPTION
1 OF 5	COVER SHEET
2 OF 5	GENERAL NOTES & DETAILS
3 OF 5	EXISTING CONDITIONS
4 OF 5	SITE PLAN
5 OF 5	GRADING AND STORMWATER
D-1 OF D-2	CONSTRUCTION DETAILS
D-2 OF D-2	CONSTRUCTION DETAILS
B-1 OF B-1	BASIN DETAILS
EC-1 OF EC-4	EROSION CONTROL
EC-2 OF EC-4	EROSION CONTROL
EC-3 OF EC-4	EROSION CONTROL
EC-4 OF EC-4	EROSION CONTROL

For each open utility cut of City streets, a \$325 permit shall be required from the City prior to occupancy and/or project acceptance.

City of WILMINGTON
 NORTH CAROLINA
 Public Services • Engineering Division
APPROVED STORMWATER MANAGEMENT PLAN
 Date: _____ Permit # _____
 Signed: _____

Approved Construction Plan

Name	Date
Planning _____	_____
Traffic _____	_____
Fire _____	_____



REV. NO.	REVISIONS	DATE
1	City Comments	4-7-20

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COVER SHEET
Cameron Co. LTD
Sunnyvale Drive Warehouse Facility
 NEW HANOVER COUNTY NORTH CAROLINA

Date: 1-13-20
 Scale: HORZ.: 1" = 50'
 Drawn: GW
 Checked: ahg
 Project No: 11499
 Sheet No: 1
 of 5

OWNER: CAMERON CO. LTD
 P.O. BOX 3649
 WILMINGTON, N.C. 28406

HANOVER DESIGN SERVICES, P.A.
 LAND SURVEYORS, ENGINEERS & LAND PLANNERS
 1123 FLORAL PARKWAY WILMINGTON, N.C. 28403
 PHONE: (910) 345-8002 LICENSE # C-5297

PRELIMINARY PLAN
NOT FOR RECORDATION OR CONVEYANCE

CITY STANDARD NOTES:

- Prior to any clearing, grading or construction activity, tree protection fencing shall be installed around protected trees or groups of trees. No construction workers, tools, materials, or vehicles are permitted within the tree protection methods.
- 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 signs.
- 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 right-of-way. Contact 811 prior to contacting City of Wilmington, Traffic Engineering regarding the utilities in ROW.
- Traffic Engineering must approve of pavement marking prior to actual striping.
- 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 owner.
- 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.
- Any broken or missing sidewalk panels will be replaced.
- Contact Traffic Engineering at 910-341-7888 to discuss street lighting options.
- Water and sewer service shall meet Cape Fear Public Utility Authority (CFPUA) details and specifications.
- 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.
- 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.
- Any irrigation system supplied by CFPUA water shall comply with the CFPUA Cross Connection Control regulations. Call 910-343-3910 for information.
- Any irrigation system shall be equipped with a rain and freeze sensor.
- Any backflow prevention devices required by the CFPUA will need to be on the list of approved devices by USFCC/HR or ASSE.
- Contractor to field verify existing water and sewer service locations, sizes and materials prior to construction. Engineer to be notified of any conflicts.
- Contractor shall maintain all weather access for emergency vehicles at all times during construction.
- 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.
- No obstructions are permitted in the space between thirty (30) inches and ten (10) feet above the ground within the triangular sight distance.
- Contact the North Carolina One Call Center at 1.800.632.4849 prior to doing any digging, clearing, or grading.
- A landscaping plan indicating the location of required street trees shall be submitted to the City of Wilmington for review and approval prior to recording the final plan.

GENERAL NOTES

- 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.
- NO CONSTRUCTION IS TO BEGIN BEFORE LOCATION OF EXISTING UTILITIES HAS BEEN DETERMINED. CALL "NO ONE-CALL" AT LEAST 48 HOURS BEFORE COMMENCING CONSTRUCTION.
- ALL TREES WHICH ARE NOT REQUIRED TO BE CLEARED FOR CONSTRUCTION SHALL BE PRESERVED WHEREVER POSSIBLE UNLESS OTHERWISE DIRECTED.
- 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.
- 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.
- 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.
- EXTREME CARE SHALL BE TAKEN TO ENSURE MINIMUM SEPARATIONS AT ALL UTILITY CROSSINGS.
- CONTRACTOR TO ENSURE THAT STREET PAVEMENT IS PLACED SO AS TO DRAIN POSITIVELY TO THE ROADWAY INLETS AND CATCH BASINS.
- CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL REQUIRED PERMITS.
- THIS PLAN IS FOR SITE UTILITIES, GRADING, ROADWORK, AND DRAINAGE ONLY.
- 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.
- ALL CONSTRUCTION TO CONFORM TO CITY OF WILMINGTON STANDARDS APPLICABLE STATE & LOCAL CODES.
- CONTRACTOR TO COORDINATE ANY REQUIRED TRAFFIC CONTROL WITH THE STATE AND THE TOWN. CONTRACTOR RESPONSIBLE FOR ANY ADDITIONAL REQUIRED PERMITS.
- 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 DRAINAGES) TO BE DIRECTED TO STORM SEWER COLLECTION SYSTEM (I.E. STORM INLETS OR PONDS) BY SWALES, OVERLAND FLOW, ADDITIONAL GRADING, OR LANDSCAPING INLETS.
- CONTRACTOR IS RESPONSIBLE FOR COORDINATION OF ANY RELOCATIONS, REALIGNMENTS, DISCONNECTIONS OR CONNECTIONS OF EXISTING UTILITIES WITH APPLICABLE AUTHORITIES.
- 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.
- 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.
- ALL SIGNS AND PAVEMENT MARKINGS SHALL MEET NCDOT AND MUTCD STANDARDS
- CONTRACTOR SHALL KEEP AND MAINTAIN A RED LINE SET OF DRAWINGS SHOWING ANY DEVIATIONS MADE FROM THE ORIGINAL DESIGN. THIS SET SHALL BE PROVIDED TO THE ENGINEER.

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.
- CFPUA STANDARD DETAIL SHEETS FOR SEWER AND WATER TAPS TO BE INCLUDED AS A PART OF THIS PLAN, ATTACHED.
 - 48-HOUR NOTICE AND 3 COMPLETE SETS OF PLANS REQUIRED FOR PRE-CONSTRUCTION MEETING BY CONTRACTOR.
 - NCDOT ENCROACHMENT REQUIRED FOR ANY WORK IN PUBLIC ROW.
 - ALL FEES TO BE PAID PRIOR TO PRE-CONSTRUCTION MEETING.

CAPE FEAR PUBLIC UTILITY AUTHORITY STANDARD NOTES:

- 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.
- ALL SERVICES TYING INTO DUCTILE IRON MAINS SHALL BE CONSTRUCTED OF CLASS 50, DIP, WITH PROTECTO 401 CERAMIC EPOXY LINING.
- MINIMUM 10' UTILITIES EASEMENT PROVIDED ALONG THE FRONTAGE OF ALL LOTS AND AS SHOWN FOR NEW DEVELOPMENTS.
- NO FLEXIBLE COUPLINGS SHALL BE USED.
- ALL STAINLESS STEEL FASTENERS SHALL BE 316.
- CLEANOUTS SHALL BE LOCATED A MINIMUM OF 12 FEET FROM 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

- ALL WATER MAINS TO BE SDR18 PVC PIPE WITH PUSH ON JOINTS UNLESS NOTED OTHERWISE ON PLANS. SEE SPECIFICATIONS FOR ADDITIONAL MATERIALS REQUIRED.
- 3" MINIMUM COVER ON ALL WATER MAINS.
- LOCATE ALL METER SETTINGS 5' FROM LOT LINE UNLESS OTHERWISE NOTED.
- ALL COMMERCIAL WATER SERVICE LINES TO BE 2" UNLESS OTHERWISE NOTED.
- FIRE HYDRANTS SHALL BE INSTALLED IN ACCORDANCE WITH THE DETAIL.
- BLOW OFF ASSEMBLIES SHALL BE IN ACCORDANCE WITH THE DETAIL.
- ALL BENDS AND TEES SHALL BE ADEQUATELY BLOCKED (SEE DETAIL).
- ALL CONNECTIONS TO EXISTING WATER LINE AND BORES TO BE DONE ACCORDING TO CFPUA SPECIFICATIONS.
- ALL MAINS SHALL BE ADEQUATELY FLUSHED, PRESSURE TESTED, AND DISINFECTED IN ACCORDANCE WITH THE SPECIFICATIONS.
- ALL WORK SHALL BE SUBJECT TO INSPECTION BY THE ENGINEER.
- CFPUA AND THE N.C. DEPT. OF ENVIRONMENTAL, HEALTH AND NATURAL RESOURCES. A PRE-CONSTRUCTION CONFERENCE IS REQUIRED. CONTACT: CFPUA.
- MINIMUM SEPARATION SHALL BE MAINTAINED AS FOLLOWS:
 - HORIZONTAL CLEARANCE OF 10 FEET BETWEEN SANITARY SEWER AND WATER MAINS.
 - HORIZONTAL CLEARANCE OF 10 FEET BETWEEN STORM SEWER AND WATER MAINS.
 - 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.
 - 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.
 - 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.
- SEE DETAIL SHEETS FOR TYPICAL UTILITIES HOOKUPS.
- ALL STREETS ARE PROPOSED TO BE PUBLIC (BUILT TO TOWN OF LELAND STANDARDS/N.C.O.D.T. PAVEMENT AND SUBGRADE STANDARDS).
- ALL SANITARY SEWER MAINS TO BE 8" UNLESS OTHERWISE INDICATED.
- ALL WATER MAINS TO BE 8" UNLESS OTHERWISE INDICATED.
- TWO VALVES ARE REQUIRED AT "T" INTERSECTIONS AND ONE VALVE ON THE WATER LINE TO FIRE HYDRANTS.
- A BLOW-OFF VALVE IS REQUIRED AT THE TERMINUS OF ALL "DEAD END" WATER LINES.
- INSTALLATION AND CONNECTION OF ALL UTILITY SERVICES, OUTSIDE UTILITY EASEMENTS, SUCH AS SEWER, STORM, AND WATER MUST BE INSPECTED BY THE TOWN OF LELAND INSPECTIONS OFFICE.
- SANITARY SERVICES SMALLER THAN 8" SHALL HAVE CLEANOUTS AT INTERVALS OF NOT MORE THAN 100'. CLEANOUTS SHALL BE PROVIDED FOR SERVICE LINES AND BUILDING DRAINS THAT HAVE HORIZONTAL DIRECTION CHANGES GREATER THAN 45 DEGREES.
- SEE 2018 IPC FOR FURTHER GUIDANCE ON UTILITY SERVICE REQUIREMENTS.

ADA NOTES

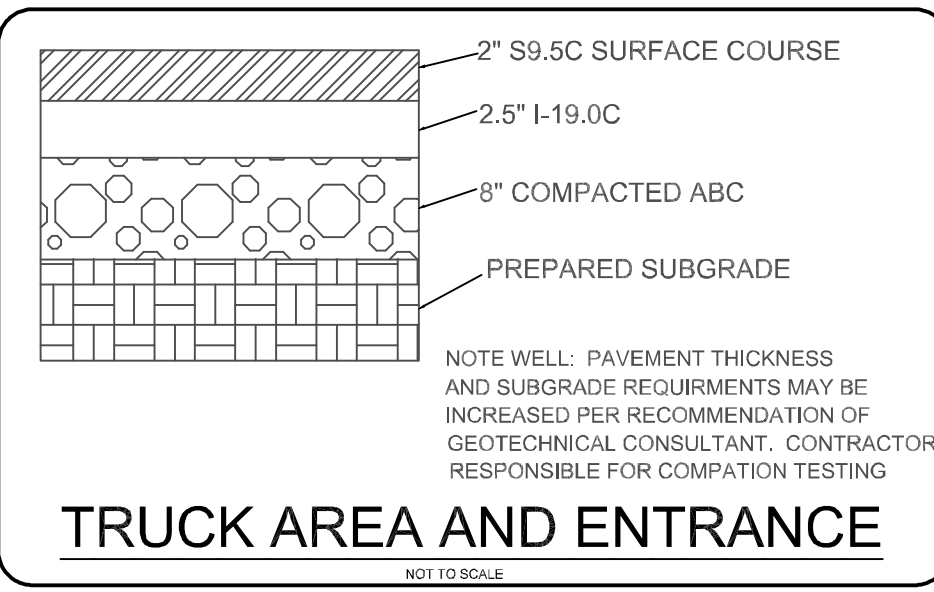
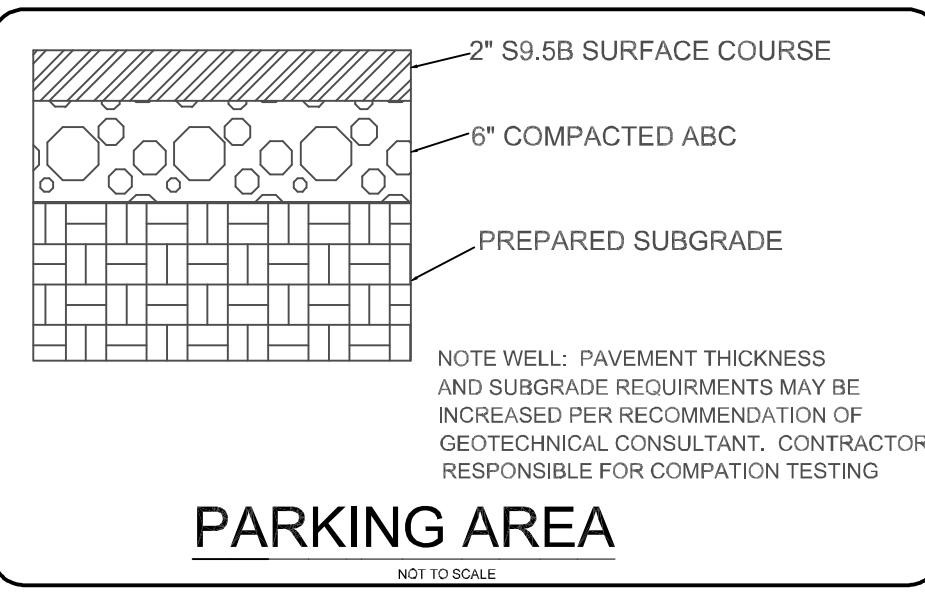
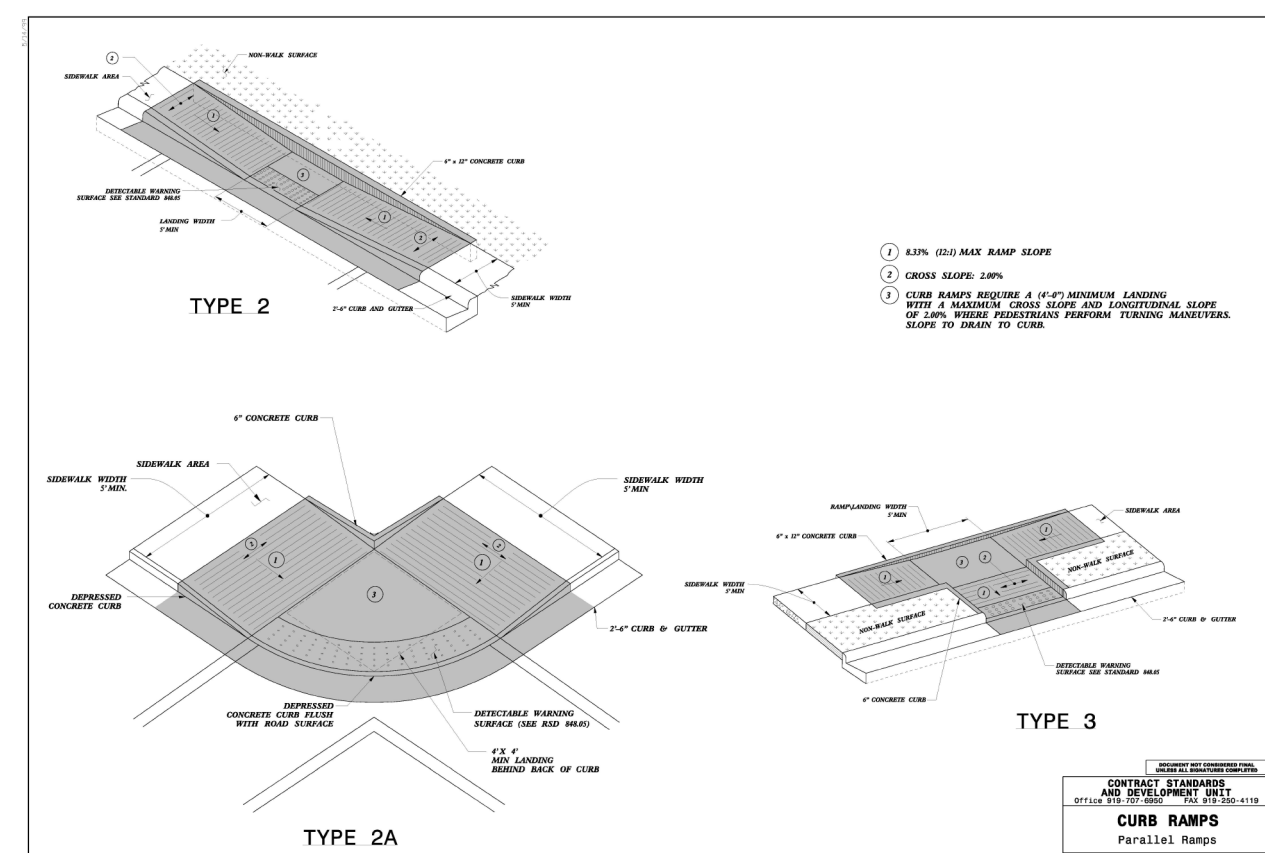
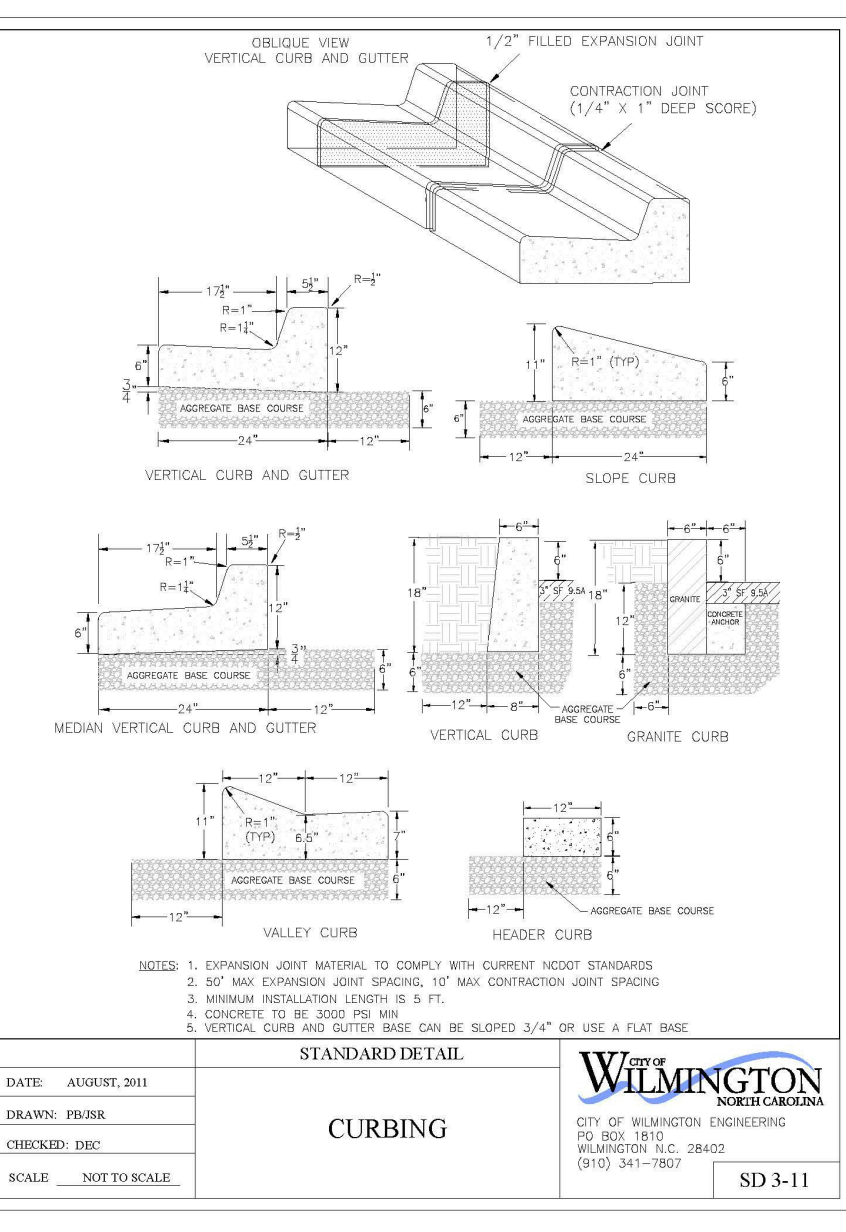
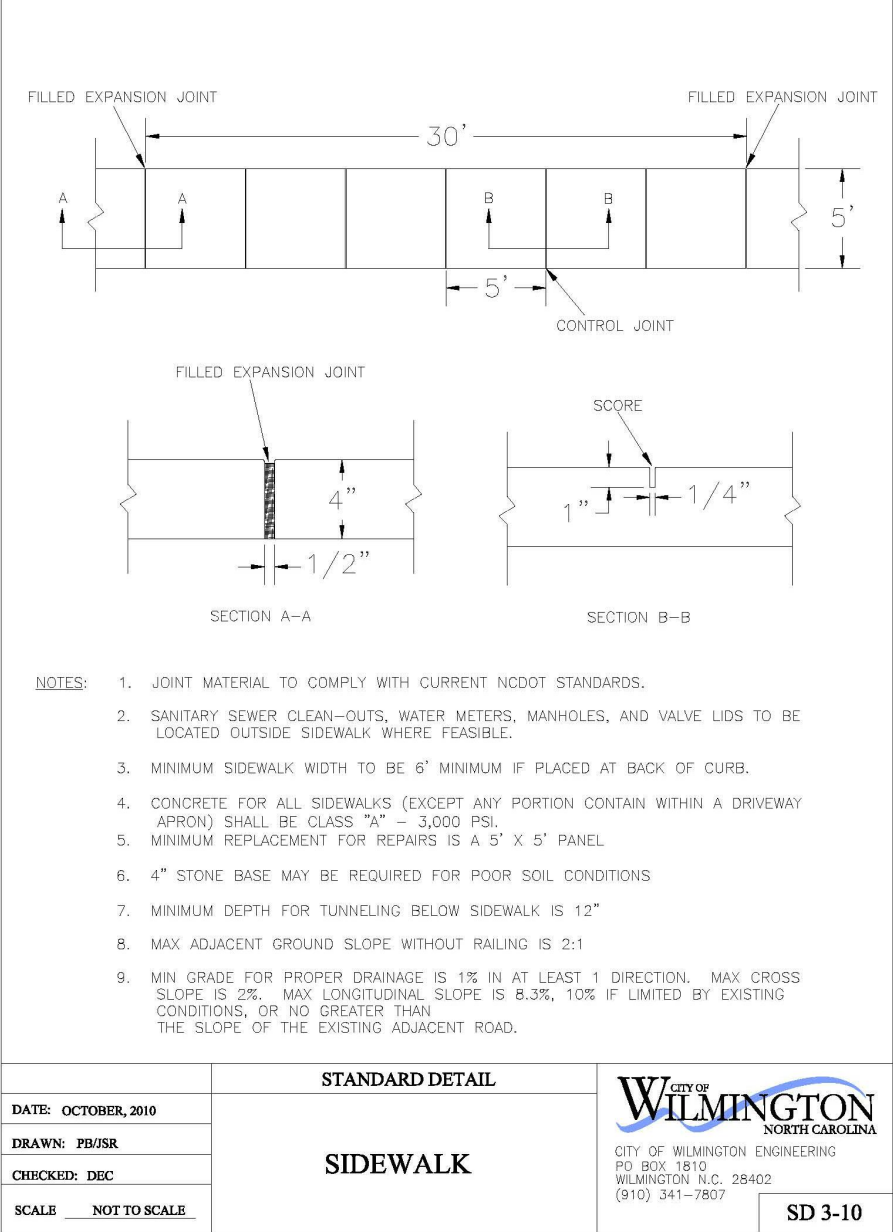
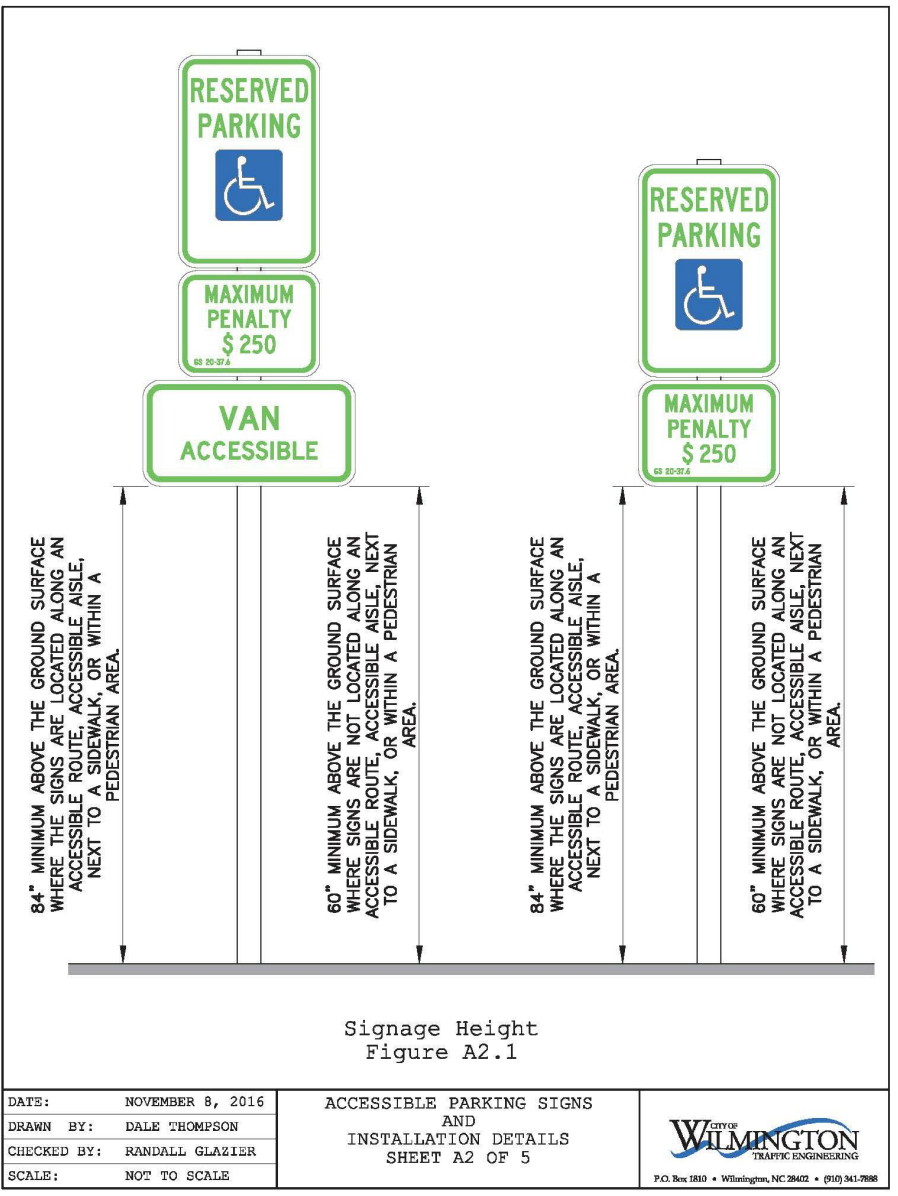
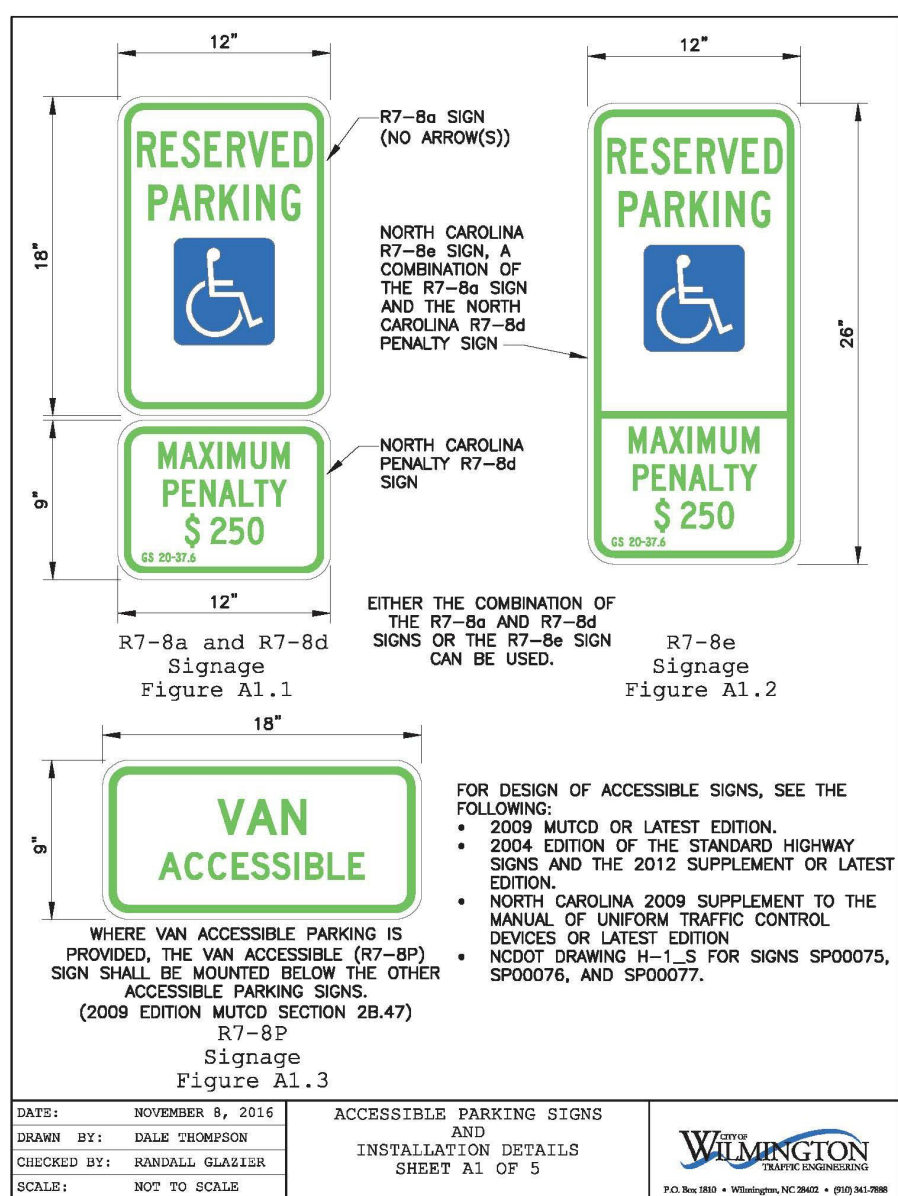
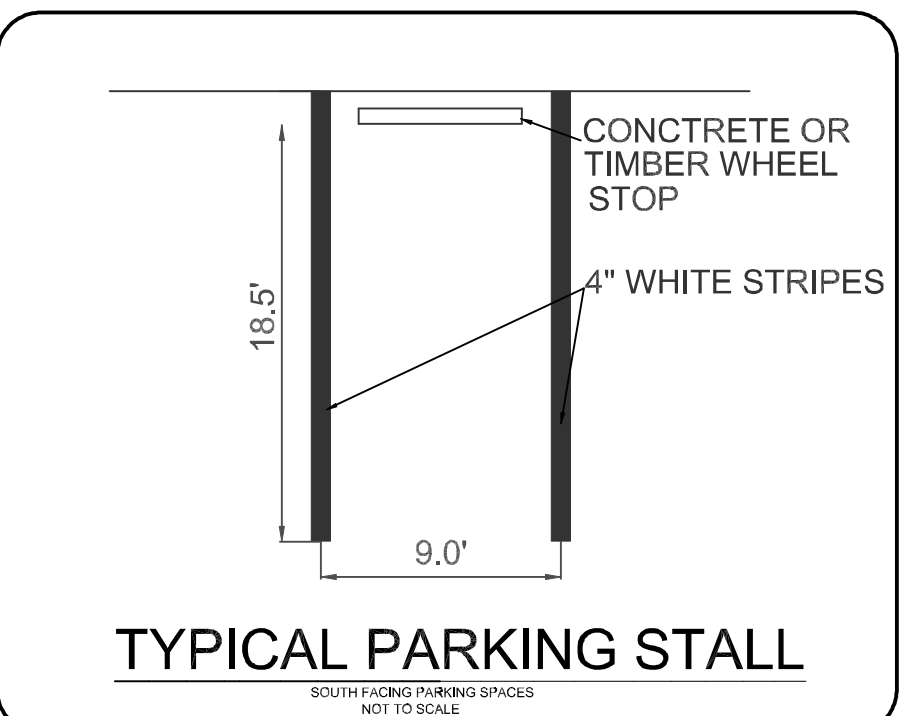
- LOCATION OF WHEELCHAIR RAMPS:
 - IN ACCORDANCE WITH THE RATIFIED HOUSE BILL 1296, ALL STREET CURBS IN NORTH CAROLINA BEING CONSTRUCTED OR RECONSTRUCTED FOR MAINTENANCE PROCEDURES, TRAFFIC OPERATIONS, REPAIRS, CORRECTION OF UTILITIES OR ALTERED FOR ANY REASON AFTER SEPTEMBER 1973 SHALL PROVIDE WHEELCHAIR 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.
- WHEELCHAIR RAMPS SHOULD BE LOCATED AS INDICATED IN DETAIL DRAWINGS, HOWEVER EXISTING LIGHT POLES, FIRE HYDRANTS, DROP INLETS, ETC. MAY AFFECT PLACEMENT.
- REFER TO 2018 NCDOT ROADWAY STANDARD DRAWINGS NUMBER 648.05-04(08) FOR RAMP DESIGN AND DETAILS.
- ALL RAMPS RAMPS, HANDICAP PARKING, AND ACCESSIBLE ROUTES SHALL COMPLY WITH THE LATEST ADA GUIDELINES RUNNING SLOPES ALONG AN ACCESSIBLE ROUTE EXCEEDING 2% SHALL BE CONSIDERED A RAMP.
- 2.00% MAX CROSS SLOPE ALLOWED. ALONG ACCESSIBLE ROUTES, 2.00%.
- 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.
- CONTRACTOR TO ENSURE SLOPES IN HANDICAP PARKING STALLS AND ACCESS ISLES DO NOT TO EXCEED 2% IN ANY DIRECTION.

ADDITIONAL STORM WATER NOTES:

- 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 LANDSCAPING INLETS.
- CONTRACTOR TO ENSURE THAT STREET UTILITIES AND CURBS IS PLACED TO DRAIN POSITIVELY TO CURB INLETS AND DRAINAGE STRUCTURES.
- 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 15 RCP.
- ROOF DRAINS SHALL BE SIZED ACCORDING TO THE 2018 INTERNATIONAL PLUMBING CODE AND ALL AND SHALL CONFORM TO ANY LOCAL REQUIREMENTS.
- ANY ROOF DRAIN LOCATIONS SHOWN HERE ARE APPROXIMATE AND MAY BE FIELD ADJUSTED AS LONG AS THE MINIMUM REQUIRED SLOPE IS MAINTAINED.
- ALL ROOF DRAINS ENTERING INFILTRATION BASINS SHALL HAVE SCREENS. STORM BOXES ENTERING INFILTRATION BASINS SHALL HAVE SUMPS.

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
- ADDITIONAL FIRE PROTECTION AND/OR ACCESSIBILITY REQUIREMENTS MAY BE REQUIRED DUE TO ANY SPECIAL CIRCUMSTANCES CONCERNING THE PROJECT.
- CONTRACTOR SHALL SUBMIT A RADIO SIGNAL STRENGTH STUDY FOR ALL COMMERCIAL BUILDINGS THAT DEMONSTRATES THAT EXISTING EMERGENCY RESPONDER RADIO SIGNAL LEVELS MEET THE REQUIREMENTS OF SECTION 510 OF THE 2018 NC FIRE CODE.
- ALL ISOLATION VALVES WITHIN THE "HOT BOX" AND BETWEEN THE "HOT BOX" AND THE RISER ROOM, MUST BE ELECTRICALY SUPERVISED. IF SPRINKLER SYSTEM PRESENT



**PRELIMINARY PLAN
NOT FOR RECORDATION OR CONVEYANCE**

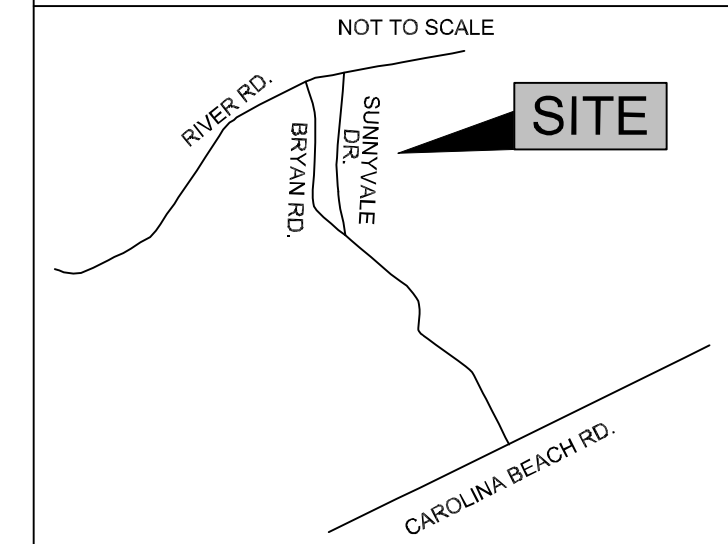
REV. NO.	REVISIONS	DATE

DETAIL SHEET
Cameron Co. LTD
Sunnyvale Drive Warehouse Facility
 NEW HANOVER COUNTY NORTH CAROLINA

Date: 1-13-20
 Scale: HORZ.: 1" = 50'
 Owner: CAMERON CO. LTD
 P.O. BOX 3649
 WILMINGTON, N.C. 28406
 Project No: 11499
 Sheet No: 2
 of 5

HANOVER DESIGN SERVICES, P.A.
 LAND SURVEYORS, ENGINEERS & LAND PLANNERS
 1123 FLORIDA PARKWAY
 WILMINGTON, N.C. 28403
 PHONE: (910) 243-8002
 LICENSE #C-2597

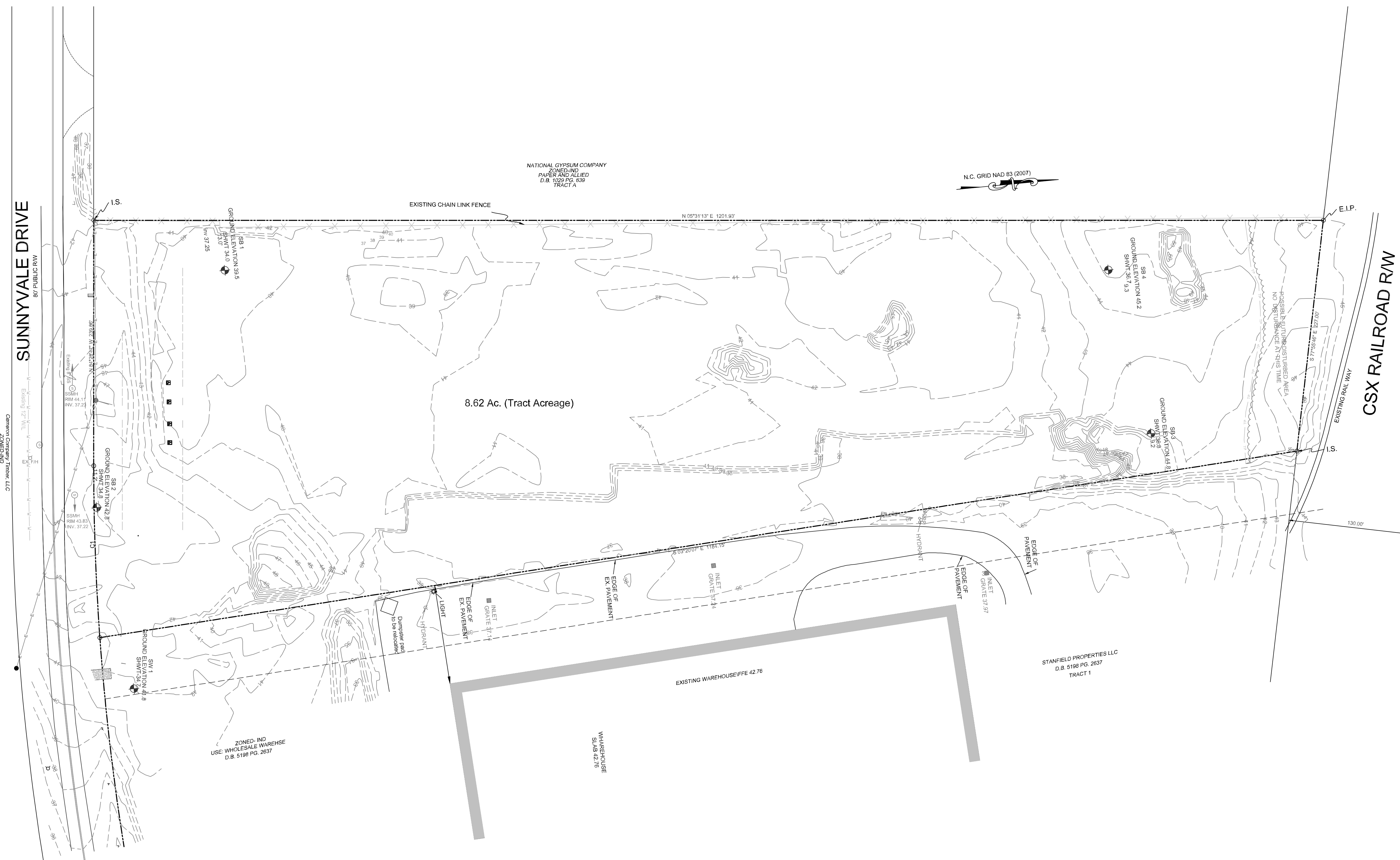
LOCATION MAP



CITY OF WILMINGTON
NORTH CAROLINA
Public Services • Engineering Division
APPROVED STORMWATER MANAGEMENT PLAN
Date: _____ Permit # _____
Signed: _____

Approved Construction Plan
Name _____ Date _____
Planning _____
Traffic _____
Fire _____

For each open utility cut of City streets, a \$325 permit shall be required from the City prior to occupancy and/or project acceptance.



NATIONAL GYPSUM COMPANY
ZONED-IND
PAPER AND ALLIED
D.B. 1029 PG. 539
TRACT A

N.C. GRID NAD 83 (2007)

8.62 Ac. (Tract Acreage)

STANFIELD PROPERTIES LLC
D.B. 5198 PG. 2637
TRACT 1

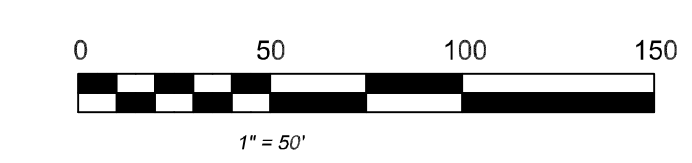
ZONED-IND
USE: WHOLESALE WAREHOUSE
D.B. 5198 PG. 2637

CURVE	RADIUS	ARC LENGTH	CHORD LENGTH	CHORD BEARING
C1	2354.57'	168.10'	168.06'	N 86°31'30" W

- LEGEND**
- = SANITARY MANHOLE
 - ⊕ = FIRE HYDRANT
 - = POWER POLE
 - = DRAINAGE FLOW DIRECTION
 - E.I.P. = EXISTING IRON PIPE
 - E.L. = EXISTING IRON
 - E.C.M. = EXISTING CONCRETE MONUMENT
 - R.W. = RIGHT OF WAY
 - C.P. = COMPUTED POINT
- PROPERTY LINE
- PROPOSED SILT FENCE
- COMPUTED PROPERTY LINE

- NOTES**
1. SURVEYED IN JANUARY OF 2018.
 2. ALL DISTANCES ARE HORIZONTAL.
 3. AREA COMPUTED BY COORDINATE METHOD.
 4. FOR REFERENCE SEE D.B. 1356 PAGE 1420 AND AS NOTED HEREON.
 5. NO REGULATED TREES EXIST ON SITE.
 6. EXISTING CONTOURS ARE AS OF 1-2018. SITE IS CURRENTLY BEING MINED. EXISTING CONTOURS TO BE UPDATED ON FINAL CONSTRUCTION PLANS.

PRELIMINARY PLAN
NOT FOR RECORDATION OR CONVEYANCE



MAP OF EXISTING CONDITIONS
Cameron Co. LTD
Sunnysvale Drive Warehouse Facility
NEW HANOVER COUNTY NORTH CAROLINA

Date: **1-13-20**
Scale: **HORZ.: 1" = 50'**
Drawn: **GW**
Checked: **AHG**
Project No: **11499**

OWNER: CAMERON CO. LTD
P.O. BOX 3649
WILMINGTON, N.C. 28406

HANOVER DESIGN SERVICES, P.A.
LAND SURVEYORS, ENGINEERS & LAND PLANNERS
1123 FLORAL PARKWAY
WILMINGTON, N.C. 28403
PHONE: (910) 345-8002
LICENSE #152597

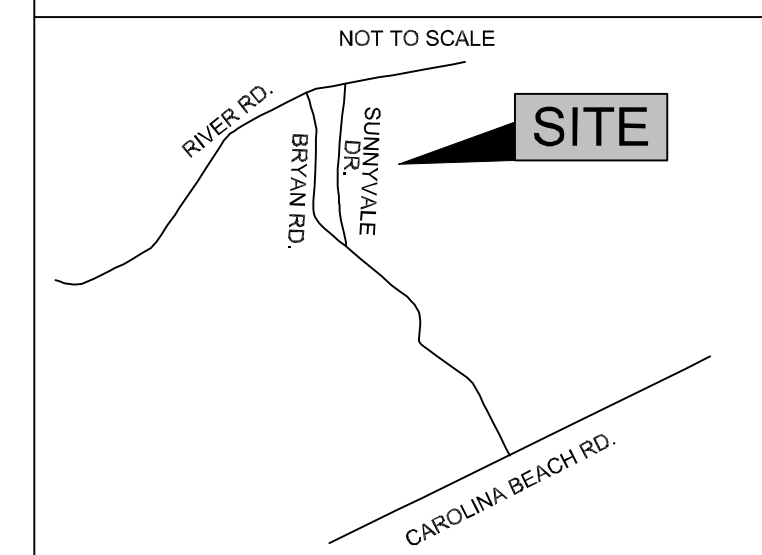


Sheet No: **3**
5

REV. NO.	REVISIONS	DATE

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LOCATION MAP



SITE INVENTORY TABLE:

STREET ADDRESS: 820 SUNNYVALE DRIVE
WILMINGTON, NC 28405

TAX PARCEL IDENTIFICATION NUMBERS:
R06500-007-001-000
DB 1356 PG 1420
ADDRESS: 820 SUNNYVALE DR.

ZONING: IND-HEAVY INDUSTRIAL DISTRICT

CAMA LAND CLASSIFICATION: URBAN
HISTORICAL AND ARCHAEOLOGICAL SITES: NONE EXIST
WETLANDS: NONE EXIST
LAND USE CODE: 958-UNUSED LAND
PROPOSED USE: WAREHOUSE/FREIGHT

DIMENSIONAL STANDARDS

- MINIMUM LOT AREA: NONE
- MAXIMUM LOT COVERAGE: N/A
- MINIMUM LOT WIDTH: NONE
- MINIMUM FRONT SETBACK: 50'
- MINIMUM REAR SETBACK: 0'
- MINIMUM INTERIOR SIDE SETBACK: 0'
- MINIMUM CORNER LOT SETBACK: 50'
- HEIGHT: 35'
- PROPOSED BUILDING: 167,476 SF
- PROPOSED BUILDING LOT COVERAGE: 44%

TOTAL ACREAGE = 8.62 ACRES

GROUND COVER: NEWLY GRADED

SOILS DATA:

- PRIMARILY KUREB SAND SAND (K₁)
- EROSION FACTOR - 0.05
- HIGHLY PERMEABLE, HYDRAULIC GROUP A

IMPERVIOUS CALCULATIONS

- EXISTING: 0 SF
- BUILDINGS: 167,530 SF
- SIDEWALK: 2,064 SF
- PAVEMENT: 105,641 SF
- TOTAL: 275,235 SF (75%)
- OFFSITE: 4,347 SF

SEWER/WATER DEMAND

- AVERAGE DAILY DEMAND 800 GPD

BUILDING TYPE

- TYPE IIB per NCSBC

PARKING DEMAND

- 1 SPACE PER 15 EMPLOYEES
- 60 EMPLOYEES = 4 SPACES REQUIRED
- 46 SPACES PROVIDED
- 1 STANDARD AND 1 ACCESSIBLE VAN SPACE REQUIRED
- 4 VAN SPACES PROVIDED

TRIP DEMAND

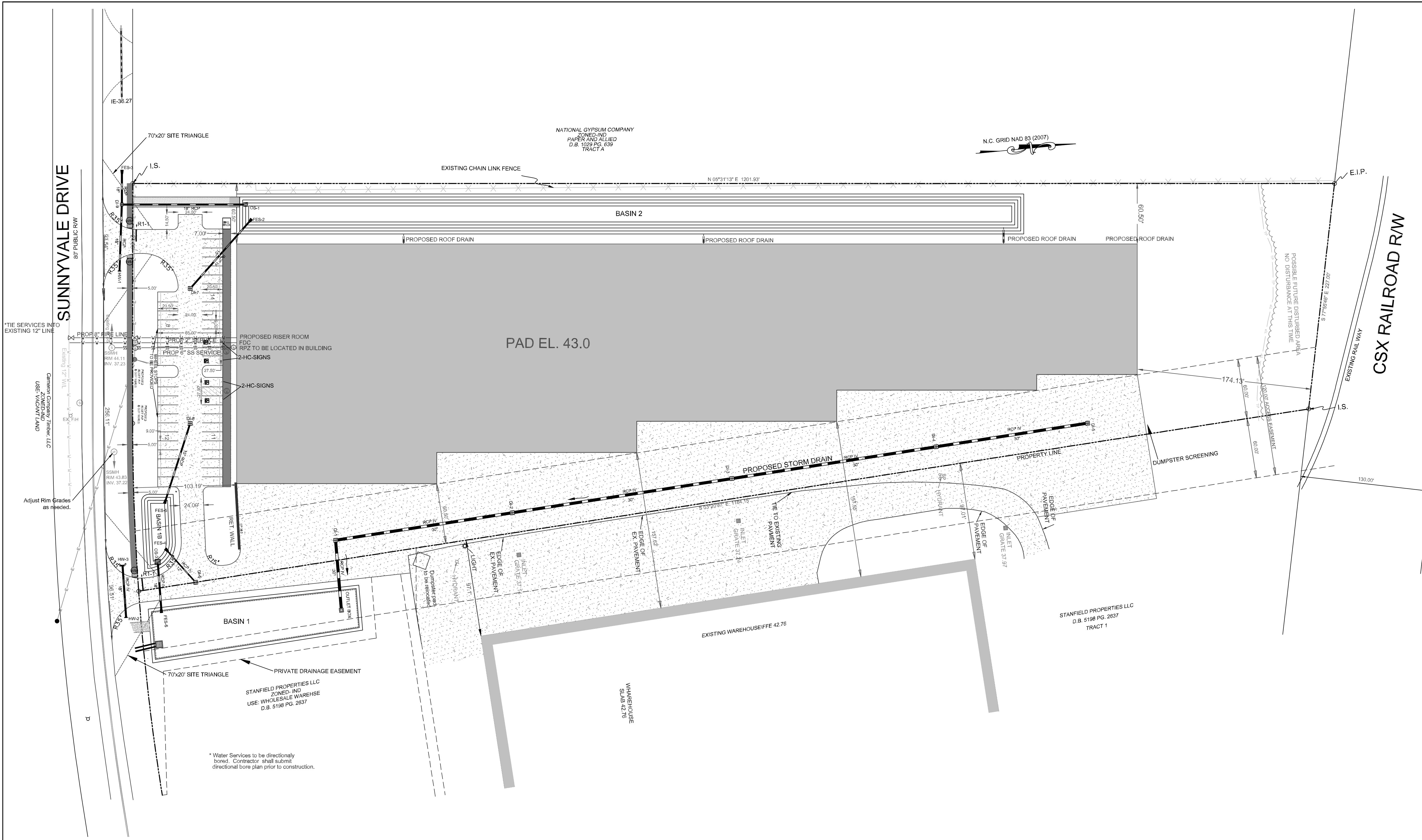
- AM PEAK = 30
- PM PEAK = 35

TREE SURVEY

- NO REGULATED TREES EXIST ON SITE

DRAINAGE AREA INFORMATION

- DRAINS TO BARNARDS CREEK 18-80
- CLASSIFICATION: C.S.W
- RIVER BASIN: CAPE FEAR



* Water Services to be directionally bored. Contractor shall submit directional bore plan prior to construction.

- CAPE FEAR PUBLIC UTILITY AUTHORITY STANDARD NOTES:
- 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.
 - ALL SERVICES TYING INTO DUCTILE IRON MAINS SHALL BE CONSTRUCTED OF CLASS 50, DIP, WITH PROTECTO 401 CERAMIC EPOXY LINING.
 - MINIMUM 10' UTILITIES EASEMENT PROVIDED ALONG THE FRONTAGE OF ALL LOTS AND AS SHOWN FOR NEW DEVELOPMENTS.
 - NO FLEXIBLE COUPLINGS SHALL BE USED.
 - ALL STAINLESS STEEL FASTENERS SHALL BE 316.
 - CLEANOUTS SHALL BE LOCATED A MINIMUM OF 12 FEET FROM
 - 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.

NOTE WELLS:

ANY AREAS ON-SITE WITHOUT ACTIVITY SHALL BE STABILIZED WITHIN 15 WORKING DAYS OR 21 CALENDAR DAYS AND AS ABOVE. ALL SLOPES MUST BE STABILIZED WITHIN 21 CALENDAR DAYS OF CEASE OF ANY ACTIVITY.

DETAILS SHOWN ARE TYPICAL OF INSTALLATIONS REQUIRED BY THE TOWN AND COUNTY. THIS SHEET DOES NOT PURPORT TO SHOW ALL REQUIRED CONSTRUCTION DETAILS, BUT WATER SERVICES IS A GUIDE. THE CONTRACTOR IS RESPONSIBLE FOR ADHERING TO ALL CITY, COUNTY AND STATE CODES AND CONSTRUCTION STANDARDS.

No geotechnical testing has been performed on site. No warranty is made for suitability of subgrade, and under and any required replacement with suitable material shall be the responsibility of the contractor.

STABILIZATION TIME FRAMES:

SITE AREA DESCRIPTION	STABILIZATION
Perimeter dikes, swales, ditches and slopes	7 DAYS
High Quality Water (HQW) Zones	7 DAYS
Slopes steeper than 3:1	7 DAYS
Slopes 3:1 or flatter	14 DAYS
All other areas with slopes flatter than 4:1	14 DAYS

City of WILMINGTON
Public Services • Engineering Division

APPROVED STORMWATER MANAGEMENT PLAN

Date: _____ Permit # _____

Signed: _____

Approved Construction Plan

Name _____ Date _____

Planning _____

Traffic _____

Fire _____

For each open utility out of City streets, a \$325 permit shall be required from the City prior to occupancy and/or project acceptance.



PRELIMINARY PLAN
NOT FOR RECORDATION OR CONVEYANCE

- NOTES:
- SURVEYED IN JANUARY OF 2018.
 - ALL DISTANCES ARE HORIZONTAL.
 - AREA COMPUTED BY COORDINATE METHOD.
 - FOR REFERENCE SEE D.B. 1356 PAGE 1420 AND AS NOTED HEREON.
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 - EXISTING CONTOURS ARE AS OF 1-2018. SITE IS CURRENTLY BEING MINED. EXISTING CONTOURS TO BE UPDATED ON FINAL CONSTRUCTION PLANS.

CURVE	RADIUS	ARC LENGTH	CHORD LENGTH	CHORD BEARING
C1	2354.57'	168.10'	168.06'	N 86°31'30" W

REV. NO.	REVISIONS	DATE

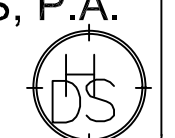
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SITE PLAN
Cameron Co. LTD
Sunnyvale Drive Warehouse Facility
NEW HANOVER COUNTY NORTH CAROLINA

Date: 3-18-21
Scale: HORZ.: 1" = 50'
Drawn: GW
Checked: AHG
Project No: 11499

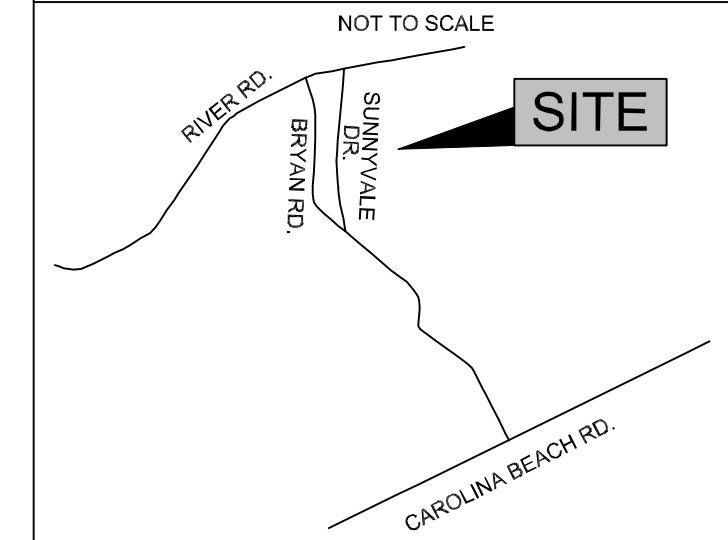
OWNER: CAMERON CO. LTD
P.O. BOX 3649
WILMINGTON, N.C. 28406

HANOVER DESIGN SERVICES, P.A.
LAND SURVEYORS, ENGINEERS & LAND PLANNERS
1123 BLOOMINGWAY
WILMINGTON, N.C. 28403
PHONE: (910) 365-8002
LICENSE # 52097



Sheet No: 4
5

LOCATION MAP



LEGEND

- WV = WATER VALVE
- WM = WATER METER
- C/O = SANITARY SEWER CLEAN OUT
- INV. = INVERT
- B/O = BLOW OFF ASSEMBLY
- BFP = BACK FLOW PREVENTOR
- GW = GUY WIRE
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- GT. = GREASE TRAP
- FH = FIRE HYDRANT ASSEMBLY
- I.S. = IRON SET
- ⊙ = SANITARY SEWER MH
- ⊠ = CURB INLET
- ⊞ = DROP INLET
- ⊗ = TREE
- ⊕ = CURB RAMP
- ⊖ = WATER SERVICE
- ⊙ = SEWER CLEANOUT
- ⊕ = WATER VALVE
- ⊖ = SIGN LOCATION
- ⊙ = LIGHT POLE

- PROPERTY LINE
- BUILDING SETBACK
- CENTERLINE
- EASEMENT
- COMPUTED PROPERTY LINE
- EXISTING CONTOUR
- STORM DRAIN
- PROPOSED SANITARY SEWER
- PROPOSED SIDEWALK
- PROPOSED ASPHALT

WILMINGTON
 NORTH CAROLINA
 Public Services • Engineering Division
 APPROVED STORMWATER MANAGEMENT PLAN
 Date: _____ Permit # _____
 Signed: _____

Approved Construction Plan

Name	Date
Planning	_____
Traffic	_____
Fire	_____

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GRADING AND STORMWATER
Cameron Co. LTD
 Sunnyvale Drive Warehouse Facility
 NEW HANOVER COUNTY NORTH CAROLINA

Date: **3-18-21**
 Scale: **HORZ.: 1" = 50'**
 Drawn: **GW**
 Checked: **AHG**
 Project No: **11499**

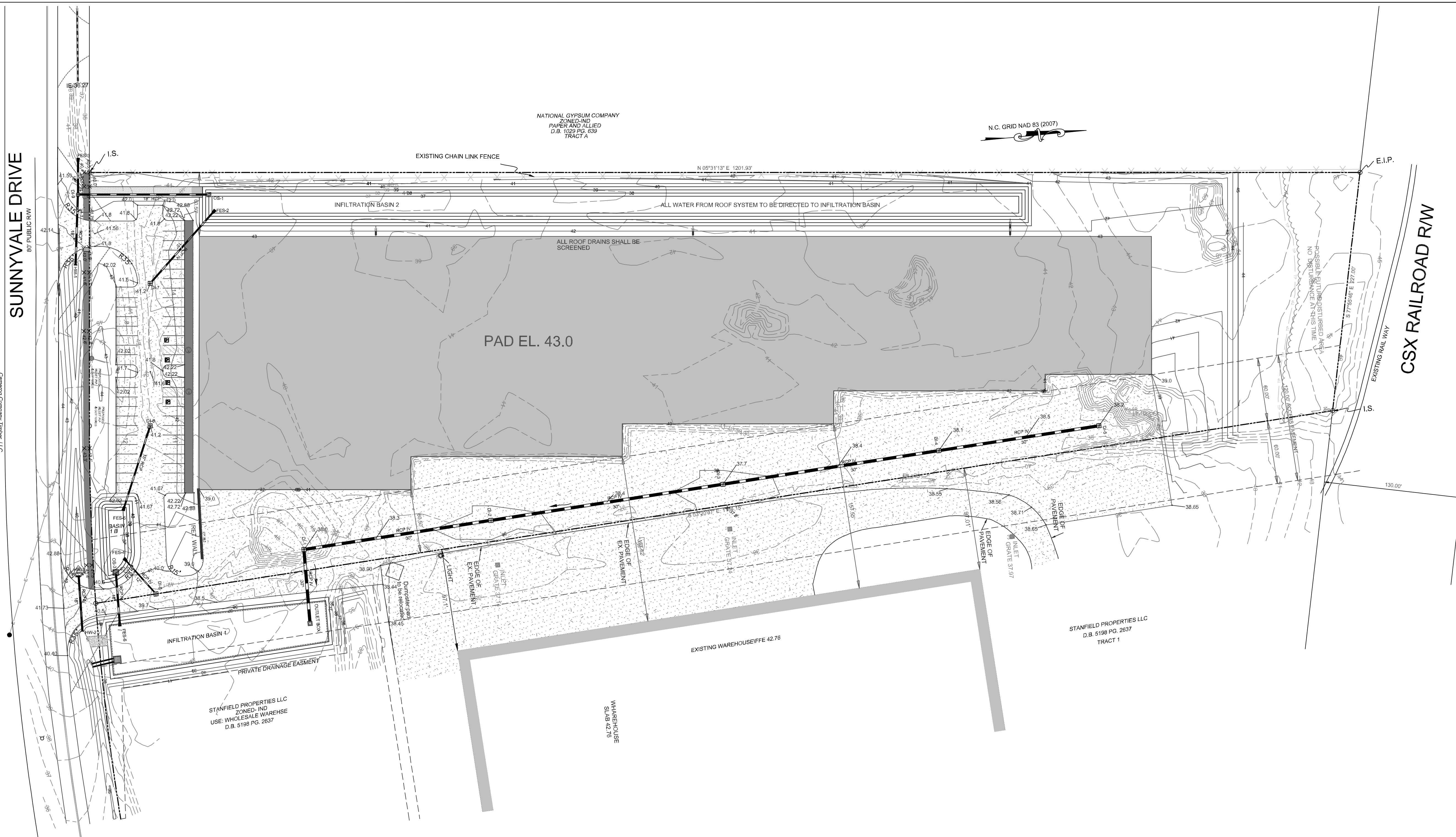
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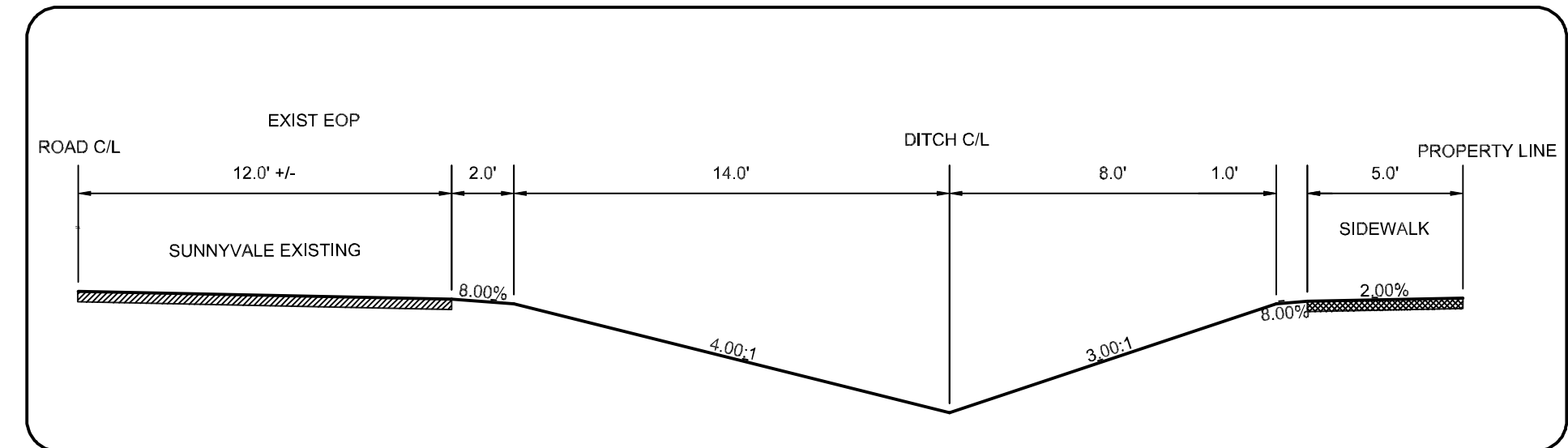
SUNNYVALE DRIVE
 80' PUBLIC RW

CSX RAILROAD RW
 EXISTING RAIL WAY



- ADDITIONAL STORM WATER NOTES:**
- 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.
 - CONTRACTOR TO ENSURE THAT STREET PAVEMENT AND CURBING IS PLACED TO DRAIN POSITIVELY TO CURB INLETS AND DRAINAGE STRUCTURES.
 - 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.
 - ROOF DRAINS SHALL BE SIZED ACCORDING TO THE 2018 INTERNATIONAL PLUMBING CODE AND ALL SHALL CONFORM TO ANY LOCAL REQUIREMENTS.
 - ANY ROOF DRAIN LOCATIONS SHOWN HERE ARE APPROXIMATE AND MAY BE FIELD ADJUSTED AS LONG AS THE MINIMUM REQUIRED SLOPE IS MAINTAINED.

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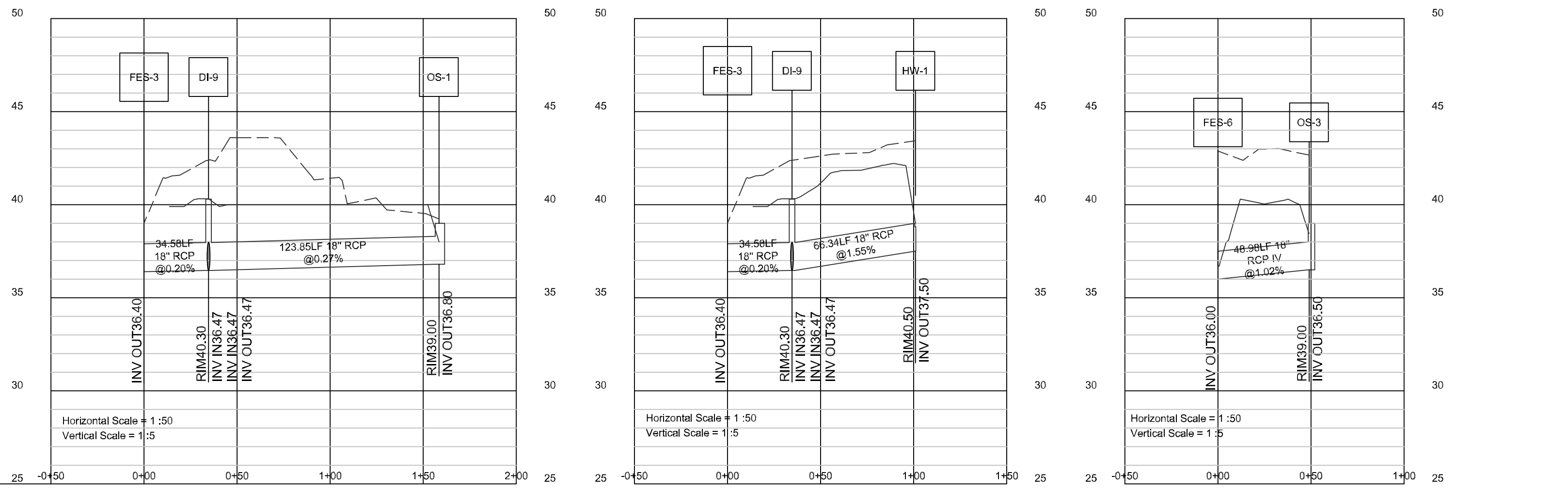
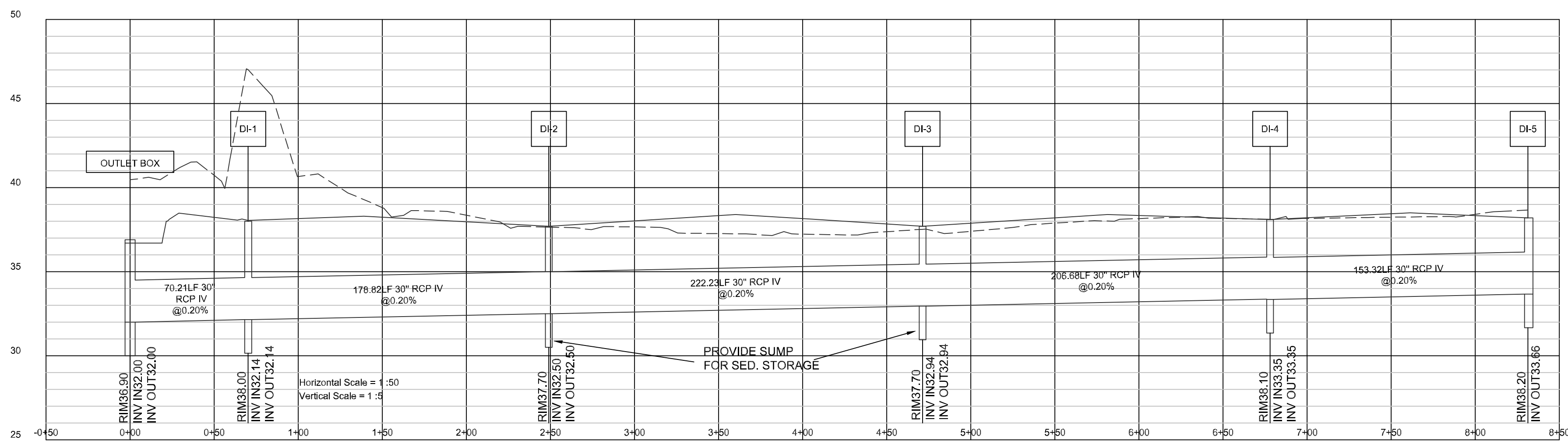
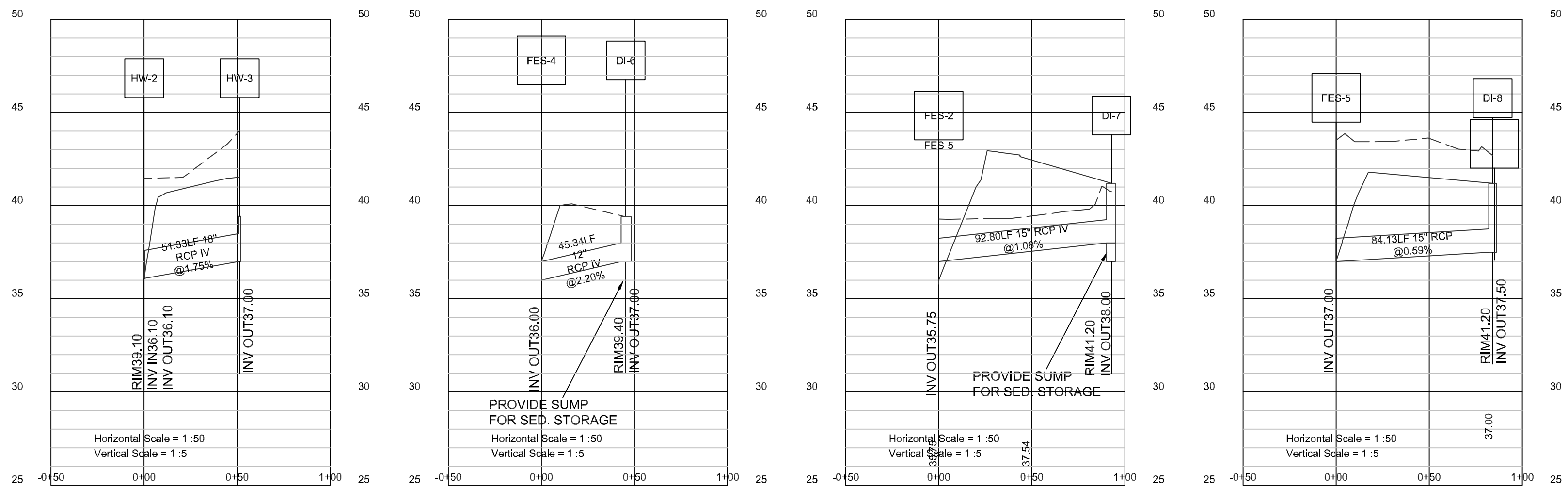
CURVE	RADIUS	ARC LENGTH	CHORD LENGTH	CHORD BEARING
C1	2354.57	1168.10'	1168.06'	N 88°31'30" W

REV. NO.	REVISIONS	DATE

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PRELIMINARY PLAN
 NOT FOR RECORDATION OR CONVEYANCE

STORM PROFILES



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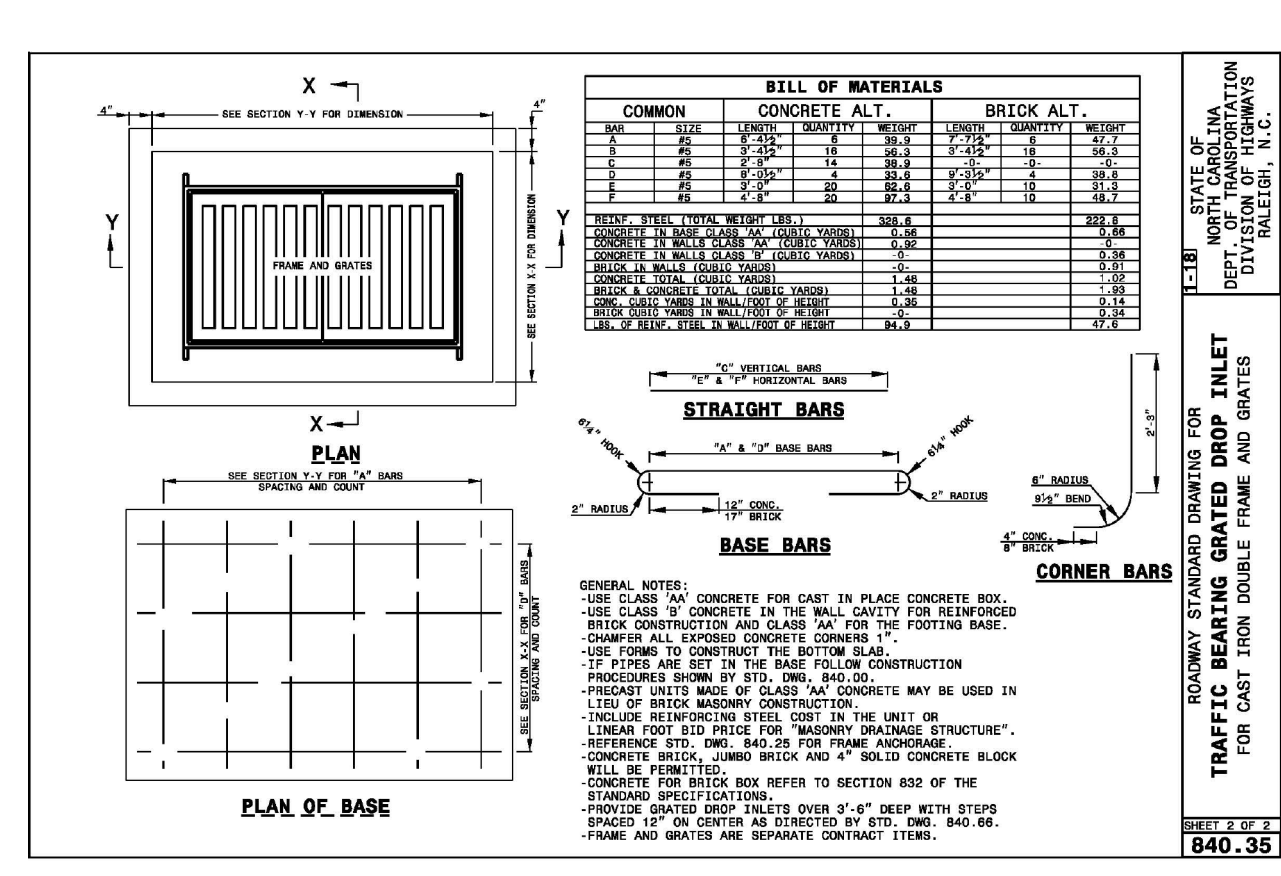
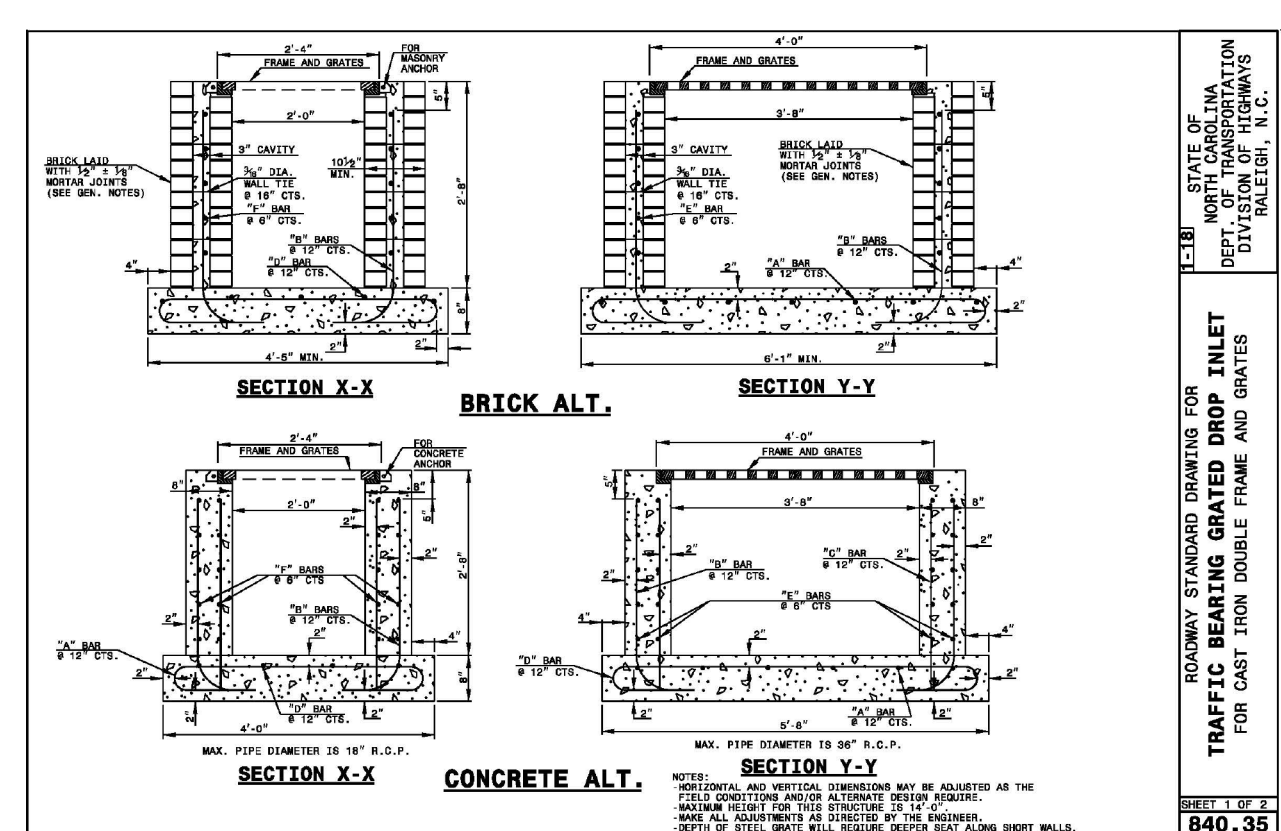
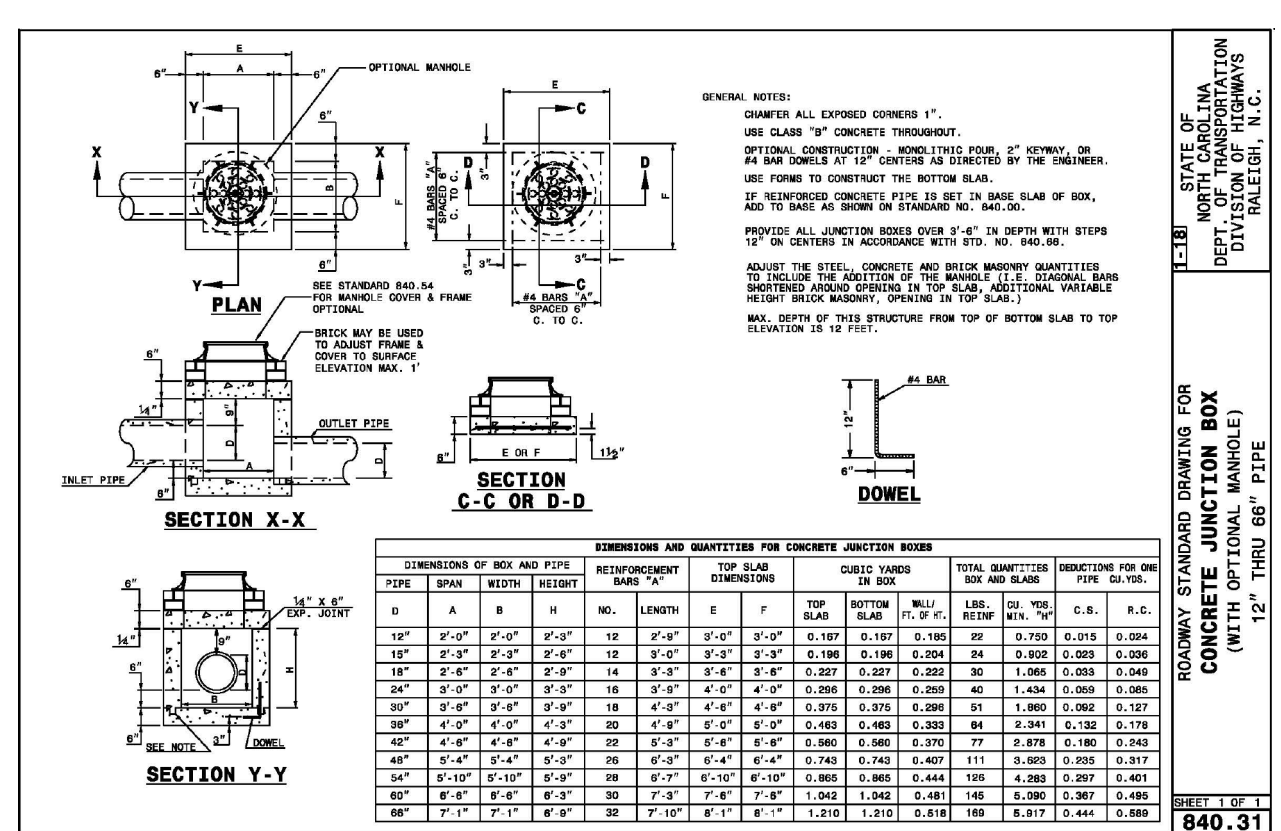
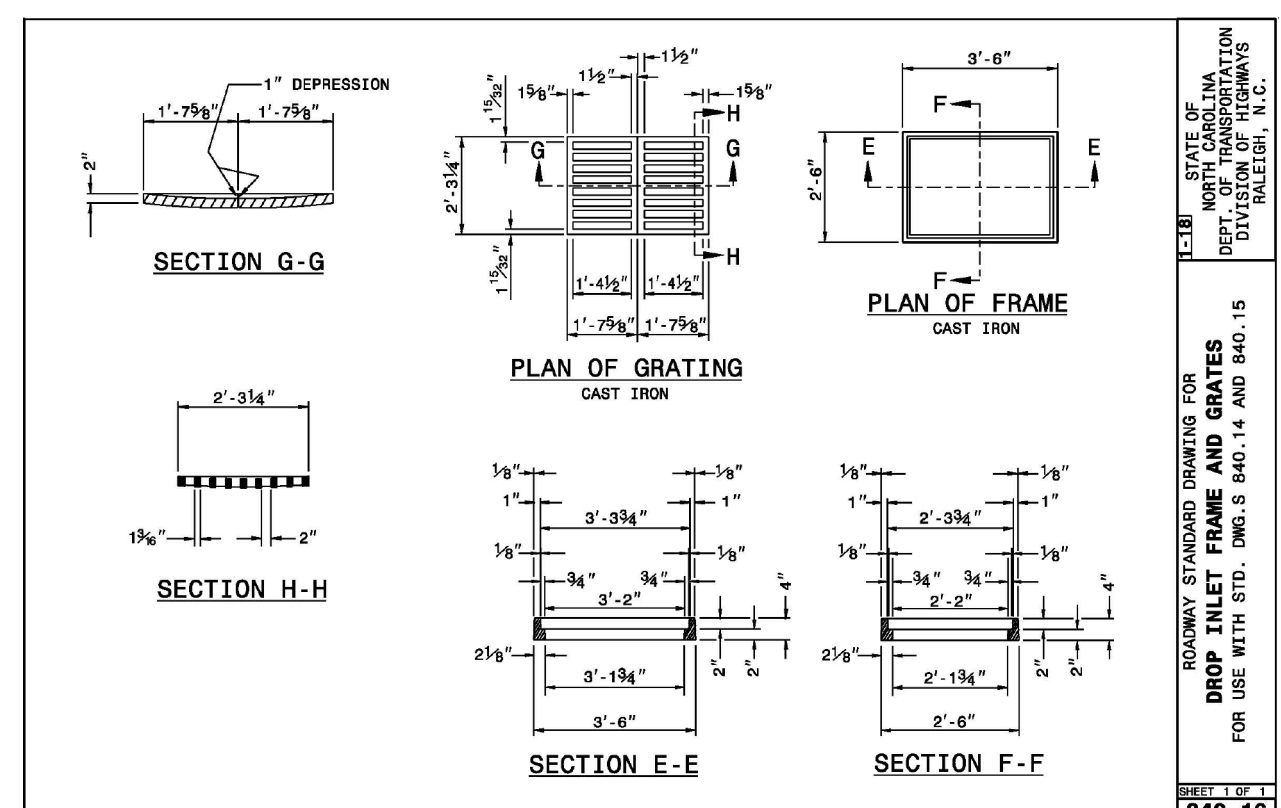
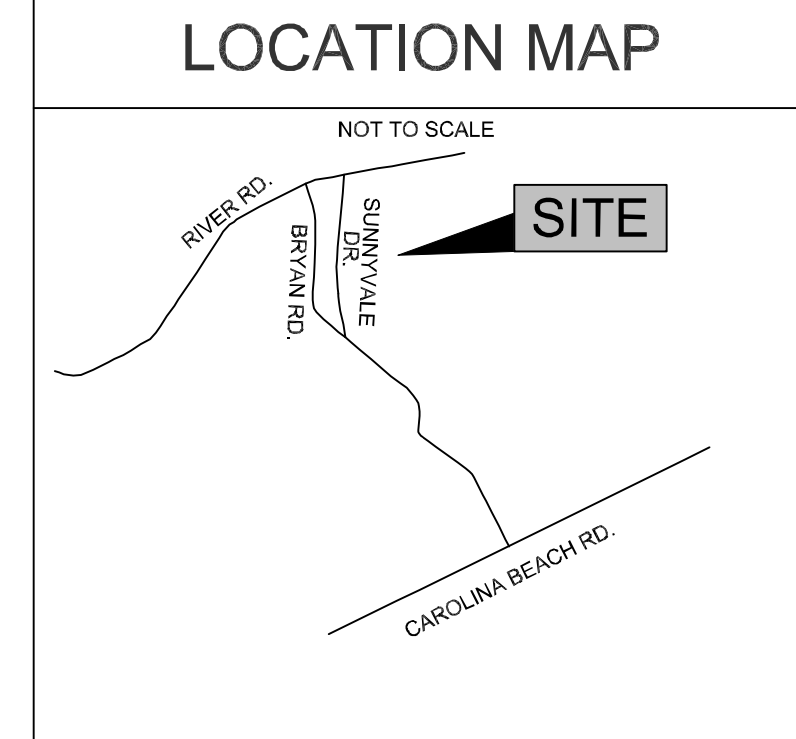
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 - ALL ROOF DRAINS SHALL HAVE SCREENS ON THEM

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PRELIMINARY PLAN
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STORM NETWORK SUMMARY

DN STRUCTURE	UP STRUCTURE	DOWN INVERT (FT)	UP INVERT (FT)	LENGTH (FT)	SLOPE (%)	SIZE (IN)
FES-3	DI-9	38.40	38.47	34.58	0.20	18.0
DI-9	OS-1**	36.47	36.80	123.85	0.27	18.0
DI-9	HW-1*	36.47	37.50	66.34	1.55	18.0
HW-2*	HW-3*	38.10	37.00	51.33	1.75	18.0
FES-4	OS-3**	38.00	38.50	48.98	1.02	18.0
DI-1	DI-2	32.00	32.14	70.21	0.20	30.0
DI-1	DI-3	32.14	32.50	178.82	0.20	30.0
DI-2	DI-4	32.50	32.94	222.23	0.20	30.0
DI-3	DI-5	32.54	33.35	216.69	0.20	30.0
DI-4	DI-6	33.35	33.66	153.32	0.20	30.0
FES-4	DI-8	36.00	37.00	45.34	2.20	12.0
FES-5	DI-7	37.00	37.50	84.13	0.59	15.0
FES-2	DI-7	35.75	38.00	92.80	2.42	15.0

* SEE NCDOT 838.01 ** SEE SHEET B-1

REV. NO.	REVISIONS	DATE

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LEGEND

- WV = WATER VALVE
- WM = WATER METER
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- ⊙ = CURB RAMP
- ⊕ = WATER SERVICE
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- ⊕ = WATER VALVE
- ⊕ = SIGN LIGHT POLE
- = LIGHT POLE

PROPERTY LINE
 BUILDING SETBACK
 CENTERLINE
 EASEMENT
 COMPUTED PROPERTY LINE
 EXISTING CONTOUR
 STORM DRAIN
 PROPOSED SANITARY SEWER
 PROPOSED SIDEWALK
 PROPOSED ASPHALT

WILMINGTON
 NORTH CAROLINA
 Public Services • Engineering Division
 APPROVED STORMWATER MANAGEMENT PLAN
 Date: _____ Permit # _____
 Signed: _____

Approved Construction Plan

Name _____ Date _____

Planning _____
 Traffic _____
 Fire _____

For each open utility cut of City streets, a \$325 permit shall be required from the City prior to occupancy and/or project acceptance.

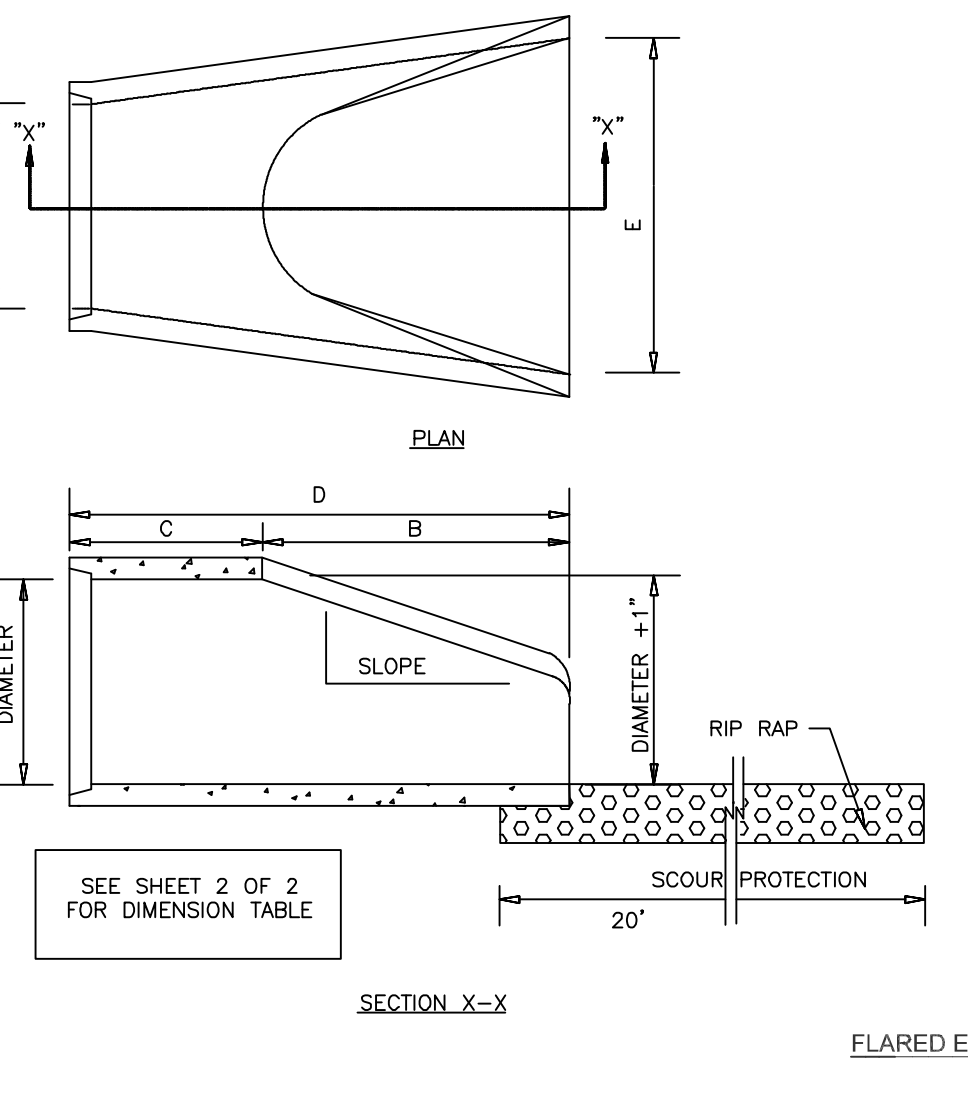
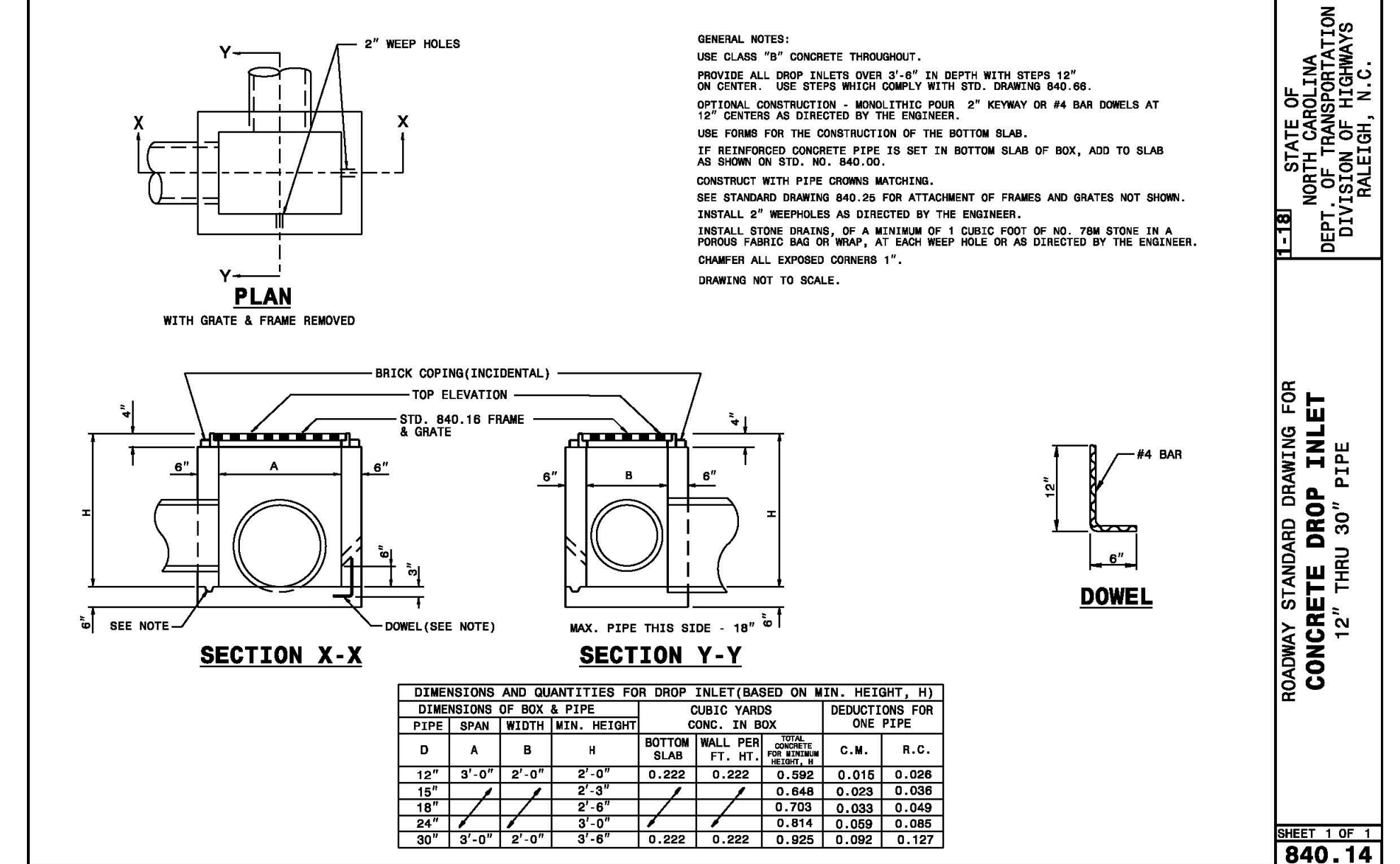
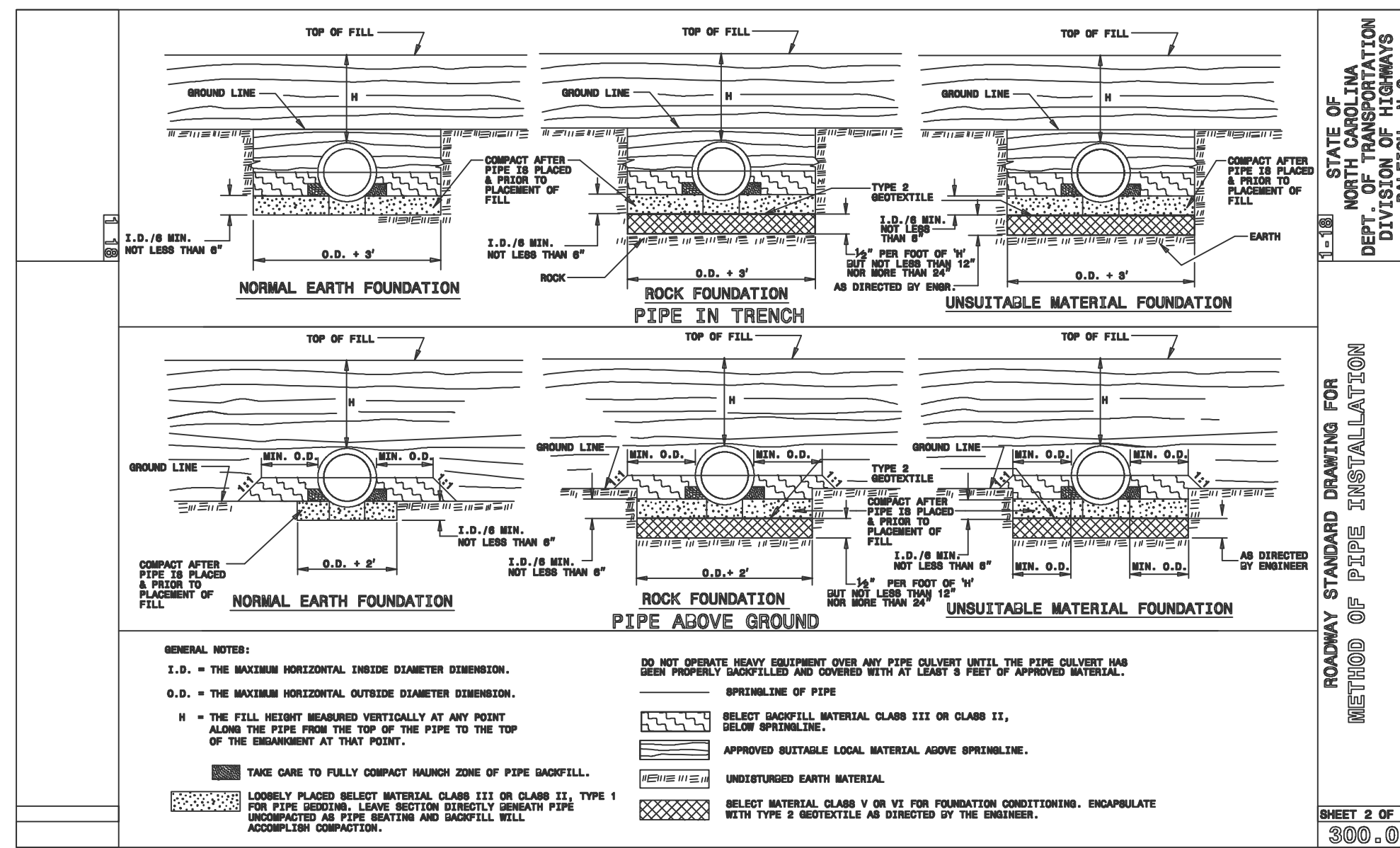
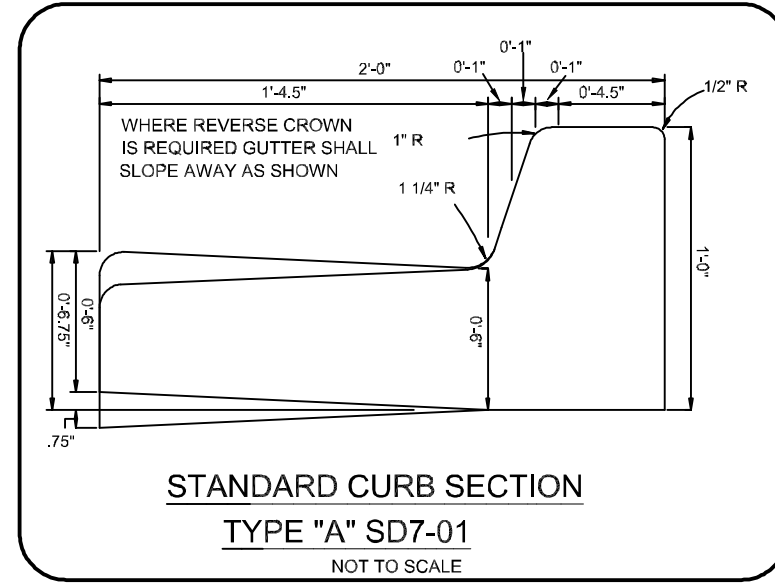
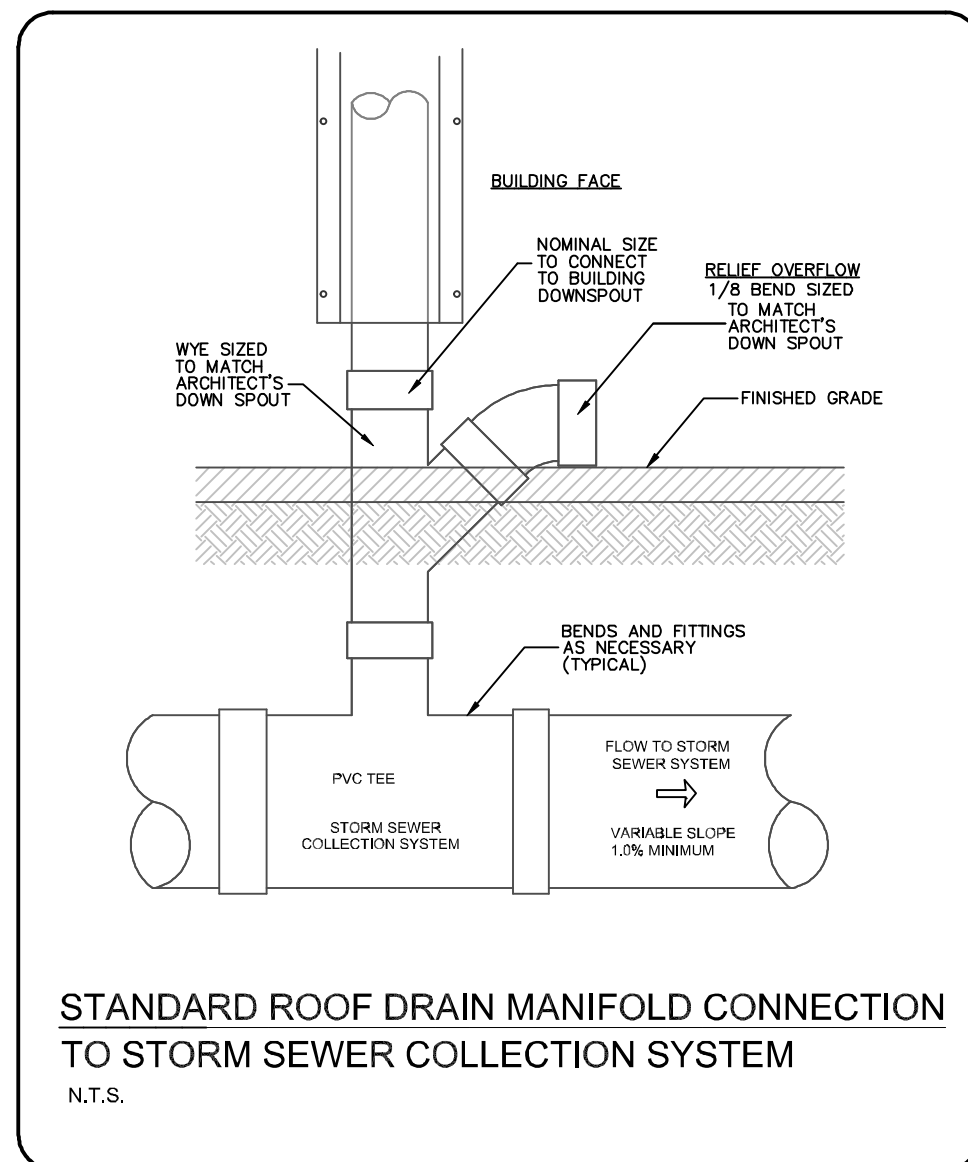


STORMWATER AND DETAILS
Cameron Co. LTD
 Sunnyvale Drive Warehouse Facility
 NEW HANOVER COUNTY NORTH CAROLINA

OWNER: CAMERON CO. LTD
 P.O. BOX 3649
 WILMINGTON, N.C. 28406

DATE: 1-13-20
 SCALE: HORZ: 1"=50'
 VERT: 1"=5'
 DRAWN: AHG
 CHECKED: AHG
 PROJECT NO: 11499
 SHEET NO: D-1
 D-2

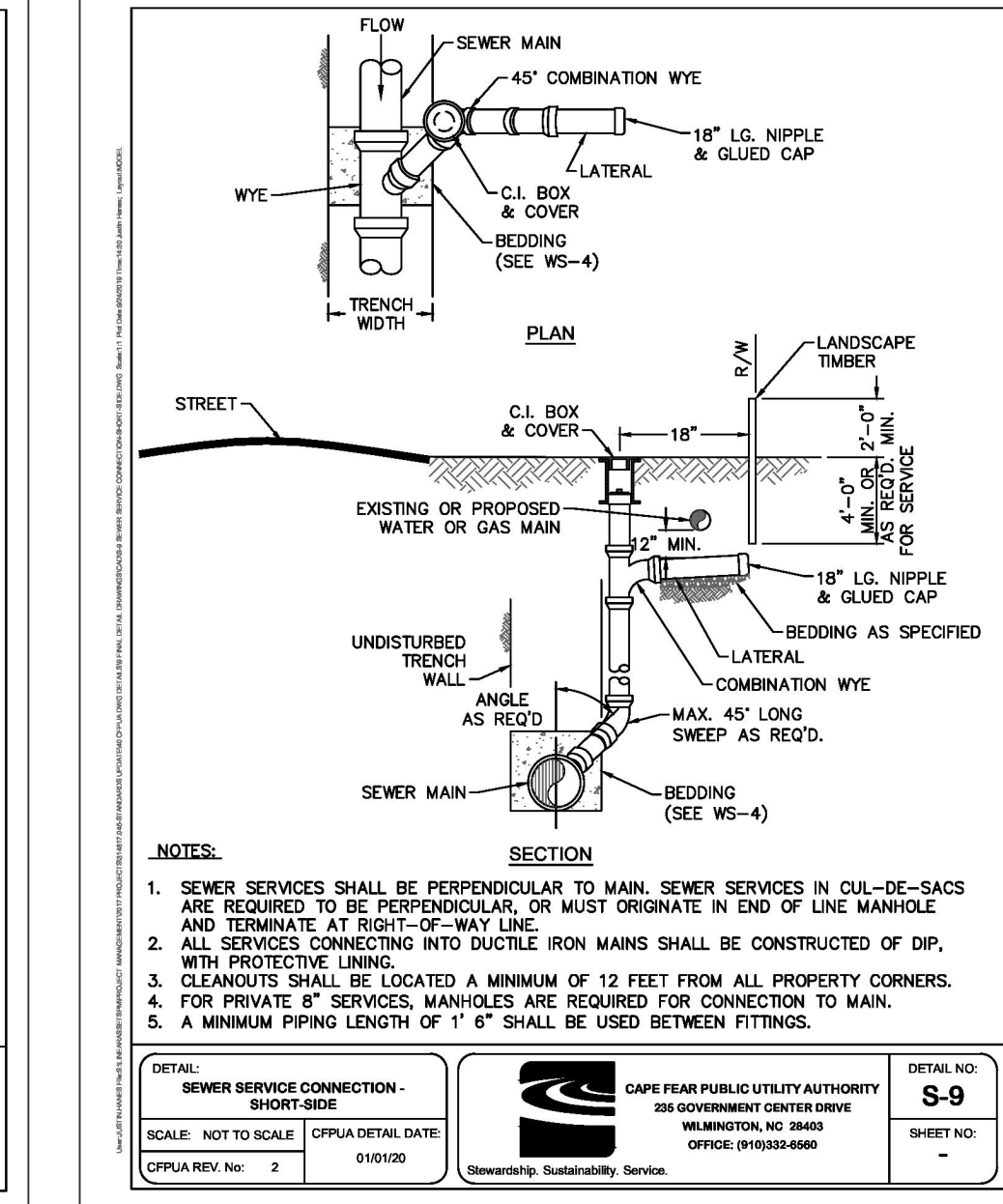
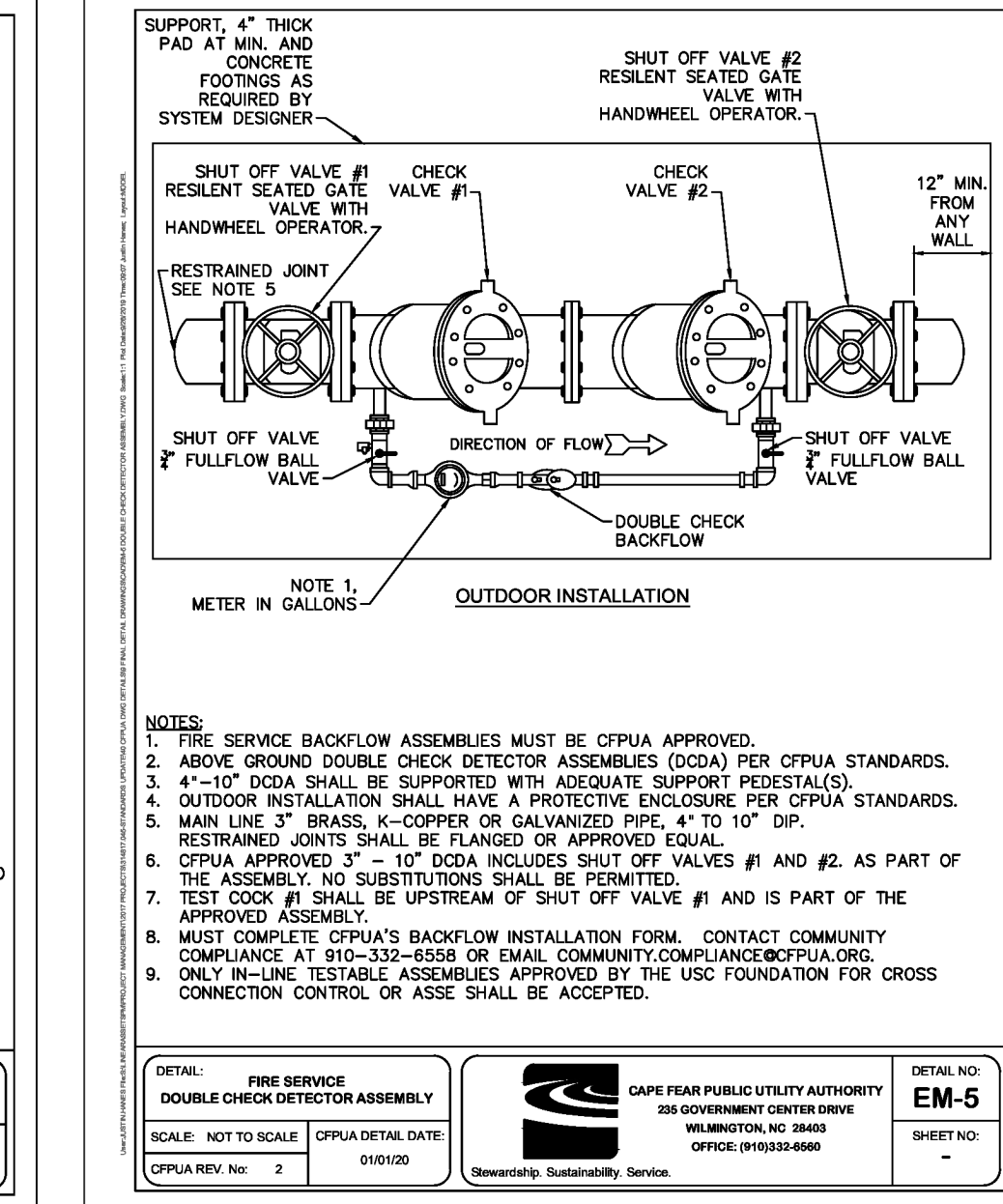
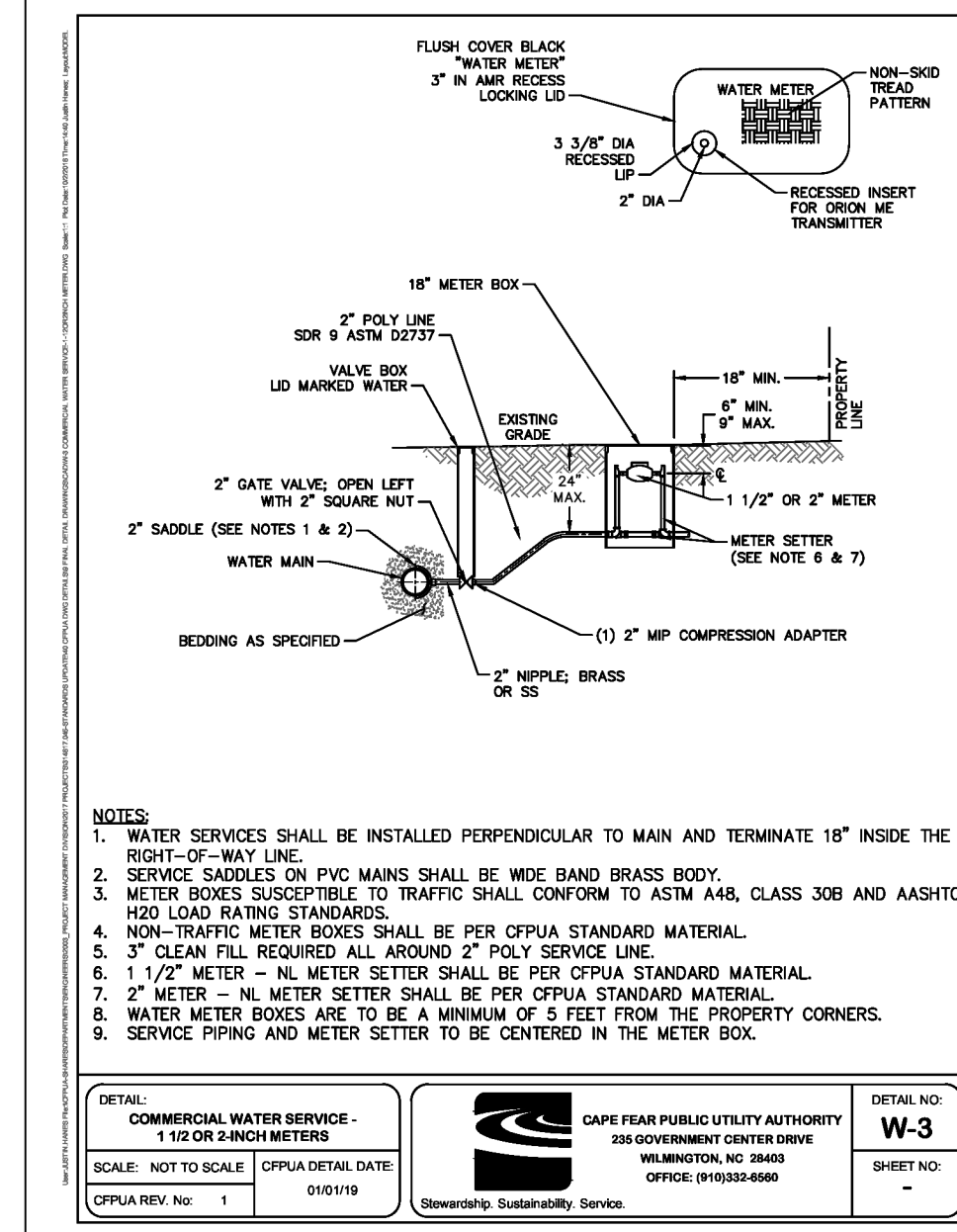
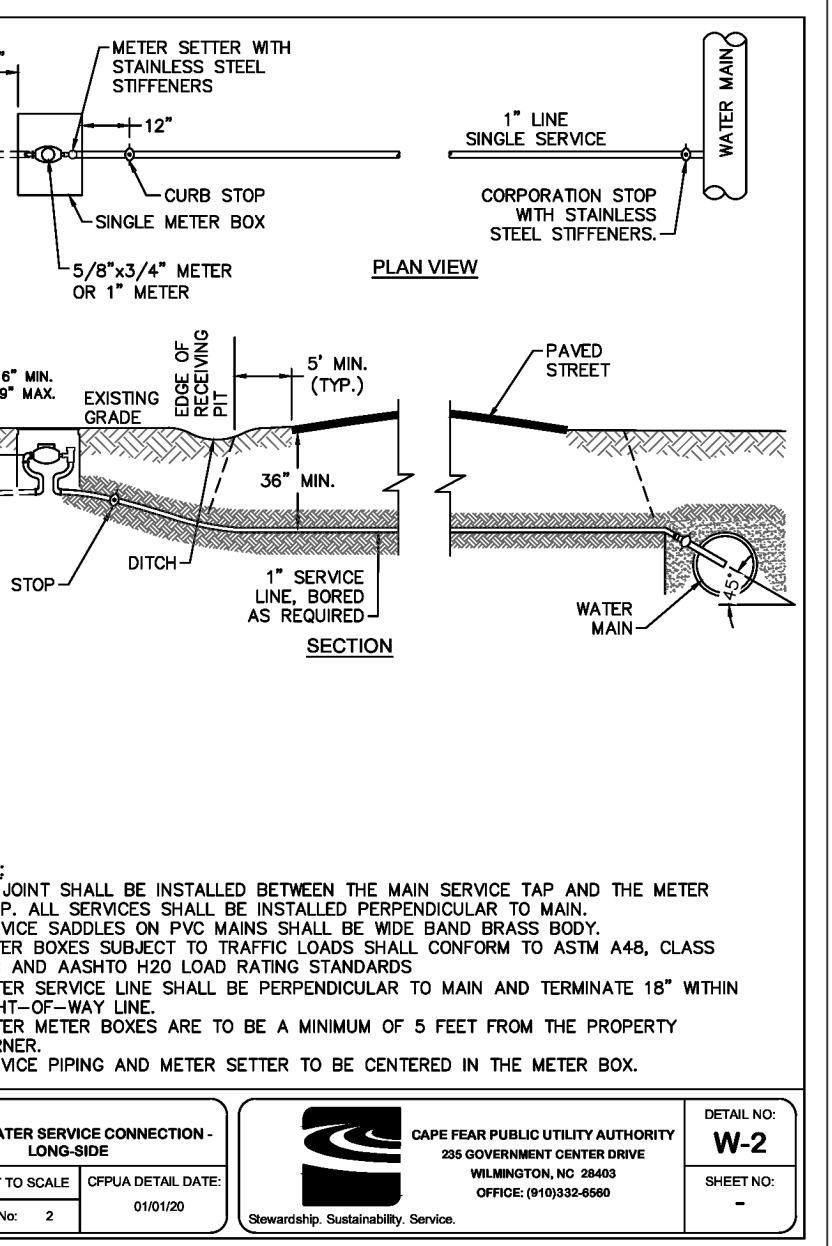
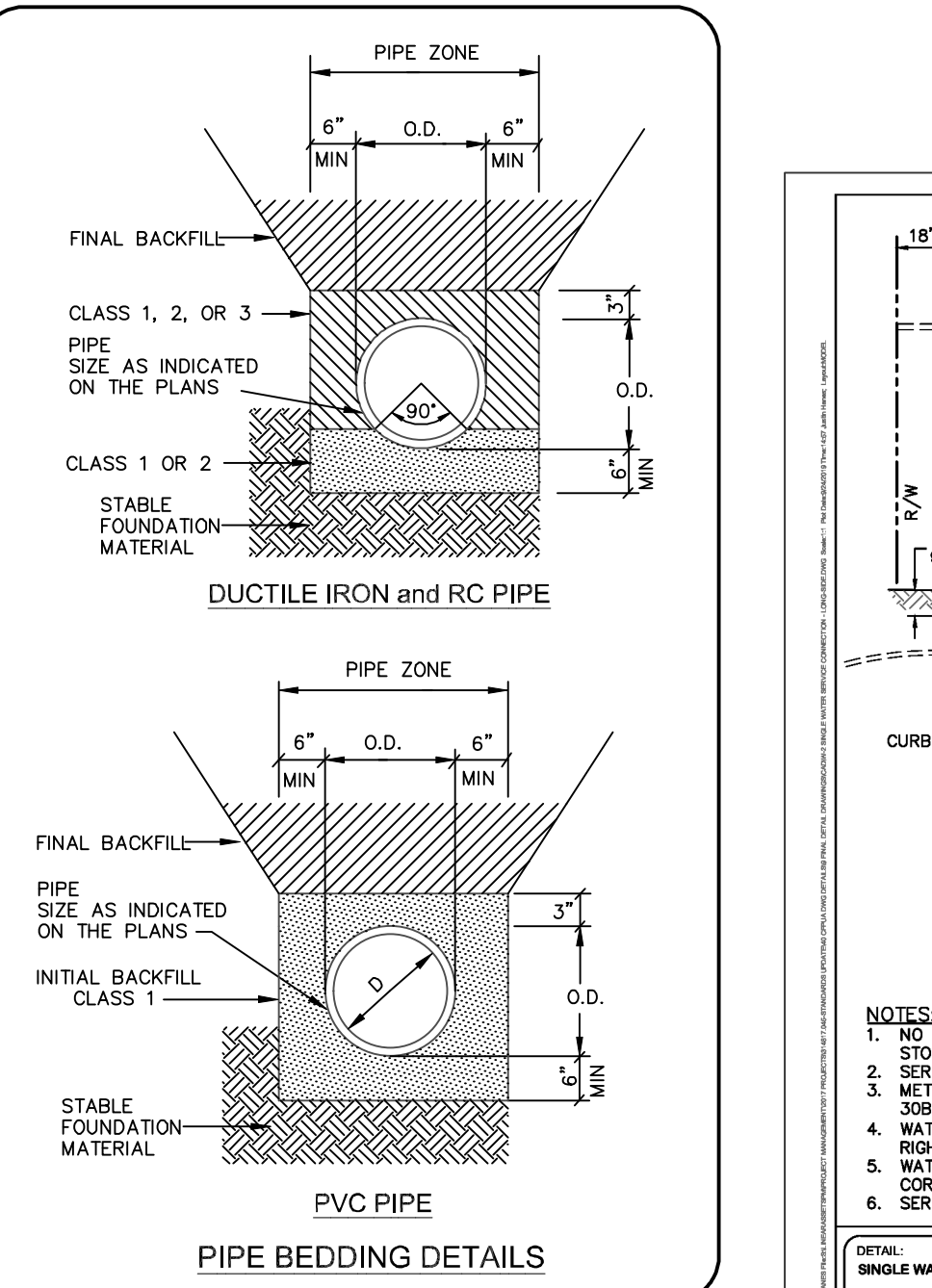
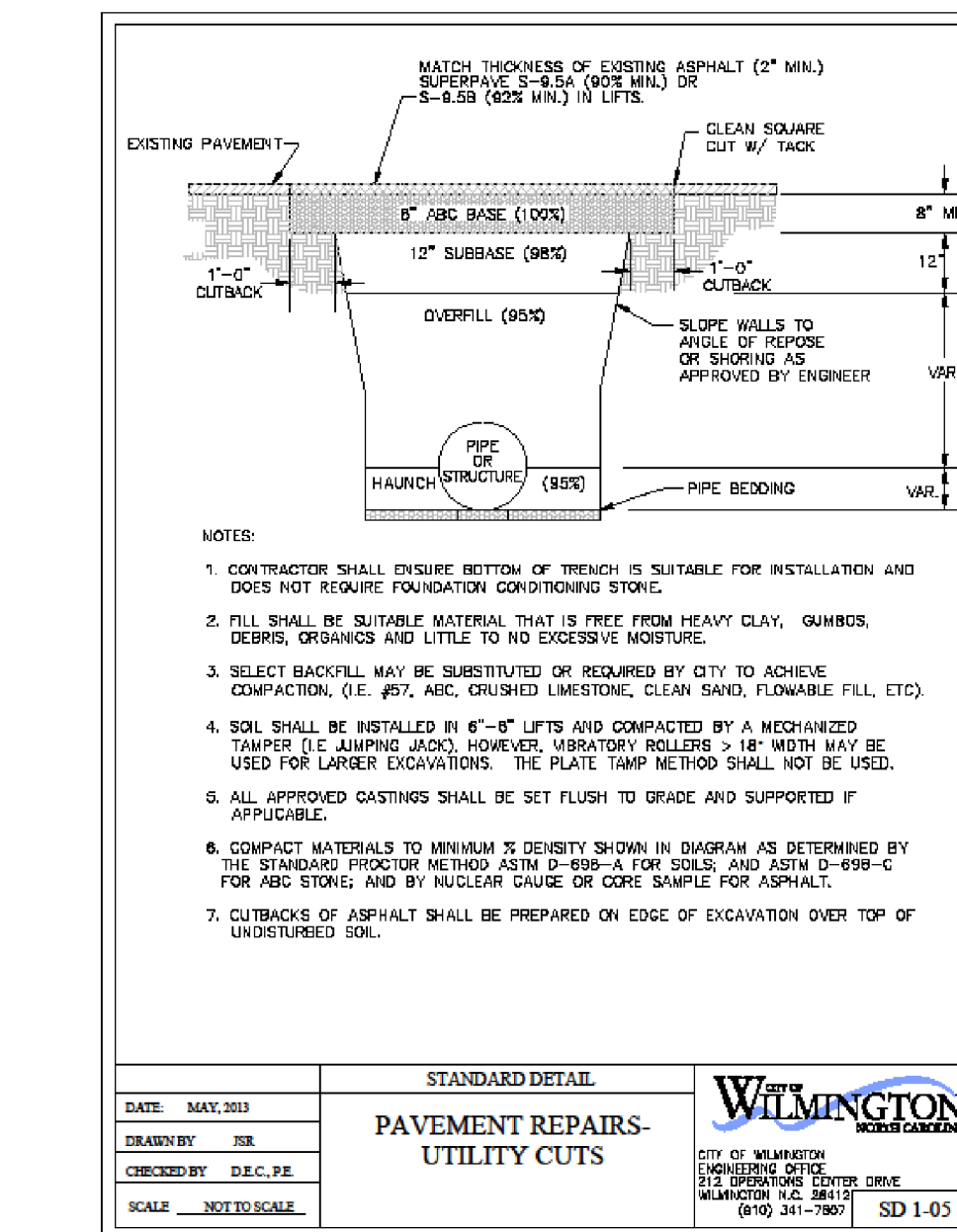
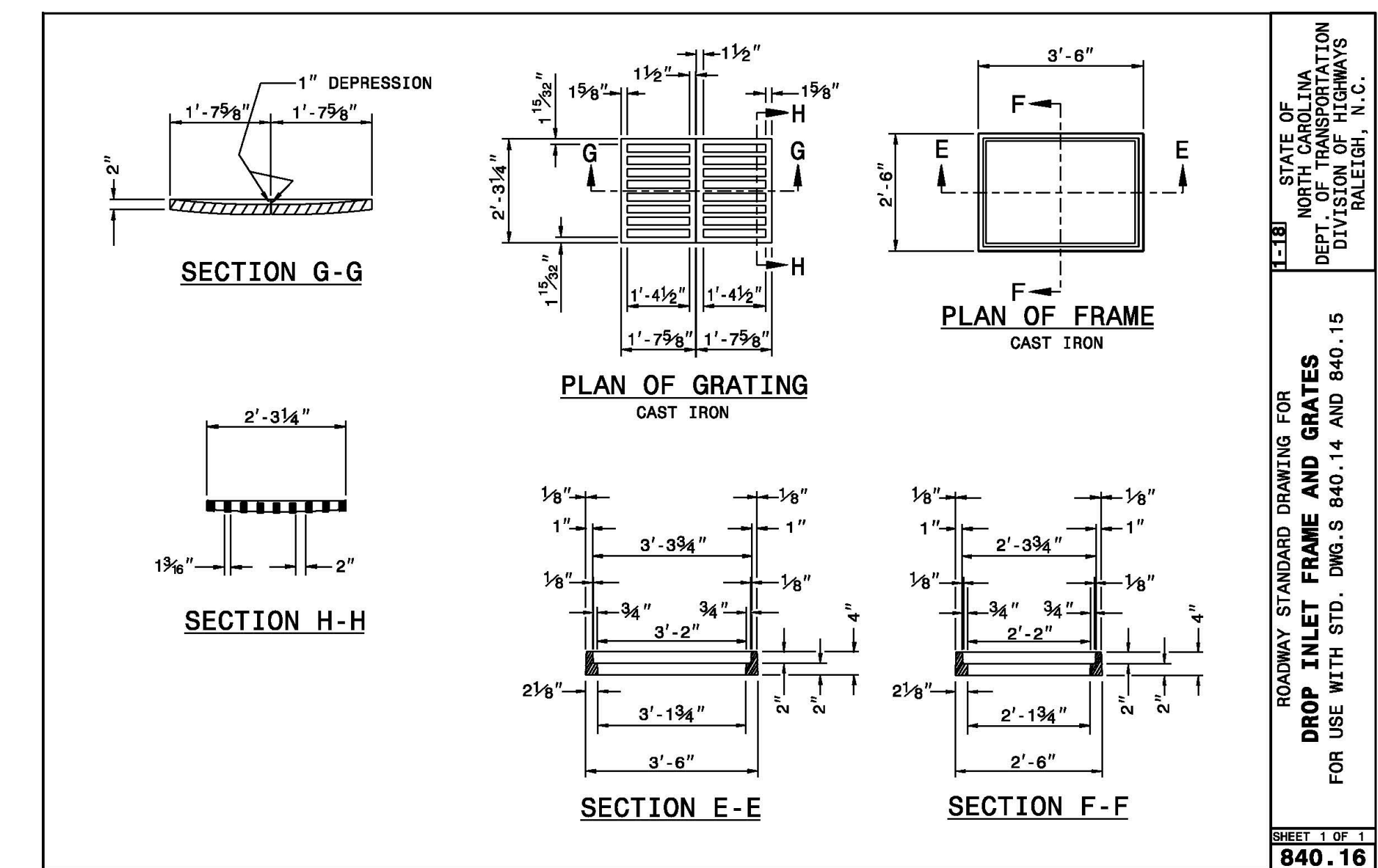
HANOVER DESIGN SERVICES, P.A.
 LAND SURVEYORS, ENGINEERS & LAND PLANNERS
 1123 FLORIDA DRIVEWAY
 WILMINGTON, N.C. 28403
 PHONE: (910) 343-9002
 LICENSE #12-0291



NOTE:
1. STRUCTURAL DESIGN OF END SECTION SHALL CONFORM WITH THAT OF STANDARD REINFORCED CONCRETE.

PIPE DIAMETER	WALL THICKNESS	SLOPE	B	C	D	E	UNIT WEIGHT
12	2 1/4	3:1	24	49	73	24	730
15	2 1/4	3:1	27	46	73	30	910
18	2 1/2	3:1	27	46	73	36	1190
21	2 3/4	3:1	36	37	73	42	1370
24	3	3:1	42	31 1/2	73 1/2	48	1770
27	3 1/4	3:1	48	25 1/2	73 1/2	54	2130
30	3 1/2	3:1	54	19 3/4	73 3/4	60	2380
33	3 3/4	3:1	60	36	96	66	3870
36	4	3:1	63	34 3/4	97 3/4	72	5320
42	4 1/2	3:1	63	35	98	78	5920
48	5	3:1	72	26	98	84	7470
54	5 1/2	2.4:1	66	34	100	90	8810
60	6	2:1	60	39	99	96	11180
72	7	2:1	78	21	99	108	13980

DIMENSIONS IN INCHES WEIGHTS IN POUNDS



NOTES:
1. NO JOINT SHALL BE INSTALLED BETWEEN THE MAIN SERVICE TAP AND THE METER STOP. ALL SERVICES SHALL BE INSTALLED PERPENDICULAR TO MAIN.
2. SERVICE SADDLES ON PVC MAINS SHALL BE WIDE BAND BRASS BODY.
3. METER BOXES SUBJECT TO TRAFFIC LOADS SHALL CONFORM TO ASTM A48, CLASS 30B AND AASHTO H20 LOAD RATING STANDARDS.
4. WATER SERVICE LINE SHALL BE PERPENDICULAR TO MAIN AND TERMINATE 18\"/>

NOTES:
1. WATER SERVICES SHALL BE INSTALLED PERPENDICULAR TO MAIN AND TERMINATE 18\"/>

NOTES:
1. FIRE SERVICE BACKFLOW ASSEMBLIES MUST BE CPVIA APPROVED.
2. ABOVE GROUND DOUBLE CHECK DETECTOR ASSEMBLIES (DCDA) PER CPVIA STANDARDS.
3. 4\"/>

NOTES:
1. SEWER SERVICES SHALL BE PERPENDICULAR TO MAIN. SEWER SERVICES IN CUL-DE-SACS ARE REQUIRED TO BE PERPENDICULAR OR MUST ORIGINATE IN END OF LINE MANHOLE AND TERMINATE AT RIGHT-OF-WAY LINE.
2. ALL SERVICES CONNECTING INTO DUCTILE IRON MAINS SHALL BE CONSTRUCTED OF DIP WITH PROTECTIVE LINING.
3. CLEANOUTS SHALL BE LOCATED A MINIMUM OF 12 FEET FROM ALL PROPERTY CORNERS.
4. FOR PRIVATE PIPING SERVICES, MANHOLES ARE REQUIRED FOR CONNECTION TO MAIN. A MINIMUM PIPING LENGTH OF 1\"/>

PRELIMINARY PLAN
NOT FOR RECORDATION OR CONVEYANCE

REV. NO.	REVISIONS	DATE

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DETAIL SHEET
Cameron Co., LTD
Sunnyvale Drive Warehouse Facility
NEW HANOVER COUNTY NORTH CAROLINA

OWNER: CAMERON CO. LTD
P.O. BOX 3649
WILMINGTON, N.C. 28406

HANOVER DESIGN SERVICES, P.A.
LAND SURVEYORS, ENGINEERS & LAND PLANNERS
1123 FLORAL PARKWAY
WILMINGTON, N.C. 28403
PHONE: (910) 343-8002
LICENSE # C-597

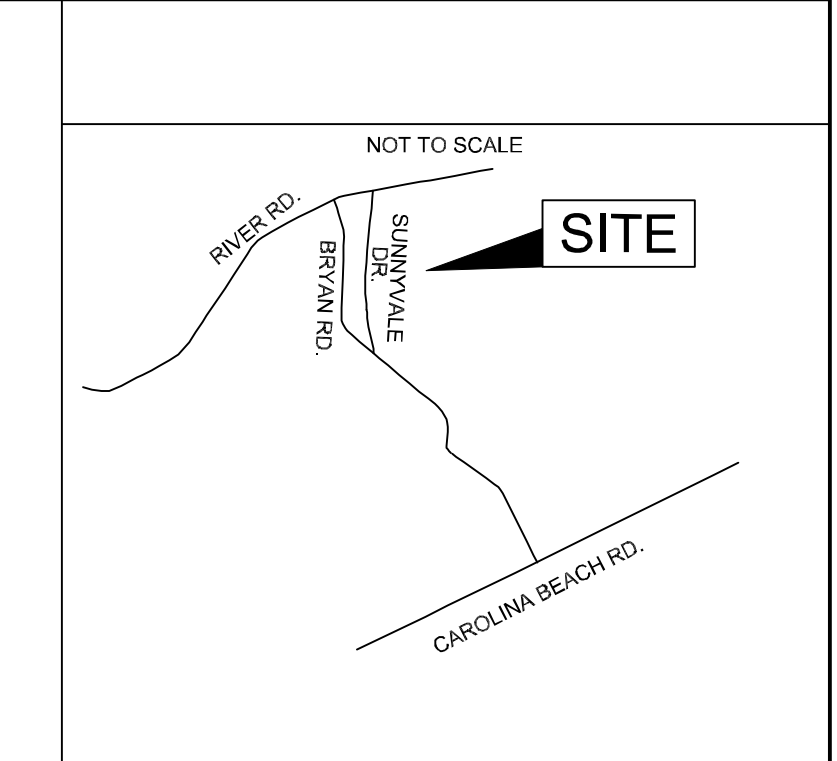
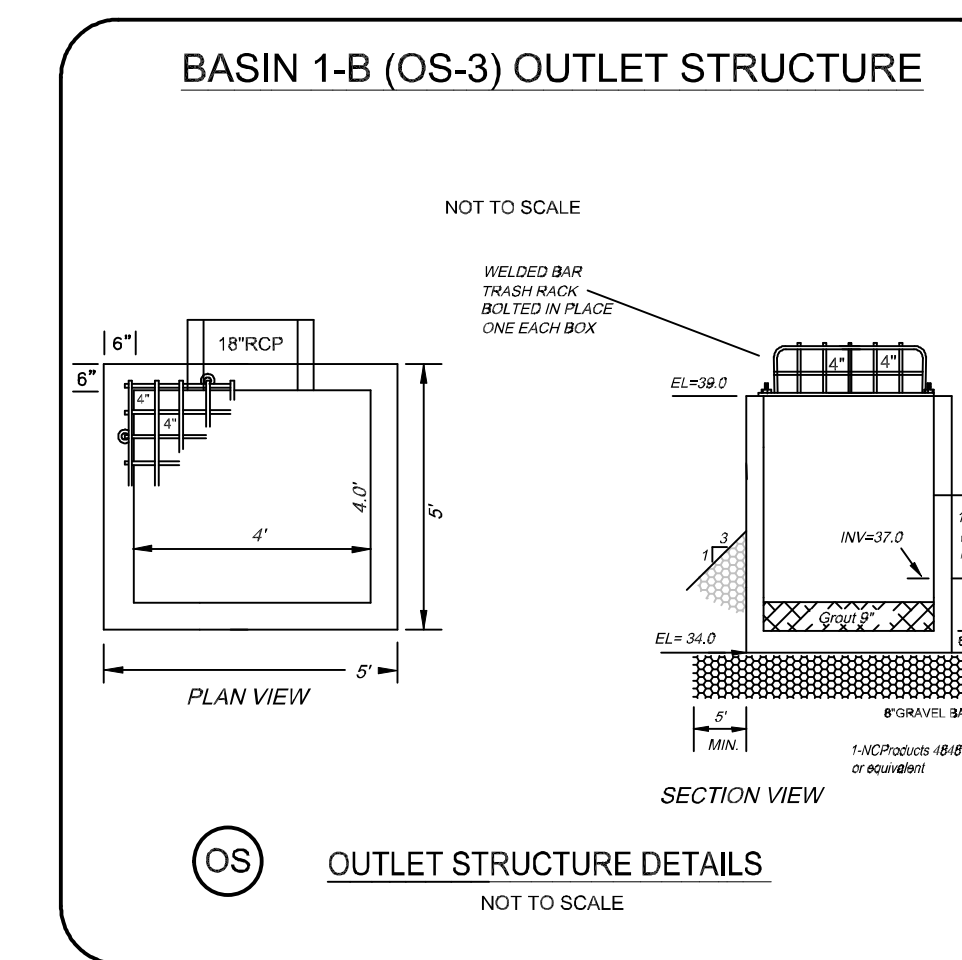
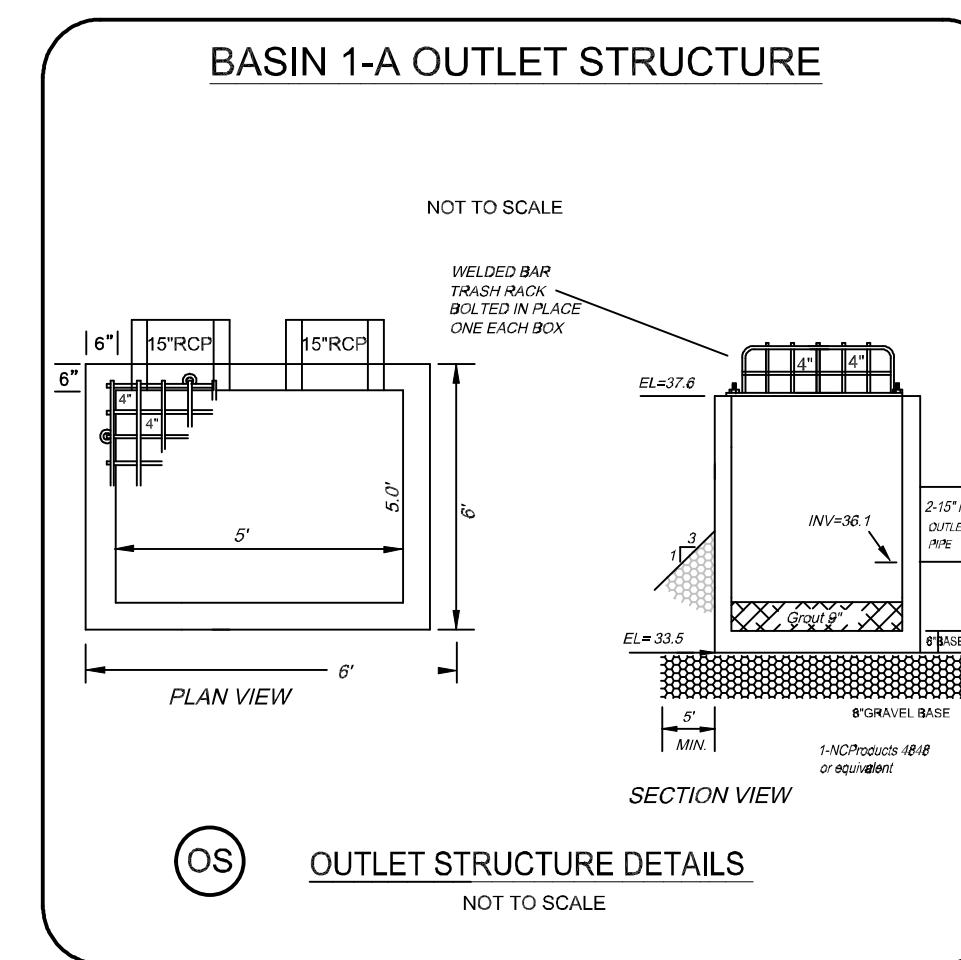
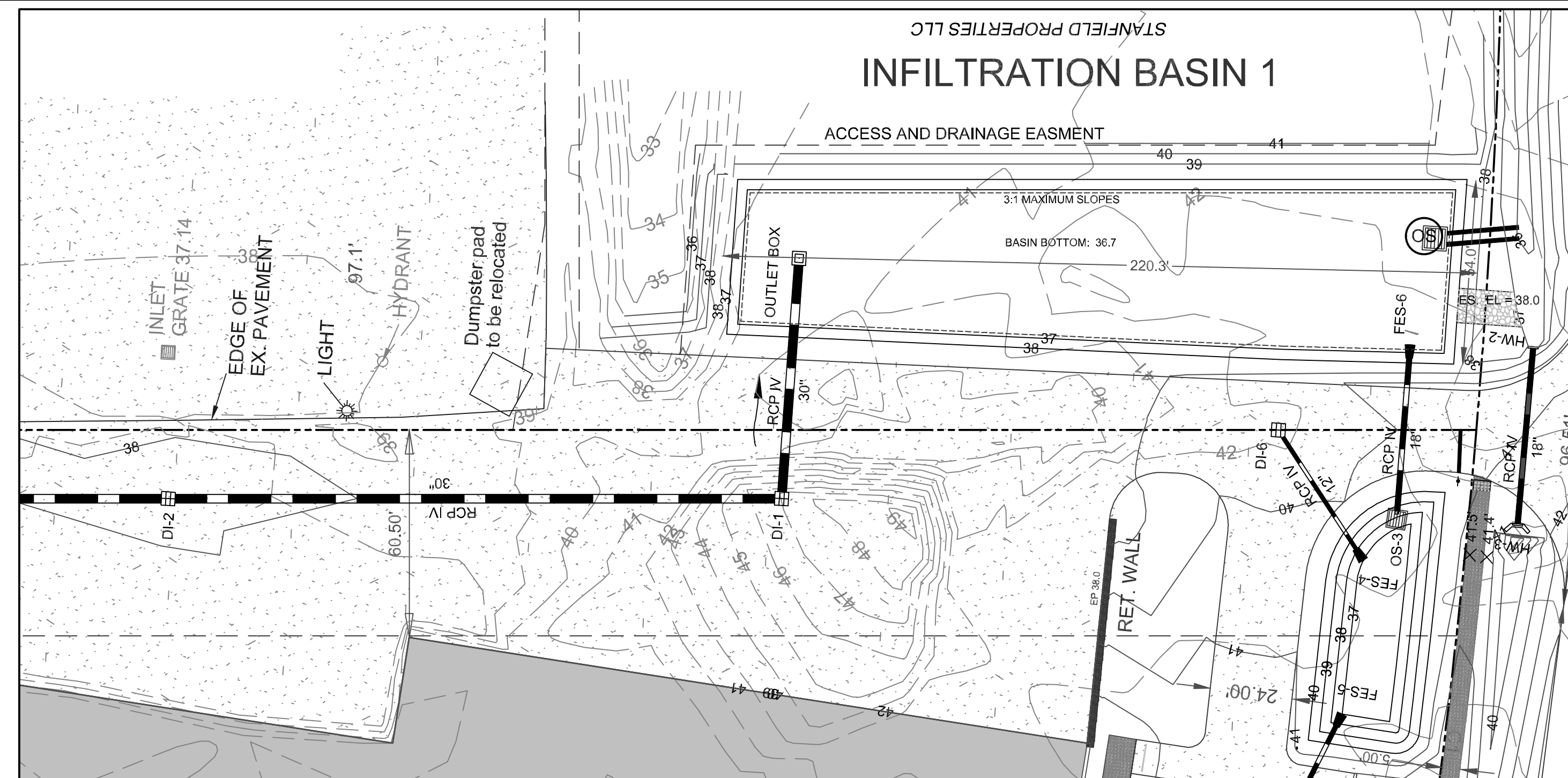
Date: 1-13-20
Scale: HORZ.: 1" = 50'
Drawn: GW
Checked: AHG
Project No: 11499
Sheet No: D-2
D-2

City of **WILMINGTON**
Public Services • Engineering Division
APPROVED STORMWATER MANAGEMENT PLAN
Date: _____ Permit #: _____
Signed: _____

Approved Construction Plan
Name: _____ Date: _____
Planning: _____
Traffic: _____
Fire: _____

For each open utility cut of City streets, a \$325 permit shall be required from the City prior to occupancy and/or project acceptance.





BASIN 1				
Elev(Ft)	Storage(CF)	Storage(Acre-Ft)	Area(SF)	Area(Acres)
38.700	0.0	0.000	8564.415	0.197
37.000	2645.1	0.061	9040.906	0.207
38.000	12447.6	0.286	10575.972	0.241
38.500	17533.1	0.412	11370.482	0.260

BASIN 1-B				
Elev(Ft)	Storage(CF)	Storage(Acre-Ft)	Area(SF)	Area(Acres)
37.000	0.0	0.000	739.724	0.017
38.000	964.4	0.022	1191.209	0.027
39.000	2383.8	0.055	1688.879	0.039
40.000	4353.3	0.100	2260.936	0.052

GENERAL BASIN NOTES:

DURING CONSTRUCTION, BASIN AREAS SHALL BE MARKED OFF TO PREVENT CONSTRUCTION TRAFFIC FROM ENTERING THE AREA AND COMPACTING SOILS.

FOR TEMPORARY CONSTRUCTION PHASE, GRADE BASINS WITHIN 0.5'-1' THE FINAL DESIGN TO PROTECT THE MATERIAL BENEATH SURFACE OF BASIN.

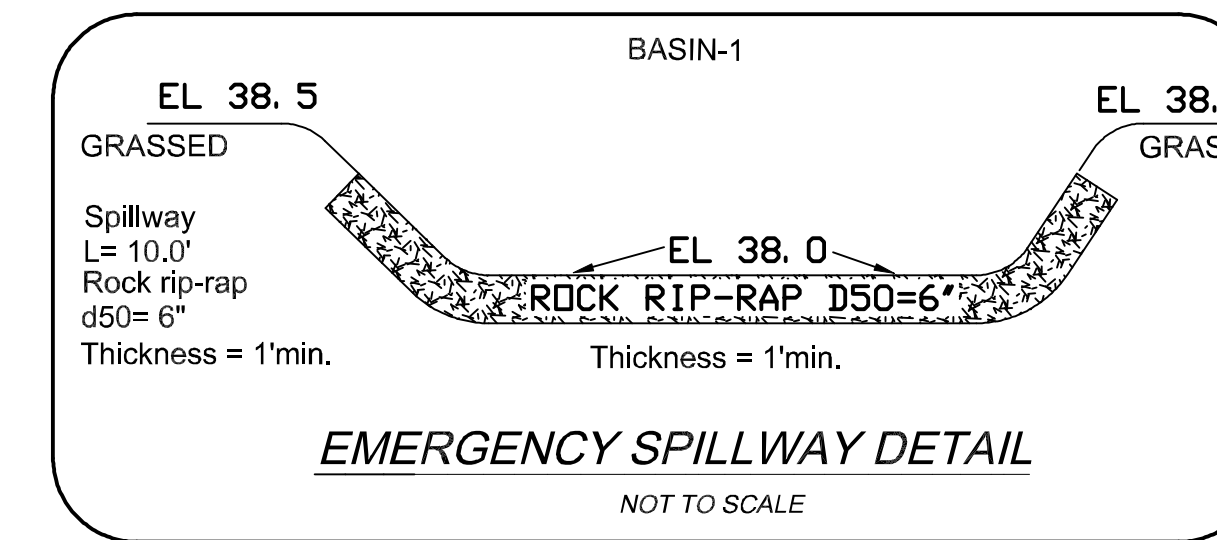
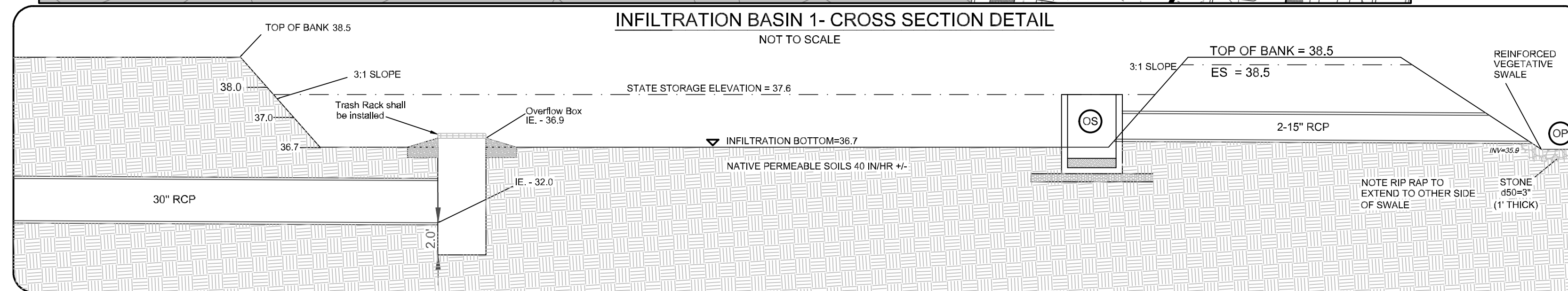
ONCE SITE IS FULLY STABILIZED, EXCAVATE THE INFILTRATION BASIN TO ITS FINAL GRADE.

GRADING OF THE BASIN SHALL BE ACCOMPLISHED USING LOW-IMPACT EQUIPMENT TO PREVENT COMPACTION OF THE SOILS.

DO NOT DISTURB UNDERLYING SOILS BELOW FINAL DESIGN ELEVATION. ONLY THE FOREBAY MAY BE OVER DUG.

PERMANENT SEEDING AND MATTING OF BASINS SHALL BE COMPLETED WITHIN 2 DAYS OF FINAL GRADING.

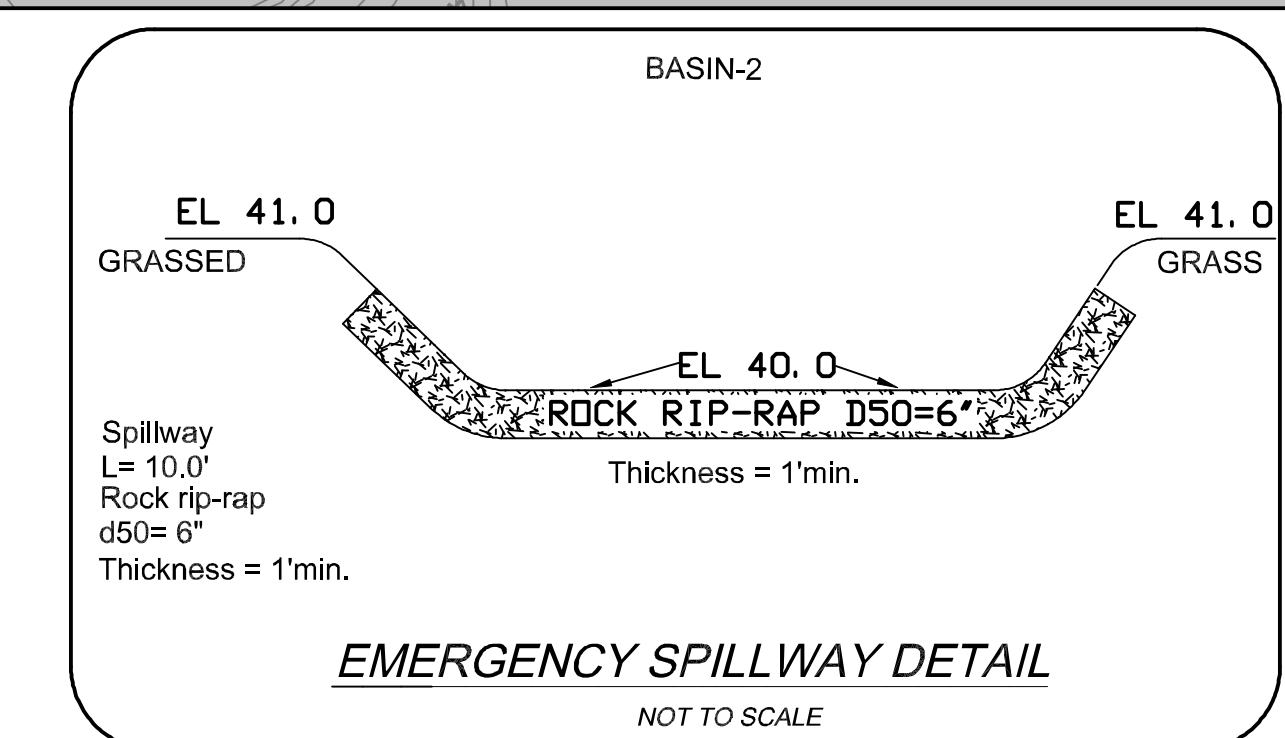
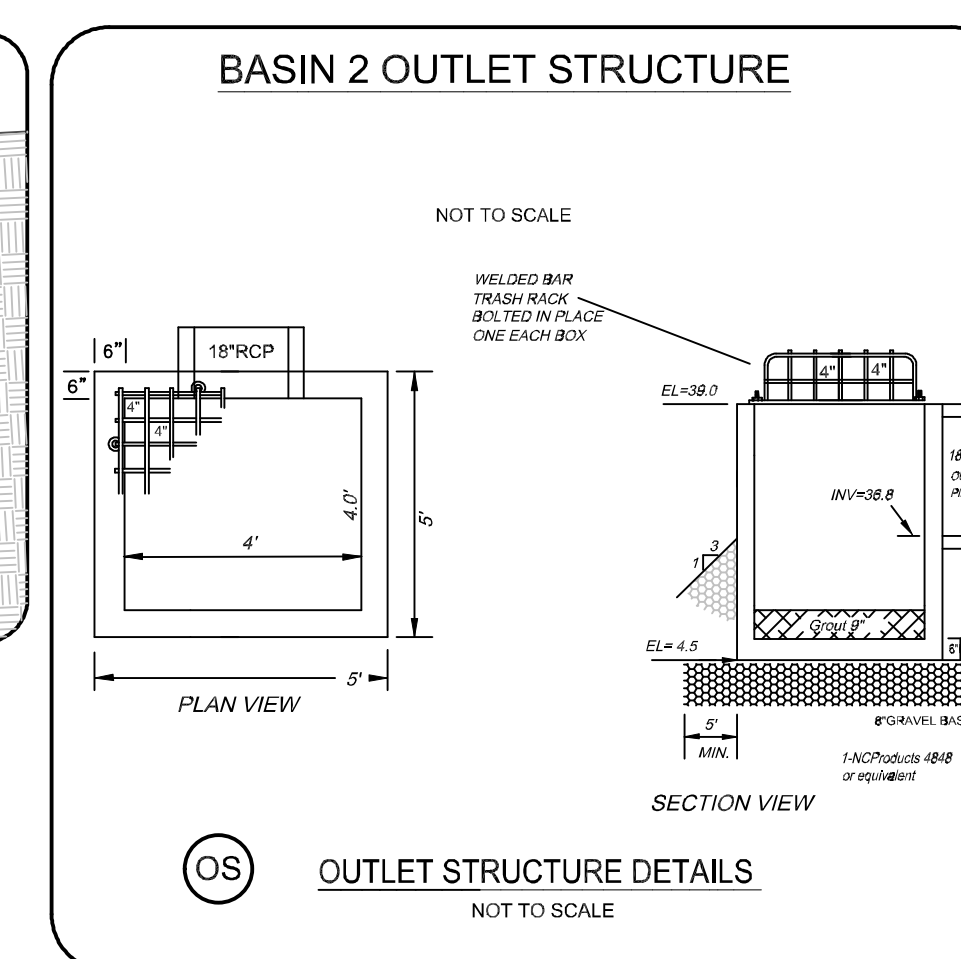
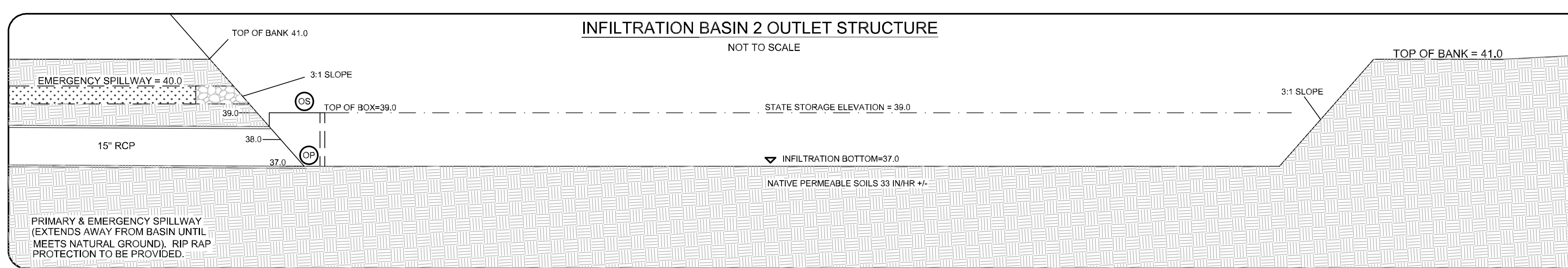
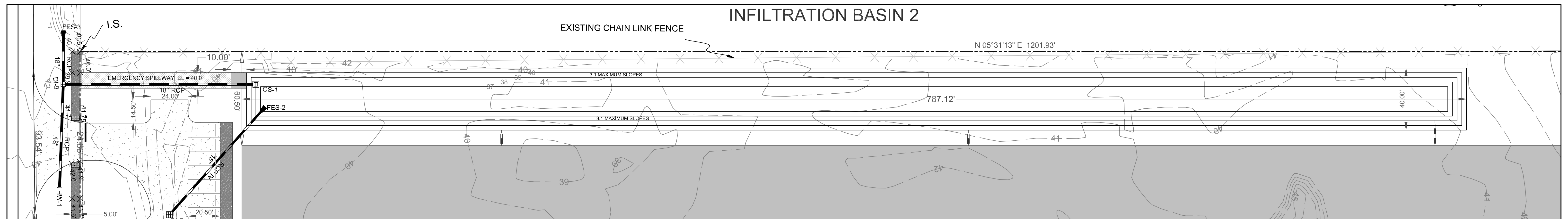
ALL ROOF DRAINS DIRECTED TO BASINS SHALL BE SCREENED.



NOTE WELL:

IN FINAL PHASE ONCE SITE IS STABILIZED REMOVE ANY ACCUMULATED DEBRIS FROM BASIN BOTTOM. ONCE SITE IS STABILIZED BRING BASIN BOTTOM TO GRADE SHOWN ON PLANS. REPLACE ANY LOW DISTURBED AREAS WITHIN BASIN WITH SOILS WITH INFILTRATION RATES AT OR GREATER THAN THE ONES SHOWN ON PLANS.

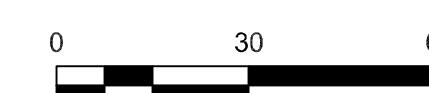
PRELIMINARY PLAN
NOT FOR RECORDATION OR CONVEYANCE



BASIN 2				
Elev(Ft)	Storage(CF)	Storage(Acre-Ft)	Area(SF)	Area(Acres)
37.000	0.0	0.000	12209.962	0.280
38.000	14559.3	0.334	16920.697	0.389
39.000	33865.4	0.777	21703.433	0.498
40.000	57990.2	1.331	26558.169	0.610
41.000	87005.7	1.997	31484.904	0.723

SEDIMENTATION PHASE - NOTE BOTTOM AT 37.5 DURING SEDIMENTATION PHASE
Storage required = 5.7 AC X 1800 = 10,260 CF
Storage provided = 27,172 CF PROVIDED AT 39.0
SA Required = 26.4 cfs X 425 sF = 11,484 SF
SA Provided = 21,705 SF @ 39.0

OUTLET VELOCITY
V<10>=0.0 FPS (INFILTRATION ONLY)



NOTES:
1. SURVEYED IN JANUARY OF 2018 AND 2019.
2. ALL DISTANCES ARE HORIZONTAL.
3. AREA COMPUTED BY COORDINATE METHOD.
4. FOR REFERENCE SEE D.B. 1356 PAGE 1420 AND AS NOTED HEREON.

CITY OF WILMINGTON
NORTH CAROLINA
Public Services • Engineering Division
APPROVED STORMWATER MANAGEMENT PLAN
Date: _____ Permit # _____
Signed: _____

Approved Construction Plan

Name	Date
Planning	_____
Traffic	_____
Fire	_____

For each open utility cut of City streets, a \$325 permit shall be required from the City prior to occupancy and/or project acceptance.

INFILTRATION BASINS/SEDIMENT BASINS
Cameron Co. LTD
Sunnyvale Drive Warehouse Facility
NEW HANOVER COUNTY NORTH CAROLINA

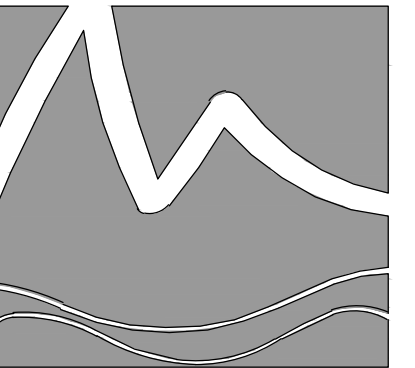
OWNER: CAMERON CO. LTD
P.O. BOX 3649
WILMINGTON, N.C. 28406

HANOVER DESIGN SERVICES, P.A.
LAND SURVEYORS, ENGINEERS & LAND PLANNERS
1123 FLORAL PARKWAY
WILMINGTON, N.C. 28403
PHONE: (910) 343-8002
LICENSE # 0-0587

Date: 3-18-21
Scale: HORZ: 1"=30'
Drawn: AHG
Checked: AHG
Project No: 11499
Sheet No: B-1
OF: B-1

REV. NO.	REVISIONS	DATE
1	UPDATED FOR EC COMMENTS	12-22-20

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MIHALY
LAND DESIGN
PLANNING + LANDSCAPE ARCHITECTURE
330 MILITARY CUTOFF RD., SUITE A3
WILMINGTON, NC 28405 910.392.4355



Revisions

CLIENT
CAMERON COMPANY, LTD
1201 GLEN MEADE ROAD
WILMINGTON, NC
910-762-2676

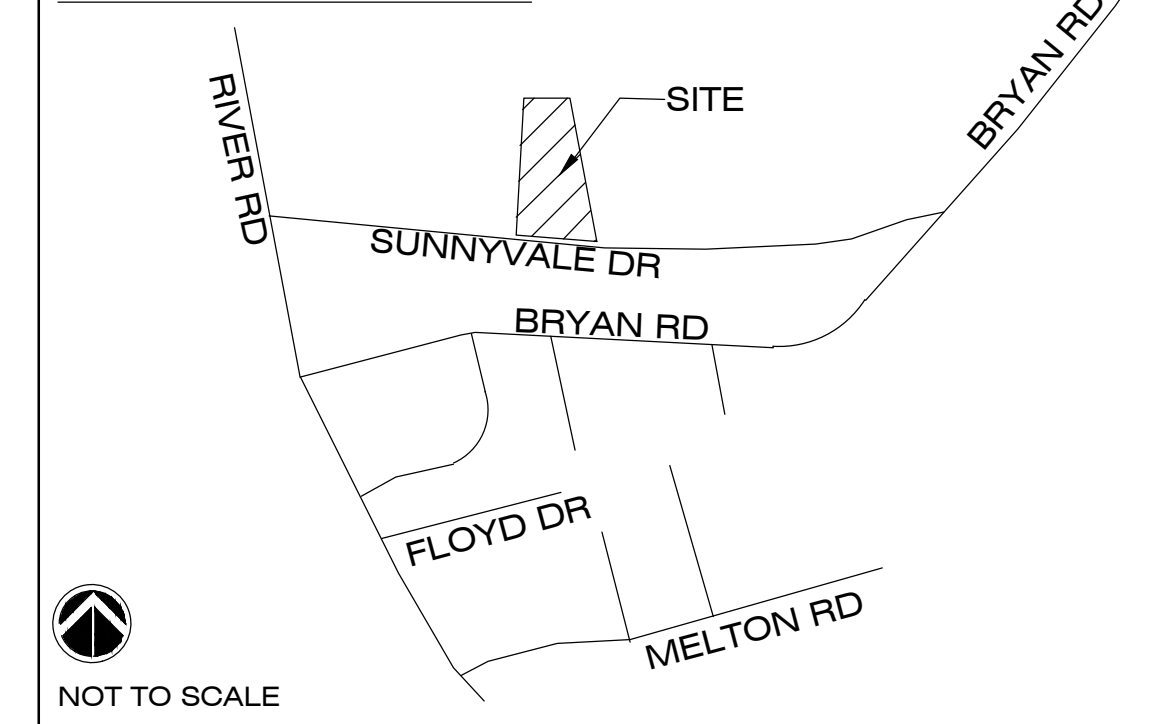
PROJECT
809 SUNNYVALE
820 SUNNYVALE DRIVE
WILMINGTON, NC
LANDSCAPE PLAN

PERMIT PLAN SET

Date: 2021-03-18
Phase:
Job Number: 650-09
Designed by: MLD
Drawn by: RJB
Checked by: JWM
Sheet Title: OVERALL

Sheet Number:
L1.0
of 4 sheets

VICINITY MAP



NOT TO SCALE

SITE DATA

ADDRESS: 820 SUNNYVALE DRIVE
PARCEL ID: R06500-007-001-000
PARCEL OWNER: CAMERON COMPANY LTD
ZONING: IND - HEAVY INDUSTRIAL
PARCEL AREA: 8.62 AC (375,487 SF)
CAMA LAND USE: URBAN

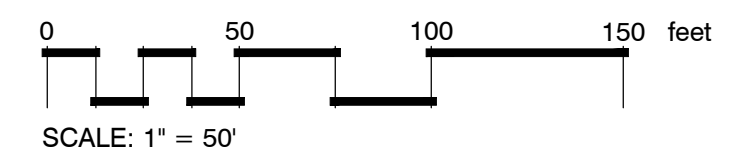
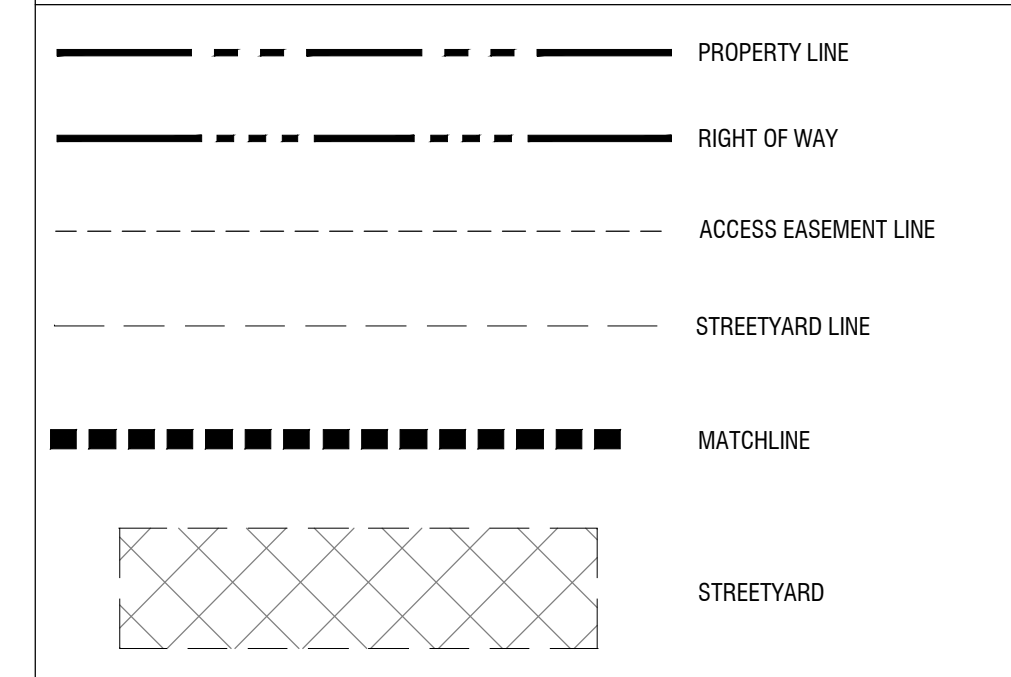
LANDSCAPE REQUIREMENTS

	REQUIRED	PROVIDED
PARKING LOT CANOPY COVERAGE (18,922 SF X 20%)	3,665 SF, 5.2 TREES	4,242 SF @ LARGE TREES (707 x 5 = 4,242 SF)
STREET YARD PLANTING STREET YARD MULTIPLIER 25 SUNNYVALE DRIVE	408' - 36" (DRIVEWAYS) = 372' x 25 9,300 SF REQUIRED	9,684 SF
TREES REQUIRED	16 (1,600 SF)	16 PROPOSED CANOPY TREES
SHRUBS REQUIRED	93 (6,000 SF)	98 PROPOSED SHRUBS
FOUNDATION PLANTING 12% FACADE AREA		
BUILDING #1 SOUTH	1,008 SF (240 LF x 30' HT x 12)	1,327 SF
TREE REQUIREMENTS PER DISTURBED ACRE 15 TREES PER DISTURBED ACRE MUST BE RETAINED OR PLANTED ON SITE.	8.62 ACRES DISTURBED x 15 TREES = 129 TREES REQUIRED	129 TREES PROVIDED - REFER TO PLANTING LEGEND
TOTAL:		129 TREES PROVIDED

SHEET INDEX

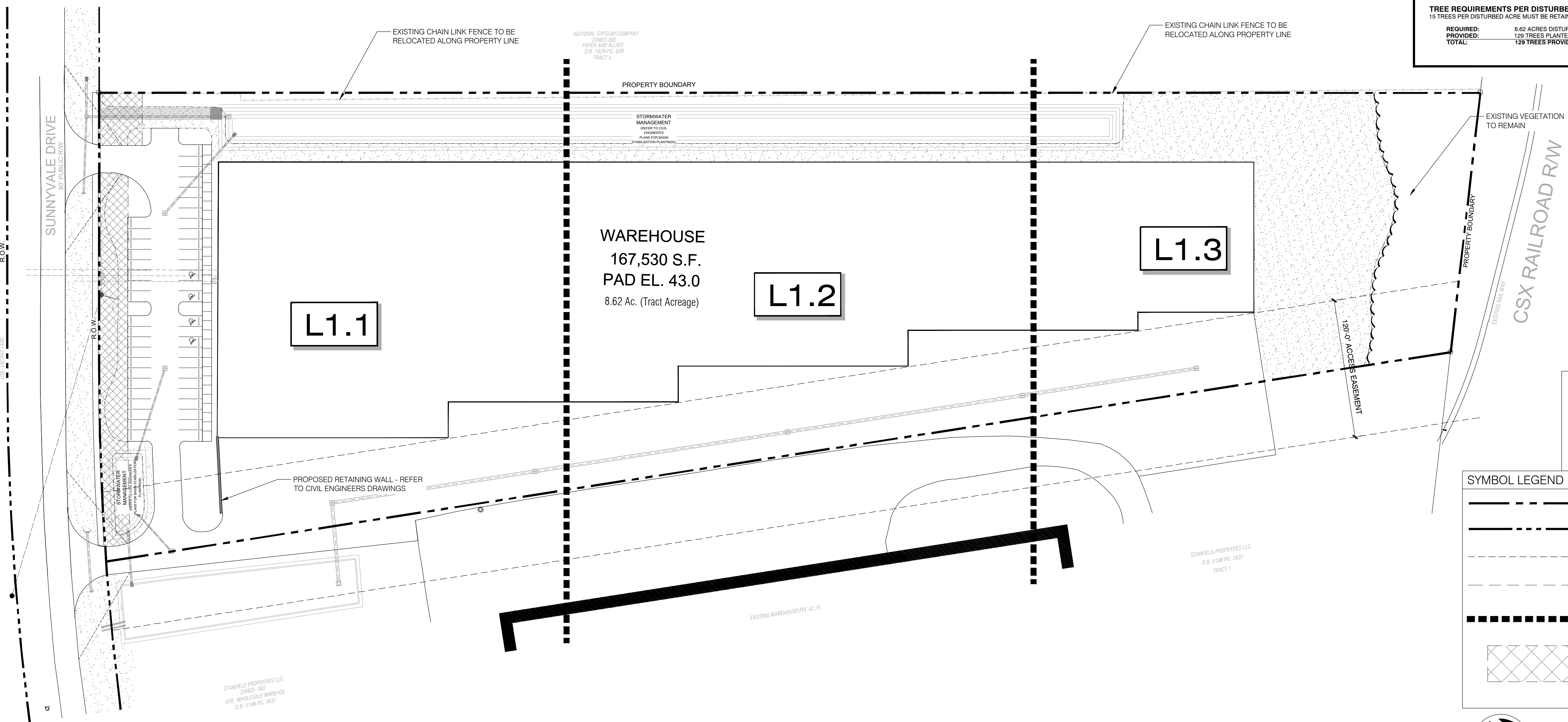
- L1.0 OVERALL
- L1.1 PLANTING PLAN
- L1.2 PLANTING PLAN
- L1.3 PLANTING PLAN
- L1.4 PLANTING DETAILS

SYMBOL LEGEND



NORTH

SCALE: 1" = 50'



Camerton Company, Inc. LLC
D.B. 5118 PG. 2637
TRACT 1

STANFIELD PROPERTIES LLC
ZONED: IND
USE: WAREHOUSE
D.B. 5118 PG. 2637

STANFIELD PROPERTIES LLC
D.B. 5118 PG. 2637
TRACT 1

EXISTING WAREHOUSE PTE 42.78

NATIONAL GYPSUM COMPANY
ZONED: IND
PAPER AND ALLIED
D.B. 1029 PG. 639
TRACT A

PROPERTY BOUNDARY

STORMWATER MANAGEMENT
REFER TO CIVIL ENGINEERS DRAWINGS

WAREHOUSE
167,530 S.F.
PAD EL. 43.0
8.62 Ac. (Tract Acreage)

L1.2

L1.3

L1.1

PROPOSED RETAINING WALL - REFER TO CIVIL ENGINEERS DRAWINGS

EXISTING CHAIN LINK FENCE TO BE RELOCATED ALONG PROPERTY LINE

EXISTING CHAIN LINK FENCE TO BE RELOCATED ALONG PROPERTY LINE

EXISTING VEGETATION TO REMAIN

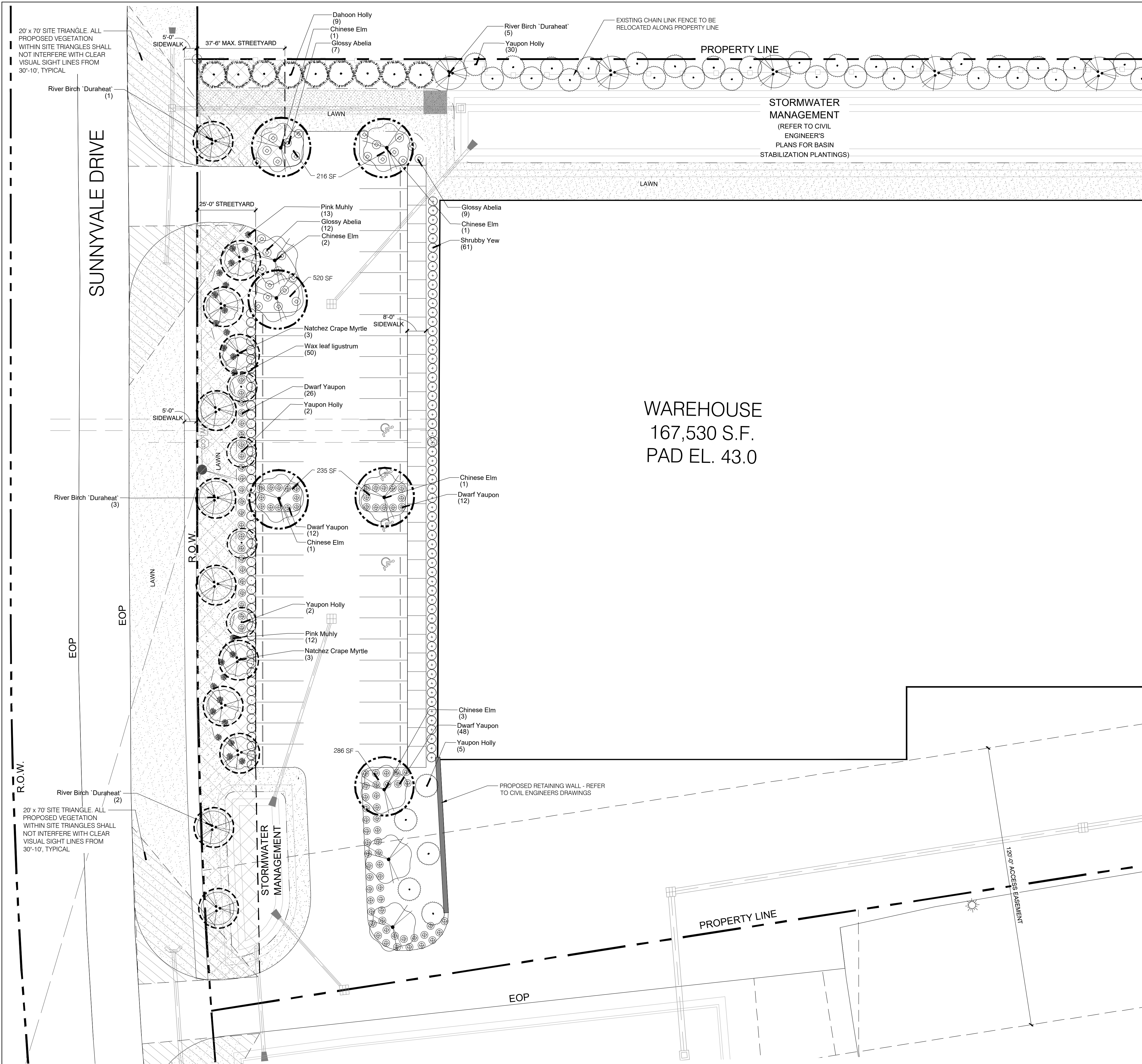
CSX RAILROAD R/W

120' ACCESS EASEMENT

SUNNYVALE DRIVE
80' PAVED FOOT

R.O.W.

STORMWATER MANAGEMENT
REFER TO CIVIL ENGINEERS DRAWINGS

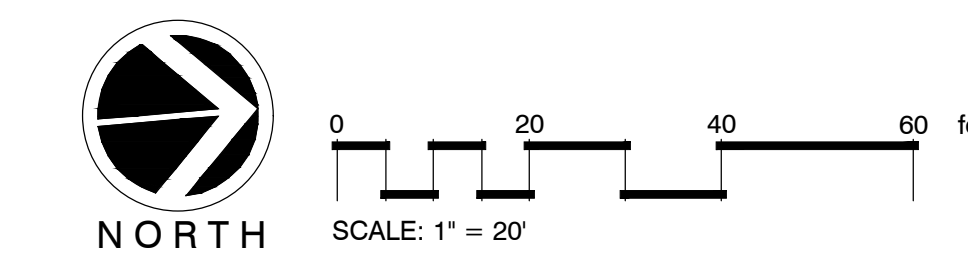
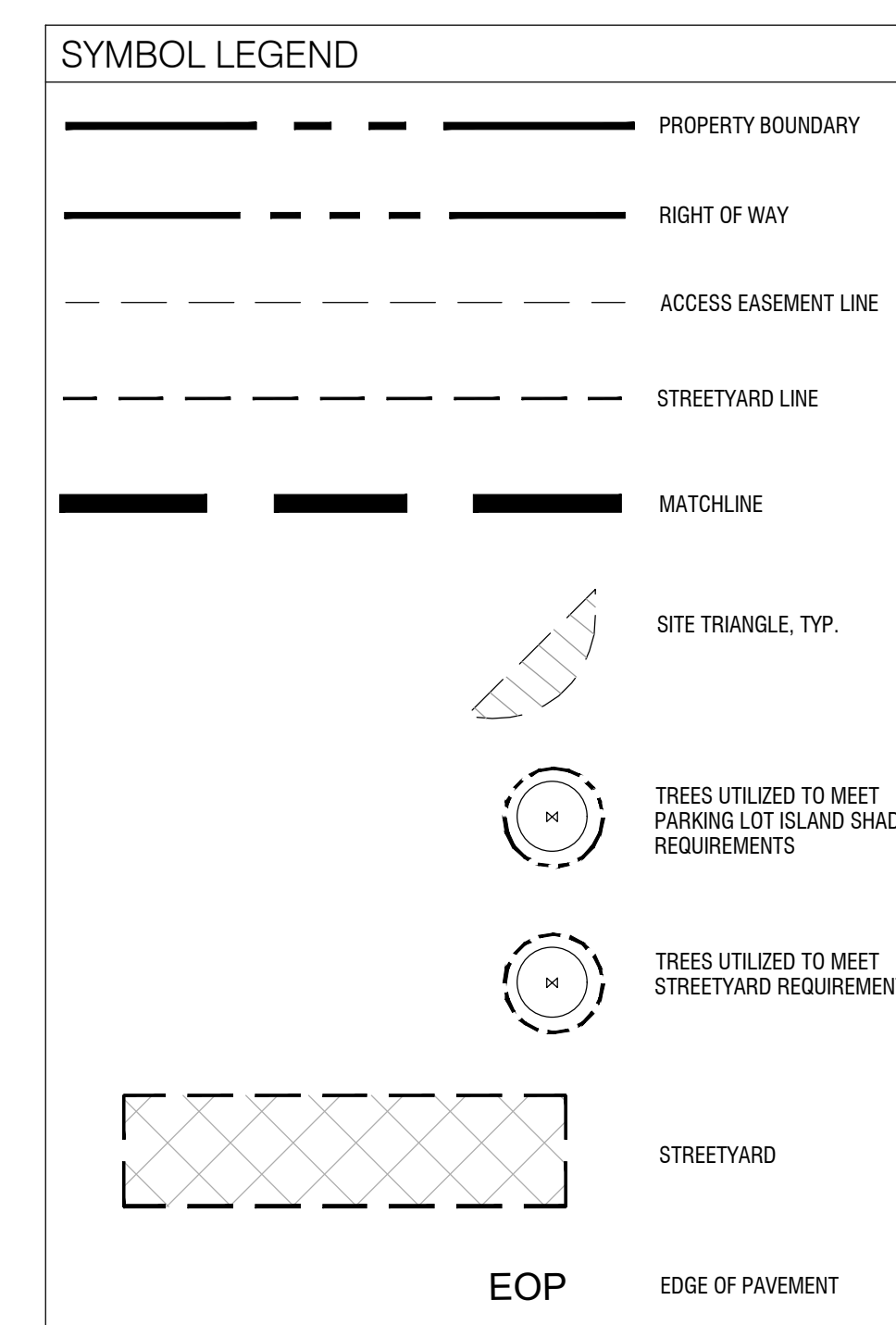


PLANT SCHEDULE L1.1

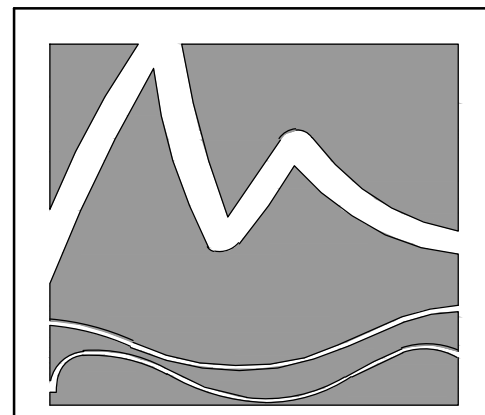
TREES	BOTANICAL / COMMON NAME	CONT	CAL	SIZE	MIN. REQ. SIZE	QTY
	Betula nigra / River Birch 'Duraheat'	B & B		10-12 HT	2" CAL	11
	Ilex cassine / Dahoon Holly	B & B			2" CAL	9
	Ilex vomitoria / Yaupon Holly	B & B			2" CAL	39
	Ligustrum x Natchez / Natchez Crape Myrtle	B & B			2" CAL	6
	Ulmus parviflora / Chinese Elm	B & B			2" CAL	9
SHRUBS	BOTANICAL / COMMON NAME	CONT	SIZE	MIN. REQ. SIZE	QTY	
	Abelia x grandiflora 'Edward Goucher' / Glossy Abelia	3 gal	18-24" HT			28
	Ilex vomitoria 'Nana' / Dwarf Yaupon	3 gal	15-18" HT			95
	Ligustrum / 'Recurvatum' / Wax leaf ligustrum	7 gal		30" HT		50
	Muhlenbergia capillaris / Pink Muhly	3 gal	18-24" HT			25
	Podocarpus macrophyllus makii / Shrubby Yew	7 gal	3-4' HT			61
SOD/SEED	BOTANICAL / COMMON NAME	CONT	SIZE	SPACING	QTY	
	Eremochloa ophiuroides / Centipede Sod	sod				

- GENERAL PLANTING NOTES**
- THIS WORK INCLUDES, BUT IS NOT LIMITED TO THE FURNISHING OF ALL LABOR, MATERIALS, EQUIPMENT, FINAL GRADING, SEEDING, SOIL AMENDMENTS, ETC., AS MAY BE REQUIRED FOR A COMPLETE INSTALLATION.
 - QUANTITIES SHOWN IN PLANT LISTS ARE FOR CONVENIENCE ONLY. PLANS SHALL GOVERN.
 - THE LANDSCAPE CONTRACTOR SHALL NOTIFY THE LANDSCAPE ARCHITECT OF ANY DISCREPANCIES IN PLANT LOCATIONS OR INSUFFICIENT PLANT QUANTITIES DUE TO DIFFERENCES IN PLAN AND ACTUAL FIELD CONDITIONS.
 - ALL TREE AND SHRUB MATERIAL SPECIFIED MUST MEET STANDARD INDUSTRY SPECIFICATIONS FOR THE CONTAINER SIZE INDICATED. DOWNSIZING OR SUBSTITUTION OF PLANT MATERIAL WITHOUT PRIOR APPROVAL OF LANDSCAPE ARCHITECT WILL NOT BE ALLOWED.
 - ALL LANDSCAPE AREAS SHALL BE GRADED TO A SMOOTH EVEN SURFACE PRIOR TO ANY PLANT INSTALLATION. ALL PLANT MATERIALS SHALL BE INSTALLED USING GOOD HORTICULTURAL PRACTICES IN ACCORDANCE WITH THE PLANS AND DETAILS. TREES SHALL NOT BE PLANTED CLOSER THAN FOUR (4) FEET FROM ANY WALKWAY OR PUBLIC SIDEWALK EXCEPT WHERE TREE WELLS OR PARKWAYS ARE PROVIDED IN THE SIDEWALK AREA. ALL TREE PLANTED WITHIN FIVE (5) FEET OF WALKS OR PUBLIC UTILITIES SHALL RECEIVE DEEP ROOT BARRIERS.
 - TREE LOCATIONS SHOWN ON PLAN MAY REQUIRE ADJUSTMENT IN THE FIELD. WHENEVER FEASIBLE, TREES SHOULD BE PLANTED A MINIMUM OF TEN (10) FEET FROM ALL UNDERGROUND UTILITIES, STREETLIGHTS, HYDRANTS, AND OUT OF DRAINAGE FLOW LINES. SHOULD THIS NOT BE POSSIBLE, CONTACT THE LANDSCAPE ARCHITECT FOR DECISION ON PLACEMENT.
 - ALL TREES IN TURF AREAS SHALL HAVE 12" MIN. CLR. CIRCUMFERENCE AROUND THE TRUNK BASE. PROVIDE 2" MIN. THK. MULCH AT BASE OF TRUNK.
 - GROUNDCOVER TYPE SHOWN SHALL BE PLANTED IN ALL SHRUB AREAS AS SPECIFIED ON PLANS. GROUNDCOVER SHALL BE PLANTED AT 8" ON-CENTER UNIFORM TRIANGULAR SPACING, AND SHALL BE CONTINUOUS UNDER ALL TREE AND SHRUB MASSES AS SHOWN ON PLAN.
 - MATURE PLANTINGS SHALL NOT INTERFERE WITH UTILITIES AND TRAFFIC SIGHT LINES.
 - ALL PLANTING AREAS SHALL BE MULCHED WITH PINESTRAW, EXCEPT FOR AREAS PLANTED WITH GROUNDCOVER. ALL AREAS PLANTED WITH GROUNDCOVER SHALL BE MULCHED WITH HARDWOOD MULCH.

*NOTE: PRIOR TO ANY CLEARING, GRADING, OR CONSTRUCTION ACTIVITY, TREE PROTECTION FENCING WILL BE INSTALLED AROUND PROTECTED TREES OR GROVES OF TREES. NO CONSTRUCTION WORKERS, TOOLS, MATERIALS OR VEHICLES ARE PERMITTED WITHIN THE TREE PROTECTION FENCING



MATCHLINE - SEE SHEET L1.2



MIHALY
LAND DESIGN
PLANNING + LANDSCAPE ARCHITECTURE
330 MILITARY CU OFF RD., SUITE A3
WILMINGTON, NC 28405 910.392.4355



Revisions

CLIENT
CAMERON COMPANY, LTD
1201 GLEN MEADE ROAD
WILMINGTON, NC
910-762-2676

PROJECT
809 SUNNYVALE
820 SUNNYVALE DRIVE
WILMINGTON, NC
LANDSCAPE PLAN

PERMIT PLAN SET

Date: 2021-03-18
Phase:
Job Number: 650-09
Designed by: MLD
Drawn by: RJB
Checked by: JWM

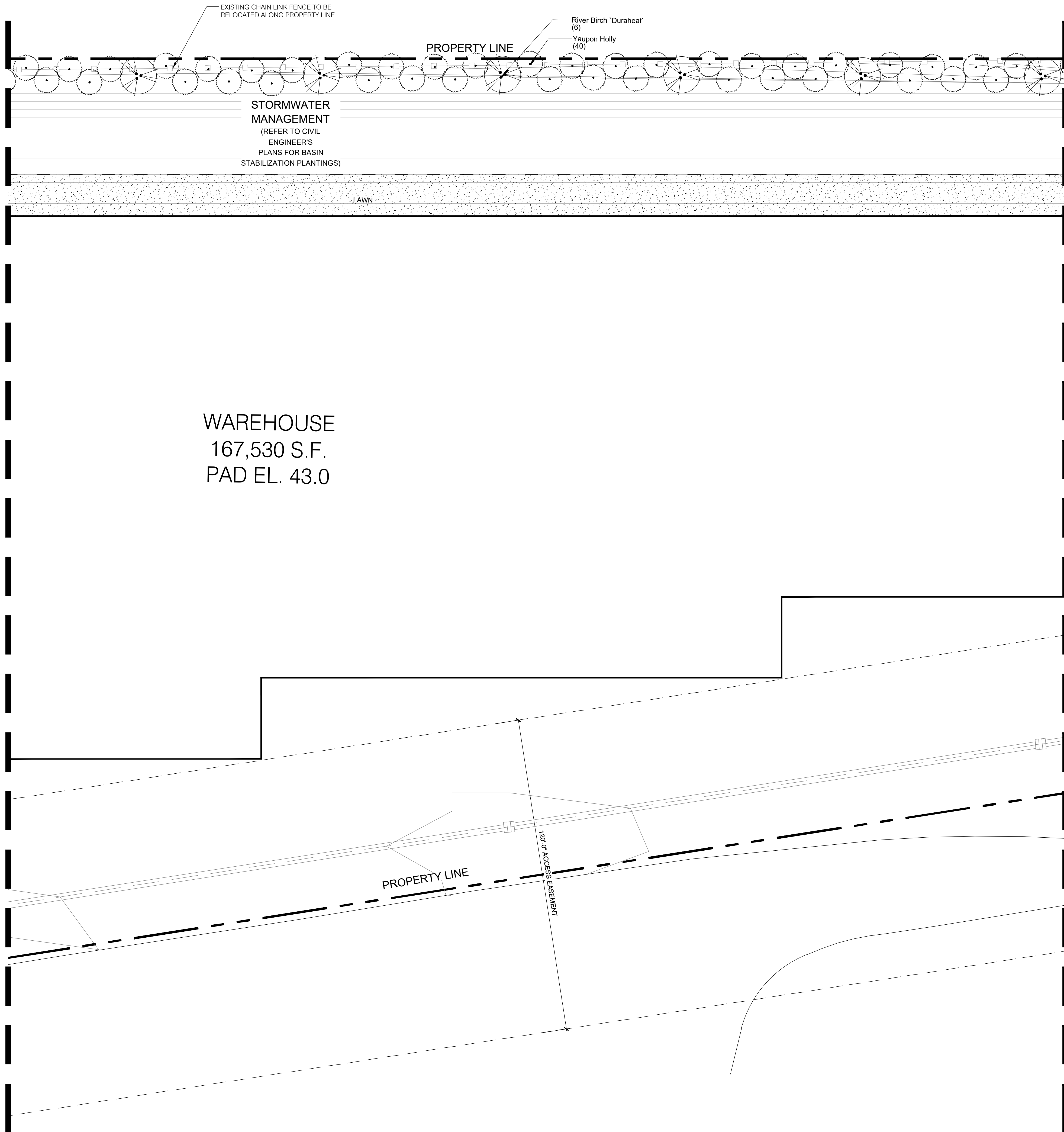
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PLANTING PLAN

Sheet Number:
L1.1
of 4 sheets

MATCHLINE - SEE SHEET L1.1

MATCHLINE - SEE SHEET L1.3

WAREHOUSE
167,530 S.F.
PAD EL. 43.0



PLANT SCHEDULE L1.2

TREES	BOTANICAL / COMMON NAME	CONT	SIZE	MIN. REQ. SIZE	QTY
	Betula nigra / River Birch "Duraheat"	B & B	10-12' HT	2" CAL	6
	Ilex vomitoria / Yaupon Holly	B & B		2" CAL	40
SOD/SEED	BOTANICAL / COMMON NAME	CONT		SPACING	QTY
	Eremochloa ophiuroides / Centipede Sod	sod			

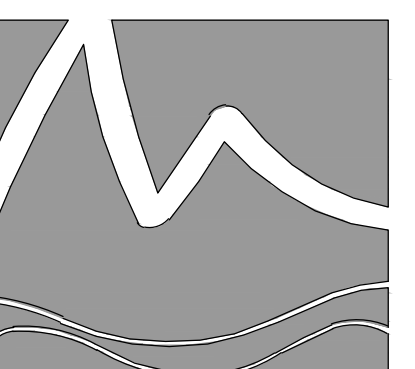
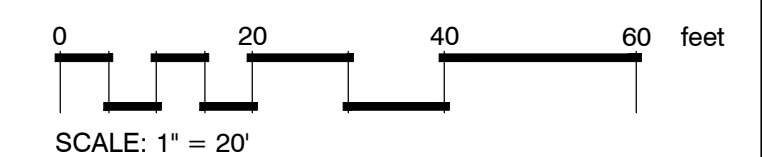
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- ALL TREE AND SHRUB MATERIAL SPECIFIED MUST MEET STANDARD INDUSTRY SPECIFICATIONS FOR THE CONTAINER SIZE INDICATED. DOWNSIZING OR SUBSTITUTION OF PLANT MATERIAL WITHOUT PRIOR APPROVAL OF LANDSCAPE ARCHITECT WILL NOT BE ALLOWED.
- ALL LANDSCAPE AREAS SHALL BE GRADED TO A SMOOTH EVEN SURFACE PRIOR TO ANY PLANT INSTALLATION. ALL PLANT MATERIALS SHALL BE INSTALLED USING GOOD HORTICULTURAL PRACTICES IN ACCORDANCE WITH THE PLANS AND DETAILS.
- TREES SHALL NOT BE PLANTED CLOSER THAN FOUR (4) FEET FROM ANY WALKWAY OR PUBLIC SIDEWALK EXCEPT WHERE TREE WELLS OR PARKWAYS ARE PROVIDED IN THE SIDEWALK AREA. ALL TREE PLANTED WITHIN FIVE (5) FEET OF WALKS OR PUBLIC UTILITIES SHALL RECEIVE DEEP ROOT BARRIERS.
- TREE LOCATIONS SHOWN ON PLAN MAY REQUIRE ADJUSTMENT IN THE FIELD. WHENEVER FEASIBLE, TREES SHOULD BE PLANTED A MINIMUM OF TEN (10) FEET FROM ALL UNDERGROUND UTILITIES, STREETLIGHTS, HYDRANTS, AND OUT OF DRAINAGE FLOW LINES. SHOULD THIS NOT BE POSSIBLE, CONTACT THE LANDSCAPE ARCHITECT FOR DECISION ON PLACEMENT.
- ALL TREES IN TURF AREAS SHALL HAVE 12" MIN. CLR. CIRCUMFERENCE AROUND THE TRUNK BASE. PROVIDE 2" MIN. THK. MULCH AT BASE OF TRUNK.
- GROUNDCOVER TYPE SHOWN SHALL BE PLANTED IN ALL SHRUB AREAS AS SPECIFIED ON PLANS. GROUNDCOVER SHALL BE PLANTED AT 8" ON-CENTER UNIFORM TRIANGULAR SPACING, AND SHALL BE CONTINUOUS UNDER ALL TREE AND SHRUB MASSES AS SHOWN ON PLAN.
- MATURE PLANTINGS SHALL NOT INTERFERE WITH UTILITIES AND TRAFFIC SIGHT LINES.
- ALL PLANTING AREAS SHALL BE MULCHED WITH PINESTRAW, EXCEPT FOR AREAS PLANTED WITH GROUNDCOVER. ALL AREAS PLANTED WITH GROUNDCOVER SHALL BE MULCHED WITH HARDWOOD MULCH.

*NOTE: PRIOR TO ANY CLEARING, GRADING, OR CONSTRUCTION ACTIVITY, TREE PROTECTION FENCING WILL BE INSTALLED AROUND PROTECTED TREES OR GROVES OF TREES. NO CONSTRUCTION WORKERS, TOOLS, MATERIALS OR VEHICLES ARE PERMITTED WITHIN THE TREE PROTECTION FENCING

SYMBOL LEGEND

	PROPERTY BOUNDARY
	ACCESS EASEMENT LINE
	MATCHLINE



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PROJECT
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820 SUNNYVALE DRIVE
WILMINGTON, NC
LANDSCAPE PLAN

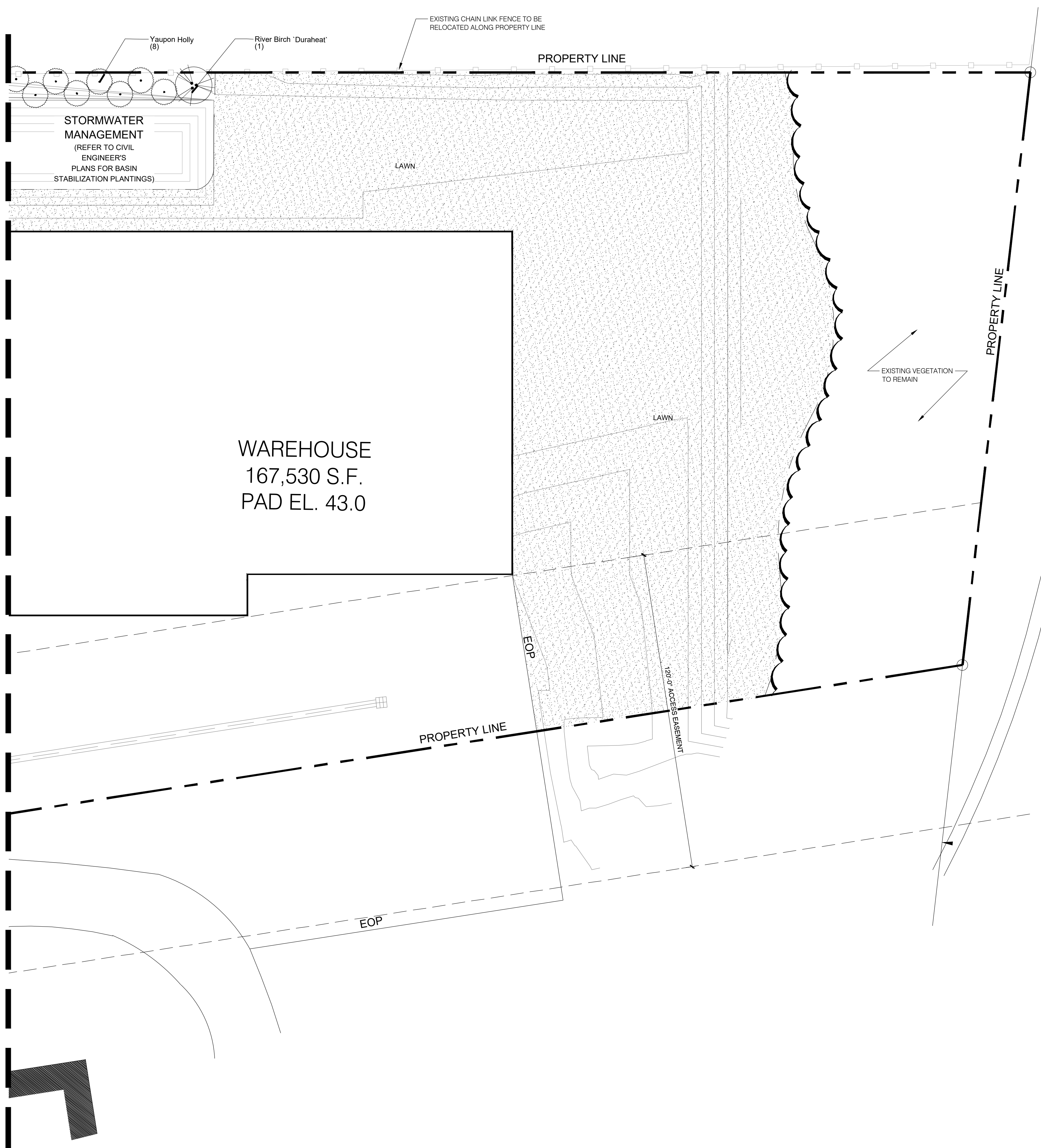
PERMIT PLAN SET

Date: 2021-03-18
Phase:
Job Number: 650-09
Designed by: MLD
Drawn by: RJB
Checked by: JWM

Sheet Title:
PLANTING PLAN

Sheet Number:
L1.2
of 4 sheets

MATCHLINE - SEE SHEET L1.2



PLANT SCHEDULE L1.3

TREES	BOTANICAL / COMMON NAME	CONT	SIZE	MIN. REQ. SIZE	QTY
	Betula nigra / River Birch "Duraheat"	B & B	10-12' HT	2" CAL	1
	Ilex vomitoria / Yaupon Holly	B & B		2" CAL	8
SOD/SEED	BOTANICAL / COMMON NAME	CONT		SPACING	QTY
	Eriochloa ophiuroides / Centipede Sod	sod			

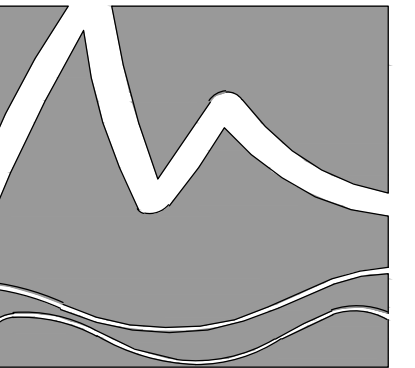
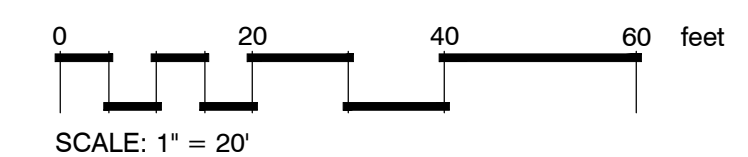
GENERAL PLANTING NOTES

- THIS WORK INCLUDES, BUT IS NOT LIMITED TO THE FURNISHING OF ALL LABOR, MATERIALS, EQUIPMENT, FINAL GRADING, SEEDING, SOIL AMENDMENTS, ETC., AS MAY BE REQUIRED FOR A COMPLETE INSTALLATION.
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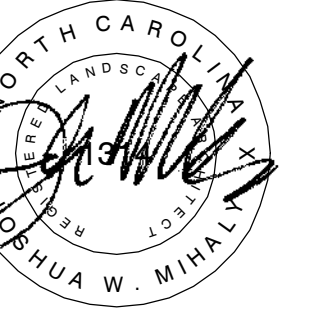
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SYMBOL LEGEND

	PROPERTY BOUNDARY
	ACCESS EASEMENT LINE
	MATCHLINE
	EOP EDGE OF PAVEMENT



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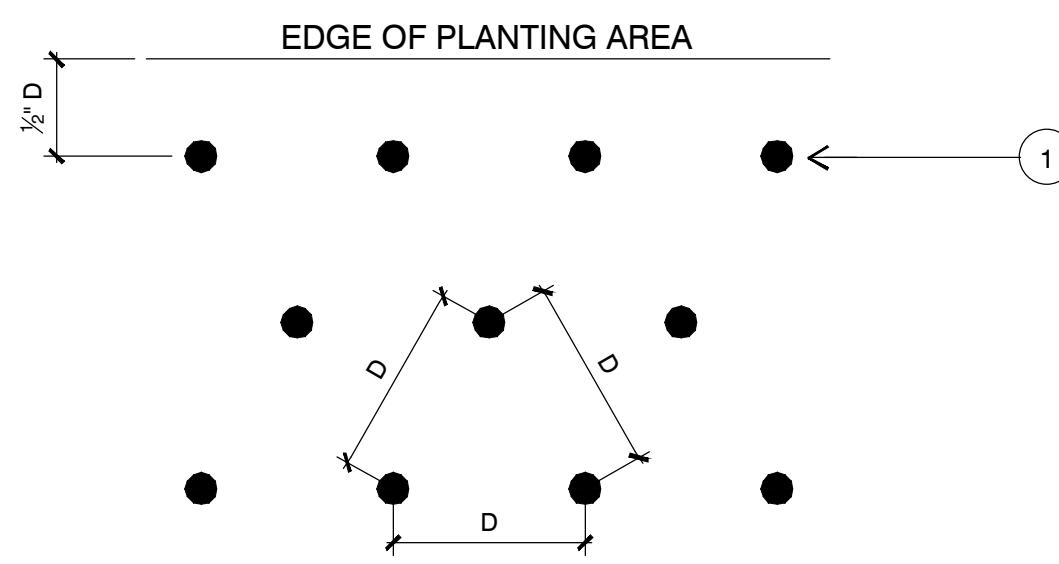
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PERMIT PLAN SET

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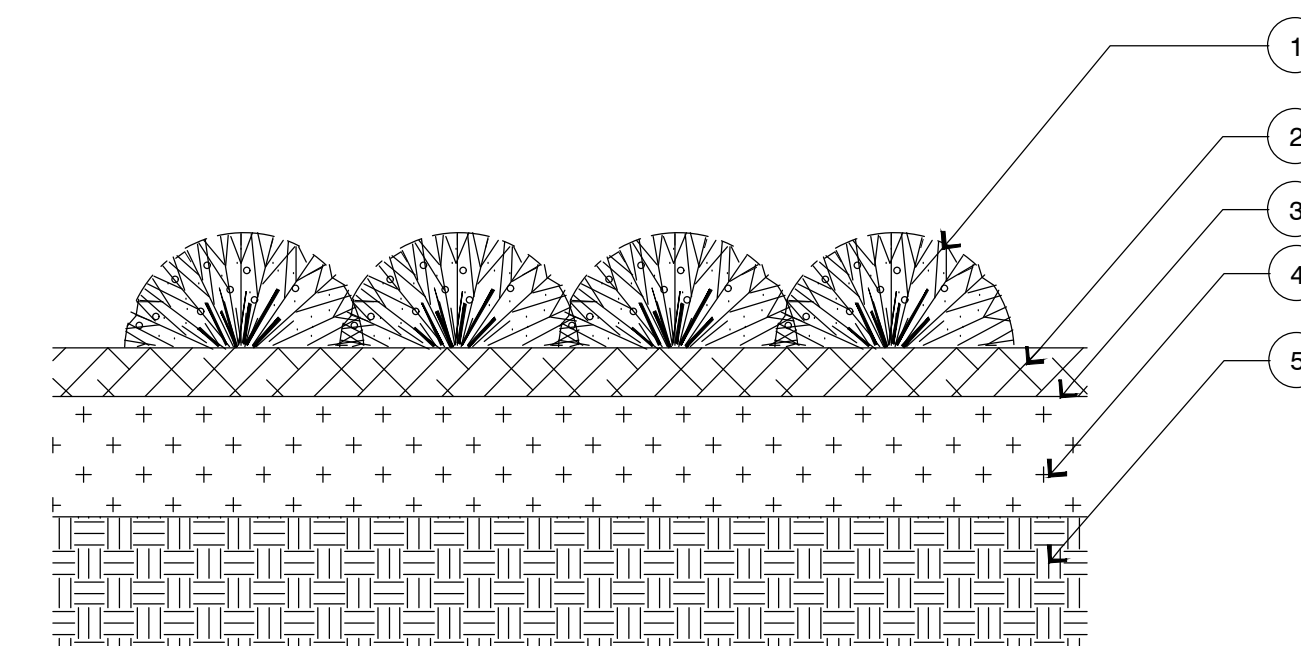
LEGEND

- 1. GROUND COVER OR SHRUB PLANTING LOCATION

NOTE:

- D - AS NOTED ON PLANTING SCHEDULE

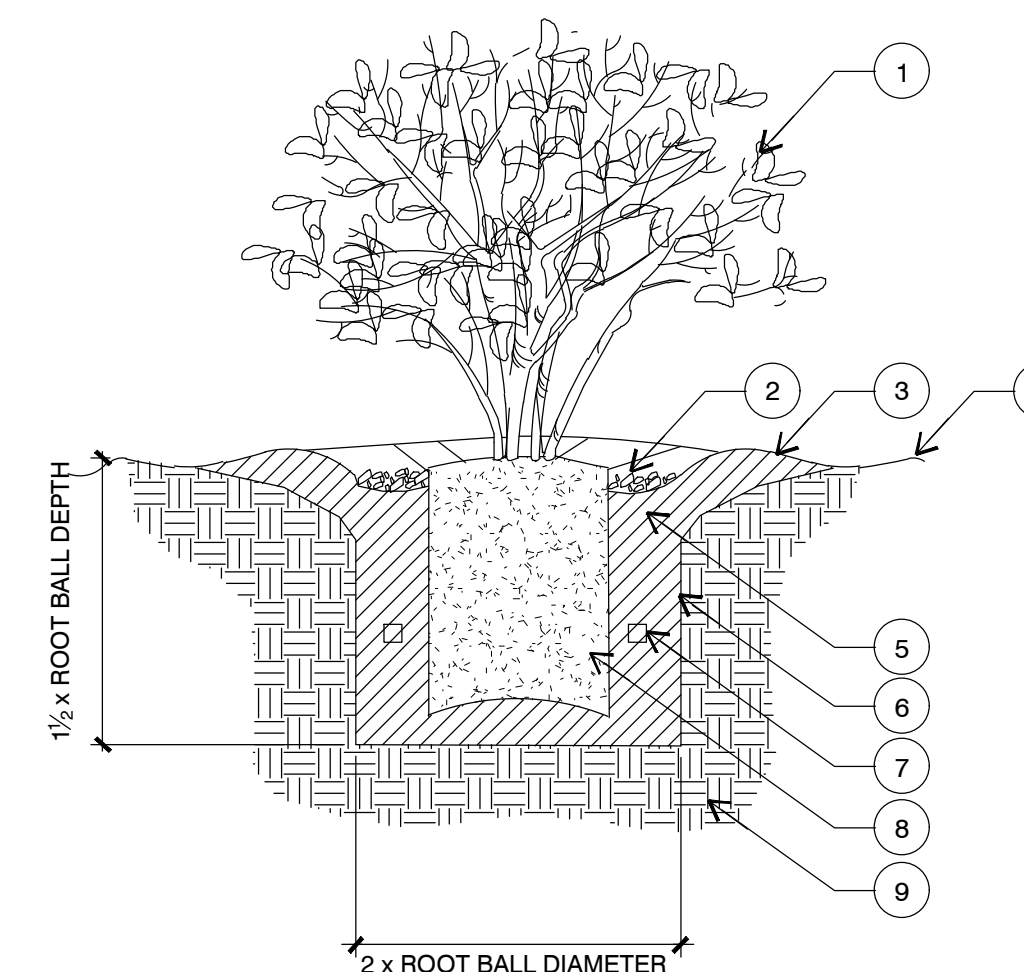
4 SPACING



LEGEND

- 1. GROUND COVER PLANT- REFER TO PLANTING PLAN FOR SPACING INFORMATION
- 2. MULCH - REFER TO PLANTING SPECIFICATIONS FOR TYPE AND DEPTH
- 3. FINISH GRADE
- 4. TOPSOIL AND NATIVE BACKFILL - REFER TO PLANTING SPECIFICATIONS FOR TYPE AND DEPTH
- 5. COMPACTED SUBGRADE

1 GROUND COVER



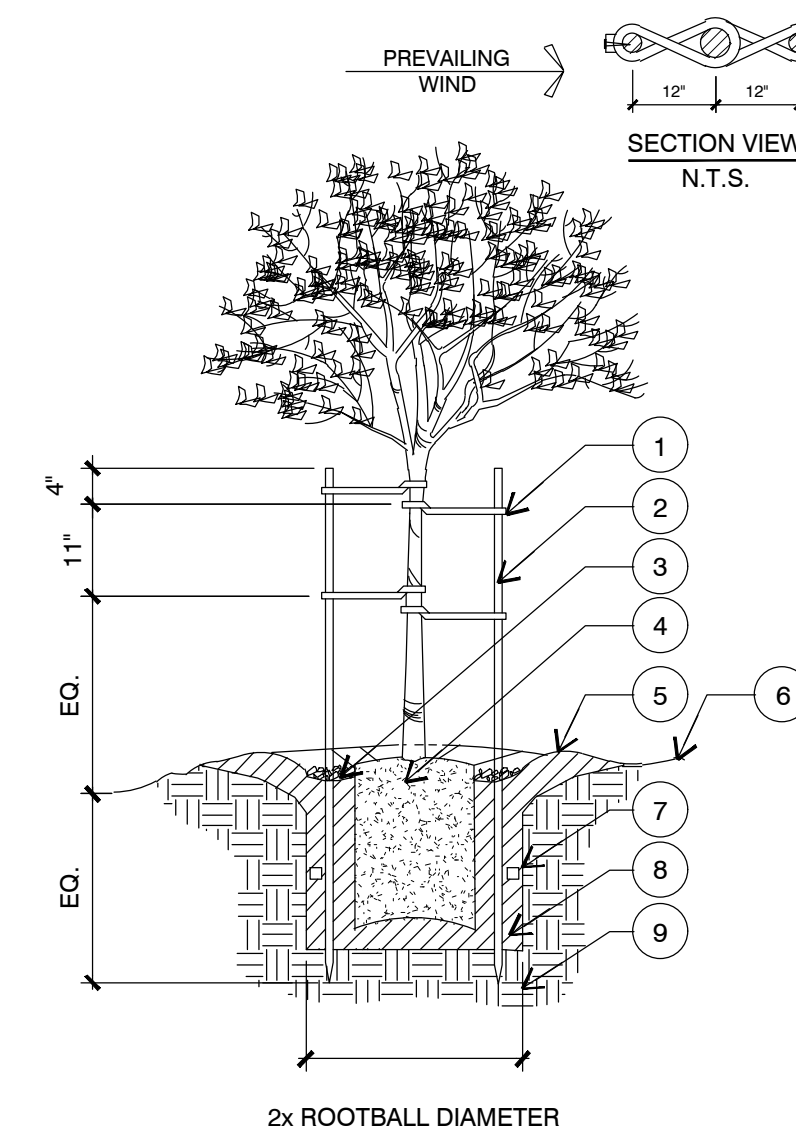
LEGEND

- 1. SHRUB
- 2. 3" LAYER OF MULCH
- 3. 3" WATER BASIN
- 4. FINISH GRADE
- 5. TOPSOIL & NATIVE BACKFILL MIXTURE
- 6. SCARIFY EDGE OF PIT
- 7. FERTILIZER TABLETS - REFER TO SCHEDULE FOR QUANTITY
- 8. ROOT BALL
- 9. NATIVE SUBGRADE

NOTES:

- SCARIFY ROOT BALLS OF PLANTS WITH CIRCLING ROOTS.
- HEAVILY ROOT BOUND SHRUBS WILL NOT BE ACCEPTED

2 SHRUB



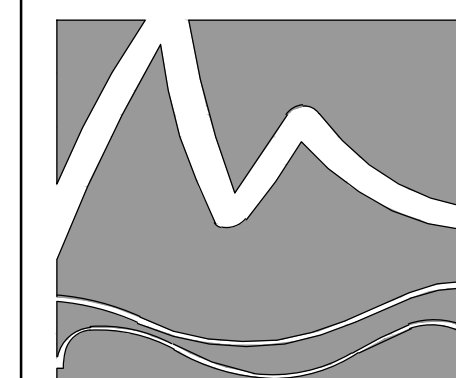
LEGEND

- 1. 24" CORDED BLACK RUBBER TREE TIE. LOOP AT TRUNK AND NAIL TO STAKE
- 2. 2 1/2" DIA. x 12' LONG TREATED LODGEPOLE PINE STAKE
- 3. 3" LAYER OF MULCH
- 4. ROOT BALL
- 5. 3" WATER BASIN
- 6. FINISH GRADE
- 7. FERTILIZER TABLET
- 8. TOPSOIL & NATIVE BACKFILL MIXTURE
- 9. NATIVE SUBGRADE

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3 TREE STAKING



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of 4 sheets