

Robertson County Tennessee

Jody Stewart, Finance Director Finance Department

523 South Brown Street, Springfield, TN 37172 (615) 384-0202 Fax (615) 384-0237

POST DATE: August 3, 2023

RE-BID 1526: Earthwork and Asphalt Paving for Innovation Academy Parking Lots

Pre-Bid Meeting: **August 14, 2023 at 10:00 AM**The pre-bid meeting will be held at Innovation Academy located at 715 5th Ave W, Springfield, TN 37172

Sealed bids must be received by: August 22, 2023 at 10:00 AM

Robertson County Finance Office 523 South Brown Street Springfield, TN 37172

THE OUTSIDE OF THE ENVELOPE MUST BE MARKED WITH THE BIDDER'S COMPANY NAME, ITEM BID, TIME OF BID OPENING, DATE OF BID OPENING, RE-BID NO. 1526 AND MUST BE MARKED "SEALED BID, DO NOT OPEN."

Bids are opened and read aloud to the public at the Robertson County Finance Office, 523 S. Brown Street, Springfield, TN 37172 immediately after the bid receipt deadline. Each vendor may submit more than one bid provided each bid meets the stated specifications. Each bid must be submitted in a separate sealed envelope with the appropriate notation on the outside. All bids must be signed by an authorized agent and submitted on the prescribed forms. Submission of bids by telegraph, telephone, or other electronic means is strictly prohibited. Any brand name called for the bid specifications is provided as a reference only. Alternate brand name items offered for bid must be equivalent as to function, basic design, type and quality of material, method of construction, and any required dimensions. Bidder must attach a letter of exception to specifications.

For assistance with technical / product information contact Clint Corbin, Supervisor, School Building and Grounds at (615) 384-0213. For assistance with bid procedures contact Taylor Tomblin, Robertson County Finance Office at (615) 384-0202 or by email: ttomblin@robcotn.org.

Note: Robertson County reserves the right to reject any or all bids, to waive any technicalities or informalities, and to accept any bid deemed in the best interest of the County. All bids will be considered in accordance with Title VI and without regard to age, sex, color, race, creed, national origin, religious persuasion, marital status, political belief, or disability that does not prohibit the performance of duty.

ROBERTSON COUNTY SCHOOLS RE-BID 1526 INFORMATION

For

Earthwork and Asphalt Paving Innovation Academy Parking Lots

Department of Buildings & Grounds 3470 Hwy 41 South Springfield TN.

Robertson County Schools Invitation to bid for Earthwork and Asphalt Paving per drawings provided: Innovation Academy 715 5th Ave W.

Springfield, TN 37172

Purpose of Request for Bid

The purpose of this bid is to solicit proposals from qualified vendors for construction of 4 asphalt parking areas and associated storm drainage. To include retention area, storm structures, asphalt paving, striping, and landscaping per drawings attached to this solicitation.

Nature of Proposal

Each interested vendor shall be responsible for the review of information contained herein, other information which may be requested, site visitation as required, and other efforts as necessary for the submission of a comprehensive bid which will represent the vendor's best offer as a provider of Earthwork and Asphalt Paving for the Robertson County School System.

Each bid shall be complete, and it shall be outlined and identified by the sections of this request to facilitate evaluation and to prevent evaluators from the unnecessary searching and arranging of materials for evaluation purposes. In the preparation of each bid, attention should be given to the criteria referenced herein that will be used for award determination purposes.

Program Requirements

General

The contractor shall furnish all supervision, labor, equipment, tools, and other materials required for work as stated below for the Robertson County School System

Scope of Program

General

Provide all labor, material, and equipment to install all elements of functional parking areas and associated earthwork per drawings provided by Klober Engineering Services dated November 8, 2022.

Scope of Work Items include but are not limited to:

Demolition of items per plans (Robertson County will be responsible for removal of portable classrooms)

Surveying for control points and grading purposes

Installation of temporary roads/laydown areas

Installation of all temporary and permanent erosion controls and soil stabilization

Earthwork as required to bring site(s) to grade and provide for stormwater system installation.

All stormwater structures and piping per drawings provided.

All required stone material to provide subbase for asphalt section per drawings.

All Asphalt paving material, labor, and equipment.

All pavement markings as shown on drawings.

Labor, material, and equipment for all concrete curbing and sidewalks as shown in the drawings. Labor, material, and equipment for all landscaping as shown per drawings.

Project is requested to be priced in two phases/work packages

Phase 1: To consist of the northern parking areas and associated stormwater retention area. Intent would be to provide the north parking area directly behind visitor side bleachers first. This lot would hopefully be brought to grade and gravel installed to provide a parking area for students prior to the Fall 2023 semester while work continues adjacent areas.

Phase 2: To consist of the single west area parking lot and southernmost parking lot closest to 5th Ave. These parking areas include tie in to the retention area for the west lot and underground storm chambers at the south lot.

Space

To the extent possible, additional detailed information shall be furnished to the vendor upon request; however, through actual measurement, use of existing drawings and/or other means, it shall be the responsibility of the vendor to verify measurements as deemed applicable for the submission of a proposal.

Special Requirements for the Submission of a Bid

Bid Bond

A five percent (5%) Bid Security is required in the form of a Bid Bond or check (certified or cashier's) made payable to Robertson County at the time of bid opening. Failure to comply will result in rejection of bid.

Bidders shall be licensed as General Contractors under Tennessee Code annotated 61-601, etc.

Instructions to Bidders

Simultaneously with his delivery of the executed contract, the Contractor shall furnish a Surety bond (Performance and Payment Bond) in the amount of 100% as security for faithful performance for this contract and for the payment of all persons performing labor on the project under this contract and furnishing materials in connection with this contract, as specified in the General Conditions included herein. The surety on such bond or bonds shall be a duly authorized surety company satisfactory to the Owner, and licensed to practice in the State of Tennessee. At the same time, the Contractor shall submit certificates of insurance as required on "Owner's Instructions for Bonds and Insurance". The Contractor shall not commence the work until he has obtained all the insurance required under this contract.

All insurance as required by this Contract to be furnished and paid for by the Contractor; the costs of providing such shall be included in his bid.

Obligations of the Bidder:

At the time of opening of bids, each bidder will be presumed to have inspected the site and to have read and be thoroughly familiar with the plans and contract documents (including all addenda). The failure or omission of any bidder to examine any form, instrument or document shall in no way relieve any bidder from any obligation in respect of his bid.

The Contractor acknowledges that he has satisfied himself as to the nature and location of the Work, and the general and local conditions, particularly those bearing upon the following:

- a. Transportation, disposal, handling and storage of materials.
- b. Roads.
- c. Uncertainties of weather, to include flooding potential work areas.
- d. The character of equipment and facilities needed prior to and during the prosecution of the Work.
- e. The location and disposition of all underground and overhead utilities either active or not in use.
- f. All other matters which can in any way affect the Work or the cost thereof under this Contract.

Qualifications

Each vendor shall submit evidence of qualifications which would influence the ability to satisfactorily perform the installation defined elsewhere in this document.

Pre-Bid Conference and Tour of Facility

There will be a pre-bid visit at Innovation Academy on August 14, 2023 at 10:00 AM. Innovation Academy is located at 715 5th Ave W Springfield, TN 37172. Supplemental visits to schools can be arranged if needed by contacting the Buildings and Grounds Department @ 615-384-0213. Bidders will be held responsible for information provided at this meeting whether in attendance or not. Attendance is strongly encouraged to ensure all aspects of the project are understood.

Format of Proposal

Each bid shall be formatted identically to the outline of this request. The intent here is to facilitate evaluation by the committee members with a minimum of effort and delay. Therefore, each bid should include information/materials that are clearly marked and separately segregated as required for easy and quick location and identification of that section of this request to which it pertains.

Acceptance of Bid and Rejections

The contract will be awarded to the qualified contractor whose offer conforms to the conditions and requirements of this bid and will be most advantageous to the Robertson County School System. The committee's evaluation of criteria, cost and other factors will be taken into consideration.

The Robertson County schools reserve the right to reject any or all offers and to waive informalities and minor irregularities in bids received.

This Request for bid does not commit the Robertson County School System to contract for services from this solicitation.

A written award or contract furnished to the successful contractor, within the time of acceptance specified in the offer, shall be deemed to result in a binding contract without further action by either party.

Firm Offer

Each vendor must agree in advance in written form to submit a bid with cost figures which will be firm for at least thirty calendar days after the opening date of the bid.

Evaluation of Bids

Evaluation

Officials of the Robertson County schools will conduct an evaluation of bids submitted in response to this solicitation. In the process of evaluation, the vendor's total bid shall be considered.

During the process of evaluation, the officials may need additional information. This need will be communicated to the vendor, and each vendor shall be responsible for responding in written form or by appearing before the officials as requested.

Contract

Award

It is the full intent, assuming that satisfactory bids are received, to award a contract, within 7 days of project award.

Termination/Cancellation

Robertson County Schools reserves the right to cancel the contract upon thirty days written notice for reasons of nonperformance within the terms and conditions of this request for bid or conditions beyond our control such as inadequate funding.

Payments

Payment for services received will be made upon receipt of invoice and inspection by county personnel of proper operation and performance of the units

Insurance

The contractor shall provide at all times during the contract period the following insurance coverage:

Workman's Compensation - Statutory Limits

Comprehensive general liability for bodily injury in the sum of \$1,000,000 each person and \$1,000,000 each occurrence and \$1,000,000 property damage, including personal injury.

Automobile liability insurance with basic limits \$1,000,000 each occurrence and \$500,000 property damage, including personal injury.

Umbrella liability limits net loss limits of liability \$1,000,000 each occurrence and \$1,000,000 each aggregate.

The bidder shall furnish the Robertson County School System certificates of insurance within 21 working days after acceptance of a contract.

Robertson County school system must have ten (10) days' notice of cancellation or change in insurance coverage and give its approval.

Addenda

Any 'Addenda' or instructions to bidders issued by the county school system prior to the time for receiving bids shall be covered in the proposal and in closing a contract they shall become a part thereof.

Responsibilities of Contractor

Personnel

All matters pertaining to the recruitment, screening, hiring, and retention shall be the exclusive responsibility of the contractor. These matters shall be done fully in compliance with existing statutes and regulations pertaining to affirmative action, no discrimination, wage and hour and any other stipulation germane to prudent personnel management. The contractor shall comply with all State of Tennessee laws, regulations, and requirements regarding people working with or in the proximity of minor children, including, but not limited to background checks with law enforcement authorities and fingerprinting.

All personnel shall be dressed in a manner authorized by the contractor. The personnel shall be neat and clean in appearance. <u>Uniforms and badges with picture identification shall be worn</u> which fully identify the worker as a member of the contractor's work force.

Employees with police records will be cleared through the Robertson County schools Board of Education's personal director before being assigned duties under this contract. (Contractor shall be responsible for the submission of police clearance record within 24 hours upon request.)

The contractor shall not pay less than the minimum wage rate. Contractor shall pay all taxes pertaining to his employees as required by law. All employees shall be bonded in the amount of \$50,000 (3rd Party Fidelity Bond).

Any employee whose work habits and/or conduct are deemed objectionable shall be removed from the work force upon request of the authorized Robertson County schools representative.

Safety

The contractor shall be responsible for the training as necessary in the application of chemicals and the use of equipment to facilitate safe conditions for the employees and the Robertson County School System's students and staff.

Security

The contractor shall be responsible for training employees in the security requirements of the Robertson County School System and shall be responsible for the enforcement of the same. The Robertson County School System requires the contractor provide a list of all personnel hired by name, social security number, date of birth, sex, race and address. The contractor shall have at the contractor's expense a background check of all employees through the T.B.I. and F.B.I., and, if the employee in not a citizen, provide documentation of the employee's legal status to work prior to employment. Additionally, each employee shall be informed of the following:

The Contractor shall be responsible for safeguarding against loss, theft or damage to all Robertson County school's property, materials, equipment and accessories that might be exposed to the contractor's personnel.

Guns, knives or other dangerous weapons shall not be allowed on campus.

Alcohol and drugs are prohibited on the campus.

Keys, which may be distributed at the beginning of each work period, shall be returned to the building supervisor at the end of each work period. Keys that will be required by the contractor and employees will be approved by the administration of the Robertson County schools and will be controlled by the person to be named after award of contract. In any event the contractor shall be fully responsible for the security and appropriate use of the keys which may be issued. Additionally, the contractor shall be fully responsible for the replacement of any keys that are lost and the changing of locks when deemed necessary by Robertson County Schools.

Supervision

All supervision as required for the execution of those contractual responsibilities assumed by the contractor shall be done by the contractor or his/her designated representative.

Damage

The contractor shall be responsible for the repair/replacement to the satisfaction of the Robertson County School's representative for any damage to the facility caused by any employee of the contractor. The contractor will be responsible for any fines accessed the school system for fire alarm activation due to employee error or the use of equipment producing emissions, etc.

Equipment and Supplies/Materials

The procurement and maintenance of all equipment required for the successful execution of this contractual obligation shall be the contractor's responsibility. The contractor will provide Robertson County schools with a list of equipment and supplies available to each school.

The list of equipment will be provided to the school system with the bid and be evaluated before the contract is awarded.

The Robertson County School System will provide locked storage spaces, but it shall not be responsible for losses that may be incurred due to theft and/or vandalism. All equipment shall be maintained properly and kept in clean condition by the contractor. All materials will be stored to meet local codes. Machines requiring battery charging will be done in proper areas.

A listing of all chemicals and equipment that will be used by the contractor must be submitted for approval prior to initial service under the contract. Changes may be made only after duly authorized.

All chemicals and equipment must meet or exceed OSHA requirements and commonly recognized safety requirements. Material safety data sheets will be maintained on each job site for all chemicals used in the cleaning processes.

The Contractor must furnish all needed safety equipment and protective devices necessary for the safety of all building occupants and property of the Robertson County School System.

Emergencies

All emergency conditions shall be promptly reported to the county school system's authorized representative.

Contractor's Representative

A representative of the contractor shall be appointed within 24 hours after receipt of contract.

Responsibilities of Robertson County Schools

Storage

Contractor is responsible for all safe storage of equipment and materials. If items need to stay on site for multiple days, an area will be provided by the county. Contractor is responsible for locking and/or securing all equipment

Trash Disposal

Contractor is responsible for providing an onsite dumpster for construction use. Dumpster shall not impede any driveways or current parking areas used by the school

Facility Keys

The Robertson County School System will furnish keys that may be required by the contractor. The keys are not to be duplicated.

Robertson County school's representative

After the award of the contract the Robertson County schools' representative will be named. This representative shall be available, within reason, any time for consultation and liaison purposes, and communications from the contractor shall be handled through this person.

NON-COLLUSION AFFIDAVIT

The agent of the bidding firm hereby certifies to the best of his/her knowledge and belief that this bid proposal to Robertson County, Tennessee has not been prepared in collusion with any other seller of similar products. The agent also certifies that the prices, terms and conditions of said bid proposal have not been communicated by the undersigned, nor by any employee or agent of the bidding firm, to any other seller of similar products and will not be communicated to any such seller prior to the official opening of said bid. The agent further states that no official or employee of Robertson County Government has promised any personal financial or other beneficial interest, either directly or indirectly in order to influence award of this bid.

Authorized Signature, Title (Owner/ Corporate Officer)	Date
Printed Name:	
Company Name	
Mailing Address	
Telephone No.	Fax No.
Contact preferred email address:	

DRUG-FREE WORKPLACE AFFIDAVIT

	undersigned, principal officer of		n
_		-	e
1.			=
2.	employer with no less than five (5) employees receivi or any local government to provide construction servi	ng pay who contracts with the state ces to submit an affidavit stating	
3.	The Company is in compliance with T.C.A. § 50-9-11	13.	
			-
Auth	orized Signature, Title (Owner/ Corporate Officer)	Date	
Print			
employer of five (5) or more employees contracting with Robertson County, To government to provide construction services, hereby states under oath as follows: 1. The undersigned is a principal officer of			-
	Mailing Address		-
	Telephone No.	Fax No.	-
Witn	ess signature :	Date:	
Witn	ess printed name:		

Robertson County, Tennessee Letter of Compliance

Successful bidder must comply with and provide this Letter of Compliance.

Amendments to the Tennessee Code Annotated Section 49-5-413 may require employers doing business with the Robertson County Board of Education to have their employees' criminal history records checked. The law provides that no employer or their employee(s):

- 1. Shall come in direct contact with school children, children in a childcare program; AND/OR
- 2. Shall enter the grounds of a school or childcare center operated by the Robertson County Board of Education when children are present without this compliance letter on file.

Your signature below indicates that you are fully aware of these requirements and that if applicable to your business relationship with the Robertson County Board of Education: (1) you have fully complied with the investigation required; and (2) you and any of your employees to which this applies are qualified to be in contact with the children and/or on school grounds as set forth by the Statute.

Further, you agree to hold Robertson County and/or its Board of Education harmless in all respects from any failure on your part to follow these requirements.

Authorized Signature, Title (Owner/Corporate Officer)	Date
Printed Name:	
Company Name	
Mailing Address	
Telephone No.	Fax No.
Contact preferred email address:	

STATE OF TENNESSEE IRAN DIVESTMENT ACT AGREEMENT

By submission of this bid, each bidder and each person signing on behalf of any bidder certifies, and in the case of a joint bid each party thereto certifies as to its own organization, under penalty of perjury, that to the best of its knowledge and belief that each bidder is not on the list created pursuant to Tennessee Code Annotated § 12-12-106.

Tenn. Code Ann. § 12-12-106 requires the chief procurement officer to publish, using credible information freely available to the public, a list of persons it determines engage in investment activities in Iran, as described in § 12-12-105.

While inclusion on this list would make a person ineligible to contract with the state of Tennessee, if a person ceases its engagement in investment activities in Iran, it may be removed from the list.

If you feel as though you have been erroneously included on this list please contact the Central Procurement Office at CPO.Website@tn.gov.

COMPANY NAME	DATE
REPRESENTATIVE	TITLE

Non-Boycott of Israel Certification

The Contractor certifies that it is not currently engaged in, and will not for the duration of the contract engage in, a boycott of Israel as defined by Tenn. Code Ann. § 12-4-119. This provision shall not apply to contracts with a total value of less than two hundred fifty thousand dollars (\$250,000) or to contractors with less than ten (10) employees.

Signature:	
Printed Name:	
Title:	
Date:	

RE-BID #1526 Form Robertson County Schools August 22, 2023 at 10:00 A.M.

Robertson County Schools is accepting sealed bid proposals for the following:

Earthwork and Asphalt Paving for Innovation Academy

Please provide prices based on the attached specifications.

LUMP SUM PRICE FOR PROJECT AT INNOVATION ACADEMY:

Ψ	_
Authorized Signature, Title (Owner/ Corporate Officer)	Date
Printed Name:	
-	
Company Name	
Company Name	
Mailing Address	-
Telephone No.	 Fax No.
Contact preferred email address:	

SITE PLAN FOR

ROBERTSON COUNTY INNOVATION ACADEMY

715 5TH AVENUE WEST SPRINGFIELD, TN ROBERTSON COUNTY

SHEET INDEX

NOTE	 PROJECT NOTES
C1.00	 OVERALL SITE LAYOUT
C1.01	 NORTH LOT DEMO & INITIAL EPSC
C1.02	 NORTH LOT SITE LAYOUT
C1.03	 NORTH LOT GRADING PLAN
C1.04	 NORTH LOT DRAINAGE PLAN
C1.05	 NORTH LOT STABILIZATION PLAN
C1.06	 NORTH LOT LANDSCAPING PLAN
C1.07	 SOUTH LOT DEMO, INITIAL EPSC, & SITE LAYOUT
C1.08	 SOUTH LOT GRADING, DRAINAGE, & FINAL STABILIZATION PLAN
C1.09	 SOUTH LOT LANDSCAPING PLAN
C2.01	 CONSTRUCTION DETAILS
C2.02	 CONSTRUCTION DETAILS
C2.03	 CONSTRUCTION DETAILS
C2.04	 ADS CHAMBER DETAILS



PHONE: (615) 382-2000 FAX: (888) 373-4485

www.klobereng.com





PROPERTY OWNER/APPLICANT: ROBERTSON COUNTY

SPRINGFIELD, TN

DEED REFERENCE:

MAP 80-H, PARCEL 6 TAORCT DB **327**, PG **573** RORCT

MAP 80-H, PARCEL 5 TAORCT DB 274, PG 475 RORCT

MAP 80-H, PARCEL 4 TAORCT DB **105**, PG **281** RORCT

PROPERTY INFORMATION:

ZONING: R10, MEDIUM RESIDENTIAL DISTRICTS AREA: 901,924 S.F. = 20.71 ACRES

EXISTING USE: MIDDLE SCHOOL PROPOSED USE: ADDITIONAL PARKING LOTS

PARKING INFORMATION:

ADDITIONAL PARKING PROVIDED = 200 SPACES

LOT COVERAGE

EXISTING BUILDING AREA = 55,689 S.F. PROPOSED ASPHALT SURFACE: ±91,024 S.F. IMPERVIOUS AREA: $\pm 91,024$ S.F. = 10.0%

SIGN NOTE:

ALL SIGNS SHALL COMPLY WITH THE MOST CURRENT EDITION OF THE JURISDICTIONAL ZONING ORDINANCE. SEPARATE SIGN PERMIT MAY BE

LANDSCAPE NOTE:

ALL LANDSCAPING SHALL COMPLY WITH THE MOST CURRENT EDITION OF THE JURISDICTIONAL DESIGN STANDARDS AND ZONING REGULATIONS. PLANT TYPES SHOWN MAY BE SUBSTITUTED WITH SIMILAR TYPES AND SIZES THAT ARE NATIVE TO THE AREA AND

UTILITIES NOTE:

COORDINATE LOCATION AND INSTALLATION OF UTILITIES WITH MECHANICAL, ELECTRICAL AND PLUMBING PLANS, SPRINGFIELD WATER DEPARTMENT AND TENNESSEE WATER RESOURCES

SPRINGFIELD WATER & WASTEWATER CONTACT: TERRY BEERS 824 CENTRAL AVENUE SPRINGFIELD, TENNESSEE 37172 TELEPHONE: (615) 382-1600

APPROVED BY THE GOVERNING JURISDICTION.

SPRINGFIELD WATER & WASTEWATER CONTACT: TERRY BEERS 824 CENTRAL AVENUE SPRINGFIELD, TENNESSEE 37172

ELECTRIC: SPRINGFIELD ELECTRIC 1000 CENTRAL AVENUE WEST SPRINGFIELD, TENNESSEE 37172 TELEPHONE: (615) 384-6770

TELEPHONE: (615) 382-1600

NO SERVICE REQUIRED

GENERAL NOTES:

- 1. PRIOR TO BEGINNING CONSTRUCTION ON THIS SITE THE LOCATION OF UTILITIES MUST BE IDENTIFIED BY CALLING THE TOLL-FREE TENNESSEE ONE CALL REFERENCE NUMBER 1-800-351-1111.
- 2. ALL CONSTRUCTION ON THIS SITE SHALL COMPLY WITH APPLICABLE REGULATIONS AS SPECIFIED BY THE CITY OF SPRINGFIELD AND THE STATE OF TENNESSEE.
- 3. THE BOUNDARY SURVEY SHOWN HEREON WAS TAKEN FROM A SURVEY BY STEVEN E. ARTZ SURVEYING OF SPRINGFIELD, TN, DATED 08/12/2021.
- 4. ACCORDING TO MAP 47147C037OC, DATED 04/16/2008, THIS SITE IS NOT IN A FLOOD HAZARD AREA. 5. SITE CONSTRUCTION WILL BEGIN FOLLOWING PLAN APPROVAL AND PRE-CONSTRUCTION MEETING BY THE CITY OF SPRINGFIELD.

GENERAL UTILITY NOTES:

- 1. WATER AND SEWER CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH ALL LOCAL CODES AND
- SPECIFICATIONS. THE CONTRACTOR SHALL PAY ALL FEES AND OBTAIN ALL PERMITS.
- 3. ALL EXISTING UNDERGROUND UTILITY LOCATIONS ARE APPROXIMATE AND ARE BASED ON TOPOGRAPHIC SURVEYS AND RECORD DRAWINGS FROM THE FACILITY. ADDITIONAL UTILITIES MAY BE PRESENT. SHOULD UNCHARTED UTILITIES BE ENCOUNTERED DURING EXCAVATION OPERATIONS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER AS
- SOON AS POSSIBLE FOR INSTRUCTIONS. 4. THE CONTRACTOR SHALL NOTIFY THE TENNESSEE ONE-CALL SYSTEM, INC. (TOCS) AT 1-800-351-1111 AND ANY NON-TOCS MEMBER UTILITY INDIVIDUALLY, AT LEAST 3 WORKING DAYS PRIOR TO ANY EXCAVATION AND/OR DEMOLITION. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONTACT THE LOCAL UTILITY COMPANY NO LESS THAN 72 HOURS PRIOR TO COMMENCING WORK.
- 5. MAINTAIN 10-FOOT HORIZONTAL AND 18-INCH VERTICAL SEPARATION BETWEEN SANITARY SEWER AND WATER
- 6. CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF ALL EXISTING UTILITIES INCLUDING IRRIGATION. TAKE CARE TO PROTECT UTILITIES THAT ARE TO REMAIN. REPAIR DAMAGE ACCORDING TO LOCAL STANDARDS AND AT THE CONTRACTOR'S EXPENSE. COORDINATE ALL CONSTRUCTION WITH THE APPROPRIATE UTILITY COMPANY. RELOCATE IRRIGATION LINES AS NECESSARY FOR CONSTRUCTION.
- 7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE SEQUENCING OF CONSTRUCTION FOR ALL UTILITY LINES SO THAT WATER LINES AND UNDERGROUND ELECTRIC DO NOT CONFLICT WITH SANITARY SEWERS OR
- STORM SEWERS. INSTALL UTILITIES PRIOR TO FINAL PAVEMENT CONSTRUCTION. 8. BACKFILL UTILITY TRENCHES UNDER PAVEMENT AREAS WITH CRUSHED STONE OR GRAVEL. BACKFILL UTILITY TRENCHES IN LAWN AREAS WITH SATISFACTORY FILL MATERIAL COMPACTED TO AT LEAST 98% OF MAXIMUM PER
- 9. ADJUST ALL EXISTING CASTINGS TO MATCH PROPOSED FINISH GRADE.
- 10. THRUST BLOCK ALL WATERLINE FITTINGS WITH CONCRETE (4,000 P.S.I. MINIMUM) POURED AGAINST UNDISTURBED EARTH TO SUSTAIN TEST PRESSURE SPECIFIED. FORM THRUST BLOCKING SO AS TO NOT EMBED JOINTS, BOLTS, VALVE BOXES, OR OPERATING NUTS.
- 11. PROVIDE VENTS AT HIGH POINTS IN WATERLINE AS NECESSARY FOR EXPELLING AIR DURING FILLING OF WATERLINE. PROVIDE BRONZE CORPORATION STOP FOR CLOSING VENT DURING TESTING AND SERVICE. LEAVE VENT COMPONENTS PLUGGED AND ATTACHED TO PIPE AFTER SUCCESSFUL TEST.
- 12. EXCESS MATERIAL SHALL BE DISPOSED OF BY THE CONTRACTOR OFF THE OWNER'S PROPERTY AT NO ADDITIONAL COST IN A LEGAL MANNER.
- 13. ALL SANITARY SEWER PIPE SHALL BE CLASS SDR 35 PVC UNLESS NOTED OTHERWISE.
- 14. ALL WATER MAINS SHALL BE PRESSURE C900 PVC UNLESS NOTED OTHERWISE. 15. ALL FIRE HYDRANT ASSEMBLIES SHALL BE INSTALLED BETWEEN 3' AND 7' FROM PAVED SURFACE.
- 16. PROVIDE AS-BUILT DRAWINGS WHICH INCLUDE AT LEAST TWO DIMENSIONS TO EACH VALVE AND MANHOLE FROM KNOWN SITE FEATURES. DRAWINGS SHALL INCLUDE VERTICAL AND HORIZONTAL INFORMATION ON ALL NEW UTILITIES AS WELL AS EXISTING UTILITIES ENCOUNTERED.

EP&SC NOTES:

- 1. THE CONTRACTOR SHALL DESIGNATE IN WRITING THE NAME AND PHONE NUMBER OF THE INDIVIDUAL
- RESPONSIBLE FOR EROSION AND SEDIMENT CONTROLS. 2. THE CONSTRUCTION ACTIVITY ANTICIPATED ON THIS PROJECT INCLUDES CLEARING, GRUBBING, GRADING,
- 3. THE PROJECT IS SUBJECT TO INSPECTION BY THE CITY AT ANY TIME AND ITEMS FOUND DEFICIENT SHALL BE
- IMMEDIATELY CORRECTED. THE CITY MAY STOP CONSTRUCTION OF PROPERTIES, OR ADMINISTER OTHER ENFORCEMENT ACTIONS AS DEFINED BY THE CITY.
- 4. INSPECTIONS SHALL BE CONDUCTED PER THE LATEST EDITION OF THE TDEC CONSTRUCTION GENERAL PERMIT. SEE SECTION 5.5.3.11.
- 5. THE APPROXIMATE TOTAL AREA OF THE SITE IS 20.71 ACRES. THE APPROXIMATE TOTAL AREA OF GRADING
- PROPOSED IS 3.86 ACRES.
- 6. THE INCREASE IN POST-CONSTRUCTION IMPERVIOUS AREA IS 2.09 ACRES.
- 7. THE ANTICIPATED FILL MATERIAL WILL CONSIST OF ON-SITE SOIL AND/OR OFF-SITE SOIL BORROW MATERIALS. 8. IF REQUIRED, THE OWNER AND THE CONTRACTOR SHALL SUBMIT A NOTICE OF INTENT (NOI) TO DISCHARGE CONSTRUCTION ACTIVITY STORMWATER APPLICATION TO THE LOCAL TENNESSEE ENVIRONMENTAL ASSISTANCE CENTER AT LEAST 30 DAYS PRIOR TO BEGINNING CONSTRUCTION. THE CONTRACTOR AND OWNER SHALL PROVIDE (WITH THE NOI FOR THIS PROJECT) EXISTING NPDES PERMIT TRACKING NUMBERS FOR SITE WHERE
- BORROW MATERIAL MAY BE OBTAINED AND WHERE SPOIL MATERIAL MAY BE PLACED. SHOULD PERMITS NOT EXIST FOR BORROW AND SPOIL SITES, SEPARATE NOI'S SHALL BE PROVIDED BY THE OWNER OR CONTRACTOR. 9. IF REQUIRED, THE NOTICE OF COVERAGE (NOC) OF THE PERMIT TO DISCHARGE CONSTRUCTION ACTIVITY STORMWATER SHALL BE POSTED NEAR THE CONSTRUCTION ENTRANCE. THE CONTRACTOR SHALL HAVE A SET OF APPROVED EROSION CONTROL PLANS ON SITE DURING ALL CONSTRUCTION.
- 10. IF REQUIRED, AN EROSION PREVENTION SILTATION CONTROL PLAN (EP&SC) AND LAND DISTURBANCE PERMIT SHALL BE IN PLACE PRIOR TO ANY GRADING, CLEARING AND/OR ANY OTHER CONSTRUCTION ACTIVITY. EROSION CONTROL DEVICES SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD; GENERALLY CONSIDERED TO BE THROUGH THE COMPLETION OF RESTORATION. IF REQUIRED, THE EP&SC PLAN ALONG WITH AN INSPECTION CHECKLIST AND STORMWATER PERMIT MUST BE AT THE PROJECT SITE AT ALL TIMES. THE INSPECTION CHECKLIST SHALL HAVE A RECORD OF DATES EP&SC DEVICES ARE INSPECTED AND ANY CORRECTION ACTION TAKEN OR MAJOR OBSERVATIONS. BMP'S MUST BE INSPECTED BY A QUALIFIED PERSON WHO HAS TAKEN AN APPROVED EROSION AND SEDIMENTATION COURSE.
- 11. APPROVED INLET PROTECTIONS FOR NEARBY STORM SEWER CURB AND DROP INLETS MUST BE INSTALLED PRIOR TO GRADING COMMENCEMENT.
- 12. SILT FENCE, OR OTHER SEDIMENT BARRIERS ARE TO BE INSTALLED PROPERLY ALONG TOPOGRAPHICAL CONTOURS DOWN SLOPE OF THE AREA TO BE DISTURBED PRIOR TO ANY GRADING, CLEARING AND/OR ANY
- OTHER CONSTRUCTION ACTIVITY. 13. ALL EP&SC DEVICES ARE TO REMAIN IN PLACE UNTIL THE SITE HAS BEEN STABILIZED AND A GOOD STAND OF GRASS HAS BEEN ESTABLISHED.
- 14. STABILIZATION MEASURES MUST BE PERFORMED WITHIN SEVEN (7) DAYS IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED, AND WITHIN FOURTEEN (14) DAYS AFTER FINAL GRADING. ALL SLOPES 3:1 OR GREATER SHALL BE STABILIZED WITHIN SEVEN (7) DAYS. 15. REFER TO STORMWATER POLLUTION PREVENTION PLAN (SWPPP) FOR ADDITIONAL REQUIREMENTS.
- 16. PRE-CONSTRUCTION VEGETATIVE GROUND COVER SHALL NOT BE REMOVED MORE THAN 14 CALENDAR DAYS PRIOR TO GRADING. ALL GRADED AREAS EXPECTED TO REMAIN UNFINISHED AND UNWORKED FOR MORE THAN 14 CALENDAR DAYS SHALL BE COVERED WITH TEMPORARY GRASS, SOD, STRAW, MULCH, OR FABRIC MATS. PERMANENT SOIL STABILIZATION SHALL BE INSTALLED WITHIN 14 CALENDAR DAYS OF FINAL GRADING.
- 17. EXCAVATED TOPSOIL TO BE REUSED MUST BE STOCKPILED AND ENCIRCLED WITH SILT FENCING. 18. THIS SITE SHALL CONTAIN A TEMPORARY STONE CONSTRUCTION ENTRANCE THAT CONFORMS TO REQUIRED SPECIFICATIONS PRIOR TO GRADING COMMENCEMENT. THE STONE SHALL BE 2 TO 3 INCH IN DIAMETER AND SHALL BE KEPT CLEAN BY ADDING STONE AS NEEDED. IT SHALL BE AT LEAST 12 INCHES DEEP UNDERLAIN
- WITH FILTER FABRIC AND 20 FEET WIDE. 19. VEGETATIVE BUFFERS OR OTHER PROTECTION MUST BE PROVIDED ALONG STREAMS, RIVERS, AND PONDS TO
- 20. ALL TREES DESIGNATED TO REMAIN, MUST BE PROTECTED. HEAVY EQUIPMENT SHOULD NOT BE OPERATED OR STORED, NOR MATERIALS HANDLED OR STORED, WITHIN THE DRIP LINES OF TREES 21. SEDIMENT MUST BE REMOVED FROM SEDIMENT BARRIERS, PONDS, AND OTHER SEDIMENT CONTROLS WHEN
- DESIGN CAPACITY HAS BEEN REDUCED BY 50%
- 22. SEDIMENT THAT HAS ESCAPED THE CONSTRUCTION SITE AND HAS COLLECTED IN THE STREET OR DRAINAGE STRUCTURES MUST IMMEDIATELY BE PHYSICALLY REMOVED 23. BUILDING AND WASTE MATERIALS, AND NON STORM WATER DISCHARGES, SUCH AS CONCRETE, PAINT WASH
- WATER, OR MACHINERY LEAKAGE, OR SPILLAGE MUST BE MANAGED TO PREVENT THEM FROM ENTERING THE STORM WATER SYSTEM, GROUND WATER, OR NEARBY WATER BODY.
- 24. ALL EPSCS HAVE BEEN DESIGNED TO CONTROL THE RAINFALL AND RUNOFF FROM A 2 YEAR, 24 HOUR STORM
- 25. TEMPORARY SEEDING FOR TENNESSEE PROJECTS INCLUDE THE FOLLOWING OPTIONS: JAN 1 - MAY 1 ITALIAN RYE / KOREAN LESPEDEZA / SUMMER OATS
- MAY 1 JULY 15 SUDAN OR STARR MILLET JULY 15 - JAN 1 BALBOA RYE / ITALIAN RYE
- 26. MULCHING SHALL CONSIST OF LOOSE HAY OR STRAW APPLIED AT THE RATE OF 2 TONS/ACRE 27. UPON COMPLETION OF SITE STABILIZATION, THE OWNER AND CONTRACTOR SHALL PROVIDED A NOTICE OF TERMINATION (NOT) FOR THE PROJECT TO THE LOCAL ENVIRONMENTAL ASSISTANCE CENTER. A COPY OF THE
- NOT SHALL BE PROVIDED TO THE ENGINEER. 28. THE CONTRACTOR SHALL MAINTAIN RECORDS OF EROSION CONTROL INSPECTIONS AND REPAIRS FOR A MINIMUM OF 3 YEARS AFTER COMPLETION OF CONSTRUCTION.
- 29. TOPSOIL SHALL BE PLACED ON EXCAVATED AREAS WHICH REQUIRE NEW VEGETATION. GROUND COVER SHALL BE REESTABLISHED WITH KENTUCKY 31 FESCUE SEEDED AT A MINIMUM OF 250 LBS. PER ACRE WITHIN 72 HOURS OF FINAL GRADING. SLOPES 3:1 OR GREATER, AND AREAS INDICATED ON PLANS, SHALL BE LINED WITH NORTH
- AMERICAN GREEN S150 GRASS MATTING OR EQUAL. SOD MAY BE SUBSTITUTED FOR MATTING OR SEED & 30. SILT FENCE SHALL BE INSTALLED IN ALL EROSION AREAS WHICH COULD ALLOW UNTREATED STORMWATER RUNOFF TO BE DISCHARGED FROM THE PROPERTY. ALL EROSION CONTROL MEASURES SHALL BE CONSISTENT WITH THE PROVISIONS DESCRIBED IN THE MOST CURRENT EDITION OF THE TENNESSEE EROSION & SEDIMENT
- 31. SILT BARRIERS SHALL BE CLEANED OF ACCUMULATED SEDIMENT WHEN APPROXIMATELY 1/3 FILLED. 32. ALL LOCATIONS OF TEMPORARY EROSION CONTROL DEVICES SHALL BE SUBJECT TO ADJUSTMENT AS DIRECTED
- BY THE ENGINEER 33. WHEN THE TEMPORARY EROSION CONTROL DEVICES ARE NO LONGER REQUIRED FOR THE INTENDED PURPOSE
- THEY SHALL BE REMOVED. 34. REPLACE DAMAGED AND WORN OUT SILT BARRIERS AS DIRECTED BY THE CITY/ENGINEER. 35. PROVIDE TEMPORARY SEEDING ON STOCKPILES AND ALL OTHER AREAS OF THE SITE THAT WILL REMAIN
- UNDISTURBED FOR 14 DAYS OR MORE. 36. I CERTIFY THAT THESE PLANS HAVE BEEN PREPARED BY ME AND/OR UNDER MY DIRECT SUPERVISION. THIS PROJECT IS PLANNED TO DISTURB MORE THAN ONE ACRE, IT THEREFORE FALLS UNDER THE TENNESSEE DIVISION OF WATER POLLUTION CONTROL'S GENERAL NPDES PERMIT TO DISCHARGE STORMWATER ASSOCIATED WITH CONSTRUCTION ACTIVITY. KLOBER ENGINEERING SERVICES WILL ASSIST THE CONTRACTOR IN SUBMITTING THE 'NOTICE OF INTENT (NOI) TO CONSTRUCT' TO THE STATE AT LEAST 30 DAYS PRIOR TO BEGINNING LAND DISTURBANCE. THE TN GENERAL CONSTRUCTION PERMIT IS TNR246407.

CONTROL HANDBOOK.

LAYOUT AND PAVING NOTES:

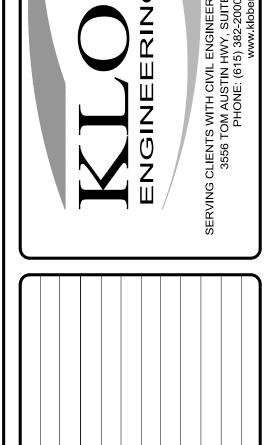
- 1. THE CONTRACTOR SHALL CHECK EXISTING GRADES, DIMENSIONS, AND INVERTS IN THE FIELD AND REPORT ANY DISCREPANCIES TO THE ENGINEER PRIOR TO BEGINNING WORK. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF ALL EXISTING UTILITIES, INCLUDING IRRIGATION LINES,
- TAKE CARE TO PROTECT UTILITIES THAT ARE TO REMAIN, AND REPAIR CONTRACTOR CAUSED DAMAGE ACCORDING TO CURRENT LOCAL STANDARDS AND AT THE CONTRACTOR'S EXPENSE. COORDINATE ALL CONSTRUCTION WITH THE APPROPRIATE UTILITY COMPANY. RELOCATE IRRIGATION LINES AS NECESSARY FOR CONSTRUCTION.
- THE CONTRACTOR SHALL COMPLY WITH ALL LOCAL CODES, OBTAIN ALL PERMITS, AND PAY ALL FEES PRIOR TO BEGINNING WORK. 4. PROVIDE A SMOOTH TRANSITION BETWEEN EXISTING PAVEMENT AND NEW PAVEMENT. FIELD ADJUSTMENT OF FINAL
- GRADES MAY BE NECESSARY. INSTALL ALL UTILITIES PRIOR TO INSTALLATION OF PAVEMENT. THE CONTRACTOR SHALL PROTECT ALL TREES TO REMAIN, IN ACCORDANCE WITH THE SPECIFICATIONS. DO NOT OPERATE OR STORE HEAVY EQUIPMENT, NOR HANDLE, NOR STORE MATERIALS WITHIN THE DRIPLINES OF TREES
- OR OUTSIDE THE LIMIT OF GRADING. 6. CONCRETE WALKS AND PADS SHALL HAVE A BROOM FINISH. ALL CONCRETE SHALL BE 4,000 P.S.I. UNLESS OTHERWISE NOTED. CURB RAMPS, SIDEWALK SLOPES, AND DRIVEWAY RAMPS SHALL BE CONSTRUCTED IN
- ACCORDANCE WITH ALL CURRENT LOCAL AND ADA REQUIREMENTS. IF APPLICABLE, THE CONTRACTOR SHALL REQUEST INSPECTION OF SIDEWALK AND RAMP FORMS PRIOR TO PLACEMENT OF CONCRETE.
- ALL DAMAGE TO EXISTING ASPHALT PAVEMENT TO REMAIN WHICH RESULTS FROM NEW CONSTRUCTION SHALL BE REPLACED WITH LIKE MATERIALS AT CONTRACTOR'S EXPENSE.
- DIMENSIONS ARE TO THE FACE OF CURB, EDGE OF CONCRETE, OR TO THE FACE OF BUILDING, UNLESS
- COORDINATES ARE FOR FACE OF BUILDINGS, CENTER LINES OF DRIVEWAYS, CENTER OF SANITARY SEWER
- MANHOLES, AND CENTER AT FACE OF CURB ON CURB INLETS, UNLESS OTHERWISE NOTED. 10. EXCESS MATERIAL SHALL BE DISPOSED OF BY THE CONTRACTOR OFF THE OWNER'S PROPERTY AT NO ADDITIONAL COST IN A LEGAL MANNER.
- . MAINTAIN ONE SET OF APPROVED CONSTRUCTION DRAWINGS ON THE JOB SITE, WITH FIELD REVISIONS, FOR
- DISTRIBUTION TO THE ENGINEER UPON COMPLETION. 12. PARKING STRIPES SHALL BE 4-INCH WHITE PAVEMENT PAINT.
- 13. CONTRACTION JOINTS SHALL BE CONSTRUCTED TO A DEPTH OF AT LEAST 1/4 THE CONCRETE THICKNESS, AND SHALL DIVIDE THE CONCRETE ROUGHLY INTO SQUARES WITH MAXIMUM 10' SEGMENTS.

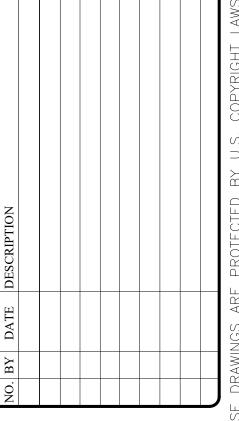
<u>GRADING AND DRAINAGE NOTES:</u>

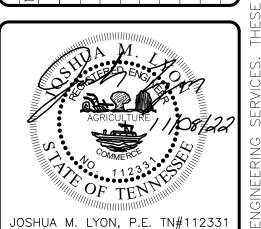
- 1. TOPSOIL SHALL BE STRIPPED FROM ALL CUT AND FILL AREAS, STOCKPILED AND REDISTRIBUTED OVER GRADED AREAS TO A MINIMUM DEPTH OF 6 INCHES. MAKE STOCKPILES FREE DRAINING AND PROVIDE EROSION AND
- SEDIMENTATION CONTROLS AROUND STOCKPILES. ALL GRADED AREAS SHALL BE SEEDED AND MULCHED WITHIN 14 DAYS AFTER GRADING IS COMPLETED.
- . CONSTRUCT TEMPORARY EROSION CONTROL AS SHOWN ON THE DRAWINGS PRIOR TO BEGINNING GRADING
- 4. ALL DRAINAGE STRUCTURES, PIPES WITHIN THE LIMITS OF CONSTRUCTION, AND DETENTION PONDS SHALL HAVE
- SEDIMENT REMOVED PRIOR TO FINAL ACCEPTANCE. 5. THE GRATE ELEVATIONS FOR CURB INLETS ARE GIVEN TO THE CENTER OF THE INLETS AT THE FACE OF CURB. THE GRATES SHALL SLOPE LONGITUDINALLY WITH THE PAVEMENT GRADE. ADJUST THE CASTING TO FALL ALONG
- 6. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF ALL EXISTING UTILITIES, PROTECT UTILITIES TO REMAIN, AND REPAIR CONTRACTOR-CAUSED DAMAGE ACCORDING TO LOCAL STANDARDS AT CONTRACTOR'S EXPENSE.
- NOTIFY LOCAL UTILITY LOCATOR SERVICE OF INTENDED EXCAVATION/UTILITY TRENCHING OPERATIONS. 8. IN THE EVENT OF ANY DISCREPANCIES FOUND IN THE DRAWINGS OR IF PROBLEMS ARE ENCOUNTERED DURING
- CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE ENGINEER BEFORE PROCEEDING WITH THE WORK. 9. THE CONTRACTOR SHALL GIVE ALL NECESSARY NOTICES AND OBTAIN ALL PERMITS.
- 10. SPOT ELEVATIONS AND CONTOURS REPRESENT PROPOSED FINISHED GRADE AND TOP OF FINISHED PAVEMENT. 11. CONTRACTOR SHALL VERIFY EXISTING ELEVATIONS AND INVERTS PRIOR TO BEGINNING WORK.
- 12. EXCESS MATERIAL SHALL BE DISPOSED OF BY THE CONTRACTOR OFF THE OWNER'S PROPERTY AT NO ADDITIONAL 13. CONTOUR LINES AND SPOT ELEVATIONS ARE THE RESULT OF A DETAILED ENGINEERING GRADING DESIGN AND
- REFLECT A PLANNED INTENT WITH REGARD TO DRAINAGE. SHOULD THE CONTRACTOR HAVE ANY QUESTIONS OF THIS INTENT OR ANY PROBLEMS WITH THE CONTINUITY OF GRADES, THE ENGINEER SHALL BE CONTACTED PRIOR TO BEGINNING WORK
- 14. EXISTING MANHOLE CASTINGS TO REMAIN SHALL BE RESET TO MATCH NEW GRADE. 15. ALL CURBS AND SIDEWALKS SHALL BE BACKFILLED WITH TOPSOIL, AND SEEDED AND MULCHED, UNLESS
- OTHERWISE NOTED. 16. ALL PIPES UNDER PAVED AREAS SHALL BE BACKFILLED WITH CRUSHED STONE. ALL PIPES UNDER LAWN AREAS
- SHALL BE BACKFILLED WITH SATISFACTORY MATERIAL COMPACTED TO 98% MAXIMUM PER ASTM D698. 17. ALL STORM DRAINAGE PIPE SHALL BE CLASS III RCP UNLESS OTHERWISE NOTED, PIPE LENGTHS SHOWN ARE
- 18. ALL CUT AND FILL SLOPES TO BE 3:1 MAXIMUM, UNLESS NOTED OTHERWISE.
- 19. SATISFACTORY TOPSOIL IS DEFINED AS SOIL BEING FREE OF SUBSOIL, CLAY LUMPS, STONES, OTHER OBJECTS
- OVER 1 INCH IN DIAMETER, OR CONTAMINANTS. 20. AFTER STRIPPING TOPSOIL, PROOFROLL SUBGRADE WITH A LOADED DUMP TRUCK WITH A MINIMUM WEIGHT OF 20
- 21. FINISH GRADES TOLERANCES ARE 0.10 FOOT ABOVE OR BELOW DESIGN ELEVATIONS.
- 2. MAXIMUM SLOPES IN ALL DIRECTIONS OF HANDICAP PARKING SPACES/AISLES SHALL BE 2%. 23. EARTHWORK FILL SHALL INCLUDE STRIPPING TOPSOIL AND PLACING ENGINEERED FILL IN MAXIMUM 8" COMPACTED
- LIFTS WITH DENSITY OF 98% OF MAXIMUM PER ASTM D698. CONSULT WITH CURRENT GEOTECHNICAL REPORT. 24. AN AS-BUILT TOPOGRAPHIC SURVEY OF THE FINAL STORMWATER MANAGEMENT POND(S) AND OUTLET STRUCTURE(S) SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW FOR COMPLIANCE WITH THE ORIGINAL DESIGN. THE CONTRACTOR MAY SUBMIT A PRELIMINARY TOPOGRAPHIC SURVEY TO THE ENGINEER PRIOR TO FINAL
- TOPSOIL APPLICATION. 25. THE STORMWATER RUNOFF CALCULATIONS ON THIS SITE HAVE BEEN PERFORMED USING THE TR-55 METHOD AND RATIONAL METHOD. RAINFALL DATA WAS OBTAINED FROM NRCS USGS PROGRAM. THE DETENTION BASIN IS SIZED
- TO HANDLE A 2 THROUGH 100 YEAR STORM EVENTS WITHOUT OVERTOPPING THE POND. STORMWATER PIPES HAVE BEEN SIZED TO HANDLE A 25 YEAR STORM EVEN UNDER FREEFLOW CONDITIONS. 26. THE WATER QUALITY FEATURES SHALL BE INSPECTED AND CLEANED EVERY 3 MONTHS DURING THE FIRST YEAR
- OF SERVICE. MAINTENANCE WILL BE PERFORMED AS REQUIRED AFTER ONE YEAR. 27. IF A STORMWATER QUALITY UNIT/SYSTEM IS REQUIRED ON A SITE PLAN/SUBDIVISION PLAT, THE ENGINEER OF RECORD WILL BE REQUIRED TO INSPECT AND CERTIFY TO THE CONSTRUCTION/INSTALLATION OF THE FACILITY PER THE PLANS APPROVED BY THE CITY OF SPRINGFIELD. WRITTEN CERTIFICATION SHALL INCLUDE AS-BUILT

COMMENCEMENT OF WORK AND THE ISSUANCE OF AN OCCUPANCY PERMIT.

DRAWINGS, PICTURES OF INSTALLATION AND VARIOUS ANALYSES THAT MAY BE REQUIRED BY THE STORMWATER 28. ALL TEMPORARY AND PERMANENT BMP'S, INCLUDING DETENTION, SHALL BE INSPECTED BY THE ENGINEER OF RECORD AND CERTIFIED TO BE IN ACCORDANCE WITH THE APPROVED CONSTRUCTION PLANS PRIOR TO THE







CONSTRUCTION **DOCUMENTS**

口

M

CALL BEFORE YOU DIG

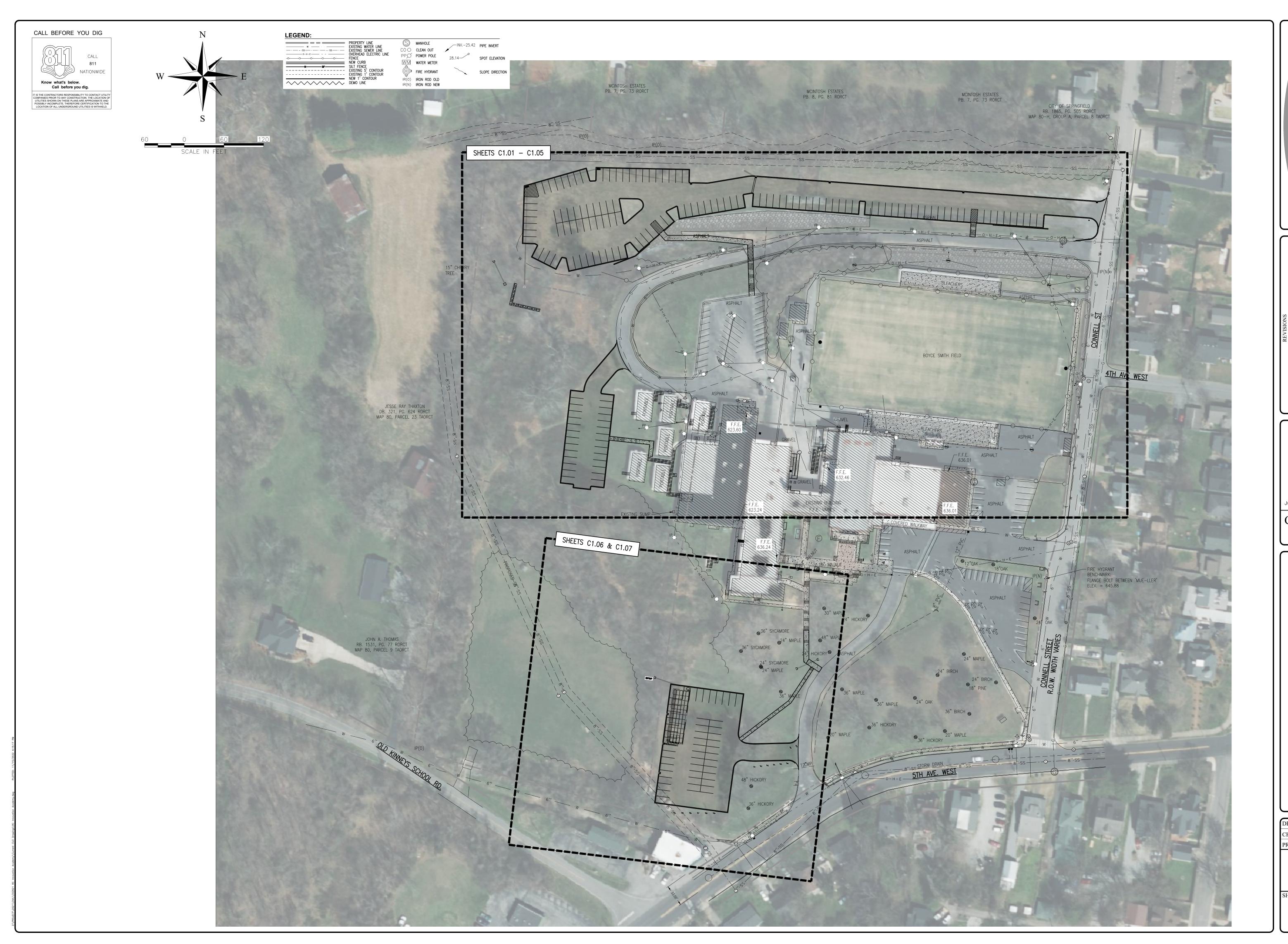
Know what's below.

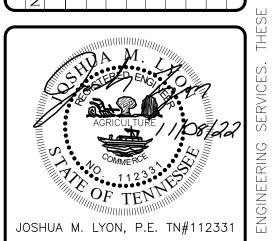
Call before you dig. IT IS THE CONTRACTORS RESPONSIBILITY TO CONTA

CALL

811 NATIONWIDE DRAWN BY: CHECKED BY: PROJECT NO.: C02921

> **PROJECT** NOTES





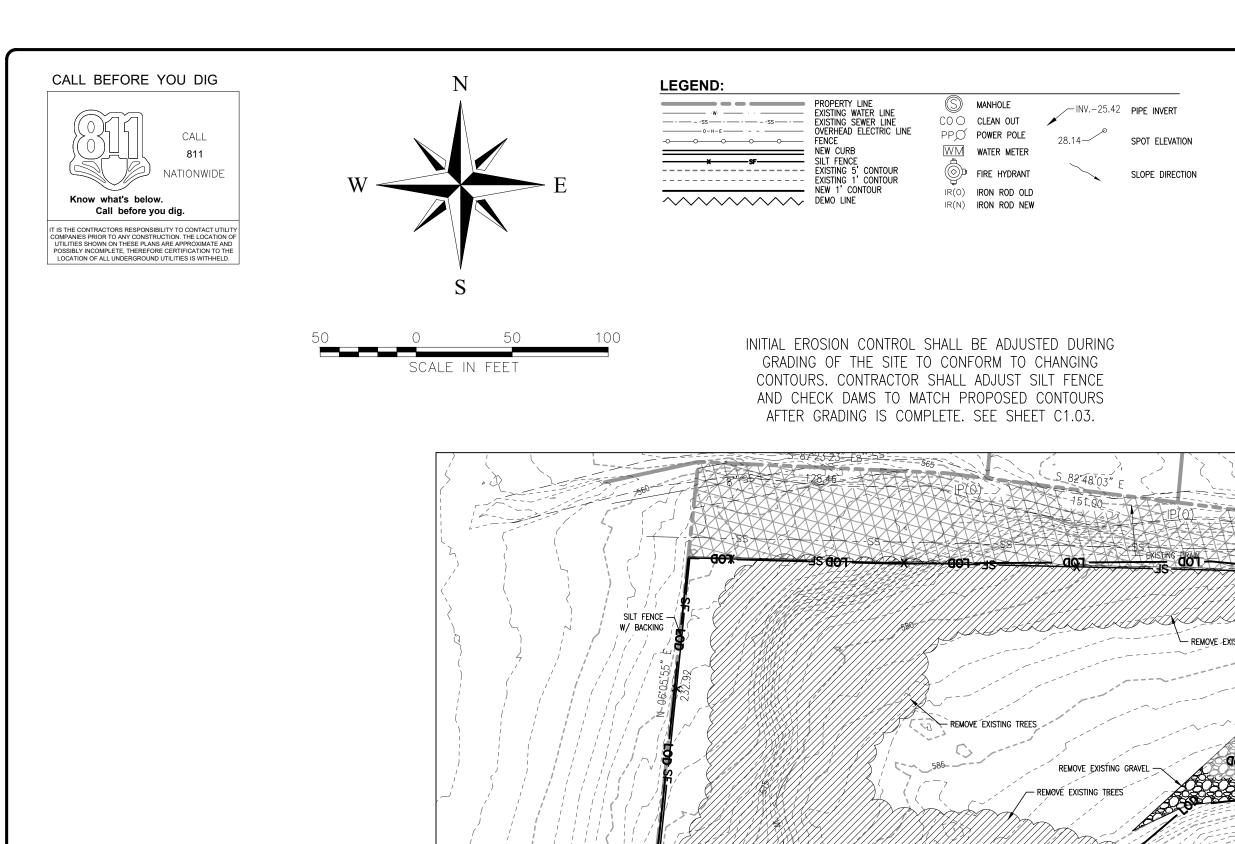
CONSTRUCTION DOCUMENTS

DRAWN BY: CHECKED BY: PROJECT NO.:

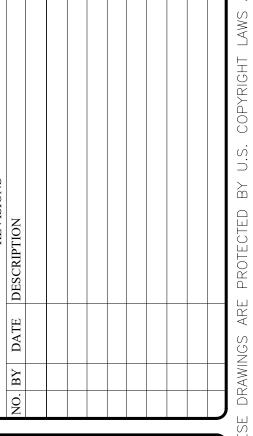
OVERALL SITE LAYOUT

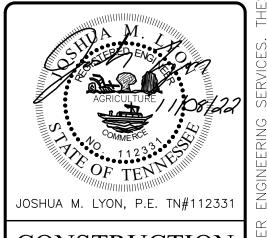
SHEET NUMBER

ROBERTSON (INNOVATION /





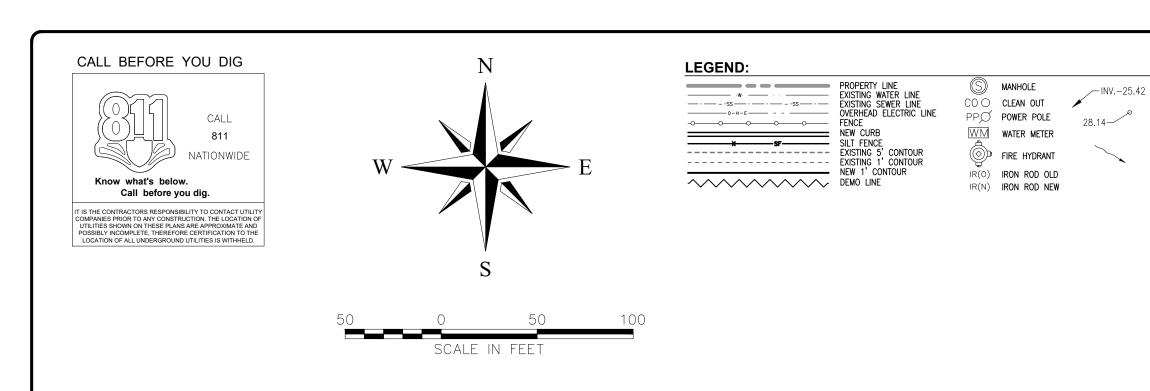


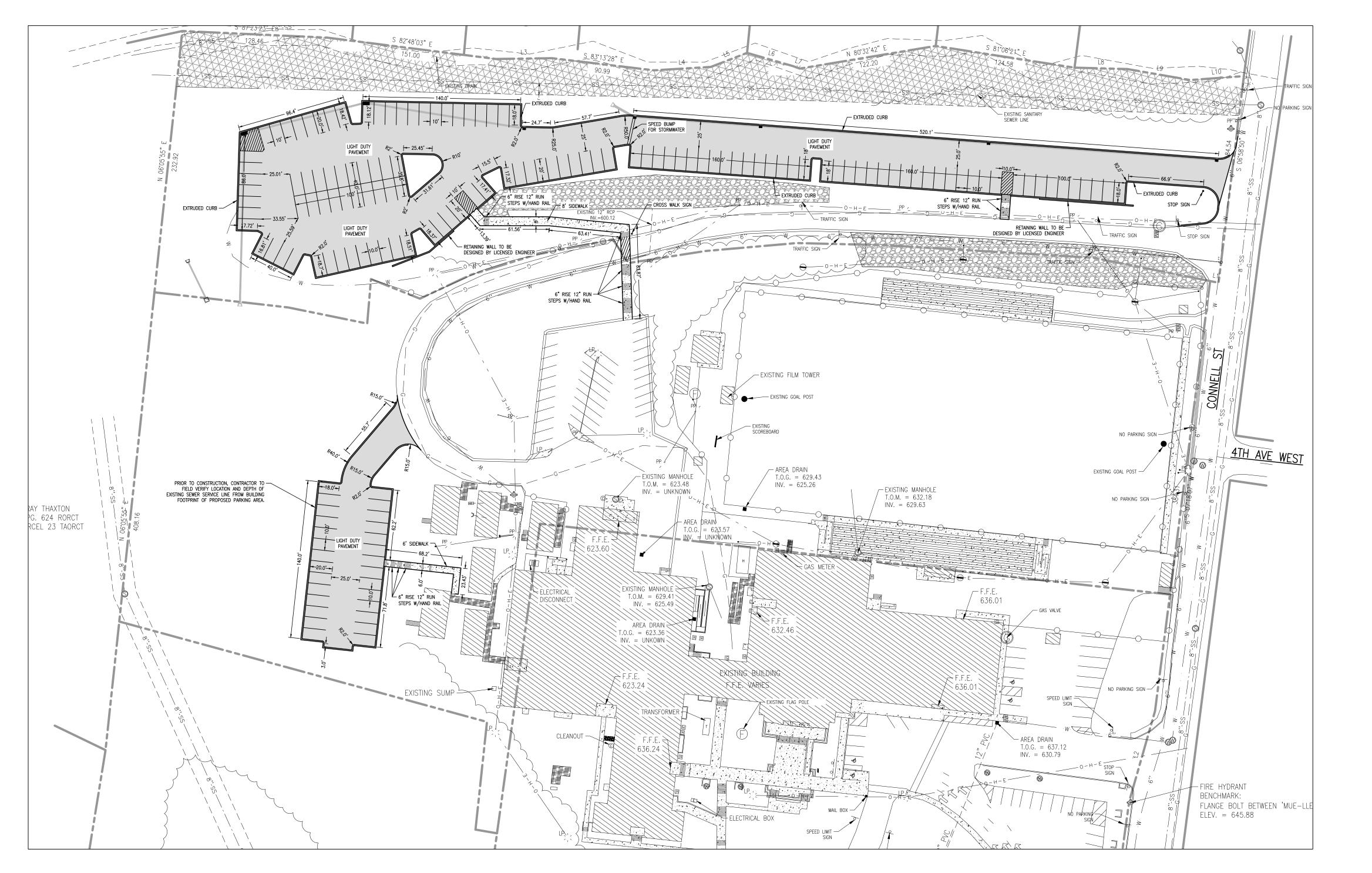


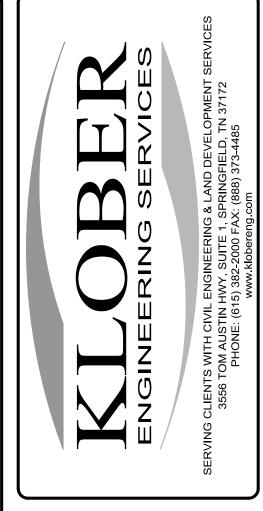
CONSTRUCTION DOCUMENTS

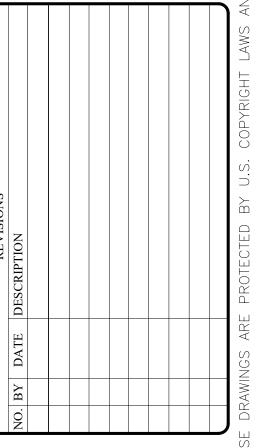
ROBERTSON (INNOVATION / DRAWN BY:

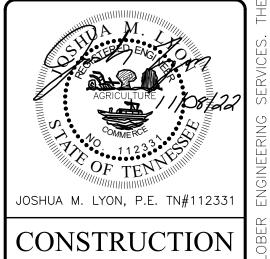
CHECKED BY: NORTH LOT DEMO & INITIAL EPSC











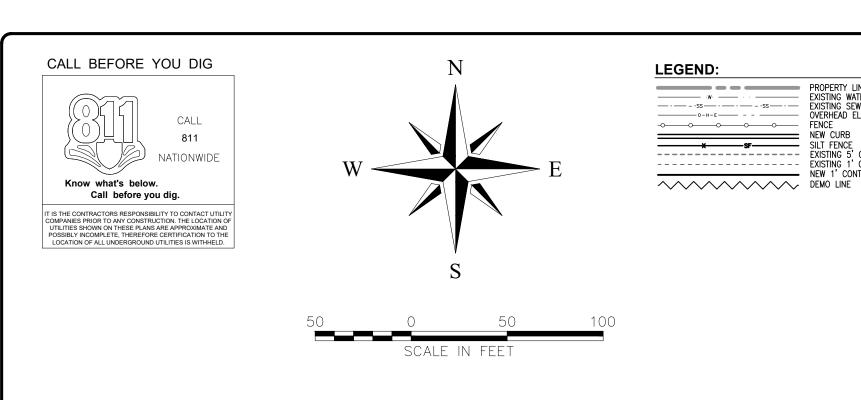
CONSTRUCTION DOCUMENTS

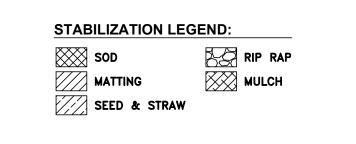
ROBERTSON COUNTINNOVATION ACADE

715 5TH AVENUE WEST
SPRINGFIELD, TN
ROBERTSON COUNTY

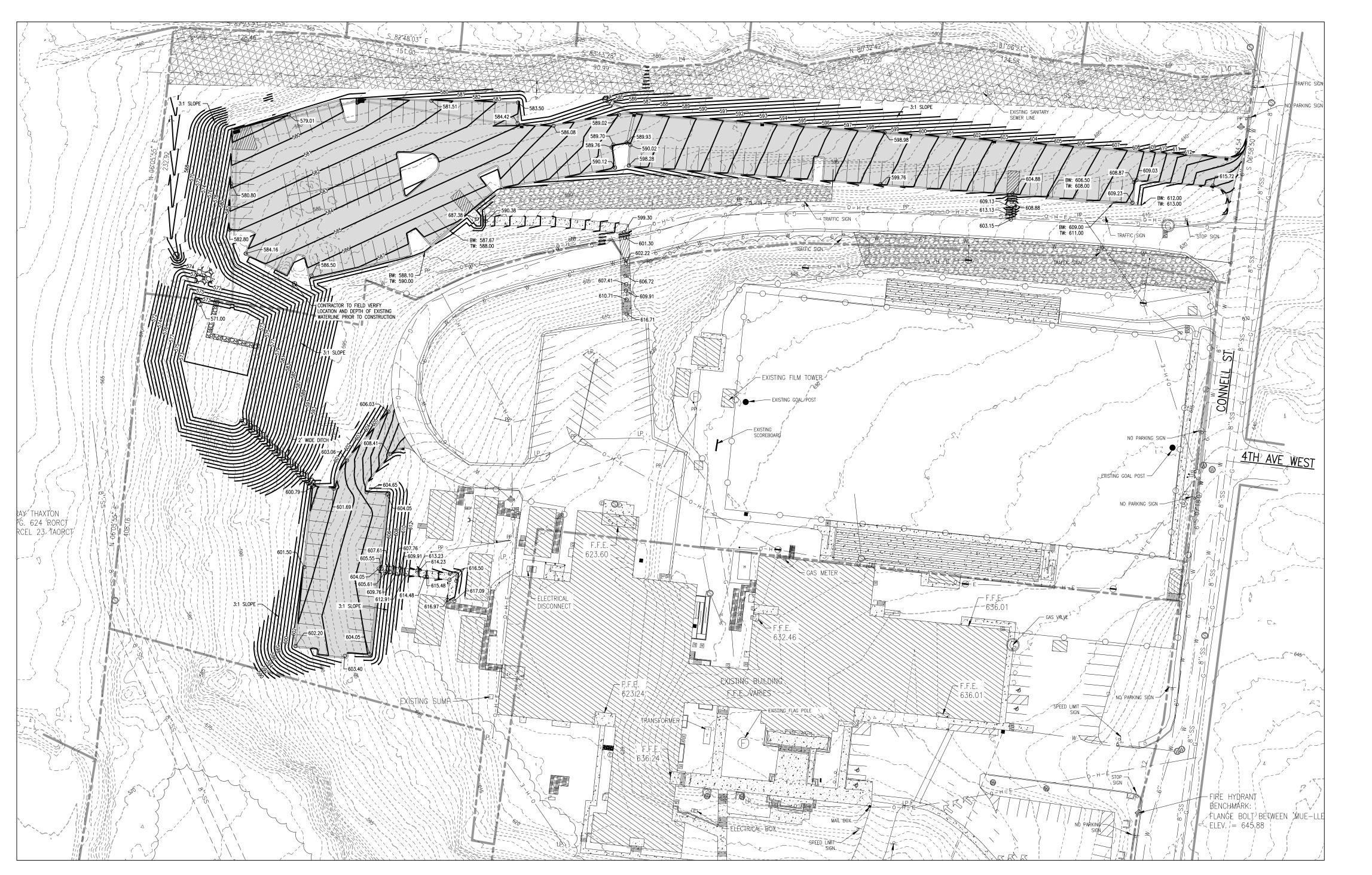
DRAWN BY:
CJN
CHECKED BY:
JML
PROJECT NO.:
C02921

NORTH LOT
SITE LAYOUT

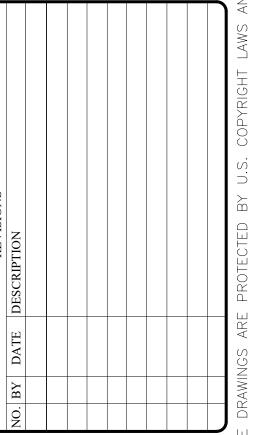


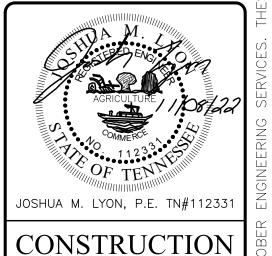


IR(O) IRON ROD OLD
IR(N) IRON ROD NEW









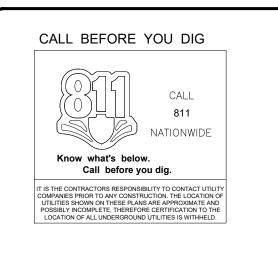
CONSTRUCTION DOCUMENTS

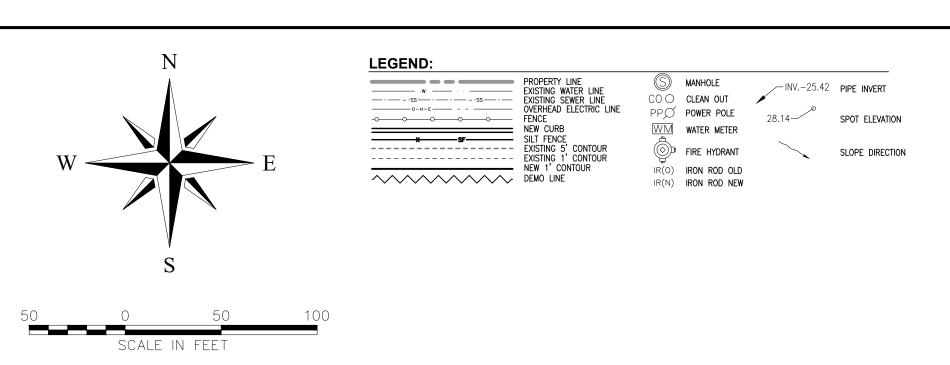
ROBERTSON COUNING TIS 5TH AVENUE WEST SPRINGFIELD, TN ROBERTSON COUNTY ROBERTSON COUNTY

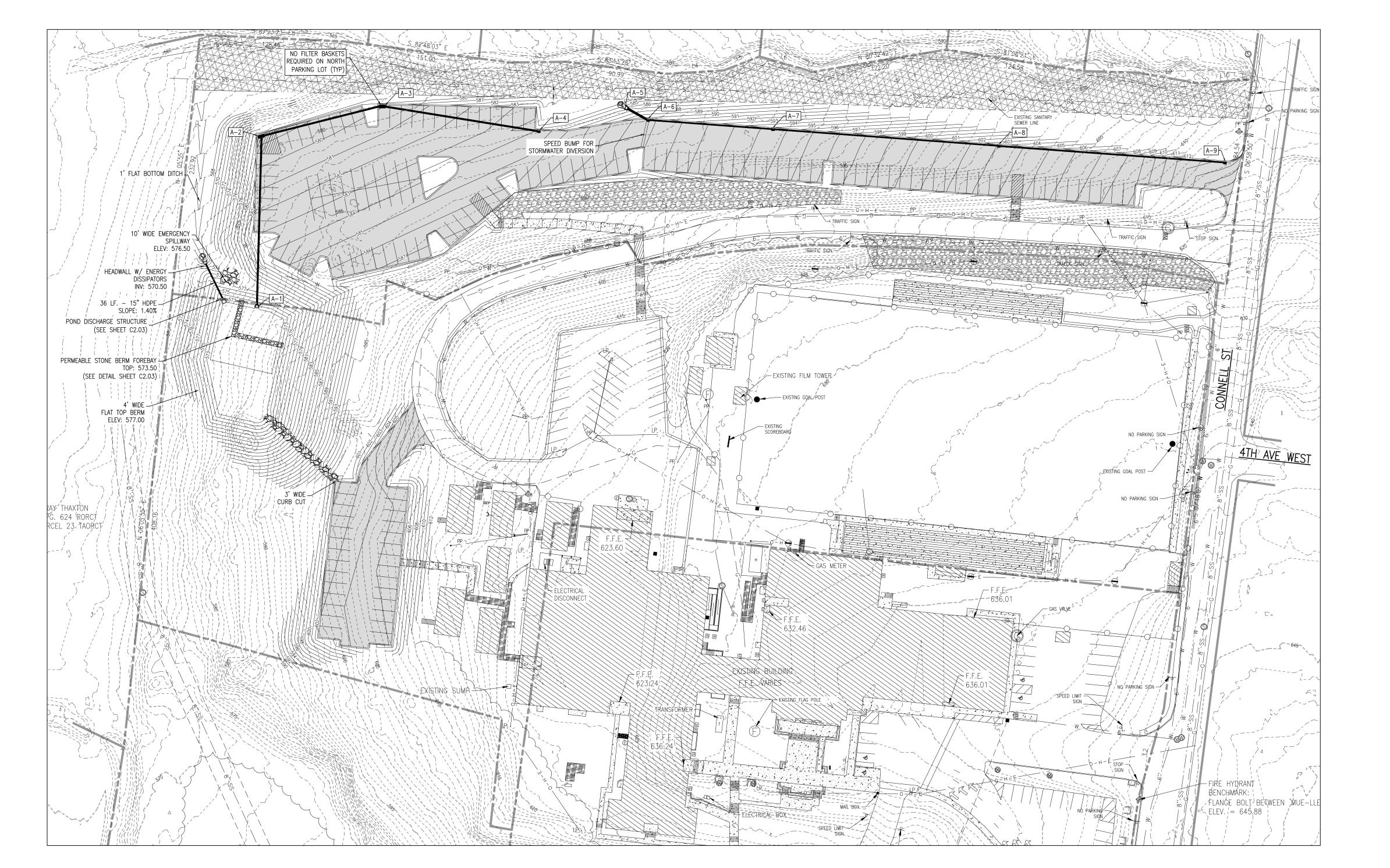
DRAWN BY:
CHECKED BY:
PROJECT NO.:

CO2921

NORTH LOT
GRADING PLAN



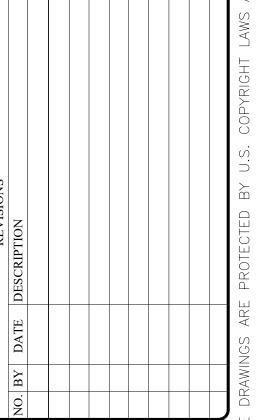


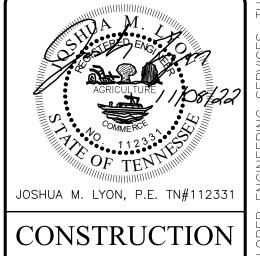


	DRAIN PIPE DATA																
	DESIGN INFO.											AS-BUILT					
PIPE NUMBER	FROM STRUCTURE	INVERT	TO STRUCTURE	INVERT	PIPE LENGTH (FEET)	PIPE DIAMETER (INCHES)	PIPE MATERIAL	SLOPE (%)	Q _c (CFS)	25 YR Q _D (CFS)	VELOCITY (FPS)		TO STRUCTURE	PIPE LENGTH (FEET)	SLOPE (%)	Q _c (CFS)	
1	A-9	607.35	A-8	599.55	200	15	HDPE	3.90%	15.28	0.17	12.45						
2	A-8	599.30	A-7	590.95	200	15	HDPE	4.17%	15.81	4.52	12.89						
3	A-7	590.95	A-6	586.30	109	15	HDPE	4.27%	15.99	11.15	13.03						
4	A-6	585.80	A-5	585.30	20	24	HDPE	2.50%	42.86	37.90	13.64						
5	A-4	581.65	A-3	576.30	137	15	HDPE	3.91%	15.29	0.91	12.46						
6	A-3	576.05	A-2	574.35	106	18	HDPE	1.60%	15.94	4.11	9.02						
7	A-2	574.35	A-1	571.80	150	18	HDPE	1.70%	16.41	7.47	9.29						
ALL INIEDA	STRUCTURE T	O RE DDIV	\TE														

		DRAIN	AGE STRUCT	URE DATA	4			
	AS-BUILT							
STRUCTURE NUMBER	STRUCTURE TYPE	SIZE	GRATE	*RIM ELEV.	INVERT	PIPE COVERAGE (IN.)	RIM ELEV.	INVERT
A-9	SINGLE CURB INLET	28" x 28"	3103-V	613.35	607.35	54.75		
A-8	SINGLE CURB INLET	28" x 28"	3103-V	603.05	599.30	27.75		
A-7	SINGLE CURB INLET	28" x 28"	3103-V	594.45	590.95	24.75		
A-6	SINGLE CURB INLET	28" x 28"	3103-V	589.70	585.80	20.05		
A-5	HEADWALL W/ ENERGY DISSIPATORS	6'	-	-	585.30	-		
A-4	SINGLE CURB INLET	28" x 28"	3103-V	584.65	581.65	18.75		
A-3	DOUBLE DROP INLET	28" x 63.5"	4310	579.80	576.05	24.50		
A-2	DOUBLE DROP INLET	28" x 63.5"	4310	578.60	574.35	30.50		
A-1	HEADWALL W/ ENERGY DISSIPATORS	6'	-	-	571.80	-		
LL INFRASTR	RUCTURE TO BE PRIVATE			*RI	M ELEV. @	BOTTOM OF CURB		





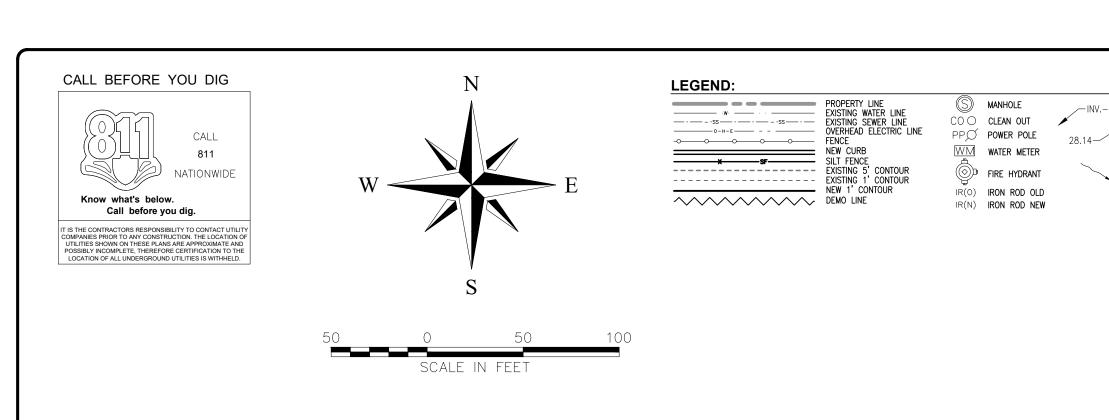


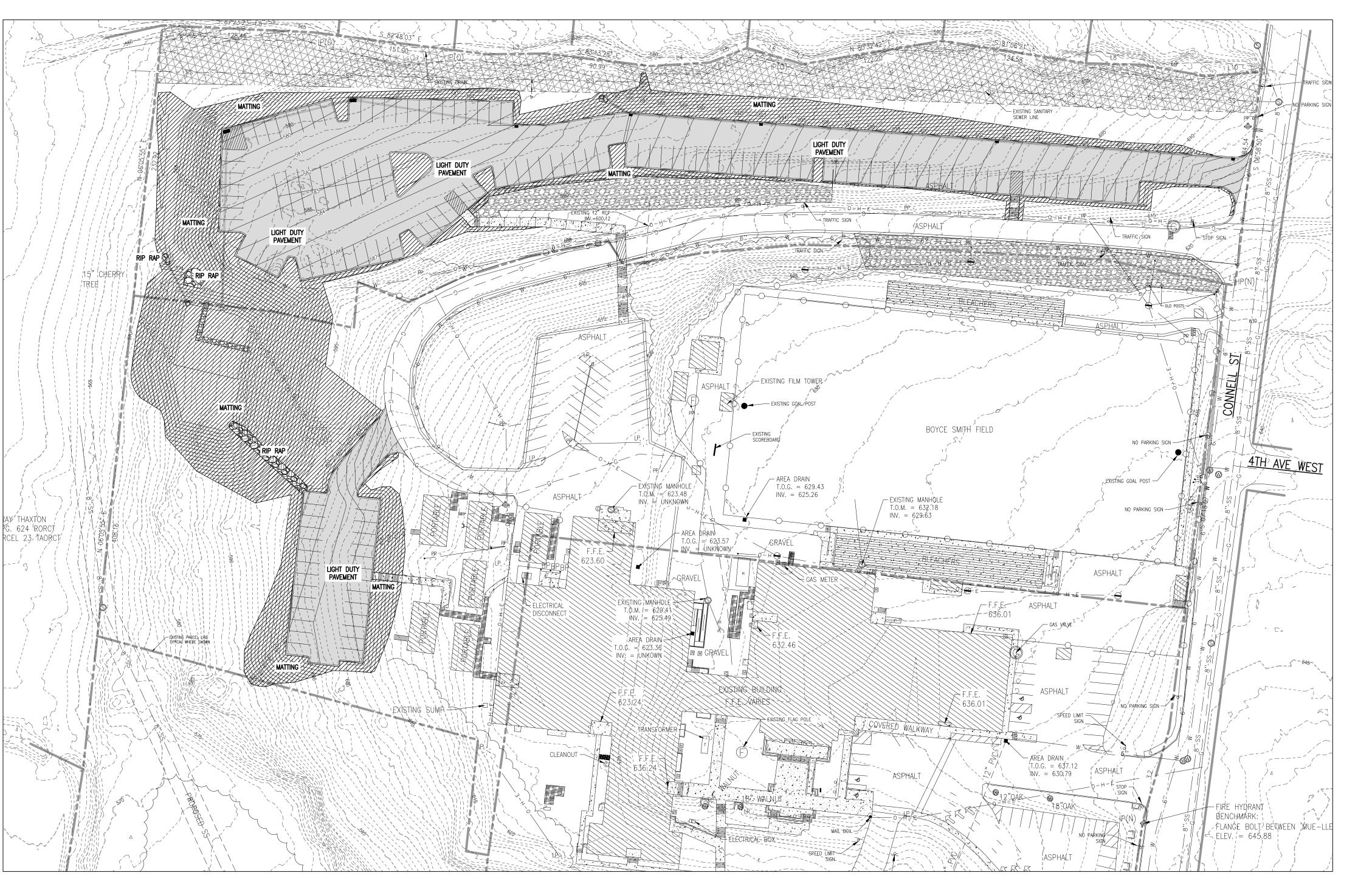
CONSTRUCTION DOCUMENTS

ROBERTSON (INNOVATION /

AWN BY:	CJN	
ECKED BY:	JML	NOIL
OJECT NO.:	C02921	
NODTHI	Γ	7090

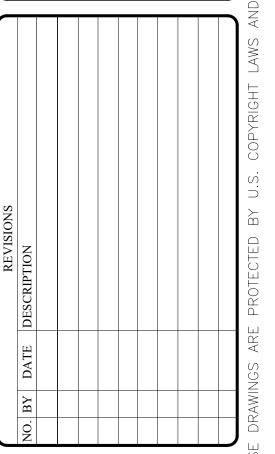
NORTH LOT DRAINAGE PLAN

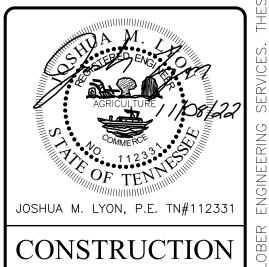




STABILIZATION LEGEND:

SEED & STRAW





DOCUMENTS

ROBERTSON (INNOVATION /

DRAWN BY: CHECKED BY: NORTH LOT STABILIZATION

PLAN SHEET NUMBER

LANDSCAPE NOTES:

APPROPRIATE UTILITY COMPANY.

- . WHEN APPLICABLE, IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROTECT EXISTING TREES TO REMAIN. NO HEAVY EQUIPMENT SHOULD BE PERMITTED TO OPERATE OR BE STORED, NOR ANY MATERIALS TO BE HANDLED OR STORED, WITHIN THE DRIPLINES OF TREES OUTSIDE THE LIMIT OF GRADING.
- 2. THE QUANTITIES INDICATED ON THE PLANT LIST AND PLAN ARE PROVIDED FOR THE BENEFIT OF THE CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR HIS OWN QUANTITY CALCULATIONS AND THE LIABILITY WHICH PERTAINS TO THOSE QUANTITIES AND TO ANY RELATED CONTRACT DOCUMENTS AND/OR PRICE QUOTATIONS. QUESTIONS SHOULD BE DIRECTED TO THE LANDSCAPE ARCHITECT.
- 3. ALL PLANT MATERIALS SHALL BE NURSERY GROWN, GRADE "A" QUALITY, UNLESS OTHERWISE NOTED AND SHALL COMPLY WITH THE AMERICAN STANDARD FOR NURSERY STOCK: ANSI Z-60.1; LATEST EDITION, FOR SIZE AND QUALITY.
- SEE SPRINGFIELD LANDSCAPING ORDINANCE FOR ACCEPTABLE TREE/SHRUB SUBSTITUTIONS.
 THE CONTRACTOR IS TO VERIFY THE EXACT LOCATION OF ALL EXISTING UTILITIES AND TO PROTECT UTILITIES THAT ARE TO REMAIN. THE CONTRACTOR SHALL REPAIR ANY DAMAGE ACCORDING TO LOCAL

STANDARDS AT THE CONTRACTOR'S EXPENSE. COORDINATE ALL CONSTRUCTION WITH THE

- 6. ALL AREAS DISTURBED BY UTILITY TRENCHING, SITE AND BUILDING CONSTRUCTION SHALL BE STABILIZED WITH SEEDING AND SODDING AS SHOWN BY THE PLAN.
- 7. SOIL USED FOR PLANTING SHALL CONSIST OF (5) PARTS TOPSOIL, (1) PART SAND AND (2) PARTS ORGANIC MATTER, MIXED WITH I POUND OF FERTILIZER PER CUBIC YARD.
 - A. SAND SHALL BE CLEAN MASONRY SAND.
 B. ORGANIC MATTER SHALL BE PEAT MOSS, OR WELL COMPOSTED PINE BARK, OR APPROVED EQUAL AND SHALL BE FINELY GROUND AND FREE OF WEEDS.
 C. ALL FERTILIZER SHALL BE 10–10–10 WITH MINOR ELEMENTS. FERTILIZER SHALL HAVE 40–50% OF ITS TOTAL NITROGEN IN A WATER INSOLUBLE FORM.
- 8. PRE-EMERGENT HERBICIDE SHALL BE APPLIED TO ALL PLANT BEDS AND SOD AREAS PRIOR TO INSTALLATION. TREFLAN OR AN APPROVED EQUAL SHALL BE USED.
- 9. ALL PLANT BEDS SHALL HAVE A MINIMUM OF 3" DEEP MULCH. MULCH SHALL BE SHREDDED HARDWOOD.
- 10. IT IS THE LANDSCAPE CONTRACTOR'S RESPONSIBILITY TO CONFIRM MATERIAL QUANTITIES. IN THE EVENT OF A DISCREPANCY, THE QUANTITIES SHOWN ON THE PLAN SHALL TAKE PRECEDENCE OVER QUANTITIES SHOWN ON THE PLANT LIST.
- 11. PRIOR TO FINAL PAYMENT, THE LANDSCAPE CONTRACTOR SHALL PROVIDE THE OWNER WITH COMPLETE WRITTEN INSTRUCTIONS ON PROPER CARE OF ALL SPECIFIED PLANT MATERIALS.
- 12. THE LANDSCAPE INSTALLATION SHALL BE COORDINATED WITH THE IRRIGATION INSTALLATION WHEN APPLICABLE.
- 13. THE LANDSCAPE CONTRACTOR SHALL MAINTAIN POSITIVE DRAINAGE AWAY FROM STRUCTURES AND TAKE SPECIAL CARE TO INSURE THAT BED PREPARATION DOES NOT INHIBIT DRAINAGE.
- 14. ALL LAWN AREAS SHALL BE CULTIVATED TO A DEPTH OF 4" PRIOR TO SODDING AND SEEDING. PREPARED TURF BEDS SHALL BE FREE FROM STONES OVER 2" DIAMETER, WEEDS AND OTHER DELETERIOUS MATERIAL.
- 15. THE LANDSCAPE CONTRACTOR SHALL RAKE SMOOTH ALL SEED OR SOD AREAS PRIOR TO INSTALLATION.

 16. THE CONTRACTOR SHALL BE RESPONSIBLE FOR BACKFILLING BEHIND THE CURB SO GRADE IS LEVEL
- WITH TOP OF CURB.
- 17. SODDED AREAS SHALL HAVE NO BARE AREAS. SEEDED AREAS SHALL BE CONSIDERED ACCEPTABLE WHEN FULL COVERAGE OF THE PERMANENT TURF GRASS SPECIES IS ESTABLISHED.
- 18. CUT AWAY ROPES OR WIRES FROM B&B PLANTS. PULL BACK BURLAP FROM TOP OF ROOT BALL. DO NOT ALLOW BURLAP TO BE EXPOSED AT SURFACE. TOTALLY REMOVE BURLAP IF IT IS SYNTHETIC.
- 19. IF CONTAINER GROWN PLANTS SHOW SIGNS OF BEING ROOT BOUND, SCORE ROOTS VERTICALLY.
- 20. ALL PLANT MATERIAL SHALL BE GUARANTEED FOR ONE YEAR FROM DATE OF FINAL ACCEPTANCE.
- 21. ALL REPLACEMENTS SHALL BE OF THE SAME TYPE, SIZE, AND QUALITY AS SPECIFIED ON THE PLANT

LIST, UNLESS APPROVED OTHERWISE IN WRITING BY THE LANDSCAPE ARCHITECT.

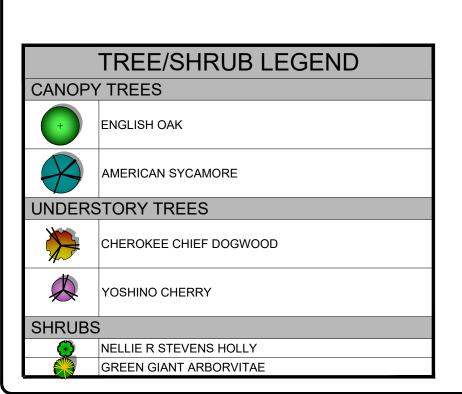
FALL: OCTOBER 1 - NOVEMBER 30

- 2. ANY MATERIAL THAT IS DEEMED TO BE 25% DEAD OR MORE SHALL BE CONSIDERED DEAD, AND MUST BE REPLACED AT NO CHARGE. A TREE IS CONSIDERED DEAD WHEN THE MAIN LEADER HAS DIED BACK, OR MORE THAN 25% OF THE CROWN IS DEAD.
- 23. REPLACEMENTS SHALL BE MADE DURING THE NEXT PLANTING SEASON UNLESS THE LANDSCAPE CONTRACTOR AGREES TO AN EARLIER DATE.

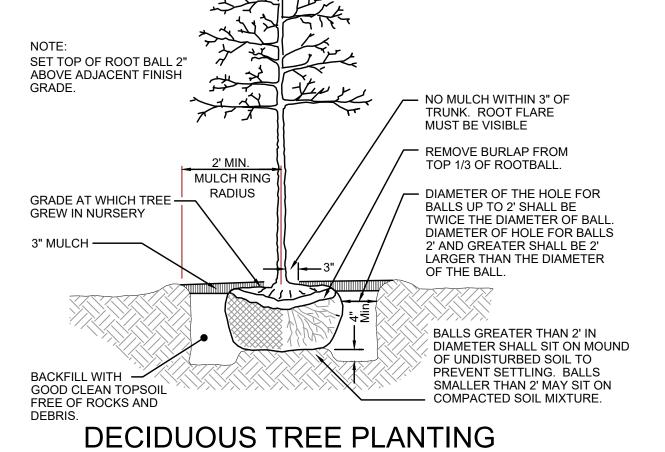
 PLANTING DATES

 SPRING: MARCH 15 APRIL 15
- 24. THE LANDSCAPE CONTRACTOR WILL NOT BE RESPONSIBLE FOR PLANT MATERIAL THAT HAS BEEN DAMAGED BY VANDALISM, FIRE, RELOCATION, WILDLIFE, THEFT, OR OTHER ACTIVITIES BEYOND THE LANDSCAPE CONTRACTOR'S CONTROL.
- 25. YARD HYDRANTS AND HOSE BIBS WILL BE THE PRIMARY SOURCE OF WATER FOR NEW LANDSCAPING.





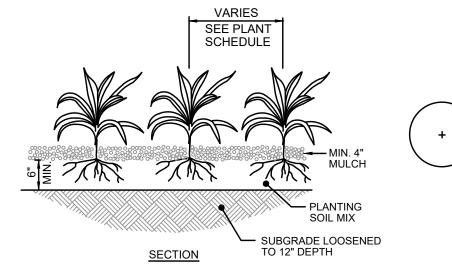
PLANT SCHEDULE										
QTY.	COMMON NAME HEIGHT TRUN									
CANOPY TREES										
6	ENGLISH OAK	10' - 12'	2" Cal.							
6	AMERICAN SYCAMORE	10' - 12'	2" Cal.							
12	TOTAL - CANOPY TREES	TOTAL - CANOPY TREES								
UNDEF	STORY TREES									
3	CHEROKEE CHIEF DOGWOOD	7' Min.	2" Cal.							
4	YOSHINO CHERRY	7' Min.	2" Cal.							
19	TOTAL - ALL TREES									
SHRUE	S									
46	NELLIE R STEVENS HOLLY	18" Min.	3 Gal.							
29	GREEN GIANT ARBORVITAE	18" Min.	3 Gal.							
75	TOTAL - SHRUBS									

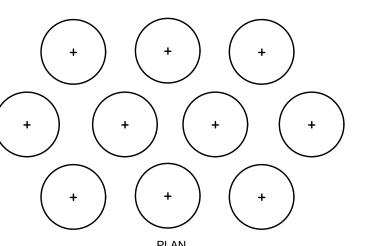


NOT TO SCALE

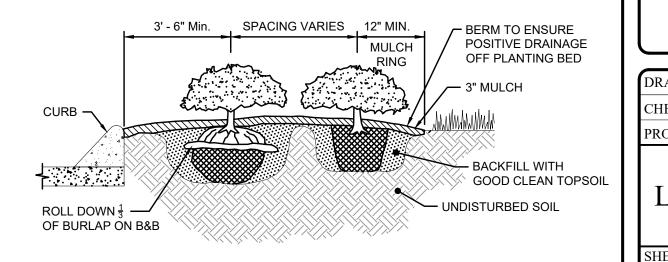
IMPROPERLY PRUNED TREES WILL BE REJECTED. DO NOT CUT CENTRAL LEADER.

SLOPE DIRECTION





GROUND COVER / PERENNIAL PLANTING
NOT TO SCALE



SHRUB / GROUND COVER PLANTING
NOT TO SCALE

ENGINEERING SERVICES

SERVING CLIENTS WITH CIVIL ENGINEERING & LAND DEVELOPMENT SERVICES
3556 TOM AUSTIN HWY, SUITE 1, SPRINGFIELD, TN 37172
PHONE: (615) 382-2000 FAX: (888) 373-4485

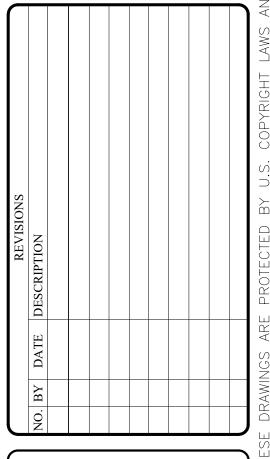
WANNE, KICHERING & LAND DEVELOPMENT SERVICES

WANNE, SUITE 1, SPRINGFIELD, TN 37172

PHONE: (615) 382-2000 FAX: (888) 373-4485

WANNE, SUITE 1, SPRINGFIELD, TN 37172

PHONE: (615) 382-2000 FAX: (888) 373-4485



CONSTRUCTION DOCUMENTS

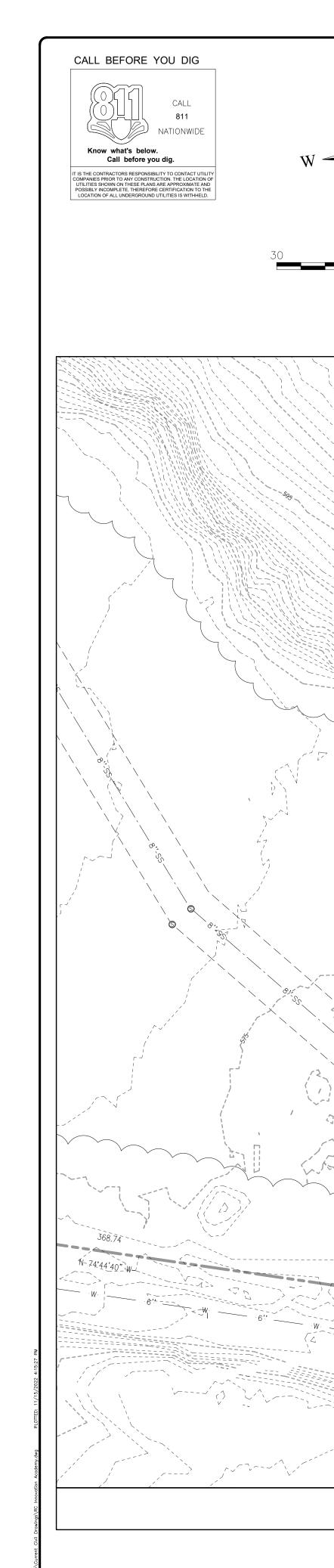
BERTSON COUNTY
OVATION ACADEMY

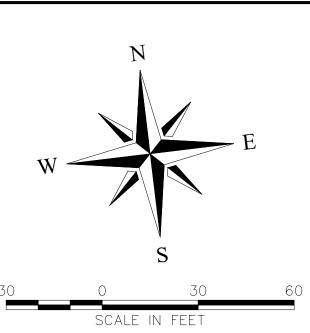
DRAWN BY:
CHECKED BY:
PROJECT NO.:
C02921

NORTH LOT
LANDSCAPING
PLAN
SHEET NUMBER

SHEET NUMBER

C1.06





DEMO LINE

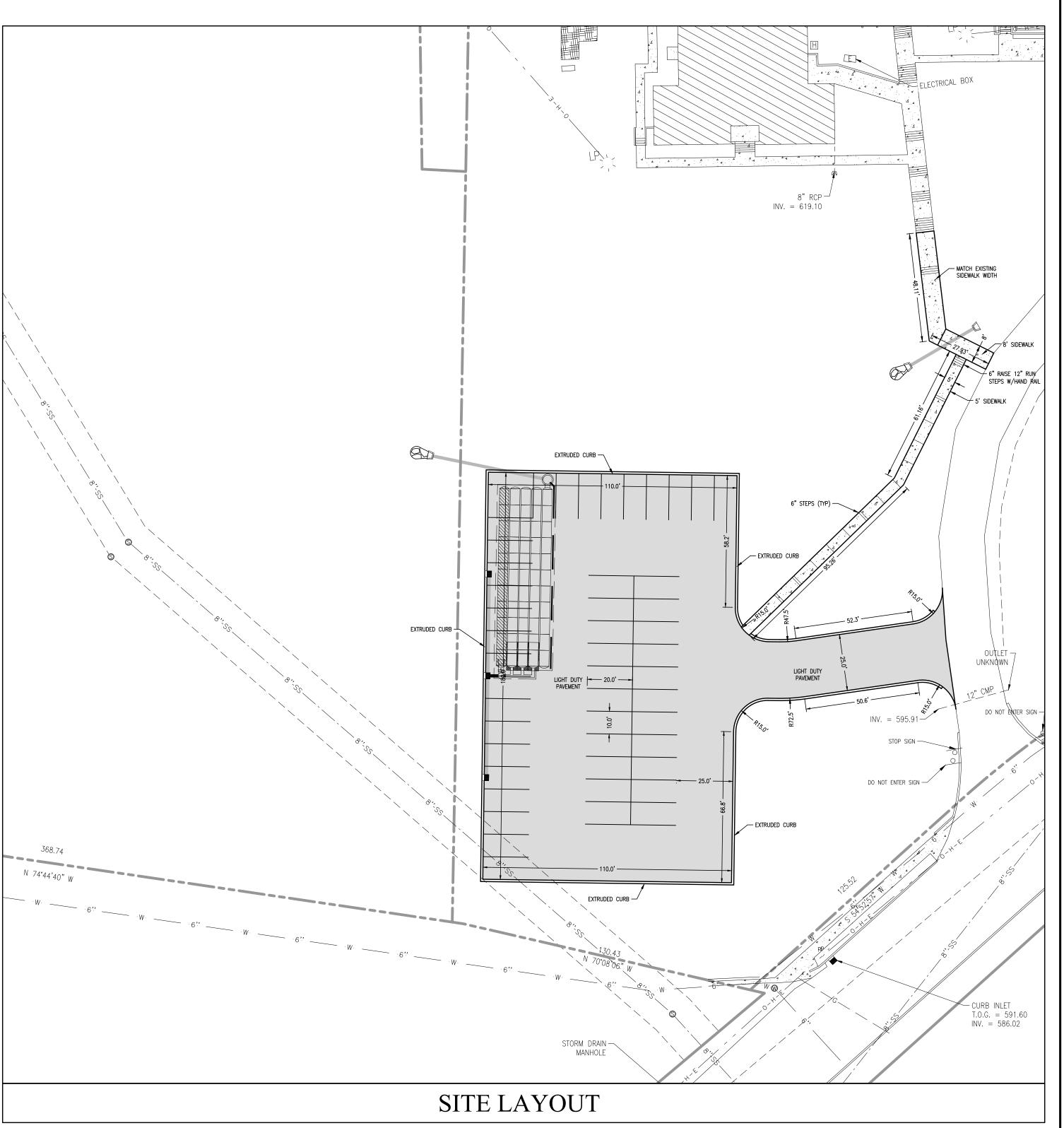
CLEAN OUT PPØ POWER POLE WM WATER METER FIRE HYDRANT IR(O) IRON ROD OLD
IR(N) IRON ROD NEW

STABILIZATION LEGEND:

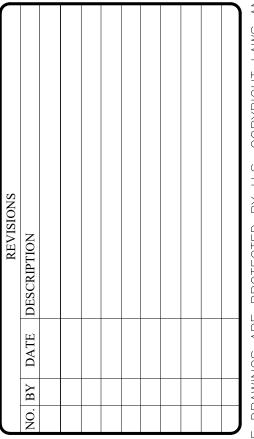
MULCH SEED & STRAW

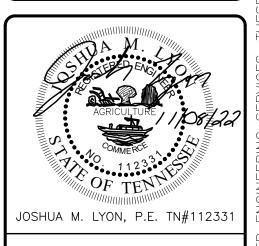
INITIAL EROSION CONTROL SHALL BE ADJUSTED DURING GRADING OF THE SITE TO CONFORM TO CHANGING CONTOURS. CONTRACTOR SHALL ADJUST SILT FENCE AND CHECK DAMS TO MATCH PROPOSED CONTOURS AFTER GRADING IS COMPLETE. SEE SHEET C1.07.







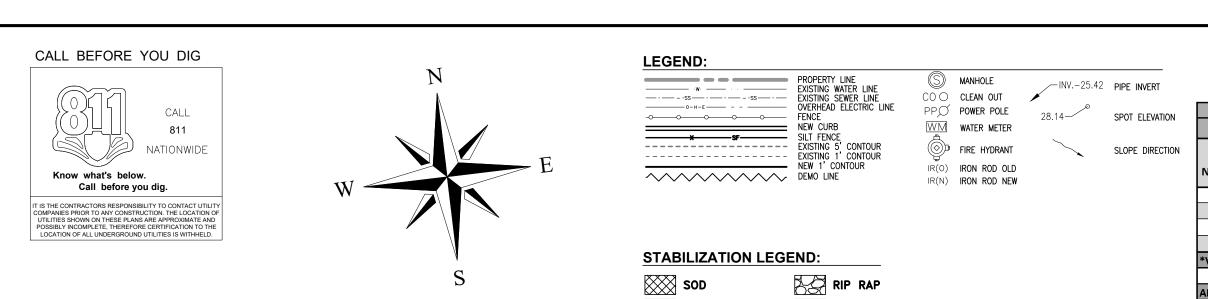




CONSTRUCTION DOCUMENTS

ROBERTSON INNOVATION

DRAWN BY: SOUTH LOT DEMO, INITIAL EPSC, & SITE LAYOUT

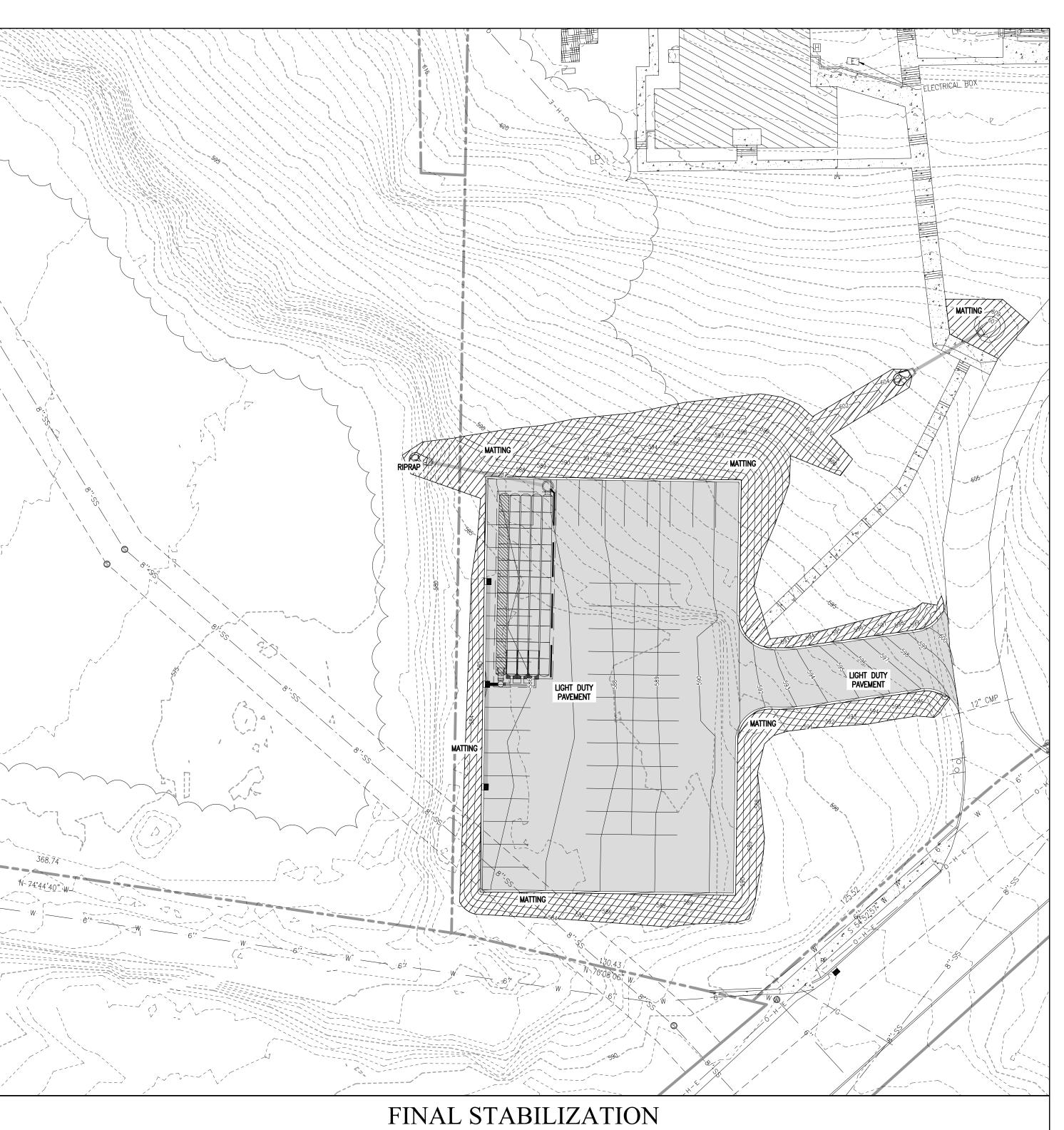


SEED & STRAW

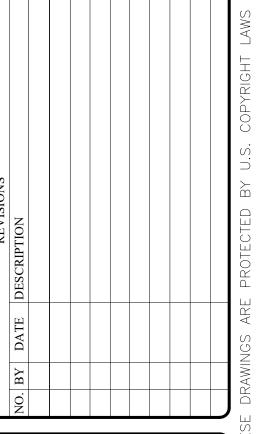
	DRAIN PIPE DATA															
	DESIGN INFO.											AS-BUILT				
PIPE NUMBER	FROM STRUCTURE	INVERT	TO STRUCTURE	INVERT		PIPE DIAMETER (INCHES)	PIPE MATERIAL	SLOPE (%)	Q _c (CFS)	25 YR Q _D (CFS)	VELOCITY (FPS)		TO STRUCTURE	PIPE LENGTH (FEET)	SLOPE (%)	Q _c (CFS)
8	B-6	580.90	B-4	580.45	42	15	HDPE	1.07%	8.01	2.09	6.53					
9	B-5	580.90	B-4	580.45	42	15	HDPE	1.07%	8.01	1.33	6.53					
10	B-4	580.45	B-3	580.40	3	15	HDPE	1.67%	9.99	5.04	8.14					
11	B-2	579.90	B-1	579.00	50	15	HDPE	1.80%	10.38	2.21*	8.46					
*VALUE TA	KEN FROM H	YDROCAD														
12	C-2	606.00	C-1	605.00	30	15	HDPE	3.33%	14.13	3.36	11.51					
ALL INFRAS	L INFRASTRUCTURE TO BE PRIVATE															
	•			•		•		•							•	

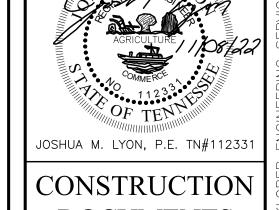
DRAINAGE STRUCTURE DATA DESIGN INFORMATION							AS-BUILT	
STRUCTURE NUMBER	STRUCTURE TYPE	SIZE	GRATE	*RIM ELEV.	INVERT	PIPE COVERAGE (IN.)	RIM ELEV.	IN
B-6	**SINGLE CURB INLET	28" x 28"	3103	584.95	580.90	31.35		
B-5	**SINGLE CURB INLET	28" x 28"	3103	584.95	580.90	31.35		
B-4	**SINGLE CURB INLET	28" x 28"	3103	584.95	580.45	36.75		
B-3	NYLOPLAST DRAIN BASIN	30"	SOLID	585.10	580.40	39.15		
B-2	NYLOPLAST DRAIN BASIN W/ INTERNAL WEIR	48"	SOLID	586.90	579.90	66.75		
B-1	HEADWALL W/ ENERGY DISSIPATORS	4'	-	-	579.00	-		
C-2	HEADWALL	4'	-	-	606.00	-		
C-1	HEADWALL W/ ENERGY DISSIPATORS	4'	-	-	605.00	-		
**W/ADS IN	LET FITLER LITE "62LITENYCB22"							
ALL INFRAST	RUCTURE TO BE PRIVATE			*RI	M FIFV. @	BOTTOM OF CURB		











CONSTRUCTION DOCUMENTS

ROBERTSON COUNT
INNOVATION ACADE

TIS 5TH AVENUE WEST
SPRINGFIELD, TN
ROBERTSON COUNTY

' '	J				
PRAWN BY:	CJN				
THECKED BY:	JML				
ROJECT NO.:	C02921				
SOUTH LOT					
GRADING,					
DRAINAGE, &	FINAL				
TABILIZATIC	N PLAN				
HEET NUMBER					
C1.(8				

SCALE IN FEET

IMPROPERLY PRUNED TREES

WILL BE REJECTED. DO NOT

NO MULCH WITHIN 3" OF TRUNK. ROOT FLARE

REMOVE BURLAP FROM TOP 1/3 OF ROOTBALL.

DIAMETER OF THE HOLE FOR

TWICE THE DIAMETER OF BALL.

DIAMETER OF HOLE FOR BALLS

2' AND GREATER SHALL BE 2' LARGER THAN THE DIAMETER

BALLS GREATER THAN 2' IN DIAMETER SHALL SIT ON MOUND

OF UNDISTURBED SOIL TO

PREVENT SETTLING. BALLS

COMPACTED SOIL MIXTURE.

SMALLER THAN 2' MAY SIT ON

BALLS UP TO 2' SHALL BE

MUST BE VISIBLE

OF THE BALL.

CUT CENTRAL LEADER.

SET TOP OF ROOT BALL 2" ABOVE ADJACENT FINISH

GRADE AT WHICH TREE -

GREW IN NURSERY

3" MULCH ——

BACKFILL WITH -

GOOD CLEAN TOPSOIL

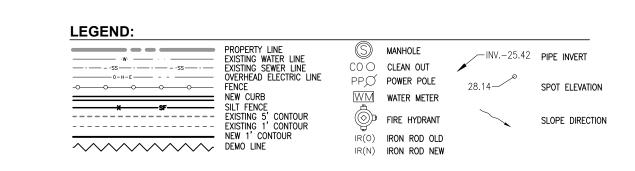
FREE OF ROCKS AND

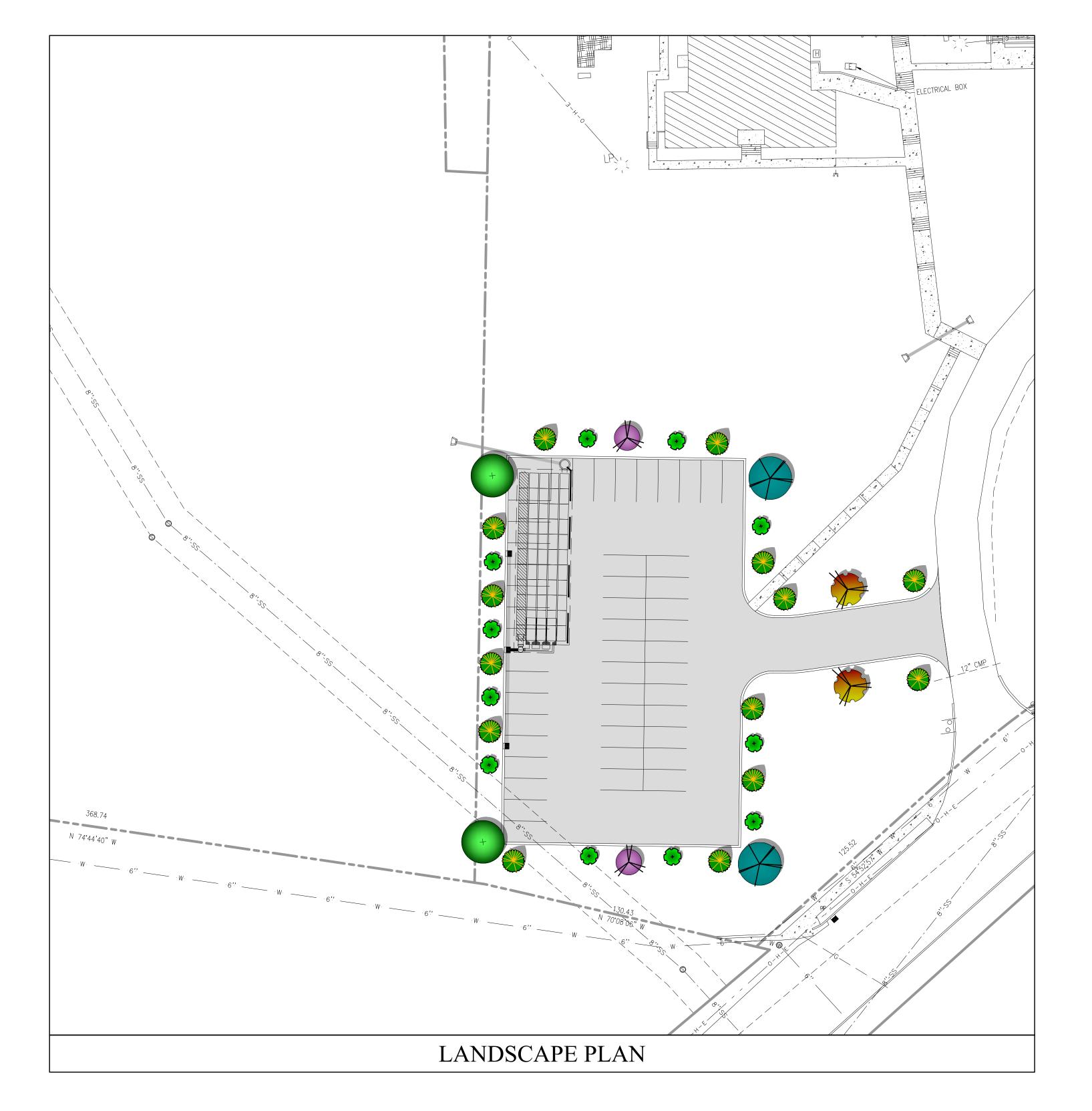
MULCH RING

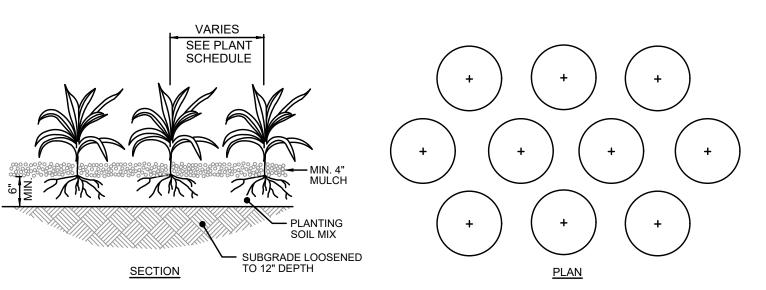
RADIUS

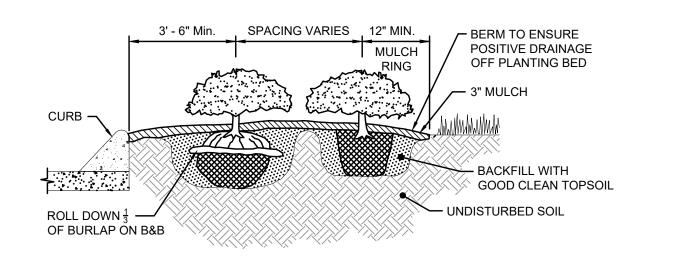
DECIDUOUS TREE PLANTING

NOT TO SCALE









SHRUB / GROUND COVER PLANTING

TREE/SHRUB LEGEND CANOPY TREES ENGLISH OAK AMERICAN SYCAMORE UNDERSTORY TREES CHEROKEE CHIEF DOGWOOD YOSHINO CHERRY SHRUBS NELLIE R STEVENS HOLLY GREEN GIANT ARBORVITAE

PLANT SCHEDULE							
QTY.	COMMON NAME	HEIGHT	TRUNK				
CANOR	PY TREES	_					
2	ENGLISH OAK	10' - 12'	2" Cal.				
2	AMERICAN SYCAMORE	10' - 12'	2" Cal.				
4	TOTAL - CANOPY TREES						
UNDEF	RSTORY TREES						
2	CHEROKEE CHIEF DOGWOOD	7' Min.	2" Cal.				
2	YOSHINO CHERRY	7' Min.	2" Cal.				
8	TOTAL - ALL TREES						
SHRUE	BS						
11	NELLIE R STEVENS HOLLY	18" Min.	3 Gal.				
14	GREEN GIANT ARBORVITAE	18" Min.	3 Gal.				
25	TOTAL - SHRUBS						

LANDSCAPE NOTES:

DELETERIOUS MATERIAL.

- 1. WHEN APPLICABLE, IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROTECT EXISTING TREES TO REMAIN. NO HEAVY EQUIPMENT SHOULD BE PERMITTED TO OPERATE OR BE STORED, NOR ANY MATERIALS TO BE HANDLED OR STORED, WITHIN THE DRIPLINES OF TREES OUTSIDE THE LIMIT OF GRADING.
- 2. THE QUANTITIES INDICATED ON THE PLANT LIST AND PLAN ARE PROVIDED FOR THE BENEFIT OF THE CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR HIS OWN QUANTITY CALCULATIONS AND THE LIABILITY WHICH PERTAINS TO THOSE QUANTITIES AND TO ANY RELATED CONTRACT DOCUMENTS AND/OR PRICE QUOTATIONS. QUESTIONS SHOULD BE DIRECTED TO THE LANDSCAPE ARCHITECT.
- 3. ALL PLANT MATERIALS SHALL BE NURSERY GROWN, GRADE "A" QUALITY, UNLESS OTHERWISE NOTED AND SHALL COMPLY WITH THE AMERICAN STANDARD FOR NURSERY STOCK: ANSI Z-60.1; LATEST EDITION, FOR SIZE AND QUALITY.
- 4. SEE SPRINGFIELD LANDSCAPING ORDINANCE FOR ACCEPTABLE TREE/SHRUB SUBSTITUTIONS.
- 5. THE CONTRACTOR IS TO VERIFY THE EXACT LOCATION OF ALL EXISTING UTILITIES AND TO PROTECT UTILITIES THAT ARE TO REMAIN. THE CONTRACTOR SHALL REPAIR ANY DAMAGE ACCORDING TO LOCAL STANDARDS AT THE CONTRACTOR'S EXPENSE. COORDINATE ALL CONSTRUCTION WITH THE APPROPRIATE UTILITY COMPANY.
- 6. ALL AREAS DISTURBED BY UTILITY TRENCHING, SITE AND BUILDING CONSTRUCTION SHALL BE STABILIZED WITH SEEDING AND SODDING AS SHOWN BY THE PLAN.
- 7. SOIL USED FOR PLANTING SHALL CONSIST OF (5) PARTS TOPSOIL, (1) PART SAND AND (2) PARTS ORGANIC MATTER, MIXED WITH I POUND OF FERTILIZER PER CUBIC YARD. A. SAND SHALL BE CLEAN MASONRY SAND.
 - B. ORGANIC MATTER SHALL BE PEAT MOSS, OR WELL COMPOSTED PINE BARK, OR APPROVED EQUAL AND SHALL BE FINELY GROUND AND FREE OF WEEDS. C. ALL FERTILIZER SHALL BE 10-10-10 WITH MINOR ELEMENTS. FERTILIZER SHALL HAVE 40-50% OF ITS TOTAL NITROGEN IN A WATER INSOLUBLE FORM.
- 8. PRE-EMERGENT HERBICIDE SHALL BE APPLIED TO ALL PLANT BEDS AND SOD AREAS PRIOR TO INSTALLATION. TREFLAN OR AN APPROVED EQUAL SHALL BE USED.
- 9. ALL PLANT BEDS SHALL HAVE A MINIMUM OF 3" DEEP MULCH. MULCH SHALL BE SHREDDED HARDWOOD.
- 10. IT IS THE LANDSCAPE CONTRACTOR'S RESPONSIBILITY TO CONFIRM MATERIAL QUANTITIES. IN THE EVENT OF A DISCREPANCY, THE QUANTITIES SHOWN ON THE PLAN SHALL TAKE PRECEDENCE OVER QUANTITIES SHOWN ON THE PLANT LIST.
- 11. PRIOR TO FINAL PAYMENT, THE LANDSCAPE CONTRACTOR SHALL PROVIDE THE OWNER WITH COMPLETE WRITTEN INSTRUCTIONS ON PROPER CARE OF ALL SPECIFIED PLANT MATERIALS.
- 12. THE LANDSCAPE INSTALLATION SHALL BE COORDINATED WITH THE IRRIGATION INSTALLATION WHEN

PREPARED TURF BEDS SHALL BE FREE FROM STONES OVER 2" DIAMETER, WEEDS AND OTHER

- 13. THE LANDSCAPE CONTRACTOR SHALL MAINTAIN POSITIVE DRAINAGE AWAY FROM STRUCTURES AND TAKE
- SPECIAL CARE TO INSURE THAT BED PREPARATION DOES NOT INHIBIT DRAINAGE. 14. ALL LAWN AREAS SHALL BE CULTIVATED TO A DEPTH OF 4" PRIOR TO SODDING AND SEEDING.
- 15. THE LANDSCAPE CONTRACTOR SHALL RAKE SMOOTH ALL SEED OR SOD AREAS PRIOR TO INSTALLATION.
- 16. THE CONTRACTOR SHALL BE RESPONSIBLE FOR BACKFILLING BEHIND THE CURB SO GRADE IS LEVEL WITH TOP OF CURB.
- 17. SODDED AREAS SHALL HAVE NO BARE AREAS. SEEDED AREAS SHALL BE CONSIDERED ACCEPTABLE WHEN FULL COVERAGE OF THE PERMANENT TURF GRASS SPECIES IS ESTABLISHED.
- 18. CUT AWAY ROPES OR WIRES FROM B&B PLANTS. PULL BACK BURLAP FROM TOP OF ROOT BALL. DO NOT ALLOW BURLAP TO BE EXPOSED AT SURFACE. TOTALLY REMOVE BURLAP IF IT IS SYNTHETIC.
- 19. IF CONTAINER GROWN PLANTS SHOW SIGNS OF BEING ROOT BOUND, SCORE ROOTS VERTICALLY. 20. ALL PLANT MATERIAL SHALL BE GUARANTEED FOR ONE YEAR FROM DATE OF FINAL ACCEPTANCE.
- 21. ALL REPLACEMENTS SHALL BE OF THE SAME TYPE, SIZE, AND QUALITY AS SPECIFIED ON THE PLANT LIST, UNLESS APPROVED OTHERWISE IN WRITING BY THE LANDSCAPE ARCHITECT.
- 22. ANY MATERIAL THAT IS DEEMED TO BE 25% DEAD OR MORE SHALL BE CONSIDERED DEAD, AND MUST BE REPLACED AT NO CHARGE. A TREE IS CONSIDERED DEAD WHEN THE MAIN LEADER HAS DIED BACK, OR MORE THAN 25% OF THE CROWN IS DEAD.
- 23. REPLACEMENTS SHALL BE MADE DURING THE NEXT PLANTING SEASON UNLESS THE LANDSCAPE CONTRACTOR AGREES TO AN EARLIER DATE. PLANTING DATES

SPRING: MARCH 15 - APRIL 15

LANDSCAPE CONTRACTOR'S CONTROL.

- FALL: OCTOBER 1 NOVEMBER 30 24. THE LANDSCAPE CONTRACTOR WILL NOT BE RESPONSIBLE FOR PLANT MATERIAL THAT HAS BEEN DAMAGED BY VANDALISM, FIRE, RELOCATION, WILDLIFE, THEFT, OR OTHER ACTIVITIES BEYOND THE
- 25. YARD HYDRANTS AND HOSE BIBS WILL BE THE PRIMARY SOURCE OF WATER FOR NEW LANDSCAPING.

CONSTRUCTION **DOCUMENTS**

DRAWN BY: CHECKED BY: PROJECT NO.:

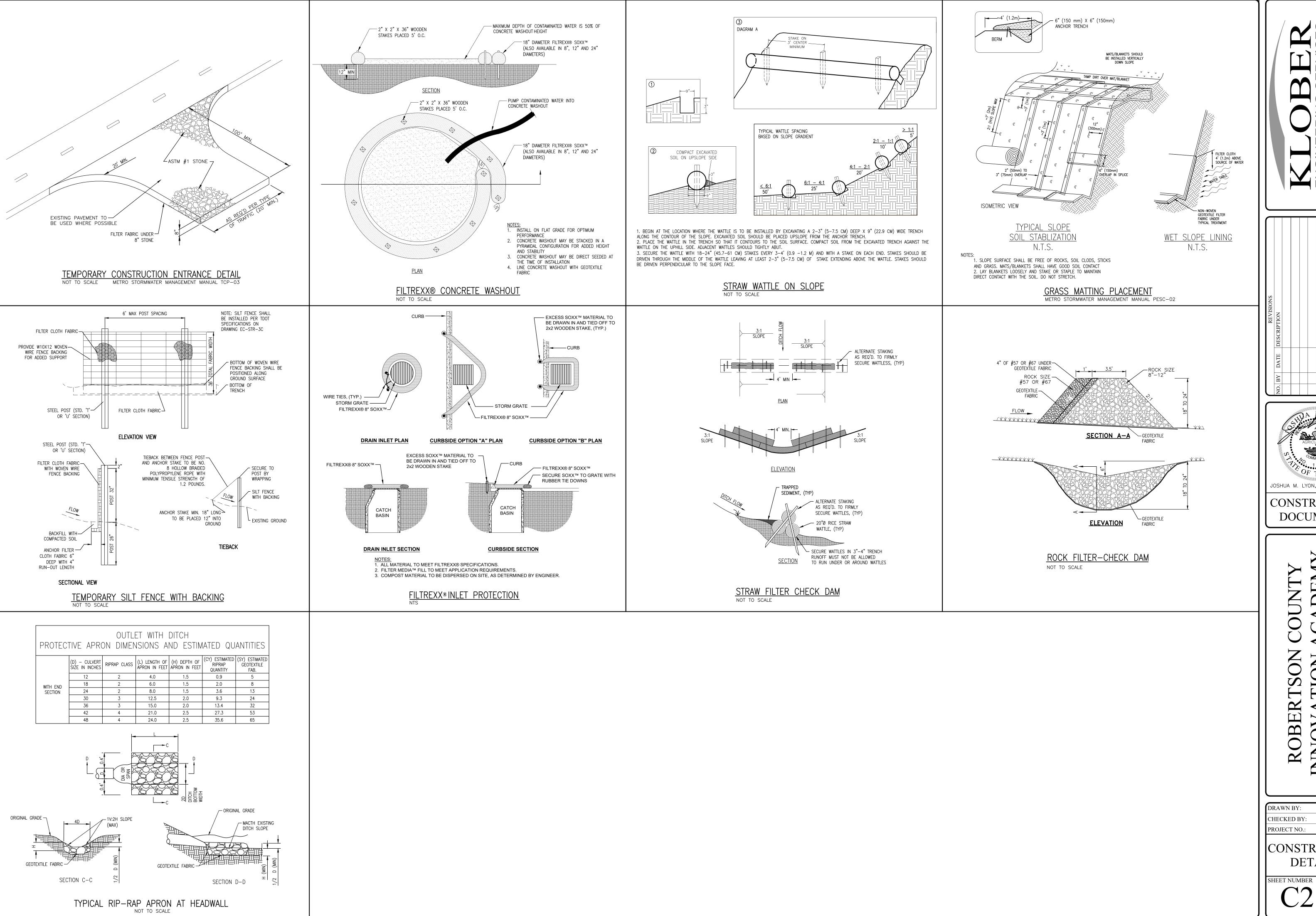
田

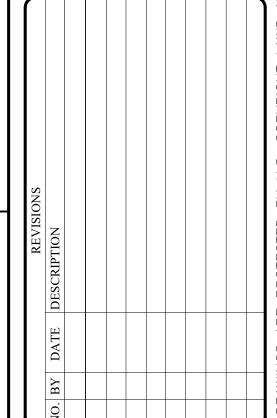
M

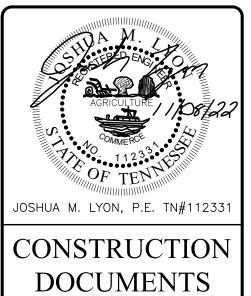
SOUTH LOT LANDSCAPING **PLAN**

SHEET NUMBER

GROUND COVER / PERENNIAL PLANTING NOT TO SCALE



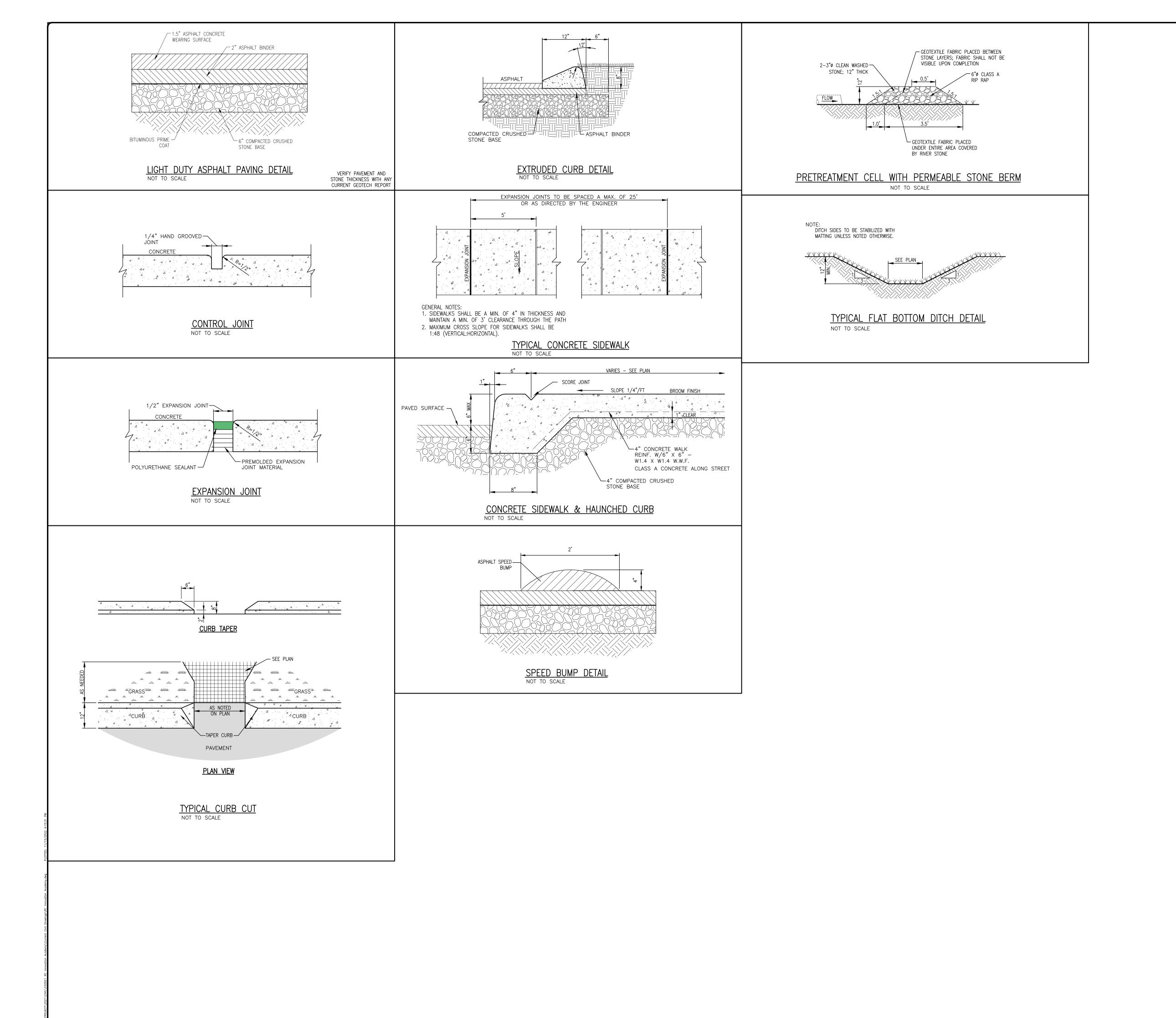


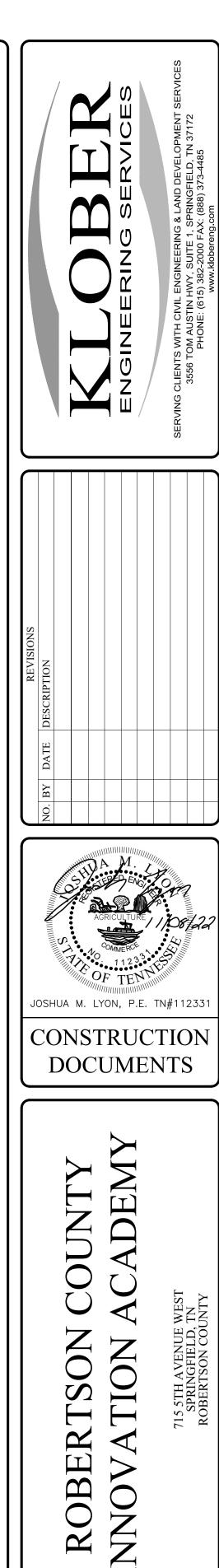


15 5TH AVENUE W SPRINGFIELD, T ROBERTSON COUT

C02921

CONSTRUCTION **DETAILS**

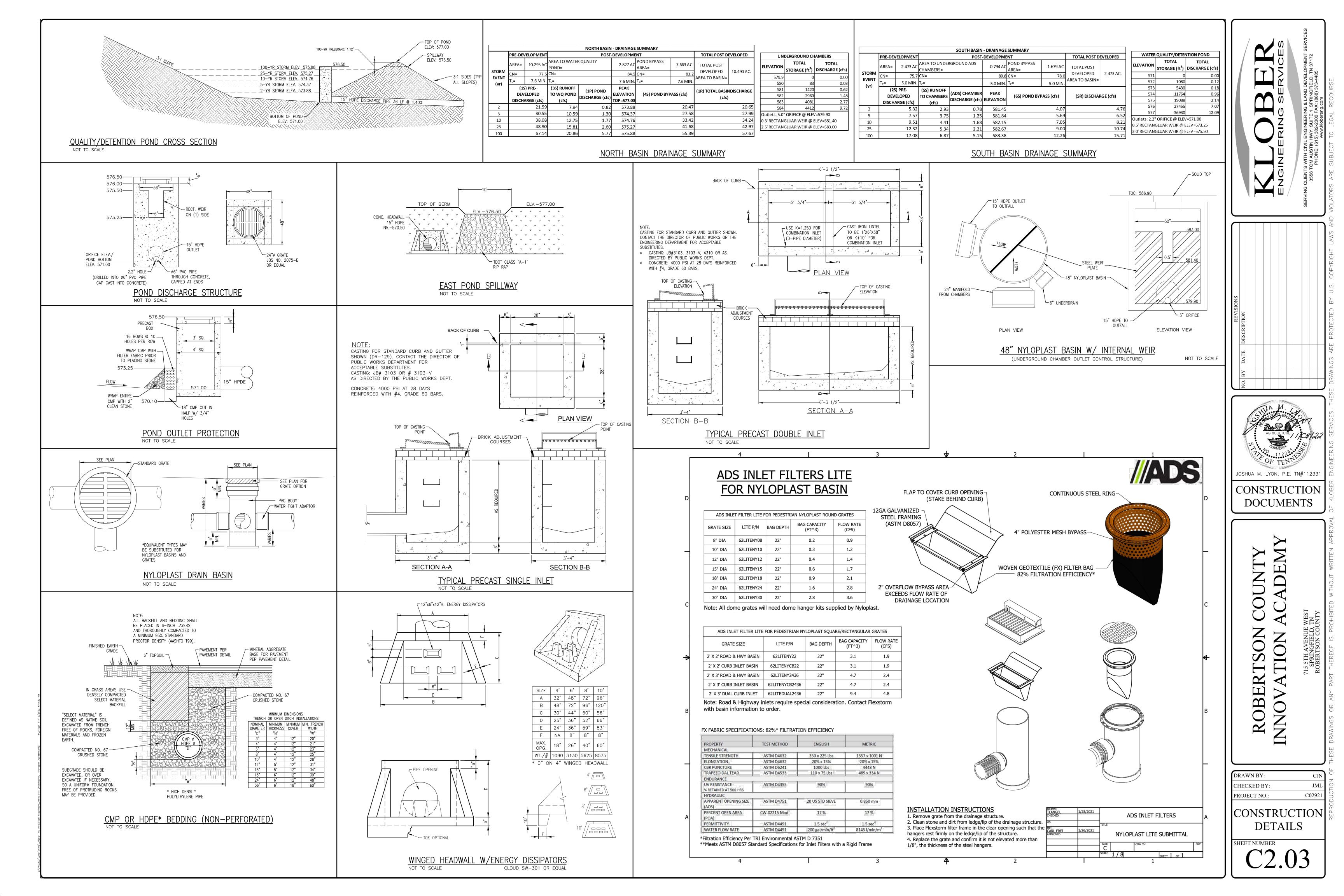


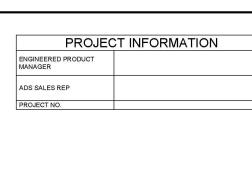


DRAWN BY:
CHECKED BY:
PROJECT NO.:
C02921
CONSTRUCTION

CONSTRUCTION DETAILS

ET NUMBER









ROB CO INNOVATION ACADEMY

SC-740 STORMTECH CHAMBER SPECIFICATIONS

- 1. CHAMBERS SHALL BE STORMTECH SC-740. CHAMBERS SHALL BE ARCH-SHAPED AND SHALL BE MANUFACTURED FROM VIRGIN, IMPACT-MODIFIED POLYPROPYLENE COPOLYMERS.
- CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
- CHAMBER ROWS SHALL PROVIDE CONTINUOUS, UNOBSTRUCTED INTERNAL SPACE WITH NO INTERNAL SUPPORTS THAT WOULD IMPEDE FLOW OR LIMIT ACCESS FOR INSPECTION.
- 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.
- 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 22.

 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.
- 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 LIRTD 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.
- CHAMBERS AND END CAPS SHALL BE PRODUCED AT AN ISO 9001 CERTIFIED MANUFACTURING FACILITY.

- SPRINGFIELD, TN
 - IMPORTANT NOTES FOR THE BIDDING AND INSTALLATION OF THE SC-740 SYSTEM STORMTECH SC-740 CHAMBERS SHALL NOT BE INSTALLED UNTIL THE MANUFACTURER'S REPRESENTATIVE HAS COMPLETED A
 PRE-CONSTRUCTION MEETING WITH THE INSTALLERS.
 - 2. STORMTECH SC-740 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH SC-310/SC-740/DC-780 CONSTRUCTION GUIDE".
 - 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.

 - THE FOUNDATION STONE SHALL BE LEVELED AND COMPACTED PRIOR TO PLACING CHAMBERS. 5. JOINTS BETWEEN CHAMBERS SHALL BE PROPERLY SEATED PRIOR TO PLACING STONE.
 - 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
 - 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
 - STORMTECH SC-740 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH SC-310/SC-740/DC-780 CONSTRUCTION GUIDE".
 - THE USE OF CONSTRUCTION EQUIPMENT OVER SC-740 CHAMBERS IS LIMITED:

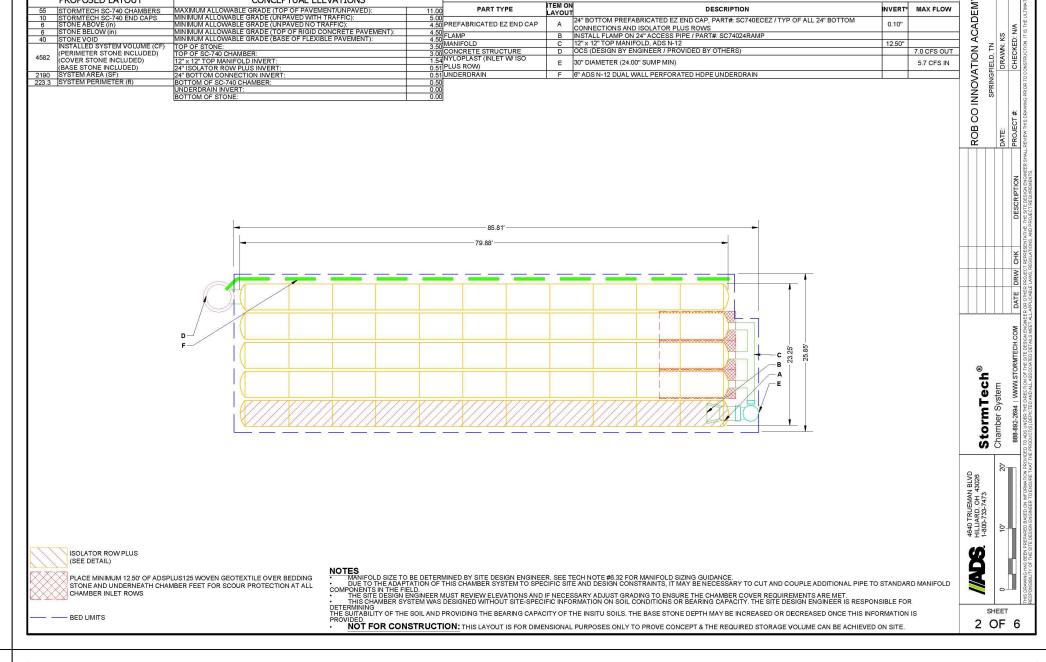
 NO EQUIPMENT IS ALLOWED ON BARE CHAMBERS.

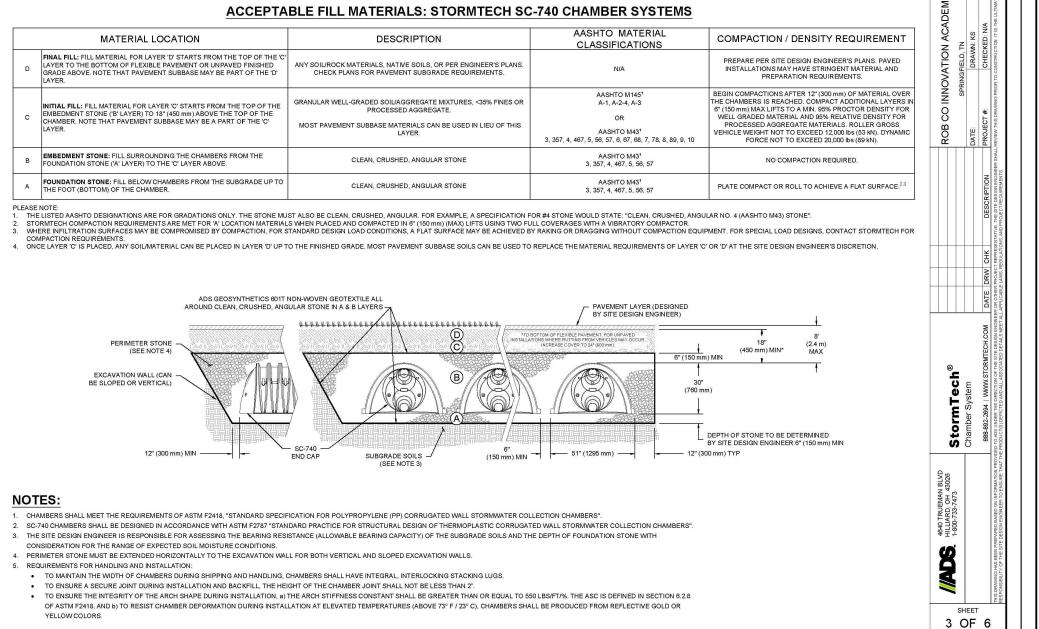
 NO RUBBER TIRED LOADERS, DUMP TRUCKS, OR EXCAVATORS ARE ALLOWED UNTIL PROPER FILL DEPTHS ARE REACHED IN ACCORDANCE WITH THE "STORMTECH SC-370/SC-740/DC-780 CONSTRUCTION GUIDE".

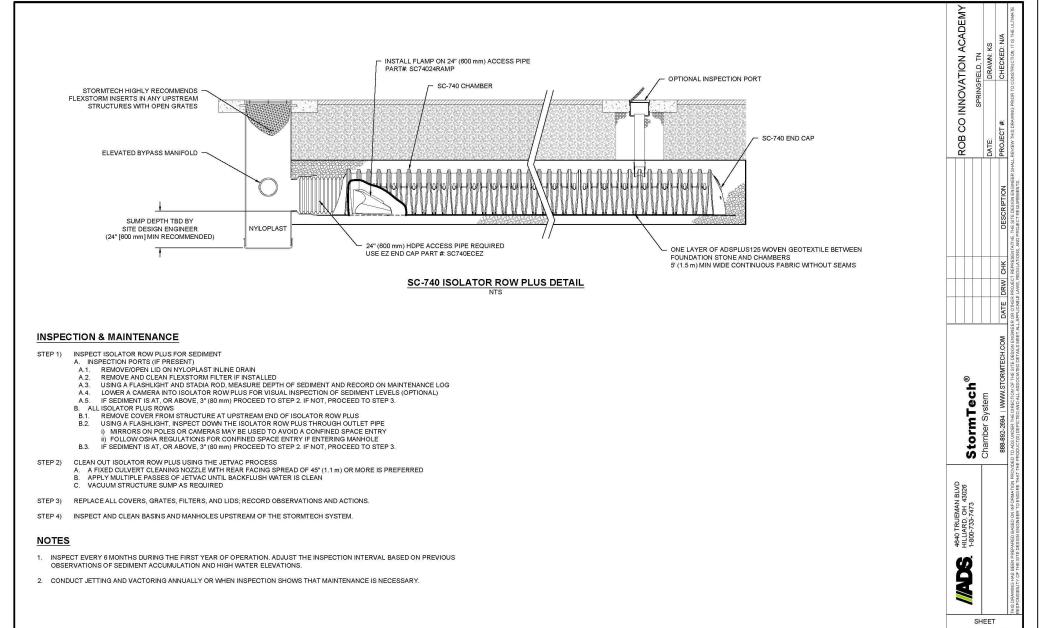
 WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT CAN BE FOUND IN THE "STORMTECH SC-310/SC-740/DC-780 CONSTRUCTION GUIDE".
 - 3. FULL 36" (900 mm) OF STABILIZED COVER MATERIALS OVER THE CHAMBERS IS REQUIRED FOR DUMP TRUCK TRAVEL OR DUMPING.

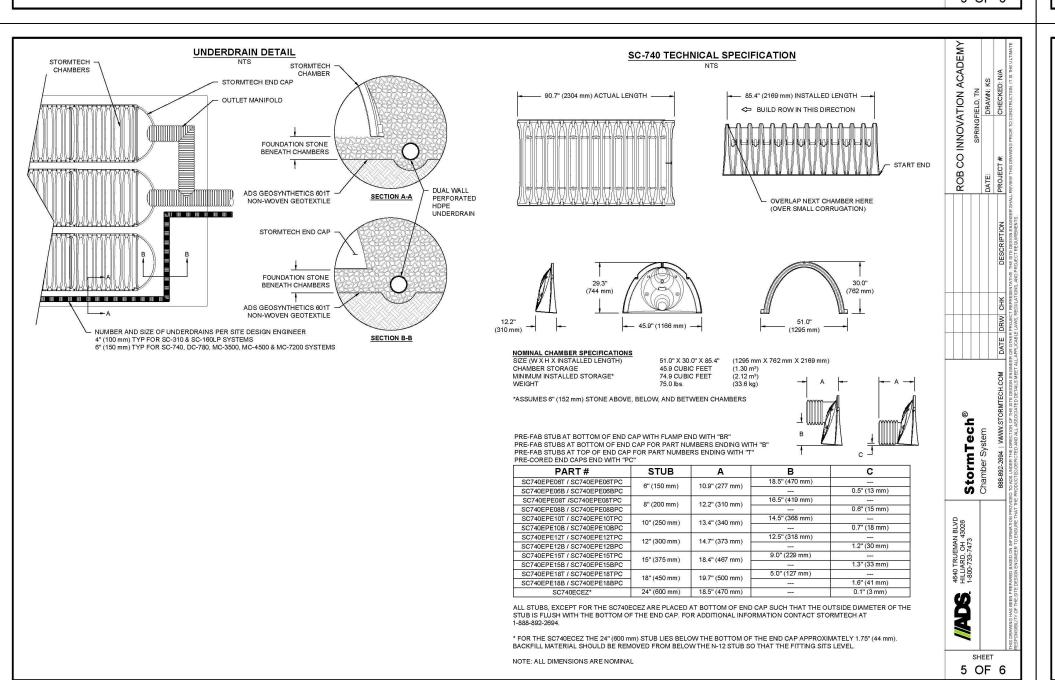
USE OF A DOZER TO PUSH EMBEDMENT STONE BETWEEN THE ROWS OF CHAMBERS MAY CAUSE DAMAGE TO THE CHAMBERS AND IS NOT AN ACCEPTABLE BACKFILL METHOD. ANY CHAMBERS DAMAGED BY THE "DUMP AND PUSH" METHOD ARE NOT COVERED UNDER THE STORMTECH STANDARD WARRANTY.

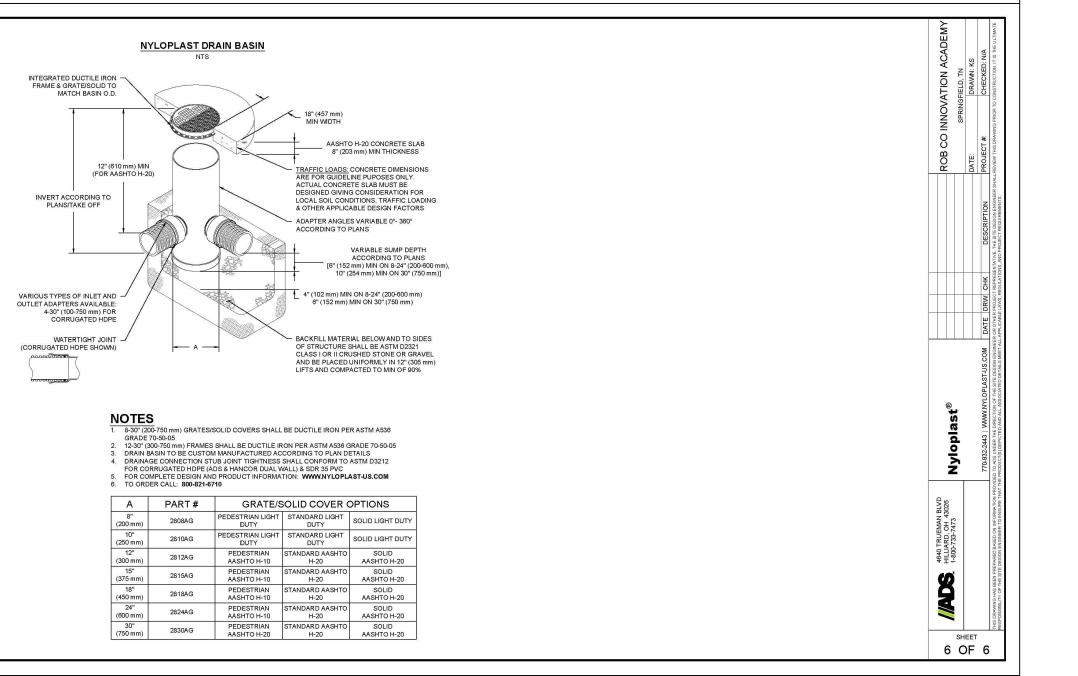
CONTACT STORMTECH AT 1-888-892-2694 WITH ANY QUESTIONS ON INSTALLATION REQUIREMENTS OR WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT.





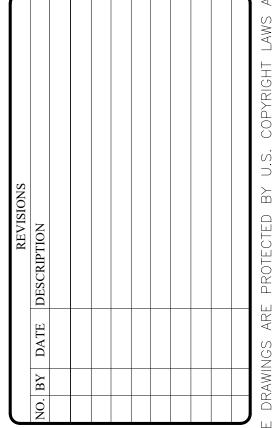






4 OF 6





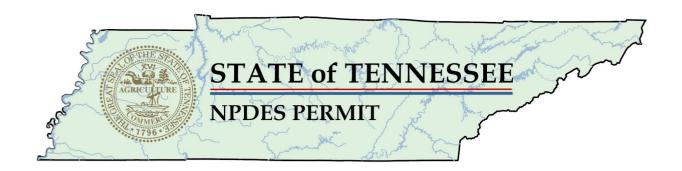


CONSTRUCTION **DOCUMENTS**

> H TSON 15 5TH AVENUE V SPRINGFIELD, T ROBERTSON COU X M

DRAWN BY: CHECKED BY: PROJECT NO.: C02921

ADS CHAMBER **DETAILS**



TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION DIVISION OF WATER RESOURCES

William R. Snodgrass - Tennessee Tower 312 Rosa L. Parks Avenue, 11th Floor Nashville, Tennessee 37243-1102

Tracking No. TNR246407

Notice of Coverage (NOC) under the General NPDES Permit for **STORMWATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITIES (CGP)**

Under authority of the Tennessee Water Quality Control Act of 1977 (T.C.A. 69-3-101 <u>et seq.</u>) and the delegation of authority from the United States Environmental Protection Agency under the Federal Water Pollution Control Act, as amended by the Clean Water Act of 1977 (33 U.S.C. 1251, <u>et seq.</u>) in accordance with effluent limitations, monitoring requirements and other conditions set forth herein. CGP requirements and permit overview are located here. Your coverage under the CGP shall be terminated upon receipt of Notice of Termination (NOT).

Construction Project: Robertson County Schools - Innovation Academy Parking Lots

Area of Disturbance: 4.82 acres

Master Tracking Number: TNR246407

Permittee Name: Robertson County Schools

Project Name: Robertson County Schools - Innovation Academy Parking Lots

is authorized to discharge: stormwater associated with construction activities

from facility location: 715 5th Ave West, Springfield, TN 37172, Robertson County

to receiving waters named: Sulphur Fork
Effective date: 12/16/2022
Expiration date: 09/30/2026

Contractors: no contractor identified

No Exceptional Tennessee Waters were identified by TDEC.

CN-0759 RDA 2366

Print