

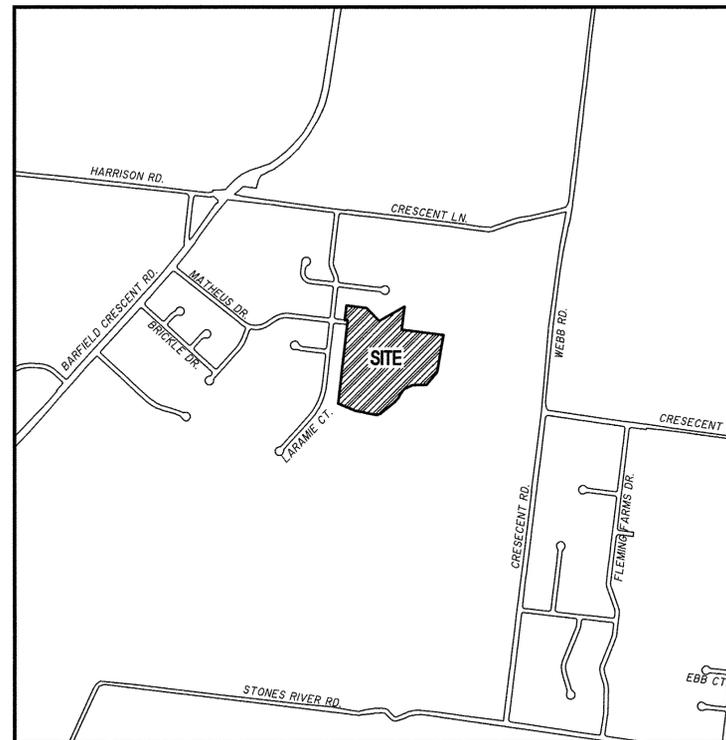
# Harrison Glen Subdivision Section VI

Rutherford County, Tennessee

## Preliminary Plan & Construction Drawings

### Index Of Sheets

- 1 Cover Sheet
- 2 General Notes
- 3 Master Plan
- 4 Existing Conditions & Initial EPSC Plan
- 5 Intermediate EPSC Plan
- 6-7 Preliminary Plan
- 8-9 Grading & Drainage Plan
- 10 Road Profile
- 11 Details
- 12 Details



Site Location Map

Not To Scale

### Developer:

Harrison Glen, LLC  
640 Broadmoor Blvd., Suite 100  
Murfreesboro, TN 37129  
(615) 896-4045

### Floodplain Note:

A portion of Harrison Glen Section VI lies within the 100 Year Floodplain, per Community Panels 47149C0381H dated Jan. 5, 2007.

### Land Data:

7th Magisterial District  
Zoning: RM  
20 Lots  
19 Buildable Lots on 24.41± Acres

### Yard Requirements:

Front: 40'  
Side: 10'  
Rear: 20'

### Deed Reference:

The property shown hereon is a portion of the lands conveyed to Harrison Glen LLC in R.B. 115 Pg. 1042 and Davidson Tract R.B. 548 Pg. 152 in R.O.R.C. 11th Civil District, Rutherford County Tennessee Tax Map 148 Parcel 17.17

### S.T.E.P. System Data:

Design Flow = 193 Lots x 300 gpd/lot = 57,900 gpd

Approved by the Rutherford County Planning Commission, with such conditions as are indicated in the minutes of the Commission on \_\_\_\_\_

Plan approval shall not constitute final approval for recording purposes.

**SEC, Inc.** SITE ENGINEERING CONSULTANTS  
ENGINEERING • SURVEYING • LAND PLANNING

850 MIDDLE TENNESSEE BOULEVARD MURFREESBORO, TENNESSEE 37129

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By: James F. Reed III Date: Mar 22, 2016

James F. Reed III, P.E. TN. Reg. #109038



Watershed of West Fork Stones River

**Site Clearing & Demolition Notes:**

- Before starting refer to sheet 4 Existing Conditions & Initial EPSC.
- Demolition includes the following within the property lines:
  - Transfer benchmark control to new locations outside the disturbed area prior to commencing demolition operations (when applicable)
  - Provide temporary barricades and other forms of protection as required to protect owner's personnel property and general public from injury due to demolition work.
  - Demolition and removal of site improvements.
  - Disconnecting, capping or sealing, and abandoning/removing site utilities in place (whichever is applicable)
- Promptly remove waste materials, unsuitable and excess topsoil and other clearing debris from Owner's property and dispose of off site.
- Remove and legally dispose of items except those indicated to be reinstalled, salvaged, or to remain.
- Existing foundations and utilities may be encountered across the site. If encountered, these items will require removal. Resulting excavations should be backfilled with properly compacted select fill.
- Removal includes digging out stumps and roots. Remove all stumps, roots over 4-inches in diameter and matted roots within the limits of grubbing to depths as follows:
  - Footings: 18 inches
  - Walks: 12 inches
  - Roads: 18 inches
  - Parking Areas: 12 inches
  - Lawn Areas: 18 inches
  - Fills: 12 inches
- Remove, reinstall, and relocate: items indicated; clean, service, and otherwise prepare them for reuse; store and protect against damage relocate items in locations indicated.
- Provide protection necessary to prevent damage to existing improvements indicated to remain in place. Protect benchmarks, existing structures, roadways, sidewalks, paving and curbs against damage from vehicular or foot traffic.
  - Protect improvements on adjoining properties and on the Owner's property.
  - Restore damaged improvements to their original condition, as acceptable to parties having jurisdiction.
- Contractor shall schedule demolition activities with the construction project manager.
- Comply with applicable requirements of federal, state and local laws, regulations and codes of the authorities having jurisdiction for the disposal of trees, shrubs and other cleared material.
- Conduct site clearing operations to ensure minimum interference with roads, streets, walks and other adjacent occupied or used facilities. Do NOT close or obstruct streets, walks or other occupied or used facilities without permission from authorities having jurisdiction.
- Obtain approved borrow soil materials off-site when sufficient satisfactory soil materials are not available on-site.
- Maintain existing utilities indicated to remain in service and protect them against damage throughout construction operations.
  - Do not interrupt exist utilities serving occupied or operating facilities, except when authorized in writing by engineer and authorities having jurisdiction. Provide temporary services during interruptions to existing utilities, as acceptable to owner and to governing authorities.
  - Contractor shall coordinate with appropriate utility owner when disconnecting, removing, or relocating existing utility services.
- Conduct demolition operations to prevent injury to people and damage to adjacent buildings and facilities to remain. Ensure safe passage of people around demolition area.
  - Erect temporary protection, barricades as per local governing authorities.
  - Protect existing site improvements and appearances to remain.
- Protect existing trees and other vegetation indicated to remain in place, against unnecessary cutting, breaking or skinning of roots, skinning and bruising of bark, smothering of trees by stockpiling construction materials or excavated materials within drip line, excess foot or vehicular traffic or parking of vehicles within drip line. Provide temporary guards to protect trees and vegetation to remain in place.
  - Protect tree root systems from damage due to deleterious materials caused by run-off or spillage during mixing, use or discarding of construction materials or drainage from stored materials. Protect root systems from compaction, flooding, erosion or excessive wetting.
  - Engage a qualified tree surgeon to remove branches from trees, if required, to clear for new construction. Where cutting is required, tree surgeon shall cut branches and roots with sharp pruning instruments; do not break or chop.
- Explosives: use of explosives will not be permitted.
- Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.
- Clean adjacent buildings and improvement of dust, dirt, and debris caused by demolition operations. Return adjacent areas to condition existing before start of demolition.
- Damages: Promptly repair damages to adjacent facilities caused by demolition operations at the contractors cost.
- Remove existing above-grade and below-grade improvements necessary to permit construction and other work as indicated.
- General: Promptly dispose of demolished materials. Do not allow demolished materials to accumulate on-site.
- Do NOT Burn or bury materials on site.
- Contractor to sawcut existing pavement to remain prior to curb, gutter, pavement, etc. removal.
- In Tennessee it is a requirement per "The Underground Utility Damage Prevention Act" that anyone who engages in excavation must notify all known utility owners, no less than three nor more than ten working days, prior to their intended excavation. A list of these utility owners may be obtained from the county register of deeds. Those utility owners who participate in the Tennessee One Call System can be notified toll free at 1-800-351-1111.
- Utilities shown are based on visual observations and utility markings. Contractor shall call TN One Call and confirm locations prior to starting work.

**General Plan Notes:**

- Prior to starting construction the contractor shall be responsible for making sure that all required permits and approvals have been obtained. No construction or fabrication shall begin until the contractor has received and thoroughly reviewed all plans and other documents approved by all of the permitting authorities.
- All work shall be performed in accordance with these plans, specifications, and the requirements and standards of the local governing authority. The soils report and recommendations set forth therein are a part of the required construction documents and take precedence unless specifically noted otherwise on the plans. The contractor shall notify the construction/project manager of any discrepancy between soils report and plans, etc.
- The locations of underground facilities shown on the plan are based on field surveys and city records. It shall be the contractor's full responsibility to contact the various utility companies to locate their facilities prior to the starting construction. No additional compensation shall be paid to the contractor for work having to be redone due to information shown incorrectly on these plans if such notification has not been given.
- All work within the rights of way shall be in accordance with the governing jurisdiction and specifications.
- Contractor shall coordinate any maintenance of traffic with the owner's representative and the local jurisdiction prior to construction.
- Contractor shall at all times ensure that SWPPP measures protecting existing drainage facilities be in place prior to the commencement of any phase of the site construction or land alteration.
- Upon completion of project, contractor shall clean the paved areas prior to removal of temporary sediment controls, as directed by the city and/or construction/project manager. If power washing is used, no sediment laden water shall be washed into the storm system. All sediment laden material on pavement or within the storm system shall be collected and removed from the site at contractor's expense.
- Rock may be present at shallow depths requiring some rock excavation for utility installation. No extra compensation shall be given for rock excavation.
- These project construction documents shall not constitute a contractual relationship between the engineer and the contractor.
- The engineer shall not be responsible for construction of safety means, methods, techniques, sequence's, or procedures utilized by the contractor or subcontractors.

**Site Plan Notes:**

- Contractor shall immediately notify the engineer of any discrepancies found between these plans, the architectural plans, and/or field conditions prior to construction.
- Apparent errors, discrepancies, or omissions on the drawing shall be brought to the attention of the owner prior to bid submittal. The contractor may not use apparent errors, discrepancies, or omissions present on the drawings presented for bidding for additional charges after bids have been submitted. The architect shall be permitted to make corrections and interpretations as may be deemed necessary for the fulfillment of the intent of the contract documents.
- The contractor shall stake all improvements using the geometric data provided in the drawings. It is the sole responsibility of the contractor to completely stake and check all improvements to ensure adequate positioning, both horizontal and vertical, prior to the installation of any improvements. No digital file will be provided.
- The notes and plans shown call attention to certain required features of the construction but do not claim to cover all details of design and construction. The contractor shall furnish and install the work complete and ready for operation.
- After completion of construction, the contractor shall perform site cleanup to remove all trash, debris, excess materials, equipment and other deleterious materials associated with construction. The contractor is expressly responsible for ensuring the site is clean and in operable condition at the time of final acceptance.
- The contractor is responsible for the protection and replacement of all property pins on this site.
- These drawings are intended for use on this site only and as an integrated set for this specific project. These drawings may not be used in whole or in part on any other project under the professional engineer's seal. The owner shall hold harmless and indemnify the architect and engineer from and against any and all claims of any nature whatsoever arising from such use.
- All dimensions and radii are given to face of curb unless otherwise noted.
- Asphalt paving: do not apply prime and tack coats when temperature is above 50° F, or when base is wet. Apply asphalt paving only when temperature is above 40° F and when base is dry.
- Materials:
  - Subgrade: Cohesive subgrade shall be compacted to 95% compaction. Cohesion less subgrade shall be compacted to 100% compaction.
  - Subbase: Unless otherwise noted on these plans, base shall consist of water bonded limestone, crushed rock or DGA.
  - Asphalt: Bituminous concrete hot plant mix binder course and asphalt topping plant mix shall be applied over base, minimum temperature time of placement shall be 225° F.
- Cast in place concrete: All concrete work shall conform to all requirements of American Concrete Institute ACI 301 and applicable sections of ASTM C-94 (latest ed.) for ready mixed concrete.
- All concrete shall be in-transit mixed concrete, 3% to 5% air-entrained and shall attain a minimum compression strength of 4,000 p.s.i. in twenty-eight (28) days.
- Slump: Maximum allowable slump will be five (5) inches.
- Concrete Materials:
  - Portland cement: Gray portland cement, ASTM C-150 (latest ed.) type 1. All concrete shall contain not less than five bags of cement per cubic yard.
  - Aggregates: ASTM C-33 (latest ed.).
  - Sands: Hard, durable, clean, sharp, natural sand free from clay, loam, dust or organic matter.
  - Water: Clean, potable, free from oil, acids, alkali, organic matter and other deleterious substances.
  - Admixture: Air type to meet ASTM C-260 (latest ed.)
- Reinforcing materials shall be uncoated and free from excessive rust, mill scale, oil, grease and other deleterious matter.
- All above grade exterior concrete surfaces shall be cured with curing compound sprayed on in strict compliance with manufacturer's directions.
- Weather Requirements:
  - Hot Weather Placing: No concrete shall be placed when the air temperature is greater than 90° F unless the following are included in the contract and reviewed by the engineer: temperature of the concrete when placed shall not be greater than 90° F. Procedures for cooling, retarding and protecting in-place concrete during hot weather shall be in accordance with ACI 305. Provide special procedures required to control concrete temperature and to protect surfaces from drying out, mixing water may be chilled or chopped ice may be used to control temperature provided water is calculated to total amount of mixing water, use of liquid nitrogen to cool concrete is the contractor's option.
  - Cold Weather Placing: Do not mix or place when atmospheric temperature will fall below 40° F, or when conditions indicate temperature will fall below 40° F within 72 hours. Concrete deposited shall have temperature not less than 50° F. Reinforcement, forms and ground which concrete will contact shall be completely free of frost. Keep concrete and form work at a temperature not less than 50° F for not less than 72 hours after pouring. Comply with requirements of ACI 305 (latest ed.) for cold weather protection.
- Concrete tests shall be authorized by the owner on an as needed basis.
- All exterior curb shall have expansion joints at 100'-0" O.C., and construction joints at 10'-0" O.C. (unless otherwise specified on the detail sheets).
- All concrete shall have a medium transverse finish.
- Subgrade shall be free of extraneous materials. Proof-rol soil subgrade with heavy, pneumatic tired equipment immediately prior to placing stone base. Any soft or unstable zones detected thereby shall be undercut to firm soil and backfilled with engineered earth fill compacted as specified. The subgrade for all pavements shall be uniformly stable before any stone base is installed. No base materials shall be placed if the subgrade indicates pumping.
- Surface preparation, spreading and laying, compacting and rolling operations shall conform with asphalt institute recommended specifications.
- Inspect area to paved and insure that all subgrade conditions are sufficiently carried out to insure a good paving job. A finished surface shall not vary more than 1/8" in 10 feet when tested with a straight edge applied parallel with, or at right angle, to centerline of asphalt surfaces. Humps or depressions which exceed specified tolerances or which retain water shall be immediately corrected by removing the defective work and replacing it with new material at the contractor's expense.

**Grading And Drainage Plan Notes:**

- The site work contractor shall coordinate the installation of all underground utilities with his work. All underground utilities (water, sanitary sewer, storm sewer, electrical conduit, irrigation sleeves, and any other miscellaneous underground utilities, devices, or structures), shall be in-place prior to the placement of base course material.
- The contractor shall cut existing pavement as necessary to assure a smooth fit and continuous grade.
- The contractor shall verify horizontal and vertical location of all existing storm sewer structures, pipes and all utilities prior to construction.
- Clearing and grubbing limits shall include all areas disturbed by grading operation.
- The soil materials shown hereon may be disturbed by cutting or filling operations performed during or before development. Therefore, the builder of any proposed structure shall investigate the current conditions and consult with a geotechnical expert or other qualified person as he deems appropriate to assure himself that the design of the proposed foundation is adequate.
- No portion of this site lies within a 100 year flood hazard area, as defined by F.E.M.A. Community Panel No. 47149C0381H dated January 5, 2007.
- Before starting grading operations, see sheets 4-7 Construction SWPPP plan notes and details.
- Prior to site construction activity, the contractor shall install all SWPPP measures to protect existing drainage facilities. Contractor shall prevent siltation from leaving the site at all times.
- Strip building and pavement areas of all organic topsoils. Stockpile suitable topsoils for respreading onto landscape areas. All excess excavated materials shall be removed from the site at the contractor's expense.
- Site grading shall be performed in accordance with these plans and specifications and the recommendations set forth in this plan set. The contractor shall be responsible for removing all soft, yielding or unsuitable materials and replacing with suitable materials.
- Contractor shall submit a compaction report prepared by a Licensed Geotechnical Engineer, verifying that all filled areas and subgrade areas within the building pad area and areas to be paved have been compacted in accordance with these plans and specifications and the recommendations. Notify project engineer if any unsuitable soils are found.
- It is the earthwork contractor's responsibility to maintain the site soils and engineered fills with a workable moisture content range to obtain the required in-place density. Scarifying and drying operation should be included in the contractor's price and should not be considered and extra for the contract. The contractor shall review and be aware of all moisture concerns and soil remediations requirements.
- Following grading of subsoil to subgrade elevations the contractor shall place topsoil to a 6" depth in all disturbed areas which are not to be paved. Smoothly finish grade to meet surrounding low areas and ensure positive drainage. Stockpile topsoil shall be screened prior to respreading. Topsoils shall be free of subsoil, debris, brush and stones larger than 1" in any dimension. Rock hounding in place will not be permitted. All excess topsoil shall be legally disposed of off site.
- After fine grading topsoil, contractor shall seed, mulch, fertilize and water until a healthy stand of grass is obtained. The restoration shall closely follow construction.
- Elevations given are at bottom face of curb and/or finished pavement grade unless otherwise specified on grading plan. All pavement shall be laid on a straight, even and uniform grade with a minimum of 1% slope toward the collection points unless otherwise specified on the grading plan. DO NOT allow negative grades or ponding of water.
- Slope building sidewalk away from the building at a maximum of 1.5% (unless otherwise indicated on sheet C3.0)
- Contractor shall provide butt end joint to meet existing pavement in elevation at drive returns and ensure positive drainage.

**General Utility Notes:**

- Contractor shall contact all utility companies immediately after bid is awarded and ensure the utility companies have the essentials required for complete service installation. Contractor shall notify construction manager and engineer of any time frames established by utility companies which will not meet opening date.
- Existing utility lines shown are approximate locations only. Contractor shall verify the size, location, invert elevation, and condition of existing utilities which are intended to be utilized as a connection point for all proposed utilities (see sheet), prior to any construction. Contractor to ensure existing utilities are in good condition and free flowing (if applicable). If elevations, size, or location differ from what is shown on sheet, contractor shall notify engineer immediately.
- The contractor will provide all necessary protective measures to safeguard existing utilities from damage during construction of this project. In the event that special equipment is required to work over and around the utilities, the contractor will be required to furnish such equipment. The cost of protecting utilities from damage and furnishing special equipment will be included in the price bid for other items of construction.
- The contractor shall notify each individual utility owner of his plan of operation in the area of the utilities, prior to commencing work, the contractor shall contact the utility owners and request them to properly locate their respective utility on the ground. This notification shall be given at least three (3) business days prior to commencement of operations around the utility.
- The contractor shall coordinate installation of utilities at such a manner as to avoid conflicts and assure proper depths are achieved as well as coordinating with the regulatory agency as to location and scheduling of tie-ins/connections to their facilities.
- All underground utilities (water sewer, storm sewer, electrical conduit, irrigation sleeves, and any other miscellaneous), shall be in-place prior to the placement of base course material.
- Utility contractor will be responsible for all tap and tie on fees required, as well as cost of underground service connections.
- No more than 25 percent of the dollar amount of the contract may be awarded to subcontractors.
- The contractor shall provide a suitable office near the site for his use and at which copies of the specifications and drawings shall be kept. The contractor shall also designate to the owner a person to be notified in Murfreesboro in case of emergencies other than during working hours and on holidays and weekends.
- Streets shall be graded to subgrade before water lines and sanitary sewers are installed.
- All waterline taps are to be made by C.U.D.
- Contractor shall comply with all requirements of the latest edition of C.U.D.'s specifications.
- In Tennessee it is a requirement per "the Underground Utility Damage Prevention Act" that anyone who engages in excavation must notify all known utility owners, no less than three nor more than ten working days, prior to their intended excavation. A list of these utility owners may be obtained from the county register of deeds those utility owners who participate in the Tennessee one call system can be notified toll free at (800) 351-1111.

**S.T.E.P. System General Notes:**

- The location of treatment system components as shown are general in nature. Minor field adjustments may be necessary. The contractor may request to modify the location of the components through the owner and the Tennessee Division of Water Pollution Control.
- This design is for the treatment and disposal of wastewater collected from 20 single family residential lots. Lots shown hereon this plan are preliminary only.
- All flows for this system shall be controlled and monitored by the MVD (Smart) Panel. This monitoring shall be considered the flow meter for this system.
- The minimum horizontal separation between the closest two points of the water and sewer line is ten (10) feet. The minimum vertical separation between the closest two points of the water and sewer line shall be 18 inches, with waterlines being above sewerlines.
- Contractor shall comply with the most current requirements, specifications, and detail drawings for the installation of STEP system collection lines as outlined in the WPC Design Criteria Section 2.4.1.
- All trenches, pipe laying, and backfilling shall be in accordance with federal O.S.H.A. regulations.
- Utility contractor shall have approval of all governing agencies having jurisdiction over this system prior to installation.
- All tanks shall be one-piece, structurally sound, watertight tanks as manufactured by Jarrett concrete products, or approved equal.
- Testing procedure for water tightness is as follows. Fill tank 2" into the riser. After a period of 24 hours, the water level should have lowered no more than 1/4".
- Collection forcemain shall be 2" SDR21 purple PVC pipe (color to be coordinated with C.U.D.). Forceman shall be tested and rated for a 150 PSI working pressure.

**Waterline Notes:**

- All water mains shall be hydrostatically tested and disinfected before acceptance.
- All trenches, pipe laying, and backfilling shall be in accordance with federal O.S.H.A. regulations.
- Contractor shall comply with all requirements of the latest edition of the CUD specifications.
- Utility contractor shall have approval of all governing agencies having jurisdiction over this system prior to installation.
- The developer must post bond, \$2,000 or \$250 for each valve box (whichever is greater), whenever the subject project has valve boxes that are located within pavement upon completion of the proposed water system extension.
- The owner/developer for budget purposes should contact CUD for related fees to project which may be substantial.
- Water Service materials shall be copper type "K" unless otherwise noted on plans. Diameter shall be as noted on these plans and shall be installed with a minimum cover of 42" or below frost line, whichever is greater.
- Construction and Materials Provided By The Water Company:
  - Top Main.
  - Furnish and install curb stop and box and water meter.
  - Coordinate all work with the City of Murfreesboro, Greg Harvey & 615-848-3200.
  - Coordinate fire metering with the Consolidated Utility District (CUD), Bryant Bradley & 615-225-3340.
- Construction and Materials Provided By The Contractor:
  - Furnish and install copper service line from meter to building.
  - All trenching and backfilling.
  - Coordinate all work with the City of Murfreesboro, Greg Harvey & 615-848-3200
  - Coordinate with Bill Durnill (CUD) & 615-867-7302 for water meter specifications.
  - Coordinate fire metering with the Consolidated Utility District, Bryant Bradley & 615-225-3340

**Natural Gas Notes:**

- Construction And Materials Provided By The Gas Company:
  - Top Main.
  - Furnish and install mainline extension, including all trenching and backfilling.
  - Furnish and install meter.
  - Coordinate all work with Atmos Energy, Jerry Burke & 615-566-3085 or Stephen Morris & 615-893-5672
- Construction and Materials Provided By The Contractor:
  - Furnish and install service lateral, including all trenching and backfilling.
  - Contractor shall include all fees required by the gas company to provide a complete working service.

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**MAES F. REED III**  
 REGISTERED PROFESSIONAL ENGINEER  
 STATE OF TENNESSEE  
 LICENSE NO. 3500

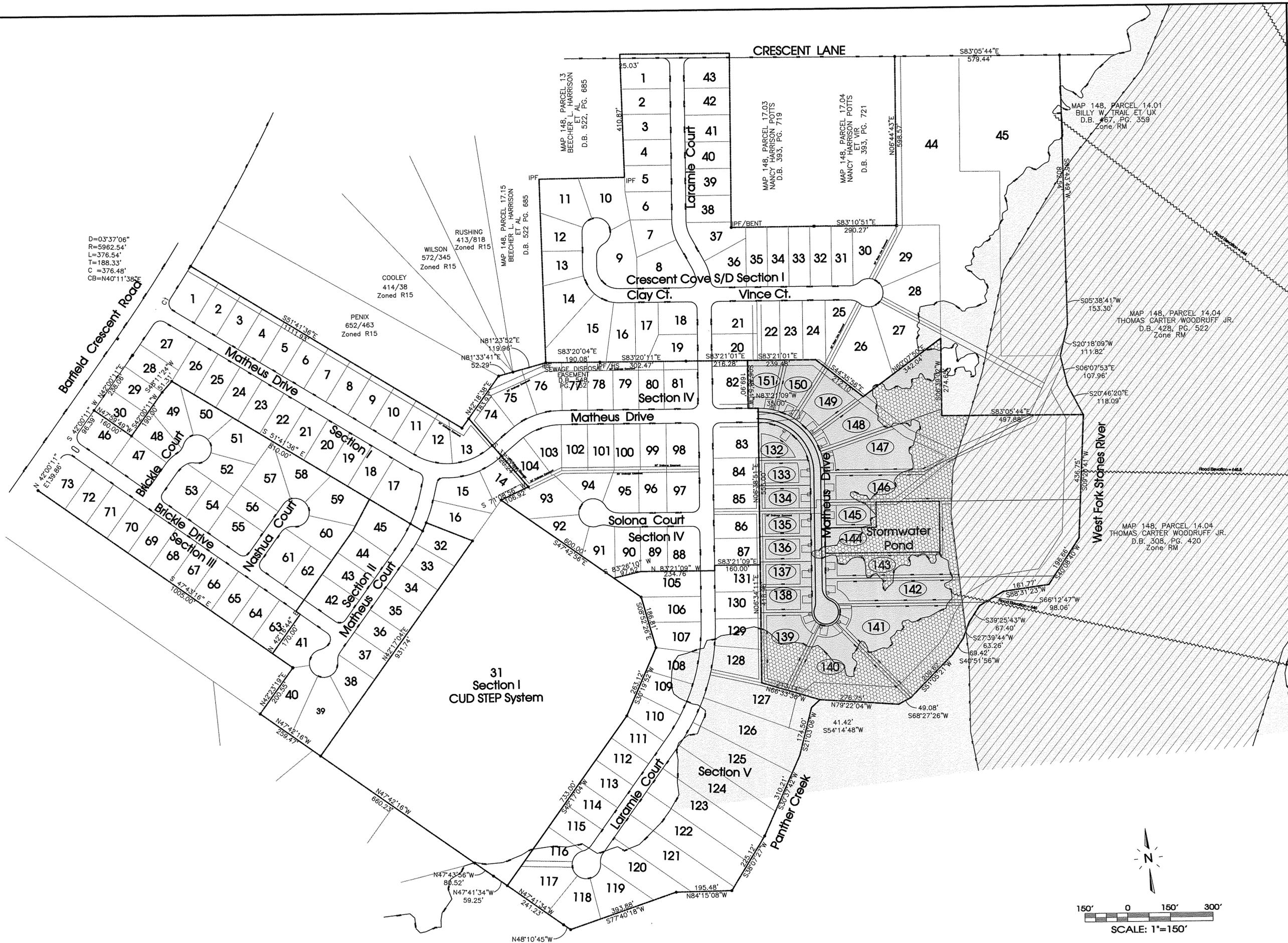


**Harrison Glen Subdivision**  
**Section VI**  
**Rutherford County, Tennessee**

REVISIONS:
DRAWN: SJA
DATE: 12-13-13
CHECKED: JFR
FILE NAME: 011322project7.dwg
SCALE: None
JOB NO. 01132
SHEET:

**General Notes**

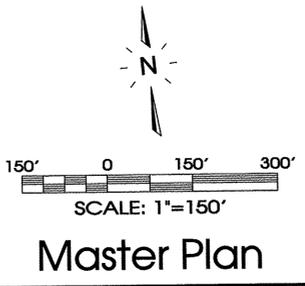
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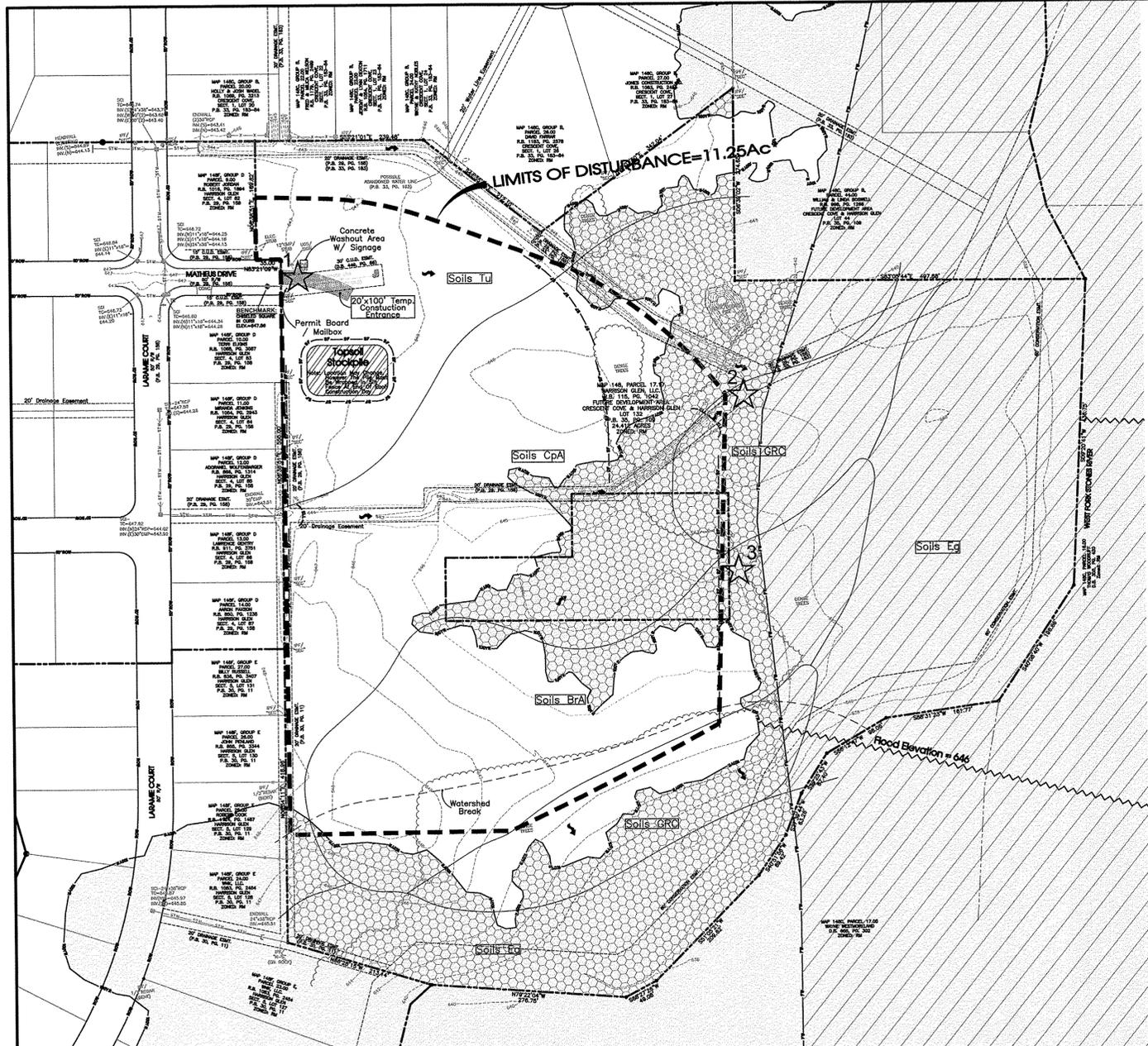


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Harrison Glen Subdivision  
 Section VI  
 Rutherford County, Tennessee

DRAWN: JPW  
 DATE: 06-30-05  
 CHECKED: JFR  
 FILE NAME: 01132project7  
 REVISED:  
 SCALE: 1"=150'  
 JOB NO. 01132  
 SHEET: 3 of 12





**EXISTING ON-SITE CONDITIONS**

COVER	SCS CLASSIFICATION	AREA (Ac)
WOODS AND PASTURE	GOOD CONDITION SOILS, CN=72	18.9
WOODS	GOOD CONDITION D SOILS, CN=77	5.5
		COMPOSITE CN=73

**PROPOSED ON-SITE CONDITIONS**

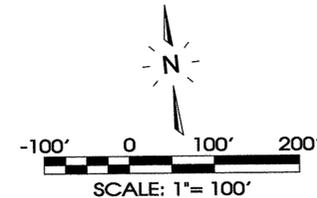
COVER	SCS CLASSIFICATION	AREA (Ac)
BUILDING, SIDEWALK, PAVEMENT, LAWN	RESIDENTIAL 30% IMPERVIOUS SOILS, CN=81	18.9
BUILDING, SIDEWALK, PAVEMENT, LAWN	RESIDENTIAL 30% IMPERVIOUS D-SOILS, CN=85	5.5
		COMPOSITE CN=82

**PROPOSED BMP'S**

BMP	TYPE
INLET PROTECTION	TEMPORARY, SEDIMENT CONTROL
SILT FENCE	TEMPORARY, SEDIMENT CONTROL
CONSTRUCTION ENTRANCE	TEMPORARY, SEDIMENT CONTROL
VEGETATION	PERMANENT, EROSION PREVENTION
STORMWATER POND (DRY)	PERMANENT, SEDIMENT CONTROL

**OUTFALLS**

NUMBER	DESCRIPTION	DISTURBED AREA	DIVERTED AREA	TOTAL DRAINAGE AREA	RECEIVING BODY
1	CONSTRUCTION ENTRANCE	0.10	0.00	0.10	WEST FORK STONES RIVER
2	EXISTING DITCH	5.28	16.58	21.86	WEST FORK STONES RIVER
3	SOUTHEAST SILT FENCE	5.87	0.00	5.87	WEST FORK STONES RIVER



**SWPPP Narrative:**  
The existing site is located on Mathews Drive within Rutherford County. The existing site is a 24.5 Acre vacant property and generally sheet flows from the west to the east. The site has been designed to drain to the West Fork Stones River.

The existing soils on the site consist of approximately 77% Brodyville / Capshaw / Elam Silt Loam with a type C hydrologic soil group and 23% Tupelo Silt Loam and Gladeville-Rock outcropping with a type D hydrologic soil group. The pre-developed site is described as pasture and woods in fair condition with an SCS Curve Number of 73. The proposed residential development is 30% impervious surface and has a weighted SCS Curve Number of 82.

During demolition and mobilization, the sediment and stormwater runoff will be controlled with certain Best Management Practices (BMPs) silt fence will be installed on the downslope sides of the site. The storm inlets will be protected with silt fence inlet protection until the stone base and pavements can be installed. A stone construction entrance will be installed upon mobilization of site to limit the tracking of mud and sediment onto the adjacent pavements and roadways. Covered dumpsters will be on site for disposal of trash and other debris. Point and other potentially hazardous chemicals will be stored inside the building or otherwise approved weatherproof container. The contractor purchasing the materials will be responsible for legally disposing of the containers and excess materials in accordance with the manufacturers' recommendations. A washout area will be provided for the concrete trucks as required.

It is the contractor's responsibility during construction to install and maintain all sedimentation and storm water pollution prevention BMPs described above and detailed within the plans at all times, which includes regular removal and disposal of accumulated debris. All erosion and sediment controls must be maintained properly until the site is stabilized. Maintenance must include inspections of all erosion and sediment controls after each runoff event and on a weekly basis. All preventative and remedial maintenance work, including clean out, repair replacement, re-grading, re-seeding, re-mulching and re-netting must be performed immediately. The developer will own and maintain the site after construction has been completed.

- Construction Sequence:**
1. Stake and/or flag limits of clearing.
  2. During preconstruction meeting all erosion & sediment control facilities & procedures shall be discussed.
  3. Clear & grub, as necessary, for installation of perimeter controls.
  4. Install silt fence perimeter controls as shown on plans.
  5. Install construction entrance and concrete washout facility, if conditions are such that mud is collecting on vehicle tires, the tires must be cleaned before the vehicles enter the public roadway. The site entrance shall be maintained in a condition that will prevent the tracking or flow of mud onto the public right-of-way. All materials spilled, dropped, washed or tracked from vehicles onto the roadway must be removed promptly.
  6. Clear & grub the remaining site as necessary.

**Storm Water Pollution Prevention Notes:**

1. The site contractor is responsible for establishing and maintaining suitable erosion and sediment control devices on-site during construction as required to prevent silt from leaving site. Silt will not be allowed beyond construction limits.
2. The contractor is responsible for removing silt from site if not reusable on-site and assuring plan alignment and grade in all ditches at completion of construction.
3. Erosion control measures shall be provided for all cut and fill operations within the limits of the construction site, throughout the construction period to provide the site with maximum protection from erosion at all times.
4. Erosion control measures are to be installed prior to any grading on-site and are to be maintained in place until stabilization of erodible soils has been accomplished.
5. The Storm Water Pollution Prevention Plan (SWPPP) is an integral part of the Erosion Prevention and Sediment Control (EPSC) Plan and should be followed during all phases of construction (bidding, site work, final stabilization).
6. Any graded or disturbed areas shall have 4 inches of topsoil, seed, mulch, fertilizer, and water applied until a healthy stand of grass is obtained unless otherwise noted on plans. The restoration shall closely follow construction.
7. The construction drawings shall be made available on site at all times and presented upon request. If unforeseen storm water pollution prevention is encountered, additional Storm Water Pollution Prevention (SWPPP) measures may be requested by the owner, county engineer, project engineer, or soil conservation service representative at anytime. Such requests shall be implemented immediately at contractor's expense.
8. All Storm Water Pollution Prevention items shall be installed as shown or noted on this sheet.
9. Apply temporary seeding and mulching in all areas that shall be inactive for 15 days or more. All disturbed and eroded earth shall be regraded and seeded within 7 days with seeding, as defined above and as shown on the table below to establish stability and provided sediment control.

Seeding Dates	Seed Type	Application Rate Per 1,000 Sq.Ft.
March 1 - August 15	Oats Perennial Rye Grass Or Tall Fescue	3#
August 16 - November 1	Rye, Wheat or Perennial Rye Grass Tall Fescue	1#
After November 1	Straw or Hay Mulch	2-3 Bales
Seed Bed Preparation	Lime 10-10-10 or 12-12-12 Fertilizer	100# 12-15#

10. Permanent vegetation shall be installed within 7 days at the completion of any graded area, weather permitting.
11. At such time rough grading or the site is complete and drainage diverts to inlets, inlet sediment filters shall be installed at all inlet structures to keep piping systems free of siltation.
12. Silt barriers shall be installed around all existing or new storm inlets, catch basins, yard drains. Install rock check dams for headwall inlets for storm water pollution prevention.
13. Storm water pollution prevention measures shall be installed around all dirt or topsoil stockpiles and other temporarily disturbed areas.
14. Contractor shall inspect all SWPPP measures daily and repair as necessary to prevent erosion. Siltation shall be removed from areas where failures have occurred and corrective action taken within 24 hours to maintain all SWPPP items.
15. Silt barriers, construction entrances, and silt fences shall remain in place until a good stand of grass has been obtained and/or paving operations are complete. Contractor shall keep silt from entering any storm drainage system. Once site has been completely stabilized, and silt in pipes and drainage swales shall be removed within 10 days.
16. Temporary sedimentation and storm water pollution prevention measures must be inspected and logged by the contractor for inspection, leaving shall be weekly and after rain storms.
17. Utility companies must comply with all storm water pollution prevention measures as defined on the storm water pollution prevention plans, details and notes.
18. The total area of disturbance for the project is 11.25 Acres.
19. All storm water pollution prevention practices shall be installed before any other earth moving occurs.
20. The contractors shall use temporary sediment filter bags as necessary to control sediment runoff.
21. The following storm water pollution prevention and sediment control measures will be used on this site:  
21A) Silt fence 21E) Check dams  
21B) Filter fabric inlet protection 21F) Temporary seeding  
21C) Construction entrance 21G) Erosion control blanket  
21D) Concrete washout facility 21H) Permanent seeding or sodding
22. Sediment shall be removed from sediment controls as necessary but at least when the design capacity of the control has been reduced by 50%.

- EPSC Phasing**
- Initial: Silt Fence Along Downgradient  
Perimeter Construction Entrance  
Eris In Existing Ditches  
Filter Fabric Inlet Protection
- Intermediate: Temporary Seeding  
Filter Fabric Inlet Protection  
Check Dams In Proposed Ditches  
Eris To Protect Ditches  
Erosion Control Blanket Installation  
At Prescribed Locations
- Final: Seeding And Stabilization Of All  
Disturbed Areas



Know what's below.  
Call before you dig.

**Survey Control**  
Field survey performed from 11-07-13 to 11-18-13. Horizontal & vertical survey control is based on the Tennessee State Plane coordinate system (NAD83-96 NAVD88), referenced from City of Murfreesboro UGB monument #02-435.

**BENCHMARK:**  
CHISELED SQUARE IN CURB  
ON MATHEUS DRIVE  
N: 514648.5  
E: 1838954.7  
ELEV: 647.86

**SFC, Inc.**  
SITE ENGINEERING CONSULTANTS  
ENGINEERING - SURVEYING - LAND PLANNING  
MURFREESBORO, TENNESSEE 37139  
PHONE: (615) 890-7901  
FAX: (615) 890-5555  
NO PORTION OF THIS DRAWING MAY BE REPRODUCED WITHOUT THE EXPRESSED WRITTEN CONSENT OF S.F.C. INC.



Harrison Glen Subdivision  
Section VI  
Rutherford County, Tennessee

Existing Conditions &  
Initial EPSC Plan

REVISIONS:

DRAWN: SJA  
DATE: 12-13-13  
CHECKED: JFR  
FILE NAME: 01132project7.dwg  
SCALE: 1" = 100'  
JOB NO. 01132  
SHEET: 4 of 12



**EXISTING ON-SITE CONDITIONS**

COVER	SCS CLASSIFICATION	AREA (Ac)
WOODS AND PASTURE	GOOD CONDITION C SOILS, CN=72	18.9
WOODS	GOOD CONDITION D SOILS, CN=77	5.5
		COMPOSITE CN=73

**PROPOSED ON-SITE CONDITIONS**

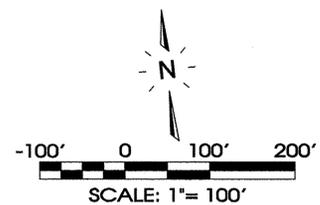
COVER	SCS CLASSIFICATION	AREA (Ac)
BUILDING, SIDEWALK, PAVEMENT, LAWN	RESIDENTIAL 30% IMPERVIOUS C-SOILS, CN=81	18.9
BUILDING, SIDEWALK, PAVEMENT, LAWN	RESIDENTIAL 30% IMPERVIOUS D-SOILS, CN=85	5.5
		COMPOSITE CN=82

**PROPOSED BMP'S**

BMP	TYPE
INLET PROTECTION	TEMPORARY, SEDIMENT CONTROL
SILT FENCE	TEMPORARY, SEDIMENT CONTROL
CONSTRUCTION ENTRANCE	TEMPORARY, SEDIMENT CONTROL
VEGETATION	PERMANENT, EROSION PREVENTION
STRAW BALES	TEMPORARY, SEDIMENT CONTROL

**OUTFALLS**

NUMBER	DESCRIPTION	DISTURBED AREA	DIVERTED AREA	TOTAL DRAINAGE AREA	RECEIVING BODY
1	CONSTRUCTION ENTRANCE	0.10	0.00	0.10	WEST FORK STONES RIVER
2	EXISTING DITCH	5.28	16.58	21.86	WEST FORK STONES RIVER
3	SOUTHEAST SILT FENCE	5.87	0.00	5.87	WEST FORK STONES RIVER



**SWPPP Narrative:**  
The existing site is located on Matheus Drive within Rutherford County. The existing site is a 24.5 Acre vacant property and generally sheet flows from the west to the east. The site has been designed to drain to the West Fork Stones River.

The existing soils on the site consist of approximately 77% Bradyville / Capshaw / Elam Silt Loam with a type C hydrologic soil group and 23% Tupelo Silt Loam and Gladeville-Rock outcropping with a type D hydrologic soil group. The pre-developed site is described as pasture and woods in fair condition with an SCS Curve Number of 73. The proposed residential development is 30% impervious surface and has a weighted SCS Curve Number of 82.

During demolition and mobilization, the sediment and stormwater runoff will be controlled with certain Best Management Practices (BMPs) silt fence will be installed on the down slope sides of the site. The storm inlets will be protected with silt fence inlet protection until the stone base and pavements can be installed. A stone construction entrance will be installed upon mobilization of site to limit the tracking of mud and sediment onto the adjacent pavements and roadways. Covered dumpsters will be on site for disposal of trash and other debris. Paint and other potentially hazardous chemicals will be stored inside the building or otherwise approved weatherproof container. The contractor purchasing the materials will be responsible for legally disposing of the containers and excess materials in accordance with the manufacturers' recommendations. A washout area will be provided for the concrete trucks as required.

It is the contractor's responsibility during construction to install and maintain all sedimentation and storm water pollution prevention BMPs described above and detailed within the plans at all times, which includes regular removal and disposal of accumulated debris. All erosion and sediment controls must be maintained properly until the site is stabilized. Maintenance must include inspections of oil erosion and sediment controls after each runoff event and on a weekly basis. All preventative and remedial maintenance work, including clean out, repair replacement, re-grading, re-seeding, re-mulching and re-netting must be performed immediately. The developer will own and maintain the site after construction has been completed.

**Construction Sequence:**

- Stake and/or flag limits of clearing.
- During preconstruction meeting all erosion & sediment control facilities & procedures shall be discussed.
- Clear & grub, as necessary, for installation of perimeter controls.
- Install silt fence perimeter controls as shown on plans.
- Install construction entrance and concrete washout facility, if conditions are such that mud is collecting on vehicle tires, the tires must be cleaned before the vehicles enter the public roadway. The site entrance shall be maintained in a condition that will prevent the tracking or flow of mud onto the public right-of-way. All materials spilled, dropped, washed or tracked from vehicles onto the roadway must be removed promptly.
- Clear & grub the remaining site as necessary.

**Storm Water Pollution Prevention Notes:**

- The site contractor is responsible for establishing and maintaining suitable erosion and sediment control devices on-site during construction as required to prevent silt from leaving site. Silt will not be allowed beyond construction limits.
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Seed Bed Preparation	Lime U-10-10 or 12-12-12 Fertilizer	100# 12-15#

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- Sediment shall be removed from sediment controls as necessary but at least when the design capacity of the control has been reduced by 50%.

**EPSC Phasing**

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Perimeter Construction Entrance  
Elts in Existing Ditches  
Filter Fabric Inlet Protection

Intermediate: Temporary Seeding  
Filter Fabric Inlet Protection  
Check Dams in Proposed Ditches  
Elts To Protect Ditches  
Erosion Control Blanket Installation  
At Prescribed Locations

Final: Seeding And Stabilization Of All Disturbed Areas

**811**  
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**BENCHMARK:**  
CHISELED SQUARE IN CURB  
ON MATHEUS DRIVE  
N: 514648.5  
E: 1838954.7  
ELEV: 647.86

**SEC, Inc.** SITE ENGINEERING CONSULTANTS  
ENGINEERING • SURVEYING • LAND PLANNING  
850 MIDDLE TENNESSEE BOULEVARD  
MURFREESBORO, TENNESSEE 37129  
PHONE: (615) 895-1000  
FAX: (615) 895-1001  
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The site as shown on these construction drawings is intended to achieve specific engineering design criteria and objectives. It is the sole responsibility of the owner/developer to ensure that the construction of the site shown on these construction drawings is in full accordance with the design criteria and objectives. It is the responsibility of the contractor to ensure that the construction of the site is constructed in accordance with the construction plans.

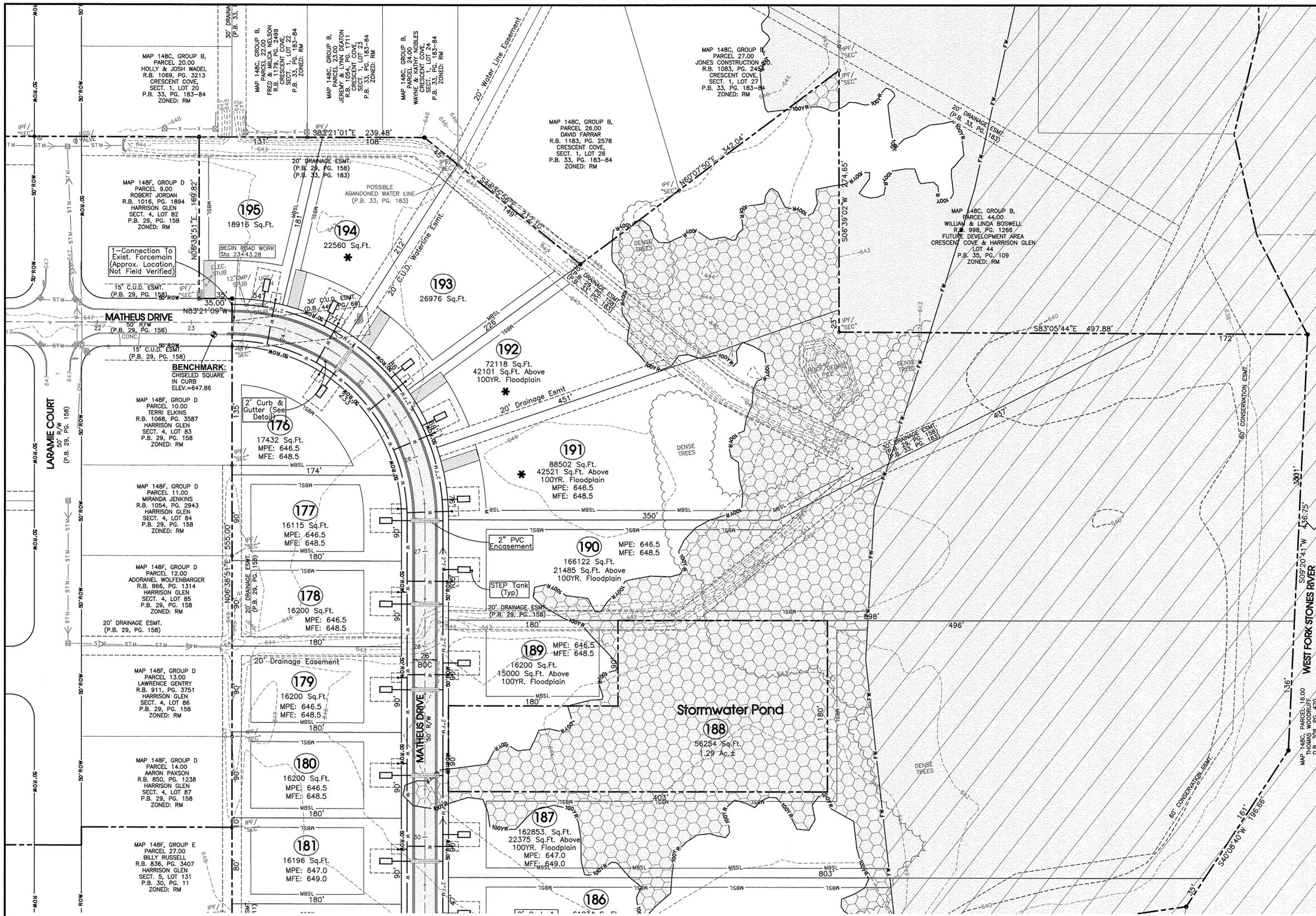


Harrison Glen Subdivision  
Section VI  
Rutherford County, Tennessee

**Intermediate EPSC Plan**

REVISIONS:

DRAWN: SJA  
DATE: 12-13-13  
CHECKED: JFR  
FILE NAME: 01132project7.dwg  
SCALE: 1"= 100'  
JOB NO. 01132  
SHEET: 5 of 12



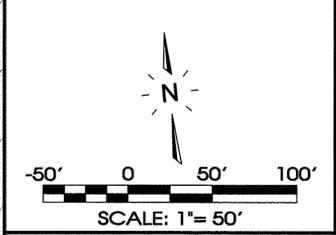
\* Lots will be required plot plan drawing and approved with consolidated utility distinct prior to county permit.

**Notes:**  
Waterline design to be provided by Consolidated Utility District's consultant. The locations of all fire hydrants and waterlines will be determined by C.U.D. in compliance with the current Rutherford County Subdivision Regulations.

**Legend:**

EXIST. CONCRETE MONUMENT	INLET FILTER PROTECTION
IRON PIN SET (I.P.S.)	HEADWALL
IRON PIN FOUND (I.P.F.)	WINGED HEADWALL
EXIST. SIGN POST	MANHOLE
EXIST. SEWER CLEANOUT	PROPOSED SPOT ELEVATION
EXIST. MANHOLE (SEWER & PHONE)	EXIST. SPOT ELEVATION
EXIST. CATCH BASIN (STORM SEWER)	REDUCER
EXIST. WATER/GAS VALVE	REVISION NUMBER
EXIST. TELEPHONE RISER	RIP RAP
EXIST. GAS RISER	RUNOFF FLOW ARROW
ELECTRICAL ENCLOSURE	SEWER/STORM FLOW DIRECTION
EXIST. WATER METER	DRAINAGE STRUCTURE DESIGNATION
EXIST. UTILITY POLE	DRAINAGE PIPE DESIGNATION
EXIST. FIRE HYDRANT	CONCRETE SIDEWALK
BENCHMARK	EXTRUDED CURB
BLOW OFF VALVE	CURB & GUTTER
CONCRETE THRUST BLOCK	CONCRETE SWALE
DOUBLE DETECTOR CHECK VALVE	CATCH BASIN
WATER METER	CURB INLET
FIRE HYDRANT	AREA DRAIN
GATE VALVE & BOX	EXTERIOR CLEANOUT

EXISTING PHONE	PH
EXISTING ELECTRIC	OH
PROPERTY LINE	---
EASEMENTS	---
RIGHT OF WAY	ROW
EROSION CONTROL SILT FENCE	SF SF SF
EXISTING TREELINE	~~~~~
EXISTING FENCELINE	-X-X-X-X-X-
MINIMUM BUILDING SETBACK LINE	MBSL
PHASE BOUNDARY	-----
EXISTING GAS LINE	GAS GAS
EXISTING STORM	STM STM STM
PROPOSED STORM	---STM---STM---STM---
EXISTING CONTOUR LINES	---601---
PROPOSED CONTOUR LINES	---601---
EXISTING SANITARY SEWER	---SS---SS---
PROPOSED SANITARY SEWER	---SS---SS---
EXISTING WATER	---W---W---
PROPOSED WATER	---W---W---
FLOODWAY	FW



**Developer:**  
Harrison Glen, LLC  
640 Broadmoor Blvd., Suite 100  
Murfreesboro, TN 37129  
(615) 896-4045

**Floodplain Note:**  
A portion of Harrison Glen Section VI lies within the 100 Year Floodplain, per Community Panels 4714803351H dated Jan. 5, 2007.

**Land Data:**  
7th Magisterial District  
Zoning: RM  
20 Lots on 24.41± Acres

**Yard Requirements:**  
Front: 40'  
Side: 10'  
Rear: 20'

**Deed Reference:**  
The property shown hereon is a portion of the lands conveyed to Harrison Glen LLC in R.B. 115 Pg. 1042 and Davidson Tract R.B. 548 Pg. 152 in R.O.R.C. 11th Civil District, Rutherford County Tennessee Tax Map 148 Parcel 17.17

**S.T.E.P. System Data:**  
Design Flow = 193 Lots x 300 gpd/lot = 57,900 gpd

Approved by the Rutherford County Planning Commission, with such conditions as are indicated in the minutes of the Commission on \_\_\_\_\_

Preliminary Plan approval shall not constitute final approval for recording purposes.

**SEC, Inc.**  
SITE ENGINEERING CONSULTANTS  
ENGINEERING • SURVEYING • LAND PLANNING  
850 MIDDLE TENNESSEE BOULEVARD  
MURFREESBORO, TENNESSEE 37129  
PHONE: (615) 890-7901  
FAX: (615) 896-2587  
E-MAIL: JREED@SEC-CIVIL.COM  
NO PORTION OF THIS DRAWING MAY BE REPRODUCED WITHOUT THE EXPRESSED WRITTEN CONSENT OF SEC, INC.

**JAMES F. REED III**  
REGISTERED PROFESSIONAL ENGINEER  
STATE OF TENNESSEE  
No. 35851

**Harrison Glen Subdivision  
Section VI**  
Rutherford County, Tennessee

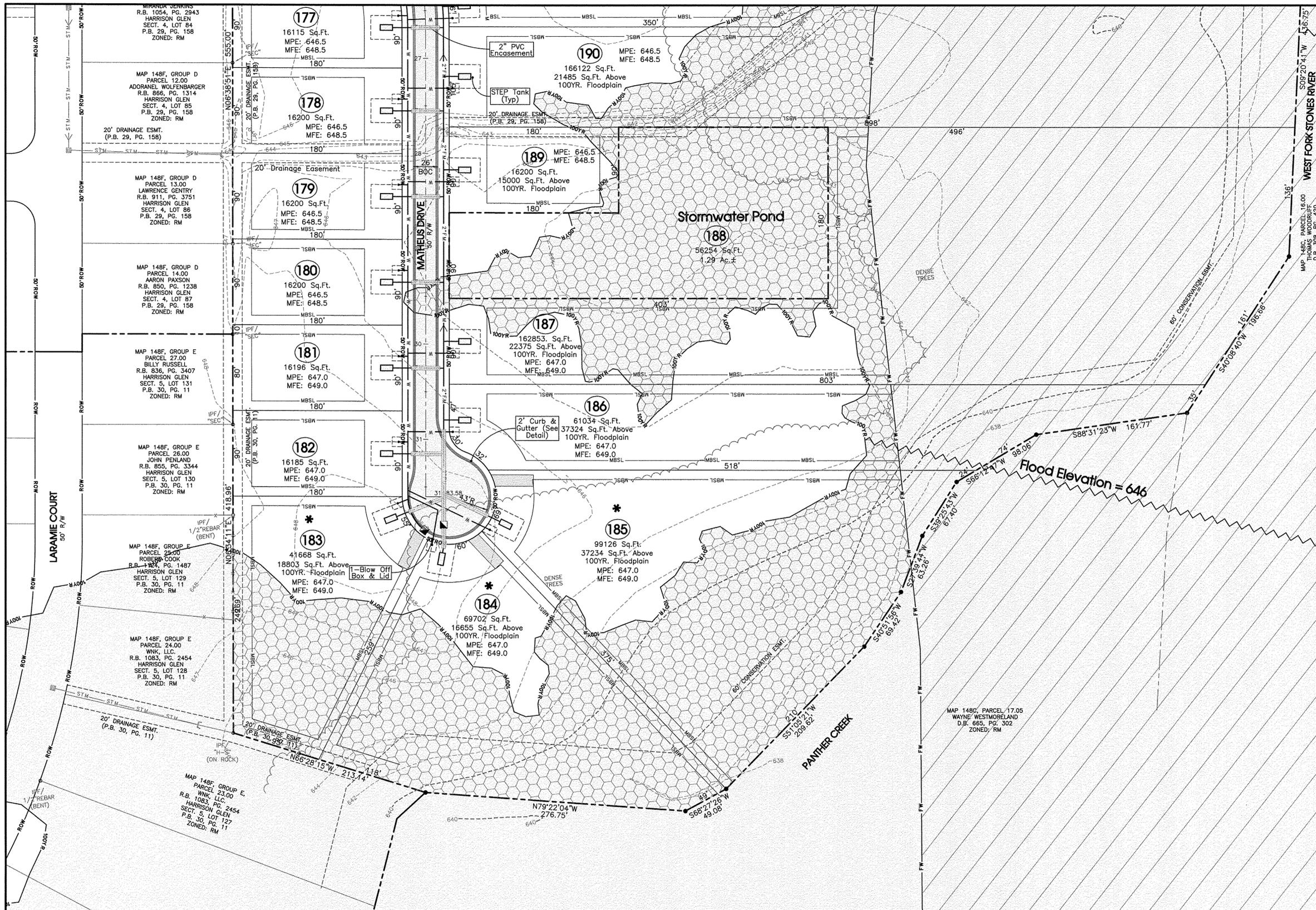
**811**  
Know what's below.  
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**Developer:**  
Harrison Glen, LLC

**Scale:**  
1"=50'

**Job No.:**  
01132

**Sheet:**  
6 of 12



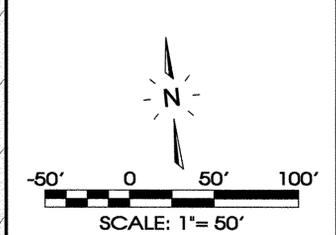
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**Legend:**

□	EXIST. CONCRETE MONUMENT	□	INLET FILTER PROTECTION
●	IRON PIN SET (I.P.S.)	—	HEADWALL
○	IRON PIN FOUND (I.P.F.)	—	WINGED HEADWALL
—	EXIST. SIGN POST	○	MANHOLE
○	EXIST. SEWER CLEANOUT	63.25 x	PROPOSED SPOT ELEVATION
○	EXIST. MANHOLE (SEWER & PHONE)	(63.25) x	EXIST. SPOT ELEVATION
⊖	EXIST. CATCH BASIN (STORM SEWER)	⊖	REDUCER
⊗	EXIST. WATER/GAS VALVE	⊗	REVISION NUMBER
⊕	EXIST. TELEPHONE RISER	⊕	RIP RAP
⊞	EXIST. GAS RISER	→	RUNOFF FLOW ARROW
⊞	ELECTRICAL ENCLOSURE	↗	SEWER/STORM FLOW DIRECTION
⊞	EXIST. WATER METER	#1	DRAINAGE STRUCTURE DESIGNATION
○	EXIST. UTILITY POLE	A	DRAINAGE PIPE DESIGNATION
○	EXIST. FIRE HYDRANT	—	CONCRETE SIDEWALK
⊕	BENCHMARK	—	EXTRUDED CURB
⊞	BLOW OFF VALVE	—	CURB & GUTTER
⊞	CONCRETE THRUST BLOCK	—	CONCRETE SWALE
⊞	DOUBLE DETECTOR CHECK VALVE	⊞	CATCH BASIN
⊞	WATER METER	⊞	CURB INLET
⊞	FIRE HYDRANT	⊞	AREA DRAIN
⊞	GATE VALVE & BOX	○	EXTERIOR CLEANOUT

EXISTING PHONE	— PH —
EXISTING ELECTRIC	— OH —
PROPERTY LINE	— — — — —
EASEMENTS	— — — — —
RIGHT OF WAY	— ROW —
EROSION CONTROL SILT FENCE	— SF — SF — SF —
EXISTING TREELINE	— — — — —
EXISTING FENCELINE	— X — X — X — X — X —
MINIMUM BUILDING SETBACK LINE	— — — — —
PHASE BOUNDARY	— — — — —
EXISTING GAS LINE	— GAS — GAS —
EXISTING STORM	— STM — STM — STM —
PROPOSED STORM	— STM — STM — STM —
EXISTING CONTOUR LINES	— 601 —
PROPOSED CONTOUR LINES	— 601 —
EXISTING SANITARY SEWER	— SS — SS —
PROPOSED SANITARY SEWER	— SS — SS —
EXISTING WATER	— W — W —
PROPOSED WATER	— W — W —
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**JAMES F. REED II**  
REGISTERED PROFESSIONAL ENGINEER  
STATE OF TENNESSEE

**Harrison Glen Subdivision  
Section VI**  
Rutherford County, Tennessee

REVISED: \_\_\_\_\_

DRAWN: SJA

DATE: 12-13-13

CHECKED: \_\_\_\_\_

JFR

FILE NAME: 01132project17.dwg

SCALE: 1"=50'

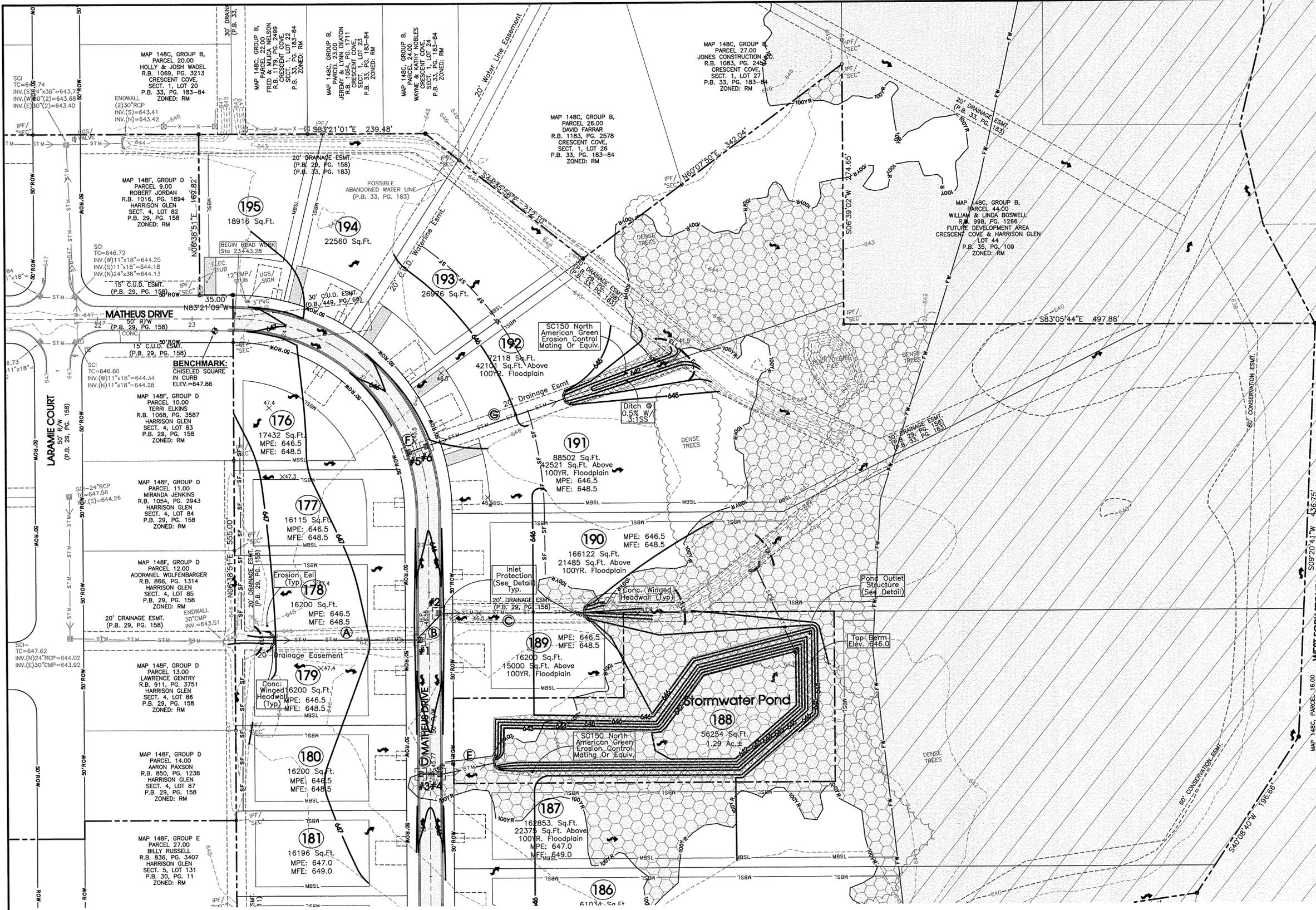
JOB NO. 01132

SHEET: \_\_\_\_\_

**7 of 12**

**Preliminary Plan**



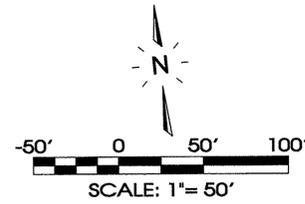


**Legend:**

EXIST. CONCRETE MONUMENT	HAY BALE
IRON PIN SET (I.P.S.)	HEADWALL
IRON PIN FOUND (I.P.F.)	WINGED HEADWALL
EXIST. SIGN POST	MANHOLE
EXIST. SEWER CLEANOUT	PROPOSED SPOT ELEVATION
EXIST. MANHOLE (SEWER & PHONE)	EXIST. SPOT ELEVATION
EXIST. CATCH BASIN (STORM SEWER)	REDUCER
EXIST. WATER/GAS VALVE	REVISION NUMBER
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ELECTRICAL ENCLOSURE	SEWER/STORM FLOW DIRECTION
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EXIST. UTILITY POLE	DRAINAGE PIPE DESIGNATION
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EXISTING ELECTRIC	OH
PROPERTY LINE	
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EXISTING TREELINE	
EXISTING FENCELINE	
MINIMUM BUILDING SETBACK LINE	MBSL
PHASE BOUNDARY	
EXISTING GAS LINE	GAS GAS
EXISTING STORM	STM STM STM
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EXISTING CONTOUR LINES	601
PROPOSED CONTOUR LINES	601
EXISTING SANITARY SEWER	SS SS
PROPOSED SANITARY SEWER	SS SS
EXISTING WATER	W W
PROPOSED WATER	W W
EROSION ELL	ELL ELL ELL
FLOODWAY	FW



**Drainage Structure Table**

STR #	T.O.C.	INV. (IN)	INV. (OUT)	DESCRIPTION
1	646.20	642.55	642.55	Single Curb Inlet
2	646.20	642.45	642.45	Single Curb Inlet
3	645.53	---	643.22	Double Curb Inlet
4	645.53	643.15	643.15	Single Curb Inlet
5	645.25	---	642.67	Single Curb Inlet
6	645.25	642.60	642.60	Single Curb Inlet

**Pipe Table**

PIPE NO.	SIZE/TYPE	INV. (IN)	INV. (OUT)	SLOPE %	LENGTH (LF)
A	30" HDPE	643.00	642.55	0.30	150.00
B	30" RCP	642.55	642.45	0.30	33.00
C	30" HDPE	642.45	642.00	0.30	150.00
D	15" RCP	643.22	643.15	0.30	22.00
E	2x 15" HDPE	643.15	642.97	0.30	60.00
F	15" RCP	642.67	642.60	0.30	22.00
G	2x 15" HDPE	642.60	642.15	0.30	150.00
H	15" RCP	641.00	640.50	0.52	95.00



Know what's below.  
Call before you dig.

**Survey Control**  
Field survey performed from 11-07-13 to 11-18-13. Horizontal & vertical survey control is based on the Tennessee State Plane coordinate system (NAD83-96 NAVD88), referenced from City of Murfreesboro UGB monument #02-435.

**BENCHMARK:**  
CHISELED SQUARE IN CURB ON MATHIEUS DRIVE  
N: 514648.5  
E: 1839954.7  
ELEV: 647.86

**SEC, Inc.**  
SITE ENGINEERING CONSULTANTS  
ENGINEERING SURVEYING - LAND PLANNING  
860 MIDDLE TENNESSEE BOULEVARD  
MURFREESBORO, TENNESSEE 37129  
PHONE: (615) 890-7300  
FAX: (615) 890-7301  
E-MAIL: JREID@SECINC.COM  
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**Harrison Glen Subdivision  
Section VI**  
Rutherford County, Tennessee

811  
DRAWN: SJA  
DATE: 12-13-13  
CHECKED: JFR  
FILE NAME: 01132project7.dwg  
SCALE: 1"=50'  
JOB NO. 01132  
SHEET: 8 of 12

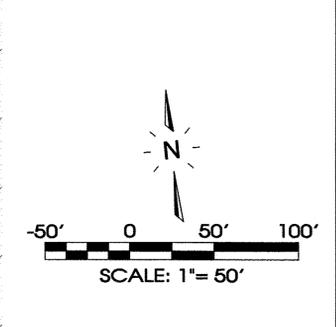


**Legend:**

□	EXIST. CONCRETE MONUMENT	□	HAY BALE
●	IRON PIN SET (I.P.S.)	—	HEADWALL
○	IRON PIN FOUND (I.P.F.)	—	WINGED HEADWALL
—	EXIST. SIGN POST	○	MANHOLE
○	EXIST. SEWER CLEANOUT	63.25 x	PROPOSED SPOT ELEVATION
○	EXIST. MANHOLE (SEWER & PHONE)	(63.25) x	EXIST. SPOT ELEVATION
○	EXIST. CATCH BASIN (STORM SEWER)	×	REDUCER
⊗	EXIST. WATER/GAS VALVE	▲	REVISION NUMBER
⊞	EXIST. TELEPHONE RISER	⊞	RIP RAP
⊞	EXIST. GAS RISER	→	RUNOFF FLOW ARROW
⊞	ELECTRICAL ENCLOSURE	>	SEWER/STORM FLOW DIRECTION
⊞	EXIST. WATER METER	#1	DRAINAGE STRUCTURE DESIGNATION
○	EXIST. UTILITY POLE	A	DRAINAGE PIPE DESIGNATION
○	EXIST. FIRE HYDRANT	—	CONCRETE SIDEWALK
⊞	BENCHMARK	—	EXTRUDED CURB
⊞	BLOW OFF VALVE	—	CURB & GUTTER
⊞	CONCRETE THRUST BLOCK	—	CONCRETE SWALE
⊞	DOUBLE DETECTOR CHECK VALVE	—	CATCH BASIN
⊞	WATER METER	—	CURB INLET
⊞	FIRE HYDRANT	—	AREA DRAIN
⊞	GATE VALVE & BOX	○	EXTERIOR CLEANOUT

EXISTING PHONE	PH
EXISTING ELECTRIC	OH
PROPERTY LINE	---
EASEMENTS	---
RIGHT OF WAY	ROW
EROSION CONTROL SILT FENCE	SF SF SF
EXISTING TREELINE	~~~~~
EXISTING FENCELINE	-X-X-X-X-
MINIMUM BUILDING SETBACK LINE	MBSL
PHASE BOUNDARY	-----
EXISTING GAS LINE	--- GAS --- GAS
EXISTING STORM	--- STM --- STM
PROPOSED STORM	--- STM --- STM
EXISTING CONTOUR LINES	--- 601 ---
PROPOSED CONTOUR LINES	--- 601 ---
EXISTING SANITARY SEWER	--- SS --- SS
PROPOSED SANITARY SEWER	--- SS --- SS
EXISTING WATER	--- W --- W
PROPOSED WATER	--- W --- W
EROSION ELL	--- ELL --- ELL
FLOODWAY	FW

EXISTING PHONE	PH
EXISTING ELECTRIC	OH
PROPERTY LINE	---
EASEMENTS	---
RIGHT OF WAY	ROW
EROSION CONTROL SILT FENCE	SF SF SF
EXISTING TREELINE	~~~~~
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MINIMUM BUILDING SETBACK LINE	MBSL
PHASE BOUNDARY	-----
EXISTING GAS LINE	--- GAS --- GAS
EXISTING STORM	--- STM --- STM
PROPOSED STORM	--- STM --- STM
EXISTING CONTOUR LINES	--- 601 ---
PROPOSED CONTOUR LINES	--- 601 ---
EXISTING SANITARY SEWER	--- SS --- SS
PROPOSED SANITARY SEWER	--- SS --- SS
EXISTING WATER	--- W --- W
PROPOSED WATER	--- W --- W
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F-MAIL: JREED@SEC-CIVIL.COM FAX: (615) 895-2567  
PHONE: (615) 890-7901

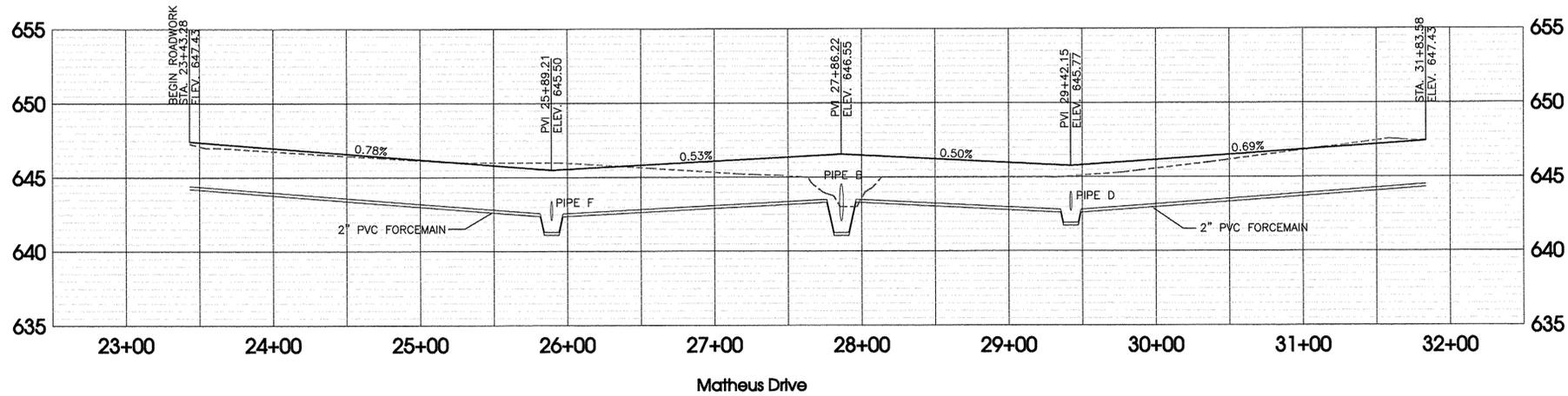
**JAMES F. REED III**  
REGISTERED PROFESSIONAL ENGINEER  
STATE OF TENNESSEE

**Harrison Glen Subdivision  
Section VI**  
Rutherford County, Tennessee

REVISIONS:

DRAWN: SJA  
DATE: 12-13-13  
CHECKED: JFR  
FILE NAME: 01132project7.dwg  
SCALE: 1"=50'  
JOB NO. 01132  
SHEET: 9 of 12

**Grading & Drainage Plan**



**SEC, Inc.**  
 SITE ENGINEERING CONSULTANTS  
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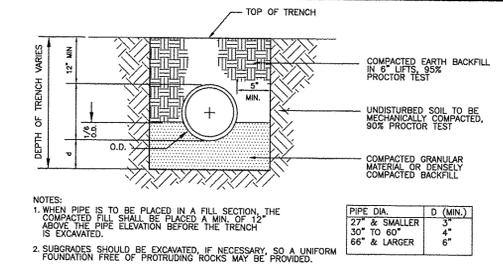


Harrison Glen Subdivision  
 Section VI  
 Rutherford County, Tennessee

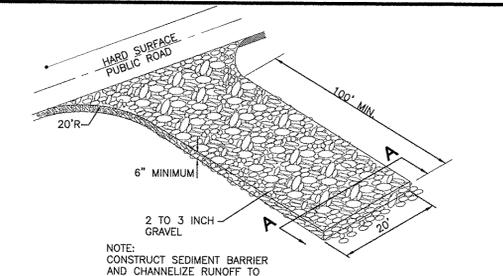
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DATE: 12-13-13	
CHECKED:	
JFR	
FILE NAME:	
01132project7.dwg	
SCALE:	
1"=50' HORIZ.	
1"=5' VERT.	
JOB NO.	
01132	
SHEET:	
10 of 12	

Road Profile

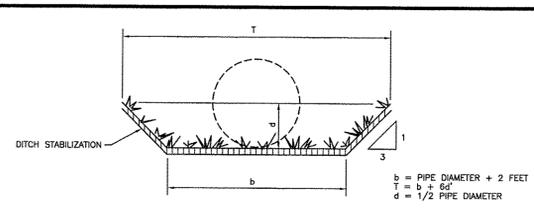
The site as shown on these construction drawings is intended to achieve specific engineering design criteria and objectives. It is the sole responsibility of the owner/developer to ensure that the construction of the site shown on these construction drawings is in full compliance with all applicable laws, codes, and regulations. No portion of this drawing may be reproduced without the expressed written consent of SEC, Inc.



**TRENCH BEDDING FOR STORM DRAIN  
CMP AND RCP ONLY**  
SCALE: NONE



**SECTION A-A  
GRAVEL CONSTRUCTION ENTRANCE**  
SCALE: NONE

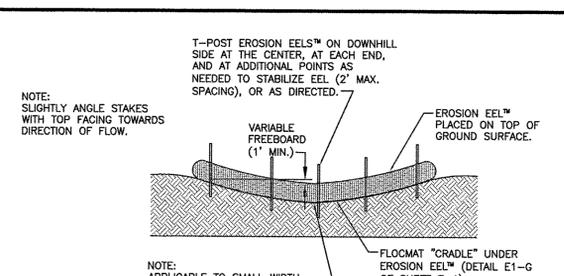


STABILIZATION OF DITCHES: ALL DITCHES SHALL BE STABILIZED IN ACCORDANCE W/ THE FOLLOWING REQUIREMENTS

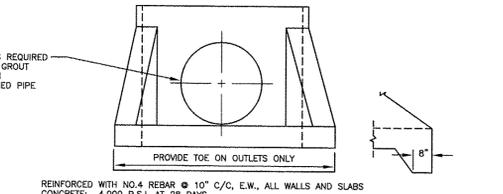
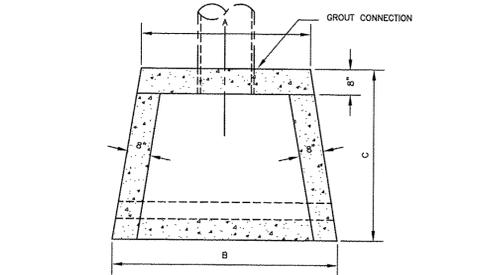
SIZE OF NEAREST CULVERT UPSTREAM	SEED	SOD	LINE W/ STONE & MORTAR
15"	GRADES LESS THAN 3%	3 - 12%	GRADES EXCEEDING 12%
18" 24"	GRADES LESS THAN 1.5%	1.5 - 7%	GRADES EXCEEDING 7%
30" & 36"	GRADES LESS THAN 1.0%	1.0 - 4.0%	GRADES EXCEEDING 4%
42" & 72"	NA	2.5% OR LESS	GRADES EXCEEDING 2.5%

$b = \text{PIPE DIAMETER} + 2 \text{ FEET}$   
 $T = b + 6d$   
 $d = 1/2 \text{ PIPE DIAMETER}$

**DITCH STABILIZATION SECTION**  
SCALE: NONE

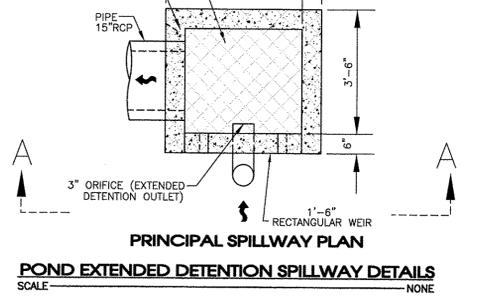
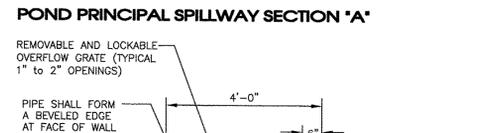
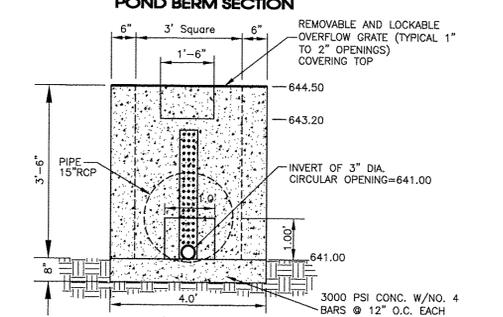
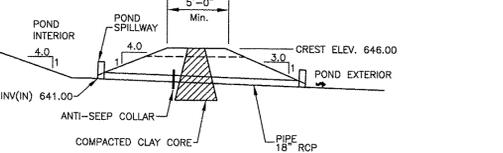


**EROSION EEL #1 DETAIL**  
SCALE: NONE

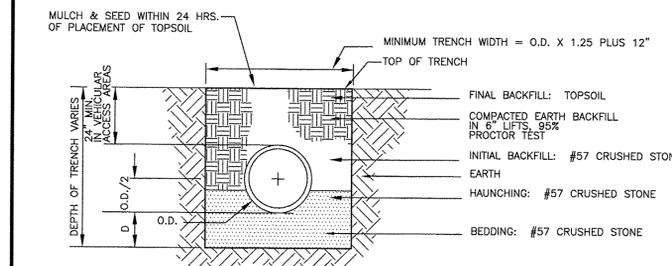


REINFORCED WITH NO.4 REBAR @ 10" C/C, E.W., ALL WALLS AND SLABS CONCRETE: 4,000 P.S.I. AT 28 DAYS

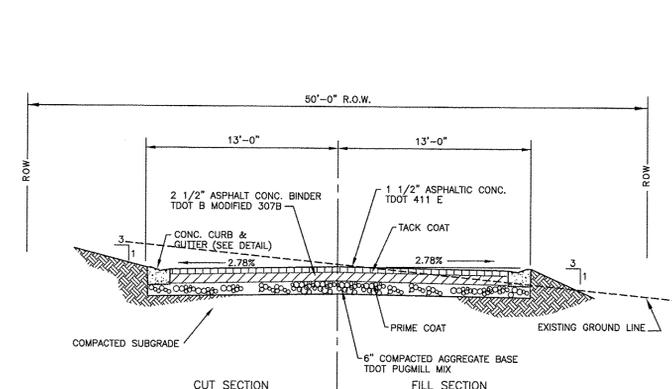
PIPE SIZE	A	B	C
24" O.D. MAX.	48"	72"	44"
39" O.D. MAX.	72"	96"	50"
53" O.D. MAX.	96"	120"	56"



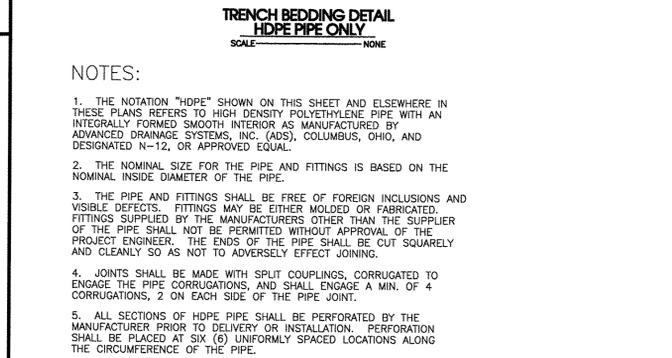
**DETENTION POND OUTLET STRUCTURE**  
SCALE: NONE



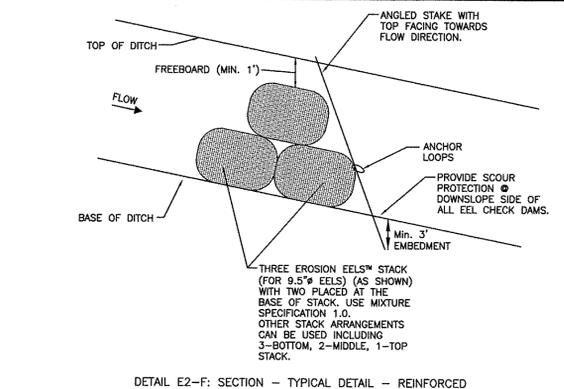
**TYPICAL ROADWAY SECTION**  
SCALE: NONE



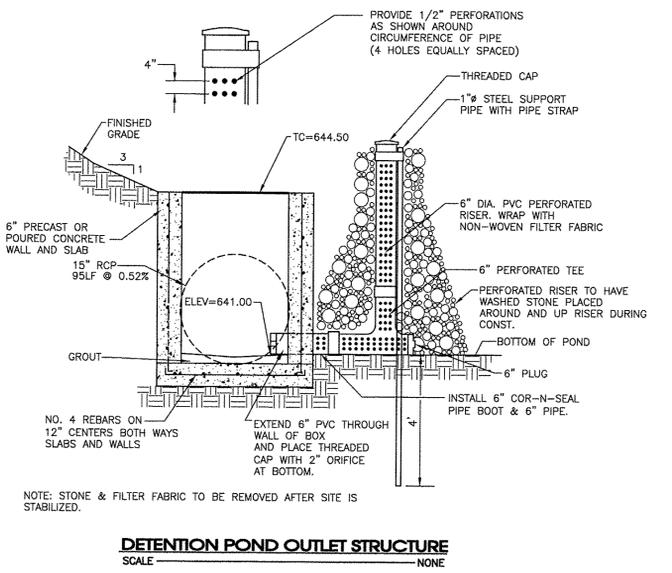
**EROSION EEL #2 DETAIL**  
SCALE: NONE



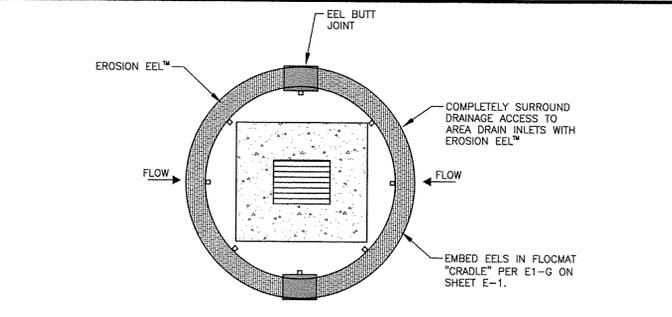
**EROSION EEL DETAIL**  
SCALE: NONE



**SILT FENCE DETAIL**  
SCALE: NONE



**SINGLE CURB INLET**  
SCALE: NONE



**'V' BOTTOM DITCH DETAIL**  
SCALE: NONE

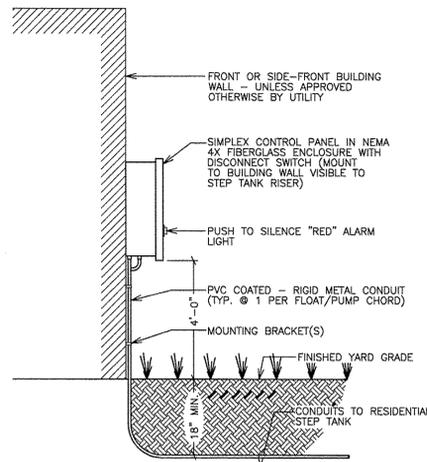
**SEC, Inc.**  
ENGINEERING • SURVEYING • LAND PLANNING  
850 MIDDLE TENNESSEE BOULEVARD  
MEMPHIS, TENNESSEE 38129  
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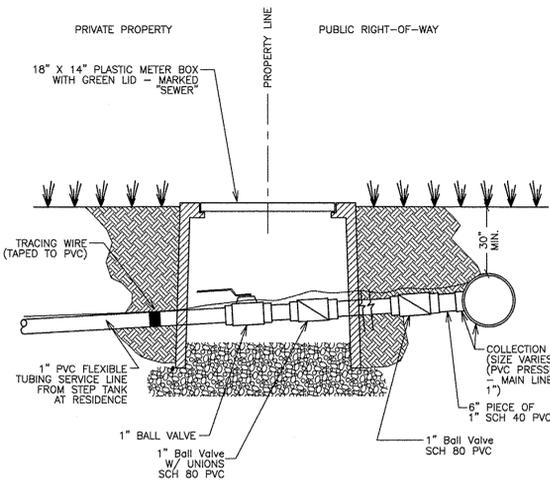
Harrison Glen Subdivision  
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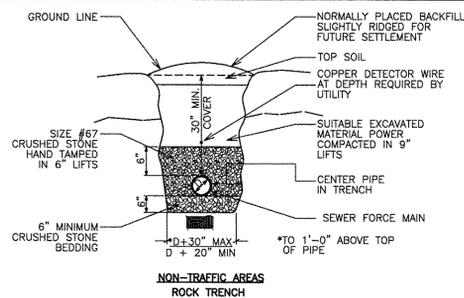
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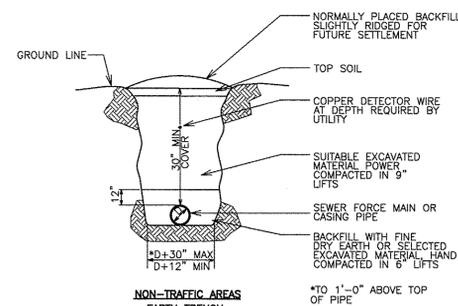
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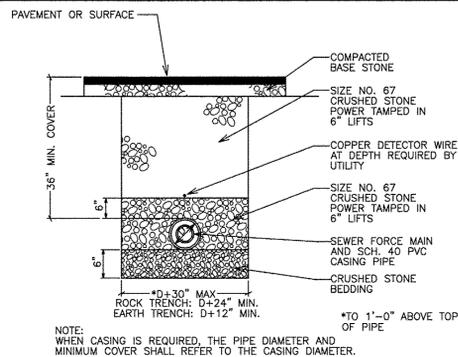
**TYPICAL SERVICE CONNECTION (PRESSURE)**  
SCALE: NONE



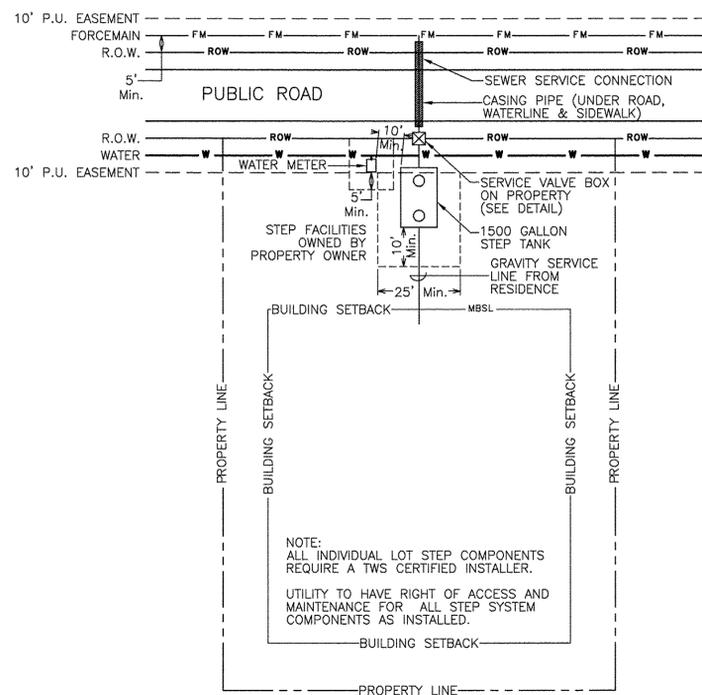
**NON-TRAFFIC AREAS  
ROCK TRENCH**



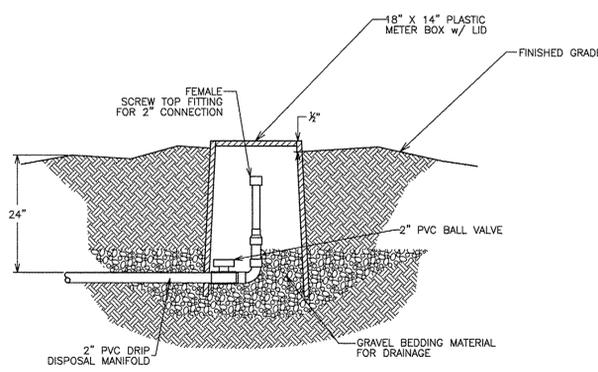
**NON-TRAFFIC AREAS  
EARTH TRENCH**



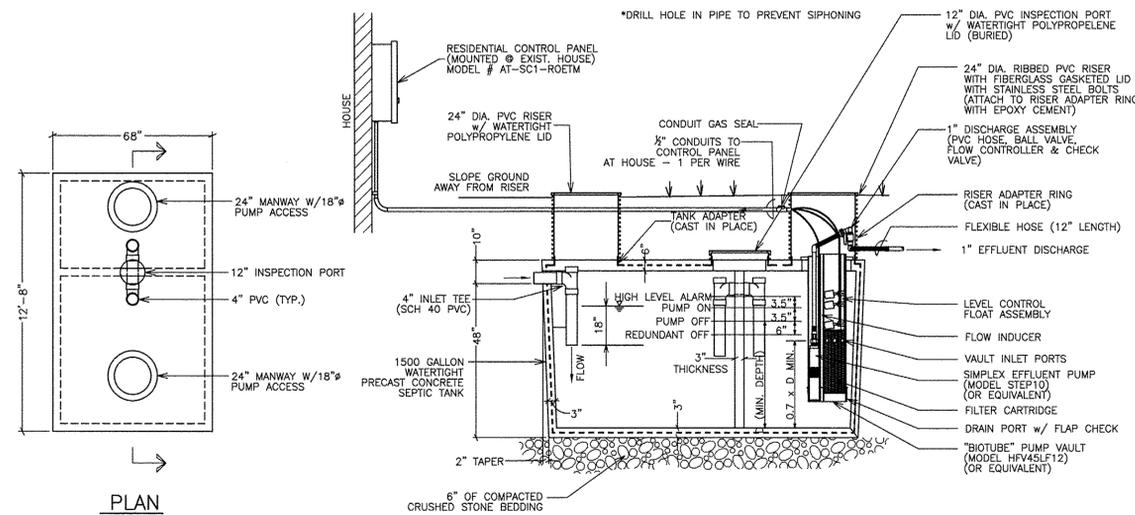
**PIPING TRENCH DETAILS**  
SCALE: NONE



**TYPICAL RESIDENTIAL SERVICE CONNECTION PLAN**  
SCALE: NONE



**END-OF-LINE BLOW-OFF ASSEMBLY**  
SCALE: NONE



**1,500 GALLON RESIDENTIAL STEP TANK**  
SCALE: NONE

**SPEC, Inc.**  
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