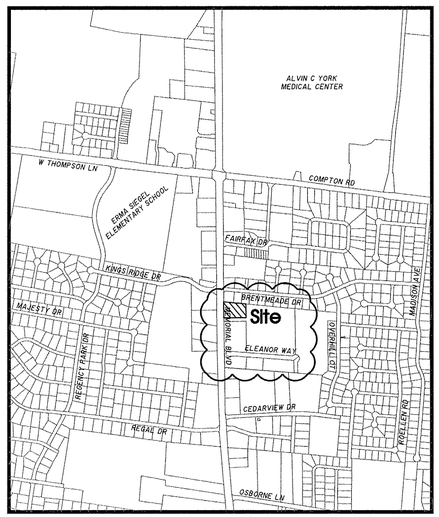
Notes:
1) Engineering Department Point of Contact is Katie Noel, 615-893-6441; KNoel@MurfreesboroTN.gov
2) Planning Department Point of Contact is Holly Smith, 615-893-6441; HSmyth@MurfreesboroTN.gov

Brookhaven
Lot 4
Murfreesboro, Tennessee
Site Plan & Construction Drawings

Drawing Index



Site Location Map
Not To Scale

SEC, Inc. SITE ENGINEERING CONSULTANTS
ENGINEERING • SURVEYING • LAND PLANNING
LANDSCAPE ARCHITECTURE
850 MIDDLE TENNESSEE BOULEVARD MURFREESBORO, TENNESSEE 37129
PHONE: (615) 890-7901 E-MAIL: MTAYLOR@SECTNJR.COM

By: Matthew A. Taylor Date: June 22, 2023

Matthew A. Taylor, P.E. TN. Reg. #112515

MATTHEW A. TAYLOR REGISTERED ENGINEER AGRICULTURE COMMERCE No. 112515 STATE OF TENNESSEE

Watershed: East Fork Stones River (Not Supporting)
Disturbed Area: 1.78± Ac.
Impervious Area: 1.22± Ac.

Sheet C0.0
Brookhaven Lot 4
S.E.C. Project #16046
Submitted: 3-18-18
Revised: 4-7-2021, 4-16-2021, 5-13-2021, 5-28-21

Site Clearing & Demolition Notes:

1. Before starting demolition operations, refer to Sheet ___ Existing Conditions & Initial EPSC Plan.

2. Demolition includes the following within the property lines:
   1) Transfer benchmark control to new locations outside the disturbed area prior to commencing demolition operations (when applicable)
   2) 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.
   3) Demolition and removal of site improvements.
   4) Disconnecting, capping or sealing, and abandoning/removing site utilities in place (whichever is applicable)

3. Promptly remove waste materials, unsuitable and excess topsoil and other clearing debris from Owner's property and dispose of off site.

4. Remove and legally dispose of items except those indicated to be reinstalled, salvaged, or to remain.

5. Existing foundations and utilities may be encountered across the site. If encountered, these items may require removal as indicated on the drawings. Resulting excavations should be backfilled with properly compacted select fill.

6. 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:
   1) Footings: 18 inches
   2) Walks: 12 inches
   3) Roads: 18 inches
   4) Parking Areas: 12 inches
   5) Lawn Areas: 18 inches
   6) Fills: 12 inches

7. Remove reinstall, and relocate: items indicated; clean, service, and otherwise prepare them for reuse; store and protect against damage reinstall items in locations indicated.

8. Provide protection necessary to prevent damage to existing improvements indicated to remain in place. Protect benchmarks, existing structures, roads, sidewalks, paving and curbs against damage from vehicular or foot traffic.
   1) Protect improvements on adjoining properties and on the Owner's property.
   2) Restore damaged improvements to their original condition, as acceptable to parties having jurisdiction.

9. Contractor shall schedule demolition activities with the construction project manager.

10. 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.

11. 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.

12. Obtain approved borrow soil materials off–site when sufficient satisfactory soil materials are not available on–site.

13. Maintain existing utilities indicated to remain in service and protect them against damage throughout construction operations.
   1) 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.
   2) Contractor shall coordinate with appropriate utility owner when disconnecting, removing, or relocating existing utility services.

14. 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.
   1) Erect temporary protection, barricades as per local governing authorities.
   2) Protect existing site improvements and appurtenances to remain.

15. 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.
   1) 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.
   2) 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.

~~16. Explosives: use of explosives will not be permitted.~~

17. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.

18. Clean adjacent buildings and improvement of dust, dirt, and debris caused by demolition operations. Return adjacent areas to condition existing before start of demolition.

19. Damages: Promptly repair damages to adjacent facilities caused by demolition operations at the contractors cost.

20. Remove existing above–grade and below–grade improvements necessary to permit construction and other work as indicated.

21. General: Promptly dispose of demolished materials. Do not allow demolished materials to accumulate on–site.

22. Do NOT Burn or bury materials on site.

23. Contractor to sawcut existing pavement to remain prior to curb, gutter, pavement, etc. removal.

24. 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.

25. 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:

1. 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.

2. 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.

3. Upon receipt of point coordinate data, the contractor shall run an independent vertical control traverse to check benchmarks and a horizontal control traverse through given points to confirm geometric data and submit to the engineer prior to any construction.

4. 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.

5. All work within the rights of way shall be in accordance with the governing jurisdiction and specifications.

6. Contractor shall coordinate any maintenance of traffic with the owner's representative and the local jurisdiction prior to construction.

7. Contractor shall at all times ensure that SWPP measures protecting existing drainage facilities be in place prior to the commencement of any phase of the site construction or land alteration.

8. 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.

9. Rock may be present requiring some rock excavation for utility installation. No extra compensation shall be given for rock excavation.

10. These project construction documents shall not constitute a contractual relationship between the engineer and the contractor.

11. The engineer shall not be responsible for construction of safety means, methods, techniques, sequence's, or procedures utilized by the contractor or subcontractors.

12. Contractor to coordinate with the City of Murfreesboro Traffic Engineering Department prior to commencement of any work in the Public Right–of–Way in this area to avoid damage to traffic signal devices. Contact Ram Balachandran, City Traffic Engineer, at 615–893–6441.

13. A separate R.O.W. Excavation Permit issued from the Murfreesboro Street Department shall be required for any excavation or construction in the public R.O.W.

Site Plan Notes:

1. Contractor shall immediately notify the engineer of any discrepancies found between these plans, the architectural plans, and/or field conditions prior to construction.

2. 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.

3. 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.

4. 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.

5. 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.

6. The contractor is responsible for the protection and replacement of all property pins on this site.

7. 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.

8. 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.

9. Coordinates referenced are for construction staking purposes and are site assigned. They should be considered local coordinates for this project only.

10. All parking space striping and markings on site shall be 4" wide white painted stripes. Other markings shall be as shown.

11. All dimensions and radii are given to face of curb unless otherwise noted.

12. Asphalt paving: do not apply prime and tack coats when temperature is below 50° F, or when base is wet. Apply asphalt paving only when temperature is above 40° F and when base is dry.

13. Materials:
   13A) Subgrade: Cohesive subgrade shall be compacted to 96% compaction. Cohesion less subgrade shall be compacted to 100% compaction.
   13B) Subbase: Unless otherwise noted on these plans, base shall consist of water bonded limestone, crushed rock or DGA.
   13C) 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.

14. 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.

15. All concrete shall be in–transit mixed concrete, 5% air–entrained and shall attain a minimum compression strength of 4,000 p.s.i. in twenty–eight (28) days.

16. Slump: Maximum allowable slump will be five (5) inches.

17. Concrete Materials:
   17A) 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.
   17B) Aggregates: ASTM C–33 (latest ed.).
   17C) Sand: Hard, durable, clean, sharp, natural sand free from clay, loam, dust or organic matter.
   17D) Water: Clean, potable, free from oil, acids, alkali, organic matter and other deleterious substances.
   17E) Admixture: Air type to meet ASTM C–260 (latest ed.)

18. Related Materials:
   18A) Curing Compound: "Horncure 300" as manufactured by A.C. Horn Company, (800) 654–0402. This product is not to be used on the interior floor slab.

19. Reinforcing materials shall be uncoated and free from excessive rust, mill scale, oil, grease and other deleterious matter. No. 4 Bars 16" O.C. both ways. Joints to be sawed at 15' foot centers for transverse and longitudinal joints.

20. All above grade exterior concrete surfaces shall be cured with curing compound sprayed on in strict compliance with manufacturer's directions.

21. Weather Requirements:
   21A) Hot Weather Placing: No concrete shall be placed when the air temperature is greater than 90° F unless the following special procedures have been 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 equivalent of ice is calculated to total amount of mixing water, use of liquid nitrogen to cool concrete is the contractor's option.
   21B) 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 60° 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.

22. Concrete tests shall be authorized by the owner on an as needed basis.

23. 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).

24. All concrete shall have a medium transverse finish.

25. Subgrade shall be free of extraneous materials. Proof–roll 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.

26. Surface preparation, spreading and laying, compacting and rolling operations shall conform with asphalt institute recommended specifications.

27. Inspect area to be paved and ensure that all subgrade conditions are sufficiently carried out to ensure 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 surface. 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:

1. 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.

2. The contractor shall cut existing pavement as necessary to assure a smooth fit and continuous grade.

3. The contractor shall verify horizontal and vertical location of all existing storm sewer structures, pipes and all utilities prior to construction.

4. Clearing and grubbing limits shall include all areas disturbed by grading operation.

5. 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.

6. This site lies within Zone X, not in the 100 year flood hazard area, as defined by F.E.M.A. Community Panel No. 47149C0145H dated January 5, 2007.

7. Before starting grading operations, see sheet ___ Existing Conditions & Initial EPSC plan notes and details.

~~8. Before starting grading operations, see landscape plan and Geotechnical Engineering report for treatment of existing grade.~~

9. Prior to site construction activity, the contractor shall install all SWPP measures to protect existing drainage facilities. Contractor shall prevent siltation from leaving the site at all times.

10. 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. ~~See geotechnical report for stripping and topsoil requirements.~~

11. Site grading shall be performed in accordance with these plans and specifications ~~and the recommendations set forth in the Geotechical Engineering report referenced in this plan set.~~ The contractor shall be responsible for removing all soft, yielding or unsuitable materials and replacing with suitable materials as specified by the Geotechnical Engineer.

12. 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 set forth in the Geotechnical Engineering report.~~ Notify project engineer if any unsuitable soils are found.

13. Compaction testing is mandatory for parking lot, building slab and foundations sub–grade.

14. Fill under paved areas and slabs on grade shall be compacted per specifications and geotechnical report. Deposit fill material in horizontal layers as recommended by Geotechnical Engineer and compact each layer with a mechanical tamper. Base course pavement shall be compacted to 100% standard proctor.

15. 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 the Geotechnical Engineering report and be aware of all moisture concerns and soil remediations requirements.~~

16. Following grading of subsoil to subgrade elevations the contractor shall place topsoil to a depth as specified on L.A. Plans in all disturbed areas which are not to be paved. Smoothly finish grade to meet surrounding lawn areas and ensure positive drainage. Stockpiled 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.

17. After fine grading topsoil, contractor shall stabilize per L.A. plans, mulch, fertilize and water until a healthy stand of grass is obtained. The restoration shall closely follow construction.

18. 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, eve, 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.

19. Contractor shall provide butt end joint to meet existing pavement in elevation at drive returns and ensure positive drainage.

General Utility Notes:

1. 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.

2. 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.

3. 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.

4. 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.

5. The contractor shall coordinate installation of utilities in 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.

6. 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.

7. Utility contractor will be responsible for all tap and tie on fees required, as well as cost of underground service connections.

8. No more than 25 percent of the dollar amount of the contract may be awarded to subcontractors.

9. 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.

10. Site shall be graded to subgrade before water lines and sanitary sewers are installed.

11. All mainline waterline taps are to be made by M.W.R.D. (Murfreesboro Water Resource Department)

12. Contractor shall comply with all requirements of the latest edition of M.W.R.D.'s specifications.

13. 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.

14. Where cleanouts, castings, valve boxes, fire hydrants, etc. are encountered and are to remain in use, in areas where elevations are to change or be paved, those features are to be adjusted to match proposed finished grades.

Sanitary Sewer Notes:

1. The contractor must notify MWRD for sewer inspection prior to starting work.

2. The owner/developer for budget purposes, should check with the Murfreesboro Water Resources Department for connection fees which may be substantial

3. Contractors for sewer work must be approved by the Murfreesboro Water Resources Department.

4. Coordinates or dimensions shown are to centerline of pipe or fitting or to centerline of manhole.

5. The top elevation of all manholes in paved areas shall match finish grade. The top elevation of all manholes in grassed areas shall be 6" above finished grade.

6. 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.

7. Complete specifications for the sewer lines, "Sewer Line Specifications and Drawings", February 2019 Ed., are on file at the Murfreesboro Water Resources Department Engineering Annex and can also be found online at http://www.murfreesborotn.gov/index.aspx?NID=284

8. Sanitary sewer wyes and 45° bends are to be the same material and class/wall thickness as the mainline pipe.

9. All services shall be constructed such that the invert of the pipe at the property line is no less than 3 1/2 feet below the finished grade. Markers shall be provided at each service location.

10. Under the current adopted plumbing code, the City of Murfreesboro requires the minimum floor elevation (M.F.E.) to be set at or above the top of casting elevation of the nearest manhole that is upstream of the sewer service connection. As an alternative, the homeowner shall install a backwater valve per the plumbing code and execute and record a release of indemnification against the City of Murfreesboro with regards to the sanitary sewer connection. The builder and/or homeowner shall be responsible for compliance with this requirement.

11. Check dams, as called out in the MWRD Specifications, are to be installed at the discretion of the Water Resources Department.

12. Sewer construction must be in accordance with all MWRD specifications and drawings.

13. Contractor must have a State of Tennessee license, Municipal Utility (MU) classification, to perform work.

14. The existing sewer main and/or manholes utilized or altered by this project must be tested before and after construction. Should the sewer not be tested prior to construction and defects found after construction will be the responsibility of the contractor to repair at his or her expense.

15. All proposed manholes must be wrapped in a Conseal, or an approved equal, 12" minimum water and soil barrier wrap at each manhole section joint and at any other manhole component as directed by MWRD.

16. No more that 25 percent of the dollar amount of the Contract may be awarded to subcontractors.

17. A maximum of 2–6" (6 in.) adjustment rings will be allowed per any existing or proposed manholes associated with this installation. If any manhole requires adjustment beyond the 2–6" adjustment rings allowed then the contractor must remove, adjust, or add barrel sections to the manhole to get it to grade at his or her own expense.

18. All newly constructed sanitary sewer mains, rehabilitated sanitary sewer laterals and mains, existing sanitary sewer mains that intersect under or over a newly constructed or removed utility, or any sewer main that has been physically altered in any way must be fully televised via an in–line Closed Circuit Television (CCTV) post construction survey fully compliant with the guidelines set forth by the National Association of Sewer Service Companies' (NASSCO) Pipeline Assessment Certification Program (PACP) at the expense of the contractor.

19. Existing sanitary sewer services that are not utilized with this project must be exposed at the mainline and capped at the wye or removed from the manhole. The manhole then must be sealed and tested.

20. Site is in Osborne Lane Assessment District.

Natural Gas Notes:

1. Construction And Materials Provided By The Gas Company:
   – Tap Main.
   – Furnish and install mainline extension, including all trenching and backfilling.
   – Furnish and install meter.
   – Coordinate all work with Atmos Energy, Bradley Benningfield @ 615–982–3654

2. 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.

Waterline Notes:

1. All water mains shall be hydrostatically tested and disinfected before acceptance.

2. All trenches, pipe laying, and backfilling shall be in accordance with federal O.S.H.A. regulations.

3. Contractor shall comply with all requirements of the latest edition of the MWRD specifications.

4. Utility contractor shall have approval of all governing agencies having jurisdiction over this system prior to installation.

5. Complete specifications for the water lines, "Water Line Specifications and Drawings", February 2019 Ed., are on file at the Murfreesboro Water Resources Department Engineering Annex and can also be found online at http://www.murfreesborotn.gov/index.aspx?nid=286

6. Water construction must be in accordance with all MWRD specifications and drawings..

7. Concerning water line construction, restraints such as rods or kickers shall be installed at any change in direction where fittings are required, at all dead–ends, and at any location as directed by the Water Resources Department.

8. Contractor must have a State of Tennessee license, Municipal Utility (MU) classification, to perform work.

9. All main line water taps will be made by the Murfreesboro Water Resources Department.

City of Murfreesboro Standard Site Plan Notes:

1. In accordance with TCA Section 7–59–310(b)(1), Competitive Cable and Video Services Act, in cases of new construction or property development where utilities are to be placed underground, the developer or property owner shall give all providers of cable or video serving the City of Murfreesboro dates on which open trenching will be available for the providers' installation of conduit, pedestals or vaults, and laterals, referred to as "equipment," to be provided at each such providers' expense.

2. All signage, including flags and flagpoles, is subject to independent review by the Development Services Division. All signage must conform to their requirements and require separate sign permits.

3. A Land Disturbance Permit may be required. Determination whether a Land Disturbance Permit is required shall be made by the Development Services Division. A separate Land Disturbance Permit application shall be made with the office of the Development Services Division for review and upon approval for issuance of a Land Disturbance Permit.

4. For all developments of more than one acre, a State of Tennessee Construction General Permit is required. Evidence of this permit must be provided to the Development Services Division prior to construction commencement.

5. Contractor to coordinate with the Traffic Engineer in the City Transportation Department prior to commencement of work in this area to avoid damage to traffic signal devices.

~~6. A TDOT permit may be required. Evidence of TDOT approval is required prior to the issuance of any building permits if required.~~

~~7. A Stormwater Management Plan demonstrating that the site provides for treatment of the water quality volume and provides for management of the stream bank protection volume must be provided.~~

~~8. An Engineers Certification of the construction of the stormwater management facilities must be provided to the Director of the Murfreesboro Water Resources Department Prior To Issuance Of Certificate of Occupancy.~~

~~9. A Stormwater Fee Credit Application must be submitted prior to the issuance of a building permit.~~

~~10. A Stormwater Facilities Operation and Maintenance Plan and a Stormwater Facilities Maintenance Agreement must be submitted prior to issuance of a building permit.~~

~~11. The Stormwater Facilities Maintenance Agreement must be recorded prior to certificate of occupancy.~~

SEC, Inc.
SITE ENGINEERING CONSULTANTS
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LANDSCAPE ARCHITECTURE
850 MIDDLE TENNESSEE BOULEVARD MURFREESBORO, TENNESSEE 37129
PHONE: (615) 890-7901 E-MAIL: MTAYLOR@SEC-CIVIL.COM FAX: (615) 895-2567
NO PORTION OF THIS DRAWING MAY BE REPRODUCED WITHOUT EXPRESSED WRITTEN CONSENT OF S.E.C. INC.

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 sites shown on these construction drawings is in total accordance with the design as noted/described. The engineer shall not be responsible for any deviation in the construction process or responsibility in the assurance that the site is constructed in accordance with the construction plans.

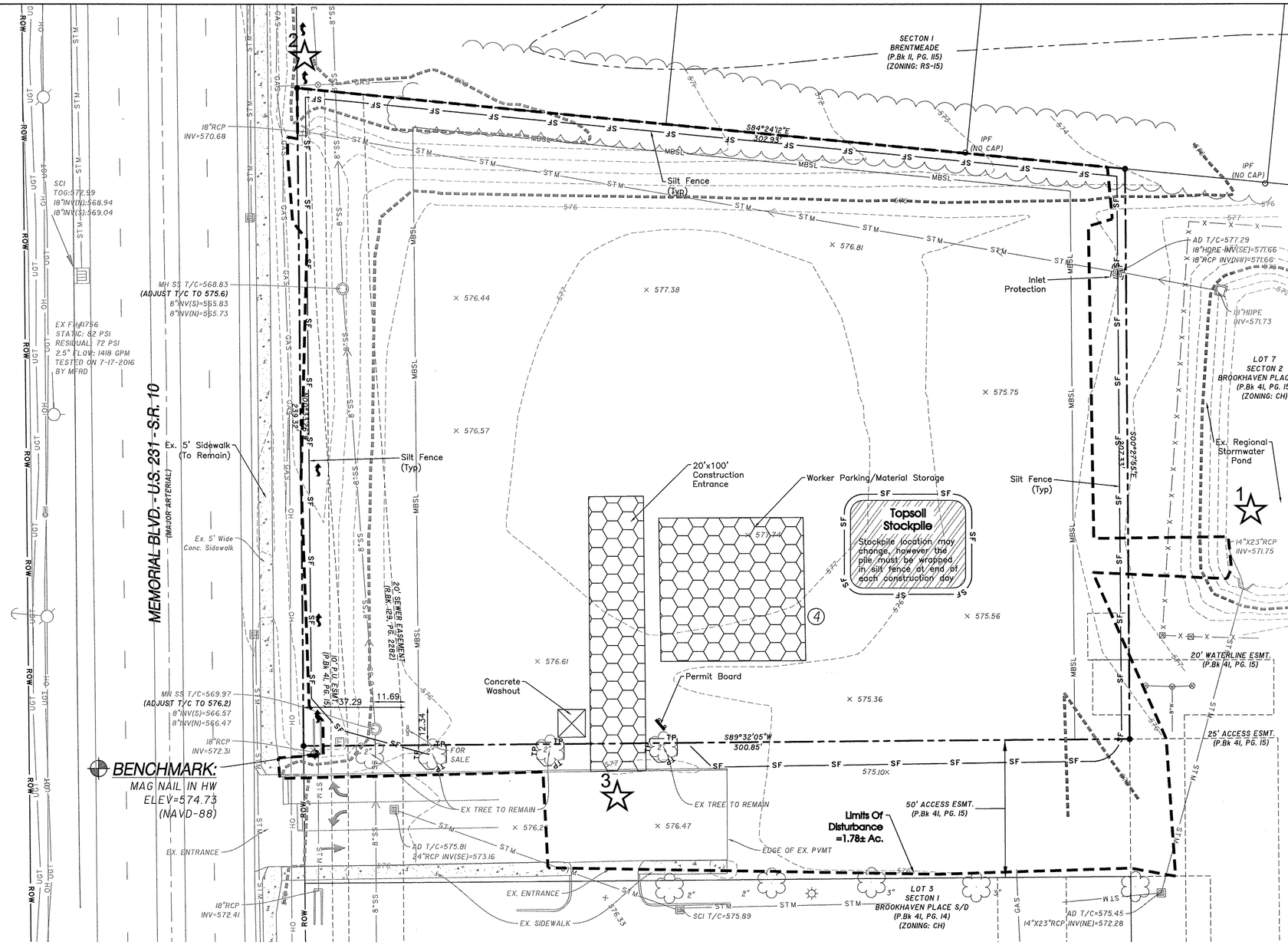
MATTHEW A. TAYLOR — 102.2021 — REGISTERED PROFESSIONAL ENGINEER — STATE OF TENNESSEE

Brookhaven Lot 4

Murfreesboro, Tennessee

REVISED: 4–7–2021: Staff Comments 4–16–2021: Permit Submittal 5–13–2021: Permit Submittal 2	
DRAWN: SJA/CFB3	
DATE: 3–18–2021	
CHECKED: MAT	
FILE NAME: 16046lot4	
SCALE: None	
JOB NO. 16046	
SHEET: C0.1	

General Notes



Legend:

EXIST. CONCRETE MONUMENT		BENCHMARK	
IRON PIN SET (I.P.S.)		HANDICAP PARKING SYMBOL	
IRON PIN FOUND (I.P.F.)	V.A.	VAN ACCESSIBLE HANDICAP DESIGNATION	
EXIST. SIGN POST		HC SIGN	
EXIST. SEWER CLEANOUT		PROPOSED SIGN POST	
EXIST. MANHOLE (SEWER & PHONE)		CONCRETE BOLLARD	
EXIST. CATCH BASIN (STORM SEWER)		WHEEL STOP	
EXIST. WATER/GAS VALVE		CONCRETE SIDEWALK	
EXIST. TELEPHONE RISER		EXTRUDED CURB	
EXIST. GAS RISER		CURB & GUTTER	
ELECTRICAL ENCLOSURE		TRAFFIC ARROW	
EXIST. WATER METER		TURN LANE ARROWS	
EXIST. UTILITY POLE	1	REVISION NUMBER	
EXIST. FIRE HYDRANT	#1	DRAINAGE STRUCTURE DESIGNATION	
POST INDICATOR VALVE	A	DRAINAGE PIPE DESIGNATION	
BLOW OFF VALVE		RIP RAP	
REDUCER		RUNOFF FLOW ARROW	
REMOTE FIRE DEPT. CONNECTION		INLET FILTER PROTECTION	
CONCRETE THRUST BLOCK	63.25 ×	PROPOSED SPOT ELEVATION	
DOUBLE DETECTOR CHECK VALVE	(63.25) ×	EXIST. SPOT ELEVATION	
FIRE DEPT. CONNECTION		SEWER/STORM FLOW DIRECTION	
FIRE HYDRANT		CATCH BASIN	
GATE VALVE & BOX		CURB INLET	
WATER METER		AREA DRAIN	
GAS METER		HEADWALL	
GREASE TRAP		WINGED HEADWALL	
EXTERIOR CLEANOUT ECO		CONCRETE SWALE	
MANHOLE		TYPE– X– HEADWALL	

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

Notes:
1. Unkept Sites Shall Not Be Permitted and May Be Subject To Stop–Work Orders
2. Per The USDA Web Soil Survey The Entire Site Is Arrington Silt Loam (Ar) – A Hydrologic Soil Group Type B Soil

SWPPP Narrative:

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. 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 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 sediment/debris at or before 50% capacity. All measures to be repaired within 7 days of notification of deficiency. All erosion and sediment controls must be maintained properly until the site is stabilized. Stabilization to be achieved within 14 days of any cessation of work. Maintenance must include inspections of all erosion and sediment controls after each runoff event and on a twice weekly basis (minimum 72 hours apart). All preventative and remedial maintenance work, including clean out, repair replacement, re–grading, reseeding, 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.

General Contractor Shall Install All Initial EPSC Measures Prior To Any Earthwork Beginning.

EXISTING ON-SITE CONDITIONS

COVER	SCS CLASSIFICATION	AREA (Ac)
GRASS	MASS GRADED SITE B SOILS, CN=61	1.54
	COMPOSITE CN=61	

INITIAL OUTFALLS

NUMBER	DESCRIPTION	AREA	SLOPE
1	EXISTING REGIONAL DETENTION POND	0.90	1–15%
2	SWALE ALONG WEST PROPERTY LINE	0.83	1–15%
3	CONSTRUCTION EXIT	0.05	1–2%

1 ☆ Outfall

PROPOSED ON-SITE CONDITIONS

COVER	SCS CLASSIFICATION	AREA (Ac)
BUILDING, SIDEWALK, PAVEMENT	PAVED PARKING LOTS, ROOFS, ETC. B–SOILS, CN=98	1.06
GRASS / LANDSCAPING	OPEN SPACE: GOOD CONDITION B–SOILS, CN=61	0.48
	COMPOSITE CN=86	

PROPOSED BMP'S

BMP	TYPE
SEDIMENT CONTROL BARRIER	TEMPORARY, SEDIMENT CONTROL
CONSTRUCTION ENTRANCE	TEMPORARY, SEDIMENT CONTROL
VEGETATION	PERMANENT, EROSION PREVENTION
INLET PROTECTION	TEMPORARY, SEDIMENT CONTROL

811 Know what's below. Call before you dig.

EPSC Phasing

Initial:	Silt Fence Along Downgradient Perimeter Construction Entrance Temp. Conc. Washout
Intermediate:	Filter Fabric Inlet Protection Silt Fence To Protect Ditches
Final:	Landscaping & Grass Sod Of All Pervious Areas (See Landscaping Plan)

EPSC Notes:
Staging Area, Worker Parking & Adjoining Drive To Be Constructed Of Stone.

Staging Area is To Be Kept Litter Free With Daily Cleanup. In Addition, All Stored Materials Are To Be Kept In Organized & Stacked Fashion. An unkempt site will not be permitted, and if debris is stored in areas outside of the designated storage area, City Staff will shut down the job site.

All Construction Signage Is To Be Constructed Of 2–4"x4" Painted Posts.

Sign #1 – Display Surface Can Be No More Than 32 S.F. & Must Be Less Than 9 Ft. Tall.

N

20' 0 20' 40'

SCALE: 1"= 20'

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PHONE: (615) 890-7901 E-MAIL: MTAYLOR@SEC-CIVIL.COM FAX: (615) 895-2567

MATTHEW A. TAYLOR — No. 112511 — STATE OF TENNESSEE

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 total accordance with the design as noted, described, and implied by the construction drawings. The engineer has no responsibility in the assurance that the site is constructed in accordance with the construction plans.

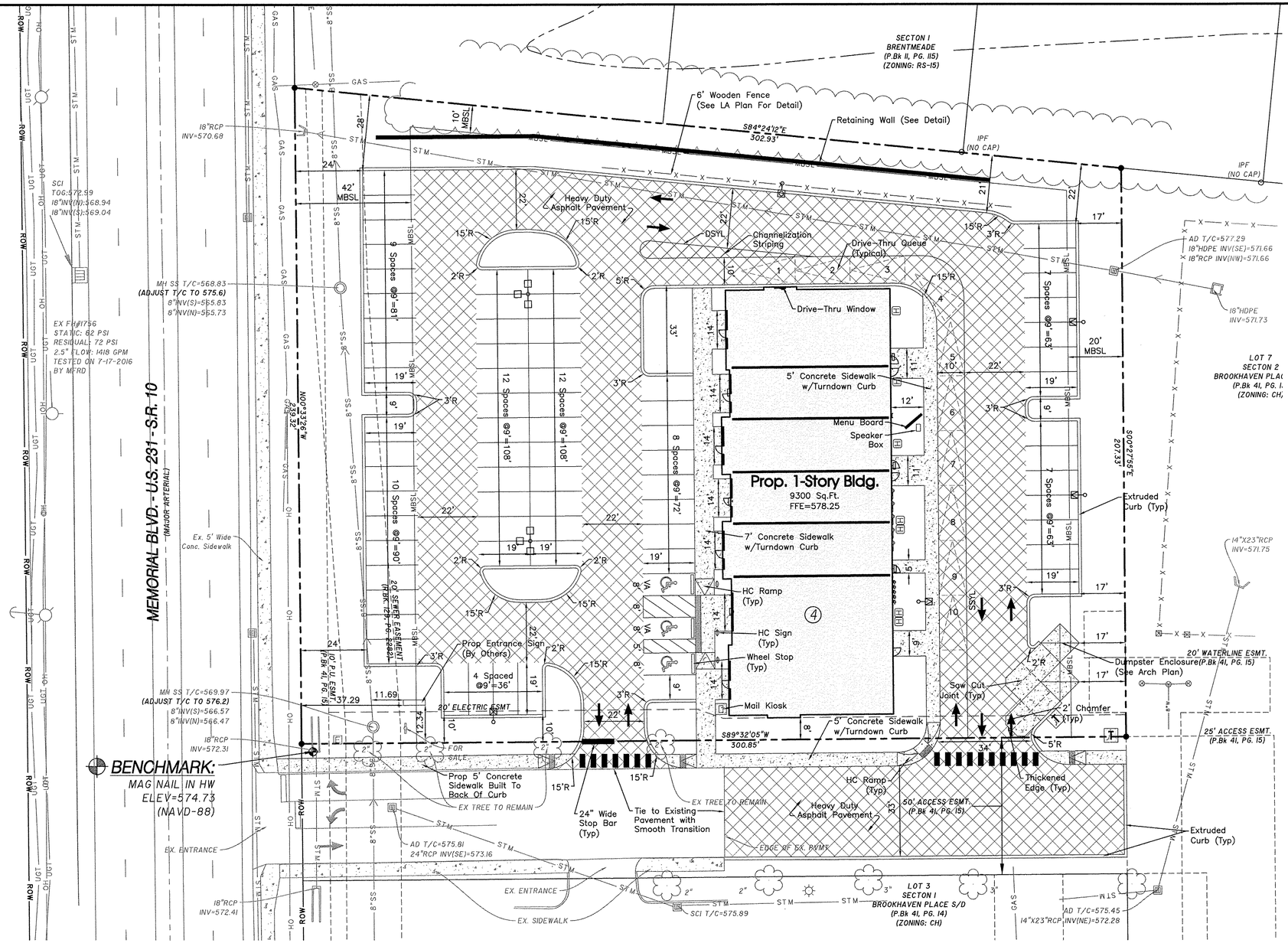
Brookhaven Lot 4

Murfreesboro, Tennessee

REVISED: 4–7–2021: Staff Comments
4–16–2021: Permit Submittal
5–13–2021: Permit Submittal 2

DRAWN: SJA/CFB3
DATE: 3–18–2021
CHECKED: MAT
FILE NAME: 16046lot4
SCALE: 1"=20'
JOB NO. 16046
SHEET: C1.0

Existing Conditions & Initial EPSC Plan



Legend:

EXIST. CONCRETE MONUMENT		BENCHMARK	
IRON PIN SET (I.P.S.)		HANDICAP PARKING SYMBOL	
IRON PIN FOUND (I.P.F.)	V.A.	VAN ACCESSIBLE HANDICAP DESIGNATION	
EXIST. SIGN POST		HC SIGN	
EXIST. SEWER CLEANOUT		PROPOSED SIGN POST	
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EXIST. CATCH BASIN (STORM SEWER)		WHEEL STOP	
EXIST. WATER/GAS VALVE		CONCRETE SIDEWALK	
EXIST. TELEPHONE RISER		EXTRUDED CURB	
EXIST. GAS RISER		CURB & GUTTER	
ELECTRICAL ENCLOSURE		TRAFFIC ARROW	
EXIST. WATER METER		TURN LANE ARROWS	
EXIST. UTILITY POLE	1	REVISION NUMBER	
EXIST. FIRE HYDRANT	#1	DRAINAGE STRUCTURE DESIGNATION	
POST INDICATOR VALVE	A	DRAINAGE PIPE DESIGNATION	
BLOW OFF VALVE		RIP RAP	
REDUCER		RUNOFF FLOW ARROW	
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CONCRETE THRUST BLOCK	63.25 ×	PROPOSED SPOT ELEVATION	
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FIRE HYDRANT		CATCH BASIN	
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GREASE TRAP		WINGED HEADWALL	
EXTERIOR CLEANOUT ECO		CONCRETE SWALE	
MANHOLE		TYPE– X– HEADWALL	

EXISTING PHONE	PH
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RIGHT OF WAY	ROW
EROSION CONTROL SILT FENCE	SF SF
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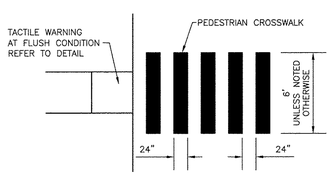
MINIMUM BUILDING SETBACK LINE	
PHASE BOUNDARY	
EXISTING GAS LINE	GAS
PROPOSED GAS LINE	GAS
EXISTING STORM	STM
PROPOSED STORM	STM
EXISTING CONTOUR LINES	601
PROPOSED CONTOUR LINES	601
EXISTING SANITARY SEWER	SS
PROPOSED SANITARY SEWER	SS
EXISTING WATER	W W
PROPOSED WATER	W W

Pavement Hatch Legend

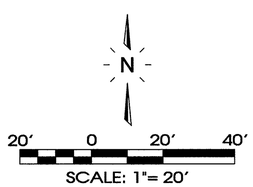
- Concrete Pavement
- Heavy Duty Asphalt Pavement
- Light Duty Asphalt Pavement



NOTE:
1. PEDESTRIAN CROSSWALK SHALL BE IN COMPLIANCE WITH ADAAG 4.7.10
2. PEDESTRIAN CROSSWALK, SOLID WHITE MARKINGS PAINTED ON ASPHALT (TYPICAL).
3. PAINT 12" WIDE STRIPES AS INDICATED. USE PORTER TRAFFIC WHITE PAINT OR APPROVED EQUAL.

PEDESTRIAN CROSSWALK
SCALE——NONE

Note:
1) Solid Waste Service Will Be Provided By A Private Hauler.



SCALE: 1"= 20'

811 Know what's **below.** **Call** before you dig.

Owner/Developer:
Investment Partners, LLC
P.O. Box 669
McMinnville, TN 37111

Contact: Bobby Kirby

Deed Reference:
Map 069D, Parcel 1.00
P.Bk. 41, Pg. 15
Bk. 2011, Pg. 2954

Yard Requirements:
Front: 42'
Side: 10'
Rear: 20'
*The minimum side yard shall apply only if the property abuts or is adjacent to property zoned or used for residential purposes or the residential portion of an approved planned development. Otherwise, no side yard is required.

Intended Use: Commercial Center - Restaurant Use Not To Exceed 3,255 Sq.Ft.

Land Use Data:
Zoned: CH
1-Story Building
Building Ht.: 16'-4"
Total Floor Area: 9,300 Sq.Ft.
1 Lot on:1.54± Acres
Adjacent Zoning: CH-East, South, West, & RS15-North

Parking Requirement:
$\frac{9,300}{233.33}$ x 9,300 Sq.Ft. = 42 Spaces Required
Provided: 70 Regular + 3 H.C. = 73 Total Spaces Provided

Flood Map No.:
This site lies within Zone X, not in the
100 Year Floodplain, per Community Panel
47149C0145H dated January 5, 2007.

SITE ENGINEERING CONSULTANTS
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LANDSCAPE ARCHITECTURE
SEC, Inc.
850 MIDDLE TENNESSEE BOULEVARD MURFREESBORO, TENNESSEE 37129
PHONE: (615) 890-7901 FAX: (615) 895-2567
E-MAIL: MTAYLOR@SEC-CIVIL.COM
NO PORTION OF THIS DRAWING MAY BE REPRODUCED WITHOUT THE EXPRESSED WRITTEN CONSENT OF S.E.C. INC.

MATTHEW A. TAYLOR — REGISTERED PROFESSIONAL ENGINEER — NUMBER 119151 — STATE OF TENNESSEE

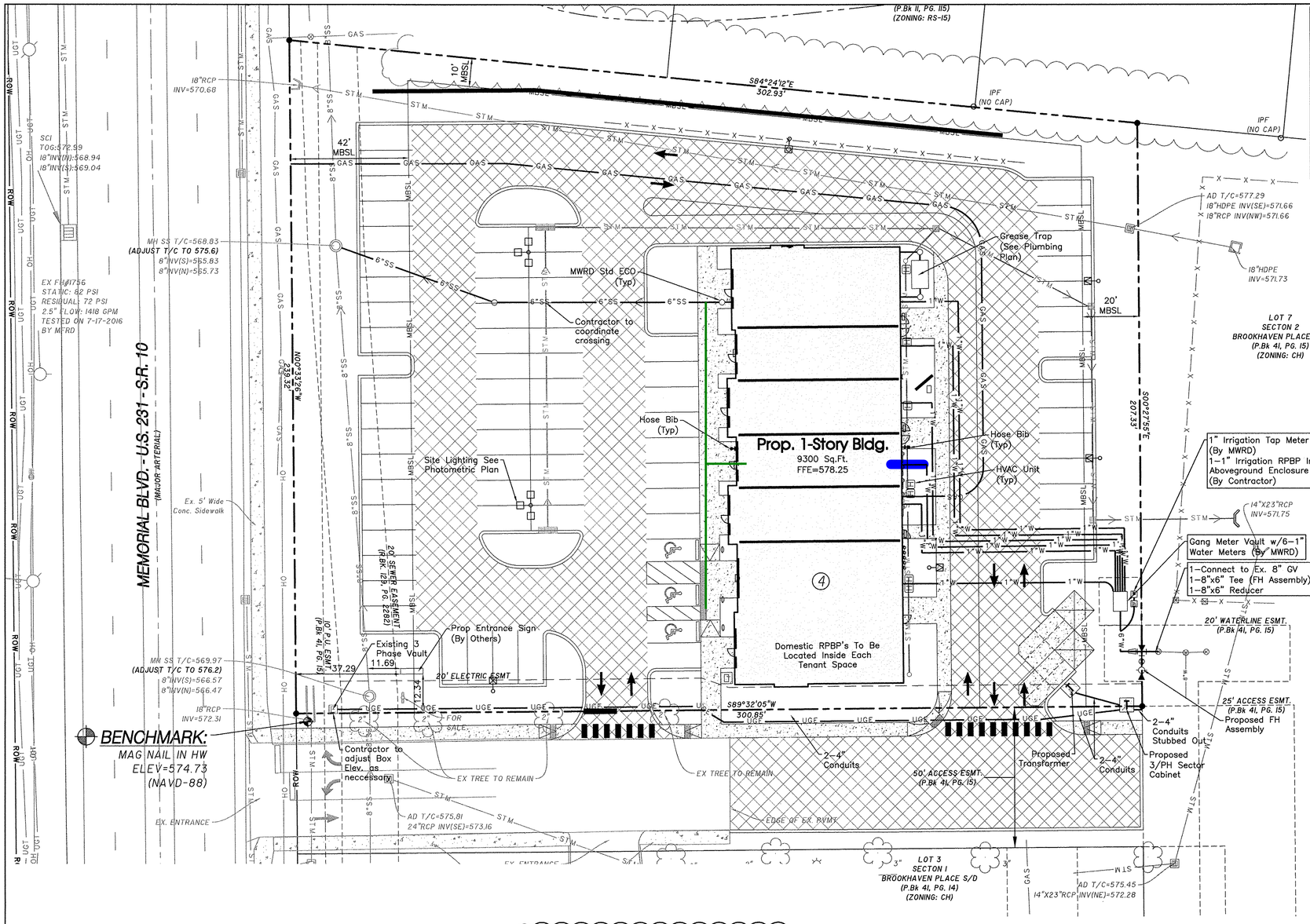
Brookhaven Lot 4
Murfreesboro, Tennessee

REVISED: 4-7-2021: Staff Comments
4-16-2021: Permit Submittal
5-13-2021: Permit Submittal 2
5-28-21: Road Line Changes

DRAWN: SJA/CFB3
DATE: 3-18-2021
CHECKED: MAT
FILE NAME: 16046lot4
SCALE: 1"=20'
JOB NO. 16046

Site Plan

SHEET: C2.0



APPROVED FOR CONSTRUCTION
THE PLANS BEARING THIS STAMP HAVE BEEN REVIEWED BY THE
MURFREESBORO ENGINEERING DEPARTMENT
AND ARE HEREBY APPROVED FOR CONSTRUCTION

THE REVIEW AND APPROVAL IS FOR GENERAL COMPLIANCE WITH THE APPLICABLE POLICIES AND REGULATIONS OF THE MURFREESBORO ENGINEERING DEPARTMENT AND ASSUMES THAT THE PLANS HAVE BEEN PREPARED IN ACCORDANCE WITH ACCEPTED ENGINEERING PRACTICES AS EVIDENCED BY THE SIGNED SEAL OF THE ENGINEER OF RECORD. THIS APPROVAL SHALL NOT BE CONSTRUED AS CREATING A PRESUMPTION OF CORRECT OPERATION OR AS A WARRANTY BY THE MURFREESBORO ENGINEERING DEPARTMENT THAT THE APPROVED FACILITIES WILL REACH THE DESIGNED GOALS

APPROVAL DATE _____
APPROVAL EXPIRES IN 12 MONTHS

BY _____

Note:
1. Property Is Within Osborne Lane Assessment District.

2. A Maximum Of 2-6" (6 in.) Adjustment Rings Will Be Allowed Per Any Existing Or Proposed Manholes Associated With This Installation. If Any Manhole Requires Adjustment Beyond The 2-6" Adjustment Rings Allowed Then The Contractor Must Remove, Adjust, Or Add Barrel Sections To The Manhole To Get It To Grade At His Or Her Own Expense.

3. The Existing Sanitary Sewer Mains That Will Cross Under Or Over The Newly Constructed Utility Main(s) Or Other Infrastructure Must Undergo An Inline Pipeline Assessment Certification Program (PACP) CCTV Survey After Construction Of The New Utility Line Has Been Completed And Be Submitted To MWRD For Review And Approval.

4. All New Sanitary Sewer Taps. Connections, And Manhole Adjustments Are To Be Per MWRD Specifications And Be Made Under MWRD Supervision By A MU Licensed Utility Contractor.

Legend:

EXIST. CONCRETE MONUMENT		BENCHMARK	
IRON PIN SET (I.P.S.)		HANDICAP PARKING SYMBOL	
IRON PIN FOUND (I.P.F.)	V.A.	VAN ACCESSIBLE HANDICAP DESIGNATION	
EXIST. SIGN POST		HC SIGN	
EXIST. SEWER CLEANOUT		PROPOSED SIGN POST	
EXIST. MANHOLE (SEWER & PHONE)		CONCRETE BOLLARD	
EXIST. CATCH BASIN (STORM SEWER)		WHEEL STOP	
EXIST. WATER/GAS VALVE		CONCRETE SIDEWALK	
EXIST. TELEPHONE RISER		EXTRUDED CURB	
EXIST. GAS RISER		CURB & GUTTER	
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EXIST. UTILITY POLE	1	REVISION NUMBER	
EXIST. FIRE HYDRANT	#1	DRAINAGE STRUCTURE DESIGNATION	
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FIRE DEPT. CONNECTION		SEWER/STORM FLOW DIRECTION	
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EXTERIOR CLEANOUT ECO		CONCRETE SWALE	
MANHOLE		TYPE- X- HEADWALL	

EXISTING PHONE	PH
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PROPERTY LINE	
EASEMENTS	
RIGHT OF WAY	ROW
EROSION CONTROL SILT FENCE	SF SF
EROSION EEL	E E E
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EXISTING FENCELINE	X X X X
MINIMUM BUILDING SETBACK LINE	
PHASE BOUNDARY	
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PROPOSED WATER	W W

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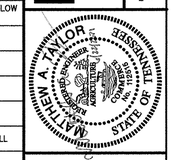

Brookhaven Lot 4
Murfreesboro, Tennessee

REVISED: 4-7-2021: Staff Comments
4-16-2021: Permit Submittal
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DRAWN: SJA/CFB3
DATE: 3-18-2021
CHECKED: MAT
FILE NAME: 16046lot4
SCALE: 1"=20'
JOB NO. 16046
SHEET: C2.1

Utility Plan

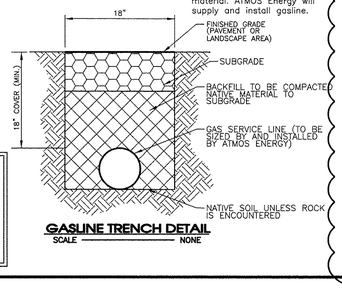
N

20' 0 20' 40'
SCALE: 1"= 20'

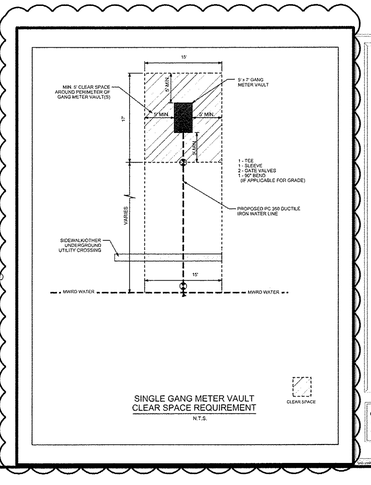
Know what's **below.** **Call** before you dig.

Electrical Legend:
- Commercial Vault
- Transformer

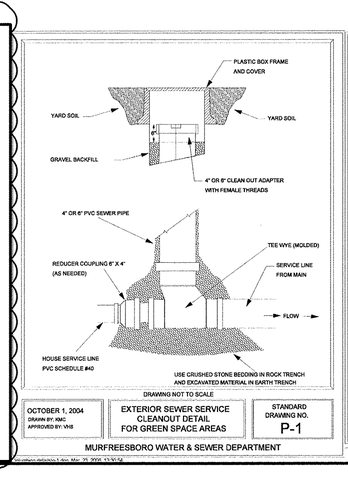
The proposed electrical, gas, water and telecommunications information shown hereon is not an actual design to be used for construction, and is for reference and illustrative purposes only. The contractor shall refer to the actual final design for each proper discipline (electrical, civil, mechanical, etc.) with the Tennessee professional engineer's seal, for precise design information.



GASLINE TRENCH DETAIL
SCALE NONE



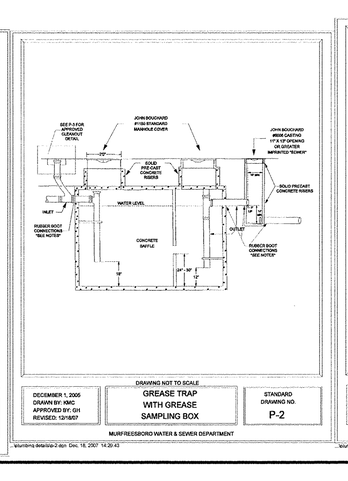
SINGLE GANG METER VAULT
CLEAR SPACE REQUIREMENT
N.T.S.



DRAWING NOT TO SCALE

OCTOBER 1, 2004 DRAWN BY: KMC APPROVED BY: GH	EXTERIOR SEWER SERVICE CLEANOUT DETAIL FOR GREEN SPACE AREAS	STANDARD DRAWING NO. P-1

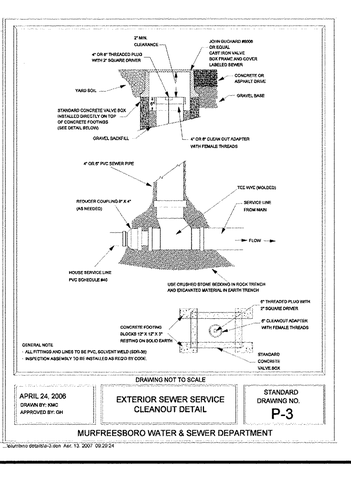
MURFREESBORO WATER & SEWER DEPARTMENT



DRAWING NOT TO SCALE

DECEMBER 1, 2006 DRAWN BY: KMC APPROVED BY: GH REVISED: 12/18/07	GREASE TRAP WITH GREASE SAMPLING BOX	STANDARD DRAWING NO. P-2

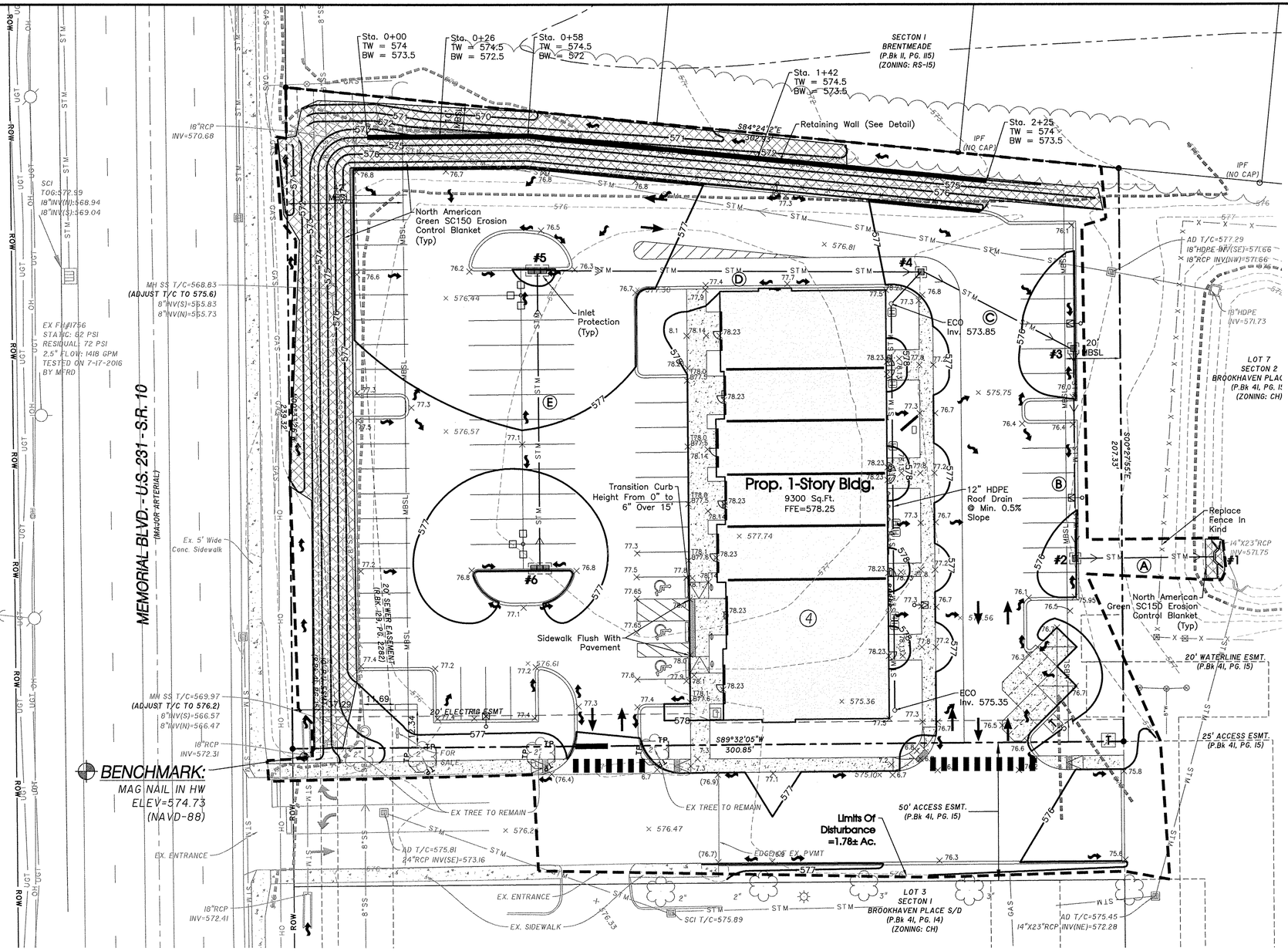
MURFREESBORO WATER & SEWER DEPARTMENT



DRAWING NOT TO SCALE

APRIL 24, 2006 DRAWN BY: KMC APPROVED BY: GH	EXTERIOR SEWER SERVICE CLEANOUT DETAIL	STANDARD DRAWING NO. P-3

MURFREESBORO WATER & SEWER DEPARTMENT



Pipe Table

PIPE	INV. IN (FT)	INV. OUT (FT)	LENGTH (FT)	SLOPE (%)	MATERIAL	SIZE (IN)
A	572.00	571.75	50	0.50	RCP	18
B	572.38	572.00	76	0.50	RCP	18
C	572.69	572.38	62	0.50	RCP	18
D	573.38	572.69	139	0.50	RCP	15
E	573.92	573.38	108	0.50	RCP	15

Drainage Structures Table

STR#	T.O.G	INV. IN (FT)	INV. OUT (FT)	CASTING	TYPE
#1	574.5	571.75 (A)	N/A	N/A	HW-OUTLET
#2	575.8	572.00 (B)	572.00 (A)	JBS 3103	Single Curb Inlet
#3	575.6	572.38 (C)	572.38 (B)	JBS 3103	Single Curb Inlet
#4	576.7	573.69 (RD) 572.69 (D)	572.69 (C)	JBS 4073	Catch Basin
#5	575.9	573.38 (E)	573.38 (D)	JBS 3103	Triple Curb Inlet
#6	576.6	N/A	573.92 (E)	JBS 3103	Triple Curb Inlet

1 ☆ Outfall

FINAL OUTFALLS

NUMBER	DESCRIPTION	AREA	SLOPE
1	EXISTING REGIONAL DETENTION POND	1.38	1-5%
2	SWALE ALONG WEST PROPERTY LINE	0.40	33%

NOTES:

1) Final EPSC Measures Shown Here On Shall Be Enacted As Early As Practical During Construction. Stabilization Timing Criteria Has Been Established In The SWPPP and TNCGP.

2) Inlet Protection, Erosion Blanket & Temporary Stabilization (I.E. Seed & Mulch) Will Be Installed By General Contractor. Permanent Stabilization Measure (I.E. Sod, Landscape,Pavement) Will Be Installed By Owner.)

3) Contractor To Stabilize All Disturbed Areas After Construction.

Know what's **below.**
Call before you dig.

N

20' 0 20' 40'

SCALE: 1"= 20'

Legend:

EXIST. CONCRETE MONUMENT		BENCHMARK	
IRON PIN SET (I.P.S.)		HANDICAP PARKING SYMBOL	
IRON PIN FOUND (I.P.F.)	V.A.	VAN ACCESSIBLE HANDICAP DESIGNATION	
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EXIST. GAS RISER		CURB & GUTTER	
ELECTRICAL ENCLOSURE		TRAFFIC ARROW	
EXIST. WATER METER		TURN LANE ARROWS	
EXIST. UTILITY POLE	1	REVISION NUMBER	
EXIST. FIRE HYDRANT	#1	DRAINAGE STRUCTURE DESIGNATION	
POST INDICATOR VALVE	A	DRAINAGE PIPE DESIGNATION	
BLOW OFF VALVE		RIP RAP	
REDUCER		RUNOFF FLOW ARROW	
REMOTE FIRE DEPT. CONNECTION		INLET FILTER PROTECTION	
CONCRETE THRUST BLOCK	63.25 ×	PROPOSED SPOT ELEVATION	
DOUBLE DETECTOR CHECK VALVE	(63.25) ×	EXIST. SPOT ELEVATION	
FIRE DEPT. CONNECTION		SEWER/STORM FLOW DIRECTION	
FIRE HYDRANT		CATCH BASIN	
GATE VALVE & BOX		CURB INLET	
WATER METER		AREA DRAIN	
GAS METER		HEADWALL	
GREASE TRAP		WINGED HEADWALL	
EXTERIOR CLEANOUT ECO		CONCRETE SWALE	
MANHOLE		TYPE- X- HEADWALL	

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

SITE ENGINEERING CONSULTANTS
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MATTHEW A. TAYLOR — REGISTERED PROFESSIONAL ENGINEER — No. 115111 — STATE OF TENNESSEE

Brookhaven Lot 4

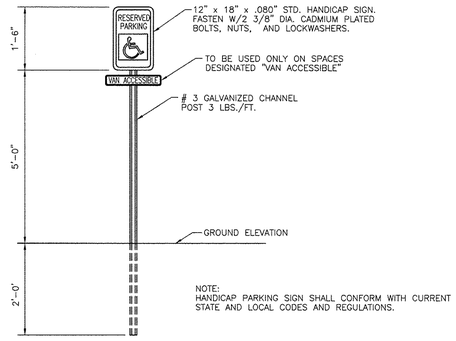
Murfreesboro, Tennessee

REVISED: 4-7-2021: Staff Comments
4-16-2021: Permit Submittal
5-13-2021: Permit Submittal 2
5-28-2021: Spot Changes

DRAWN: SJA/CFB3
DATE: 3-18-2021
CHECKED: MAT
FILE NAME: 16046lot4
SCALE: 1"=20'
JOB NO. 16046

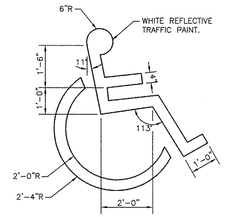
Grading, Drainage, & Final EPSC Plan

SHEET: C3.0



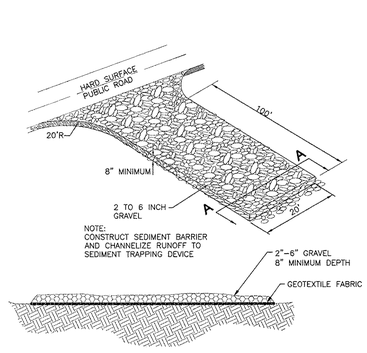
HANDICAP PARKING SIGN DETAIL

SCALE NONE



HANDICAP SYMBOL DETAIL

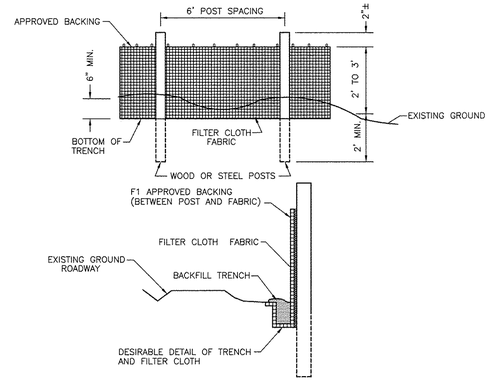
SCALE NONE



SECTION A-A

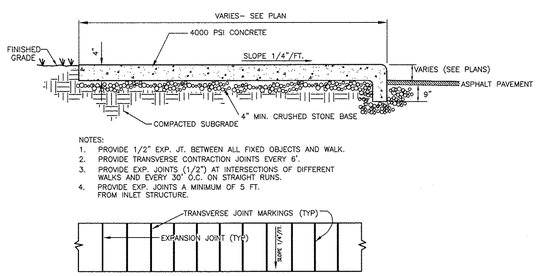
GRAVEL CONSTRUCTION ENTRANCE

SCALE NONE



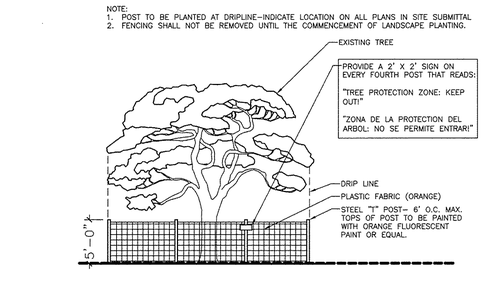
SILT FENCE DETAIL

SCALE NONE

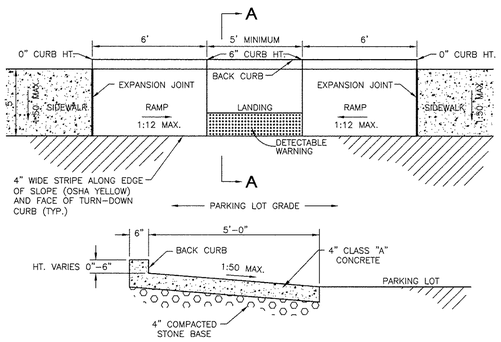


CONCRETE SIDEWALK WITH TURN DOWN CURB

SCALE NONE



TREE PROTECTION
NOT TO SCALE



SECTION A-A

GENERAL NOTES:

1. LANDING SHALL BE FLUSH WITH EDGE OF PAVEMENT.

2. SURFACE TEXTURE OF THE CURB RAMP SHALL BE STABLE, FIRM, AND SLIP RESISTANT. THE SURFACE SHALL BE COARSE BROOMED FINISH TRANSVERSE TO THE SLOPE OF THE RAMP.

3. BACK CURB HEIGHT ALONG RAMPS SHALL TRANSITION FROM 0 INCHES AT EXPANSION JOINTS TO 6" AT LANDING AND SHALL BE A CONSTANT HEIGHT OF 6" THROUGH LANDING. CROSS-SLOPE (BACK TO FRONT) OF TOP OF BACK CURB SHALL BE THE SAME AS THE SIDEWALK CROSS-SLOPE.

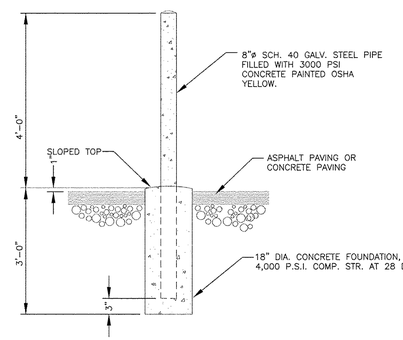
4. RAMPS SHALL HAVE A MAXIMUM SLOPE OF 1:12 (VERTICAL:HORIZONTAL) AND SHALL NOT BE REQUIRED TO EXCEED 8 FEET (96 INCHES) IN LENGTH.

5. HANDICAP RAMP SHALL BE CONSTRUCTED WITH DETECTABLE WARNINGS WHICH SHALL CONSIST OF RAISED TRUNCATED DOMES WITH A NOMINAL DIAMETER OF 0.9 INCHES, A NOMINAL HEIGHT OF 0.2 INCHES AND A NOMINAL CENTER-TO-CENTER SPACING OF 2.35 INCHES AND SHALL CONTRAST VISUALLY WITH ADJOINING SURFACES, WITHER LIGHT-ON-DARK, OR DARK-ON-LIGHT. THE MATERIAL USED SHALL BE YELLOW BRICK PAVERS AND SHALL PROVIDE CONTRAST AND BE AN INTEGRAL PART OF THE WALKING SURFACE. THE PAVERS SHALL COMPLY WITH THE CURRENT REQUIREMENTS SET FORTH IN THE ADA AND BE INSTALLED PER THE MANUFACTURERS RECOMENDATIONS. THE DETECTABLE WARNING SHALL EXTEND THE FULL WIDTH AND FOR 2 FEET FROM THE BOTTOM OF THE RAMP.

6. A CURB RAMP SHALL HAVE A DETECTABLE WARNING COMPLYING WITH 4.29.2 OF ADA REQUIREMENTS. THE DETECTABLE WARNING SHALL EXTEND THE FULL WIDTH AND DEPTH OF THE CURB RAMP.

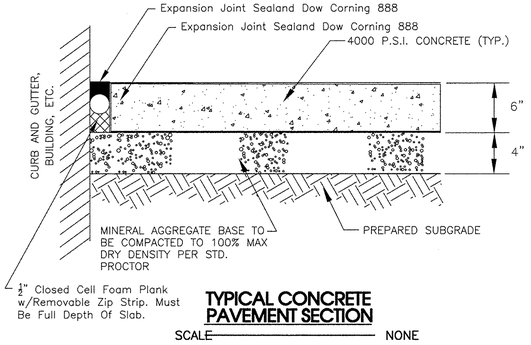
HANDICAP RAMP

SCALE NONE



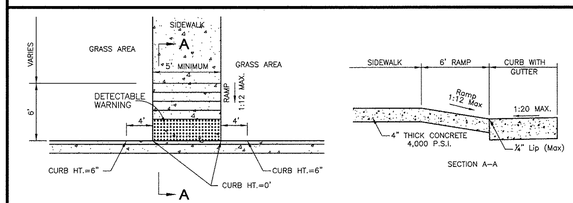
BOLLARD DETAIL

SCALE NONE



TYPICAL CONCRETE PAVEMENT SECTION

SCALE NONE



SECTION A-A

GENERAL NOTES:

1. RAMP SHALL BE FLUSH WITH EDGE OF PAVEMENT.

2. SURFACE TEXTURE OF THE CURB RAMP SHALL BE STABLE, FIRM, AND SLIP RESISTANT. THE SURFACE SHALL BE COARSE BROOMED FINISH TRANSVERSE TO THE SLOPE OF THE RAMP.

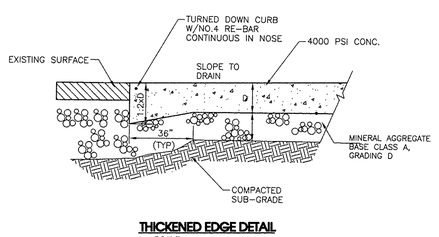
3. RAMPS SHALL HAVE A MAXIMUM SLOPE OF 1:12 (VERTICAL:HORIZONTAL) AND SHALL NOT BE REQUIRED TO EXCEED 8 FEET (96 INCHES) IN LENGTH.

4. HANDICAP RAMP SHALL BE CONSTRUCTED WITH DETECTABLE WARNINGS WHICH SHALL CONSIST OF RAISED TRUNCATED DOMES WITH A NOMINAL DIAMETER OF 0.9 INCHES, A NOMINAL HEIGHT OF 0.2 INCHES AND A NOMINAL CENTER-TO-CENTER SPACING OF 2.35 INCHES AND SHALL CONTRAST VISUALLY WITH ADJOINING SURFACES, WITHER LIGHT-ON-DARK, OR DARK-ON-LIGHT. THE MATERIAL USED SHALL BE YELLOW BRICK PAVERS AND SHALL PROVIDE CONTRAST AND BE AN INTEGRAL PART OF THE WALKING SURFACE. THE PAVERS SHALL COMPLY WITH THE CURRENT REQUIREMENTS SET FORTH IN THE ADA AND BE INSTALLED PER THE MANUFACTURERS RECOMENDATIONS. THE DETECTABLE WARNING SHALL EXTEND THE FULL WIDTH AND FOR 2 FEET FROM THE BACK OF CURB.

5. A CURB RAMP SHALL HAVE A DETECTABLE WARNING COMPLYING WITH 4.29.2 OF ADA REQUIREMENTS. THE DETECTABLE WARNING SHALL EXTEND THE FULL WIDTH AND DEPTH OF THE CURB RAMP.

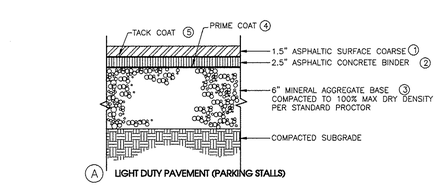
HANDICAP RAMP

SCALE NONE



THICKENED EDGE DETAIL

SCALE NONE



① BITUMINOUS SURFACE: (1" PER SQ. TD. = 106 LBS)
TDOT 411-01.01 – MINERAL AGGREGATE (ASC) GRADING "E"
TDOT 411-01.02 – ASPHALTIC CEMENT (ASC) GRADING "E"

② BITUMINOUS BINDER: (1" PER SQ. YD. = 110 LBS.)
TDOT 307-03.11 – BITUMINOUS PLANT MIX BASE (HOT MIX) (BPMB-HM) GRADING "B"

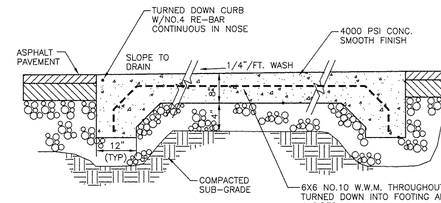
③ MINERAL AGGREGATE: (2.03 TON / CU. YD.)
TDOT 303-01 – MINERAL AGGREGATE TYPE "A" BASE, GRADING "D"

④ PRIME COAT:
TDOT 402-01 – BITUMINOUS MATERIAL FOR PRIME COAT (PC) 0.30-0.35 GAL/SQ. YD.
TDOT 402-02 – AGGREGATE FOR COVER MATERIAL (PC) 8-12 LB/SQ. YD.

⑤ TACK COAT:
TDOT 403-01 – BITUMINOUS MATERIAL FOR TACK COAT (TC) 0.02 GAL/SQ. YD.

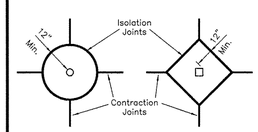
TYPICAL PAVEMENT SECTIONS

SCALE NONE



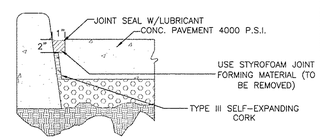
DUMPSTER PAD

SCALE NONE



ISOLATION JOINT DETAIL

SCALE NONE



THIS APPLIES TO CURBS, SIDEWALKS, DRAINAGE/UTILITY STRUCTURES, BUILDINGS, FIXED OBJECTS, ETC.

ISOLATION/EXPANSION JOINT DETAIL

SCALE NONE

Notes:
1) Contraction joint spacing – as shown
2) Isolation joints are required at all fixed objects, such as bollards, building, cleanouts, curb & gutter, drainage structures, fire hydrants, manholes, valve boxes, etc.
3) Isolation joints shall be round or square, at the contractor's option, as shown diagramed.
4) Expansion joints shall be spaced at 100 feet max.
5) Thicken edge of slab at edges of slabs including but not limited to at intersection with asphalt pavement, curb & gutter, expansion joints, isolation joints, and sidewalks
6) Thickened edges shall be (1.2 X D)" deep, tapered from edge of joint over 36", to the normal slab depth of (D).
7) Sawed contraction joints shall be (¼ X D)" deep, 1/8" wide. Sawing shall take place as soon as concrete will allow.
8) All joints (saw, etc.) shall be sealed to reduce water infiltration.
9) Construction should be in accordance with ACI 330 specifications for unreinforced concrete parking lot.

SEC, Inc.
SITE ENGINEERING CONSULTANTS
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PHONE: (615) 890-7901 E-MAIL: MTAYLOR@SEC-CIVIL.COM FAX: (615) 895-2567

MATTHEW A. TAYLOR REGISTERED PROFESSIONAL ENGINEER No. 119501 STATE OF TENNESSEE

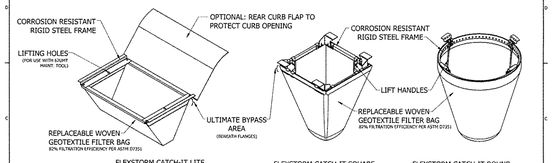
Brookhaven
Lot 4
Murfreesboro, Tennessee

REVISED: 4-7-2021: Staff Comments
4-16-2021: Permit Submittal
5-13-2021: Permit Submittal 2

Details

DRAWN: SJA/CFB3
DATE: 3-18-2021
CHECKED:
MAT
FILE NAME:
16046lot4
SCALE:
None
JOB NO.
16046
SHEET:
C4.0

FLEXSTORM Specification Drawing
ASTM D8057 Standard Specification for Inlet Filters with a Rigid Frame



ASTM D8057 Requirements

-> Filter system consists of rigid frame and removable geosynthetic bag
-> Filter bag sized to meet treatment flow rate of the drainage location
-> Bag maintains shape to be extracted when completely filled with sediment
-> Rigid frame capable of supporting full load of sediment with grate removed
-> Frame does not interfere or elevate grate by more than 1/8"
-> Bypass flow exceeds design flow of drainage location
-> Filter bag achieves >80% filtration efficiency per ASTM D7351

Installation Instructions:
1. Remove grate from the drainage structure
2. Clean stone and dirt from ledge (lip) of drainage structure
3. Drop the FLEXSTORM inlet filter through the clear opening such that the hangers rest firmly on the lip of the structure
4. Replace the grate and confirm it is not elevated more than 1/8"

Maintenance Guidelines:
1. Empty the sediment bag if more than half filled with sediment and debris
2. Remove the grate, engage the lifting points, and lift filter from the drainage structure
3. Dispose of sediment and debris as directed by the Engineer or Maintenance Contract
4. Alternatively, an industrial vacuum can be used to collect sediment from filter bag

For more information contact APM@inletfilters.com

FLEXSTORM CATCH-IT LITE
FLEXSTORM CATCH-IT
FLEXSTORM ADS
inletfilters.com 630-355-3288

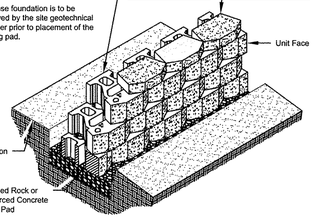
FLEXSTORM ASTM D8057 SPECIFICATION DRAWING

Base Leveling Pad Notes:

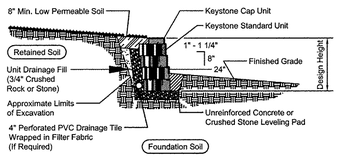
1. The leveling pad is to be constructed of crushed stone or 2,000 psis unreinforced concrete
2. The base foundation is to be approved by the site geotechnical engineer prior to placement of the leveling pad.

Standard Unit	
Width:	18"
*Depth:	18"
Height:	8"
*Weight:	102 lbs

Cap Unit	
Width:	18"
*Depth:	10 1/2"
Height:	4"
*Weight:	45 lbs



Standard Unit/Base Pad Isometric Section View
* Dimensions & Weight May Vary by Region

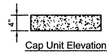


Typical Gravity Wall Section
Standard Unit - 1" Setback

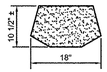
NOTE: Install Per Manufacturers Specifications

SEGMENTAL REATAINING WALL DETAILS
SCALE NONE

Note:
Retaining Wall Shall Be Designed By Structural Engineer. Details For Reference Only.



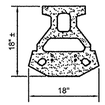
Cap Unit Elevation



Cap Unit Plan

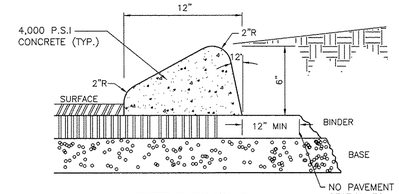
3-Plane Split Cap Unit Option
* Dimensions & Availability Will Vary by Region

Standard Elevation

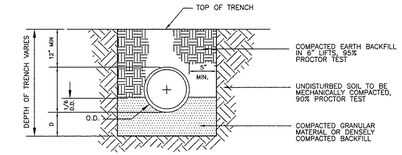


Standard Plan

Standard Unit
* Dimensions May Vary by Region



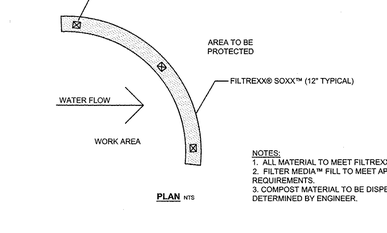
EXTRUDED CURB
SCALE NONE



NOTES:
1. WHEN PIPE IS TO BE PLACED IN A FILL SECTION, THE COMPACTED FILL SHALL BE PLACED A MIN. OF 12" ABOVE THE PIPE ELEVATION BEFORE THE TRENCH IS EXCAVATED.
2. SUBGRADES SHOULD BE EXCAVATED, IF NECESSARY, SO A UNIFORM FOUNDATION FREE OF PROTRUDING ROCKS MAY BE PROVIDED.

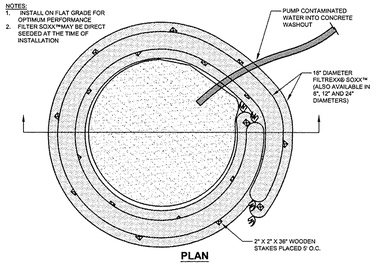
PIPE DIA.	D (MIN.)
21" & SMALLER	3"
30" TO 60"	4"
66" & LARGER	6"

TRENCH BEDDING FOR STORM DRAIN CMP AND RCP ONLY
SCALE NONE



SECTION

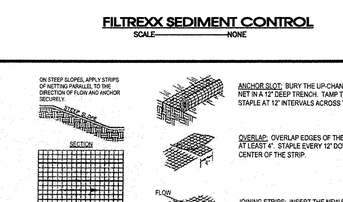
NOTES:
1. INSTALL ON FLAT GRADE FOR OPTIMUM PERFORMANCE
2. FILTER SOXX™MAY BE DIRECT SEEDED AT THE TIME OF INSTALLATION



PLAN

FILTREXX® CONCRETE WASHOUT
SCALE NONE

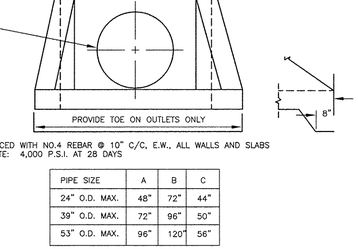
SECTION NTS



PLAN NTS

NOTES:
1. ALL MATERIAL TO MEET FILTREXX® SPECIFICATIONS.
2. FILTER MEDIA™ FILL TO MEET APPLICATION REQUIREMENTS.
3. COMPOST MATERIAL TO BE DISPERSED ON SITE, AS DETERMINED BY ENGINEER.

FILTREXX SEDIMENT CONTROL
SCALE NONE



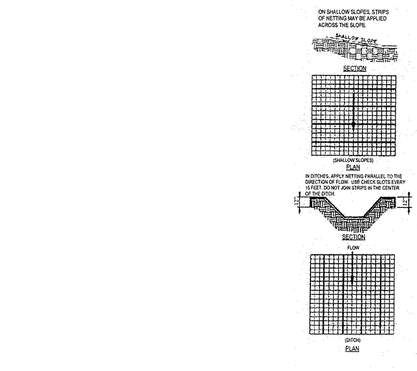
REINFORCED WITH NO.4 REBAR @ 10" C/C, E.W., ALL WALLS AND SLABS
CONCRETE: 4,000 P.S.I. AT 28 DAYS

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"

WINGED HEADWALL
SCALE NONE

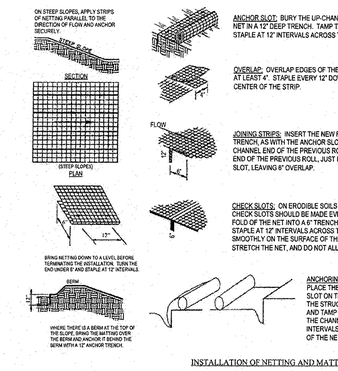
GENERAL HANDICAP STALL DETAIL
SCALE NONE

GENERAL NOTES:
1. VERTICAL ACCESSIBLE SIGN DOES NOT HAVE TO BE POLE-MOUNTED AND MAY BE MOUNTED TO THE BUILDING FASCIA INSTEAD. (LOCAL AND STATE REGULATIONS TO SUPERSEDE)
2. SEE PLAN VIEW FOR HC STALL LAYOUT & DIMENSIONS.



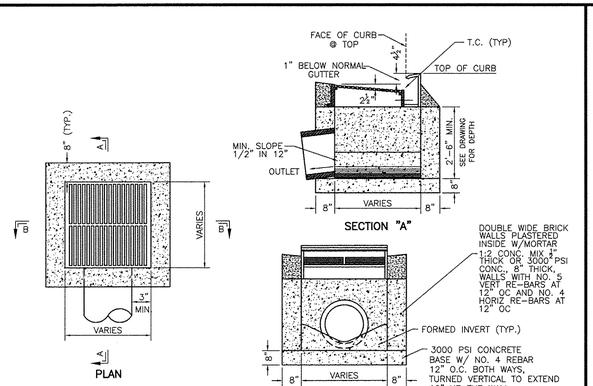
ORIENTATION OF NETTING AND MATTING

Figure TCP-09-2
Mat Anchoring and Layout



INSTALLATION OF NETTING AND MATTING

Figure TCP-09-1
Mat Anchoring

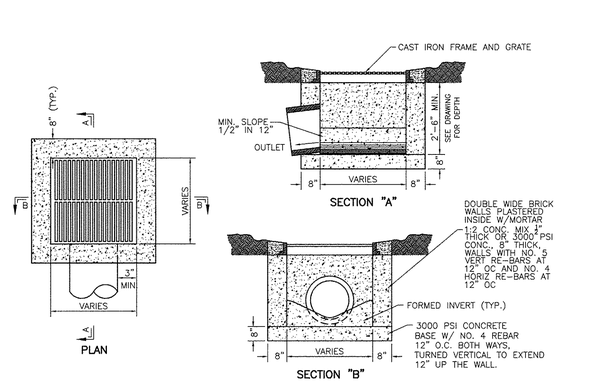


PLAN

SECTION "A"

SECTION "B"

PRECAST CURB INLET DETAIL
SCALE NONE



PLAN

SECTION "A"

SECTION "B"

PRECAST CATCH BASIN DETAIL
SCALE NONE

SITE ENGINEERING CONSULTANTS
ENGINEERING • SURVEYING • LAND PLANNING
LANDSCAPE ARCHITECTURE
SEC, Inc.
850 MIDDLE TENNESSEE BOULEVARD MURFREESBORO, TENNESSEE 37129
PHONE: (615) 890-7901 E-MAIL: MTAYLOR@SEC-CIVIL.COM FAX: (615) 895-2567

MATTHEW A. TAYLOR LICENSED PROFESSIONAL ENGINEER No. 121811 STATE OF TENNESSEE

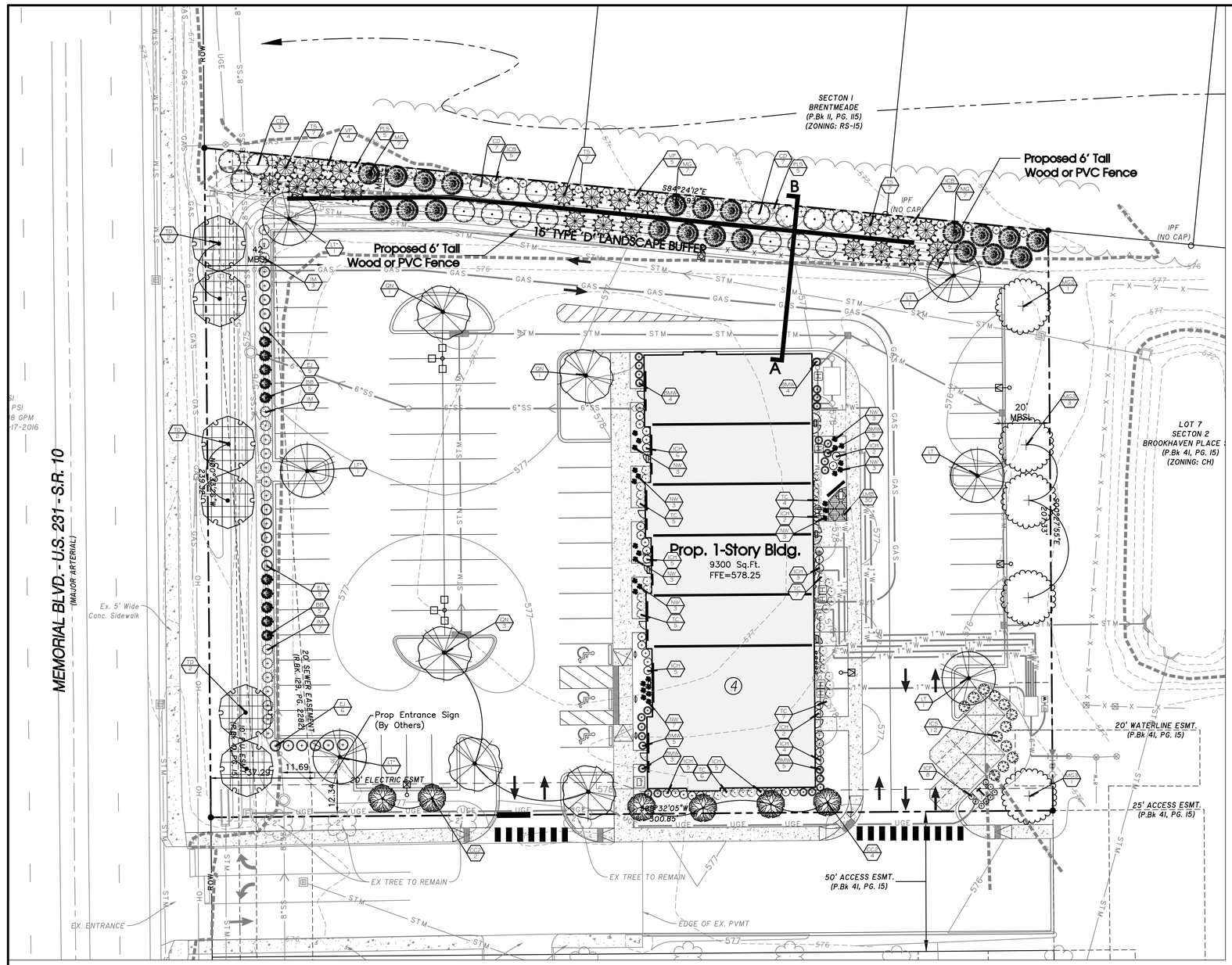
The site as shown on these construction drawings is intended to achieve specific engineering design criteria and objectives. It is the sole responsibility of the owner/developer to ensure that the construction of the site shown on these construction drawings is in total accordance with the design as noted, described, and implied by the drawings and specifications. The contractor is responsible for all construction means, methods, techniques, sequences and procedures and the safety precautions and programs in connection with the construction of this site and for the coordination of all portions of the work under the contract, including that of subcontractors. Any errors or discrepancies noted in these drawings shall be immediately reported to the engineer. Failure to do so will relieve the engineer of responsibility in the assurance that the site is constructed in accordance with the construction plans.

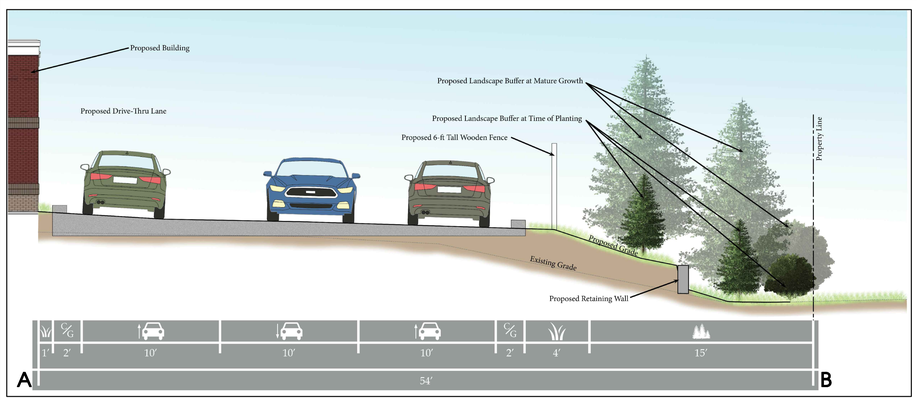
Brookhaven Lot 4
Murfreesboro, Tennessee

REVISED: 4-7-2021: Staff Comments 4-16-2021: Permit Submittal 5-13-2021: Permit Submittal 2	
DRAWN: SJA/CFB3	
DATE: 3-18-2021	
CHECKED: MAT	
FILE NAME: 16046lot4	
SCALE: None	
JOB NO. 16046	
SHEET: C4.1	Details

BROOKHAVEN LOT 4

LANDSCAPE PLAN





20′ 0 20′ 40′

SCALE: 1"= 20′

PLAN NOTES:

1. ANY TREES OR SHRUBS THAT ARE DEAD, DYING OR MISSING OUTSIDE THE SCOPE OF THE CURRENT WORK WILL NEED TO BE REPLACED PRIOR TO ISSUANCE OF CERTIFICATE OF OCCUPANCY.
2. ALL LANDSCAPE BEDS TO HAVE NEATLY TRENCHED BED EDGE AND HAVE 4" MINIMUM DEPTH OF HARDWOOD MULCH.
3. ALL TREES AND SHRUBS SHALL BE COORDINATED WITH LIGHTING PLAN PRIOR TO INSTALLATION.
4. ALL NEW PLANT MATERIAL AND TURF AREAS SHALL BE IRRIGATED.
5. ALL SHRUBS TO BE 3' BACK OF CURB.
6. ALL AREAS OF DISTURBANCE OUTSIDE OF LANDSCAPE BEDS SHALL BE REPAIRED WITH REBEL III FESCUE SEED OR SOD.
7. ANY UTILITY STRUCTURE, LIGHT POLES, SIGN, OR OTHER FEATURE MAY NOT BE ADDED TO ANY REQUIRED LANDSCAPE ISLAND IN SUCH A MANNER THAT WOULD DISPLACE THE REQUIRED ELEMENT(S) (TREES, SHRUBS, ETC.)
8. PROPERTY OWNER IS RESPONSIBLE FOR MAINTAINING ALL LANDSCAPING MATERIALS, INCLUDING TURF, AND IRRIGATION MATERIALS BOTH ON SITE, AND INSIDE THE ROW.

PLANTING SCHEDULE NOTES

1. SHRUBS AND TREES SHALL BE OF THE HIGHEST QUALITY.
2. NO SUBSTITUTIONS ALLOWED WITHOUT PRIOR WRITTEN APPROVAL OF THE OWNER AND LANDSCAPE ARCHITECT OF RECORD.
3. SUBSTITUTIONS AND DEVIATIONS MAY OR MAY NOT BE APPROVED.
4. REVISED LANDSCAPE PLANS MUST BE SUBMITTED AND APPROVED BY THE CITY OF MURFREESBORO PLANNING DEPARTMENT 615-893-6441 PRIOR TO INSTALLATION.
5. ALL IRRIGATION, LAWN AND PLANT MATERIALS WITHIN THE ROW MUST BE MAINTAINED BY THE PROPERTY OWNER.

SITE DATA
SITE AREA: 1.54 ACRES
SITE ZONING: CH

OPEN SPACE REQUIREMENTS
20% OF OPEN SPACE (LANDSCAPE AREAS GREATER THAN 200 SF) IS REQUIRED PER PHASE.
OPEN SPACE REQUIRED 1.54 AC x 20% = 0.31 AC
OPEN SPACE PROVIDED = 0.54 AC (35.06%)
FORMAL OPEN SPACE NOT REQUIRED

LANDSCAPE REQUIREMENTS (AS PER SECTION 27)

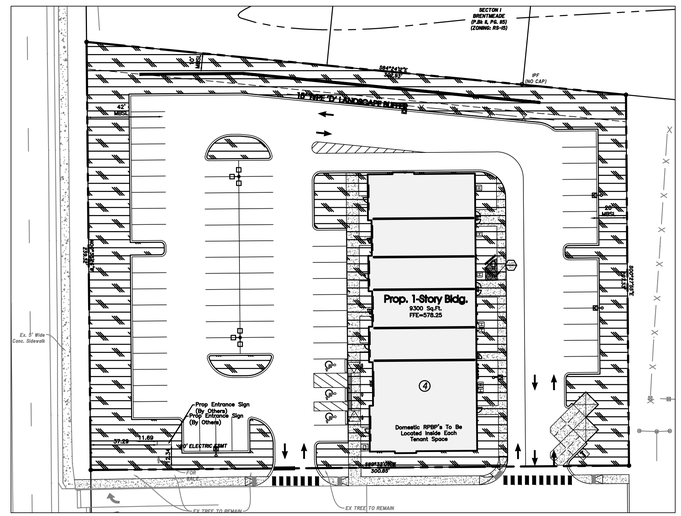
REQUIRED PERIMETER LANDSCAPING

	REQUIRED	PROVIDED
(MEMORIAL BOULEVARD)		
239.32 LF		
1 SHADE TREE/ 40 LF OF FRONTAGE	6 TREES	6 TREES
1 SHRUB/ 5 LF OF FRONTAGE	48 SHRUBS	48 SHRUBS
(NORTHERN PERIMETER)		
302.93 LF - TYPE 'D' BUFFER		
1 SHADE TREE/ 40 LF OF FRONTAGE	5 TREES	0 TREES (BUFFER REQUIREMENTS)
1 ORNAMENTAL TREE/ 25 LF OF FRONTAGE	4 TREES	0 TREES (BUFFER REQUIREMENTS)
(EASTERN PERIMETER)		
207.33 LF		
1 SHADE TREE/ 40 LF OF FRONTAGE	5 TREES	5 TREES
(PRIVATE DRIVE)		
(300.85' - 66.40') = 234.45 LF		
1 SHADE TREE/ 40 LF OF FRONTAGE	6 TREES	6 TREES

PARKING LOT REQUIREMENTS
ONE SHADE TREE OR TWO ORNAMENTAL TREES PER 12.5 PARKING STALLS TO BE PLANTED IN LANDSCAPE ISLANDS (MIN. 8' WIDTH).
71 PARKING SPACES PROVIDED = 6 TREES REQUIRED
11 TREES PROVIDED IN ISLANDS

DESIGN GUIDELINES LANDSCAPE REQUIREMENTS

	TREES REQUIRED	TREES PROPOSED
REQUIRED PERIMETER/PARKING TREES:	32	37 (OVERAGE DUE TO PARKING ISLAND REQUIREMENTS)
10% REQUIRED 4" CALIPER:	3	3
15% REQUIRED 3" CALIPER:	5	30
75% REQUIRED 2.5" CALIPER:	24	4



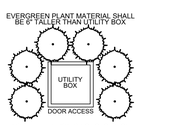
Open Space Calculation

Open Space:
Required: (20%)(1.54 Ac.) = 0.31 Acres (13,416 Sq.Ft.)
Provided: 0.54 Acres or 23,549 Sq.Ft. (35.06%)

Open Space

20′ 0 20′ 40′

SCALE: 1"= 20′



NOTE: UTILITY BOXES NOT SHOWN ON PLAN SHALL BE IDENTIFIED IN THE FIELD AND SCREENED WITH EVERGREEN PLANTS AS SHOWN ABOVE.

UTILITY BOX SCREENING
NOT TO SCALE

811 Know what's below. Call before you dig.

N

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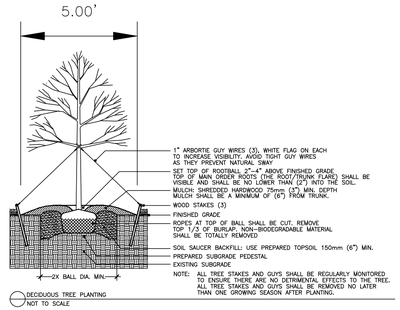
TENNESSEE LICENSED LANDSCAPE ARCHITECT 1013 STEVEN M. MOORE

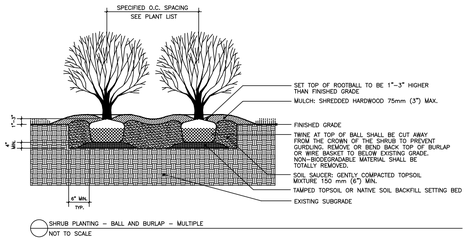
Brookhaven Lot 4
Murfreesboro, Tennessee

REVISED:	
04-07-2021:	Staff Comments
04-16-2021:	Permit Submittal
05-13-2021:	Permit Submittal #2
DRAWN:	SWL
DATE:	03-18-2021
CHECKED:	RSM
FILE NAME:	16064lot4_LA
SCALE:	1" = 20'
JOB NO.	16046
SHEET:	L1.0

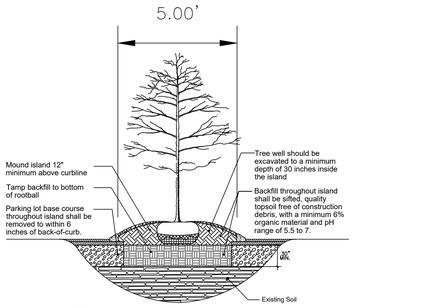
Landscape Plan



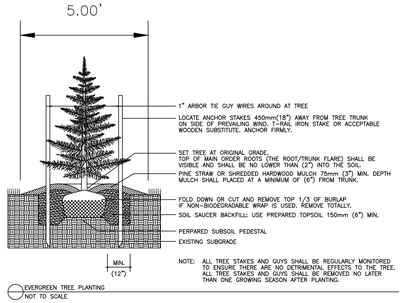
DECIDUOUS TREE PLANTING
NOT TO SCALE



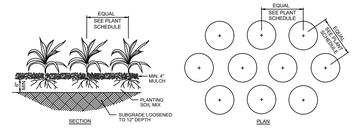
SHRUB PLANTING – BALL AND BURLAP – MULTIPLE
NOT TO SCALE



Tree Planting Detail
For Parking Lot Island or Median



EVERGREEN TREE PLANTING
NOT TO SCALE



GROUND COVER & PERENNIAL PLANTING
NOT TO SCALE

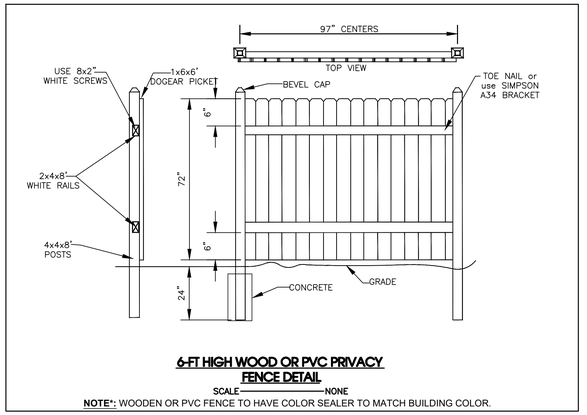
PLANT SCHEDULE

DECIDUOUS TREES	CODE	QTY	BOTANICAL / COMMON NAME	ROOT	PLANT SIZE	HGT. MIN.	SPREAD MIN.	SPACING	REMARKS
	CC2	6	CARPINUS BETULUS `CORNERSTONE` / CORNERSTONE EUROPEAN HORNBEAM	B & B	3"CAL	14` - 16`		AS SHOWN	5` CLEAR TRUNK, SINGLE, STRAIGHT CENTRAL LEADER, EVENLY BRANCHED, SYMMETRICAL CROWN, MATCHED*
	LT	3	LIRIODENDRON TULIPIFERA / TULIP TREE	B & B	3"CAL	14` - 16`		AS SHOWN	5` CLEAR TRUNK, SINGLE, STRAIGHT CENTRAL LEADER, EVENLY BRANCHED, SYMMETRICAL CROWN, MATCHED*
	LT*	3	LIRIODENDRON TULIPIFERA / TULIP TREE	B & B	4"CAL	16` - 18`		AS SHOWN	5` CLEAR TRUNK, SINGLE, STRAIGHT CENTRAL LEADER, EVENLY BRANCHED, SYMMETRICAL CROWN, MATCHED*
	MG3	5	METASEQUOIA GLYPTOSTROBOIDES / DAWN REDWOOD	B & B	3"CAL	14` - 16`		AS SHOWN	5` CLEAR TRUNK, SINGLE, STRAIGHT CENTRAL LEADER, EVENLY BRANCHED, SYMMETRICAL CROWN, MATCHED*
	QN	5	QUERCUS NUTTALLII / NUTTALL OAK	B & B	3"CAL	14` - 16`		AS SHOWN	5` CLEAR TRUNK, SINGLE, STRAIGHT CENTRAL LEADER, EVENLY BRANCHED, SYMMETRICAL CROWN, MATCHED*
	TD	6	TAXODIUM DISTICHUM / BALD CYPRESS	B & B	3"CAL	14` - 16`		AS SHOWN	5` CLEAR TRUNK, SINGLE, STRAIGHT CENTRAL LEADER, EVENLY BRANCHED, SYMMETRICAL CROWN, MATCHED*
EVERGREEN TREES	CODE	QTY	BOTANICAL / COMMON NAME	ROOT	PLANT SIZE	HGT. MIN.	SPREAD MIN.	SPACING	REMARKS
	CD	17	CEDRUS DEODARA `BRACKEN`S BEST CEDAR` / BRACKEN`S BEST DEODAR CEDAR	B & B		6`	4`	8` O.C.	FULL TO GROUND, DENSE, WELL-BRANCHED
	MG	21	MAGNOLIA GRANDIFLORA `BRACKENS BROWN BEAUTY` / BRACKEN`S SOUTHERN MAGNOLIA	B & B		6`	4`	8` O.C.	FULL TO GROUND, DENSE, WELL-BRANCHED
	TS	21	THUJA STANDISHII X PLICATA `GREEN GIANT` / GREEN GIANT ARBORVITAE	B & B		6`	4`	8` O.C.	FULL TO GROUND, DENSE, WELL-BRANCHED
ANNUALS/PERENNIALS	CODE	QTY	BOTANICAL / COMMON NAME	ROOT	PLANT SIZE	HGT. MIN.	SPREAD MIN.	SPACING	REMARKS
	NW	28	NEPETA X FAASSENII `WALKERS LOW` / WALKERS LOW CATMINT	1 GAL		12"	12"	3` O.C.	WELL ROOTED AND FULL TO EDGES OF CONTAINER
BUFFER SHRUBS	CODE	QTY	BOTANICAL / COMMON NAME	ROOT	PLANT SIZE	HGT. MIN.	SPREAD MIN.	SPACING	REMARKS
	ICB	10	ILEX CORNUTA `DWARF BURFORD` / DWARF BURFORD HOLLY	CONT.		36"	36"	AS SHOWN	DENSE, FULL, MATCHED
	PLS	10	PRUNUS LAUROCERASUS `SCHIPKAENSIS` / SCHIPKA LAUREL	CONT.		36"	36"	AS SHOWN	FULL TO GROUND, DENSE, WELL-BRANCHED
	VP	9	VIBURNUM X PRAGENSE / PRAGUE VIBURNUM	CONT.		36"	36"	AS SHOWN	DENSE, FULL, MATCHED
EVERGREEN SHRUBS	CODE	QTY	BOTANICAL / COMMON NAME	ROOT	PLANT SIZE	HGT. MIN.	SPREAD MIN.	SPACING	REMARKS
	BMW	26	BUXUS MICROPHYLLA `WINTER GEM` / GLOBE WINTER GEM BOXWOOD	CONT.		12"	12"	3` O.C.	WELL-BRANCHED, DENSE, MATCHED
	ICH	39	ILEX CRENATA `HOOGENDORN` / HOOGENDORN JAPANESE HOLLY	CONT.		12"	12"	3` O.C.	DENSE, FULL, MATCHED
	ICP	8	ILEX CRENATA `SKY PENCIL` / SKY PENCIL JAPANESE HOLLY	CONT.		30"	18"	2` O.C.	DENSE, FULL, MATCHED
	ICS	12	ILEX CRENATA `STEEDS` / STEEDS JAPANESE HOLLY	CONT.		30"	18"	4` O.C.	DENSE, FULL, MATCHED
	TC	34	THUJA OCCIDENTALIS `CONGABE` / FIRE CHIEF ARBORVITAE	CONT.		12"	12"	4` O.C.	DENSE, FULL, MATCHED
PERIMETER SHRUBS	CODE	QTY	BOTANICAL / COMMON NAME	ROOT	PLANT SIZE	HGT. MIN.	SPREAD MIN.	SPACING	REMARKS
	BB	10	BUXUS MICROPHYLLA JAPONICA `GREEN BEAUTY` / GREEN BEAUTY BOXWOOD	CONT.		24"	24"	5` O.C.	DENSE, FULL, MATCHED
	EJ	16	EUONYMUS JAPONICUS `AUREO-MARGINATUS` / GOLDEN EUONYMUS	CONT.		24"	24"	5` O.C.	FULL, WELL-BRANCHED, MATCHED
	IM	17	ILEX X MESERVEAE `CHINA GIRL` TM / CHINA GIRL HOLLY	CONT.		24"	24"	5` O.C.	DENSE, FULL, MATCHED
GROUND COVERS	CODE	QTY	BOTANICAL / COMMON NAME	ROOT	PLANT SIZE	HGT. MIN.	SPREAD MIN.	SPACING	REMARKS
	LMB	30	LIRIOPE MUSCARI `BIG BLUE` / BIG BLUE LILYTURF	1 QUART		12"	12"	18" O.C.	WELL ROOTED, MATURE, FULL TO EDGES OF CONTAINER

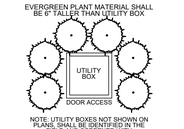
MATCHED* - TREES OF THE SAME SPECIES SHALL HAVE THE FOLLOWING CHARACTERISTICS:
MATCHED BY BRANCH HEIGHT, CALIPER, HEIGHT OF TREE, SPREAD OF BRANCHES AND BRANCHING STRUCTURE, AND OVERALL CANOPY SHAPE

LANDSCAPE NOTES

1. THE LANDSCAPE CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF ALL UTILITIES AND TAKE NECESSARY PRECAUTIONS TO PREVENT DAMAGE TO THESE UTILITIES.
2. THE LANDSCAPE CONTRACTOR SHALL COORDINATE ALL CONSTRUCTION WITH THE APPROPRIATE UTILITY COMPANY AND SHALL BE RESPONSIBLE FOR AND DAMAGE TO UTILITIES.
3. PLANT MATERIALS AND STUMPS INDICATED FOR REMOVAL SHALL BE REMOVED AND DISPOSED OFF-SITE BY THE CONTRACTOR. BACKFILL HOLES WITH TOPSOIL FREE OF ROOTS AND ROCKS.
4. TREAT ALL LANDSCAPE BEDS WITH PRE-EMERGENT HERBICIDE PRIOR TO PLANTING. THE LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR ALL WEEDING UNTIL FINAL ACCEPTANCE.
5. THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR THE FINE GRADING OF ALL PLANTING AREAS.
6. THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLETELY MAINTAINING THE WORK (INCLUDING BUT NOT LIMITED TO: WATERING, MULCHING, SPRAYING, FERTILIZING, ETC.) OF ALL PLANTING AREAS AND LAWNS PER PROJECT SPECIFICATIONS UNTIL FINAL ACCEPTANCE OF THE WORK BY THE OWNER.
7. PROVIDE TREES, SHRUBS, AND PLANTS OF QUALITY, SIZE, GENUS, SPECIES AND VARIETY SHOWN AND SCHEDULED FOR LANDSCAPE WORK AND COMPLYING WITH RECOMMENDATIONS AND REQUIREMENTS OF ANSI Z60.1 "AMERICAN STANDARD FOR NURSERY STOCK". HEIGHT AND WIDTH SHOWN ARE MINIMUM SIZES.
8. THE LANDSCAPE CONTRACTOR SHALL COMPLETELY GUARANTEE ALL WORK FOR A PERIOD OF ONE YEAR BEGINNING AT THE DATE OF ACCEPTANCE. THE LANDSCAPE CONTRACTOR SHALL MAKE ALL REPLACEMENTS PROMPTLY (AS PER DIRECTION OF OWNER).
9. THE LANDSCAPE CONTRACTOR SHALL PROVIDE THE OWNER WITH WRITTEN INSTRUCTIONS ON THE PROPER CARE OF ALL SPECIFIED PLANT MATERIALS PRIOR TO FINAL PAYMENT.
10. THE QUANTITIES INDICATED ON THE PLANT SCHEDULE AND PLAN ARE FOR THE CONVENIENCE OF THE CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR HIS/HER OWN QUANTITY CALCULATION AND THE LIABILITY WHICH PERTAINS TO THOSE QUOTATIONS. ANY DISCREPANCY SHALL BE CALLED TO THE ATTENTION OF THE LANDSCAPE ARCHITECT IMMEDIATELY.
11. EXISTING TREES TO REMAIN SHALL BE PROTECTED FROM CONSTRUCTION DAMAGE. SELECTIVELY PRUNE DEAD WOOD.
12. SEED OR SOD ALL AREAS DISTURBED BY CONSTRUCTION AND NOT DESIGNATED AS PLANTING BEDS.
13. SHRUBS AND GROUNDCOVER BEDS TO BE PLANTED IN A TRIANGULAR SPACING. SEE PLANTING SCHEDULE FOR DISTANCES.
14. UPON COMPLETION AND FINAL ACCEPTANCE OF THE LANDSCAPE INSTALLATION, A THREE (3) YEAR LANDSCAPE MAINTENANCE BOND WILL BE REQUIRED. THIS BOND SHOULD BE SUBMITTED IN THE NAME OF THE PROPERTY OWNER OF RECORD OR A LEASE HOLDER WHO HAS TEN (10) YEARS OR MORE REMAINING ON A CURRENT LEASE. THE PROPERTY OWNER/LEASE HOLDER SHOULD ALLOW ADEQUATE TIME TO OBTAIN THE BOND AS THIS PROCESS MAY BE LENGTHY AND MAY DELAY THE ISSUEANCE OF THE CERTIFICATE OF OCCUPANCY.



6-FT HIGH WOOD OR PVC PRIVACY FENCE DETAIL
SCALE——NONE
NOTE*: WOODEN OR PVC FENCE TO HAVE COLOR SEALER TO MATCH BUILDING COLOR.



NOTE: UTILITY BOXES NOT SHOWN ON PLANS, SHALL BE IDENTIFIED IN THE FIELD AND SCREENED WITH EVERGREEN PLANTS AS SHOWN ABOVE.

UTILITY BOX SCREENING
NOT TO SCALE

Know what's **below.**
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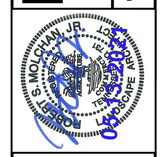
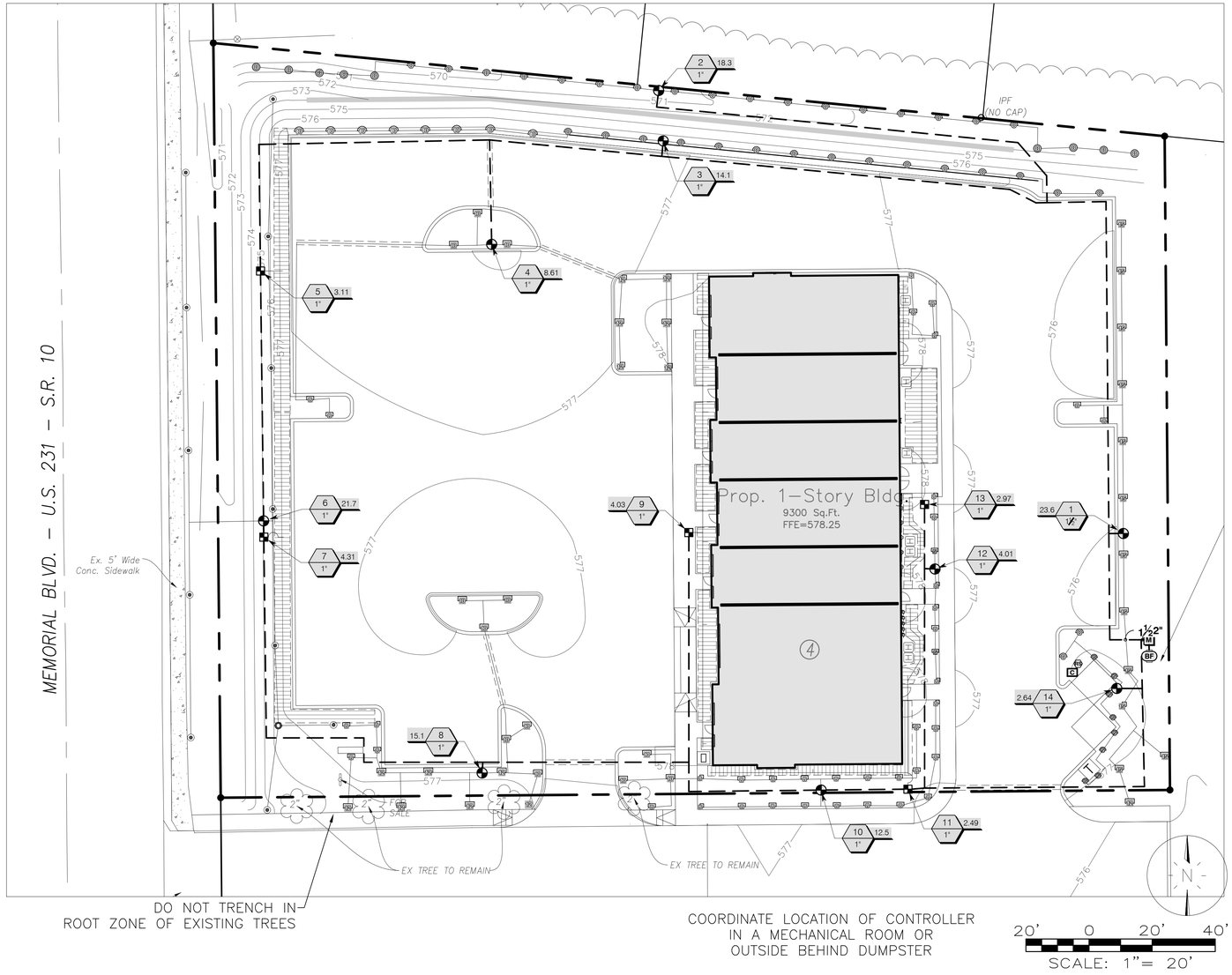


Brookhaven
Lot 4
Murfreesboro, Tennessee

REVISED:
04-07-2021: Staff Comments
04-16-2021: Permit Submittal
05-13-2021: Permit Submittal #2
DRAWN: SWL
DATE: 03-18-2021
CHECKED: RSM
FILE NAME: 16064lot4_LA
SCALE: N/A
JOB NO. 16046
SHEET: L2.0

Landscape Details & Notes



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CONNOR L. BALL
REGISTERED LANDSCAPE ARCHITECT
TENNESSEE
05/18/2021

Brookhaven
Lot 4
Murfreesboro, Tennessee

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SCALE: 1" = 20'
JOB NO. 16046
SHEET: IR1.0

Irrigation Plan

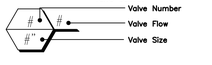
Heibert+Ball
LAND DESIGN
Suite 400
1894 Gen. George Patton Dr.
Franklin, TN 37067-4668
615.376.2421 www.hblanddesign.com

IRRIGATION SCHEDULE

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	PSI
Q H F	Rain Bird RD-04-S-P30 5 Series MPR Turf Spray, 4.0" Pop-Up, with 30 psi in-stem pressure regulation, and Seal-A-Matic check valve. 1/2" NPT female threaded inlet.	30
Q T H F	Rain Bird RD-04-S-P30 8 Series MPR Turf Spray, 4.0" Pop-Up, with 30 psi in-stem pressure regulation, and Seal-A-Matic check valve. 1/2" NPT female threaded inlet.	30
Q T H F	Rain Bird RD-04-S-P30 10 Series MPR Turf Spray, 4.0" Pop-Up, with 30 psi in-stem pressure regulation, and Seal-A-Matic check valve. 1/2" NPT female threaded inlet.	30
Q T H TQ F	Rain Bird RD-04-S-P30 12 Series MPR Turf Spray, 4.0" Pop-Up, with 30 psi in-stem pressure regulation, and Seal-A-Matic check valve. 1/2" NPT female threaded inlet.	30
Q T H TQ F	Rain Bird RD-04-S-P30 15 Series MPR Turf Spray, 4.0" Pop-Up, with 30 psi in-stem pressure regulation, and Seal-A-Matic check valve. 1/2" NPT female threaded inlet.	30
8 08HE-VAN 12 12HE-VAN 10 10HE-VAN 15 15HE-VAN	Rain Bird RD-04-S-P30 HE-VAN Series Turf Spray, 4.0" Pop-Up, with 30 psi in-stem pressure regulation, and Seal-A-Matic check valve. 1/2" NPT female threaded inlet.	30
Q H F	Rain Bird RD-06-S 5 Series MPR 6.0" Pop-Up w/ check valve.	30
Q T H F	Rain Bird RD-06-S 8 Series MPR 6.0" Pop-Up w/ check valve.	30
Q T H F	Rain Bird RD-06-S 10 Series MPR 6.0" Pop-Up w/ check valve.	30
R-VAN 1318 R-VAN 1724	Rain Bird R-VAN-1724 1804-SAM-P45 Turf Rotator, 17`-24` Hand Adjustable Rotary Stream, w/1800 turf spray body, 4.0" Pop-Up. With Seal-A-Matic Check Valve and 45 psi in-stem pressure regulation.	45

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION
	Rain Bird XCZ-100-PRF Medium Flow Drip Control Kit, 1" DV valve, 1" pressure regulating filter, 40psi pressure regulator. 3gpm - 15gpm.
	Area to Receive Dripline Rain Bird XFCV-09-18 (18) XFCV On-Surface Landscape Dripline with a Heavy-Duty 3.5 psi Check Valve. 0.9GPH emitters at 18.0" O.C. Dripline laterals spaced at 18.0" apart, with emitters offset for triangular pattern. Great for elevation change. Specify XF insert fittings.

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION
	Rain Bird PEB-PRS-D 1", 1-1/2", 2" Plastic Industrial Valves. Low Flow Operating Capability, Globe Configuration. With Pressure Regulator Module.
BF	RPBP 1" Reduced Pressure Backflow Preventer located in aboveground Enclosure (By Contractor)
C	Hunter HCC-1600-M 16 Station Outdoor Wi-Fi enabled, full-functioning controller with touchscreen & one ICM-800 Module. Commercial Use. Metal Cabinet.
RS	Hunter MWS Weather Station with rain sensor, wind sensor, 120 VAC, 5 amp. 5 year warranty.
M	Water Meter 1" To be provided by MWRD
	Irrigation Lateral Line: PVC Class 200 SDR 21
	Irrigation Mainline: PVC Schedule 40
	Pipe Sleeve: PVC Schedule 40



Section 32 80 00 Irrigation

Part 1 - General

1.1 Section includes
A. Pipe and fittings, valves, outlets, emitters, bubblers, control zone kits, landscape dripline, emission devices, and accessories.
B. Connection to utilities.
C. Control system.

1.2 Related sections
A. Turf and grasses.
B. Plants.

1.3 References
A. ANSI/ASTM D2282 acrylonitrile butadiene styrene (ABS) plastic pipe (SDR PR).
B. ANSI/ASTM D2564 solvent cement for poly (vinyl chloride) (PVC) plastic pipe and fittings.
C. ASTM B32 solder metal.
D. ASTM B88 seamless copper water tube.
E. ASTM D2235 solvent cement for acrylonitrile butadiene styrene (abs) plastic pipe and fittings.
F. ASTM D2241 poly (vinyl chloride) (PVC) plastic pipe (SDR PR).
G. FS 0 F 506 flux, soldering; paste and liquid.

1.4 System description
A. Electric solenoid controlled underground irrigation system, with low point self drains.

1.5 Submittals
A. Submit under provisions of section 013300 submittal procedures.
B. Shop drawings: indicate piping layout to water source, location of sleeves under pavement, location and coverage of sprinkler heads, plant and landscaping features, site structures, schedule of fittings to be used.
C. Product data: provide component and control system and wiring diagrams.
D. Samples: provide one outlet of each type, with housing. Accepted samples may be used in work.
E. Manufacturer's installation and operation instructions: include for all components.

1.6 Project record documents
A. Accurately record actual locations of piping system and all system components on as accurately drawn as-built drawing.

1.7 Operation and maintenance data
A. Provide instructions for operation and maintenance of system and controls, seasonal activation and shutdown, and manufacturer's parts catalog.
B. Provide schedule indicating length of time each valve is required to be open to provide a determined amount of water.

1.8 Regulatory requirements
A. Conform to applicable local and state codes and requirements.

1.9 Field measurements
A. Verify that field measurements are as shown on drawings.

1.10 Extra materials
A. Provide the following extra components under provisions of section 017800 close out submittals:
1. Two sprinkler heads of each type and size.
2. Two valve keys for manual valves.
3. Two valve box keys.
4. Two keys for valve markers.
5. Two wrenches for each type head core and for removing and installing each type head.
6. Two nozzles of each type and size.

Part 2 - Products

2.1 Manufacturers
A. Rainbird or approved equal.
B. Substitutions: under provisions of section 01 25 00 substitution procedures.

2.2 Materials
A. Pipe: PVC in accordance with ASTM d2241; 200 psi pressure rated upstream from controls, solvent weld sockets.
B. Fittings: type and style of connection to match pipe.
C. Solvent cement: ANSI/ASTM D2564 for PVC pipe and fittings.
D. Sleeve material: see drawings.

2.3 Outlets
A. Outlets: brass or bronze construction.
B. Spray type sprinkler head: pop up head with full or part circle pattern. See drawings.
C. Bubbler: see drawings.
D. Rotor sprinkler head: pop up head with full or part circle pattern. See drawings.
E. Quick coupler: see drawings.

2.4 Valves
A. Gate valves: bronze construction, non-rising stem, inside screw with threaded ends.
B. Backflow preventers: iron or bronze body construction, reduced pressure zone type.
C. Valve box and cover: Ametek.
D. Drain valve: Rainbird or approved equal.

2.5 Drip irrigation products
A. Control zone kit assemblies for drip irrigation zones must include a valve, filtration and pressure regulation to meet the flow requirements of the zone. Where necessary a check valve shall also be installed.
1. Low flow control zone kit with a low flow valve or low flow anti-siphon valve, and pressure regulating (PR) filter for zones with flows from 0.2 to 5.0 gpm.
2. Medium flow control zone kit with an automatic irrigation control valve or anti-siphon valve, and pressure regulating filter for zones with flows from 3 to 15 gpm.
B. Fittings
1. Compression fittings shall be used to allow connection of PVC to polyethylene tubing.
C. Compression fittings shall be one of three fittings (tee, coupling and elbow) with a threaded adapter.
D. Compression fittings shall provide connections to threaded components.
E. A removable flush cap shall be used to close off a line. The purple flush cap shall be used to close off a line containing non-potable water.
1. LOC fittings shall be used with any polyethylene tubing from 0.620 to 0630" OD (16 mm OD).
2. Landscape dripline insert fittings shall be used with any polyethylene tubing or inline emitter tubing.
3. ¼" barb transfer fittings shall be used to connect 1/4" distribution tubing with an id of 0.16".
F. Point source emission devices
1. Point source single-outlet emitters shall be pressure-compensating over the pressure range of 15 to 50 psi and have a consistent flow rate over this pressure range.
2. Multi-outlet emitters shall be pressure-compensating over the pressure range of 15 to 50 psi. Each open outlet shall have a consistent flow rate over this pressure range.
3. The emitters shall be self-flushing to minimize clogging.
G. Multiple outlet manifold
1. The multiple outlet manifold shall have multiple free-flowing ¼" barb outlets.
2. The multiple outlet manifold shall have 1/2" FPT inlet threads.
3. The operating pressure range for the multiple outlet manifold shall be 15 to 50 psi.

2.6 Controls
A. Controller: see drawings.
B. Controller housing: weatherproof, watertight, with lockable access door.
C. Electric solenoid: normally closed valves to control wiring, including required fittings and accessories.
D. Wire: color coded.

Section 32 80 00 Irrigation (Continued)

Part 3 - Execution

3.1 Installers
A. Minimum 3 years experience with commercial systems.

3.2 Examination
A. Verify that field conditions are acceptable and are ready to receive work.
B. Verify location of existing utilities.
C. Verify that required utilities are available, in proper location and ready for use.
D. Beginning of installation means installer accepts existing conditions.

3.3 Preparation
A. Piping layout indicated is diagrammatic only. Route piping to avoid plants and structures.
B. Layout and stake locations of system components.
C. Review layout requirements with other affected work. Coordinate locations of sleeves under paving to accommodate system.

3.4 Trenching
A. Trench and backfill in accordance with section 312300 excavation and fill.
B. Minimum trench width: 4 inches.
C. Minimum trench depth: 18 inches.
D. Trench to accommodate grade changes and slope to drains.
E. Maintain trenches free of debris, material, or obstructions that may damage pipe.

3.5 Installation
A. Install pipe, valves, controls, and outlets in accordance with manufacturer's instructions.
B. Connect to water and electrical service.
C. Set sprinkler heads and box covers at finish grade elevations.
D. Provide for thermal movement of components in system.
E. Use threaded nipples for risers to each outlet to facilitate easy replacement.
F. Install control wiring. Provide 10 inch expansion coil at each valve to which controls are connected, and at 100 ft. intervals. Bury wire beside pipe. Mark valves with neoprene valve markers containing locking device. Set valve markers in 160 psi PVC pipe risers exiting from top of valve to finish grade.
G. After piping is installed but before sprinkler heads are installed and backfilling commences, open valves and flush system with full head of water.

3.6 Field quality control
A. Field inspection and testing will be performed under provisions of section 014500-quality control.
B. Prior to backfilling, test system for leakage for whole system to maintain 100 psi pressure for one hour. System acceptable if no leakage or loss of pressure occurs during test period.

3.7 Backfilling
A. Backfill trench and compact to subgrade elevation as specified in section 31 23 00 excavation and fill.
B. Protect piping from displacement.
C. Replace work damage by the work of this section with equivalent products.

3.8 Installer's field services
A. Prepare and start systems under provisions of section 017500 starting and adjusting.
B. Prove one complete spring startup and a fall shutdown.

3.9 Adjusting
A. Adjust work under provisions of section 017500 starting and adjusting.
B. Adjust control system to achieve time cycles required.
C. Change head types as directed.

3.10 Demonstration
A. Instruct owner's personnel in operation and maintenance of system, including adjusting of sprinkler heads. Use operation and maintenance material as basis for demonstration.

3.11 Schedules
A. See Irrigati.

End of section 32 80 00

CRITICAL ANALYSIS

Generated:	2021-05-17 14:48
P.O.C. NUMBER: 01	
Water Source Information:	To be provided by MWRD
FLOW AVAILABLE	
Water Meter Size:	1"
Flow Available:	37.50 gpm
PRESSURE AVAILABLE	
Static Pressure at POC:	80.00 PSI
Elevation Change:	5.00 ft
Service Line Size:	1 1/2"
Length of Service Line:	20 ft
Pressure Available:	77.00 psi
DESIGN ANALYSIS	
Maximum Multi-valve Flow:	37.50 gpm
Flow Available at POC:	37.50 gpm
Residual Flow Available:	0.00 gpm
Pressure Req. at Critical Station:	49.77 psi
Loss for Fittings:	0.26 psi
Loss for Main Line:	5.26 psi
Loss for POC to Valve Elevation:	0.00 psi
Loss for Backflow:	0.00 psi
Loss for Water Meter:	8.48 psi
Critical Station Pressure at POC:	63.77 psi
Pressure Available:	77.00 psi
Residual Pressure Available:	13.23 psi

CONTRACTOR TO VERIFY THAT A 1.0" PLEX PIPE SERVICE LINE, A 1" METER, AND A 1" BACKFLOW HAVE BEEN PROVIDED SYSTEM IS DESIGNED TO RUN MULTIPLE STATIONS AT A TIME WITH A MIN. STATIC FLOW OF 80 GPM. CONTRACTOR SHALL PROGRAM CONTROLLER TO MAKE SURE THE SYSTEM OPERATES CORRECTLY

Irrigation Notes
These notes are presented as a "summary" of the written specifications issued for the project. Refer to the written specifications for additional detail and full project requirements.
Prior to beginning work onsite, all sub-contractors must read and sign the latest copy of the site storm water pollution prevention plan (swppp), which is maintained by the d/b contractor. All sub-contractors and their employees must adhere to all requirements of the swppp.
1. The irrigation system design is based on 80 static pressure (psi) and maximum flow of 38 gallons per minute (gpm). The subcontractor shall verify the pressure and flow prior to commencement of construction. Report to the d/b contractor any differences between the pressure indicated and the actual pressure reading at the point of connection.
2. The pipe routing shown is diagrammatic only. All piping, valves, heads, etc shown within paved areas are for design clarification only. Pressure loss calculations are based on the pipe routing as shown. Significant deviations from the routing shown should be avoided.
3. Do not willingly install the sprinkler system as shown on the drawings when it is obvious in the field that obstructions, grade differences, or differences in the dimensions of the constructed areas exist that might not have been considered in the irrigation design or changes have occurred in the site plan. Such obstructions or differences should be brought to the attention of the irrigation designer and the d/b contractor immediately. Should the subcontractor proceed with the installation without notifying the irrigation designer and the d/b contractor, the irrigation subcontractor assumes full responsibility for any and all revisions / reconstruction necessary.
4. It is the responsibility of the irrigation subcontractor to familiarize himself / herself with the site, all grade differences, locations of walls, and installed utilities. Coordinate work with the d/b contractor and other subcontractors for the location and installation of pipe sleeves underneath pavement and through walls.
5. Due to the scale of the drawing, it is not possible to indicate all offsets, fittings, joints, etc. which may be required. The subcontractor shall carefully investigate the structural and finished conditions affecting all of his/her work and plan his/her work accordingly, furnishing such fittings, etc. as may be required to meet such conditions. All work shall be installed in such a manner as to avoid conflicts between irrigation system components, landscape planting, and architectural features.
6. Flush all lines and heads prior to installing nozzles. Adjust nozzle spray arc and radius for optimum performance to prevent overspray onto paved surfaces or face of building as much as possible to fit the site conditions. Throttle flow control at each valve for optimum operating pressure for each zone.
7. All sprinkler heads shall be set perpendicular to finished grade of the area to be irrigated unless otherwise noted.
8. When vertical obstructions (poles, signs, trees, hydrants, etc) interfere with the spray pattern of the heads so as to prevent proper coverage, the subcontractor shall field adjust the sprinkler system by installing a quarter, third, or half circle head at the sides of the obstruction so as to provide proper coverage. All adjustments shall be made at no additional cost.
9. Use Teflon tape on all male pipe threads on PVC pipe, swing joints, and valve assemblies.
10. Install valve boxes 18-inches from and perpendicular to walks, curbs, building, or landscape features. At multiple valve box groups, each box shall be installed a minimum of 18-inches apart.
11. Set irrigation controller to operate the system between the approximate hours of 3am and 7am. Do not operate system during normal business hours.
12. 120-volt electrical power at the controller shall be provided by others. It is the responsibility of the irrigation contractor to make the final hook-up from the power provided to the controller.
13. Provide as-built drawings per the written specifications.
14. Refer to the written specifications for complete system description and additional information

Heibert+Ball
LAND DESIGN
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Franklin, TN 37067-4668
615.376.2421 www.hblanddesign.com

SITE ENGINEERING CONSULTANTS
ENGINEERING • SURVEYING • LAND PLANNING
LANDSCAPE ARCHITECTURE
SEC, Inc.
850 MIDDLE TENNESSEE BOULEVARD MURFREESBORO, TENNESSEE 37129
PHONE: (615) 890-7901 WWW.SEC-CIVIL.COM FAX: (615) 895-2567

CONNOR L. BAILEY
REGISTERED
AGRICULTURE
ENVIRONMENT
CONSERVATION
TENNESSEE
LANDSCAPE ARCHITECT
2009-001

Brookhaven
Lot 4
Murfreesboro, Tennessee

REVISED:
04-07-2021: Staff Comments
04-16-2021: Permit Submittal
05-13-2021: Permit Submittal #2

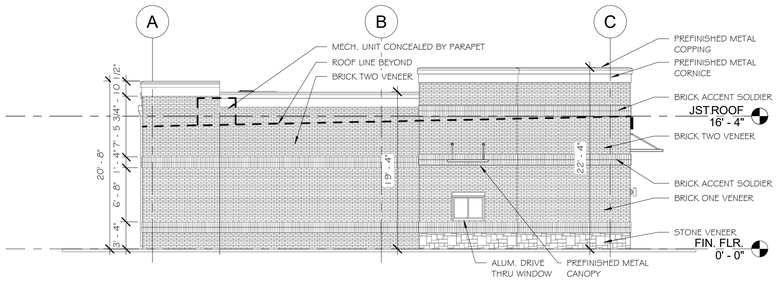
DRAWN: SWL
DATE: 03-18-2021
CHECKED: RSM
FILE NAME: 16064lot4_LA
SCALE: 1" = 20'
JOB NO. 16046
SHEET: IR1.1

Irrigation Notes

FACADE MATERIAL SURFACE AREA:

BRICK ONE	856.00 S.F.	26.80%
BRICK TWO	378.00 S.F.	11.83%
BRICK ACCENT	560.00 S.F.	17.53%
STONE VENEER.	70.00 S.F.	2.19%
METAL CORNICE	363.00 S.F.	8.69%
GLASS AREA	966.00 S.F.	32.96%
TOTAL MASS AREA	3,193.00 S.F.	

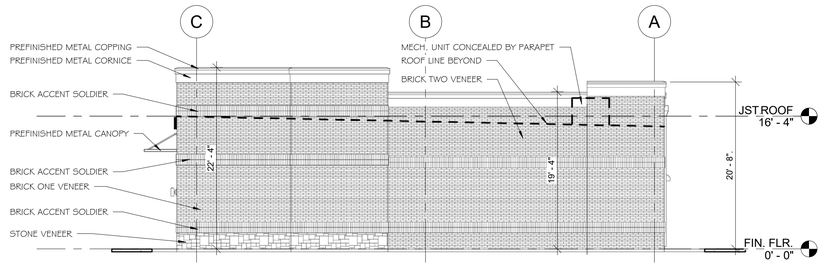
1 WEST ELEVATION
1/8" = 1'-0"



FACADE MATERIAL SURFACE AREA:

BRICK ONE	430.00 S.F.	34.09%
BRICK TWO	449.00 S.F.	35.60%
BRICK ACCENT	195.00 S.F.	15.46%
STONE VENEER	52.00 S.F.	4.12%
METAL CORNIICE	121.00 S.F.	9.59%
GLASS AREA	14.00 S.F.	1.14%
TOTAL MASS AREA	1,261.00 S.F.	

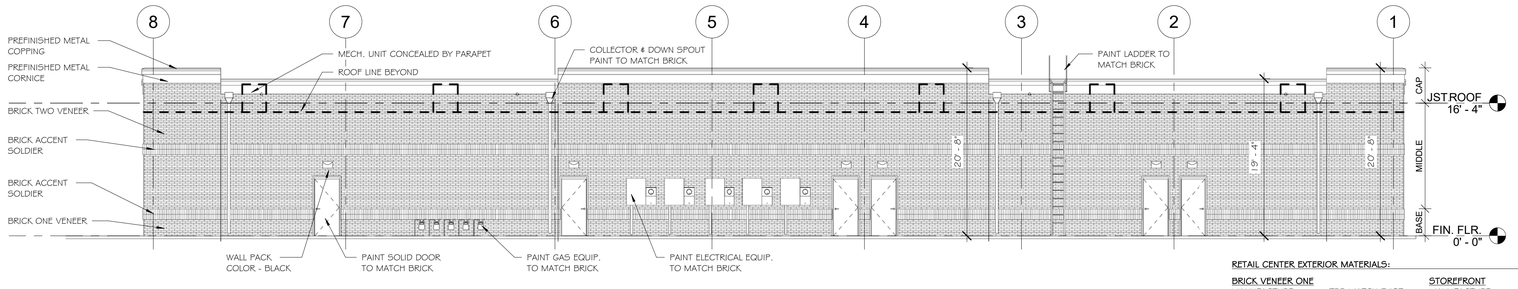
2 NORTH ELEVATION
1/8" = 1'-0"



FACADE MATERIAL SURFACE AREA:

BRICK ONE	444.00 S.F.	35.21%
BRICK TWO	449.00 S.F.	35.60%
BRICK ACCENT	195.00 S.F.	15.46%
STONE VENEER	52.00 S.F.	4.12%
METAL CORNICE	121.00 S.F.	9.61%
TOTAL MASS AREA	1,261.00 S.F.	

3 SOUTH ELEVATION
1/8" = 1'-0"



FACADE MATERIAL SURFACE AREA:

BRICK ONE	269.00 S.F.	8.72%
BRICK TWO	1975.00 S.F.	56.99%
BRICK ACCENT	379.00 S.F.	12.28%
METAL CORNICE	311.00 S.F.	10.20%
SOLID DOORS	150.00 S.F.	1.81%
TOTAL MASS AREA	3,084.00 S.F.	

4 EAST ELEVATION
1/8" = 1'-0"

RETAIL CENTER EXTERIOR MATERIALS:

BRICK VENEER ONE
MANUFACTURE: TBD MATCH EXIST.
STYLE / SIZE: MODULAR
COLOR: MATCH EXIST.
MORTAR COLOR: MATCH EXIST.

BRICK VENEER TWO
MANUFACTURE: TBD MATCH EXIST.
STYLE / SIZE: MODULAR
COLOR: MATCH EXIST.
MORTAR COLOR: MATCH EXIST.

BRICK VENEER ACCENT
MANUFACTURE: TBD MATCH EXIST.
STYLE / SIZE: MODULAR
COLOR: MATCH EXIST.
MORTAR COLOR: MATCH EXIST.

STONE VENEER
MANUFACTURE: TBD MATCH EXIST.
STYLE / SIZE: MULTIPLE
COLOR: MATCH EXIST.
MORTAR COLOR: MATCH EXIST.

STOREFRONT
MANUFACTURE: TUBELITE
STYLE / SIZE: 2"X4" ALUMINUM
COLOR: DARK BRONZE
MORTAR COLOR: T.B.D.

GLAZING
MANUFACTURE: PPG
STYLE / SIZE: 1" INSULATED LOW-E
COLOR: LITE GREY

METAL CANOPY
MANUFACTURE: MAPES
STYLE / SIZE: METAL RECTANGULAR
COLOR: BLACK
REMARK: INTRICAL GUTTER & WOOD SOFFIT

PREFINISHED METAL CORNICE
MANUFACTURE: T.B.D.
STYLE / SIZE: T.B.D.
COLOR: WHITE
FINISH: SATIN

AWNINGS
MANUFACTURE: T.B.D.
STYLE / SIZE: FABRIC / METAL
COLOR: BLACK / BLACK
REMARK: 3'-0" OVERHANG

UP & DOWNLIGHTS
MANUFACTURE: T.B.D.
STYLE / SIZE: T.B.D.
COLOR: BLACK

GENEAL NOTE:
1. MECHANICAL EQUIPMENT ROOF MOUNTED SHALL BE INSTALLED SUCH THAT THE TOP OF THE EQUIPMENT IS BELOW THE HIGHEST POINT OF THE PARAPET WALLS.

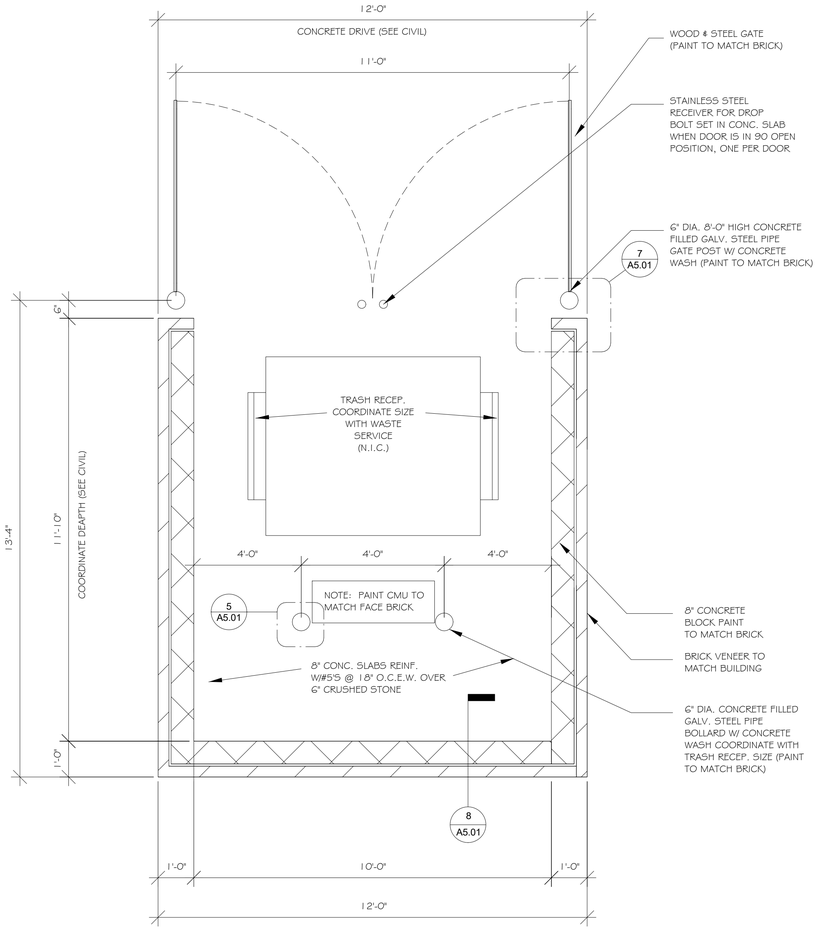
2. PARAPET WALLS OR TOWERS THAT PROJECT ABOVE OTHER PORTIONS OF THE BUILDING SHALL BE FINISHED ON REAR SIDES WITH THE MATERIALS SIMILAR TO THE PRESENTATION SIDE.

W. Michael Stewart
Architect
540 Grove Isle Cir. 103
Vero Beach, Florida 32962

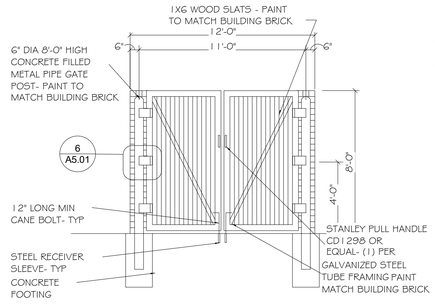
BROOKHAVEN
PHASE 3 LOT 4
MURFREESBORO, TENNESSEE

05/19/2021

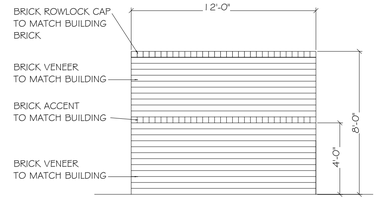
A2.00



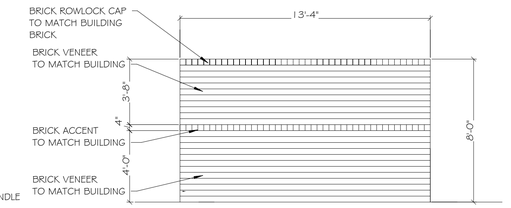
A DUMPSTER PLAN
1/2" = 1'-0"



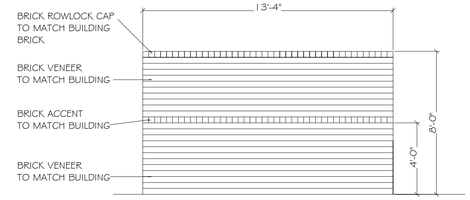
1 DUMPSTER GATE ELEVATION
1/4" = 1'-0"



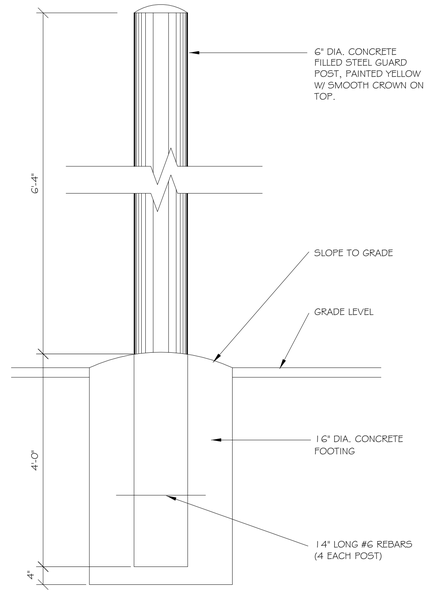
3 DUMPSTER REAR ELEVATION
1/4" = 1'-0"



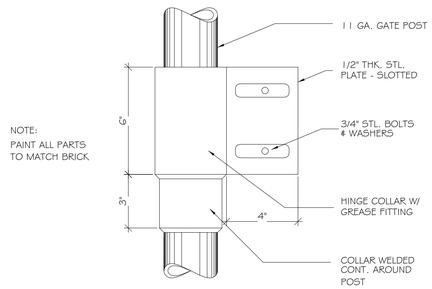
2 DUMPSTER LEFT ELEVATION
1/4" = 1'-0"



4 DUMPSTER RIGHT ELEVATION
1/4" = 1'-0"

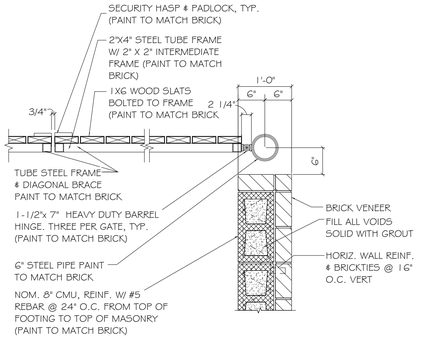


5 DUMPSTER STEEL BOLLARD
3/4" = 1'-0"

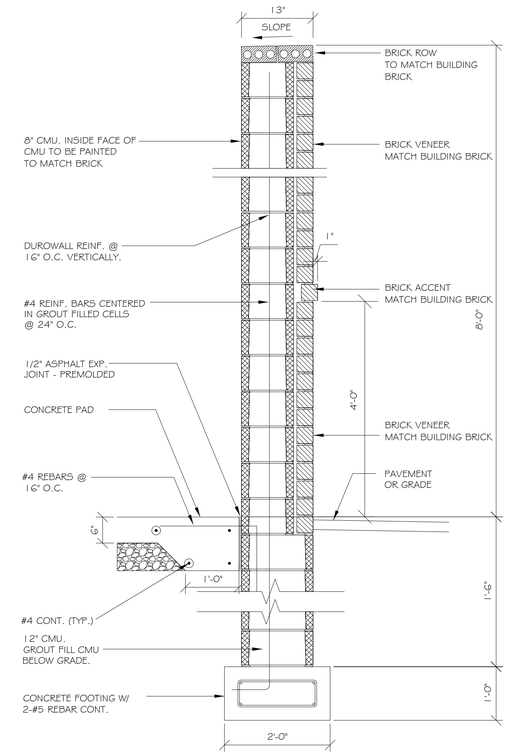


NOTE:
PAINT ALL PARTS TO MATCH BRICK

6 DUMPSTER GATE HINGE
3" = 1'-0"



7 DUMPSTER GATE PLAN
3/4" = 1'-0"



8 DUMPSTER WALL SECTION
3/4" = 1'-0"

PRELIMINARY NOT FOR CONSTRUCTION

W. Michael Stewart
Architect
540 Grove Isle Cir. 103
Vero Beach, Florida 32962

BROOKHAVEN
PHASE 3 LOT 4
MURFREESBORO, TENNESSEE

06/01/2021

A5.01