

GENERAL CONSTRUCTION NOTES:

- All construction on these plans shall be performed in accordance with Book of Standards, Highway and Incidental Structures and Standard Specifications for Construction and Materials by Maryland Department of Transportation State Highway Administration; 2011 Maryland Standards and Specifications for Soil Erosion and Sediment Control by Maryland Department of the Environment (Water Management Administration), Natural Resources Conservation Service, and Maryland Association of Soil Conservation Districts; 2007 Stormwater Management Act and 2000 Maryland Stormwater Design Manual Volumes I & II, per Maryland Department of the Environment (Water Management Administration), unless otherwise specified.
- The location of existing utilities shown is approximate only. Contractor shall verify the existence, location and depth of any utilities and shall notify the engineer of any discrepancy prior to beginning work.
- Contractor shall be responsible for notifying the engineering office of Terra Solutions Engineering, LLC at 301-378-9842 in the event of any discrepancies in the plans or in the relationships of finished grade prior to beginning work.
- Contractor shall be responsible for maintenance of traffic on any existing roads and installation of proposed signs and pavement markings along proposed roads in accordance with Maryland State Highway Administration and federal (USDOT FHWA, Manual on Uniform Traffic Control Devices) standards.
- The contractor shall note that in case of a discrepancy between the scaled and figured dimensions shown on these plans, the figured dimensions shall govern.
- It shall be distinctly understood that the failure to mention specifically any work which would normally be required to complete the project, shall not relieve the contractor of his responsibility to perform such work.
- All existing paving disturbed by the contractor shall be replaced to the same thickness according to MSHA specifications.
- All rip-rap shall be loose-laid stone. Rip-rap placed at storm drain outfalls in existing swales shall be placed so as to completely line the existing swale with only the minimum possible grading or shaping of the swale.
- Inlets in sumps shall be constructed level at the elevation given in the structure schedule or profile. Inlets on grade shall be adjusted so the grade on the top slab matches the grade of the curb.
- All roads, drives and parking areas shall be compacted in accordance with State Highway Administration Specifications, Section 204 (Embankment and Subgrade Section), latest edition.
- Terra Solutions Engineering, LLC is not responsible for the contractor's means or methods for construction, including but not limited to the contractor's utilization of men, materials, equipment or safety measures. In the performance of any work for this construction, the contractor assumes all responsibility for performing the work correctly, safely and in conformance with all federal, state and local code and/or regulatory requirements.
- Certain areas of Frederick County are located within the Monocacy Valley region which is historically considered to contain subsurface limestone formations with karst features commonly referred to as sinkholes. Terra Solutions Engineering, LLC recommends the party responsible for construction of this development retain the services of a professional geotechnical engineer to investigate the site's suitability for construction and make recommendations for site development and corrective measures if subsurface conditions affecting the site are discovered.
- Any attempts to estimate costs associated with rock handling/removal and/or subsurface conditions must be based on geotechnical reports and recommendations. Geotechnical reports may include information pertinent to the development of the site which is not included on the plans. The contractor must consult any existing geotechnical and other consultant's reports in conjunction with this set of plans.
- All construction shall conform to the State of Maryland Handicapped Code and the Americans with Disabilities Act (ADA).
- Placement of any work such as curb, gutter, sidewalk, driveway aprons, etc. shall be commenced only after the installation of all utilities including gas lines, electrical lines, street light conduits, television cable, water and sewer lines and roof drains, etc., are in place.
- These plans are for civil site construction only. See A.S.M.E.P. plans for all other elements. Building services (gas, CATV, electric, telephone) and roof drains are not part of these plans.
- Safe and legal disposal of demolished items is the contractor's responsibility.

GENERAL NOTES

- ALL CONSTRUCTION MATERIALS AND METHODS TO BE IN ACCORDANCE WITH MARYLAND S.H.A. STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS, AND LATEST EDITIONS AS AMENDED, JULY 2008, OR TOWN OF MIDDLETOWN STANDARDS AND AS SHOWN IN THE CONTRACT DOCUMENTS.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO INSURE THAT ALL LOCAL, STATE & FEDERAL CONSTRUCTION SAFETY REGULATIONS ARE FOLLOWED DURING THE CONSTRUCTION ACTIVITIES ASSOCIATED WITH THIS PROJECT.
- THE TOWN OF MIDDLETOWN IS NOT RESPONSIBLE FOR THE CONTRACTOR'S MEANS OR METHODS FOR CONSTRUCTION, INCLUDING BUT NOT LIMITED TO THE CONTRACTOR'S UTILIZATION OF MEN, MATERIALS, EQUIPMENT OR SAFETY MEASURES IN THE PERFORMANCE OF ANY WORK FOR THIS CONSTRUCTION. THE CONTRACTOR ASSUMES ALL RESPONSIBILITY FOR THE CORRECT AND SAFE CONSTRUCTION AND CONFORMANCE WITH ALL FEDERAL, STATE, AND LOCAL CODE AND/OR REGULATORY REQUIREMENTS.
- THE CONTRACTOR SHALL NOTIFY THE FOLLOWING AT LEAST THREE WORKING DAYS BEFORE STARTING ANY CONSTRUCTION:
 - TOWN OF MIDDLETOWN (301) 371-4173
 - VERIZON (TELEPHONE) 1-800-275-2355
 - FREDERICK COUNTY (DIP) (301) 600-1131
 - FREDERICK GAS (GAS) (301) 662-2151
 - COMCAST (TV CABLE) (301) 662-4822, EXT 133
 - MISS UTILITY (ALL UTILITIES) 1-800-257-7777
- A PRECONSTRUCTION MEETING WILL BE HELD WITH THE TOWN OF MIDDLETOWN AND FREDERICK COUNTY PRIOR TO THE START OF CONSTRUCTION. CONTACT OF FREDERICK COUNTY AT 301-662-2151 TO SCHEDULE. THE TOWN WILL REQUIRE SUBMITTALS FOR ALL WATER, SEWER, STORM DRAIN, AND ROAD MATERIALS. THE TOWN WILL RETURN 3 COPIES AND ADDITIONAL COPIES TO BE PROVIDED AS NECESSARY FOR THE CONTRACTOR'S USE.
- ASBESTOS SHALL BE SUBMITTED TO THE TOWN PRIOR TO RELEASE OF FINAL PAYMENT. THE TOWN REQUIRES (1) MYLAR COPY, (2) BLACK LINE COPIES AND (3) ELECTRONIC COPY IN PDF FORMAT.
- THE CONTRACTOR SHALL COORDINATE HIS WORK SCHEDULE WITH THE TOWN OF MIDDLETOWN. THE TOWN OF MIDDLETOWN SHALL HAVE FINAL AUTHORITY ON THE CONTRACTOR'S WORK SCHEDULE.
- THE EXISTENCE AND LOCATION OF UNDERGROUND UTILITIES OR STRUCTURES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES AND STRUCTURES BEFORE COMMENCING THE WORK. THE CONTRACTOR SHALL CONTACT MISS UTILITY AT LEAST THREE WORKING DAYS IN ADVANCE OF THE WORK.
- EXISTING UTILITIES ARE SHOWN FROM AVAILABLE RECORDS. CONTRACTOR SHALL FIELD VERIFY, BY TEST PITS, IF NECESSARY, ALL LOCATIONS AND ELEVATIONS PRIOR TO CONSTRUCTION. ANY UTILITY DAMAGED BY THE CONTRACTOR SHALL BE REPAIRED IMMEDIATELY BY THE CONTRACTOR AT NO EXPENSE TO THE TOWN OR THE ENGINEER, AND REPAIRED IN ACCORDANCE WITH THE REQUIREMENTS OF THE UTILITY OWNER.
- SHOULD THE CONTRACTOR DISCOVER DISCREPANCIES BETWEEN THE PLANS AND THE ACTUAL FIELD CONDITIONS ENCOUNTERED, THE TOWN AND THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY TO ARRIVE AT AN ACCEPTABLE RESOLUTION.
- THE CONTRACTOR SHALL RESTORE ALL DAMAGE TO ROADS, GRASS AREAS, SIDEWALK, PAVING, CURB & GUTTER, AND GRAVEL AREAS UPON COMPLETION OF WORK AT NO ADDITIONAL COST TO OWNER AND TO THE SATISFACTION OF THE OWNER.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR AVOIDING AND/OR CLEANING UP DUST AND MUD ON ALL ROADS DUE TO VEHICLES ARRIVING AND LEAVING THE JOB SITE AS PART OF HIS WORK.
- IT SHALL BE DISTINCTLY UNDERSTOOD THAT FAILURE TO MENTION SPECIFICALLY ANY WORK WHICH IS NORMALLY REQUIRED TO COMPLETE THE PROJECT SHALL NOT RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITY TO COMPLETE SUCH WORK.
- REMOVAL AND REPLACEMENT OF DISTURBED CURB & GUTTER AND SIDEWALK SHALL BE TO THE NEAREST JOINT.
- PROVIDE DEPRESSED HANDICAPPED RAMPS AT THE INTERSECTION OF ALL NEW SIDEWALK AND STREETS OR DRIVEWAY INTERSECTIONS.
- ALL NEW STORM DRAIN REINFORCED CONCRETE PIPES SHALL BE CLASS IV UNLESS INDICATED OTHERWISE ON THE PLANS.
- PLACEMENT OF ANY CONCRETE WORK SUCH AS CURB & GUTTER, SIDEWALKS, DRIVEWAY APRONS, ETC. SHALL BE COMMENCED ONLY AFTER RELOCATION AND/OR INSTALLATION OF ALL UTILITIES INCLUDING GAS LINES, ELECTRICAL LINES, CONDENTS, TELEVISION CABLE, WATER AND SEWER LINES ARE IN PLACE.
- CONTRACTOR SHALL ADJUST ALL EXISTING UTILITIES TO MATCH PROPOSED GRADE.
- ALL EXISTING SIGNS SHALL BE RELOCATED BEHIND NEW CURB AT LOCATIONS DESIGNATED BY THE TOWN REPRESENTATIVE.
- ALL EXISTING FENCES DISTURBED SHALL BE RELOCATED OR REPLACED AS SHOWN ON THE PLANS.
- THE CONTRACTOR SHALL COORDINATE THE RELOCATION OF EXISTING ELECTRIC, TELEPHONE, CABLE TV, AND GAS FACILITIES WITH THE UTILITY OWNERS AND THE TOWN OF MIDDLETOWN.
- THE CONTRACTOR SHALL STAGE HIS WORK TO ALLOW THE CONTINUED USE OF ALL EXISTING ACCESS DRIVEWAYS TO RESIDENCES, COMMERCIAL, AND MUNICIPAL ESTABLISHMENTS DURING CONSTRUCTION AND TO ALLOW INGRESS/EGRESS FROM SUCH ACCESS POINTS.
- EXPANSION JOINTS ARE TO BE PLACED BETWEEN JOINTS OF NEW CONCRETE AND EXISTING CONCRETE.

PAVING AND STRIPING NOTES

- ALL CONSTRUCTION METHODS AND MATERIALS USED SHALL CONFORM TO THE LATEST REQUIREMENTS OF THE M.S.H.A. STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS, LATEST EDITION, UNLESS NOTED OTHERWISE.
- ALL CURB FILLETS HAVE A RADIUS TO FACE OF CURB AS SHOWN ON THE PLANS.
- FIELD ADJUSTMENTS SHALL BE MADE AS NECESSARY TO PROVIDE A SMOOTH TRANSITION BOTH VERTICALLY AND HORIZONTALLY FROM EXISTING TO PROPOSED PAVING SECTIONS.
- GUTTERS AND PAVING SHALL BE INSTALLED IN SUCH A MANNER AS TO INSURE POSITIVE DRAINAGE IN ALL AREAS, AS SHOWN.
- ALL CURB & GUTTER SHALL BE PER CURB & GUTTER DETAIL, THESE PLANS.
- WHERE PROPOSED PAVEMENT AND/OR CURB & GUTTER IS INDICATED TO ABUT EXISTING PAVEMENT, THE EXISTING PAVEMENT EDGE SHALL BE SAW CUT AND TACK COATED TO INSURE PROPER BONDING WITH THE CONSTRUCTION. ALL EXISTING SIDEWALK, CURB & GUTTER TO BE REMOVED SHALL BE REMOVED TO THE NEAREST JOINT. PROPOSED PAVEMENT, SIDEWALK, CURB & GUTTER SHALL MATCH EXISTING BOTH HORIZONTALLY & VERTICALLY, PROVIDING A SMOOTH TRANSITION.
- WHEN THE FINAL COURSE OF HOT MIX ASPHALT IS INSTALLED OVERLAP EXISTING JOINTS BY A MINIMUM OF 12 INCHES, SEAL ALL TRANSVERSE JOINTS WHERE NEW MEETS OLD WITH AC-30.
- ALL STRIPING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES".
- MATERIALS FOR CROSSWALKS AND STOP BARS SHALL BE MORTON DURA-STRIP METHYL METHACRYLATE 90 MIL THICKNESS.

SIGNAGE NOTES

- FOLLOW FREDERICK COUNTY, MD SIGNAGE AND MARKING PLAN SPECIFICATIONS SECTIONS 1 THROUGH 11 AND THE FOLLOWING:

POSTS AND HARDWARE

- 2" SQUARE POST 14GA. WITH 7/16" PREPUNCHED HOLES AT 1" CENTERS ALL SIDES LENGTH AS NEEDED FOR SIGN SIZE, MINIMUM 10FT. 2 1/2" IGA. SQUARE FIT BASE SHALL BE THE HOLE PATTERN; LENGTH OF 3 FEET.
- PROVIDE CORNER BOLTS FOR POST INSTALLATION AND DRIVE RIVETS FOR SIGN INSTALLATION.

STREET SIGN SPECIFICATIONS

- 6 1/2" X 24" EXTRUDED (EXT) STREET NAME SIGN (SNS) 1.3M DG CUBED GRADE REFLECTORIZED SHEETING (DIAMOND GRADE CUBED) AND 3M 117TC ELECTRO CUT FILM (OR EQUIVALENT) 2 SIDED. EXTRUSION NOT TO BE COVERED WITH VINYL. WHITE LETTERS ON GREEN BACKGROUND WITH STREET NAME IN 4" LETTERS (PREP) AND SUFFIX IN 2" LETTERS (ST, DR, ETC.). BLACK LETTERING ON WHITE (REFLECTORIZED) BACKGROUND FOR PRIVATE ROAD SNS.

BRACKET

- #89 LONG EXTRUDED BLADES CAP WHEN A SECOND SIGN IS MOUNTED ATOP THE FIRST SIGN IN A PERPENDICULAR DIRECTION USE THE #89 ESCROW CROSS PIECE BETWEEN THE SIGNS.

SPEED LIMIT SIGNS SPECIFICATIONS

- PROVIDE R2-8, 18" X 24", 0.80 ALUMINUM BACKING, 1.3M DG CUBED GRADE REFLECTORIZED SHEETING (DIAMOND GRADE CUBED) AND 3M 117TC ELECTRO CUT FILM (OR EQUIVALENT), 25 MPH (UNLESS ROAD IS DESIGNATED FOR ANOTHER SPEED AND APPROVED BY THE TOWN FOR THAT POSTED SPEED.

STOP SIGN SPECIFICATIONS

- PROVIDE R1-1, 30" X 30", 0.80 ALUMINUM BACKING, 1.3M DG CUBED GRADE REFLECTORIZED SHEETING (DIAMOND GRADE CUBED) AND 3M 117TC ELECTRO CUT FILM (OR EQUIVALENT).

- PRODUCT NUMBERS ARE FROM SHANNON BAUM SIGNS, ELDERBURG, MD 1-800-368-2295 OTHER MANUFACTURER'S OR SUPPLIERS ACCEPTABLE ON OR EQUAL BASIS.
- STOP SIGNS, STREET SIGNS AND 25 MPH SPEED LIMIT SIGNS SHALL BE PROVIDED AND INSTALLED WHERE SHOWN. CONTACT THE DIRECTOR OF OPERATIONS IF NONE ARE SHOWN.

- ALL SIGNAGE SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" UNLESS SIGNS ARE DESIGNATED WITHIN THE MIDDLETOWN STANDARDS. SIGNS NEED TO BE INSTALLED PRIOR TO THE FIRST USE & OCCUPANCY PERMIT BEING ISSUED.

IMPROVEMENT AND SWM DEVELOPMENT PLANS

FOR FRANKLIN COMMONS

(FORMERLY CHESTERBROOK - PHASE 2)

TAX MAP 501, PARCEL 1060

Situated at Broad Street and Franklin Street

MIDDLETOWN ELECTION DISTRICT No. 3

TOWN OF MIDDLETOWN

FREDERICK COUNTY, MARYLAND

TRENCH BEDDING AND BACKFILL SPECIFICATIONS

February 13, 2002 July 16, 2015, January 28, 2016

WATER

WATER MAINS SHALL BE BEDDED IN ACCEPTABLE EXCAVATED MATERIAL THE INSTALLATION WITH NO ROCKS GREATER THAN 2" IN ANY DIRECTION. INITIAL BACKFILL OF MATERIAL TO 12" ABOVE THE TOP OF PIPE. FULL DEPTH DRY CRUSHER RUN (FORMER MESA DESIGNATION) (DCR6) AND GRADATION AS FOLLOWS SHALL BE INSTALLED TO THE BOTTOM OF THE PAVEMENT SECTION.

SIEMENS SIZE	SPACING
1-1/2"	90-100
2"	90-100
3"	70-80
4"	45-50
6"	20-30
#16	15-25
#20	10-20
#30	10-20
#100	5-10
#200	5-10

WATER HOUSE CONNECTIONS (WHCS) SHALL BE BEDDED IN 3" OF NATURAL SAND AND COVERED WITH 6" OF NATURAL SAND. NO CRUSHER SAND.

WATER MAINS AND SERVICES SHALL BE INSTALLED WITH 3" DETECTABLE TAPE PLACED 12" ABOVE THE PIPE. THE TAPE SHALL BE POLYETHYLENE PLASTIC TAPE WITH METALLIC CORE, 3" WIDTH AND 4 MIL THICKNESS, SOLID BLUE PRINTED WITH BLACK LETTERS "CAUTION - WATER LINE BURIED BELOW."

SEWER

SEWER MAINS SHALL BE BEDDED IN GSB OR NO. 57 AGGREGATE IF GROUND WATER CONDITIONS EXIST. INITIAL BACKFILL SHALL BE DCR6 TO 12" ABOVE THE PIPE. NO. 8 CRUSHER AGGREGATE MAY BE USED IN LIEU OF NO. 57 OR DCR6 AS BEDDING WHERE NO GROUND WATER EXISTS.

SEWER HOUSE CONNECTIONS (SHCS): SAME BEDDING AND BACKFILL AS WATER.

SEWER MAINS AND LATERALS SHALL BE INSTALLED WITH 6" NONDETECTABLE TAPE PLACED 12" ABOVE THE PIPE. THE TAPE SHALL BE POLYETHYLENE PLASTIC TAPE WITH 3" WIDTH AND 4 MIL THICKNESS, SOLID GREEN PRINTED WITH BLACK LETTERS "CAUTION - SEWER LINE BURIED BELOW."

STORM DRAIN

BEDDED IN NO. 57 AGGREGATE AND BACKFILLED TO SPRINGLINE WITH DCR6. ALL PRECAST STRUCTURES (MANHOLES, INLETS ETC.) SHALL BE CAST WITH A MIN. 4" OF ADJUSTMENT AVAILABLE.

ALL INLETS SHALL BE CONSTRUCTED WITH WEEP HOLES AND NO. 57 AGGREGATE AND HARDWARE CLOTH INSTALLED IN THE FIELD.

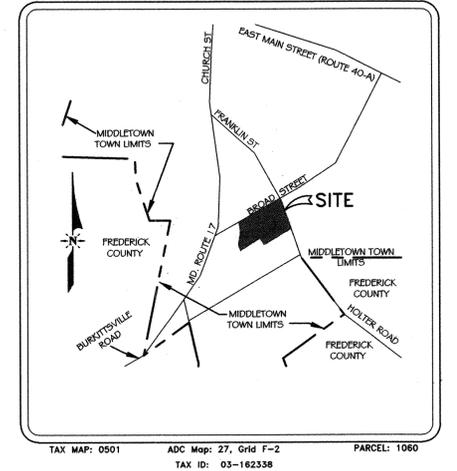
FREDERICK COUNTY, MD SIGNAGE AND MARKING PLAN (APPLICABLE TO RIGHT-OF-WAY) (EDITED DOWN TO SECTIONS APPLICABLE TO THE TOWN OF MIDDLETOWN)

GENERAL NOTES FOR SIGNAGE AND PAVEMENT MARKING SPECIFICATIONS

- All signage and pavement markings shall comply with "Standard Specifications for Construction & Materials", dated July 2008, as published by the Maryland Department (MDOT) of Transportation State Highway Administration (SHA), and latest revisions or additions, including specifications herein, and latest revisions. The specifications shall hereafter be referred to as the specifications. The specifications are accessible on-line at: <http://www.sha.state.md.us/businesswithsha/businesswithsha.asp?id=8157>
- All standard details and standard plates referred to shall be those of the State of Maryland, Department of Transportation, State Highway Administration's "Book of Standards for Highway & Incidental Structures" or Frederick County Standard Details and the latest revision thereto. The State of Maryland, Department of Transportation, State Highway Administration "Book of Standards" shall be referred to as the Maryland State Highway Administration's "Book of Standards" or Maryland State Highway Administration standard. Access to the State of Maryland standard details and standard plates etc. can be found on-line at: <http://www.sha.state.md.us/businesswithsha/businesswithsha.asp?id=8157>
- References to the State of Maryland, State, S.P.C., State Roads Commission, State Highway Administration, or Commission in these specifications shall be interpreted to mean Frederick County, Maryland.
- References to officials of Maryland State Government or the Maryland State Highway Administration Book of Standards shall be interpreted to mean the appropriate official in Frederick County Government, unless specified otherwise.

CONSTRUCTION & REQUIREMENTS

- PAVEMENT MARKINGS: 951
 - Markings shall be thermo-plastic except long line markings.
 - Long line markings shall meet State Standards, including reflectorized beads meeting SHA specs.
 - School Zone Crosswalks shall either have perpendicular hatching (not diagonal) located away from wheel paths without parallel lines or 2 parallel lines without any interior hatching.
 - Approved traffic paints for use in Maryland from the 1994 NASTO site. These results are approved for both PCC and Bituminous surfaces.
 - SHA Approved Paints are cited with 1994 NASTO Ref. #, Manufacturer Code, Manufacturer Name & color.



VICINITY MAP SCALE: 1" = 600'

SHEET INDEX

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AGENCY FILE REFERENCES:

- PROPERTY TAX ID#s: 03-162338
- SITE PLAN A/P No: 14838
- SWM CONCEPT A/P No: 14839
- THIS PLAN A/P No: 15726

ENGINEER'S DESIGN CERTIFICATION

I hereby certify, to the best of my professional knowledge, information and belief, that this plan has been prepared in accordance with local ordinances, Comar 26.17.01.00, and the 2011 Maryland Standards and Specifications for Soil Erosion and Sediment Control in Developing Areas as adopted by the State of Maryland - Maryland Department of the Environment Water Resource Administration, and the hydraulic design criteria for Highways as adopted by the Maryland State Highway Administration (revised Jan. 1, 2001), and the grading, storm drainage, sediment control and stormwater management requirements of Frederick County and Frederick Soil Conservation District.

Michael L. Swanson, P.E. MD Reg. No. 30736 Date 8-28-19

CERTIFICATION OF QUANTITIES OF EXCAVATION & FILL

I hereby certify, to the best of my Professional knowledge, information, and belief that the estimated total amount of excavation and fill as shown on these plans has been computed to be 3,700 cubic yards of excavation and 5,800 cubic yards of fill, and that the total area to be disturbed as shown on these plans has been determined to be 12,275 square feet in the Public Right-of-way and 112,200 square feet on Private Land.

Michael L. Swanson, P.E. MD Reg. No. 30736 Date 8-28-19

Note: The estimated quantities shown above are for permit purposes only and are not to be used for construction bidding purposes.

OWNER'S/DEVELOPER'S CERTIFICATION

I/We hereby certify that all clearing, grading, construction and/or development will be done pursuant to this plan, and that any responsible personnel involved in the construction project will have a certificate of attendance at a Department of Natural Resources approved training program for the control of sediment and erosion before beginning the project.

I/We further certify that "as-built" plans will be submitted and approved following completion of any stormwater management facility and that construction will be supervised by a registered professional engineer.

Date: 8/14/19 Signature: T. Wesley Boss, Manager

Printed name & title: T. Wesley Boss, Manager

Firm: Chesterbrook Land LLC Phone No: 301-991-2354

Address: 5310 Spectrum Drive Frederick, MD 21703

Revision 1 reflects the reduction of the turn lane and taper on Broad Street to avoid relocation of a utility pole. There were also revisions to the drainage design to accommodate an existing speed hump and cross walk. The single fire hydrant has been replaced with two. Several Town notes and details were updated as well. The plan requires re-approval by the Town, SCD, and the County. There were minor changes to the ESC design with the drainage revisions.

CATOCTIN SOIL CONSERVATION DISTRICT

APPROVED BY: [Signature] DATE: 9/3/19

SCD approval for sediment and erosion control is contingent upon issuance of all applicable regulatory permits

FOR STORMWATER REVIEW ONLY

REV. #	DATE	REVISION	ENGINEER/CONSULTANT DATE AND INITIAL	DEV. REVIEW DATE AND INITIAL
1	8-15-19	REV. PER TOWN, SCD, CO. RE-APPROVAL	8/28/19	8-12-19

CATOCTIN SOIL CONSERVATION DISTRICT

APPROVED BY: [Signature] DATE: 9/3/19

SCD approval for sediment and erosion control is contingent upon issuance of all applicable regulatory permits

TOWN OF MIDDLETOWN PLANNING COMMISSION

APPROVED BY: [Signature] DATE: 9/18/2019

APPROVED FOR: Mark Curry, Chairman

PROFESSIONAL ENGINEER'S CERTIFICATION

SIGNED BY: [Signature] DATE: 8-28-19

MD LICENSE NO.: 30736, P.E. EXPIRATION DATE: 08-03-20

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.

CALL "MISS UTILITY" AT 1-800-257-7777 FOR UTILITY LOCATIONS AT LEAST 48 HOURS PRIOR TO BEGINNING CONSTRUCTION.

FRANKLIN COMMONS (FORMERLY CHESTERBROOK - PHASE 2)
 Situated at Broad Street and Franklin Street
 MIDDLETOWN ELECTION DISTRICT No. 3
 TOWN OF MIDDLETOWN
 FREDERICK COUNTY, MARYLAND

IMPROVEMENT AND SWM DEVELOPMENT PLANS - COVER SHEET

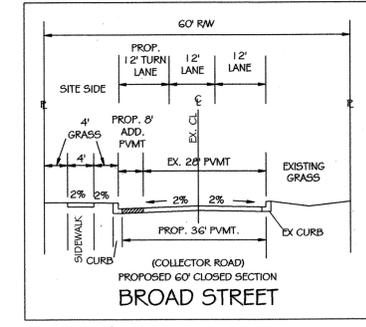
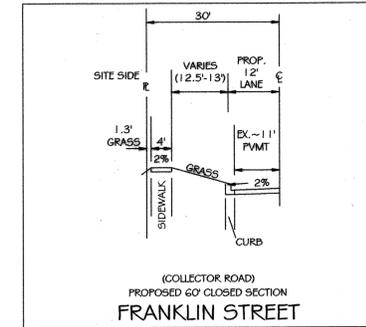
NO.	DATE	REVISION	DESCRIPTION
1	8-15-19	REV. PER TOWN, SCD, COUNTY RE-APPROVAL	

PROJECT No.: 0083
 DATE: AUGUST 2019
 SCALE: AS SHOWN
 SHEET No. 1 of 13

Middletown, AP # 19579



- LEGEND**
- ONSITE PAVEMENT (PREVIOUS CONCRETE)
 - RIGHT-OF-WAY PAVEMENT/TRAD. PAVEMENT (ASPHALT)
 - REINFORCED TURF (EM. ACCESS)
 - CONCRETE (SIDEWALK)
 - 6" STANDARD CURB (RIGHT-OF-WAY)
 - MOUNTABLE CURB (ONSITE)



NO.	DATE	REVISION	DESCRIPTION	M/S	BY
1	5-15-19		REV. PER TOWN, SCD, COUNTY RE-APPROVAL		

FRANKLIN COMMONS
(FORMERLY CHESTERBROOK - PHASE 2)
Situated at Broad Street and Franklin Street
MIDDLE TOWN ELECTION DISTRICT No. 3
TOWN OF MIDDLETOWN
FREDERICK COUNTY, MARYLAND

IMPROVEMENT AND SWM DEVELOPMENT PLANS - OVERALL LAYOUT PLAN

Terra Solutions Engineering, LLC
Commercial & Residential Land Planning and Engineering
5216 Chairmans Court, Suite 105
Frederick, MD 21703
Phone: 301-278-9882 Email: TerraSolutionsEngineering@gmail.com

Owner/Developer
CHESTERBROOK LAND, LLC
10000 S. WOODS
Frederick, MD 21703

TOWN OF MIDDLETOWN
PLANNING COMMISSION

Arthur K. Unangst 9/10/2019
APPROVED DATE
For Mark Conroy, P.E. Chairman

PROFESSIONAL ENGINEER'S CERTIFICATION

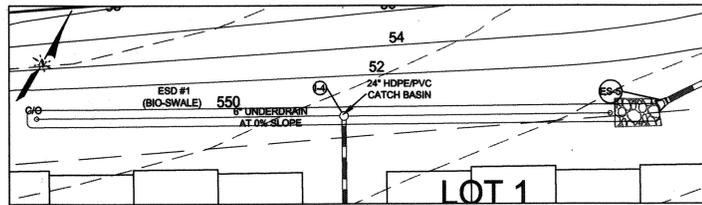
SIGNED BY: *M.L.S.* 9-28-19 DATE
MICHAEL LEE SWANSON, P.E.
MD LICENSE No.: 30736, P.E. EXPIRATION DATE: 08-03-20

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.

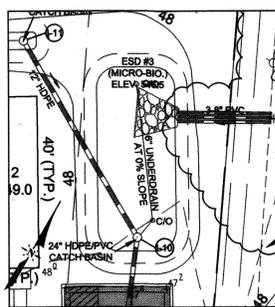
CALL "MISS UTILITY" AT 1-800-257-7777 FOR UTILITY LOCATIONS AT LEAST 48 HOURS PRIOR TO BEGINNING CONSTRUCTION.



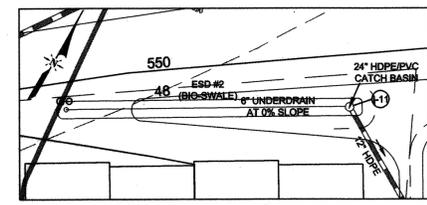
PROJECT No.: 0083
DATE: AUGUST 2019
SCALE: 1" = 40'
SHEET No. 2 of 13



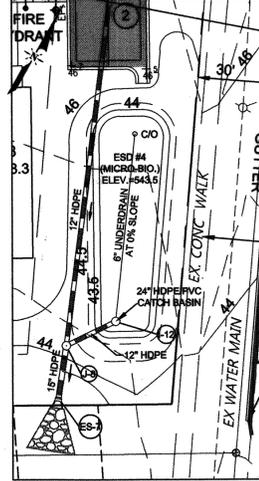
ESD FACILITY #1 (BIO-SWALE)
SCALE: 1"=20'



ESD FACILITY #3 (MICRO-BIORETENTMENT)
SCALE: 1"=20'



ESD FACILITY #2 (BIO-SWALE)
SCALE: 1"=20'



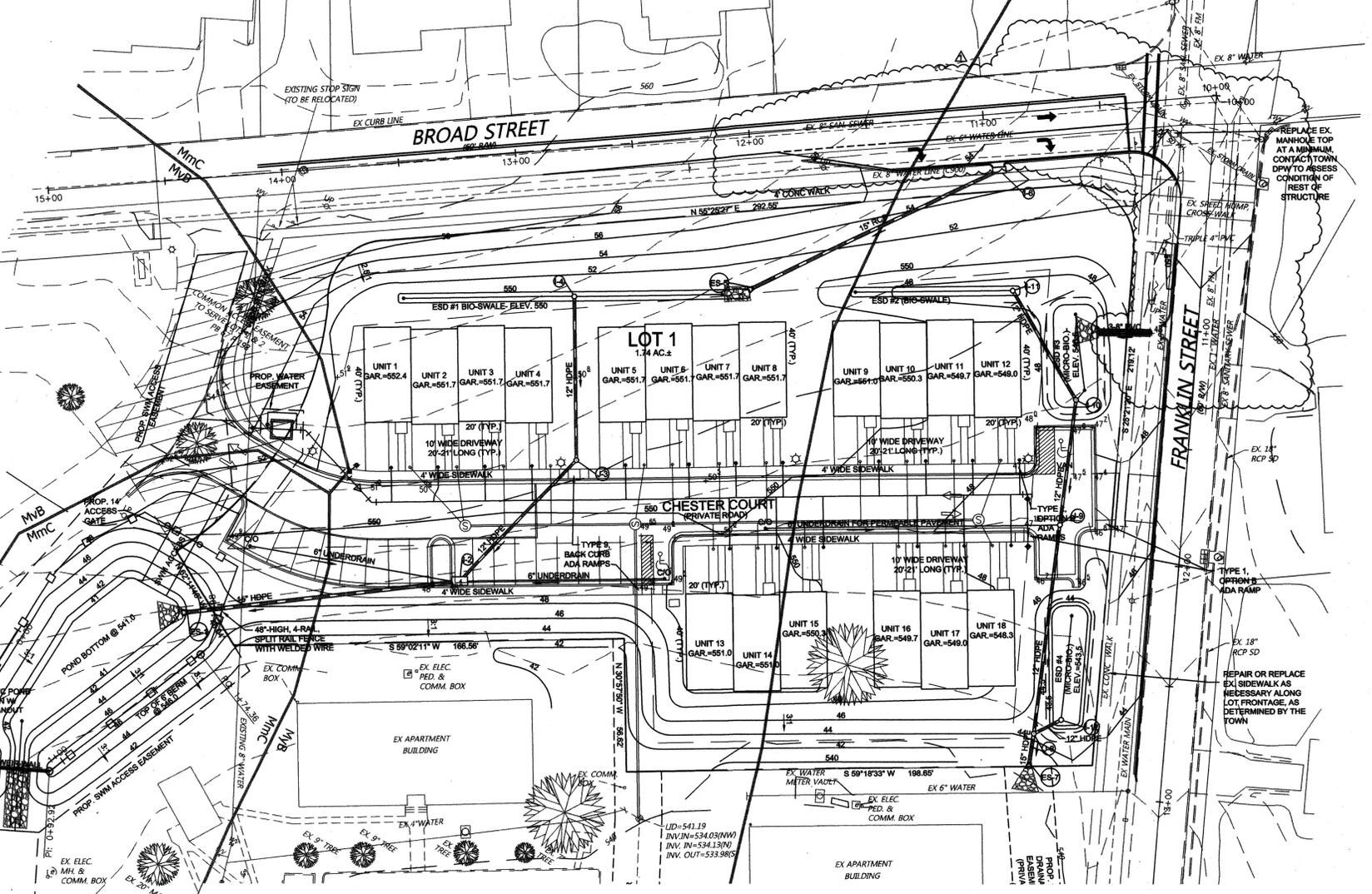
ESD FACILITY #4 (MICRO-BIORETENTMENT)
SCALE: 1"=20'

	ESD #1 (BIO-SWALE)	ESD #2 (BIO-SWALE)	ESD #3 (MICRO-BIO)	ESD #4 (MICRO-BIO)
BERM ELEV.	551.0	547.5	547.5	544.5
TOP ELEV.	550.0	549.0-546.5	546.5	543.5
SOIL MEDIA DEPTH	4'	2'	2'	2'
BOTTOM ELEV.	544.42	545.42-542.92	542.92	539.92
6" UNDERDRAIN INVERT	544.67	543.17	543.17	540.17
CATCH BASIN INVERT OUT	544.20	543.15	542.6	540.15
CATCH BASIN CREST ELEV.	550.5	547.0	547.0	544.0

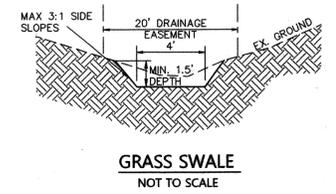
NOTE: ESD #2 SHALL BE PLANTED WITH MIN. 4 SHRUBS AND ESD #1, 3, AND 4 SHALL BE PLANTED MIN. 8 SHRUBS FROM LIST OF OPTIONS ON SHEET 5. CONTRACTOR SHALL COORDINATE WITH OWNER ON SELECTION.

ADDITIONAL GRADING AND DRAINAGE NOTES

- Pavement underdrains shall be PVC schedule 40 or HDPE Smoothbore, Type S. Where pipe slopes exceed 1%, other pipe materials may be substituted with engineer approval.
- HDPE pipe shall be smoothbore, high-density polyethylene pipe meeting the specifications of AASHTO M294, Type S (Examples include Hancor HE-Q, ADS N-12 or an approved equivalent) for 12" pipe and larger. High density pipe shall be smoothbore meeting the specifications of AASHTO M252, Type "S" for 4" to 10" pipe. All backfill to be per the pipe manufacturer's specifications or Middletown criteria, whichever is more stringent. Typical backfill shall be suitable material, such as free-draining sands and gravel conforming to ASTM D2321 Class I, II, or III material and be placed in lifts as necessary and compacted to 95 percent minimum dry density according to AASHTO-T99 minimum (per AASHTO T-180 in road right-of-way areas).
- Spot shots along the curb indicate the elevation at the flowline, unless otherwise indicated.
- See this sheet and Cover Sheet for additional Town of Middletown storm drain notes and bedding notes. See sheet 6 for additional storm drain details.
- Sumps on all HDPE/PVC inlets shall have pre-fabricated inserts or grouted to the lowest pipe invert.
- Connect I-20 to existing inlet. The contractor shall remove the existing fences and gates and other landscaped features to pre-construction condition or new. Existing evergreens (Leyland Cypress) requiring removal shall be replaced with new stock Emerald Green Arborvitae, 5-6 ft B&B (no container growth) or Leyland Cypress 5-6 ft B&B.



GRADING AND DRAINAGE PLAN
SCALE: 1"=30'



GRASS SWALE
NOT TO SCALE

GENERAL NOTES FOR STORM DRAIN CONSTRUCTION

- ALL STORM DRAIN SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST EDITION OF THE GENERAL SPECIFICATIONS OF MARYLAND STATE HIGHWAY ADMINISTRATION AND THE TOWN OF MIDDLETOWN'S DESIGN MANUAL.
- TYPES OF STRUCTURES REFER TO THE STANDARD STORM DRAINAGE DETAILS OF THE MARYLAND STATE HIGHWAY ADMINISTRATION, UNLESS OTHERWISE NOTED.
- INFORMATION CONCERNING UNDERGROUND UTILITIES WAS OBTAINED FROM AVAILABLE RECORDS; HOWEVER, THE CONTRACTOR MUST DETERMINE THE EXACT LOCATION AND ELEVATIONS OF THE MAINS BY DIGGING TEST PITS BY HAND AT ALL UTILITY CROSSINGS, WELL IN ADVANCE OF TRENCHING. IF CLEARANCES ARE LESS THAN SPECIFIED ON THIS PLAN OR LESS THAN 12" WHEN NOT SPECIFIED, CONTACT THE CIVIL ENGINEER AND/OR THE INSPECTOR AND THE APPROPRIATE UTILITY OWNER BEFORE PROCEEDING WITH CONSTRUCTION.
- WHERE ANY PART OF THE STORM DRAIN SYSTEM IS LOCATED IN FILL SECTION, PROVIDE SELECT FILL MATERIAL COMPACTED TO 95% AASHTO T-180 DENSITY FROM APPROVED SUBGRADE UP TO STRUCTURE BOTTOM SLABS AND/OR PIPE BEDDING.
- FOR LOCATIONS OF ALL UTILITIES, CALL MISS UTILITY, 1-800-257-7777, 72 HOURS IN ADVANCE OF ANY WORK IN THIS VICINITY.
- ALL RIPRAP TO BE UNDERLAID WITH MDSHA CLASS "C" GEOTEXTILE POLYPROPYLENE FILTER-FABRIC OR APPROVED EQUAL. ALL RIPRAP TO BE UNGROUTED STONE UNLESS OTHERWISE NOTED.
- NOTIFY THE TOWN OF MIDDLETOWN 48 HOURS IN ADVANCE OF EXCAVATION IN VICINITY OF SEWER AND WATER MAINS UNDER WHICH THE STORM DRAINAGE IS TO BE INSTALLED.
- GRADE ALL DISTURBED AREAS TO MAINTAIN POSITIVE DRAINAGE.
- ALL STORM DRAINAGE PIPE TO BE REINFORCED CONCRETE PIPE (RCP) STORM DRAIN PIPE, AND PLACED AS FOLLOWS: ALL STORM DRAINAGE PIPE WITHIN THE PUBLIC RIGHT OF WAY SHALL BE RCP AND SHALL CONFORM TO ASTM C76 STANDARDS WITH O-RING JOINTS AND GASKETS IN ACCORDANCE WITH ASTM C443 STANDARDS. PIPE MATERIAL SUBSTITUTIONS MUST BE APPROVED BY THE TOWN ENGINEER.
- PROVIDE DOMESTICALLY PRODUCED CASTINGS WITH THE TOWN OF MIDDLETOWN IDENTIFICATION. INLET CASTINGS SHALL BE IN ACCORDANCE WITH DETAIL SD-1 OF THE MIDDLETOWN STANDARDS.
- ALL STORM DRAINAGE STRUCTURES SHALL BE MANUFACTURED WITH ALL STORM DRAINAGE CONNECTION OPENINGS PROVIDED. FUTURE PIPE CONNECTIONS SHALL BE BRICKED SHUT IN THE FIELD. ANY DEVIATION FROM THIS PROCEDURE MUST BE APPROVED BY THE TOWN ENGINEER. ALL STRUCTURES AND MANUFACTURERS MUST BE MDSHA APPROVED OR ON THE APPROVED SUBSTITUTES LIST PUBLISHED BY MDSHA.
- ALL STANDARD STORM DRAINAGE STRUCTURES ARE SUBJECT TO MODIFICATION BY THE SITE INSPECTOR AND/OR ENGINEER TO MEET FIELD REQUIREMENTS.
- WHERE STORM DRAIN PROFILES ARE NOT OF APPROPRIATE DEPTHS TO FACILITATE THE MINIMUM DEPTHS OF THE SPECIFIED STRUCTURE, CONTACT THE DESIGN ENGINEER FOR MODIFICATION.
- THE STORM DRAIN SYSTEM SHALL BE FLUSHED WITH WATER PRIOR TO ACCEPTANCE BY THE TOWN.
- NO 9" DIAMETER COG AND COS BASES SHALL BE ACCEPTED BY THE TOWN.
- ALL GRATE INLETS SHALL BE ADJUSTED TO GRADE USING MDSHA CONCRETE MIX 6.
- ADJUSTMENTS TO COG OR COS TOPS MAY BE BY BRICK FOR NO MORE THAN 1 COURSE OR 3 INCHES. ADJUSTMENTS MORE THAN THIS SHALL BE MADE BY UTILIZING MDSHA MIX 6.
- ALL EXISTING STORM DRAIN PIPE AND STRUCTURES NOT UTILIZED SHALL BE REMOVED AND BACK FILLED WITHIN THE LIMIT OF DISTURBANCE. ANY EXISTING SD TO BE ABANDONED THAT EXTENDS OUTSIDE THE RIGHT-OF-WAY IS TO BE BRICKED SHUT AT THE RIGHT-OF-WAY LINE.
- PRECAST STANDARD STRUCTURES MAY BE USED IN LIEU OF STANDARD STRUCTURES.

FOR STORMWATER REVIEW ONLY
FREDERICK COUNTY, MARYLAND
DEVELOPMENT REVIEW, ENGINEERING

APPROVED: *Dore A. Gable* 12/9/15
DEVELOPMENT REVIEW CHIEF DATE

APPROVED: *[Signature]* 12/9/15
STORMWATER MANAGEMENT DATE

REVISIONS:

REV. #	DATE	DESCRIPTION	ENGINEER/CONSULTANT DATE AND INITIAL	DEV. REVIEW DATE AND INITIAL
1	5-15-19	REV. PER TOWN, SCD/ CO. RE-APPR.	8/22/19	ML/S 9-12-19

TOWN OF MIDDLETOWN
PLANNING COMMISSION

APPROVED: *Cynthia R. Unsworth* 9/18/2019
FOR: *Mark Carney, P.E. Chairman* DATE

PROFESSIONAL ENGINEER'S CERTIFICATION

SIGNED BY: *Michael Lee Swanson, PE* 9-28-19
MICHAEL LEE SWANSON, PE DATE
MD LICENSE NO.: 30736, P.E. EXPIRATION DATE: 08-03-20

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.

CALL "MISS UTILITY" AT 1-800-257-7777 FOR UTILITY LOCATIONS AT LEAST 48 HOURS PRIOR TO BEGINNING CONSTRUCTION.

FRANKLIN COMMONS (FORMERLY CHESTERBROOK - PHASE 2)
Situated at Broad Street and Franklin Street
MIDDLETOWN ELECTION DISTRICT No. 3
TOWN OF MIDDLETOWN
FREDERICK COUNTY, MARYLAND

IMPROVEMENT AND SWM DEV. PLANS - GRADING AND DRAINAGE PLAN

NO. DATE REVISION DESCRIPTION

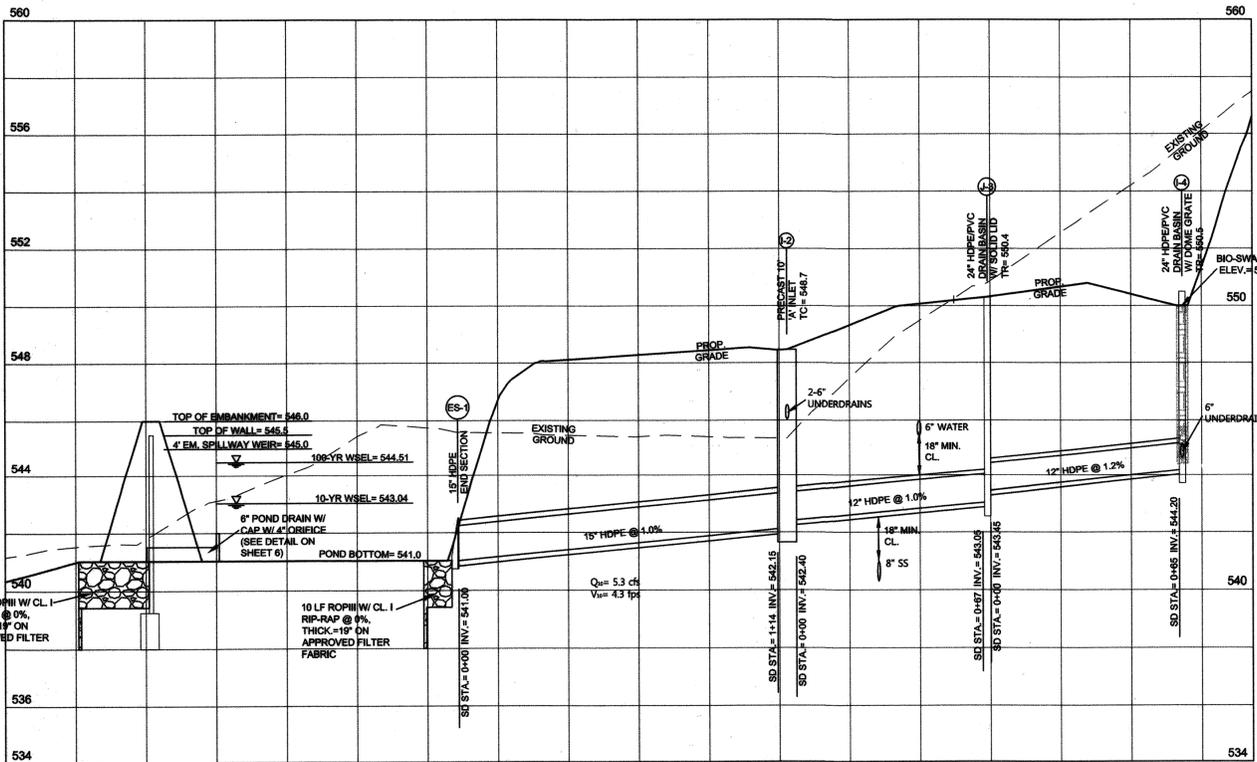
5-15-19 REV. PER TOWN, SCD/ COUNTY RE-APPROVAL

ML/S BY

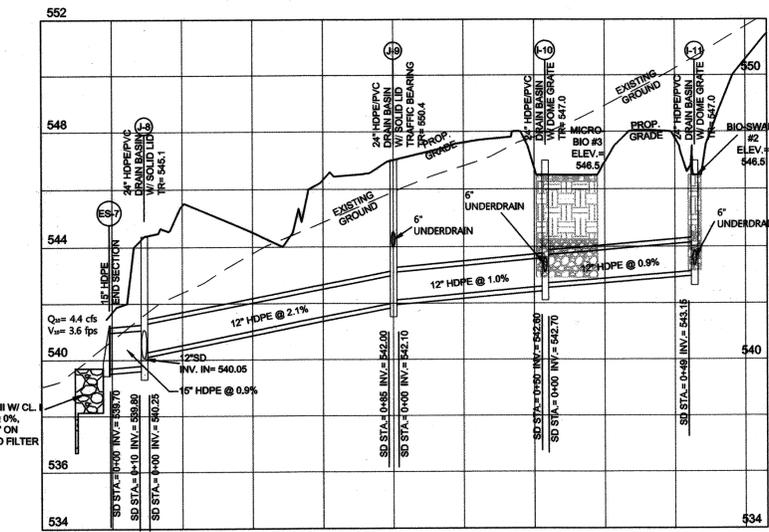
Terra Solutions Engineering, LLC
Commercial & Residential Land Planning and Engineering
5216 Chairmans Court, Suite 105
Frederick, MD 21703
Phone: 301-376-9642 Email: TerraSolutionsEngineering@gmail.com

Owner/Developer
CHESTERBROOK LAND, LLC
3310 Spickett Rd.
Frederick, MD 21703

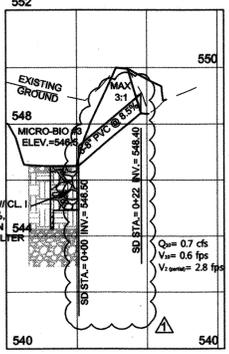
PROJECT NO.: 0083
DATE: AUGUST 2019
SCALE: AS SHOWN
SHEET No. 4 of 13



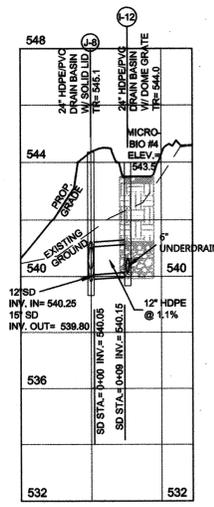
ES-1 TO I-4 STORM DRAIN PROFILE
SCALE- HORIZ = 1"=30'
VERT. = 1"=3'



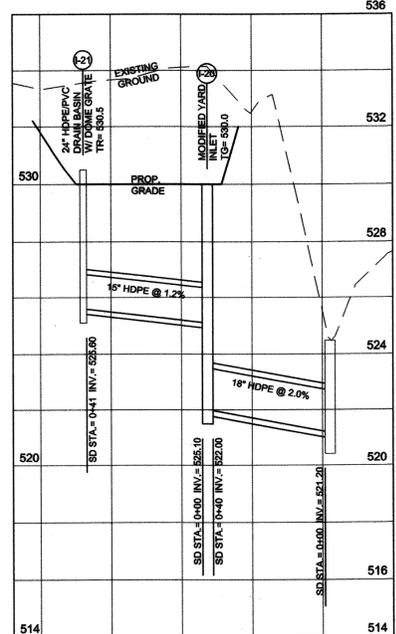
ES-7 TO I-11 STORM DRAIN PROFILE
SCALE- HORIZ = 1"=30'
VERT. = 1"=3'



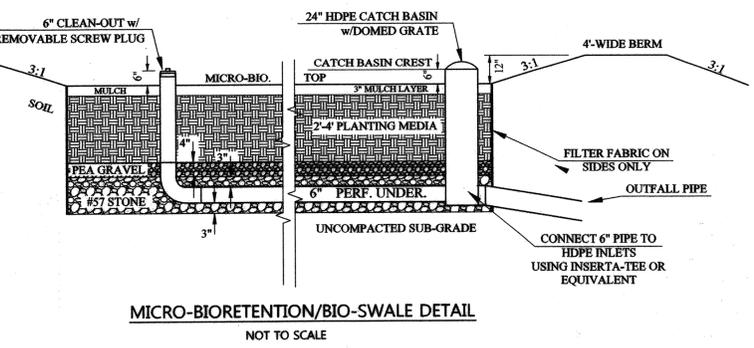
ES-13 TO I-14 STORM DRAIN PROFILE
SCALE- HORIZ = 1"=30'
VERT. = 1"=3'



J-8 TO I-12 STORM DRAIN PROFILE
SCALE- HORIZ = 1"=30'
VERT. = 1"=3'

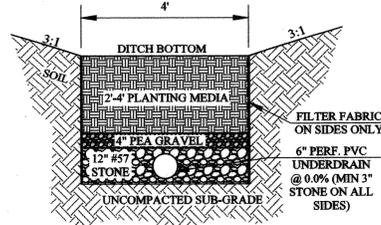


EX. INLET TO I-21 STORM DRAIN PROFILE
SCALE- HORIZ = 1"=30'
VERT. = 1"=3'



MICRO-BIORETENTION/BIO-SWALE DETAIL
NOT TO SCALE

ESD FACILITY COMPACTION NOTE:
IT IS VERY IMPORTANT TO MINIMIZE COMPACTION OF BOTH THE BASE OF ESD FACILITIES AND THE REQUIRED BACKFILL. USE EXCAVATION HOES TO REMOVE ORIGINAL SOIL. IF PRACTICES ARE EXCAVATED USING A LOADER, THE CONTRACTOR SHOULD USE WIDE TRACK OR MASH TRACK EQUIPMENT, OR LIGHT EQUIPMENT WITH TURF TIRE TYPES. COMPACTION CAN BE ALLEVIATED AT THE BASE OF THE ESD FACILITY BY USING A PRIMARY TILLING OPERATION SUCH AS A CHISEL, PLOW, RIPPER, OR SUBSOILER. THESE TILLING OPERATIONS ARE TO REFRACATURE THE SOIL PROFILE THROUGH THE 12 INCH COMPACTION ZONE. SUBSTITUTE METHODS MUST BE APPROVED BY THE ENGINEER. ROTOTILLERS TYPICALLY DO NOT TILL DEEP ENOUGH TO REDUCE THE EFFECTS OF COMPACTION FROM HEAVY EQUIPMENT.



BIO-SWALE CROSS-SECTION
NOT TO SCALE

NOTE: SEE APPENDIX A IN THE 2000 MARYLAND STORMWATER DESIGN MANUAL, VOLUME II, FOR MORE INFORMATION. DO NOT PLANT TREES OR WOODY SHRUBS ON FILL EMBANKMENTS. DO NOT PLANT TREES WITHIN 15' OF TOE OF FILL EMBANKMENT, WITHIN 10' OF PERFORATED PIPES, OR WITHIN 10' OF OUTLET STRUCTURES.

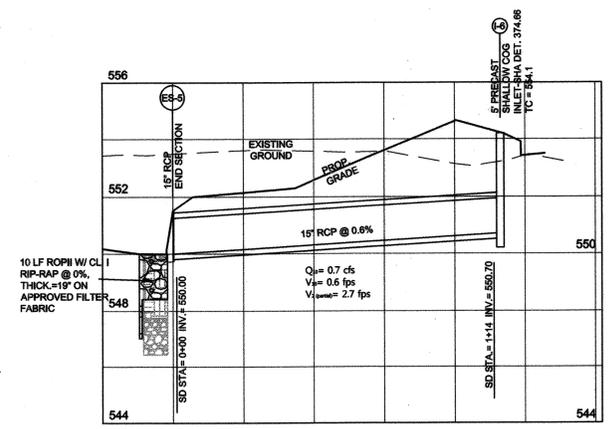
- SHRUB OPTIONS:
- BOTTLEBRUSH BUCKEYE
 - ARROWWOOD
 - BUTTONBUSH
 - SPICEBUSH
 - HIGHBUSH BLUEBERRY
 - BAYBERRY
 - INJERRY
 - WINTERBERRY
- HERBACEOUS OPTIONS:
- BROOMSEDGE
 - SWITCHGRASS
 - JOE PYE WEED
 - BROOM PANIC GRASS
 - THREE SQUARE BULRUSH
 - TALL CONEFLOWER
 - BLUE FLAG
 - WOOLGRASS
 - CARDINAL FLOWER
 - NEW YORK IRONWEED

MICRO-BIO. LANDSCAPE SPECS

Appendix B.4. Construction Specifications for Environmental Site Design Practices

Material	Specification	Size	Notes
Plantings	see Appendix A, Table A.4	n/a	plantings are site-specific
Planting soil [2' to 4' deep]	loamy sand (60 - 65%) & compost (35 - 40%) or sandy loam (30%), coarse sand (30%) & compost (40%)	n/a	USDA soil types loamy sand or sandy loam; clay content <5%
Organic content	Min. 10% by dry weight (ASTM D 2974)		
Mulch	shredded hardwood		aged 6 months, minimum; no pine or wood chips
Pea gravel diaphragm	pea gravel: ASTM-D-448	NO. 8 OR NO. 9 (1/8" TO 3/8")	
Curtain drain	ornamental stone: washed cobbles	stone: 2" to 5"	
Geotextile	AASHTO M-43	n/a	PE Type I nonwoven
Gravel (underdrains and infiltration berms)	AASHTO M-43	NO. 57 OR NO. 6 AGGREGATE (3/8" to 3/4")	
Underdrain piping	F 758, Type PS 28 or AASHTO M-278	4" to 6" rigid schedule 40 PVC or SDR35	Slotted or perforated pipe; 3/8" perf. @ 6" on center, 4 holes per row, minimum of 3" of gravel over pipes, not necessary underneath pipes. Perforated pipe shall be wrapped with 1/2-inch galvanized hardware cloth.
Poured in place concrete (if required)	MSHA Mix No. 3; F _c = 3500 psi @ 28 days, normal weight, air-entrained, reinforcing to meet ASTM-615-60	n/a	on-site testing of poured-in-place concrete required: 28 day strength and slump test; all concrete design (cast-in-place or pre-cast) not using previously approved State or local standards requires design drawings sealed and approved by a professional structural engineer licensed in the State of Maryland - design to include meeting ACI Code 350.2R/89, vertical loading [H-10 or H-30]; allowable horizontal loading (based on soil pressures), and analysis of potential cracking.
Sand	AASHTO-M-6 or ASTM-C-33	0.02" to 0.04"	Sand substitutions such as Diabase and Graystone (AASHTO) #10 are not acceptable. No calcium carbonated or dolomitic sand substitutions are acceptable. No "rock dust" can be used for sand.

B.4.7 Supp. 1
MICRO-BIO./BIO-SWALE SPECIFICATIONS



ES-5 TO I-6 STORM DRAIN PROFILE
SCALE- HORIZ = 1"=30'
VERT. = 1"=3'

FOR STORMWATER REVIEW ONLY
FREDERICK COUNTY, MARYLAND
DEVELOPMENT REVIEW, ENGINEERING

APPROVED: *David A. Gable* 12/3/15
DEVELOPMENT REVIEW CHIEF DATE

APPROVED: *[Signature]* 12/3/15
STORMWATER MANAGEMENT DATE

Reviewed in accordance with local County requirements. Frederick County assumes no liability for design and/or construction. Approval is valid for two (2) years from date of approval. Any design or construction after the last date shown above. The project must be under construction before approval expiration to be considered active. Otherwise, resubmission of plans, including applicable fees, must be made to Development Review for reapproval. Fees for resubmission cannot be waived.

REV. #	DATE	REVISION DESCRIPTION	ENGINEER/CONSULTANT DATE AND INITIAL	DEV. REVIEW DATE AND INITIAL
1	5-15-19	REV. PER TOWN, SCD/CO. RE-APPR.	8-28-19	9-12-19

TOWN OF MIDDLETOWN
PLANNING COMMISSION

APPROVED: *Cynthia K. Unangst* 9/10/2019
FOR: *Mark Conroy, P.E. Chairman* DATE

PROFESSIONAL ENGINEER'S CERTIFICATION

SIGNED BY: *Michael Lee Swanson* 8-28-19
MICHAEL LEE SWANSON, PE DATE
MD LICENSE NO.: 30736, P.E. EXPIRATION DATE: 08-03-20

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.

CALL "MISS UTILITY" AT 1-800-257-7777 FOR UTILITY LOCATIONS AT LEAST 48 HOURS PRIOR TO BEGINNING CONSTRUCTION.

Terra Solutions Engineering, LLC
Commercial & Residential Land Planning and Engineering
5216 Charmians Court, Suite 105
Frederick, MD 21703
Phone: 301-378-9442 Email: TerraSolutionsEngineering@gmail.com

Owner/Developer
CHESTERBROOK LAND, LLC
5310 Spectrum Blvd
Frederick, MD 21703

PROJECT No.: 0083
DATE: AUGUST 2019
SCALE: AS SHOWN
SHEET No. 5 of 13

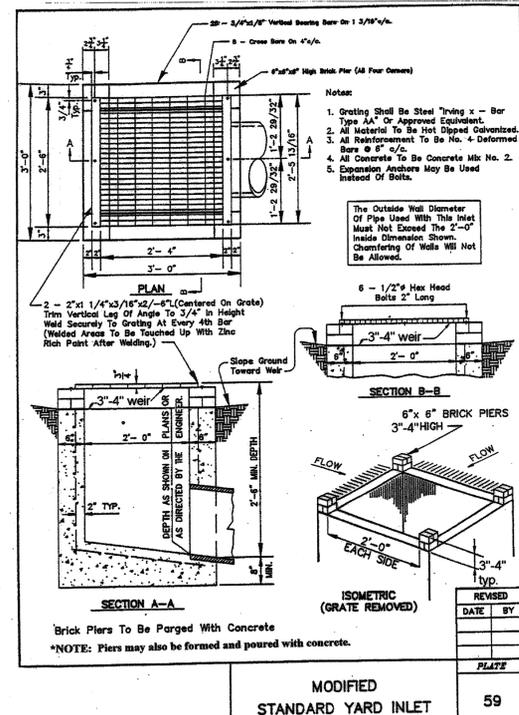
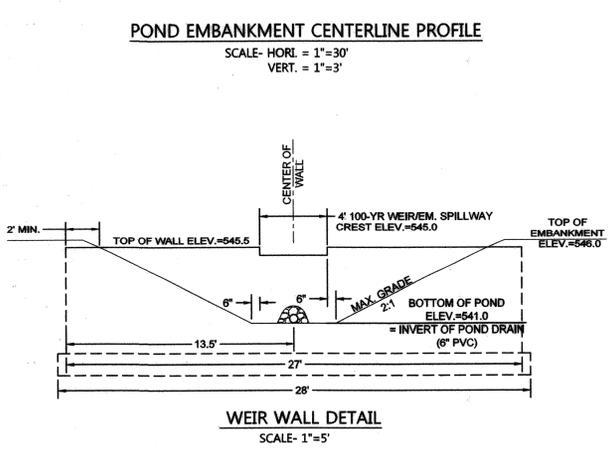
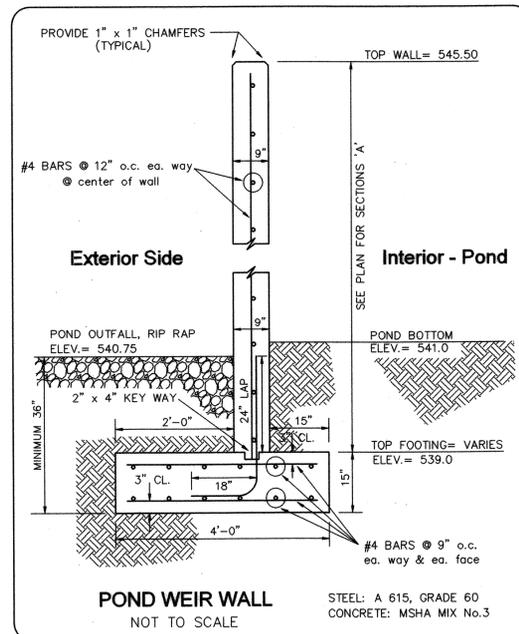
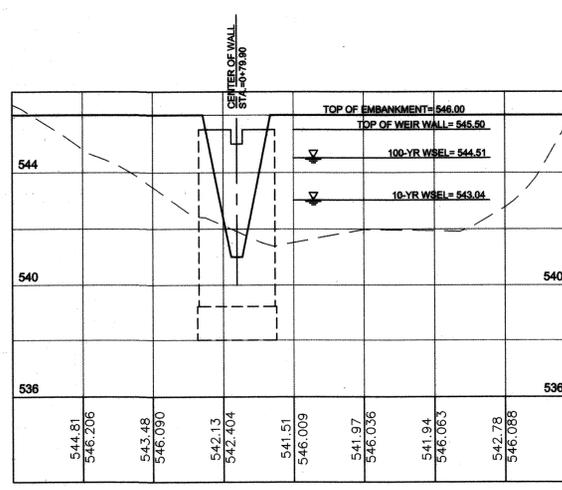
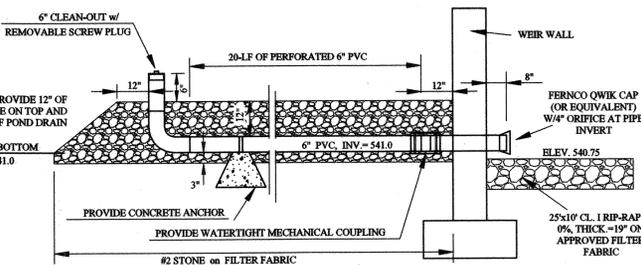
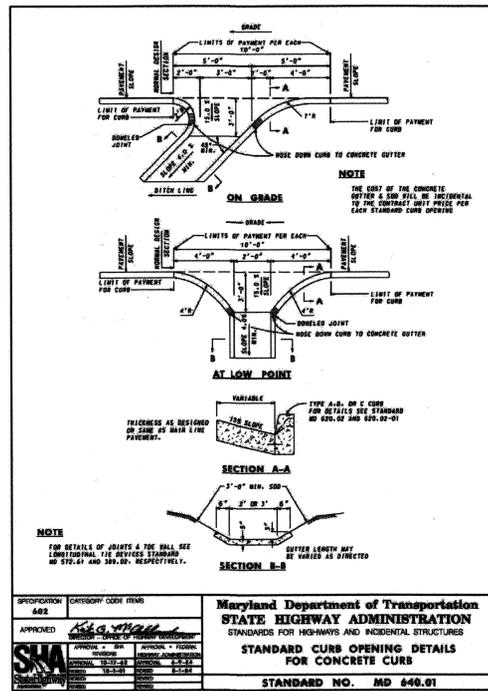
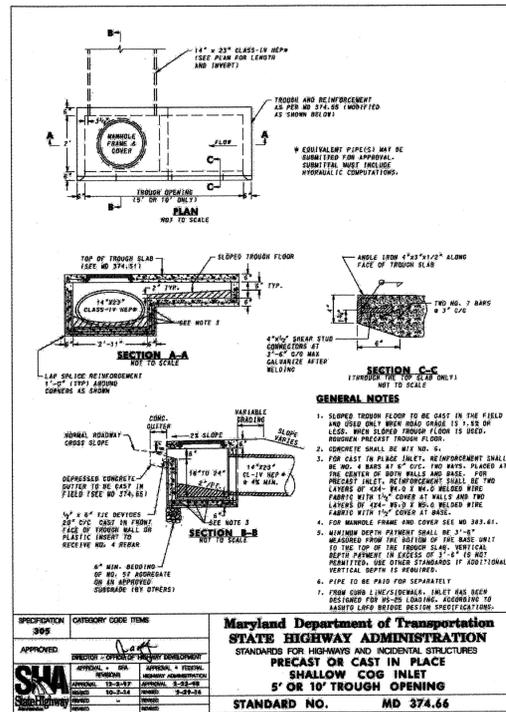
FRANKLIN COMMONS
(FORMERLY CHESTERBROOK - PHASE 2)
Situated at Broad Street and Franklin Street
MIDDLETOWN ELECTION DISTRICT No. 3
TOWN OF MIDDLETOWN
FREDERICK COUNTY, MARYLAND

IMPROVEMENT AND SWM DEV. PLANS - STORM DRAIN PROFILES & SWM DETAILS

NO. DATE REVISION DESCRIPTION

5-15-19 REV. PER TOWN, SCD/ COUNTY RE-APPROVAL

M.L.S. BY



Section 2721
Engineered Surface Drainage Products

GENERAL
PVC surface drainage inlets shall include the drain basin type as indicated on the contract drawing and referenced within the contract specifications. The ductile iron grates for each of these fittings are to be considered an integral part of the surface drainage inlet and shall be furnished by the same manufacturer. The surface drainage inlets shall be as manufactured by Nyloplast a division of Advanced Drainage Systems, Inc. or prior approved equal.

MATERIALS
The drain basins required for this contract shall be manufactured from PVC pipe stock, utilizing a thermofforming process to reform the pipe stock to the specified configuration. The drainage pipe connection shall be manufactured from PVC pipe stock and formed to provide a watertight connection with the specified pipe system. This joint tightness shall conform to ASTM D3212 for joints for drain and sewer plastic pipe using flexible elastomeric seals. The flexible elastomeric seals shall conform to ASTM F477. The pipe ball spigot shall be joined to the main body of the drain basin or catch basin. The raw material used to manufacture the pipe stock that is used to manufacture the main body and pipe stubs of the surface drainage inlets shall conform to ASTM D1784 cell class 12454.

The grates and frames furnished for all surface drainage inlets shall be ductile iron for sizes 8", 10", 12", 15", 18", 24" and 30" and shall be made specifically for each basin so as to provide a round bottom flange that closely matches the diameter of the surface drainage inlet. Grates for drain basins shall be capable of supporting various wheel loads as specified by Nyloplast. 12" and 15" square grates will be hinged to the frame using pins. Ductile iron used in the manufacture of the castings shall conform to ASTM A536 grade 70-50-06. Grates and covers shall be provided painted black.

INSTALLATION
The specified PVC surface drainage inlet shall be installed using conventional flexible pipe backfill materials and procedures. The backfill material shall be crushed stone or other granular material meeting the requirements of class 1 or class 2 material as defined in ASTM D2321. Bedding and backfill for surface drainage inlets shall be well graded and compacted uniformly in accordance with ASTM D2321. The drain basin body will be cut at the time of the final grade. No brick, stone or concrete block will be required to set the grate to the final grade height. For load rated installations, a concrete slab shall be poured under and around the grate and frame. The concrete slab must be designed taking into consideration local soil conditions, traffic loading, and other applicable design factors. For other installation considerations such as migration of rain, ground water, and soft foundations refer to ASTM D2321 guidelines.

NYLOPLAST 30" DRAIN BASIN: 2830AG_X

1. OVERSIZED CONCRETE SHALL BE DUCTILE IRON PER MANUFACTURER'S SPECIFICATIONS.
2. FRAMES SHALL BE DUCTILE IRON PER MANUFACTURER'S SPECIFICATIONS.
3. DRAIN BASIN SHALL BE MANUFACTURED ACCORDING TO MANUFACTURER'S RECOMMENDATION. THE DESIGN OR MODIFICATION OF THIS PRODUCT FOR CONCRETE, BRICK, OR OTHER MATERIALS IS NOT PERMITTED.
4. DRAINAGE CONNECTION (RIP-RAP, TRENCH) SHALL CONFORM TO MANUFACTURER'S RECOMMENDATION. THE DESIGN OR MODIFICATION OF THIS PRODUCT FOR CONCRETE, BRICK, OR OTHER MATERIALS IS NOT PERMITTED.
5. ADAPTERS CAN BE ORDERED AS SEPARATE ITEMS TO BE USED TO ATTACH TO OTHERS. SEE DRAWING NO. 205-110-111 FOR TRAFFIC INSTALLATION ANGLES BETWEEN ADAPTERS. SEE DRAWING NO. 205-110-112.

FRANKLIN COMMONS
(FORMERLY CHESTERBROOK - PHASE 2)
Situated at Broad Street and Franklin Street
MIDDLETOWN ELECTION DISTRICT No. 3
TOWN OF MIDDLETOWN
FREDERICK COUNTY, MARYLAND

FOR STORMWATER REVIEW ONLY
FREDERICK COUNTY, MARYLAND
DEVELOPMENT REVIEW, ENGINEERING

APPROVED: *David A. Gable* 12/3/15
DEVELOPMENT REVIEW CHIEF DATE

APPROVED: *[Signature]* 12/3/15
STORMWATER MANAGEMENT DATE

Revised in accordance with local County requirements. Frederick County assumes no liability for design and/or construction. Approval is valid for two (2) years (one (1) year if public water and/or sewerage) after the last date shown above. The project must be under construction before approval expires to be considered active. Obsolete, redundant or obsolete information must be made to Development Review for reapproval. Fees for resubmittal cannot be waived.

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1	5-15-19	REV. PER TOWN, SCD/ CO. RE-APPR	8-28-19	9-2-19

TOWN OF MIDDLETOWN
PLANNING COMMISSION

APPROVED: *Anthony K. Unsworth* 9/18/2019
DATE

APPROVED: *Sam Mark Conroy* PC Chairman

PROFESSIONAL ENGINEER'S CERTIFICATION

SIGNED BY: *Michael Lee Swanson* 8-28-19
DATE

MICHAEL LEE SWANSON, PE
MD LICENSE NO.: 30736, P.E. EXPIRATION DATE: 08-03-20

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.

Seal & Signature

PROJECT No.: 0083
DATE: AUGUST 2019
SCALE: AS SHOWN
SHEET No. 6 of 13

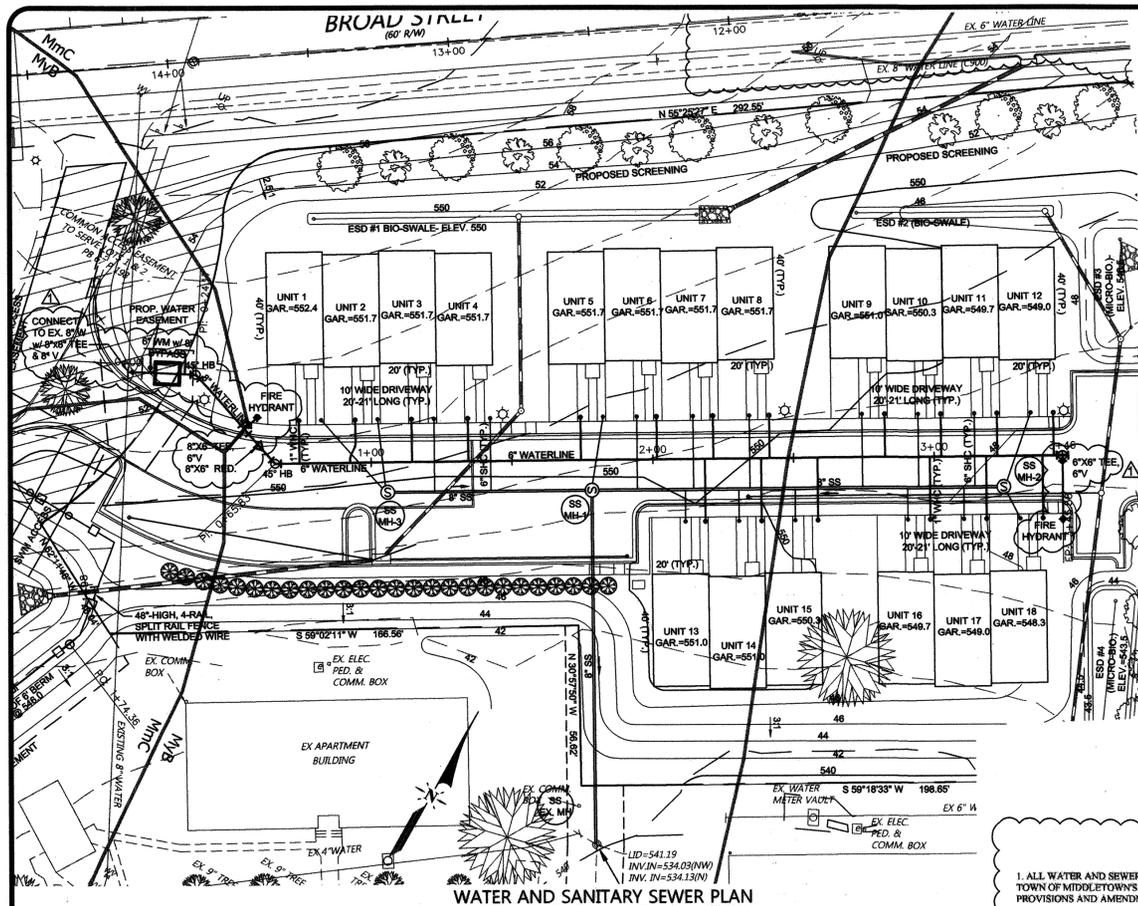
Terra Solutions Engineering, LLC
Commercial & Residential Land Planning and Engineering
5216 Chairmans Court, Suite 105
Frederick, MD 21703
Phone: 301-378-9642 Email: TerraSolutionsEngineering@gmail.com

Owner/Developer
CHESTERBROOK LAND, LLC
5510 Specter Lane
Frederick, MD 21703

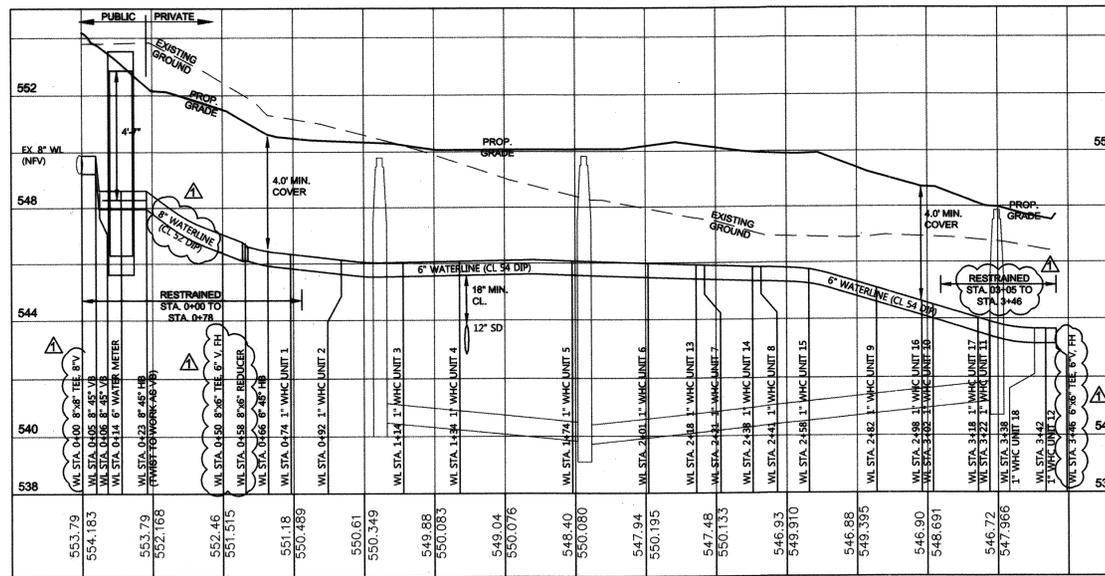
Franklin Commons
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Situated at Broad Street and Franklin Street
MIDDLETOWN ELECTION DISTRICT No. 3
TOWN OF MIDDLETOWN
FREDERICK COUNTY, MARYLAND

IMPROVEMENT AND SWM DEV. PLANS - STORM DRAIN AND SWM DETAILS

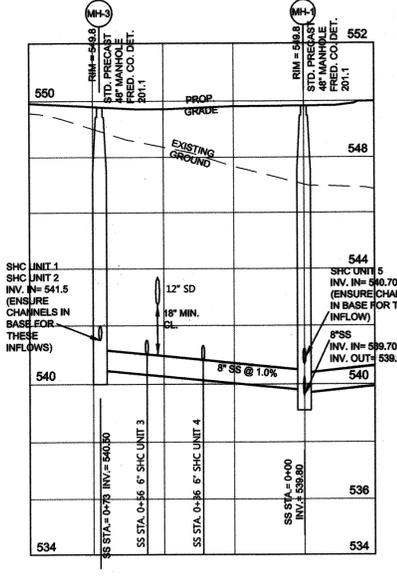
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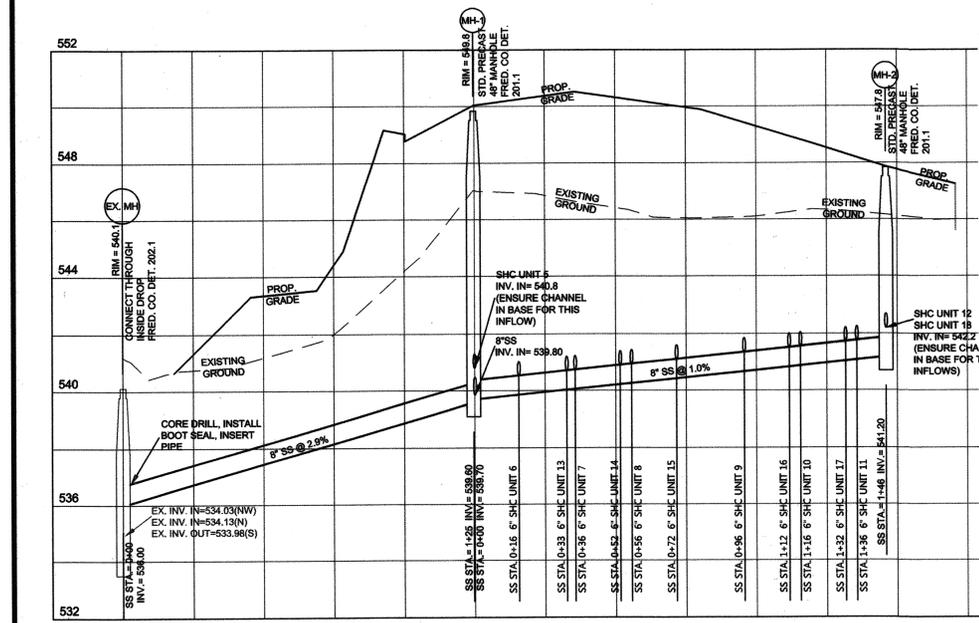
WATER AND SANITARY SEWER PLAN
SCALE: 1"=30'



WATERLINE PROFILE
SCALE: HORIZ = 1"=30'
VERT = 1"=3'



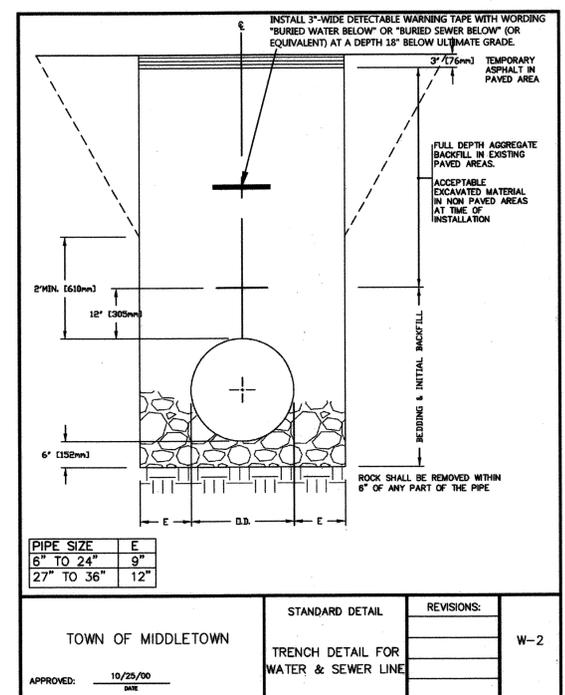
MH-1 TO MH-3 SAN. SEWER PROFILE
SCALE: HORIZ = 1"=30'
VERT = 1"=3'



EX-MH TO MH-2 SAN. SEWER PROFILE
SCALE: HORIZ = 1"=30'
VERT = 1"=3'

- WATER AND SEWER NOTES**
5/1/14, 1/28/16, 6/24/16, 8/17/18
1. ALL WATER AND SEWER CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE TOWN OF MIDDLETOWN'S DESIGN MANUAL ADOPTED JUNE 14, 1999, ANY SPECIAL PROVISIONS AND AMENDMENTS THERETO.
 2. THE CONTRACTOR SHALL NOT TAP OR OTHERWISE PENETRATE EXISTING WATER AND SEWER MAINLINES WITHOUT PRIOR APPROVAL FROM THE TOWN OF MIDDLETOWN.
 3. THE CONTRACTOR SHALL NOT OPERATE VALVES ON EXISTING WATER AND/OR SEWER MAINS WITHOUT PRIOR APPROVAL FROM THE TOWN OF MIDDLETOWN.
 4. THE CONTRACTOR IS RESPONSIBLE TO AVOID SPILLAGE OF RAW SEWAGE. THE CONTRACTOR SHALL FURNISH NECESSARY EQUIPMENT (SEWER PLUGGING, PUMPING, CONTAINMENT, ETC.) TO PREVENT SPILLAGE.
 5. EXCAVATION WITHIN A COUNTY ROAD RIGHT-OF-WAY WILL NOT BE ALLOWED WITHOUT OBTAINING A PERMIT FROM THE FREDERICK COUNTY DIVISION OF HIGHWAY OPERATIONS FOR THE INSTALLATION OF UTILITIES, STORM DRAINS, ETC. TELEPHONE IS 301-600-1564.
 6. EXISTING UTILITIES ARE SHOWN FROM THE BEST AVAILABLE RECORDS. THE CONTRACTOR SHALL TEST PIT IN THE AREA OF KNOWN UTILITIES TO VERIFY SIZE, ELEVATION, LOCATION AND TYPE PRIOR TO PERFORMING ANY WORK. ANY UTILITY, WHETHER SHOWN OR NOT, THAT IS DAMAGED BY THE CONTRACTOR SHALL BE REPAIRED IMMEDIATELY AT NO EXPENSE TO THE OWNER. SHOULD THE CONTRACTOR DISCOVER DISCREPANCIES BETWEEN THE PLANS AND FIELD CONDITIONS, THE OWNER IS TO BE NOTIFIED IMMEDIATELY. SHOULD THE CONTRACTOR MAKE FIELD CORRECTIONS OR ADJUSTMENTS WITHOUT THE AUTHORIZATION OF THE OWNER, THEN THE CONTRACTOR ASSUMES THE RESPONSIBILITY FOR SAID CORRECTIONS OR ADJUSTMENTS.
 7. ANY NECESSARY ADJUSTMENTS TO EXISTING MANHOLES, VALVE BOXES, ETC., ARE TO BE DONE SO BY THE CONTRACTOR. THE CONTRACTOR IS RESPONSIBLE FOR REMOVING AND REPLACING ANY EXISTING FENCES, DRIVEWAYS, SIGNS, DRAINAGE PIPES, MAILBOXES, SIGNPOSTS, TREES, ETC. DAMAGED OR REMOVED DURING CONSTRUCTION. ALL DISTURBED AREAS SHALL BE RETURNED TO THEIR ORIGINAL CONDITION OR BETTER.
 8. THE CONTRACTOR SHALL NOTIFY MISS UTILITY (1-800-257-7777) 72 HOURS PRIOR TO START OF CONSTRUCTION.
 9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR KEEPING SILT AND DEBRIS OUT OF THE SANITARY SEWER SYSTEM FOR THE DURATION OF THE CONTRACT.
 10. THE CONTRACTOR SHALL MAINTAIN ACCESS TO ALL PROPERTY OWNERS AT ALL TIMES. THE CONTRACTOR SHALL OBTAIN THE OWNER'S APPROVAL. WILL COORDINATE WITH PROPERTY OWNERS IF ACCESS MUST BE INTERRUPTED FOR SHORT TIME PERIODS.
 11. ALL WATER MAINS ARE TO BE DUCTILE IRON PIPE CLASS 52 FOR 8" DIAMETER AND LARGER OR AS REQUIRED BY THE DIRECTOR OF PUBLIC WORKS. 6" AND SMALLER DIAMETER SHALL BE CLASS 34 OR AS REQUIRED BY THE DIRECTOR. NO FOREIGN FITTINGS ARE PERMITTED IN THE TOWN SYSTEM. ALL FITTINGS AND VALVES SHALL BE ANCHORED WITH DUCTILE IRON RESTRAINING DEVICES AND ADJACENT PIPE SHALL BE ANCHORED FOR THE REQUIRED RESTRAINED LENGTH. SEE THE RESTRAINED LENGTH TABLE FOR ACTUAL REQUIREMENTS. ALL SANITARY SEWER IS TO BE PVC PIPE SDR 35 FOR DEPTHS OF 4 FEET TO 15 FEET. PVC C-400 SHALL BE USED FOR SEWER DEPTHS LESS THAN 4 FEET OR GREATER THAN 15 FEET. NO SEWER SHALL BE DEEPER THAN 18 FEET.
 12. 1" WATER HOUSE CONNECTIONS AND WATER SYSTEM APPURTENANCES SHALL BE IN ACCORDANCE WITH THE FOLLOWING:
 - A. CORPORATION STOPS: BY FORD METER BOX COMPANY CORPORATION STOP FORD FB 1000-Q, OR MUELLER B-2500R (1").
 - B. SEE TOWN STANDARD DETAILS FOR THE METER VAULT SETTING.
 13. ALL SEWER HOUSE CONNECTION CLEANOUTS AND WATER HOUSE CONNECTION CURB STOPS ARE TO BE LOCATED WITHIN 2' OF THE PROPERTY OR RIGHT OF WAY LINE AND IN LAWN AREAS.
 14. NO OUTSIDE DROPS SHALL BE PERMITTED ON SEWER MANHOLES IN THE TOWN SYSTEM. SEE THE TOWN DETAILS FOR THE STANDARD INSIDE DROP REQUIREMENTS. MANHOLE INTERIOR JOINTS DO NOT NEED TO BE PATCHED OR DAMP PROOFED. EXTERIOR JOINTS TO BE DAMP PROOFED WITH MASTIC.
 15. ALL SANITARY SEWER MANHOLES COVERS TO BE LABELED "TOWN OF MIDDLETOWN". ANY SANITARY SEWER MANHOLE THAT IS LOCATED IN GREEN SPACE AREAS SHALL BE CONSTRUCTED 1' HIGHER THAN FINISHED GRADE. MANHOLES SHALL BE CONSTRUCTED WITH "A-LOCK OR STAR SEAL STYLE PIPE TO MANHOLE SEALS. BOOT STYLE SHALL BE BY SPECIAL EXCEPTION GRANTED BY THE DIRECTOR OF OPERATIONS.
 16. CURBS TO BE PAINTED SAFETY YELLOW 7.5" EACH SIDE OF A FIRE HYDRANT.
 17. ANY STRUCTURES BUILT OVER OR IN ANY UTILITY EASEMENT WITHOUT PRIOR APPROVAL OF THE TOWN SHALL BE REMOVED AT THE OWNER'S EXPENSE.
 18. ALL SANITARY SEWERS AND SANITARY MANHOLES SHALL BE PRESTRESSED BY THE CONTRACTOR PRIOR TO SCHEDULING THE TOWN REPRESENTATIVE FOR FORMAL TESTING.
 19. ALL WATERLINE MATERIALS AND CASTINGS MUST BE DOMESTICALLY PRODUCED.

- APPROVED MATERIALS**
- WATER:**
GATE VALVES: APC 2500, MUELLER A2360, KENNEDY KENSEL II RW
FIRE HYDRANTS: APC 602B, MUELLER SUPER CENTURION, KENNEDY K81 (SAFETY RED ONLY)
VALVE BOXES AND CURB BOXES: DOMESTICALLY PRODUCED, CURB BOXES WITH KEY EXTENSION 18" MINIMUM.
1" WATER HOUSE CONNECTIONS AND WATER SYSTEM APPURTENANCES SHALL BE IN ACCORDANCE WITH THE FOLLOWING:
A. CORPORATION STOPS: BY FORD METER BOX COMPANY CORPORATION STOP FORD FB 1000-Q, OR MUELLER B-2500R (1").
B. SEE TOWN STANDARD DETAILS FOR THE METER VAULT SETTING.
- FOR EXISTING SERVICES THAT ARE 1/2", PROVIDE FOR FB 1000-Q OR MUELLER B-2500R (3/4"). FB 1000-Q (1-1/2"). CURB STOPS SHALL BE B44-533Q OR B-2509. TAPPING SADDLE FOR 1-1/2" AND ABOVE, FORD STAINLESS STEEL SADDLE WITH DUAL STAINLESS STEEL BANDS, STYLE PS231 FOR THE SIZE PIPE AND TAP NEEDED. OTHER ACCEPTABLE MANUFACTURER'S ARE ROMAC 306 AND SMITH BLAIR 372.
- COPPER TYPE K IN THE APPROPRIATE SIZE SHALL BE CONTINUOUS WITHOUT JOINTS FORM THE CORPORATION TO THE CURBSTOP UNLESS MANUFACTURER'S STANDARD ROLL SIZE IS PROHIBITED.
- TEMPORARY WATERLINE: MINIMUM 8" MAIN AND 1/2" SERVICE. SHUT OFF VALVE AT EACH SERVICE, DISINFECTED AT THE PROJECT SITE PRIOR TO CONNECTION. PROTECTED AS NEEDED FOR FREEZING AND TRAFFIC.
- GRADES SHALL BE MAINTAINED BY SETTING UP ADDITIONAL STAKES FROM THE STAKEOUT AND USING STRINGLINE BETWEEN. LEVEL OFF THE STRINGLINE OR STAKES TO SET THE SUBGRADE AND TOP OF PIPE.
- SERVICE LINES SHALL BE BEDDED IN NATURAL SAND AND BACKFILLED TO 12 INCHES ABOVE THE PIPE IN ACCORDANCE WITH THE APPROVED PLANS. FOR MAINS IN EXISTING ROADWAYS, SERVICE LINES SHALL BE BACKFILLED TO ROAD SUBGRADE WITH D36 (FULL DEPTH). PROVIDE DETECTABLE TAPE 12" ABOVE THE PIPE. PROVIDE 10 GA COPPER INSULATED TRACER WIRE FROM V3 TO V3.
- INTERIOR OF PIPE SHALL BE FREE OF ROCKS, STONES AND OTHER DEBRIS THAT CANNOT BE FLUSHED OUT OF THE SYSTEM. UTILITY CONFLICTS SHALL BE BROUGHT TO THE ATTENTION OF THE DIRECTOR OF OPERATIONS. ALL FITTINGS AND VALVES SHALL EMPLOY DUCTILE IRON RESTRAINING DEVICES AND PIPE IN THE RESTRAINED ZONE (RESTRAINED LENGTH TABLE IS ON PLANS AND TYPICALLY SHOWN ON THE PROFILE) SHALL BE RESTRAINED BY USE OF "FIELD LOCK" GASKETS OR EQUAL. RED TAPE SHALL BE APPLIED TO THE JOINT UTILIZING A "FIELD LOCK" GASKET. FINISHED GRADE AT THE HYDRANTS SHALL BE A MINIMUM OF 18 INCHES BELOW THE STEAMER NUT AND PREFERABLY AT 4 TO 6 INCHES BELOW THE BRAKE AWAY FLANGE.
- AFTER CONSTRUCTION OF THE LINE, FLUSH AND PERFORM A HYDROSTATIC TEST (NORMALLY 150 PSI AT THE HIGH POINT FOR 2 HOURS WITH CALCULATED PERMISSIBLE LEAKAGE). PRESSURE ON THE LINE MUST BE MAINTAINED WITHIN 5 PSI TO 150 PSI. A METER OR GRADUATED CONTAINER MUST BE PROVIDED FOR THE GAUGING AND MEASUREMENT. RESIDUAL CHLORINE WILL BE MEASURED BY THE TOWN AND MUST BE 10PPM AFTER 24 HOURS. A BACTERIA TEST AND POSITIVE RESULTS WILL BE REQUIRED PRIOR TO WHC'S BEING INSTALLED. (A MINIMUM OF 2 SAMPLES SHALL BE TESTED.)
- WHC COPPER SHALL BE BEDDED IN NATURAL SAND (NO LIMESTONE SAND). CURB BOXES SHALL BE SET AT A MAXIMUM OF 2 FEET INSIDE THE PROPERTY LINE. 18 TO 24 INCH DETAILS SHALL BE PROVIDED ON THE HOUSE SIDE OF THE CURB STOP. THE END OF THE PROFILE MAY BE PLUGGED WITH AN ADAPTER AND FLOO OR THE COPPER MAY BE BENT OVER AND MADE WATER TIGHT. WHERE SERVICES ARE EXISTING THE CONTRACTOR SHALL CONNECT TO SERVICE PIPE WITH THE APPROPRIATE CONNECTOR.
- FINAL TIE-IN OF THE NEW WATERLINE SHALL BE VISUALLY INSPECTED BY THE TOWN. PROVIDE DUCTILE IRON RESTRAINING DEVICES ON THE SOLID SLEEVES.
- VALVE BOX ADJUSTMENTS: INITIAL: SET TO 1/2" BELOW BINDER ELEVATION. FINAL: USE 1-1/2" ADJUSTMENT RISE ("RIDE HEIGHT").
- FIRE HYDRANTS MUST BE SAFETY RED FROM THE FACTORY. FIELD PAINTING IS NOT ACCEPTABLE.
- ALL SERVICES MUST BE VISUALLY INSPECTED BY THE TOWN. THE CONTRACTOR SHALL MEASURE ALL SERVICE LINES FROM THE CORPORATION STOP TO THE CURB STOP AND THE CURB STOP TO 2 CORNERS OF THE SIDEWALK.
- ALL 1-1/2" AND 2" WHC PIPING SHALL BE SDR-11, 160 PSI, HDPE PIPING WITH APPROPRIATE FITTINGS, NSP-61 APPROVED. TAPPING SADDLE FOR 1-1/2" AND ABOVE, FORD STAINLESS STEEL SADDLE WITH DUAL STAINLESS STEEL BANDS, STYLE PS231 FOR THE SIZE PIPE AND TAP NEEDED. OTHER ACCEPTABLE MANUFACTURER'S ARE ROMAC 306 AND SMITH BLAIR 372.



PIPE SIZE	E
6" TO 24"	9"
27" TO 36"	12"

TOWN OF MIDDLETOWN
STANDARD DETAIL
TRENCH DETAIL FOR WATER & SEWER LINE
APPROVED: 10/25/00
REV: W-2

TOWN OF MIDDLETOWN
PLANNING COMMISSION

APPROVED: *For Mark Conroy, P.C. Chairman* DATE: 7/17/2017

PROFESSIONAL ENGINEER'S CERTIFICATION

SIGNED BY: *Michael Lee Swanson* DATE: 8-20-17
MICHAEL LEE SWANSON, PE
MD LICENSE No.: 30736, P.E. EXPIRATION DATE: 08-03-20
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.

CALL "MISS UTILITY" AT 1-800-257-7777 FOR UTILITY LOCATIONS AT LEAST 48 HOURS PRIOR TO BEGINNING CONSTRUCTION.

FRANKLIN COMMONS
(FORMERLY CHESTERBROOK - PHASE 2)
Situated at Broad Street and Tremble Street
MIDDLETOWN ELECTION DISTRICT No. 3
FREDERICK COUNTY, MARYLAND

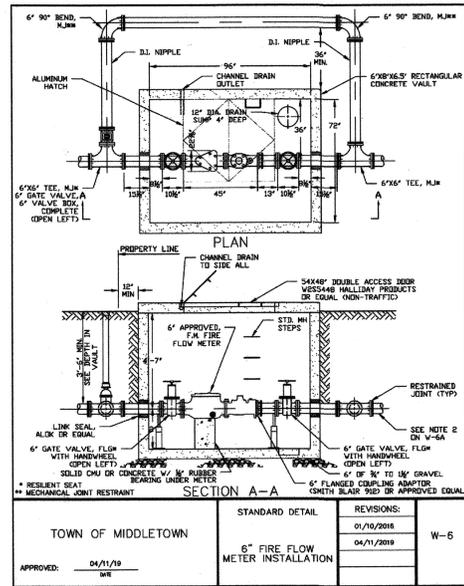
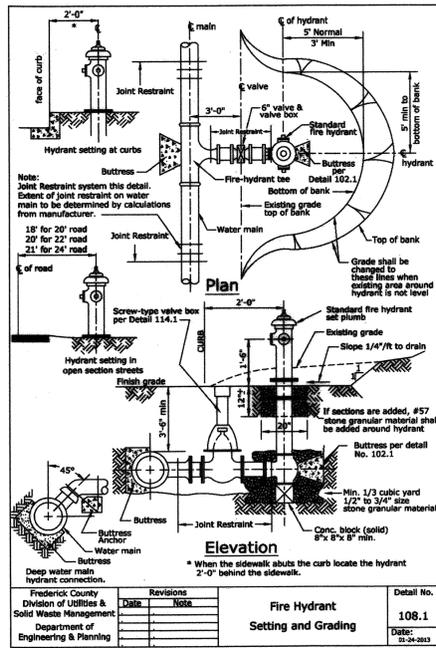
Terra Solutions Engineering, LLC
Commercial & Residential Land Planning and Engineering
528 Chairmans Court, Suite 105
Frederick, MD 21703
Phone: 301-378-9842 Email: TerraSolutionsEngineering@gmail.com

Owner/Developer
CHESTERBROOK LAND, LLC
5310 Spectrum Drive
Frederick, MD 21703



PROJECT No.: 0083
DATE: AUGUST 2019
SCALE: AS SHOWN
SHEET No. 7 of 13

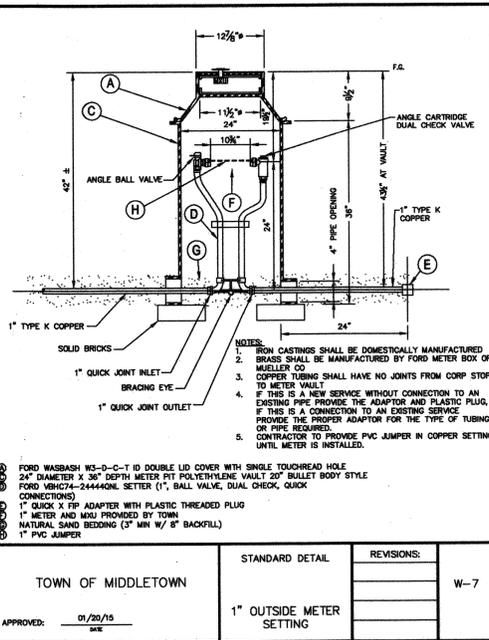
NO.	DATE	REVISION	DESCRIPTION
1	5-15-19	REV. PER TOWN, SCD COUNTY RE-APPROVAL	MLS



- 6" METER VAULT NOTES
- EMBEDDED HATCH DRAIN SHALL BE PIPED TO DRAIN THROUGH THE EDGE OF THE TOP SLAB WITH A MINIMUM 1" DIAMETER PVC PIPE. HATCH TO BE CENTER ON THE METER. PROVIDE HALLDAY PRODUCTS OR EQUAL OF EQUAL.
 - ALL PIPE JOINTS FROM THE TEES ON EACH SIDE OF THE VAULT SHALL BE MECHANICALLY RESTRAINED WITH RESTRAINING GASKETS FOR A MINIMUM OF 36 FEET.
 - PIPE SUPPORT SHALL BE "STANDON" MODEL S89 FLANGE SUPPORTS WHERE INDICATED.
 - VAULT SHALL BE PRECAST FROM A MANUFACTURER THAT IS A MEMBER NPCC OR CERTIFIED BY THE MSHA AS A PRODUCER OF PRECAST PRODUCTS FOR SHA USE. VAULT SHALL BE REINFORCED FOR H-20 LOADING AND THE ACCESS HATCH SHALL SUPPORT A LOADING OF 300 PSF. VAULT PIPE PENETRATIONS SHALL BE LINK SEAL OR A-HOOK STYLE SEAL. BOOT STYLE SEALS ARE NOT ACCEPTABLE. OUTSIDE OF VAULT SHALL BE DAMP PROOFED WITH SHERWIN-WILLIAMS SHER TAP DPOY OR EQUAL. ALL VAULTS SHALL BE LOCATED IN GRASS AREAS OUTSIDE OF TRAFFIC AREAS.
 - EXTERIOR FITTING TO BE 1/2" WITH MECHANICAL JOINT RESTRAINTS. PIPE TO BE CLASS 54. INTERIOR FITTING AND PIPE SHALL BE FLANGED CLASS 53. ALL IRON, PIPE AND FITTINGS SHALL BE OF DOMESTIC ORIGIN.
 - STEPS SHALL BE STANDARD PLASTIC COATED STEEL MANHOLE STEPS WITH BILCO LADDERPUP OR EQUAL INSTALLED.
 - SLOPE FLOOR TO DRAIN SUMP.
 - METER IS SUPPLIED BY THE TOWN FOR INSTALLATION BY OTHERS.
 - FOR FIRE FLOW ONLY THE INTERNAL LOW FLOW BYPASS IS NOT PROVIDED NOR IS THE DETECTOR CHECK FOR INSTALLATIONS WITHOUT THE DETECTOR CHECK LENGTHEN THE LARGE 4" PLAN END PIECE BETWEEN THE METER AND THE GATE VALVE. BE SURE THE METER REMAINS IN THE HATCH OPENING.
 - SEE MIDDLETOWN MARYLAND STANDARD WATER AND SEWER NOTES FOR ADDITIONAL INFORMATION.
 - A DIAL CHECK MUST BE PROVIDED INSIDE THE BUILDING.

TOWN OF MIDDLETOWN	STANDARD DETAIL	REVISIONS:
		04/11/2019 W-6A

APPROVED: 04/11/19 DATE: WE



PIPE RESTRAINING LENGTHS
EBBA IRON SALES, INC.
MEGA LUG

PIPE SIZE	FITTING	SOIL TYPE	BEDDING	TEST PRESS	DOB	SF	RESTRAINED LENGTH	
8" DIP	1 1/2" BEND	C.I.	SOL	150 PSI	3.5FT	2.1	3 FEET	
	2 1/2" BEND	C.I.	SOL	150 PSI	3.5FT	2.1	5 FEET	
	45 HORIZ BEND	C.I.	SOL	150 PSI	3.5FT	2.1	14 FEET	
	45 VERT BEND	C.I.	SOL	150 PSI	3.5FT	2.1	24 UPPER/12 LOWER	
	90 BEND	C.I.	SOL	150 PSI	3.5FT	2.1	30 FEET	
	CAP	C.I.	SOL	150 PSI	3.5FT	2.1	41 FEET	
	TEE	C.I.	SOL	150 PSI	3.5FT	2.1	13 FEET	
	10" DIP	1 1/2" BEND	C.I.	SOL	150 PSI	3.5FT	2.1	3 FEET
		2 1/2" BEND	C.I.	SOL	150 PSI	3.5FT	2.1	7 FEET
		45 HORIZ BEND	C.I.	SOL	150 PSI	3.5FT	2.1	14 FEET
45 VERT BEND		C.I.	SOL	150 PSI	3.5FT	2.1	27 UPPER/12 LOWER	
90 BEND		C.I.	SOL	150 PSI	3.5FT	2.1	33 FEET	
CAP		C.I.	SOL	150 PSI	3.5FT	2.1	46 FEET	
TEE		C.I.	SOL	150 PSI	3.5FT	2.1	21 FEET BRANCH SIDE	
10 X 8		C.I.	SOL	150 PSI	3.5FT	2.1	7 FEET BRANCH SIDE	
12" DIP		1 1/2" BEND	C.I.	SOL	150 PSI	3.5FT	2.1	4 FEET
		2 1/2" BEND	C.I.	SOL	150 PSI	3.5FT	2.1	8 FEET
	45 HORIZ BEND	C.I.	SOL	150 PSI	3.5FT	2.1	16 FEET	
	45 VERT BEND	C.I.	SOL	150 PSI	3.5FT	2.1	33 UPPER/19 LOWER	
	90 BEND	C.I.	SOL	150 PSI	3.5FT	2.1	39 FEET	
	CAP	C.I.	SOL	150 PSI	3.5FT	2.1	56 FEET	
	TEE	C.I.	SOL	150 PSI	3.5FT	2.1	21 FEET BRANCH SIDE	
	12 X 8	C.I.	SOL	150 PSI	3.5FT	2.1	5 FEET BRANCH SIDE	
	12 X 6	C.I.	SOL	150 PSI	3.5FT	2.1	5 FEET BRANCH SIDE	
		C.I.	SOL	150 PSI	3.5FT	2.1	5 FEET BRANCH SIDE	

DOB= DEPTH OF BURY (DEEPER IS MORE CONSERVATIVE)
SF= SAFETY FACTOR
BEDDING= LOOSE SOIL BEDDING (4" MAX) WITH SOL. BACKFILL
SOIL TYPE = C.I. IS CLAY LOAM, G2 IS CLAYEY GRAVELS, SHALES. THESE ARE TYPICAL MIDDLETOWN SOILS.
FIELD LUG GASKETS ARE PERMITTED FOR USE IN THE RESTRAINED ZONE. APPLY RED FIELD LUG TAPE TO THE JOINT.

TOWN OF MIDDLETOWN	STANDARD DETAIL	REVISIONS:
		02/11/02 W-4

APPROVED: 02/11/02 DATE

NO.	DATE	REVISION	DESCRIPTION
	5-15-19		REV. PER TOWN, SCDI COUNTY RE-APPROVAL

FRANKLIN COMMONS
(FORMERLY CHESTERBROOK - PHASE 2)
Sited at Broad Street and Franklin Street
MIDDLETOWN ELECTION DISTRICT No. 3
TOWN OF MIDDLETOWN
FREDERICK COUNTY, MARYLAND

IMPROVEMENT AND SWM DEVELOPMENT PLANS - WATER DETAILS

Terra Solutions Engineering, LLC
Commercial & Residential Land Planning and Engineering
5216 Chairmans Court, Suite 105
Frederick, MD 21703
Phone: 301-376-9842 Email: TerraSolutionsEngineering@gmail.com

Owner/Developer
CHESTERBROOK LAND, LLC
2019-2020
Frederick, MD 21703

PROFESSIONAL ENGINEER'S CERTIFICATION

SIGNED BY: *Michael Lee Swanson* 8-28-19
MICHAEL LEE SWANSON, PE DATE
MD LICENSE No.: 30736, P.E., EXPIRATION DATE: 08-03-20

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.

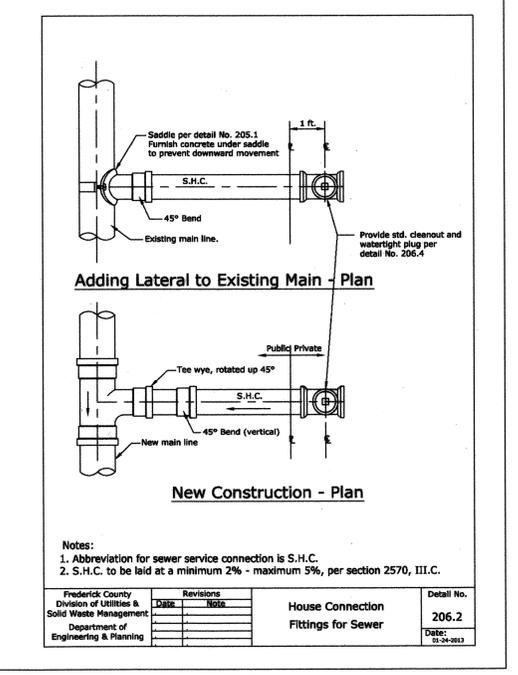
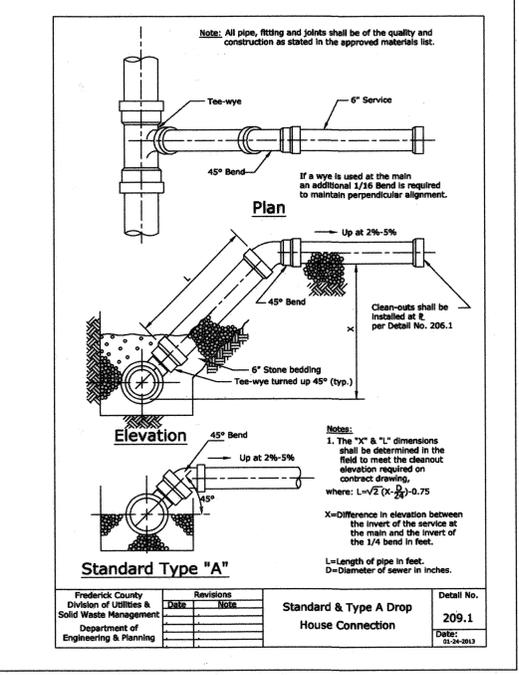
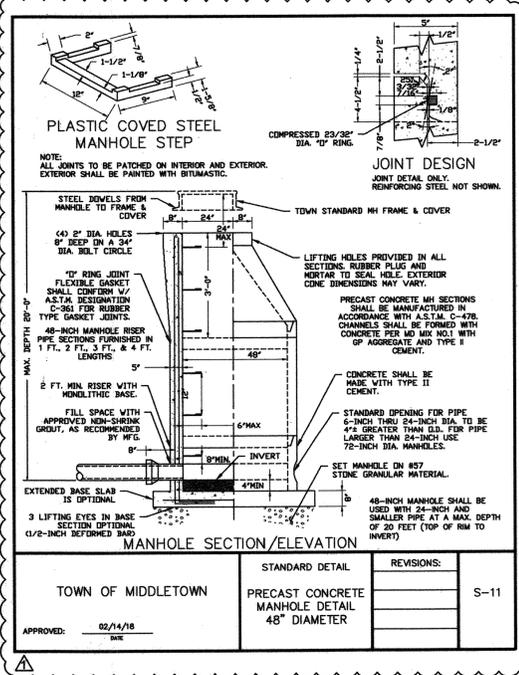
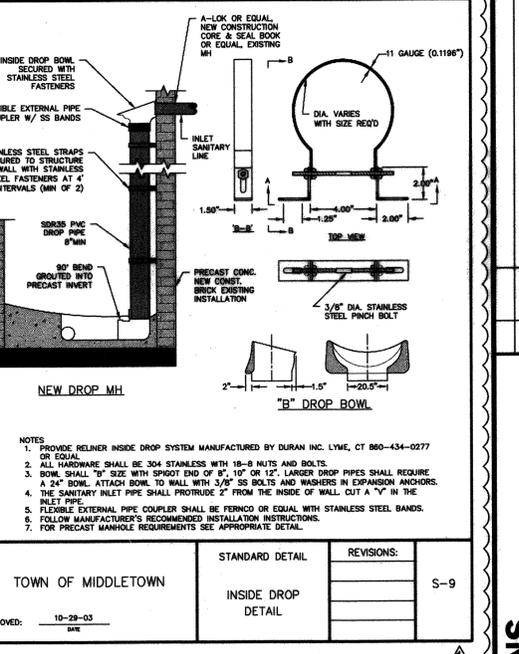
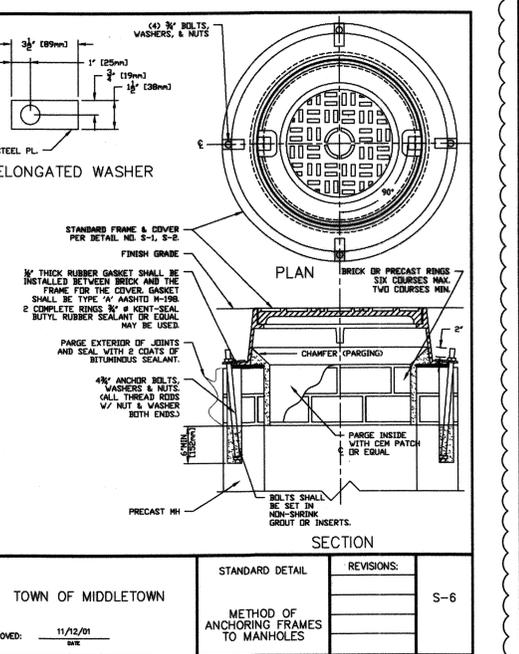
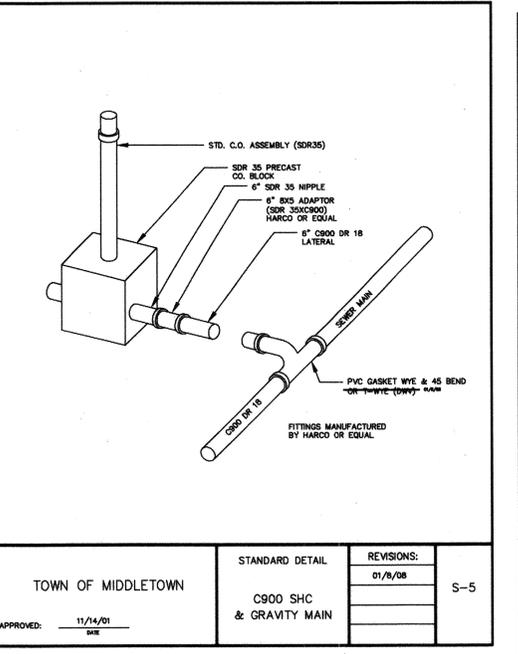
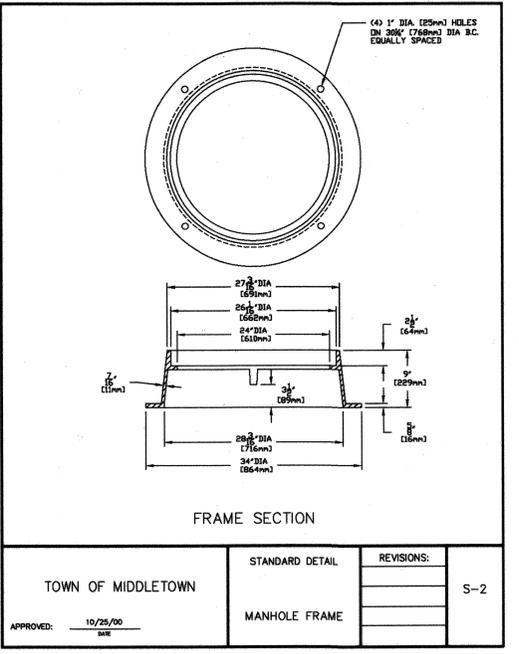
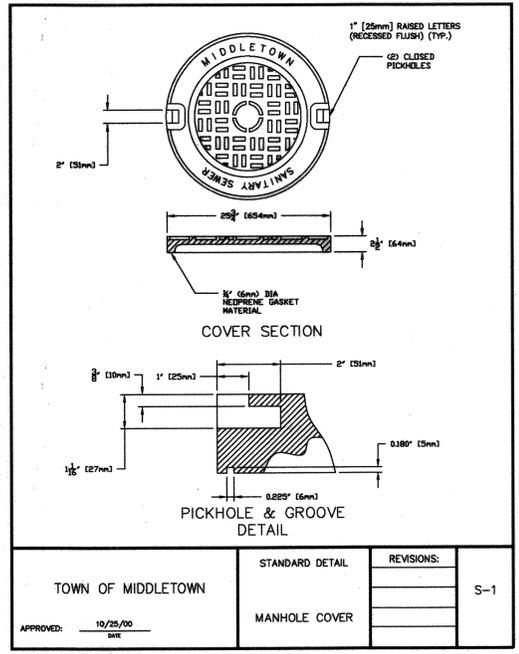
Seal & Signature

TOWN OF MIDDLETOWN
PLANNING COMMISSION

Lythia R. Vannoy 9/18/2019
APPROVED DATE
Fr. Mark Carney, PE, Chairman

PROJECT No.: 0083
DATE: AUGUST 2019
SCALE: NO SCALE
SHEET No. 8 of 13

CALL "MISS UTILITY" AT 1-800-257-7777 FOR UTILITY LOCATIONS AT LEAST 48 HOURS PRIOR TO BEGINNING CONSTRUCTION.



SEWER SERVICE CONNECTIONS

UNIT #	LOWEST FLOOR ELEV.	CLEANOUT ELEV.	PROP. GRADE ELEV.	SSC SLOPE	SSC TYPE	STATION	U/S MH	D/S MH	LENGTH	DEPTH	REMARKS
1	553.6	542.8	551.3	4%	SSC	MH-3					
2	552.9	542.4	550.9	4%	SSC	MH-3					
3	552.9	542.0	550.9	4%	SSC	MH-3					
4	552.9	541.8	550.9	4%	SSC	MH-5					
5	552.9	541.7	550.9	4%	SSC	MH-5					
6	552.9	541.5	550.9	4%	SSC						
7	552.9	541.7	550.9	4%	SSC						
8	552.9	541.9	550.6	4%	SSC						
9	552.2	542.4	549.7	4%	SSC						
10	551.5	542.55	549.2	4%	SSC						
11	550.9	542.75	548.7	4%	SSC						
12	550.2	543.20	548.3	4%	SSC	MH-2					
13	552.2	541.15	550.4	4%	SSC						
14	552.2	541.35	550.1	4%	SSC						
15	551.5	541.55	549.6	4%	SSC						
16	550.9	541.95	548.7	4%	SSC						
17	550.2	542.15	548.3	4%	SSC						
18	549.5	542.60	547.9	4%	SSC	MH-2					

REQUIREMENTS FOR TELEVISIONING SANITARY SEWER LINES
(UPDATED SEPTEMBER 2013)

All PUBLIC gravity sewer lines and laterals shall be televised as a condition of inspection in order to obtain conditional/operational acceptance. Televising shall be done in accordance with Section 2571. I.A.2. Televising firms must be submitted and approved by the Town of Middletown prior to their use. The DVD must be viewed and approved by the Town of Middletown prior to acceptance of the sewer mains and laterals and placing any portion of the system into service.

The following procedures must be followed:

- All sewer mains and laterals for the project must be installed, backfilled and compaction tests reviewed and approved by the Town of Middletown prior to televising.
- Complete all pressure tests, deflection tests and MH vacuum tests prior to televising.
- All mains and laterals shall be flushed with water, dyed red, in a manner sufficient to remove all dirt and debris and provide enough water to discern any standing water. Flushing will take place no earlier than 48 hr prior to televising and will be witnessed by the Town of Middletown inspector. Contractor shall ensure that no construction debris is flushed into the receiving sewer.
- Stand pipes to laterals will be labeled with lot #, etc. with a bold, black, permanent marker by the contractor and verified by the inspector as correct. Put the lot # with the camera prior to inserting camera into the cleanout stack.
- Project name, number, date, time, type and size of pipe and MH #-MH # or lot # will be displayed on the screen at all times and not obscure the view of the sewer pipe. There will be a running count of the linear footage shown on the screen.
- After televising and prior to Conditional Acceptance, if the Town of Middletown determines that any infiltration, debris or damage may have occurred on any main or lateral they will be flushed and televised again.
- All lines and laterals will be placed on one DVD if space permits (if not, place mains on one DVD and laterals on another.) in a format that can be viewed on Windows Media Player or Real Player. A written report will be provided from the televising company containing a log noting the information in item 5 above, the general condition of the line/lateral and any specific features. The main lines and laterals log will be in the same sequence as shown on the DVD.
- Tolerances:
 - No dirt, stone or other debris permitted in mains or laterals.
 - No standing water in laterals.
 - The decision to allow any standing water in mains will be determined by the Town of Middletown based on pipe diameter, % slope and/or other factors as determined by the Town of Middletown.

Notes:
1. Abbreviation for sewer service connection is S.H.C.
2. S.H.C. to be laid at a minimum 2% - maximum 5%, per section 2570, III.C.

TOWN OF MIDDLETOWN
PLANNING COMMISSION

APPROVED: *Cynthia R. Unsworth* 9/18/2019
DATE: 9/18/2019
FOR: *Mark Conroy* PE Chairman

PROFESSIONAL ENGINEER'S CERTIFICATION

SIGNED BY: *Michael Lee Swanson* 8-20-19
DATE: 8-20-19
MICHAEL LEE SWANSON, PE
MD LICENSE No.: 30736, P.E. EXPIRATION DATE: 08-03-20

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.

Scale & Signature

FRANKLIN COMMONS
(FORMERLY CHESTERBROOK - PHASE 2)
Situated at Broad Street and Franklin Street
MIDDLETOWN ELECTION DISTRICT No. 3
TOWN OF MIDDLETOWN
FREDERICK COUNTY, MARYLAND

IMPROVEMENT AND SWM DEVELOPMENT PLANS - SEWER DETAILS

Terra Solutions Engineering, LLC
Commercial & Residential Land Planning and Engineering
5216 Charmans Court, Suite 105
Frederick, MD 21703
Phone: 301-378-9842 Email: TerraSolutionsEngineering@gmail.com

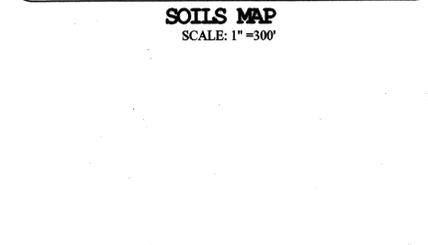
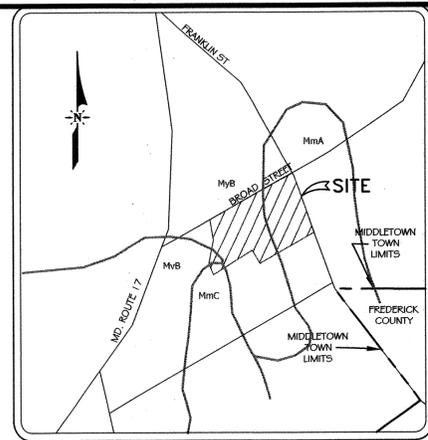
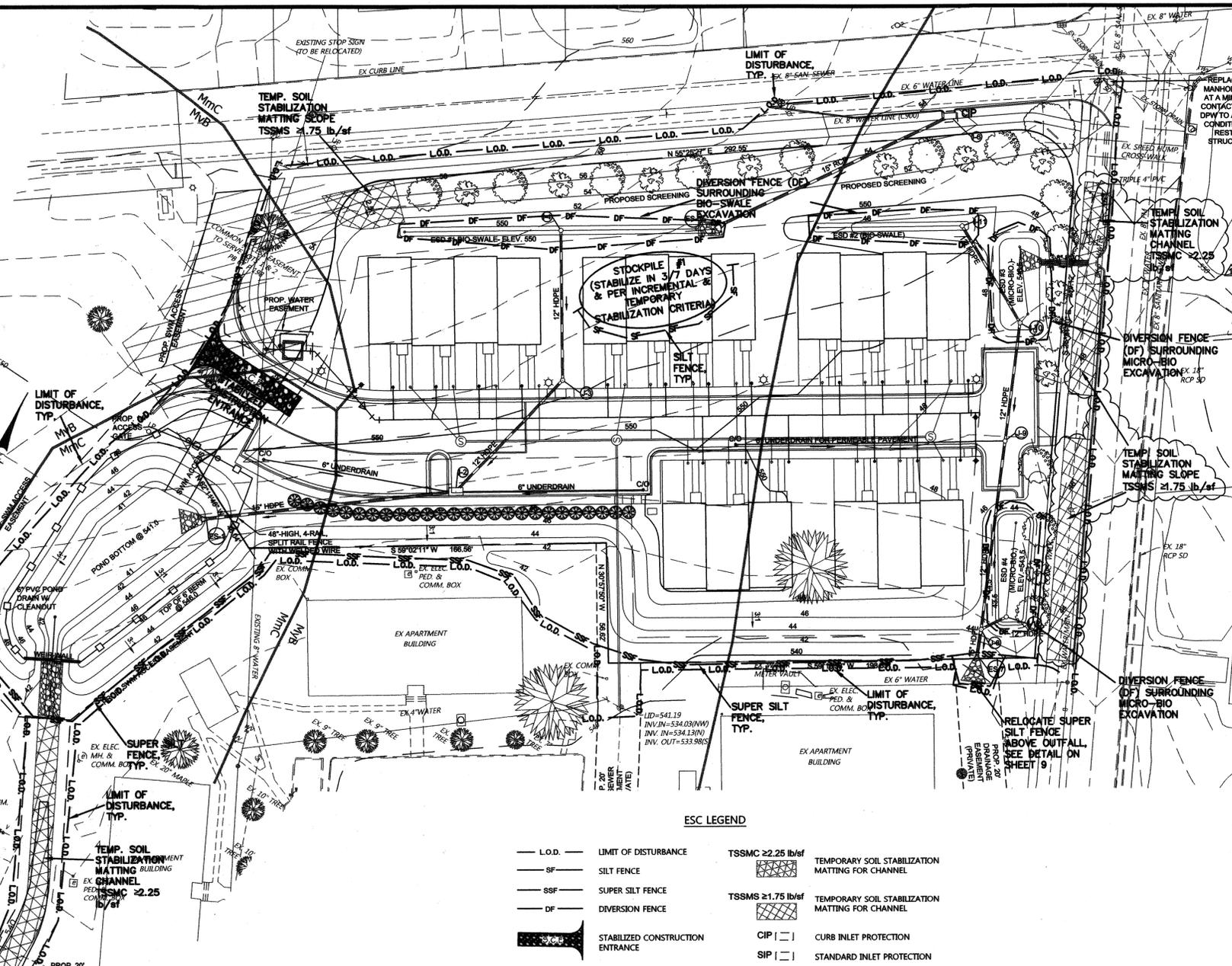
Owner/Developer
CHESTERBROOK LAND, LLC
3510 Spang Road
Frederick, MD 21703

PROJECT No.: 0083
DATE: AUGUST 2019
SCALE: NO SCALE
SHEET No. 9 of 13

INC. DATE: 5-15-19
REV. PER TOWN/SCD COUNTY RE-APPROVAL: REVISION

SEQUENCE OF CONSTRUCTION:

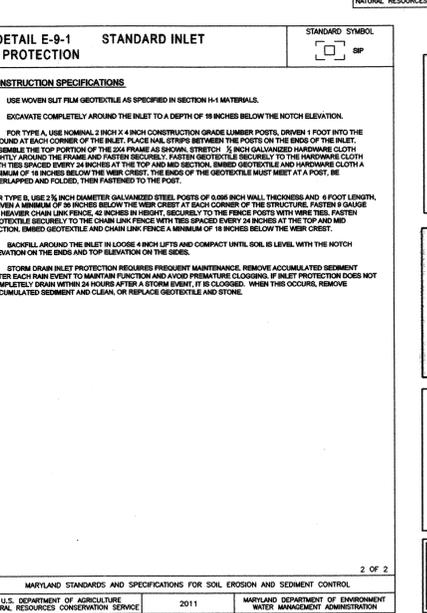
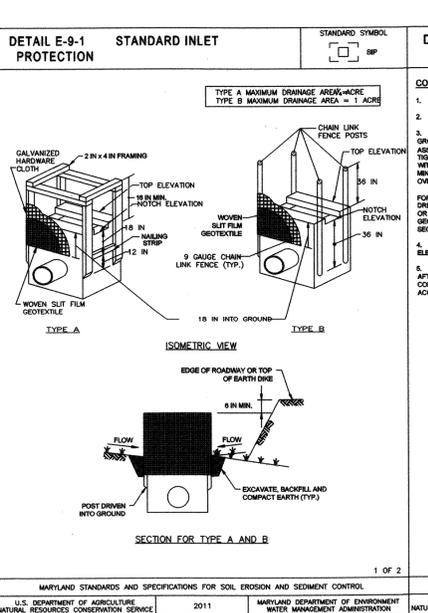
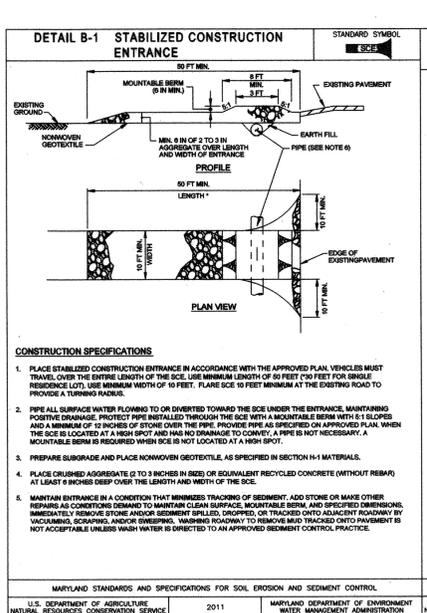
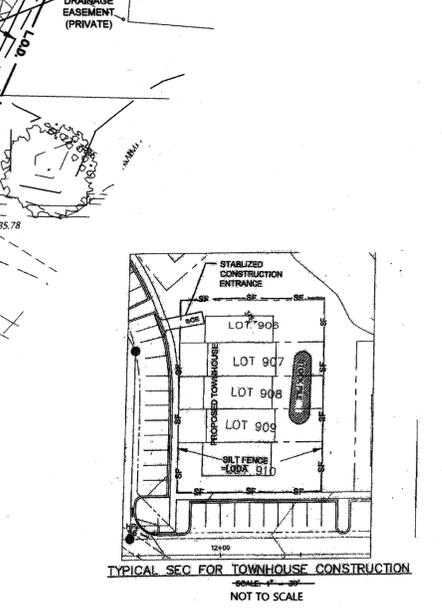
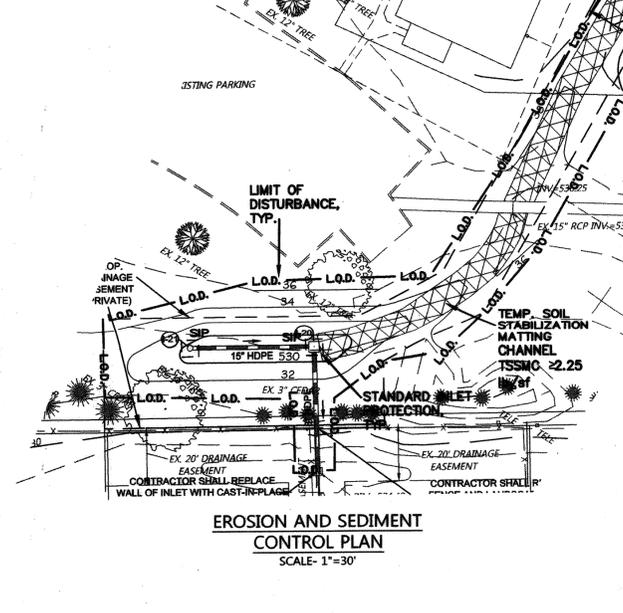
1. THE CONTRACTOR SHALL NOTIFY MISS UTILITY AT 1-800-257-7777 AT LEAST 3 WORKING DAYS BEFORE PERFORMING ANY WORK.
2. CONTACT THE FREDERICK COUNTY ENVIRONMENTAL COMPLIANCE SECTION (ECS) AT 301-600-3507 TO SCHEDULE A PRE-CONSTRUCTION MEETING AT LEAST 24 HOURS PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION ACTIVITIES. THE LIMITS-OF-DISTURBANCE (LOD) IDEALLY SHOULD BE STAKED-OUT PRIOR TO THE PRE-CONSTRUCTION MEETING. ALSO, FOREST CONSERVATION MITIGATION SHALL BE IN PLACE PER THE APPROVED FOREST CONSERVATION PLAN PRIOR TO THE MEETING. BOTH MUST BE INSPECTED AND APPROVED BY THE INSPECTOR PRIOR TO BEGINNING GRADING.
3. UPON INSPECTOR APPROVAL, CLEAR, GRUB, AND INSTALL THE STABILIZED CONSTRUCTION ENTRANCES (S.C.E.) AS INDICATED ON THE APPROVED SEDIMENT CONTROL PLAN (SCP).
4. CLEAR, GRUB, AND INSTALL PERIMETER CONTROLS AS INDICATED ON THE SCP, IN THIS ORDER:
 - SUPER SILT FENCE
5. UPON INSPECTOR APPROVAL, COMMENCE WITH SITE IMPROVEMENTS. BIO-SWALES, MICRO-BIOTENTION (MB), PERMEABLE PAVEMENT AND THEIR EXCAVATIONS SHALL BE PROTECTED FROM SEDIMENT AND BE INSTALLED LAST, IF POSSIBLE. (SEE NOTE 7) INSTALL OTHER SEDIMENT EROSION CONTROL MEASURES, AS SHOWN ON THE SCP AND IN THIS ORDER, AS IMPROVEMENTS COMMENCE:
 - STANDARD INLET PROTECTION
 - TEMPORARY SOIL STABILIZATION MATTING, CHANNEL (TSSMC)
 - TEMPORARY SOIL STABILIZATION MATTING, SLOPE (TSSMS)
 - CURB INLET PROTECTION (AS NECESSARY)
 - DIVERSION FENCE (AS NECESSARY)
6. THE CURB AND WIDENED PAVEMENT ALONG FRANKLIN STREET CAN BE BUILT AT ANY TIME BUT THE CONTRACTOR SHALL MAINTAIN THE GRASS SWALE BEHIND THE CURB (SEE NOTE 11). INSTALL THE TRIPLE 8" PIPES, AND BLOCK THE UPPER ENDS. FINE GRADE THE GRASS SWALE TO THE TRIPLE CULVERTS BUT MAINTAIN POSITIVE FLOW DOWN THE GRASS SWALE. STABILIZE ALL DISTURBED AREAS WITH TSSMC.
7. CONTRACTOR SHALL ENSURE THAT SEDIMENT DOES NOT ENTER MICRO-BIOTENTION, PERMEABLE PAVEMENT, OR DRY WELLS OR SUBGRADES. IDEALLY WORK ON THESE AREAS OCCURS AFTER UPHILL AREAS ARE STABILIZED. DIVERT SEDIMENT LADEN WATER AWAY FROM EXCAVATION, DO NOT USE SEDIMENT CONTROL PRACTICES NEARBY. ENSURE UPHILL AREAS ARE STABILIZED PRIOR TO INSTALLING SOIL MEDIA OR PERMEABLE PAVEMENT STONE BASE. USE DIVERSION FENCE AND CURB INLET PROTECTION AS NECESSARY. PROVIDE POSITIVE DRAINAGE ALONG DIVERSION FENCE AND AWAY FROM EXCAVATIONS.
8. FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION MUST BE COMPLETED WITHIN:
 - A. THREE (3) CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER DIKES, SWALES, DITCHES, PERIMETER SLOPES STEEPER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1), AND
 - B. SEVEN (7) CALENDAR DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON PROJECT SITE NOT UNDER ACTIVE GRADING.
9. ESTABLISH STOCKPILE AREAS, AS NECESSARY, SURROUNDED BY SILT FENCE. TEMPORARILY SEED AND MULCH ALL STOCKPILES WITHIN THE 3/7 DAY REQUIREMENT. SEE, ALSO, THE INCREMENTAL STABILIZATION CRITERIA. THE CONTRACTOR MAY MAKE ADJUSTMENTS TO THE STOCKPILE LOCATION, WITH INSPECTOR APPROVAL.
10. ONCE CONSTRUCTION IS COMPLETE AND THE SITE IS STABILIZED, AND WITH THE INSPECTOR'S APPROVAL, REMOVE EROSION AND SEDIMENT CONTROL DEVICES AND STABILIZE DISTURBED AREAS WITH PERMANENT STABILIZATION. UTILIZE DETAIL "TYPICAL SEC FOR TOWNHOUSE CONSTRUCTION" (THIS SHEET) FOR CONSTRUCTION OF THE TOWNHOUSE "STICKS", AS NECESSARY, ONCE THE REST OF THE SITE IS STABILIZED.
11. COMPLETE INSTALLATION OF MICRO-BIOTENTION AND BIO-SWALE FACILITIES AND PERMEABLE PAVEMENT. WHEN ALL UPHILL AREAS ARE STABILIZED AND THE MICRO-BIOTENTION FACILITIES ARE COMPLETE AND STABILIZED, REMOVE THE BLOCKING FROM THE TRIPLE 8" PIPES. NO SEDIMENT SHALL ENTER THE COMPLETED MICRO-BIOTENTION FACILITIES. INSTALL FILL BETWEEN FRANKLIN STREET CURB AND SIDEWALK AND INSTALL BALANCE OF THE EMERGENCY ACCESS PAVEMENT. STABILIZE IMMEDIATELY WITH TSSMS.
12. STABILIZE ANY REMAINING DISTURBED AREAS WITH PERMANENT STABILIZATION.
13. THE CONTRACTOR SHALL BE ALLOWED TO MAKE MINOR ADJUSTMENTS TO THIS SEQUENCE UPON ENGINEER AND INSPECTOR APPROVAL.



CONSTRUCTION SPECIFICATIONS

1. INSTALL 3/8 INCH DIAMETER GALVANIZED STEEL POSTS OF 6.00 INCH WALL THICKNESS AND 24 FOOT LENGTH SPACED NO FURTHER THAN 10 FEET APART. DRIVE THE POSTS A MINIMUM OF 36 INCHES INTO THE GROUND.
2. FASTEN 8 GAUGE OR HEAVIER GALVANIZED CHAIN LINK FENCE (2 1/2 INCH MAXIMUM OPENING) 42 INCHES IN HEIGHT SECURELY TO THE FENCE POSTS WITH WIRE TIES OR H/2 NAILS.
3. FASTEN WOVEN Silt FILM GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS. SECURELY TO THE UPHOLE SIDE OF CHAIN LINK FENCE WITH TIES SPACED EVERY 24 INCHES AT THE TOP AND MID SECTION. EMBED GEOTEXTILE AND CHAIN LINK FENCE A MINIMUM OF 4 INCHES INTO THE GROUND.
4. WHEEDLE ENDS OF THE GEOTEXTILE TOGETHER. THE ENDS SHALL BE OVERLAPPED BY 6 INCHES, FOLDED, AND STAPLED TO PREVENT SEGMENT BY PARS.
5. EXTEND BOTH ENDS OF THE SUPER SILT FENCE A MINIMUM OF FIVE HORIZONTAL FEET UPHOLE AT 42 INCHES TO THE MAIN FENCE ALIGNMENT TO PREVENT RUNOFF FROM GOING AROUND THE ENDS OF THE SUPER SILT FENCE.
6. PROVIDE MANUFACTURER CERTIFICATION TO THE INSPECTOR/ENFORCEMENT AUTHORITY SHOWING THAT GEOTEXTILE USED MEETS THE REQUIREMENTS IN SECTION H-1 MATERIALS.
7. REMOVE ACCUMULATED SEDIMENT AND DEBRIS WHEN BULGES DEVELOP IN FENCE OR WHEN SEDIMENT REACHES 20% OF FENCE HEIGHT. REPLACE GEOTEXTILE IF TORN. IF UNDERMINING OCCURS, REINSTALL CHAIN LINK FENCING AND GEOTEXTILE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL
U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE 2011 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION



MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL
U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE 2011 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

NO.	DATE	REVISION	DESCRIPTION
1	5-15-18	REV. PER TOWN, SCD COUNTY RE-APPROVAL	MLS

FRANKLIN COMMONS (FORMERLY CHESTERBROOK - PHASE 2)
 Situated at Broad Street and Franklin Street
 MIDDLETOWN ELECTION DISTRICT No. 3
 TOWN OF MIDDLETOWN
 FREDERICK COUNTY, MARYLAND

Terra Solutions Engineering, LLC
 Commercial & Residential Land Planning and Engineering
 5216 Chantaine Court, Suite 105
 Frederick, MD 21703
 Phone: 301-378-9442 Email: TerraSolutionsEngineering@gmail.com

Owner/Developer
 CHESTERBROOK LAND, LLC
 3510 Spencerville Road
 Frederick, MD 21703

CATOCIN SOIL CONSERVATION DISTRICT
 APPROVED BY: *Danny Fanning*
 DISTRICT MANAGER
 DATE: 9/3/18

SCD approval for sediment and erosion control is contingent upon issuance of all applicable regulatory permits

CATOCIN SOIL CONSERVATION DISTRICT
 APPROVED BY: *Danny Fanning*
 DISTRICT MANAGER
 DATE: 9/3/18

SCD approval for sediment and erosion control is contingent upon issuance of all applicable regulatory permits

PROFESSIONAL ENGINEER'S CERTIFICATION
 SIGNED BY: *Michael Lee Swanson*
 MICHAEL LEE SWANSON, PE DATE: 08-03-2018
 MD LICENSE NO.: 30736, P.E. EXPIRATION DATE: 08-03-20
 I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DAILY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.

PROJECT No.: 0083
 DATE: August, 2018
 SCALE: 1" = 30'
 SHEET No. 10 of 13

General Sediment Control Notes

- The permittee shall notify the local Soil Conservation Service (SCS) and Frederick City/County Department of Public Works (DPW) and/or Maryland Department of the Environment (MDE) forty-eight (48) hours prior to commencing any land disturbing activity and, unless waived by SCS, shall be required to hold a pre-construction meeting between themselves, and an authorized representative of the MDE and an authorized representative of SCS (i.e. City, County or State Sediment Control Inspector) as outlined in the approved sequence of construction.
- The permittee shall obtain inspection and approval from SCS/DPW at the following points:
 - At the required pre-construction meeting.
 - Following installation of sediment control measures and prior to any other land disturbing activity.
 - During the installation of a sediment basin or stormwater management structure at the required inspection points (see inspection checklist on plan). Notification prior to commencing construction is mandatory.
 - Prior to the removal or modification of any sediment control structure(s).
 - Prior to final acceptance.
- The permittee shall construct all erosion and sediment control measures per the approved plan and construction sequence, shall have them inspected and approved by the DPW prior to beginning any other land disturbing activity, shall ensure that all runoff from disturbed areas is directed to the sediment control devices, and shall not remove any erosion or sediment control measures without prior permission from the DPW.
- The permittee shall protect all points of construction ingress and egress to prevent the deposition of materials onto traversed public thoroughfares(s). All materials deposited onto public thoroughfares(s) shall be removed immediately.
- The permittee shall inspect periodically and maintain continuously, in effective operating condition, all erosion and sediment control measures until such time as they are removed with the prior permission of the DPW.
- All sediment basins, trap embankments, perimeter dikes, and all disturbed slopes steeper or equal to 3:1 shall be stabilized with sod, seed and anchored straw mulch, or other approved stabilization measures, within three (3) calendar days of establishment. Sediment control measures shall be removed as soon as they are no longer needed and the sediment control system must be minimized and stabilized immediately. Maintenance must be performed as necessary to ensure continued stabilization.
- The permittee shall apply sod, seed and anchored straw mulch, or other approved stabilization measures to all disturbed areas within seven (7) calendar days after stripping and grading activities have ceased on that area. Maintenance shall be performed as necessary to ensure continued roadway improvements, and areas within 50-feet of a building under construction may be exempted from this requirement, provided that erosion and sediment control measures are installed and maintained to protect those areas.
- Prior to removal of sediment control measures, the permittee shall stabilize all contributory disturbed areas using sod or an approved permanent seed mixture with required soil amendments and an approved anchored mulch. Wood fiber mulch may only be used in seeding season where the slope does not exceed 10% and grading has been done to promote sheet flow drainage. Areas brought to finished grade during the seeding season shall be permanently stabilized within seven (7) calendar days of establishment. When property is brought to finished grade during the months of November through February, and permanent stabilization is found to be impractical, approved temporary seed and anchored mulch shall be applied to disturbed areas. The final permanent stabilization of such property shall be completed prior to the following April 15th.
- The site permit, work materials, approved SC/SM plans and test reports shall be available to the outside of the site at the office of the Frederick County.
- Surface drainage flows over, under, into, and off slopes shall be controlled by either preventing drainage flows from traversing the slopes or by installing mechanical devices to lower the water downspout and/or closing them. Dikes shall be installed and maintained at the outlet of the slope and the slope and drainage area to it are fully stabilized, at which time they must be removed and final grading done to promote sheet flow drainage. Mechanical devices must be provided at all points of concentrated flow where erosion is likely to occur.
- Permanent seeding or other points of concentrated water flow shall be stabilized with sod or seed with approved erosion control matting or by other approved stabilization measures.
- Temporary sediment control devices shall be removed, with the permission of the DPW, within thirty (30) calendar days following establishment of permanent stabilization in all contributory drainage areas. Stormwater management structures used temporarily for sediment control shall be converted to the permanent configuration within this time period as well.
- No permanent cut or fill slope with a gradient steeper than 3:1 will be permitted in non-maintenance areas. A slope gradient of up to 3:1 will be permitted in non-maintenance areas provided that those areas are indicated on the erosion and sediment control plan with a low-maintenance ground cover specified for permanent stabilization. Slope gradient's steeper than 2:1 will not be permitted with vegetative stabilization.
- The permittee shall install a splash-block at the bottom of each downspout unless the downspout is connected with a drain line to an acceptable outlet.
- For finished grading, the permittee shall provide adequate gradients so as to: (1) prevent water from standing on the surface of lawns more than twenty-four (24) hours after the end of a rainfall, except in designated drainage courses and swale flow areas which may drain as long as forty-eight (48) hours after the end of a rainfall, and (2) provide positive drainage away from all building foundations or openings.
- Sediment traps or basins are not permitted within 20 feet of a building that exists or is under construction. No building may be constructed within 20 feet of a sediment trap or basin.
- All inlets in non-sump areas shall have asphalt berms installed at the time of base course establishment to prevent runoff from entering the trap.
- The sediment control inspector has the option of requiring additional sediment control measures, if deemed necessary.
- All trap elevations are relative to the outlet elevation, which must be on existing undisturbed ground.
- Vegetative stabilization shall be performed in accordance with the most current Maryland Standards and Specifications for Soil Erosion and Sediment Control. Refer to Section B-4 for the following when applying temporary seeding, permanent seeding, mulching, sodding, and ground covers.
- Temporary sediment trap(s) shall be cleaned out and restored to the original dimensions when sediment has accumulated to a point one-half (1/2) the depth between outlet crest and the bottom of the trap, or as directed by the inspector.
- Sediment removed from traps shall be placed and stabilized in approved areas, but not within a floodplain.
- All sediment basins and traps must be surrounded with a welded wire, or approved equal, safety fence. The fence must be at least 42 inches high, have posts spaced no farther apart than eight (8) feet, have mesh openings no greater than 2 inches in width and 4 inches in height with a minimum of 14 gauge wire or equal. Safety fence must be maintained in good condition at all times.
- No excavation in the areas of existing utilities is permitted unless their location has been determined. Call "Miss Utility" at 1-800-257-7777 forty-eight (48) hours prior to the start of work.
- Off site spoil or borrow areas must have prior approval from SCS.

Frederick S.C.D. Sediment & Erosion Control Notes

- All erosion and sediment control measures shall be installed and maintained in continuous compliance with the latest version of the "Maryland Standards and Specifications for Soil Erosion and Sediment Control".
- All disturbed areas are to be seeded within seven (7) days of initial grading. For stabilization methods, see Section B-4, of the 2011 Maryland Standards and Specifications for Soil Erosion and Sediment Control" by the Maryland Department of the Environment (Water Management Administration), Natural Resources Conservation Service and Maryland Association of Soil Conservation Districts.
- All erosion and sediment control measures are to be placed prior to, or at the initiation of grading.
- All utilities, such as; storm drain, public water, sanitary sewer, electric power, telephone, cable and gas lines, that are not in paved areas and are not undergoing active grading shall be temporarily or permanently stabilized within three (3) days of initial disturbance. (See Section B-4 of the above referenced standards) within three (3) days of grading. All soil stockpiles are to be mulched and seeded within seven (7) days.
- The owner/developer or their designee is responsible for conducting routine inspections and required maintenance. The site and controls should be inspected weekly and the next day after each rain event. Any accumulated sediment shall be removed and disposed of in a suitable area and shall be temporarily or permanently stabilized. (See Section B-4 of the above referenced standards). Any project that has a state issued N.O.I permit must document each inspection and maintain an inspection log. See the N.O.I permit for additional details.
- The contractor is responsible for maintaining all sediment and erosion control measures until all disturbed areas are stabilized.
- After fine grading, all disturbed areas are to be permanently mulched and seeded (see Section B-4).
- No slope shall be greater than 2:1.
- Following initial soil disturbance or re-disturbance, permanent or temporary stabilization must be completed within:
 - Three (3) calendar days as to the surface of all perimeter dikes, swales, ditches, perimeter slopes, and all slopes steeper than 3 horizontal to 1 vertical (3:1); and
 - Seven (7) calendar days as to all other disturbed or graded areas on the project site not under active grading.
- This does not apply to those areas that are shown on the plan and are currently being used for material storage or for those areas in which actual construction activities are currently being performed. Maintenance shall be performed as necessary to ensure that stabilized areas continuously meet the appropriate requirements of the 2011 Maryland Standards and Specifications for Soil Erosion and Sediment Control".

Temporary Seeding Notes

- General**
- Scope: Planting short-term vegetation to stabilize, cleared or graded areas subject to erosion for a period of seven (7) days or more.
 - Standards: Temporary seeding shall conform to all requirements of the "2011 Maryland Standards and Specifications for Soil Erosion and Sediment Control" published jointly by the Maryland Department of the Environment, Water Management Administration in association with Natural Resources Conservation Service and Maryland Association of Soil Conservation Districts.
 - Sediment and Erosion Control: All perimeter controls must be stabilized in three (3) days. All interior controls must be stabilized within seven (7) days.
- Specifications**
- Site Preparation
 - Prior to seeding, install all required sediment and erosion control measures.
 - Final grading not required for temporary seeding.
 - Soil Amendments
 - Fertilizer shall be applied at the rate of 436 lbs./acre using 10-20-20 or equivalent.
 - Acid soils shall be limed at a lime rate of 2 tons/acre.
 - Seeded Preparation
 - Soil shall be loosened to a depth of 2 to 4 inches by raking, discing, or other acceptable means prior to seeding.
 - Seeding
 - Select a mixture from table B.1 in the standard specifications.
 - Apply seed uniformly with a cyclone seeder drill, cutpacker, or hydroseeder.
 - Mulching
 - Mulch shall be applied immediately after seeding. Mulch materials and applications shall conform to the standard specifications.

Permanent Seeding & Sodding Notes

- General**
- Scope: Planting permanent, long-lived vegetative cover on graded or cleared areas.
 - Standards: Permanent seeding shall conform to all requirements of the "2011 Maryland Standards and Specifications for Soil Erosion and Sediment Control" by the Maryland Department of the Environment (Water Management Administration), Natural Resources Conservation Service and Maryland Association of Soil Conservation Districts.
- Specifications**
- Site Preparation
 - Prior to seeding, install all required sediment and erosion control measures.
 - Final grading required for permanent seeding.
 - Soil Amendments
 - Fertilizer shall be applied at the rate of N (45 lbs./acre), P (90 lbs./acre) and K (90 lbs./acre) using 10-20-20 or equivalent.
 - Acid soils shall be limed at a lime rate of 2 tons/acre.
 - Seeding Preparation
 - Soil shall be loosened to a depth of 2 to 4 inches by raking, discing, or other acceptable means prior to seeding.
 - Seeding
 - Select a mixture from tables B.2 and B.3 in the standard specifications.
 - Apply seed uniformly with a cyclone seeder, drill, cutpacker seeder or hydroseeder (slurry includes seed and fertilizer on a firm, moist seedbed).
 - Seeding depth should be 1/2 inch on clayey soils and 1/4 inch on sandy soils, using other than hydroseeder method of application. Note: If hydroseeding is used and the seed and fertilizer is mixed, it will be mixed on site and the seeding shall be immediate without interruption.
 - Mulching
 - Mulch shall be applied immediately after seeding. Mulch materials and applications shall conform to the standard specifications.
- Permanent Stabilization with Sod**
- All specifications, site preparation, installation and maintenance of sod for permanent, long-lived vegetative cover shall conform to Section B-4 of the "2011 Maryland Standards and Specifications for Soil Erosion and Sediment Control" by the Maryland Department of the Environment (Water Management Administration), Natural Resources Conservation Service and Maryland Association of Soil Conservation Districts.

For Utility Work Only or For Off-Site Utility Work

- Can not exceed 5,000 square feet.
- Place all excavated material on the high side of the trench.
- Only do as much work as can be completed in one day so backfilling, final grading, seeding and mulching can occur at the same pace as construction.
- Any sediment control measures disturbed by construction will be repaired the same day.

Secondary Utility Work (August 7, 2006)

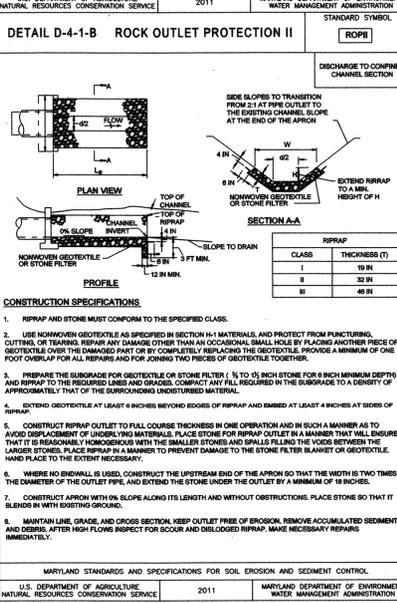
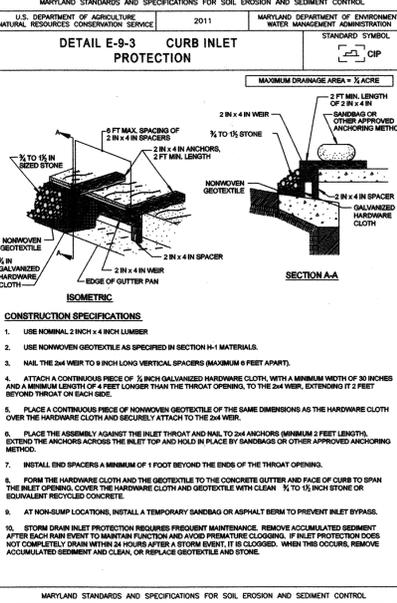
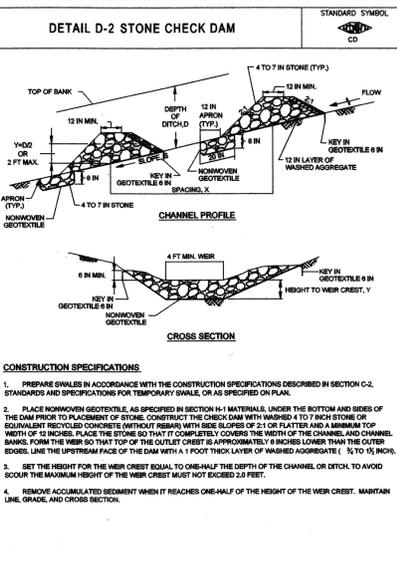
- All disturbance from secondary utility's such as phone cable, electric cable, TV cable, etc. will be the subcontractors responsibility to bring work area back to grade level that was existing and seed much any disturbance from installation of lines or conduit.
- Sub contractors will be responsible for re-installing or repairing any silt fence of sediment controls that were existing to maintain proper sediment control that might have been damaged.

Stockpile Notes

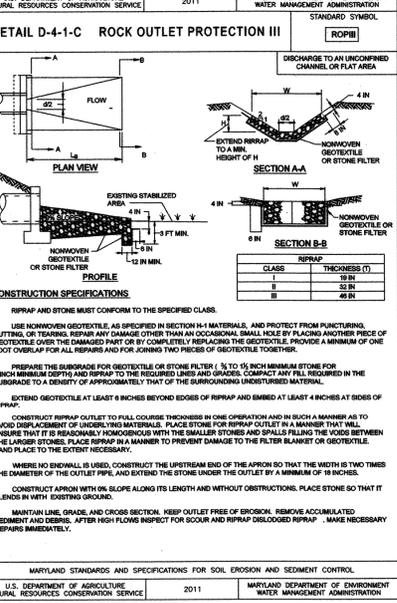
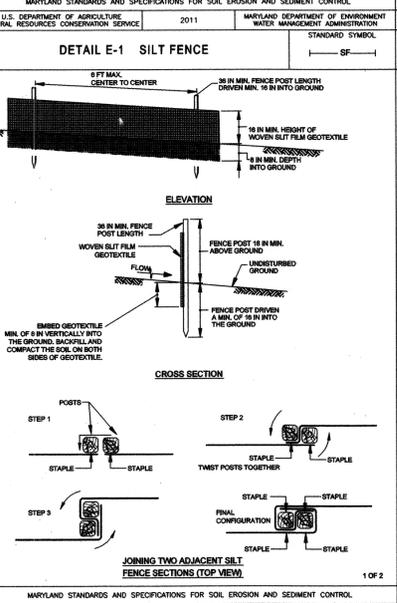
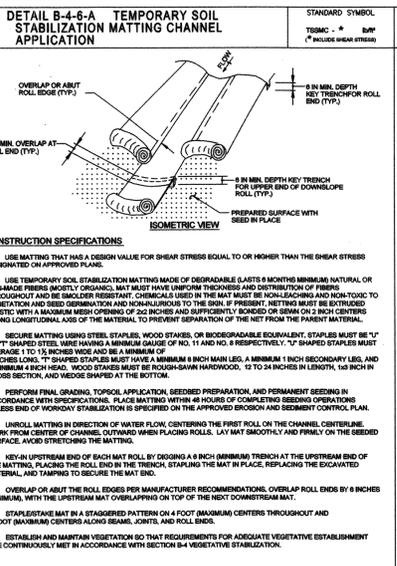
- No stockpile allowed on asphalt.
- All stockpile left at the end of the day needs to be stabilized until the next re-disturbance.

Stream Closure Statement

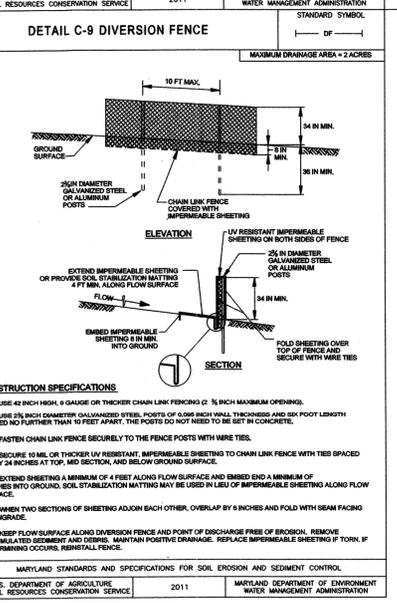
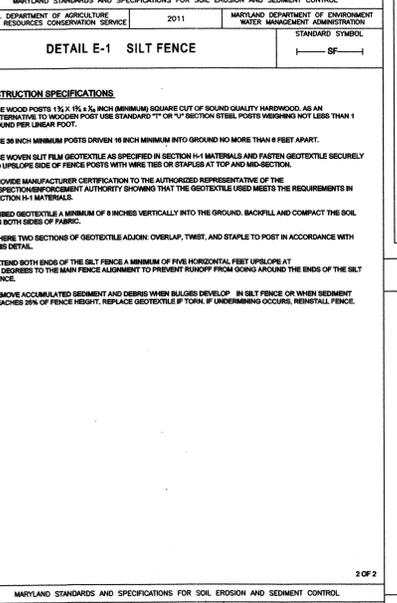
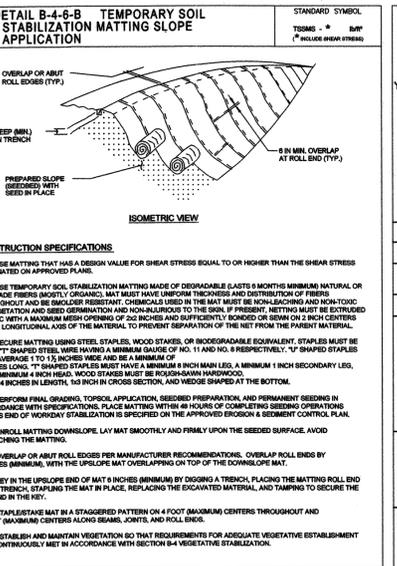
As of June 1, 1992, All sediment and erosion control plans and/or stormwater management plans that include in-stream work must have a stream closure date(s) shown in the sequence of construction.



CLASS	THICKNESS (T)
I	18 IN.
II	32 IN.
III	48 IN.



CLASS	THICKNESS (T)
I	18 IN.
II	32 IN.
III	48 IN.



CLASS	THICKNESS (T)
I	18 IN.
II	32 IN.
III	48 IN.

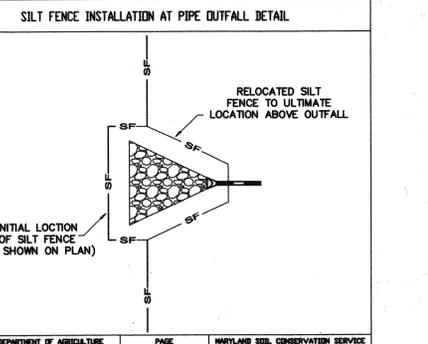
SEDIMENT CONTROL/STORMWATER MANAGEMENT REQUIRED INSPECTIONS

YOU MUST NOTIFY THE COUNTY SEDIMENT CONTROL AND STORMWATER MANAGEMENT OFFICE AT 301-800-3507 BEFORE 8:00 AM 24 HOURS PRIOR TO THE REQUIRED INSPECTION. FAILURE TO NOTIFY THIS OFFICE WILL RESULT IN A STOP WORK ORDER OR OTHER PENALTIES AS OUTLINED IN FREDERICK COUNTY CODES.

***** NOTICE *****

THIS LIST IS FOR SEQUENCE OF CONSTRUCTION ONLY. THIS OFFICE ASSUMES NO RESPONSIBILITY OF LIABILITY FOR IMPROPER INSTALLATION OR ANY ITEMS ON THIS CHECKLIST. THIS OFFICE RECOMMENDS THAT A PROFESSIONAL ENGINEER BE PRESENT FOR EACH OF THE REQUIRED INSPECTIONS.

TYPE OF INSPECTIONS:	COMMENTS/INITIALS
1) PRE-CONSTRUCTION MEETING	
2) COMPLETION OF SEDIMENT CONTROL INSTALLATION (IF USING A BASIN SEE #6 BELOW)	
3) PRIOR TO MODIFICATION OR REMOVAL OF SED. CONTROL	
4) INFILTRATION SYSTEMS	
5) OPEN CHANNEL FLOW ATTENUATION	
6) RETENTION/DETENTION STRUCTURES (BASINS/PONDS)	
A. SITE READINESS PER SEQUENCE OF CONSTRUCTION	N/A
B. CROSS SECTION CONFORMANCE	N/A
C. LINER MATERIAL (TYPE/SIZE)	N/A
D. STABILIZATION	N/A
A. SUBGRADE PREPARATION	N/A
1. CORE TRENCH	N/A
B. SUFFICIENT MATERIAL/COMPACTION	N/A
C. SUFFICIENT CONSTRUCTION	N/A
1. SUITABLE MATERIAL/COMPACTION	N/A
2. SLOPE GRADE	N/A
D. FILTERING MATERIAL (TYPE/DEPTH)	N/A
E. PLACEMENT OF FILLER MATERIAL	N/A
F. SELECTION, TYPE OF PIPING (IF APPLICABLE)	N/A
G. COVER/STABILIZATION	N/A
H. MISCELLANEOUS:	



CATCOTIN SOIL CONSERVATION DISTRICT

APPROVED BY: *Danny Bandy*
DISTRICT MANAGER
DATE: 9/13/19

SD approval for sediment and erosion control is contingent upon issuance of all applicable regulatory permits

CATCOTIN SOIL CONSERVATION DISTRICT

APPROVED BY: *Danny Bandy*
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DATE: 9/13/19

SD approval for sediment and erosion control is contingent upon issuance of all applicable regulatory permits

PROFESSIONAL ENGINEER'S CERTIFICATION

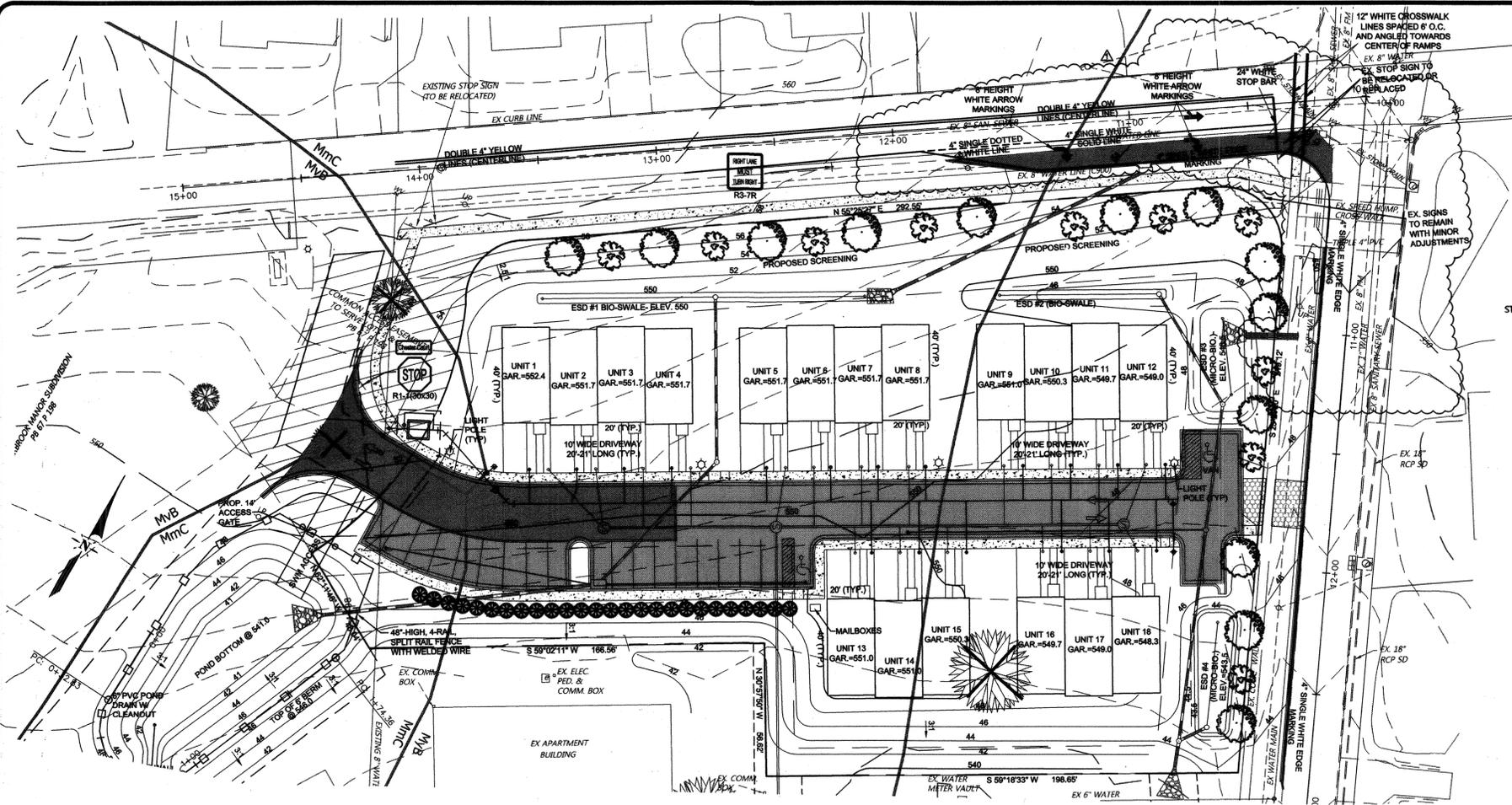
SIGNED BY: *Michael Lee Swanson* 6-28-19
DATE: 6-28-19
MD LICENSE No.: 30736, P.E. EXPIRATION DATE: 08-03-20

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.

Seal & Signature

PROJECT No.: 0083
DATE: AUGUST 2019
SCALE: NO SCALE
SHEET No. 11 of 13

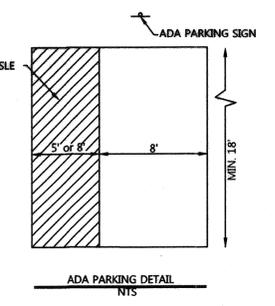
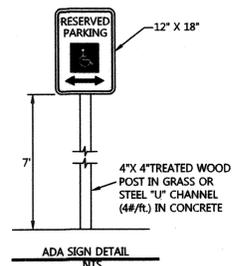
FRANKLIN COMMONS
(FORMERLY CHESTERBROOK - PHASE 2)
Situated at Broad Street and Franklin



LANDSCAPING, SIGNING AND PAVEMENT MARKING PLAN
SCALE: 1"=30'

ADDITIONAL STRIPING AND MARKINGS NOTES

- See Cover Sheet for additional Town of Middletown striping and markings notes and Town of Middletown and Frederick County signing notes.
- Hollow arrows shown on the plan are intended to show traffic movement. Solid arrows are intended to show actual pavement markings.
- Signs removed by contractor, but not relocated shall be returned to the Town of Middletown.
- All existing markings that conflict with proposed markings shall be removed by grinding.



ADA PARKING SPACE DETAIL
N.T.S.

- ADA PARKING SPACE NOTES
- For spaces accommodating a van, the striped aisle shall be 8' wide and the sign shall have a supplemental "van" sign added below the parking sign.
 - The maximum slope in any direction across the parking space or striped aisle shall be 2%.

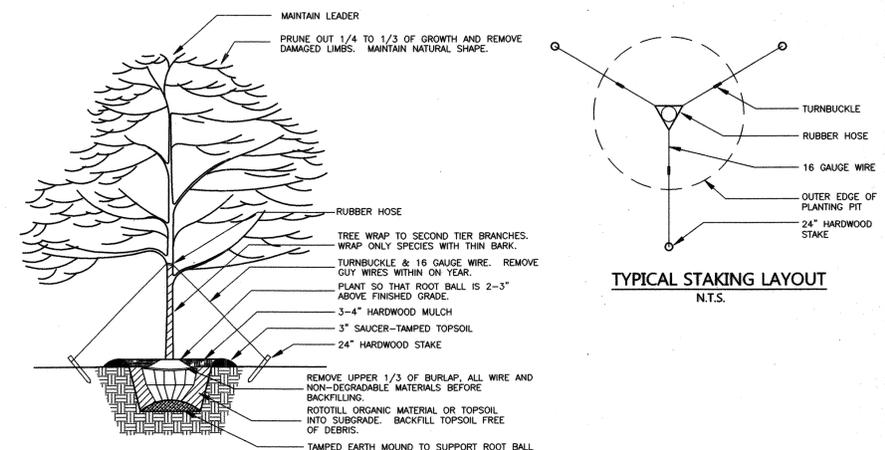
SOILS & PLANTING SPECIFICATIONS

- The Contractor shall provide all necessary materials, labor and equipment required for the completion of the work shown hereon. The Contractor will be responsible for obtaining a source of supply for all materials listed of the specified size and variety. If the Contractor is unable to locate a source for the specified material, then proof must be submitted in writing that it is not obtainable. The proposed material must fall within the same general functional characteristics for plants (i.e. shade tree, ornamental tree, etc.) and have the same design characteristics such as height and spread, as the plant material being replaced. No significant change in size or location of plant material is permitted, nor a reduction in plant quantities.
- Unless otherwise specified, the Contractor shall comply with all standards set forth in the "Landscape Specification Guidelines", Current Edition, by the Landscape Contractors Association. All plant materials shall be well established, well branched, full sized and shall conform to the Specifications of the latest edition of American Standard for Nursery Stock, sponsored by the American Association of Nurserymen, Inc. (AAN).
- Soil Preparation: In the areas to be planted or seeded/added, the Contractor shall spread 6" of topsoil. The topsoil is to be worked into the existing soil, then raked, leaving the surface uniform and free of depressions. All stones over 1" in diameter and debris over 1 1/2" in diameter shall be removed prior to seeding, sodding or planting. The Contractor will provide topsoil meeting the following requirements: (a) It shall be fertile, friable, free of rocks, roots and foreign debris, representative of local soils and capable of sustaining vigorous plant growth. It shall also be free of plants, plant parts or weedy material. (b) Acidity range of between pH 5.0 and 6.5. Organic content not less than 5% and not greater than 30%. Clay content not to exceed 20%. Soluble salts not to exceed 900 ppm (in soil). Once complete, a 3" layer of Compro (or other organic material) shall be worked into the topsoil, prior to planting.
- Turf areas are to be seeded or sodded, at the owner's direction. If turf areas are to be seeded, then it shall be of the following mix: Fescue mix: 90% (Georgetown, Suffolk, Loft, Princeton, Apache, Rebel 2, Arid, Bonanza or equivalent) and Vantage Bluegrass: 10% (or equivalent). Apply 10/10/10 fertilizer at rate of 1,000 lbs./acre. Sod to be State Certified, turf type tall fescue. Apply 10/10/10 fertilizer at rate of 1,000 lbs./acre. Sod to be harvested and installed within 36 hours. Lightly irrigate prior to laying sod. Lay straight, butt rows lightly and stagger lateral joints. Tamp or roll with approved equipment. A true & even surface shall be provided. Pft/lock slopes > 3:1. Filled area greater than 1 square foot shall be re-sodded.
- Plants shall be nursery grown and shall have grown under the same climatic conditions as the location of the subject site for at least two years before planting. All plants shall conform to the measurement specified in the plant tabulation. All plant sizes specified in the plans shall generally be the median for the size ranges indicated in the AAN standards. Plants are to be installed, backfilled and fertilized as specified in the "Landscape Specification Guidelines", Current Edition, by the Landscape Contractors Association. Installation is to be per the attached Details.
- ACCEPTANCE: Upon completion of all work under this Contract and upon written notice of same, the Landscape Architect or the Owner, a site inspection will be conducted by all concerned parties. All discrepancies will be noted and it will be the Contractor's obligation to remedy same, prior to the final acceptance of those areas. Upon final acceptance, the Plant Replacement Guarantee period shall commence.

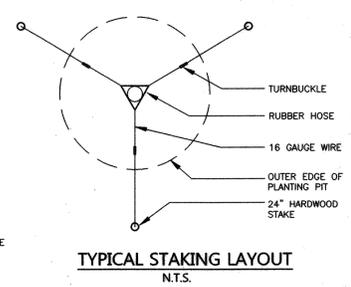
LANDSCAPING SCHEDULE						
SYMBOL	SCIENTIFIC NAME	COMMON NAME	SIZE	QUANTITY	ROOT	MATURE HEIGHT
	CERCIS CANADENSIS	REDBUD	6' to 8' HT.	13	B & B	25'
	CORNUS FLORIDA	FLOWERING DOGWOOD	6' to 8' HT.	10	B & B	25'
	ILEX CRENATA 'STEEDS'	STEEDS HOLLY	7 GAL.	26	CONT.	8'

NOTES: 1. LANDSCAPING SHALL BE MAINTAINED IN A LIVING CONDITION
2. SEE SHEETS 4 AND 5 FOR PLANTING WITHIN MICRO-BIOS AND BIO-SWALES

X INDICATES EXISTING TREE TO BE REMOVED



TYPICAL TREE STAKING
N.T.S.



TYPICAL STAKING LAYOUT
N.T.S.

TOWN OF MIDDLETOWN
PLANNING COMMISSION
Approved 9/18/2017
DATE

PROFESSIONAL ENGINEER'S CERTIFICATION
SIGNED BY: *Michael Lee Swanson* 8-28-19
DATE
MICHAEL LEE SWANSON, PE
MD LICENSE No.: 30736, P.E. EXPIRATION DATE: 08-03-20

CALL "MISS UTILITY" AT 1-800-257-7777 FOR UTILITY LOCATIONS AT LEAST 48 HOURS PRIOR TO BEGINNING CONSTRUCTION.

FRANKLIN COMMONS
 (FORMERLY CHESTERBROOK - PHASE 2)
 Situated at Broad Street and Franklin Street
 MIDDLETOWN ELECTION DISTRICT No. 3
 FREDERICK COUNTY, MARYLAND
 IMPROVEMENT AND SWM DEV. PLANS - LANDSCAPE AND SIGNING PLAN

Terra Solutions Engineering, LLC
 Commercial & Residential Land Planning and Engineering
 5216 Charmaine Court, Suite 105
 Frederick, MD 21702
 Phone: 301-275-2982 Email: TerraSolutionsEngineering@gmail.com
 Owner/Developer
 CHESTERBROOK LAND, LLC
 5310 Spectrum Drive
 Frederick, MD 21703

PROJECT No.: 0083
 DATE: AUGUST 2019
 SCALE: AS SHOWN
 SHEET No. 12 of 13

STREETWORKS

DESCRIPTION

The Traditional LED outdoor luminaire displays the old-fashioned charm of traditional area lighting, enhancing any setting with distinctive styling. As a decorative luminaire, the Traditional LED luminaire complements the architectural and environmental design of parks and roadways. The high lumen downlight configuration uses Cooper Lighting's patented LightBulb™ technology to deliver uniform and efficient illumination to pedestrian and roadway applications.

CONSTRUCTION FEATURES

Construction
Hinged stainless steel hinge pins die-cast aluminum housing and cover with replaceable lens. Tested to ensure strength of construction and longevity in application.

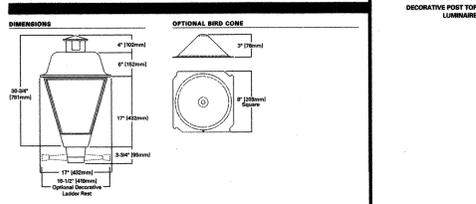
Optics
Choice of several patented, high-efficiency Aculeo™ optics elements manufactured from injection-molded acrylic. Optics are precisely designed to show the distribution maximizing efficiency and application specific. The Aculeo™ optic system creates consistent distribution with the ability to meet customized application requirements. Offered standard in 4000K (L-2780) CCT and nominal 70 CRI.

Electrical
LED drivers are tested and equipped with heat sinks for optimal performance and prolonged life. Standard drivers feature electronic universal voltage (120V-277V/50-60Hz), greater than 8:100 power factor, and operating temperature range from -30°C to +40°C. Includes surge protection for transient line surges up to 10kV. Standard three-position ball-type terminal block. System is rated for 90% lumen maintenance at 60,000 hours (compliant with IESNA TM-21).

Mounting
Self-aligning pole-top filter for 2" O.D. pole tops or vertical lenses. Square-headed 1-1/4" polymer coated mounting bolts with a lock nut.

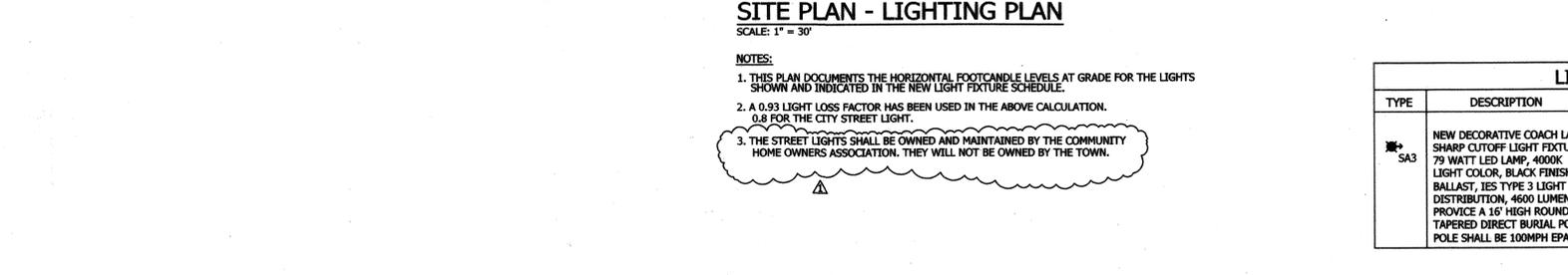
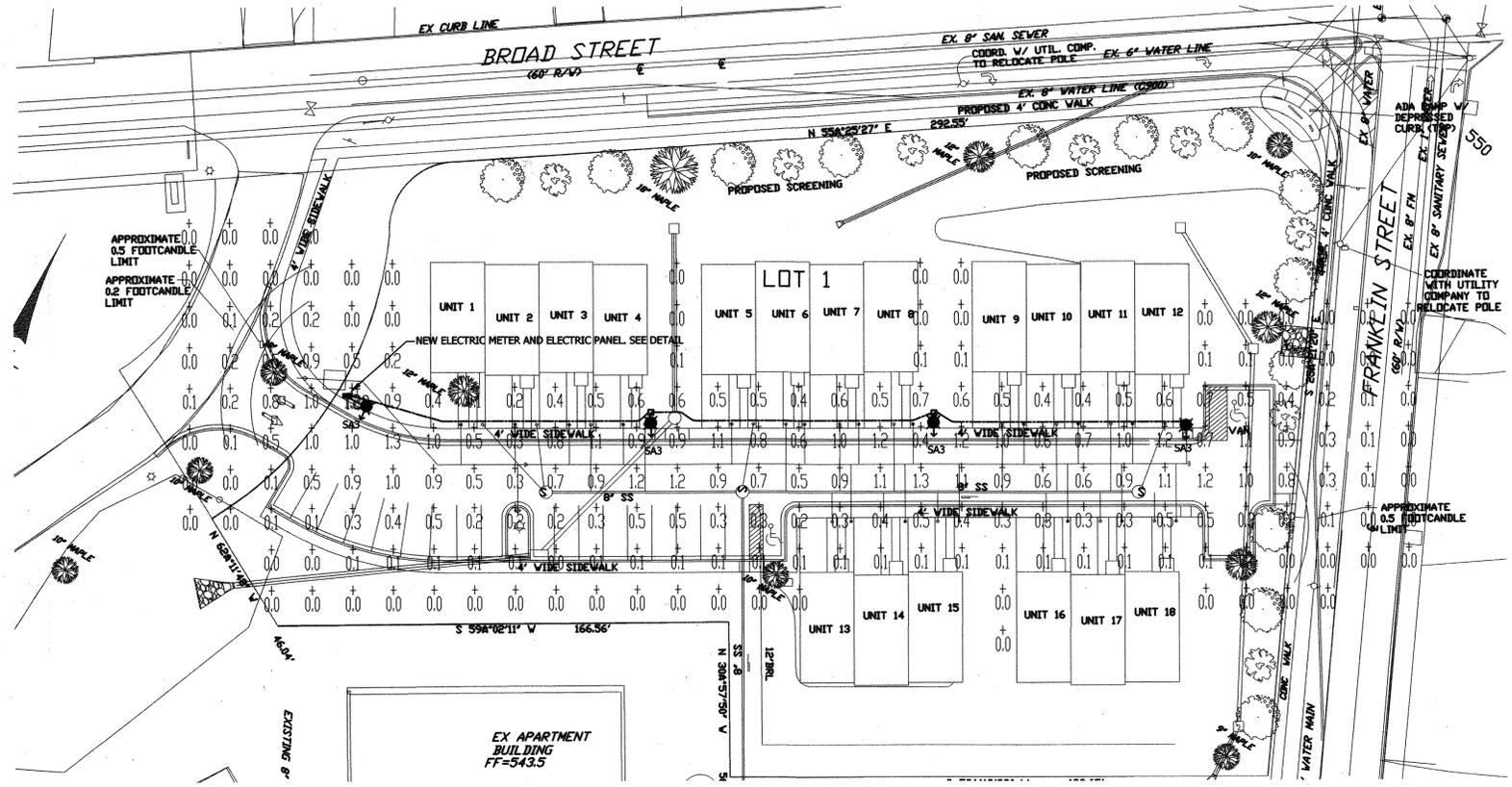
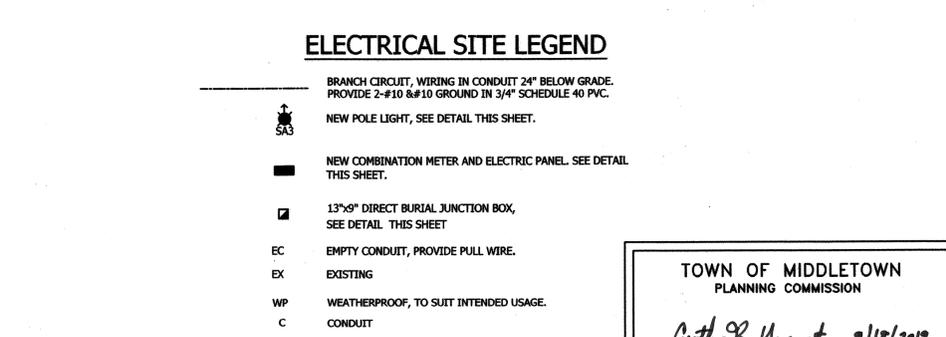
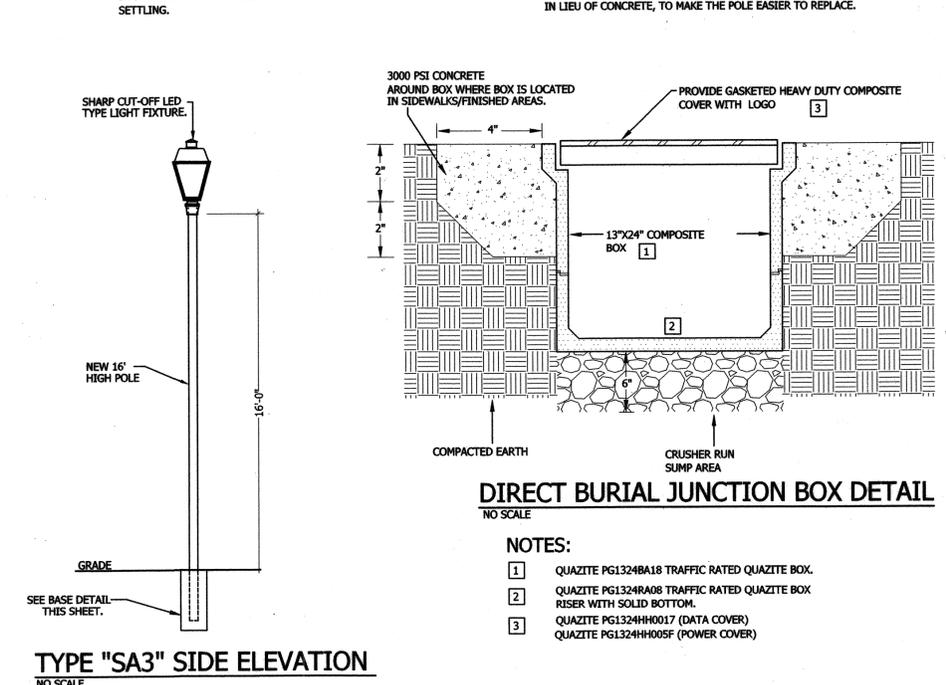
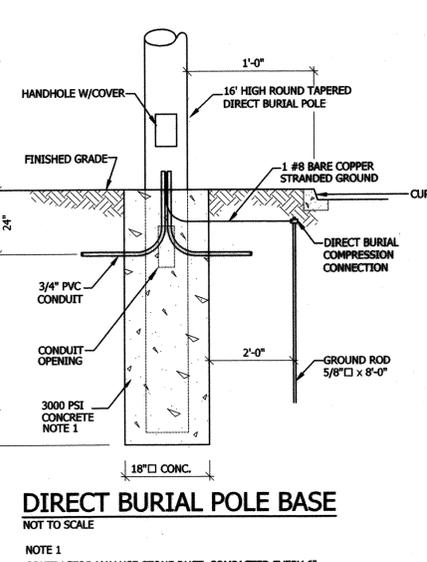
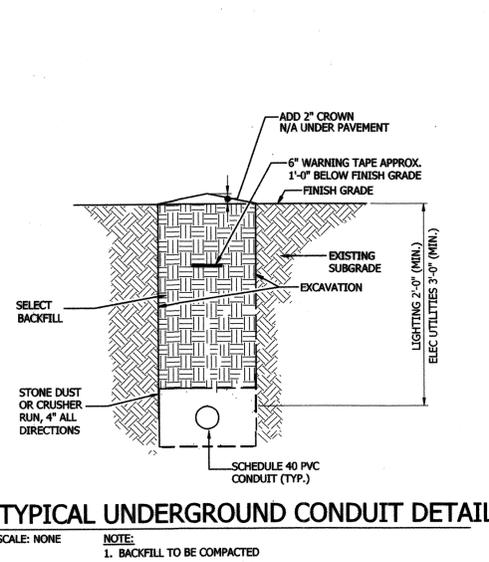
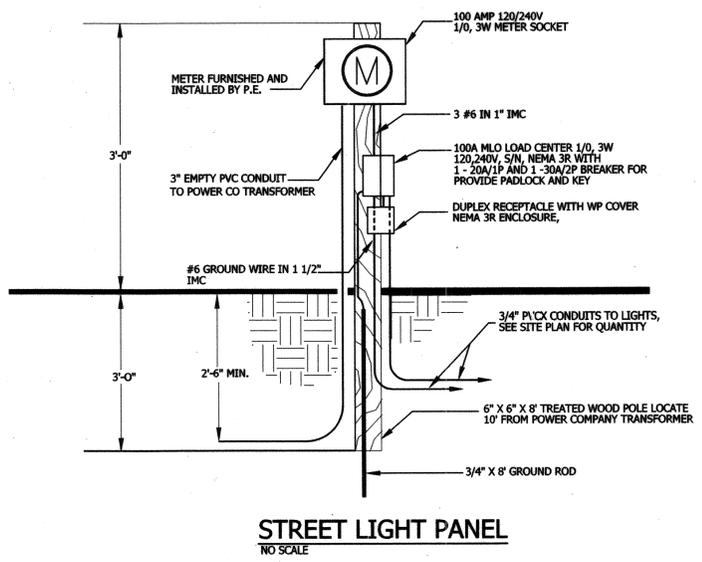
Finish
Cast components finished in a flatter durable black TPOC polyester powder coat paint. 2.5 mil nominal thickness for superior protection against fade and wear. Optional colors include bronze, grey and white.RAL and custom color matches available.

Warranty
Five-year warranty.



Cooper Lighting
by GE

TYPE SA3 LIGHTING CUT SHEET



NO.	DATE	REVISION	DESCRIPTION
1	11/15/14	REV. PER MIDDLETOWN & COUNTY COMM.	MGT
2	5/13/19	REV. PER MIDDLETOWN & COUNTY COMM.	MLS

FRANKLIN COMMONS
(FORMERLY CHESTERBROOK - PHASE 2)
Sited at Broad Street and Franklin Street
MIDDLE TOWN ELECTION DISTRICT No. 3
TOWN OF MIDDLETOWN
FREDERICK COUNTY, MARYLAND

LIGHTING PLAN

Terra Solutions Engineering, LLC
Commercial & Residential Land Planning and Engineering
5216 Chancellors Course, Suite 105
Frederick, MD 21703
Phone: 301-378-9942 Email: terra@terraengineering.com

Owner/Developer
CHESTERBROOK LAND, LLC
5310 Spectrum
Frederick, MD 21703

TOWN OF MIDDLETOWN
PLANNING COMMISSION

APPROVED
For Frank Conway, P.E. Chairman

DATE: 9/18/2019

J.F. Brown III & Assoc., Inc.
Commercial & Residential Land Surveying
4253 Old National Pike
Middletown, Maryland 21769
Phone: (301) 663-1776

5/13/10
Seal of Signature

PROJECT No.: 0083
DATE: October 2015
SCALE: 1" = 30'
SHEET No. 13 of 13

Professional Certification. I hereby certify that these documents were prepared or approved by me and that I am a duly licensed professional engineer under the laws of the State of Maryland License 34886, Expiration Date: 10/23/2017