ROAD CONSTRUCTION PLANS
BONNIE BRANCH WOODS
LOTS 1-15 AND OPEN SPACE LOTS 16-22
SECOND ELECTION DISTRICT
HOward COUNTY, MARYLAND

VICINITY MAP
SCALE: 1" = 2000'

LEGEND
- SUDDENLY DISAPPEARING TRENDS
- CLEARANCES
- EASEMENTS
- FOREST CONSERVATION EASEMENTS
- FOREST CONSERVATION DISPOSITION
- TRADING TREE LINE
- LIMIT OF COVERAGE
- TEMPORARY CHAINAGE
- PERMANENT EASEMENTS
- PRIVATELY OWNED LANDSCAPE EASEMENTS
- PRIVATED EASEMENTS
- ZONING REGULATIONS
- ADDITIONAL EASEMENTS
- PARK SYSTEM
- PARK EASEMENTS
- PUBLIC RIGHTS AND EASEMENTS
- PRIVATE USE IN COMMON ACCESS EASEMENTS

GENERAL NOTES:
1. ALL INFORMATION SHALL BE CONSIDERED AS SUBJECT TO LATER LEVY AND IMPOSITIONS IN THE FORM OF ADDITIONAL REVENUES AS MIGHT BE DEEMED NECESSARY TO COVER THE COST OF DESIGN, CONSTRUCTION, MAINTENANCE, AND OPERATIONS OF THE IMPROVEMENTS.
2. PROJECT COSTS SHALL BE DETERMINED BY THE COUNTY AS SOON AS POSSIBLE AND NOT MORE THAN 120 DAYS FROM THE DATE OF CONTRACT.
3. ALL REVISIONS TO THESE PLANS MUST BE MADE IN ACCORDANCE WITH THE COUNTY'S CRITICAL ZONE REGULATIONS.
4. PERMITS FOR THE PERFORMANCE OF WORK AND THE ISSUANCE OF FULLY OPERATIONAL PERMITS SHALL BE ISSUED BY THE COUNTY.
5. NO CONTRACTS OR PERMITS FOR THE PERFORMANCE OF WORK AND THE ISSUANCE OF FULLY OPERATIONAL PERMITS SHALL BE ISSUED UNTIL A FULLY OPERATIONAL PERMIT HAS BEEN ISSUED BY THE COUNTY.

OWNER/DEVELOPER
BOBBIE MURPHY WOODS
C/O MURPHY WOODS DEVELOPMENT CO.
123 Main St., Suite 200
Eastridge, MD 20802

MIDHURST BRONDE & ASSOC., INC.
123 Main St., Suite 200
Eastridge, MD 20802

11/15/2000

* * * * *
NOTES

GENERAL NOTES:

1. THIS BRIDGE HAS BEEN DESIGNED FOR GENERAL SITE CONDITIONS. THE PROJECT ENGINEER SHALL BE RESPONSIBLE FOR THE STRUCTURE'S SUITABILITY TO THE EXISTING SITE CONDITIONS AND FOR THE HYDRAULIC EVALUATION -- INCLUDING SUCUR AND CONFINATION OF SOIL CONDITIONS.

2. PRIOR TO CONSTRUCTION, CONTRACTOR MUST VERIFY ALL ELEVATIONS SHOWN THROUGH THE ENGINEER.

3. ONLY CONTECH BRIDGE SOLUTIONS INC. THE CONSPAN APPROVED PRECASTER IN MARYLAND MAY PROVIDE THE STRUCTURE DESIGNED IN ACCORDANCE WITH THESE PLANS.

4. THE USE OF ANOTHER PRECAST STRUCTURE WITH THE DESIGN ASSUMPTIONS USED FOR THE CONSPAN STRUCTURE MAY LEAD TO SERIOUS DESIGN ERRORS. USE OF ANY OTHER PRECAST STRUCTURE WITH THIS DESIGN AND DRAWINGS VIOLATES ANY CERTIFICATION OF THIS DESIGN AND WARRANTY. CONTECH BRIDGE SOLUTIONS INC. ASSUMES NO LIABILITY FOR DESIGN OF ANY ALTERNATE OR SIMILAR TYPE STRUCTURES.

5. ALTERNATE STRUCTURES MAY BE CONSIDERED, PROVIDED THAT BIDDED AND SEALED DESIGN DRAWINGS (AND CALCULATIONS) ARE SUBMITTED TO THE ENGINEER 2 WEEKS PRIOR TO THE BID DATE FOR REVIEW AND APPROVAL.

DESIGN DATA

DESIGN LOADS:
- HEADWALLS: EARTH PRESSURE \+ LIVE LOAD BURCHARGE
- WINDWALLS: EARTH PRESSURE ONLY
- HEADWALL DESIGN FILL WEIGHT: 1'-6" MIN. FROM TOP OF CORRUGATED STRUCTURE TO BOTTOM OF FLEXIBLE PAVEMENT
- 2'-0" MIN. FROM TOP OF CORRUGATED STRUCTURE TO TOP OF ROADWAY
- NET ALLOWABLE SOIL SHEARING PRESSURE: 3500 PSD
- GROSS ALLOWABLE SOIL SHEARING PRESSURE: 2500 PSD

*FOUNDATION SOIL LOADING AND SUBGRADE PREPARATION SHALL BE IN ACCORDANCE WITH THE GEOLOGICAL REPORT FOR THIS PROJECT PREPARED BY HILLS-CANYONS DATED OCTOBER 13, 2008.

MATERIALS

PRECAST UNITS SHALL BE CONSTRUCTED AND INSTALLED IN ACCORDANCE WITH CONSPAN SPECIFICATIONS. CONCRETE FOR FOOTINGS SHALL HAVE A MINIMUM COMpressive STRENGTH OF 4000 PSI. REINFORCING STEEL FOR FOOTINGS SHALL CONFORM TO ASTM A615 OR ASTG-GRAD 60.

BONNIE BRANCH WOODS
HOWARD COUNTY, MARYLAND

LOCATION PLAN
NOT TO SCALE

NOTE:
- WINDWALL & HEADWALL PRECAST UNITS & FOUNDATIONS DESIGNED BY CONTECH
- BRIDGE AND BRIDGE FOUNDATION DESIGNED BY CSC ENGINEERS

HEADWALL AND WINGWALL PLAN

NOTE:
WINDBARRIER & HEADWALL PRECAST UNITS & FOUNDATIONS DESIGNED BY CONTECH

NOTE:
BRIDGE AND BRIDGE FOUNDATION DESIGNED BY CBC ENGINEERS

COVER ALL CORNERS WITH 2" WIDE STRIP OF FILTER FABRIC

STRUCTURAL PLATE BRIDGE BY CBC ENGINEERS. SEE PLATE BRIDGE PLANS FOR BRIDGE DETAILS.

BONNIE BRANCH WOODS
HOWARD COUNTY, MARYLAND

1/2" HEADWALL

CONTECH CONSTRUCTION PRODUCTS, INC.
DESIGN OF FOOTINGS, BACKFILL SPECIFICATIONS
AND SCOUR ANALYSIS
FOR A 19' x 6'-4" MULTI-PLATE ARCH;
BONNIE BRANCH WOODS
HOWARD COUNTY, MARYLAND

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1. TITLE SHEET/INDEX
2. PLAN, PROFILE AND DETAILS
3. SPECIFICATIONS
4. SPECIFICATIONS CONTINUED
1. GENERAL

1.1 This work shall consist of boring, handling, and circulating of a Mud Pump with outlet to accommodate with those specifications, the manufacturer's provisions, and the details shown on the plans.

1.2 The contractor shall notify the site location of all utilities in the field before beginning any work that could interfere with those utilities.

1.3 Contractor must notify all utility companies to locate all known locations of underground utilities prior to commencing any work on the contract.

1.4 Contractor shall coordinate with work done by others adjacent to or within the contract limits.

2. DIMENSIONS

2.1 The proposed structure shall be a Multi-Plate Arch with the following dimensions:

- Span: 50 ft
- Rise: 12 ft
- Diameter: 12 ft (IDP)

2.2 All plan dimensions on the contract drawings are measured to a true horizontal plane unless otherwise noted.

2.3 All dimensions, locations, and elevations of building structures shown on the contract drawings shall be verified by the contractor in the field.

3. DESIGN CRITERIA

All design, except where noted, conforms to the applicable sections of the current ASHTO Standard Specifications for Highway Bridges.

4. WORKSHOP AND INVESTIGATION

All materials and materials shall conform to the shopwork and inspection requirements of ASHTO and NCH.

5. MATERIALS AND DIMENSIONS

5.1 Bolted reinforced concrete shall conform to the requirements of ASHTO 67-67.

5.2 Bolt and stud shall meet the provisions of ASTM A-46 and ASTM A-36, Grade C, respectively, and shall be furnished in accordance with the requirements of ASTM A-633.

6. INSTALLATION

The Contractor shall be furnished with all necessary information concerning the connection of the units and the installation of the units. The Contractor shall be responsible for the installation.

The Contractor shall ensure that the field work is completed in a manner that is consistent with the specifications.

7. CONCRETE

7.1 Reinforced concrete structures shall conform to the requirements of ASHTO 67-67.

8. SPECIFICATIONS

8.1 Portland Cement- Conforming to ASTM C-115, Type I or II.

8.2 Water- Water to be added shall be clean, free from injurious amounts of oils, acids, salts, organic materials, or deleterious ingredients.

8.3 Aggregate- Fine and coarse aggregatages shall conform to current ASTM C-33 requirements. Fine aggregate shall be clean and free from deleterious materials, and coarse aggregate shall be free from injurious amounts of oils, acids, salts, organic materials, or deleterious ingredients.

8.4 Subgrade- The subgrade shall be protected with the required materials in a manner that is consistent with the specifications.

1.0 GENERAL

1.0.1 This work shall consist of boring, handling, and circulating of a Mud Pump with outlet to accommodate with those specifications, the manufacturer's provisions, and the details shown on the plans.

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8.0.4 Subgrade- The subgrade shall be protected with the required materials in a manner that is consistent with the specifications.
7.6 REINFORCING STEEL

7.6.4 All reinforcing bars shall be deformed here (AASHO Hot-113). 

7.8 PLACING AND FINISHING

7.8.2 The finishing shall be executed as shown on the plans and specifications unless otherwise indicated. Wherever the placing and finishing of concrete is shown on the plans, it shall be done in accordance with the specifications.

8. BACKFILL SPECIFICATIONS

8.1 The contractor shall furnish all labor, materials, and equipment, and perform all work and services necessary to complete in a satisfactory manner the preparation, excavation, filling, construction, and finishing as shown on the plans and specifications.

8.2 This work shall consist of clearing and grading, stockpiling of excess structure sections, and erection of the structure.

8.3 This work shall be performed in accordance with the requirements of the owner or his designated representative.

8.5.3.4.1 The contractor shall maintain, inspect, and report the construction site to the owner and his representative.

8.5.3.4.2 In the event of damage to the construction site, the contractor shall be responsible for the cost of any damage, including any additional repairs required.

8.5.3.4.3 The contractor shall perform any necessary clean-up, including the removal of all debris and equipment from the site.

8.5.4 Conditions other than those indicated are governed by the owner or the designated representative, as shown on the plans and specifications.

8.6.3 Site preparation

8.6.3.1 Within the specified area, all existing, encroaching materials, and structures scheduled for demolition shall be removed and disposed of.

8.6.3.2 Any existing, encroaching materials, and structures scheduled for demolition shall be disposed of off site, or, as directed by the owner or his designated representative.

8.6.3.3 Prior to the addition of fill, any required securities shall be released and the original grantee shall be reimbursed for any additional compensation or any other expenses incurred.

8.7.6.3.4.4 Site preparation shall be performed as required by the project specifications and construction details. Special attention shall be given to the pre- and post-filling soil test records. If the fill is not properly compacted, or if water or other materials are added, the work shall be redone before the placement of fill.

8.8.4.3 Implementation

8.8.4.3.1 All backfill shall be placed in a minimum distance of 1.5 feet from the edge of the structure, and in the absence of the owner as directed by the contractor and shown on the plans.

9. SLOPE AND STEMMED WALLS

9.3 Grading

9.3.1 The Contractor shall furnish, operate, and maintain such equipment as necessary to construct sanitary facilities, and control conditions of the ground for excavation and drainage.

9.4.3.1 The contractor shall ensure that the proposed design and specifications, including all necessary supporting documentation, are in compliance with the requirements of the owner or his designated representative.