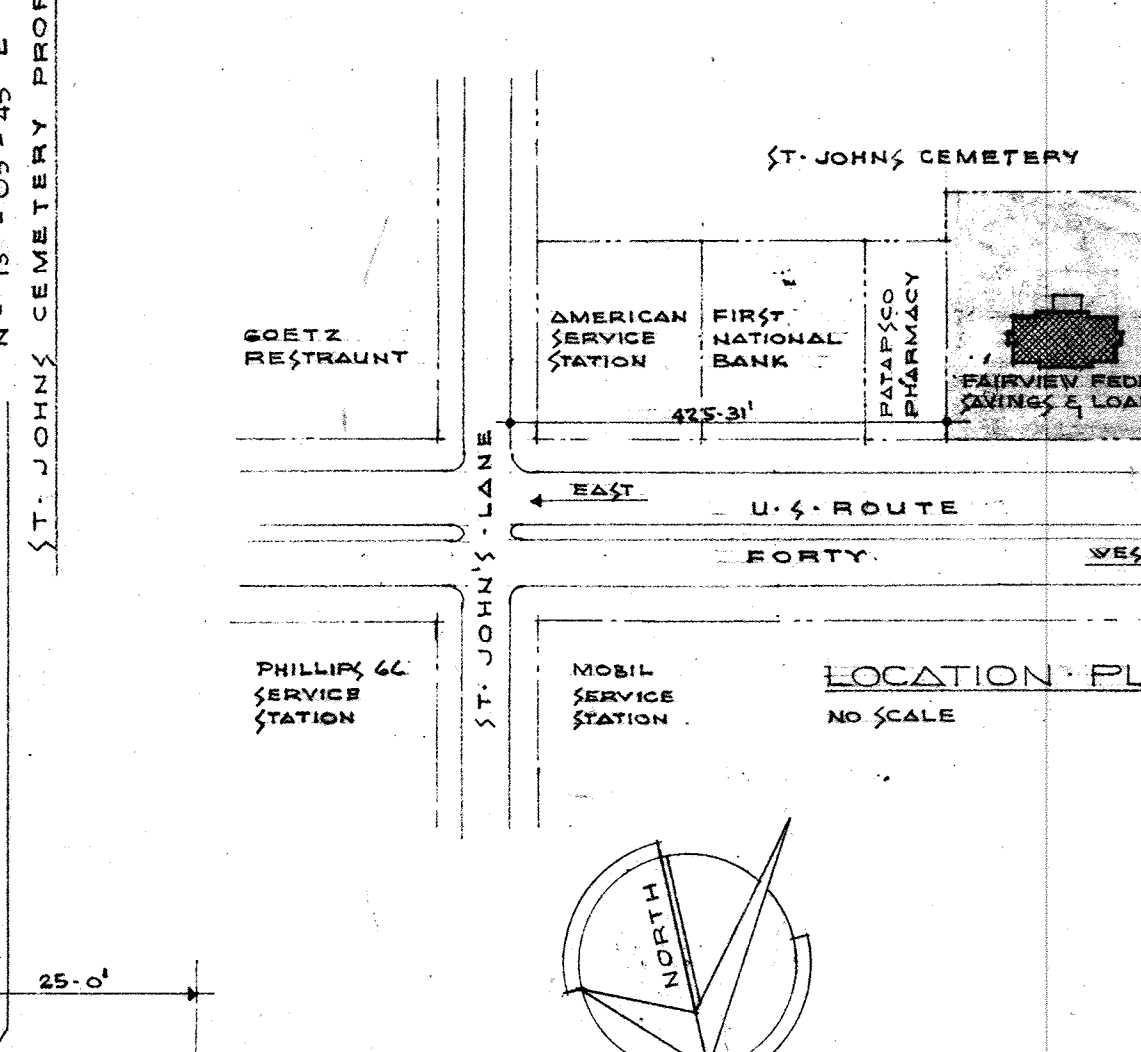


APPROVED:  
 DEPARTMENT OF PUBLIC WORKS  
*W O Filbert* 6-12-72  
 CHIEF BUREAU OF HIGHWAYS DATE

APPROVED:  
 OFFICE OF PLANNING & ZONING  
*J H Clemons* 6-14-72  
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

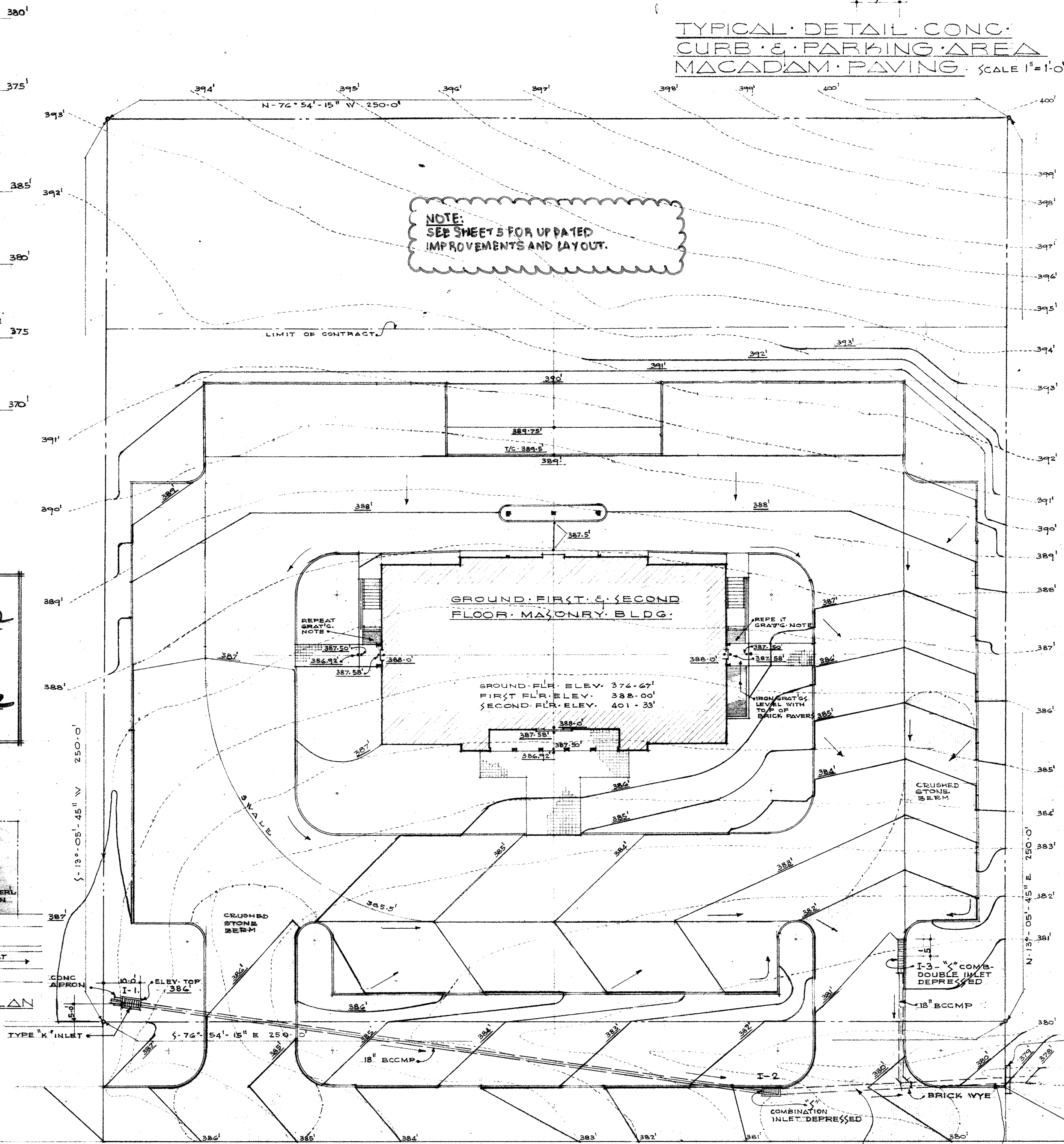
APPROVED:  
 DEPARTMENT OF PUBLIC WORKS  
*W O Filbert* 6-12-72  
 CHIEF BUREAU OF HIGHWAYS DATE

APPROVED:  
 OFFICE OF PLANNING & ZONING  
*J H Clemons* 6-14-72  
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE



TOTAL AREA OF PROPERTY: 1.435 ACRES

ON-SITE PARKING  
 AREA SERVING PUBLIC 210' x 49' = 1029 SQ. FT.  
 1 CAR SPACE REQUIRED PER 100 SQ. FT. = 10.29  
 1029 ÷ 100 = 10.29 ≈ 10 CAR SPACES REQUIRED



APPROVED FOR PUBLIC WATER & PUBLIC SEWERAGE (STORM DRAINAGE SYSTEM & PUBLIC ROADS) HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS:  
*William A. Altman* 6/14/72  
 DIRECTOR DATE

APPROVED HOWARD COUNTY PLANNING & ZONING DEPARTMENT:  
*Thomas J. Amis* 6-14-72  
 DIRECTOR DATE

APPROVED FOR PUBLIC WATER & PUBLIC SEWERAGE SYSTEM - HOWARD COUNTY HEALTH DEPARTMENT:  
*John H. Hoop* 6-14-72  
 HOWARD COUNTY HEALTH OFFICER DATE

REVISED COLUMBIA BANK  
 9151 BALTIMORE NATIONAL PIKE  
 ELLICOTT CITY, MD 21042

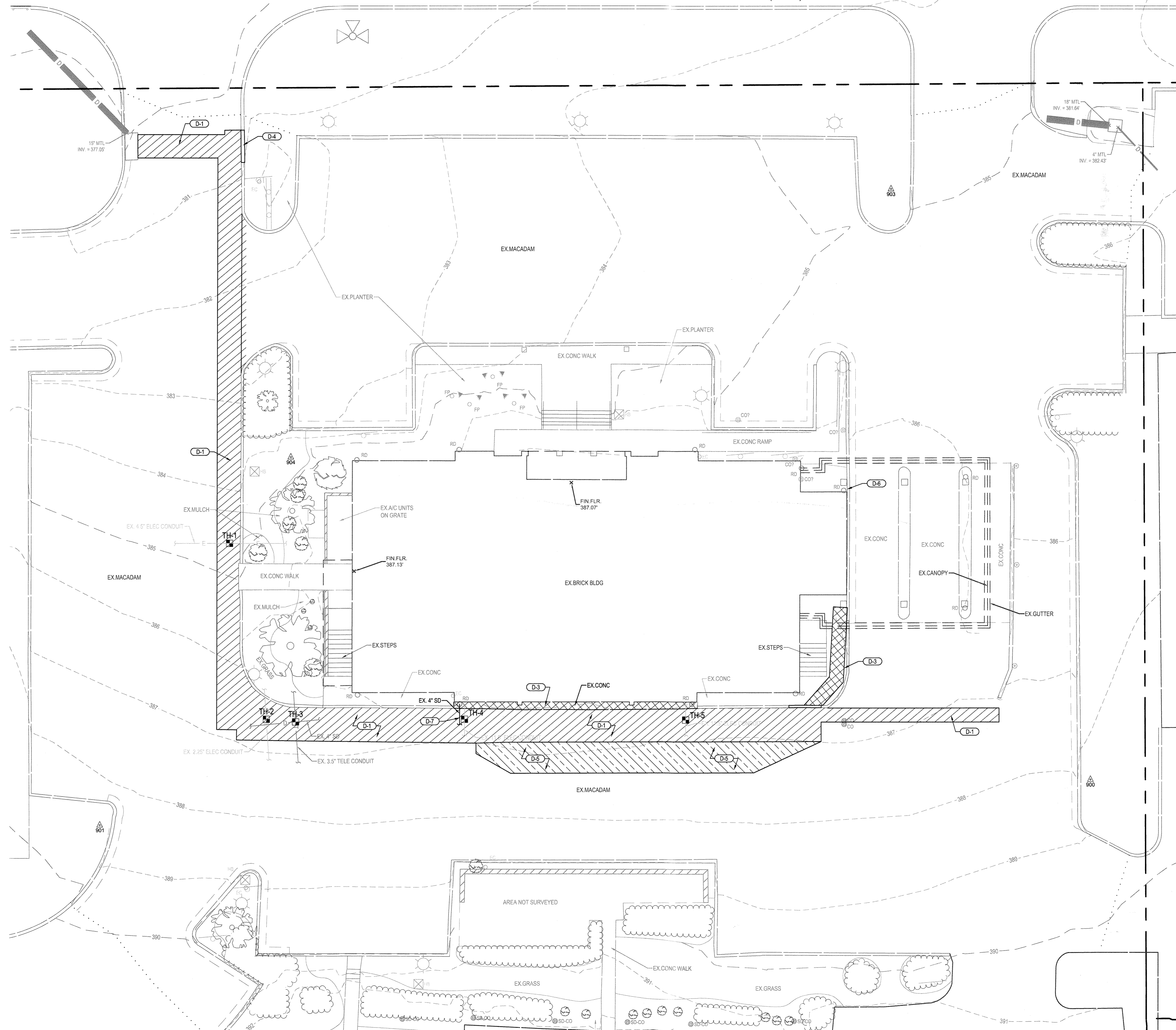
OWNER:  
 PETERSEN FSD ASSOCIATES AND  
 7108 COLUMBIA GARDENS DR.  
 COLUMBIA, MD 21046

MILLER SCHUERHOLZ & ASSOCIATES  
 MECHANICAL ENGINEERS  
 2315 ST. PAUL ST.  
 BALTIMORE, MARYLAND

BONNETT & BROS.  
 ARCHITECTS-ENGINEERS  
 515 PARK AVE.  
 BALTIMORE, MARYLAND

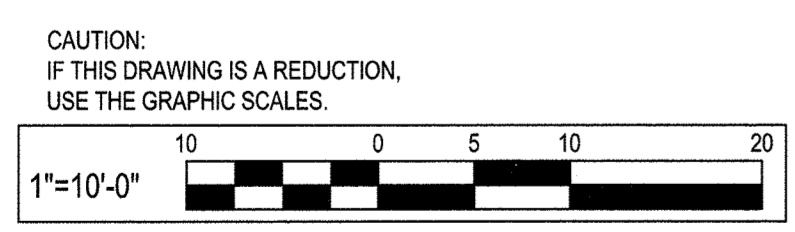
DATE: 6-14-72  
 SCALE: AS NOTED  
 REVISED: 6-14-72  
 JOB NO.: 634





- DEMOLITION LEGEND:**
- BITUMINOUS PAVING REMOVAL
  - BITUMINOUS PAVING MILL AND OVERLAY
  - CONCRETE SIDEWALK REMOVAL

- DEMOLITION NOTES:**
- D-1 SAWCUT AND REMOVE EXISTING BITUMINOUS PAVING SECTION FOR TRENCH REPAIR.
  - D-2 SAWCUT AND REMOVE EXISTING CONCRETE SIDEWALK SECTION FOR TRENCH REPAIR.
  - D-3 REMOVE EXISTING CONCRETE SIDEWALK.
  - D-4 SAWCUT AND REMOVE EXISTING CONCRETE CURB.
  - D-5 MILL AND OVERLAY EXISTING BITUMINOUS PAVING.
  - D-6 REMOVE EXISTING ROOF DRAIN. REDIRECT AS SPECIFIED ON PAGE C201.
  - D-7 REMOVE EXISTING STORM DRAIN LINE.



APPROVED: DEPARTMENT OF PLANNING AND ZONING

*Paul Plunk* 5-22-19  
Chief, Development Engineer Division HSR Date

*Keith Schwab* 5-20-19  
Chief, Division of Land Development Date

*Nathaniel J. J. J.* 5-30-19  
Director Date

| NO. | DATE    | REVISION                 | BY |
|-----|---------|--------------------------|----|
| 1   | 4/16/19 | STORM DRAIN IMPROVEMENTS |    |

WHITNEY BAILEY COX & MAGNANI, LLC  
300 East Joppa Road, Suite 200  
Bel Air, MD 21034  
410.512.6500 www.wbcm.com

**WBCM**  
Designing Infrastructure for Tomorrow

STATE OF MARYLAND  
PLANE TABLE ENGINEER  
No. 34682

I hereby certify that the drawings were prepared or approved by me, that I am a duly licensed professional engineer under the laws of the State of Maryland.

License #34682 Expiration Date: 07/08/19

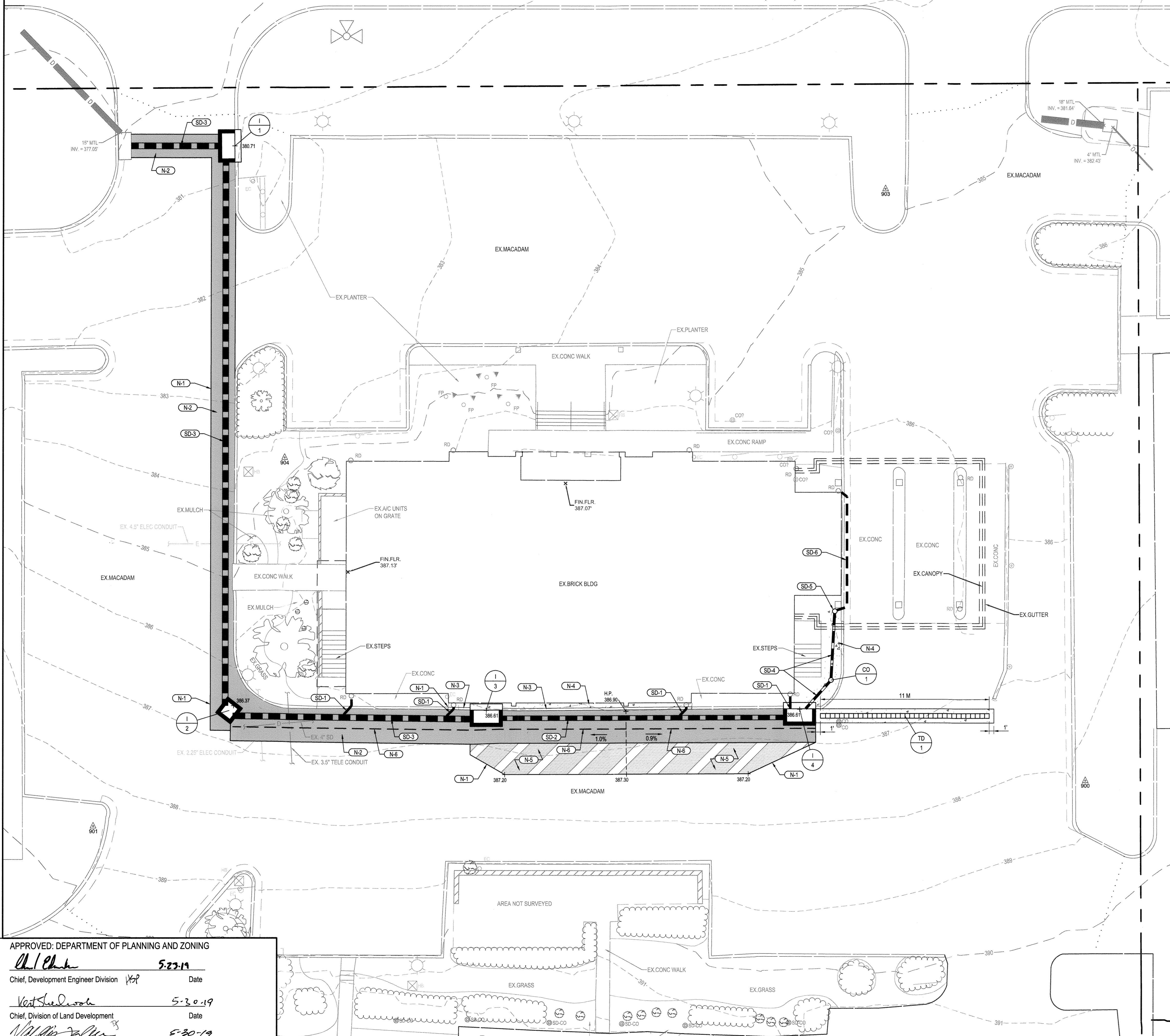
**DEMOLITION PLAN**

**COLUMBIA BANK**

CSC REAL ESTATE SERVICES, LLC  
915 BALTIMORE NATIONAL PIKE  
ELLCOTT CITY, MARYLAND 21042

|           |              |
|-----------|--------------|
| DESIGNED: | M.L.H.       |
| DRAWN:    | M.L.H.       |
| CHECKED:  | R.W.H.       |
| SCALE:    | 1"=10'       |
| DATE:     | 4/16/19      |
| PROJECT:  | 2018.0595.00 |
| DRAWING:  | 2 OF 6       |





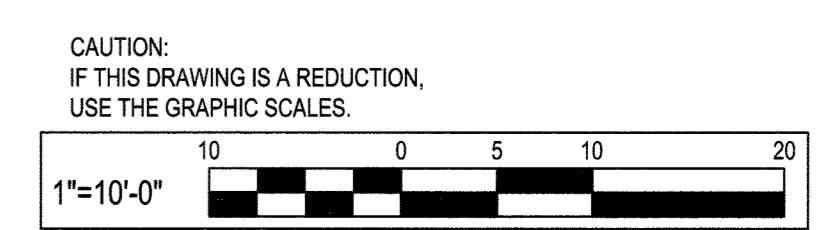
**STRUCTURE SCHEDULE**

| NO.  | DESCRIPTION   | INVERTS   | NORTHING    | EASTING      | TOP ELEV. |
|------|---|---|-------------|--------------|-----------|
| CO-1 | NEW FLUSH CLEANOUT  | INV IN 382.925<br>INV OUT 383.591                   | N 586343.21 | E 1361176.56 | 384.17    |
| I-1  | MDSHA STD. MD-374.70<br>PRECAST STANDARD TYPE S INLET   | INV IN 377.610<br>INV OUT 377.510                   | N 586467.97 | E 1361059.40 | 380.71    |
| I-2  | MDSHA STD. MD-374.70<br>PRECAST STANDARD TYPE S INLET   | INV IN 380.070<br>INV OUT 379.970                   | N 586348.19 | E 1361047.67 | 386.55    |
| I-3  | MDSHA STD. MD-379.04<br>PRECAST STD. TYPE S COMBO INLET   | INV IN 381.190<br>INV OUT 380.940                   | N 586343.42 | E 1361102.52 | 386.91    |
| I-4  | MDSHA STD. MD-379.04<br>PRECAST STD. TYPE S COMBO INLET   | INV IN 385.000<br>INV IN 383.500<br>INV OUT 382.196 | N 586337.72 | E 1361169.33 | 386.85    |
| TD-1 | 12" WIDE SLOPE TRENCH DRAIN,<br>MODEL POWERDRAIN S300K WITH<br>SLOTTED DUCTILE IRON GRATE AS<br>MANUFACTURED BY ACO DRAIN OR<br>APPROVED EQUAL. | INV OUT 385.126                                     | N 586334.22 | E 1361191.65 | 386.20    |

- CONSTRUCTION LEGEND:**
- BITUMINOUS PAVING
  - CONCRETE SIDEWALK
  - PAVEMENT MILL & OVERLAY
  - NEW STORM DRAIN PIPE
  - NEW TRENCH DRAIN
  - NEW PAVING UNDERDRAIN
  - NEW INLET
  - FLOW ARROW
  - SPOT ELEVATION
  - NEW INLET
  - NEW TRENCH DRAIN

- CONSTRUCTION NOTES:**
- N-1 MEET EXISTING CONDITIONS.
  - N-2 NEW BITUMINOUS PAVING. SEE DETAIL #2 ON SHEET C202.
  - N-3 NEW 6" CONCRETE CURB. SEE DETAIL #1 ON SHEET C202.
  - N-4 NEW CONCRETE SIDEWALK. SEE DETAIL #5 ON SHEET C202.
  - N-5 MILL AND OVERLAY EXISTING BITUMINOUS PAVING TO PROVIDE DRAIN FLOW DIRECTED TO NEW INLETS. SEE DETAIL #3 ON SHEET C202.
  - N-6 PAVING UNDERDRAIN TO BE FIELD LOCATED AND ADJUSTED DURING NEW STORM DRAIN INSTALLATION. TO BE PLACED IN AREAS WITH HIGH GROUNDWATER PRESENT.

- STORM DRAIN NOTES:**
- SD-1 CONNECT EXISTING ROOF DRAIN DOWNSPOUT TO NEW STORM DRAIN COLLECTION SYSTEM.
  - SD-2 NEW 12" HDPE PIPE.
  - SD-3 NEW 15" HDPE PIPE.
  - SD-4 NEW 6" PVC PIPE.
  - SD-5 NEW ROOF LEADER.
  - SD-6 REDIRECT GUTTER TO NEW ROOF LEADER. SEE DETAIL #0 ON SHEET C202.



APPROVED: DEPARTMENT OF PLANNING AND ZONING

*Ch. I. Chik* 5-23-19  
Chief, Development Engineer Division Date

*Keith Sedwick* 5-30-19  
Chief, Division of Land Development Date

*Walter J. Zylstra* 5-30-19  
Director Date

PLAN  
SCALE: 1" = 10'

BY: \_\_\_\_\_

REVISION: \_\_\_\_\_

NO. DATE

1 4/16/19

STORM DRAIN IMPROVEMENTS

WHITNEY BAILEY COX & MAGNANI, LLC  
300 East Joppa Road Suite 200  
410-515-4500 www.wbcm.com

**WBCM**  
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STATE OF MARYLAND  
PROFESSIONAL ENGINEER  
No. 34682

I hereby certify that the plans were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.

License #34682 Expiration Date: 07/08/19

SITE PLAN

COLUMBIA BANK

CSC REAL ESTATE SERVICES, LLC  
9161 BALTIMORE NATIONAL PIKE  
ELLCOTT CITY, MARYLAND 21042

DESIGNED: M.L.H.

DRAWN: M.L.H.

CHECKED: R.W.H.

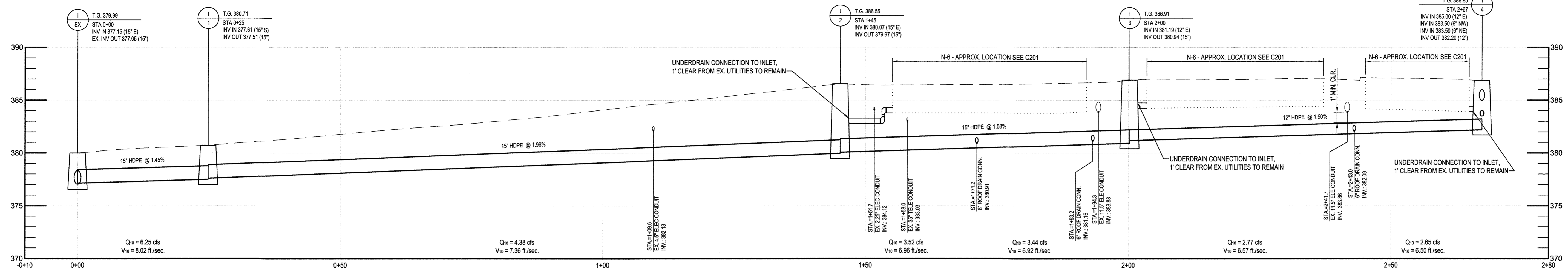
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DATE: 4/16/19

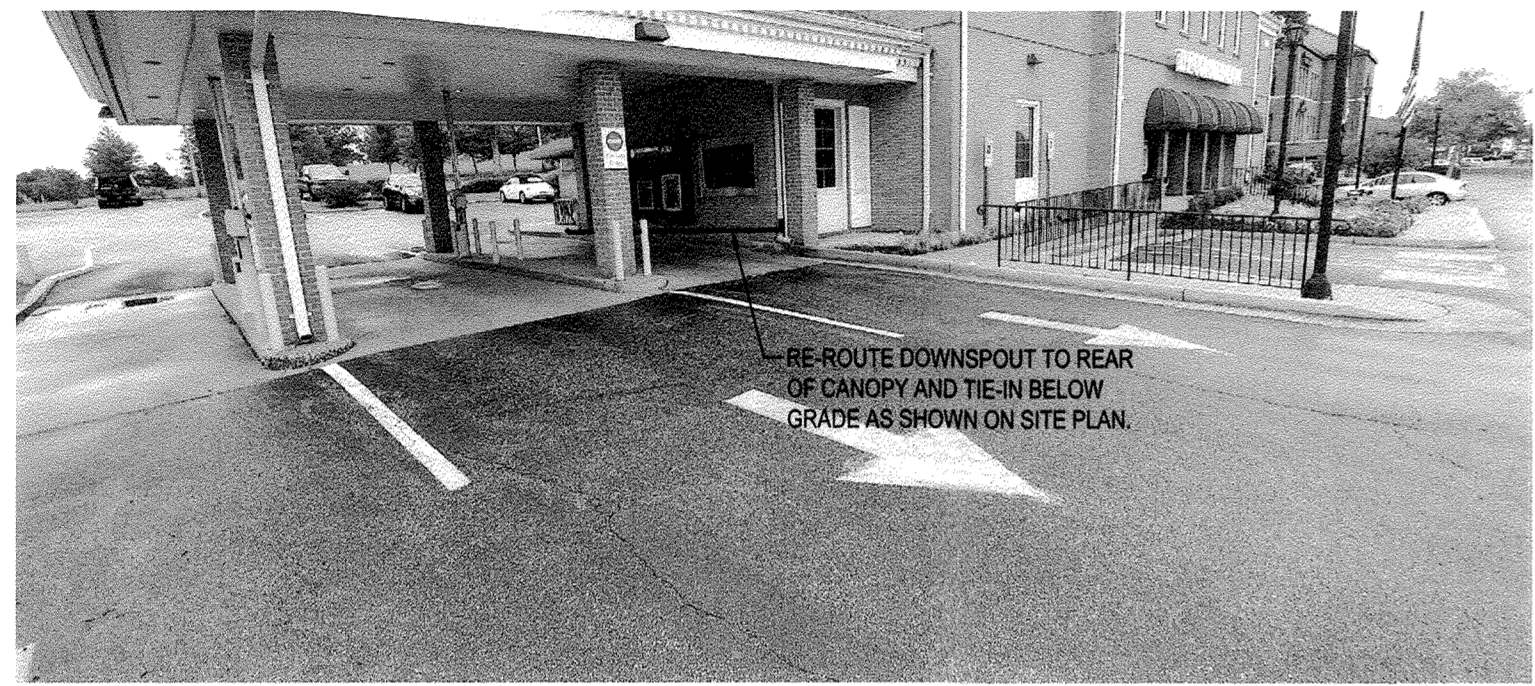
PROJECT: 2018.0595.00

DRAWING: 3 OF 6

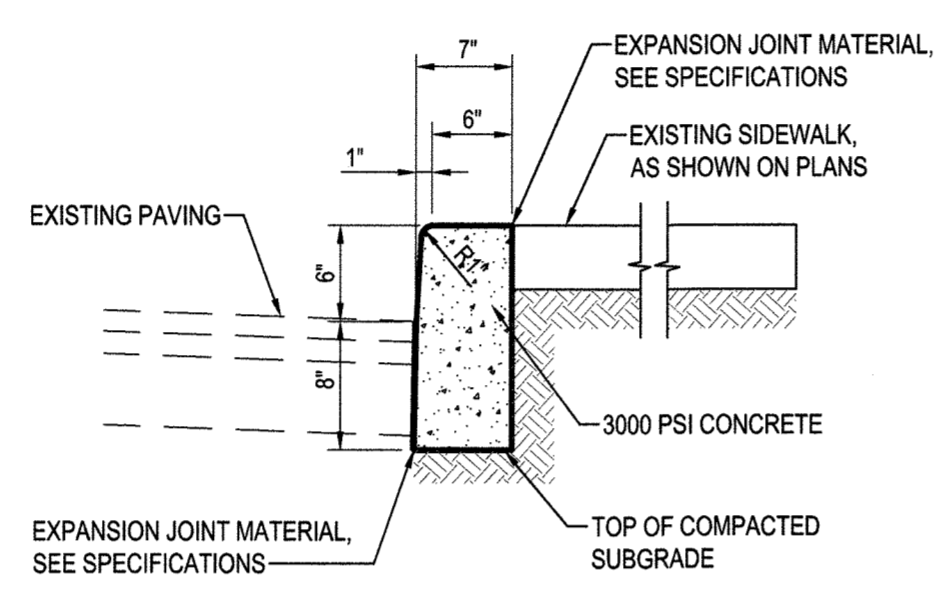




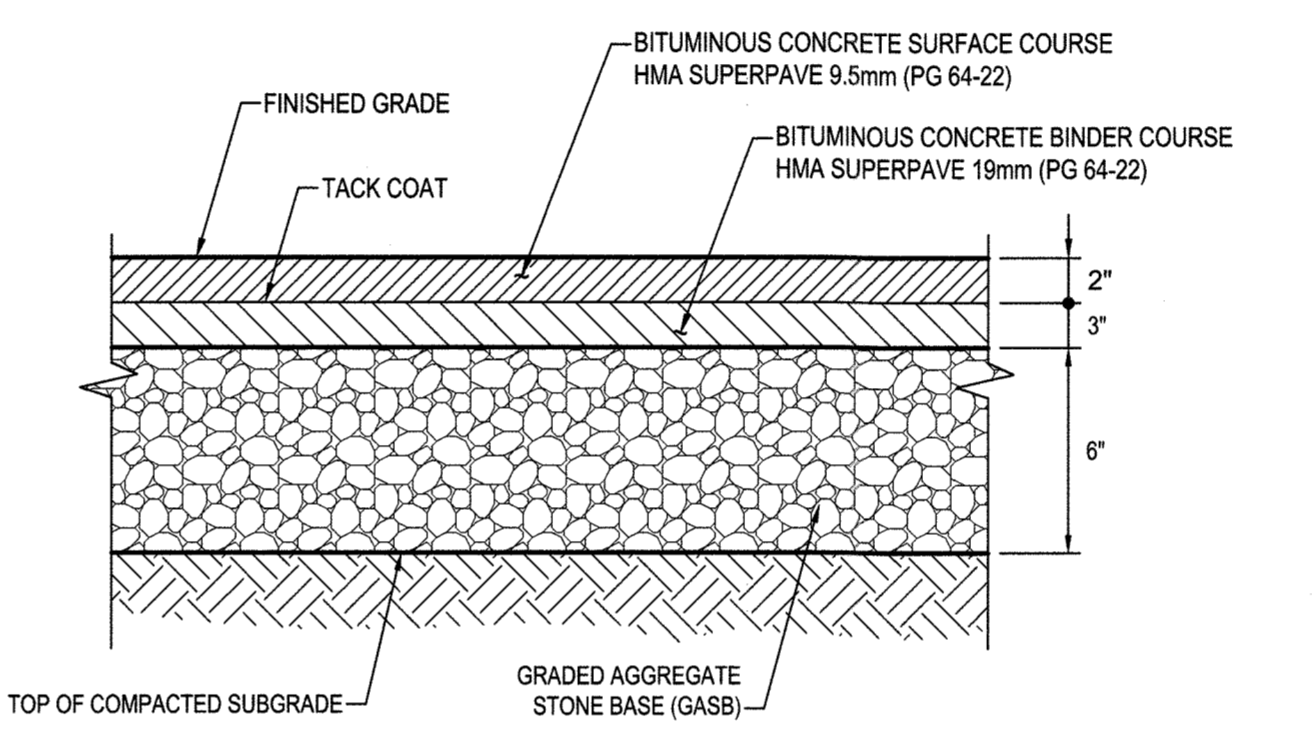
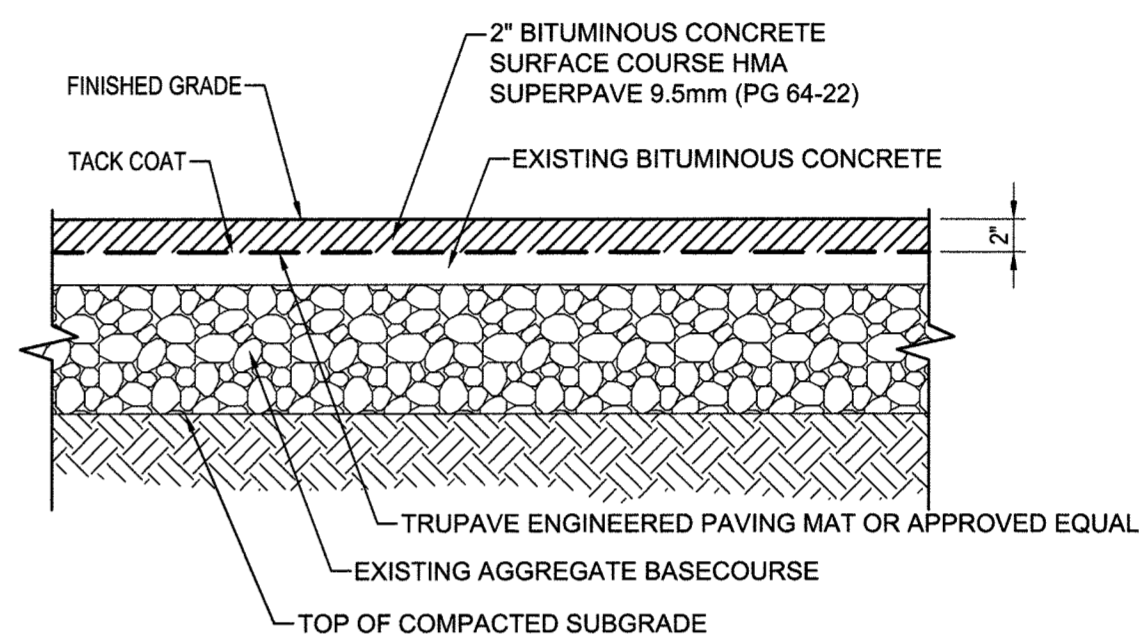
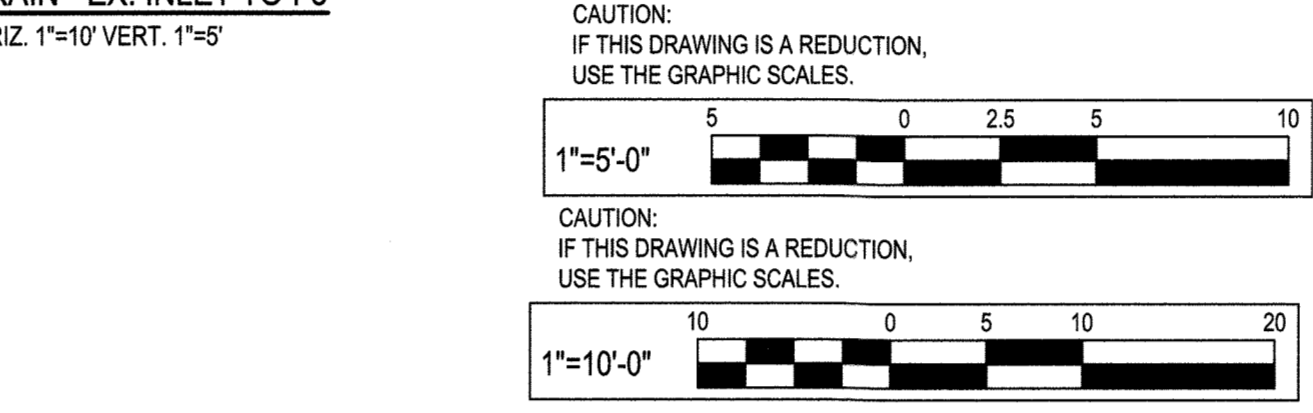
NEW STORM DRAIN - EX. INLET TO I-5  
SCALE: HORIZ. 1"=10' VERT. 1"=5'



0 DOWNSPOUT DETAIL - SD-6  
C202 NOT TO SCALE

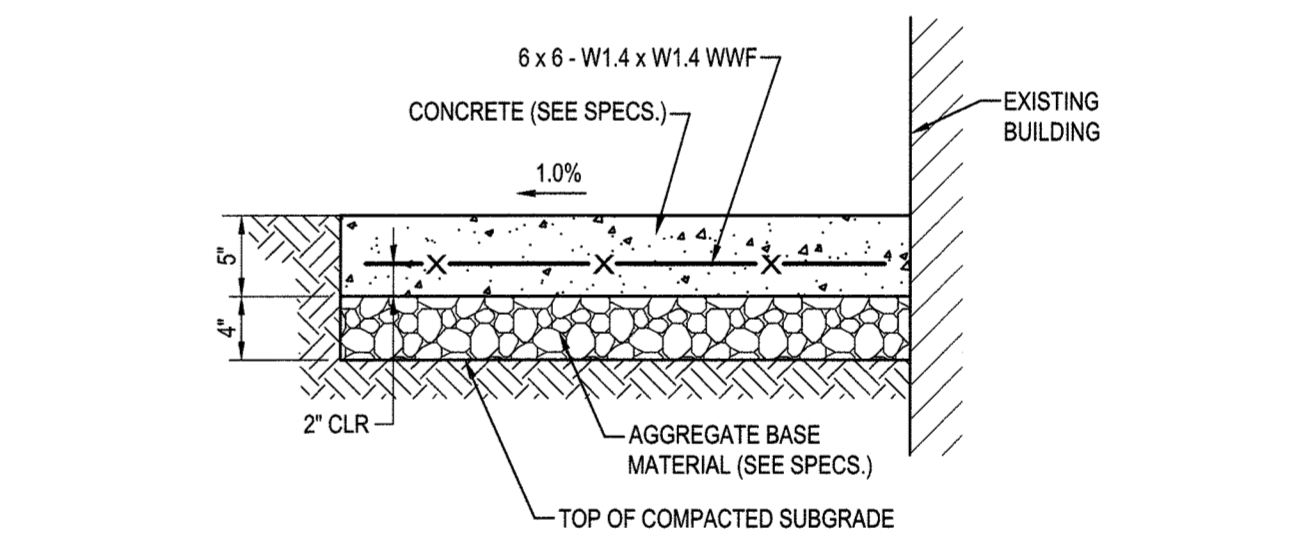
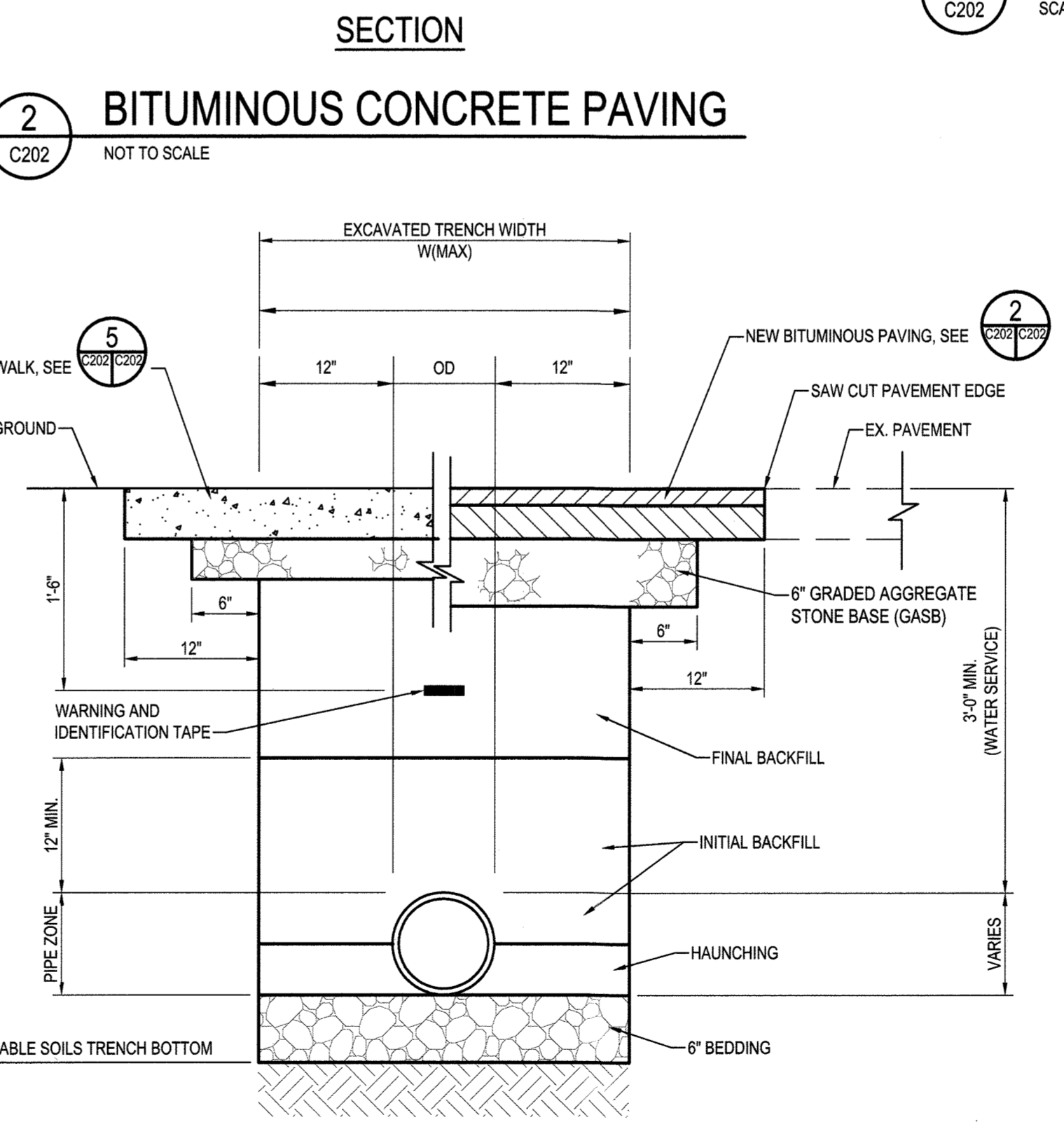
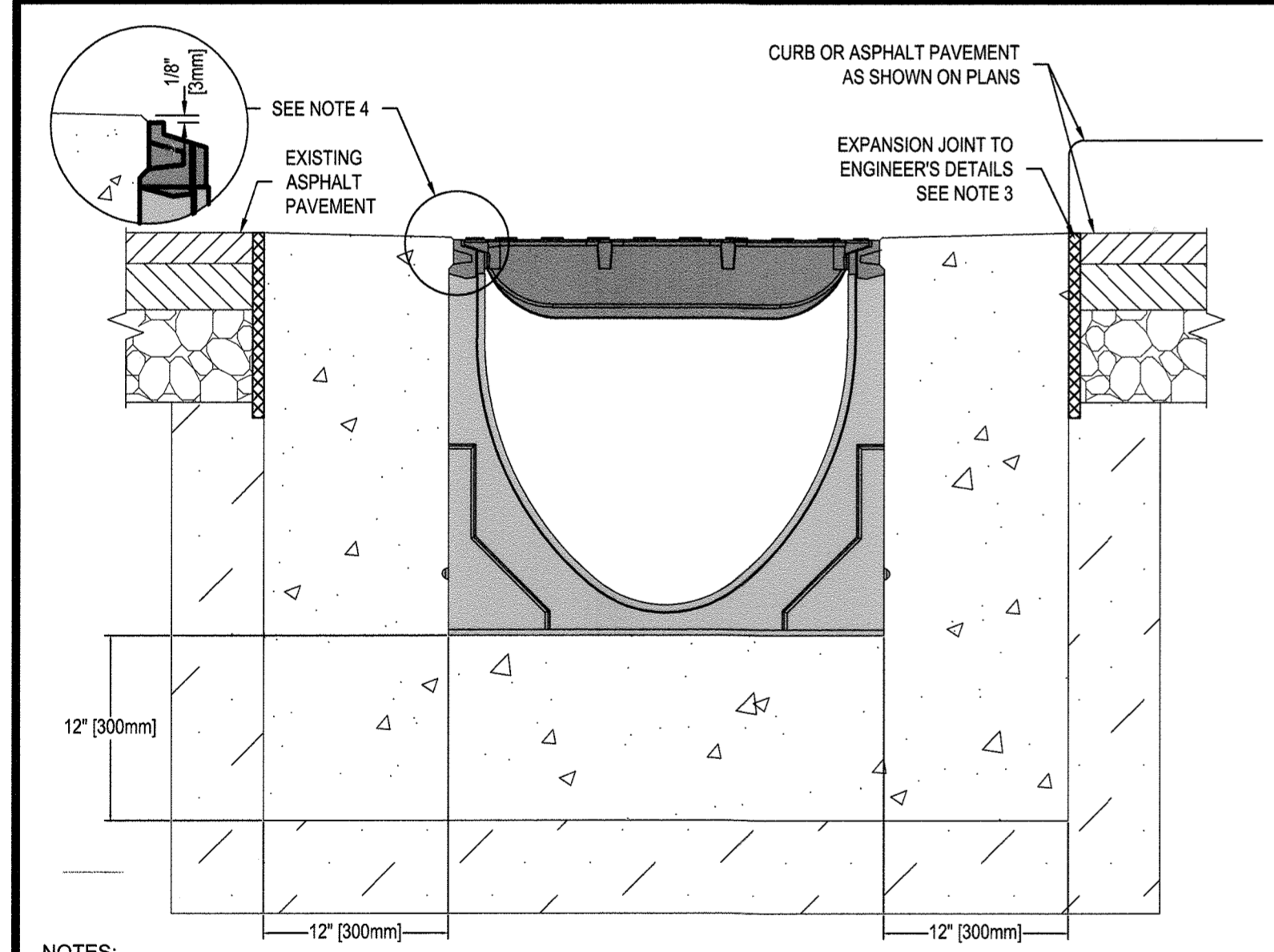


1 6" CONCRETE CURB  
C202 NOT TO SCALE

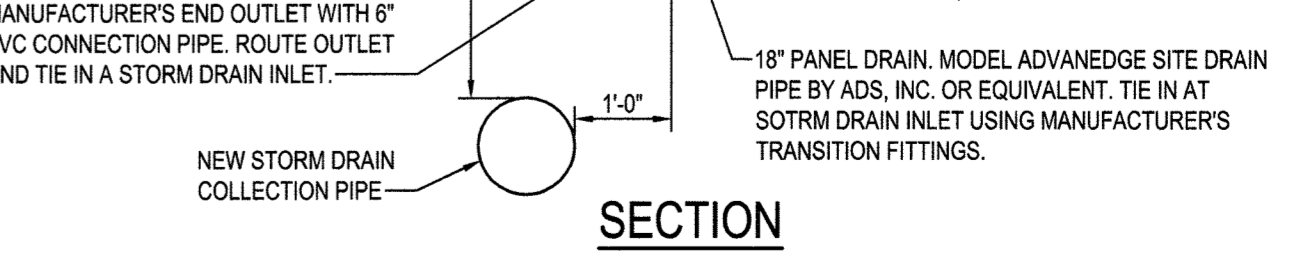
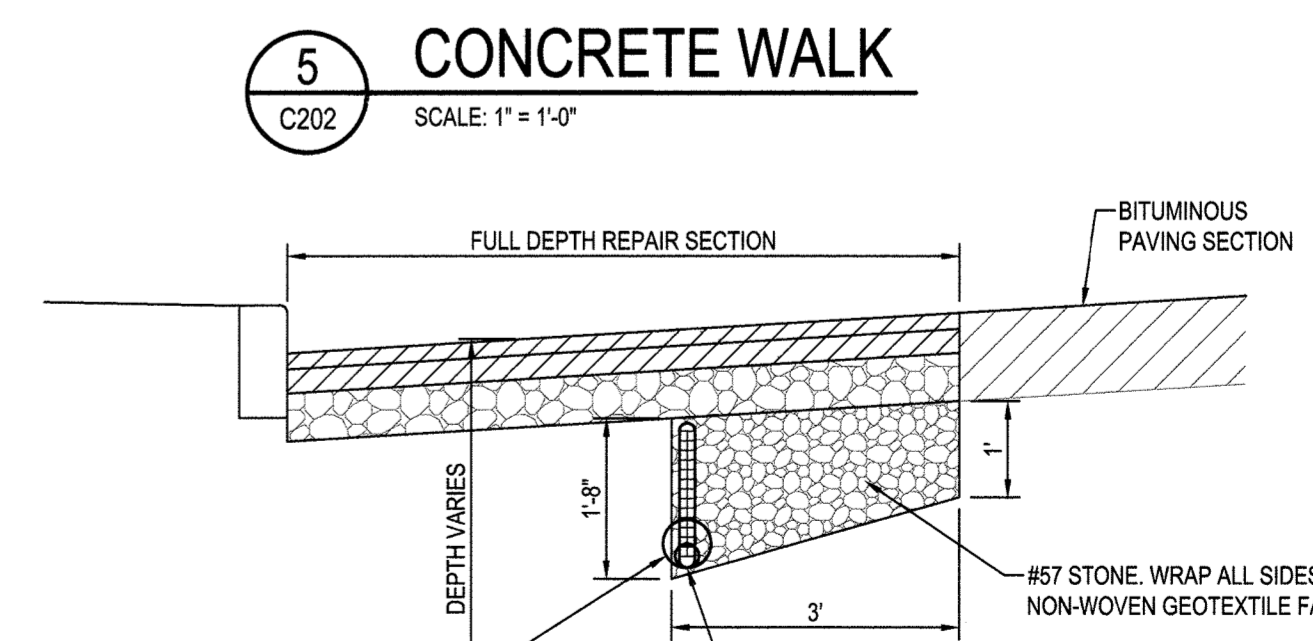


- NOTES:
1. MAINTAIN POSITIVE DRAINAGE AT ALL TIMES.
  2. AT PERIMETERS OF OVERLAY PAVING AREAS: MEET NEW ROAD PAVING SECTION FINISHED GRADE FLUSH.
  3. MILL THE TOP 2 INCHES OF THE PARKING LOT AND ROADWAY SURFACE.
  4. EXAMINE THE MILLED SURFACE. CUT OUT ANY FAILED BASE COURSE AREA EXHIBITING ALLIGATOR OR PATCHWORK CRACKING, WHICH MAY HAVE BEEN HIDDEN BELOW THE SURFACE COURSE, TO EXPOSE THE UNDERLYING SOIL OR CRUSHED STONE BASE.
  5. CLEAN EXPOSED LINEAR CRACKS IN THE EXPOSED SURFACE. FILLING CRACKS THINNER THAN 1/4-INCH WIDTH WITH LIQUID ASPHALT AND FILLING CRACKS LARGER THAN 1/4-INCH WITH SAND/ASPHALT MIX.
  6. PLACE THE LIQUID ASPHALT TACK COAT AND APPROPRIATE PAVEMENT GRADE GEOTEXTILE FABRIC ACROSS THE ENTIRE OVERLAY AREA TO MEET MANUFACTURER'S REQUIREMENTS. PAVING FABRIC SHOULD BE INSTALLED BY AN APPROVED SPECIALTY CONTRACTOR.
  7. PLACE A 2-INCH THICK OVERLAY SECTION OF HOT-MIX ASPHALT (9.5MM SUPERPAVE, LEVEL 10 OVER THE ENTIRE OVERLAY AREA.

3 MILL AND OVERLAY PAVEMENT SECTION  
C202 SCALE: 1"=1'-0"



- NOTES:
1. 1/2" PREMOLDED EXPANSION JOINT MATERIAL TO BE PLACED WHERE WALKS ABUT CURBS, STEPS, BUILDINGS, OTHER WALKS, ETC. AND AT A MAXIMUM OF 20' INTERVALS ALONG THE WALK.
  2. SCORING SHALL BE PROVIDED AT 4' ON-CENTER FOR 4' & 8' WALKS, 5' ON-CENTER FOR 5' & 10' WALKS, AND 6' ON-CENTER FOR 6' AND LARGER NOT PREVIOUSLY MENTIONED.



6 PAVING UNDERDRAIN DETAIL  
C202 SCALE: 1/2"=1'

4 UTILITY TRENCH  
C202 NOT TO SCALE

**SPECIFICATION CLAUSE**  
**S300K POWERDRAIN - LOAD CLASS F**

**GENERAL**  
THE SURFACE DRAINAGE SYSTEM SHALL BE POLYMER CONCRETE S300K CHANNEL SYSTEM WITH DUCTILE IRON EDGE RAILS AS MANUFACTURED BY ACO POLYMER PRODUCTS, INC.

**MATERIALS**  
CHANNELS SHALL BE MANUFACTURED FROM POLYESTER RESIN POLYMER CONCRETE WITH AN INTEGRALLY CAST-IN DUCTILE IRON EDGE RAIL. MINIMUM PROPERTIES OF POLYMER CONCRETE WILL BE AS FOLLOWS:  
COMPRESSIVE STRENGTH: 14,000 PSI  
FLEXURAL STRENGTH: 4,000 PSI  
TENSILE STRENGTH: 1,500 PSI  
WATER ABSORPTION: 0.07%  
FROST PROOF: YES  
DILUTE ACID AND ALKALI RESISTANT: YES  
B117 SALT SPRAY TEST COMPLIANT: YES

THE SYSTEM SHALL BE 12" (300mm) NOMINAL INTERNAL WIDTH WITH A 14.2" (390mm) OVERALL WIDTH AND A BUILT-IN SLOPE OF 0.5%. CHANNEL INVERT SHALL HAVE DEVELOPED "V" SHAPE. ALL CHANNELS SHALL BE INTERLOCKING WITH A MALE/FEMALE JOINT.

THE COMPLETE DRAINAGE SYSTEM SHALL BE BY ACO POLYMER PRODUCTS, INC. ANY DEVIATION OR PARTIAL SYSTEM DESIGN AND/OR IMPROPER INSTALLATION WILL VOID ANY AND ALL WARRANTIES PROVIDED BY ACO POLYMER PRODUCTS, INC.

CHANNEL SHALL WITHSTAND LOADING TO PROPER LOAD CLASS AS OUTLINED BY EN 1433. GRATE TYPE SHALL BE APPROPRIATE TO MEET THE SYSTEM LOAD CLASS SPECIFIED AND INTENDED APPLICATION. GRATES SHALL BE SECURED USING POWERLOCK BOLTLESS LOCKING SYSTEM. CHANNEL AND GRATE SHALL BE CERTIFIED TO MEET THE SPECIFIED EN 1433 LOAD CLASS. THE SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS AND RECOMMENDATIONS.

|                |  |   |  |  |
|----------------|--|---|--|--|
| SK3-F-ECP      | <b>S300K - POWERDRAIN - LOAD CLASS: F</b><br>Exposed Concrete Pavement | <b>ACO Polymer Products, Inc.</b>   |  |  |
| DATE: 08/25/15 | <b>INSTALLATION DRAWING - ACO DRAIN</b>                                | 825 W. Beechcraft St<br>Casa Grande, AZ 85122<br>Tel: 520-421-9986<br>Fax: 520-421-9899 | 9470 Pinecone Dr<br>Mentor, OH 44060<br>Tel: 440-639-7230<br>Fax: 440-639-7235 | 4211 Pleasant Rd.<br>Fort Mill, SC 29708<br>Tel: 440-639-7230<br>Fax: 803-902-1063 |

Arizona Tel: 888-490-9552 e-mail: sales@acousa.com Ohio Tel: 800-543-4764 www.acousa.com South Carolina Tel: 800-543-4764

APPROVED: DEPARTMENT OF PLANNING AND ZONING

*[Signature]* 5-22-19  
Chief, Development Engineer Division Date

*[Signature]* 5-30-19  
Chief, Division of Land Development Date

*[Signature]* 5-30-19  
Director Date

| NO. | DATE    | REVISION                 |
|-----|---------|--------------------------|
| 1   | 4/16/19 | STORM DRAIN IMPROVEMENTS |

WHITNEY BAILEY COX & MAGNANI, LLC  
300 East Joppa Road Suite 200  
410.512.4500 www.wbcm.com

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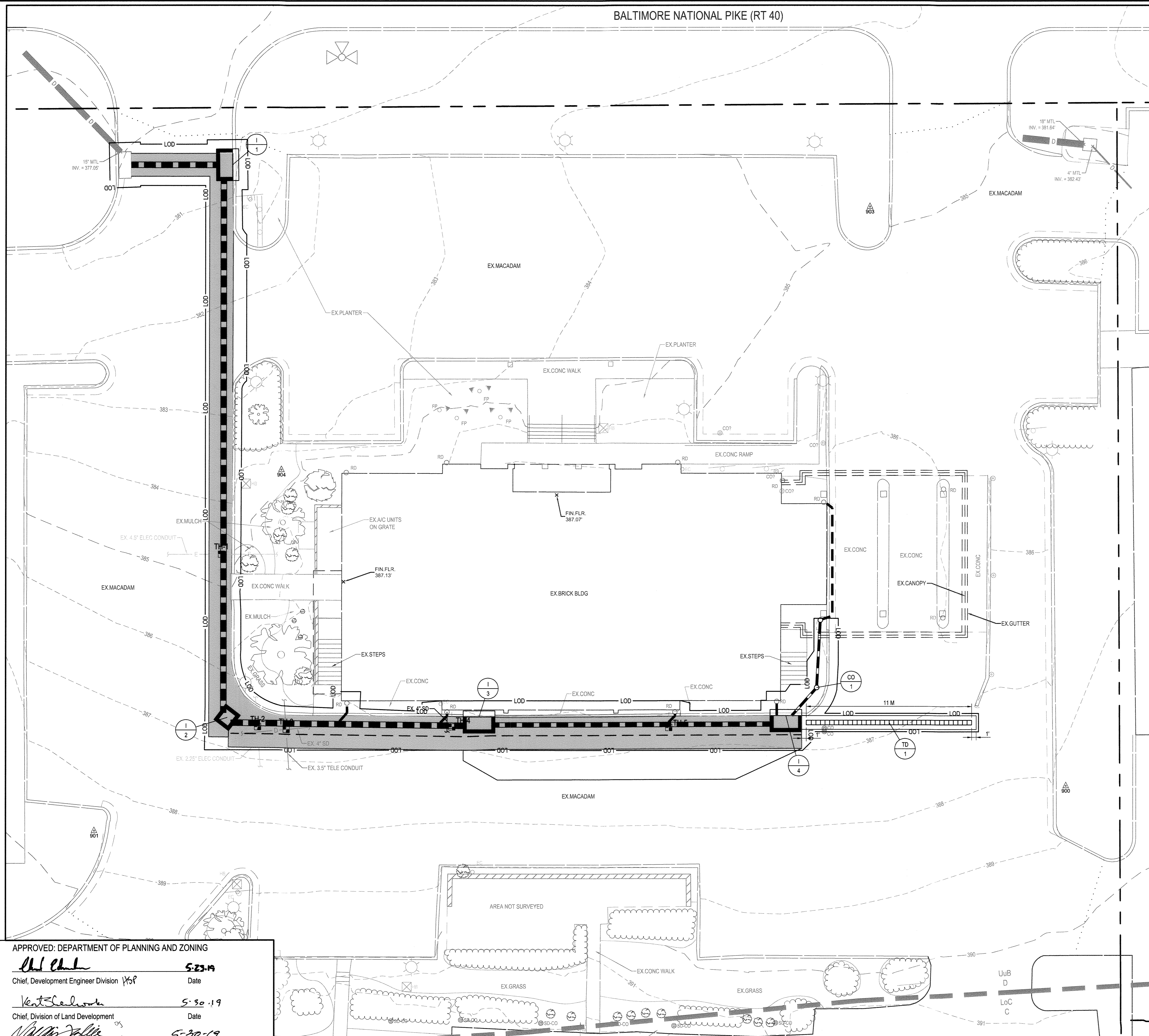
STATE OF MARYLAND  
PROFESSIONAL ENGINEER  
BLAINE WADE JONES  
No. 34682  
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.  
License #34682 Expiration Date: 07/08/19

SITE DETAILS AND UTILITY PROFILES

REVISED COLUMBIA BANK  
CSC REAL ESTATE SERVICES, LLC  
9151 BALTIMORE NATIONAL PIKE  
ELLCOTT CITY, MARYLAND 21042

|           |              |
|-----------|--------------|
| DESIGNED: | M.L.H.       |
| DRAWN:    | M.L.H.       |
| CHECKED:  | R.W.H.       |
| SCALE:    | AS SHOWN     |
| DATE:     | 4/16/19      |
| PROJECT:  | 2018.0595.00 |
| DRAWING:  | 4 OF 6       |





**CONSTRUCTION LEGEND:**

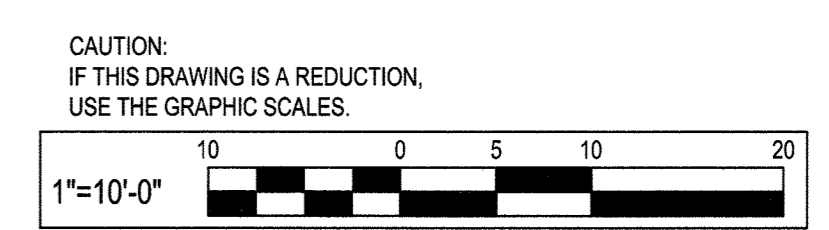
|  |                        |
|--|------------------------|
|  | NEW INLET              |
|  | NEW TRENCH DRAIN       |
|  | LIMIT OF DISTURBANCE   |
|  | SAME DAY STABILIZATION |

**STANDARD STABILIZATION NOTE**

FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN:

- THREE (3) CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER DIKES, SWALES, DITCHES, PERIMETER SLOPES, AND ALL SLOPES GREATER 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.

NO DISTURBED AREA SHALL BE LEFT UNSTABILIZED OVERNIGHT UNLESS RUNOFF IS DIRECTED TO A MDE APPROVED SEDIMENT CONTROL DEVICE



APPROVED: DEPARTMENT OF PLANNING AND ZONING

*[Signature]* 5-23-19  
Chief, Development Engineer Division 1/6/P Date

*[Signature]* 5-30-19  
Chief, Division of Land Development Date

*[Signature]* 5-30-19  
Director Date

| NO. | DATE    | REVISION                 | BY |
|-----|---------|--------------------------|----|
| 1   | 4/16/19 | STORM DRAIN IMPROVEMENTS |    |

WHITNEY BAILEY COX & MAGNANI, LLC  
300 East Japan Road, Suite 200  
410.512.4500 www.wbcm.com

**WBCM**  
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I hereby certify that the 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 #34682 Expiration Date: 07/08/19

**EROSION AND SEDIMENT CONTROL PLAN**

REVISED COLUMBIA BANK  
CSC REAL ESTATE SERVICES, LLC  
9151 BALTIMORE NATIONAL PIKE  
ELLCOTT CITY, MARYLAND 21042

|           |              |
|-----------|--------------|
| DESIGNED: | M.L.H.       |
| DRAWN:    | M.L.H.       |
| CHECKED:  | R.W.H.       |
| SCALE:    | 1"=10'       |
| DATE:     | 4/16/19      |
| PROJECT:  | 2018.0595.00 |
| DRAWING:  | 5 OF 6       |



**HOWARD SOIL CONSERVATION DISTRICT (HSCD)  
STANDARD SEDIMENT CONTROL NOTES**

1. A pre-construction meeting must occur with the Howard County Department of Public Works, Construction Inspection Division (CID), 410-313-1855 after the final LOD and protected areas are marked clearly in the field. A minimum of 48 hour notice to CID must be given at the following stages:
  - a. Prior to the start of earth disturbance.
  - b. Upon completion of the installation of perimeter erosion and sediment controls, but before proceeding with any other earth disturbance or grading.
  - c. Prior to the start of another phase of construction or opening of another grading unit.
  - d. Prior to the removal or modification of sediment control practices.

Other building or grading inspection approvals may not be authorized until this initial approval by the inspection agency is made. Other related state and federal permits shall be referenced, to ensure coordination and to avoid conflicts with this plan.

2. All vegetative and structural practices are to be installed according to the provisions of this plan and are to be in conformance with the 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, and revisions thereto.
3. Following initial soil disturbance or re-disturbance, permanent or temporary stabilization is required within three (3) calendar days as to the surface of all perimeter controls, 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 areas on the project site except for those areas under active grading.

4. All disturbed areas must be stabilized within the time period specified above in accordance with the 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for topsoil (Sec. B-2-2), permanent seeding (Sec. B-4-5), temporary seeding (Sec. B-4-4) and mulching (Sec. B-4-3). Temporary stabilization with mulch alone can only be applied between the fall and spring seeding dates if the ground is frozen. Incremental stabilization (Sec. B-4-1) specifications shall be enforced in areas with >15' of cut and/or fill. Stockpiles (Sec. B-4-8) in excess of 20 ft. must be benched with stable outlet. All concentrated flow, steep slope, and highly erodible areas shall receive soil stabilization matting (Sec. B-4-6).

5. All sediment control structures are to remain in place, and are to be maintained in operative condition until permission for their removal has been obtained from the CID.

6. Site Analysis:

|                                     |      |          |
|-------------------------------------|------|----------|
| Total Area of Site:                 | 1.43 | Acres    |
| Area Disturbed:                     | 0.06 | Acres    |
| Area to be roofed or paved:         | 0    | Acres    |
| Area to be vegetatively stabilized: | 0    | Acres    |
| Total Cut:                          | 0    | Cu. Yds. |
| Total Fill:                         | 0    | Cu. Yds. |
| Offsite waste/borrow area location: |      |          |

7. Any sediment control practice which is disturbed by grading activity for placement of utilities must be repaired on the same day of disturbance.

8. Additional sediment control must be provided, if deemed necessary by the CID. The site and all controls shall be inspected by the contractor weekly, and the next day after each rain event. A written report by the contractor, made available upon request, is part of every inspection and should include:

- Inspection date
- Inspection type (routine, pre-storm event, during rain event)
- Name and title of inspector
- Weather information (current conditions as well as time and amount of last recorded precipitation)
- Brief description of project's status (e.g., percent complete) and/or current activities
- Evidence of sediment discharges
- Identification of plan deficiencies
- Identification of sediment controls that require maintenance
- Identification of missing or improperly installed sediment controls
- Compliance status regarding the sequence of construction and stabilization requirements
- Photographs
- Monitoring/sampling
- Maintenance and/or corrective action performed
- Other inspection items as required by the General Permit for Stormwater Associated with Construction Activities (NPDSS, MDE).

9. Trenches for the construction of utilities is limited to three pipe lengths or that which can and shall be back-filled and stabilized by the end of each workday, whichever is shorter.

10. Any major changes or revisions to the plan or sequence of construction must be reviewed and approved by the HSCD prior to proceeding with construction. Minor revisions may be allowed by the CID per the list of HSCD-approved field changes.

11. Disturbance shall not occur outside the L.O.D. A project is to be sequenced so that grading activities begin on one grading unit (maximum acreage of 20 ac. per grading unit) at a time. Work may proceed to a subsequent grading unit when at least 50 percent of the disturbed area in the preceding grading unit has been stabilized and approved by the CID. Unless otherwise specified and approved by the HSCD, no more than 30 acres cumulatively may be disturbed at a given time.

12. Wash water from any equipment, vehicles, wheels, pavement, and other sources must be treated in a sediment basin or other approved washout structure.

13. Topsoil shall be stockpiled and preserved on-site for redistribution onto final grade.

14. All Silt Fence and Super Silt Fence shall be placed on-the-contour, and be imbricated at 25' minimum intervals, with lower ends curled uphill by 2' in elevation.

15. Stream channels must not be disturbed during the following restricted time periods (inclusive):
  - Use I and II: March 1 - June 15
  - Use III and III: October 1 - April 30
  - Use IV: March 1 - May 31

16. A copy of this plan, the 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, and associated permits shall be on-site and available when the site is active.

**B-4.5 STANDARDS AND SPECIFICATIONS**

**FOR**

**PERMANENT STABILIZATION**

**Definition**

To stabilize disturbed soils with permanent vegetation.

**Purpose**

To use long-lived perennial grasses and legumes to establish permanent ground cover on disturbed soils.

**Conditions Where Practice Applies**

Exposed soils where ground cover is needed for 6 months or more.

**Criteria**

**A. Seed Mixtures**

**1. General Use**

- a. Select one or more of the species or mixtures listed in Table B.3 for the appropriate Plant Hardiness Zone (from Figure B.3) and based on the site condition or purpose found on Table B.2. Enter selected mixture(s), application rates, and seeding dates in the Permanent Seeding Summary. The Summary is to be placed on the plan.
- b. Additional planting specifications for exceptional sites such as shorelines, stream banks, or dunes or for special purposes such as wildlife or aesthetic treatment may be found in USDA-NRCS Technical Field Office Guide, Section 342 - Critical Area Planting.
- c. For sites having disturbed area over 5 acres, use and show the rates recommended by the soil testing agency.
- d. For areas receiving low maintenance, apply urea form fertilizer (46-0-0) at 3 1/2 pounds per 1000 square feet (350 pounds per acre) at the time of seeding in addition to the soil amendments shown in the Permanent Seeding Summary.

**2. Turfgrass Mixtures**

- a. Areas where turfgrass may be desired include lawns, parks, playgrounds, and commercial sites which will receive a medium to high level of maintenance.
- b. Select one or more of the species or mixtures listed below based on the site condition or purpose. Enter selected mixture(s), application rates, and seeding dates in the Permanent Seeding Summary. The Summary is to be placed on the plan.
  - i. Kentucky Bluegrass: Full Sun Mixture: For use in areas that receive intensive management. Irrigation required in the areas of central Maryland and Eastern Shore. Recommended Certified Kentucky Bluegrass Cultivar Seeding Rate: 1.5 to 2.0 pounds per 1000 square feet. Choose a minimum of three Kentucky Bluegrass cultivars with each ranging from 10 to 35 percent of the total mixture by weight.
  - ii. Kentucky Bluegrass/Perennial Rye: Full Sun Mixture: For use in full sun areas where

B.21

**rapid establishment is necessary and when turf will receive medium to intensive management. Certified Perennial Ryegrass Cultivar/Certified Kentucky Bluegrass Seeding Rate: 2 pounds mixture per 1000 square feet. Choose a minimum of three Kentucky bluegrass cultivars with each ranging from 10 to 35 percent of the total mixture by weight.**

- iii. Tall Fescue/Kentucky Bluegrass: Full Sun Mixture: For use in drought prone areas and/or for areas receiving low to medium management in full sun to medium shade. Recommended mixture includes: Certified Tall Fescue Cultivars 85 to 100 percent, Certified Kentucky Bluegrass Cultivars 0 to 5 percent. Seeding Rate: 5 to 8 pounds per 1000 square feet. Use one or more cultivars may be blended.
- iv. Kentucky Bluegrass/Perennial Rye: Shade Mixture: For use in areas with shade in Bluegrass lawns. For establishment in high quality, intensively managed turf areas. Mixture includes: Certified Kentucky Bluegrass Cultivars 30 to 40 percent and Certified Fine Fescue and 60 to 70 percent. Seeding Rate: 1 1/2 to 3 pounds per 1000 square feet.

**Notes:**

Select turfgrass varieties from those listed in the most current University of Maryland Publication, Agronomy Memo #77, "Turfgrass Cultivar Recommendations for Maryland". Choose certified material. Certified material is the best guarantee of cultivar purity. The certification program of the Maryland Department of Agriculture, Turf and Seed Section, provides a reliable means of consumer protection and assures a pure genetic line.

**c. Ideal Times of Seeding for Turfgrass Mixtures**

**Western MD:** March 15 to June 1, August 1 to October 1 (Hardiness Zones: 5b, 6a)

**Central MD:** March 1 to May 15, August 15 to October 15 (Hardiness Zones: 6b)

**Southern MD, Eastern Shore:** March 1 to May 15, August 15 to October 15 (Hardiness Zones: 7a, 7b)

- d. Till areas to receive seed by disking or other approved methods to a depth of 2 to 4 inches, level and rake the areas to prepare a proper seedbed. Remove stones and debris over 1/2 inch in diameter. The resulting seedbed must be in such condition that future mowing of grasses will pose no difficulty.
- e. If soil moisture is deficient, supply new seedings with adequate water for plant growth (1/2 to 1 inch every 3 to 4 days depending on soil texture) until they are firmly established. This is especially true when seedings are made late in the planting season, if abnormally dry or hot seasons, or on adverse sites.

B.22

**Permanent Seeding Summary**

| Hardiness Zone (from Figure B.3): |         |                          |               | Fertilizer Rate (10-20-20)          |                               |                         | Lime Rate                 |
|-----------------------------------|---------|--------------------------|---------------|-------------------------------------|-------------------------------|-------------------------|---------------------------|
| Seed Mixture (from Table B.3):    |         |                          |               | N                                   | P <sub>2</sub> O <sub>5</sub> | K <sub>2</sub> O        |                           |
| No.                               | Species | Application Rate (lb/ac) | Seeding Dates | Seeding Depth                       |                               |                         |                           |
|                                   |         |                          | 1/2 - 1/2 in  | 45 pounds per acre (1.0 lb/1000 sf) | 40 lb/ac (2 lb/1000 sf)       | 90 lb/ac (2 lb/1000 sf) | 2 tons/ac (90 lb/1000 sf) |
|                                   |         |                          | 1/2 - 1/2 in  |                                     |                               |                         |                           |
|                                   |         |                          | 1/2 - 1/2 in  |                                     |                               |                         |                           |

- B. Sod: To provide quick cover on disturbed areas (2:1 grade or flatter).

1. General Specifications
  - a. Class of turfgrass sod must be Maryland State Certified. Sod labels must be made available to the job foreman and inspector.
  - b. Sod must be machine cut to a uniform soil thickness of 3/4 inch, plus or minus 1/8 inch, at the time of cutting. Measurement for thickness must exclude top growth and thatch. Broken packs and top or bottom ends will not be acceptable.
  - c. Standard size sections of sod must be strong enough to support their own weight and retain their size and shape when suspended vertically with a firm grip on the upper 10 percent of the section.
  - d. Sod must not be harvested or transplanted when moisture content (excessively dry or wet) may adversely affect its survival.
  - e. Sod must be harvested, delivered, and installed within a period of 36 hours. Sod not transplanted within this period must be approved by an agronomist or soil scientist prior to its installation.

2. Sod Installation
  - a. During periods of excessively high temperature or in areas having dry subsoil, lightly irrigate the subsoil immediately prior to laying the sod.
  - b. Lay the first row of sod in a straight line with subsequent rows placed parallel to it and tightly wedged against each other. Stagger lateral joints to promote more uniform growth and strength. Ensure that sod is not stretched or overlapped and that all joints are tamped tight in order to prevent voids which would cause air drying of the roots.
  - c. Whenever possible, lay sod with the long edges parallel to the contour and with staggering joints. Roll and tamp, peg or otherwise secure the sod to prevent slippage on slopes. Ensure solid contact exists between sod roots and the underlying soil surface.
  - d. Water the sod immediately following rolling and tamping until the underside of the new sod pad and soil surface below the sod are thoroughly wet. Complete the operations of laying, tamping and irrigating for any piece of sod within eight hours.

3. Sod Maintenance
  - a. In the absence of adequate rainfall, water daily during the first week or so often and sufficiently to maintain moist soil to a depth of 4 inches. Water sod during the first of the day to prevent wetting.
  - b. After the first week, sod watering is required as necessary to maintain adequate moisture content.
  - c. Do not mow until the sod is firmly rooted. No more than 1/2 of the grass leaf must be removed by the initial cutting or subsequent cuttings. Maintain a grass height of at least 3 inches unless otherwise specified.

B.23

**B-4.4 STANDARDS AND SPECIFICATIONS**

**FOR**

**TEMPORARY STABILIZATION**

**Definition**

To stabilize disturbed soils with vegetation for up to 6 months.

**Purpose**

To use fast growing vegetation that provides cover on disturbed soils.

**Conditions Where Practice Applies**

Exposed soils where ground cover is needed for a period of 6 months or less. For longer duration of time, permanent stabilization practices are required.

**Criteria**

1. Select one or more of the species or seed mixtures listed in Table B.1 for the appropriate Plant Hardiness Zone (from Figure B.3), and enter them in the Temporary Seeding Summary below along with application rates, seeding dates and seeding depths. If this Summary is not put on the plan and completed, then Table B.1 plus fertilizer and lime rates must be put on the plan.
2. For sites having soil tests performed, use and show the recommended rates by the testing agency. Soil tests are not required for Temporary Seeding.
3. When stabilization is required outside of a seeding season, apply seed and mulch or straw mat along as prescribed in Section B-4-3.A.1.b and maintain until the next seeding season.

**Temporary Seeding Summary**

| Hardiness Zone (from Figure B.3): |         |                          |               | Fertilizer Rate (10-20-20) |                               | Lime Rate                 |
|-----------------------------------|---------|--------------------------|---------------|----------------------------|-------------------------------|---------------------------|
| Seed Mixture (from Table B.3):    |         |                          |               | N                          | P <sub>2</sub> O <sub>5</sub> |                           |
| No.                               | Species | Application Rate (lb/ac) | Seeding Dates | Seeding Depth              |                               |                           |
|                                   |         |                          |               |                            | 436 lb/ac (10 lb/1000 sf)     | 2 tons/ac (90 lb/1000 sf) |
|                                   |         |                          |               |                            |                               |                           |
|                                   |         |                          |               |                            |                               |                           |

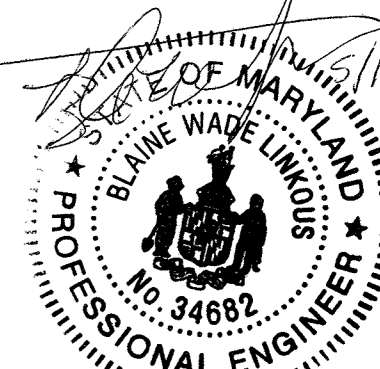
B.18

| NO. | DATE     | REVISION   |
|-----|----------|------------|
| 1   | 03/14/19 | REVISION H |
|     | 11/16/18 | BID SET    |

WHITNEY BAILEY COX & MAGNANI, LLC  
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I hereby certify that the 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 #34662 Expiration Date: 07/08/19

**EROSION AND SEDIMENT CONTROL NOTES**

REVISED COLUMBIA BANK  
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|           |              |
|-----------|--------------|
| DESIGNED: | MLH          |
| DRAWN:    | MLH          |
| CHECKED:  | R.W.H.       |
| SCALE:    | 1"=10'       |
| DATE:     | 4/16/19      |
| PROJECT:  | 2018.0585.00 |
| DRAWING:  | 6 OF 6       |

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chad Edwards 5-23-19  
Chief, Development Engineer Division HSP Date

Keith Ledwith 5-30-19  
Chief, Division of Land Development Date

William H. Magness 5-30-19  
Director Date

Rev: 2-2019

Mar 13, 2019, 9:07am User: dshannon