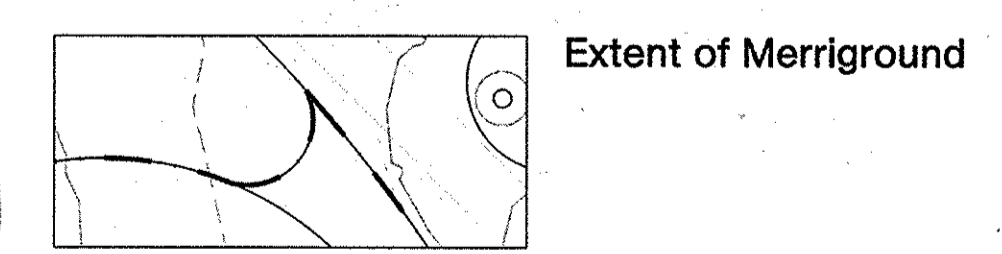


- EQUIPMENT KEY**
- A-Double helix spiral slide, refer to Sparks@Play Drawing #: 74269-1-1, 74269-1-1R, 74269-1-1B
 - B-Swing rope ring, refer to Sparks@Play Drawing #: 74269-1-1, 74269-1-1R, 74269-1-1C
 - C-Climbing tower + slide, refer to Sparks@Play Drawing #: 74269-1-1, 74269-1-1R, 74269-1-1D
 - D-Stepping spiral pod, refer to Sparks@Play Drawing #: 74269-1-1, 74269-1-1R, 74269-1-1E
 - E-Spiral mound, refer to MSP Details LF356
 - F-Spiral seat, refer to MSP Details LF356
 - G-Spider web, refer to Sparks@Play Drawing #: 74269-1-1, 74269-1-1R, 74269-1-1A
 - H-Wondrous tower, refer to MSP Details LF358, LF359, 360
 - I-Jumping disks, refer to MSP Details LF357-01
 - L-Drinking fountain, refer to MSP Details LF357-02
 - Water play element, refer to Sparks@Play Drawing #: 74269-1-1

340



APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
 Director: *Walter J. Gable* Date: 9-8-16
 Chief, Division of Land Development: *Chad E. Gable* Date: 9-2-15
 Chief, Development Engineering Division: *Walter J. Gable* Date: 8-25-15

APPROVED
 PLANNING BOARD OF HOWARD COUNTY
 Date: November 20, 2014
 See SH 2 for add'l approvals required & phasing.

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03/18/14	Rev A - SDP DRAFT	NA	NK
		BY	APPR.

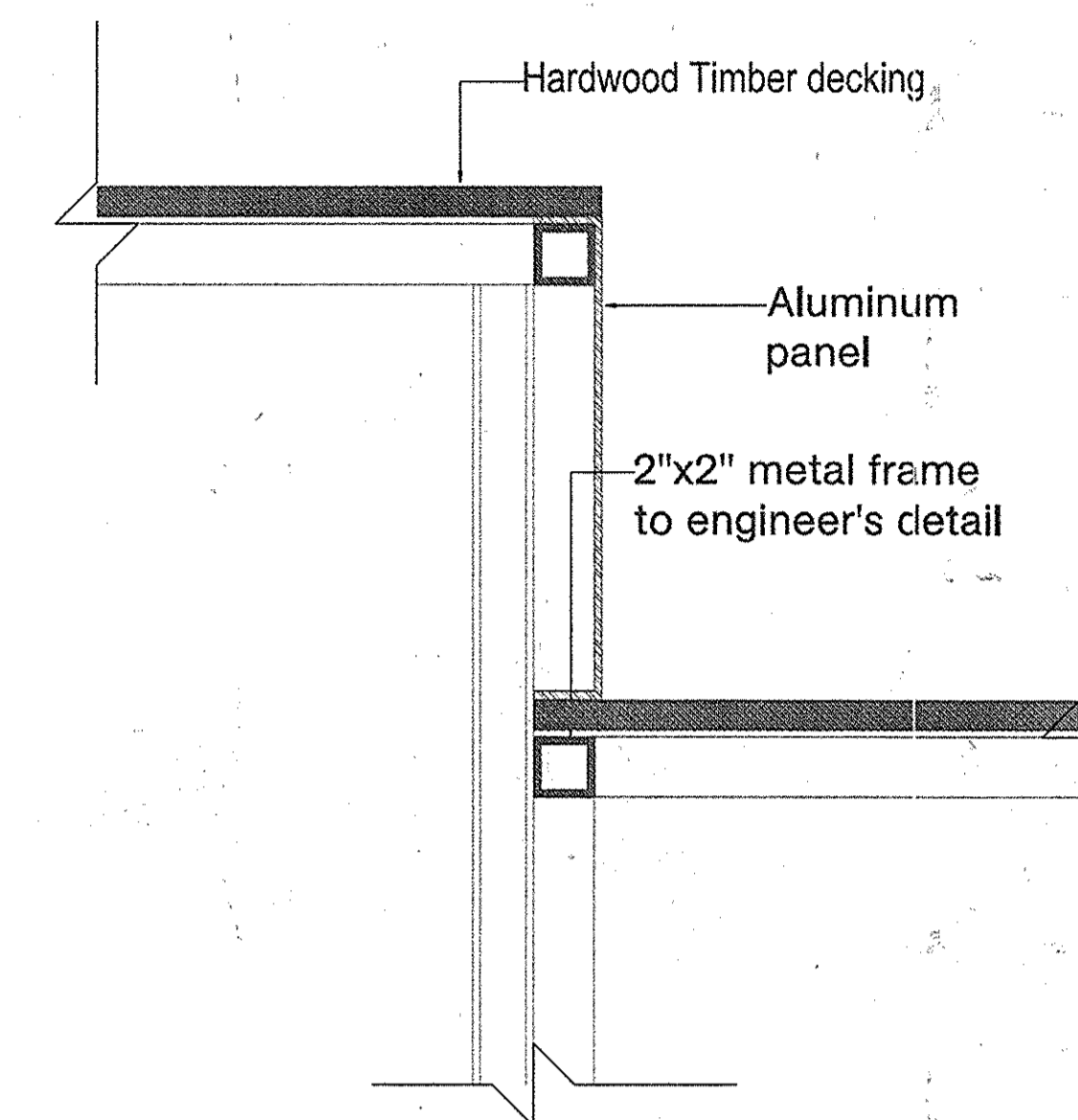
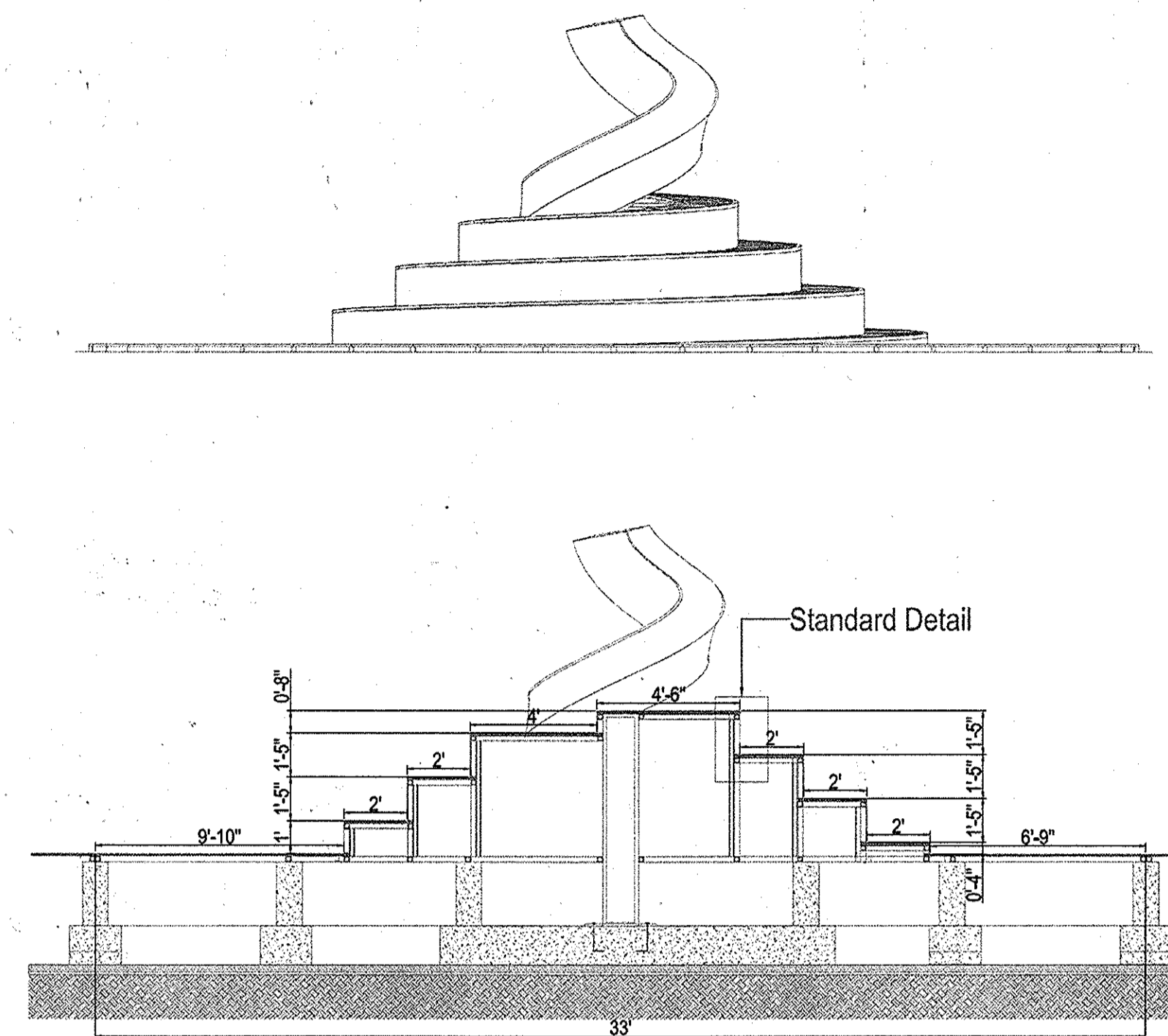
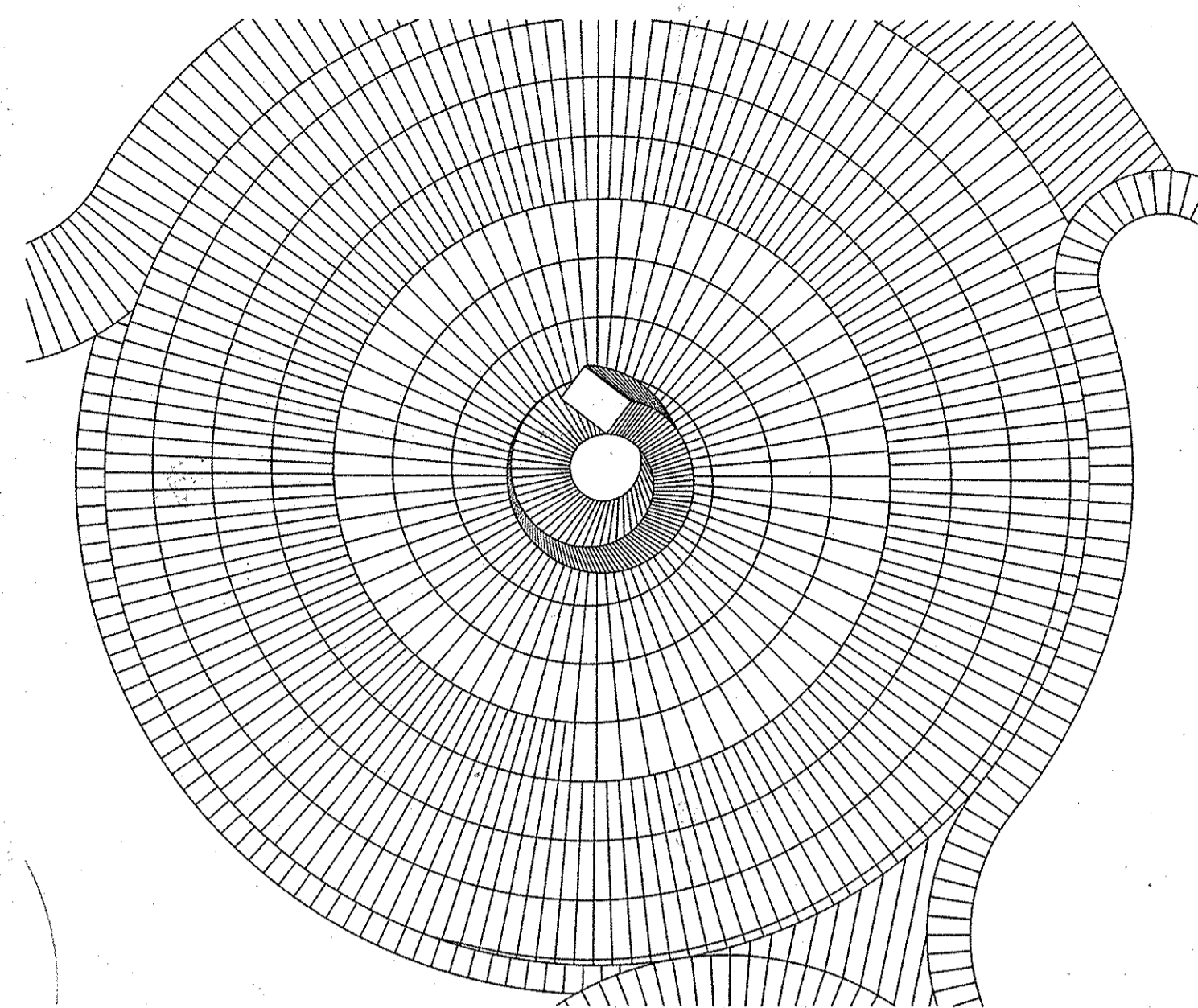
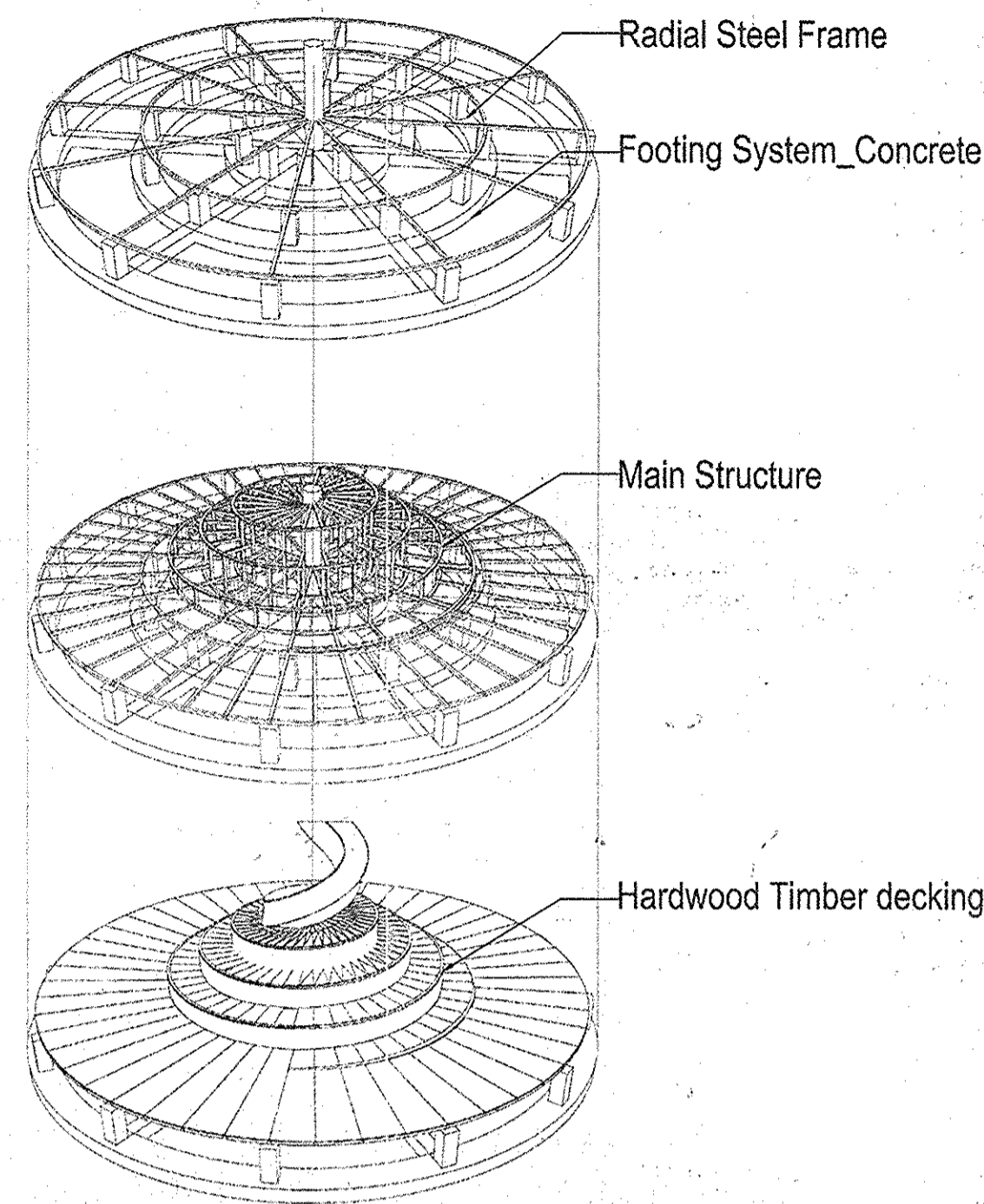
PREPARED FOR & DEVELOPER:
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 10630 LITTLE PATUXENT PARKWAY
 CENTURY PLAZA, SUITE 315
 COLUMBIA, MD 21044
 ATTN: MICHAEL McCALL
 410-740-0029



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GENERAL ARRANGEMENT PLAN
DOWNTOWN COLUMBIA
 MERRIWEATHER-SYMPHONY WOODS NEIGHBORHOOD
 MERRIWEATHER PARK at SYMPHONY WOODS PHASE 1 AND FUTURE PHASES 2-7
 TOWN CENTER - SECTION 1 AREA 1
 PART OF OPEN SPACE LOT 23-PLAT NO. 22123 &
 PART OF OPEN SPACE LOT 9B-PLAT BOOK 15, PAGE 32
 GREEN COMMERCIAL BUILDING
 ELECTION DISTRICT No. 5
 HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
3/32"=1'-0"	NT	13043
DATE	TAX MAP - GRID	SHEET
JUNE, 2015	36 - 01	17 OF 85

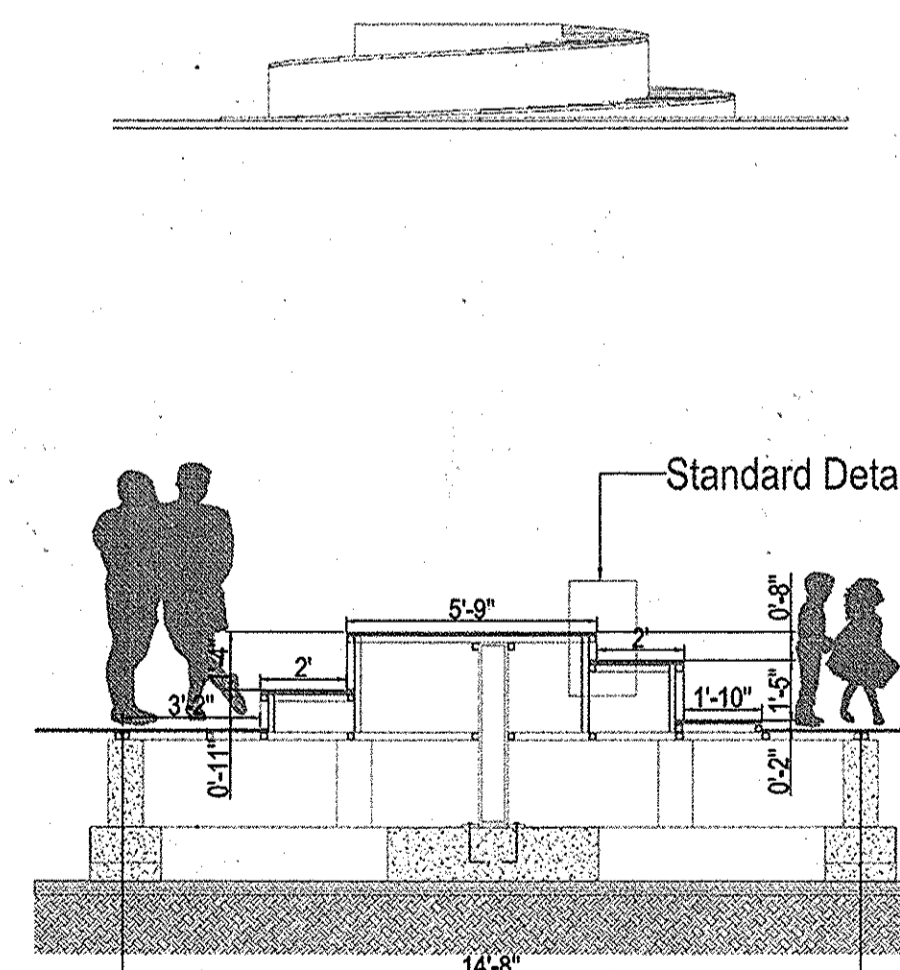
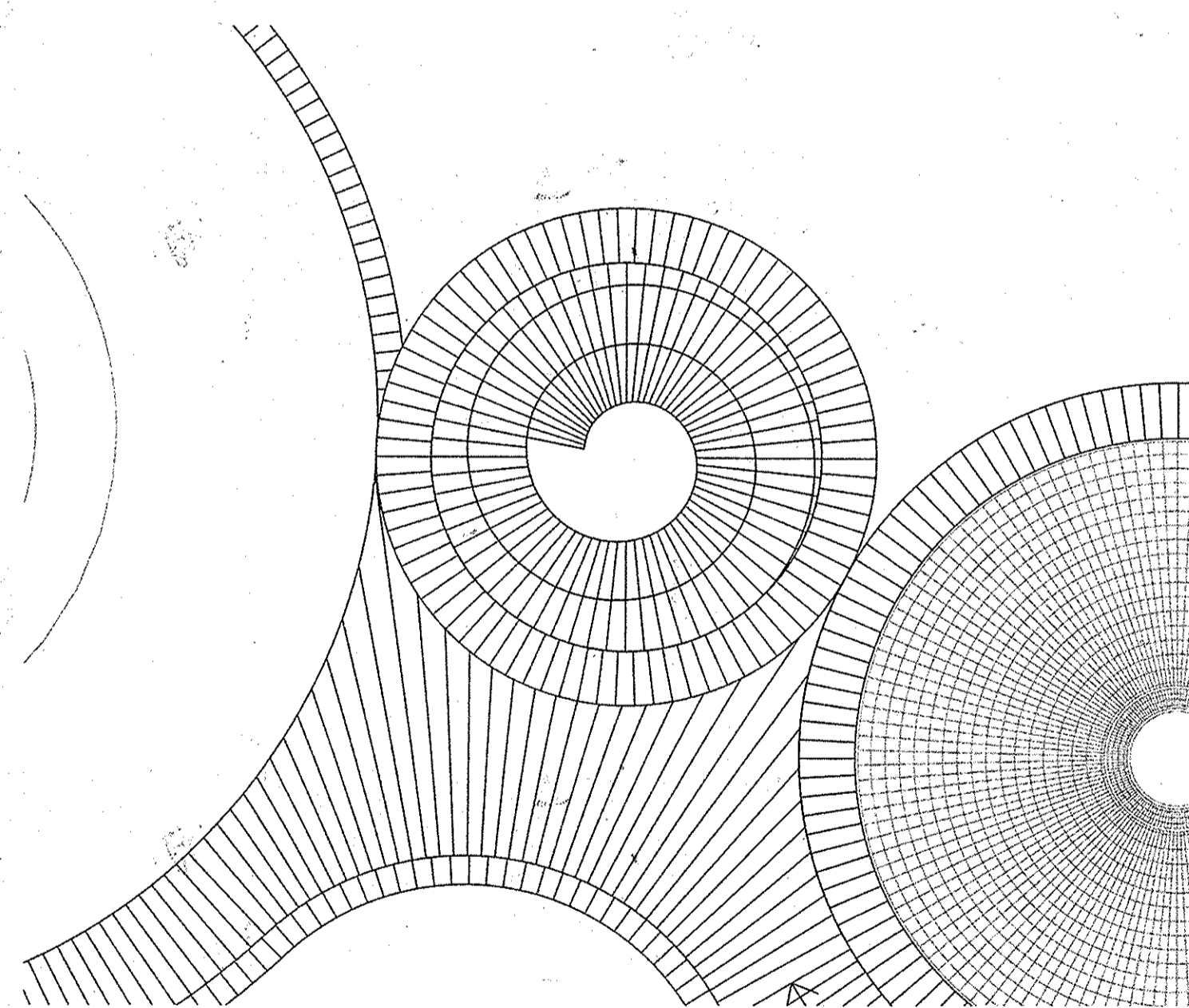
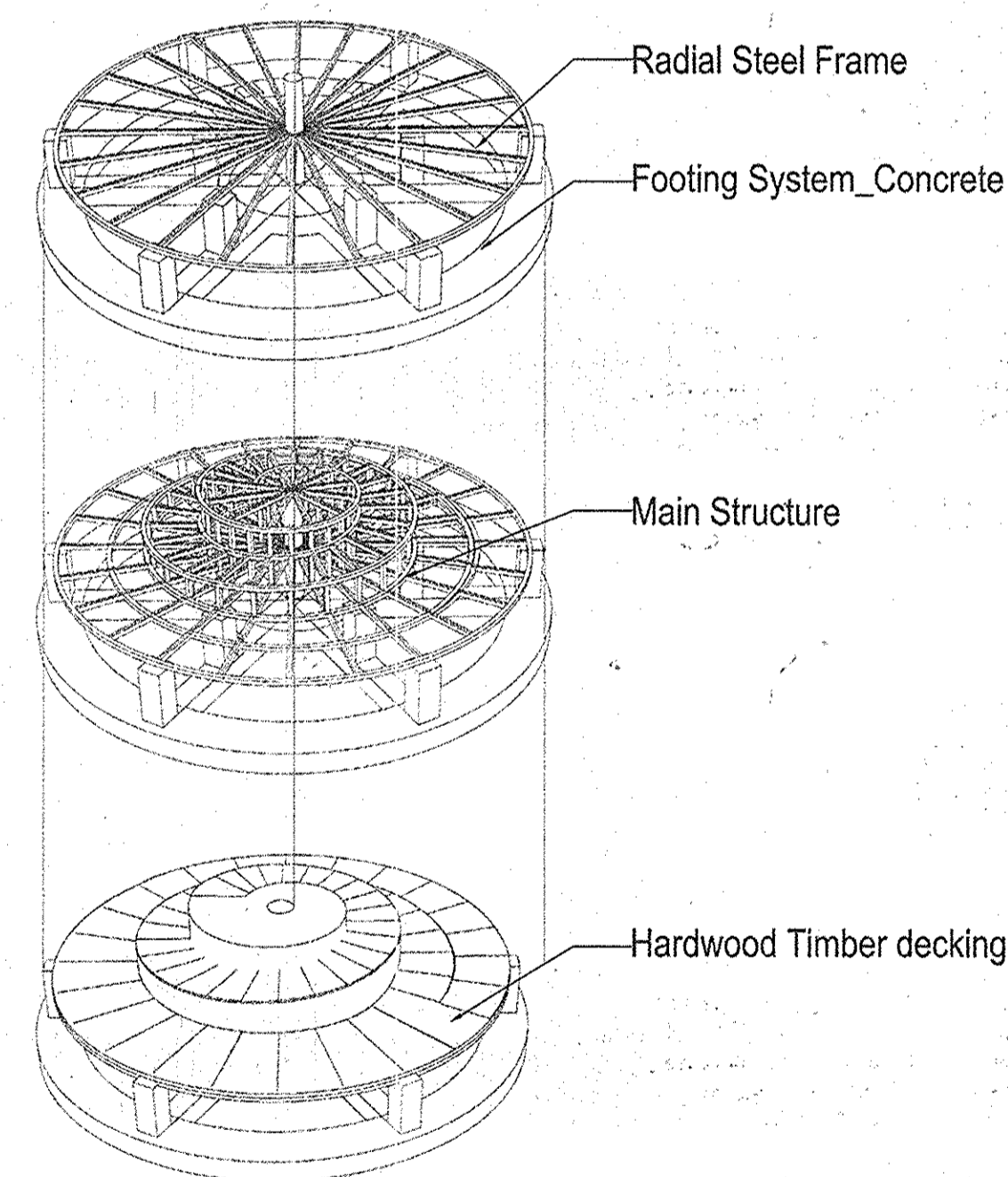


01 Mound Spiral / Components_Diagrams

02 Mound Spiral / General Plan
SCALE: 1-1/2"=1'-0"

03 Mound Spiral / Elevation_Typical Section

04 Mound Spiral / Standard Detail



05 Seat Spiral / Components_Diagrams

06 Seat Spiral / General Plan
SCALE: 1-1/2"=1'-0"

07 Seat Spiral / Elevation_Typical Section

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
 Director: *Valerie J. J...* Date: 9-8-15
 Chief, Division of Land Development: *...* Date: 9-2-15
 Chief, Development Engineering Division: *...* Date: 8-25-15

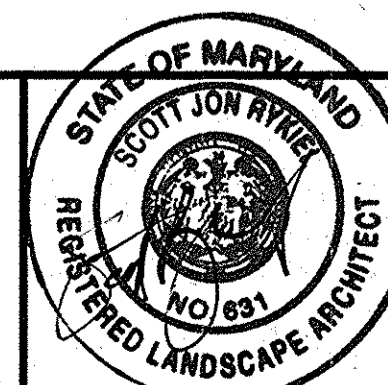
APPROVED
 PLANNING BOARD OF HOWARD COUNTY
 Date: November 20, 2014
 * see Sh. 2 for Pricing & Att'l
 Required Approvals for Pigs 3-7

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DATE	REVISION	BY	APP'R.
10/22/14	Rev C - SDP DRAFT	SDC	DR
10/20/14	Rev B - SDP DRAFT	SDC	DR
03/18/14	Rev A - SDP DRAFT	DP	NK

PREPARED FOR & DEVELOPER:
 INNER ARBOR TRUST
 10630 LITTLE PATUXENT PARKWAY
 CENTURY PLAZA, SUITE 315
 COLUMBIA, MD 21044
 ATTN: MICHAEL McCALL
 410-740-0029



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SPRIRAL MOUND AND SPIRAL SEAT DETAILS
DOWNTOWN COLUMBIA
 MERRIWEATHER-SYMPHONY WOODS NEIGHBORHOOD
 MERRIWEATHER PARK at SYMPHONY WOODS PHASE 1 AND FUTURE PHASES 2-7
 TOWN CENTER - SECTION 1 AREA 1
 PART OF OPEN SPACE LOT 23-PLAT NO. 22123 &
 PART OF OPEN SPACE LOT 9B-PLAT BOOK 15, PAGE 32
 GREEN COMMERCIAL BUILDING
 ELECTION DISTRICT No. 5
 HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
	NT	13043
DATE	TAX MAP - GRID	SHEET
JUNE, 2015	36 - 01	18 OF 85

LF356 MOUND SPIRAL / SEAT SPIRAL _ EQUIPMENT SCHEDULE

Jumping Disc

Play value

Round spring platforms are mounted on strong, low springs. It is not only fun to jump on them, but one can jump off the disc in any direction, as from a springboard. The momentum which is enforced by the springs propels the jumping child quite far. Jumping from one disc to the other represents a special sequence of movements and a challenge for small children.

Supplier

Richter Spielgeräte GmbH

Fundamental characteristics

- Wooden surface with natural structure for a good grip
- Incentive for playing: round, low wooden plate, springs
- Movement: jumping up and down, jumping off, hopping, and balancing

Suitable

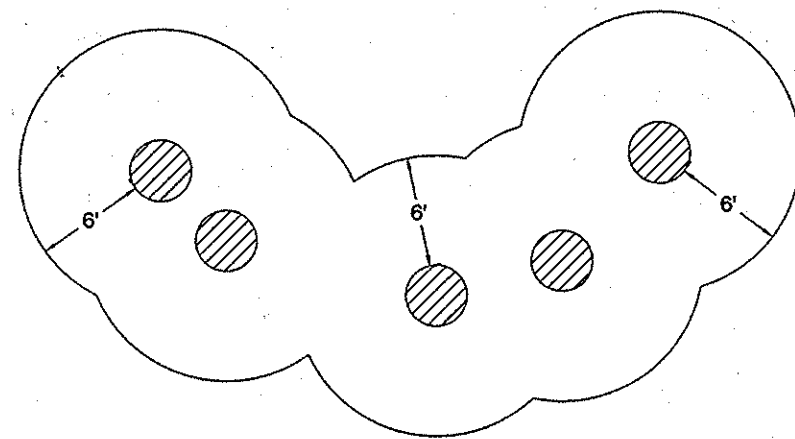
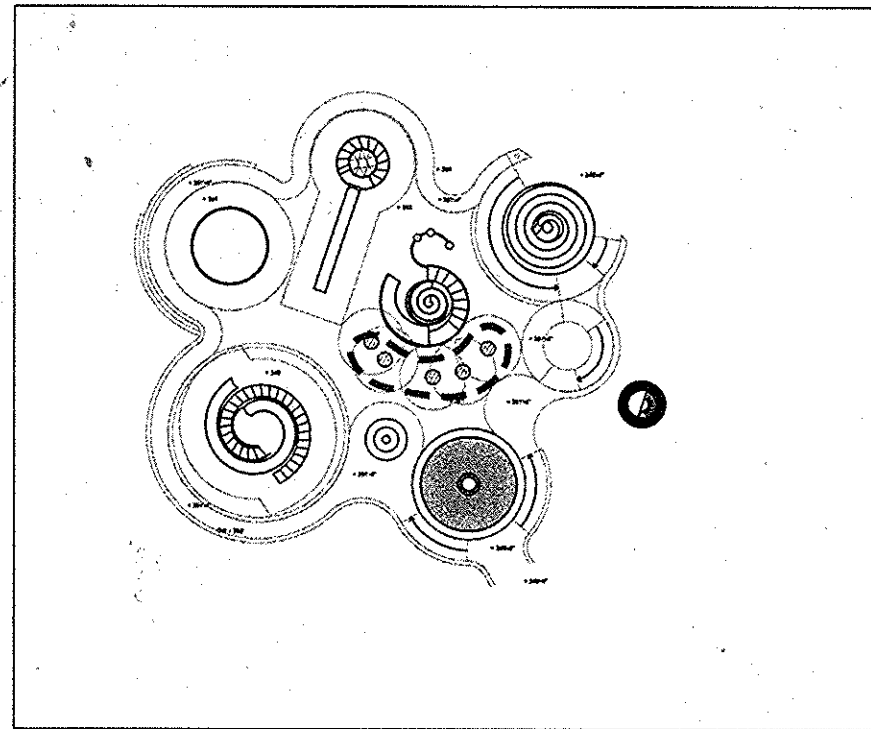
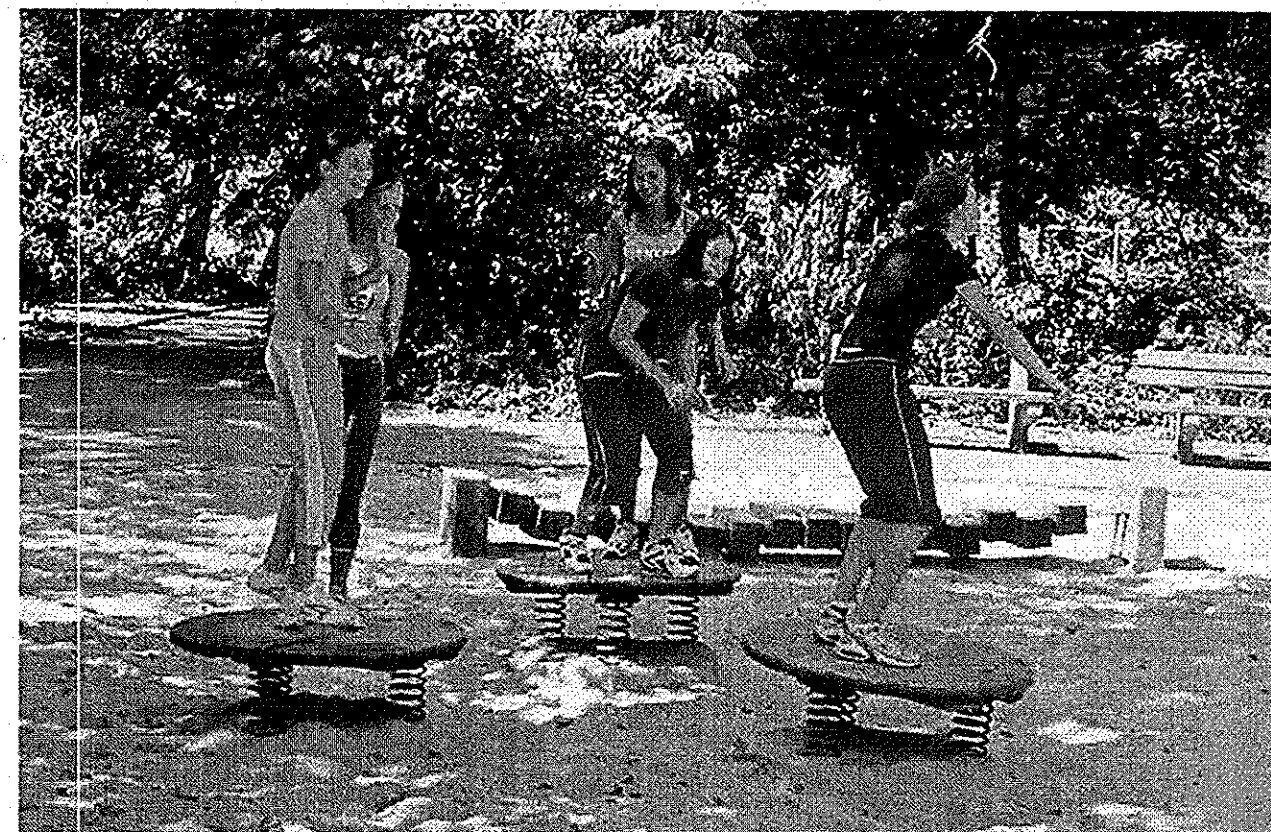
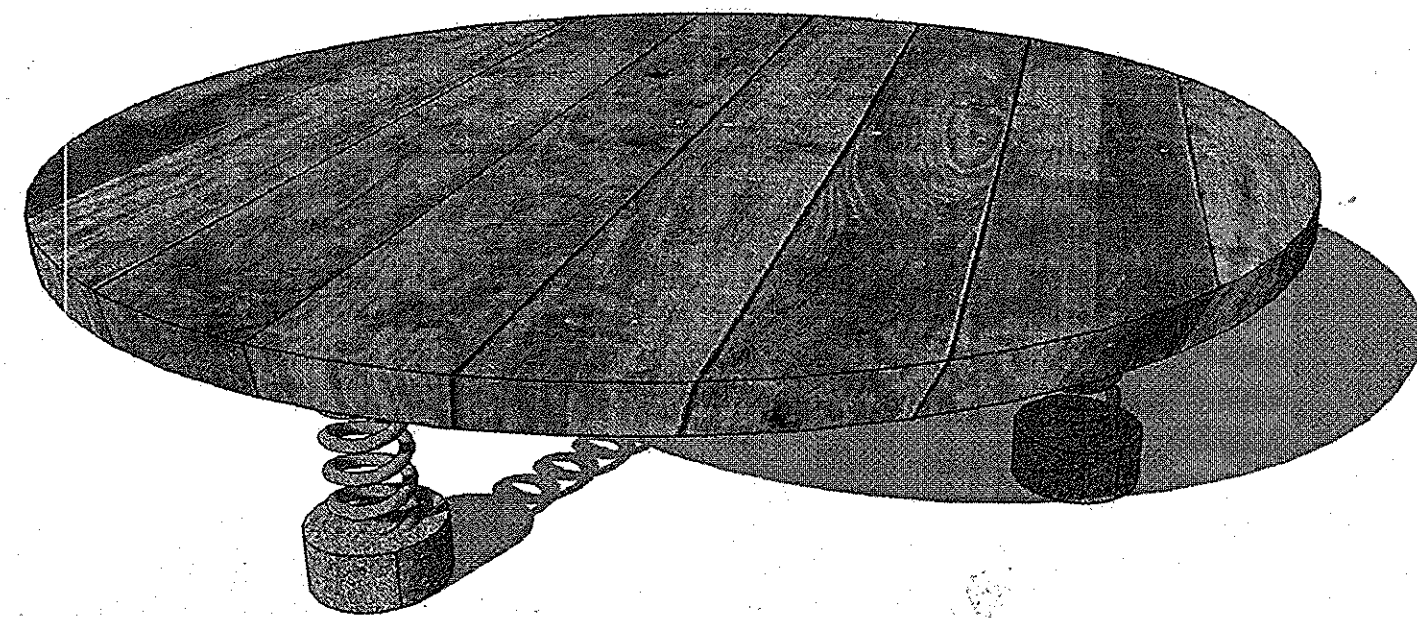
- for children from 4 years

Dimensions

Height: 1ft - 1 25/32 in
Diameter: 3ft - 33/8 in

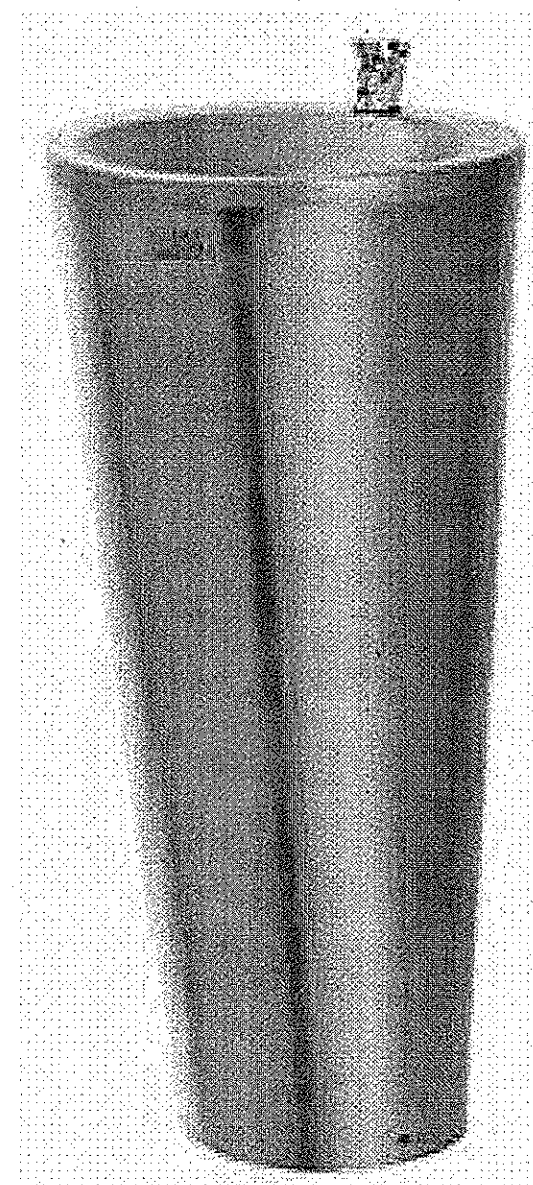
Materials

Disc: Top disc - EPI or equivalent
Painted Coated springs (3 Nos.), standard color yellow
Fastening elements galvanised

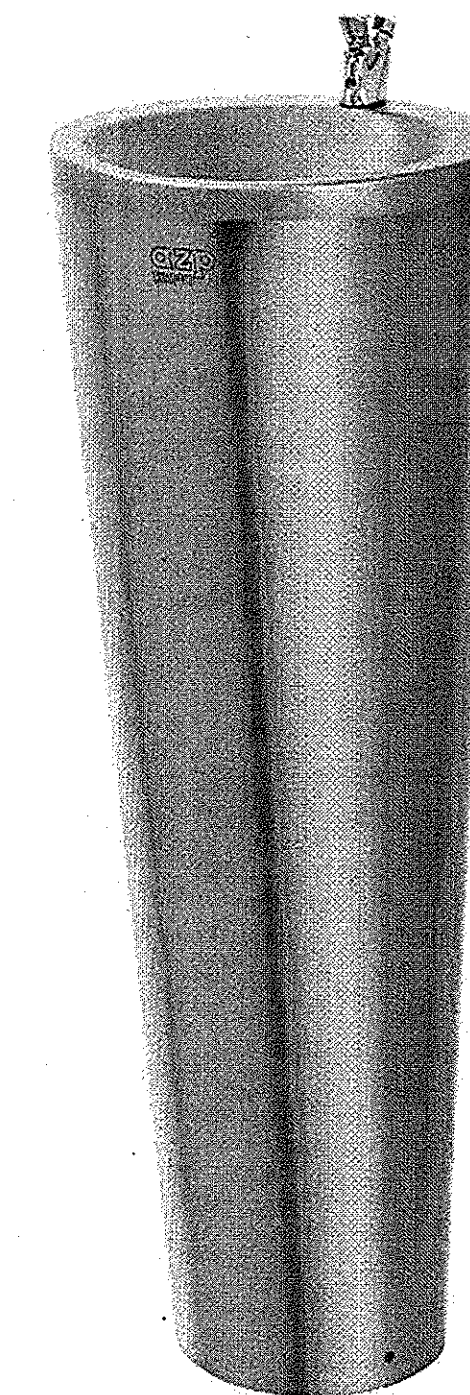


Supplier: AZP BRNO
Product: AFO 03 D (Children's Drinking Fountain)
Material: Stainless steel AISI 304
Dimensions: 17.7" high
Ø11.8" (top)
Ø 7.9" (bottom)
Product: AFO 03 (Adults Drinking Fountain)
Material: Stainless steel AISI 304
Dimensions: 2'11" high
Ø11.8" (top)
Ø 7.9" (bottom)

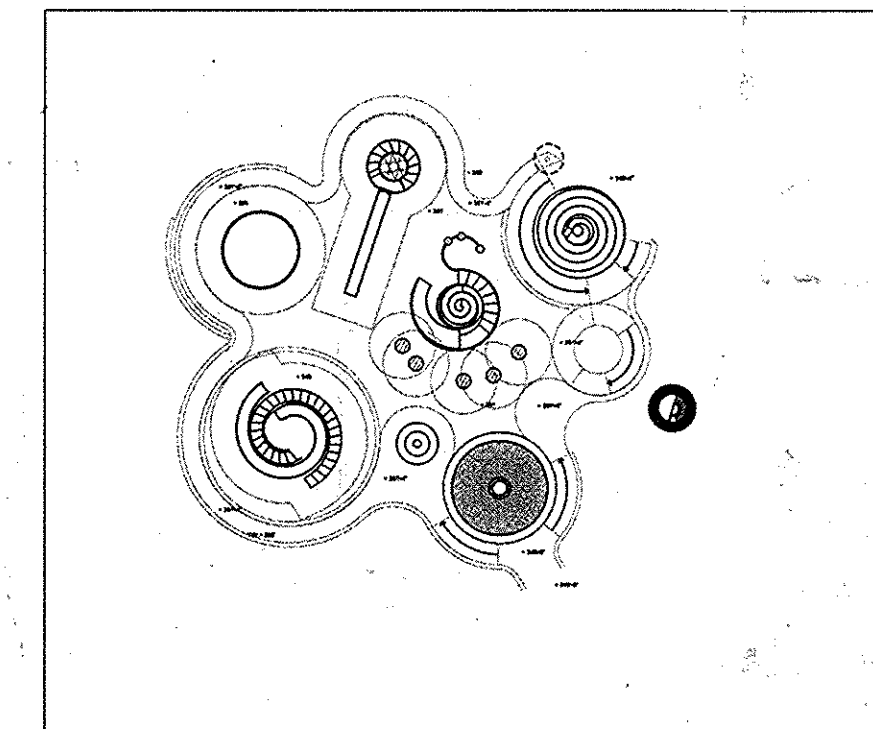
Description
Conical body gives the fountain an interesting shape, with a combination of brushed and sandblasted surface finishes. The fountain is fitted with a manual press valve that allows its easy use. The water flows only when the valve is pressed and after its release there is a short adjusted time to rinse out the jet.



AFO 03D



AFO 03



01

JUMPING DISC

SCALE: NTS

02

DRINKING FOUNTAIN

SCALE: NTS

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

William J. J. J.
Director
Date: 9-8-15
Chief, Division of Land Development
Date: 9-25-15
Chief, Development Engineering Division

APPROVED
PLANNING BOARD OF HOWARD COUNTY

Date: November 20, 2014
see Sheet 2 for Phase information and requirements for additional approvals for 3-7

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DATE	REVISION	BY	APPR.
10/22/14	Rev C - SDP DRAFT	SDC	DR
10/21/14	Rev B - SDP DRAFT	SDC	DR
03/18/14	Rev A - SDP DRAFT	NA	NK
01/31/14	Rev A - DAP	NA	NK

PREPARED FOR & DEVELOPER:
INNER ARBOR TRUST
10630 LITTLE PATUXENT PARKWAY
CENTURY PLAZA, SUITE 315
COLUMBIA, MD 21044
ATTN: MICHAEL McCALL
410-740-0029



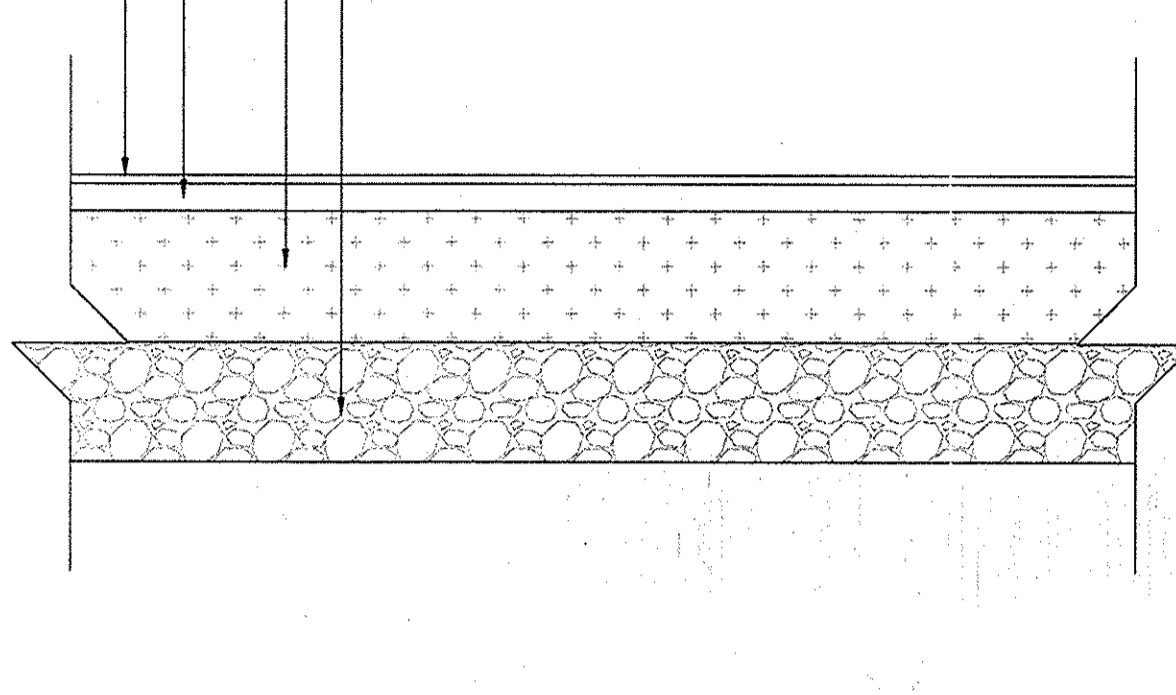
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JUMPING DISC AND DRINKING FOUNTAIN DETAILS
DOWNTOWN COLUMBIA
MERRIWEATHER-SYMPHONY WOODS NEIGHBORHOOD
MERRIWEATHER PARK at SYMPHONY WOODS PHASE 1 AND FUTURE PHASES 2-7
TOWN CENTER- SECTION 1 AREA 1
PART OF OPEN SPACE LOT 23-PLAT NO. 22123 &
PART OF OPEN SPACE LOT 9B-PLAT BOOK 15, PAGE 32
GREEN COMMERCIAL BUILDING
ELECTION DISTRICT No. 5
HOWARD COUNTY, MARYLAND

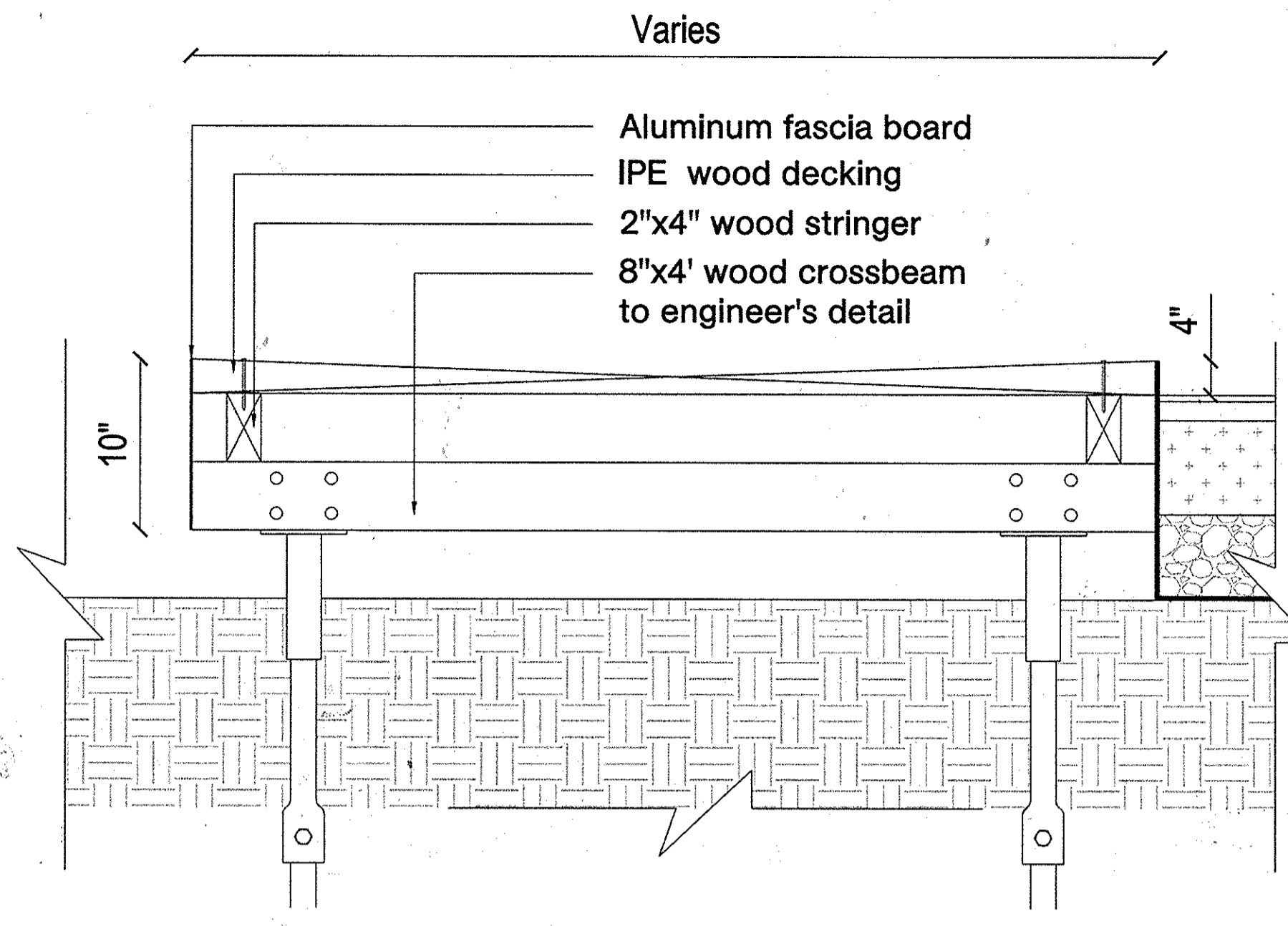
LF357 EQUIPMENT SCHEDULE

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NTS	NT	13043
DATE	TAX MAP - GRID	SHEET
JUNE, 2015	36 - 01	19 OF 85

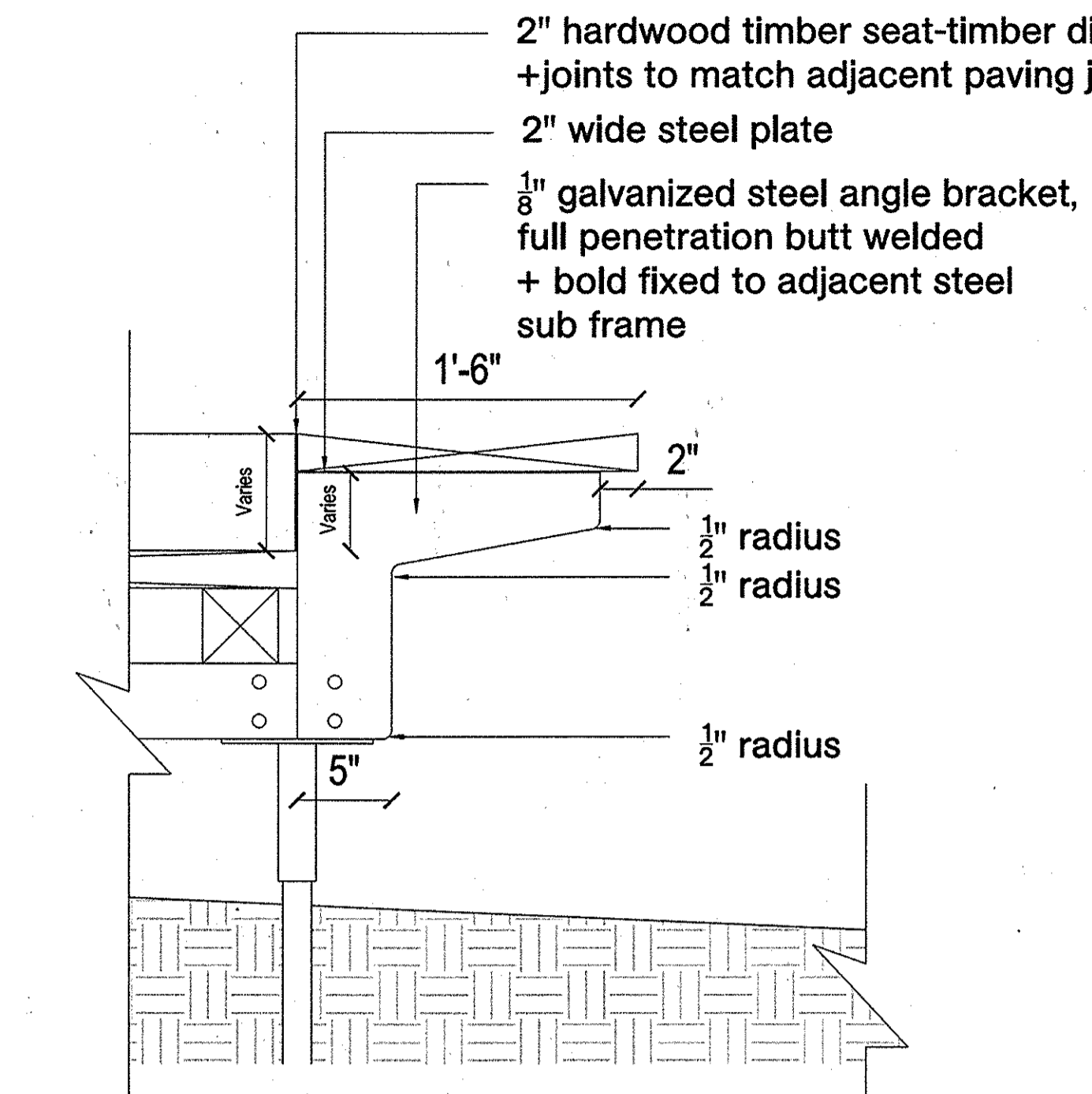
- 3/8" Pebbles to suppliers spec.
- 1 1/8" Recycled rubber to supplier spec.
- 5 1/2" Recycled closed-cell foam to supplier spec.
- 4" Compacted aggregate base to supplier spec.



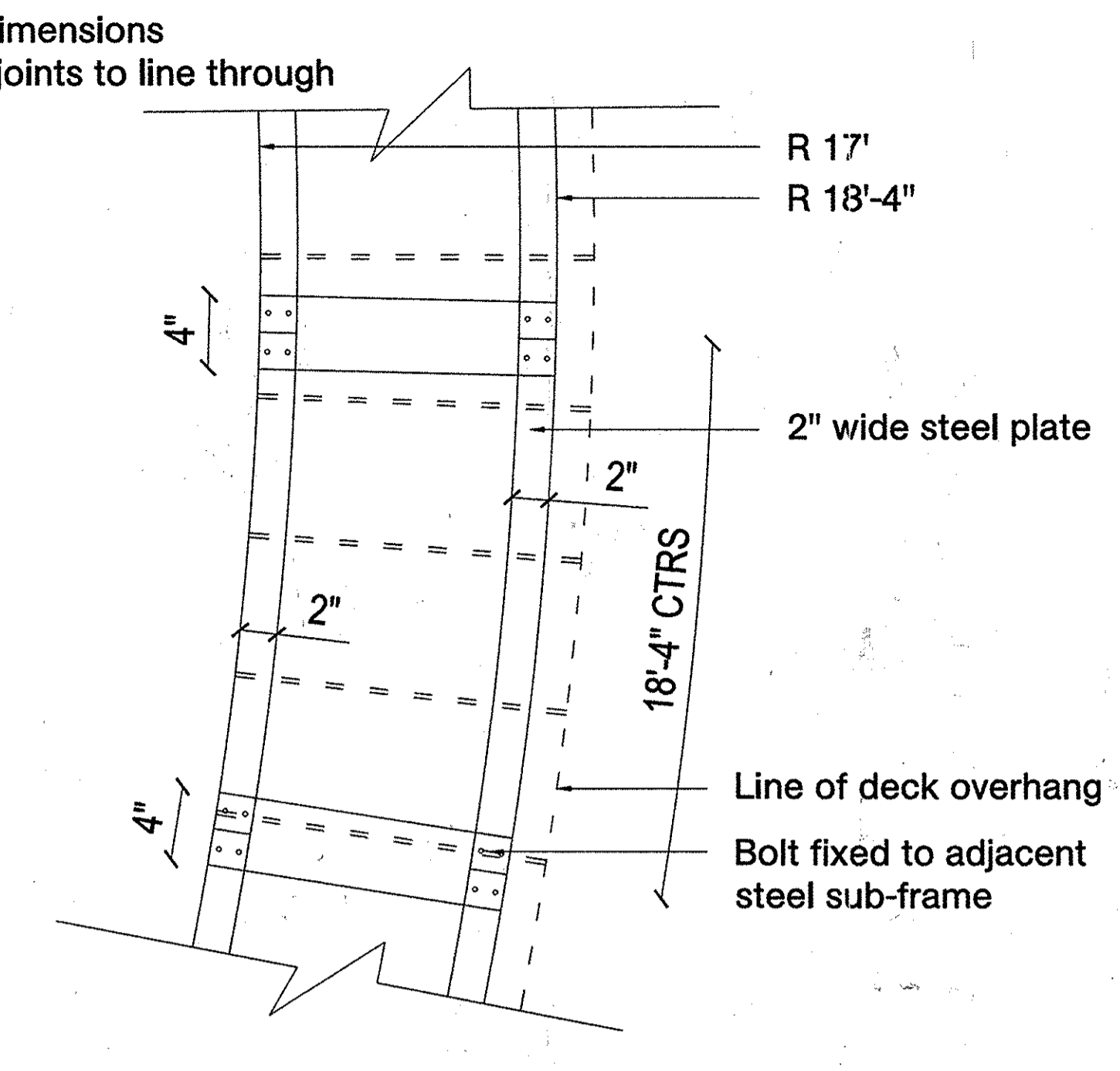
01 Typical rubber surface detail
SCALE: 1-1/2"=1'-0"



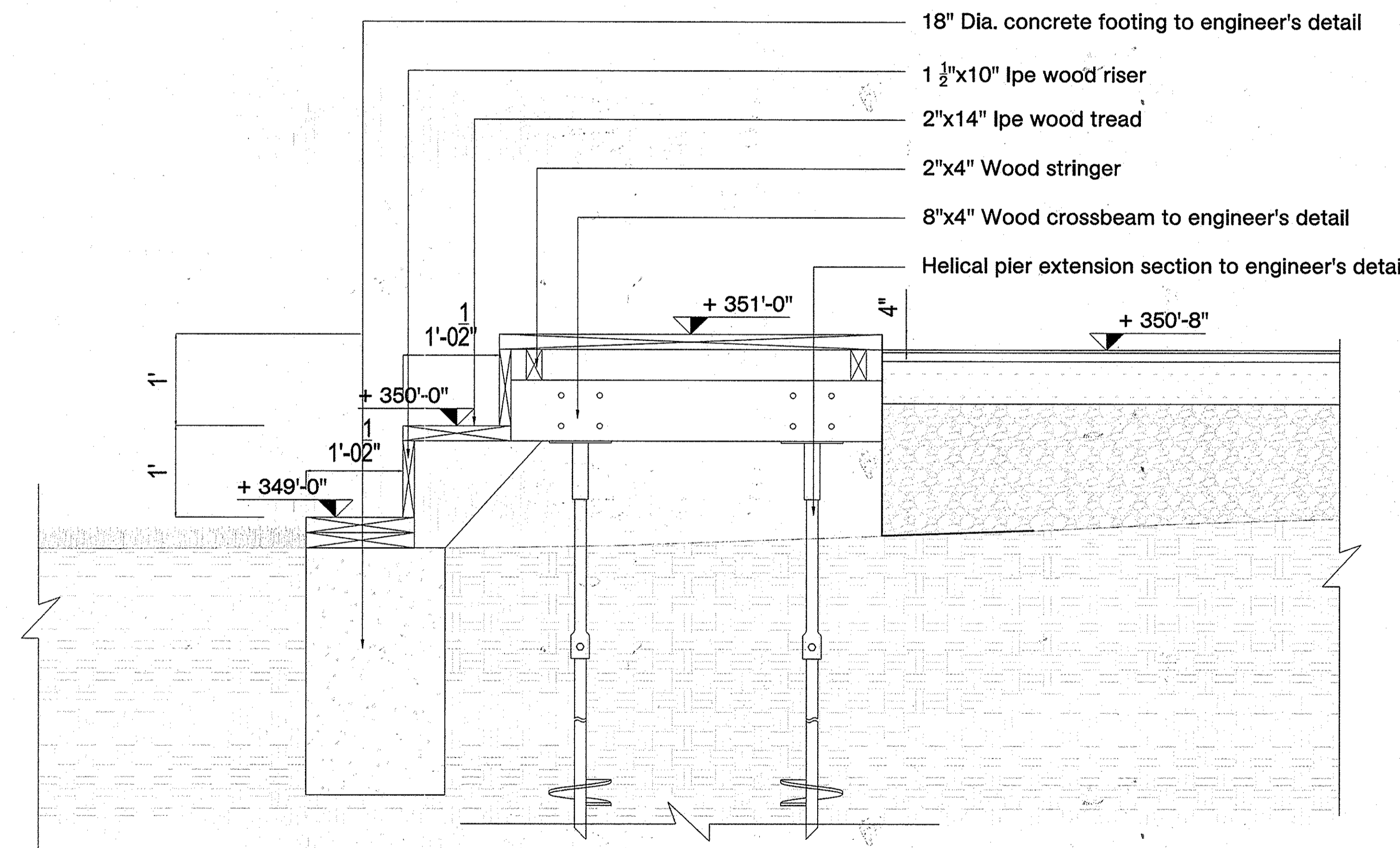
02 Typical timber deck detail
SCALE: 1-1/2"=1'-0"



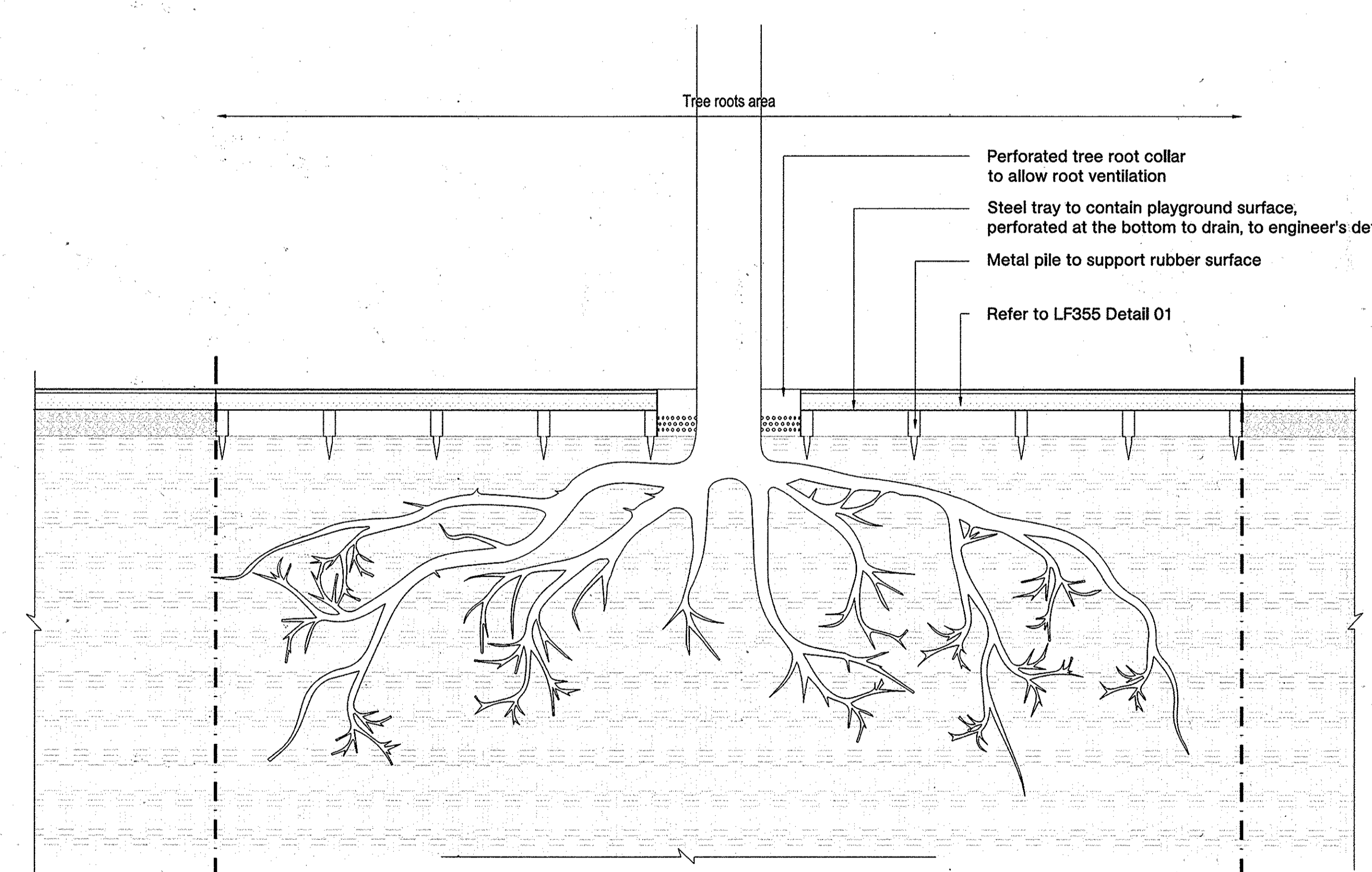
03 Ramp edge section detail
SCALE: 1-1/2"=1'-0"



04 Ramp edge plan detail
SCALE: 1-1/2"=1'-0"



05 Typical timber step edge
SCALE: 1"=1'-0"



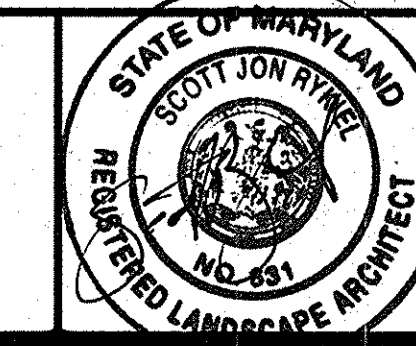
06 Root treatment on rubber surface
SCALE: 3/8"=1'-0"

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
 Director: *Kathleen...* Date: 9-8-15
 Chief, Division of Land Development: *...* Date: 7-2-15
 Chief, Development Engineering Division: *...* Date: 6-25-15

APPROVED
 PLANNING BOARD OF HOWARD COUNTY
 Date: November 20, 2014

Landscape Architect		PREPARED FOR & DEVELOPER:	
Martha Schwartz Partners Ltd		INNER ARBOR TRUST	
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www.marthaschwartz.com		ATTN: MICHAEL McCALL	
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DES. XXX	DRN. XXX	CHK. XXX	DATE
10/22/14	Rev C - SDP DRAFT	SDC	DR
10/21/14	Rev B - SDP	SDC	DR
03/18/14	Rev A - SDP DRAFT	NA	NK
		BY	APPR.

STATE OF MARYLAND
 REGISTERED LANDSCAPE ARCHITECT
 SCOTT JON RINE
 No. 651

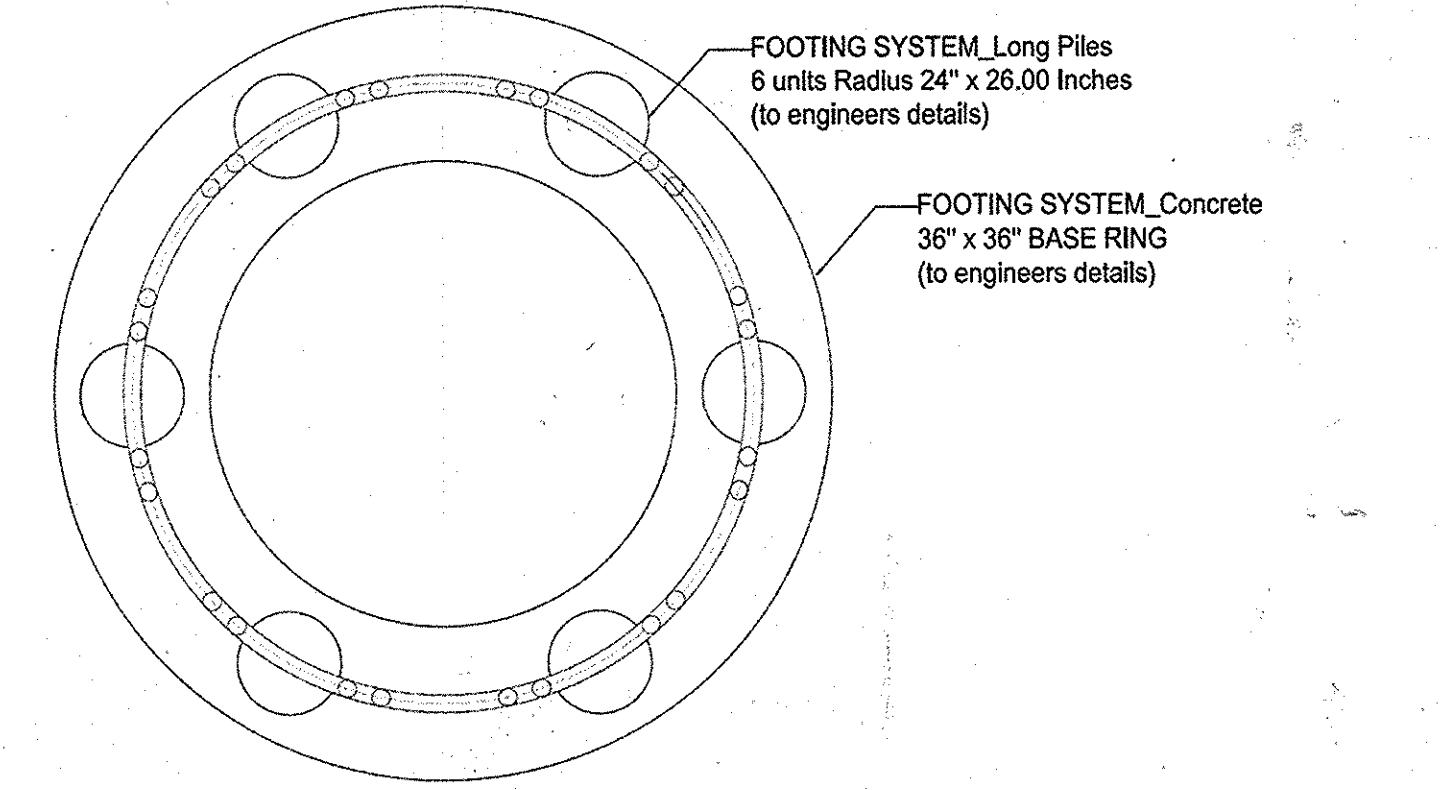
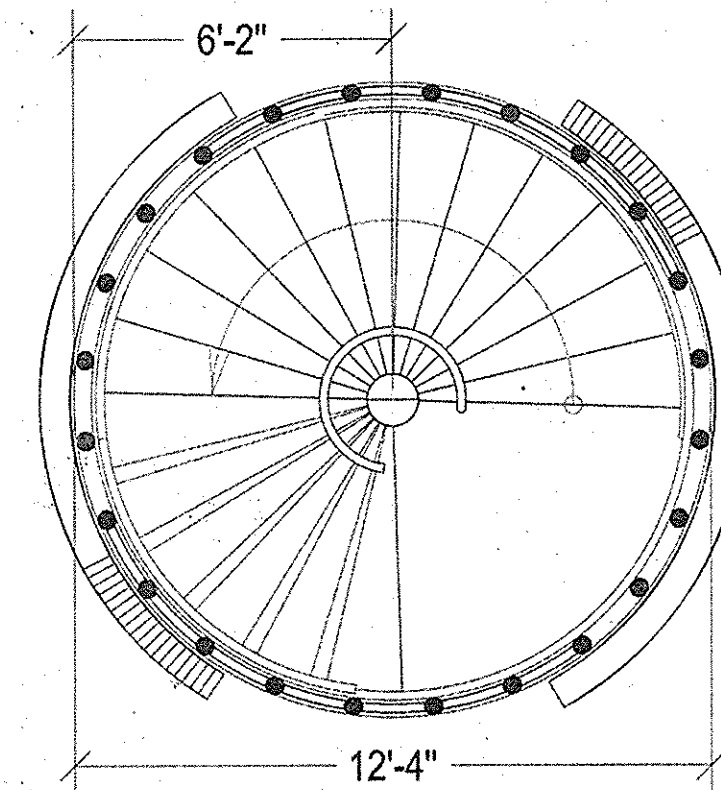
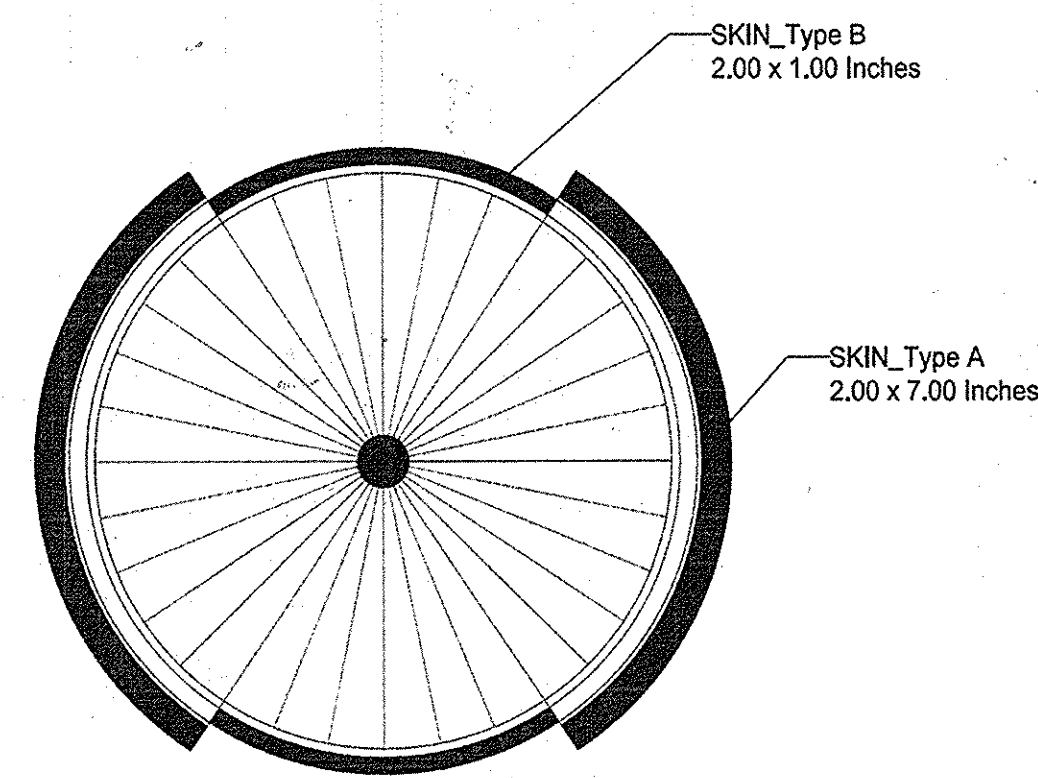
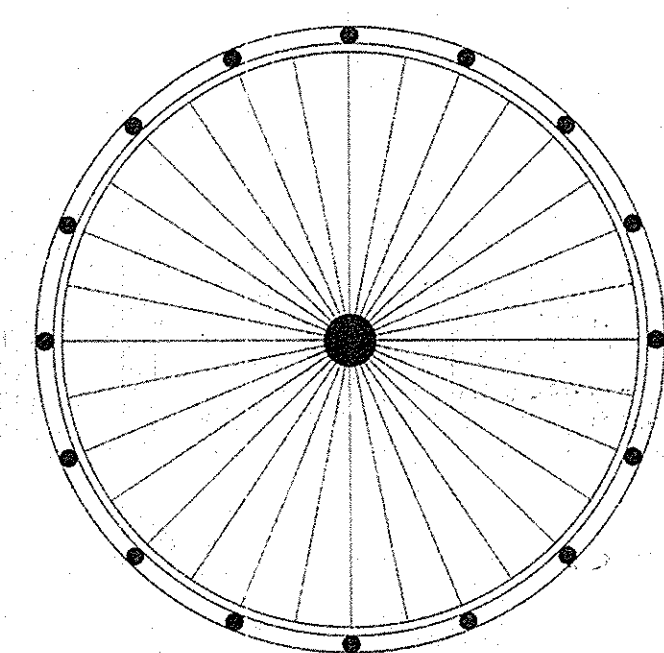
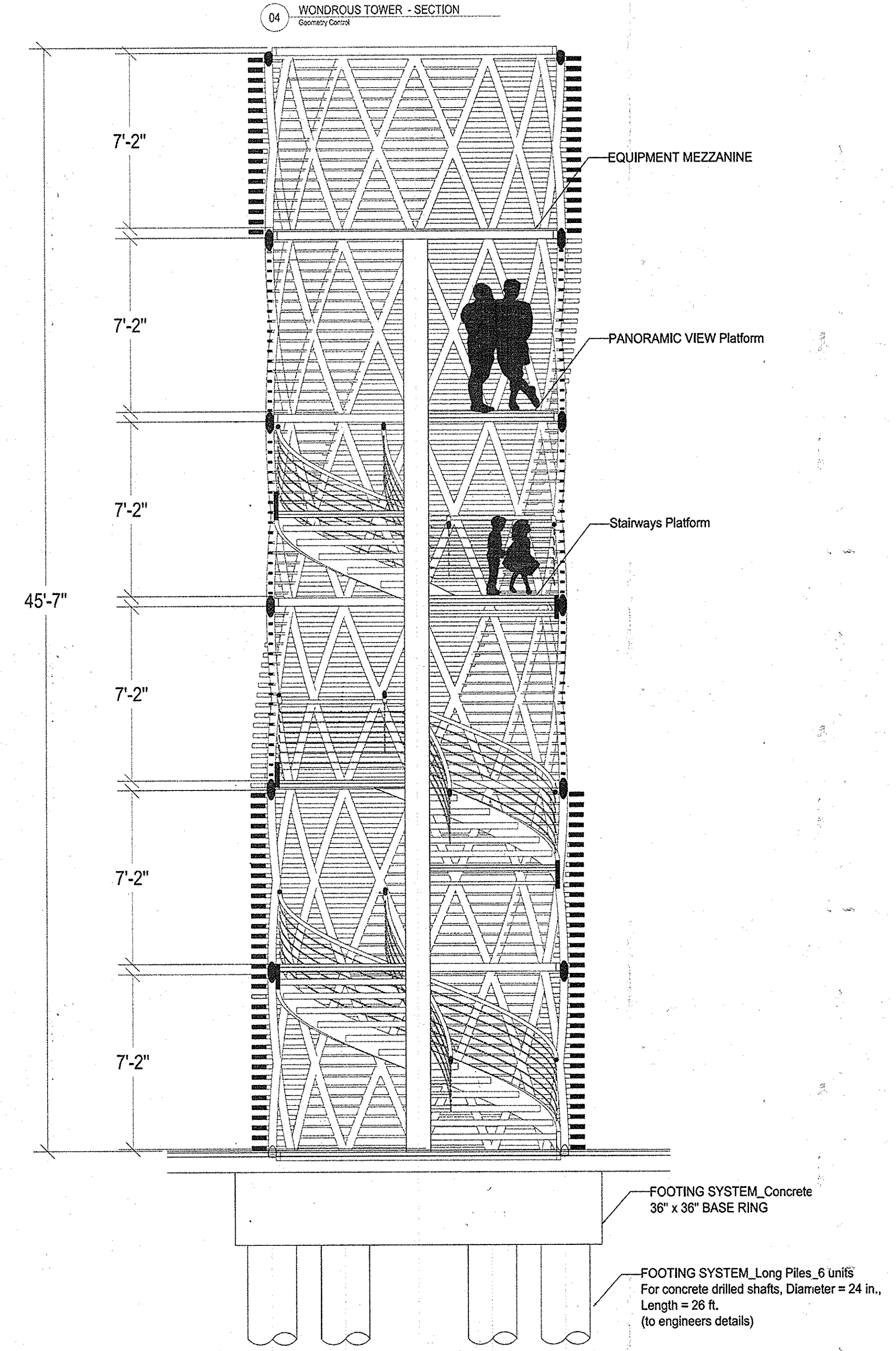
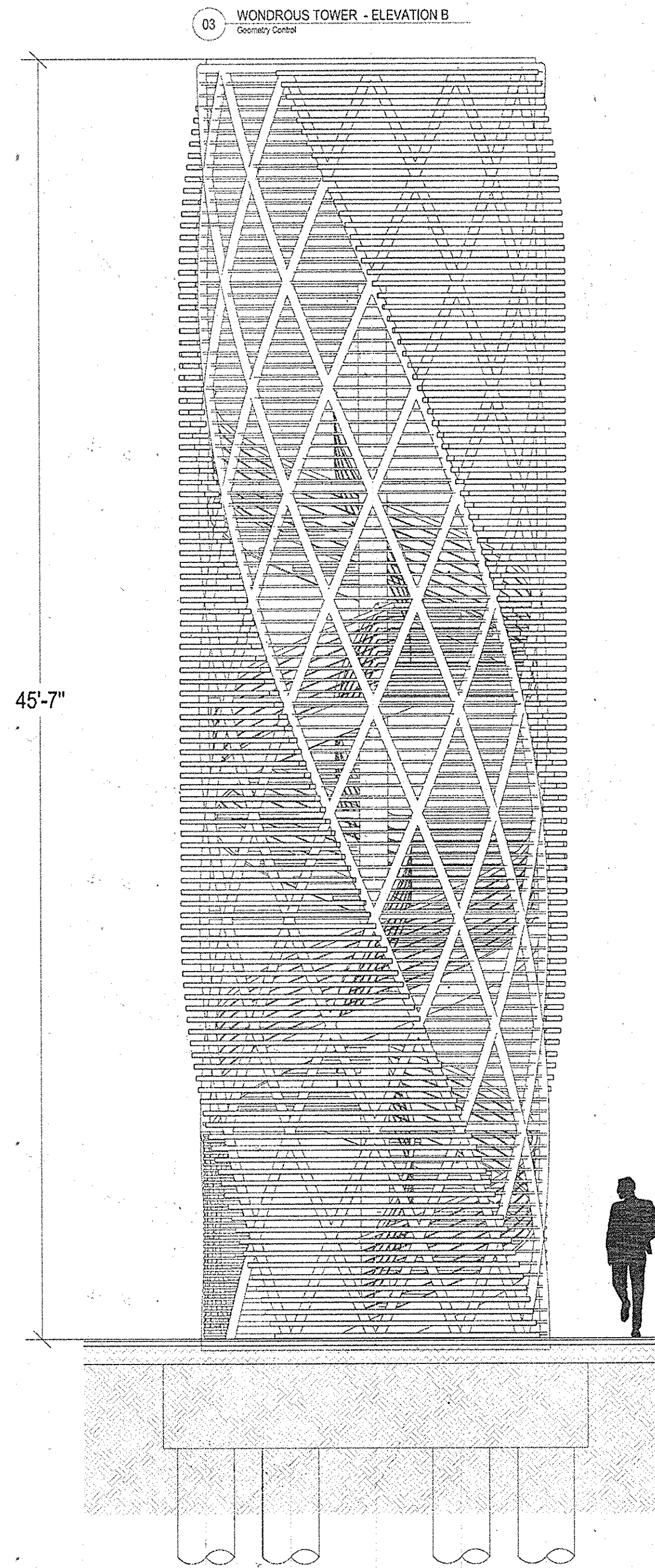
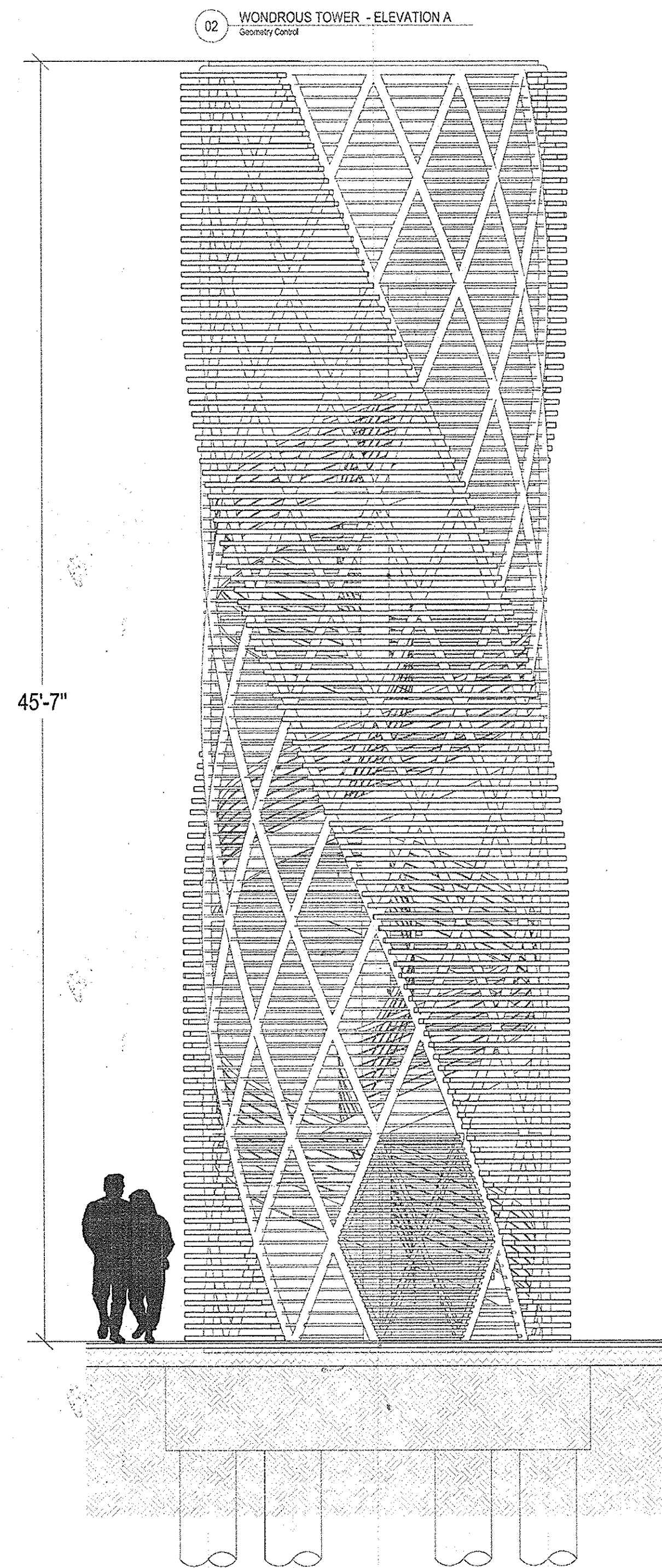
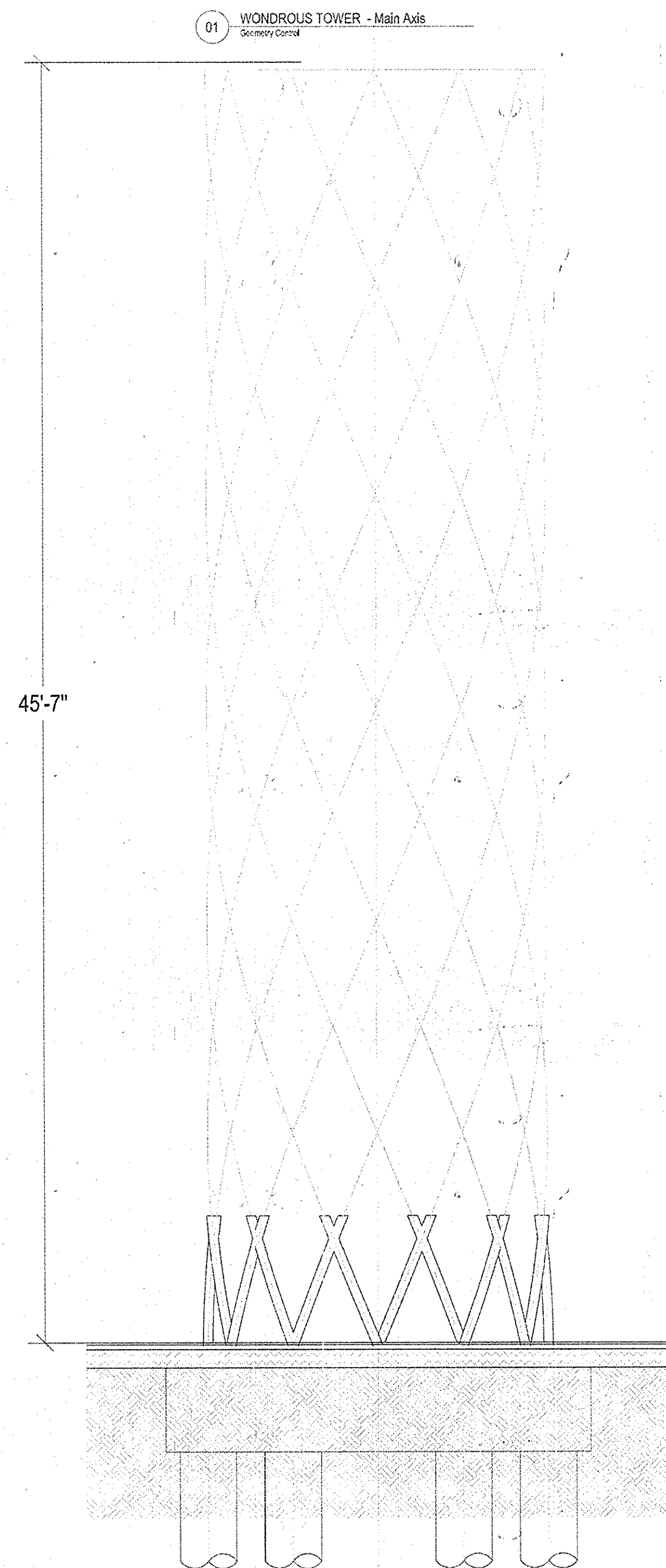


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TYPICAL PLAYGROUND PAVING AND EDGE DETAILS
 DOWNTOWN COLUMBIA
 MERRIWEATHER-SYMPHONY WOODS NEIGHBORHOOD
 MERRIWEATHER PARK at SYMPHONY WOODS PHASE 1 AND FUTURE PHASES 2-7
 TOWN CENTER- SECTION 1 AREA 1
 PART OF OPEN SPACE LOT 23-PLAT NO. 22123 &
 PART OF OPEN SPACE LOT 9B-PLAT BOOK 15, PAGE 32
 ELECTION DISTRICT No. 5
 GREEN COMMERCIAL BUILDING
 HOWARD COUNTY, MARYLAND

LF355 TYPICAL DETAILS

SCALE	ZONING	G. L. W. FILE No.
VARIABLES	NT	13043
DATE	TAX MAP - GRID	SHEET
JUNE, 2015	36 - 01	20 OF 85



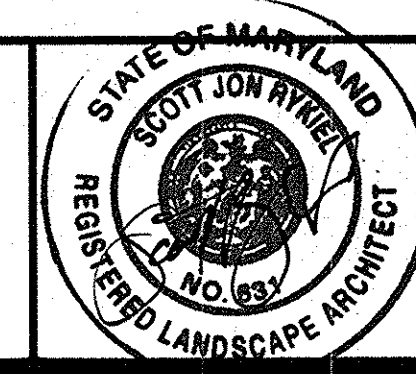
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
William J. Gyle 9-8-15
 Director Date
Neil S. Sullivan 9-8-15
 Chief, Division of Land Development Date
Chris Clark 8-25-15
 Chief, Development Engineering Division Date

APPROVED
 PLANNING BOARD OF HOWARD COUNTY
 Date: November 20, 2014
 see sheet 2 for Phasing and additional required approvals for Phases 3-7

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DATE	REVISION	BY	APP'R.
29/01/15	Rev D - SDP DRAFT	JC	DR
10/22/14	Rev C - SDP DRAFT	SDC	DR
10/20/14	Rev B - SDP DRAFT	SDC	DR
03/18/14	Rev A - SDP DRAFT	DP	NK

PREPARED FOR & DEVELOPER:
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 COLUMBIA, MD 21044
 ATTN: MICHAEL McCALL
 410-740-0029



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WONDROUS TOWER SCHEMATIC ELEVATION
DOWNTOWN COLUMBIA
 MERRIWEATHER-SYMPHONY WOODS NEIGHBORHOOD
 MERRIWEATHER PARK at SYMPHONY WOODS PHASE 1 AND FUTURE PHASES 2-7
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 PART OF OPEN SPACE LOT 9B-PLAT BOOK 15, PAGE 32
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SCALE	ZONING	G. L. W. FILE No.
VARIABLES	NT	13043
DATE	TAX MAP - GRID	SHEET
JUNE, 2015	36 - 01	21 OF 85

LF358 WONDROUS TOWER



IT IS THE MANUFACTURERS OPINION AND INTENT THAT THE USE AND LAYOUT OF THESE COMPONENTS CONFORM WITH THE AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM) STANDARD ASTM F1487

THIS PLAY AREA & PLAY EQUIPMENT IS DESIGNED FOR AGES 2-12 YEARS UNLESS OTHERWISE NOTED ON PLAN.

IT IS THE MANUFACTURERS OPINION THAT THIS PLAY AREA DOES CONFORM TO THE A.D.A. ACCESSIBILITY STANDARDS, ASSUMING AN ACCESSIBLE PROTECTIVE SURFACING IS PROVIDED, AS INDICATED, OR WITHIN THE ENTIRE USE ZONE.

THIS CONCEPTUAL PLAN WAS BASED ON INFORMATION AVAILABLE TO US. PRIOR TO CONSTRUCTION, DETAILED SITE INFORMATION INCLUDING SITE DIMENSIONS, TOPOGRAPHY, EXISTING UTILITIES, SOIL CONDITIONS, AND DRAINAGE SOLUTIONS SHOULD BE OBTAINED, EVALUATED, & UTILIZED IN THE FINAL DESIGN. PLEASE VERIFY ALL DIMENSIONS OF PLAY AREA, SIZE, ORIENTATION, AND LOCATION OF ALL EXISTING UTILITIES, EQUIPMENT, AND SITE FURNISHINGS PRIOR TO ORDERING. SLIDES SHOULD NOT FACE THE HOT AFTERNOON SUN.

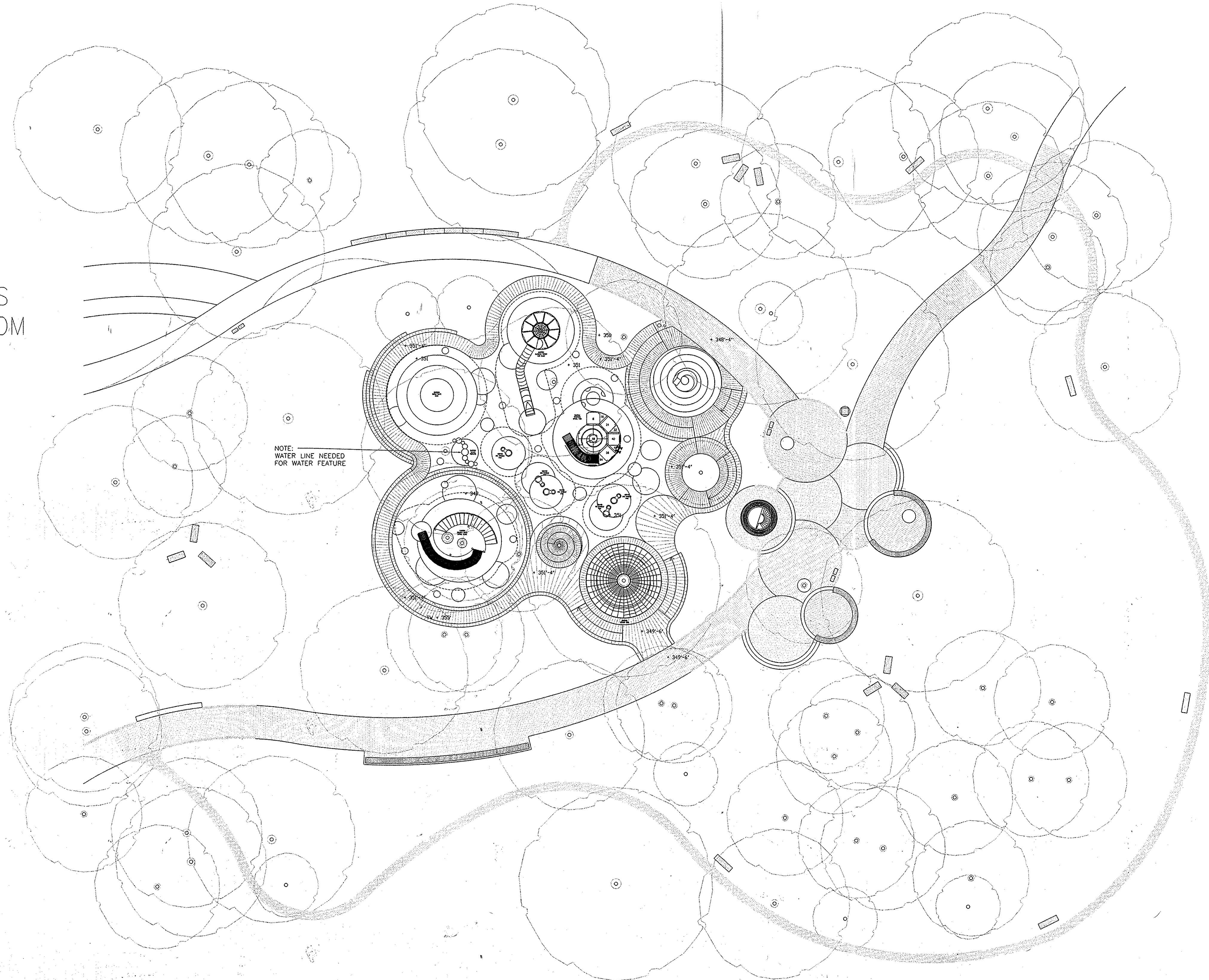
CHOOSE A PROTECTIVE SURFACING MATERIAL THAT HAS A CRITICAL HEIGHT VALUE TO MEET THE MAXIMUM FALL HEIGHT FOR THE EQUIPMENT (REF. ASTM F1487 STANDARD CONSUMER SAFETY PERFORMANCE SPECIFICATION FOR PLAYGROUND EQUIPMENT FOR PUBLIC USE, SECTION 8 CURRENT REVISION). THE SUBSURFACE MUST BE WELL DRAINED. IF THE SOIL DOES NOT DRAIN NATURALLY IT MUST BE TILED OR SLOPED 1/8" TO 1/4" PER FOOT TO A STORM SEWER OR A "FRENCH DRAIN".

DESIGNED BY:
TPK

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LANDSCAPE STRUCTURES, INC.
601 7th STREET SOUTH - P.O. BOX 198
DELANO, MINNESOTA 55328
PH: 1-800-328-0035 FAX: 1-763-972-6091

Date	Previous Drawing #	Initials

NOTE:
NO QUOTE WAS GENERATED FOR THIS DRAWING. SEE CUSTOM TAB FOR PRICING.



NOTE: WATER LINE NEEDED FOR WATER FEATURE

2-5 EQUIPMENT

TOTAL ELEVATED PLAY COMPONENTS	4		
TOTAL ELEVATED COMPONENTS ACCESSIBLE BY RAMP	0	REQUIRED	0
TOTAL ELEVATED COMPONENTS ACCESSIBLE BY TRANSFER	4	REQUIRED	2
TOTAL ACCESSIBLE GROUND LEVEL COMPONENTS SHOWN	4	REQUIRED	1
TOTAL DIFFERENT TYPES OF GROUND LEVEL COMPONENTS	3	REQUIRED	3

THIS SHEET IS FOR INFORMATIONAL PURPOSES ONLY.
HOWARD COUNTY DOES NOT REVIEW PLAYGROUND EQUIPMENT/ADA COMPLIANCE DURING PERMITTING.
THE US ACCESS BOARD MAY BE ABLE TO PROVIDE ANY REQUIRED GUIDANCE TO THE DEVELOPER IN ENSURING ANY ADA REQUIREMENTS ARE MET.

5-12 EQUIPMENT

TOTAL ELEVATED PLAY COMPONENTS	2		
TOTAL ELEVATED COMPONENTS ACCESSIBLE BY RAMP	0	REQUIRED	0
TOTAL ELEVATED COMPONENTS ACCESSIBLE BY TRANSFER	2	REQUIRED	1
TOTAL ACCESSIBLE GROUND LEVEL COMPONENTS SHOWN	8	REQUIRED	1
TOTAL DIFFERENT TYPES OF GROUND LEVEL COMPONENTS	4	REQUIRED	4

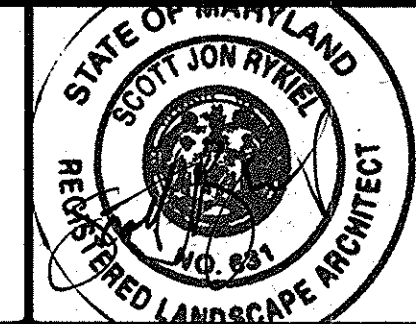
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
William J. Jurek 9-8-15
 Director Date
Robert J. Jurek 9-2-15
 Chief, Division of Land Development Date
Robert J. Jurek 8-25-15
 Chief, Development Engineering Division Date

APPROVED
 PLANNING BOARD OF HOWARD COUNTY
 Date: November 20, 2014*
 *See Sheet 2 for Phasing and additional approval requirements for Phases 3-7

Sparks@Play, LLC
 Isaac Sparks

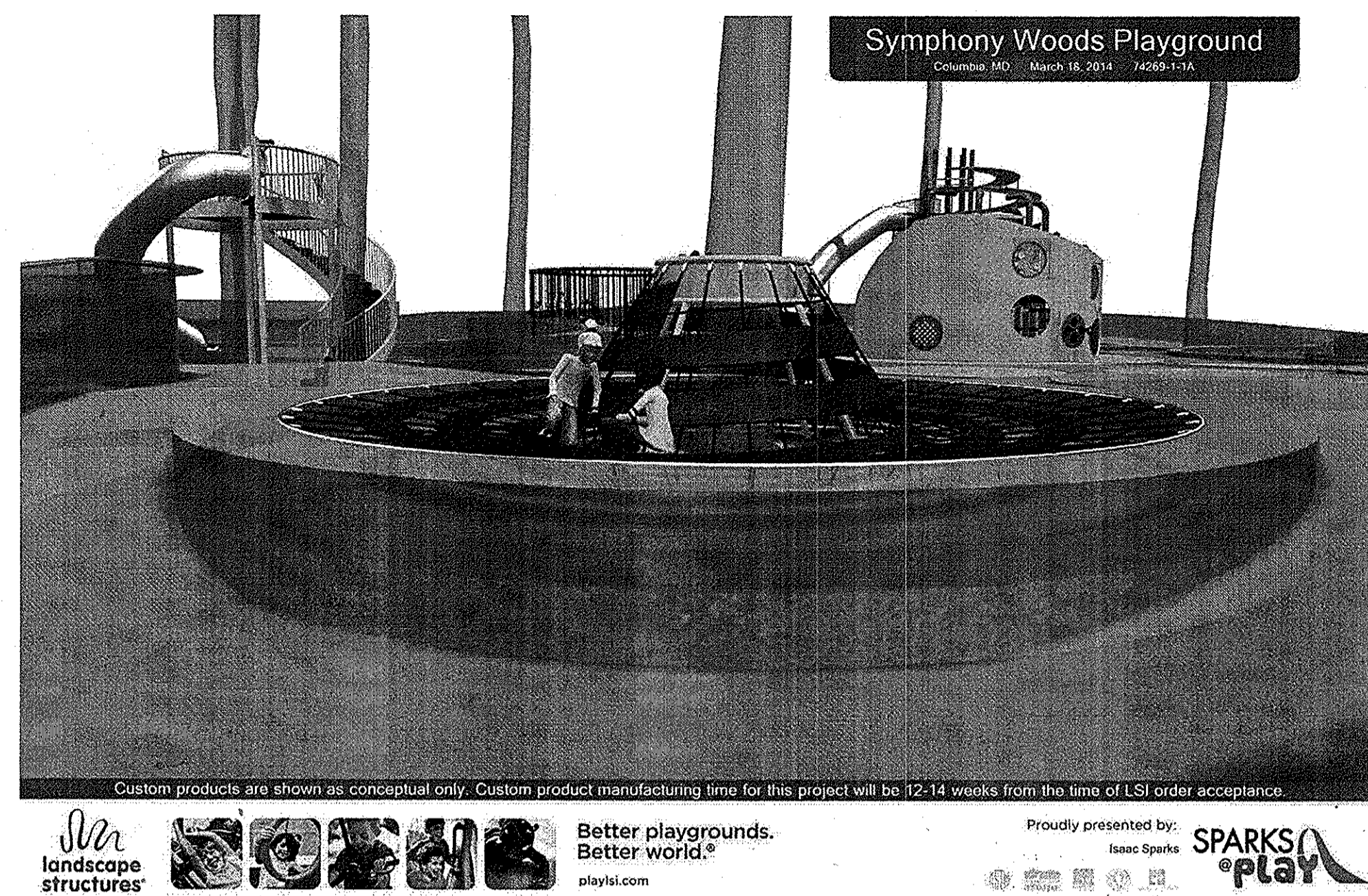
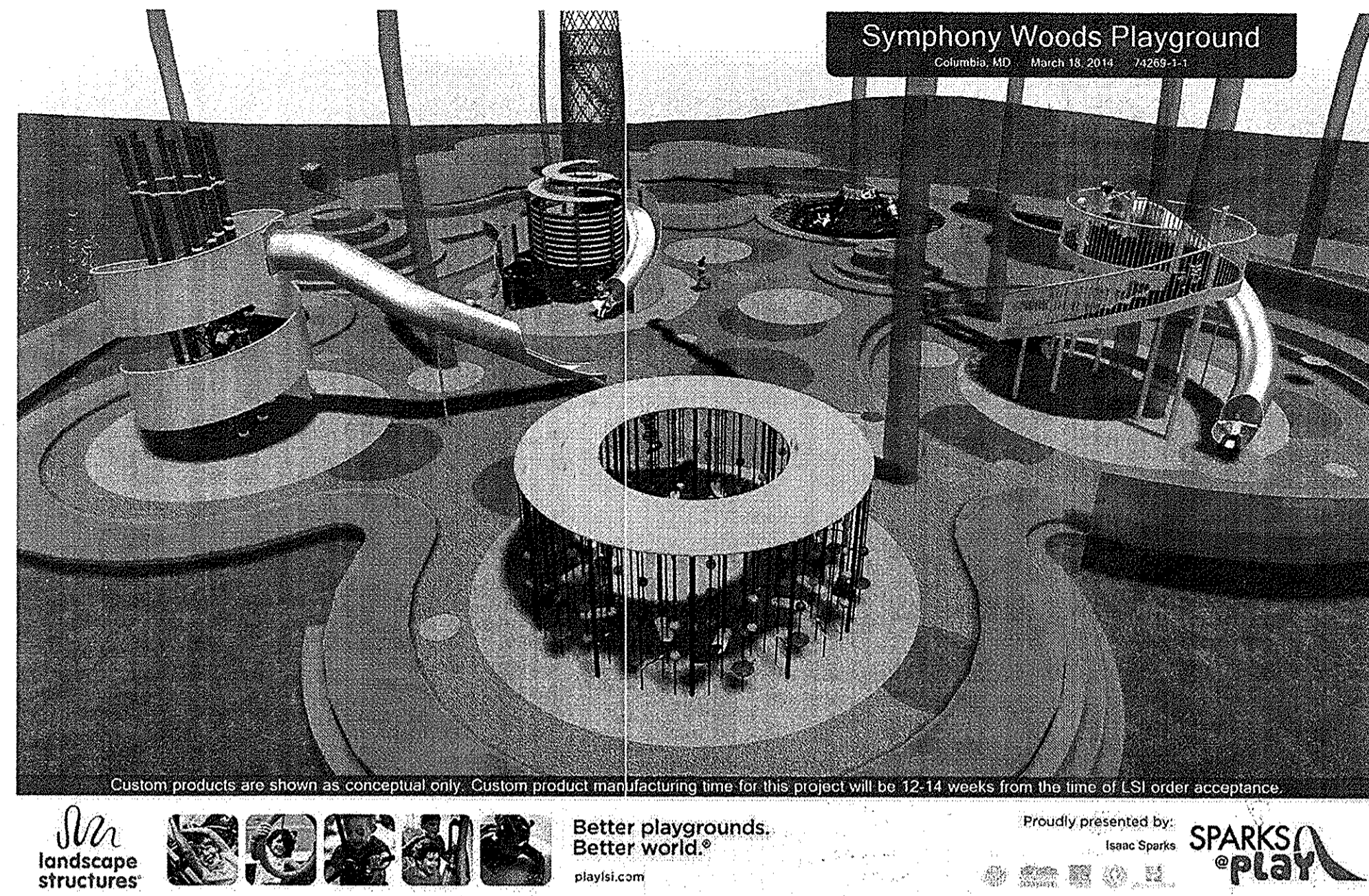
DATE	REVISION	BY	APPR.

PREPARED FOR & DEVELOPER:
 INNER ARBOR TRUST
 10630 LITTLE PATUXENT PARKWAY
 CENTURY PLAZA, SUITE 315
 COLUMBIA, MD 21044
 ATTN: MICHAEL McCALL
 410-740-0029



MERRIGROUND LAYOUT OVERVIEW AND ADA ACCESSIBILITY PLAN
 DOWNTOWN COLUMBIA
 MERRIWEATHER-SYMPHONY WOODS NEIGHBORHOOD
 MERRIWEATHER PARK at SYMPHONY WOODS PHASE 1 AND FUTURE PHASES 2-7
 TOWN CENTER - SECTION 1 AREA 1
 PART OF OPEN SPACE LOT 23-PLAT NO. 13335 &
 PART OF OPEN SPACE LOT 9B-PLAT BOOK 15, PAGE 32
 GREEN COMMERCIAL BUILDING
 ELECTION DISTRICT No. 5
 HOWARD COUNTY, MARYLAND

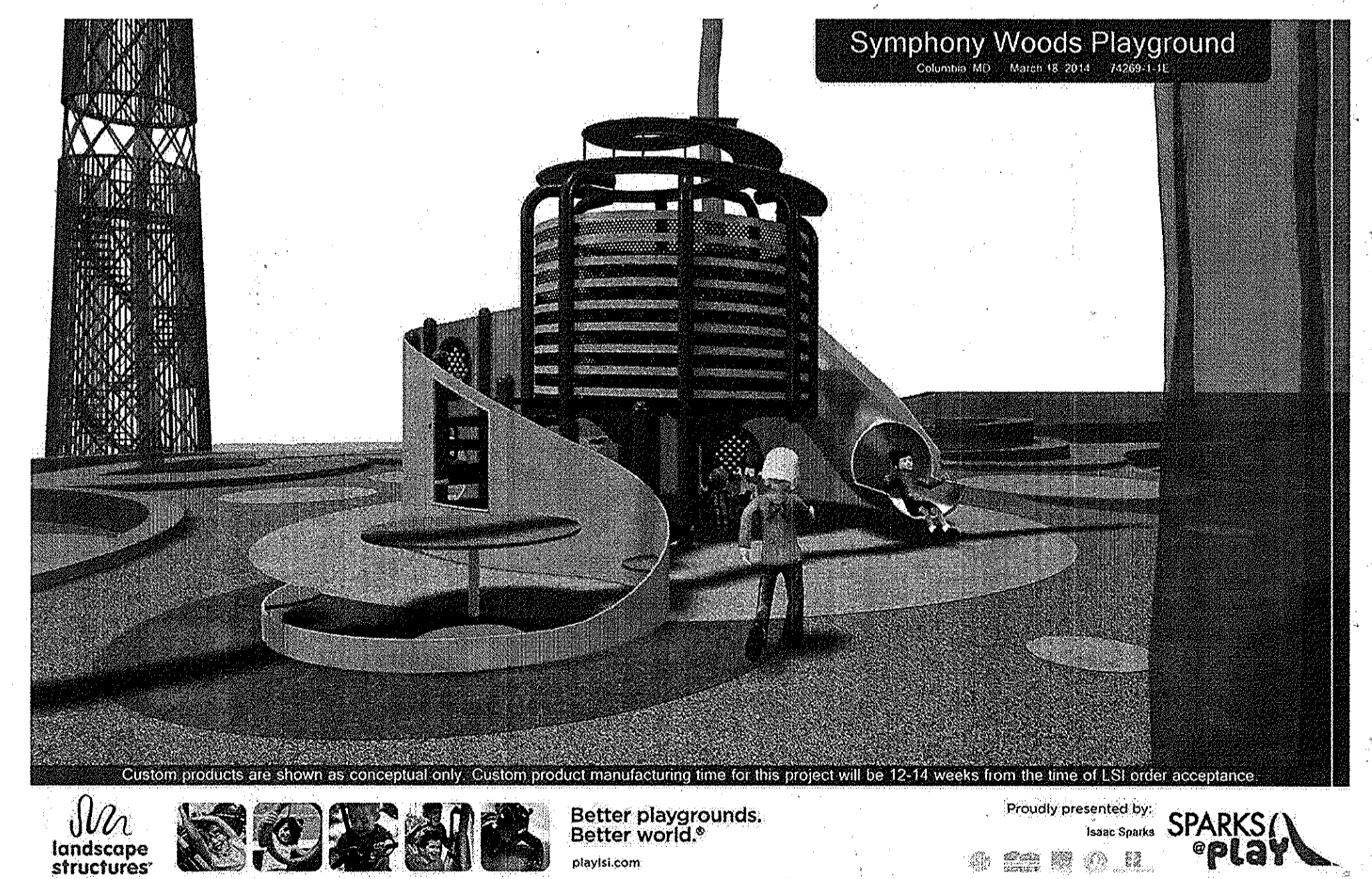
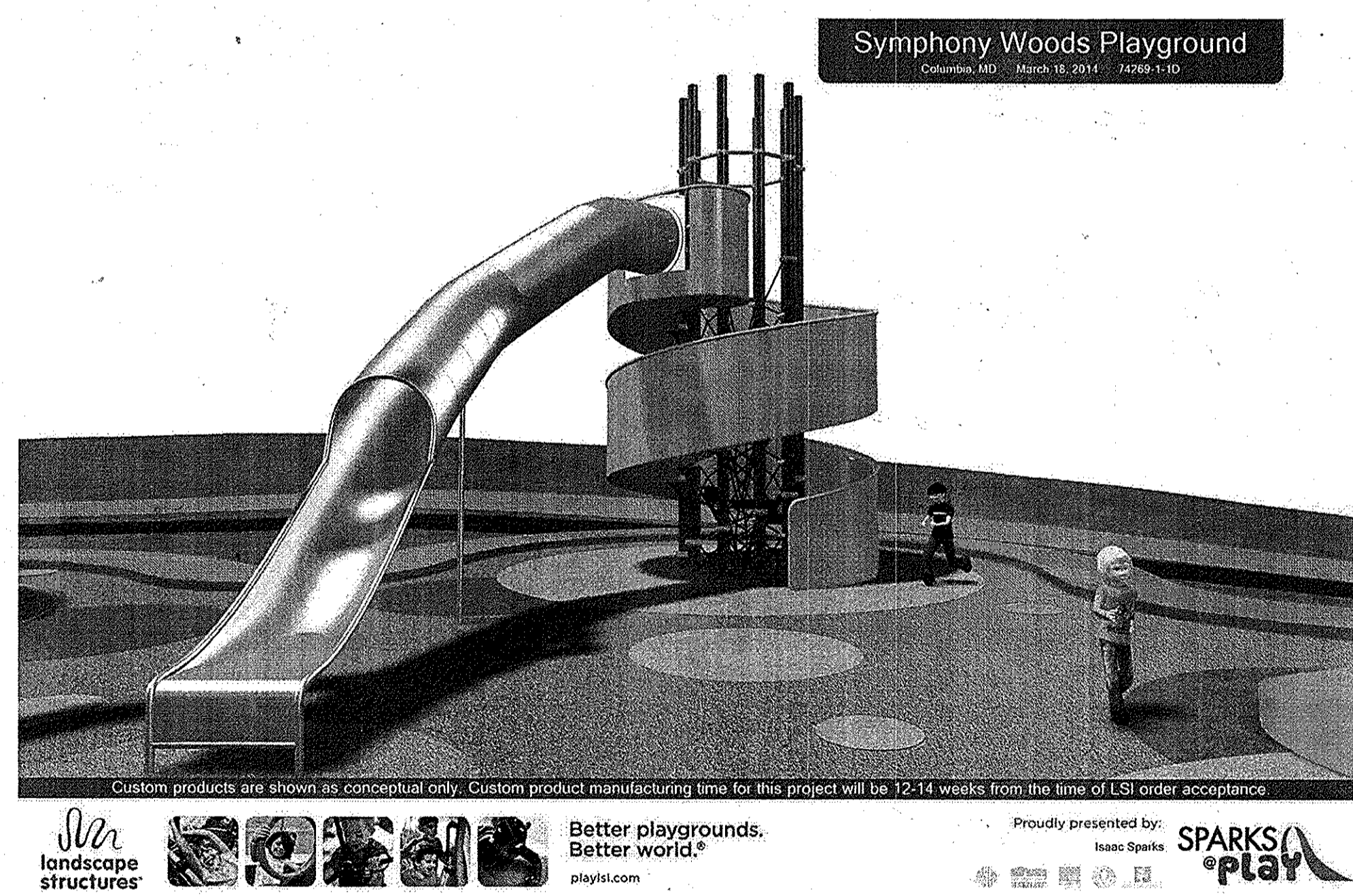
SCALE	ZONING	G. L. W. FILE No.
AS SHOWN	NT	13043
DATE	TAX MAP - GRID	SHEET
JUNE, 2015	36 - 01	22 OF 85



1 | OVERALL VIEW OF MERRIGROUND (DRAWING # 74269-1-1)
N.T.S.

2 | CUSTOM SPIDER WEB (DRAWING # 74269-1-1A)
N.T.S.

3 | CUSTOM DOUBLE HELIX SPIRAL SLIDE ((DRAWING # 74269-1-1B)
N.T.S.



4 | CUSTOM SWING ROPE RING (DRAWING # 74269-1-1C)
N.T.S.

5 | CUSTOM CLIMBING TOWER AND SLIDE (DRAWING # 74269-1-1D)
N.T.S.

6 | CUSTOM STEPPING SPIRAL POD (DRAWING # 74269-1-1E)
N.T.S.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
 Director: *William J. Jaffe* Date: 9-8-15
 Chief, Division of Land Development: *Michael J. McCall* Date: 9-23-15
 Chief, Development Engineering Division: *Michael J. McCall* Date: 8-25-15

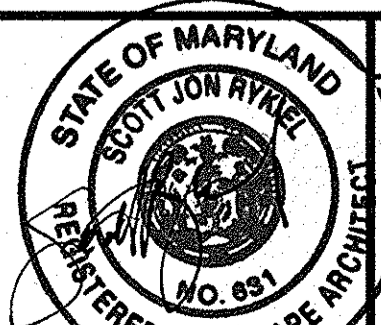
APPROVED
 PLANNING BOARD OF HOWARD COUNTY
 Date: November 20, 2014
 + See Sheet 2 for Pricing and additional approvals for Phases 3-7

Sparks@Play, LLC
 Isaac Sparks

DATE	REVISION	BY	APPR.

PREPARED FOR & DEVELOPER:
 INNER ARBOR TRUST
 10630 LITTLE PATUXENT PARKWAY
 CENTURY PLAZA, SUITE 315
 COLUMBIA, MD 21044
 ATTN: MICHAEL MCCALL
 410-740-0029

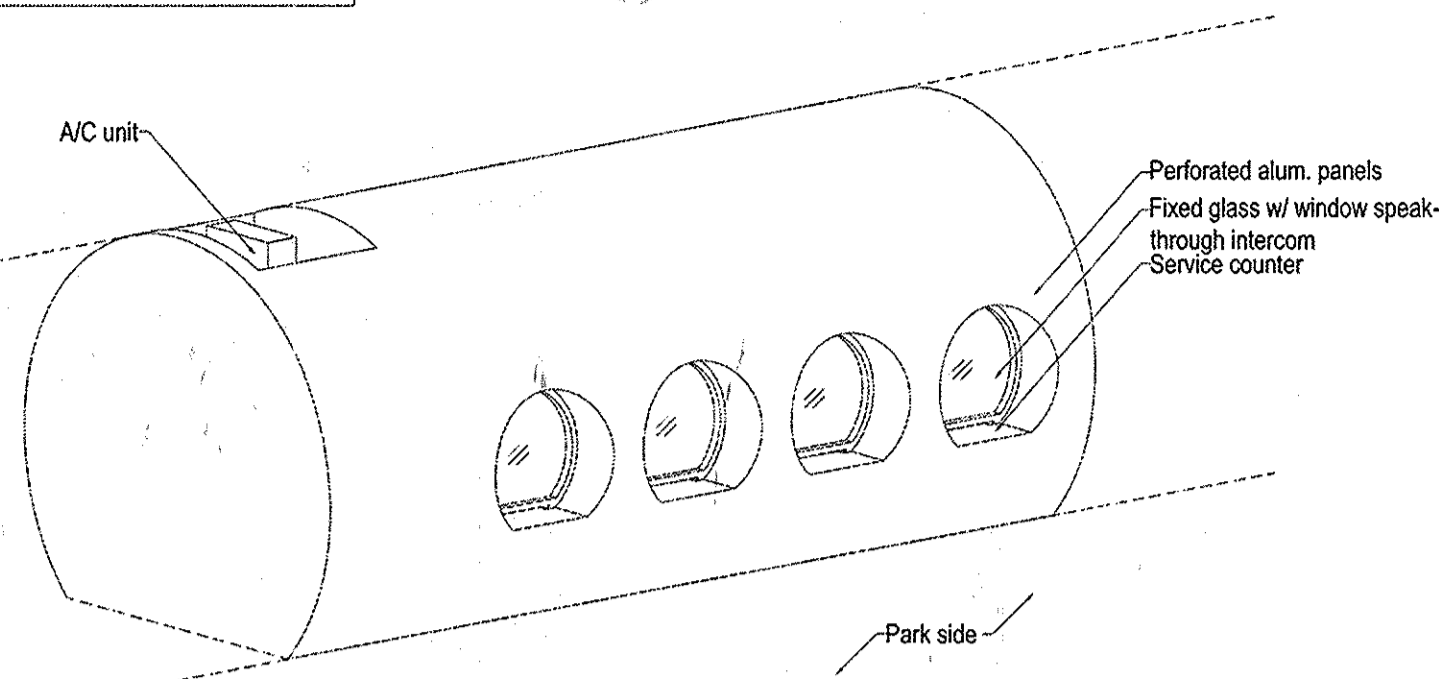
PROFESSIONAL CERTIFICATION
 I HEREBY CERTIFY THAT THESE PLANS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.
 LICENSE NO. _____
 EXPIRATION DATE: _____



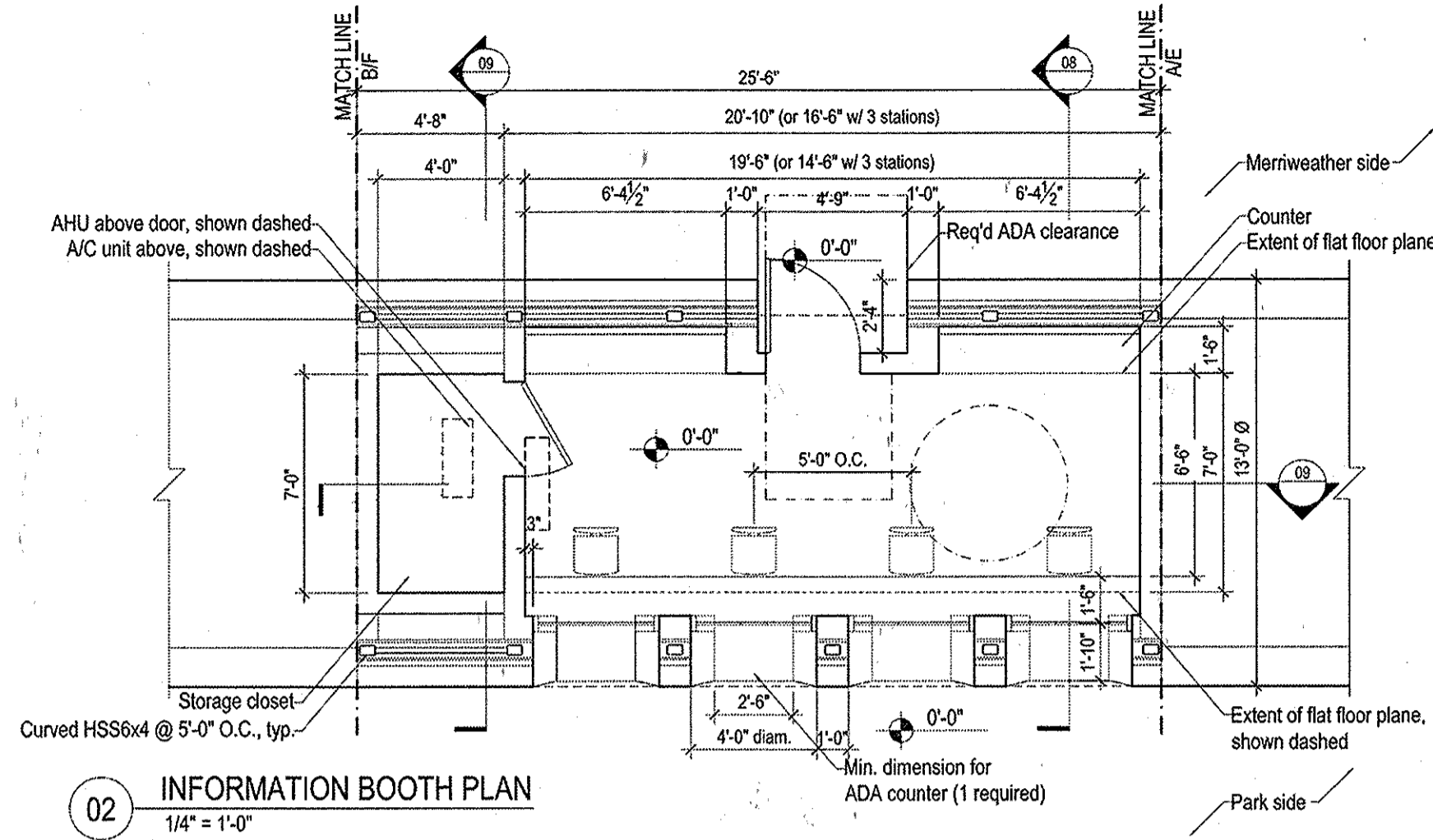
PLAYGROUND DETAILS
 DOWNTOWN COLUMBIA
 MERRIWEATHER-SYMPHONY WOODS NEIGHBORHOOD
 MERRIWEATHER PARK at SYMPHONY WOODS PHASE 1 AND FUTURE PHASES 2-7
 TOWN CENTER- SECTION 1 AREA 1
 PART OF OPEN SPACE LOT 23-PLAT NO. 13535 &
 PART OF OPEN SPACE LOT 9B-PLAT BOOK 15, PAGE 32
 GREEN COMMERCIAL BUILDING
 HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
AS SHOWN	NT	13043
DATE	TAX MAP - GRID	SHEET
JUNE, 2015	36 - 01	23 OF 85

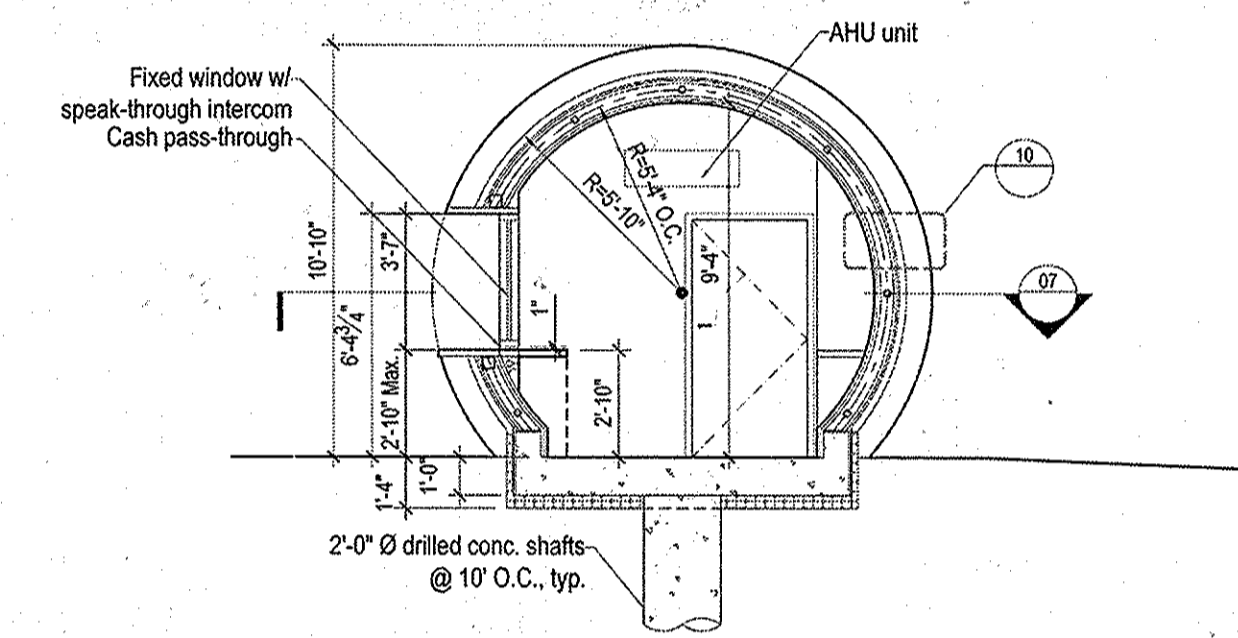
INFO BOOTH



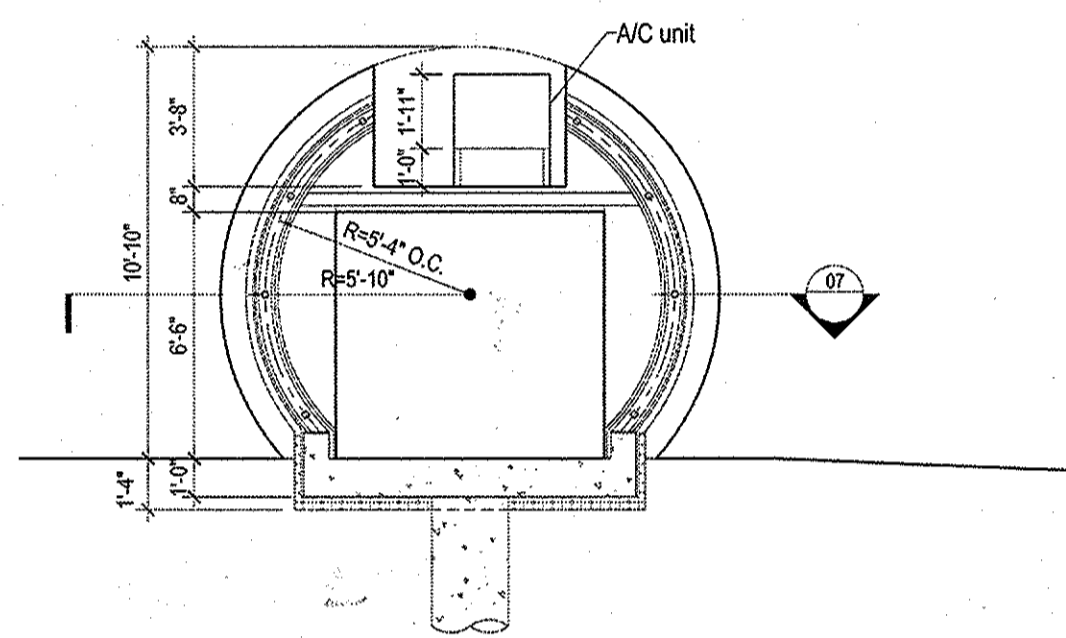
01 AXO: INFORMATION BOOTH N.T.S.



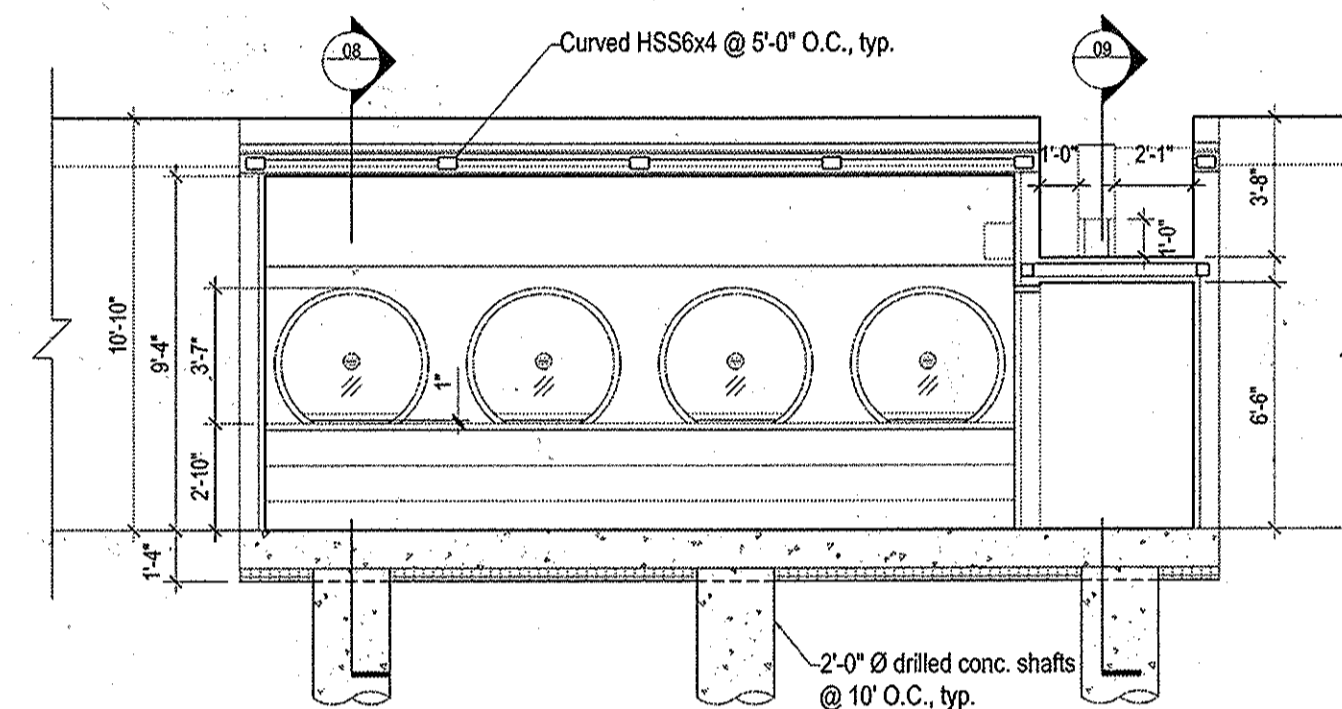
02 INFORMATION BOOTH PLAN 1/4" = 1'-0"



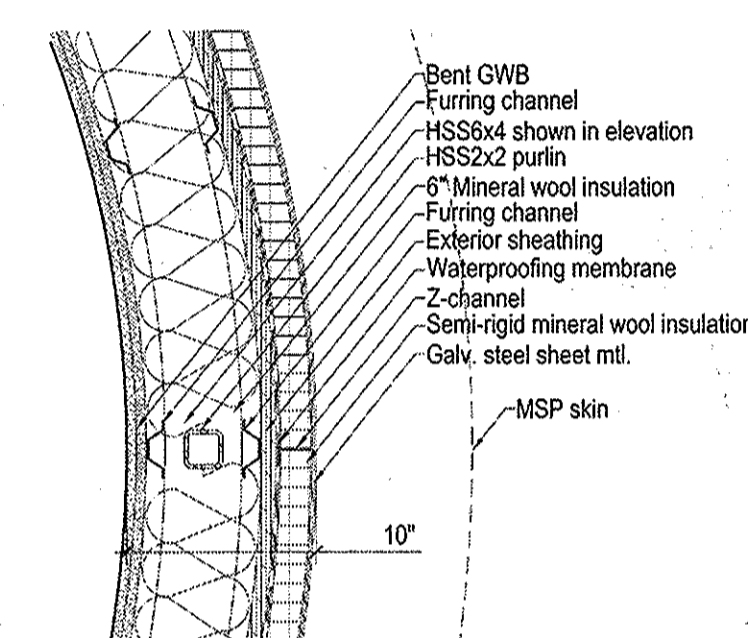
03 SECTION: INFO BOOTH TRANSACTION WINDOW 1/4" = 1'-0"



04 SECTION: INFO BOOTH STORAGE CLOSET 1/4" = 1'-0"



05 SECTION: INFO BOOTH 1/4" = 1'-0"



06 DETAIL: KIOSK & INFO BOOTH WALL ASSEMBLY 1 1/2" = 1'-0"

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING Director: _____ Date: _____ Chief, Division of Land Development: _____ Date: _____ Chief, Development Engineering Division: _____ Date: _____	APPROVED PLANNING BOARD OF HOWARD COUNTY Date: _____
--	--

Architect: NARCHITECTS, PLLC 68 JAY #317 BROOKLYN, NY 11201 T: 718.260.0845 F: 718.260.0847	Structural Engineer: ARUP 1120 CONNECTICUT AVE. NW, SUITE 1110 WASHINGTON, DC 20036 T: 202-729-8229	DES. MH	DRN. 20/24	CHK. 16/14	DATE	REVISION	BY	APP'R.
--	--	---------	------------	------------	------	----------	----	--------

PREPARED FOR & DEVELOPER:

INNER ARBOR TRUST
10630 LITTLE PATUXENT PARKWAY
CENTURY PLAZA, SUITE 315
COLUMBIA, MD 21044
ATTN: MICHAEL MCCALL
410-740-0029

CATERPILLAR: INFO BOOTH PLAN AND SECTIONS

DOWNTOWN COLUMBIA
MERRIWEATHER-SYMPHONY WOODS NEIGHBORHOOD
MERRIWEATHER PARK AT SYMPHONY WOODS PHASE 1 AND FUTURE PHASES 2-7
TOWN CENTER-SECTION 1 AREA 1
PART OF OPEN SPACE LOT 23-PLAT NO. 22123 &
PART OF OPEN SPACE LOT 98-PLAT BOOK 15, PAGE 32
GREEN COMMERCIAL BUILDING
HOWARD COUNTY, MARYLAND

SCALE 1/4" = 1'-0"	ZONING NT	G. L. W. FILE No. 13043
DATE JUNE, 2015	TAX MAP - GRID 36 - 01	SHEET 24 OF 85

A 900

SDP 14-073

THIS PLAN IS FOR INFORMATIONAL PURPOSES ONLY AND NOT FOR CONSTRUCTION. THIS PLAN WILL BE SUPERCEDED BY CONSTRUCTION DOCUMENTS PREPARED BY NARCHITECTS, PLLC FOR REVIEW AND APPROVAL AT THE BUILDING PERMIT STAGE BY THE HOWARD COUNTY DEPARTMENT OF INSPECTIONS, LICENSES AND PERMITS. THE SEAL AND SIGNATURE BELOW IS FOR THE PURPOSES OF INCLUDING THIS PLAN IN THE SET OF SITE DEVELOPMENT PLANS.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING Director: <i>William J. Allen</i> Date: <i>7-8-15</i> Chief, Division of Land Development: <i>[Signature]</i> Date: <i>8-2-15</i> Chief, Development Engineering Division: <i>[Signature]</i> Date: <i>8-25-15</i>	APPROVED PLANNING BOARD OF HOWARD COUNTY Date: <i>November 20, 2014</i> * Please see Sheet 2 for Phasing and additional approvals required for Phases 3-7
---	--

GLWGUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
BURTONSVILLE, MARYLAND 20886
TEL: 301-421-4024 BAL: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

DES.	DRN.	CHK.	DATE	REVISION	BY	APP'R.
------	------	------	------	----------	----	--------

PREPARED FOR & DEVELOPER:

INNER ARBOR TRUST
10630 LITTLE PATUXENT PARKWAY
CENTURY PLAZA, SUITE 315
COLUMBIA, MD 21044
ATTN: MICHAEL MCCALL
410-740-0029

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE 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 NO. 14693
EXPIRATION DATE: MAY 21, 2016



CATERPILLAR: INFO BOOTH PLAN AND SECTIONS

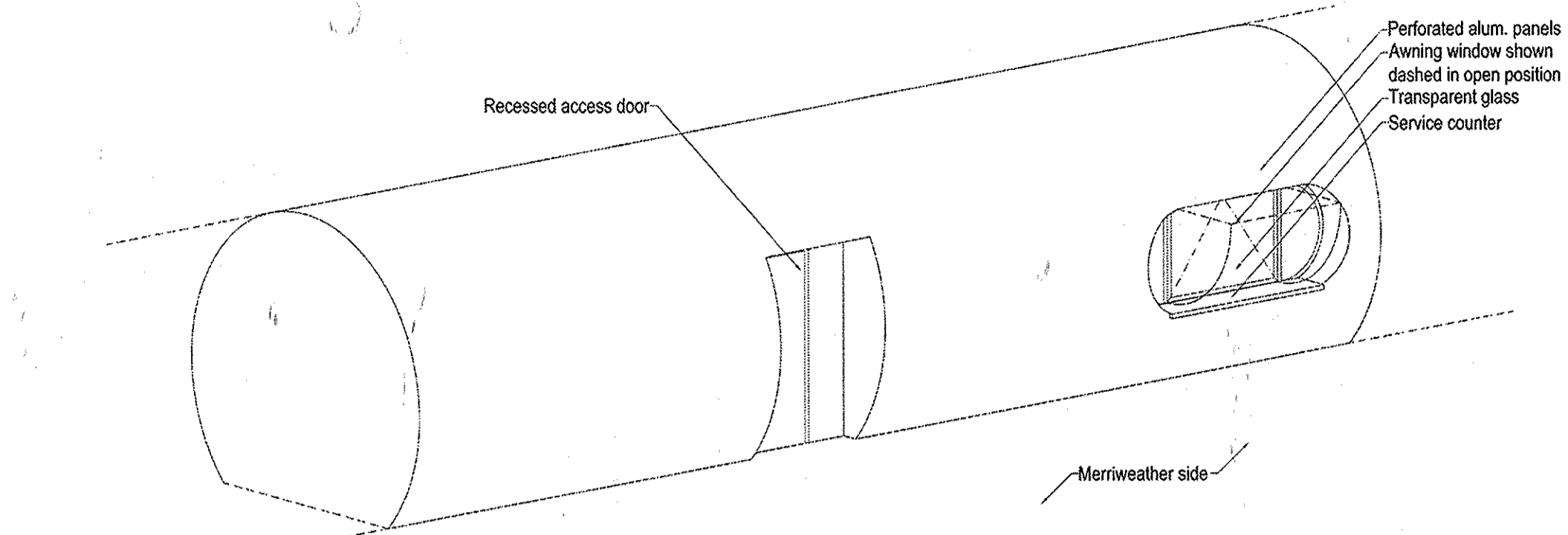
DOWNTOWN COLUMBIA
MERRIWEATHER-SYMPHONY WOODS NEIGHBORHOOD
MERRIWEATHER PARK AT SYMPHONY WOODS PHASE 1 AND FUTURE PHASES 2-7
TOWN CENTER-SECTION 1 AREA 1
PART OF OPEN SPACE LOT 23-PLAT NO. 15335 &
PART OF OPEN SPACE LOT 98-PLAT BOOK 15, PAGE 32
GREEN COMMERCIAL BUILDING
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN	ZONING NT	G. L. W. FILE No. 13043
DATE JUNE, 2015	TAX MAP - GRID 36 - 01	SHEET 24 OF 85

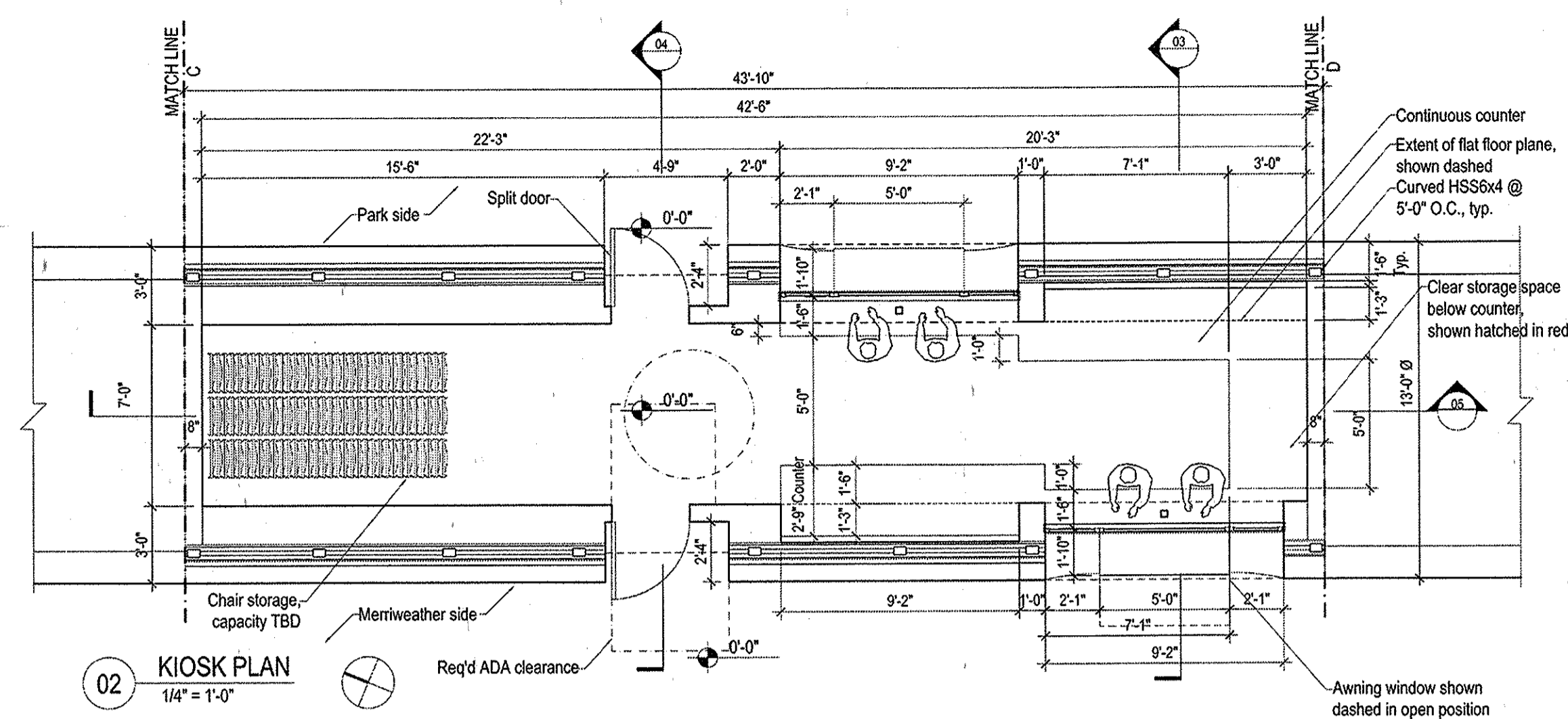
PDOX SHEET 10.120F 59

SDP 14-073

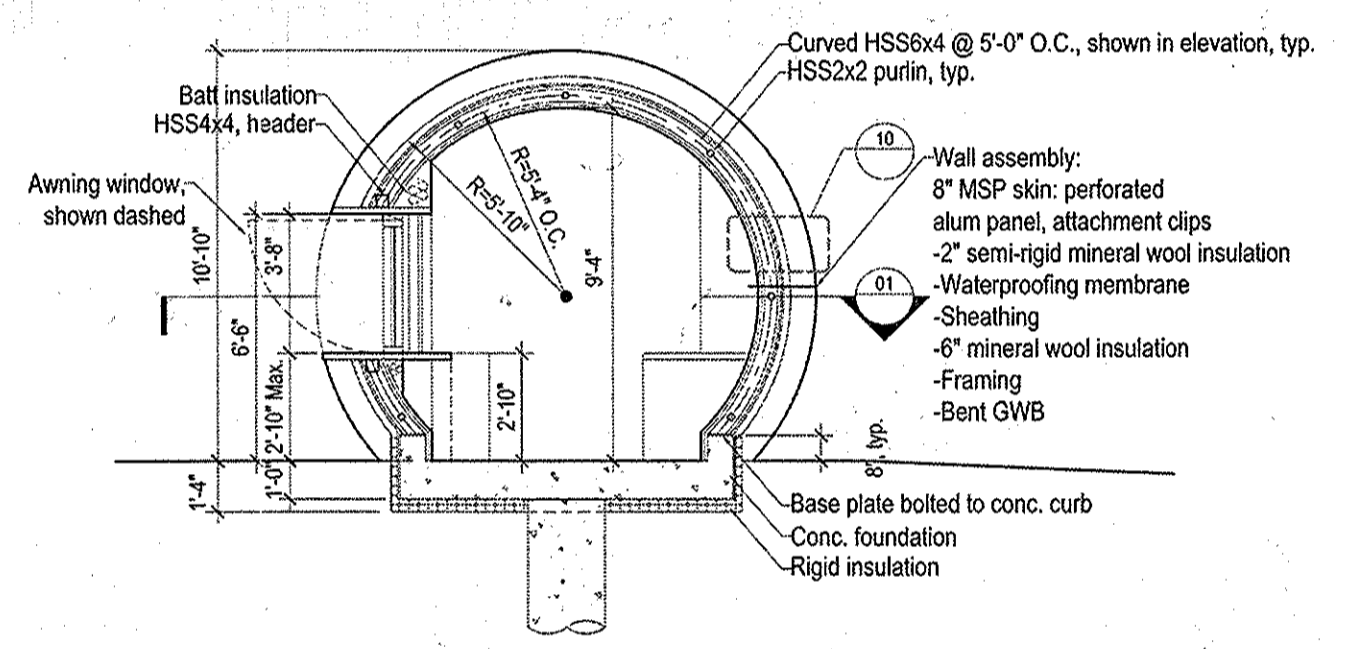
KIOSK



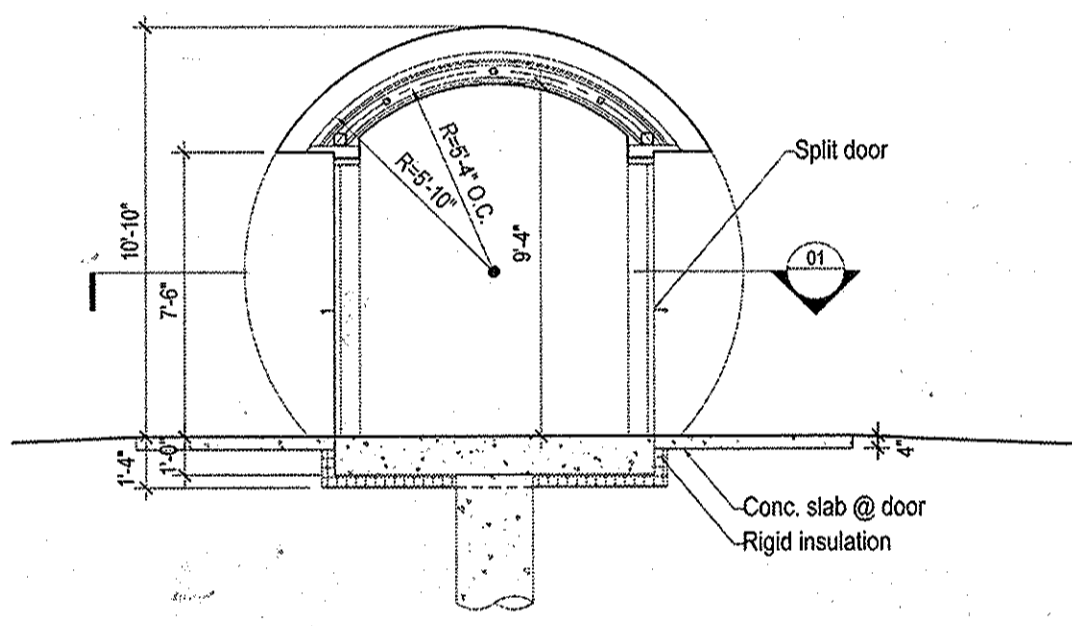
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N.T.S.



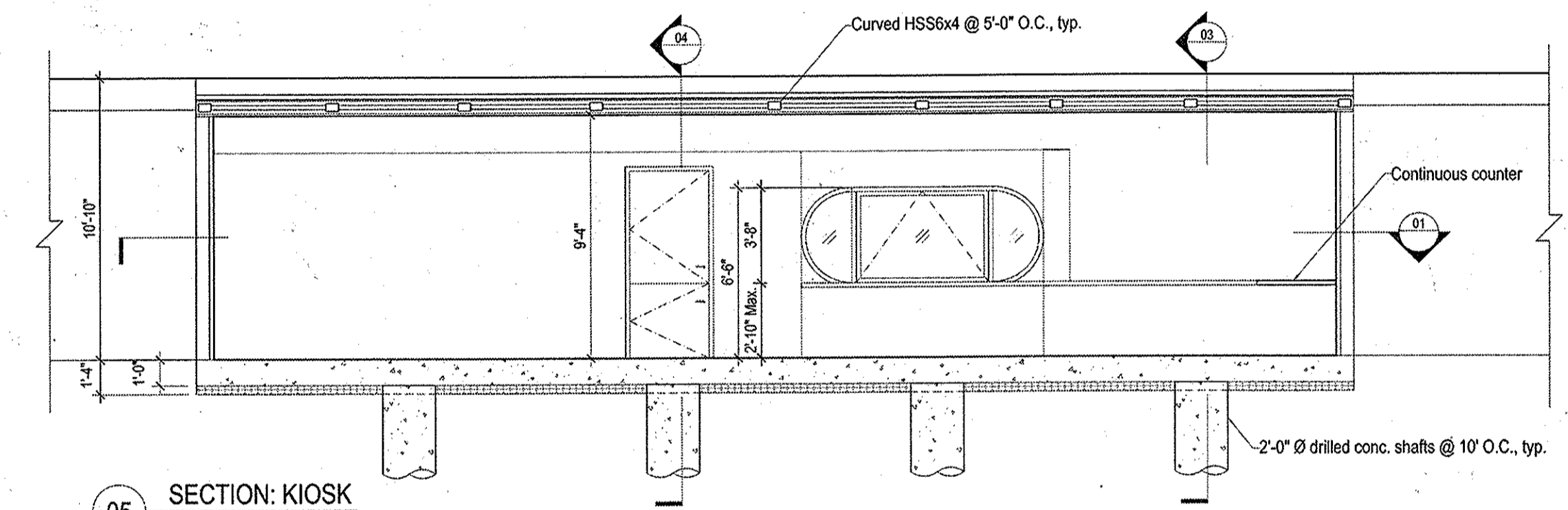
02 KIOSK PLAN
1/4" = 1'-0"



03 SECTION: KIOSK TRANSACTION WINDOW
1/4" = 1'-0"



04 SECTION: KIOSK DOOR
1/4" = 1'-0"



05 SECTION: KIOSK
1/4" = 1'-0"

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Director: _____ Date: _____
Chief, Division of Land Development: _____ Date: _____
Chief, Development Engineering Division: _____ Date: _____

APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: _____

Architect: NARCHITECTS, PLLC 68 JAY #317 BROOKLYN, NY 11201 T: 718.260.0945 F: 718.260.0847	Structural Engineer: ARJP 1130 CONNECTICUT AVE. NW, SUITE 1110 WASHINGTON, DC 20036 T: 202.724.8228	PREPARED FOR & DEVELOPER: INNER ARBOR TRUST 10630 LITTLE PATUXENT PARKWAY CENTURY PLAZA, SUITE 315 COLUMBIA, MD 21044 ATTN: MICHAEL McCALL 410-740-0029
--	--	---

CATERPILLAR: KIOSK PLAN AND SECTIONS
DOWNTOWN COLUMBIA
MERRIWEATHER-SYMPHONY WOODS NEIGHBORHOOD
MERRIWEATHER PARK AT SYMPHONY WOODS PHASE 1 AND FUTURE PHASES 2-7
TOWN CENTER- SECTION 1 AREA 1
PART OF OPEN SPACE LOT 23-PLAT NO. 22123 &
PART OF OPEN SPACE LOT 9B-PLAT BOOK 15, PAGE 32
GREEN COMMERCIAL BUILDING
ELECTION DISTRICT No. 5
HOWARD COUNTY, MARYLAND

SCALE 1/4" = 1'-0"	ZONING NT	G. L. W. FILE No. 13043
DATE JUNE, 2015	TAX MAP - GRID 36 - 01	SHEET 25 OF 85

A 901

SDP 14-073

L:\CADD\2015\1073\1073.dwg (last saved 6/2/2015 10:43 AM) PLOTTED BY: MJC

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Director: *W. J. [Signature]* Date: **9-8-15**
Chief, Division of Land Development: *[Signature]* Date: **9-2-15**
Chief, Development Engineering Division: *[Signature]* Date: **8-25-15**

APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: **November 30, 2015**
** See Sheet 2 for Pricing and additional approvals required for Phases 3-7*

THIS PLAN IS FOR INFORMATIONAL PURPOSES ONLY AND NOT FOR CONSTRUCTION. THIS PLAN WILL BE SUPERCEDED BY CONSTRUCTION DOCUMENTS PREPARED BY NARCHITECTS, PLLC FOR REVIEW AND APPROVAL AT THE BUILDING PERMIT STAGE BY THE HOWARD COUNTY DEPARTMENT OF INSPECTIONS, LICENSES AND PERMITS. THE SEAL AND SIGNATURE BELOW IS FOR THE PURPOSES OF INCLUDING THIS PLAN IN THE SET OF SITE DEVELOPMENT PLANS.

GLW GUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3509 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
BURTONSVILLE, MARYLAND 20866
TEL: 301-421-4024 BAL: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

DES.	DRN.	CHK.	DATE	REVISION	BY	APP'R.

PREPARED FOR & DEVELOPER:
INNER ARBOR TRUST
10630 LITTLE PATUXENT PARKWAY
CENTURY PLAZA, SUITE 315
COLUMBIA, MD 21044
ATTN: MICHAEL McCALL
410-740-0029

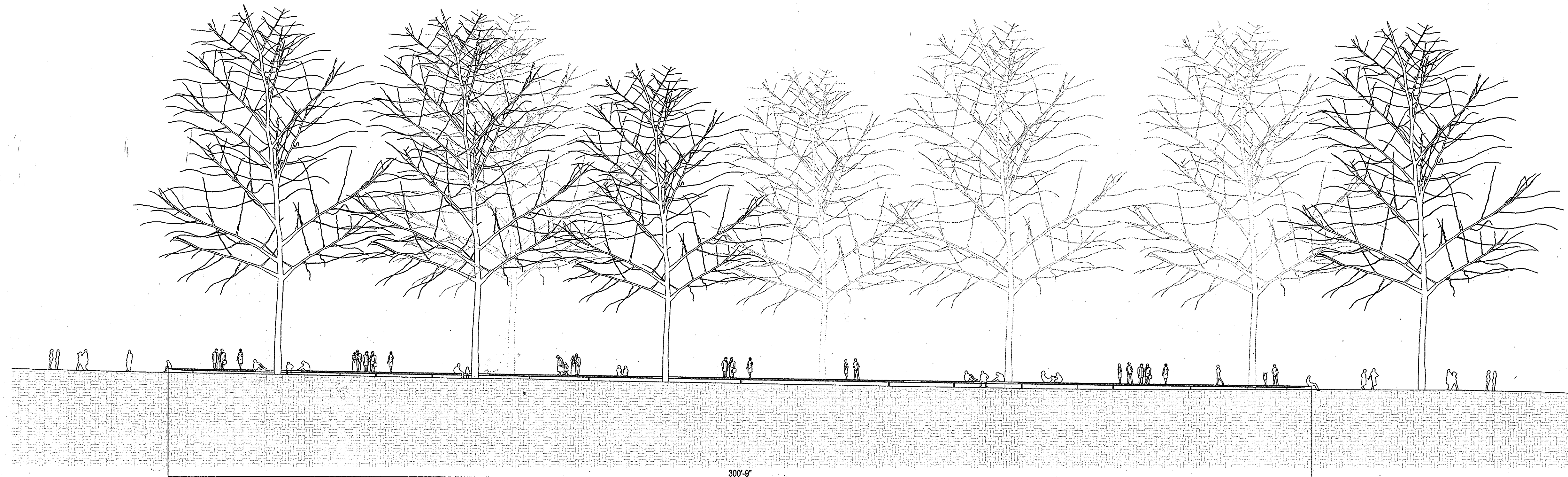
PROFESSIONAL CERTIFICATION
I HEREBY CERTIFY THAT THESE PLANS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 14931
EXPIRATION DATE: MAY 21, 2016

CATERPILLAR: KIOSK PLAN AND SECTIONS
DOWNTOWN COLUMBIA
MERRIWEATHER-SYMPHONY WOODS NEIGHBORHOOD
MERRIWEATHER PARK at SYMPHONY WOODS PHASE 1 AND FUTURE PHASES 2-7
TOWN CENTER- SECTION 1 AREA 1
PART OF OPEN SPACE LOT 23-PLAT NO. 13535 &
PART OF OPEN SPACE LOT 9B-PLAT BOOK 15, PAGE 32
GREEN COMMERCIAL BUILDING
ELECTION DISTRICT No. 5
HOWARD COUNTY, MARYLAND

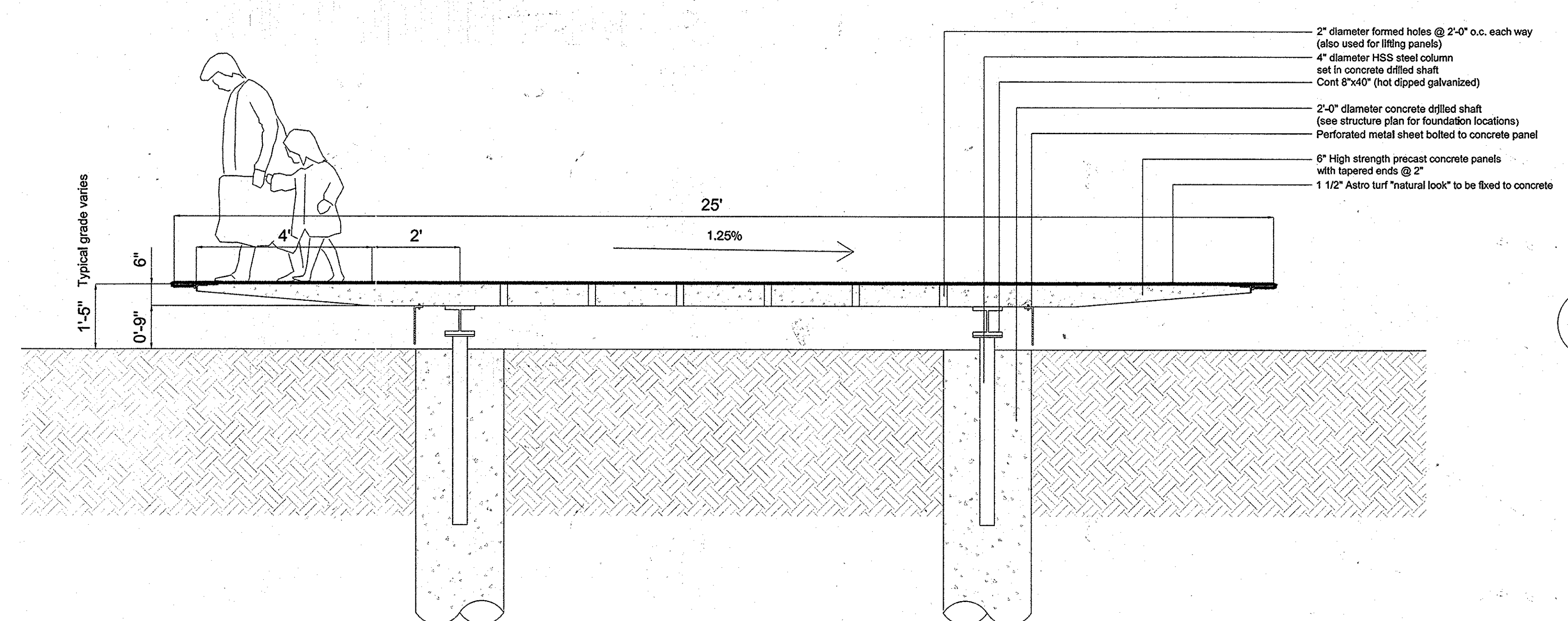
SCALE AS SHOWN	ZONING NT	G. L. W. FILE No. 13043
DATE JUNE, 2015	TAX MAP - GRID 36 - 01	SHEET 25 OF 85

PDOX SHEET 10.130F 59

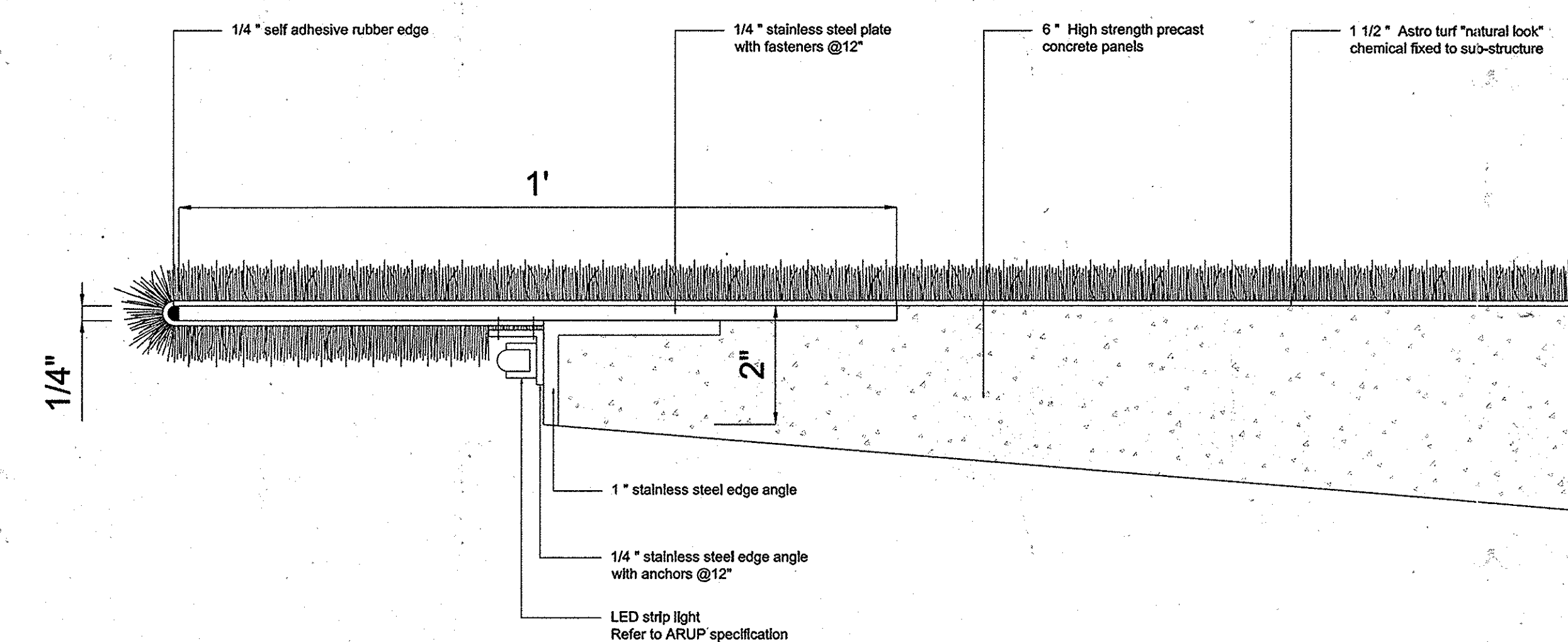
SDP 14-073



1 Long section
SCALE: 1/16"=1'-0"



2 Detailed Section
SCALE: 1/2"=1'-0"



3 Tapered Edge Detail
SCALE: 6"=1'-0"



Astro Turf, "Natural look"
1 1/2" pile height, Latex backing
pre-punched for drainage

4 Materials Example
NTS

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
 Director: *Valerie J. Gler* 9-8-15
 Chief, Division of Land Development: *Christy E. Edwards* 9-24-15
 Chief, Development Engineering Division: *Christy E. Edwards* 8-25-15

APPROVED
 PLANNING BOARD OF HOWARD COUNTY
 Date: November 20, 2014
 *see sheet 2 for phasing and additional approvals required for Phases 2+7

Landscape Architect
Martha Schwartz Partners Ltd
 65-69 East Road, London, N1 6AH, UK
 T: +44 (0)20 7549 7487
 F: +44 (0)20 7520 0988
 www.marthaschwartz.com

DATE	REVISION	BY	APP'R
10/22/14	Rev E - SDP DRAFT	SDC	DR
10/20/14	Rev D - SDP DRAFT	SDC	DR
03/19/14	Rev C - SDP DRAFT	NA	NK
03/18/14	Rev B - SDP DRAFT	NA	NK
01/31/14	Rev A - DAP	NA	NK

PREPARED FOR & DEVELOPER:
 INNER ARBOR TRUST
 10630 LITTLE PATUXENT PARKWAY
 CENTURY PLAZA, SUITE 315
 COLUMBIA, MD 21044
 ATTN: MICHAEL McCALL
 410-740-0029



FOR INFORMATION ONLY
 NOT FOR CONSTRUCTION

PICNIC TABLE DETAILS
DOWNTOWN COLUMBIA
 MERRIWEATHER-SYMPHONY WOODS NEIGHBORHOOD
 MERRIWEATHER PARK at SYMPHONY WOODS PHASE 1 AND FUTURE PHASES 2-7
 TOWN CENTER - SECTION 1 AREA 1
 PART OF OPEN SPACE LOT 23-PLAT No. 22123 &
 PART OF OPEN SPACE LOT 9B-PLAT BOOK 15, PAGE 32
 GREEN COMMERCIAL BUILDING
 ELECTION DISTRICT No. 5
 HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
VARIES	NT	13043
DATE	TAX MAP - GRID	SHEET
JUNE, 2015	36 - 01	26 OF 85

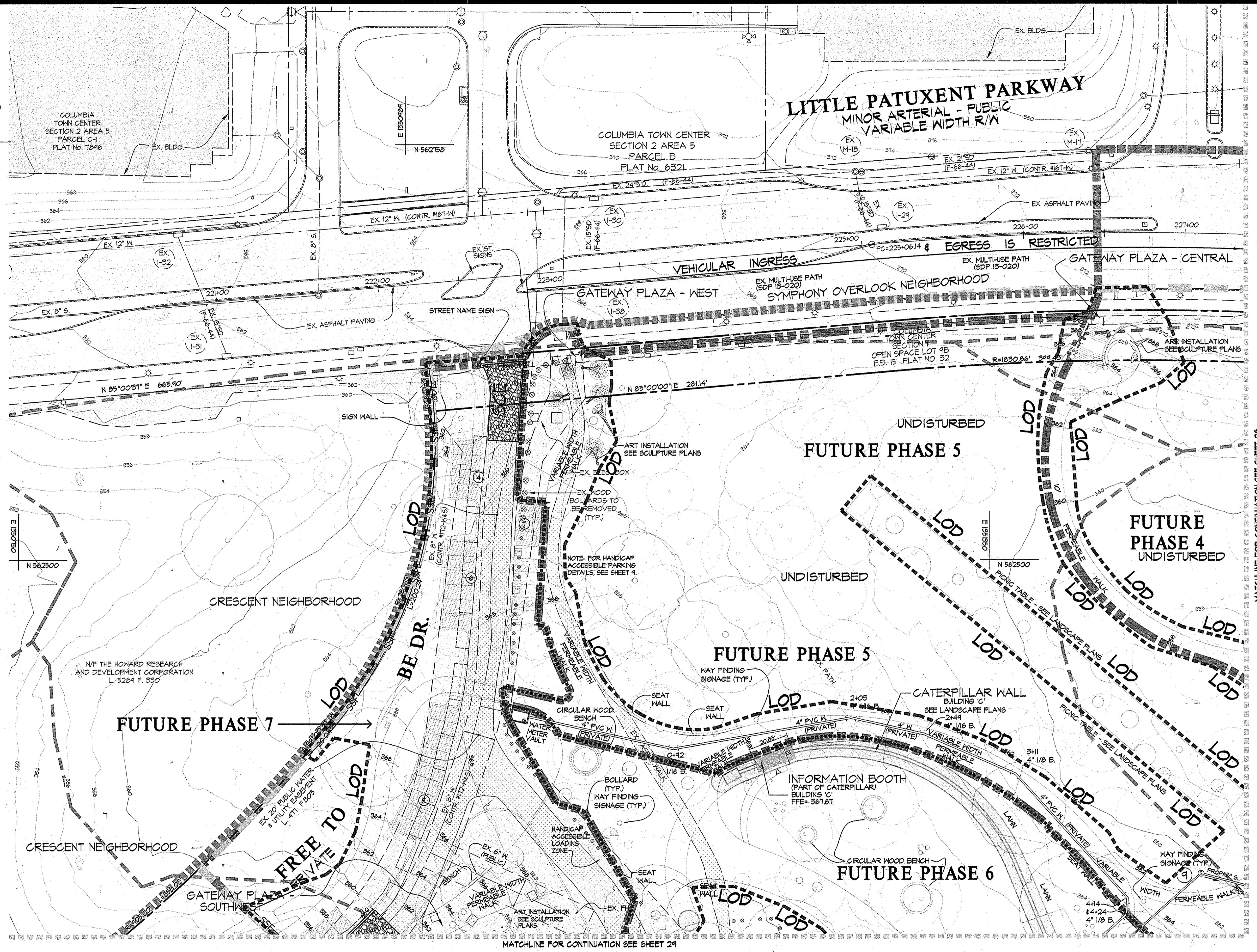
LF205 TYPICAL DETAILS

- LEGEND**
- 5' — PROPOSED SILT FENCE
 - 50' — PROPOSED SUPER SILT FENCE
 - LOD --- LIMITS OF DISTURBANCE/L.O.D.
 - LIMIT --- LIMIT
 - PHASE LIMITS OF DISTURBANCE/L.O.D.
 - LOS LIMIT OF SUBMISSION/LOS
 - SOILS BOUNDARY ---
 - SCE STABILIZED CONSTRUCTION ENTRANCE
 - ① PHASE I DRAINAGE AREA
 - FUTURE ② FUTURE PHASE DRAINAGE AREA

- NOTES:**
- ALL VARIABLE WIDTH PATHS ARE 10' MINIMUM WIDTH UNLESS NOTED OTHERWISE.
 - FOR LEGEND SEE SHEET 3.
 - IMPROVEMENTS OUTSIDE OF THE LIMITS OF THE APPROVED FDP (FDP-DC-MSH-1) TO BE ADDED BY A FUTURE REDLINE TO THESE PLANS ONCE AN AMENDED FDP HAS BEEN SUBMITTED, REVIEWED AND APPROVED BY DPZ.

SOIL TYPE	SOIL DESCRIPTION	SOILS GROUP
BaA	Baile silt loam, 0 to 3 percent slopes	"D"
BbB	Gladstone loam, 3 to 8 percent slopes	"B"
BbC	Gladstone loam, 8 to 15 percent slopes	"B"
Ha	Hatboro-Codorus silt loam, 0 to 3 percent slopes	"D"
MaC	Manor loam, 8 to 15 percent slopes	"B"
McD	Manor loam, 15 to 25 percent slopes	"B"
UeB	Urban land-Udorthents complex, 0 to 8 percent slopes	"D"

- B' TYPE SOILS
- D' TYPE SOILS



This Development Plan is approved for Soil Erosion and Sediment Control by the Howard Soil Conservation District.

John R. Robinson 8/17/15
Howard S.C.D. Date

DEVELOPER'S/BUILDER'S CERTIFICATE

I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT FOR SEDIMENT AND EROSION CONTROL, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT.

Michael J. Trap 5/31/15
SIGNATURE OF DEVELOPER/BUILDER DATE

ENGINEER'S CERTIFICATE

I HEREBY CERTIFY THAT THIS PLAN FOR SEDIMENT AND EROSION CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

Michael J. Trap 5/31/15
ENGINEER'S SIGNATURE DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

William J. ... 9-8-16
Director Date

... 9-2-15
Chief, Division of Land Development Date

... 8-25-15
Chief, Development Engineering Division Date

APPROVED
PLANNING BOARD OF HOWARD COUNTY

Date: November 10, 2014
See Sheet 2 for Phasing and additional approvals required for Phases 3-7.

GLWGUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
BURTONSVILLE, MARYLAND 20866
TEL: 301-421-4024 BALT. 410-880-1820 DC/VA 301-989-2524 FAX: 301-421-4186

PREPARED FOR & DEVELOPER:
INNER ARBOR TRUST
10630 LITTLE PATUXENT PARKWAY
CENTURY PLAZA, SUITE 315
COLUMBIA, MD 21044
ATTN: MICHAEL McCALL
410-740-0029

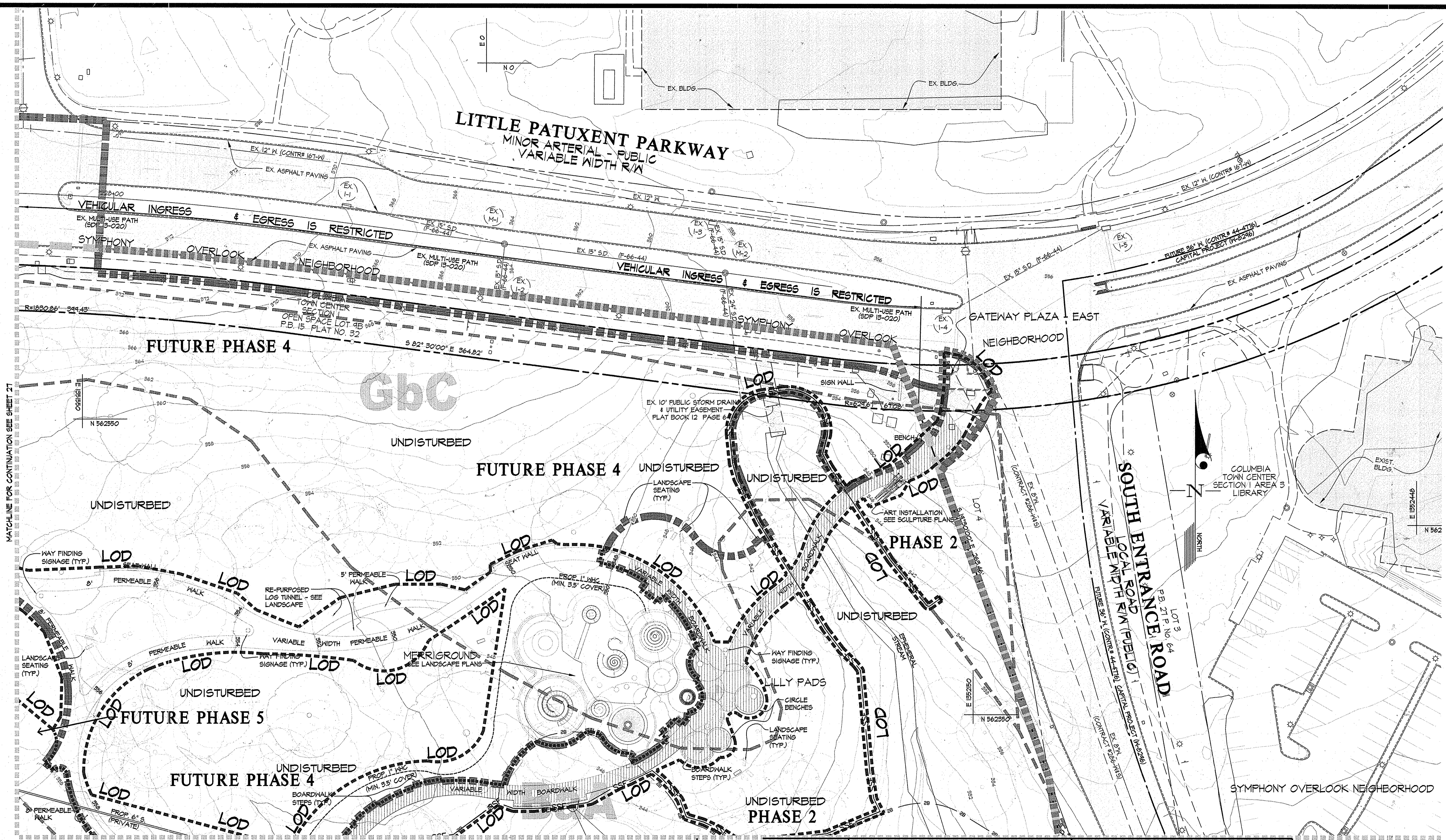
PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE 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 NO. 14931
EXPIRATION DATE: MAY 21, 2016

SEDIMENT CONTROL PLAN-NORTHWEST
DOWNTOWN COLUMBIA
MERRIWEATHER-SYMPHONY WOODS NEIGHBORHOOD
MERRIWEATHER PARK at SYMPHONY WOODS PHASE 1 AND FUTURE PHASES 2-7
TOWN CENTER- SECTION 1 AREA 1
PART OF OPEN SPACE LOT 23-PLAT NO. 13535 &
PART OF OPEN SPACE LOT 9B-PLAT BOOK 15, PAGE 32
GREEN COMMERCIAL BUILDING

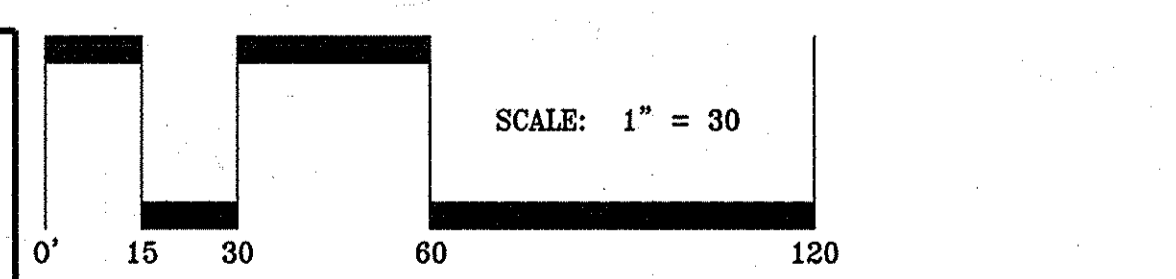
SCALE	ZONING	G. L. W. FILE NO.
1"=30'	NT	13043
DATE	TAX MAP - GRID	SHEET
JUNE, 2015	36 - 01	27 OF 85

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APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Victoria Jaffe 9-8-15
 Director Date
V. Jaffe 9-2-15
 Chief, Division of Land Development Date
W. J. Jaffe 9-25-15
 Chief, Development Engineering Division Date

APPROVED
 PLANNING BOARD OF HOWARD COUNTY
 Date: November 20, 2014
 (See Sheet 2 for Printing & additional requirements required for Phases 2, 4, & 5)



GLW Gutschick Little & Weber, P.A.
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
 3909 NATIONAL DRIVE - SUITE 250 - BURTNSVILLE OFFICE PARK
 BURTNSVILLE, MARYLAND 20866
 TEL: 301-421-4024 BALT: 410-580-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

DATE	REVISION	BY	APPR.

PREPARED FOR & DEVELOPER:
 INNER ARBOR TRUST
 10630 LITTLE PATUXENT PARKWAY
 CENTURY PLAZA, SUITE 315
 COLUMBIA, MD 21044
 ATTN: MICHAEL MCCALL
 410-740-0029

PROFESSIONAL CERTIFICATION
 I HEREBY CERTIFY THAT THESE 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 NO. 14931
 EXPIRATION DATE: MAY 21, 2016

This Development Plan is approved for Soil Erosion and Sediment Control by the Howard Soil Conservation District.
John R. Roberts 9/3/15
 Howard S.C.D. Date

DEVELOPER'S/BUILDER'S CERTIFICATE
 I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT FOR SEDIMENT AND EROSION CONTROL, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT.
Michael J. Jaffe 5/31/15
 SIGNATURE OF DEVELOPER/BUILDER DATE

ENGINEER'S CERTIFICATE
 I HEREBY CERTIFY THAT THIS PLAN FOR SEDIMENT AND EROSION CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.
Michael J. Jaffe 5/31/15
 ENGINEER'S SIGNATURE DATE

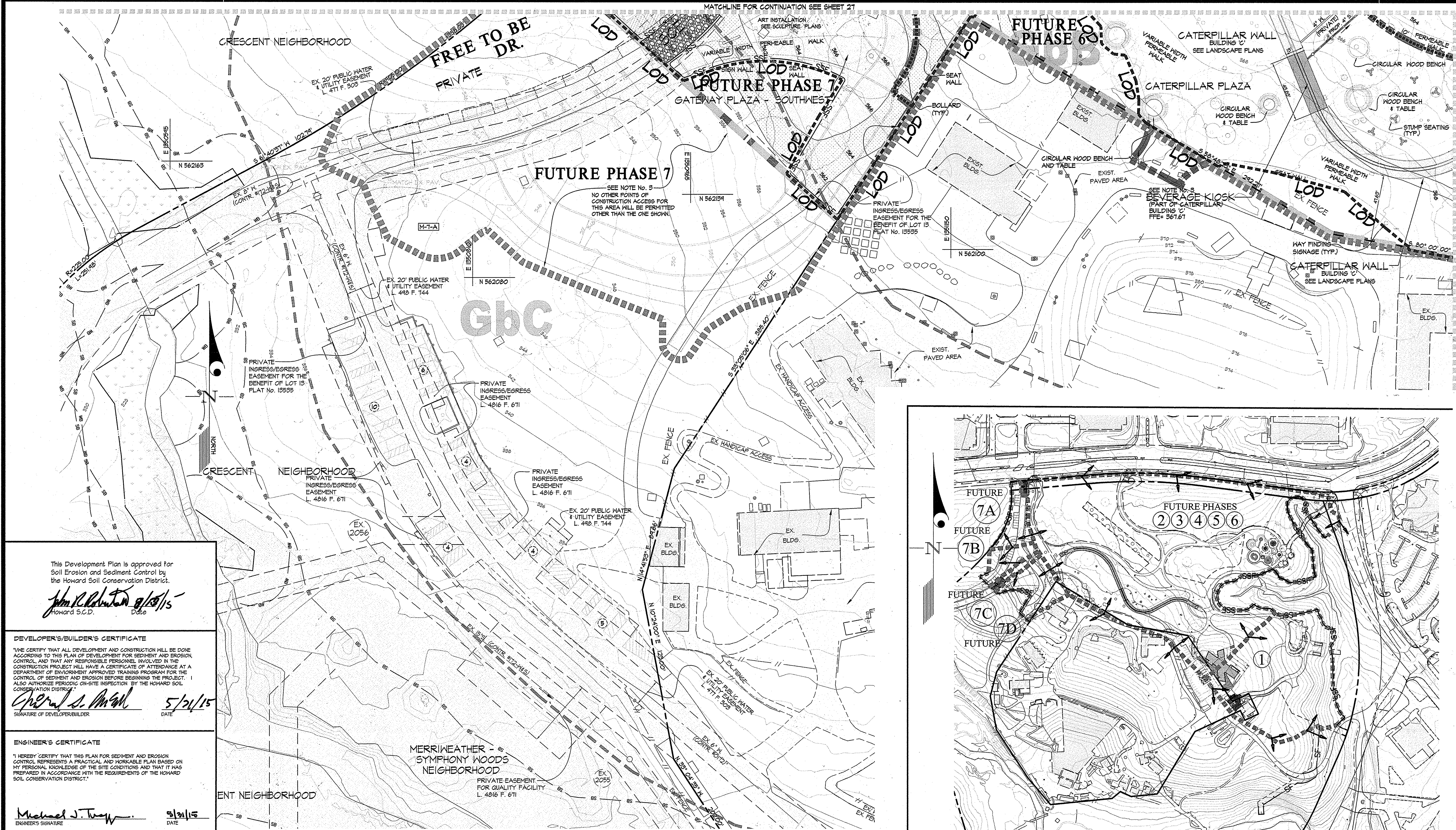
SEDIMENT CONTROL PLAN-NORTHEAST
DOWNTOWN COLUMBIA
 MERRIWEATHER-SYMPHONY WOODS NEIGHBORHOOD
 MERRIWEATHER PARK at SYMPHONY WOODS PHASE 1 AND FUTURE PHASES 2-7
 TOWN CENTER - SECTION 1 AREA 1
 PART OF OPEN SPACE LOT 23-PLAT NO. 13535 &
 PART OF OPEN SPACE LOT 9B-PLAT BOOK 15, PAGE 32
 GREEN COMMERCIAL BUILDING
 ELECTION DISTRICT No. 5
 HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE NO.
1"=30'	NT	13043
DATE	TAX MAP - GRID	SHEET
JUNE, 2015	36 - 01	28 OF 85

PDOX SHEET 12 OF 59

L:\CAD\DRAWINGS\11072\13043\Phase by GJM\SDP\Bound 01\SDP27-31-500.dwg, PLOTTED: 5/21/2015 6:24 PM, LAST SAVED: 5/21/2015 10:26 AM, PLOTTED BY: Mike Troppan

MATCHLINE FOR CONTINUATION SEE SHEET 27



MATCHLINE FOR CONTINUATION SEE SHEET 30

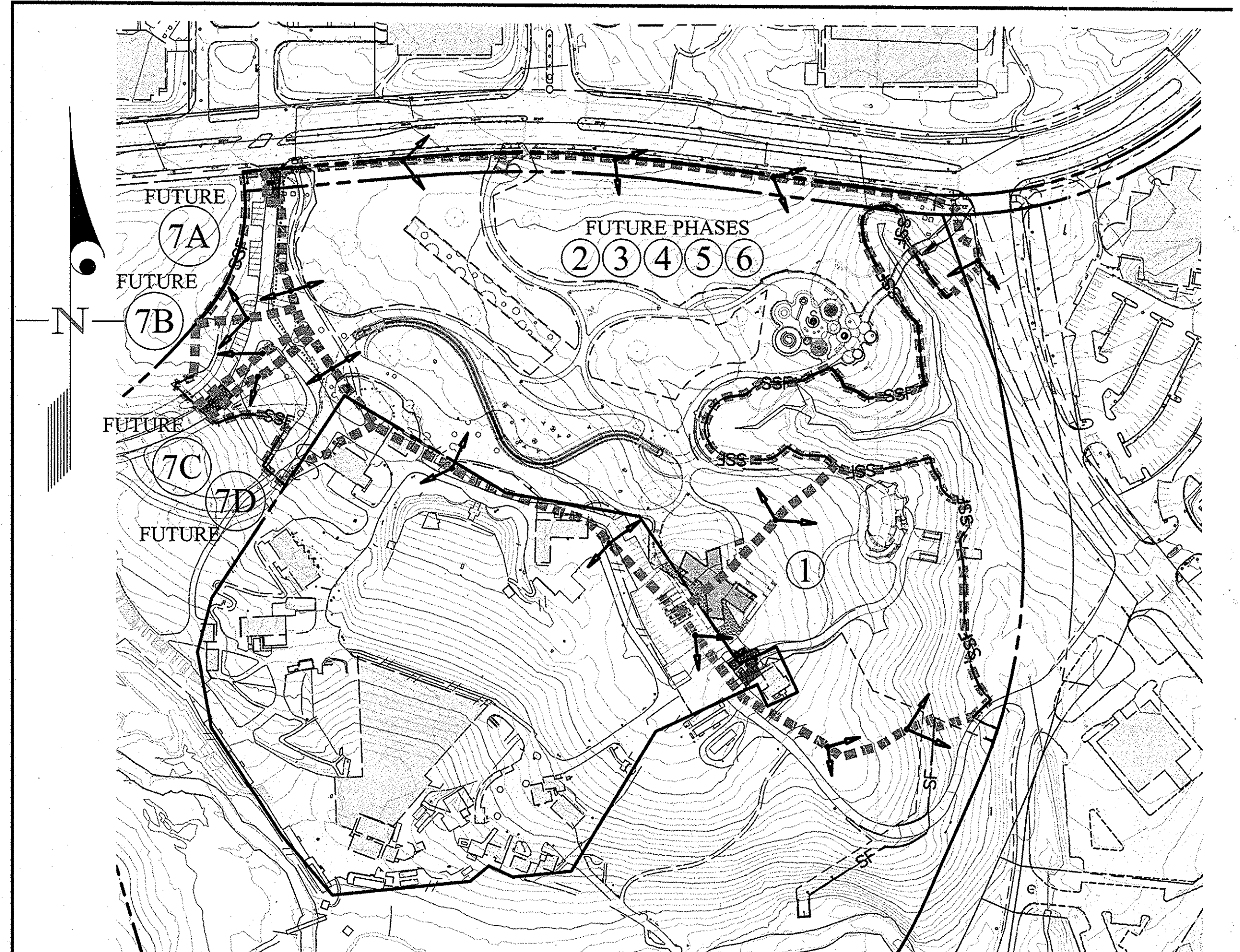
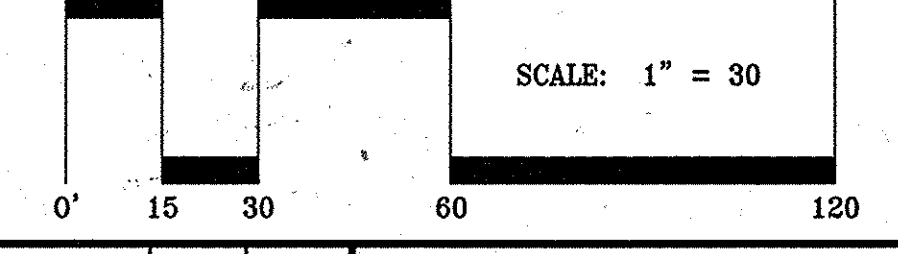
This Development Plan is approved for Soil Erosion and Sediment Control by the Howard Soil Conservation District.
John R. Robertson 8/18/15
Howard S.C.D. Date

DEVELOPER'S/BUILDER'S CERTIFICATE
I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT FOR SEDIMENT AND EROSION CONTROL...
General S. Smith 5/21/15
SIGNATURE OF DEVELOPER/BUILDER DATE

ENGINEER'S CERTIFICATE
I HEREBY CERTIFY THAT THIS PLAN FOR SEDIMENT AND EROSION CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT HAS BEEN PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.
Michael J. Tracy 9/21/15
ENGINEER'S SIGNATURE DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
William J. Jaffe 9-8-15
Director Date
Kate A. Deane 9-2-15
Chief, Division of Land Development Date
David E. Smith 8-25-15
Chief, Development Engineering Division Date

APPROVED: PLANNING BOARD OF HOWARD COUNTY
Date: *November 20, 2015*
See Sheet 2 for Planning Information and additional approvals required for Phases 2-7



DRAINAGE AREA PHASE I (SILT FENCE): 3.45 AC.
DRAINAGE AREA FUTURE PHASES 2 THRU 6 (SUPER SILT FENCE): 10.48 AC.
DRAINAGE AREA FUTURE PHASE 7:
7A (SUPER SILT FENCE): 0.34 AC.
7B (SUPER SILT FENCE): 0.31 AC.
7C (SCE): 0.11 AC.
7D (SUPER SILT FENCE): 0.50 AC.

SEDIMENT CONTROL DRAINAGE AREA MAP
SCALE: 1" = 150'

PDOX SHEET 13 OF 59

GLWGUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
BURTONSVILLE, MARYLAND 20866
TEL: 301-421-4024 BALT. 410-581-1820 DC/VA 301-989-2524 FAX: 301-421-4186

DATE	REVISION	BY	APPR.

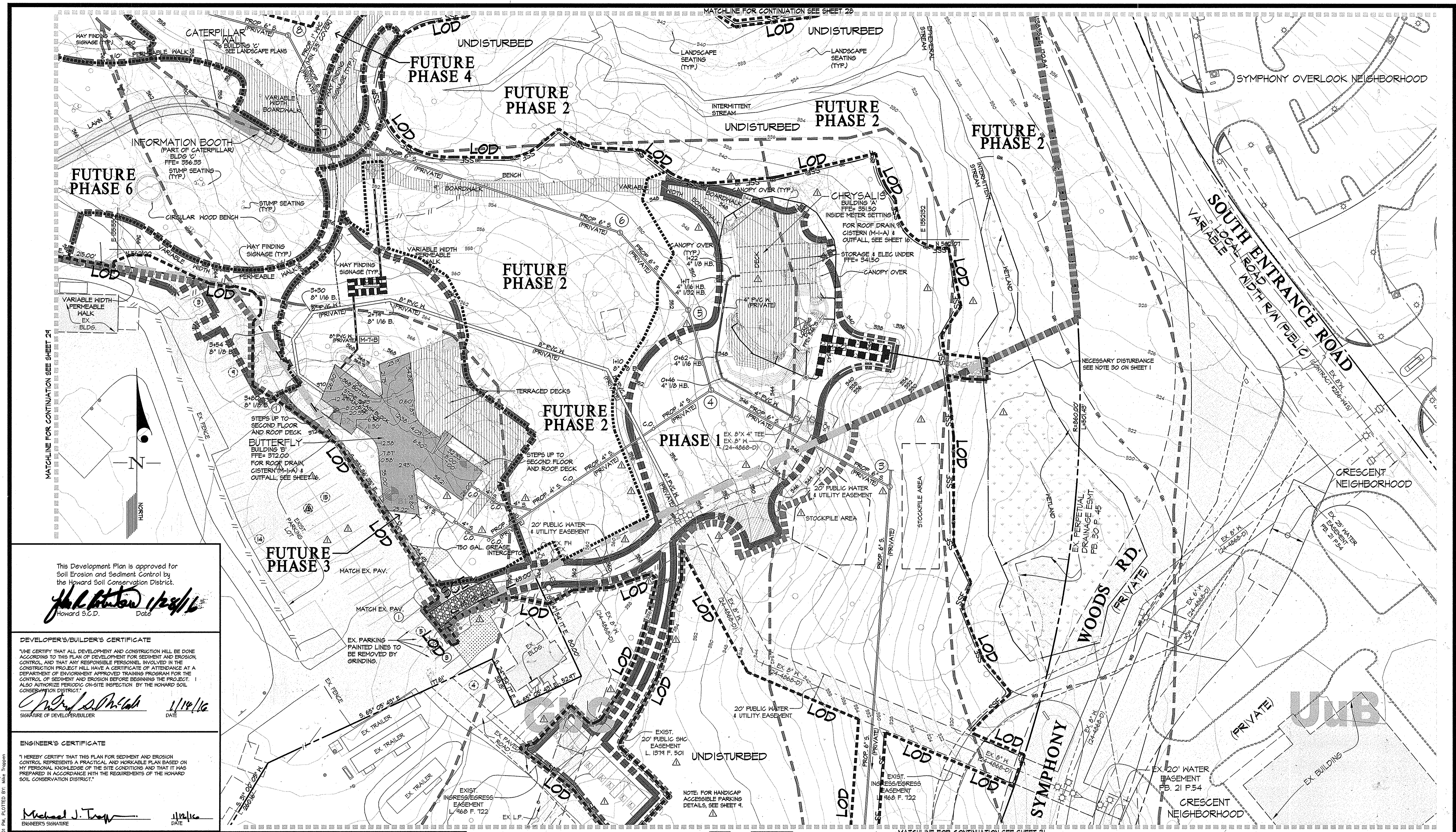
PREPARED FOR & DEVELOPER:
INNER ARBOR TRUST
10630 LITTLE PATUXENT PARKWAY
CENTURY PLAZA, SUITE 315
COLUMBIA, MD 21044
ATTN: MICHAEL MCCALL
410-740-0029

PROFESSIONAL CERTIFICATION
I HEREBY CERTIFY THAT THESE 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 NO. 14931
EXPIRATION DATE: MAY 21, 2016

SEDIMENT CONTROL PLAN-MIDWEST
DOWNTOWN COLUMBIA
MERRIWEATHER-SYMPHONY WOODS NEIGHBORHOOD
MERRIWEATHER PARK AT SYMPHONY WOODS PHASE 1 AND FUTURE PHASES 2-7
TOWN CENTER, SECTION 1 AREA 1
PART OF OPEN SPACE LOT 23-PLAT NO. 13535 &
PART OF OPEN SPACE LOT 9B-PLAT BOOK 15, PAGE 32
GREEN COMMERCIAL BUILDING
ELECTION DISTRICT No. 5
HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE NO.
1"=30'	NT	13043
DATE	TAX MAP - GRID	SHEET
JUNE, 2015	36 - 01	29 OF 85

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PLOTTED: 5/21/2015 8:22 PM, LAST SAVED: 5/21/2015 10:26 AM, PLOTTED BY: Mike Trostern



This Development Plan is approved for Soil Erosion and Sediment Control by the Howard Soil Conservation District.

John S. C. D. 1/28/16
Date

DEVELOPER'S/BUILDER'S CERTIFICATE

I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT FOR SEDIMENT AND EROSION CONTROL, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT.

Michael J. Trapp 1/14/16
SIGNATURE OF DEVELOPER/BUILDER DATE

ENGINEER'S CERTIFICATE

I HEREBY CERTIFY THAT THIS PLAN FOR SEDIMENT AND EROSION CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT HAS BEEN PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

Michael J. Trapp 1/14/16
ENGINEER'S SIGNATURE DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Victoria Preece 2-11-16
Director Date

Victoria Preece 2-11-16
Chief, Division of Land Development Date

Ch. J. ... 2-11-16
Chief, Development Engineering Division Date

APPROVED: PLANNING BOARD OF HOWARD COUNTY

Date: November 20, 2014

*See Sec 2 for Provisions and Q&A approvals for Phase 3-7

GLWGUTSCHICK LITTLE & WEBER, P.A.

CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS

3909 NATIONAL DRIVE - SUITE 250 - BURTSMVILLE OFFICE PARK
BURTSMVILLE, MARYLAND 20866
TEL: 301-421-4024 BAL: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

DES. MJT DRN. WBJ CHK. MJT

DATE: 1/28/16

UPDATE CHRYSALIS BUILDING, WATERLINE, SEWER, SD, ADDED NEW HC PKING AND PATH
REMOVED TRAILER PARKING PADS

PREPARED FOR & DEVELOPER:

INNER ARBOR TRUST
10630 LITTLE PATUXENT PARKWAY
CENTURY PLAZA, SUITE 315
COLUMBIA, MD 21044
ATTN: MICHAEL MCCALL
410-740-0029

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE 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 NO. 14631, EXPIRATION DATE: MAY 21, 2016

Michael J. Trapp
Professional Engineer

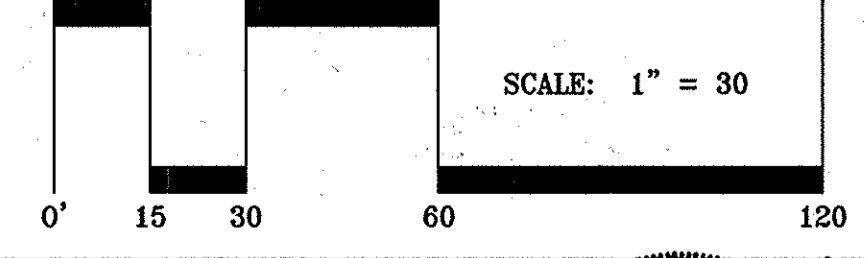
REVISION

SEDIMENT CONTROL PLAN-MIDEAST
DOWNTOWN COLUMBIA
MERRIWEATHER SYMPHONY WOODS NEIGHBORHOOD
MERRIWEATHER PARK at SYMPHONY WOODS PHASE 1 AND FUTURE PHASES 2-7
TOWN CENTER - SECTION 1 AREA 1
PART OF OPEN SPACE LOT 23-PLAT NO. 13533 &
PART OF OPEN SPACE LOT 29-PLAT NO. 15, PAGE 32
GREEN COMMERCIAL BUILDING

ELECTION DISTRICT No. 5

HOWARD COUNTY, MARYLAND

SCALE 1"=30'	ZONING NT	G. L. W. FILE NO. 13043
DATE JAN., 2016	TAX MAP - GRID 36 - 01	SHEET 30 OF 85



FOR NOTES - SEE SHEET 27

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This Development Plan is approved for Soil Erosion and Sediment Control by the Howard Soil Conservation District.

John A. Robinson 8/17/15
 Date
 Howard S.C.D.

DEVELOPER'S/BUILDER'S CERTIFICATE

I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN FOR SEDIMENT AND EROSION CONTROL, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT.

Gregory A. Mohr 5/31/15
 SIGNATURE OF DEVELOPER/BUILDER DATE

ENGINEER'S CERTIFICATE

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Michael J. Tray 5/31/15
 DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

William A. Gable 9-8-15
 Director Date

W. J. Shubert 9-2-15
 Chief, Division of Land Development Date

Chris P. ... 8-25-15
 Chief, Development Engineering Division Date

APPROVED: PLANNING BOARD OF HOWARD COUNTY

Date: *November 20, 2014*

3rd Street 2nd Phase and additional approval requirements per Phases 5-7

PREPARED FOR & DEVELOPER:

INNER ARBOR TRUST
 10630 LITTLE PATUXENT PARKWAY
 CENTURY PLAZA, SUITE 315
 COLUMBIA, MD 21044
 ATTN: MICHAEL MCCALL
 410-740-0029

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE 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 NO. 14931

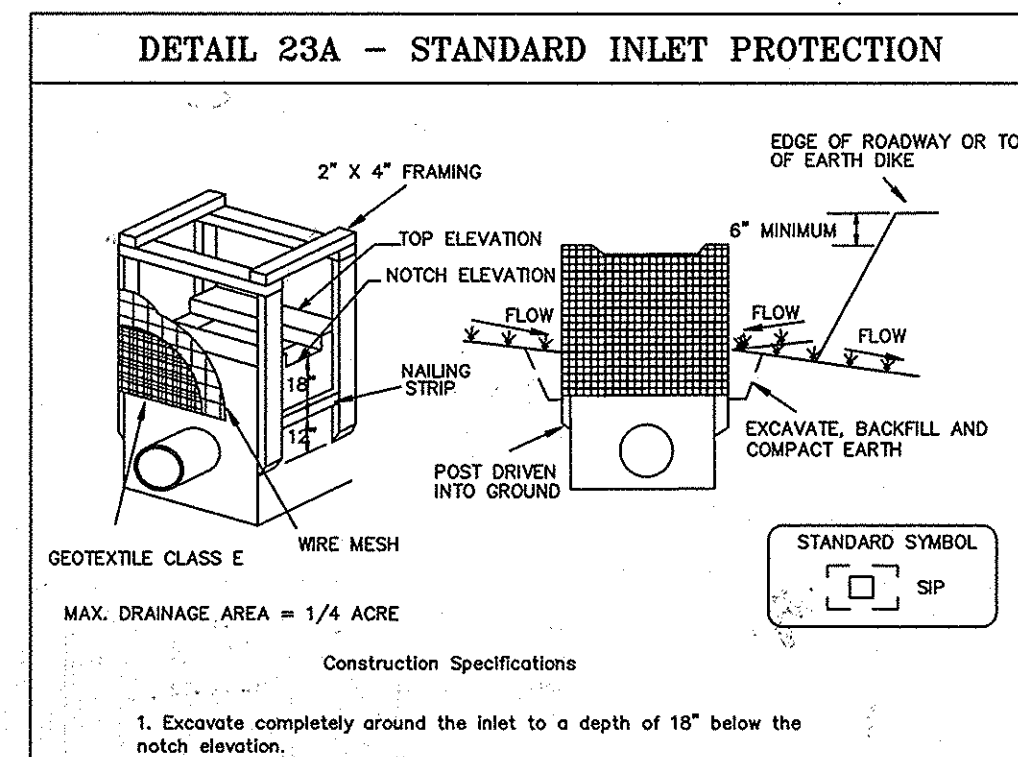
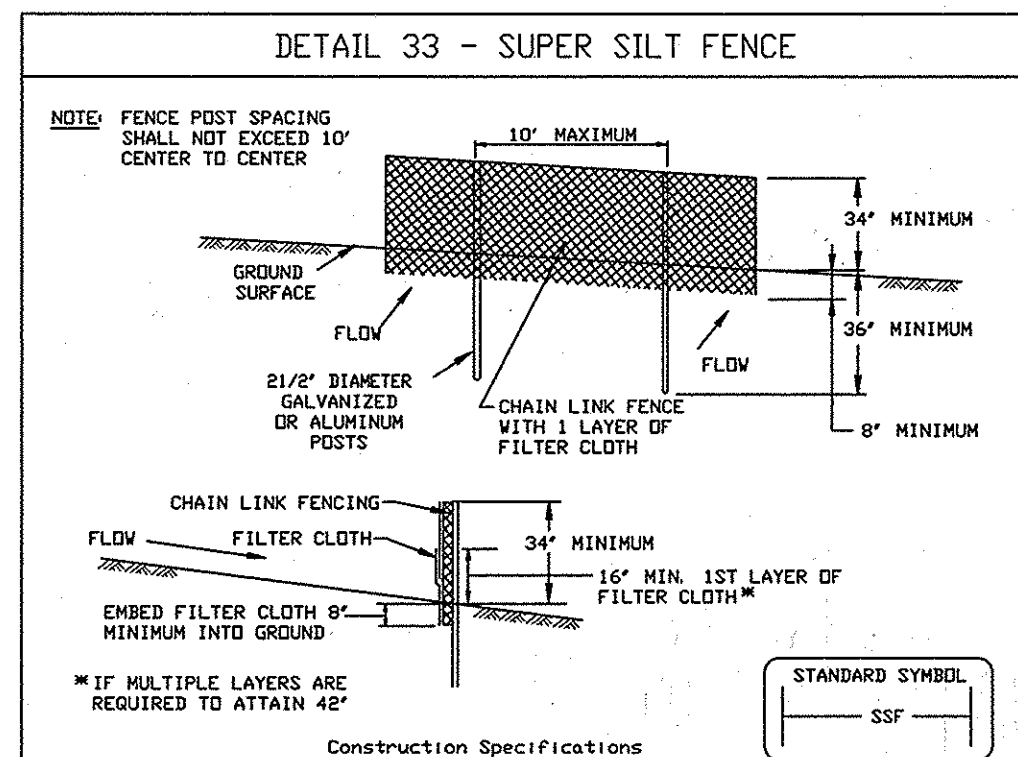
EXPIRATION DATE: MAY 21, 2016

SEDIMENT CONTROL PLAN-SOUTHEAST
DOWNTOWN COLUMBIA
 MERRIWEATHER-SYMPHONY WOODS NEIGHBORHOOD
 MERRIWEATHER PARK at SYMPHONY WOODS PHASE 1 AND FUTURE PHASES 2-7
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 GREEN COMMERCIAL BUILDING

ELECTION DISTRICT No. 5
 HOWARD COUNTY, MARYLAND

PDOX SHEET 4.1 OF 59		
SCALE 1"=30'	ZONING NT	G. L. W. FILE NO. 13043
DATE JUNE, 2015	TAX MAP - GRID 36 - 01	SHEET 31 OF 85

L:\CAD\DRAWINGS\11072\13043\Plans by G.L.W. (SVP) (bound 0's) (SDP27-31-500.dwg)
 PLOTTED: 5/21/2015 8:20 PM, LAST SAVED: 5/21/2015 10:28 AM, PLOTTED BY: Mike Trosper
 L:\CAD\DRAWINGS\11072\13043\Plans by G.L.W. (SVP) (bound 0's) (SDP27-31-500.dwg) DES. MJT DRN. WSJ CHK. MJT DATE REVISION BY APPR.



U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE

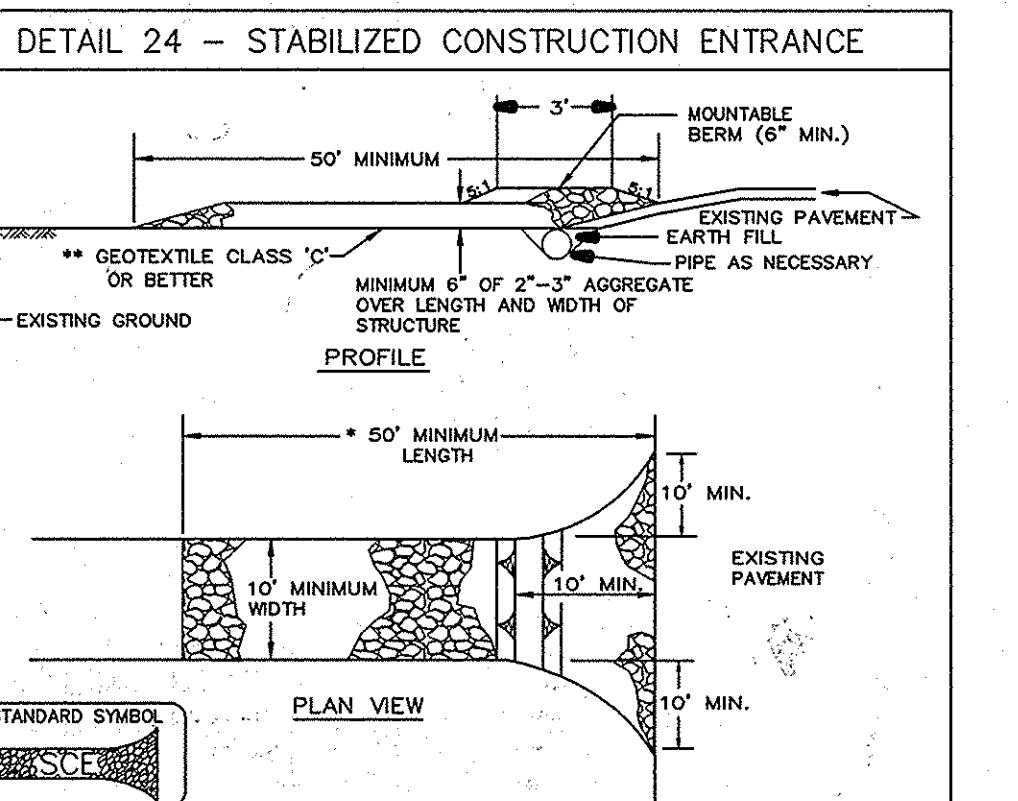
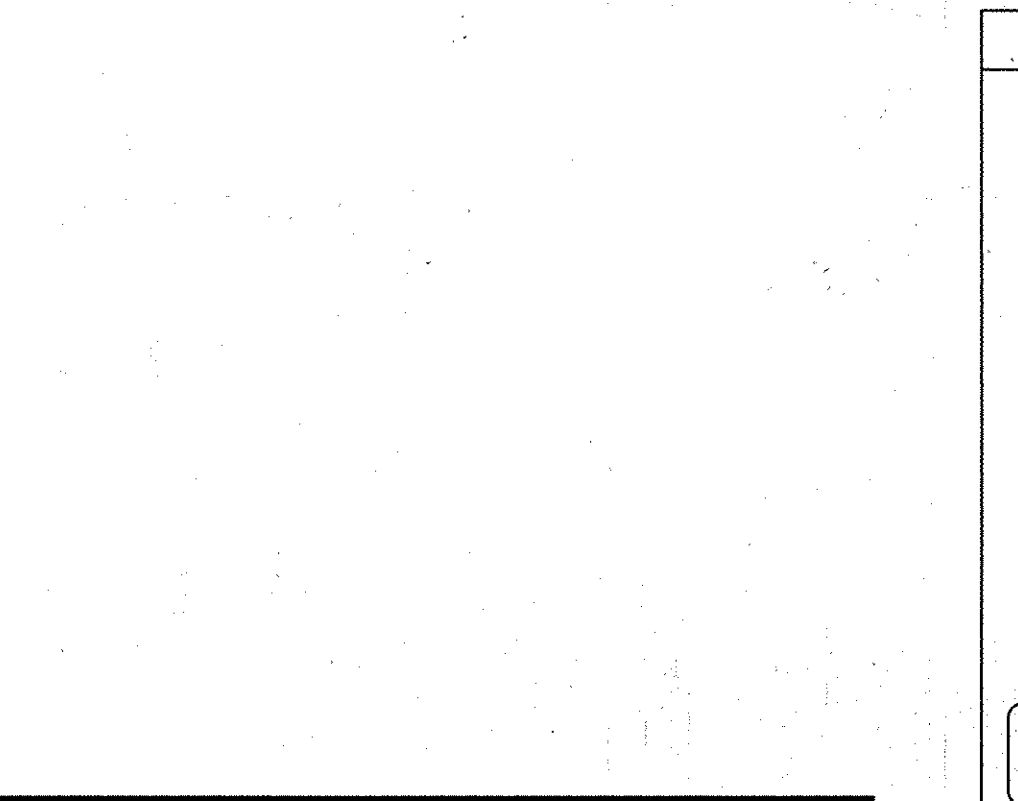
PAGE 2 - 26 - 3

MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE

PAGE 8 - 16 - 5

MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION



This Development Plan is approved for Soil Erosion and Sediment Control by the Howard County Department of Planning & Zoning.

Michael J. Troy 1/14/16
Date

DEVELOPER'S/BUILDER'S CERTIFICATE

I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT FOR SEDIMENT AND EROSION CONTROL, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD COUNTY SOIL CONSERVATION DISTRICT.

Michael J. Troy 1/14/16
SIGNATURE OF DEVELOPER/BUILDER DATE

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Michael J. Troy 1/14/16
ENGINEER'S SIGNATURE DATE

APPROVED HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

William J. [Signature] 2-11-16
Director Date

[Signature] 2-11-16
Chief, Division of Land Development Date

[Signature] 2-4-16
Chief, Development Engineering Division Date

APPROVED PLANNING BOARD OF HOWARD COUNTY

Date: November 20, 2014

[Signature] See S-2 for planning & add'l approvals for Phases 2-7

GLWGUTSCHICK LITTLE & WEBER, P.A.

CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS

3909 NATIONAL DRIVE - SUITE 200 - BURTNSVILLE OFFICE PARK
BURTNSVILLE, MARYLAND 20866
TEL: 301-421-4024 FAX: 301-421-4186

PREPARED FOR & DEVELOPER:

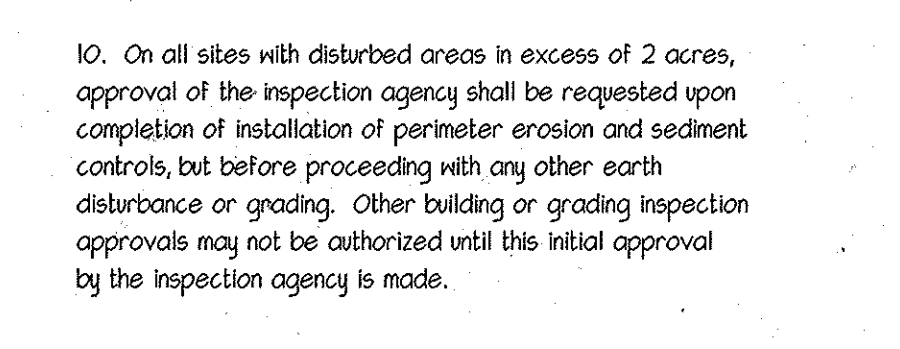
INNER ARBOR TRUST
10630 LITTLE PATUXENT PARKWAY
CENTURY PLAZA, SUITE 315
COLUMBIA, MD 21044
ATTN: MICHAEL MCCALL
410-740-0029

DATE	REVISION	BY	APPR.
1/14/16	UPDATE SITE ANALYSIS	mjt	

SEDIMENT CONTROL NOTES

- A minimum of 24 hours notice must be given to the Howard County Office of Inspection and Permits prior to the start of any construction. (410) 313-1855
- All vegetative and structural practices are to be installed according to the provisions of this plan and are to be in conformance with the 1984 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.
- Following initial soil disturbance or redistribution, permanent or temporary stabilization shall be completed within:
 - 7 calendar days for all perimeter sediment control structures, dikes and perimeter slopes and all slopes greater than 3:1, b) 14 days as to all other disturbed or graded areas on the project site.
- All sediment traps/basins shown must be fenced and warning signs posted around their perimeter in accordance with Vol. I, Chapter 12, of the HOWARD COUNTY DESIGN MANUAL, Storm Drainage.
- All disturbed areas must be stabilized within the time period specified above in accordance with the 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for permanent seedings (Sec. 5), sod (Sec. 54), temporary seedings (Sec. 50) and mulching (Sec. 52). Temporary stabilization, with mulch alone, can only be done when recommended seeding dates do not allow for proper germination and establishment of grasses.
- 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 Howard County Sediment Control Inspector.
- Site Analysis:**

Total Area of Site	18.33 Acres
Area Disturbed	4.63 Acres
Area to be roofed or paved	1.64 Acres
Area to be vegetatively stabilized	1.94 Acres
Total Cut	3,700 Cu. Yds.
Total Fill	3,700 Cu. Yds.
- Surplus cut to be disposed of on a site with an approved sediment control plan.
- Any sediment control practice which is disturbed by grading activity for placement of utilities must be repaired on the same day of disturbance.
- Additional sediment control must be provided, if deemed necessary by the Howard County DPW Sediment Control Inspector.
- On all sites with disturbed areas in excess of 2 acres, approval of the inspection agency shall be requested upon completion of installation of perimeter erosion and sediment controls, but before proceeding with any other earth disturbance or grading. Other building or grading inspection approvals may not be authorized until this initial approval by the inspection agency is made.
- Trenches for the construction of utilities is limited to 3 pipe lengths or that which shall be backfilled and stabilized within one working day whichever is shorter.



SEDIMENT CONTROL NOTES

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- All vegetative and structural practices are to be installed according to the provisions of this plan and are to be in conformance with the 1984 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.
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- All disturbed areas must be stabilized within the time period specified above in accordance with the 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for permanent seedings (Sec. 5), sod (Sec. 54), temporary seedings (Sec. 50) and mulching (Sec. 52). Temporary stabilization, with mulch alone, can only be done when recommended seeding dates do not allow for proper germination and establishment of grasses.
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PREPARED FOR & DEVELOPER:

INNER ARBOR TRUST
10630 LITTLE PATUXENT PARKWAY
CENTURY PLAZA, SUITE 315
COLUMBIA, MD 21044
ATTN: MICHAEL MCCALL
410-740-0029

PERMANENT SEEDING NOTES

- Apply to graded or cleared area not subject to immediate further disturbance where a permanent long-lived vegetative cover is needed.
- Seeded Preparation: Loosen upper three inches of soil by raking, disking or other acceptable means before seeding (unless previously loosened).
- Soil Amendments: In lieu of soil test recommendations, use one of the following schedules
- Preferred - Apply 2 tons per acre dolomitic limestone (42 lbs/1000 square feet) and 600 lbs per acre 10-10-10 fertilizer (14 lbs/1000 sq ft) before seeding. Harrow or disc into upper three inches of soil. At time of seeding, apply 400 lbs per acre 30-0-0 ureaform fertilizer (14 lbs/1000 sq ft).
 - Acceptable - Apply 2 tons per acre dolomitic limestone (42 lbs/1000 square feet) and 1000 lbs per acre 10-10-10 fertilizer (23 lbs/1000 sq ft) before seeding. Harrow or disc into upper three inches of soil.
- Seeding: For the periods March 1 thru April 30, and August 1 thru October 15, seed with 60 lbs per acre (1.4 lbs/1000 sq ft) of Kentucky 31 Tall Fescue. For the period May 1 thru July 31, seed with 60 lbs Kentucky 31 Tall Fescue per acre and 2 lbs per acre (.05 lbs/1000 sq ft) of weeping lovegrass. During the period of October 16 thru February 28, protect site by: Option (1) 2 tons per acre of well anchored straw mulch and seed as soon as possible in the spring. Option (2) use the sod. Option (3) Seed with 60 lbs/acre Kentucky 31 Tall Fescue and mulch with 2 tons/acre well anchored straw.
- Mulching: Apply 1-1/2 to 2 tons per acre (10 to 40 lbs/1000 sq ft) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 2lb gals per acre (5 gal/1000 sq ft) of emulsified asphalt on flat areas. On slopes 8 feet or higher, use 34b gallons per acre (6 gal/1000 sq ft) for anchoring.
- Maintenance: Inspect all seeded areas and make needed repairs, replacements and reseeding.

TEMPORARY SEEDING NOTES

Apply to graded or cleared areas likely to be redistributed where a short-term vegetative cover is needed.

Seeded Preparation: Loosen upper three inches of soil by raking, disking or other acceptable means before seeding (unless previously loosened).

Soil Amendments: Apply 600 lbs per acre 10-10-10 fertilizer (14 lbs/1000 sq ft).

Seeding: For periods March 1 thru April 30 and from August 15 thru November 15, seed with 2-1/2 bushel per acre of annual ryegrass (3.2 lbs/1000 sq ft.). For the period May 1 thru August 14, seed with 3 lbs per acre of weeping lovegrass (.07 lbs/1000 sq ft). For the period November 16 thru February 28, protect site by applying 2 tons per acre of well anchored straw mulch and seed as soon as possible in the spring or use sod.

Mulching: Apply 1-1/2 to 2 tons per acre (10 to 40 lbs/1000 sq ft) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 2lb gal per acre (5 gal/1000 sq ft) of emulsified asphalt on flat areas. On slopes, 8 ft or higher, use 34b gal per acre (6 gal/1000 sq ft) for anchoring.

Refer to the 1984 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for rate and methods not covered.

PERMANENT SEEDING NOTES

Apply to graded or cleared area not subject to immediate further disturbance where a permanent long-lived vegetative cover is needed.

Seeded Preparation: Loosen upper three inches of soil by raking, disking or other acceptable means before seeding (unless previously loosened).

Soil Amendments: In lieu of soil test recommendations, use one of the following schedules

- Preferred - Apply 2 tons per acre dolomitic limestone (42 lbs/1000 square feet) and 600 lbs per acre 10-10-10 fertilizer (14 lbs/1000 sq ft) before seeding. Harrow or disc into upper three inches of soil. At time of seeding, apply 400 lbs per acre 30-0-0 ureaform fertilizer (14 lbs/1000 sq ft).
- Acceptable - Apply 2 tons per acre dolomitic limestone (42 lbs/1000 square feet) and 1000 lbs per acre 10-10-10 fertilizer (23 lbs/1000 sq ft) before seeding. Harrow or disc into upper three inches of soil.

Seeding: For the periods March 1 thru April 30, and August 1 thru October 15, seed with 60 lbs per acre (1.4 lbs/1000 sq ft) of Kentucky 31 Tall Fescue. For the period May 1 thru July 31, seed with 60 lbs Kentucky 31 Tall Fescue per acre and 2 lbs per acre (.05 lbs/1000 sq ft) of weeping lovegrass. During the period of October 16 thru February 28, protect site by: Option (1) 2 tons per acre of well anchored straw mulch and seed as soon as possible in the spring. Option (2) use the sod. Option (3) Seed with 60 lbs/acre Kentucky 31 Tall Fescue and mulch with 2 tons/acre well anchored straw.

Mulching: Apply 1-1/2 to 2 tons per acre (10 to 40 lbs/1000 sq ft) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 2lb gals per acre (5 gal/1000 sq ft) of emulsified asphalt on flat areas. On slopes 8 feet or higher, use 34b gallons per acre (6 gal/1000 sq ft) for anchoring.

Maintenance: Inspect all seeded areas and make needed repairs, replacements and reseeding.

TEMPORARY SEEDING NOTES

Apply to graded or cleared areas likely to be redistributed where a short-term vegetative cover is needed.

Seeded Preparation: Loosen upper three inches of soil by raking, disking or other acceptable means before seeding (unless previously loosened).

Soil Amendments: Apply 600 lbs per acre 10-10-10 fertilizer (14 lbs/1000 sq ft).

Seeding: For periods March 1 thru April 30 and from August 15 thru November 15, seed with 2-1/2 bushel per acre of annual ryegrass (3.2 lbs/1000 sq ft.). For the period May 1 thru August 14, seed with 3 lbs per acre of weeping lovegrass (.07 lbs/1000 sq ft). For the period November 16 thru February 28, protect site by applying 2 tons per acre of well anchored straw mulch and seed as soon as possible in the spring or use sod.

Mulching: Apply 1-1/2 to 2 tons per acre (10 to 40 lbs/1000 sq ft) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 2lb gal per acre (5 gal/1000 sq ft) of emulsified asphalt on flat areas. On slopes, 8 ft or higher, use 34b gal per acre (6 gal/1000 sq ft) for anchoring.

Refer to the 1984 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for rate and methods not covered.

PERMANENT SEEDING NOTES

Apply to graded or cleared area not subject to immediate further disturbance where a permanent long-lived vegetative cover is needed.

Seeded Preparation: Loosen upper three inches of soil by raking, disking or other acceptable means before seeding (unless previously loosened).

Soil Amendments: In lieu of soil test recommendations, use one of the following schedules

- Preferred - Apply 2 tons per acre dolomitic limestone (42 lbs/1000 square feet) and 600 lbs per acre 10-10-10 fertilizer (14 lbs/1000 sq ft) before seeding. Harrow or disc into upper three inches of soil. At time of seeding, apply 400 lbs per acre 30-0-0 ureaform fertilizer (14 lbs/1000 sq ft).
- Acceptable - Apply 2 tons per acre dolomitic limestone (42 lbs/1000 square feet) and 1000 lbs per acre 10-10-10 fertilizer (23 lbs/1000 sq ft) before seeding. Harrow or disc into upper three inches of soil.

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Mulching: Apply 1-1/2 to 2 tons per acre (10 to 40 lbs/1000 sq ft) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 2lb gals per acre (5 gal/1000 sq ft) of emulsified asphalt on flat areas. On slopes 8 feet or higher, use 34b gallons per acre (6 gal/1000 sq ft) for anchoring.

Maintenance: Inspect all seeded areas and make needed repairs, replacements and reseeding.

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE 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 NO. 14633

EXPIRATION DATE: MAY 21, 2016

STANDARD AND SPECIFICATIONS FOR TOPSOIL DEFINITION

- Placement of topsoil over a prepared subsoil prior to establishment of permanent vegetation.
- PURPOSE**
- To provide a suitable soil medium for vegetative growth. Soils of concern have low nutrient content, low nutrient levels, low pH materials toxic to plants, and/or unacceptable soil conditions.
- CONDITIONS WHERE PRACTICE APPLIES**
- This practice is limited to areas having 2:1 or flatter slopes where:
 - The texture of the exposed subsoil/parent material is not adequate to produce vegetative growth.
 - The soil material is so shallow that the rooting zone is not deep enough to support plants or furnish continuing supply of moisture and plant nutrients.
 - The original soil to be vegetated contains material toxic to plant growth.
 - The soil is so acidic that treatment with limestone is not feasible.
 - For the purpose of these Standards and Specifications, areas having slopes steeper than 2:1 require special consideration and design for adequate stabilization. Areas having slopes steeper than 2:1 shall have the appropriate stabilization shown on the plans.
- CONSTRUCTION AND MATERIAL SPECIFICATIONS**
- Topsoil salvaged from the existing site may be used provided that it meets the standards as set forth in these specifications. Typically the depth of topsoil to be salvaged for a given soil type can be found in the respective soil profile section in the Soil Survey published by USDA-SCS in cooperation with Maryland Agricultural Experimental Station.
 - Topsoil shall be a loam, sandy loam, clay loam, silt loam, sandy clay loam, loamy sand. Other soils may be used if recommended by an agronomist or soil scientist and approved by the appropriate approval authority. Regardless, topsoil shall not be a mixture of contrasting bedrock substrates and shall contain less than 5% by volume of cinders, stones, slag, coarse fragments, gravel, sticks, rocks, trash, or other materials larger than 1 1/2" in diameter.
 - Topsoil shall be free of plant parts such as bermuda grass, quackgrass, Johnsongrass, nutsedge, poison ivy, thistle, or others as specified.
 - Where the subsoil is either highly acidic or composed of heavy clays, ground limestone shall be spread at the rate of 4-8 tons/acre (200-400 pounds per 1000 square feet) prior to the placement of topsoil. Lime shall be distributed uniformly over designated areas and worked into the soil in conjunction with tillage operations as described in the following procedures:
 - For sites having disturbed areas under 5 acres:
 - Place topsoil (if required) and apply soil amendments as specified in 2.0 Vegetative Stabilization - Section 1 - Vegetative Stabilization Methods and Materials.
 - For sites having disturbed areas over 5 acres:
 - On soil meeting Topsoil specifications, obtain test results dictating fertilizer and lime amendments required to bring the soil into compliance with the following:
 - pH for topsoil shall be between 6.0 and 7.5. If the tested soil demonstrates a pH of less than 6.0, sufficient lime shall be prescribed to raise the pH to 6.5 or higher.
 - Organic content of topsoil shall be not less than 15 percent by weight.
 - Topsoil having soluble salt greater than 500 parts per mill shall not be used.
 - No sod or seed shall be placed on soil which has been with soil sterilants or chemicals used for weed control until sufficient time has elapsed (14 days min) to permit dissipation of photo-toxic materials.
 - Topsoil substitutes or amendments, as recommended by a qualified agronomist or soil scientist and approved by the appropriate approval authority, may be used in lieu of natural topsoil.
 - Place topsoil (if required) and apply soil amendments as specified in 2.0 Vegetative Stabilization - Section 1 - Vegetative Stabilization Methods and Materials.
 - Topsoil Application
 - When topsoiling, maintain needed erosion and sediment control practices such as diversion, Grade Stabilization Structures, Earth Dikes, Slope Silt Fence and Sediment Traps and Basins.
 - Grades on the areas to be topsoiled, which have been previously established, shall be maintained, about 4" - 6" higher in elevation.
 - Topsoil shall be uniformly distributed in a 4" - 6" layer and lightly compacted to a minimum thickness of 4". Spreading shall be performed in such a manner that sodding or seeding can proceed with a minimum of additional soil preparation and tillage. Any irregularities in the surface resulting from topsoiling or other operations shall be corrected in order to prevent the formation of depressions or water.
 - Topsoil shall not be placed while the topsoil or subsoil is frozen or muddy condition, when the subsoil is excessively wet or in a condition that may otherwise be detrimental to proper grading and seeded preparation.
 - Alternative for Permanent Seeding - Instead of applying the full amounts of lime and commercial fertilizer, composted sludge and amendments may be applied as specified below:
 - Composted Sludge Material for use as a soil conditioner for sites having disturbed areas over 5 acres shall be tested to prescribe amendments and for sites having disturbed areas under 5 acres shall conform to the following requirements:
 - Composted sludge shall be supplied by, or originate from, a person or persons that are permitted (at the time of acquisition of the compost) by the

TEMPORARY SEEDING NOTES

Apply to graded or cleared areas likely to be redistributed where a short-term vegetative cover is needed.

Seeded Preparation: Loosen upper three inches of soil by raking, disking or other acceptable means before seeding (unless previously loosened).

Soil Amendments: Apply 600 lbs per acre 10-10-10 fertilizer (14 lbs/1000 sq ft).

Seeding: For periods March 1 thru April 30 and from August 15 thru November 15, seed with 2-1/2 bushel per acre of annual ryegrass (3.2 lbs/1000 sq ft.). For the period May 1 thru August 14, seed with 3 lbs per acre of weeping lovegrass (.07 lbs/1000 sq ft). For the period November 16 thru February 28, protect site by applying 2 tons per acre of well anchored straw mulch and seed as soon as possible in the spring or use sod.

Mulching: Apply 1-1/2 to 2 tons per acre (10 to 40 lbs/1000 sq ft) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 2lb gal per acre (5 gal/1000 sq ft) of emulsified asphalt on flat areas. On slopes, 8 ft or higher, use 34b gal per acre (6 gal/1000 sq ft) for anchoring.

Maintenance: Inspect all seeded areas and make needed repairs, replacements and reseeding.

PERMANENT SEEDING NOTES

Apply to graded or cleared area not subject to immediate further disturbance where a permanent long-lived vegetative cover is needed.

Seeded Preparation: Loosen upper three inches of soil by raking, disking or other acceptable means before seeding (unless previously loosened).

Soil Amendments: In lieu of soil test recommendations, use one of the following schedules

- Preferred - Apply 2 tons per acre dolomitic limestone (42 lbs/1000 square feet) and 600 lbs per acre 10-10-10 fertilizer (14 lbs/1000 sq ft) before seeding. Harrow or disc into upper three inches of soil. At time of seeding, apply 400 lbs per acre 30-0-0 ureaform fertilizer (14 lbs/1000 sq ft).
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Maintenance: Inspect all seeded areas and make needed repairs, replacements and reseeding.

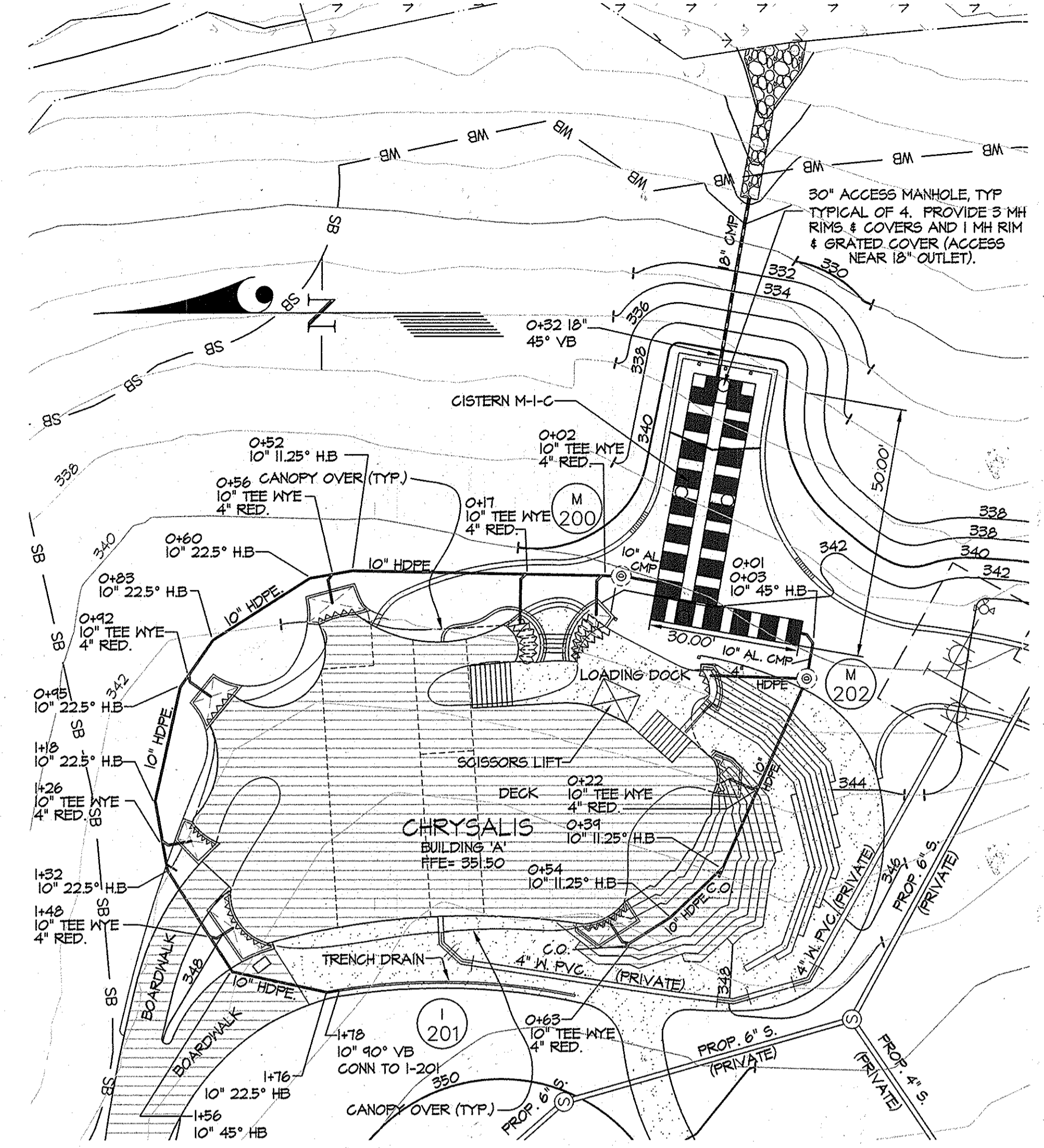
PROFESSIONAL CERTIFICATION

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EXPIRATION DATE: MAY 21, 2016

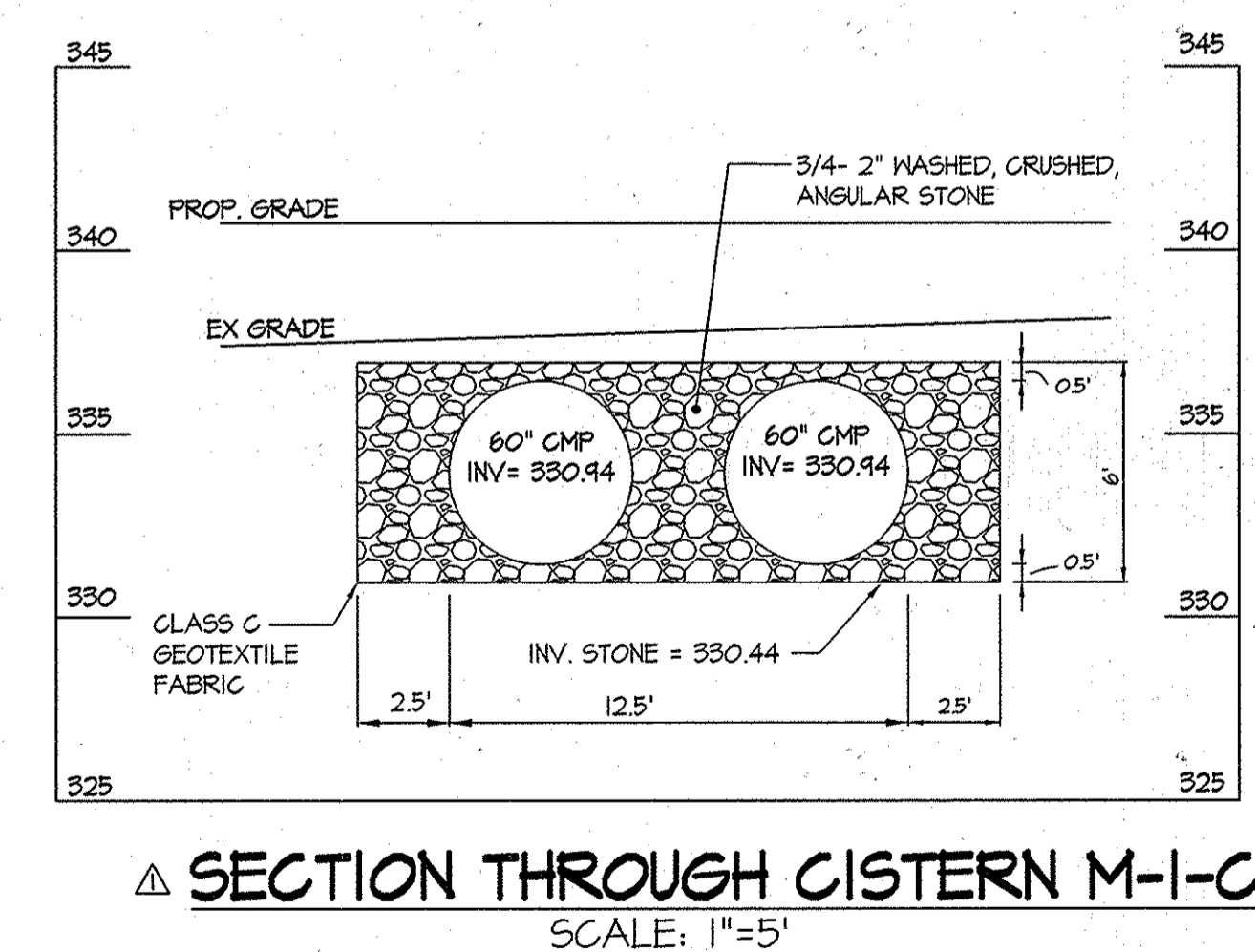
DUST CONTROL

- Controlling dust blowing and movement on construction sites and roads.
- Purpose**
- To prevent blowing and movement of dust from exposed soil surfaces, reduce on and off-site damage, health hazards, and improve traffic safety.
- Conditions Where Practice Applies**
- This practice is applicable to areas subject to dust blowing and movements where on and off-site damage is likely without treatment.
- Specifications**
- Mulches - See standards for vegetative stabilization with mulches only. Mulch should be crimped or locked to prevent blowing.
 - Vegetative Cover - See standards for temporary vegetative cover.
 - Tillage - To roughen surface and bring clods to the surface. This is an emergency measure which should be used before soil blowing starts. Begin plowing on windward side of site. Chisel-type plows spaced about 12" apart, spring-toothed harrows, and similar plows are examples of equipment which may produce the desired effect.
 - Irrigation - This is generally done as an emergency treatment. Site is sprinkled with water until the surface is moist. Repeat as needed. At no time should the site be irrigated to the point that runoff begins to flow.
 - Barriers - Solid board fences, silt fences, burlap fences, straw bales, and similar material can be used to control air currents and soil blowing. Barriers placed at right angles to prevailing currents at intervals of about 10 times their height are effective in controlling soil blowing.
 - Calcium Chloride - Apply at rates that will keep surface moist. May need retreatment.
- Permanent Methods**
- Permanent Vegetation - See standards for permanent vegetative cover, and permanent stabilization with sod. Existing trees or large shrubs may afford valuable protection if left in place.
 - Topsoiling - Covering with less erosive soil materials. See standards for topsoiling.
 - Stone - Cover surface with crushed stone or coarse gravel.



NOTES:

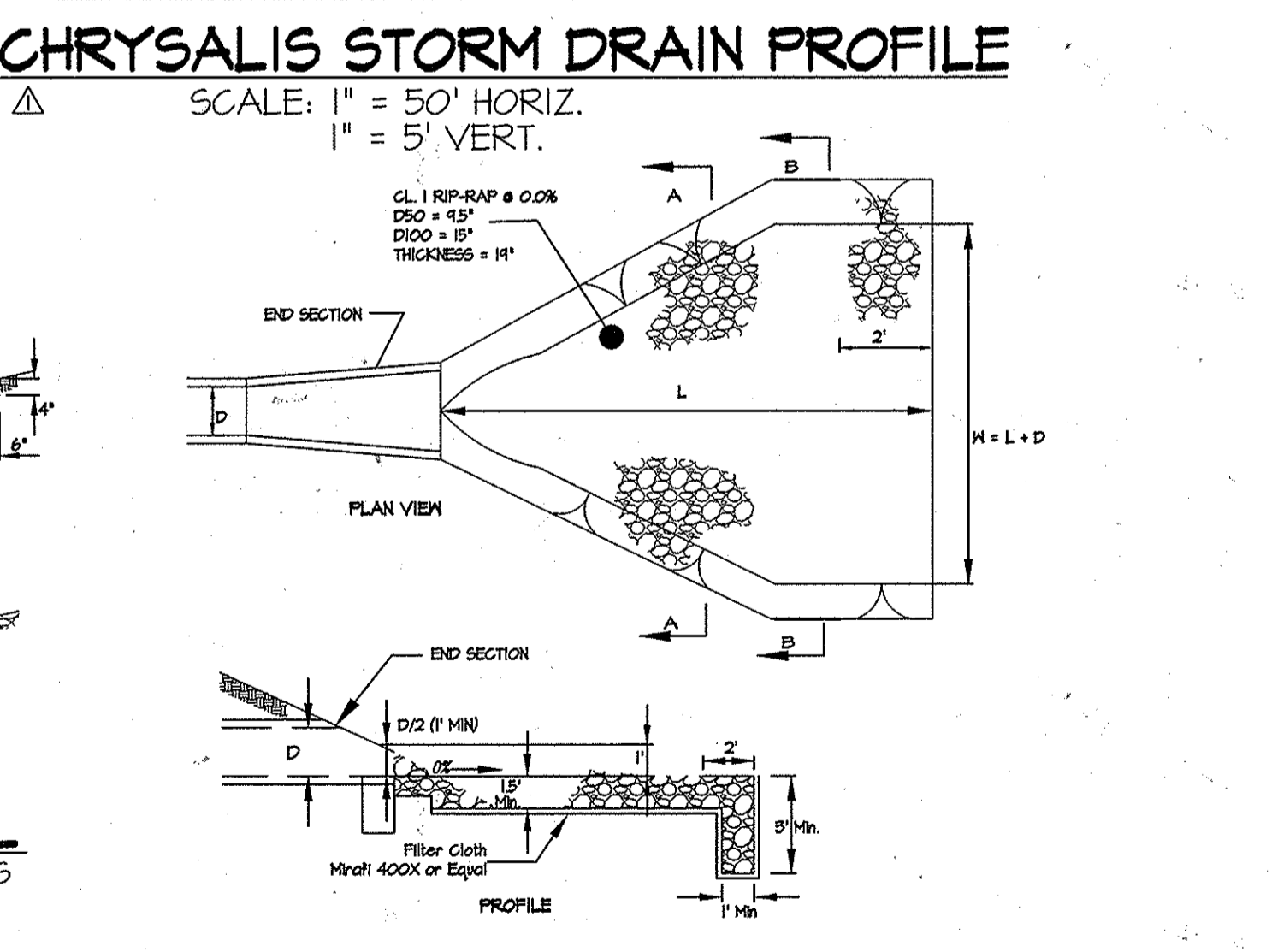
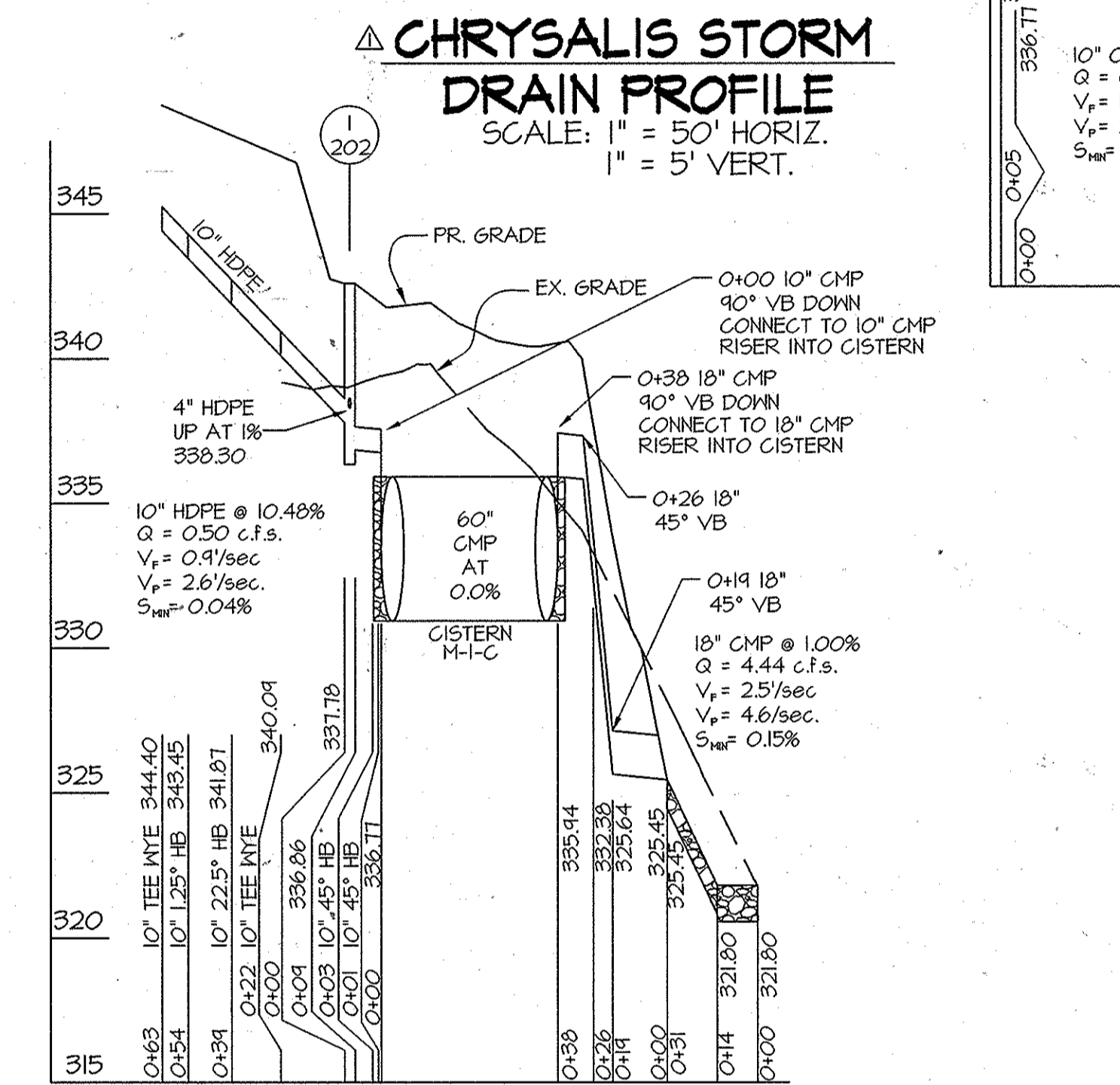
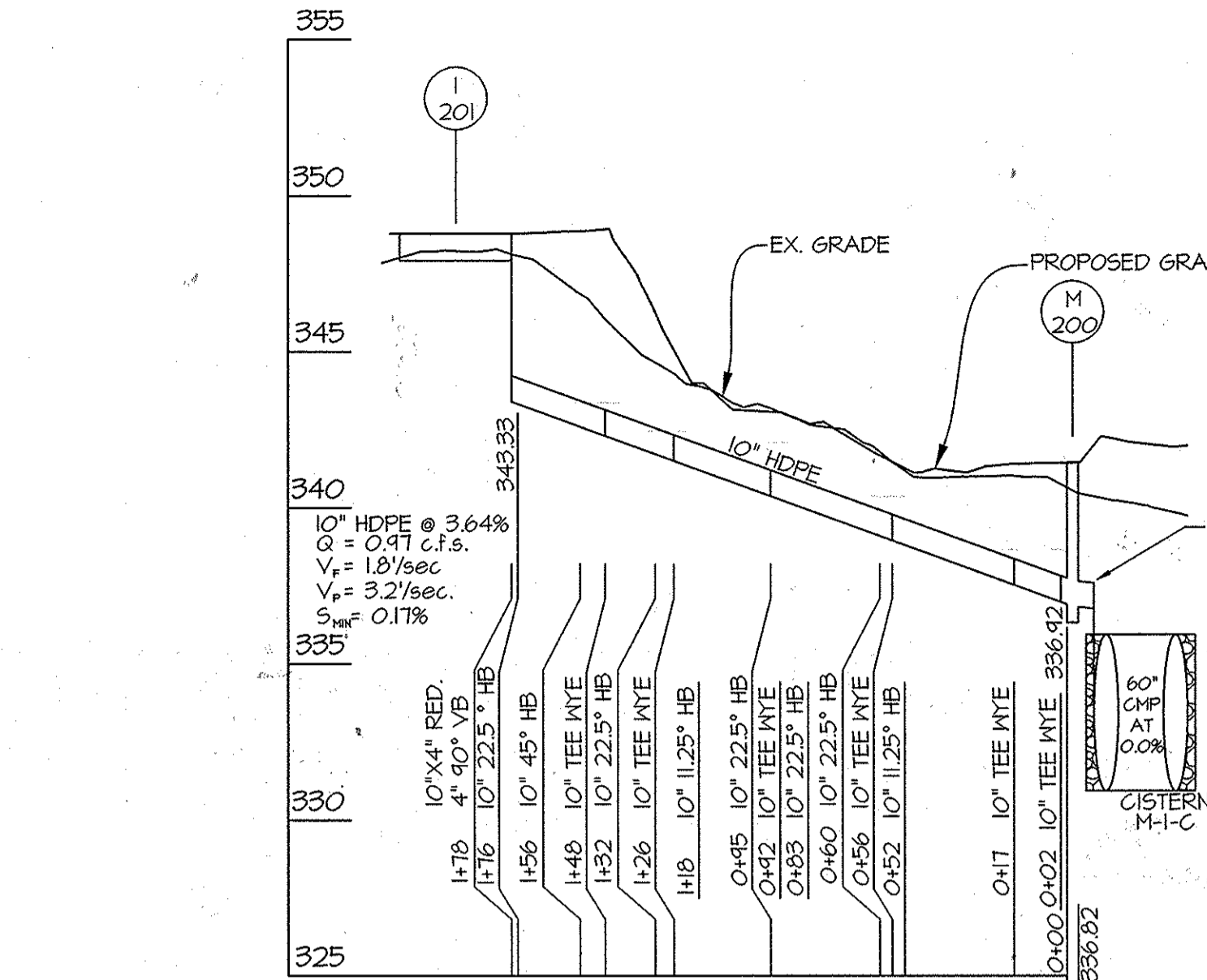
- FOR MORE INFORMATION SEE ESD DRAINAGE AREA MAP, SHEET 31.
- MINIMUM STORAGE VOLUME FOR M-I-C IS 2,485 CUBIC FEET.
- ALL PIPE FOR M-I-C SHALL BE 12 GAUGE ALUMINIZED CORRUGATED METAL PIPE.
- ALL PIPE CONNECTING TO M-I-C SHALL BE ALUMINIZED CORRUGATED METAL PIPE.
- PIPE CONNECTING BASINS AT THE CHRYSALIS LE65 SHALL BE HDPE LATERALS FROM THE ROOF DRAIN MANIFOLD TO THE BASINS SHALL BE 4" HDPE PIPE WITH A 4" 90° VERTICAL BEND UP TO A 4" X 6" INLINE DRAIN ADAPTER WITH AN 8" DOMED GRATE.
- CISTERN RAIN WATER SHALL BE REUSED FOR IRRIGATION OF LAWN AREAS, PLANTING BEDS, REHYDRATION OF ENVIRONMENTAL WETLAND AREAS AND SIMILAR PERVIOUS AREAS THAT WILL PROMOTE INFILTRATION INTO THE GROUND. THE CISTERN SHALL BE EMPTIED BETWEEN RAIN EVENTS AS MUCH AS PRACTICABLE. IRRIGATION SHALL BE PERFORMED BY USE OF A PORTABLE SUMP PUMP INSERTED INTO THE CISTERN THROUGH ONE OF THE ACCESS MANKOLES AND ATTACHED TO A HOSE NETWORK CONNECTING PORTABLE SPRINKLER(S) OR A SIMILAR DISTRIBUTION SYSTEM.



APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
 Director: [Signature] Date: 2-11-16
 Chief, Division of Land Development: [Signature] Date: 2-11-16
 Chief, Development Engineering Division: [Signature] Date: 2-11-16

APPROVED: PLANNING BOARD OF HOWARD COUNTY
 Date: November 20, 2016
 *See Sh. 2 for posting & Add'l Approvals for Ph 3-7

GLWGUTSCHICK LITTLE & WEBER, P.A.
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
 3909 NATIONAL DRIVE - SUITE 250 - BURTNSVILLE OFFICE PARK
 BURTNSVILLE, MARYLAND 20896
 TEL: 301-421-4024 BAL: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186



FOR CHRYSALIS (BUILDING A) INLET DETAILS SEE SHEET 9
 FOR RAIN GARDEN M-T-A PLAN AND ELEVATIONS, SEE SHEET 5.
 FOR RAIN GARDEN M-T-A #B SECTION SEE SHEET 34.

PREPARED FOR & DEVELOPER:
 INNER ARBOR TRUST
 10630 LITTLE PATUXENT PARKWAY
 CENTURY PLAZA, SUITE 315
 COLUMBIA, MD 21044
 ATTN: MICHAEL MCCALL
 410-740-0029

PROFESSIONAL CERTIFICATION
 I HEREBY CERTIFY THAT THESE 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 NO. 14633
 EXPIRATION DATE: MAY 21, 2016

S.D. PIPE SUMMARY TABLE
 PRIVATELY OWNED AND MAINTAINED

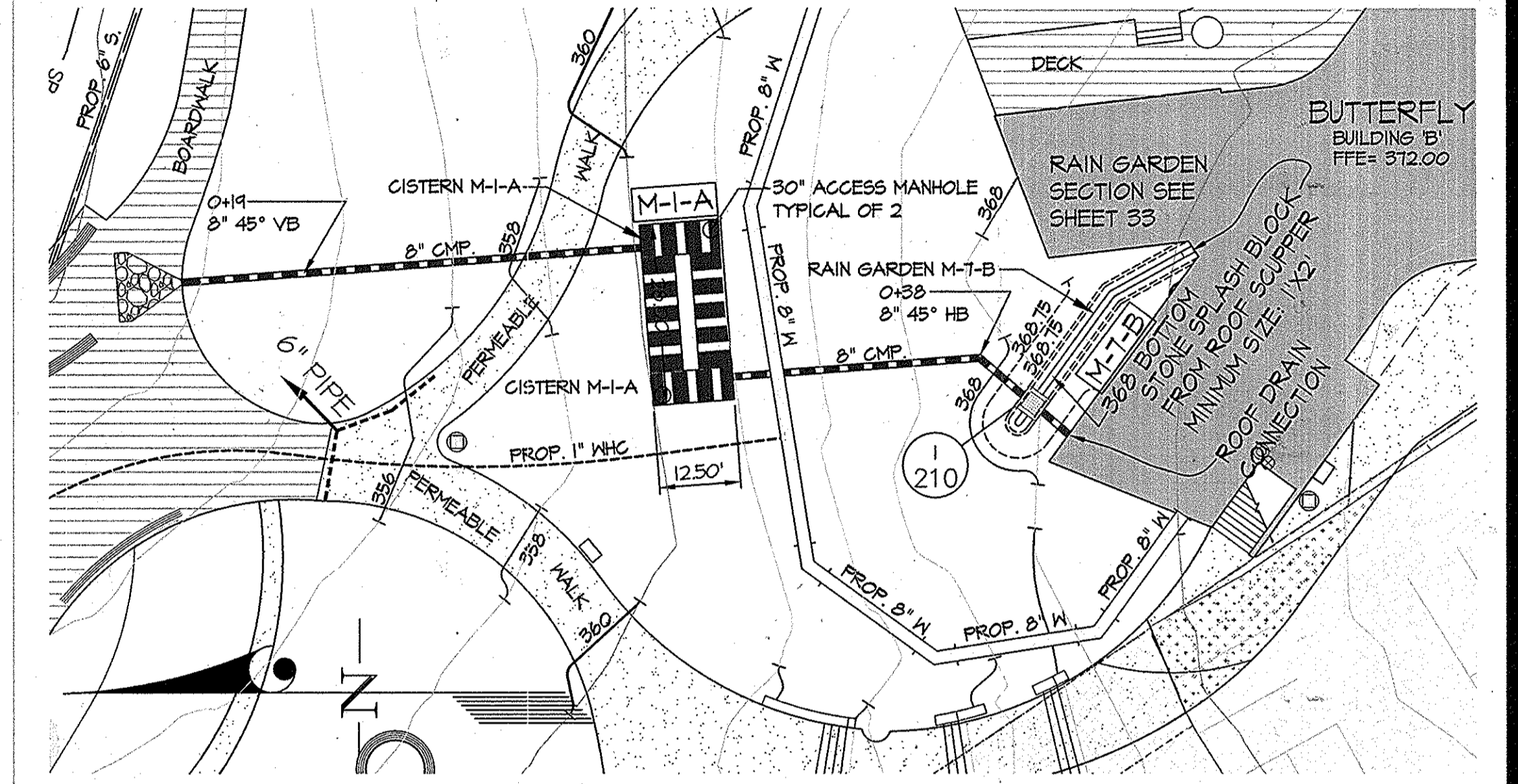
SIZE (IN)	TYPE	QUANTITY	REMARKS
10"	HDPE	241	
8"	CMP	71	
10"	CMP	14	
15"	CMP	32	
18"	CMP	38	

S.D. PIPE FITTING TABLE
 PRIVATELY OWNED AND MAINTAINED

SIZE (IN)	TYPE	QUANTITY	REMARKS
8"	45° HORIZ. BEND	1	CMP
8"	45° VERT. BEND	1	CMP
18"	45° VERT. BEND	1	CMP

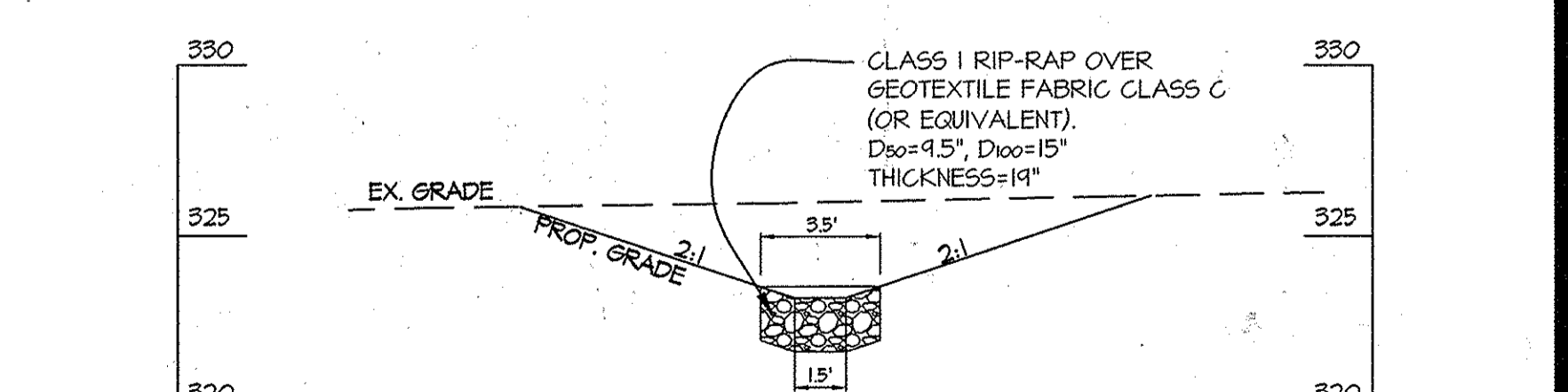
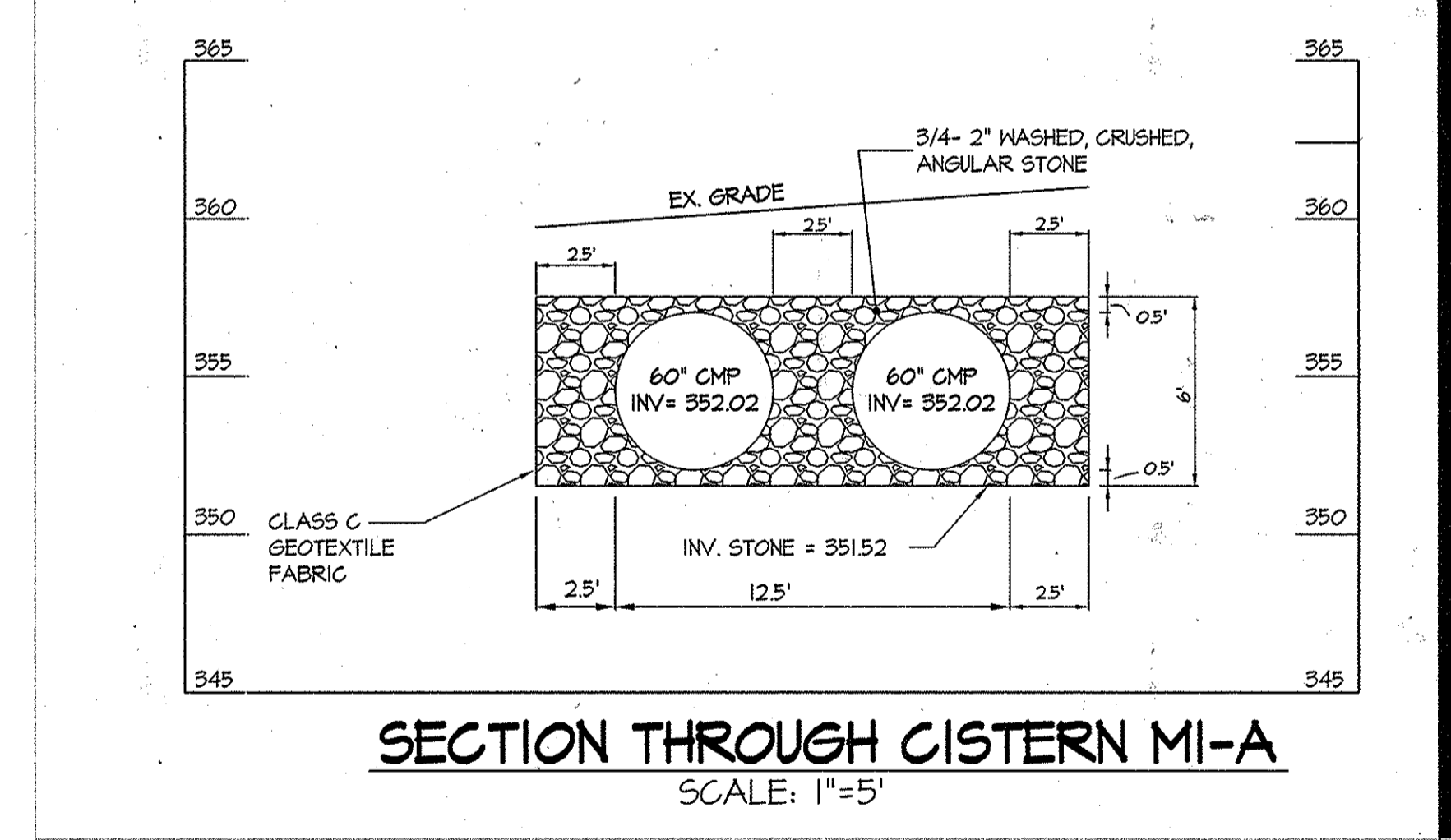
S.D. STRUCTURE SCHEDULE

NO.	TYPE	WIDTH (INSIDE)	TOP ELEVATION UPPER	TOP ELEVATION LOWER	INVERT ELEVATION UPPER	INVERT ELEVATION LOWER	STANDARD DETAIL	NOTES	LOCATION	OWNERSHIP & MAINTENANCE
I-200	MANKHOLE	4'-0"	341.82	----	336.92	336.82	HO. CO. 6.512		SEE PLAN	PRIVATE
I-201	TRENCH DRAIN	----	348.80	----	348.16	341.93	HO. CO. D. 4.22	SEE PLAN	PRIVATE	
I-201A	MANKHOLE	4'-0"	342.60	----	336.86	338.91	HO. CO. 6.512		SEE PLAN	PRIVATE



NOTES:

- FOR MORE INFORMATION SEE ESD DRAINAGE AREA MAP SHEET 31.
- MINIMUM STORAGE VOLUME FOR M-I-A IS 1673 CUBIC FEET.
- ALL PIPE TO BE 12 GAUGE ALUMINIZED CORRUGATED METAL PIPE.



REVISION

NO.	DATE	DESCRIPTION
1	2-11-16	ISSUE FOR PERMIT

CISTERN ENLARGEMENT PLAN, DETAILS AND SCHEDULES
DOWNTOWN COLUMBIA
MERRIWEATHER PARK AT SYMPHONY WOODS NEIGHBORHOOD
 MERRIWEATHER PARK AT SYMPHONY WOODS PHASE 1 AND FUTURE PHASES 2-7
 TOWN CENTER - SECTION 1 AREA 1
 PART OF OPEN SPACE LOT 23-PLAT NO. 13533 &
 PART OF OPEN SPACE LOT 9B-PLAT BOOK 15, PAGE 32
 GREEN COMMERCIAL BUILDING

SCALE: AS SHOWN ZONING: NT SHEET: 33 OF 85
 DATE: JAN., 2016 TAX MAP - GRID: 36 - 01 SHEET: 33 OF 85
 ELECTION DISTRICT No. 5 HOWARD COUNTY, MARYLAND

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 L:\CAD\DRAWINGS\110721\13043\13043-SDP13-02STERN.dwg
 DES. DRN. CHK. DATE: 1/4/16
 UPDATE CHRYSALIS BUILDING, WATERLINE, SEWER, SD, CISTERN & PROFILES
 BY: mje
 APPR.: [Signature]

B.4.B Specifications for Permeable Pavements

These specifications include information on acceptable materials for typical applications and are not exclusive or limiting. The designer is responsible for developing detailed specifications for individual projects and specific conditions.

1. Pervious Concrete Specifications

Design Thickness - Pervious concrete applications shall be designed so that the thickness of the concrete slab shall support the traffic and vehicle types that will be carried. Applications may be designed using either standard pavement procedures (e.g., AASHTO, ACI 308R, ACI 308.4R, ACI 308.5R) or using structural values derived from flexible pavement design procedures.

Mix & Installation - Traditional Portland cements (ASTM C 150, C 1157) may be used in pervious concrete applications. Phosphorus admixtures may also be used. Materials should be tested (e.g., trial batching) prior to construction so that critical properties (e.g., setting time, rate of strength development, porosity, permeability) can be determined.

Aggregate - Pervious concrete contains a limited fine aggregate content. Commonly used gradations include ASTM C 33 No. 67 (¾ in. to No. 4), No. 8 (¾ in. to No. 16) and No. 94 (¾ in. to No. 50) sieves. Single-sized aggregate (up to 1 inch) may also be used.

Water Content - Water-to-cement ratios between 0.27 and 0.30 are used routinely with proper inclusion of chemical admixtures. Water quality should meet ACI 308.5. As a general rule, potable water should be used although recycled concrete production water meeting ASTM C 44 or AASHTO M 157 may also be used.

Admixtures - Chemical admixtures (e.g., retarders or hydration-stabilizers) are used to obtain special properties in pervious concrete. Use of admixtures should meet ASTM C 494 (chemical admixtures) and ASTM C 260 (air entraining admixtures) and closely follow manufacturer's recommendations.

Base Course - The base course shall be AASHTO No. 3 or 4 course aggregate with an assumed open pore space of 30% (n = 0.30).

2. Permeable Interlocking Concrete Pavements (PICP)

Paver Blocks - Blocks should be either 3 ½ in. or 4 in. thick, and meet ASTM C 936 or CSA A231.2 requirements. Applications should have 20% or more (40% preferred) of the surface area open. Installation should follow manufacturer's instructions, except that infill and base course materials and dimensions specified in this Appendix shall be followed.

Infill Materials and Leveling Course - Openings shall be filled with ASTM C-33 graded sand or sandy loam. PICP blocks shall be placed on a one-inch thick leveling course of ASTM C-33 sand.

Base Course - The base course shall be AASHTO No. 3 or 4 course aggregate with an assumed open pore space of 30% (n = 0.30).

Reinforced Turf

Reinforced Grass Pavement (RGP) - Whether used with grass or gravel, the RGP thickness shall be at least ¼" thick with a load capacity capable of supporting the traffic and vehicle types that will be carried.

OPERATION AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED PERMEABLE PAVEMENT (A-2)

a. The Owner shall periodically sweep (or vacuum porous concrete pavement) the pavement surfaces to reduce sediment accumulation and ensure continued surface porosity. Sweeping should be performed at least twice annually with a commercial cleaning unit. Washing or compressed air units should not be used to perform surface cleaning.

b. The Owner shall periodically clean drainage pipes, inlets, stone edge drains and other structures within or draining to the subbase.

c. The Owner shall use deicers in moderation. Deicers should be non-toxic and be applied either as calcium magnesium acetate or as pretreated salt.

d. The Owner shall ensure snow plowing is performed carefully with blades set one inch above the surface. Plowed snow piles and snowmelt should not be directed to permeable pavement.

OPERATION AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED DISCONNECTION OF NON-ROOFTOP RUNOFF (N-2)

a. Maintenance of areas receiving disconnected runoff is generally no different than that required for other lawn or landscaped areas. The Owner shall ensure the areas receiving runoff are protected from future compaction or development of impervious area. In commercial areas, foot traffic should be discouraged as well.

OPERATION AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED Rainwater Harvesting (M-1)

a. The Owner shall inspect and maintain cisterns as needed or at a minimum on a semi-annual basis.
 b. The Owner shall verify integrity of inlets draining to cisterns and clean and remove any debris on a monthly basis.
 c. The Owner shall replace damaged components as needed.
 d. The Owner shall reuse the rainwater to irrigate lawn and landscape areas with the use of portable pumps, hoses and sprinklers on an as needed basis.

OPERATION AND MAINTENANCE SCHEDULE FOR RAIN GARDENS (M-7)

a. The Owner shall maintain the plant material, mulch layer and soil layer annually. Maintenance of mulch and soil is limited to correcting areas of erosion or wash out. Any mulch replacement shall be done in the spring. Plant material shall be checked for disease and insect infestation and maintenance will address dead material and pruning. Acceptable replacement plant material is limited to the following: 2000 Maryland Stormwater Design Manual Volume II, Table A.4.1 and 2.
 b. The Owner shall perform a plant in the spring and in the fall of each year. During the inspection, the Owner shall remove dead and diseased vegetation considered beyond treatment, replace dead plant material with acceptable replacement plant material, treat diseased trees and shrubs, and replace all deficient stakes and wires.
 c. The Owner shall inspect the mulch each spring. The mulch shall be replaced every two to three years. The previous mulch layer shall be removed before the new layer is applied.
 d. The Owner shall correct soil erosion on an as needed basis, with a minimum of once per month and after each heavy storm.

B.4.C Specifications for Rain Gardens

1. Material Specifications

The allowable materials to be used in these practices are detailed in Table B.4.1.

2. Filtering Media or Planting Soil

The soil shall be a uniform mix, free of stones, slumps, roots or other similar objects larger than two inches. No other materials or substances shall be mixed or dumped within the micro-bioretenement practice that may be harmful to plant growth, or prove a hindrance to the planting or maintenance operations. The planting soil shall be free of Bermuda grass, Quackgrass, Johnson grass, or other noxious weeds as specified under COMAR 15.08.01.05.

The planting soil shall be tested and shall meet the following criteria:

Soil Component - Loamy Sand or Sandy Loam (USDA Soil Textural Classification)

Organic Content - Minimum 10% by dry weight (ASTM D 2974). In general, this can be met with a mixture of loamy sand (60%-65%) and compost (35%-40%) or sandy loam (30%), coarse sand (30%), and compost (40%).
Clay Content - Media shall have a clay content of less than 5%.
pH Range - Should be between 5.5 - 7.0. Amendments (e.g., lime, iron sulfate plus sulfur) may be mixed into the soil to increase or decrease pH.

There shall be at least one soil test per project. Each test shall consist of both the standard soil test for pH, and additional tests of organic matter, and soluble salts. A textural analysis is required from the site stockpiled topsoil. If topsoil is imported, then a texture analysis shall be performed for each location where the topsoil was excavated.

3. Compaction

It is very important to minimize compaction of both the base of bioretention practices and the required backfill. When possible, use excavation hoers to remove original soil. If practices are excavated using a loader, the contractor should use wide track or marsh track equipment, or light equipment with turf type tires. Use of equipment with narrow tracks or narrow tires, rubber tires with large lugs, or high-pressure tires will cause excessive compaction resulting in reduced infiltration rates and is not acceptable. Compaction will significantly contribute to design failure.

Compaction can be alleviated at the base of the bioretention facility by using a primary tillage operation such as a chisel plow, ripper, or subsoiler. These tillage operations are to restructure 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.

Rototill 2 to 3 inches of sand into the base of the bioretention facility before backfilling the optional sand layer. Pump any ponded water before preparing (rototilling) base.

When backfilling the topsoil over the sand layer, first place 3 to 4 inches of topsoil over the sand, then rototill the sand/topsoil to create a gradation zone. Backfill the remainder of the topsoil to final grade.

When backfilling the bioretention facility, place soil in lifts 12" to 18". Do not use heavy equipment within the bioretention basin. Heavy equipment can be used around the perimeter of the basin to supply soils and sand. Grade bioretention materials with light equipment such as a compact loader or a dozer/loader with marsh tracks.

4. Plant Material

Recommended plant material for micro-bioretenement practices can be found in Appendix A, Section A.2.3.

5. Plant Installation

Compost is a better organic material source, is less likely to float, and should be placed in the Invert and other low areas. Mulch should be placed in surrounding to a uniform thickness of 2" to 3". Shredded or chipped hardwood mulch is the only accepted mulch. Pine mulch and wood chips will float and move to the perimeter of the bioretention area during a storm event and are not acceptable. Shredded mulch must be well aged (6 to 12 months) for acceptance.

Rootstock of the plant material shall be kept moist during transport and on-site storage. The plant root ball should be planted so 1/8th of the ball is above final grade surface. The diameter of the planting pit shall be at least six inches larger than the diameter of the planting ball. Set and maintain the plant straight during the entire planting process. Thoroughly water ground bed cover after installation.

Trees shall be braced using 2" by 2" stakes only as necessary and for the first growing season only. Stakes are to be equally spaced on the outside of the tree ball.

Grasses and legume seed should be drilled into the soil to a depth of at least one inch. Grass and legume plugs shall be planted following the non-grass ground cover planting specifications.

The topsoil specifications provide enough organic material to adequately supply nutrients from natural cycling. The primary function of the bioretention structure is to improve water quality. Adding fertilizers, defolants, or at a minimum, impedes this goal. Only add fertilizer if wood chips or mulch are used to amend the soil. Rototill urea fertilizer at a rate of 2 pounds per 1000 square feet.

6. Underdrains

Underdrains should meet the following criteria:

Pipe - Should be 4" to 6" diameter, slotted or perforated rigid plastic pipe (ASTM F 758, Type P5 28, or AASHTO-M-278) in a gravel layer. The preferred material is slotted, 4" rigid pipe (e.g., PVC or HDPE).
Perforations - If perforated pipe is used, perforations should be ½" diameter located 6" on center with a minimum of four holes per row. Pipe shall be wrapped with a ¾" (No. 4 or 4x4) galvanized hardware cloth.
Gravel - The gravel layer (No. 57 stone preferred) shall be at least 3" thick above and below the underdrain.
 The main collector pipe shall be at a minimum 0.5% slope.

A rigid, non-perforated observation well must be provided (one per every 10000 square feet) to provide a clean-out port and monitor performance of the filter.

A 4" layer of pea gravel (¾" to 1" stone) shall be located between the filter media and underdrain to prevent migration of fines into the underdrain. This layer may be considered part of the filter bed when bed thickness exceeds 24".

The main collector pipe for underdrain systems shall be constructed at a minimum slope of 0.5%. Observation wells and/or clean-out pipes must be provided (one minimum per every 1000 square feet of surface area).

7. Miscellaneous

These practices may not be constructed until all contributing drainage area has been stabilized

Table B.4.1 Materials Specifications for Micro-Bioretenement, Rain Gardens & Landscape Infiltration-			
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 3/16")	
Curtain drain	ornamental stone: washed cobbles	stone: 2" to 5"	
Geotextile	n/a	n/a	PE Type 1 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 P5 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 undermeath pipes. Perforated pipe shall be wrapped with ¾-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 350.8/89; vertical loading (H-30 or H-20); 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.

APPENDIX B.1.1 - SUPPLEMENTAL POND SPECIFICATIONS (NON-378)

SUPPLEMENTAL STORMWATER PONDS AND WETLAND SPECIFICATIONS (NON-378)

THESE NOTES AND SPECIFICATIONS ARE IN ADDITION TO THE MD-378 SPECIFICATIONS. IF THERE IS ANY QUESTIONS AS TO THE APPLICABILITY, THE MD-378 SPECIFICATIONS SUPERSEDE.

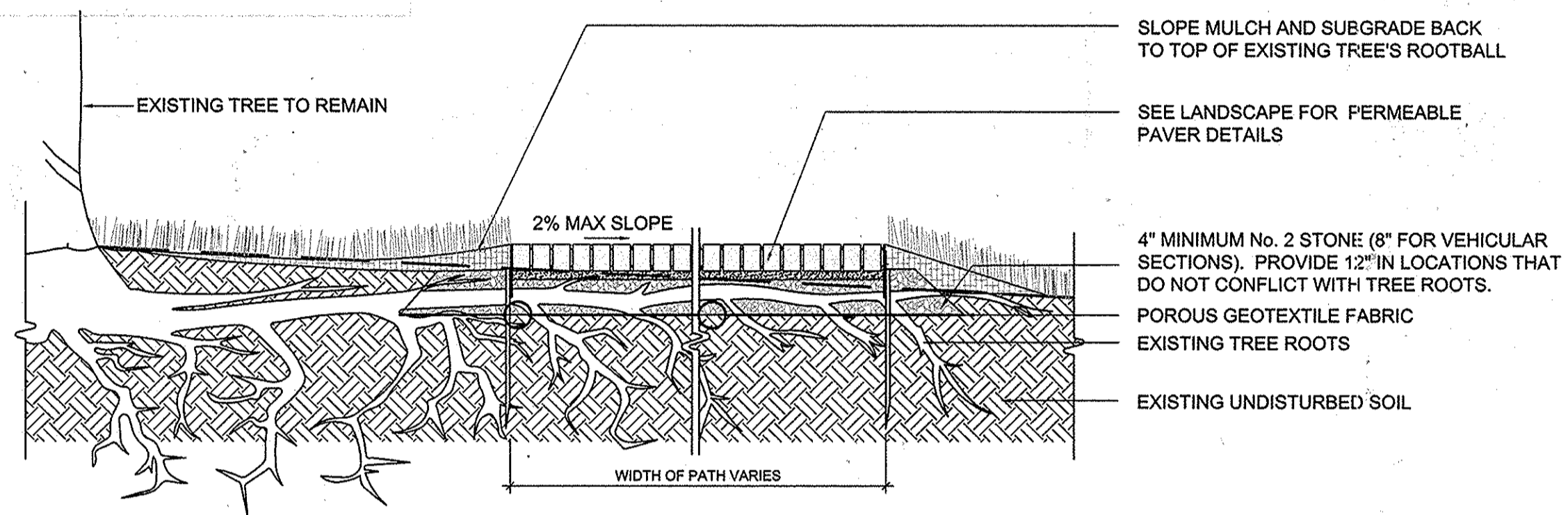
- IT IS PREFERRED TO USE THE SAME MATERIAL IN THE EMBANKMENT AS IS BEING INSTALLED FOR THE CORE TRENCH. IF THIS IS NOT POSSIBLE BECAUSE THE APPROPRIATE MATERIAL IS NOT AVAILABLE, A DAM CORE WITH A SHALL MAY BE USED. THE CROSS-SECTION OF THE STORMWATER FACILITY SHOULD SHOW THE LIMITS OF THE DAM CORE (UP TO 10-YEAR WATER SURFACE ELEVATION) AS WELL AS THE ACCEPTABLE MATERIALS FOR THE SHELL. THE SHAPE OF THE DAM CORE AND THE MATERIAL TO BE USED IN THE SHELL SHOULD BE PROVIDED BY THE GEOTECHNICAL ENGINEER.
- IF THE COMPACTION TESTS FOR THE SITE IMPROVEMENTS IS USING MODIFIED PROCTOR (AASHTO T-180), THEN TO MAINTAIN ON-SITE CONSISTENCY, THE MODIFIED PROCTOR MAY BE USED IN LIEU OF A STANDARD PROCTOR (AASHTO T-99). THE MINIMUM DENSITY USING THE MODIFIED PROCTOR TEST METHOD SHALL BE AT LEAST 92% OF THE MAXIMUM DRY DENSITY WITH A MOISTURE CONTENT OF ±2% OF THE OPTIMUM. THE MINIMUM REQUIRED DENSITY USING THE STANDARD PROCTOR TEST METHOD SHALL BE AT LEAST 92% OF THE MAXIMUM DRY DENSITY WITH A MOISTURE CONTENT OF ±2% OF THE OPTIMUM.
- FOR ALL STORMWATER MANAGEMENT FACILITIES, A GEOTECHNICAL ENGINEER OR THEIR REPRESENTATIVE MUST BE PRESENT TO VERIFY COMPACTION IN ACCORDANCE WITH THE SELECTED TEST METHOD. THIS INFORMATION NEEDS TO BE PROVIDED IN A REPORT TO THE DESIGN ENGINEER, SO THAT CERTIFICATION OF THE CONSTRUCTION OF THE FACILITY, IN ACCORDANCE WITH MD-378 SPECIFICATIONS, CAN BE MADE.
- A 4-INCH LAYER OF TOPSOIL SHALL BE PLACED ON ALL DISTURBED AREAS OF THE DAM EMBANKMENT. SEEDING, LIMING, FERTILIZING, MULCHING, ETC. SHALL BE IN ACCORDANCE WITH MARYLAND SOIL CONSERVATION SERVICE MD-342 OR THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, PERMANENT SEEDING, SECTION IN CHAPTER 20. THE PURPOSE OF THE TOPSOIL IS TO ESTABLISH A GOOD GROWTH OF GRASS, WHICH IS NOT ALWAYS POSSIBLE WITH SOME OF THE MATERIALS THAT MAY BE PLACED FOR THE EMBANKMENT FILL.

5. GEOTEXTILE PLACED BENEATH RIP-RAP SHALL BE CLASS "C" GEOTEXTILE OR BETTER (SEE SECTION 24.0, MATERIAL SPECIFICATIONS, 1994 STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, (MDE, 1994). SOME ACCEPTABLE GEOTEXTILES THAT MEET THE CLASS "C" CRITERIA INCLUDE:

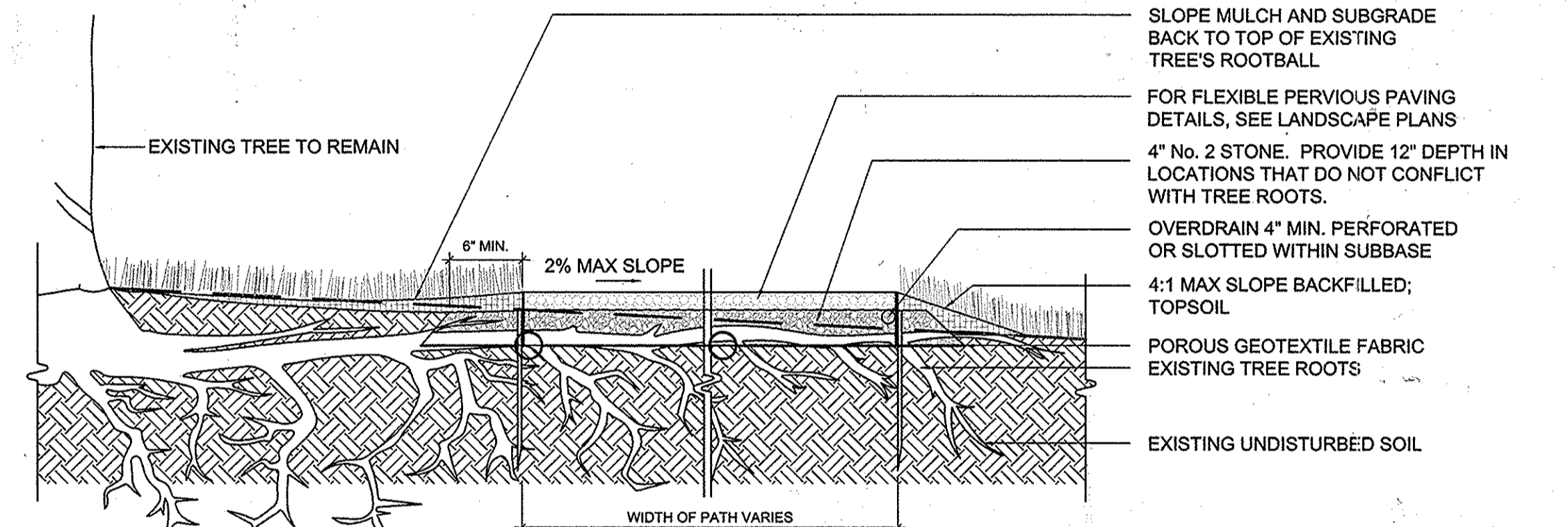
- AMOCO 4552
- GEOLON 970
- WEBER 907
- CARTHAGE FX-705
- MIRAFI 180-N
- WEBER 907

THIS IS ONLY A PARTIAL LISTING OF AVAILABLE GEOTEXTILES BASED ON INFORMATION PROVIDED BY THE MANUFACTURERS OF THE 1997 SPECIFIER'S GUIDE DATED DECEMBER 1996. IT IS THE RESPONSIBILITY OF THE ENGINEER TO VERIFY THE ADEQUACY OF THE MATERIAL, AS THERE ARE CHANGES IN THE MANUFACTURING PROCESS AND THE TYPE OF FABRIC USED, WHICH MAY AFFECT THE CONTINUED ACCEPTANCE.

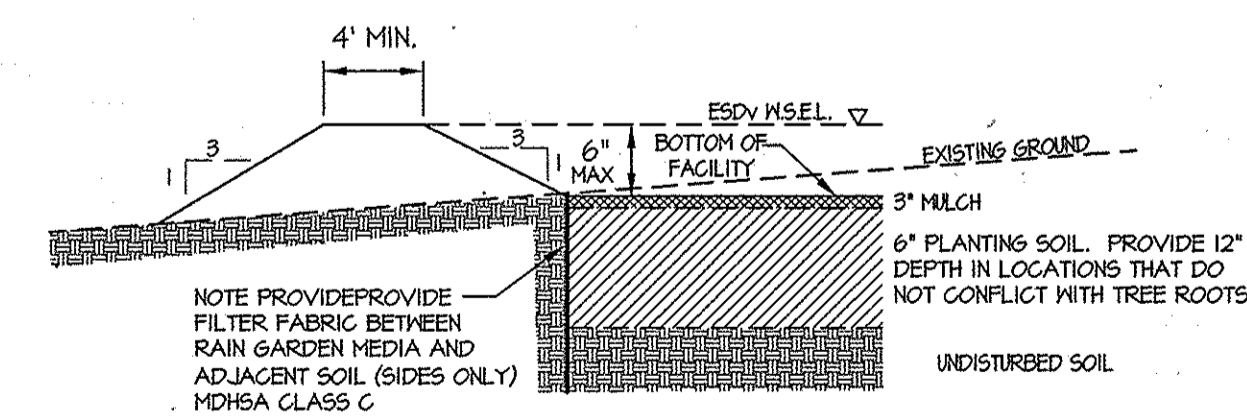
- A RULE OF THUMB TO DETERMINE WHEN AN EXCAVATED POND MAY NEED TO BE CONSIDERED AN EMBANKMENT POND IS AS FOLLOWS: PROVIDE CALCULATION OF 10H + 20 FEET = L, WHERE H HEIGHT FROM POND BOTTOM TO TOP OF DAM. IF THE PROJECTION OF L DOWNSTREAM IS A HORIZONTAL LINE FROM THE UPSTREAM TOE OF SLOPE IS BELOW EXISTING GROUND, THE POND CAN BE CONSIDERED AN EXCAVATED POND. IN ADDITION, THE EXISTING GROUND SLOPE, DOWNSTREAM OF THE TOE, MUST BE LESS THAN 10%.
- THE DESIGN ENGINEER AND GEOTECHNICAL ENGINEER SHOULD MAKE THE DETERMINATION THAT THE SETTLEMENT OF THE POND WILL NOT CAUSE EXCESSIVE JOINT EXTENSION. FOR FURTHER INFORMATION ON JOINT ANALYSIS, SEE NRCE PUBLICATION TR-18.
- FILL PLACEMENT SHALL NOT EXCEED A MAXIMUM 8-INCH. EACH LIFT SHALL BE CONTINUOUS FOR THE ENTIRE LENGTH OF THE EMBANKMENT.
- THE EMBANKMENT FILL SHALL NOT BE PLACED HIGHER THAN THE CENTERLINE OF THE PRINCIPAL SPILLWAY UNTIL AFTER THE PRINCIPAL SPILLWAY HAS BEEN INSTALLED. IF THE EMBANKMENT NEEDS TO BE EXCAVATED TO INSTALL THE PRINCIPAL SPILLWAY, THE SIDE SLOPE SHALL BE NO LESS THAN 2:1.
- THE SIDE SLOPES OF A CUT TO REPAIR A DAM, INSTALL A PRINCIPAL SPILLWAY FOR AN EXCAVATED POND, OR OTHER REPAIR WORK, SHALL BE NO LESS THAN 2:1.



PERMEABLE PAVEMENT (A-2)-PAVER TYPICAL DETAIL NTS



PERMEABLE PAVEMENT-FLEXIBLE PAVING TYPICAL DETAIL NTS



RAIN GARDEN SECTION NTS

FOR PLAN VIEW AND ELEVATIONS OF RAIN GARDEN M-T-A SEE SHEET 5.
 FOR PLAN VIEW AND ELEVATIONS FOR RAIN GARDEN M-T-B SEE SHEETS 6 AND 33

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
 Director: [Signature] Date: 9-9-15
 Chief, Division of Land Development: [Signature] Date: 9-2-15
 Chief, Development Engineering Division: [Signature] Date: 8-25-15

APPROVED
 PLANNING BOARD OF HOWARD COUNTY
 Date: November 20, 2015

GLWGUTSCHICK LITTLE & WEBER, P.A.
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PREPARED FOR & DEVELOPER:
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 CENTURY PLAZA, SUITE 315
 COLUMBIA, MD 21044
 ATTN: MICHAEL MCCALL
 410-740-0029

PROFESSIONAL CERTIFICATION
 I HEREBY CERTIFY THAT THESE PLANS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER IN THE STATE OF MARYLAND, LICENSE NO. 14831
 EXPIRATION DATE: MAY 21, 2016



ESD NOTES, MAINTENANCE SCHEDULES AND DETAILS
DOWNTOWN COLUMBIA
MERRIWEATHER SYMPHONY WOODS NEIGHBORHOOD
MERRIWEATHER PARK AT SYMPHONY WOODS PHASE 1 AND FUTURE PHASES 2-7
 TOWN CENTER- SECTION 1 AREA 1
 PART OF OPEN SPACE LOT 23-PLAT NO. 13535 &
 PART OF OPEN SPACE LOT 9B-PLAT BOOK 15, PAGE 32
 GREEN COMMERCIAL BUILDING
 ELECTION DISTRICT No. 5
 HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE NO.
AS SHOWN	NT	13043
DATE	TAX MAP - GRID	SHEET
JUNE, 2015	36 - 01	34 OF 85