Building Permit Application

Howard County Maryland
Department of Inspections, Licenses and Permits
3430 Court House Drive
Permits: 410-313-2455
www.howardcountymd.gov

Date Received: _____

Permit No.: BR0022008

Building Address:	11560 Cedar Lane
City:	Ellicott City **State:** MD **Zip Code:** 21042
Suite/Apt. #	– **SDP/WP/BA #:** SDP-19-148
Census Tract:	6065.01 **Subdivision:** Cedar Lane
Section:	– **Area:** – **Lot:** 7
Tax Map:	24 **Parcel:** 42 **Grid:** 6 14
Zoning:	RC-DEO **Map Coordinates:** 4931-C **Lot Size:** 15,729

Existing Use:	Open Lot
Proposed Use:	New Single Family Home
Estimated Construction Cost: $	350,000
Description of Work:	Construct New Single family Home with 4 Bedrooms, full patio, 2½ Baths, Two story, Finished bsmt
Occupant/Tenant Name:	N/A

Was tenant space previously occupied? ☐Yes ☐No

Contact Name:	
Address:	
City:	**State:** **Zip Code:**
Phone:	**Fax:**
Email:	

Property Owner's Name:	Luke Yun
Address:	10015 Carlton Drive
City:	Ellicott City **State:** MD **Zip Code:** 21042
Phone:	443-324-7508 **Fax:** –
Email:	

Applicant's Name & Mailing Address, (If other than stated herein)

Applicant's Name:	Ken Tash
Address:	P.O. Box 999
City:	Ellicott City **State:** MD **Zip Code:** 21041
Phone:	443-324-1725 **Fax:**
Email:	Ken@ellicottcitybuilders.com

Contractor Company:	Greenfield Family Homes LLC
Contact Person:	Ken Tash
Address:	P.O. Box 999
City:	Ellicott City **State:** MD **Zip Code:** 21041
License No. :	124621
Phone:	443-324-1725 **Fax:**
Email:	Ken@ellicottcitybuilders.com

Engineer/Architect Company:	Site Design Associates
Responsible Design Prof.:	Dan Taylor
Address:	3341 Ellicott Mills Drive, Suite 1
City:	Ellicott City **State:** MD **Zip Code:** 21043
Phone:	410-461-2855 **Fax:** 410-997-9282
Email:	info@dantaylor.com

Commercial Building Characteristics	***Residential Building Characteristics***
Height:	☐SF Dwelling ☐SF Townhouse
No. of stories:	**Depth** **Width**
Gross area, sq. ft./floor:	1st floor:
	2nd floor:
Area of construction (sq. ft.):	Basement:
	☐Finished Basement
Use group:	☐ Unfinished Basement
	☐ Crawl Space
Construction type:	☐ Slab on Grade
☐ Reinforced Concrete	No. of Bedrooms:
☐ Structural Steel	***Multi-family Dwelling***
☐ Masonry	No. of efficiency units:
☐ Wood Frame	No. of 1 BR units:
☐ State Certified Modular	No. of 2 BR units:
	No. of 3 BR units:
	Other Structure:
	Dimensions:
➢ **Roadside Tree Project Permit**	Footings:
☐Yes ☐No	Roof:
Roadside Tree Project Permit #	☐ State Certified Modular
	☐ Manufactured Home

Utilities	
Electric: ☐Yes ☐ No	
Gas: ☐Yes ☐ No	
Water Supply	
☐ Public	
☐Private	
Sewage Disposal	
☐ Public	
☐Private	
Heating System	
☐ Electric ☐ Oil	
☐ Natural Gas ☐ Propane Gas	
☐ Other:	
Sprinkler System:	
☐Yes ☐ No	
Grading Permit Number:	
Building Shell Permit Number:	

THE UNDERSIGNED HEREBY CERTIFIES AND AGREES AS FOLLOWS: (1) THAT HE/SHE IS AUTHORIZED TO MAKE THIS APPLICATION; (2) THAT THE INFORMATION IS CORRECT; (3) THAT HE/SHE WILL COMPLY WITH ALL REGULATIONS OF HOWARD COUNTY WHICH ARE APPLICABLE THERETO; (4) THAT HE/SHE WILL PERFORM NO WORK ON THE ABOVE REFERENCED PROPERTY NOT SPECIFICALLY DESCRIBED IN THIS APPLICATION; (5) THAT HE/SHE GRANTS COUNTY OFFICIALS THE RIGHT TO ENTER ONTO THIS PROPERTY FOR THE PURPOSE OF INSPECTING THE WORK PERMITTED AND POSTING NOTICES.

Applicant's Signature ***Print Name*** Ken Tash

Email Address ***Date*** 4 Jun 2018

Title/Company Agent / Greenfield Family Homes LLC

Checks Payable to: **DIRECTOR OF FINANCE OF HOWARD COUNTY**

PLEASE WRITE NEATLY & LEGIBLY

-FOR OFFICE USE ONLY-

AGENCY	DATE	SIGNATURE OF APPROVAL
State Highways		
Building Officials		
PSZA (Zoning)		
PSZA (Engineering)		
Health	6/19/2018	

Is Sediment Control approval required for issuance? ☐ Yes ☐ No

☐ CONTINGENCY CONSTRUCTION START

DPZ SETBACK INFORMATION	
Front:	
Rear:	
Side:	
Side St.:	
All minimum setbacks met?	☐ Yes ☐No
Is Entrance Permit Required?	☐ Yes ☐No
Historic District?	☐ Yes ☐No
Lot Coverage for New Town Zone:	
SDP/Red-line approval date:	

Filing Fee	$ 100.00
Permit Fee	$
Tech Fee	$
Excise Tax	$
PSFS	$
Guaranty Fund	$ 50.00
Add'l per Fee	$
Total Fees	$
Sub- Total Paid	$ 150.00
Balance Due	$
Check	#

Distribution of Copies: **White: Building Officials** **Green: PSZA,Zoning** **Yellow: PSZA,Engineering** **Pink: Health** **Gold: SHA**

Building Permit Application

Howard County Maryland
Department of Inspections, Licenses and Permits
3430 Court House Drive
Permits: 410-313-2455
www.howardcountymd.gov

Date Received: _____

Permit No.: B R O O 2 0 0 8

Building Address: 11580 Chapel Rise
City: Clarksville State: MD Zip Code: 21029
Suite/Apt. #: - SDP/WP/BA #: GP. 18 · 048
Census Tract: 6005101 Subdivision: Chapel Rise
Section: - Area: - Lot: 7
Tax Map: 29 Parcel: 42 Grid: 8 : 14
Zoning: RC-DEO Map Coordinates: 4934-C3 Lot Size: 153,729 SF

Existing Use: Open Lot
Proposed Use: New Single Family Home
Estimated Construction Cost: $ 350,000.-
Description of Work: Construct New Single Family Home with 5 Bedrooms, 6 Full Baths, 2-½ Baths, 3 car garage, 2 fireplaces, Deck, Patio.
~~Occupant/Tenant Name~~:
Was tenant space previously occupied? ☐Yes ☐No
Contact Name:
Address:
City: State: Zip Code:
Phone: Fax:
Email:

Commercial Building Characteristics	*Residential Building Characteristics*
Height:	☒ SF Dwelling ☐ SF Townhouse
No. of stories:	Depth / Width
Gross area, sq. ft./floor:	1st floor: 68' x 76'
	2nd floor: 68' x 71'
Area of construction (sq. ft.):	Basement: 68' x 76'
	☒ Finished Basement
Use group:	☐ Unfinished Basement
	☐ Crawl Space
Construction type:	☐ Slab on Grade
☐ Reinforced Concrete	No. of Bedrooms: 5
☐ Structural Steel	*Multi-family Dwelling*
☐ Masonry	No. of efficiency units:
☒ Wood Frame	No. of 1 BR units:
☐ State Certified Modular	No. of 2 BR units:
	No. of 3 BR units:
	Other Structure:
	Dimensions:
Roadside Tree Project Permit: ☐ Yes ☐ No	Footings:
Roadside Tree Project Permit #:	Roof:
N/A.	☐ State Certified Modular
	☐ Manufactured Home

Property Owner's Name: Luke Yun
Address: 10062 Carillon Drive
City: Ellicott City State: MD Zip Code: 21042
Phone: 443-386-9508 Fax: -
Email: -

Applicant's Name & Mailing Address, (If other than stated herein)
Applicant's Name: Ron Tash
Address: P.O. Box 999
City: Columbia State: MD Zip Code: 21044
Phone: 443-324-4725 Fax:
Email: RTash@ColumbiaBuilders.com

Contractor Company: Greenfield Family Homes, LLC
Contact Person: Ron Tash
Address: P.O. Box 999
City: Columbia State: MD Zip Code: 21044
License No.: 68201
Phone: 443-324-4725 Fax:
Email: RTash@ColumbiaBuilders.com

~~Engineer~~/Architect Company: D.W. Taylor & Assoc.
Responsible Design Prof.: Don Taylor
Address: 5024 Dorsey Hall Drive · Suite 203
City: Ellicott City State: MD Zip Code: 21042
Phone: 410-964-1131 Fax: 410-997-2924
Email: info@DWTaylor.com.

Utilities	
Electric:	☒ Yes ☐ No
Gas:	☒ Yes ☐ No
Water Supply	
☐ Public	
☒ Private	
Sewage Disposal	
☐ Public	
☒ Private	
Heating System	
☐ Electric ☐ Oil	
☒ Natural Gas ☐ Propane Gas	
☐ Other:	
Sprinkler System:	
☒ Yes ☐ No	
Grading Permit Number:	G 18000038
Building Shell Permit Number:	N/A.

RECEIVED
JUN 01 2018
LICENSES & PERMITS DIVISION

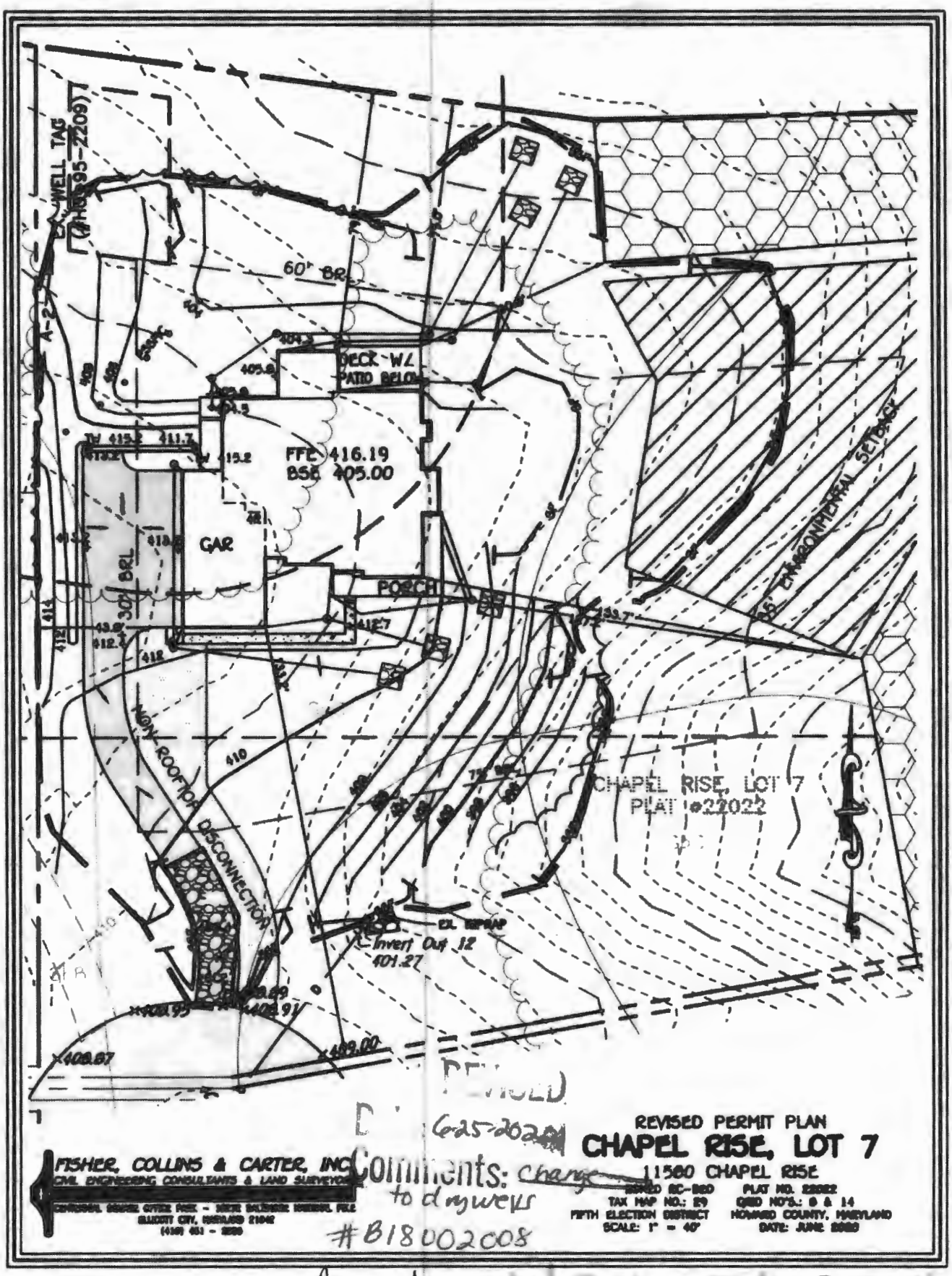
THE UNDERSIGNED HEREBY CERTIFIES AND AGREES AS FOLLOWS: (1) THAT HE/SHE IS AUTHORIZED TO MAKE THIS APPLICATION; (2) THAT THE INFORMATION IS CORRECT; (3) THAT HE/SHE WILL COMPLY WITH ALL REGULATIONS OF HOWARD COUNTY WHICH ARE APPLICABLE THERETO; (4) THAT HE/SHE WILL PERFORM NO WORK ON THE ABOVE REFERENCED PROPERTY NOT SPECIFICALLY DESCRIBED IN THIS APPLICATION; (5) THAT HE/SHE GRANTS COUNTY OFFICIALS THE RIGHT TO ENTER ONTO THIS PROPERTY FOR THE PURPOSE OF INSPECTING THE WORK PERMITTED AND POSTING NOTICES.

Applicant's Signature — *Print Name*: Ron Tash

RTash@ColumbiaBuilders.com
Email Address

1 June 2018
Date

Approved 6/21/2018 RE B18002008



REVISED PERMIT PLAN

CHAPEL RISE, LOT 7

11580 CHAPEL RISE

ZONED: RC-DEO PLAT NO.: 22022
TAX MAP NO.: 29 GRID NO'S.: 8 & 14
FIFTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: 1" = 40' DATE: JUNE 2018

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 - 2855

REVISED

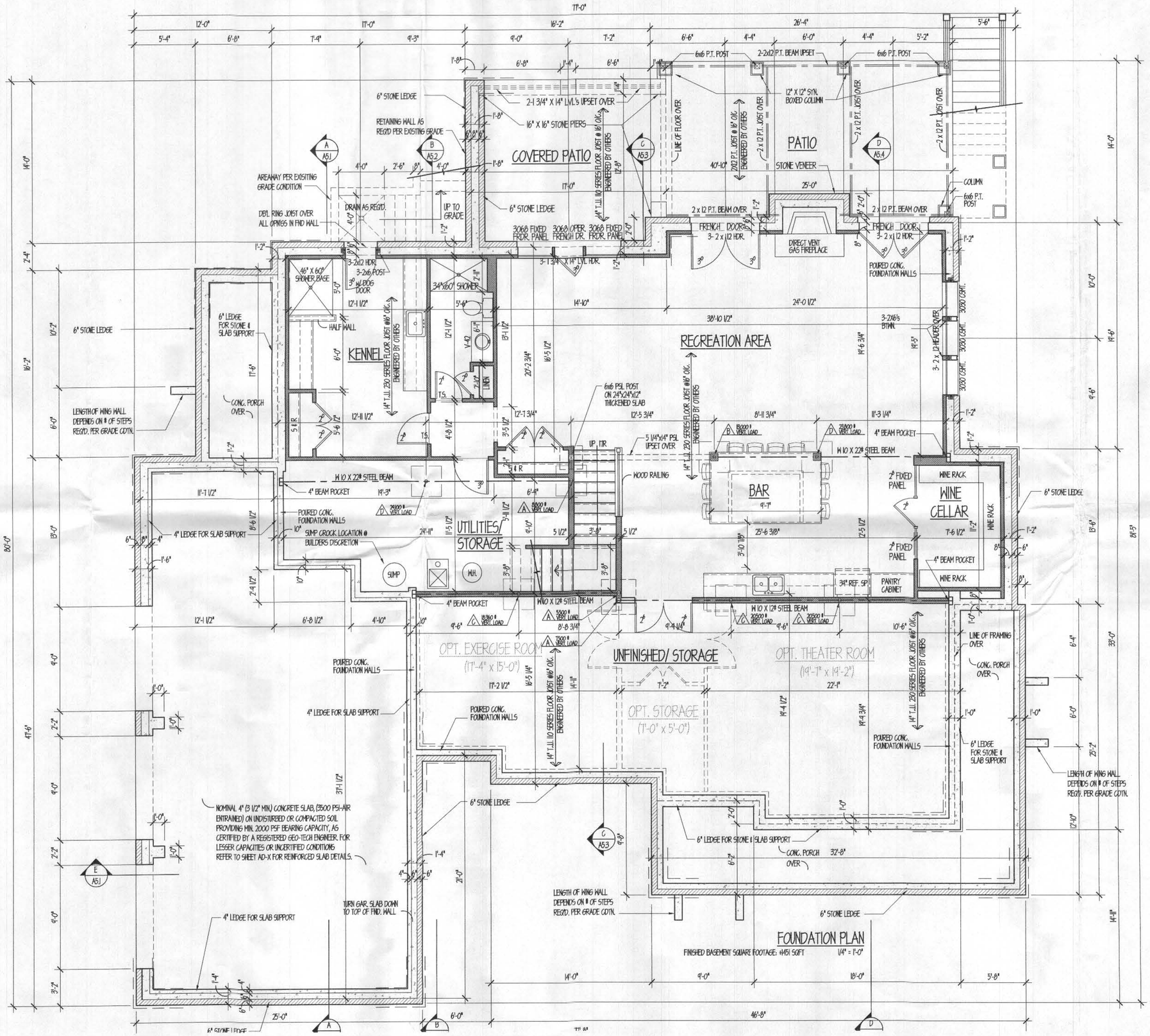
D 6-25-2020

Comments: change to drywells

#B18002008

Approved
RLE 7/8/2020

HEALTH COPY



PROFESSIONAL CERTIFICATION: I CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED ARCHITECT UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE # 3307-R, EXPIRATION DATE 10/7/17

dw taylor associates inc
ARCHITECT
5024 DORSEY HALL DR. SUITE 203 ELLICOTT CITY, MD 21042
P.(410) 964 1181 F. (410) 997 2924 www.dwtaylor.com

BID & PERMIT SET

REVISIONS	
date	remarks

drawn by: EC	checked by: TOM 2-4-2016
scale: 1/4" = 1'-0"	date: 10-22-2015

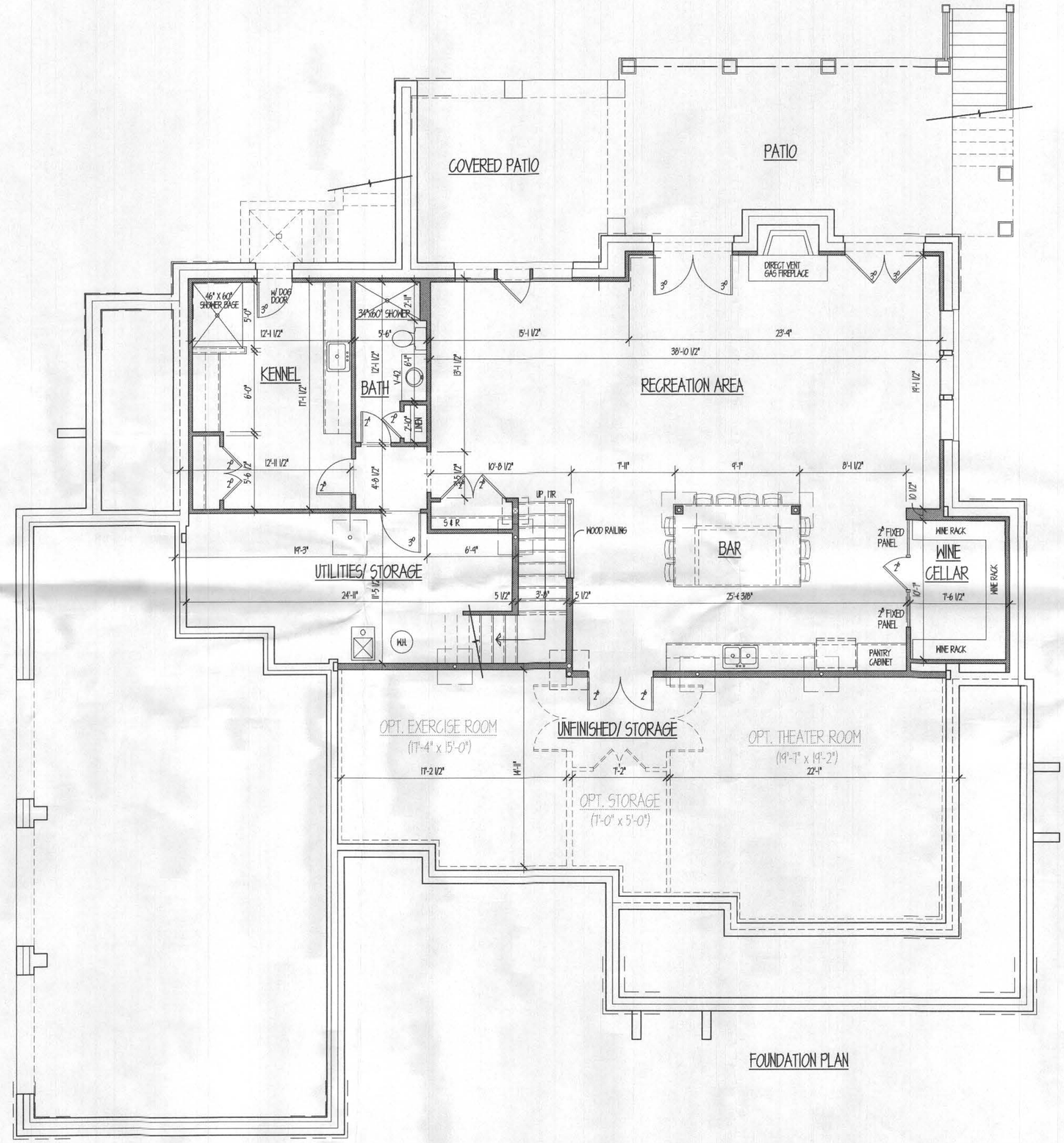
PROJECT TITLE

YUN RESIDENCE
11580 CHAPEL RISE

CONTENT

FOUNDATION PLAN

PROJECT NUMBER	DRAWING NUMBER
2623	A2.1



FOUNDATION PLAN

PROFESSIONAL CERTIFICATION. I CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED ARCHITECT UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE # 3367-R, EXPIRATION DATE 10/7/17

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REVISIONS	
date	remarks

drawn by: EC	checked by: TOM 2-4-2016
scale: 1/4" = 1'-0"	date: 10-22-2015

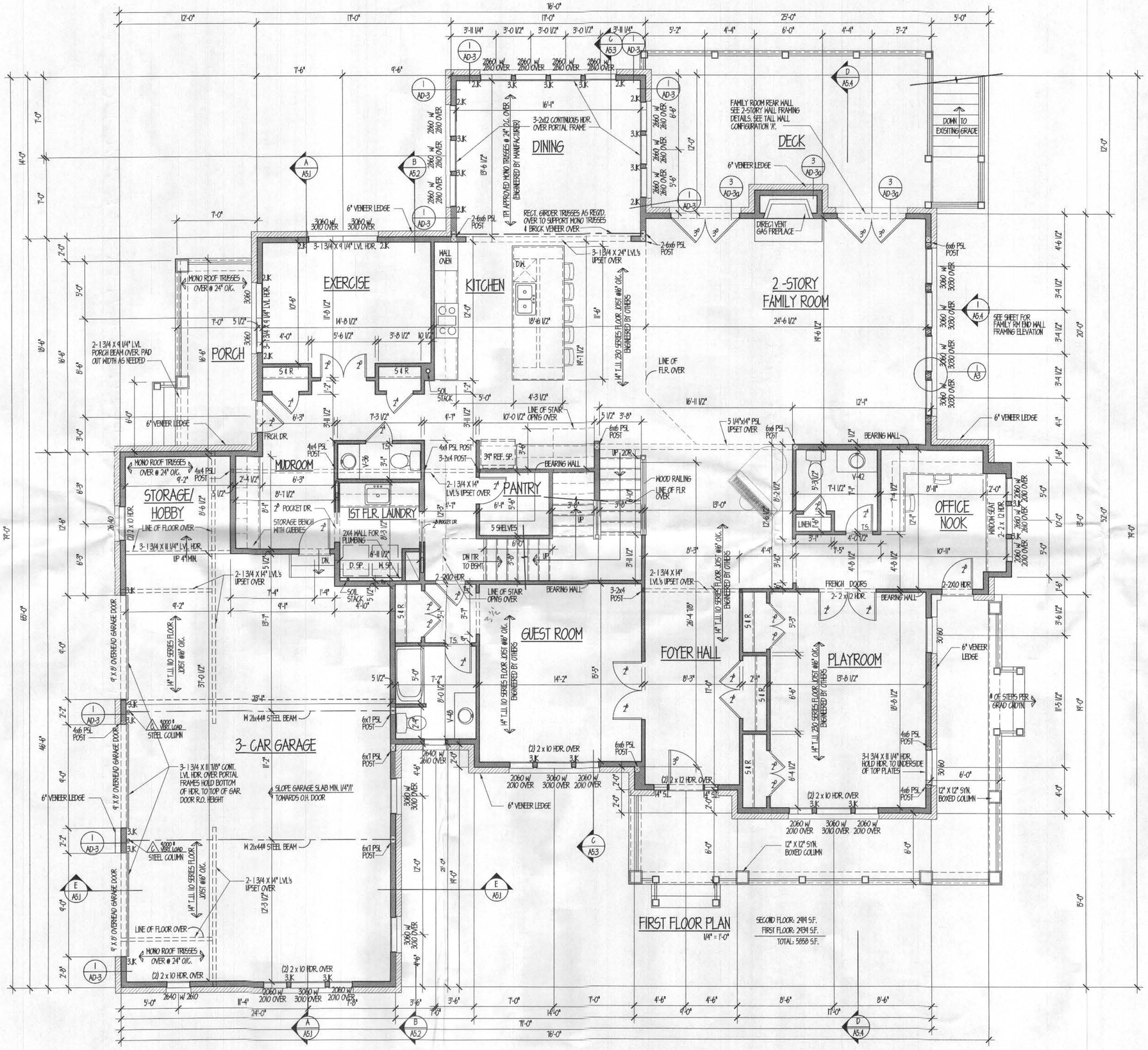
PROJECT TITLE

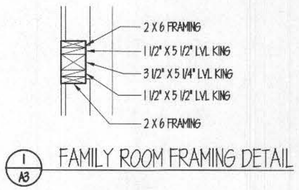
YUN RESIDENCE
11580 CHAPEL RISE

CONTENT

LOWER LEVEL PLAN

PROJECT NUMBER	DRAWING NUMBER
2623	A2.2





FAMILY ROOM FRAMING DETAIL

PROFESSIONAL CERTIFICATION. I CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED ARCHITECT UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE # 3367-R, EXPIRATION DATE 10/7/17

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BID & PERMIT SET

REVISIONS	
date	remarks

drawn by: EC	checked by: TOM 2-4-2016
scale: 1/4" = 1'-0"	date: 10-22-2015

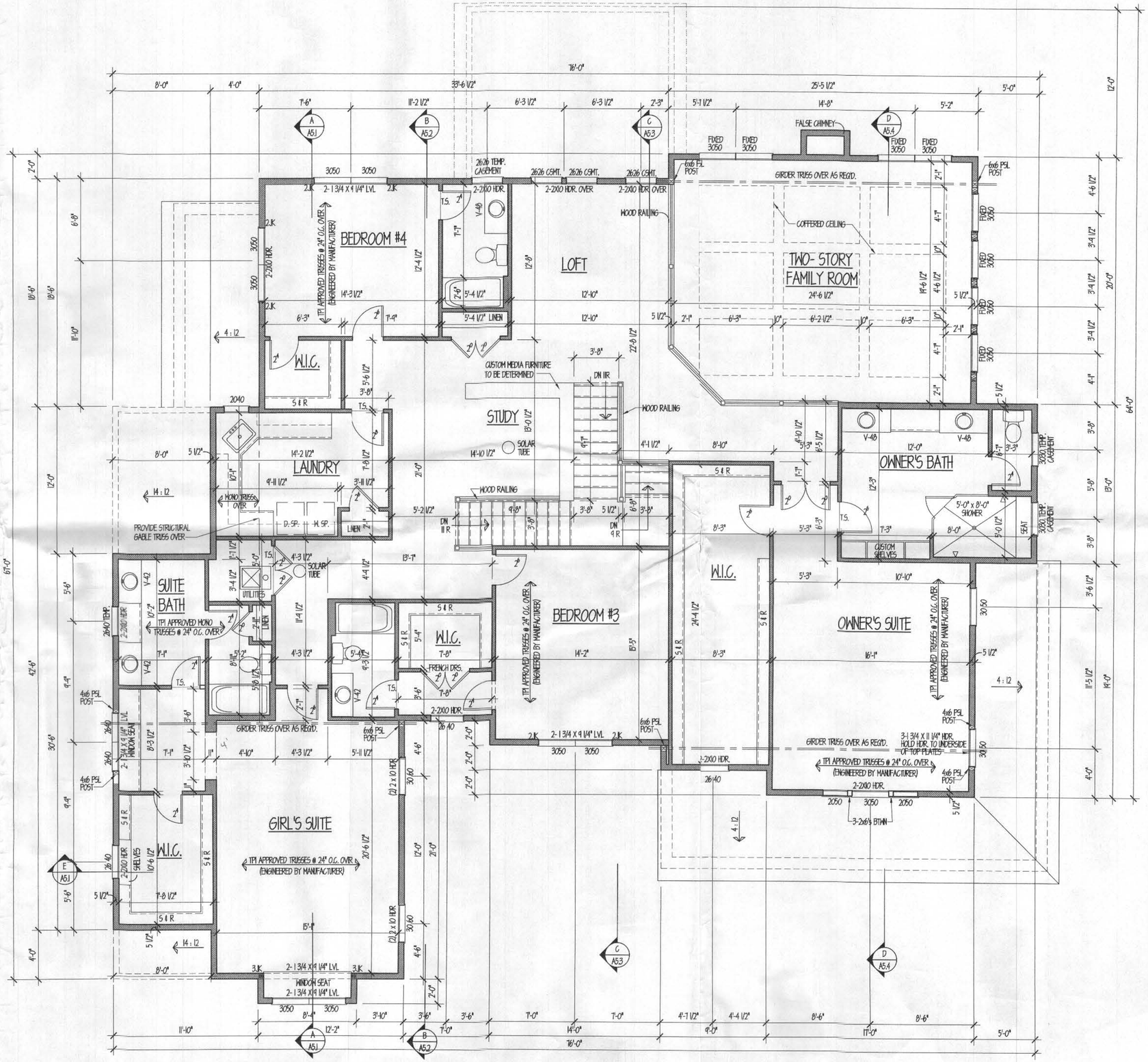
PROJECT TITLE

YUN RESIDENCE
11580 CHAPEL RISE

CONTENT

FIRST FLOOR PLAN

PROJECT NUMBER	DRAWING NUMBER
2623	A3



PROFESSIONAL CERTIFICATION: I CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED ARCHITECT UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE # 3387-R, EXPIRATION DATE 10/7/17

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BID & PERMIT SET

REVISIONS	
date	remarks

drawn by: EC	checked by: TOM 2-4-2016
scale: 1/4" = 1'-0"	date: 10-22-2015

PROJECT TITLE

YUN RESIDENCE
11580 CHAPEL RISE

CONTENT

SECOND FLOOR PLAN

PROJECT NUMBER	DRAWING NUMBER
2623	A4

Approved B18002008
R12 6/19/2018

Health

RECEIVED
JUN 13 2018
HOWARD COUNTY HEALTH DEPT.
FOOD PROTECTION PROGRAM

dw taylor associates inc
ARCHITECT

BID & PERMIT SET

REVISIONS	
date	narrative
10-4-2017	CLIENT UPDATE 4' REAR EXTENSION

drawn by: EC	checked by: TDM 2-4-2016
scale: 1/4" = 1'-0"	date: 10-22-2015

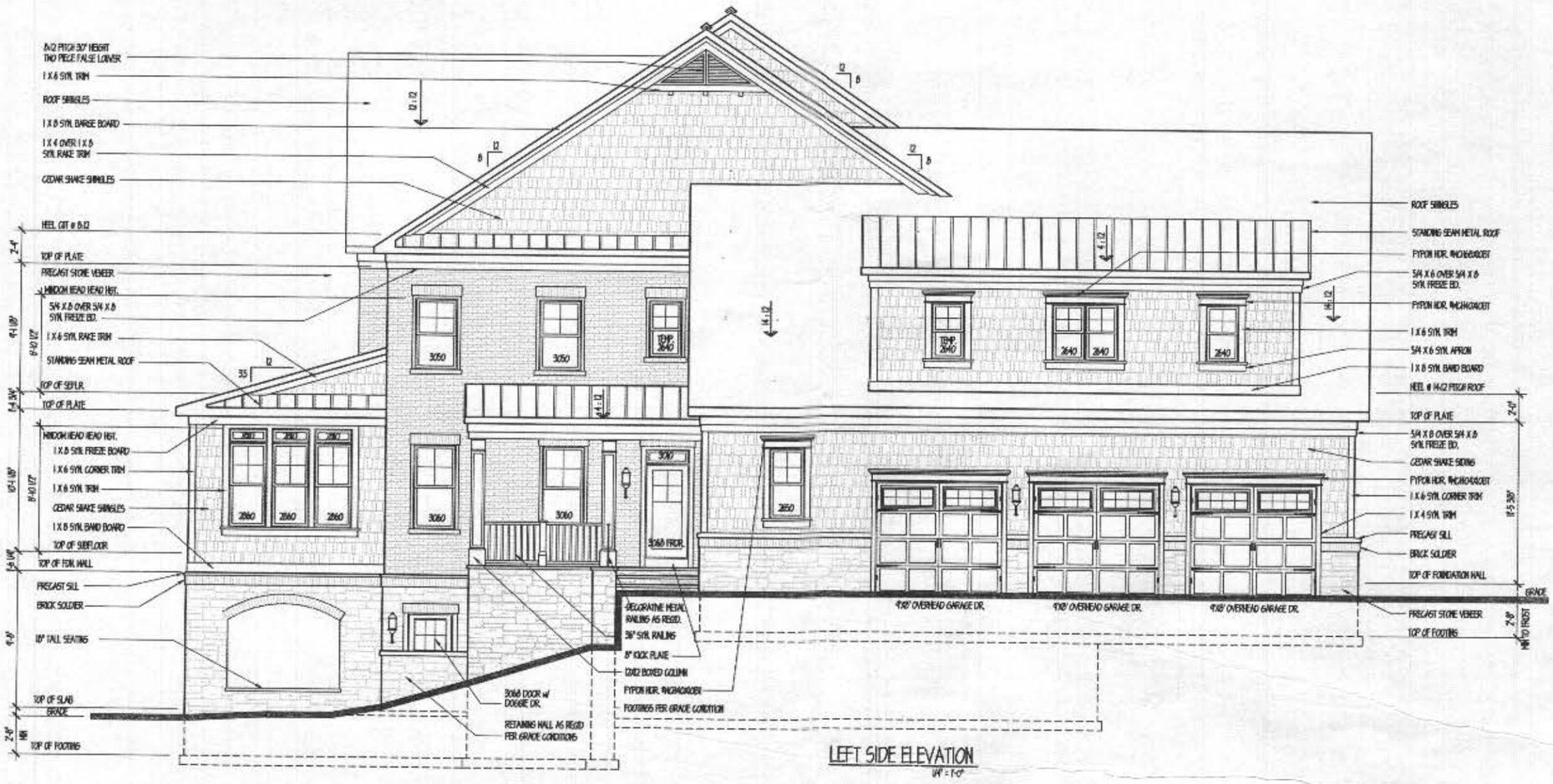
PROJECT TITLE

YUN RESIDENCE
11580 CHAPEL RISE

CONTENT

FRONT ELEVATION

PROJECT NUMBER	DRAWING NUMBER
2623	A1.1



LEFT SIDE ELEVATION
1/4" = 1'-0"

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ARCHITECT

BID & PERMIT SET

REVISIONS	
date	revisions
10-4-2017	CLIENT UPDATES @ REAR EXTENSION
drawn by: EG	checked by: TDN 2-4-2016
scale: 1/4" = 1'-0"	date: 10-22-2015

PROJECT TITLE

YUN RESIDENCE
11580 CHAPEL RISE

CONTENT

LEFT SIDE ELEVATION

PROJECT NUMBER	DRAWING NUMBER
2623	A1.2

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

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ARCHITECT

BID & PERMIT SET

REVISIONS	
date	remarks
10-4-2021	CLIENT DEMAND, 4' REAR EXTENSION

drawn by: EC	checked by: TDH 2-4-2016
scale: 1/4" = 1'-0"	date: 10-22-2015

PROJECT TITLE
YUN RESIDENCE
11580 CHAPEL RISE

CONTENT
REAR ELEVATION

PROJECT NUMBER	DRAWING NUMBER
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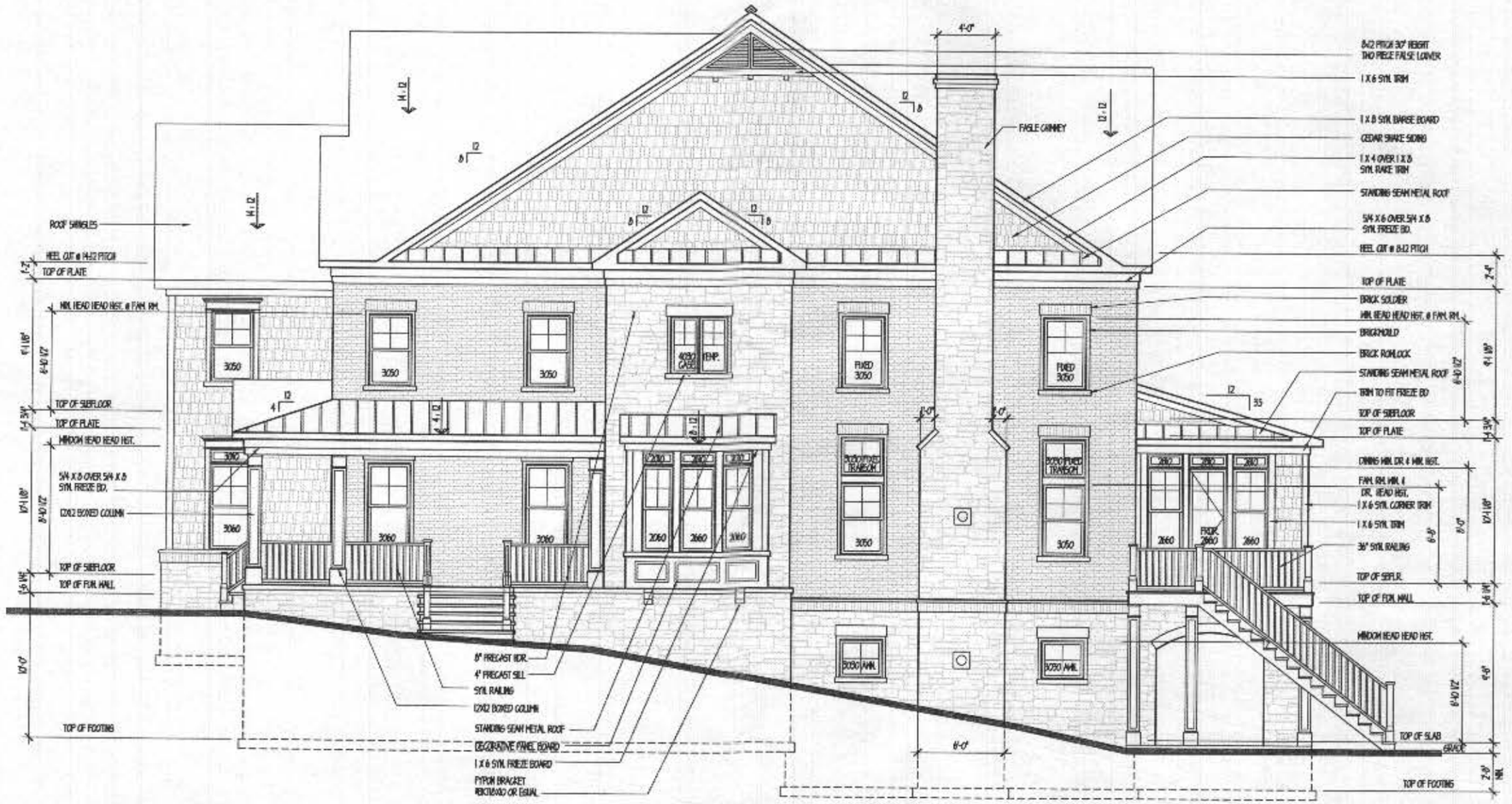

RIGHT SIDE ELEVATION

1/4" = 1'-0"

PROFESSIONAL CERTIFICATION. I CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED ARCHITECT UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE # [illegible], EXPIRATION DATE [illegible]

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associates inc
ARCHITECT

5024 DORSEY HALL DR. SUITE 205 ELLICOTT CITY, MD 21042
P.(410) 884 1181 F. (410) 997 3304 www.dwtaylor.com

BID & PERMIT SET

REVISIONS

date	remarks
10-4-2017	CLIENT UPDATES & REAR EXTENSION

drawn by EG

checked by TOM 2-4-2016

scale 1/4" = 1'-0"

date 10-22-2015

PROJECT TITLE

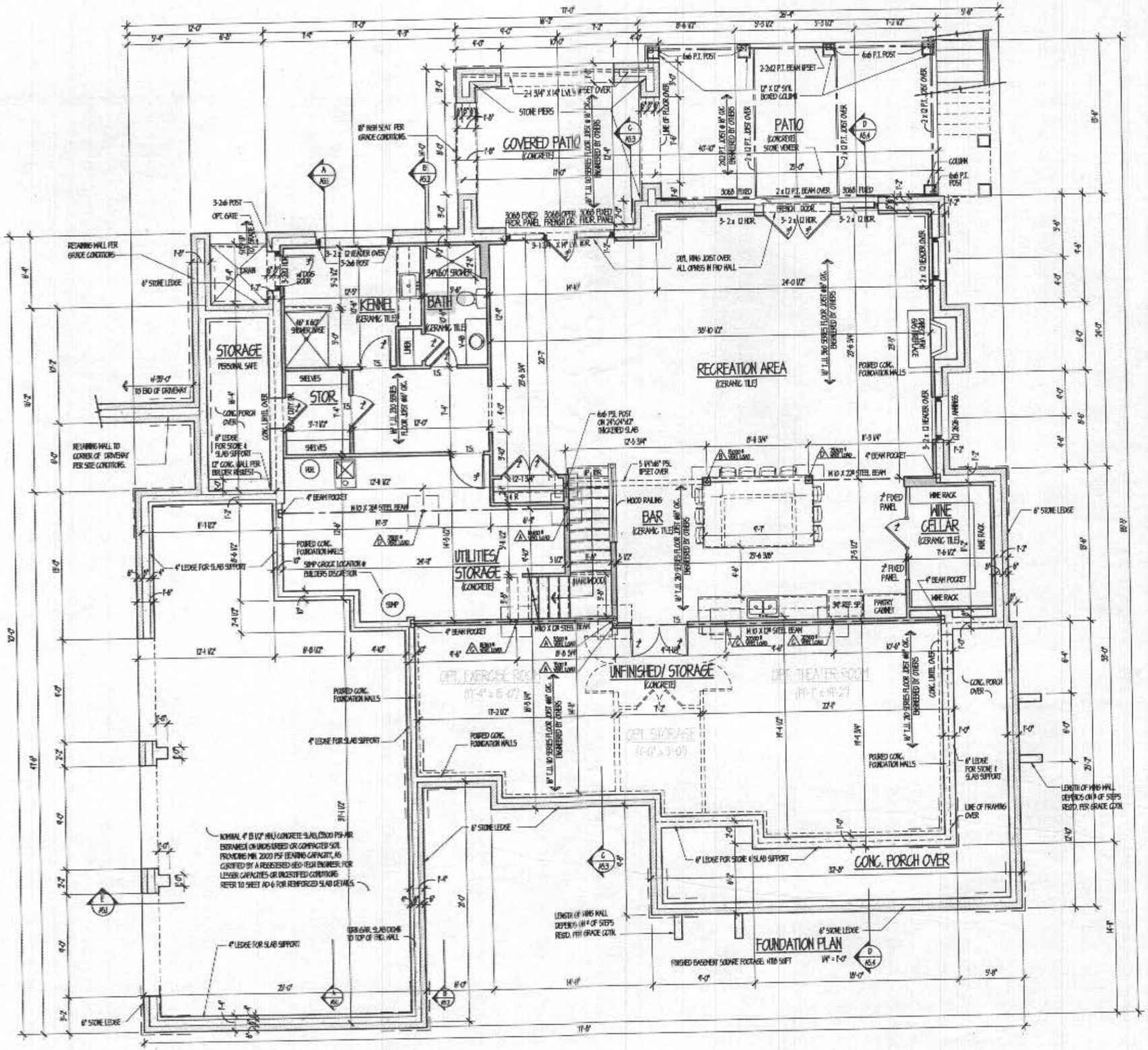
YUN RESIDENCE
11580 CHAPEL RISE

CONTENT

RIGHT SIDE ELEVATION

PROJECT NUMBER 2623

DRAWING NUMBER A1.4



NOTE:
Refer to the Foundation Wall and Footing Schedules on Sheet AD-1 for minimum wargll and footing sizes and reinforcement requirements. Refer to Sheets AD-1 and AD-2 for supplementary details.

dw taylor associates inc
ARCHITECT

BID & PERMIT SET

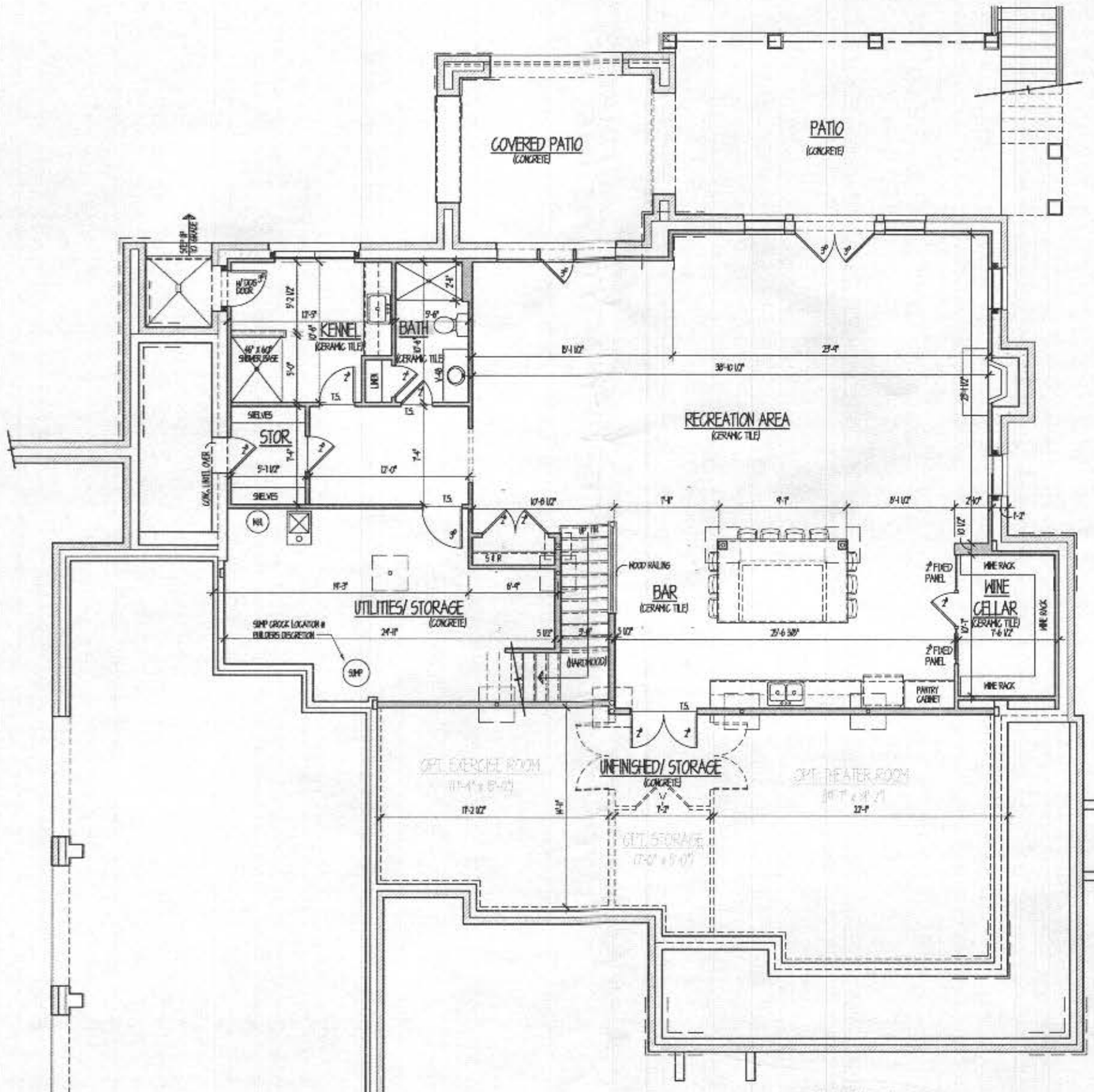
REVISIONS	
date	remarks
10-4-2011	CLIENT UPDATE, 4' REAR EXTENSION
1-1-2011	NO STORAGE UNDER FRONT PORCH
5-25-2011	12" CONC. WALL ADDED TO REAR STORAGE RM

drawn by: EC	checked by: TDM 2-4-2016
scale: 1/4" = 1'-0"	date: 10-22-2015

PROJECT TITLE
YUN RESIDENCE
11580 CHAPEL RISE

CONTENT
FOUNDATION PLAN

PROJECT NUMBER	DRAWING NUMBER
2623	A2.1



FOUNDATION PLAN

NOTE:
Refer to "A1" Sheets for larger scale construction details, materials, application, flashing and weather protection requirements that may not be sufficiently defined on this sheet.

dw taylor associates inc
ARCHITECT

BID & PERMIT SET

REVISIONS	
date	remarks
10-4-2021	CLIENT UPDATES, 4' REAR EXTENSION

drawn by: EC	checked by: YDH 2-4-2016
scale: 1/4" = 1'-0"	date: 10-22-2015

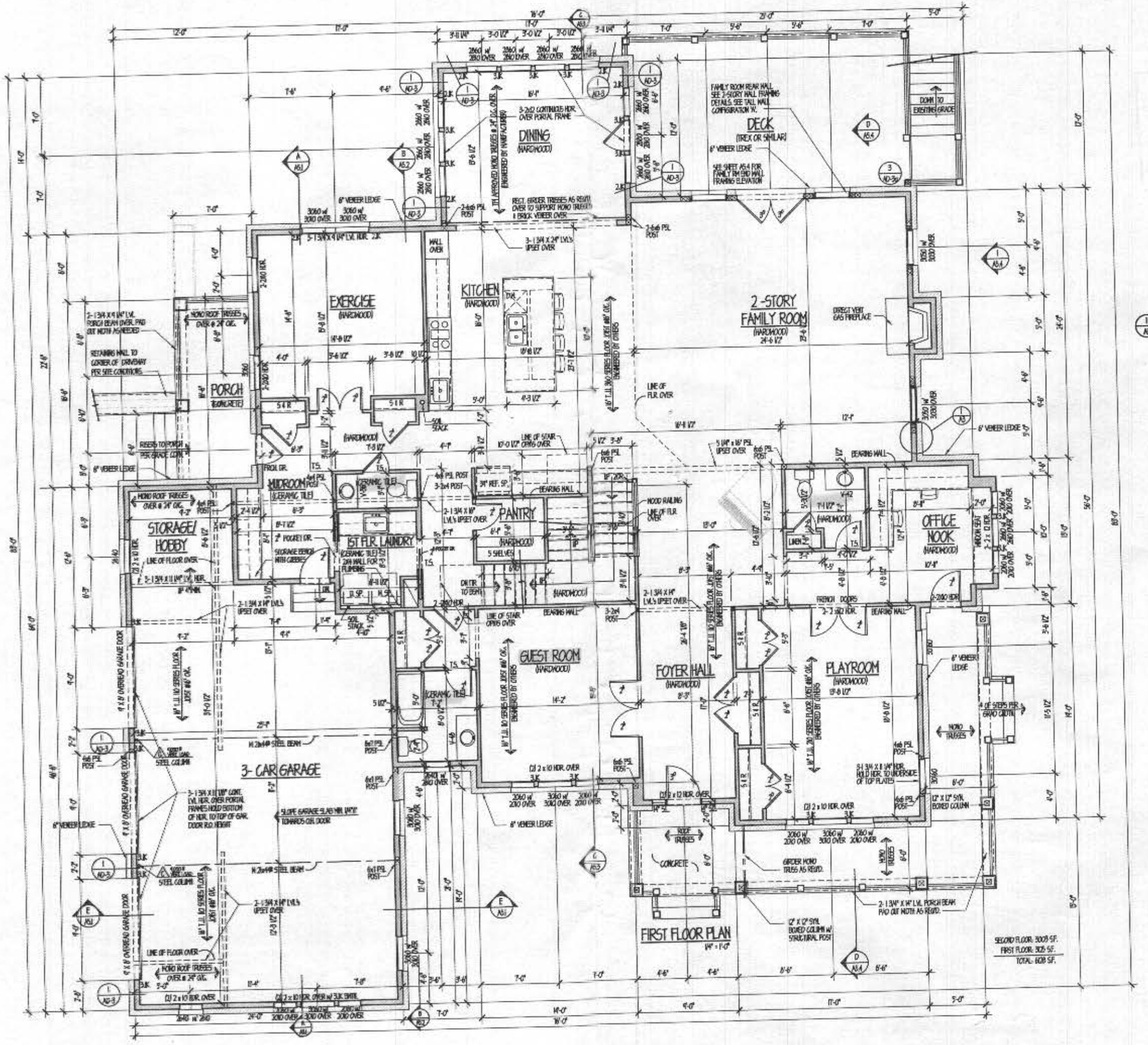
PROJECT TITLE

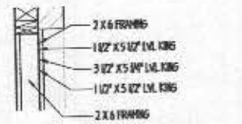
YUN RESIDENCE
11580 CHAPEL RISE

CONTENT

LOWER LEVEL PLAN

PROJECT NUMBER	DRAWING NUMBER
2623	A2.2





1 A9 FAMILY ROOM FRAMING DETAIL

NOTE:
Refer to "A9" Sheets for larger scale construction details, materials, application, flashing and weather protection requirements that may not be sufficiently defined on this sheet.

dw taylor associates inc
ARCHITECT

BID & PERMIT SET

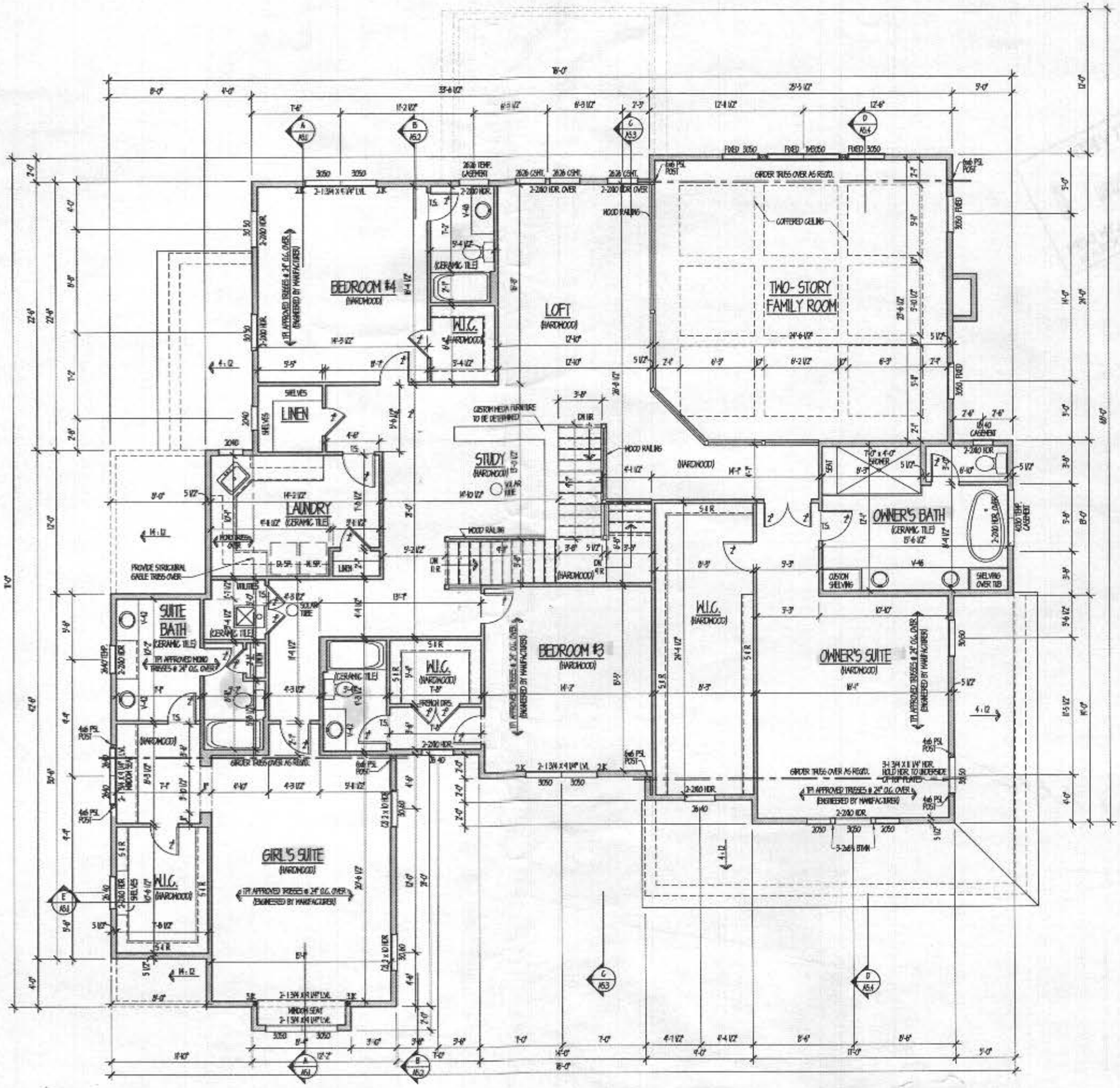
REVISIONS	
date	remarks
10-4-2011	CLIENT UPDATE: 4' REAR EXTENSION

drawn by: EL	checked by: TDH 2-4-2016
scale: 1/4" = 1'-0"	date: 10-22-2015

PROJECT TITLE
YUN RESIDENCE
11580 CHAPEL RISE

CONTENT
FIRST FLOOR PLAN

PROJECT NUMBER	DRAWING NUMBER
2623	A3



NOTE:
Refer to "A0" Sheets for larger scale construction details, materials, application, flashing and weather protection requirements that may not be sufficiently defined on this sheet.

dw taylor associates inc
ARCHITECT

BID & PERMIT SET

REVISIONS	
date	remarks
10-4-2017	CLIENT UPDATE: 4' REAR EXTENSION

drawn by: EC	checked by: YUN 2-4-2016
scale: 1/4" = 1'-0"	date: 10-22-2015

PROJECT TITLE

YUN RESIDENCE
11580 CHAPEL RISE

CONTENT

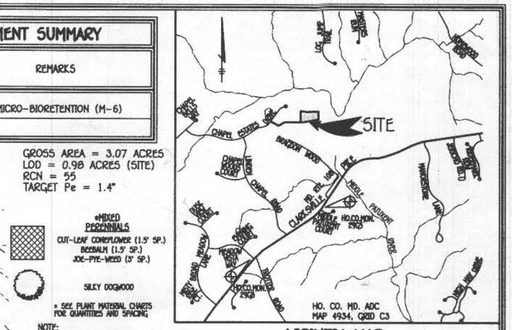
SECOND FLOOR PLAN

PROJECT NUMBER	DRAWING NUMBER
2623	A4

STORMWATER MANAGEMENT PRACTICES	
ADDRESS	MICRO-BIORETENTION M-6 (NUMBER)
11580 CHAPEL RISE	2

STORMWATER MANAGEMENT SUMMARY			
AREA ID.	ESDv REQUIRED CU.FT.	ESDv PROVIDED CU.FT.	REMARKS
SITE	1,421	1,423	MICRO-BIORETENTION (M-6)
TOTAL	1,421	1,423	

GROSS AREA = 3.07 ACRES
LOD = 0.98 ACRES (SITE)
RCN = 55
TARGET Pe = 1.4"



VICINITY MAP
SCALE: 1" = 2000'

MICRO-BIORETENTION								
MICRO-BIO FILTER	A	B	C	D	E	F	G	H
1	408.00	408.00	407.00	405.00	404.75	404.25	403.08	401.75
2	398.00	398.00	397.00	395.00	394.75	394.25	393.08	391.75

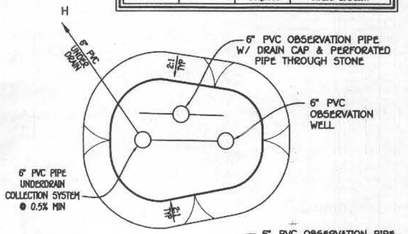
MICRO-BIORETENTION PLANT MATERIAL			
MICRO-BIO1 QUANTITY	MICRO-BIO2 QUANTITY	NAME	MAXIMUM SPACING (FT.)
50	30	MIXED PERENNIALS	1.5 TO 3.0 FT.
2	1	SILKY DOGWOOD	PLANT AWAY FROM INFLOW LOCATION

*MIXED PERENNIALS
CUT-LEAF CONEFLOWER (1.5' SP.)
BOSSAUN (1.5' SP.)
JOE-PYE-WEED (3' SP.)

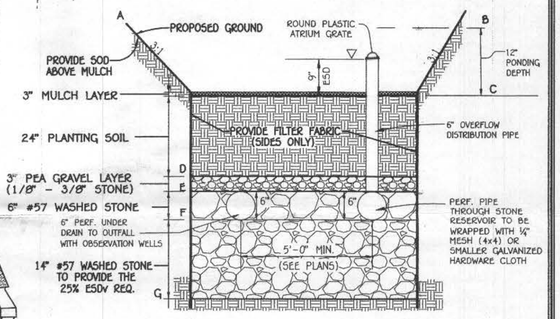
SILKY DOGWOOD

* SEE PLANT MATERIAL CHARTS FOR QUANTITIES AND SPACING

NOTE:
PLANT MATERIAL MUST COVER AT LEAST 50% OF THE SURFACE AREA OF THE MICRO-BIORETENTION



MICRO BIO-RETENTION PLANTING DETAIL
NOT TO SCALE



MICRO BIO-RETENTION SECTION WITH 6" OVERFLOW DISTRIBUTION PIPE
NO SCALE

OPERATION & MAINTENANCE SCHEDULE FOR MICRO-BIORETENTION (M-6)

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 ACCORDINGLY. REPLACEMENT PLANT MATERIAL IS LIMITED TO THE FOLLOWING: 2000 MARYLAND STORMWATER DESIGN MANUAL VOLUME II, TABLE A.6.1 AND E.

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.

BUILDER/DEVELOPER'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 THE 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."

SIGNATURE OF DEVELOPER — DATE 2/12/18

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 - 2855

NO.	REVISION	DATE

GP-18-048

THIS DEVELOPMENT IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
APPROVED:
HOWARD SOIL CONSERVATION DISTRICT — DATE 2/6/18

OWNER
YONG YUN & QING LI
10062 CARILLON DRIVE
ELLICOTT CITY, MD 21042

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 38386, EXPIRATION DATE: 01/12/2020.

STATE OF MARYLAND — STEPHANIE T. FITE — No. 38386 — PROFESSIONAL ENGINEER

Signature Of Professional Engineer — DATE 2/11/18

ENGINEER'S CERTIFICATE

"I/WE CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT 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."

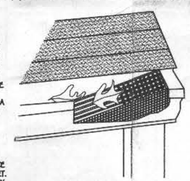
SIGNATURE OF ENGINEER — DATE 2/11/18

PLAN VIEW
SCALE : 1"=20'

0' 30' 60' 120'
SCALE: 1" = 30'

STORMWATER MANAGEMENT NOTES

1. STORMWATER MANAGEMENT IS PROVIDED IN ACCORDANCE WITH WITH CHAPTER 5, "ENVIRONMENTAL SITE DESIGN" OF THE 2007 MARYLAND STORMWATER MANAGEMENT DESIGN MANUAL, EFFECTIVE MAY 4, 2010.
2. MAXIMUM CONTRIBUTING ROOF TOP AREA TO EACH DOWNSPOUT SHALL BE 1,000 SQ. FT. OR LESS.
3. DRYWELLS SHALL BE PROVIDED AT LOCATIONS WHERE THE LENGTH OF DISCONNECTION IS LESS THAN 75' AT 5%. THE SIZE AND CONSTRUCTION OF THE DRYWELL SHALL BE IN ACCORDANCE WITH THE DETAIL SHOWN ON THIS SHEET.
4. FINAL GRADING IS SHOWN ON THIS PLAN.



GUTTER DRAIN FILTER DETAIL
NOT TO SCALE

SOILS LEGEND		
SOIL	NAME	CLASS
GbB	Gladstone loam, 3 to 8 percent slopes	B
GbC	Gladstone loam, 8 to 15 percent slopes	B
MaD	Manor loam, 15 to 25 percent slopes	B

GRADING AND SEDIMENT & EROSION CONTROL PLAN
CHAPEL RISE
LOT 7
ZONED RC-DEO — PLAT NO. 22022
TAX MAP NO.: 29 — GRID NO'S.: 8 & 14
FIFTH ELECTION DISTRICT — HOWARD COUNTY, MARYLAND
SCALE: 1" = 30' — DATE: JANUARY, 2018
SHEET 1 OF 2

Approved BSR002008 AIE 6/19/2018 BR002008

I:\2012\12060\Engineering\Dwgs\12060-6099 Chapel Rise Lot 7\12060 Lot 7 Base-Awg, GP, 2/1/2018 2:23:02 PM, Ed

SOIL PREPARATION, TOPSOILING AND SOIL AMENDMENTS (B-4-2)

A. Soil Preparation

1. Temporary Stabilization

a. Seedbed preparation consists of loosening soil to a depth of 3 to 5 inches by means of suitable agricultural or construction equipment, such as disc harrows or chisel plows or rippers mounted on construction equipment. After the soil is loosened, it must not be rolled or dragged smooth but left in the roughened condition. Slopes 3:1 or flatter are to be tracked with ridges running parallel to the contour of the slope.

b. Apply fertilizer and lime as prescribed on the plans.

c. Incorporate lime and fertilizer into the top 3 to 5 inches of soil by disking or other suitable means.

2. Permanent Stabilization

a. A soil test is required for any earth disturbance of 5 acres or more. The minimum soil conditions required for permanent vegetative establishment are:

i. Soil pH between 6.0 and 7.0.
ii. Soluble salts less than 500 parts per million (ppm).
iii. Soil contains less than 40 percent clay but enough fine grained material (greater than 30 percent silt plus clay) to provide the capacity to hold a moderate amount of moisture. An exception: if lovegrass will be planted, then a sandy soil (less than 30 percent silt plus clay) would be acceptable.
iv. Soil contains 1.5 percent minimum organic matter by weight.
v. Soil contains sufficient pore space to permit adequate root penetration.

b. Application of amendments or topsoil is required if on-site soils do not meet the above conditions.

c. Graded areas must be maintained in a true and even grade as specified on the approved plan, then scarified or otherwise loosened to a depth of 3 to 5 inches.

d. Apply soil amendments as specified on the approved plan or as indicated by the results of a soil test.

e. Mix soil amendments into the top 3 to 5 inches of soil by disking or other suitable means. Rake lawn areas to smooth the surface, remove large objects like stones and branches, and ready the area for seed application. Loosen surface soil by dragging with a heavy chain or other equipment to roughen the surface where site conditions will not permit normal seedbed preparation. Track slopes 3:1 or flatter with tracked equipment leaving the soil in an irregular condition with ridges running parallel to the contour of the slope. Leave the top 1 to 3 inches of soil loose and friable. Seedbed loosening may be unnecessary on newly disturbed areas.

B. Topsoiling

1. Topsoil is placed over prepared subsoil prior to establishment of permanent vegetation. The purpose is to provide a suitable soil medium for vegetative growth. Soils of concern have low moisture content, low nutrient levels, low pH, materials toxic to plants, and/or unacceptable soil gradation.

2. Topsoil salvaged from an existing site may be used provided 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 representative soil profile section in the Soil Survey published by USDA-NRCS.

3. Topsoiling is limited to areas having 2:1 or flatter slopes where:

a. The texture of the exposed subsoil/parent material is not adequate to produce vegetative growth.

b. The soil material is so shallow that the rooting zone is not deep enough to support plants or furnish continuing supplies of moisture and plant nutrients.

c. The original soil to be vegetated contains material toxic to plant growth.

d. The soil is so acidic that treatment with limestone is not feasible.

4. Areas having slopes steeper than 2:1 require special consideration and design.

5. Topsoil Specifications: Soil to be used as topsoil must meet the following criteria:

a. Topsoil must be a loam, sandy loam, clay loam, silt loam, sandy clay loam, or loamy sand. Other soils may be used if recommended by an agronomist or soil scientist and approved by the appropriate approval authority. Topsoil must not be a mixture of contrasting textured subsoils and must contain less than 5 percent by volume of cinders, stones, slag, coarse fragments, gravel, sticks, roots, trash, or other materials larger than 1 1/2 inches in diameter.

b. Topsoil must be free of noxious plants or plant parts such as Bermuda grass, quack grass, Johnson grass, nut sedge, poison ivy, thistle, or others as specified.

c. 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.

6. Topsoil Application

a. Erosion and sediment control practices must be maintained when applying topsoil.

b. Uniformly distribute topsoil in a 5 to 8 inch layer and lightly compact to a minimum thickness of 4 inches. Spreading is to 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 must be corrected in order to prevent the formation of depressions or water pockets.

c. Topsoil must not be placed if the topsoil or subsoil is in a frozen or muddy condition, when the subsoil is excessively wet or in a condition that may otherwise be detrimental to proper grading and seedbed preparation.

C. Soil Amendments (Fertilizer and Lime Specifications)

1. Soil tests must be performed to determine the exact ratios and application rates for both lime and fertilizer on sites having disturbed areas of 5 acres or more. Soil analysis may be performed by a recognized private or commercial laboratory. Soil samples taken for engineering purposes may also be used for chemical analyses.

2. Fertilizers must be uniform in composition, free flowing and suitable for accurate application by appropriate equipment. Manure may be substituted for fertilizer with prior approval from the appropriate approval authority. Fertilizers must all be delivered to the site fully labeled according to the applicable laws and must bear the name, trade name or trademark and warranty of the producer.

3. Lime materials must be ground limestone (hydrated or burnt lime may be substituted except when hydroseeding) which contains at least 50 percent total oxides (calcium oxide plus magnesium oxide). Limestone must be ground to such fineness that at least 50 percent will pass through a #100 mesh sieve and 98 to 100 percent will pass through a #20 mesh sieve.

4. Lime and fertilizer are to be evenly distributed and incorporated into the top 3 to 5 inches of soil by disking or other suitable means.

5. Where the subsoil is either highly acidic or composed of heavy clays, spread ground limestone at the rate of 4 to 8 tons/acre (200-400 pounds per 1,000 square feet) prior to the placement of topsoil.

B-4-3 STANDARDS AND SPECIFICATIONS FOR SEEDING AND MULCHING

Definition

The application of seed and mulch to establish vegetative cover.

Purpose

To protect disturbed soils from erosion during and at the end of construction.

Conditions Where Practice Applies

To the surface of all perimeter controls, slopes, and any disturbed area not under active grading.

Criteria

A. Seeding

1. Specifications
   a. All seed must meet the requirement of the Maryland State Seed Law. All seed must be subject to re-testing by a recognized seed laboratory. All seed used must have been tested within the 6 months immediately preceding the date of sowing such material on any project. Refer to Table B.4 regarding the quality of seed. Seed tags must be available upon request to the inspector to verify type of seed and seeding rate.
   b. Mulch alone may be applied between the fall and spring seeding dates only if the ground is frozen. The appropriate seeding mixture must be applied when the ground thaws.
   c. Inoculants: The inoculant for treating legume seed in the seed mixtures must be a pure culture of nitrogen fixing bacteria prepared specifically for the species. Inoculants must not be used later than the date indicated on the container. Add fresh inoculants as directed on the package. Use four times the recommended rate when hydroseeding. Note: It is very important to keep inoculant as cool as possible until used. Temperatures above 75 to 80 degrees Fahrenheit can weaken bacteria and make the inoculant less effective.
   d. Soil or seed must not be placed on soil which has been treated with soil sterilants or chemicals used for weed control until sufficient time has elapsed (14 days min.) to permit dissipation of phyto-toxic materials.

2. Application
   a. Dry Seeding: This includes use of conventional drop or broadcast spreaders.
      i. Incorporate seed into the subsoil at the rates prescribed on Temporary Seeding Table B.1, Permanent Seeding Table B.3, or site-specific seeding summaries.
      ii. Apply seed in two directions, perpendicular to each other. Apply half the seeding rate in each direction. Roll the seeded area with weighted roller to provide good seed to soil contact.
   b. Drill or Cultipacker Seeding: Mechanized seeders that apply and cover seed with soil.
      i. Cultipacker seeders are required to bury the seed in such a fashion as to provide at least 1/4 inch of soil covering. Seedbed must be firm after planting.
      ii. Apply seed in two directions, perpendicular to each other. Apply half the seeding rate in each direction.
   c. Hydroseeding: Apply seed uniformly with hydroseeder (slurry includes seed and fertilizer).
      i. If fertilizer is being applied at the time of seeding, the application rates should not exceed the following: nitrogen, 100 pounds per acre total of soluble nitrogen; P (phosphorus), 200 pounds per acre; K (potassium), 200 pounds per acre.
      ii. Lime: Use only ground agricultural limestone (up to 3 tons per acre may be applied by hydroseeding). Normally, not more than 2 tons are applied by hydroseeding at any one time. Do not use burnt or hydrated lime when hydroseeding.
      iii. Mix seed and fertilizer on site and seed immediately and without interruption.
      iv. When hydroseeding do not incorporate seed into the soil.

B. Mulching

1. Mulch Materials (in order of preference)
   a. Straw consisting of thoroughly threshed wheat, rye, oat, or barley and reasonably bright in color. Straw is to be free of noxious weeds as specified in the Maryland Seed Law and not musty, moldy, caked, decayed, or excessively dusty. Note: Use only sterile straw mulch in areas where one species of grass is desired.
   b. Wood Cellulose Fiber Mulch (WCFM) consisting of specially prepared wood cellulose processed into a uniform fibrous physical state.
      i. WCFM is to be dyed green or contain a green dye in the package that will provide an appropriate color to facilitate visual inspection of the uniformly sprayed slurry.
      ii. WCFM, including dye, must contain no germination or growth inhibiting factors.
      iii. WCFM materials are to be manufactured and processed in such a manner that the wood cellulose fiber mulch will remain in uniform suspension in water under agitation and will blend with seed, fertilizer and other additives to form a homogeneous slurry. The mulch material must form a blotter-like ground cover, on application, having moisture absorption and percolation properties and must cover and hold grass seed in contact with the soil without inhibiting the growth of the grass seedlings.
      iv. WCFM material must not contain elements or compounds at concentration levels that will by phyto-toxic.
      v. WCFM must conform to the following physical requirements: fiber length of approximately 10 millimeters, diameter approximately 1 millimeter, pH range of 4.0 to 8.5, ash content of 1.8 percent maximum and water holding capacity of 90 percent minimum.

2. Application
   a. Apply mulch to all seeded areas immediately after seeding.
   b. When straw mulch is used, spread it over all seeded areas at the rate of 2 tons per acre to a uniform loose depth of 1 to 2 inches. Apply mulch to achieve a uniform distribution and depth so that the soil surface is not exposed. When using a mulch anchoring tool, increase the application rate to 2.5 tons per acre.
   c. Wood cellulose fiber used as mulch must be applied to a net dry weight of 1500 pounds per acre. Mix the wood cellulose fiber with water to obtain a mixture with a maximum of 50 pounds of wood cellulose fiber per 100 gallons of water.

3. Anchoring
   a. Perform mulch anchoring immediately following application of mulch to minimize loss by wind or water. This may be done by one of the following methods (listed by preference), depending upon the size of the area and erosion hazard:
      i. A mulch anchoring tool is a tractor drawn implement designed to punch and anchor mulch into the soil surface a minimum of 2 inches. This practice is most effective on large areas, but is limited to flatter slopes where equipment can operate safely. If used on sloping land, this practice should follow the contour.
      ii. Wood cellulose fiber may be used for anchoring straw. Apply the fiber binder at a net dry weight of 750 pounds per acre. Mix the wood cellulose fiber with water at a maximum of 50 pounds of wood cellulose fiber per 100 gallons of water.
      iii. Synthetic binders such as Acrylic DLR (Agro-Tack), DCA-70, Petroset, Terra Tax II, Terra Tack AR or other approved equal may be used. Follow application rates as specified by the manufacturer. Application of liquid binders needs to be heavier at the edges where wind catches mulch, such as in valleys and on crests of banks. Use of asphalt binders is strictly prohibited.
      iv. Lightweight plastic netting may be stapled over the mulch according to manufacturer recommendations. Netting is usually available in rolls 4-15 feet wide and 300 to 3,000 feet long.

TEMPORARY SEEDING NOTES (B-4-4)

Definition

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

Purpose

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

Conditions Where Practice Applies

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

Criteria

1. Select one or more of the species or seed mixtures listed in Table B.1 for the appropriate Plant Hardiness Zone (from Figure B.3), and enter them in the Temporary Seeding Summary below along with application rates, seeding dates and seeding depths. If this Summary is not put on the plan and completed, then Table B.1 plus fertilizer and lime rates must be put on the plan.

2. For sites having soil tests performed, use and show the recommended rates by the testing agency. Soil tests are not required for Temporary Seeding.

3. When stabilization is required outside of a seeding season, apply seed and mulch or straw mulch alone as prescribed in Section B-4-3.A.1.b and maintain until the next seeding season.

Temporary Seeding Summary

Hardiness Zone (from Figure B.3): 6b
Seed Mixture (from Table B.1):

Species	Application Rate (lb/ac)	Seeding Dates	Seeding Depths	Fertilizer Rate (10-20-20)	Lime Rate
BARLEY	96	3/1 - 5/15, 8/15 - 10/15	1"	436 lb/ac (10 lb/ 1000 sf)	2 tons/ac (90 lb/ 1000 sf)
OATS	72		1"		
RYE	112		1"		

PERMANENT SEEDING NOTES (B-4-5)

A. Seed Mixtures

1. General Use

a. Select one or more of the species or mixtures listed in Table B.3 for the appropriate Plant Hardiness Zone (from Figure B.3) and based on the site condition or purpose found on Table B.2. Enter selected mixture(s), application rates, and seeding dates in the Permanent Seeding Summary. The Summary is to be placed on the plan.

b. Additional planting specifications for exceptional sites such as shorelines, stream banks, or dunes or for special purposes such as wildlife or aesthetic treatment may be found in USDA-NRCS Technical Field Office Guide, Section 342 - Critical Area Planting.

c. For sites having disturbed area over 5 acres, use and show the rates recommended by the soil testing agency. d. For areas receiving low maintenance, apply urea form fertilizer (46-0-0) at 3 1/2 pounds per 1000 square feet (150 pounds per acre) at the time of seeding in addition to the soil amendments shown in the Permanent Seeding Summary .

2. Turfgrass Mixtures

a. Areas where turfgrass may be desired include lawns, parks, playgrounds, and commercial sites which will receive a medium to high level of maintenance.

b. Select one or more of the species or mixtures listed below based on the site conditions or purpose. Enter selected mixture(s), application rates, and seeding dates in the Permanent Seeding Summary. The summary is to be placed on the plan.

i. Kentucky Bluegrass: Full Sun Mixture: For use in areas that receive intensive management. Irrigation required in the areas of central Maryland and Eastern Shore. Recommended Certified Kentucky Bluegrass Cultivars Seeding Rate: 1.5 to 2.0 pounds per 1000 square feet. Choose a minimum of three Kentucky bluegrass cultivars with each ranging from 10 to 35 percent of the total mixture by weight.

ii. Kentucky Bluegrass/Perennial Rye: Full Sun Mixture: For use in full sun areas where rapid establishment is necessary and when turf will receive medium to intensive management. Certified Perennial Ryegrass Cultivars/Certified Kentucky Bluegrass Seeding Rate: 2 pounds mixture per 1000 square feet. Choose a minimum of three Kentucky bluegrass cultivars with each ranging from 10 to 35 percent of the total mixture by weight.

iii. Tall Fescue/Kentucky Bluegrass: Full Sun Mixture: For use in drought prone areas and/or for areas receiving low to medium management in full sun to medium shade. Recommended mixture includes; Certified Tall Fescue Cultivars 95 to 100 percent, Certified Kentucky Bluegrass Cultivars 0 to 5 percent. Seeding Rate: 5 to 8 pounds per 1000 square feet. One or more cultivars may be blended.

iv. Kentucky Bluegrass/Fine Fescue: Shade Mixture: For use in areas with shade in Bluegrass lawns. For establishment in high quality, intensively managed turf area. Mixture includes; Certified Kentucky Bluegrass Cultivars 30 to 40 percent and Certified Fine Fescue and 60 to 70 percent. Seeding Rate: 1 1/2 to 3 pounds per 1000 square feet.

Notes:
Select turfgrass varieties from those listed in the most current University of Maryland Publication, Agronomy Memo #77, "Turfgrass Cultivar Recommendations for Maryland"

Choose certified material. Certified material is the best guarantee of cultivar purity. The certification program of the Maryland Department of Agriculture, Turf and Seed Section, provides a reliable means of consumer protection and assures a pure genetic line

c. Ideal Times of Seeding for Turf Grass Mixtures Western MD: March 15 to June 1, August 1 to October 1 (Hardiness Zones: 5b, 6a) Central MD: March 1 to May 15, August 15 to October 15 (Hardiness Zone: 6b) Southern MD, Eastern Shore: March 1 to May 15, August 15 to October 15 (Hardiness Zones: 7a, 7b)

d. Till areas to receive seed by disking or other approved methods to a depth of 2 to 4 inches, level and rake the areas to prepare a proper seedbed. Remove stones and debris over 1 1/2 inches in diameter The resulting seedbed must be in such condition that future mowing of grasses will pose no difficulty.

e. If soil moisture is deficient, supply new seedings with adequate water for plant growth (1/2 to 1 inch every 3 to 4 days depending on soil texture) until they are firmly established. This is especially true when seedings are made late in the planting season, in abnormally dry or hot seasons, or on adverse sites.

Permanent Seeding Summary

Hardiness Zone (from Figure B.3): 6b
Seed Mixture (from Table B.3): B

No.	Species	Application Rate (lb/ac)	Seeding Dates	Seeding Depths	N	P_2O_5	K_2O	Lime Rate
B	TALL FESCUE	100	Mar. 1-May 15 Aug. 15-Oct. 15	1/4-1/2 in.	45 lbs. per acre (1.0 lb/ 1000 sf)	90 lb/ac (2 lb/ 1000 sf)	90 lb/ac (2 lb/ 1000 sf)	2 tons/ac (90 lb/ 1000 sf)

BUILDER/DEVELOPER'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 THE 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."

B. James Caufield — 2/12/18
SIGNATURE OF DEVELOPER — DATE

THIS DEVELOPMENT IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
APPROVED:

John L. Robertson — 2/11/18
HOWARD SOIL CONSERVATION DISTRICT — DATE

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 - 2855

NO.	REVISION	DATE

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

1. General Specifications
   a. Class of turfgrass sod must be Maryland State Certified. Sod labels must be made available to the job foreman and inspector.
   b. Sod must be machine cut at a uniform soil thickness to ¾ inch, plus or minus ½ inch, at the time of cutting. Measurement for thickness must exclude top growth and thatch. Broken pads and torn or uneven ends will not be acceptable.
   c. Standard size sections of sod must be strong enough to support their own weight and retain their size and shape when suspended vertically with a firm grasp on the upper 10 percent of the section.
   d. Sod must not be harvested or transplanted when moisture content (excessively dry or wet) may adversely affect its survival.
   e. Sod must be harvested, delivered, and installed within a period of 36 hours. Sod not transplanted within this period must be approved by an agronomist or soil scientist prior to its installation.

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

3. Sod Maintenance
   a. In the absence of adequate rainfall, water daily during the first week or as often and sufficiently as necessary to maintain moist soil to a depth of 4 inches. Water sod during the heat of the day to prevent wilting.
   b. After the first week, sod watering is required as necessary to maintain adequate moisture content.
   c. Do not mow until the sod is firmly rooted. No more than ½ of the grass leaf must be removed by the initial cutting or subsequent cuttings. Maintain a grass height of at least 3 inches unless otherwise specified.

HOWARD SOIL CONSERVATION DISTRICT (HSCD) STANDARD SEDIMENT CONTROL NOTES

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

   Other building or grading inspection approvals may not be authorized until this initial approval by the inspection agency is made. Other related state and federal permits shall be referenced, to ensure coordination and to hold contractors with this plan.
2. All vegetative and structural practices are to be installed according to the provisions of this plan and are to be in conformance with the 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, and revisions thereto.
3. Following initial soil disturbance or re-disturbance, permanent or temporary stabilization is required within three (3) calendar days as to the surface of all perimeter controls, dikes, swales, ditches, perimeter slopes, and all slopes steeper than 3 horizontal to 1 vertical (3:1); and seven (7) calendar days as to all other disturbed areas on the project site except for those areas under active grading.
4. All disturbed areas must be stabilized within the time period specified above in accordance with the 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for topsoil (Sec. B-4-2), permanent seeding (Sec. B-4-5), temporary seeding (Sec. B-4-4) and mulching (Sec. B-4-3). Temporary stabilization with mulch alone can not be applied between the fall and spring seeding dates if the ground is frozen. Supplemental stabilization (Sec. B-4-1) specifications shall be enforced in areas with >15'of cut and/or fill. Stockpiles (Sec. B-4-6) in excess of 20 ft. must be benched with stable outlet. All concentrated flow, steep slope, and highly erodible areas shall receive soil stabilization matting (Sec. B-4-8).
5. All sediment control structures are to remain in place, and are to be maintained in operative condition until permission for their removal has been obtained from the CID.
6. Site Analysis:

Total Area of Site:	5.07	Acres
Area Disturbed:	0.98	Acres
Area to be roofed or paved:	0.25	Acres
Area to be vegetatively established:	0.72	Acres
Total Cut:	450	Cu. Yds.
Total Fill:	450	Cu. Yds.
Offsite waste/borrow area location:	N/A	

7. Any sediment control practice which is disturbed by grading activity for placement of utilities must be repaired on the same day of disturbance.
8. Additional sediment control must be provided, if deemed necessary by the CID. The site and all controls shall be inspected by the contractor weekly; and the next day after each rain event. A written report by the contractor, make available upon request, is part of every inspection and should include:
   - Inspection date
   - Inspection time (routine, pre-storm event, during rain event)
   - Name and title of inspector
   - Weather information (current conditions as well as time and amount of last recorded precipitation)
   - Brief description of project's status (e.g., percent complete) and/or current activities
   - Evidence of sediment discharges
   - Identification of plan deficiencies
   - Identification of sediment controls that require maintenance
   - Identification of missing or improperly installed sediment controls
   - Compliance status regarding the sequence of construction and stabilization requirements
   - Photographs
   - Corrective action taken
   - Maintenance and/or corrective action performed
   - Other inspection items as required by the General Permit for Stormwater Associated with Construction Activities (NPDES, MDE).
9. Trenches for the construction of utilities is limited to three pipe lengths or that which can and shall be back-filled and stabilized by the end of each workday, whichever is shorter.
10. Any major changes or revisions to the plan or sequence of construction must be reviewed and approved by the HSCD prior to proceeding with construction. Minor revisions may allowed by the CID per the list of HSCD-approved field changes.
11. Disturbance shall not occur outside the L.O.D. A project is to be constructed so that grading activities begin on one grading unit (maximum acreage of 20 ac. per grading unit) at a time. Work may proceed to a subsequent grading unit when at least 50 percent of the disturbed area in the preceding grading unit has been stabilized and approved by the CID. Unless otherwise specified and approved by the HSCD, no more than 20 acres cumulatively may be disturbed at a given time.
12. Wash water from tire equipment, vehicles, wheels, pavement, and other sources must be treated in a sediment basin or other approved washrack structure.
13. Topsoil shall be stockpiled and preserved on-site for redistribution onto final grade.
14. All silt fence and Super silt fence shall be placed on-the-contour, and be indentated at 25' minimum intervals, with toes-in ends curled uphill by 2 in. elevation.
15. Stream channels must not be disturbed during the following restricted time periods (inclusive):
   - Use I and IP March 1 – June 15
   - Use III and IIIP October 1 – April 30
   - Use IV March 1 – May 31
16. A copy of this plan, the 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, and associated permits shall be on-site and available when the site is active.

B-4-8 STANDARDS AND SPECIFICATIONS FOR STOCKPILE AREAS

Definition

A mound or pile of soil protected by appropriately designed erosion and sediment control measures.

Purpose

To provide a designated location for the temporary storage of soil that controls the potential for erosion, sedimentation, and changes to drainage patterns.

Conditions Where Practice Applies

Stockpile areas are utilized when it is necessary to salvage and store soil for later use.

Criteria

1. The stockpile location and all related sediment control practices must be clearly indicated on the erosion and sediment control plan.
2. The footprint of the stockpile must be sized to accommodate the anticipated volume of material and based on a side slope ratio no steeper than 2:1. Benching must be provided in accordance with Section B-3 Land Grading.
3. Runoff from the stockpile area must drain to a suitable sediment control practice.
4. Access the stockpile area from the upgrade side.
5. Clear water runoff into the stockpile area must be minimized by use of a diversion device such as an earth dike, temporary swale or diversion fence. Provisions must be made for discharging concentrated flow in a non-erosive manner.
6. Where runoff concentrates along the toe of the stockpile fill, an appropriate erosion/sediment control practice must be used to intercept the discharge.
7. Stockpiles must be stabilized in accordance with the 3/7 day stabilization requirement as well as Standard B-4-1 Incremental Stabilization and Standard B-4-4 Temporary Stabilization.
8. If the stockpile is located on an impervious surface, a liner should be provided below the stockpile to facilitate cleanup. Stockpiles containing contaminated material must be covered with impermeable sheeting.

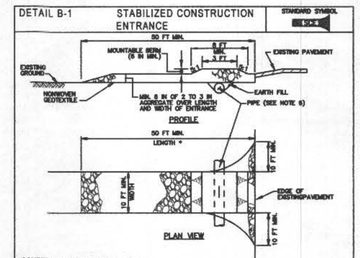
Maintenance

The stockpile area must continuously meet the requirements for Adequate Vegetative Establishment in accordance with Section B-4 Vegetative Stabilization. Side slopes must be maintained at no steeper than a 2:1 ratio. The stockpile area must be kept free of erosion. If the vertical height of a stockpile exceeds 20 feet for 2:1 slopes, 30 feet for 3:1 slopes, or 40 feet for 4:1 slopes, benching must be provided in accordance with Section B-3 Land Grading.

Table B.4. Materials Specifications for Micro-Bioretention, 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%		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
Pea gravel diaphragm	pea gravel: ASTM-D-448	No. 8 or No. 9 (1/8" to 3/8")	
Curtain drain	ornamental stone: washed cobbles	stone: 2" to 5"	
Geotextile		n/a	PE Type 1 nonwoven
Gravel (underdrains and infiltration berms)	AASHTO M-43	No. 57 or No. Aggregate (3/8" to 3/4")	
Underdrain piping	F 758, Type PS 28 or AASHTO M-278	4" to 8" rigid schedule 40 PVC or SDR35	Slotted or perforated pipe; 3/8" perf. @ 6" on center, 4 holes per row; minimum of 3" of gravel over pipes; not necessary underneath pipes. Perforated pipe shall be wrapped with 1/4 inch galvanized hardware cloth
Poured in place concrete (if required)	MSHA Mix No. 3; f' = 3500 psi at 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: Label-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.R/89; vertical loading D1-10 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.

DETAIL B-1 — STABILIZED CONSTRUCTION ENTRANCE — STANDARD SYMBOL: SCE



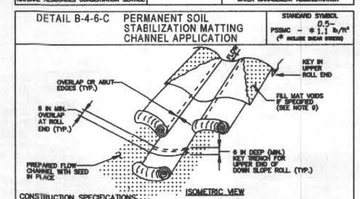
CONSTRUCTION SPECIFICATIONS

1. PLACE STABILIZED CONSTRUCTION ENTRANCE IN ACCORDANCE WITH THE APPROVED PLAN. VEHICLES MUST TRAVEL OVER THE ENTIRE LENGTH OF THE SCE. USE MINIMUM LENGTH OF 50 FEET (*30 FEET FOR SINGLE RESIDENCE LOT). USE MINIMUM WIDTH OF 10 FEET. PLACE SCE 10 FEET MINIMUM AT THE EXISTING ROAD TO PROVIDE A TURNING RADIUS.
2. PIPE ALL SURFACE WATER FLOWING TO OR DIVERTED TOWARD THE SCE UNDER THE ENTRANCE, MAINTAINING POSITIVE DRAINAGE. PROTECT PIPE INSTALLED THROUGH THE SCE WITH A MOUNTABLE BERM WITH 5:1 SLOPES AND A MINIMUM OF 12 INCHES OF STONE OVER THE PIPE. PROVIDE PIPE AS SPECIFIED ON APPROVED PLAN, OR WHEN THE SCE IS LOCATED AT A HIGH SPOT AND HAS NO DRAINAGE TO CONVEY, A PIPE IS NOT NECESSARY. A MOUNTABLE BERM IS REQUIRED WHEN SCE IS NOT LOCATED AT A HIGH SPOT.
3. PREPARE SUBGRADE AND PLACE NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION M-1 MATERIALS.
4. PLACE CRUSHED AGGREGATE (2 TO 3 INCHES IN SIZE) OR EQUIVALENT RECYCLED CONCRETE (WITHOUT REBAR) AT LEAST 6 INCHES DEEP OVER THE LENGTH AND WIDTH OF THE SCE.
5. MAINTAIN ENTRANCE IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND TO MAINTAIN CLEAN SURFACE, MOUNTABLE BERM, AND SPECIFIED DIMENSIONS. IMMEDIATELY REMOVE STONE AND/OR SEDIMENT SPILLED, DROPPED, OR TRACKED ONTO ADJACENT PUBLIC RIGHTS-OF-WAY, SIDEWALKS, AND/OR DRIVEWAYS. WASHING IS REQUIRED TO REMOVE SEDIMENT NOT INCORPORATED INTO THE STONE. WASHING ONTO ROADWAY TO WHICH TRACKED ONTO PAVEMENT IS NOT ACCEPTABLE UNLESS WASH WATER IS DIRECTED TO AN APPROVED SEDIMENT CONTROL.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL B-4-6-C — PERMANENT SOIL STABILIZATION MATTING CHANNEL APPLICATION — STANDARD SYMBOL: PSMC — 0.5 – 1.1 lb/ft² (* MAY VARY)



CONSTRUCTION SPECIFICATIONS

1. USE MATTING THAT HAS A DESIGN VALUE FOR SHEAR STRESS EQUAL TO OR HIGHER THAN THE SHEAR STRESS DESIGNATED ON APPROVED PLANS.
2. USE PERMANENT SOIL STABILIZATION MATTING MADE OF OPEN WEAVE SYNTHETIC, NON-DEGRADABLE FIBERS OR ELEMENTS OF UNIFORM THICKNESS AND DISTRIBUTED THROUGHOUT. CHEMICALS USED IN THE MAT MUST BE NON-LEACHING AND NON-TOXIC TO VEGETATION AND SEED GERMINATION AND NON-HAZARDOUS TO THE SOIL. IF PRESENT, NETTING MUST BE EXTRUDED PLASTIC WITH A MAXIMUM OPENING OF 0.5 INCH. MAT MUST BE SUFFICIENTLY BONDED OR SEWN ON 2 INCH CENTERS ALONG LONGITUDINAL AXIS OF THE MATERIAL TO PREVENT SEPARATION OF THE MAT'S COMPONENTS.
3. SECURE MATTING USING STEEL STAPLES OR WOOD STAKES. STAPLES MUST BE "U" OR "T" SHAPED STEEL WIRE HAVING A MINIMUM GAUGE OF NO. 11 AND BE A MINIMUM LENGTH OF 8 INCHES. STAPLE CROWN MUST AVERAGE 1 TO 1 ½ INCHES WIDE AND BE A MINIMUM OF 6 INCHES LONG. "T" SHAPED STAPLES MUST HAVE A MINIMUM 2 INCH MAIN LEG, A MINIMUM CROSSBAR LENGTH OF 1 INCH AND A MIN. 4 INCH LEG. WOOD STAKES MUST BE ROUGH-SAWN HARDWOOD, 1.2 TO 24 INCHES IN LENGTH, 1x3 INCH IN CROSS SECTION, AND WEDGE SHAPE AT THE BOTTOM.
4. PERFORM FINAL GRADING, TOPSOIL APPLICATION, SEEDBED PREPARATION, AND PERMANENT SEEDING IN ACCORDANCE WITH SPECIFICATIONS. IF MATTING INSTALLED WITHIN 48 HOURS OF COMPLETING SEEDING OPERATIONS, UNLESS END OF WORKDAY STABILIZATION IS SPECIFIED ON THE APPROVED EROSION AND SEDIMENT CONTROL PLAN.
5. UNROLL MATTING IN DIRECTION OF WATER FLOW, CENTERING THE FIRST ROLL ON THE CHANNEL CENTER L