

**GENERAL NOTES**

- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS MSHA STANDARDS AND SPECIFICATIONS IF AVAILABLE.
- THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS/BUREAU OF ENGINEERING/CONSTRUCTION INSPECTION DIVISION AT (410) 313-1880 AT LEAST FIVE (5) WORKING DAYS PRIOR TO THE START OF THE WORK.
- THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 OR 811 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK BEING DONE.
- TRAFFIC CONTROL DEVICES, MARKINGS AND SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). ALL STREET AND REGULATORY SIGNS SHALL BE IN PLACE PRIOR TO THE PLACEMENT OF ANY ASPHALT.
- ALL PLAN DIMENSIONS ARE TO FACE OF CURB OR TO THE FACE OF THE BUILDING UNLESS OTHERWISE NOTED.
- THE SUBJECT PROPERTY IS ZONED CE: CORRIDOR EMPLOYMENT AND CL: CONTINUING LIGHT INDUSTRIAL PER THE HOWARD COUNTY COMPREHENSIVE ZONING PLAN (10/06/2013).
- AN ENVIRONMENTAL CONCEPT PLAN ECP-18-043 WAS APPROVED FOR THIS PROJECT DATED (11/27/2018).
- A PRESUBMISSION COMMUNITY INPUT MEETING WAS HELD ON MARCH 27, 2019 FROM 6-8PM AT HOWARD COUNTY LIBRARY SYSTEM - SAVAGE BRANCH LOCATED AT 9525 DURNESS LANE, LAUREL, MD 20723.
- THIS PROJECT IS IN CONFORMANCE WITH THE LATEST HOWARD COUNTY STANDARDS.
- THE EXISTING TOPOGRAPHY IS A SURVEY OF FIELD RUN TOPO PREPARED BY MORRIS AND RITCHE ASSOCIATES, INC. DATED 11/16/2017, HOWARD COUNTY GIS TOPO (CIRCA 2011) HAS BEEN SHOWN TO SUPPLEMENT THE PLAN.
- THE COORDINATES SHOWN HEREON ARE BASED UPON THE HOWARD COUNTY GEODETIC CONTROL WHICH IS BASED UPON THE MARYLAND STATE PLANE COORDINATE SYSTEM. HOWARD COUNTY MONUMENT NOS. 48A1 AND 43G1 WERE USED FOR THIS PROJECT.
- THIS PROJECT UTILIZES ENVIRONMENTAL SITE DESIGN FOR ALL SWM PRACTICES. ALL SWM DEVICES WILL BE PRIVATELY OWNED AND MAINTAINED. ~~REDEVELOPMENT CERTIFICATE~~.
- NO GRADING, REMOVAL OF VEGETATIVE COVER OR TREES, PAVING AND NEW STRUCTURES SHALL BE PERMITTED WITHIN THE REQUIRED WETLANDS, STREAM(S) OR THEIR BUFFERS, FOREST CONSERVATION EASEMENT AREAS AND 100 YEAR FLOODPLAIN.
- EXISTING UTILITIES ARE BASED UPON FIELD RUN SURVEY PERFORMED BY MORRIS AND RITCHE ASSOCIATES, INC. DATED 11/16/2017 AND SUPPLEMENTED BY ACCUMARK DATA COLLECTED ON 11/01/2017.
- THERE IS NO FLOODPLAIN ON THIS SITE.
- THERE ARE NO STREAMS OR WETLANDS ON THIS SITE. STEEP SLOPES EXIST ALONG THE BOUNDARY ADJACENT TO THE RAIL LINES.
- THE TRAFFIC STUDY FOR THIS PROJECT WAS PREPARED BY TRAFFIC CONCEPTS, INC. DATED OCTOBER 26, 2017 AD REVISED IN JULY 2019.
- NO NOISE STUDY REQUIRED FOR THIS PROJECT.
- GEOTECHNICAL REPORT FOR THIS PROJECT WAS PREPARED BY GEO-TECHNICAL ASSOCIATES DATED MAY 11, 2018.
- BOUNDARY INFORMATION IS BASED ON A FIELD RUN BOUNDARY SURVEY PERFORMED BY MORRIS AND RITCHE ASSOCIATES, INC. DATED NOVEMBER 16, 2017.
- THE APPROVAL OF THIS SITE DEVELOPMENT PLAN (SDP) DOES NOT CONSTITUTE ANY APPROVAL OF ANY SUBSEQUENT AND ASSOCIATED SUBDIVISION PLAT/PLAN AND/OR RED-LINE REVISION PLAN. REVIEW OF THIS PROJECT FOR COMPLIANCE WITH THE HOWARD COUNTY SUBDIVISION AND LAND DEVELOPMENT REGULATIONS AND THE HOWARD COUNTY ZONING REGULATIONS SHALL OCCUR AT THE SUBDIVISION PLAT/PLAN STAGE AND/OR RED-LINE REVISION PLAN PROCESS. THEREFORE THE APPLICANT AND CONSULTANT SHOULD EXPECT ADDITIONAL AND MORE DETAILED REVIEW COMMENTS (INCLUDING COMMENTS THAT MAY ALTER THE OVERALL SITE DESIGN) AS THIS PROJECT PROGRESSES THROUGH THE PLAN REVIEW PROCESS.
- HEALTH DEPARTMENT APPROVAL OF THIS SITE DEVELOPMENT PLAN DOES NOT ENSURE APPROVAL OF BUILDING PERMIT APPLICATIONS ASSOCIATED WITH THIS PLAN. PLANS FOR CERTAIN FACILITIES TO BE CONSTRUCTED WITHIN THE LIMITS DESCRIBED BY THIS PLAN WILL REQUIRE REVIEW AND APPROVAL BY THE HEALTH DEPARTMENT. SUCH FACILITIES MAY INCLUDE, BUT ARE NOT LIMITED TO, THOSE WHICH HAVE SWIMMING POOLS, OR THAT SELL PREPARED OR PACKAGED FOODS, OR THAT MAY HAVE EQUIPMENT THAT EMITS RADIATION.
- THE CORRECTNESS OR COMPLETENESS OF EXISTING INFORMATION SHOWN ON THE DRAWINGS IS NOT WARRANTED OR GUARANTEED. THE CONTRACTOR SHALL VERIFY THE LOCATION OF UTILITIES AND UNDERGROUND FACILITIES, BY TEST PITS OR OTHER METHODS APPROVED BY THE OWNER'S REPRESENTATIVE, AS REQUIRED TO VERIFY EXACT LOCATIONS AND DEPTHS WITHIN THE LIMIT OF DISTURBANCE. ALL DISCREPANCIES BETWEEN INFORMATION SHOWN ON THE DRAWINGS AND THAT VERIFIED IN THE FIELD SHALL BE REPORTED TO THE OWNER'S REPRESENTATIVE PRIOR TO BEGINNING WORK.
- THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL. FINANCIAL SURETY IN THE AMOUNT OF \$17,250 FOR 28 SHADE TREES (\$300/TREE), 36 EVERGREEN TREES AND 10 FLOWERING TREES (\$150/TREE), AND 65 SHRUBS (\$30/SHRUB) HAS BEEN PROVIDED WITH THE DEVELOPER'S AGREEMENT.
- THIS PROJECT COMPLIES WITH THE REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY CODE FOR FOREST CONSERVATION BY PROVIDING A FEE-IN-LIEU PAYMENT. THE SITE IS IMPLEMENTING THE DEPARTMENT OF PLANNING AND ZONING IMPERVIOUS AREA POLICY TO ADDRESS THE FOREST CONSERVATION OBLIGATION. ALL PREVIOUSLY DEVELOPED AREA COVERED BY IMPERVIOUS SURFACE IS EXEMPT FROM FOREST CONSERVATION REQUIREMENTS AS PER STATE HOUSE BILL NO. 706 (DECEMBER 1, 2015).
- A FEE-IN-LIEU PAYMENT OF \$19,602 FOR FOREST CONSERVATION REQUIREMENTS WILL BE PROVIDED. A REQUEST HAS BEEN SENT TO HOWARD COUNTY FOR A FEE-IN-LIEU PAYMENT FOR THE FOREST CONSERVATION REQUIREMENTS. A WRITTEN STATEMENT LETTER HAS ACCOMPANIED THE SUBMITTAL WITH A DESCRIPTION OF THE JUSTIFICATIONS DATED JULY 18, 2019.

**PERMIT INFORMATION CHART**

SUBDIVISION NAME	PARCEL
BALTIMORE - WASHINGTON INDUSTRIAL PARK	PAR A
PLAT BOOK 17	DEED REF
PAGE 68	15893 / 00438
GRID	ZONING
1	CE-CL
TAX MAP NO.	ELECT. DIST.
48	6
CENSUS TRACT	
	606705

**STORMWATER MANAGEMENT INFORMATION CHART**

LOT/PARCEL NO.	FACILITY NAME AND NUMBER	PRACTICE TYPE (QUANTITY)	PUBLIC	PRIVATE	HOA MAINTAINS	MISC.
PAR A, 0130	MICROBIORETENTION FACILITY 1	M-6 (2020 SF)	NO	YES	NO	N/A
PAR A, 0130	MICROBIORETENTION FACILITY 2	M-6 (2005 SF)	NO	YES	NO	N/A
PAR A, 0130	MICROBIORETENTION FACILITY 3	M-6 (1046 SF)	NO	YES	NO	N/A
PAR A, 0130	UNDERGROUND SAND FILTER	M-6 (1215 SF)	NO	YES	NO	N/A

**ADDRESS CHART**

TAX MAP NO.	PARCEL	LOT	ZONE	STREET ADDRESS	UNIT NUMBER	OWNER	DEED REFERENCE
48	0130	PAR A	CE-CL INDUSTRIAL	8106 STAYTON DRIVE	N/A	SW PROPERTIES LLC	15893/438

**PARKING TABULATIONS**

USE	GROSS S.F.	PARKING RATE	PARKING SPACES REQUIRED
EXISTING WAREHOUSE	72,147 SF	0.75/1,000 SF	54
PROPOSED WAREHOUSE ADDITION	38,331 SF	0.75/1,000 SF	29
TOTAL PARKING REQUIRED (PER CODE)*			83
TOTAL EXISTING PARKING (PER SURVEY, SDP-19-043)			77
TOTAL PARKING TO BE REMOVED (REQUIRED FOR DRIVE AISLES)			16
TOTAL PROPOSED PARKING			61

- BASED ON THE PARKING LOT UTILIZATION ANALYSIS LETTER PREPARED BY SANG MIN LEE OF SW PROPERTIES LLC ON DECEMBER 11, 2018, THE PARKING SPACE NEEDS AT THE PROPOSED WAREHOUSE ADDITION WOULD NOT RESULT IN A PARKING DEFICIT FOR THE SITE.
- REFERENCE #10 ON SITE ANALYSIS DATA CHART
- A PARKING PARKING STUDY WAS PREPARED BY TRAFFIC CONCEPTS, DATED JULY 19, 2019

**APPROVED: DEPARTMENT OF PLANNING AND ZONING**

Chief, Development Engineering Division *4/29/20*  
 Chief, Division of Land Development *5/1/2020*  
 Director *5-12-2020*

**APPROVED FOR PUBLIC WATER AND PUBLIC SEWER**

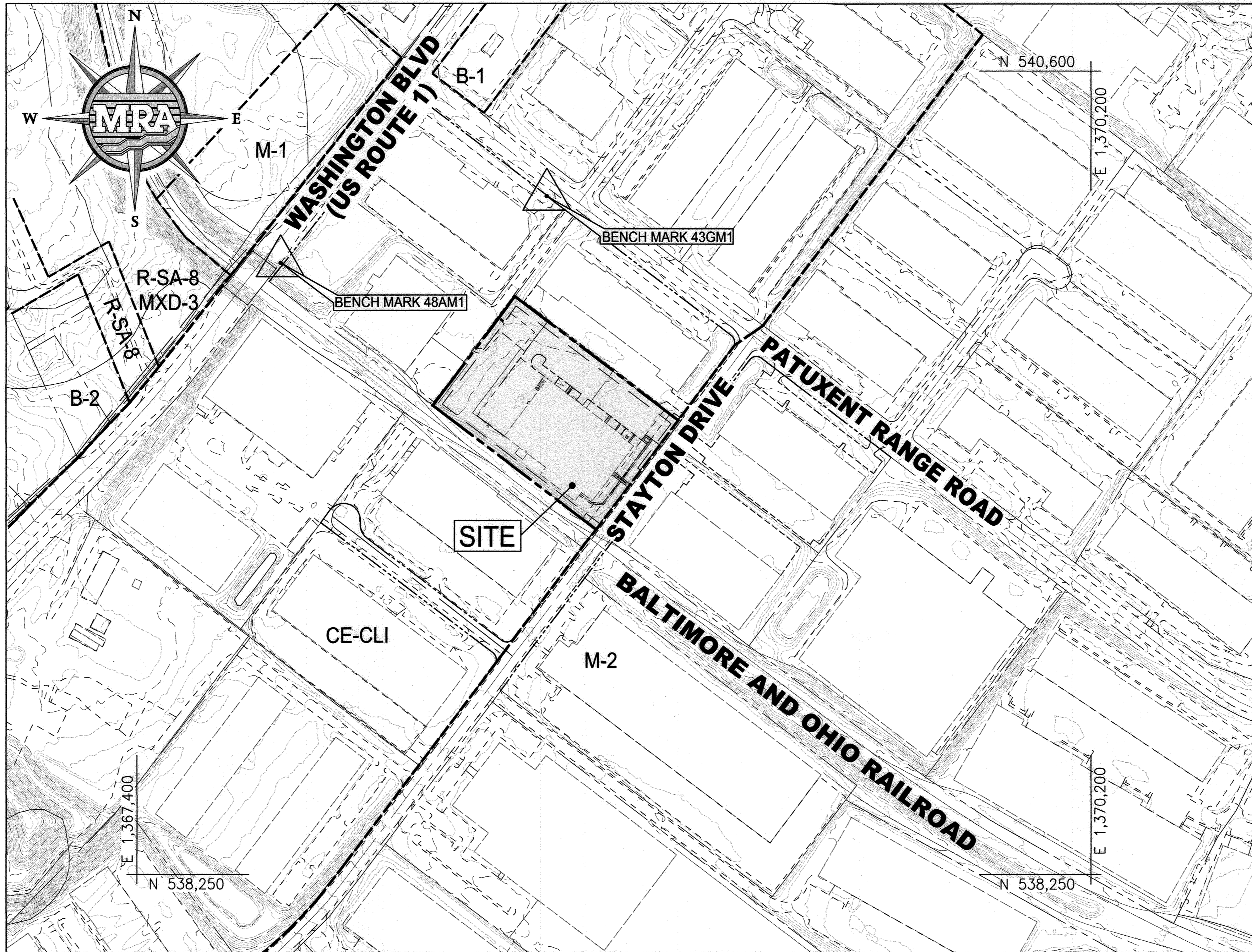
County Health Officer *Michael G.*  
 Howard County Health Department

# SITE DEVELOPMENT PLAN

## SW PROPERTIES LLC

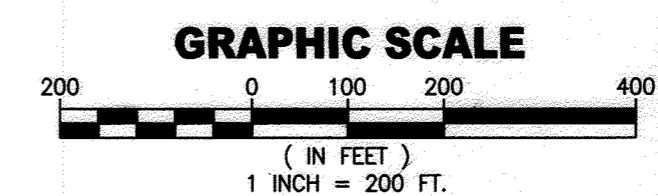
### PROPOSED WAREHOUSE ADDITION

#### HOWARD COUNTY, MARYLAND



**LOCATION PLAN**

SCALE: 1" = 200'



**DATUM**

DESIGN & DRAWING BASED ON MARYLAND COORDINATE SYSTEM: HORIZONTAL NAD 83 (1991) VERTICAL NAVD 88

**OWNER/DEVELOPER**

SW PROPERTIES LLP  
 8106 STAYTON DRIVE  
 JESSUP, MD 20794  
 ATTN: ALVIN LEE  
 PHONE: (213)-944-4448

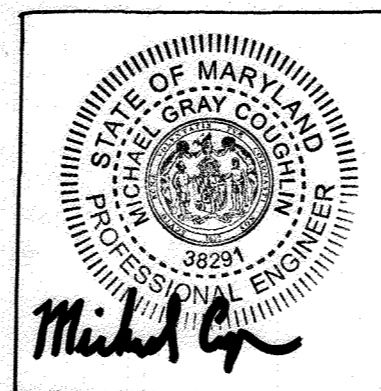
**PROFESSIONAL CERTIFICATION**

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DAILY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 38291, EXPIRATION DATE: 01/13/2022



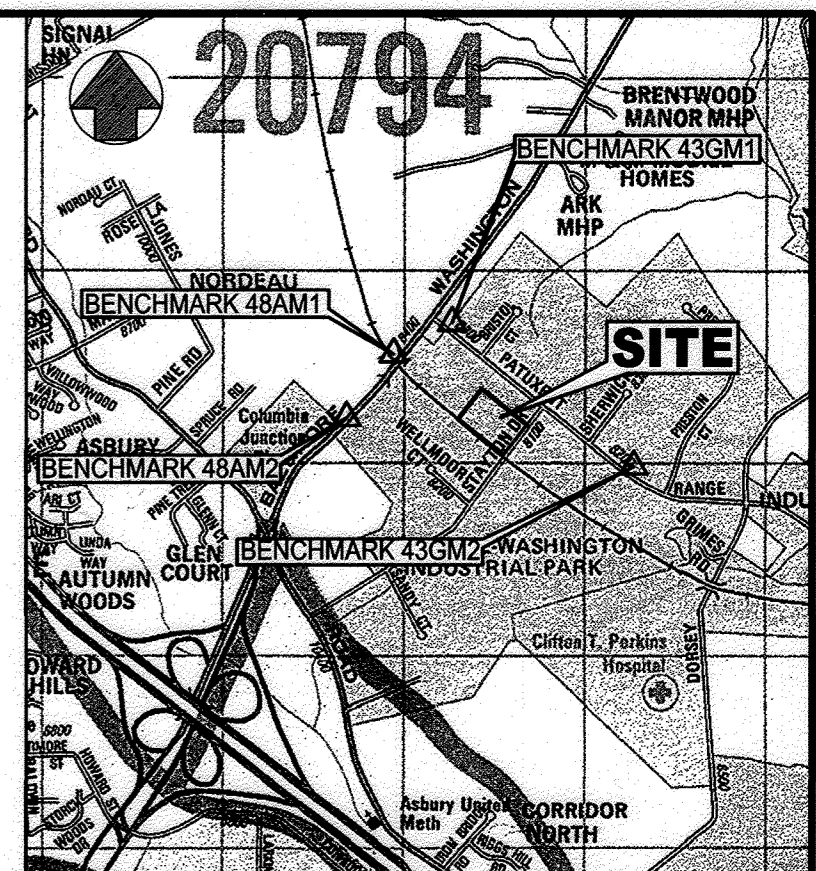
Know what's below. Call before you dig.

PROTECT YOURSELF, GIVE THREE WORKING DAYS NOTICE. THIS DRAWING DOES NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY. ALL CONSTRUCTION MUST BE DONE IN COMPLIANCE WITH THE OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970 AND ALL RULES AND REGULATIONS THERE TO APPROPRIATE.



**ASBUIT CERTIFICATION FOR PSWM**

I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THE PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND COMPLIES WITH THE APPROVED PLANS AND SPECIFICATIONS. I HAVE VERIFIED THAT THE CONTRIBUTING DRAINAGE AREA IS SUFFICIENTLY STABILIZED TO PREVENT CLOSING OF THE UNDERGROUND SWM FACILITY.  
 MICHAEL G. COUGHLIN, PE NO. 38291, DATE OF ASBUIT 02/25/2022.



COPYRIGHT ADD THE MAP PEOPLE PERMITTED USE No. 21006237 MAP No. 4935, GRID K4

**VICINITY MAP**

1" = 2,000'

**BENCHMARKS**

BENCHMARK	DESCRIPTION	ELEVATION
BM 43GM1	3/4" REBAR AT CORNER OF PATUXENT RANGE ROAD AND US ROUTE 1	NAD 83 NAVD 88 ELEV. 82.923
BM 48A1	CONCRETE MONUMENT AT US ROUTE 1 EAST OF RAILROAD CROSSING	NAD 83 NAVD 88 ELEV. 86.468

**LEGEND**

- EX. EDGE OF PAVEMENT
- EX. CURB AND GUTTER
- EX. CONCRETE WALK
- EX. C/L ROAD
- EX. ADJACENT PROPERTY LINE
- EX. PROPERTY LINE
- EX. RIGHT OF WAY
- EX. UTILITY EASEMENT
- EX. BUILDING/STRUCTURE
- EX. 2' CONTOUR
- EX. 10' CONTOUR
- EX. ZONING
- EX. = EXISTING
- PR = PROPOSED
- DS = DOWNSPOUT

**SITE ANALYSIS DATA CHART**

1. TOTAL PROJECT AREA	5.51 ACRES (240,016 SF)
2. AREA OF PLAN SUBMISSION	2.78 ACRES (121,202 SF)
3. LIMIT OF DISTURBANCE	2.78 ACRES (121,202 SF)
4. PRESENT ZONING	CE-CL
5. PROPOSED USE	WAREHOUSE ADDITION
6. PROPOSED FLOOR SPACE	38,331 SF
7. TOTAL FLOOR SPACE	110,478 SF
8. TOTAL PARKING SPACES REQUIRED	(SEE CHART THIS SHEET)
9. PARKING SPACES PROVIDED	(SEE CHART THIS SHEET)
10. MAXIMUM NUMBER OF EMPLOYEES ON SITE	27 OFFICE + 10 WAREHOUSE + 4 DRIVERS = 41 TOTAL ON PAYROLL
11. DPZ FILE REFERENCES	SDP-74-070, SDP-70-022, ECP-18-043
12. SANITARY SEWER / WATER SERVICE	PUBLIC/PUBLIC
13. TAX MAP / PARCEL NO.	48 / 130
14. ELECTION DISTRICT	6
15. COUNCIL DISTRICT	3
16. EXISTING STEEP SLOPES >15%	0.21 AC.
17. EXISTING IMPERVIOUS AREA (ON-SITE)	3.51 AC.
18. EXISTING OPEN SPACE (ON-SITE)	2.00 AC.
19. PROPOSED IMPERVIOUS (ON-SITE)	4.10 AC.
20. PROPOSED OPEN SPACE (ON-SITE)	1.41 AC.
21. EXISTING IMPERVIOUS AREA (W/IN LOD)	1.32 AC.
22. EXISTING OPEN SPACE (W/IN LOD)	1.46 AC.
23. PROPOSED IMPERVIOUS AREA (W/IN LOD)	1.90 AC.
24. PROPOSED OPEN SPACE (W/IN LOD)	0.88 AC.
25. EXISTING FOREST ON-SITE	0.41 AC.
26. ERODIBLE SOILS ON-SITE (SuB)	0.00 AC.
27. EXISTING WETLANDS AND BUFFER AREA	0.00 AC.
28. EXISTING FLOODPLAIN & BUFFER AREA	0.00 AC.

**SHEET INDEX**

01 OF 29	COVER SHEET
02 OF 29	EXISTING CONDITIONS AND DEMOLITION PLAN
03 OF 29	EROSION & SEDIMENT CONTROL PLAN EXISTING CONDITIONS (ESC 1 OF 4)
04 OF 29	EROSION & SEDIMENT CONTROL PLAN PROPOSED CONDITIONS (ESC 2 OF 4)
05 OF 29	EROSION & SEDIMENT CONTROL PLAN DETAILS (ESC 3 OF 4)
06 OF 29	EROSION & SEDIMENT CONTROL NOTES (ESC 4 OF 4)
07 OF 29	FINAL GRADING PLAN
08 OF 29	PRIVATE UTILITY PLAN
09 OF 29	PRIVATE UTILITY PROFILES
10 OF 29	PRIVATE STORM DRAIN PLAN & DRAINAGE AREA MAP
11 OF 29	PRIVATE STORM DRAIN PROFILES
12 OF 29	PRIVATE SITE PLAN
13 OF 29	PRIVATE SITE NOTES & DETAILS
14 OF 29	PRIVATE SITE & UTILITY DETAILS
15 OF 29	STORMWATER MANAGEMENT PLAN & DRAINAGE AREA MAPS
16 OF 29	STORMWATER MANAGEMENT PLAN
17 OF 29	STORMWATER MANAGEMENT PROFILES
18 OF 29	UNDERGROUND SAND FILTER NOTES & DETAILS
19 OF 29	STORMWATER MANAGEMENT NOTES
20 OF 29	GEO-TECHNICAL BORING LOGS & LOCATION PLAN
21 OF 29	LANDSCAPE PLAN
22 OF 29	LANDSCAPE NOTES & DETAILS
23 OF 29	LANDSCAPE NOTES
24 OF 29	FOREST STAND DELINEATION
25 OF 29	FOREST CONSERVATION PLAN - 1
26 OF 29	FOREST CONSERVATION PLAN - 2
27 OF 29	BUILDING ELEVATIONS
28 OF 29	LIGHTING AND PHOTOMETRIC PLAN
29 OF 29	LIGHTING DETAILS

▲ LOD FOR REDLINE REVISION= 0.033 AC. (1,431 SF)

**MORRIS & RITCHE ASSOCIATES, INC.**

ENGINEERS, PLANNERS, SURVEYORS AND LANDSCAPE ARCHITECTS  
 1220-C EAST JOPPA ROAD, SUITE 505  
 TOWSON, MARYLAND 21286  
 (410) 821-1690  
 FAX (410) 821-1748  
 Copyright 2020 Morris & Ritchie Associates, Inc.

**SITE DEVELOPMENT PLAN**  
**SW PROPERTIES LLC**  
**PROPOSED WAREHOUSE ADDITION**

**COVER SHEET**

TAX MAP 48 ~ GRID 1 ~ PARCEL 130 ~ ZONING CE-CL ~ DEED REF 15893/00438  
 PB 17 PG 68 ~ TAX ASSESSMENT DISTRICT 81 ~ 6th ELECTION DISTRICT  
 DPZ FILE REFERENCES SDP-74-070, SDP-70-022  
 8106 STAYTON DRIVE, HOWARD COUNTY, MARYLAND

DATE	REVISIONS	JOB NO.
04/16/2021	▲ ADDED MECHANICAL UNIT PADS	19637X01
03/25/2022	Update Per Asbuil Conditions	AS SHOWN
4/18/2022	▲ GREASE INTERCEPTOR AND REFRIGERATION UNIT ADDITIONS	DATE: 01/13/2020
		DRAWN BY: DTP/DK
		DESIGN BY: THIS
		REVIEW BY: MGC
		SHEET: 01 OF 29

**SITE DEMOLITION NOTES**

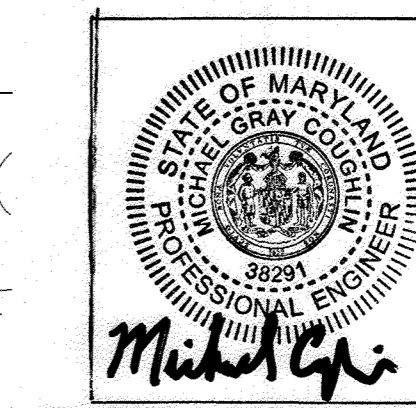
1. THE CONTRACTOR SHALL SECURE ALL REQUIRED PERMITS FROM ALL APPLICABLE AGENCIES FOR HIS DEMOLITION AND DISPOSAL OF ANY DEMOLITION MATERIAL TO BE REMOVED FROM THE SITE. THE CONTRACTOR SHALL POST BONDS AND PAY PERMIT FEES AS REQUIRED TO ALL INVOLVED AGENCIES.
2. PRIOR TO COMMENCEMENT OF DEMOLITION ACTIVITIES, THE CONTRACTOR SHALL CONTACT ALL UTILITY COMPANIES TO VERIFY THE EXACT LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL CALL "MISS UTILITY" AT 1-800-257-7777 (OR 811), 72 HOURS PRIOR TO CONSTRUCTION.
3. THE CONTRACTOR SHALL STABILIZE THE SITE AND KEEP EROSION CONTROL MEASURES IN PLACE UNTIL THE COMPLETION OF WORK OR DEEMED NECESSARY BY HOWARD COUNTY INSPECTION. THE CONTRACTOR SHALL ASSUME RESPONSIBILITY FOR THE MAINTENANCE OF EXISTING EROSION AND SEDIMENTATION CONTROLS, AND FOR INSTALLATION OF ANY NEW EROSION AND SEDIMENTATION CONTROLS AT THAT TIME (AS PER THE EROSION AND SEDIMENTATION CONTROL PLAN).
4. THE CONTRACTOR SHALL PREPARE ALL MANIFEST DOCUMENTS AS REQUIRED PRIOR TO COMMENCEMENT OF DEMOLITION.
5. ALL BUILDINGS, INCLUDING FOUNDATION WALLS, FLOOR SLABS, AND FOOTINGS INDICATED ON THIS PLAN ARE TO BE REMOVED FROM SITE. THE CONTRACTOR SHALL SECURE ANY PERMITS, PAY ALL FEES AND PERFORM CLEARING AND GRUBBING AND DEBRIS REMOVAL PRIOR TO COMMENCEMENT OF GRADING OPERATIONS.
6. ANY SIDEWALKS, FENCES, STAIRS, WALLS, DEBRIS AND RUBBISH ARE TO BE REMOVED AND DISPOSED FROM THE SITE AREA IN AN APPROVED LANDFILL. THE CONTRACTOR IS RESPONSIBLE TO SECURE ALL NECESSARY PERMITS FOR DISPOSAL OF CONSTRUCTION MATERIALS.
7. BACKFILL DEPRESSIONS, FOUNDATION HOLES AND REMOVED DRIVEWAY AREAS WITH APPROVED SOIL MATERIAL AND COMPACT. FERTILIZE, SEED AND MULCH DISTURBED AREAS NOT SUBJECT TO FURTHER SITE CONSTRUCTION. EMPLOY WATERING EQUIPMENT FOR DUST CONTROL.
8. IF ASBESTOS OR HAZARDOUS MATERIAL ARE FOUND ON SITE, THEY MUST BE REMOVED BY A LICENSED HAZARDOUS MATERIAL CONTRACTOR.
9. A COPY OF THE "EROSION AND SEDIMENT CONTROL PLAN" SHALL BE ON-SITE THROUGHOUT THE ENTIRE DEMOLITION AND CONSTRUCTION PHASES. THE CONTRACTOR SHALL CONTACT HOWARD CO. SCD BY CALLING (410) 313-0880 ONE (1) WEEK PRIOR TO THE START OF ANY DEMOLITION AND/OR CLEARING AND GRUBBING ACTIVITIES.
10. UTILITY LOCATIONS SHOWN ON THE PLANS ARE APPROXIMATE, LOCATED FROM FIELD SURVEYS OR UTILITY COMPANY RECORDS. IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE EXACT LOCATION AND DEPTH OF ALL UTILITY LINES BEFORE THE START OF DEMOLITION.
11. THE CONTRACTOR MUST SUBMIT DISCONNECT NOTIFICATION TO HOWARD CO. PUBLIC WORKS AND ALL ASSOCIATED UTILITY COMPANIES RELATING TO THIS SITE AT LEAST THREE (3) WEEKS PRIOR TO BEGINNING DEMOLITION.
12. DOMESTIC GAS SERVICES SHALL BE CAPPED AND SERVICE LINES PURGED OF RESIDUAL GAS IN ACCORDANCE WITH BALTIMORE GAS AND ELECTRIC COMPANY. WORK TO BE COORDINATED AND PAID FOR BY THE CONTRACTOR. REMOVE EXISTING SERVICE PIPING ON SITE.
13. THE CONTRACTOR SHALL CUT AND PLUG, OR ARRANGE FOR THE APPROPRIATE UTILITY COMPANY TO CUT AND PLUG ALL SERVICE PIPING AT THE STREET LINE OR MAIN, AS REQUIRED BY LOCAL UTILITY COMPANY AND/OR BALTIMORE COUNTY. ALL SERVICES MAY NOT BE SHOWN ON THIS PLAN. THE CONTRACTOR SHALL INVESTIGATE THE SITE PRIOR TO BIDDING TO DETERMINE THE EXTENT OF SERVICE PIPING TO BE REMOVED, CUT, OR PLUGGED.
14. THE CONTRACTOR SHALL PROTECT ALL IRON PINS, MONUMENTS, AND PROPERTY CORNERS THAT WILL NOT BE REMOVED AND SHALL BE RESET BY A LICENSED LAND SURVEYOR AT THE EXPENSE OF THE CONTRACTOR.
15. THE CONTRACTOR WILL BE RESPONSIBLE FOR SECURING ALL PERMITS FOR DEMOLITION FROM HOWARD COUNTY AND MUST FURNISH THE REQUIRED MATERIAL AND PAY ALL FEES.
16. PRIOR TO DEMOLITION, THE APPLICANT MUST PROVIDE CERTIFICATION, BY A PERSON LICENSED AS A PESTICIDE APPLICATOR BY THE MARYLAND STATE DEPARTMENT OF AGRICULTURE, THAT ALL AREAS OF THE BUILDING, STRUCTURE, AND LOT ARE FREE OF RODENT INFESTATION.
17. DEMOLITION OF EXISTING PAVEMENT, SIDEWALK, SITE FEATURES, AND UTILITIES WITHIN THE PUBLIC RIGHT-OF-WAY CAN ONLY OCCUR ONCE HOWARD COUNTY PERMITS HAVE BEEN ISSUED.
18. ALL EXISTING UTILITIES ALONG STAYTON DRIVE INCLUDING GAS, ELECTRIC, CABLE, FIBER OPTIC CABLE, TELEPHONE, AND ALL ASSOCIATED EQUIPMENT AND APPURTENANCES TO REMAIN UNDISTURBED AND OPERATIONAL THROUGHOUT DEMOLITION ACTIVITIES. ANY COSTS ASSOCIATED WITH DAMAGE TO EXISTING UTILITIES SHALL BE BORNE BY THE CONTRACTOR.
19. CONTRACTOR SHALL REFER TO BGE DESIGN DRAWINGS FOR ABANDONMENT, RELOCATION, AND/OR REMOVAL OF EXISTING GAS AND ELECTRIC SERVICES.
20. CONTRACTOR SHALL ONLY REMOVE EXISTING CURB WITHIN PARKING LOT WHEN ACTIVELY CONSTRUCTING PROPOSED ROAD IMPROVEMENTS.
21. THE CORRECTNESS OR COMPLETENESS OF EXISTING INFORMATION SHOWN ON THE DRAWINGS IS NOT WARRANTED OR GUARANTEED. THE CONTRACTOR SHALL VERIFY THE LOCATION OF UTILITIES AND UNDERGROUND FACILITIES BY TEST PITS OR OTHER METHODS APPROVED BY THE OWNER'S REPRESENTATIVE, AS REQUIRED TO VERIFY EXACT LOCATIONS AND DEPTHS WITHIN THE LIMIT OF DISTURBANCE. ALL DISCREPANCIES BETWEEN INFORMATION SHOWN ON THE DRAWINGS AND THAT VERIFIED IN THE FIELD SHALL BE REPORTED TO THE OWNER'S REPRESENTATIVE PRIOR TO BEGINNING WORK.

**LEGEND**

EXISTING	EX. PROPERTY LINE	EX. TREES/SHRUBS
---	EX. ADJACENT PROPERTY LINE	EX. WOODS
---	EX. RIGHT OF WAY LINE	EX. 2' CONT
---	EX. EASEMENT	EX. 10' CONT
---	EX. BUILDING SETBACK	EX. SLOPE > 15%
---	EX. WATER MAIN, VALVE, FIRE HYDRANT	LIMIT OF DISTURBANCE
---	EX. WATER METER	URBAN LAND-UDORIENTS SOIL
---	EX. SANITARY SEWER	EX. CURB (TBR)
---	EX. STORM DRAIN	EX. PAVEMENT (TBR)
---	EX. STORM DRAIN INLET	EX. CONCRETE (TBR)
---	EX. UNDERGROUND GAS	EX. CONCRETE (TBR) (TO BE REMOVED)
---	EX. UNDERGROUND ELECTRIC	EX. ROAD CENTER LINE
---	EX. GROUND LIGHT	EX. CONCRETE
---	EX. TRANSFORMER	EX. STRIPING
---	EX. TELEPHONE LINE	EX. METAL FENCE
---	EX. CATV CABLE	EX. BUILDING
---	EX. BUILDING	EX. CURB
---	EX. EDGE OF PAVEMENT	

**ASBULT CERTIFICATION FOR PSWM**

THERE IS NO ASBULT INFORMATION PROVIDED ON THIS SHEET  
MICHAEL G. COUGHAN, PE NO. 38291, DATE OF ASBULT 02/15/2022



**MORRIS & RITCHIE ASSOCIATES, INC.**

ENGINEERS, PLANNERS, SURVEYORS AND LANDSCAPE ARCHITECTS  
1220-C EAST JOPPA ROAD, SUITE 505  
TOWSON, MARYLAND 21286  
(410) 821-1690  
FAX (410) 821-1748  
Copyright 2020 Morris & Ritchie Associates, Inc.

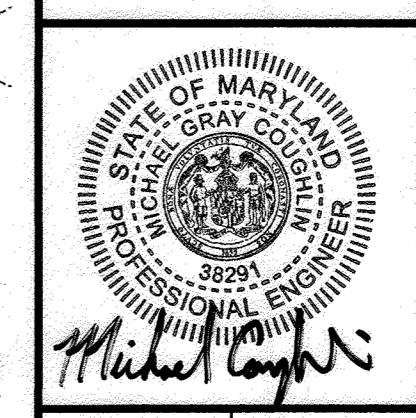
**SITE DEVELOPMENT PLAN**

**SW PROPERTIES LLC**

**PROPOSED WAREHOUSE ADDITION**

**EXISTING CONDITIONS AND DEMOLITION PLAN**

TAX MAP 48 - GRID 1 - PARCEL 130 - ZONING CE-CU - DEED REF 15893/00438  
PB 17 PG 68 - TAX ASSESSMENT DISTRICT 81 - 6TH ELECTION DISTRICT  
DPZ FILE REFERENCES SDP-74-070, SDP-70-022  
8106 STAYTON DRIVE, HOWARD COUNTY, MARYLAND



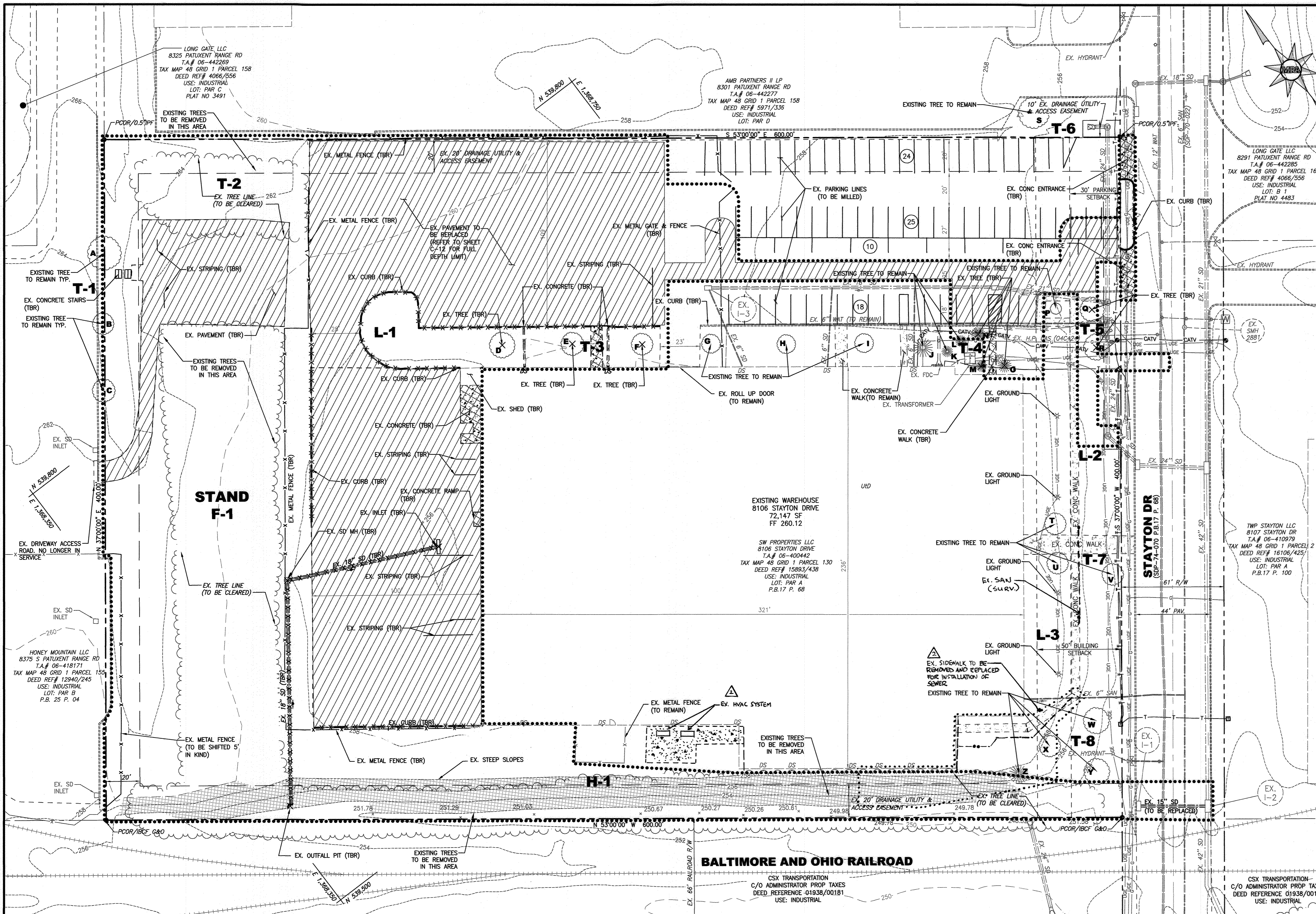
DATE	REVISIONS	JOB NO.
02/25/2022	AS-BUILT	19637X01
04/16/2023	INCREASE INTERCEPTOR AND REFRIGERATION UNIT ADDITIONS	DATE: 01/13/2020
		DRAWN BY: DTP/DK
		DESIGN BY: THS
		REVIEW BY: MGC
		SHEET: 02 OF 29

**DATUM**  
DESIGN & DRAWING BASED ON  
MARYLAND COORDINATE SYSTEM:  
HORIZONTAL NAD 83 (1991)  
VERTICAL NAVD 88  
**OWNER/DEVELOPER**  
SW PROPERTIES LLP  
8106 STAYTON DRIVE  
JESSUP, MD 20794  
ATINA ALVIN LEE  
PHONE: (213)-944-4448

**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. 38291, EXPIRATION DATE: 01/13/2022



**Know what's below. Call before you dig.**  
PROTECT YOURSELF, GIVE THREE WORKING DAYS NOTICE  
THIS DRAWING DOES NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY. ALL CONSTRUCTION MUST BE DONE IN COMPLIANCE WITH THE OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970 AND ALL RULES AND REGULATIONS THERE TO APPROPRIATE.



**FOREST STAND ANALYSIS TABLE**

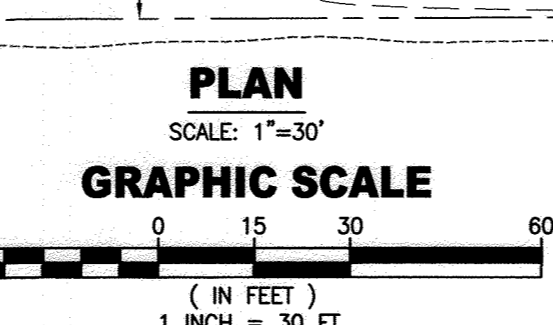
STY	A. TYPE OF COMMUNITY	B. AREA*	C. TYPICAL FOREST COVER FOR SOIL TYPE	D. MODERATELY SUITABLE INDEX	E. VALUE FOR SOIL TYPE	F. Forest Area in Sensitive Environment (Aces)²
P-1	Virginia Pine Forest	0.4	Low	Not Rated	Not Rated	0.0

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
*[Signature]* 4/29/20  
DATE  
CHIEF, DEVELOPMENT ENGINEERING DIVISION  
CHIEF, DIVISION OF LAND DEVELOPMENT  
*[Signature]* 5/12/2020  
DATE  
DIRECTOR

**SITE LANDSCAPE EXISTING TREE INVENTORY**

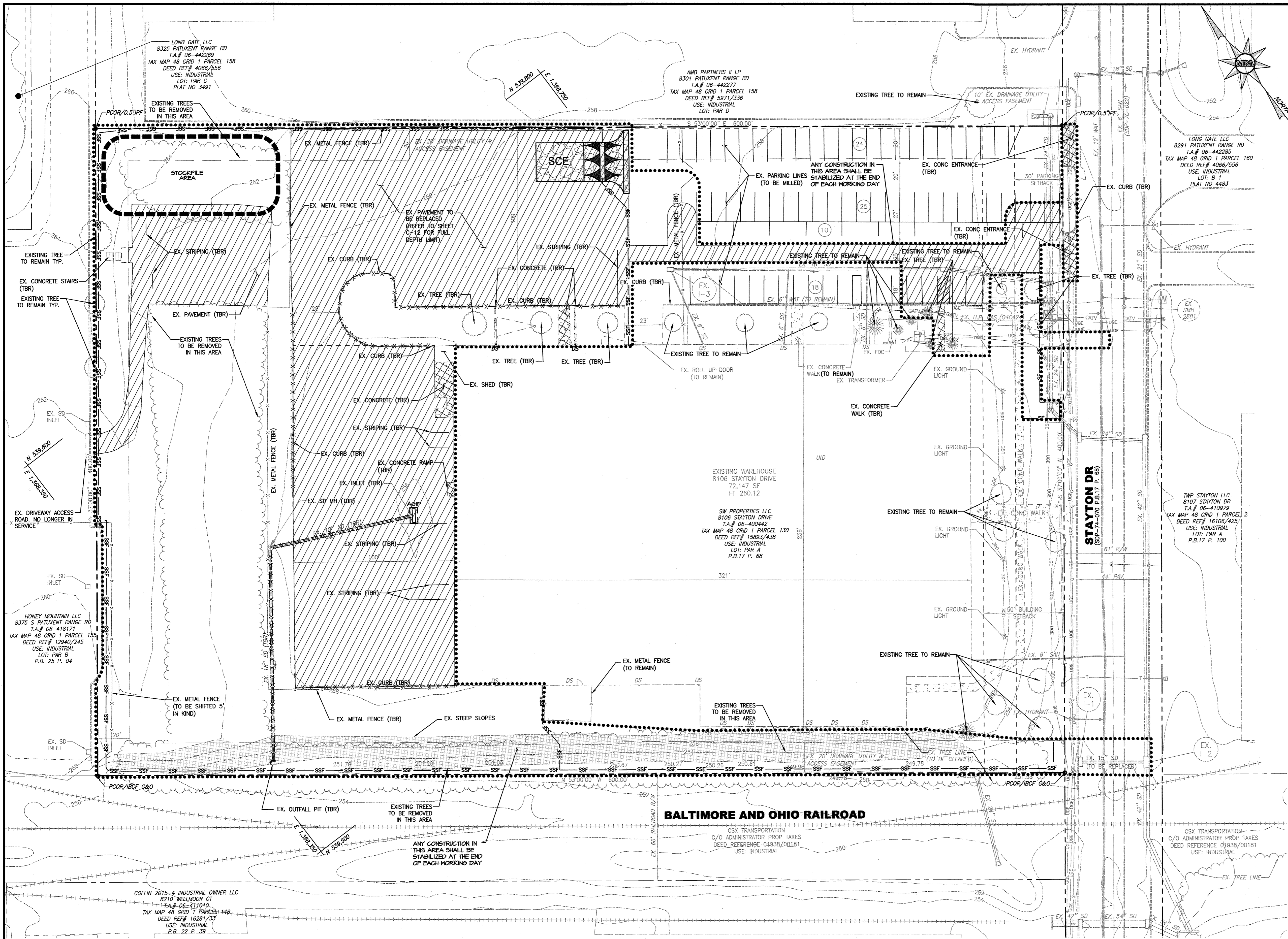
Tree ID	Botanical Name	Common Name	DBH (Inches)	Condition	Vegetative Community	Notes
A	Acer rubrum	Red Maple	13.0	Fair	(T-1) Tree Group 1	Exposed Roots
B	Acer rubrum	Red Maple	13.5	Fair	(T-1) Tree Group 1	Exposed Roots, Limb Damage
C	Acer rubrum	Red Maple	16.5	Fair	(T-1) Tree Group 1	Exposed Roots
D	Gleditsia var. inermis	Thornless Honeylocust	14.25	Fair	(T-3) Tree Group 3	
E	Gleditsia var. inermis	Thornless Honeylocust	14	Fair	(T-3) Tree Group 3	Leaning Trunk
F	Gleditsia var. inermis	Thornless Honeylocust	13.25	Fair	(T-3) Tree Group 3	
G	Gleditsia var. inermis	Thornless Honeylocust	13	Fair	(T-3) Tree Group 3	Some Canopy die back
H	Gleditsia var. inermis	Thornless Honeylocust	15	Fair	(T-3) Tree Group 3	
I	Gleditsia var. inermis	Thornless Honeylocust	13.5	Fair	(T-3) Tree Group 3	
J	Pinus strobus	Eastern Pine	15.5	Fair	(T-4) Tree Group 4	Leaning Trunk
K	Pinus strobus	Eastern Pine	10.5	Fair	(T-4) Tree Group 4	
L	Pinus strobus	Eastern Pine	11.5	Fair	(T-4) Tree Group 4	
M	Pinus strobus	Eastern Pine	10.25	Fair	(T-4) Tree Group 4	
N	Pinus strobus	Eastern Pine	13	Fair	(T-4) Tree Group 4	
O	Pinus strobus	Eastern Pine	13.5	Fair	(T-4) Tree Group 4	
P	Acer rubrum	Red Maple	8.5	Fair	(T-5) Tree Group 5	Exposed Canopy in Trunk
Q	Quercus palustris	Pin Oak	18.25	Fair	(T-5) Tree Group 5	Some Canopy die back
R	Quercus palustris	Pin Oak	22.25	Poor	(T-5) Tree Group 5	Exposed Roots, Exposed Cavity in Trunk, Canopy Die back, Suckering
S	Quercus acutissima	Sawtooth Oak	23	Fair	(T-6) Tree Group 6	
T	Acer palmatum	Japanese Maple	9	Fair	(T-7) Tree Group 7	
U	Acer saccharum	Sugar Maple	13.5	Fair	(T-7) Tree Group 7	Exposed Roots
V	Acer rubrum	Red Maple	19	Fair	(T-7) Tree Group 7	Large Exposed Cavity in Trunk, Limb Damage
W	Quercus palustris	Pin Oak	26.5	Fair	(T-8) Tree Group 8	
X	Acer saccharum	Sugar Maple	11.5	Fair	(T-8) Tree Group 8	Exposed Roots
Y	Quercus palustris	Pin Oak	21.25	Fair	(T-8) Tree Group 8	Some Damaged Limbs
Z	Pinus strobus	Eastern Pine	14.5	Fair	(T-8) Tree Group 8	Leaning Trunk

Note: Vegetative Community (T-2) Tree Group 2 consists of a small group of Pinus virginiana ranging in size of 6"-11.9" DBH in fair condition. Due to its size and isolation it does not qualify as forest.



**EXISTING VEGETATIVE COMMUNITIES**

SYMBOL	TYPE	NOTE
F-1	FOREST (F)	THE FOREST IS A VIRGINIA PINE FOREST WITH AN AVERAGE STAND SIZE OF 4'-31.5" DBH. THE GENERAL CONDITION IS FAIR TO POOR. SEE THE FOREST STAND DELINEATION PLAN FOR MORE INFORMATION.
T-1	TREE GROUP 1	SEE SITE LANDSCAPE TREE INVENTORY CHART THIS SHEET.
T-2	TREE GROUP 2	SEE SITE LANDSCAPE TREE INVENTORY CHART THIS SHEET.
T-3	TREE GROUP 3	SEE SITE LANDSCAPE TREE INVENTORY CHART THIS SHEET.
T-4	TREE GROUP 4	SEE SITE LANDSCAPE TREE INVENTORY CHART THIS SHEET.
T-5	TREE GROUP 5	SEE SITE LANDSCAPE TREE INVENTORY CHART THIS SHEET.
T-6	TREE GROUP 6	SEE SITE LANDSCAPE TREE INVENTORY CHART THIS SHEET.
T-7	TREE GROUP 7	SEE SITE LANDSCAPE TREE INVENTORY CHART THIS SHEET.
T-8	TREE GROUP 8	SEE SITE LANDSCAPE TREE INVENTORY CHART THIS SHEET.
L-1	LAWN AREA 1	SEE SITE LANDSCAPE TREE INVENTORY CHART THIS SHEET.
L-2	LAWN AREA 2	SEE SITE LANDSCAPE TREE INVENTORY CHART THIS SHEET.
H-1	HEDGE/ROW 1	SEE SITE LANDSCAPE TREE INVENTORY CHART THIS SHEET.



**LEGEND**

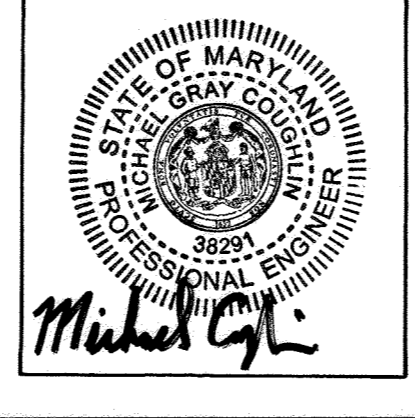
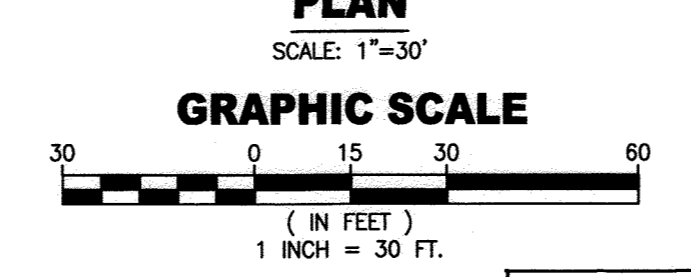
---	EXISTING
---	EX. PROPERTY LINE
---	EX. ADJACENT PROPERTY LINE
---	EX. RIGHT OF WAY LINE
---	EX. EASEMENT
---	EX. BUILDING SETBACK
---	EX. WATER MAIN, VALVE, FIRE HYDRANT
---	EX. WATER METER
---	EX. SANITARY SEWER
---	EX. STORM DRAIN
---	EX. STORM DRAIN INLET
---	EX. UNDERGROUND GAS
---	EX. UNDERGROUND ELECTRIC
---	EX. GROUND LIGHT
---	EX. TRANSFORMER
---	EX. TELEPHONE LINE
---	EX. CATV CABLE
---	EX. BUILDING
---	EX. CURB
---	EX. EDGE OF PAVEMENT
---	EX. ROAD CENTER LINE
---	EX. CONCRETE
---	EX. STRIPING
---	EX. METAL FENCE
---	EX. RAILROAD
---	EX. TREES/SHRUBS
---	EX. WOODS
---	EX. 2' CONT
---	EX. 10' CONT
---	EX. SLOPE > 15%
---	LIMIT OF DISTURBANCE
---	URBAN LAND-UDORTMENTS SOIL
---	EX. CURB (TBR)
---	EX. PAVEMENT (TBR)
---	EX. CONCRETE (TBR)
---	(TBR)
---	AGIP
---	STOCKPILE AREA
---	SILT FENCE
---	SUPER SILT FENCE
---	STABILIZED CONSTRUCTION ENTRANCE

**GENERAL NOTE**  
THE CORRECTNESS OR COMPLETENESS OF EXISTING INFORMATION SHOWN ON THE DRAWINGS IS NOT WARRANTED OR GUARANTEED. THE CONTRACTOR SHALL VERIFY THE LOCATION OF UTILITIES AND UNDERGROUND FACILITIES, BY TEST PITS OR OTHER METHODS APPROVED BY THE OWNER'S REPRESENTATIVE, AS REQUIRED TO VERIFY EXACT LOCATIONS AND DEPTHS WITHIN THE LIMIT OF DISTURBANCE. ALL DISCREPANCIES BETWEEN INFORMATION SHOWN ON THE DRAWINGS AND THAT VERIFIED IN THE FIELD SHALL BE REPORTED TO THE OWNER'S REPRESENTATIVE PRIOR TO BEGINNING WORK.

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
*Chad Schuler*  
CHIEF, DEVELOPMENT ENGINEERING DIVISION  
DATE: 4/29/20

CHIEF, DIVISION OF LAND DEVELOPMENT  
*Spencer*  
DIRECTOR  
DATE: 5-12-2020

HOWARD SCD SIGNATURE BLOCK  
THIS PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.  
*John R. Kibretsa*  
HOWARD SOIL CONSERVATION DISTRICT  
DATE: 4/22/20



**ASBUILT CERTIFICATION FOR PSWM**  
THERE IS NO ASBUILT INFORMATION PROVIDED ON THIS SHEET  
MICHAEL G. COUGHLIN, PE NO. 38291, DATE OF ASBUILT 02/15/2022

**811**  
Know what's below.  
Call before you dig.  
PROTECT YOURSELF, GIVE THREE WORKING DAYS NOTICE  
THIS DRAWING DOES NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY. ALL CONSTRUCTION MUST BE DONE IN COMPLIANCE WITH THE OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970 AND ALL RULES AND REGULATIONS THERE TO APPLICABLE.

**DATUM**  
DESIGN & DRAWING BASED ON MARYLAND COORDINATE SYSTEM:  
HORIZONTAL NAD 83 (1991)  
VERTICAL NAVD 88

**OWNER/DEVELOPER**  
SW PROPERTIES LLP  
8106 STAYTON DRIVE  
JESSUP, MD 20794  
ATtn: ALVIN LEE  
PHONE: (213)-944-4448

**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. 38291, EXPIRATION DATE: 01/13/2022

**ESC 1 OF 4**

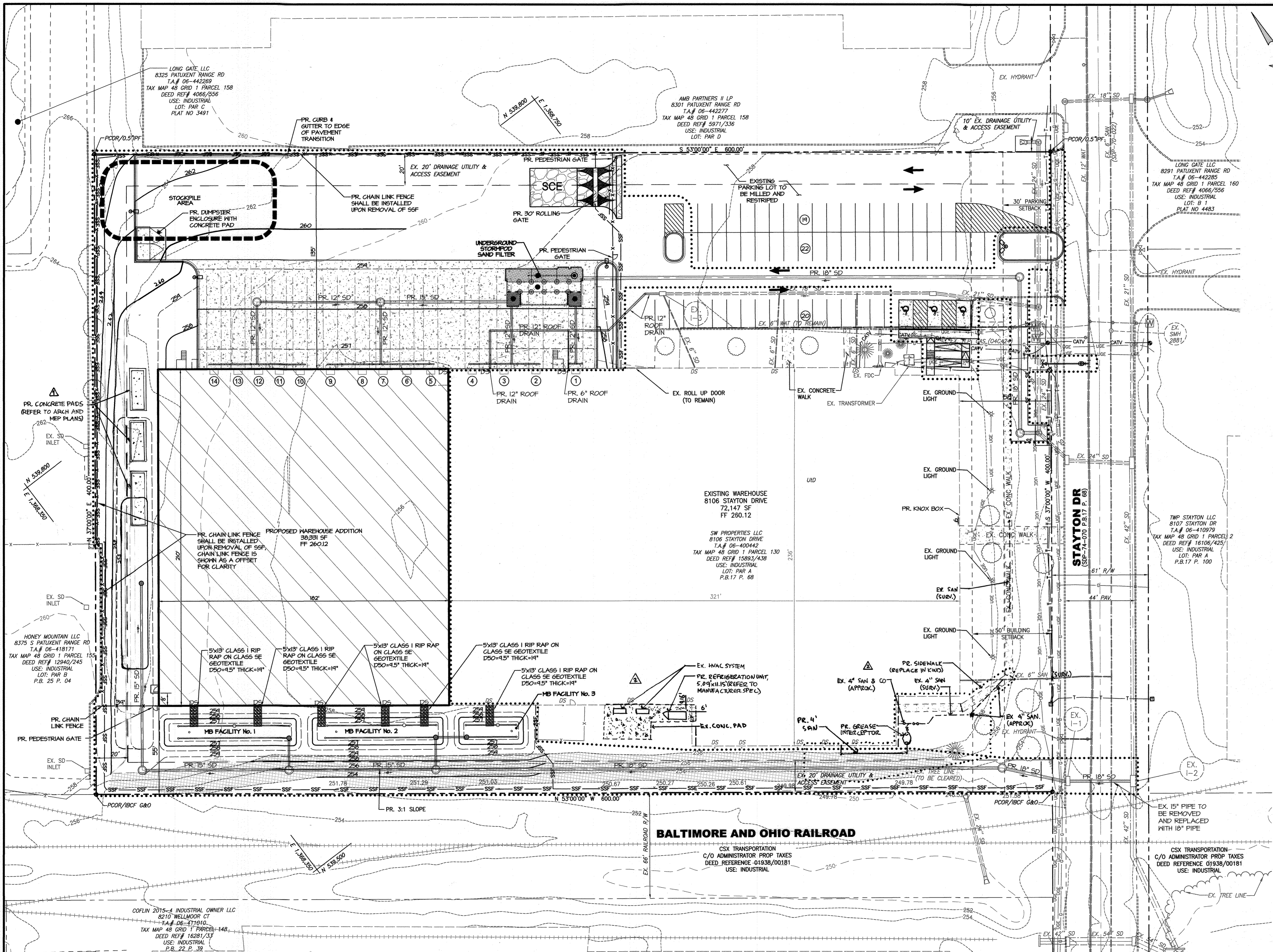
**MRA**

**MORRIS & RITCHIE ASSOCIATES, INC.**  
ENGINEERS, PLANNERS, SURVEYORS AND LANDSCAPE ARCHITECTS  
1220-C EAST JOPPA ROAD, SUITE 505  
TOWSON, MARYLAND 21286  
(410) 821-1690  
FAX (410) 821-1748  
Copyright 2020 Morris & Ritchie Associates, Inc.

**SITE DEVELOPMENT PLAN**  
**SW PROPERTIES LLC**  
**PROPOSED WAREHOUSE ADDITION**  
**EROSION & SEDIMENT CONTROL PLAN**

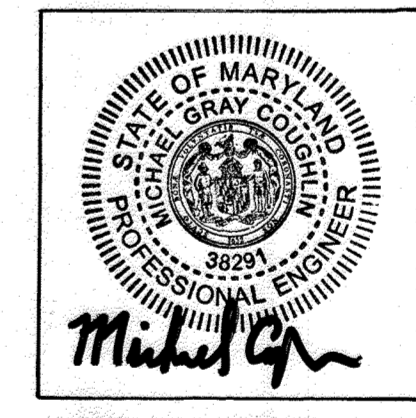
**EXISTING CONDITIONS**  
TAX MAP 48 ~ GRID 1 ~ PARCEL 130 ~ ZONING CE-CU ~ DEED REF 15883/00438  
PB 17 PG 68 ~ TAX ASSESSMENT DISTRICT 81 ~ 6th ELECTION DISTRICT  
DPZ FILE REFERENCES SDP-74-070, SDP-70-022  
8106 STAYTON DRIVE, HOWARD COUNTY, MARYLAND

DATE	REVISIONS	JOB NO.:
02/15/2022	AS-BUILT	19637X01
		SCALE: 1" = 30'
		DATE: 01/13/2020
		DRAWN BY: DTP/DK
		DESIGN BY: THS
		REVIEW BY: MGC
		SHEET: 03 OF 29

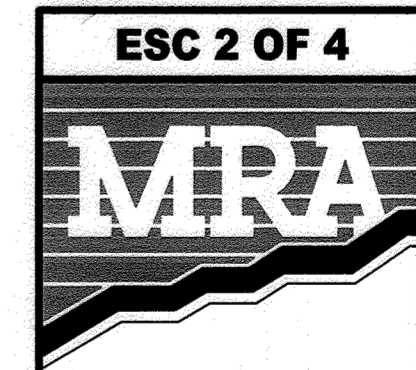


**LEGEND**

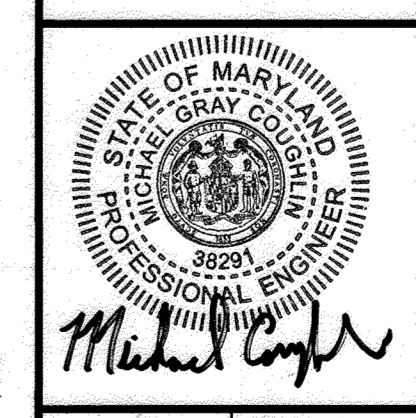
	EXISTING
	EX. PROPERTY LINE
	EX. ADJACENT PROPERTY LINE
	EX. RIGHT OF WAY LINE
	EX. EASEMENT
	EX. BUILDING SETBACK
	EX. WATER MAIN, VALVE, FIRE HYDRANT
	EX. WATER METER
	EX. SANITARY SEWER
	EX. STORM DRAIN
	EX. STORM DRAIN INLET
	EX. UNDERGROUND GAS
	EX. UNDERGROUND ELECTRIC
	EX. GROUND LIGHT
	EX. TRANSFORMER
	EX. TELEPHONE LINE
	EX. CATV CABLE
	EX. BUILDING
	EX. CURB
	EX. EDGE OF PAVEMENT
	EX. ROAD CENTER LINE
	EX. CONCRETE
	EX. STRIPING
	EX. METAL FENCE
	EX. RAILROAD
	EX. TREES/SHRUBS
	EX. WOODS
	EX. 2' CONT
	EX. 10' CONT
	EX. SLOPE > 15%
	LIMIT OF DISTURBANCE
	URBAN LAND-WOODLANDS SOIL
	PROPOSED
	STOCKPILE AREA
	SILT FENCE
	SUPER SILT FENCE
	STABILIZED CONSTRUCTION ENTRANCE
	PR. METAL FENCE
	PR. TRUCK DOCK
	PR. BUILDING
	PR. STORM DRAIN
	PR. TRENCH DRAIN
	PR. CONT 1
	PR. CONT 2
	PR. CONT 10
	PR. CURB/GUTTER
	PR. STRIPING
	PR. ADA SIGNAGE / WHEEL STOP
	PR. CONCRETE



**ASBUILT CERTIFICATION FOR PSWM**  
 THERE IS NO ASBUILT INFORMATION PROVIDED ON THIS SHEET  
 MICHAEL G. COUGHLIN, PE NO. 38291, DATE OF ASBUILT 02/25/2022.



**MORRIS & RITCHIE ASSOCIATES, INC.**  
 ENGINEERS, PLANNERS, SURVEYORS AND LANDSCAPE ARCHITECTS  
 1220-C EAST JOPPA ROAD, SUITE 505  
 TOWSON, MARYLAND 21286  
 (410) 821-1690  
 FAX (410) 821-1748  
 Copyright 2020 Morris & Ritchie Associates, Inc.

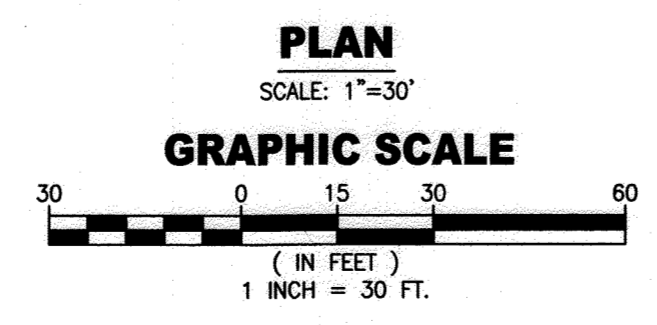


**SITE DEVELOPMENT PLAN**  
**SW PROPERTIES LLC**  
**PROPOSED WAREHOUSE ADDITION**  
**EROSION & SEDIMENT CONTROL PLAN**  
**PROPOSED CONDITIONS**  
 TAX MAP 48 ~ GRID 1 ~ PARCEL 130 ~ ZONING CE-CU ~ DEED REF 15893/00438  
 PB 17 PG 68 ~ TAX ASSESSMENT DISTRICT 81 ~ 6th ELECTION DISTRICT  
 DPZ FILE REFERENCES SDP-74-070, SDP-70-022  
 8106 STAYTON DRIVE, HOWARD COUNTY, MARYLAND

DATE	REVISIONS	JOB NO.:
04/16/2021	ADDED MECHANICAL UNIT PADS	19637X01
02/25/2022	AS-BUILT	SCALE: 1" = 30'
04/16/2023	GREASE INTERCEPTOR AND REGENERATION UNIT ADDITIONS	DATE: 01/13/2020
		DRAWN BY: DTP/DK
		DESIGN BY: THS
		REVIEW BY: MGC
		SHEET: 04 OF 29

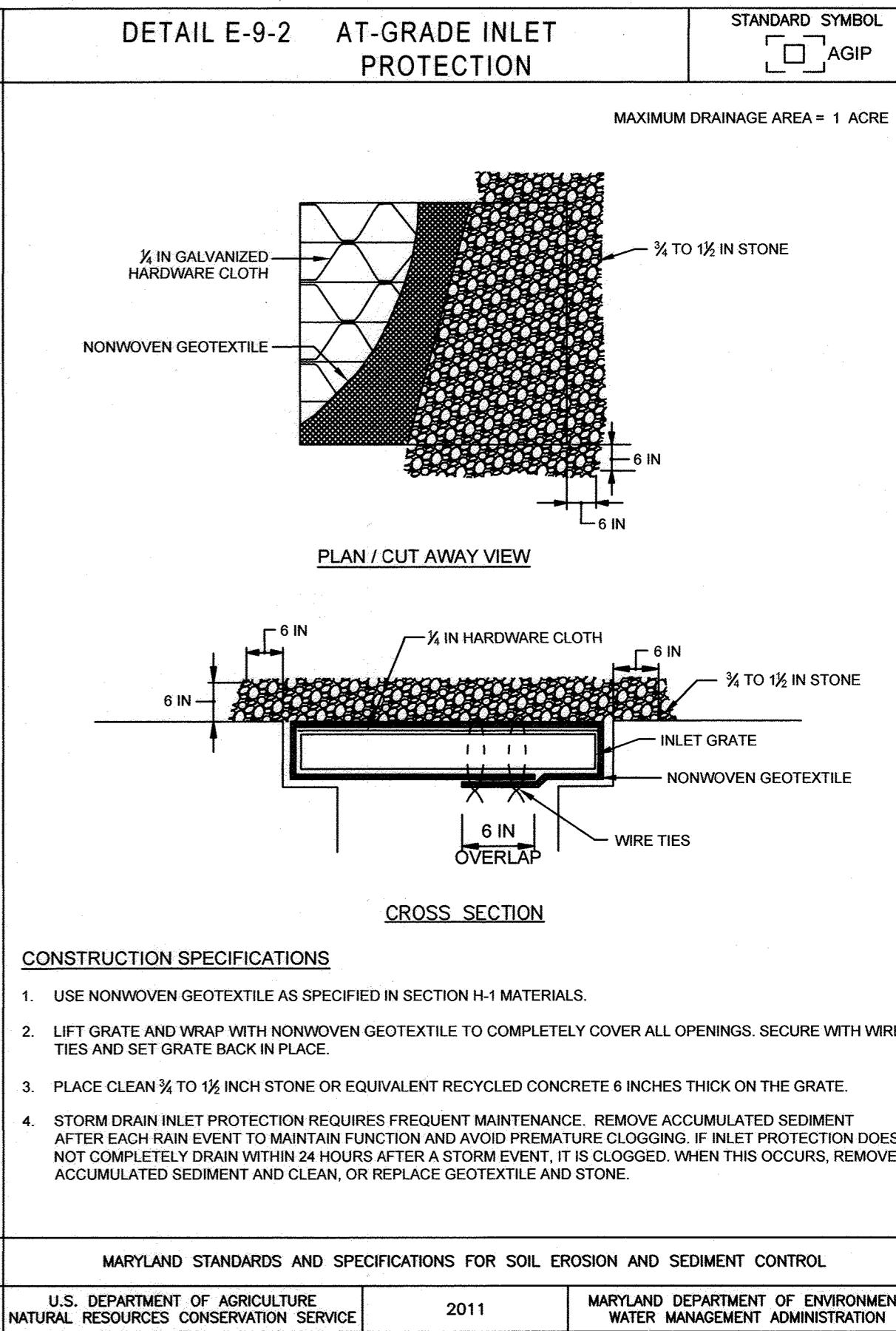
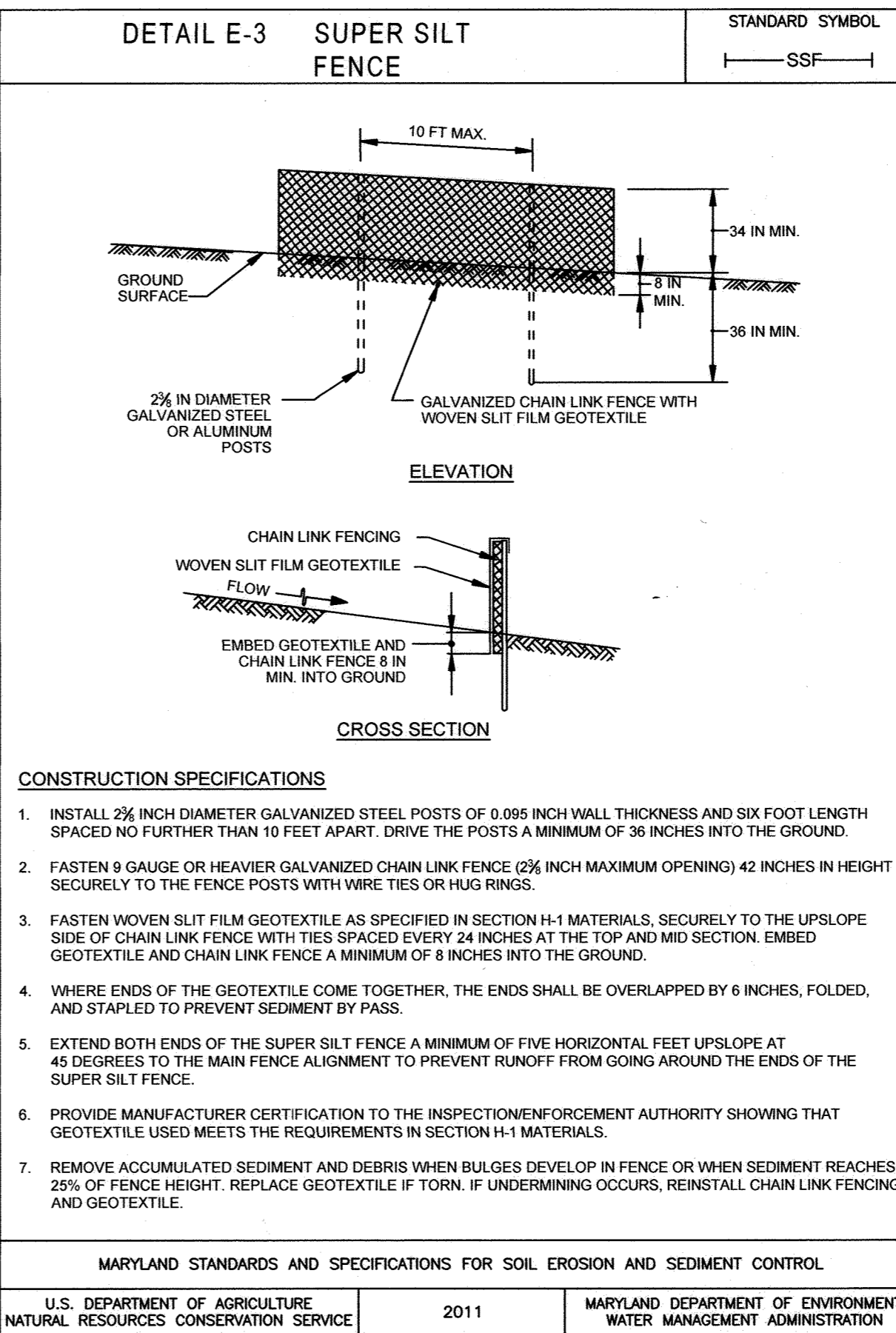
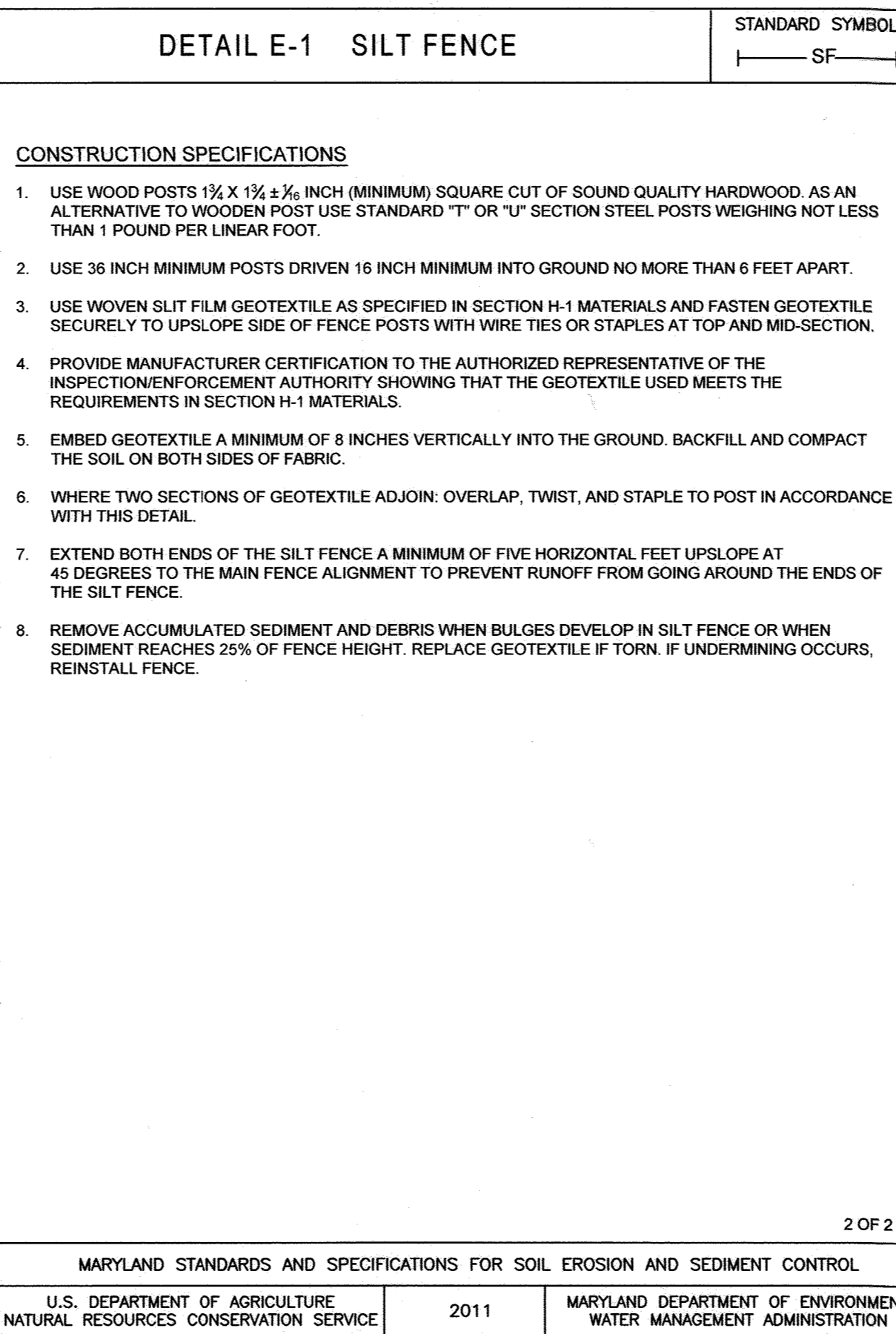
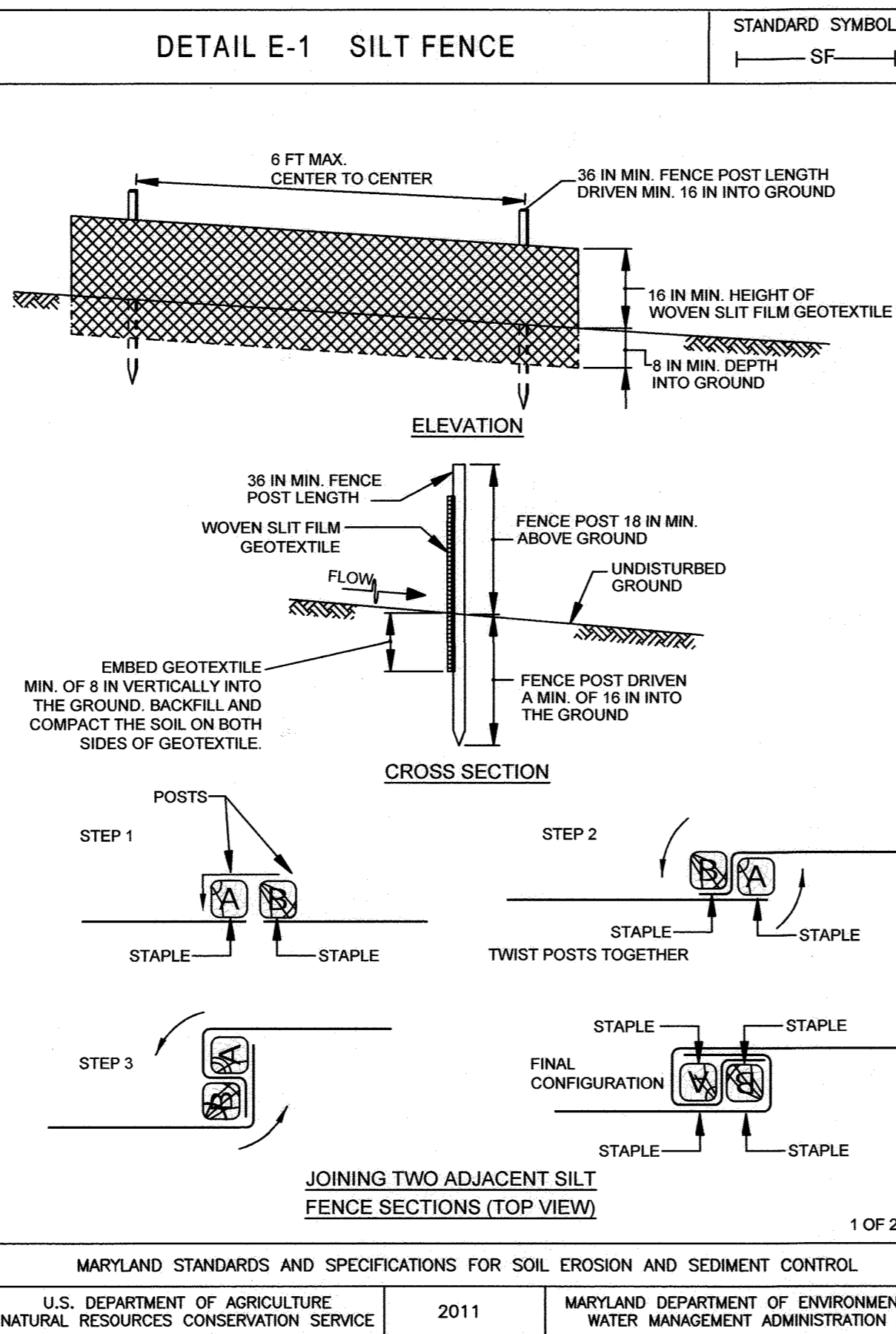
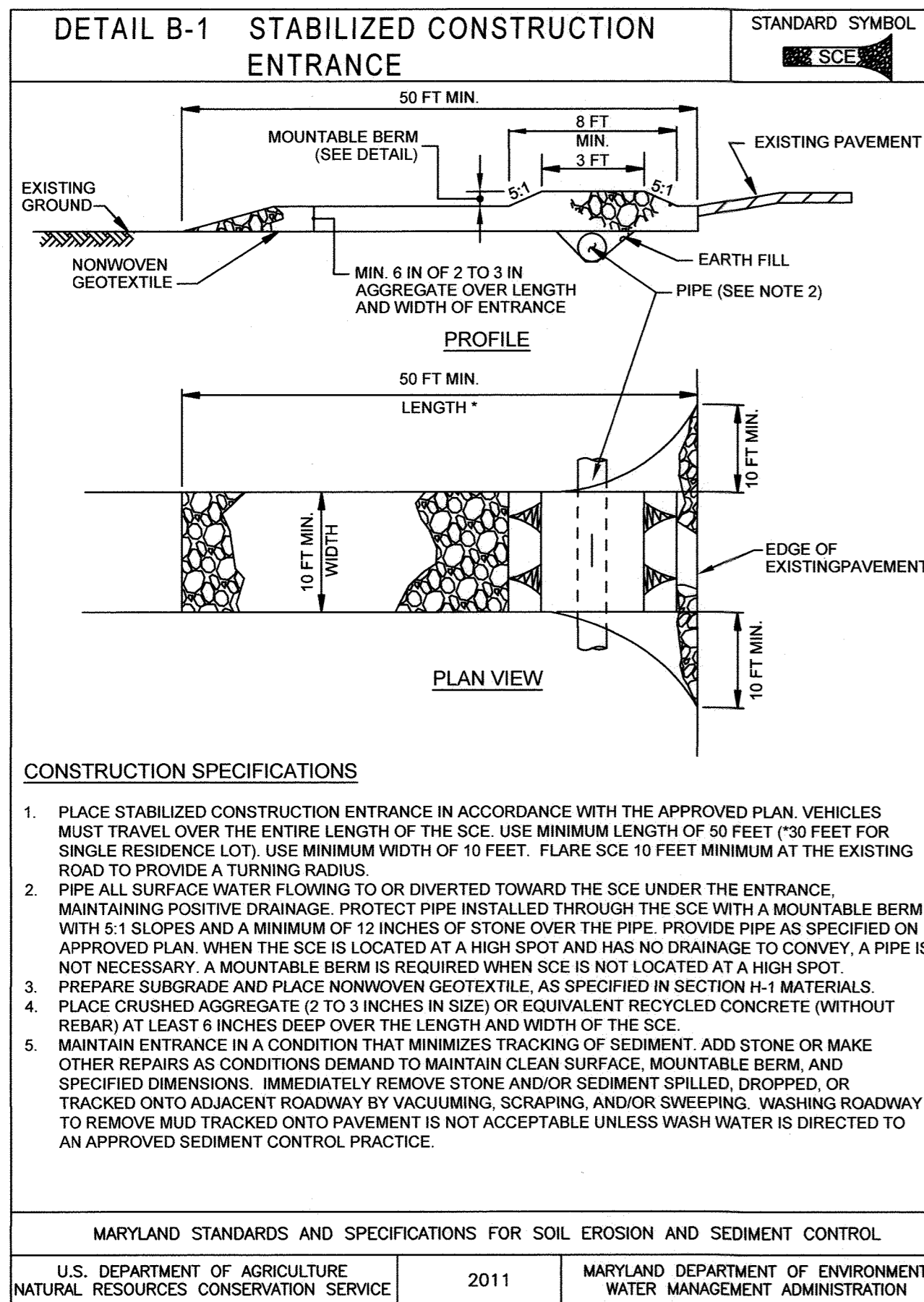
APPROVED: DEPARTMENT OF PLANNING AND ZONING  
 [Signature]  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION  
 DATE: 4/29/20

HOWARD SCD SIGNATURE BLOCK  
 THIS PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.  
 [Signature]  
 HOWARD SOIL CONSERVATION DISTRICT  
 DATE: 4/22/20



**811**  
 Know what's below.  
 Call before you dig.  
 PROTECT YOURSELF. GIVE THREE WORKING DAYS NOTICE.

**DATUM**  
 DESIGN & DRAWING BASED ON MARYLAND COORDINATE SYSTEM: HORIZONTAL NAD 83 (1991) VERTICAL NAVD 88  
**OWNER/DEVELOPER**  
 SW PROPERTIES LLP  
 8106 STAYTON DRIVE  
 JESSUP, MD 20794  
 ATTN: ALVIN LEE  
 PHONE: (213)-944-4448  
**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. 38291, EXPIRATION DATE: 01/13/2022



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

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

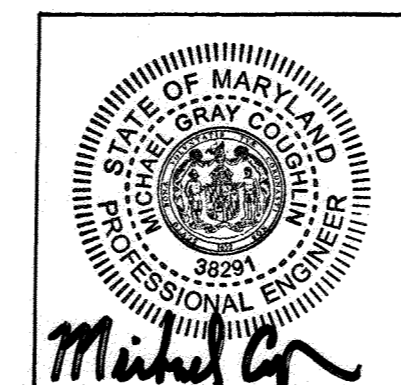
MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL  
U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE 2011 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

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

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

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
4/29/20  
5/16/2020  
5-12-2020

HOWARD SCD SIGNATURE BLOCK  
THIS PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.  
4/22/20



ASBUILT CERTIFICATION FOR PSWM  
THERE IS NO ASBUILT INFORMATION PROVIDED ON THIS SHEET  
MICHAEL G. COUGHLIN, PE NO. 38291, DATE OF ASBUILT 02/15/2022

OWNER/DEVELOPER  
SW PROPERTIES LLP  
8106 STAYTON DRIVE  
JESSUP, MD 20794  
ATTN: ALVIN LEE  
PHONE: (213)-944-4448

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. 38291, EXPIRATION DATE: 01/13/2022

**ESC 3 OF 4**

**MORRIS & RITCHIE ASSOCIATES, INC.**  
ENGINEERS, PLANNERS, SURVEYORS AND LANDSCAPE ARCHITECTS  
1220-C EAST JOPPA ROAD, SUITE 505  
TOWSON, MARYLAND 21286  
(410) 821-1690  
FAX (410) 821-1748  
Copyright 2020 Morris & Ritchie Associates, Inc.

**SITE DEVELOPMENT PLAN  
SW PROPERTIES LLC  
PROPOSED WAREHOUSE ADDITION  
EROSION & SEDIMENT CONTROL PLAN  
DETAILS**

TAX MAP 48 ~ GRID 1 ~ PARCEL 130 ~ ZONING CE-CU ~ DEED REF 15893/00438  
PB 17 PG 68 ~ TAX ASSESSMENT DISTRICT 81 ~ 6th ELECTION DISTRICT  
DPZ FILE REFERENCES SDP-74-070, SDP-70-022  
8106 STAYTON DRIVE, HOWARD COUNTY, MARYLAND

DATE	REVISIONS	JOB NO.:
02/25/2022	AS-BUILT	19637X01
		SCALE: NO SCALE
		DATE: 01/13/2020
		DRAWN BY: DTP/DK
		DESIGN BY: THS
		REVIEW BY: MGC
		SHEET: 05 OF 29

B-4-4 STANDARDS AND SPECIFICATIONS FOR TEMPORARY STABILIZATION

DEFINITION TO STABILIZE DISTURBED SOILS WITH VEGETATION FOR UP TO 6 MONTHS.

PURPOSE TO USE FAST GROWING VEGETATION THAT PROVIDES COVER ON DISTURBED SOILS.

CONDITIONS WHERE PRACTICE APPLIES EXPOSED SOILS WHERE GROUND COVER IS NEEDED FOR A PERIOD OF 6 MONTHS OR LESS.

CRITERIA 1. SELECT ONE OR MORE OF THE SPECIES OR SEED MIXTURES LISTED IN TABLE B.1 FOR THE APPROPRIATE PLANT HARDNESS ZONE (FROM FIGURE B.3), AND ENTER THEM IN THE TEMPORARY SEEDING SUMMARY TABLE.

B-4-5 STANDARDS AND SPECIFICATIONS FOR TEMPORARY STABILIZATION

DEFINITION TO STABILIZE DISTURBED SOILS WITH PERMANENT VEGETATION.

PURPOSE TO USE LONG-LIVED PERENNIAL GRASSES AND LEGUMES TO ESTABLISH PERMANENT GROUND COVER ON DISTURBED SOILS.

CONDITIONS WHERE PRACTICE APPLIES EXPOSED SOILS WHERE GROUND COVER IS NEEDED FOR 6 MONTHS OR MORE.

B-4-8 STANDARDS AND SPECIFICATIONS FOR STOCKPILE AREA

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.

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 START OF ANOTHER PHASE OF CONSTRUCTION OR OPENING OF ANOTHER GRADING UNIT. D. PRIOR TO THE REMOVAL OR MODIFICATION OF SEDIMENT CONTROL PRACTICES.

OTHER BUILDING OR GRADING INSPECTION APPROVALS MAY NOT BE AUTHORIZED UNTIL THIS INITIAL APPROVAL BY THE INSPECTION AGENCY IS MADE. OTHER RELATED STATE AND FEDERAL PERMITS SHALL BE REFERENCED, TO ENSURE COORDINATION AND TO AVOID CONFLICTS WITH THIS PLAN.

- 2. ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, AND REVISIONS THERETO. 3. FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION IS REQUIRED WITHIN THREE (3) CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER CONTROLS, DICES, 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 ONLY BE APPLIED BETWEEN THE FALL AND SPRING SEEDING DATES IF THE GROUND IS FROZEN. INCREMENTAL STABILIZATION (SEC. B-4-1) SPECIFICATIONS SHALL BE ENFORCED IN AREAS WITH >15' OF CUT AND/OR FILL. STOCKPILES (SEC. B-4-8) IN EXCESS OF 20 FT. MUST BE BENCHED WITH STABLE OUTLET, ALL CONCENTRATED FLOW, STEEP SLOPE, AND HIGHLY ERODIBLE AREAS SHALL RECEIVE SOIL STABILIZATION MATTING (SEC. B-4-6). 5. ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE, AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMISSION FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE CID.

6. SITE ANALYSIS: TOTAL AREA OF SITE: 5.51 ACRES. AREA TO BE ROOFED OR PAVED: 2.78 ACRES. AREA TO BE VEGETATIVELY STABILIZED: 0.93 ACRES. TOTAL CUT: 3080 CU. YDS. TOTAL FILL: 2560 CU. YDS. OFFSITE WASTE/BORROW AREA LOCATION: [SEE NOTE 12].

7. ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE. 8. ADDITIONAL SEDIMENT CONTROL MUST BE PROVIDED, IF DEEMED NECESSARY BY THE CID, THE SITE AND ALL CONTROLS SHALL BE INSPECTED BY THE CONTRACTOR WEEKLY, AND THE NEXT DAY AFTER EACH RAIN EVENT. A WRITTEN REPORT BY THE CONTRACTOR, MADE AVAILABLE UPON REQUEST, IS PART OF EVERY INSPECTION AND SHOULD INCLUDE: • INSPECTION DATE • INSPECTION TYPE (ROUTINE, PRE-STORM EVENT, DURING RAIN EVENT) • NAME AND TITLE OF INSPECTOR • WEATHER INFORMATION (CURRENT CONDITIONS AS WELL AS TIME AND AMOUNT OF LAST RECORDED PRECIPITATION) • BRIEF DESCRIPTION OF PROJECT'S STATUS (E.G., PERCENT COMPLETE) AND/OR CURRENT ACTIVITIES • EVIDENCE OF SEDIMENT DISCHARGES • IDENTIFICATION OF PLAN DEFICIENCIES • IDENTIFICATION OF SEDIMENT CONTROLS THAT REQUIRE MAINTENANCE • IDENTIFICATION OF MISSING OR IMPROPERLY INSTALLED SEDIMENT CONTROLS • COMPLIANCE STATUS REGARDING THE SEQUENCE OF CONSTRUCTION AND STABILIZATION REQUIREMENTS • PHOTOGRAPHS

- MONITORING/SAMPLING • MAINTENANCE AND/OR CORRECTIVE ACTION PERFORMED • OTHER INSPECTION ITEMS AS REQUIRED BY THE GENERAL PERMIT FOR STORMWATER ASSOCIATED WITH CONSTRUCTION ACTIVITIES (NPDES, MDC). 9. TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO THREE PIPE LENGTHS OR THAT WHICH CAN AND SHALL BE BACK-FILLED AND STABILIZED BY THE END OF EACH WORKDAY, WHICHEVER IS SHORTER. 10. ANY MAJOR CHANGES OR REVISIONS TO THE PLAN OR SEQUENCE OF CONSTRUCTION MUST BE REVIEWED AND APPROVED BY THE HSCD PRIOR TO PROCEEDING WITH CONSTRUCTION. MINOR REVISIONS MAY BE ALLOWED BY THE CID PER THE LIST OF HSCD-APPROVED FIELD CHANGES. 11. DISTURBANCE SHALL NOT OCCUR OUTSIDE THE L.O.D.. A PROJECT IS TO BE SEQUENCED SO THAT GRADING ACTIVITIES BEGIN ON ONE GRADING UNIT (MAXIMUM ACREAGE OF 20 AC. PER GRADING UNIT) AT A TIME. WORK MAY PROCEED TO A SUBSEQUENT GRADING UNIT WHEN AT LEAST 50 PERCENT OF THE DISTURBED AREA IN THE PRECEDING GRADING UNIT HAS BEEN STABILIZED AND APPROVED BY THE CID, UNLESS OTHERWISE SPECIFIED AND APPROVED BY THE HSCD, NO MORE THAN 30 ACRES CUMULATIVELY MAY BE DISTURBED AT A GIVEN TIME. 12. WASH WATER FROM ANY EQUIPMENT, VEHICLES, WHEELS, PAVEMENT, AND OTHER SOURCES MUST BE TREATED IN A SEDIMENT BASIN OR OTHER APPROVED WASHOUT STRUCTURE. 13. TOPSOIL SHALL BE STOCKPILED AND PRESERVED ON-SITE FOR REDISTRIBUTION ONTO FINAL GRADE. 14. ALL SILT FENCE AND SUPER SILT FENCE SHALL BE PLACED ON-THE-CONTOUR, AND BE IMBRICATED AT 25' MINIMUM INTERVALS, WITH LOWER ENDS CURLED UPHILL BY 2' IN ELEVATION. 15. STREAM CHANNELS MUST NOT BE DISTURBED DURING THE FOLLOWING RESTRICTED TIME PERIODS (INCLUSIVE): • USE I AND II MARCH 1 - JUNE 15 • USE III AND IIII 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. 17. UNSUITABLE MATERIAL SHALL BE REMOVED FROM SITE AND DISPOSED OF AT AN OFFSITE AREA COVERED BY AN ACTIVE GRADING PERMIT, WITH FUNCTIONING EROSION AND SEDIMENT CONTROLS IN PLACE.

OWNERS/DEVELOPER CERTIFICATION:

"I/WE HEREBY CERTIFY THAT ANY CLEARING, GRADING, CONSTRUCTION, OR DEVELOPMENT WILL BE DONE PURSUANT TO THIS APPROVED EROSION AND SEDIMENT CONTROL PLAN, INCLUDING INSPECTING AND MAINTAINING CONTROLS, AND THAT THE RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF TRAINING AT A MARYLAND DEPARTMENT OF THE ENVIRONMENT (MDE) APPROVED TRAINING PROGRAM FOR THE CONTROL ON EROSION AND SEDIMENT PRIOR TO BEGINNING THE PROJECT. I CERTIFY RIGHT-OF-ENTRY FOR PERIODIC ON-SITE EVALUATION BY HOWARD COUNTY, THE HOWARD SOIL CONSERVATION DISTRICT AND/OR MDE."

OWNER'S/DEVELOPER'S SIGNATURE: [Signature] DATE: 01/13/2020 PRINTED NAME & TITLE: Song Lee / owner

DESIGN CERTIFICATION:

"I HEREBY CERTIFY THAT THIS PLAN HAS BEEN DESIGNED IN ACCORDANCE WITH CURRENT MARYLAND EROSION AND SEDIMENT CONTROL LAWS, REGULATIONS, AND STANDARDS, THAT IT REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE, AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT."

DESIGNER'S SIGNATURE: [Signature] DATE: 01/13/2020 MICHAEL COUGHLIN PRINTED NAME: MD REGISTRATION NO. 38291 (P.E.) R.L.S. OR R.L.A. (CIRCLE ONE)

TABLE B.1: TEMPORARY SEEDING FOR SITE STABILIZATION

Table with columns: PLANT SPECIES, SEEDING RATE (LB/AC, LB/1,000 FT^2), SEEDING DEPTH (INCHES), RECOMMENDED SEEDING DATES BY PLANT HARDNESS ZONE (5B AND 6A, 6B, 7A AND 7B), FERTILIZER RATE (10-20-20). Rows include COOL-SEASON GRASSES (Annual Ryegrass, Barley, Oats, Wheat), and WARM-SEASON GRASSES (Foxtail Millet, Pearl Millet).

NOTES: 1. SEEDING RATES FOR WARM-SEASON GRASSES ARE IN POUNDS OF PURE LIVE SEED (PLS). ACTUAL PLANTING RATES SHALL BE ADJUSTED TO REFLECT PERCENT SEED GERMINATION AND PURITY, AS TESTED. ADJUSTMENTS ARE USUALLY NOT NEEDED FOR THE COOL-SEASON GRASSES. SEEDING RATES LISTED ABOVE ARE FOR TEMPORARY SEEDINGS, WHEN PLANTED ALONE. WHEN PLANTED AS A NURSE CROP WITH PERMANENT SEED MIXES, USE 1/3 OF THE SEEDING RATE LISTED ABOVE FOR BARLEY, OATS, AND WHEAT. FOR SMALLER-SEEDED GRASSES (ANNUAL RYEGRASS, PEARL MILLET, FOXTAIL MILLET) DO NOT EXCEED MORE THAN 5% (BY WEIGHT) OF OVERALL PERMANENT SEEDING MIX. CEREAL RYE GENERALLY SHOULD NOT BE USED AS A NURSE CROP, UNLESS PLANTING WILL OCCUR IN VERY LATE FALL BEYOND THE SEEDING DATES FOR OTHER TEMPORARY SEEDINGS. CEREAL RYE HAS ALLELOPATHIC PROPERTIES THAT INHIBIT THE GERMINATION AND GROWTH OF OTHER PLANTS. IF IT MUST BE USED AS A NURSE CROP, SEED AT 1/3 OF THE RATE LISTED ABOVE. OATS ARE THE RECOMMENDED NURSE CROP FOR WARM-SEASON GRASSES. 2. FOR SANDY SOILS, PLANT SEEDS AT TWICE THE DEPTH LISTED ABOVE. 3. THE PLANTING DATES LISTED ABOVE ARE AVERAGES FOR EACH ZONE AND MAY REQUIRE ADJUSTMENT TO REFLECT LOCAL CONDITIONS, ESPECIALLY NEAR THE BOUNDARIES OF THE ZONE.

PERMANENT SEEDING SUMMARY

Table with columns: No., SPECIES, APPLICATION RATE (lb/Ac), SEEDING DATES, SEEDING DEPTHS, FERTILIZER RATE (N, P2O5, K2O), LIME RATE. Rows include SWITCH GRASS, CREEPING RED FESCUE, PATRIDGE PEA, TALL FESCUE, KENTUCKY BLUE GRASS, PERENNIAL RYEGRASS.

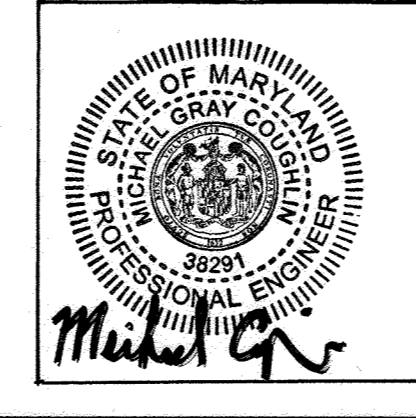
\* ADDITIONAL PLANTING DATES DURING WHICH SUPPLEMENTAL WATERING MAY BE NEEDED TO ENSURE PLANT ESTABLISHMENT. \*\* WARM-SEASON GRASSES NEED A SOIL TEMPERATURE OF AT LEAST 50 DEGREES F IN ORDER TO GERMINATE. IF SOIL TEMPERATURES ARE COLDER THAN 50 DEGREES, OR MOISTURE IS NOT ADEQUATE, THE SEEDS WILL REMAIN DORMANT UNTIL CONDITIONS ARE FAVORABLE. IN GENERAL, PLANTING DURING THE LATTER PORTION OF THIS PERIOD ALLOWS MORE TIME FOR WEED EMERGENCE AND WEED CONTROL PRIOR TO PLANTING. WHEN SELECTING A PLANTING DATE, CONSIDER THE NEED FOR WEED CONTROL VS. THE LIKELIHOOD OF HAVING SUFFICIENT MOISTURE FOR PLANTINGS, ESPECIALLY ON DROUGHTY SITES.

DAILY STABILIZATION

THIS NOTE SHOULD BE USED FOR MINIMAL AREAS WITHIN THE LIMITS OF DISTURBANCE THAT DO NOT DRAIN TO A SEDIMENT CONTROL MEASURE AND/OR WHERE THE INSTALLATION OF CONTROLS IS NOT FEASIBLE. (ROAD WIDENING, SIDEWALK INSTALLATION, ETC.). THE CONTRACTOR SHALL ONLY DISTURB THAT AREA WHICH CAN BE COMPLETED AND STABILIZED BY THE END OF EACH WORKING DAY. STABILIZATION SHALL BE AS FOLLOWS: 1.) FOR AREAS TO BE PAVED, THE APPLICATION OF STONE BASE. 2.) FOR AREAS TO BE VEGETATIVELY STABILIZED: a.) PERMANENT SEED AND SOIL STABILIZATION MATTING OR SOD FOR ALL STEEP SLOPES, CHANNELS OR SWALES. b.) PERMANENT SEED AND MULCH FOR ALL OTHER AREAS. ANY AREAS WHICH CAN NOT BE STABILIZED BY THE END OF EACH WORKING DAY MUST HAVE SILT FENCE INSTALLED ON THE DOWNSLOPE SIDE.

APPROVED: DEPARTMENT OF PLANNING AND ZONING [Signature] DATE: 4-29-20 CHIEF, DEVELOPMENT ENGINEERING DIVISION [Signature] DATE: 5/1/2020 CHIEF, DIVISION OF LAND DEVELOPMENT [Signature] DATE: 5-12-2020 DIRECTOR

HOWARD SCD SIGNATURE BLOCK [Signature] DATE: 4/22/20 HOWARD SOIL CONSERVATION DISTRICT

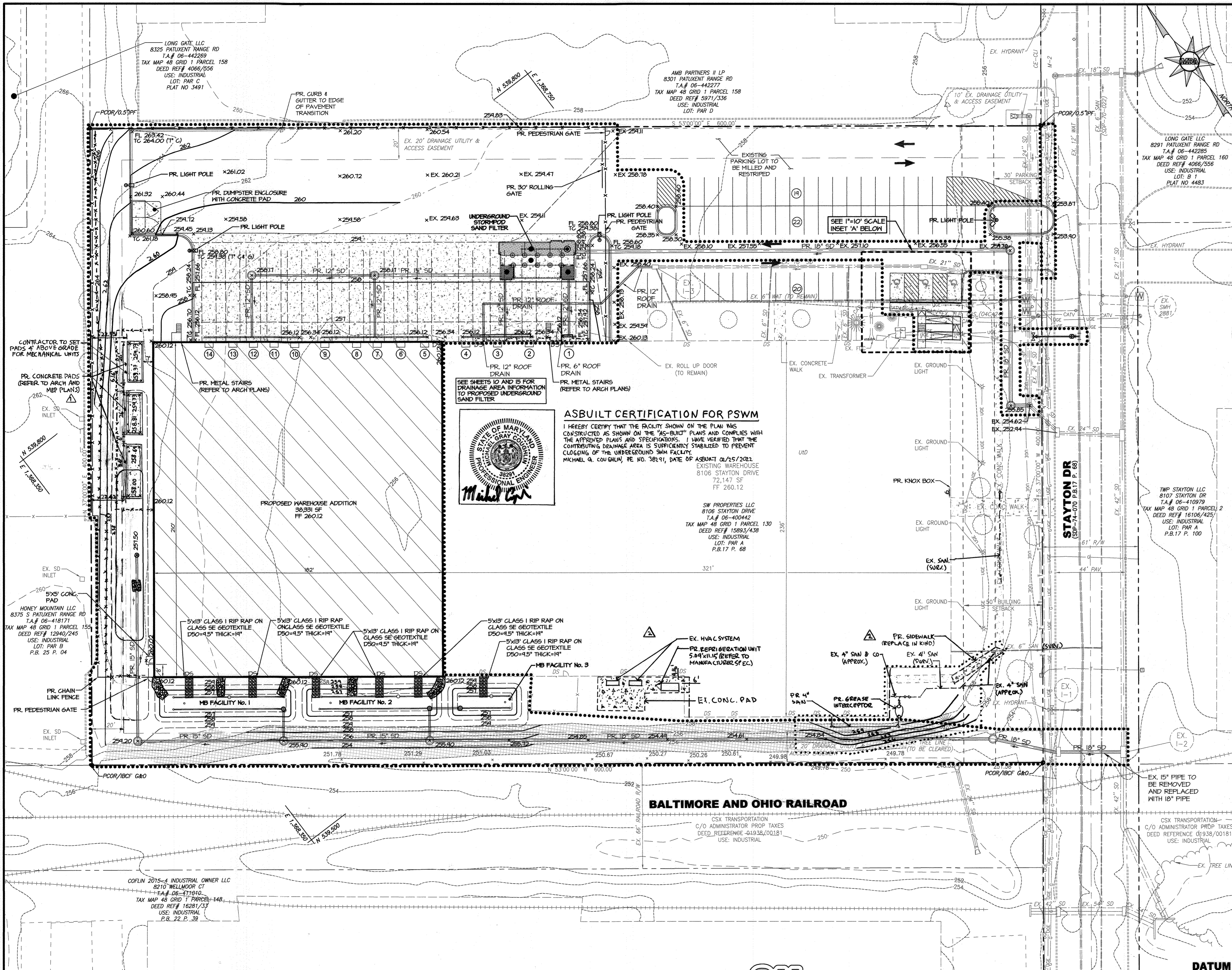


ASBUILT CERTIFICATION FOR PSWM THERE IS NO ASBUILT INFORMATION PROVIDED ON THIS SHEET MICHAEL G. COUGHLIN, PE NO. 38291, DATE OF ASBUILT 02/25/2022.

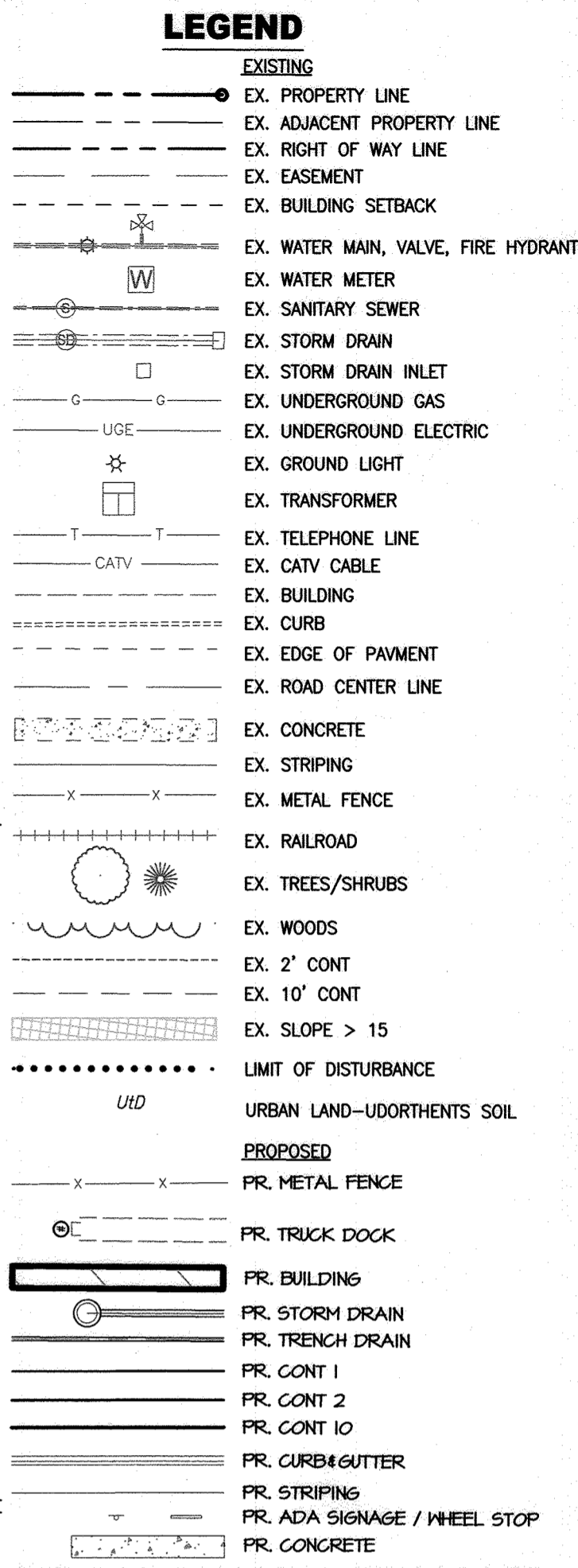
OWNER/DEVELOPER SW PROPERTIES LLP 8106 STAYTON DRIVE JESSUP, MD 20794 ATTN: ALVIN LEE PHONE: (213)-944-4448

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. 38291, EXPIRATION DATE: 01/13/2022

ESC 4 OF 4 MORRIS & RITCHIE ASSOCIATES, INC. ENGINEERS, PLANNERS, SURVEYORS AND LANDSCAPE ARCHITECTS 1220-C EAST JOPPA ROAD, SUITE 505 TOWSON, MARYLAND 21286 (410) 821-1690 FAX (410) 821-1748 Copyright 2020 Morris & Ritchie Associates, Inc. SITE DEVELOPMENT PLAN SW PROPERTIES LLC PROPOSED WAREHOUSE ADDITION EROSION & SEDIMENT CONTROL PLAN NOTES DATE: 02/25/2022 REVISIONS: A5-BUILT JOB NO.: 19637X01 SCALE: NO SCALE DATE: 01/13/2020 DRAWN BY: DTP/DK DESIGN BY: THS REVIEW BY: MGC SHEET: 06 OF 29 SDP-19-043



- ### ADA ACCESSIBILITY NOTES
- ACCESSIBLE ROUTES SHALL COMPLY WITH ALL REQUIREMENTS OF THE 2010 ADA STANDARDS FOR ACCESSIBLE DESIGN.
  - ACCESSIBLE ROUTES WITH NO RAMPS
    - SLOPE: ALL WALKING SURFACES SHALL HAVE A RUNNING SLOPE NOT STEEPER THAN 1:20.
    - CROSS SLOPE: ALL WALKING SURFACES SHALL HAVE A CROSS SLOPE NOT STEEPER THAN 1:48.
    - CLEAR WIDTH: ALL WALKING SURFACES SHALL HAVE A CLEAR WIDTH OF 36" MINIMUM, THE MINIMUM CLEAR WIDTH OF 36" CANNOT INCLUDE THE CHAMFERED EDGES OF THE SIDEWALKS.
    - WHERE GUTTERS MEET CURB RAMPS, THE GUTTER PAN SLOPE MUST NOT EXCEED 5%.
  - ACCESSIBLE ROUTES WITH RAMPS
    - RUNNING SLOPE: SHALL NOT EXCEED 1:12.
    - CROSS SLOPE: SHALL NOT EXCEED 1:48.
    - CLEAR WIDTH: MINIMUM 36".
    - RISE: MAXIMUM 30 INCHES PER RAMP RUN.
    - LANDINGS: A LEVEL LANDING SHALL BE PROVIDED AT THE TOP AND BOTTOM OF EACH RAMP RUN.
      - LANDING SLOPE: SHALL NOT EXCEED 1:48.
      - LANDING WIDTH: AT LEAST AS WIDE AS THE WIDEST RAMP RUN LEADING TO THE LANDING.
      - LANDING LENGTH: CLEAR LENGTH SHALL BE A MINIMUM OF 60".
      - LANDING AT CHANGE IN DIRECTION: MINIMUM OF 60" X 60".
  - HANDRAILS: RAMP RUNS WITH A RISE GREATER THAN 6" SHALL PROVIDE HANDRAILS.
    - WHERE REQUIRED: BOTH SIDES OF STAIRS AND RAMPS.
    - CONTINUITY: HANDRAILS SHALL BE CONTINUOUS WITHIN THE FULL LENGTH OF EACH RAMP RUN.
    - HEIGHT: TOP OF GRIPPING SURFACE SHALL BE 34" MIN. AND 38" MAX. VERTICALLY ABOVE RAMP AND WALKING SURFACE.
    - CLEARANCE: CLEARANCE BETWEEN HANDRAIL GRIPPING SURFACE AND ADJACENT SURFACES SHALL BE 1.5" MINIMUM.
    - GRIPPING SURFACE: SHALL BE CONTINUOUS ALONG THEIR LENGTH AND SHALL NOT BE OBSTRUCTED ALONG THEIR TOPS OR SIDES.
    - CIRCULAR CROSS SECTION: SHALL HAVE AN OUTSIDE DIAMETER OF 1.25" MAXIMUM.
    - EXTENSIONS: SHALL EXTEND HORIZONTALLY ABOVE THE LEVEL LANDING FOR 12" MINIMUM BEYOND THE TOP AND BOTTOM OF RAMP RUNS. EXTENSIONS SHALL RETURN TO A WALL, GUARD, OR THE LANDING SURFACE, OR SHALL BE CONTINUOUS TO THE HANDRAIL OF AN ADJACENT RAMP RUN.



### ASBUILT CERTIFICATION FOR PSWM

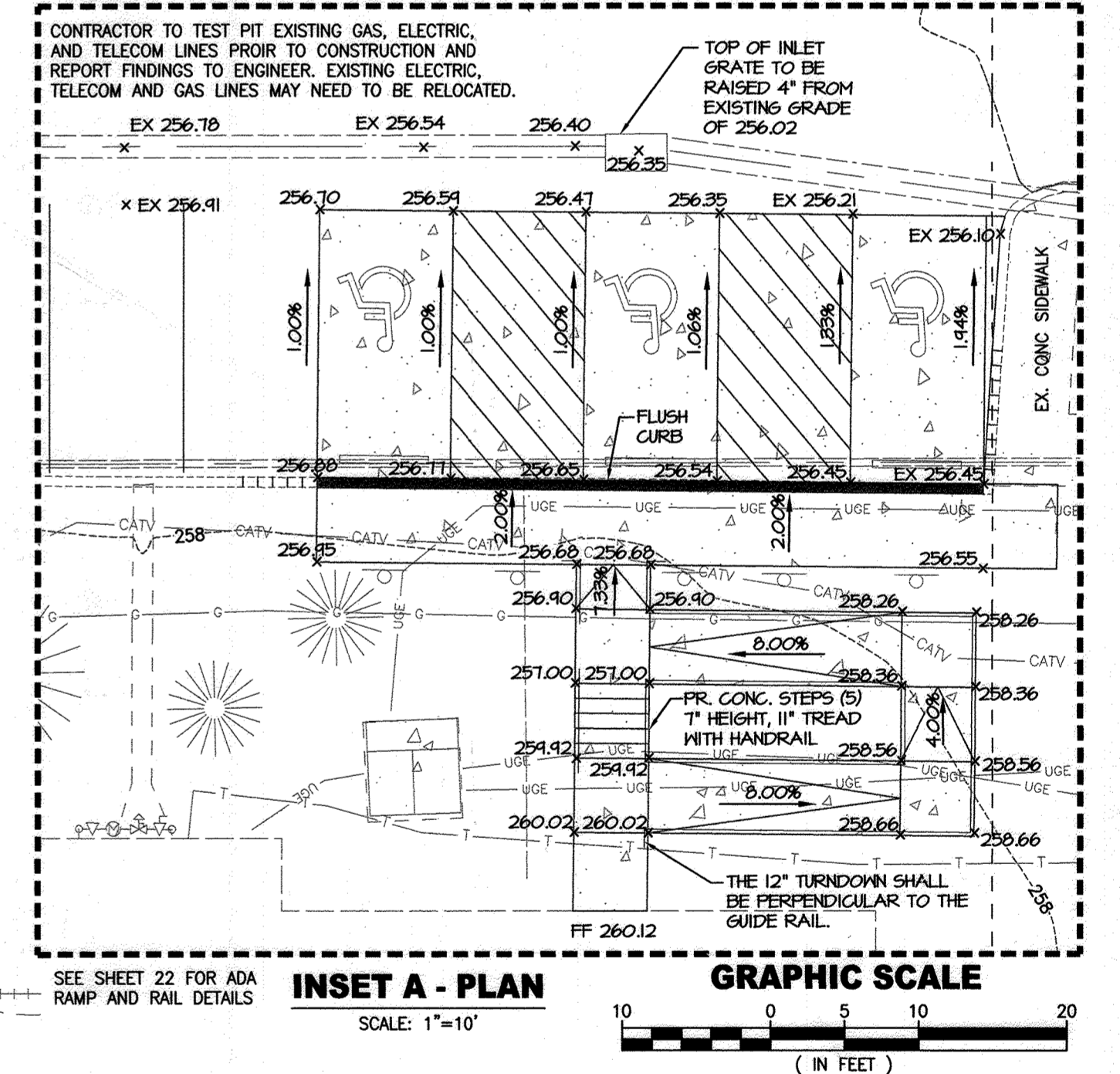
I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THE PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND COMPLIES WITH THE APPROVED PLANS AND SPECIFICATIONS. I HAVE VERIFIED THAT THE CONTRIBUTING DRAINAGE AREA IS SUFFICIENTLY STABILIZED TO PREVENT CLOGGING OF THE UNDERGROUND SWM FACILITY.

MICHAEL G. COUGHLIN, PE NO. 38191, DATE OF ASBUILT 02/15/2023

EXISTING WAREHOUSE  
8106 STAYTON DRIVE  
72,147 SF  
FF 260.12

SW PROPERTIES LLC  
8106 STAYTON DRIVE  
T.A.# 06-410079  
TAX MAP 48 GRID 1 PARCEL 130  
DEED REF# 15853/438  
USE: INDUSTRIAL  
LOT: PAR A  
P.B.17 P. 68

Professional Engineer Seal for Michael G. Coughlin, No. 38291, State of Maryland.

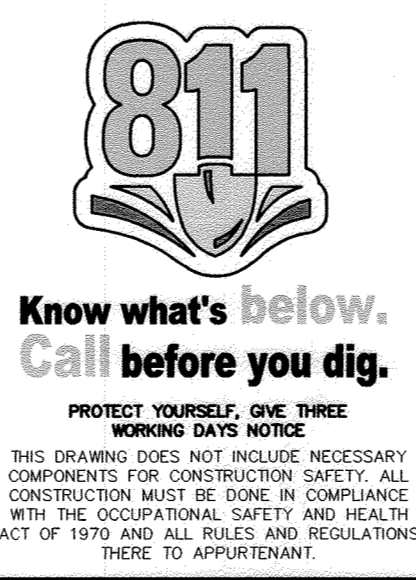
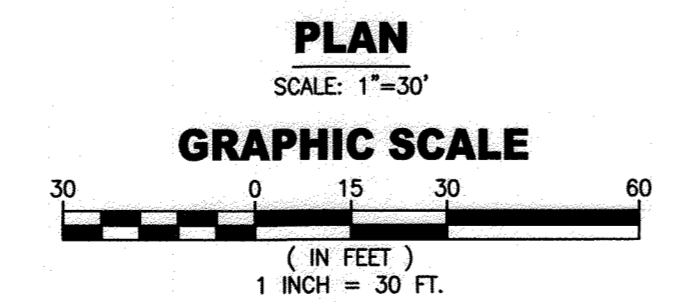


### GAS/ELECTRIC/TELECOMMUNICATIONS

CONTRACTOR SHALL REFER TO THE FINAL GAS, ELECTRIC AND TELECOMMUNICATIONS PLANS FOR SIZE OF CONDUITS, QUANTITY, NOTES, DETAILS AND CONSTRUCTION SPECIFICATIONS. LINES SHOWN HEREON ARE SCHEMATIC ONLY. FINAL GAS AND ELECTRIC TO BE ASSIGNED BY BGE. FINAL TELECOMMUNICATIONS TO BE DESIGNED BY CONTRACTED SERVICE PROVIDER.

### GENERAL NOTE

THE CORRECTNESS OR COMPLETENESS OF EXISTING INFORMATION SHOWN ON THE DRAWINGS IS NOT WARRANTED OR GUARANTEED. THE CONTRACTOR SHALL VERIFY THE LOCATION OF UTILITIES AND UNDERGROUND FACILITIES, BY TEST PITS OR OTHER METHODS APPROVED BY THE OWNER'S REPRESENTATIVE, AS REQUIRED TO VERIFY EXACT LOCATIONS AND DEPTHS WITHIN THE LIMIT OF DISTURBANCE. ALL DISCREPANCIES BETWEEN INFORMATION SHOWN ON THE DRAWINGS AND THAT VERIFIED IN THE FIELD SHALL BE REPORTED TO THE OWNER'S REPRESENTATIVE PRIOR TO BEGINNING WORK.



### CONCRETE NOTE

THE CONTRACTOR SHALL VERIFY CONCRETE FORM PLACEMENT TO ASSURE COMPLIANCE WITH CURRENT LOCAL AND STATE ADA AS WELL AS BUILDING CODES. ADA INSPECTION SHALL BE REQUIRED PRIOR TO POURING CONCRETE. THE CONTRACTOR ACCEPTS RESPONSIBILITY FOR MEETING ALL APPLICABLE HANDICAP SLOPE AND DISTANCE REQUIREMENTS AS WELL AS OTHER REQUIREMENTS AS STATED IN THE APPLICABLE CODES.

ANY DISCREPANCIES FOUND SHOULD BE BROUGHT TO THE SITE ENGINEER'S ATTENTION BEFORE ANY CONCRETE IS PLACED.

### DATUM

DESIGN & DRAWING BASED ON MARYLAND COORDINATE SYSTEM: HORIZONTAL NAD 83 (1991) VERTICAL NAVD 88

### OWNER/DEVELOPER

SW PROPERTIES LLP  
8106 STAYTON DRIVE  
JESSUP, MD 20794  
ATTN: ALVIN LEE  
PHONE: (213)-944-4448

### 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. 38291, EXPIRATION DATE: 01/13/2023

APPROVED: DEPARTMENT OF PLANNING AND ZONING

4/29/20 DATE

5/11/2020 DATE

5-12-2020 DATE

## MORRIS & RITCHIE ASSOCIATES, INC.

ENGINEERS, PLANNERS, SURVEYORS AND LANDSCAPE ARCHITECTS  
1220-C EAST JOPPA ROAD, SUITE 505  
TOWSON, MARYLAND 21286  
(410) 821-1690  
FAX (410) 821-1748  
Copyright 2020 Morris & Ritchie Associates, Inc.

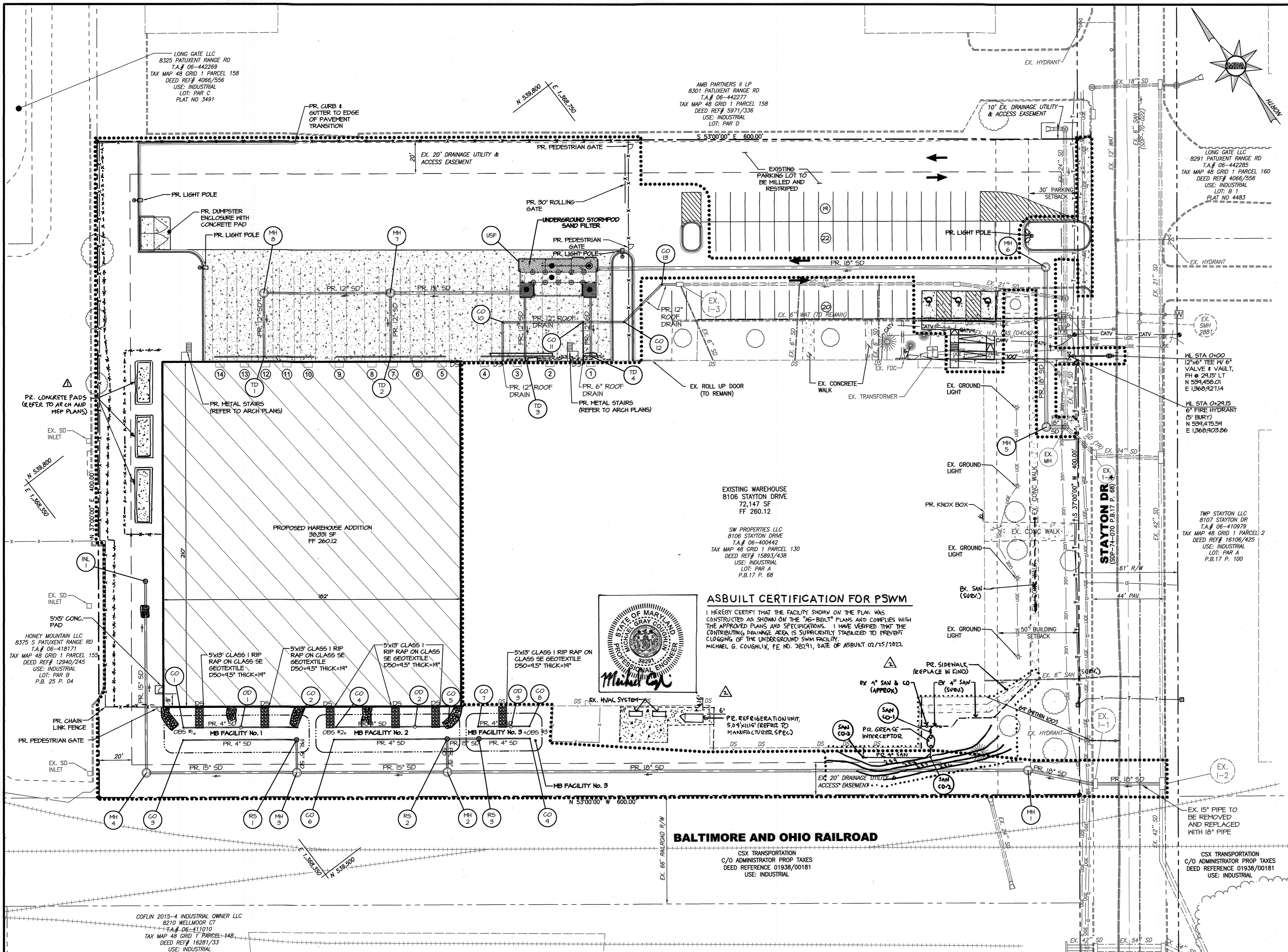
---

### SITE DEVELOPMENT PLAN SW PROPERTIES LLC PROPOSED WAREHOUSE ADDITION

FINAL GRADING PLAN

TAX MAP 48 - GRID 1 - PARCEL 130 - ZONING CE-CU - DEED REF 15893/00438  
PB 17 PG 68 - TAX ASSESSMENT DISTRICT 81 - 6th ELECTION DISTRICT  
DPZ FILE REFERENCES SDP-74-070, SDP-70-022  
8106 STAYTON DRIVE, HOWARD COUNTY, MARYLAND

DATE	REVISIONS	JOB NO.:
04/16/2021	REVISED GRADING, ADDED MECHANICAL UNIT PADS AND SPOT ELEVATIONS	19637X01
02/25/2022	Update Per As-Built Conditions	SCALE: AS SHOWN
04/10/2023	GREASE INTERCEPTOR AND REFRIGERATION UNIT ADDITIONS	DATE: 01/13/2020
		DRAWN BY: DTP/DK
		DESIGN BY: THS
		REVIEW BY: MGC
		SHEET: 07 OF 23



### LEGEND

- EXISTING
- EX. PROPERTY LINE
- EX. ADJACENT PROPERTY LINE
- EX. RIGHT OF WAY LINE
- EX. EASEMENT
- EX. BUILDING SETBACK
- EX. WATER MAIN, VALVE, FIRE HYDRANT
- EX. WATER METER
- EX. SANITARY SEWER
- EX. STORM DRAIN
- EX. STORM DRAIN INLET
- EX. UNDERGROUND GAS
- EX. UNDERGROUND ELECTRIC
- EX. GROUND LIGHT
- EX. TRANSFORMER
- EX. TELEPHONE LINE
- EX. CATV CABLE
- EX. BUILDING
- EX. CURB
- EX. EDGE OF PAVEMENT
- EX. ROAD CENTER LINE
- EX. CONCRETE
- EX. STRIPING
- EX. METAL FENCE
- EX. RAILROAD
- EX. TREES/SHRUBS
- EX. WOODS
- LIMIT OF DISTURBANCE
- URBAN LAND-UDORMENTS SOIL
- PROPOSED
- PR. METAL FENCE
- PR. TRUCK DOCK
- PR. BUILDING
- PR. STORM DRAIN
- PR. TRENCH DRAIN
- PR. CURB/GUTTER
- PR. STRIPING
- PR. ADA SIGNAGE / WHEEL STOP
- PR. CONCRETE
- PR. MICRO-BIO

### STORM DRAIN MANHOLE SCHEDULE

No.	TYPE	SIZE	INV. OUT	TOP EL.	COORDINATE	REMARKS
MH-1	PRECAST MANHOLE	48"	248.68	253.20	N 539,289.99 E 1,368,730.55	HOWARD COUNTY DETAILS G-5.11, G-5.12
MH-2	PRECAST MANHOLE	48"	251.76	255.90	N 539,504.38 E 1,368,447.20	HOWARD COUNTY DETAILS G-5.11, G-5.12
MH-3	PRECAST MANHOLE	48"	251.76	255.90	N 539,504.38 E 1,368,447.20	HOWARD COUNTY DETAILS G-5.11, G-5.12
MH-4	PRECAST MANHOLE	48"	251.76	255.90	N 539,504.38 E 1,368,447.20	HOWARD COUNTY DETAILS G-5.11, G-5.12
MH-5	PRECAST MANHOLE	48"	251.76	255.90	N 539,504.38 E 1,368,447.20	HOWARD COUNTY DETAILS G-5.11, G-5.12
MH-6	PRECAST MANHOLE	48"	251.76	255.90	N 539,504.38 E 1,368,447.20	HOWARD COUNTY DETAILS G-5.11, G-5.12
MH-7	PRECAST MANHOLE	48"	251.76	255.90	N 539,504.38 E 1,368,447.20	HOWARD COUNTY DETAILS G-5.11, G-5.12
MH-8	PRECAST MANHOLE	48"	251.76	255.90	N 539,504.38 E 1,368,447.20	HOWARD COUNTY DETAILS G-5.11, G-5.12
INL-1	DRAIN BASIN	12"	254.49	257.50	N 539,708.87 E 1,368,370.84	NYLOPLAST DRAIN BASIN WITH DOME GRATE (SEE SHEET 17 FOR DETAIL)

### PIPE SCHEDULE

STRUCTURE IN	SIZE	TYPE	LENGTH	STRUCTURE OUT
TD-1	12"	HIGH-DENSITY POLYETHYLENE (HDPE)	38.85'	MH-6
MH-8	12"	REINFORCED CEMENT CONCRETE PIPE (RCCP)	77.50'	MH-7
TD-2	12"	HIGH-DENSITY POLYETHYLENE (HDPE)	38.85'	MH-7
MH-7	15"	REINFORCED CEMENT CONCRETE PIPE (RCCP)	78.27'	USF
TD-3	12"	HIGH-DENSITY POLYETHYLENE (HDPE)	35.69'	USF
TD-4	12"	HIGH-DENSITY POLYETHYLENE (HDPE)	35.69'	USF
USF	18"	REINFORCED CEMENT CONCRETE PIPE (RCCP)	273.92'	MH-6
MH-6	18"	REINFORCED CEMENT CONCRETE PIPE (RCCP)	97.48'	MH-5
MH-5	18"	REINFORCED CEMENT CONCRETE PIPE (RCCP)	11.93'	EX. MH-1
EX. MH-1	24"	REINFORCED CEMENT CONCRETE PIPE (RCCP)	35.69'	EX. I-1
INL-1	15"	HIGH-DENSITY POLYETHYLENE (HDPE)	116.87'	MH-4
MH-4	15"	REINFORCED CEMENT CONCRETE PIPE (RCCP)	92.05'	MH-3
RS-1	15"	HIGH-DENSITY POLYETHYLENE (HDPE)	20.00'	MH-3
MH-3	15"	REINFORCED CEMENT CONCRETE PIPE (RCCP)	92.16'	MH-2
RS-3	15"	HIGH-DENSITY POLYETHYLENE (HDPE)	19.44'	RS-2
RS-2	15"	HIGH-DENSITY POLYETHYLENE (HDPE)	20.20'	MH-2
MH-2	18"	REINFORCED CEMENT CONCRETE PIPE (RCCP)	355.32'	MH-1
MH-1	18"	REINFORCED CEMENT CONCRETE PIPE (RCCP)	42.275'	EX. I-1
EX. I-1	18"	REINFORCED CEMENT CONCRETE PIPE (RCCP)	39.285'	EX. I-2
RD 1	12"	HIGH-DENSITY POLYETHYLENE (HDPE)	23.80'	CO 10
CO 10	12"	HIGH-DENSITY POLYETHYLENE (HDPE)	49.18'	CO 11
CO 11	12"	HIGH-DENSITY POLYETHYLENE (HDPE)	25.24'	CO 12
CO 12	12"	HIGH-DENSITY POLYETHYLENE (HDPE)	32.30'	CO 13
CO 13	12"	HIGH-DENSITY POLYETHYLENE (HDPE)	8.94'	EX. I-3
RD 2	6"	HIGH-DENSITY POLYETHYLENE (HDPE)	23.80'	CO 11

**ASBUILT CERTIFICATION FOR PSWM**  
 I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THE PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND COMPLIES WITH THE APPROVED PLANS AND SPECIFICATIONS. I HAVE VERIFIED THAT THE CONTRIBUTING DRAINAGE AREA IS SUFFICIENTLY STABILIZED TO PREVENT CLOGGING OF THE UNDERGROUND SWM FACILITY.  
 MICHAEL G. COUGHLIN, P.E. NO. 38291, DATE OF ASBUILT 02/15/2022.



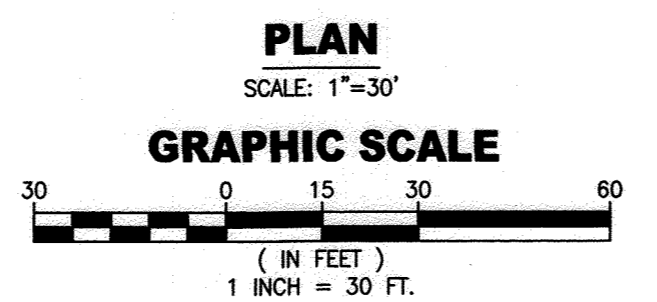
**BALTIMORE AND OHIO RAILROAD**  
 CSX TRANSPORTATION  
 C/O ADMINISTRATOR PROP TAXES  
 DEED REFERENCE 01938/00181  
 USE: INDUSTRIAL

**GAS/ELECTRIC/TELECOMMUNICATIONS**  
 CONTRACTOR SHALL REFER TO THE FINAL GAS, ELECTRIC AND TELECOMMUNICATION PLANS FOR SIZE OF CONDUITS, QUANTITY, NOTES, DETAILS AND CONSTRUCTION SPECIFICATIONS. LINES SHOWN HEREON ARE SCHEMATIC ONLY. FINAL GAS AND ELECTRIC TO BE ASSIGNED BY BGE. FINAL TELECOMMUNICATIONS TO BE DESIGNATED BY CONTRACTED SERVICE PROVIDER.

**KNOX BOX NOTE**  
 KNOX BOXES SHALL BE LOCATED WITHIN 6' TO THE RIGHT OF THE MAIN ENTRANCE AT A RANGE OF 4'-5' IN HEIGHT. THE CONTRACTOR SHOULD CONTACT THE OFFICE OF THE FIRE MARSHAL PRIOR TO PURCHASING AND INSTALLING KNOX BOXES TO DETERMINE THE NUMBER AS WELL AS THE LOCATION(S) WHERE THEY ARE TO BE MOUNTED. THE FIRE PUMP AND SPRINKLER SYSTEM CONTROL ARE ACCESSIBLE THROUGH THE EXISTING WAREHOUSE WITH NO EXTERIOR INGRESS/EGRESS. THEREFORE A KNOX BOX IS NOT REQUIRED FOR THAT AREA.

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
 DATE: 4-29-20  
 DATE: 5-12-2020  
 DATE: 5-12-2020

**GENERAL NOTE**  
 THE CORRECTNESS OR COMPLETENESS OF EXISTING INFORMATION SHOWN ON THE DRAWINGS IS NOT WARRANTED OR GUARANTEED. THE CONTRACTOR SHALL VERIFY THE LOCATION OF UTILITIES AND UNDERGROUND FACILITIES, BY TEST PITS OR OTHER METHODS APPROVED BY THE OWNER'S REPRESENTATIVE, AS REQUIRED TO VERIFY EXACT LOCATIONS AND DEPTHS WITHIN THE LIMIT OF DISTURBANCE. ALL DISCREPANCIES BETWEEN INFORMATION SHOWN ON THE DRAWINGS AND THAT VERIFIED IN THE FIELD SHALL BE REPORTED TO THE OWNER'S REPRESENTATIVE PRIOR TO BEGINNING WORK.



**ROOF DRAIN NOTES**

- CONTRACTOR TO INSTALL ROOF DRAINS TO THE DESIGNATED CLEANOUT DURING SITE CONSTRUCTION. THE REMAINDER OF THE ROOF DRAIN SYSTEM TO BE INSTALLED DURING BUILDING CONSTRUCTION.
- THE ROOF DRAIN SYSTEM FROM THE DESIGNATED CLEANOUT TO SURROUNDING POINTS AROUND THE BUILDING IS A SCHEMATIC ONLY. THE BUILDER SHALL INSTALL THE ROOF DRAINS DURING BUILDING CONSTRUCTION. ALL ROOF DRAINS ARE TO BE INSTALLED PER MANUFACTURERS SPECIFICATIONS.
- ROOF DRAINS TO HAVE A MINIMUM 2' COVER.
- MINIMUM SLOPE SHALL BE 0.50%.
- ALL ROOF DRAINS SHALL BE NYLOPLAST-ADS HOPE N-12 PIPE OR AN APPROVED EQUAL.
- DRAIN BASINS SHALL BE NYLOPLAST-ADS DRAIN BASIN OR APPROVED EQUAL (AS SHOWN IN STRUCTURE SCHEDULE).
- TOPS OF CLEANOUTS SHALL BE FLUSH WITH GRADE. CONTRACTOR TO USE HEAVY TRAFFIC BEARING FRAME AND COVERS WHEN CLEANOUT IS IN PAVEMENT AND SIDEWALKS.
- ALL UTILITY CROSSINGS SHALL HAVE 1'-0" MINIMUM CLEARANCE.
- SEE ARCHITECTURAL PLANS FOR ELECTRICAL, PLUMBING AND GAS LOCATIONS. SEE CIVIL PLANS FOR STORM DRAIN, SANITARY SEWER AND WATER.

**DATUM**  
 DESIGN & DRAWING BASED ON MARYLAND COORDINATE SYSTEM: HORIZONTAL NAD 83 (1991) VERTICAL NAVD 88  
**OWNER/DEVELOPER**  
 SW PROPERTIES LLP  
 8106 STAYTON DRIVE  
 JESSUP, MD 20794  
 ATTN: ALVIN LEE  
 PHONE: (213)-944-4448

**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. 38291, EXPIRATION DATE: 01/13/2022

**MORRIS & RITCHIE ASSOCIATES, INC.**  
 ENGINEERS, PLANNERS, SURVEYORS AND LANDSCAPE ARCHITECTS  
 1220-C EAST JOPPA ROAD, SUITE 505  
 TOWSON, MARYLAND 21286  
 (410) 821-1690  
 FAX (410) 821-1748  
 Copyright 2020 Morris & Ritchie Associates, Inc.

**SITE DEVELOPMENT PLAN**  
**SW PROPERTIES LLC**  
**PROPOSED WAREHOUSE ADDITION**  
 PRIVATE UTILITY PLAN

TAX MAP 48 - GRID 1 - PARCEL 130 - ZONING CE-CU - DEED REF 15893/00438  
 PB 17 PG 68 - TAX ASSESSMENT DISTRICT 81 - 6TH ELECTION DISTRICT  
 DPZ FILE REFERENCES SDP-74-070, SDP-70-022  
 8106 STAYTON DRIVE, HOWARD COUNTY, MARYLAND

DATE	REVISIONS	JOB NO.:
04/16/2021	ADDED MECHANICAL UNIT PADS	19637X01
02/25/2022	Update Per As-Built Conditions	SCALE: 1" = 30'
04/18/2023	GREASE INTERCEPTOR AND REGENERATION UNIT ADDITIONS	DATE: 01/13/2020
		DRAWN BY: DTP/DK
		DESIGN BY: THS
		REVIEW BY: MGC
		SHEET: 08 OF 29



**UNDERGROUND SAND FILTER STORM DRAIN COMPUTATIONS**

LOCATION		AREA	ACRES	COEFF. "C"	CA	SUMP CA	Σ CA	TIME CONC.-MIN.			INTEIN. "T"	INTEIN. "T"	Q-C.L.A.	PIPE n = .014					REMARKS
From	To							Inlet	Drain	Total				Adjusted	10 Year	C.F.S.	Size	S(act)	
TD-1	TD-1	E	.39	.67	0.2613	0.0000		5.00	5.0	9.76	8.50	2.22	12"	0.67%	0.45%	7.0	2.8	39'	25 YR/10 YR
TD-1	MH-8	E	.39	.67	0.2613	0.0000		5.00	5.0	9.76	8.50	2.22	12"	1.52%	0.45%	7.0	2.8	78'	
MH-8	MH-7	E	.39	.67	0.2613	0.0000		5.00	5.0	9.76	8.50	2.22	12"	4.02%	0.47%	7.6	2.9	39'	25 YR/10 YR
TD-2	TD-2	F	.31	.86	0.2666	0.0000		5.00	5.0	9.76	8.50	2.27	12"	1.52%	0.54%	7.0	3.6	78'	
MH-7	USF	F	.70	.86	0.2666	0.0000		5.00	5.0	9.76	8.50	2.27	12"	8.26%	0.14%	8.3	1.6	36'	25 YR/10 YR
TD-3	TD-3	G	.17	.72	0.0432	0.0000		5.00	5.0	9.76	8.50	2.27	12"	0.50%	0.37%	7.0	3.4	274'	
TD-3	USF	G	.17	.72	0.0432	0.0000		5.00	5.0	9.76	8.50	2.27	12"	0.50%	0.37%	7.0	3.4	97'	
TD-4	TD-4	H	.06	.72	0.0432	0.0000		5.00	5.0	9.76	8.50	2.27	12"	0.50%	0.37%	7.0	3.4	12'	
TD-4	USF	H	.06	.72	0.0432	0.0000		5.00	5.0	9.76	8.50	2.27	12"	0.50%	0.37%	7.0	3.4	274'	
USF	MH-6	E-F-G-H	.93	.72	0.0432	0.0000		5.00	5.0	9.76	8.50	2.27	12"	0.50%	0.37%	7.0	3.4	97'	
MH-6	MH-5	E-F-G-H	.93	.72	0.0432	0.0000		5.00	5.0	9.76	8.50	2.27	12"	0.50%	0.37%	7.0	3.4	12'	
MH-5	EX.MH	E-F-G-H	.93	.72	0.0432	0.0000		5.00	5.0	9.76	8.50	2.27	12"	0.50%	0.37%	7.0	3.4	12'	

**MICRO-BIORETENTION FACILITY STORM DRAIN COMPUTATIONS**

LOCATION		AREA	ACRES	COEFF. "C"	CA	SUMP CA	Σ CA	TIME CONC.-MIN.			INTEIN. "T"	INTEIN. "T"	Q-C.L.A.	PIPE n = .014					REMARKS
From	To							Inlet	Drain	Total				Adjusted	10 Year	C.F.S.	Size	S(act)	
INL-1	INL-1	A	.20	.24	0.0480	0.0000		5.00	5.0	9.76	8.50	4.1	15"	0.75%	0.00%	7.0	.3	117'	25 YR/10 YR
INL-1	MH-4	A	.20	.24	0.0480	0.0000		5.00	5.0	9.76	8.50	4.1	15"	1.60%	0.00%	7.0	.3	92'	
MH-4	MH-3	A	.20	.24	0.0480	0.0000		5.00	5.0	9.76	8.50	4.1	15"	7.69%	0.25%	10.1	2.5	20'	25 YR/10 YR
RS-1	RS-1	B	.45	.79	0.3555	0.0000		5.00	5.0	9.76	8.50	3.02	15"	0.60%	0.31%	7.0	2.7	92'	
MH-3	MH-3	B	.45	.79	0.3555	0.0000		5.00	5.0	9.76	8.50	3.02	15"	1.00%	0.02%	7.0	.8	19'	25 YR/10 YR
MH-3	MH-2	A-B	.65	.79	0.3555	0.0000		5.00	5.0	9.76	8.50	3.02	15"	9.50%	0.44%	11.9	3.2	20'	25 YR/10 YR
RS-3	RS-3	D	.15	.79	0.3555	0.0000		5.00	5.0	9.76	8.50	3.02	15"	0.60%	0.53%	7.0	4.0	42'	
RS-2	RS-2	C	.45	.79	0.3555	0.0000		5.00	5.0	9.76	8.50	3.02	15"	1.47%	0.85%	7.4	5.1	41'	25 YR/10 YR
RS-2	MH-2	C-D	.60	.79	0.3555	0.0000		5.00	5.0	9.76	8.50	3.02	15"						
MH-2	MH-1	A-D	1.25	.79	0.3555	0.0000		5.00	5.0	9.76	8.50	3.02	15"						
MH-1	EX-L-1	A-D	1.25	.79	0.3555	0.0000		5.00	5.0	9.76	8.50	3.02	15"						
EX-L-1	EX-L-1	I	.51	.57	0.2907	0.0000		5.00	5.0	9.76	8.50	2.47	18"						
EX-L-1	EX-L-2	A-I	1.76	.57	0.2907	0.0000		5.00	5.0	9.76	8.50	2.47	18"						

**LEGEND**

- EXISTING
  - EX. PROPERTY LINE
  - EX. ADJACENT PROPERTY LINE
  - EX. RIGHT OF WAY LINE
  - EX. EASEMENT
  - EX. BUILDING SETBACK
  - EX. WATER MAIN, VALVE, FIRE HYDRANT
  - EX. WATER METER
  - EX. SANITARY SEWER
  - EX. STORM DRAIN
  - EX. STORM DRAIN INLET
  - EX. UNDERGROUND GAS
  - EX. UNDERGROUND ELECTRIC
  - EX. GROUND LIGHT
  - EX. TRANSFORMER
  - EX. TELEPHONE LINE
  - EX. CATV CABLE
  - EX. BUILDING
  - EX. CURB
  - EX. EDGE OF PAVEMENT
  - EX. ROAD CENTER LINE
  - EX. CONCRETE
  - EX. STRIPING
  - EX. METAL FENCE
  - EX. RAILROAD
  - EX. TREES/SHRUBS
  - EX. WOODS
  - EX. 2' CONT
  - EX. 10' CONT
  - EX. SLOPE > 15
  - LIMIT OF DISTURBANCE
  - URBAN LAND-UDORTHEMIS SOIL
- PROPOSED
  - PR. METAL FENCE
  - PR. TRUCK DOCK
  - PR. BUILDING
  - PR. STORM DRAIN
  - PR. TRENCH DRAIN
  - PR. CONT 1
  - PR. CONT 2
  - PR. CONT 10
  - PR. CURB&GUTTER
  - PR. STRIPING
  - PR. ADA SIGNAGE / WHEEL STOP
  - PR. CONCRETE
  - PR. DRAINAGE AREA

**SOILS CHART**

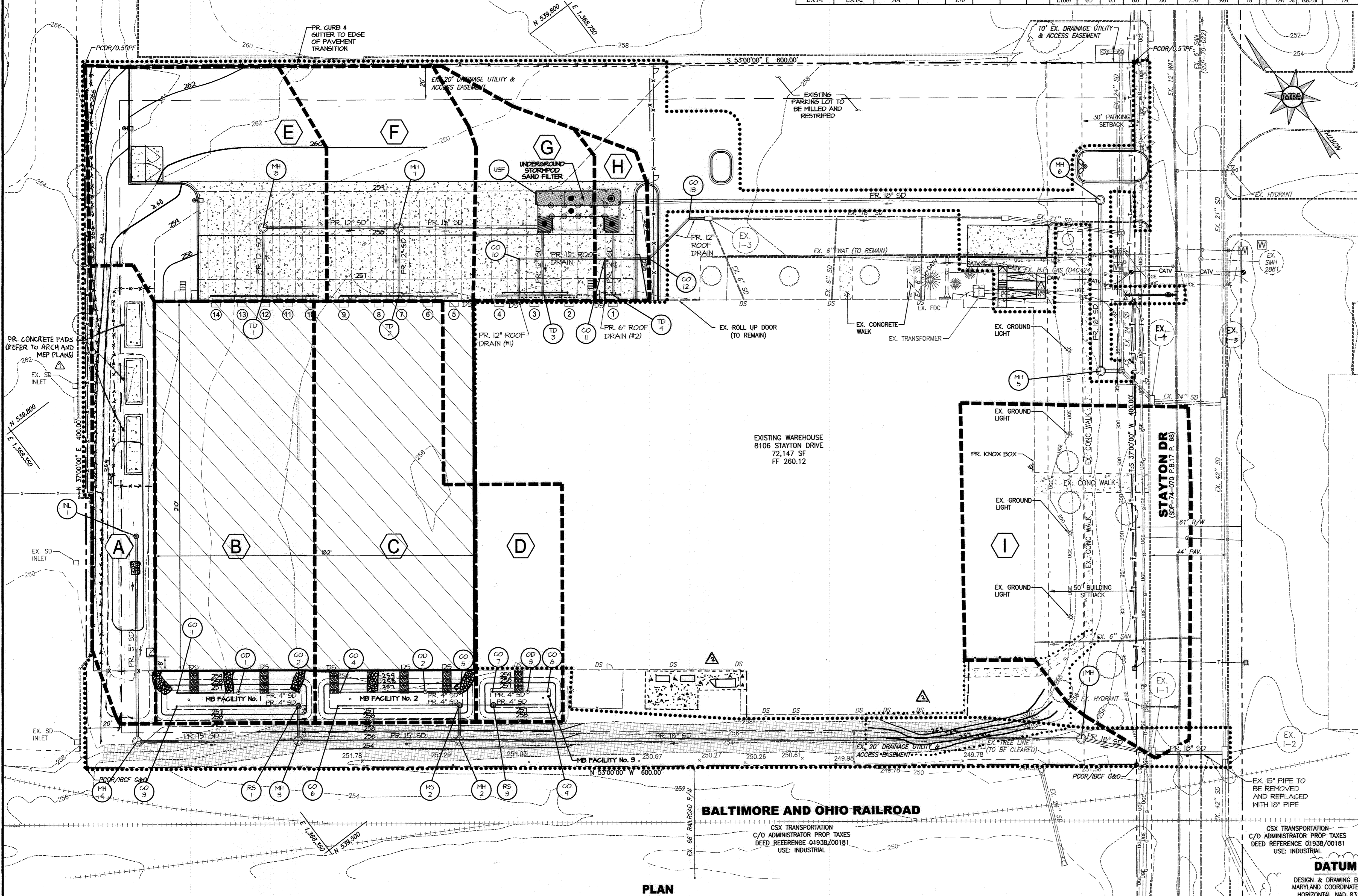
MAP SYMBOL AND SOIL NAME	HYDROLOGIC GROUP	SLOPES	ACREAGE ON-SITE
UID URBAN LAND-UDORTHEMIS COMPLEX	D	0-15%	0.37 AC.

**ROOF DRAIN SCHEDULE**

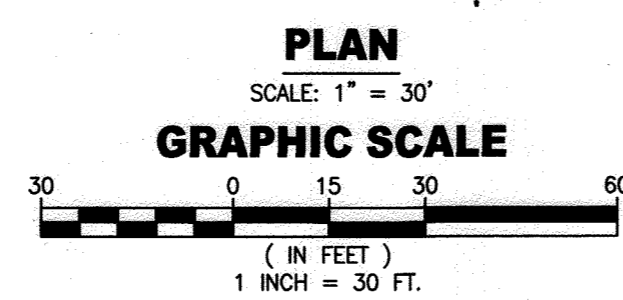
FROM	LOWER INVERT	PIPE LENGTH (ft)	PIPE SIZE	MATERIAL	SLOPE(%)	UPPER INVERT	TO
RD 1	253.62	23.80	12"	HDPE	0.50%	253.50	CO 10
CO 10	253.50	49.18	12"	HDPE	0.50%	253.25	CO 11
CO 11	253.25	25.24	12"	HDPE	0.50%	253.12	CO 12
CO 12	253.12	32.30	12"	HDPE	0.50%	252.96	CO 13
CO 13	252.96	8.94	12"	HDPE	0.50%	252.92	EX I-3
RD 2	253.62	23.80	6"	HDPE	1.55%	253.25	CO 11

**DRAINAGE AREA TABULATION**

DRAINAGE AREA	AREA SF	ACRE	IMP AREA SF	ACRE	% IMP	C-FACTOR
A	9,063	0.20	0	0.00	0.0%	0.24
B	19,358	0.45	16,801	0.44	87.59%	0.79
C	19,358	0.45	16,801	0.44	87.59%	0.79
D	4,461	0.10	1,046	0.12	23.10%	0.74
E	16,882	0.39	11,880	0.27	69.95%	0.67
F	13,575	0.31	13,575	0.31	100%	0.86
G	7,561	0.17	7,561	0.17	100%	0.86
H	2,636	0.06	2,213	0.05	83.95%	0.72
I	22,000	0.51	11,945	0.27	52.94%	0.57



APPROVED: DEPARTMENT OF PLANNING AND ZONING  
 4/21/20  
 DATE  
 5/12/2020  
 DATE  
 5-12-2020  
 DATE



**ASBUILT CERTIFICATION FOR PSWM**  
 I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THE PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND COMPLIES WITH THE APPROVED PLANS AND SPECIFICATIONS. I HAVE VERIFIED THAT THE CONTRIBUTING DRAINAGE AREA IS SUFFICIENTLY STABILIZED TO PREVENT CLOGGING OF THE UNDERGROUND SWM FACILITY.  
 MICHAEL C. GOUGL, PE, NO. 38614, DATE OF ASBUILT 02/15/2022

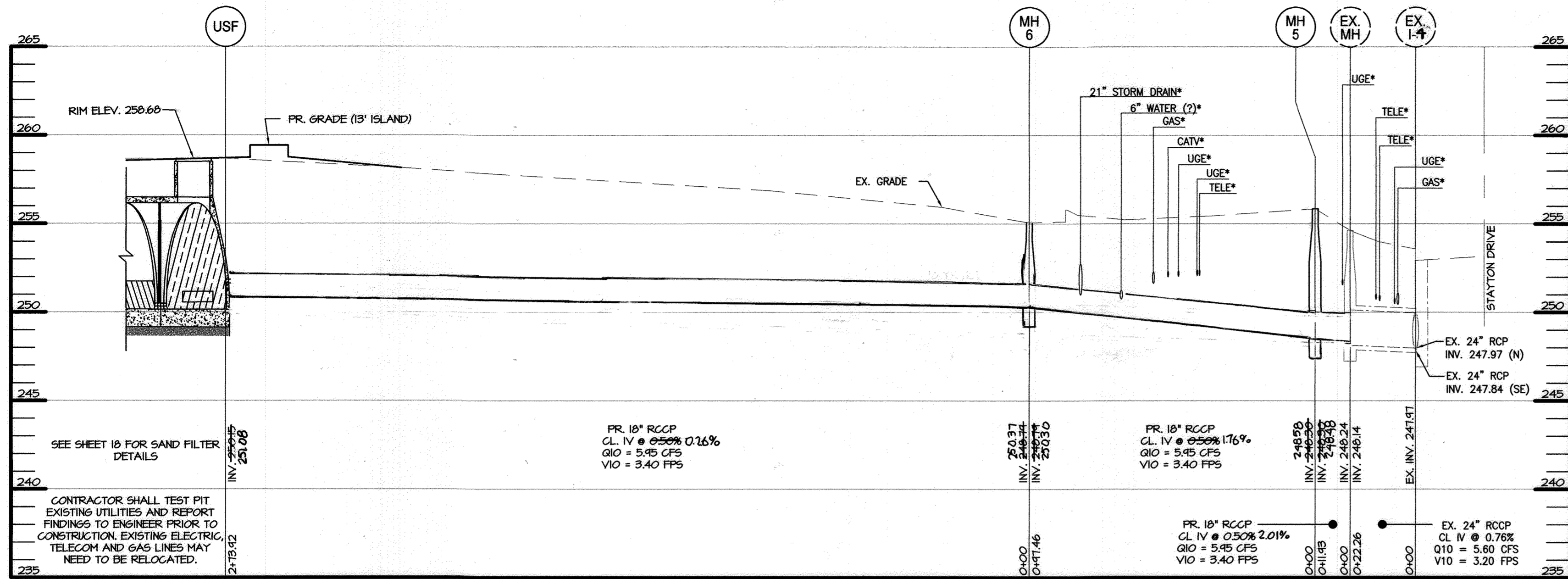
**DATUM**  
 DESIGN & DRAWING BASED ON MARYLAND COORDINATE SYSTEM: HORIZONTAL NAD 83 (1991) VERTICAL NAVD 88  
**OWNER/DEVELOPER**  
 SW PROPERTIES LLP  
 8106 STAYTON DRIVE  
 JESSUP, MD 20794  
 ATTN: ALVIN LEE  
 PHONE: (213)-944-4448

**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. 38291, EXPIRATION DATE: 01/13/2022

**MORRIS & RITCHE ASSOCIATES, INC.**  
 ENGINEERS, PLANNERS, SURVEYORS AND LANDSCAPE ARCHITECTS  
 1220-C EAST JOPPA ROAD, SUITE 505  
 TOWSON, MARYLAND 21286  
 (410) 821-1690  
 FAX (410) 821-1748  
 Copyright 2020 Morris & Ritchie Associates, Inc.

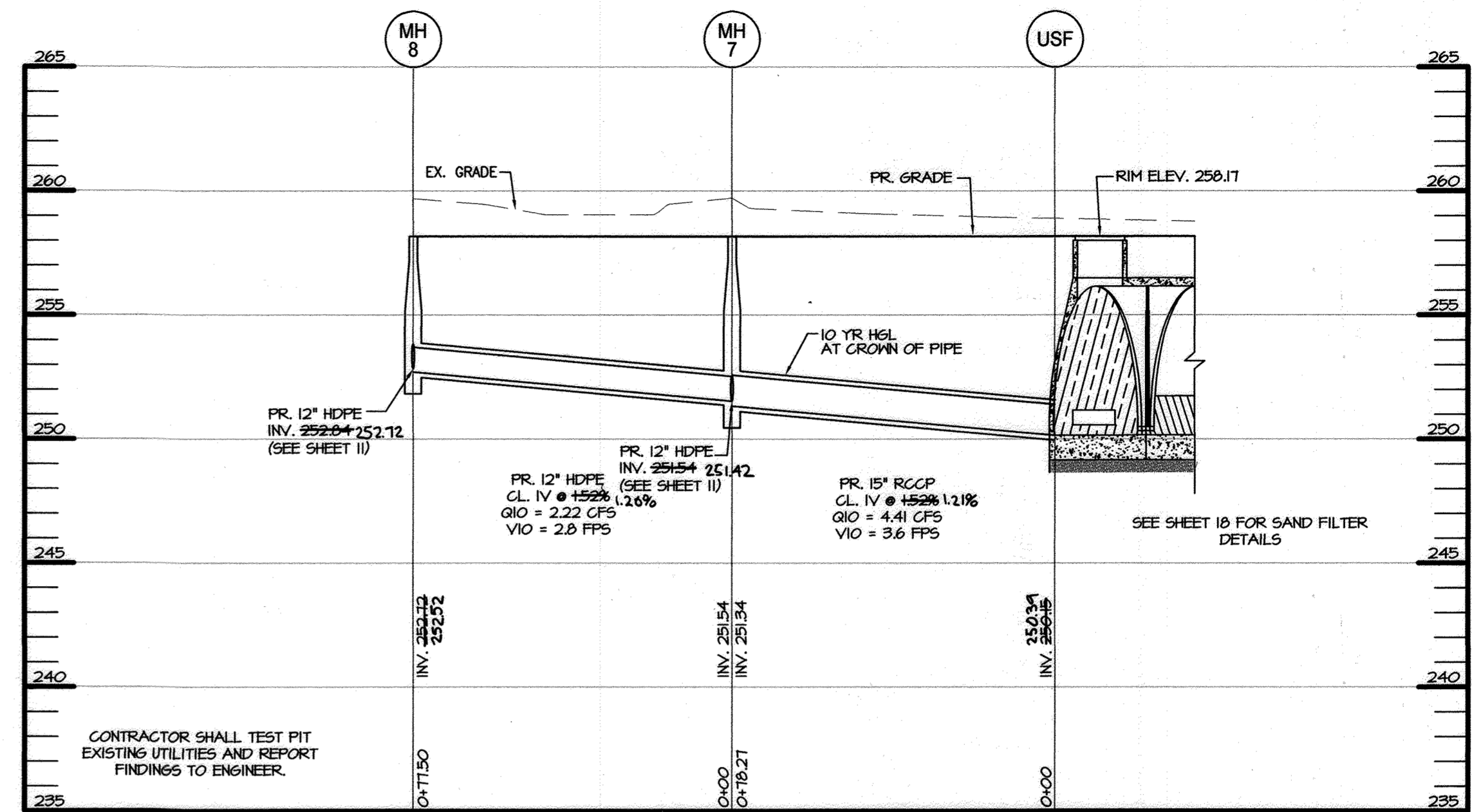
**SITE DEVELOPMENT PLAN  
 SW PROPERTIES LLC  
 PROPOSED WAREHOUSE ADDITION  
 STORM DRAIN DRAINAGE AREA MAP  
 & COMPUTATIONS**  
 TAX MAP 48 ~ GRID 1 ~ PARCEL 130 ~ ZONING CE-CU ~ DEED REF 15893/00438  
 PB 17 PG 68 ~ TAX ASSESSMENT DISTRICT 81 ~ 6th ELECTION DISTRICT  
 DPZ FILE REFERENCES SDP-74-070, SDP-70-022  
 8106 STAYTON DRIVE, HOWARD COUNTY, MARYLAND

DATE	REVISIONS	JOB NO.:
04/16/2021	ADDED MECHANICAL UNIT PADS AND REVISED GRADING	19637201
07/25/2021	Update Per As-Built Conditions	SCALE: 1" = 30'
09/10/2023	INCREASE INTERCEPTOR AND REGENERATION UNIT ADDITIONS	DATE: 01/13/2020
		DRAWN BY: DTP/DK
		DESIGN BY: THS
		REVIEW BY: MGC
		SHEET: 09 OF 23



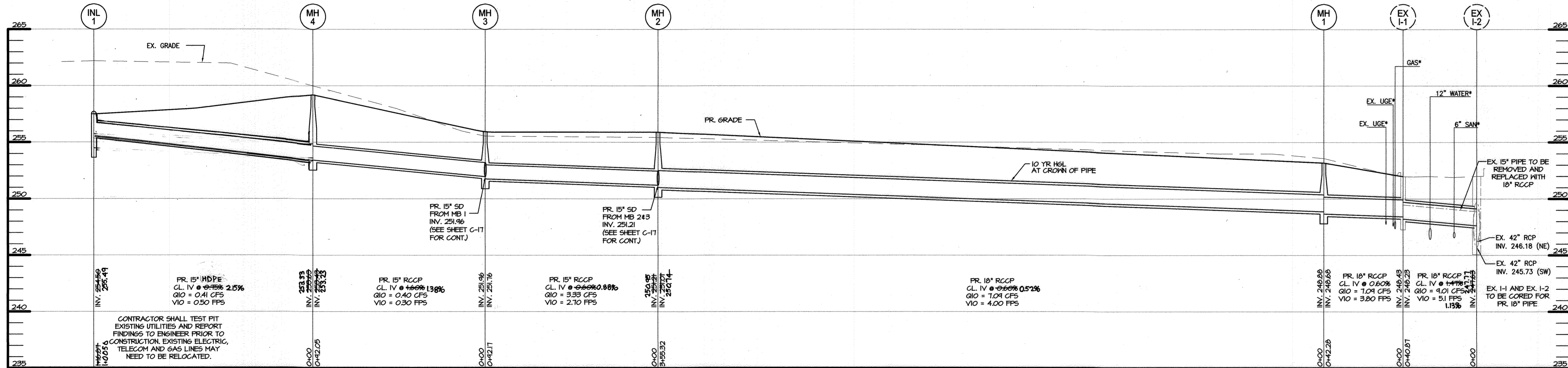
**STORM DRAIN PROFILE**

SCALE: H: 1" = 30'  
V: 1" = 5'



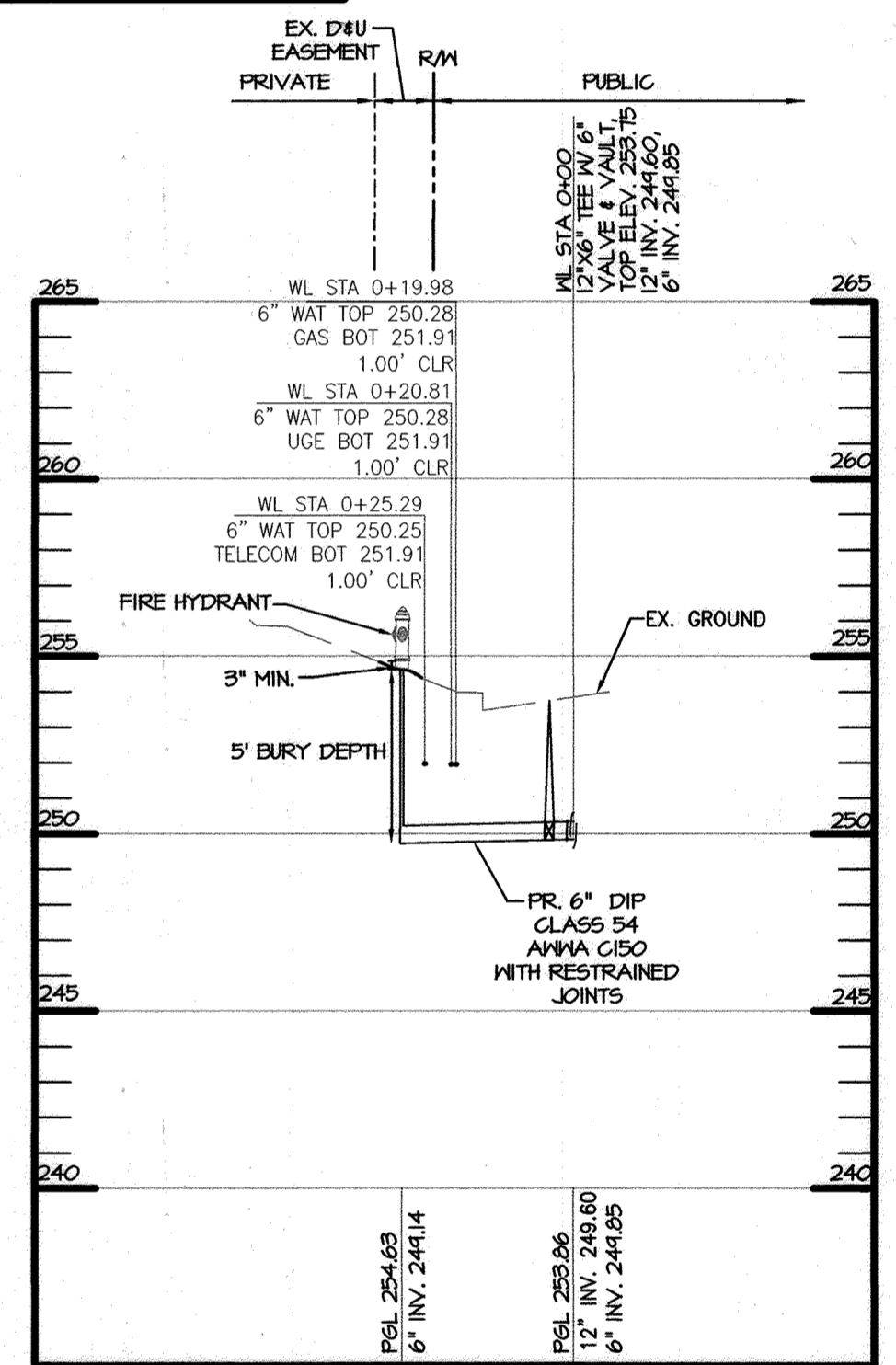
**STORM DRAIN PROFILE**

SCALE: H: 1" = 30'  
V: 1" = 5'



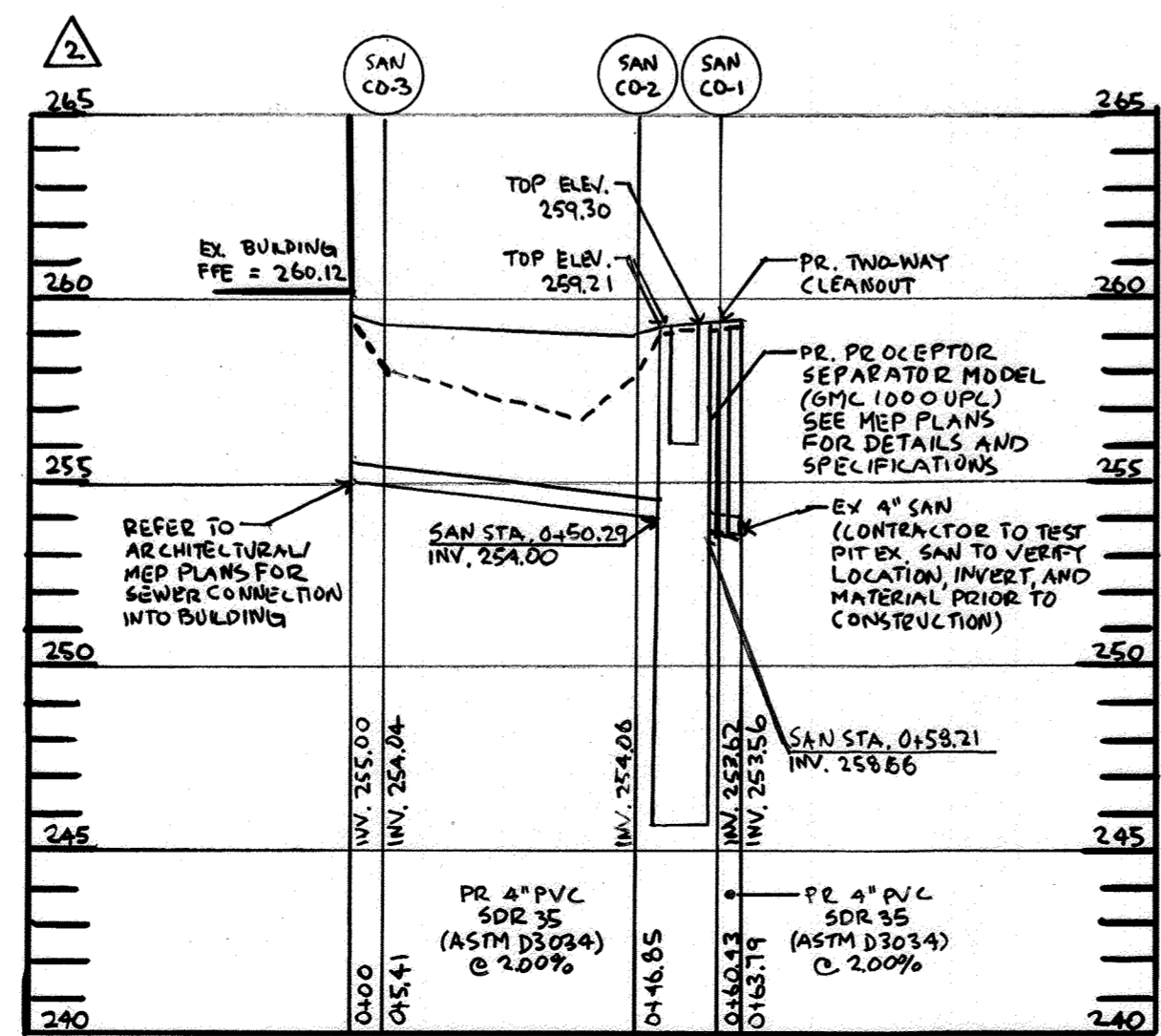
**STORM DRAIN PROFILE**

SCALE: H: 1" = 30'  
V: 1" = 5'



**FIRE HYDRANT PROFILE**

SCALE: H: 1" = 30'  
V: 1" = 5'



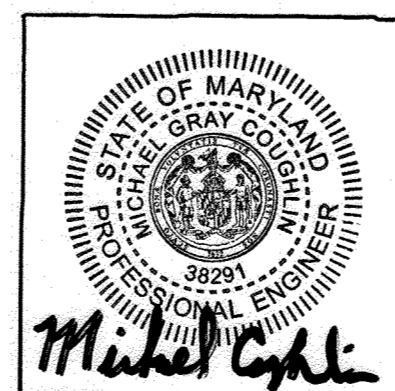
**SANITARY SEWER PROFILE**

SCALE: H: 1" = 30'  
V: 1" = 5'

APPROVED: DEPARTMENT OF PLANNING AND ZONING

*[Signature]*  
CHIEF, DEVELOPMENT ENGINEERING DIVISION  
CHIEF, DIVISION OF LAND DEVELOPMENT  
DIRECTOR

4.29.20  
DATE  
5/1/20  
DATE  
5-12-2020  
DATE



**ASBUILT CERTIFICATION FOR PSWM**

I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THE PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND COMPLIES WITH THE APPROVED PLANS AND SPECIFICATIONS. I HAVE VERIFIED THAT THE CONTRIBUTING DRAINAGE AREA IS SUFFICIENTLY STABILIZED TO PREVENT CLOSING OF THE UNDERGROUND SWM FACILITY.

**DATUM**

DESIGN & DRAWING BASED ON MARYLAND COORDINATE SYSTEM: HORIZONTAL NAD 83 (1991) VERTICAL NAVD 88

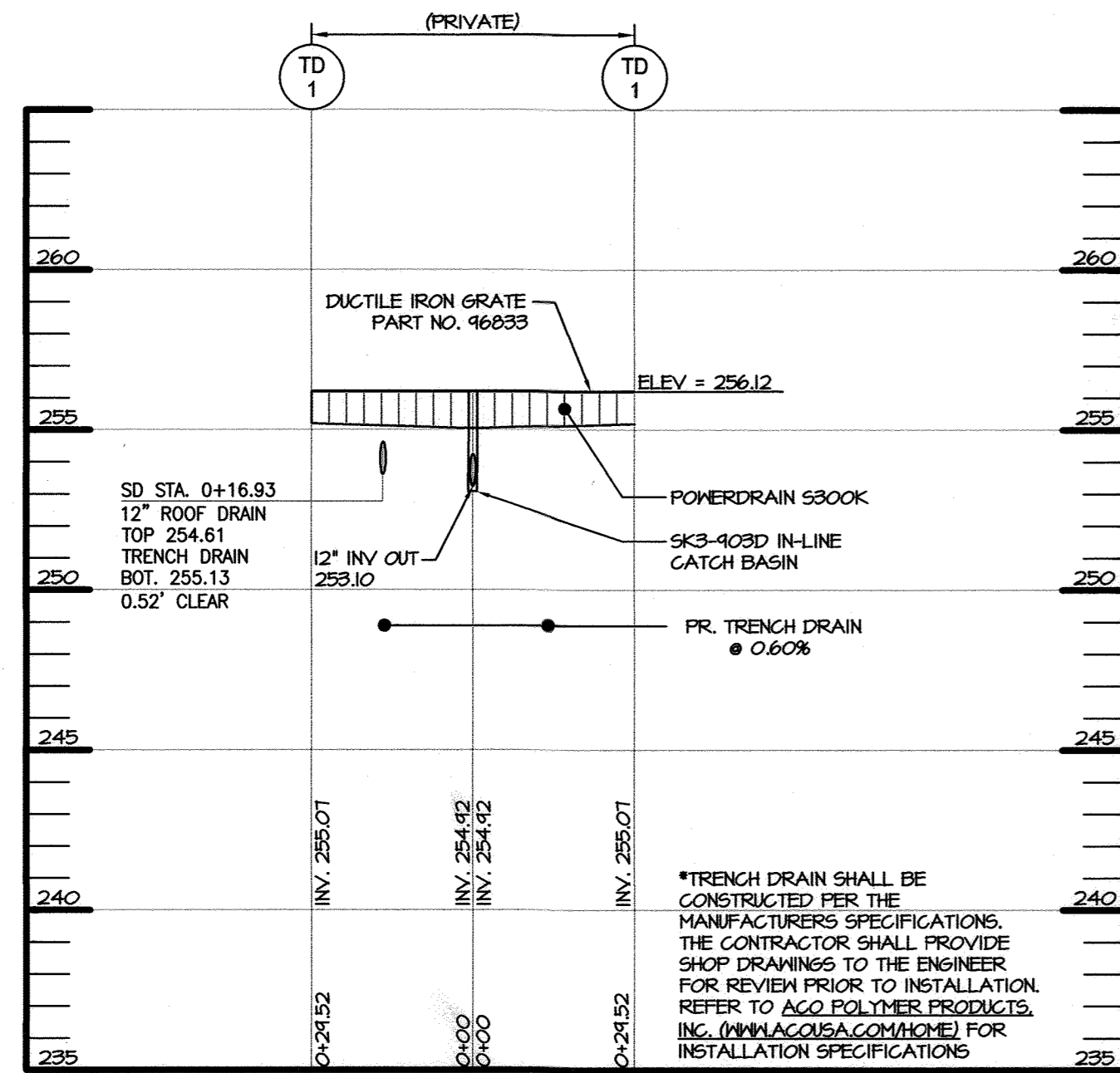
**OWNER/DEVELOPER**

SW PROPERTIES LLP  
8106 STATION DRIVE  
JESSUP, MD 20794  
ATTN: ALVIN LEE  
PHONE: (213)-944-4448

**PROFESSIONAL CERTIFICATION**

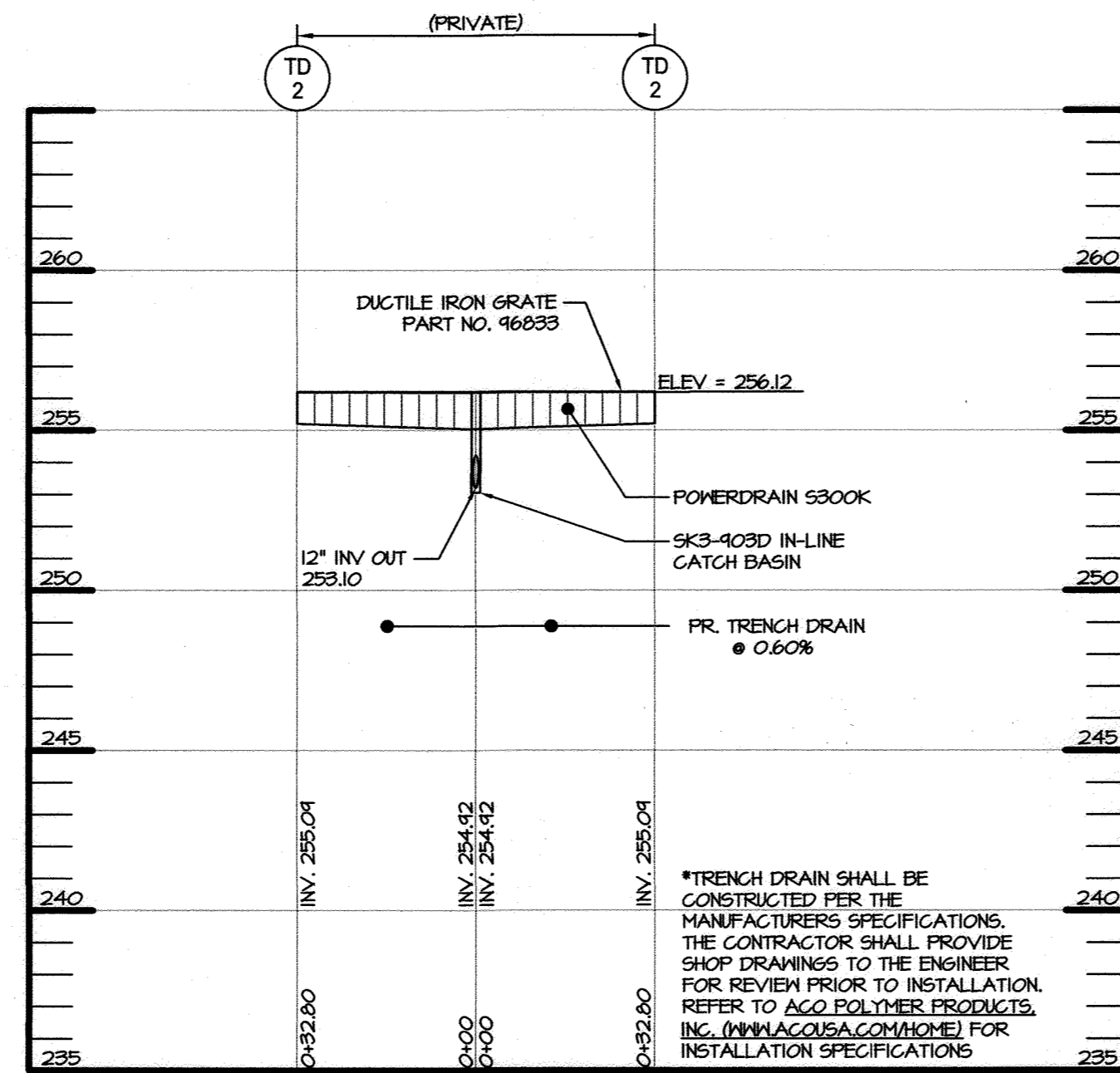
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 38291, EXPIRATION DATE: 01/13/2020

		<b>MORRIS &amp; RITCHIE ASSOCIATES, INC.</b> ENGINEERS, PLANNERS, SURVEYORS AND LANDSCAPE ARCHITECTS 1220-C EAST JOPPA ROAD, SUITE 505 TOWSON, MARYLAND 21286 (410) 821-1690 FAX (410) 821-1748 Copyright 2020 Morris & Ritchie Associates, Inc.	
		<b>SITE DEVELOPMENT PLAN</b> <b>SW PROPERTIES LLC</b> <b>PROPOSED WAREHOUSE ADDITION</b> PRIVATE UTILITY PROFILES	
DATE	REVISIONS	JOB NO.:	19637X01
02/25/2020	Update Per Asbuilt Conditions	SCALE:	AS SHOWN
04/19/2023	GREASE INTERCEPTOR AND REFRIGERATION UNIT ADDITIONS	DATE:	01/13/2020
		DRAWN BY:	DTP/DK
		DESIGN BY:	THS
		REVIEW BY:	MGC
		SHEET:	10 OF 23



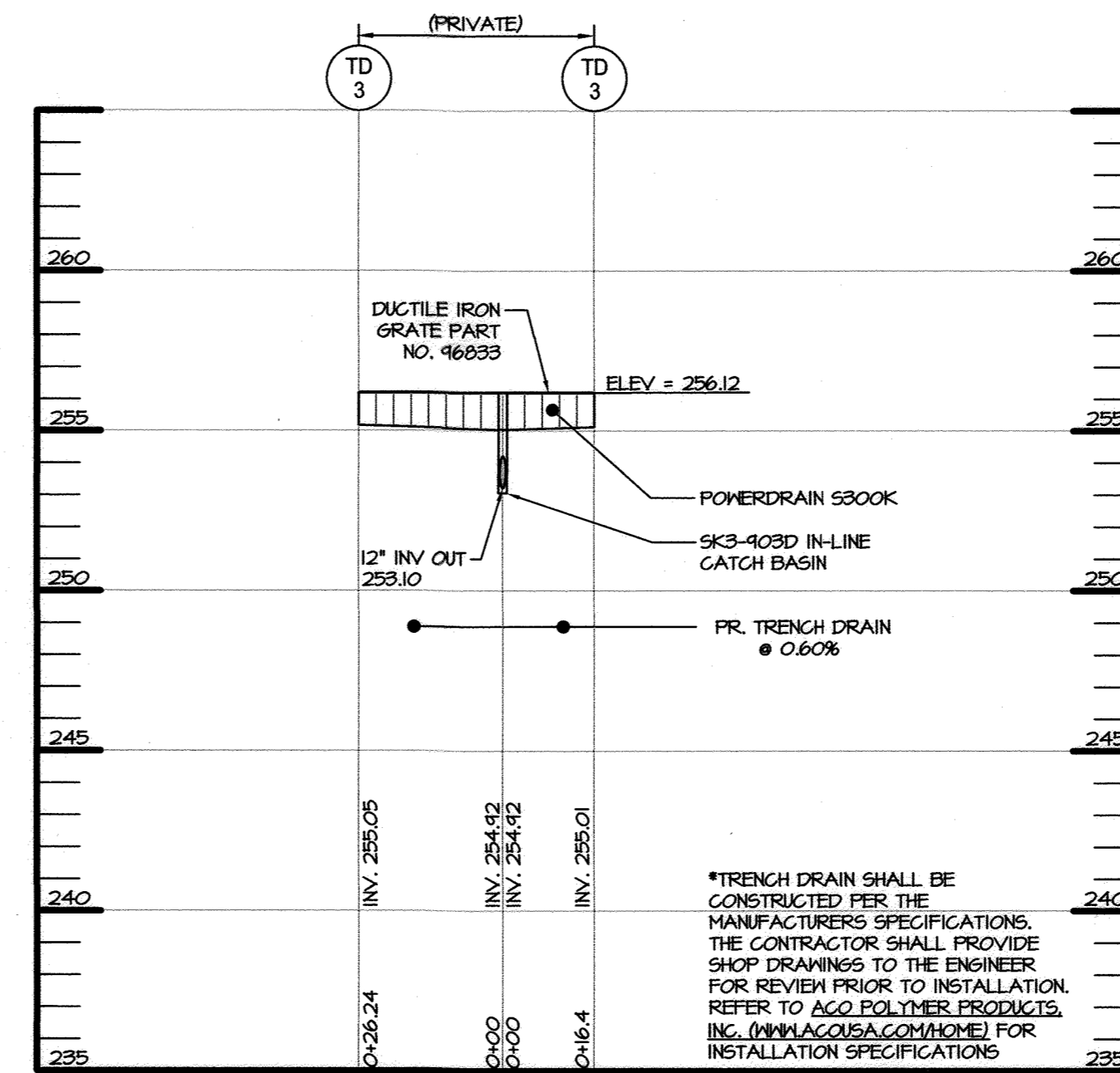
**TRENCH DRAIN 1 PROFILE**

SCALE: H: 1" = 30"  
V: 1" = 5'



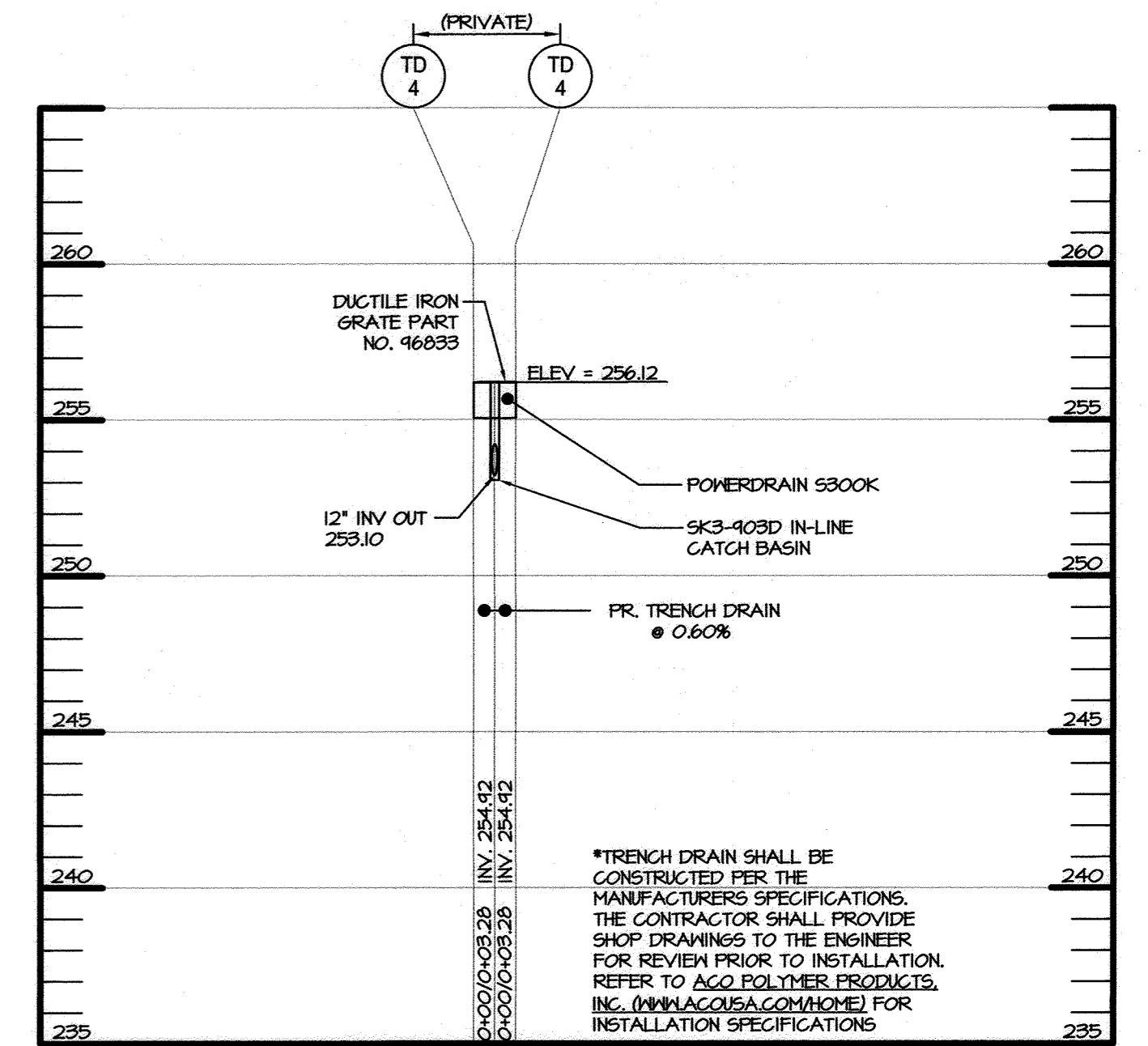
**TRENCH DRAIN 2 PROFILE**

SCALE: H: 1" = 30"  
V: 1" = 5'



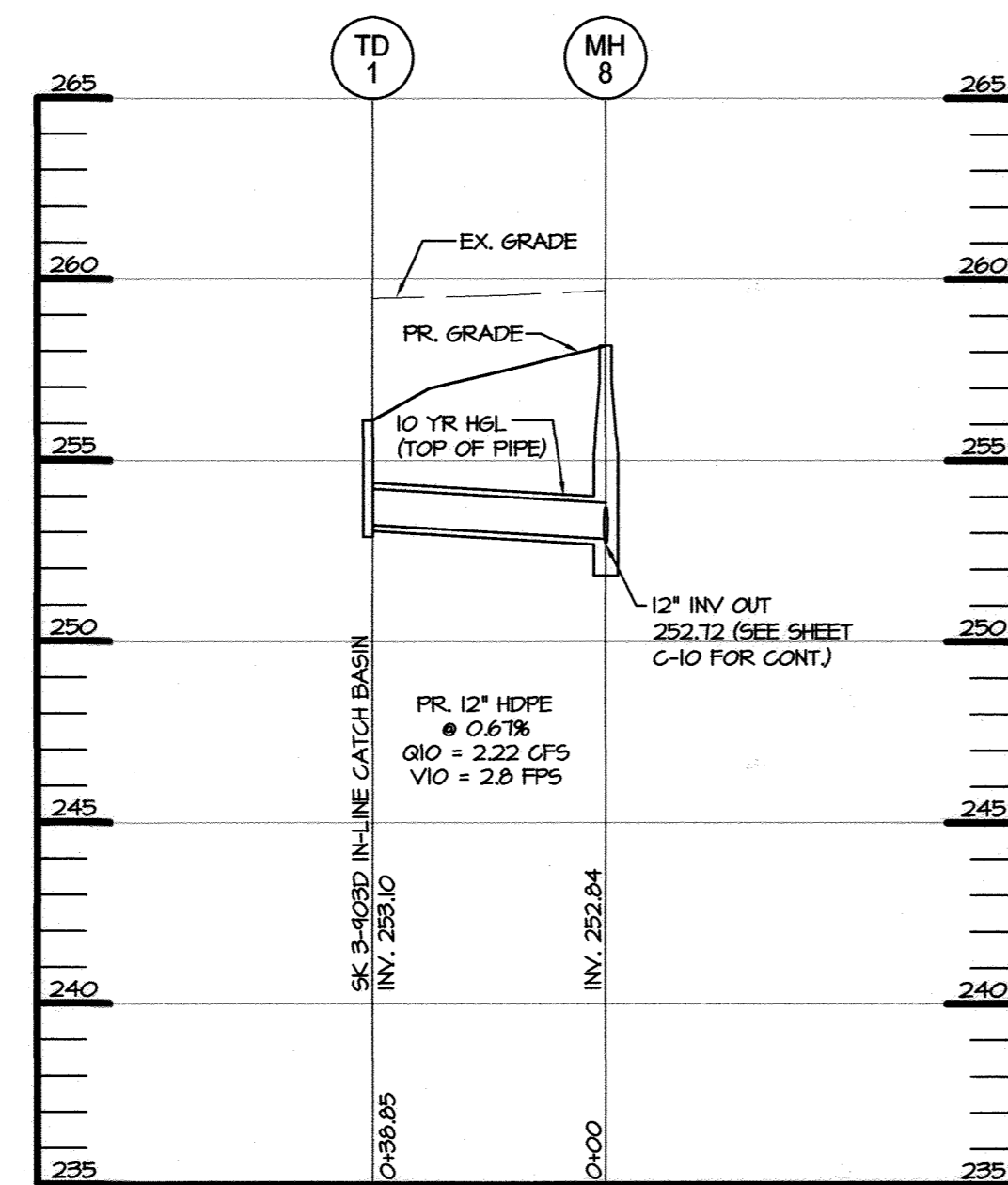
**TRENCH DRAIN 3 PROFILE**

SCALE: H: 1" = 30"  
V: 1" = 5'



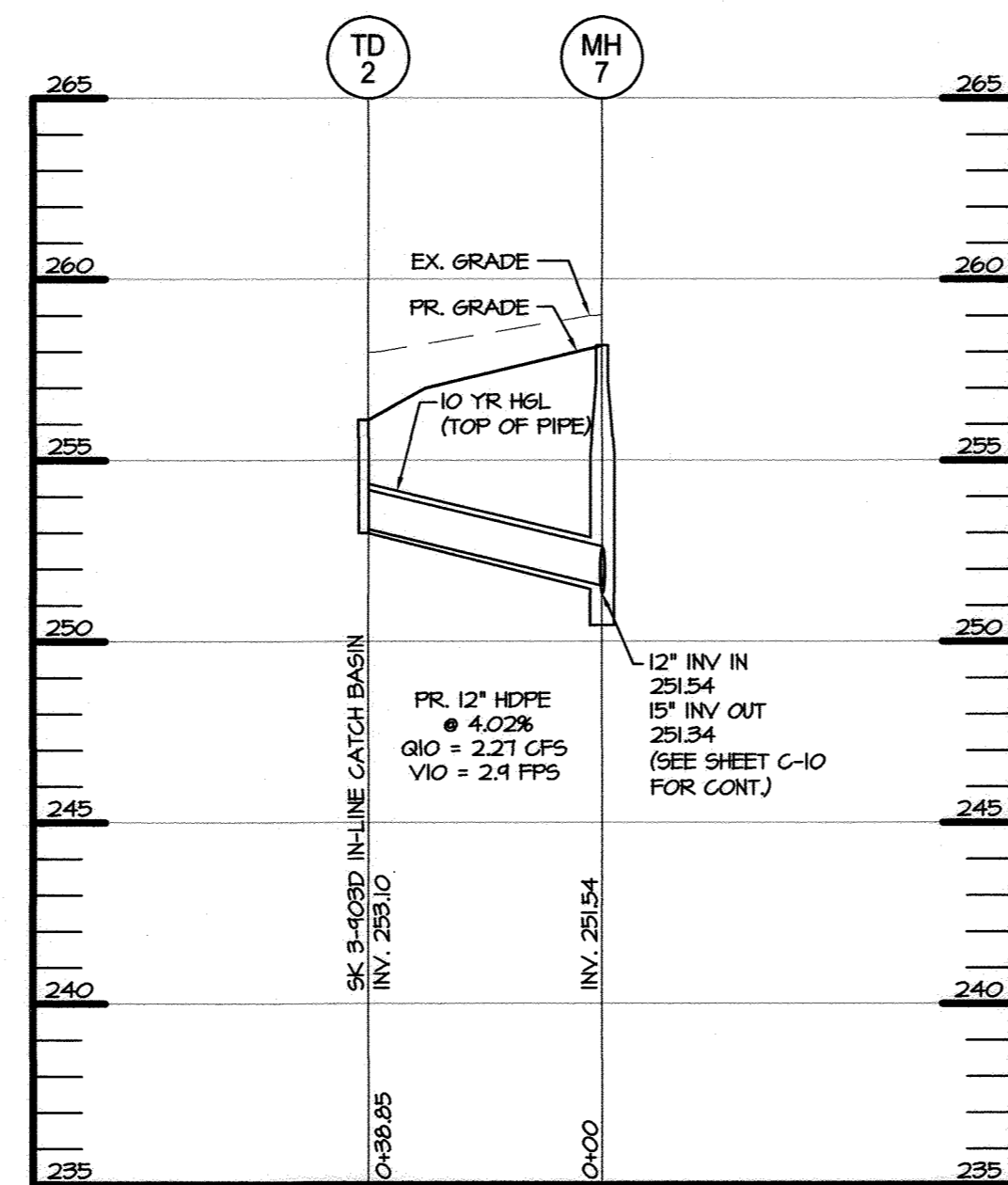
**TRENCH DRAIN 4 PROFILE**

SCALE: H: 1" = 30"  
V: 1" = 5'



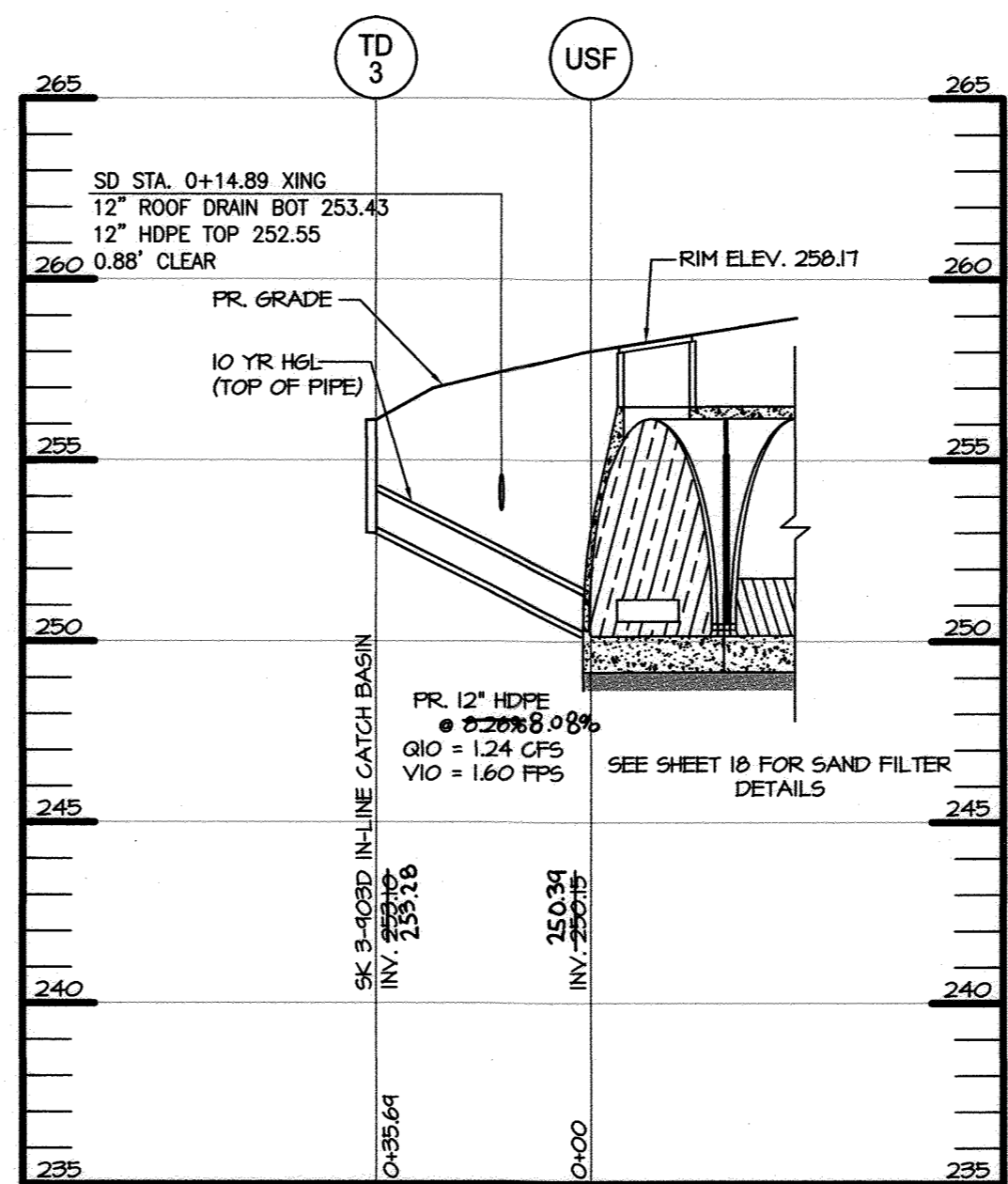
**STORM DRAIN PROFILE**

SCALE: H: 1" = 30"  
V: 1" = 5'



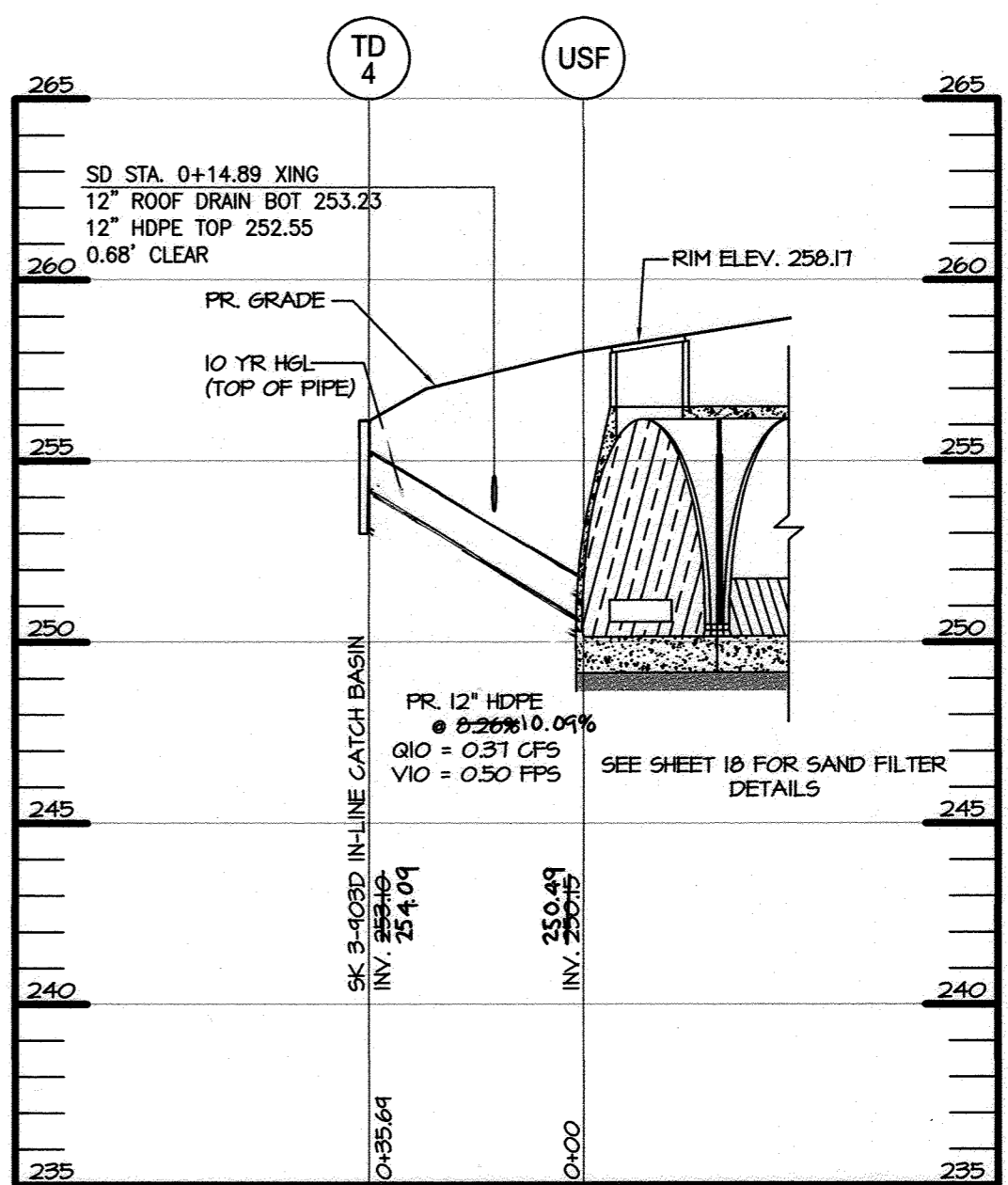
**STORM DRAIN PROFILE**

SCALE: H: 1" = 30"  
V: 1" = 5'



**STORM DRAIN PROFILE**

SCALE: H: 1" = 30"  
V: 1" = 5'

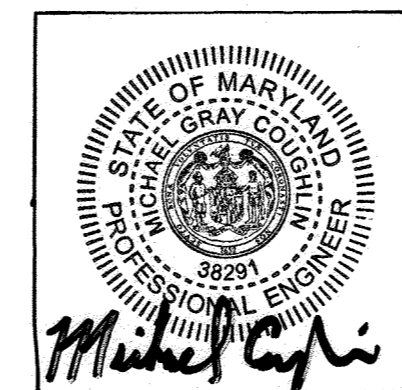


**STORM DRAIN PROFILE**

SCALE: H: 1" = 30"  
V: 1" = 5'

APPROVED: DEPARTMENT OF PLANNING AND ZONING

*[Signature]*  
CHIEF, DEVELOPMENT ENGINEERING DIVISION  
DATE: 4-29-20  
*[Signature]*  
CHIEF, DIVISION OF LAND DEVELOPMENT  
DATE: 5-12-2020  
*[Signature]*  
DIRECTOR



**ASBUILT CERTIFICATION FOR PSWM**

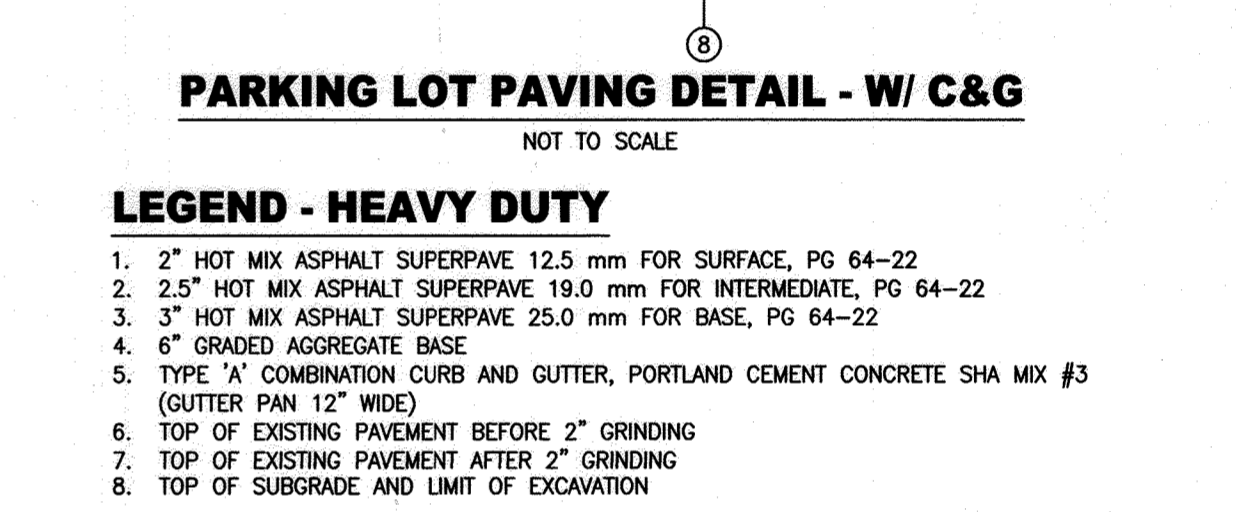
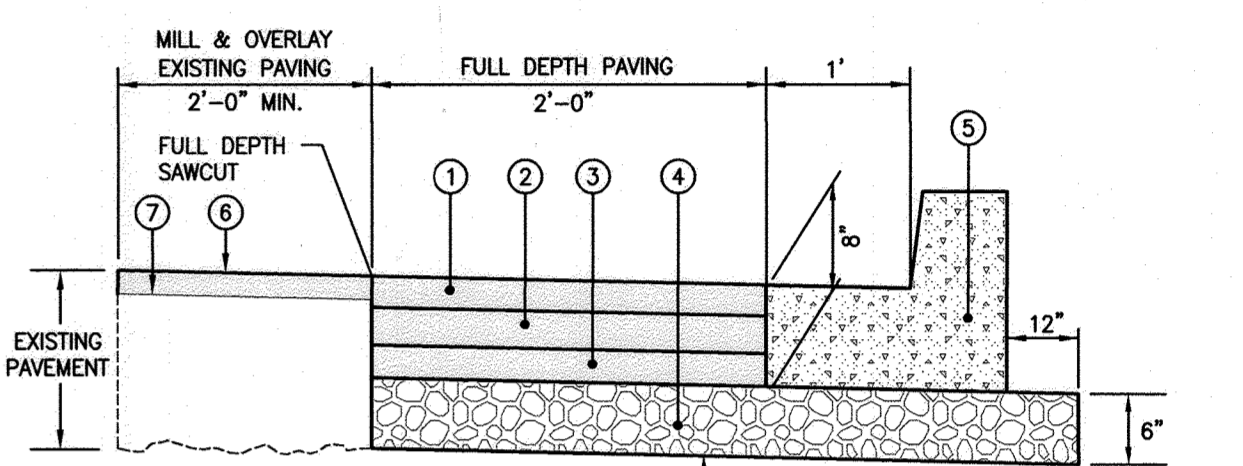
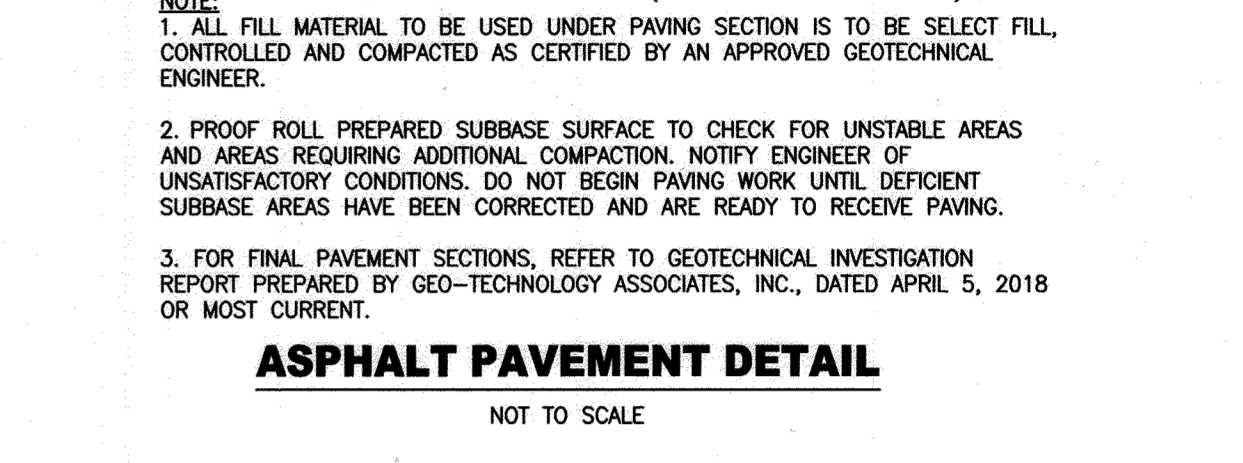
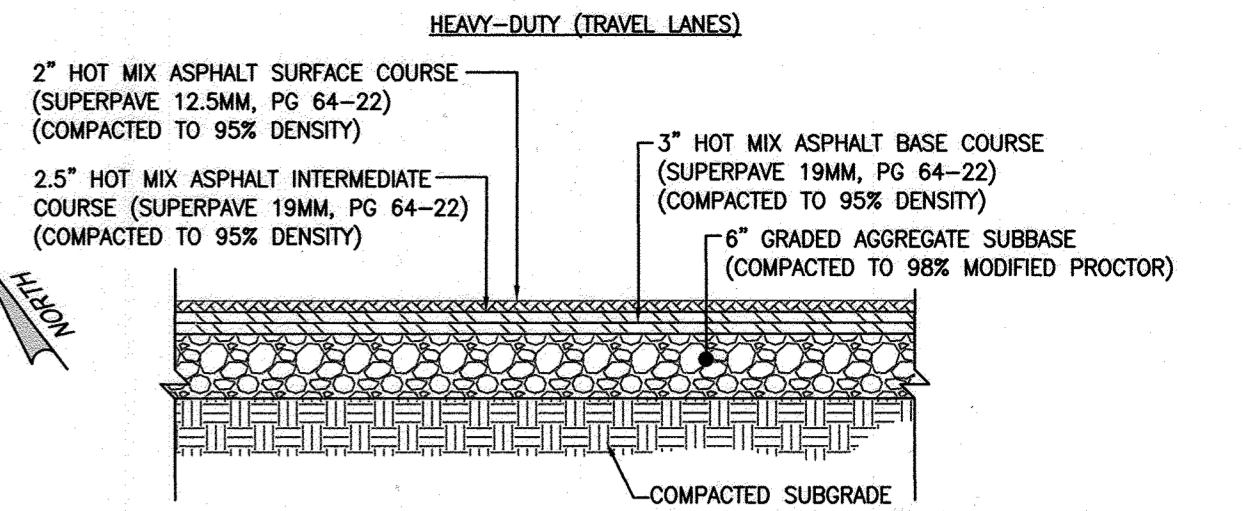
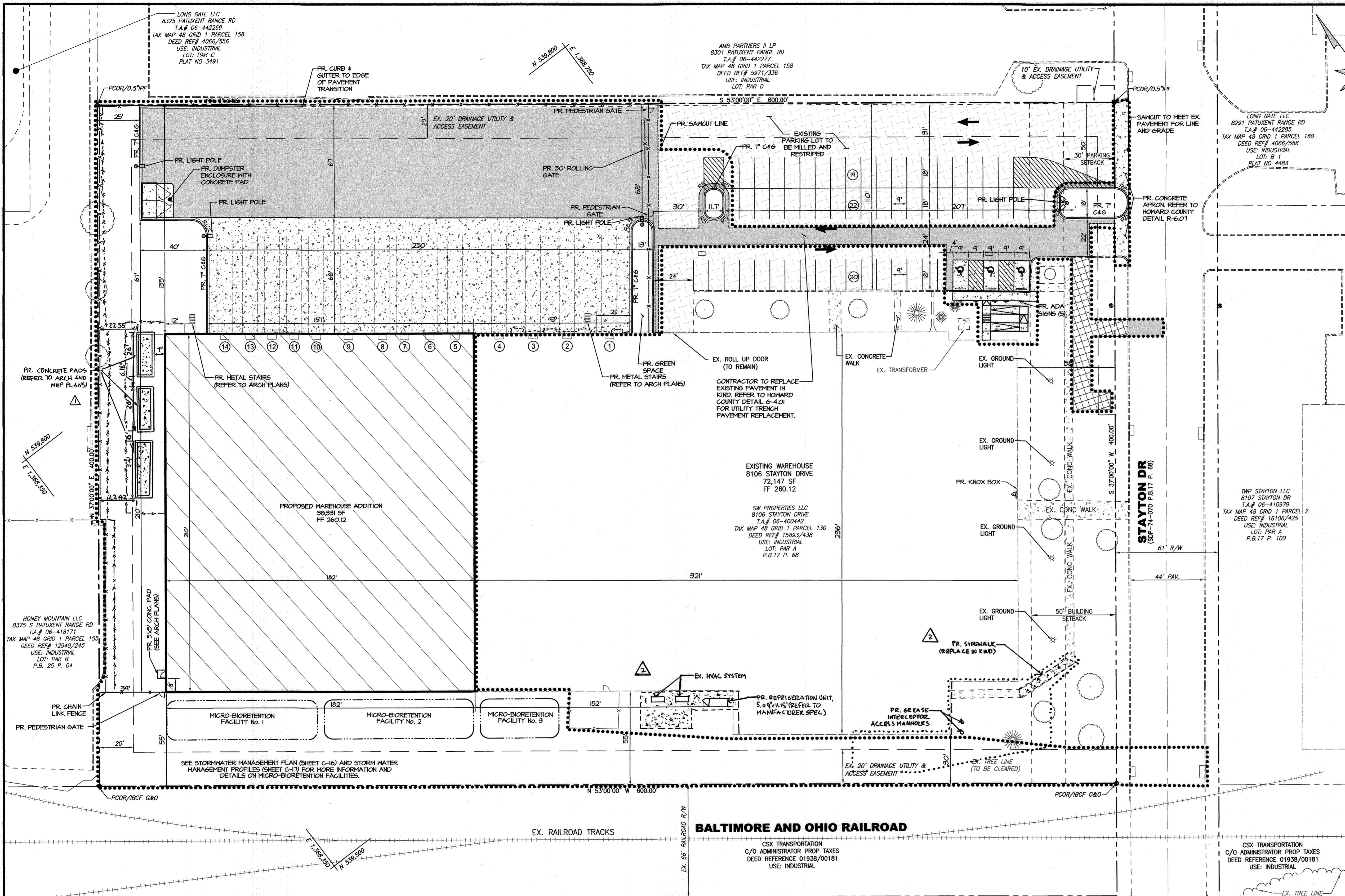
I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THE PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND COMPLIES WITH THE APPROVED PLANS AND SPECIFICATIONS. I HAVE VERIFIED THAT THE CONTRIBUTING DRAINAGE AREA IS SUFFICIENTLY STABILIZED TO PREVENT CLOGGING OF THE UNDERGROUND SWM FACILITY.  
MICHAEL G. COUGHLIN, PE NO. 38291, DATE OF ASBUILT 02/15/2022.

**DATUM**  
DESIGN & DRAWING BASED ON MARYLAND COORDINATE SYSTEM: HORIZONTAL NAD 83 (1991) VERTICAL NAVD 88  
**OWNER/DEVELOPER**  
SW PROPERTIES LLP  
8106 STATON DRIVE  
JESSUP, MD 20794  
ATTN: ALVIN LEE  
PHONE: (213)-944-4448

**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. 38291, EXPIRATION DATE: 01/13/2022

		<b>MORRIS &amp; RITCHIE ASSOCIATES, INC.</b> ENGINEERS, PLANNERS, SURVEYORS AND LANDSCAPE ARCHITECTS 1220-C EAST JOPPA ROAD, SUITE 505 TOWSON, MARYLAND 21286 (410) 821-1690 FAX (410) 821-1748 Copyright 2020 Morris & Ritchie Associates, Inc.	
		<b>SITE DEVELOPMENT PLAN          SW PROPERTIES LLC          PROPOSED WAREHOUSE ADDITION</b>  PRIVATE STORM DRAIN PROFILES  TAX MAP 48 ~ GRID 1 ~ PARCEL 130 ~ ZONING CE-CU ~ DEED REF 15893/00438 PB 17 PG 68 ~ TAX ASSESSMENT DISTRICT 81 ~ 6th ELECTION DISTRICT DPZ FILE REFERENCES SDP-74-070, SDP-70-022 8106 STATON DRIVE, HOWARD COUNTY, MARYLAND	
DATE	REVISIONS	JOB NO.:	19637X01
02/25/2022	Update Per As-Built Conditions	SCALE:	AS SHOWN
		DATE:	01/13/2020
		DRAWN BY:	DTP/DK
		DESIGN BY:	THS
		REVIEW BY:	MGC
		SHEET:	11 OF 29



**CONCRETE NOTE**  
THE CONTRACTOR SHALL VERIFY CONCRETE FORM PLACEMENT TO ASSURE COMPLIANCE WITH CURRENT LOCAL AND STATE ADA AS WELL AS BUILDING CODES. ADA INSPECTION SHALL BE REQUIRED PRIOR TO POURING CONCRETE. THE CONTRACTOR ACCEPTS RESPONSIBILITY FOR MEETING ALL APPLICABLE HANDICAP SLOPE AND DISTANCE REQUIREMENTS AS WELL AS OTHER REQUIREMENTS AS STATED IN THE APPLICABLE CODES. ANY DISCREPANCIES FOUND SHOULD BE BROUGHT TO THE SITE ENGINEER'S ATTENTION BEFORE ANY CONCRETE IS PLACED.

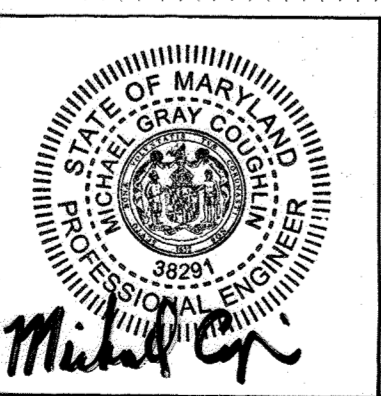
**GENERAL NOTE**  
THE CORRECTNESS OR COMPLETENESS OF EXISTING INFORMATION SHOWN ON THE DRAWINGS IS NOT WARRANTED OR GUARANTEED. THE CONTRACTOR SHALL VERIFY THE LOCATION OF UTILITIES AND UNDERGROUND FACILITIES, BY TEST PITS OR OTHER METHODS APPROVED BY THE OWNER'S REPRESENTATIVE, AS REQUIRED TO VERIFY EXACT LOCATIONS AND DEPTHS WITHIN THE LIMIT OF DISTURBANCE. ALL DISCREPANCIES BETWEEN INFORMATION SHOWN ON THE DRAWINGS AND THAT VERIFIED IN THE FIELD SHALL BE REPORTED TO THE OWNER'S REPRESENTATIVE PRIOR TO BEGINNING WORK.

**APPROVED: DEPARTMENT OF PLANNING AND ZONING**

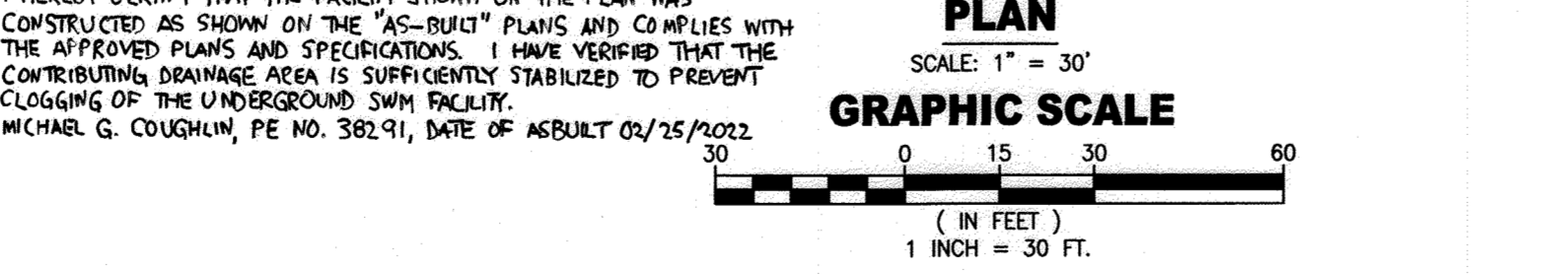
*Chief Development Engineering Division* **4-29-20** DATE

*Chief, Division of Land Development* **5/11/2020** DATE

*Director* **5-12-2020** DATE

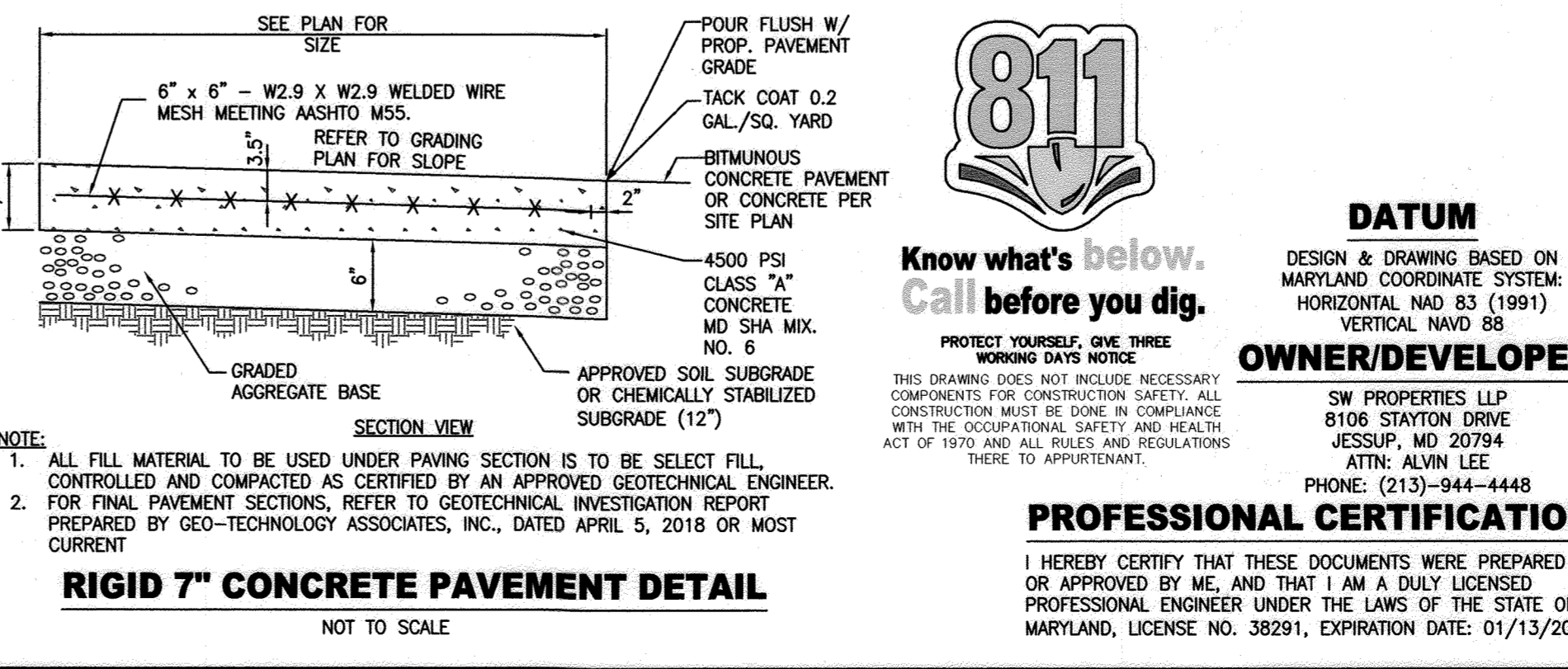


**ASBUILT CERTIFICATION FOR PSWM**  
I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THE PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND COMPLEES WITH THE APPROVED PLANS AND SPECIFICATIONS. I HAVE VERIFIED THAT THE CONTRIBUTING DRAINAGE AREA IS SUFFICIENTLY STABILIZED TO PREVENT CLOGGING OF THE UNDERGROUND SWM FACILITY.  
MICHAEL G. COUGHLIN, PE NO. 38291, DATE OF ASBUILT 02/25/2022



**LEGEND**

EXISTING	PR. TRUCK DOCK
EX. PROPERTY LINE	PR. BUILDING
EX. ADJACENT PROPERTY LINE	PR. CURB&GUTTER
EX. RIGHT OF WAY LINE	PR. STRIPINGS
EX. EASEMENT	PR. ADA SIGNAGE / WHEEL STOP
EX. BUILDING SETBACK	PR. CONCRETE
EX. BUILDING	PR. PIPE TRENCH FOR UTILITY CONSTRUCTION
EX. CURB	PROPOSED PR. 2" MILLED PAVEMENT
EX. EDGE OF PAVEMENT	PR. FULL DEPTH PAVEMENT
EX. ROAD CENTER LINE	PR. SAWCUT LINE
EX. CONCRETE	
EX. STRIPING	
EX. METAL FENCE	
EX. RAILROAD	
EX. TREES/SHRUBS	
EX. WOODS	
LIMIT OF DISTURBANCE	
URBAN LAND-UDORIENTED SOIL	
PR. METAL FENCE	
PR. MICRO-BIO	



**811**  
Know what's below. Call before you dig.  
PROTECT YOURSELF. GIVE THREE WORKING DAYS NOTICE.  
THIS DRAWING DOES NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY. ALL CONSTRUCTION MUST BE DONE IN COMPLIANCE WITH THE OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970 AND ALL RULES AND REGULATIONS THERE TO APPROPRIATE.

**DATUM**  
DESIGN & DRAWING BASED ON MARYLAND COORDINATE SYSTEM:  
HORIZONTAL NAD 83 (1991)  
VERTICAL NAVD 88

**OWNER/DEVELOPER**  
SW PROPERTIES LLP  
8106 STAYTON DRIVE  
JESSUP, MD 20794  
ATTN: ALVIN LEE  
PHONE: (213)-944-4448

**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. 38291, EXPIRATION DATE: 01/13/2022

**MORRIS & RITCHE ASSOCIATES, INC.**  
ENGINEERS, PLANNERS, SURVEYORS AND LANDSCAPE ARCHITECTS  
1220-C EAST JOPPA ROAD, SUITE 505  
TOWSON, MARYLAND 21286  
(410) 821-1690  
FAX (410) 821-1748  
Copyright 2020 Morris & Ritchie Associates, Inc.

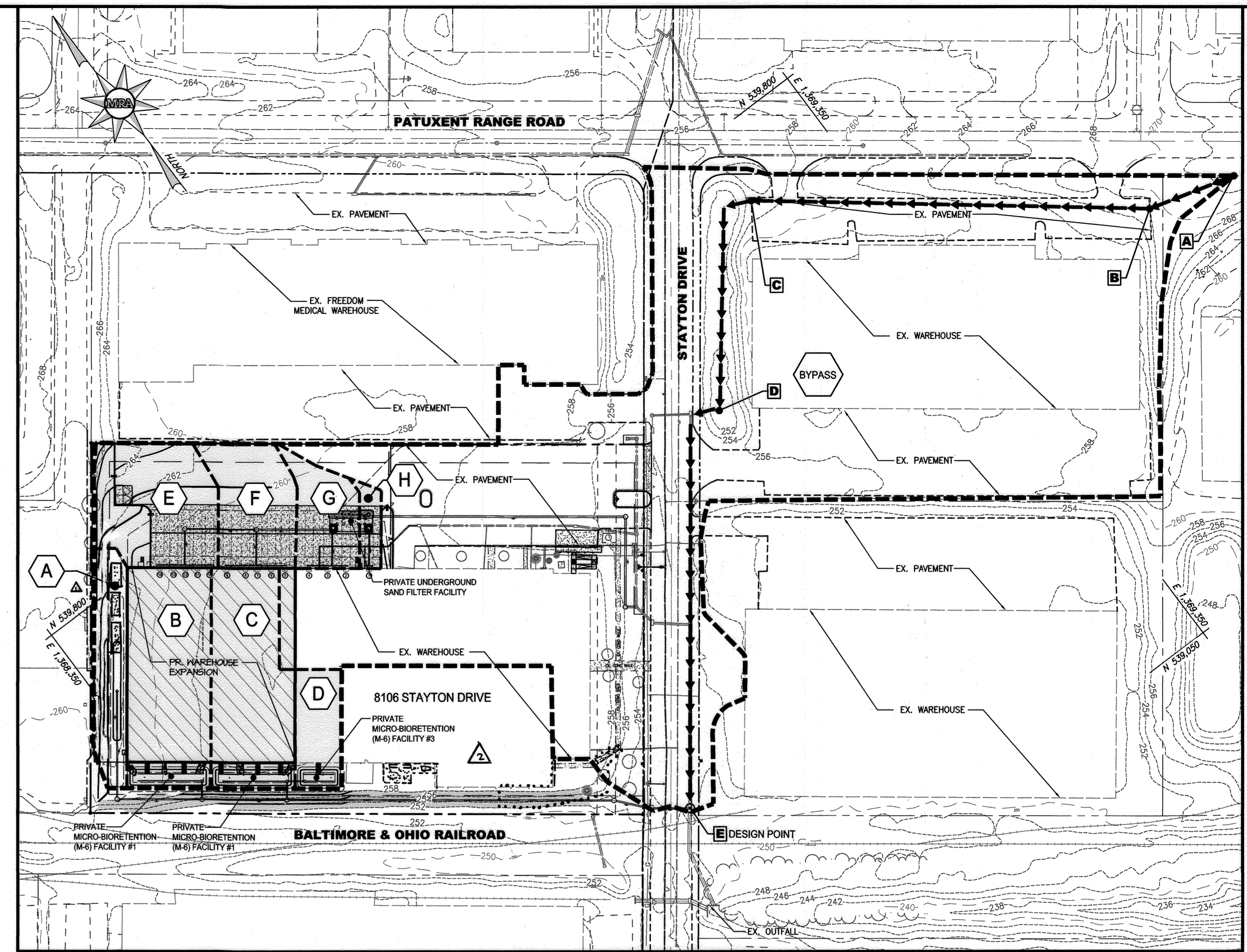
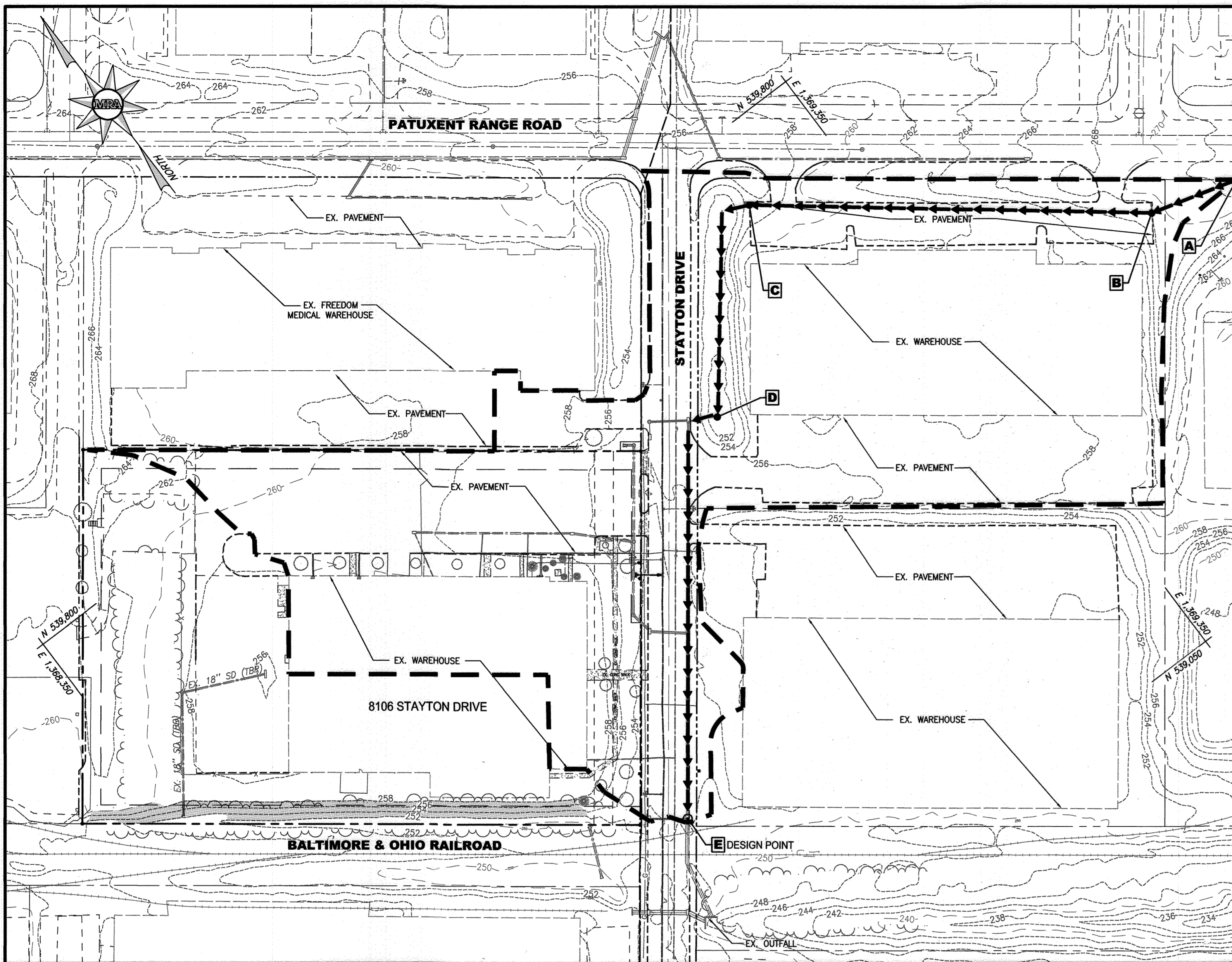
**SITE DEVELOPMENT PLAN**  
**SW PROPERTIES LLC**  
**PROPOSED WAREHOUSE ADDITION**  
PRIVATE SITE PLAN

TAX MAP 48 ~ GRID 1 ~ PARCEL 130 ~ ZONING CE-CU ~ DEED REF 15893/00438  
PB 17 PG 68 ~ TAX ASSESSMENT DISTRICT 81 ~ 6th ELECTION DISTRICT  
DPZ FILE REFERENCES SDP-74-070, SDP-70-022  
8106 STAYTON DRIVE, HOWARD COUNTY, MARYLAND

DATE	REVISIONS	JOB NO.:
04/16/2021	ADDED MECHANICAL UNIT PADS	19637X01
02/25/2022	Update Per Approved Conditions	DATE: 01/13/2020
04/19/2023	GREASE INTERCEPTOR AND REGENERATION UNIT ADDITIONS	DRAWN BY: DTP/DK
		DESIGN BY: THIS
		REVIEW BY: MSC
		SHEET: 12 OF 23

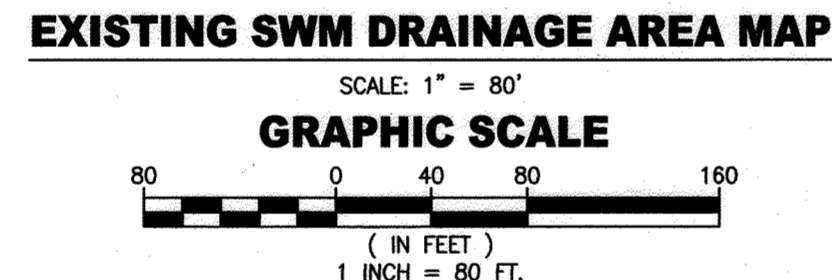






**EXISTING DRAINAGE AREA & 'C' FACTOR TABULATION**

AREA	ACREAGE	RCN	% IMP	IMP AREA	TC	SITE RUNOFF (CFS)(TR-55)	ZONING
TOTAL	7.98 AC.	95	81%	6.43 AC.	0.322	10YR = 37.09	CE-CL1

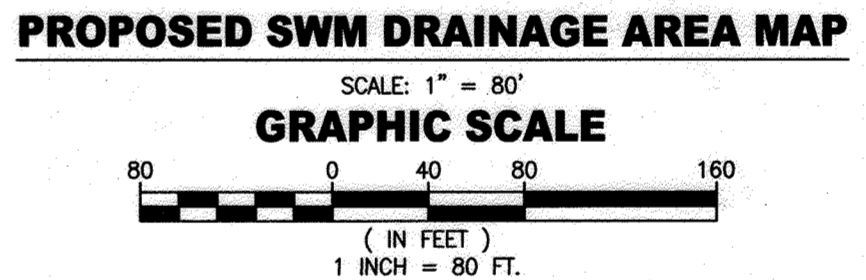


**SOILS CHART**

MAP SYMBOL AND SOIL NAME	HYDROLOGIC GROUP	SLOPES	ACREAGE ON-SITE
UHB URBAN LAND - UDORTHERENTS COMPLEX	D	0-15%	9.76 AC.

**PROPOSED DRAINAGE AREA & 'C' FACTOR TABULATION**

AREA	ACREAGE	RCN	% IMP	IMP AREA	TC	SITE RUNOFF (CFS)(TR-55)	ZONING
TOTAL	9.76 AC.	94	76%	7.42 AC.	0.322	10YR = 44.77	CE-CL1, M-2



**SWM DRAINAGE AREAS & 'C' FACTOR TABULATION**

AREA	ACREAGE	RCN	% IMP	IMP AREA	TC	SITE RUNOFF (CFS)(TR-55)	ZONING
A	0.20 AC.	80	0%	0.20 AC.	0.10	10YR = 0.91	CE-CL1
B	0.45 AC.	96	88%	0.39 AC.	0.10	10YR = 2.87	CE-CL1
C	0.45 AC.	96	88%	0.39 AC.	0.10	10YR = 2.87	CE-CL1
D	0.15 AC.	94	78%	0.12 AC.	0.10	10YR = 0.92	CE-CL1
E,F,G,H	0.93 AC.	96	86%	0.81 AC.	0.10	10YR = 5.66	CE-CL1
BYPASS	7.63 AC.	97	87%	6.63 AC.	0.322	10YR = 36.23	CE-CL1, M-2

\*DENOTES DRAINAGE AREA FOR ESD FACILITY

**HYDROLOGY/HYDRAULIC SUMMARY**

MICRO-BIORETENTION (M-6) FACILITY #1	WATER SURFACE ELEVATION	AREA OF FILTER PROVIDED	AREA OF FILTER REQUIRED	TOTAL STORAGE VOLUME REQUIRED	TOTAL STORAGE VOLUME PROVIDED	TOTAL STORAGE PONDING VOLUME PROVIDED
	ft.	s.f.	s.f.	c.f.	c.f.	a.c.-ft.
ESD VOLUME (ESDv)	257.00	387	845	2413	1799	0.0413
ESD VOLUME - AS-BUILT	256.43	387	907	2413	1955	0.0449
RECHARGE VOLUME (REV)	N/A	N/A	N/A	93	112	0.0026
RECHARGE VOLUME - AS-BUILT				93	212	0.0049
10-YEAR STORM	258.40					
10-YEAR STORM (ASBUILT)	258.46					

\*\* WATER QUALITY (WQv) IS SATISFIED WITH FULL STORAGE OF ESD VOLUME.  
 \*\*\* RAINFALL AMOUNT (PE) = 1.00 IN.

MARYLAND-378 FACILITY:  
 STRUCTURE CLASSIFICATION: A  
 WATERSHED NAME: LITTLE PATUXENT RIVER  
 STRUCTURE TYPE: MICRO-BIORETENTION (M-6)  
 STORAGE HEIGHT PRODUCT (AC-FT.): 0.0413 (ESD)  
 DRAINAGE AREA TO FACILITY (AC.): 96  
 RCN TO FACILITY: 96  
 PERMANENT POOL, WATER SURFACE AREA (AC.): 258.40 (ESD)  
 BYPASS SPILLWAY (WQR) RATE, AT DESIGN STORM (10 YR): 2.42 CFS (10 YEAR)  
 FREEBOARD PROVIDED (FT.): 0.60' (10 YEAR)

**HYDROLOGY/HYDRAULIC SUMMARY**

MICRO-BIORETENTION (M-6) FACILITY #2	WATER SURFACE ELEVATION	AREA OF FILTER PROVIDED	AREA OF FILTER REQUIRED	TOTAL STORAGE VOLUME REQUIRED	TOTAL STORAGE VOLUME PROVIDED	TOTAL STORAGE PONDING VOLUME PROVIDED
	ft.	s.f.	s.f.	c.f.	c.f.	a.c.-ft.
ESD VOLUME (ESDv)	257.00	387	845	2413	1799	0.0413
ESD VOLUME - AS-BUILT	256.56	387	865	2413	1907	0.0436
RECHARGE VOLUME (REV)	N/A	N/A	N/A	93	112	0.0026
RECHARGE VOLUME - AS-BUILT				93	202	0.0046
10-YEAR STORM	258.40					
10-YEAR STORM (ASBUILT)	258.96					

\*\* WATER QUALITY (WQv) IS SATISFIED WITH FULL STORAGE OF ESD VOLUME.  
 \*\*\* RAINFALL AMOUNT (PE) = 1.00 IN.

MARYLAND-378 FACILITY:  
 STRUCTURE CLASSIFICATION: A  
 WATERSHED NAME: LITTLE PATUXENT RIVER  
 STRUCTURE TYPE: MICRO-BIORETENTION (M-6)  
 STORAGE HEIGHT PRODUCT (AC-FT.): 0.0413 (ESD)  
 DRAINAGE AREA TO FACILITY (AC.): 96  
 RCN TO FACILITY: 96  
 PERMANENT POOL, WATER SURFACE AREA (AC.): 258.40 (ESD)  
 BYPASS SPILLWAY (WQR) RATE, AT DESIGN STORM (10 YR): 2.42 CFS (10 YEAR)  
 FREEBOARD PROVIDED (FT.): 0.60' (10 YEAR)

**HYDROLOGY/HYDRAULIC SUMMARY**

MICRO-BIORETENTION (M-6) FACILITY #3	WATER SURFACE ELEVATION	AREA OF FILTER PROVIDED	AREA OF FILTER REQUIRED	TOTAL STORAGE VOLUME REQUIRED	TOTAL STORAGE VOLUME PROVIDED	TOTAL STORAGE PONDING VOLUME PROVIDED
	ft.	s.f.	s.f.	c.f.	c.f.	a.c.-ft.
ESD VOLUME (ESDv)	257.00	134	380	765	834	0.0191
ESD VOLUME - AS-BUILT	256.74	134	374	765	880	0.0191
RECHARGE VOLUME (REV)	N/A	N/A	N/A	30	50	0.0012
RECHARGE VOLUME - AS-BUILT				30	89	0.0020
10-YEAR STORM	258.19					
10-YEAR STORM (ASBUILT)	258.43					

\*\* WATER QUALITY (WQv) IS SATISFIED WITH FULL STORAGE OF ESD VOLUME.  
 \*\*\* RAINFALL AMOUNT (PE) = 1.00 IN.

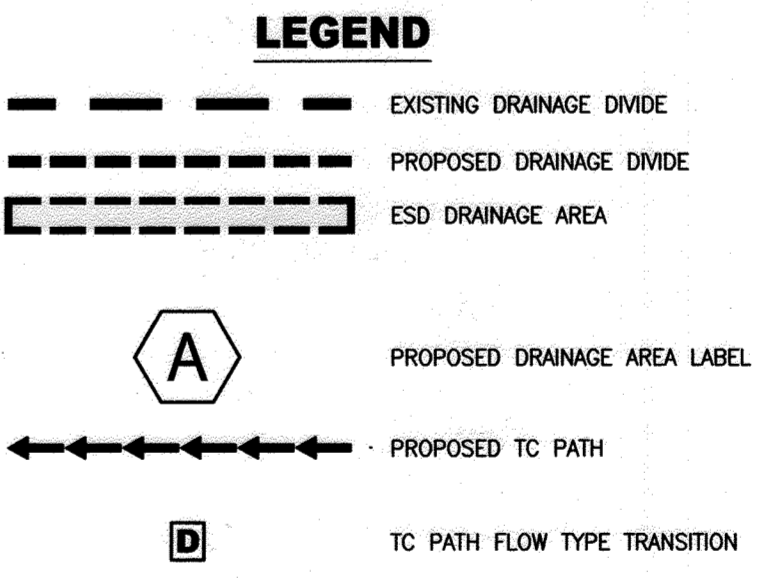
MARYLAND-378 FACILITY:  
 STRUCTURE CLASSIFICATION: A  
 WATERSHED NAME: LITTLE PATUXENT RIVER  
 STRUCTURE TYPE: MICRO-BIORETENTION (M-6)  
 STORAGE HEIGHT PRODUCT (AC-FT.): 0.0191 (ESD)  
 DRAINAGE AREA TO FACILITY (AC.): 0.15  
 RCN TO FACILITY: 94  
 PERMANENT POOL, WATER SURFACE AREA (AC.): 258.19 (ESD)  
 BYPASS SPILLWAY (WQR) RATE, AT DESIGN STORM (10 YR): 0.79 CFS (10 YEAR)  
 FREEBOARD PROVIDED (FT.): 0.61' (10 YEAR)

**HYDROLOGY/HYDRAULIC SUMMARY**

STORMPOD UNDERGROUND SAND FILTER	WATER SURFACE ELEVATION	STORAGE HEIGHT PRODUCT (AC-FT.)	AREA OF FILTER BED REQUIRED	AREA OF FILTER BED PROVIDED	PRE-TREATMENT STORAGE VOLUME PROVIDED	FILTER VOIDS STORAGE VOLUME PROVIDED	ABOVE FILTER STORAGE VOLUME PROVIDED	TOTAL STORAGE VOLUME PROVIDED
	c.f.	c.f.	s.f.	s.f.	c.f.	c.f.	c.f.	a.c.-ft.
ESD VOLUME (ESDv)	2643	1982	167	319	2093	204	984	3281
ESD VOLUME - AS-BUILT				319	2093	204	984	3281

\*\* WATER QUALITY (WQv) IS SATISFIED WITH FULL STORAGE OF ESD VOLUME.  
 \*\*\* RAINFALL AMOUNT (PE) = 1.00 IN.

MARYLAND-378 FACILITY:  
 WATERSHED NAME: LITTLE PATUXENT RIVER  
 STORAGE HEIGHT PRODUCT (AC-FT.): 0.0753 (ESD)  
 DRAINAGE AREA TO FACILITY (AC.): 0.88  
 RCN TO FACILITY: 96



APPROVED: DEPARTMENT OF PLANNING AND ZONING

*[Signature]* 4.29.20  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION

*[Signature]* 5/11/2020  
 CHIEF, DIVISION OF LAND DEVELOPMENT

*[Signature]* 5-12-2020  
 DIRECTOR



**ASBUILT CERTIFICATION FOR PSWM**

I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THE PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND COMPLIES WITH THE APPROVED PLANS AND SPECIFICATIONS. I HAVE VERIFIED THAT THE CONTRIBUTING DRAINAGE AREA IS SUFFICIENTLY STABILIZED TO PREVENT CLOGGING OF THE UNDERGROUND SWM FACILITY.

MICHAEL G. COUGHLIN, PE NO. 38291, DATE OF ASBUILT 01/15/2022

**DATUM**  
 DESIGN & DRAWING BASED ON MARYLAND COORDINATE SYSTEM: HORIZONTAL NAD 83 (1991) VERTICAL NAVD 88

**OWNER/DEVELOPER**  
 SW PROPERTIES LLP  
 8106 STAYTON DRIVE  
 JESSUP, MD 20794  
 ATTN: ALVIN LEE  
 PHONE: (213)-944-4448

**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. 38291, EXPIRATION DATE: 01/13/2022

**MORRIS & RITCHIE ASSOCIATES, INC.**  
 ENGINEERS, PLANNERS, SURVEYORS AND LANDSCAPE ARCHITECTS  
 1220-C EAST JOPPA ROAD, SUITE 505  
 TOWSON, MARYLAND 21286  
 (410) 821-1690  
 FAX (410) 821-1748  
 Copyright 2020 Morris & Ritchie Associates, Inc.

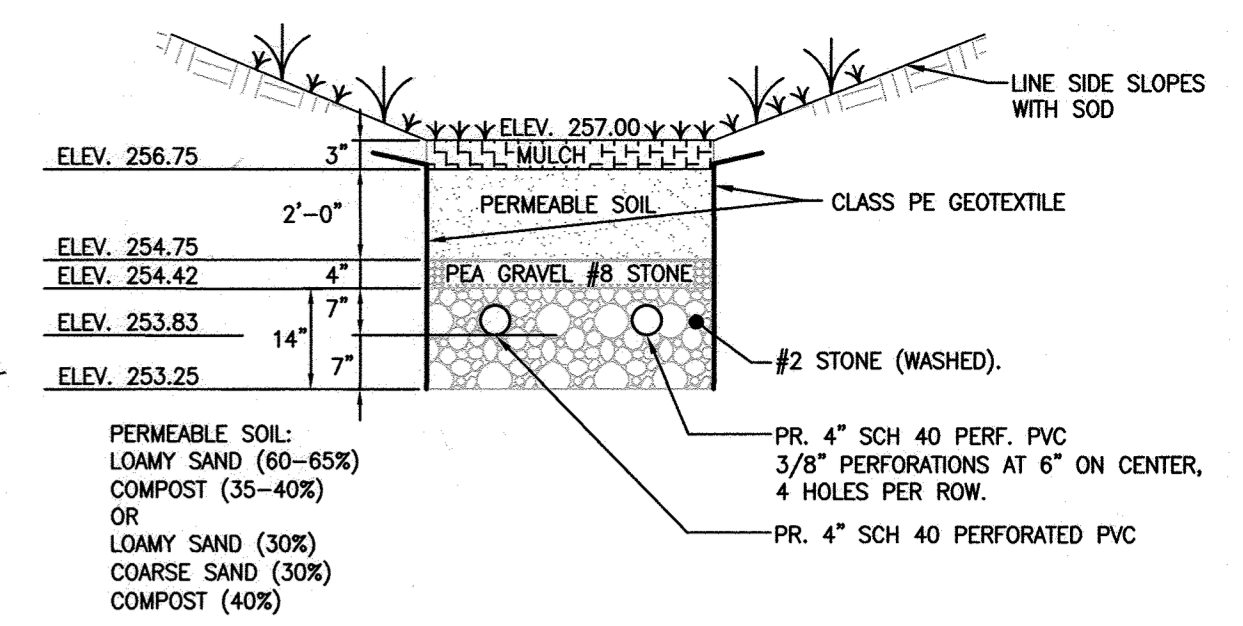
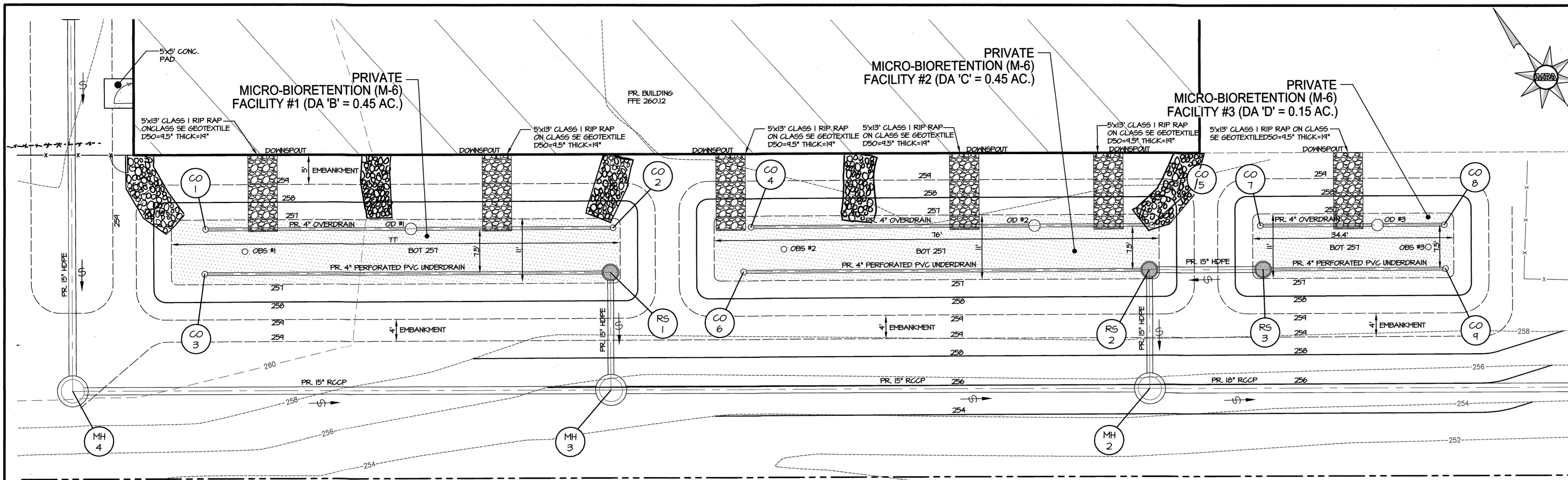
**SITE DEVELOPMENT PLAN  
 SW PROPERTIES LLC  
 PROPOSED WAREHOUSE ADDITION  
 STORMWATER MANAGEMENT PLAN  
 & DRAINAGE AREA MAPS**

TAX MAP 48 ~ GRID 1 ~ PARCEL 130 ~ ZONING CE-CL1 ~ DEED REF 15893/00438  
 PB 17 PG 68 ~ TAX ASSESSMENT DISTRICT 81 ~ 6th ELECTION DISTRICT  
 DPZ FILE REFERENCES SDP-74-070, SDP-70-022  
 8106 STAYTON DRIVE, HOWARD COUNTY, MARYLAND

**REVISIONS**

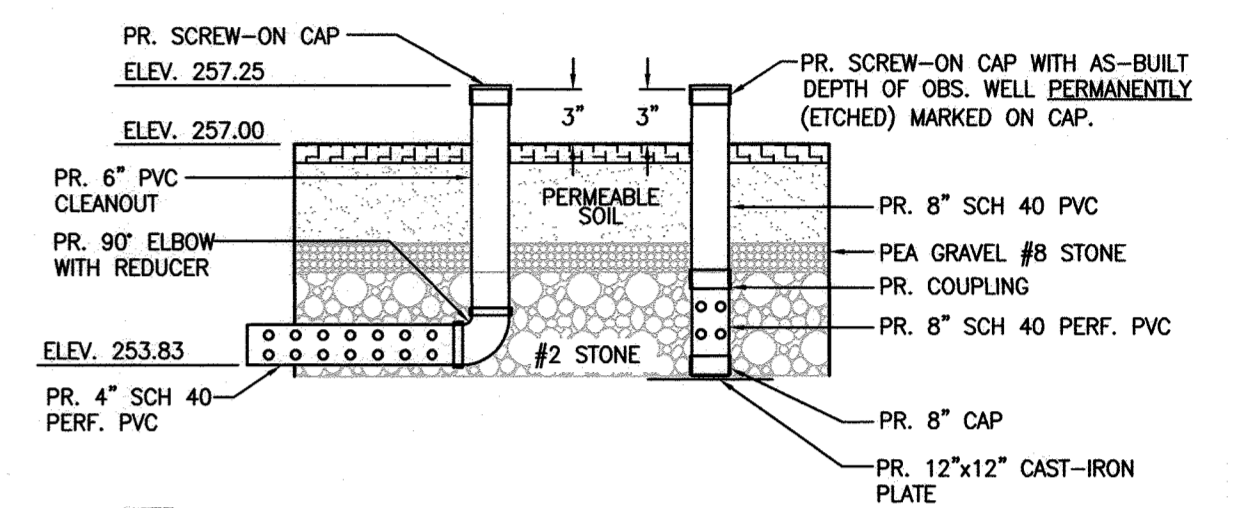
DATE	REVISIONS	JOB NO.:
04/16/2021	ADDED MECHANICAL UNIT PADS AND REVISED GRADING	19637X01
02/15/2022	Updated Per As-Built Conditions	SCALE: 1" = 80'
04/16/2023	GREASE INTERCEPTOR AND REFRIGERATION UNIT ADDITIONS	DATE: 01/13/2020

DRAWN BY: DTP/DK  
 DESIGN BY: THS  
 REVIEW BY: MGC  
 SHEET: 15 OF 29



NOTE: REFER TO SPECIFICATIONS FOUND IN APPENDIX B-4 OF THE REVISED 2007 STORMWATER MANAGEMENT ACT FOR ADDITIONAL INFORMATION ON SPECIFICATIONS AND CONSTRUCTION.

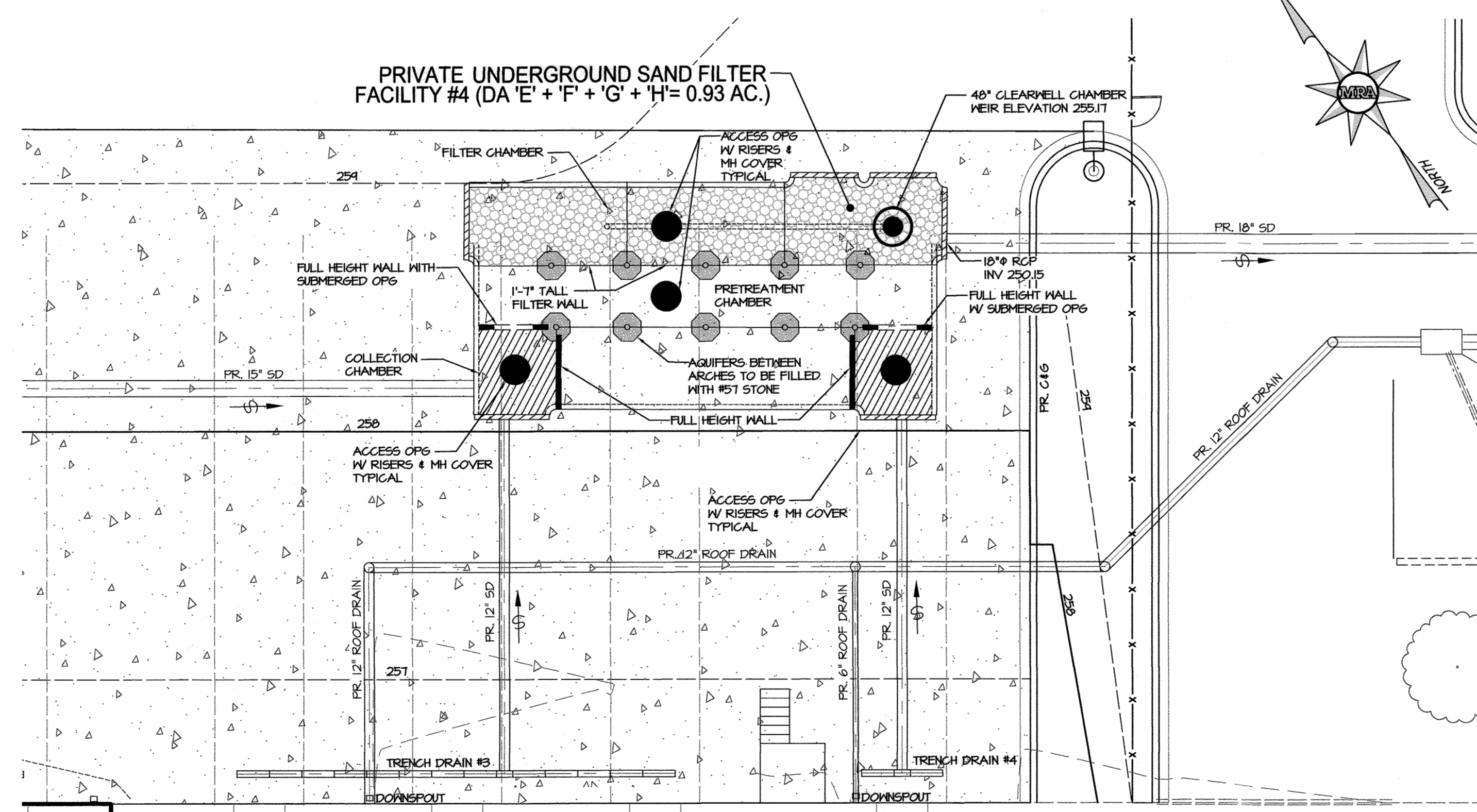
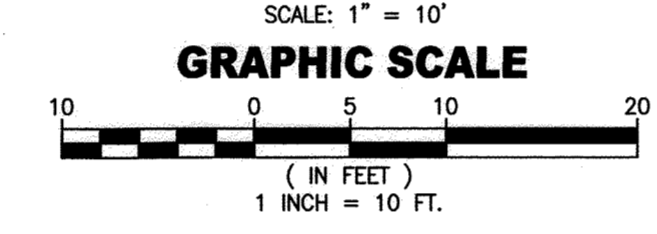
**MICRO - BIORETENTION FACILITY FILTER MEDIA SECTION**  
NOT TO SCALE



NOTE:  
1. SEE PLANS FOR LOCATION OF CLEANOUTS AND OBSERVATION WELLS.  
2. ALL PVC ABOVE GROUND TO BE PAINTED A DARK BROWN COLOR WITH WATER BASED ACRYLIC OR LATEX PAINT. PAINT A MINIMUM 6" BELOW TOP OF GRADE.  
3. CONTRACTOR MUST MARK ORIGINAL DEPTH OF CLEANOUTS AND OBSERVATION WELLS BEFORE LEAVING THE SITE.

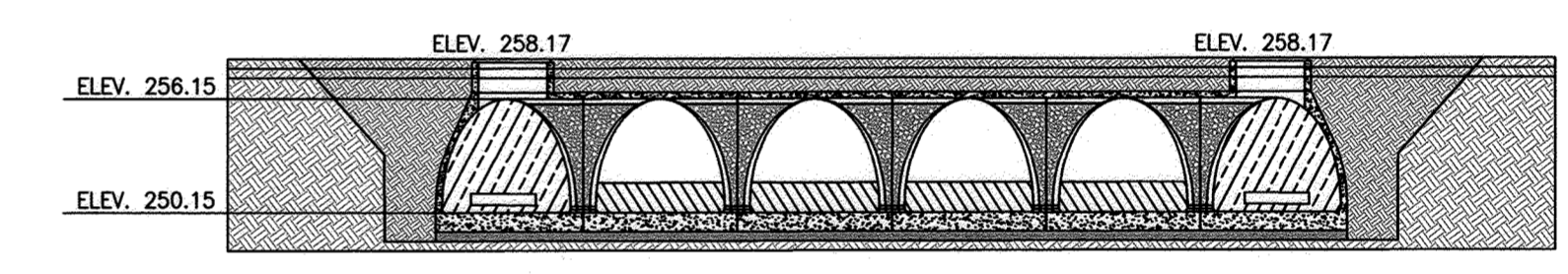
**MICRO-BIORETENTION FACILITY CLEANOUT & OBSERVATION WELL DETAIL**  
NOT TO SCALE

**MICRO-BIORETENTION FACILITY INSET**



**UNDERGROUND SAND FILTER FACILITY INSET**

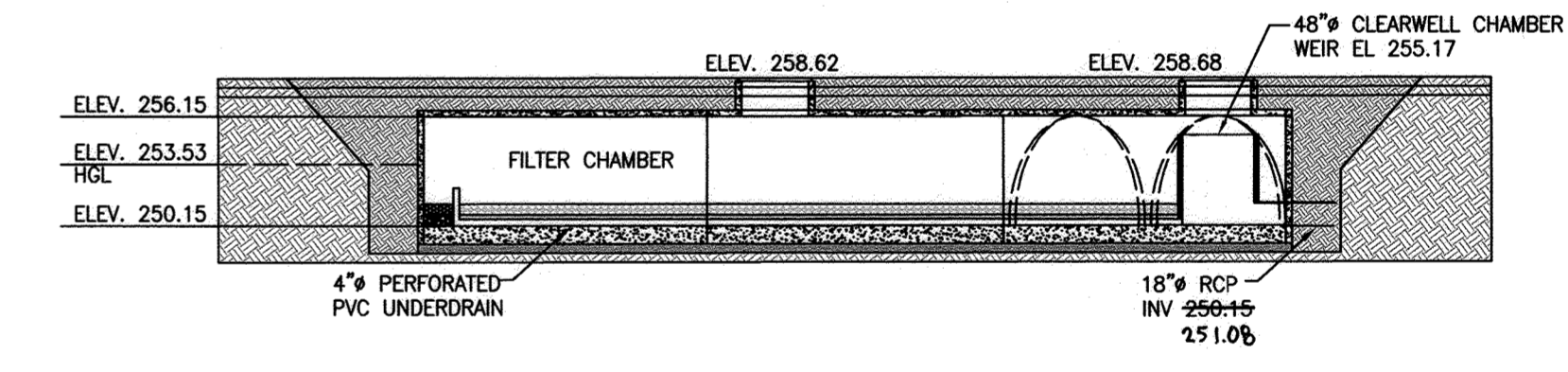
SCALE: 1" = 10'



NOTE: STRUCTURE IS REQUIRED TO BE WATER TIGHT BETWEEN CHAMBERS TO MAINTAIN A PERMANENT POOL IN PRE-TREATMENT CHAMBER. THE PREFORMED JOINTS BETWEEN PRECAST MODULES ARE TO BE GROUTED IN FIELD.

**UNDERGROUND SAND FILTER FACILITY COLLECTION CHAMBER SECTION**

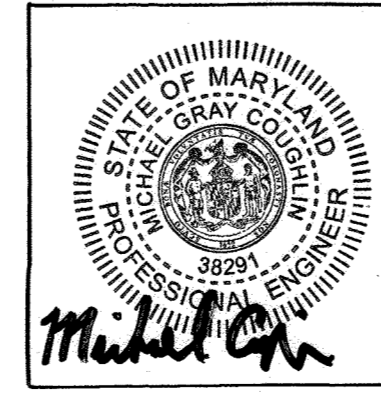
SCALE: 1" = 10'



**UNDERGROUND SAND FILTER FACILITY FILTER CHAMBER SECTION**

SCALE: 1" = 10'

APPROVED DEPARTMENT OF PLANNING AND ZONING  
 DATE: 4/29/20  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION JR  
 DATE: 5/11/2020  
 CHIEF, DIVISION OF LAND DEVELOPMENT  
 DATE: 5-12-2020  
 DIRECTOR



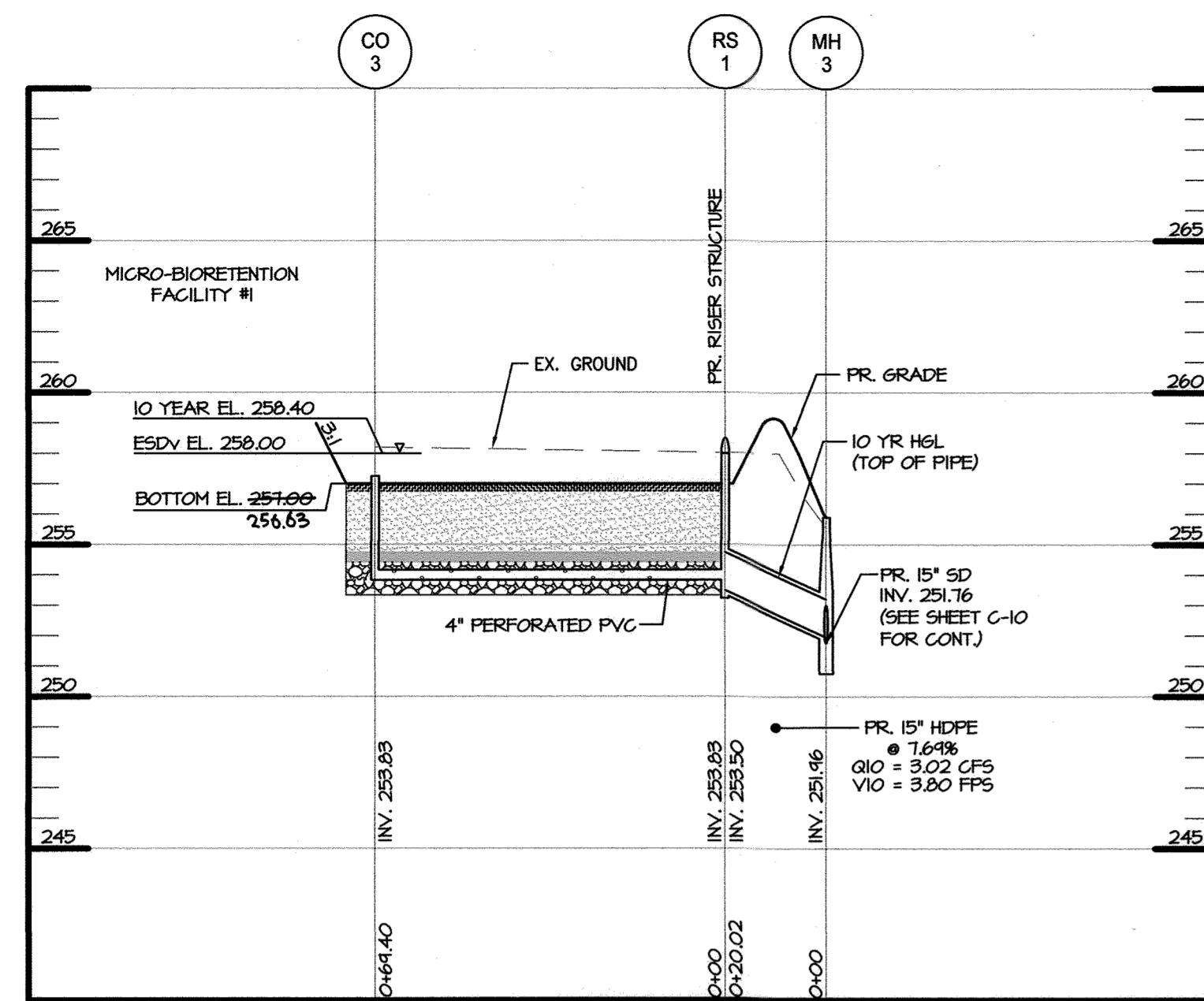
**ASBUILT CERTIFICATION FOR PSWM**  
 I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THE PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND CONFORMS WITH THE APPROVED PLANS AND SPECIFICATIONS. I HAVE VERIFIED THAT THE CONTRIBUTING DRAINAGE AREA IS SUFFICIENTLY STABILIZED TO PREVENT CLOSING OF THE UNDERGROUND SWM FACILITY.  
 MICHAEL G. COUGHLIN, PE NO. 38291, DATE OF ASBUILT 04/15/2022

**DATUM**  
 DESIGN & DRAWING BASED ON MARYLAND COORDINATE SYSTEM:  
 HORIZONTAL NAD 83 (1991)  
 VERTICAL NAVD 88  
**OWNER/DEVELOPER**  
 SW PROPERTIES LLP  
 8106 STAYTON DRIVE  
 JESSUP, MD 20794  
 ATTN: ALVIN LEE  
 PHONE: (213)-944-4448

**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. 38291, EXPIRATION DATE: 01/13/2022

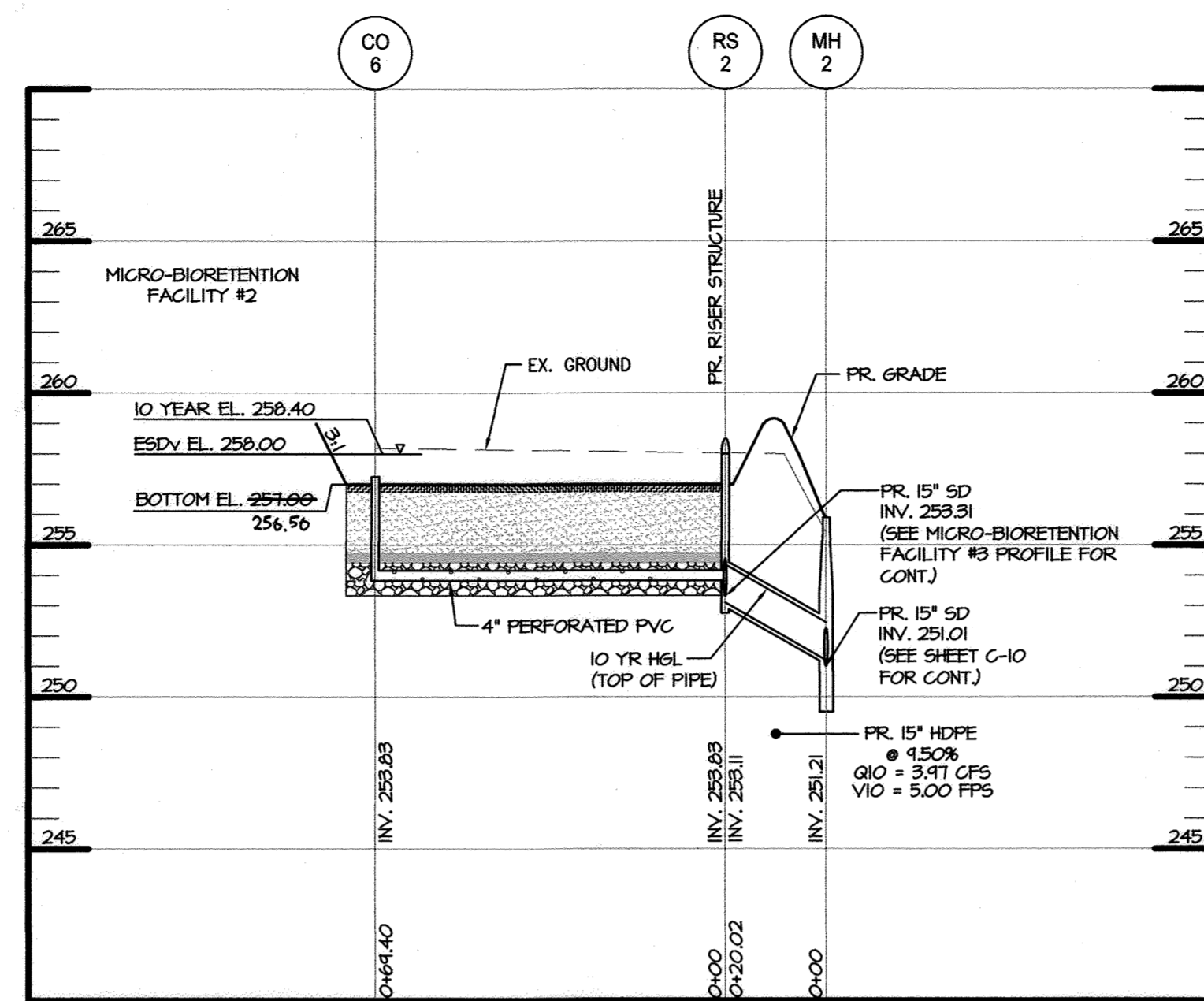
		<b>MORRIS &amp; RITCHIE ASSOCIATES, INC.</b> ENGINEERS, PLANNERS, SURVEYORS AND LANDSCAPE ARCHITECTS 1220-C EAST JOPPA ROAD, SUITE 505 TOWSON, MARYLAND 21286 (410) 821-1690 FAX (410) 821-1748 Copyright 2020 Morris & Ritchie Associates, Inc.	
		<b>SITE DEVELOPMENT PLAN</b> <b>SW PROPERTIES LLC</b> <b>PROPOSED WAREHOUSE ADDITION</b>  <b>STORMWATER MANAGEMENT PLAN</b> TAX MAP 48 ~ GRID 1 ~ PARCEL 130 ~ ZONING CE-CU ~ DEED REF 15893/00438 PB 17 PG 68 ~ TAX ASSESSMENT DISTRICT 81 ~ 6th ELECTION DISTRICT DPZ FILE REFERENCES SDP-74-070, SDP-70-022 8106 STAYTON DRIVE, HOWARD COUNTY, MARYLAND	
DATE	REVISIONS	JOB NO.:	19637X01
02/25/2021	Updated Per As-Built Conditions	SCALE:	AS SHOWN
		DATE:	01/13/2020
		DRAWN BY:	DTP/DK
		DESIGN BY:	THS
		REVIEW BY:	MGC
		SHEET:	16 OF 29





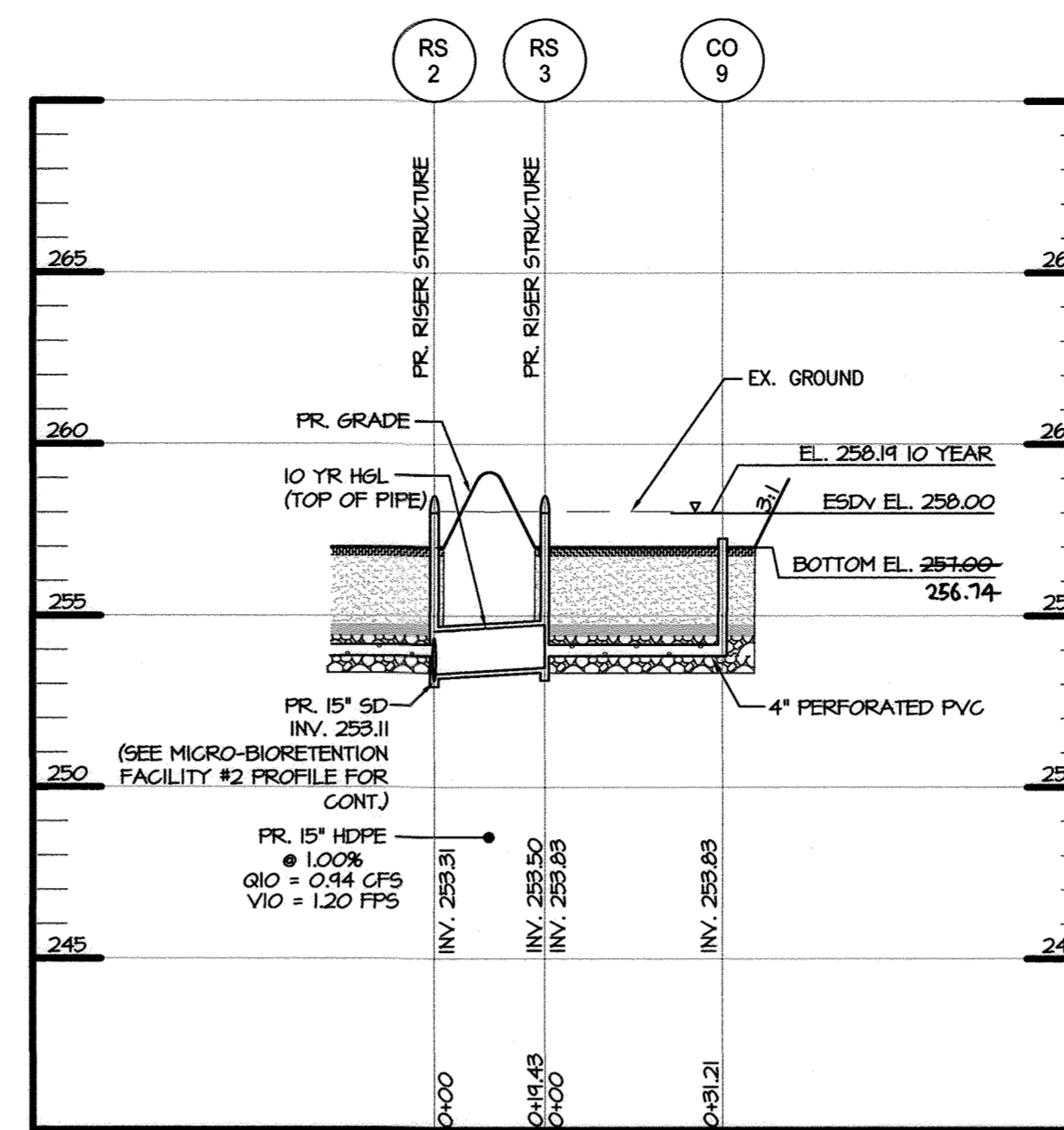
**MICRO-BIORETENTION FACILITY No. 1 PROFILE**

SCALE: H: 1" = 30"  
V: 1" = 5"



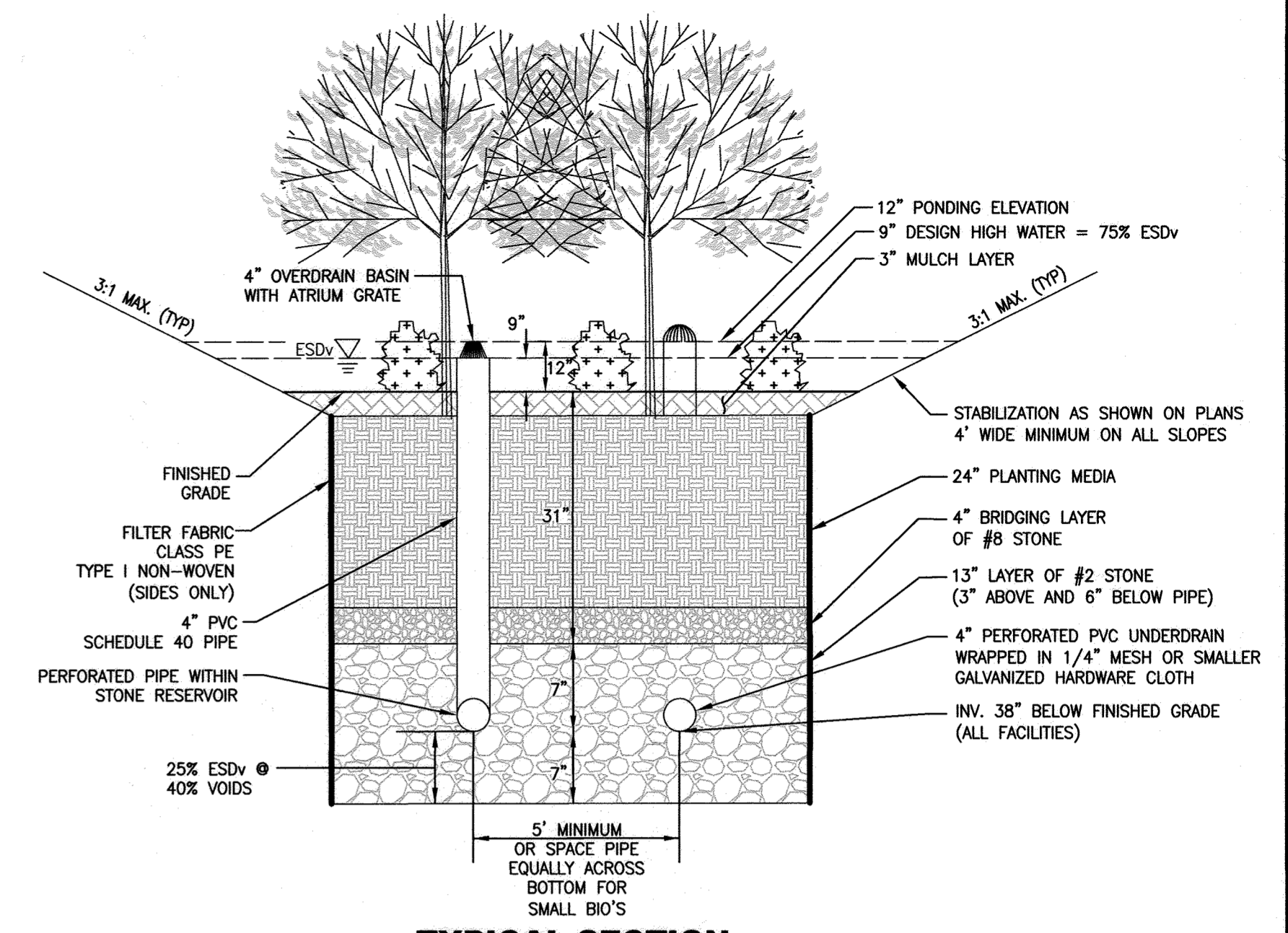
**MICRO-BIORETENTION FACILITY No. 2 PROFILE**

SCALE: H: 1" = 30"  
V: 1" = 5"



**MICRO-BIORETENTION FACILITY No. 3 PROFILE**

SCALE: H: 1" = 30"  
V: 1" = 5"

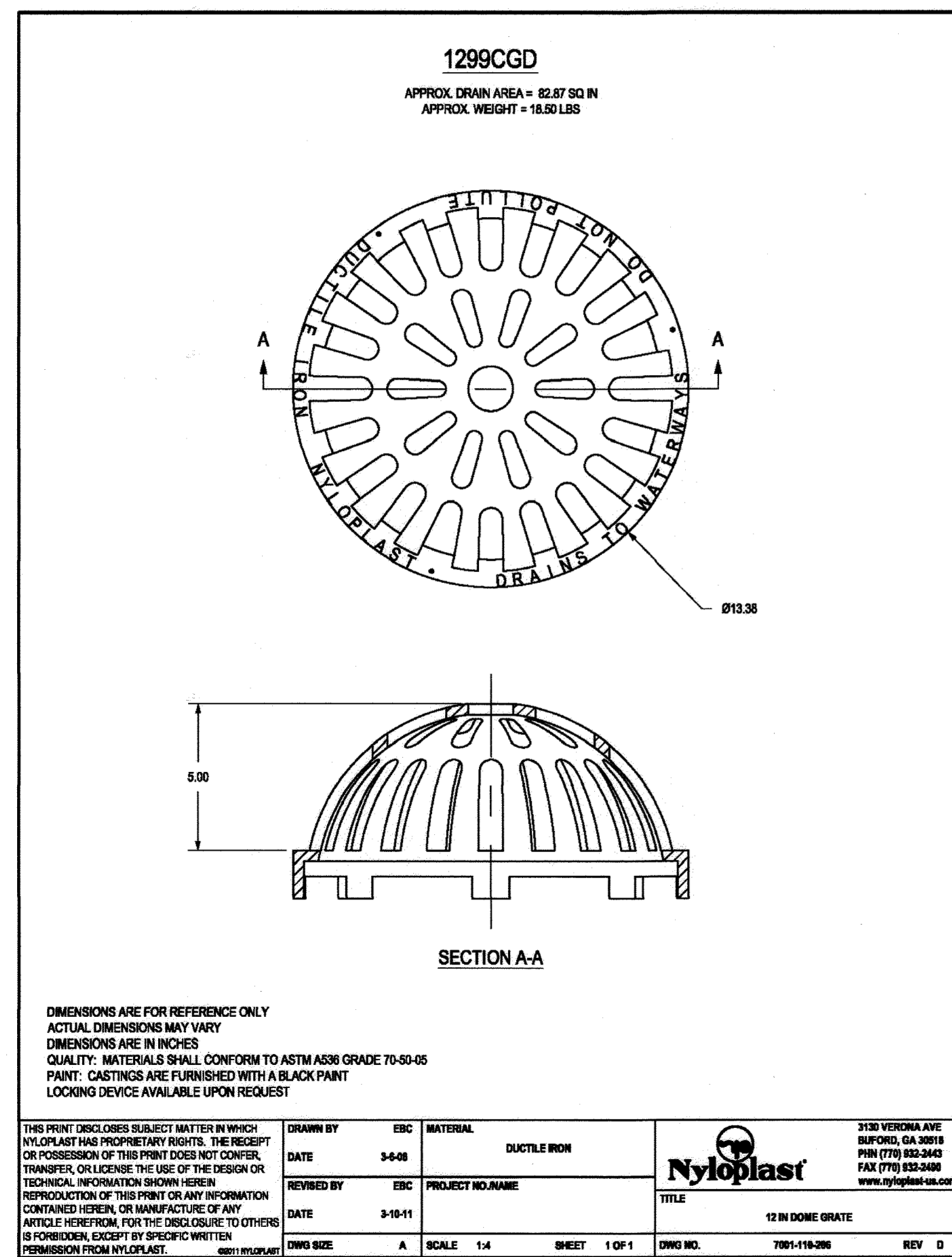


**TYPICAL SECTION FACILITY OVERDRAIN AND UNDERDRAIN SECTION**

MDE CLASSIFICATION M-6  
NOT TO SCALE

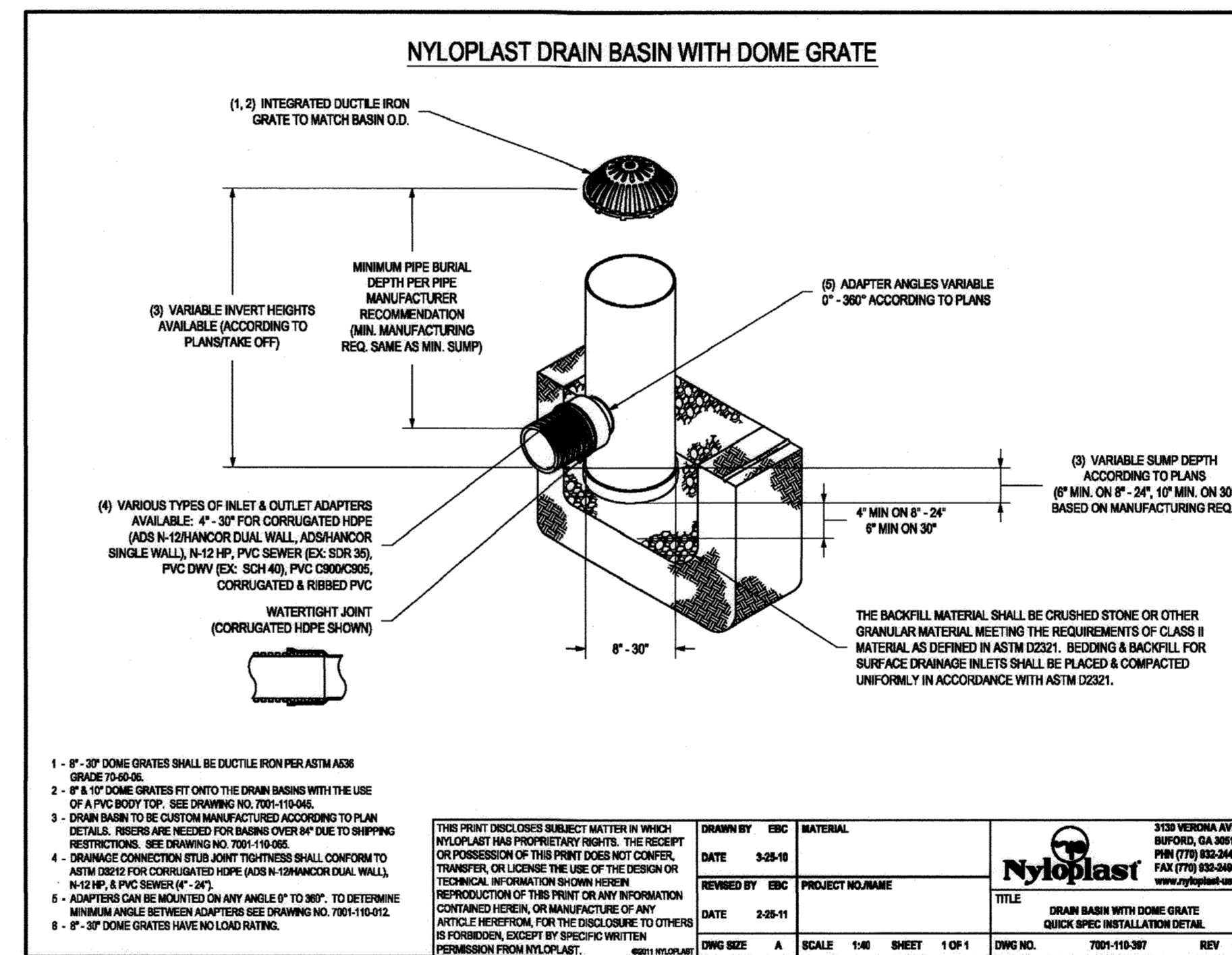
STORMDRAIN CLEANOUT SCHEDULE					
No.	NORTHING	EASTING	TOP ELEV.	INVERT OUT	SIZE
<b>FACILITY #1</b>					
CO #1	539623.68	1368335.06	257.25	253.83	6"
CO #1 AS-BUILT	539624.33	1368333.78	256.70	253.75	6"
CO #2	539581.76	1368390.70	257.25	253.83	6"
CO #2 AS-BUILT	539584.92	1368386.06	256.78	253.75	6"
CO #3	539617.72	1368330.35	257.25	253.83	6"
CO #3 AS-BUILT	539618.59	1368330.15	256.80	253.75	6"
OD #1	539602.58	1368363.08	257.25	253.83	4"
OD #1 AS-BUILT	539602.63	1368362.67	256.77	253.75	4"
OBS #1	539616.62	1368338.14	257.25	253.83	8"
OBS #1 AS-BUILT	539616.95	1368338.10	256.95	253.75	8"
RS #1	539575.96	1368385.76	258.00*	253.50	15"
RS #1 AS-BUILT	539576.20	1368385.03	258.00	253.53	15"
<b>FACILITY #2</b>					
CO #4	539568.21	1368408.66	257.25	253.83	6"
CO #4 AS-BUILT	539567.19	1368409.62	256.63	253.83	6"
CO #5	539526.30	1368464.31	257.25	253.83	6"
CO #5 AS-BUILT	539528.67	1368461.53	256.70	253.83	6"
CO #6	539562.25	1368403.95	257.25	253.83	6"
CO #6 AS-BUILT	539562.42	1368402.88	256.80	253.83	6"
OD #2	539538.38	1368448.27	257.25	253.83	4"
OD #2 AS-BUILT	539537.13	1368449.99	256.54	253.83	4"
OBS #2	539561.15	1368411.74	257.25	253.83	8"
OBS #2 AS-BUILT	539560.99	1368411.64	256.85	253.83	8"
RS #2	539520.50	1368459.37	258.00*	253.11	15"
RS #2 AS-BUILT	539520.93	1368458.76	258.00	253.15	15"
<b>FACILITY #3</b>					
CO #7	539515.05	1368479.02	257.25	253.83	6"
CO #7 AS-BUILT	539514.98	1368479.93	257.00	254.03	6"
CO #8	539496.09	1368504.17	257.25	253.83	6"
CO #8 AS-BUILT	539494.83	1368504.52	256.71	254.03	6"
CO #9	539490.02	1368499.81	257.25	253.83	6"
CO #9 AS-BUILT	539489.22	1368499.79	256.57	254.03	6"
OD #3	539502.96	1368495.06	257.25	253.83	4"
OD #3 AS-BUILT	539503.67	1368494.01	256.70	254.03	4"
OBS #3	539494.72	1368499.70	257.25	253.83	8"
OBS #3 AS-BUILT	539492.71	1368499.41	256.44	254.03	8"
RS #3	539508.81	1368474.89	258.00*	253.50	15"
RS #3 AS-BUILT	539507.50	1368475.46	258.00	253.74	15"

\*TOP WEIR ELEVATION FOR RISER STRUCTURES AT 12" PONDING ELEVATION, 5" BELOW THE TOP OF 12" NYLOPLAST GRATE



DIMENSIONS ARE FOR REFERENCE ONLY  
ACTUAL DIMENSIONS MAY VARY  
DIMENSIONS ARE IN INCHES  
QUALITY: MATERIALS SHALL CONFORM TO ASTM A36 GRADE 70-80-05  
PAINT: CASTINGS ARE FURNISHED WITH A BLACK PAINT  
LOOKING DEVICE: AVAILABLE UPON REQUEST

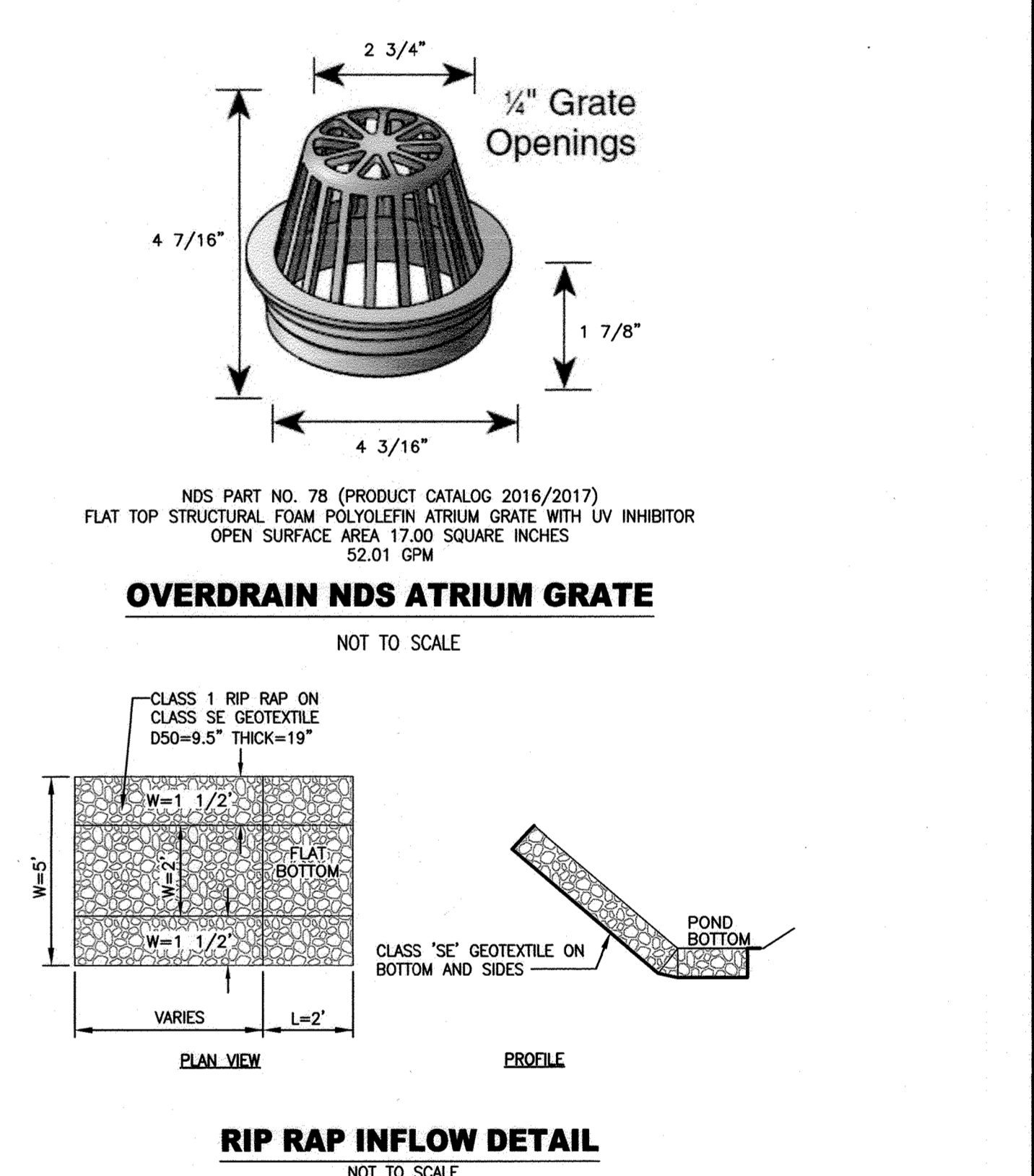
THIS PRINT OR DISSEMINATION SUBJECT MATTER IN WHICH NYLOPLAST HAS PROPRIETARY RIGHTS. THE RECEIPT OR POSSESSION OF THIS PRINT DOES NOT CONFER, TRANSFER, OR DENY THE USE OF THE DESIGN OR TECHNICAL INFORMATION SHOWN HEREIN.	DRAWN BY: EBC	MATERIAL: DUCTILE IRON	3128 VERNON AVE BOWLING, GA 30044 PH: (770) 852-2443 FAX: (770) 852-2446 www.nyloplast.com
REPRODUCTION OF THIS PRINT OR ANY INFORMATION CONTAINED HEREIN, OR MANUFACTURE OF ANY ARTICLE HEREFROM FOR THE DISCLOSURE TO OTHERS IS FORBIDDEN, EXCEPT BY EXPRESS WRITTEN PERMISSION FROM NYLOPLAST.	DATE: 3-28-18	PROJECT NO: NAME	TITLE: 12 IN DOME GRATE
	DATE: 3-10-11	DWG NO: A	SCALE: 1:4
		SHEET: 1 OF 1	DWG NO: 700-119-397
			REV: 0



- 1 - 8" - 30" DOME GRATES SHALL BE DUCTILE IRON PER ASTM A36 GRADE 70-80-05.
- 2 - 8" - 30" DOME GRATES FIT ONTO THE DRAIN BASIN WITH THE USE OF A PVC BODY TOP. SEE DRAWING NO. 700-119-396.
- 3 - DRAIN BASIN TO BE CUSTOM MANUFACTURED ACCORDING TO PLAN DETAIL. RISERS ARE NEEDED FOR BASINS OVER 8" DUE TO SHIPPING RESTRICTIONS. SEE DRAWING NO. 700-119-396.
- 4 - DRAINAGE CONNECTION (STUB JOINT) TIGHTNESS SHALL CONFORM TO ASTM D2059 FOR CORRUGATED HOPE (ADS IN 12" HORIZONTAL WALL, N-12 MP, & PVC SENDER (F-30)).
- 5 - ADAPTERS CAN BE MOUNTED ON ANY ANGLE UP TO 30°. TO DETERMINE MINIMUM ANGLE BETWEEN ADAPTERS SEE DRAWING NO. 700-119-392.
- 6 - 8" - 30" DOME GRATES HAVE NO LOAD RATING.

THIS PRINT OR DISSEMINATION SUBJECT MATTER IN WHICH NYLOPLAST HAS PROPRIETARY RIGHTS. THE RECEIPT OR POSSESSION OF THIS PRINT DOES NOT CONFER, TRANSFER, OR DENY THE USE OF THE DESIGN OR TECHNICAL INFORMATION SHOWN HEREIN. REPRODUCTION OF THIS PRINT OR ANY INFORMATION CONTAINED HEREIN, OR MANUFACTURE OF ANY ARTICLE HEREFROM FOR THE DISCLOSURE TO OTHERS IS FORBIDDEN, EXCEPT BY EXPRESS WRITTEN PERMISSION FROM NYLOPLAST.

3128 VERNON AVE BOWLING, GA 30044 PH: (770) 852-2443 FAX: (770) 852-2446 www.nyloplast.com	DATE: 3-28-18	PROJECT NO: NAME	TITLE: DRAIN BASIN WITH DOME GRATE
REVISED BY: EBC	DATE: 2-28-11	DWG NO: A	SCALE: 1:4
		SHEET: 1 OF 1	DWG NO: 700-119-397
			REV: 0



**OVERDRAIN NDS ATRIUM GRATE**

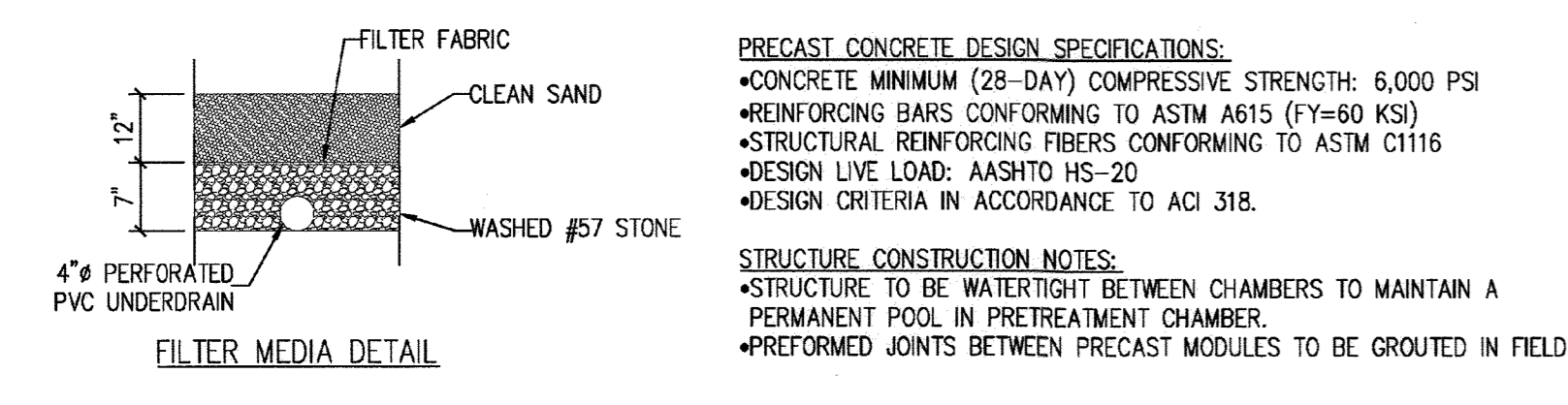
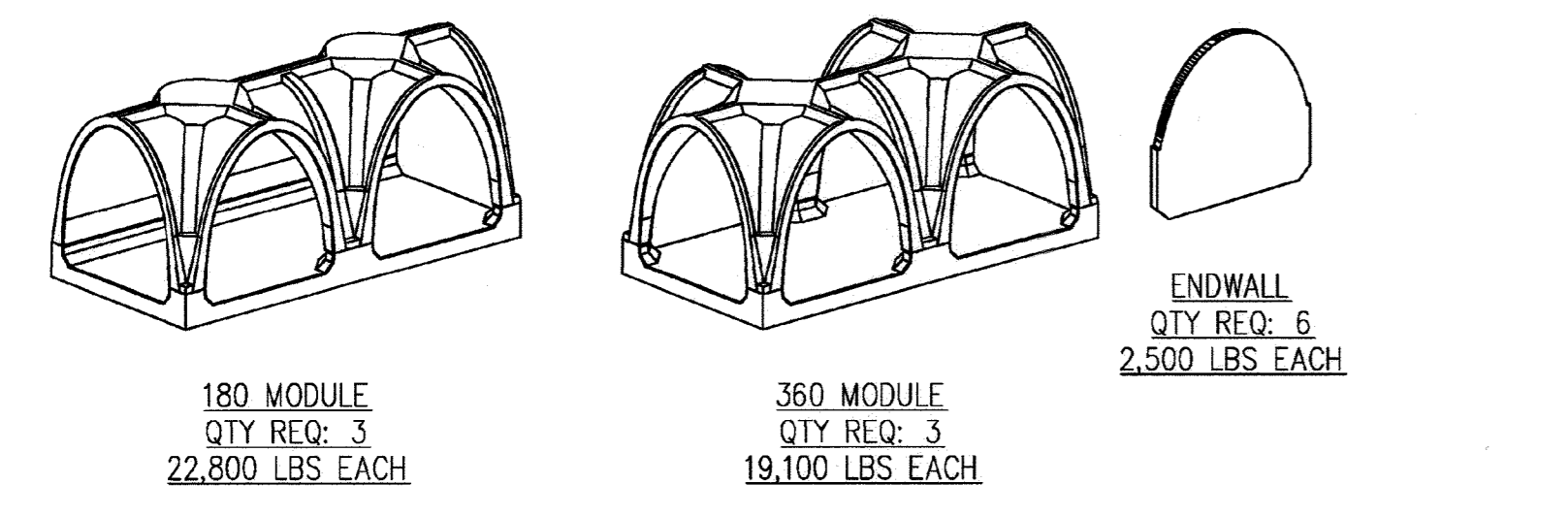
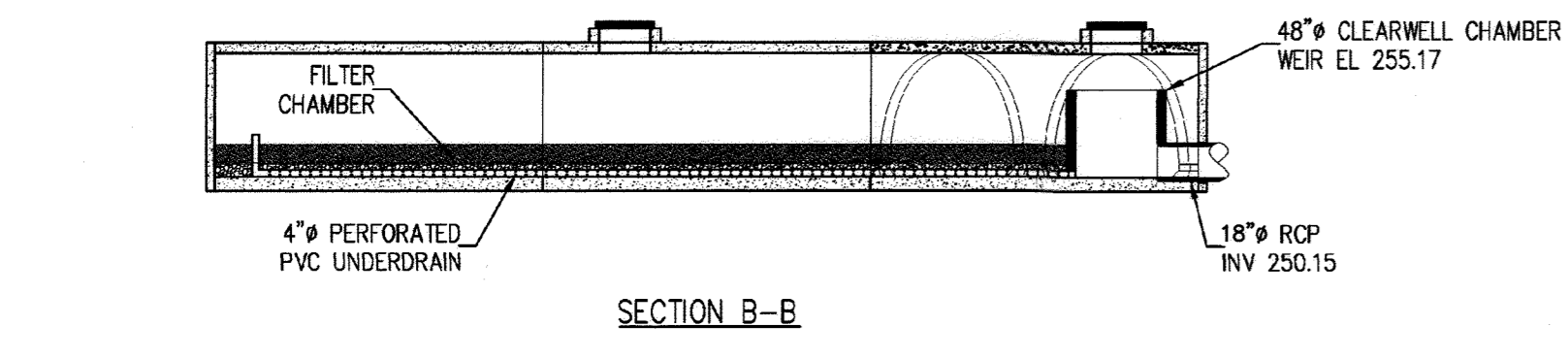
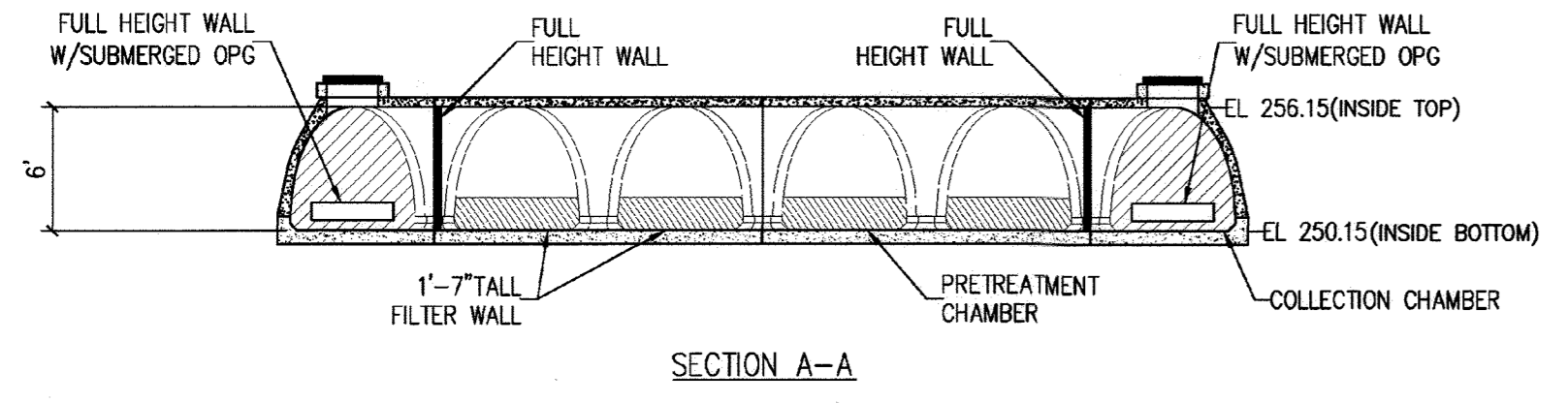
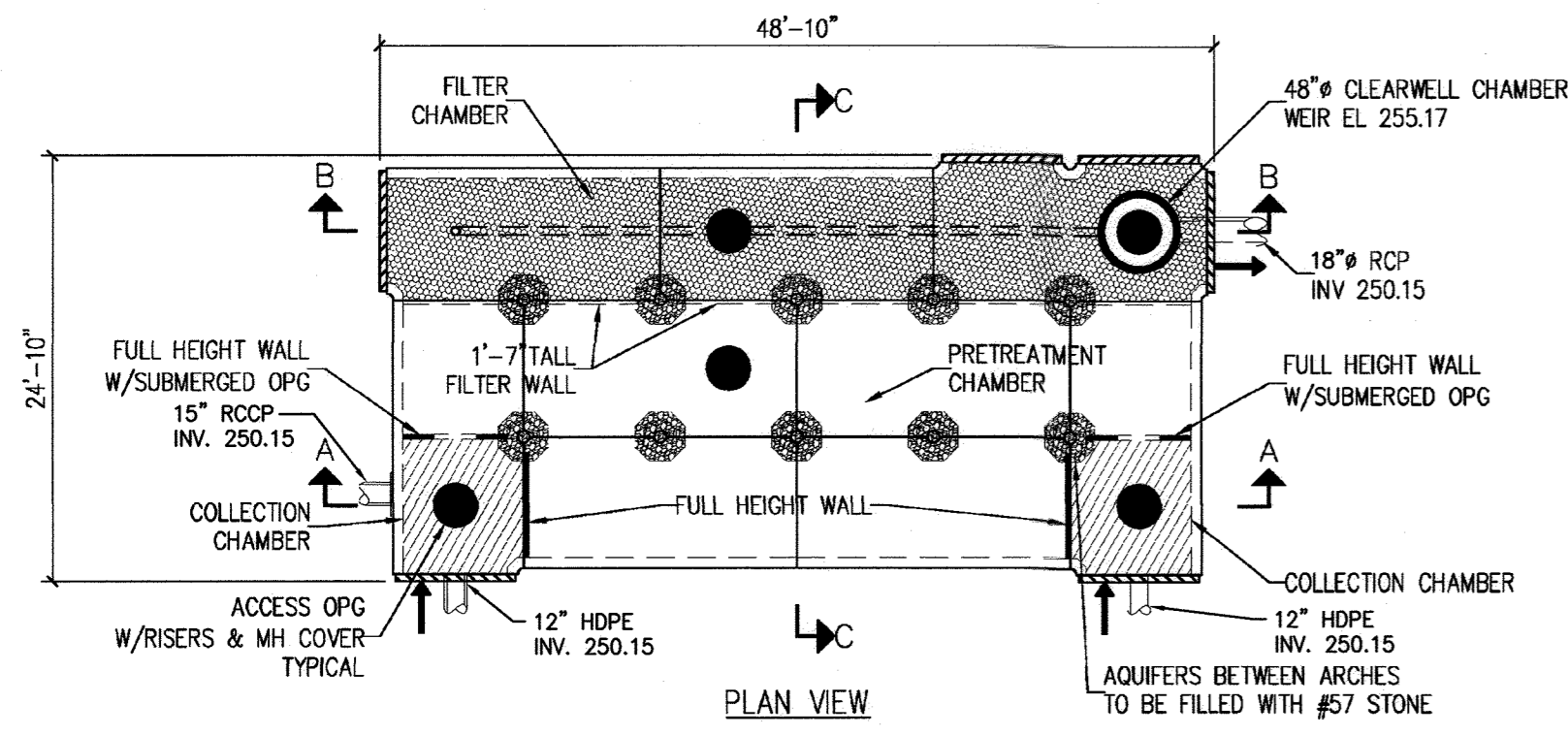
**RIP RAP INFLOW DETAIL**

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION  
 DATE: 4-29-20  
 DATE: 5/1/2020  
 DATE: 5-12-2020

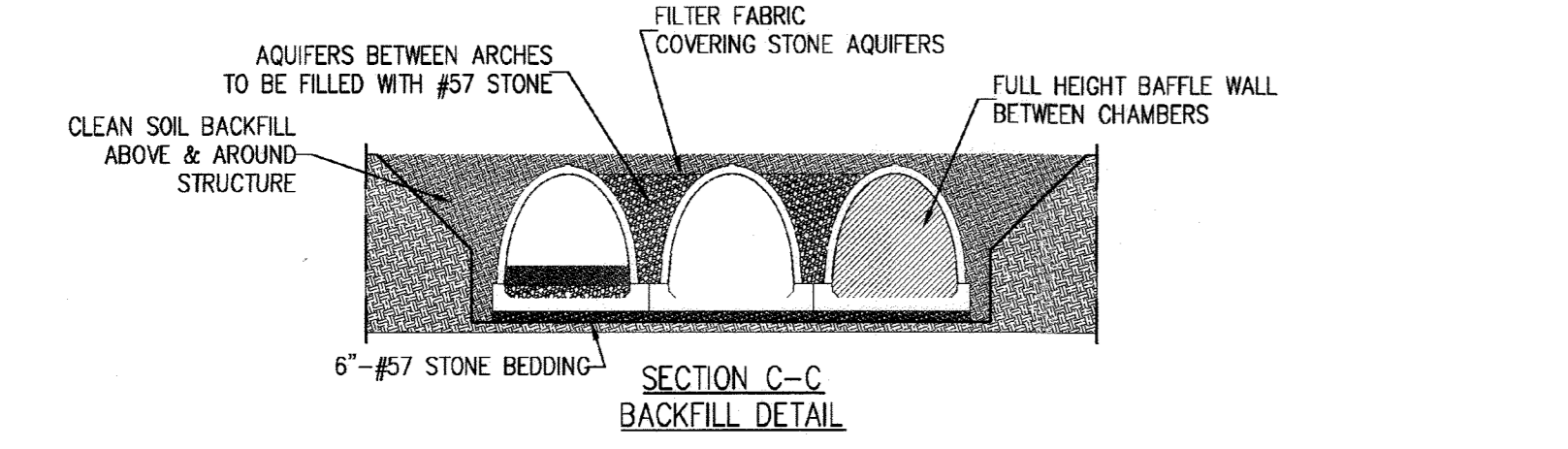
**ASBUILT CERTIFICATION FOR PSWM**  
 I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THE PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND COMPLIES WITH THE APPROVED PLANS AND SPECIFICATIONS. I HAVE VERIFIED THAT THE CONTRIBUTING DRAINAGE AREA IS SUFFICIENTLY STABILIZED TO PREVENT CLADDING OF THE UNDERGROUND SWM FACILITY.  
 MICHAEL G. COUGHLIN, PE NO. 382191, DATE OF ASBUILT 02/25/2022

**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. 38291, EXPIRATION DATE: 01/13/2020

 <b>MORRIS &amp; RITCHE ASSOCIATES, INC.</b> ENGINEERS, PLANNERS, SURVEYORS AND LANDSCAPE ARCHITECTS 1220-C EAST JOPPA ROAD, SUITE 505 TOWSON, MARYLAND 21286 (410) 821-1690 FAX (410) 821-1748 Copyright 2020 Morris & Ritchie Associates, Inc.	<b>SITE DEVELOPMENT PLAN          SW PROPERTIES LLC          PROPOSED WAREHOUSE ADDITION</b> STORMWATER MANAGEMENT PROFILES TAX MAP 48 ~ GRID 1 ~ PARCEL 130 ~ ZONING CE-CLU ~ DEED REF 15893/00438 PB 17 PG 68 ~ TAX ASSESSMENT DISTRICT 81 ~ 6th ELECTION DISTRICT DPZ FILE REFERENCES SDP-74-070, SDP-70-022 8106 STAYTON DRIVE, HOWARD COUNTY, MARYLAND
	DATE: 02/25/2022 REVISIONS: Updated Per As-Built Conditions JOB NO.: 19637X01 SCALE: AS SHOWN DATE: 01/13/2020 DRAWN BY: DTP/DK DESIGN BY: THS REVIEW BY: MGC SHEET: 17 OF 23



MATERIALS LIST		
DESCRIPTION	QTY	SUPPLIED BY
AQUIFER #57 STONE FILL	14 CYDS	CONTRACTOR
FILTER FABRIC COVERING AQUIFERS	756 SF	CONTRACTOR
CLEAN SAND	12 CYDS	CONTRACTOR
FILTER FABRIC BETWEEN MEDIA LAYERS	320 SF	CONTRACTOR
WASHED UNDERDRAIN #57 STONE	7 CYDS	CONTRACTOR
4" PERFORATED PVC UNDERDRAIN PIPE	40 LF	CONTRACTOR



**SPECIFICATIONS FOR THE INSTALLATION & BACKFILLING OF THE STORMPOD DETENTION SYSTEM**

- 1.0 DESCRIPTION**  
THIS WORK CONSISTS OF CONSTRUCTING AN UNDERGROUND STORMPOD STORMWATER FACILITY IN ACCORDANCE WITH THESE SPECIFICATIONS AND IN CONFORMITY WITH THE LINES, GRADES, DESIGN AND DIMENSIONS SHOWN ON THE PLANS OR AS ESTABLISHED BY THE PROJECT ENGINEER.
- 2.0 EQUIPMENT/TOOLS**
- 2.1 EQUIPMENT/TOOLS PROVIDED BY ROTONDO**
- LIFTING HARDWARE (I.E. FIXTURES THAT CONNECT TO THE PRODUCT).
- 2.2 EQUIPMENT/TOOLS PROVIDED BY CONTRACTOR**
- EXCAVATOR/CRANE
  - 4-HOOK CABLE OR CHAIN FOR HANDLING PRECAST ELEMENTS IN GOOD CONDITION AND PROPER CAPACITY
  - (2) PINCH BARS WITH A MINIMUM LENGTH OF 60 INCHES
  - A TRANSIT OR LASER LEVEL WITH ROD
  - A CARPENTER'S LEVEL 4 FOOT MINIMUM LENGTH
  - A SURVEYOR'S TAPE MEASURE 100 FOOT MINIMUM LENGTH
  - WRENCH AND SOCKET SET TO TIGHTEN BOLTED CONNECTIONS WHEN REQUIRED
- 3.0 MATERIALS**
- 3.1 NON-WOVEN FILTER FABRIC**
- NON-WOVEN FILTER FABRIC USED TO PREVENT MIGRATION OF SOIL FINES FROM BACKFILL ZONE C INTO THE STONE BACKFILL IN ZONE B SHALL MEET OR EXCEED THESE MINIMUM VALUES:

NON-WOVEN FILTER FABRIC SPECIFICATIONS		
PROPERTIES	TEST METHOD	TEST RESULTS
GRAB TENSILE STRENGTH	ASTM-D-4632	90 LBS
GRAB TENSILE ELONGATION	ASTM-D-4632	50 %
PUNCTURE STRENGTH	ASTM-D-4833	65 LBS
TRAPEZOIDAL TEAR STRENGTH	ASTM-D-4533	45 LBS
UV RESISTANCE (800 HRS.)	ASTM-D-4355	70 %
APPARENT OPENING SIZE	ASTM-D-4751	70 US SIEVE
PERMITTIVITY	ASTM-D-4491	2.5 SEC-1
FLOW RATE	ASTM-D-4491	135 GPM/SF

- 3.2 ACCESS MATERIALS**
- ACCESS HATCH - A 4-FT X 4-FT H 20 DOUBLE LEAF, GALVANIZED STEEL HATCH AS MANUFACTURED BY INWESCO, INC. OR APPROVED EQUAL.
  - MANHOLE FRAME & COVER - H 20 CAST-IRON MANHOLE FRAMES AND COVERS AS SUPPLIED BY CAPITOL FOUNDRY OR APPROVED EQUAL.
  - LADDERS - HOT-DIPPED GALVANIZED STEEL MANHOLE LADDERS AS MANUFACTURED BY INWESCO, INC. MODEL I-3400 OR APPROVED EQUAL.
  - MANHOLE STEPS - COPOLYMER POLYPROPYLENE STEEL REINFORCED MANHOLE STEPS AS SUPPLIED BY MA INDUSTRIES MODEL PSI-PF OR APPROVED EQUAL.
- 4.0 INSTALLATION PREPARATION**
- TO ENSURE CORRECT INSTALLATION OF THE PRECAST STORMPOD SYSTEM, CARE AND CAUTION MUST BE EXERCISED IN PREPARING THE STONE BEDDING THAT GOES BENEATH THE STRUCTURE. EXERCISING SPECIAL CARE WILL FACILITATE THE RAPID INSTALLATION OF THE PRECAST COMPONENTS.

- 4.1 SUBGRADE**
- SUBGRADE SOILS IN THE PLANNED STRUCTURE AREA SHOULD BE EXAMINED BY THE SITE SOILS ENGINEER. IN THE EVENT THAT ANY WEILING MATERIALS ARE ENCOUNTERED, THESE SUBGRADE SOILS SHOULD EITHER BE THOROUGHLY DENSEIFIED IN PLACE OR UNDERCUT TO FIRM GROUND AND REPLACED WITH CONTROLLED, COMPACTED FILL TO FINAL SUBGRADE ELEVATIONS.
  - THE SITE SOILS ENGINEER SHALL CERTIFY THAT THE SUBGRADE BEARING CAPACITY MEETS OR EXCEEDS THE APPLIED BEARING PRESSURES FROM THE STRUCTURE.
- 4.2 STONE BEDDING**
- BEDDING MATERIAL SHALL BE #57 STONE.
  - A 6 INCH MINIMUM LAYER OF THE SPECIFIED AGGREGATE SHALL BE PLACED AND LEVELED ON TOP OF THE PREPARED SUBGRADE UNDER THE ENTIRE STRUCTURE.
  - BEDDING SHALL BE LIGHTLY AND UNIFORMLY COMPACTED.
  - THE STONE BED SHALL BE LEVELED IN ACCORDANCE WITH GRADES SHOWN ON THE PLANS, WHEN CHECKED WITH A TRANSIT/LASER LEVEL, THE ELEVATION SHALL NOT VARY MORE THAN 1/4 INCH (+/-) FROM THE SPECIFIED ELEVATION.

- 5.0 INSTALLATION OF PRECAST SYSTEM**
- ROTONDO ENVIRONMENTAL SOLUTIONS SHALL HAVE A QUALIFIED TECHNICIAN ON SITE DURING THE INSTALLATION PROCESS TO INSURE THAT THE PRECAST SECTIONS ARE INSTALLED PER MANUFACTURER'S REQUIREMENTS. ROTONDO SHALL PROVIDE CERTIFICATION THAT THE PRECAST CONCRETE ELEMENTS ARE INSTALLED IN ACCORDANCE TO THE APPROVED PLANS AND TO MANUFACTURER'S REQUIREMENTS. ROTONDO IS NOT RESPONSIBLE FOR THE LOCATION OR ELEVATION OF THE STRUCTURE OR FOR PROVIDING CERTIFICATION FOR THE SUBGRADE OR BACKFILL PROCESS. A LICENSED SOILS ENGINEER SHALL BE RESPONSIBLE FOR THE CERTIFICATION THAT THE SUBGRADE AND STRUCTURE BEDDING AS WELL AS THE BACKFILL PROCESS AND MATERIALS MEET THE REQUIRED SPECIFICATIONS.

TO ENSURE A QUALITY ASSEMBLY OF THE PRECAST STORMPOD SYSTEM, THE INSTALLATION OF OUTSIDE FLOOR POD, INTERIOR 360-POD AND TOP POD ELEMENTS SHOULD BE INSTALLED SIMULTANEOUSLY WHILE MONITORING ELEVATIONS, ALIGNMENT AND MINIMIZING GAPS IN JOINTS. IT IS IMPORTANT TO START AT ONE POINT AND MIGRATE ACROSS THE SYSTEM DRAWING ALL SECTIONS INWARD.

- 5.1 PLACEMENT OF POD ASSEMBLIES**
- EACH STORMPOD ASSEMBLY CONSISTS OF AN ARCH POD ATTACHED TO A SINGLE PRECAST FLOOR SLAB. ARCH POD IS ATTACHED TO THE PRECAST FLOOR SLAB AT THE PRECAST FACILITY PRIOR TO DELIVERY TO THE JOBSITE.
  - IDENTIFY THE CRITICAL BENCH MARK LOCATION TO BEGIN THE INSTALLATION OF PRECAST ELEMENTS. TYPICALLY, THIS LOCATION WOULD BE AT THE OUTLET OR ANOTHER CRITICAL POINT WHERE GROWTH AND ALIGNMENT ARE A CONCERN.
  - TO ENSURE CORRECT INSTALLATION OF THE PRECAST STORMPOD SYSTEM, THE OUTER PERIMETER BARREL SHOULD BE MARKED USING A PRE-PLACED STRING-LINE PLACED AT THE TOP OF THE STONE BED OFFSET ALONG THE SIDE OF THE ARCH BARREL. SECURE STRING-LINE WITH WOOD STAKES PLACED AT EACH END OF THE BARREL WITH THE TOP OF THE STAKE SET TO APPROXIMATELY 3 INCHES ABOVE THE REQUIRED BED ELEVATION. FASTEN THE STRING-LINE TO THE STAKE BY STAPLING TO THE TOP OF THE STAKE.
  - TO ESTABLISH PROPER EXTERIOR WALL ALIGNMENT FOR THE STRUCTURE, START INSTALLING EXTERIOR POD SECTIONS IN EITHER DIRECTION UNTIL PROPER ALIGNMENT AND GROWTH HAS BEEN CONFIRMED. MEASURE FROM OFFSET STRING LINE TO MONITOR ALIGNMENT. ELEVATIONS AND LEVELNESS MUST ALSO BE MONITORED AND ADJUSTED AT ALL TIMES WHEN INSTALLING POD UNITS.

- WHEN INSTALLING THE POD UNITS, REMOVE ENOUGH STONE WHERE SECTIONS ARE DRAWN TOGETHER WHICH MAY PREVENT SECTIONS FROM TOUCHING. EACH SECTION MUST THEN BE DRAWN TOGETHER TIGHT TO MINIMIZE GAPS AND ENGAGE THE ALIGNMENT TONG AND GROOVES. VERIFY THE INVERT ELEVATIONS AT EACH JOINT AND FOLLOW THE LEVELING PROCEDURES IN PREVIOUS STEP.
- ONCE ACCEPTABLE, REPEAT THE PREVIOUS STEPS MIGRATING ACROSS THE SYSTEM TO ONE COMMON POINT.
- ONCE PRECAST ELEMENTS HAVE BEEN INSTALLED, WRAP EXTERIOR VERTICAL JOINTS WITH JOINT WRAP MATERIAL. THIS MATERIAL IS USED TO PREVENT FINES FROM PASSING THROUGH AND PROVIDE A SOIL-TIGHT JOINT.
- IF THE SYSTEM IS REQUIRED TO BE WATER-TIGHT, ONCE THE PRECAST ELEMENTS HAVE BEEN INSTALLED, MAKE SURE ALL INTERIOR JOINT SURFACES ARE CLEAN AND FREE FROM DIRT/DEBRIS. STARTING WITH THE BOTTOM SECTION JOINTS, APPLY A CONTINUOUS UNIFORM BEAD OF NON-SHRINK GROUT.

- 6.0 BACKFILL**
- A LICENSED SOILS ENGINEER SHALL BE RESPONSIBLE FOR THE CERTIFICATION THAT THE SUBGRADE AND STRUCTURE BEDDING AS WELL AS THE BACKFILL PROCESS AND MATERIALS MEET THE REQUIRED SPECIFICATIONS.
- 6.1 DO NOT PERFORM BACKFILLING DURING WET OR FREEZING WEATHER.**
- 6.2 NO BACKFILL SHALL BE PLACED AGAINST ANY STRUCTURAL ELEMENTS UNTIL THE BACKFILL MATERIAL HAS BEEN APPROVED BY THE SITE SOILS ENGINEER.**
- 6.3 CONSTRUCTION VEHICLES HEAVIER THAN A CATERPILLAR D-4 ARE NOT ALLOWED OVER THE STRUCTURE WHEN BACKFILL DEPTH IS LESS THAN 4 FEET OVER THE STRUCTURE CROWN. LIGHTWEIGHT DOZERS MAY BE OPERATED OVER UNITS HAVING 2 FEET OF COMPACTED COVER, BUT HEAVY EARTH MOVING EQUIPMENT (LARGER THAN A CAT D-4 DOZER WEIGHING IN EXCESS OF 12 TONS AND HAVING TRACK PRESSURES OF 8 PSI OR GREATER) SHALL REQUIRE A MINIMUM OF 4 FEET OF COVER. IN NO CASE SHALL EQUIPMENT OPERATING IN EXCESS OF THE DESIGN LOAD HS-20 BE PERMITTED OVER THE STRUCTURE UNLESS APPROVED BY ROTONDO ENVIRONMENTAL SOLUTIONS' ENGINEER.**

- 6.4 BACKFILL ZONES**
- ZONE A - FILL THAT IS DIRECTLY AGAINST THE STRUCTURE AROUND THE OUTSIDE PERIMETER OF THE STRUCTURE.
  - ZONE B - FILL THAT IS IN THE CENTER VOID AREAS BETWEEN POD SECTIONS.
  - ZONE C - FILL THAT IS PLACED DIRECTLY OVER THE TOP OF THE STRUCTURE.
  - ZONE D - CONSTRUCTED EMBANKMENT OR OVERFILL.
- 6.5 REQUIRED BACKFILL PROPERTIES**
- ZONE A - GENERALLY, SOILS SHALL BE REASONABLY FREE OF ORGANIC MATTER, AND, NEAR CONCRETE SURFACES, FREE OF STONES LARGER THAN 3 INCHES IN DIAMETER.
  - ZONE B - SHALL BE CRUSHED GRAVEL THAT MEETS #57 COURSE AGGREGATE SPECIFICATION. SEE TABLE 1.
  - ZONE C - GENERALLY, SOILS SHALL BE REASONABLY FREE OF ORGANIC MATTER, AND, NEAR CONCRETE SURFACES, FREE OF STONES LARGER THAN 3 INCHES IN DIAMETER.
  - ZONE D - SHALL BE REGULAR BACKFILL MATERIAL.
  - IN-SITU SOIL - NATURAL GROUND IS TO BE SUFFICIENTLY STABLE TO ALLOW EFFECTIVE SUPPORT TO THE PRECAST CONCRETE STRUCTURE.

TABLE 1 ACCEPTABLE STONE FOR USE IN ZONE B							
GRADE #	SIEVE SIZE						
	1 1/2"	1"	3/4"	3/8"	#4	#10	#16
#57	100%	95-100%	-	25-80%	-	0-10%	0-5%

\* STANDARD SIZES OF COURSE AGGREGATE PER ASTM C33 AND AASHTO M43.

- 6.6 BACKFILL SEQUENCE**
- PHASE 1 - BACKFILL ZONE A TO TOP OF STRUCTURE AROUND THE ENTIRE PERIMETER OF STRUCTURE TO THE DIMENSIONS SHOWN.
  - PHASE 2 - BACKFILL ZONE B TO TOP OF STRUCTURE FOR ALL CENTER VOID AREAS. START WITH THE VOID AREAS ON THE OUTER PERIMETER OF THE STRUCTURE WORKING YOUR WAY INWARD TOWARD THE CENTER OF THE STRUCTURE.
  - PHASE 3 - BACKFILL ZONE C ON TOP OF THE STRUCTURE TO THE DIMENSION SHOWN. PRIOR TO BACKFILLING ZONE C, PLACE A LAYER OF FILTER FABRIC OVER THE TOP OF THE CENTER VOID AREAS FILLED WITH STONE.
- 6.7 PLACING AND COMPACTING BACKFILL AROUND STRUCTURE - ZONE A**
- DUMPING OF BACKFILL MATERIAL IS NOT ALLOWED ANY NEARER THAN 3 FT FROM THE SIDE OF THE STRUCTURE.
  - THE FILL MUST BE PLACED AND COMPACTED IN LAYERS NOT EXCEEDING 6 INCHES IN THICKNESS, LOOSE MEASUREMENT. THE MAXIMUM DIFFERENCE IN THE SURFACE LEVELS OF THE FILL AROUND THE PERIMETER OF THE STRUCTURE MUST NOT EXCEED 2 FEET.
  - EACH LAYER SHALL BE COMPACTED WITHIN A TOLERANCE OF OMC (OPTIMUM MOISTURE CONTENT) TO OMC+2 POINTS TO A DENSITY OF AT LEAST 95% OF THE THEORETICAL DENSITY.
  - EACH LAYER SHALL BE COMPACTED BY ROLLING, TAMPING WITH MECHANICAL RAMMERS OR PNEUMATIC BACKFILL TAMPERS, OR HAND TAMPING WITH HEAVY METAL TAMPERS WITH A FACE OF AT LEAST 25 SQUARE INCHES. IF VIBRATORY ROLLERS ARE USED IN THE BACKFILL OPERATIONS, VIBRATORY MOTORS SHALL NOT BE ACTIVATED UNTIL AT LEAST 4 FEET OF BACKFILL HAS BEEN PLACED AND COMPACTED OVER THE TOP OF THE STRUCTURE.

- 6.8 PLACING AND COMPACTING BACKFILL IN CENTER VOIDS - ZONE B**
- STONE BACKFILL SHALL BE PLACED INTO THE CENTER VOID AREA USING AN EXCAVATOR, SMALL BUCKET LOADER, STONE SHOOTER OR A CONCRETE BUCKET. STONE SHALL BE DROPPED INTO THE CENTER OF THE VOID AREA FROM A LOW ELEVATION.
- 6.9 PLACING AND COMPACTING BACKFILL ON TOP OF STRUCTURE - ZONE C**
- PRIOR TO PLACEMENT OF BACKFILL MATERIAL, A LAYER OF NON-WOVEN FILTER FABRIC SHOULD BE PLACED OVER THE TOP OF THE STONE BACKFILL IN ZONE B OF ALL CENTER VOID AREAS TO PREVENT MIGRATION OF SOIL FINES FROM ZONE C INTO THE BACKFILL STONE OF ZONE B.
  - DUMPING BACKFILL MATERIAL IS NOT ALLOWED ON TOP OF THE STRUCTURE. BACKFILL MATERIAL SHALL BE DUMPED NO CLOSER THAN 3 FEET FROM THE OUTSIDE PERIMETER OF THE STRUCTURE AND SPREAD ACROSS THE TOP OF THE STRUCTURE USING LIGHT EQUIPMENT SUCH AS A LIGHT DOZER OR BOBCAT.
  - THE FILL MUST BE PLACED AND COMPACTED IN LAYERS NOT EXCEEDING 6 INCHES THICKNESS, LOOSE MEASUREMENT.
  - EACH LAYER SHALL BE COMPACTED WITHIN A TOLERANCE OF OMC (OPTIMUM MOISTURE CONTENT) TO OMC+2 POINTS TO A DENSITY OF AT LEAST 95% OF THE THEORETICAL DENSITY.
  - EACH LAYER MATERIAL SHALL BE COMPACTED BY ROLLING, TAMPING WITH MECHANICAL RAMMERS OR PNEUMATIC BACKFILL TAMPERS, OR HAND TAMPING WITH HEAVY METAL TAMPERS WITH A FACE OF AT LEAST 25 SQUARE INCHES. IF VIBRATORY ROLLERS ARE USED IN THE BACKFILL OPERATIONS, VIBRATORY MOTORS SHALL NOT BE ACTIVATED UNTIL AT LEAST 4 FEET OF BACKFILL HAS BEEN PLACED AND COMPACTED OVER THE TOP OF THE STRUCTURE.



**StormPod® Sand Filter System  
Maintenance and Inspection Guidelines**

The StormPod Sand Filter System is designed to capture and treat the Water Quality Volume (WQv) from a developed site. Over time larger sediment particles, floatable debris and oil which are carried by the stormwater runoff, collect and build up in the pre-treatment chamber while nutrients and fine sediment particles are filtered from the water by the sand filter. In order for the system to operate efficiently and properly, the structure should be inspected and maintained at regular intervals or as needed. Prior to inspecting or maintaining the structure, all personnel must be familiar with safety requirements and proper procedures for handling and disposing of waste. Confined space entry and OSHA regulations must be followed during both the inspection and maintenance operations. A record or log of all maintenance work and inspections should be kept to provide information on the condition of the facility. Reviewing the information allows the inspectors and owners to create more efficient and beneficial maintenance procedures and practices.

**Inspection**

The water level in the filter chamber shall be monitored by the owner or owner's representative on a quarterly basis and after every large storm for the first year after completion of construction. A log shall be maintained of the results indicating the rate of dewatering after each storm and the water depth for each observation. It is recommended that the log indicate the approximate time it would normally take to drain the maximum design storm runoff volume below the top of the filter's sand bed. Once it is determined that the system is functioning properly, it shall be inspected annually by the owner or owner's representative to assure continued proper functioning. If the structure is located in an area where sediment or pollutants may accumulate rapidly, it may be determined that the system be inspected semi-annually. If significant increases or decreases in the normal drain time are observed, the filter's sand bed, underdrain system, and tailwater levels must be evaluated and appropriate measures taken to comply with the maximum drain time requirements and maintain the proper functioning of the filter. The concrete shell, internal walls, risers and pipes should also be checked for any visible cracks or leaks.

**Maintenance**

It is best to schedule all maintenance work during dry weather when no flow is entering the system. The sediment chamber should be pumped out on a semi-annual basis for the first year after completion of construction to determine the build-up rate of sediment in the sedimentation chamber. If sediment accumulates to a depth of 6-inches or more within a 6-month period, the sedimentation chamber should be pumped out every 6 months. If not, it should be pumped out annually at the time of the annual inspection. If the chamber contains an oil skim, it should be removed by a firm specializing in oil recovery and recycling. The remaining material may then be removed by vacuum pump and disposed of per local, state and federal waste regulations. After each cleaning, refill the first chamber level to the top of the pool weir with clean water to reestablish the water seals. When the filter will no longer draw down within a 40-hour period, the top layer of filter cloth and ballast gravel must be removed and replaced with new materials conforming to the original specifications. Any discolored or sediment contaminated sand shall also be removed and replaced. If there are any signs of damage to the concrete components of the structure, repairs should be treated immediately. The handling and disposal of sediment and waste must comply with all local, county, state and federal regulations.

APPROVED: DEPARTMENT OF PLANNING AND ZONING

*[Signature]* 4/29/20  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION

*[Signature]* 5/1/2020  
 CHIEF, DIVISION OF LAND DEVELOPMENT

*[Signature]* 5-12-2020  
 DIRECTOR

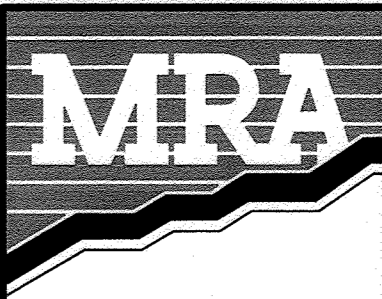
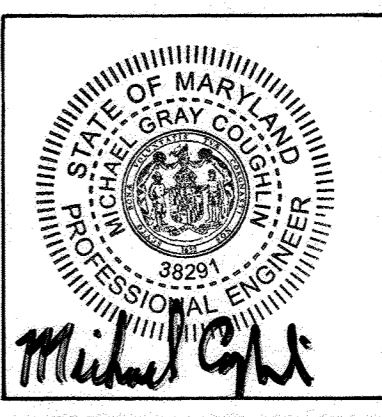
Rotondo Environmental Solutions, LLC  
 703-212-4828  
 www.rotondo-es.com

**OWNER/DEVELOPER**

SW PROPERTIES LLP  
 8106 STAYTON DRIVE  
 JESSUP, MD 20794  
 ATTN: ALVIN LEE  
 PHONE: (213)-944-4448

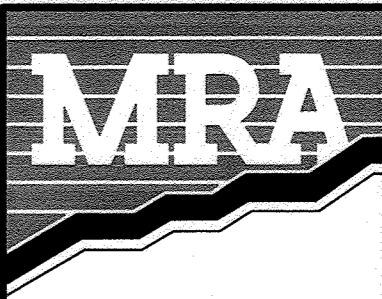
**PROFESSIONAL CERTIFICATION**

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. 38291, EXPIRATION DATE: 01/13/2020

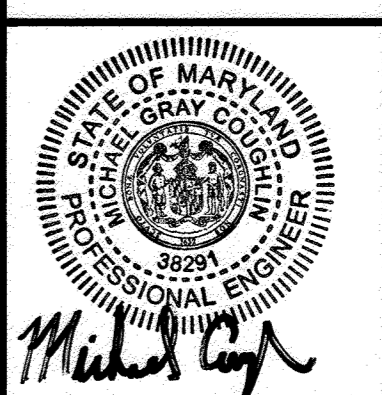


**ASBUILT CERTIFICATION FOR PSWM**

THESE IS NO ASBUILT INFORMATION PROVIDED ON THIS SHEET  
 MICHAEL G. COUGHLIN, PE NO. 38291, DATE OF ASBUILT 02/25/2022.



**MORRIS & RITCHIE ASSOCIATES, INC.**  
 ENGINEERS, PLANNERS, SURVEYORS AND LANDSCAPE ARCHITECTS  
 1220-C EAST JOPPA ROAD, SUITE 505  
 TOWSON, MARYLAND 21286  
 (410) 821-1690  
 FAX (410) 821-1748  
 Copyright 2020 Morris & Ritchie Associates, Inc.



**SITE DEVELOPMENT PLAN  
 SW PROPERTIES LLC  
 PROPOSED WAREHOUSE ADDITION  
 UNDERGROUND SAND FILTER  
 NOTES & DETAILS**

TAX MAP 48 ~ GRID 1 ~ PARCEL 130 ~ ZONING CE-CL ~ DEED REF 15893/00438  
 PB 17 PG 68 ~ TAX ASSESSMENT DISTRICT 81 ~ 6th ELECTION DISTRICT  
 DPZ FILE REFERENCES SDP-74-070, SDP-70-022  
 8106 STAYTON DRIVE, HOWARD COUNTY, MARYLAND

DATE	REVISIONS	JOB NO.:
02/25/2022	AS-BUILT	19637X01
		SCALE: NO SCALE
		DATE: 01/13/2020
		DRAWN BY: DTP/DK
		DESIGN BY: THS
		REVIEW BY: MGC
		SHEET: 18 OF 29

**B.4.C SPECIFICATIONS FOR MICRO-BIORETENTION**

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, STUMPS, ROOTS OR OTHER SIMILAR OBJECTS LARGER THAN TWO INCHES. NO OTHER MATERIALS OR SUBSTANCES SHALL BE MIXED OR DUMPED WITHIN THE MICROBIORETENTION 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% TO 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.

THESE 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 FOR 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 HOES 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 ALLEVATED AT THE BASE OF THE BIORETENTION FACILITY BY USING A PRIMARY TILLING OPERATION SUCH AS A CHISEL PLOW, RIPPER, OR SUBSOILER. THESE TILLING OPERATIONS ARE TO REFRACTURE 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.

ROTTILL 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 (ROTTILLING) BASE. WHEN BACKFILLING THE TOPSOIL OVER THE SAND LAYER, FIRST PLACE 3 TO 4 INCHES OF TOPSOIL OVER THE SAND, THEN ROTTILL 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-BIORETENTION 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 PLOTS 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 DEFEATS, 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 PS 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 3/8" DIAMETER LOCATED 6" ON CENTER WITH A MINIMUM OF FOUR HOLES PER ROW. PIPE SHALL BE WRAPPED WITH A 1/4" (NO. 4 OR 4 X 4) 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 1,000 SQUARE FEET) TO PROVIDE A CLEAN-OUT PORT AND MONITOR PERFORMANCE OF THE FILTER.
- A 4" LAYER OF PEA GRAVEL (1/8" TO 3/8" 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 MATERIAL SPECIFICATIONS FOR MICRO-BIORETENTION**

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%) & COMPOST (40%)	N/A	URCCPA SOIL TYPES LOAMY SAND OR SANDY LOAM; CLAY CONTENT < 5%
ORGANIC CONTENT	MIN. 10% BY DRY WEIGHT (ASTM D 2974)		
PEA GRAVEL DIAPHRAGM	PEA GRAVEL: ASTM-D-448	NO. 8 OR NO. 9 (1/8" TO 3/8")	
MULCH	SHREDDED HARDWOOD		AGED 6 MONTHS, MINIMUM; NO PINE OR WOOD CHIPS
GEOTEXTILE		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 PS 28 OR AASHTO M-278	4" TO 6" RIGID SCHEDULE 40 PVC OR RCP/PR35	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.
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.

**OPERATION AND MAINTENANCE SCHEDULE**

FOR MICRO-BIORETENTION (M-6) FACILITY #1, #2 AND #3

- THE OWNER SHALL MAINTAIN THE PLANT MATERIAL, MULCH LAYER AND SOIL LAYER ANNUALLY. MAINTENANCE OF MULCH AND SOILS 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 B.4.1. AND B.3.2.
- 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.
- THE OWNER SHALL INSPECT THE MULCH EACH SPRING. THE MULCH SHALL BE REPLACED ANNUALLY. THE PREVIOUS MULCH LAYER SHALL BE REMOVED BEFORE THE NEW LAYER IS APPLIED.
- THE TOP FEW INCHES OF FILTER MEDIA SHOULD BE REMOVED AND REPLACED WHEN WATER PONDS FOR MORE THAN 48 HOURS. SILTS AND SEDIMENT SHOULD BE REMOVED FROM THE SURFACE OF THE FILTER BED WHEN ACCUMULATION EXCEEDS ONE INCH.
- THE OWNER SHALL CORRECT SOIL EROSION ON AN AS NEEDED BASIS, WITH MINIMUM OF ONCE PER MONTH AND AFTER EACH HEAVY STORM.
- REFER TO THE 2000 MARYLAND STORMWATER MANAGEMENT DESIGN MANUAL CHAPTER 5 SECTION 5.102 MAINTENANCE CRITERIA FOR MICRO-BIORETENTION AND CHAPTER 3 SECTION 3.4.6 FOR BIORETENTION MAINTENANCE CRITERIA.

**INSPECTION SCHEDULE**

PRIOR NOTIFICATION SHALL BE GIVEN TO THE ENGINEER AND HOWARD COUNTY 48 HOURS BEFORE COMMENCING ANY WORK IN CONJUNCTION WITH THE STORMWATER MANAGEMENT PLAN AND UPON COMPLETION OF A PROJECT WHEN A FINAL INSPECTION WILL BE CONDUCTED.

REGULAR INSPECTIONS SHALL BE DOCUMENTED FOR EACH ESD PLANNING TECHNIQUE AND PRACTICE AT THE STAGES OF CONSTRUCTION SPECIFIED IN THE DESIGN MANUAL BY HOWARD COUNTY, ITS AUTHORIZED REPRESENTATIVE, OR CERTIFIED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF MARYLAND. AT A MINIMUM, ALL ESD AND OTHER NONSTRUCTURAL PRACTICES SHALL BE INSPECTED UPON COMPLETION OF FINAL GRADING, THE ESTABLISHMENT OF PERMANENT STABILIZATION AND BEFORE ISSUANCE OF USE AND OCCUPANCY APPROVAL.

- UPON COMPLETION OF EXCAVATION TO SUB-FOUNDATION AND WHERE REQUIRED, INSTALLATION OF STRUCTURAL SUPPORTS OR REINFORCEMENT FOR STRUCTURES, INCLUDING BUT NOT LIMITED TO:
  - CORE TRENCHES FOR STRUCTURAL EMBANKMENTS;
  - INLET-OUTLET STRUCTURES, DRAIN PIPES, AND WATERTIGHT CONNECTORS ON PIPES; AND
  - TRENCHES FOR ENCLOSED STORM DRAINAGE FACILITIES.
- DURING PLACEMENT OF STRUCTURAL FILL, CONCRETE, STONE, SAND, SOIL AND INSTALLATION OF PIPING AND CATCH BASINS;
- DURING BACKFILL OF FOUNDATIONS AND TRENCHES;
- DURING EMBANKMENT CONSTRUCTION; AND
- UPON COMPLETION OF FINAL GRADING AND ESTABLISHMENT OF PERMANENT STABILIZATION. NO WORK SHALL PROCEED UNTIL THE ENGINEER INSPECTS AND APPROVES THE WORK PREVIOUSLY COMPLETED.

**MAINTENANCE RESPONSIBILITY**

THE STORMWATER MANAGEMENT FACILITY SHOWN ON THESE PLANS IS PRIVATE AND SHALL BE MAINTAINED BY THE OWNER(S).

**MAINTENANCE SCHEDULE**

- ALL TRASH AND DEBRIS SHALL BE REMOVED FROM THE AREA SURROUNDING THE FACILITY AS NECESSARY AND IN A TIMELY MANNER. ALL APURTENANCES SHALL BE KEPT FREE OF TRASH.
- SEDIMENT SHOULD BE CLEANED OUT OF THE SEDIMENTATION CHAMBER WHEN IT ACCUMULATES TO A DEPTH OF MORE THAN SIX INCHES.
- WHEN THE FILTERING CAPACITY DIMINISHES, FAILS TO DRAIN IN 24 HOURS, THE TOP FEW INCHES OF DISCOLORED MATERIAL SHALL BE REMOVED AND SHALL BE REPLACED WITH FRESH MATERIAL. THE REMOVED SEDIMENTS SHOULD BE DISPOSED IN AN ACCEPTABLE MANNER. SILT/SEDIMENT SHOULD BE REMOVED FROM THE FILTER BED WHEN THE ACCUMULATION EXCEEDS ONE INCH.
- THE OWNER(S) OF THE FACILITY SHALL BE RESPONSIBLE FOR THE SAFETY OF THE AREAS SURROUNDING THE FACILITIES AND THE CONTINUED OPERATION, SURVEILLANCE, INSPECTION, AND MAINTENANCE THEREOF.

**MAINTENANCE CRITERIA FOR MICRO-BIORETENTION FACILITIES**

THE FOLLOWING ITEMS SHOULD BE ADDRESSED TO ENSURE PROPER MAINTENANCE AND LONG-TERM PERFORMANCE OF MICRO-BIORETENTION PRACTICES:

- PRIVATELY OWNED PRACTICES SHALL HAVE A MAINTENANCE PLAN AND SHALL BE PROTECTED BY EASEMENT, DEED RESTRICTION, ORDINANCE, OR OTHER LEGAL MEASURES PREVENTING ITS NEGLECT, ADVERSE ALTERATION, AND REMOVAL.
- THE TOP FEW INCHES OF FILTER MEDIA SHOULD BE REMOVED AND REPLACED WHEN WATER PONDS FOR MORE THAN TWENTY-FOUR (24) HOURS. SILTS AND SEDIMENT SHOULD BE REMOVED FROM THE SURFACE OF THE FILTER BED WHEN ACCUMULATION EXCEEDS ONE (1) INCH.
- WHERE PRACTICES ARE USED TO TREAT AREAS WITH HIGHER CONCENTRATIONS OF HEAVY METALS (E.G., PARKING LOTS, ROADS, ETC.), MULCH SHOULD BE REPLACED ANNUALLY. OTHERWISE, THE TOP TWO (2) TO THREE (3) INCHES SHOULD BE REPLACED AS NECESSARY.
- OCCASIONAL PRUNING AND REPLACEMENT OF DEAD VEGETATION IS NECESSARY. IF SPECIFIC PLANTS ARE NOT SURVIVING, MORE APPROPRIATE SPECIES SHOULD BE USED. WATERING MAY BE REQUIRED DURING PROLONGED DRY PERIODS.

**CONSTRUCTION SPECIFICATIONS**

- SITE PREPARATION SHALL INCLUDE LOOSENING OF TOP 4 INCHES OF SUBGRADE PRIOR TO PLACEMENT OF PAVING SECTION.
- ALL FILLS IN PAVEMENT AREAS TO BE COMPACTED TO 92% OF THE MODIFIED PROCTOR (ASTM T-180) MAXIMUM DRY DENSITY IN ACCORDANCE WITH MD SHA SPECIFICATIONS FOR ROAD FILLS.
- OBSERVATION WELL PIPES SHALL BE CONSTRUCTED WITH ASTM F758 PVC FOR PERFORATED SECTIONS.
- ASPHALT SPECIFICATIONS SHALL MEET DESIGN SPECIFICATIONS LISTED IN "ASPHALT CONCRETE SPECIFICATIONS" LISTED ON THIS SHEET.

**NOTIFICATION OF ENGINEER NOTE**

CONTRACTOR IS REQUIRED TO CONTACT THE ENGINEER CERTIFYING THE AS-BUILT 5 DAYS PRIOR TO STARTING STORMWATER FACILITIES IN ADDITION TO COORDINATING / SCHEDULING ALL RELATED WORK.

**GEOTECHNICAL NOTE**

CONTRACTOR SHALL REFER TO THE REPORT OF GEOTECHNICAL INVESTIGATION FOR 8106 STAYTON DRIVE, DATED APRIL 5, 2018, PREPARED BY GEO-TECHNOLOGY ASSOCIATES, INC., FOR BID AND CONSTRUCTION PURPOSES. ALL RECOMMENDATIONS MADE IN THE REPORT SHALL BE CONSIDERED PART OF THE PROJECT'S SCOPE OF WORK.

**CONTRACTOR'S AS-BUILT NOTE**

AS-BUILT PLANS AND CERTIFICATION ARE REQUIRED FOR THIS STORMWATER MANAGEMENT FACILITY. THESE MUST BE PREPARED AND SEALED BY A REGISTERED PROFESSIONAL ENGINEER. HOWARD COUNTY WILL NOT PERFORM THE INSPECTION OR PREPARE THE AS-BUILT PLANS OR CERTIFICATION. THE STORMWATER MANAGEMENT PERMIT SECURITY WILL NOT BE RELEASED UNTIL THE AS-BUILT PLAN AND CERTIFICATION ARE APPROVED BY BALTIMORE COUNTY.

IN ORDER TO PREPARE THE REQUIRED AS-BUILT PLANS AND CERTIFICATION, THIS STORMWATER MANAGEMENT FACILITY MUST BE INSPECTED BY THE ENGINEER AT SPECIFIC STAGES DURING CONSTRUCTION AS REQUIRED BY THE CURRENT HOWARD COUNTY STORMWATER MANAGEMENT POLICY AND DESIGN MANUAL. THE CONTRACTOR SHALL NOTIFY THE ENGINEER AT LEAST FIVE (5) WORKING DAYS PRIOR TO STARTING ANY WORK SHOWN ON THESE PLANS.

**AS BUILT CERTIFICATION**

I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS BUILT" PLANS AND MEETS THE APPROVED PLANS AND SPECIFICATIONS.

SIGNATURE \_\_\_\_\_ MD LICENSE NO. \_\_\_\_\_ DATE \_\_\_\_\_

CERTIFY MEANS TO STATE OR DECLARE A PROFESSIONAL OPINION BASED UPON ONSITE INSPECTIONS AND MATERIAL TESTS WHICH ARE CONDUCTED DURING CONSTRUCTION. THE ONSITE INSPECTION AND MATERIAL TESTS ARE THOSE INSPECTIONS AND TESTS DEEMED SUFFICIENT AND APPROPRIATE BY COMMONLY ACCEPTED ENGINEERED STANDARDS. CERTIFY DOES NOT MEAN TO IMPLY A GUARANTEE BY THE ENGINEER OR DOES AN ENGINEER'S CERTIFICATION RELIEVE ANY OTHER PARTY FROM MEETING REQUIREMENTS IMPOSED BY CONTRACT, EMPLOYMENT, OR OTHER MEANS, INCLUDING MEETING COMMONLY ACCEPTED INDUSTRY PRACTICES.

**OWNER'S / DEVELOPER'S CERTIFICATION**

I/WE CERTIFY THAT ALL WORK SHOWN ON THESE CONSTRUCTION DRAWINGS WILL BE ACCOMPLISHED PURSUANT TO THESE PLANS. I/WE ALSO UNDERSTAND THAT IT IS MY/OUR RESPONSIBILITY TO HAVE THE CONSTRUCTION SUPERVISED AND CERTIFIED, INCLUDING THE SUBMITTAL OF "AS-BUILT" PLANS, BY A REGISTERED PROFESSIONAL ENGINEER WITHIN THIRTY (30) DAYS OF COMPLETION, BY A MARYLAND REGISTERED PROFESSIONAL ENGINEER.

SIGNATURE \_\_\_\_\_ DATE 01/13/2020

**ENGINEER'S CERTIFICATION**

I HEREBY CERTIFY THAT THIS PLAN HAS BEEN PREPARED BY OR UNDER MY SUPERVISION AND MEETS THE MINIMUM STANDARDS OF THE BALTIMORE COUNTY DEPARTMENT OF ENVIRONMENTAL PROTECTION AND SUSTAINABILITY AND THE BALTIMORE COUNTY SOIL CONSERVATION DISTRICT.

SIGNATURE *Michael Cuyler* DATE 01/13/2020

**ASBUILT CERTIFICATION FOR P3SWM**

THERE IS NO ASBUILT INFORMATION PROVIDED ON THIS SHEET  
MICHAEL G. COUGHLIN, PE NO. 38291, DATE OF ASBUILT 02/25/2022



**OWNER/DEVELOPER**

SW PROPERTIES LLP  
8106 STAYTON DRIVE  
JESSUP, MD 20794  
ATTN: ALVIN LEE  
PHONE: (213)-944-4448

**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. 38291, EXPIRATION DATE: 01/13/2022

		<b>MORRIS &amp; RITCHIE ASSOCIATES, INC.</b> ENGINEERS, PLANNERS, SURVEYORS AND LANDSCAPE ARCHITECTS 1220-C EAST JOPPA ROAD, SUITE 505 TOWSON, MARYLAND 21286 (410) 821-1690 FAX (410) 821-1748 Copyright 2020 Morris & Ritchie Associates, Inc.	
		<b>SITE DEVELOPMENT PLAN SW PROPERTIES LLC PROPOSED WAREHOUSE ADDITION</b>  <b>STORMWATER MANAGEMENT NOTES</b> TAX MAP 48 ~ GRID 1 ~ PARCEL 130 ~ ZONING CE-CL1 ~ DEED REF 15893/00438 PB 17 PG 68 ~ TAX ASSESSMENT DISTRICT 81 ~ 6th ELECTION DISTRICT DPZ FILE REFERENCES SDP-74-070, SDP-70-022 8106 STAYTON DRIVE, HOWARD COUNTY, MARYLAND	
DATE	REVISIONS	JOB NO.:	1963701
02/25/2022	AS-BUILT	SCALE:	NO SCALE
		DATE:	01/13/2020
		DRAWN BY:	DTP/DK
		DESIGN BY:	THS
		REVIEW BY:	MCC
		SHEET:	19 OF 29

APPROVED: DEPARTMENT OF PLANNING AND ZONING

*[Signature]* DATE 4-29-20

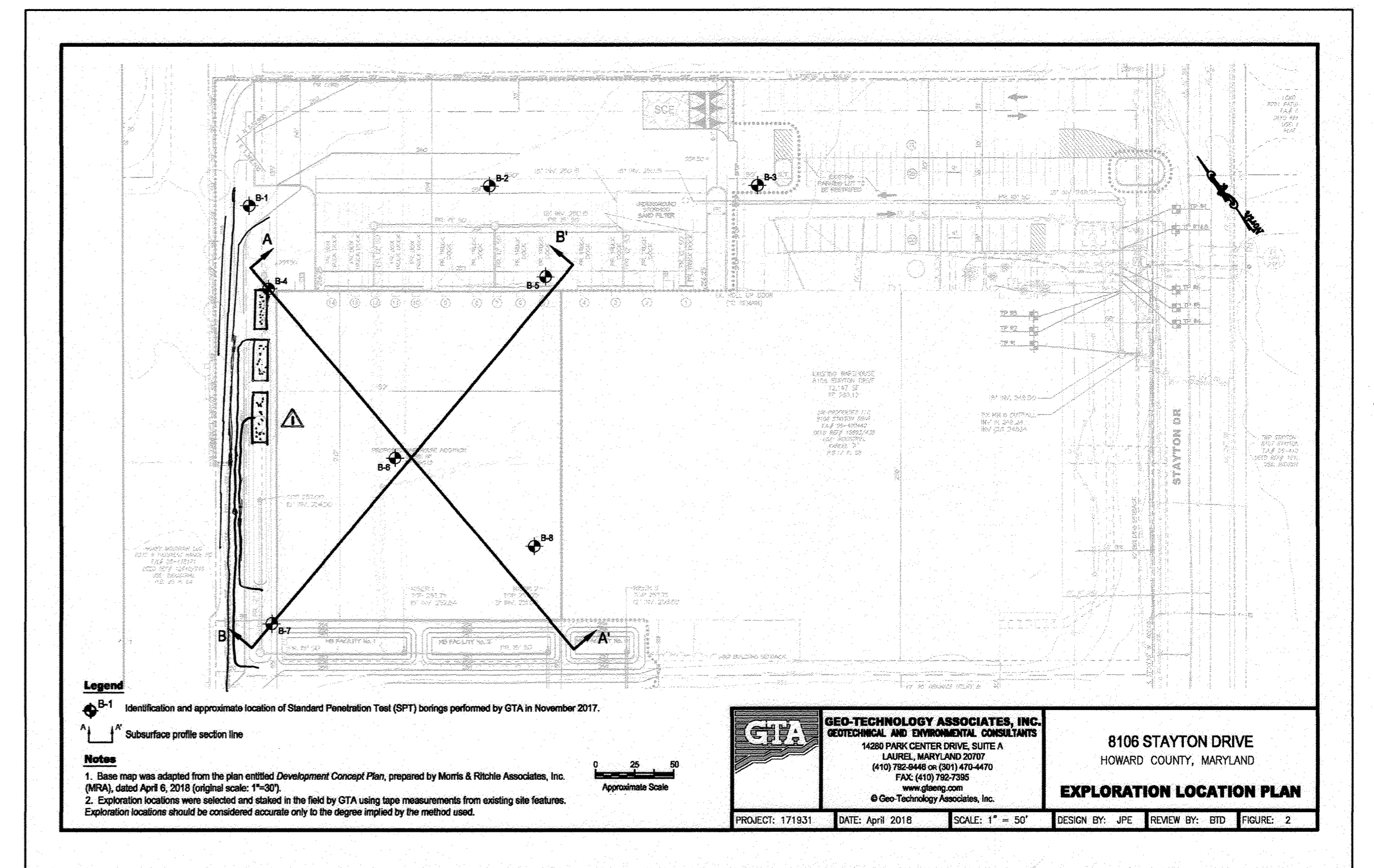
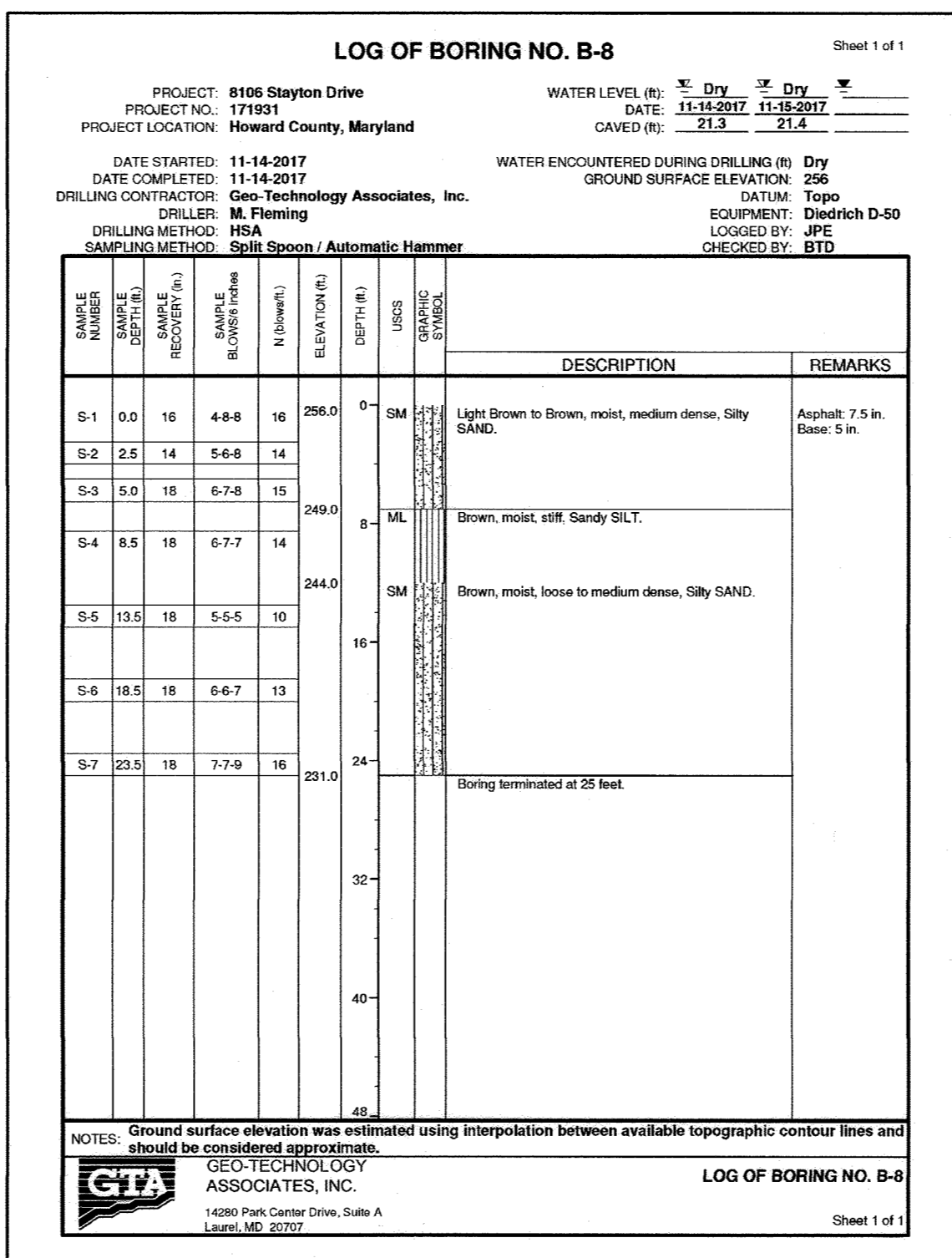
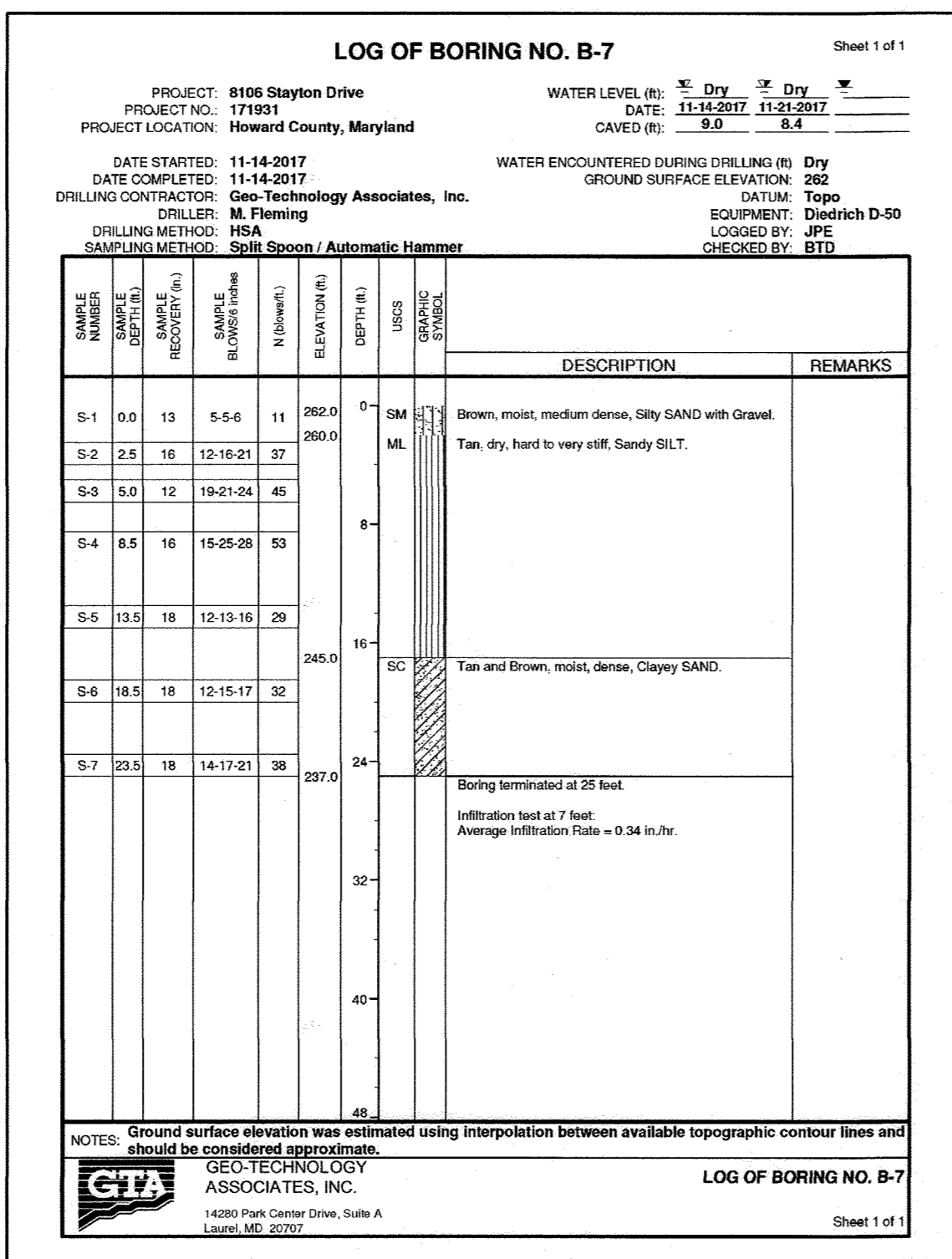
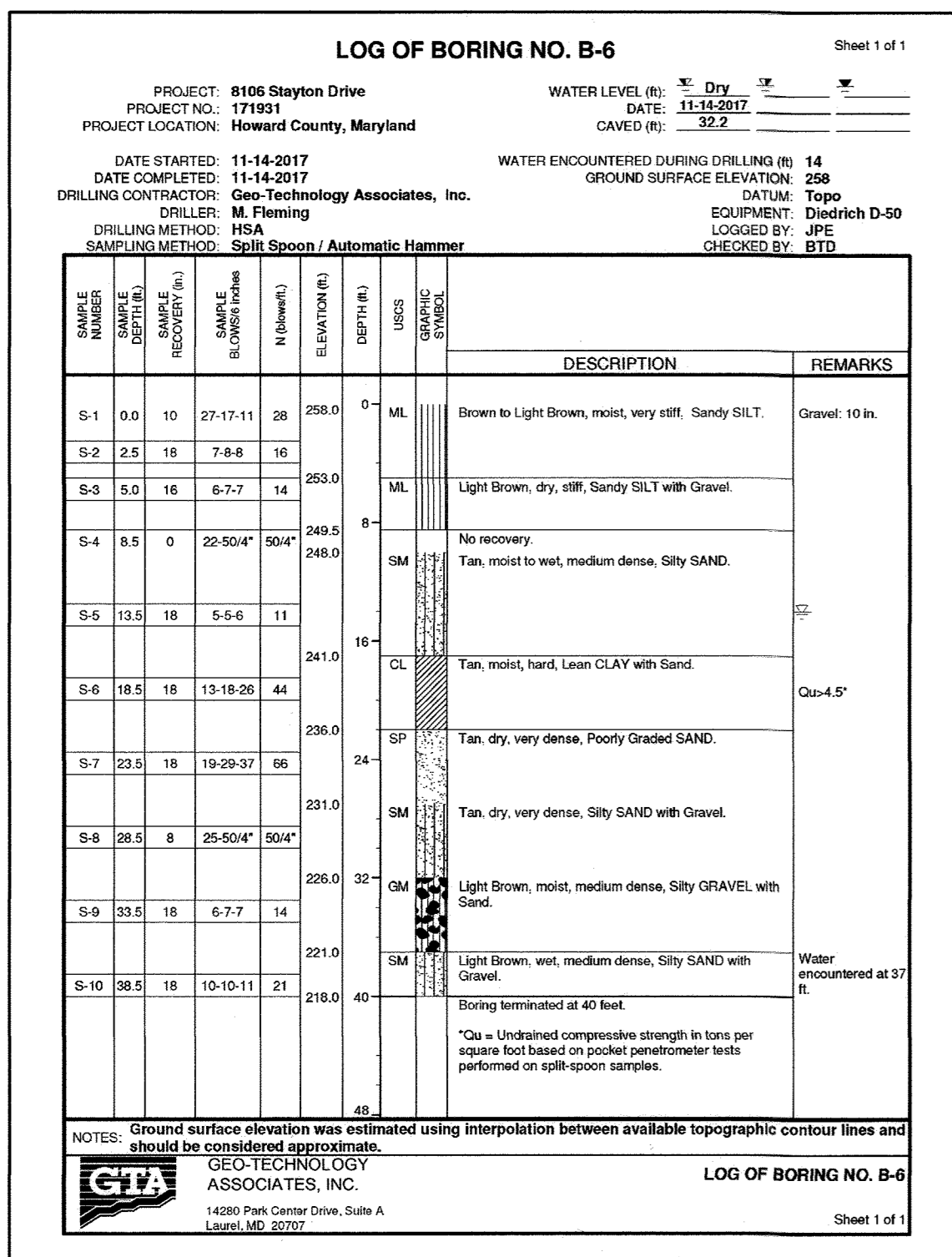
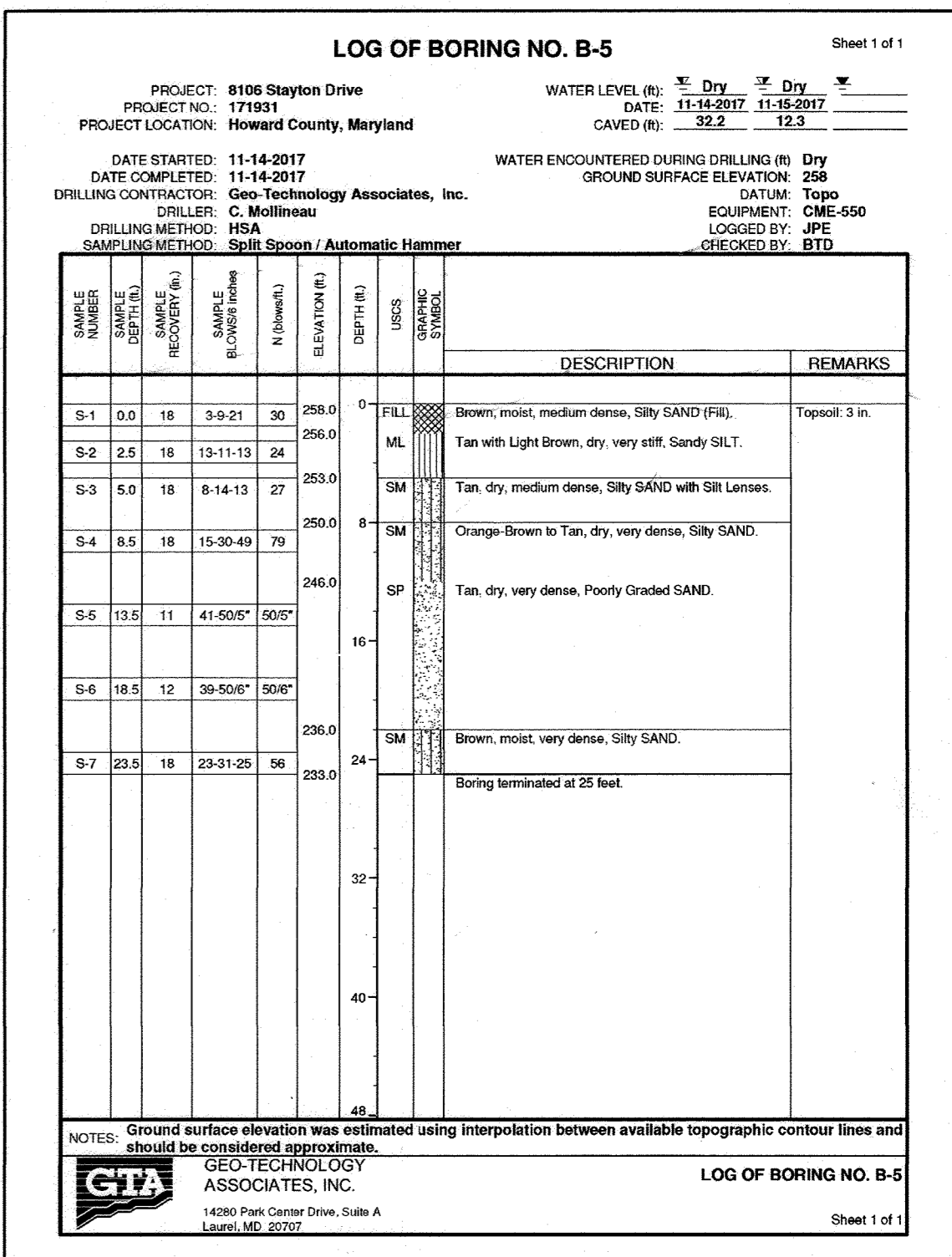
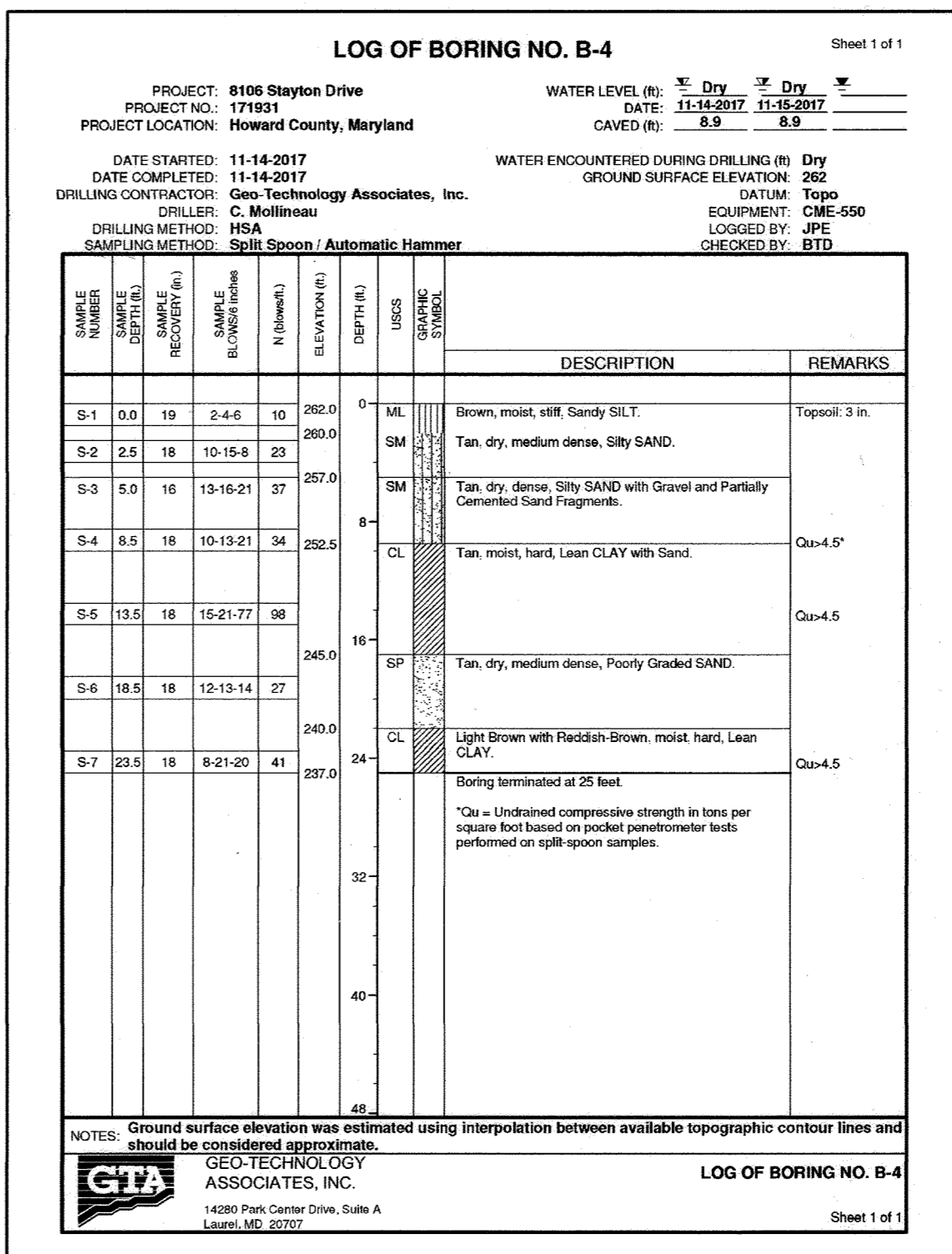
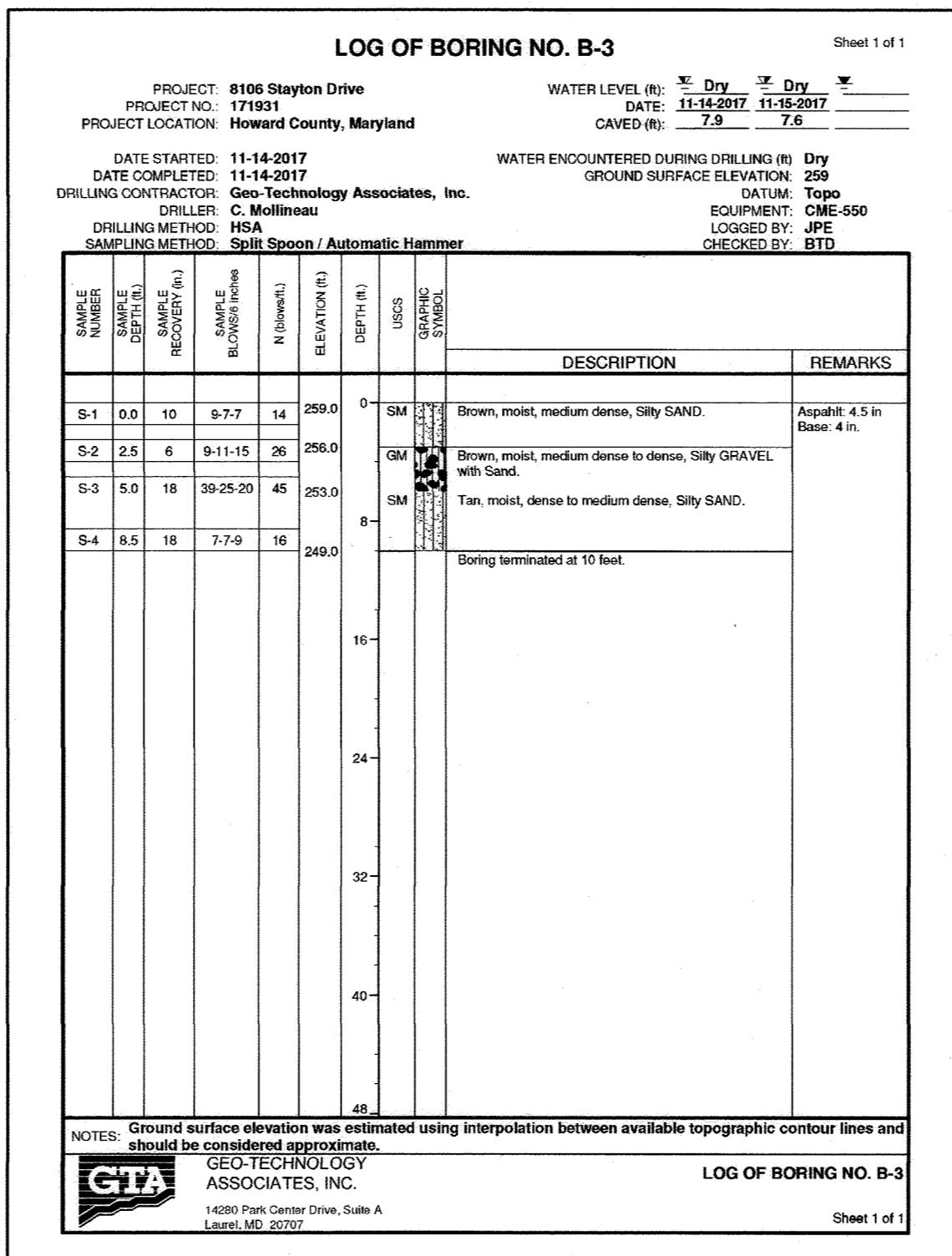
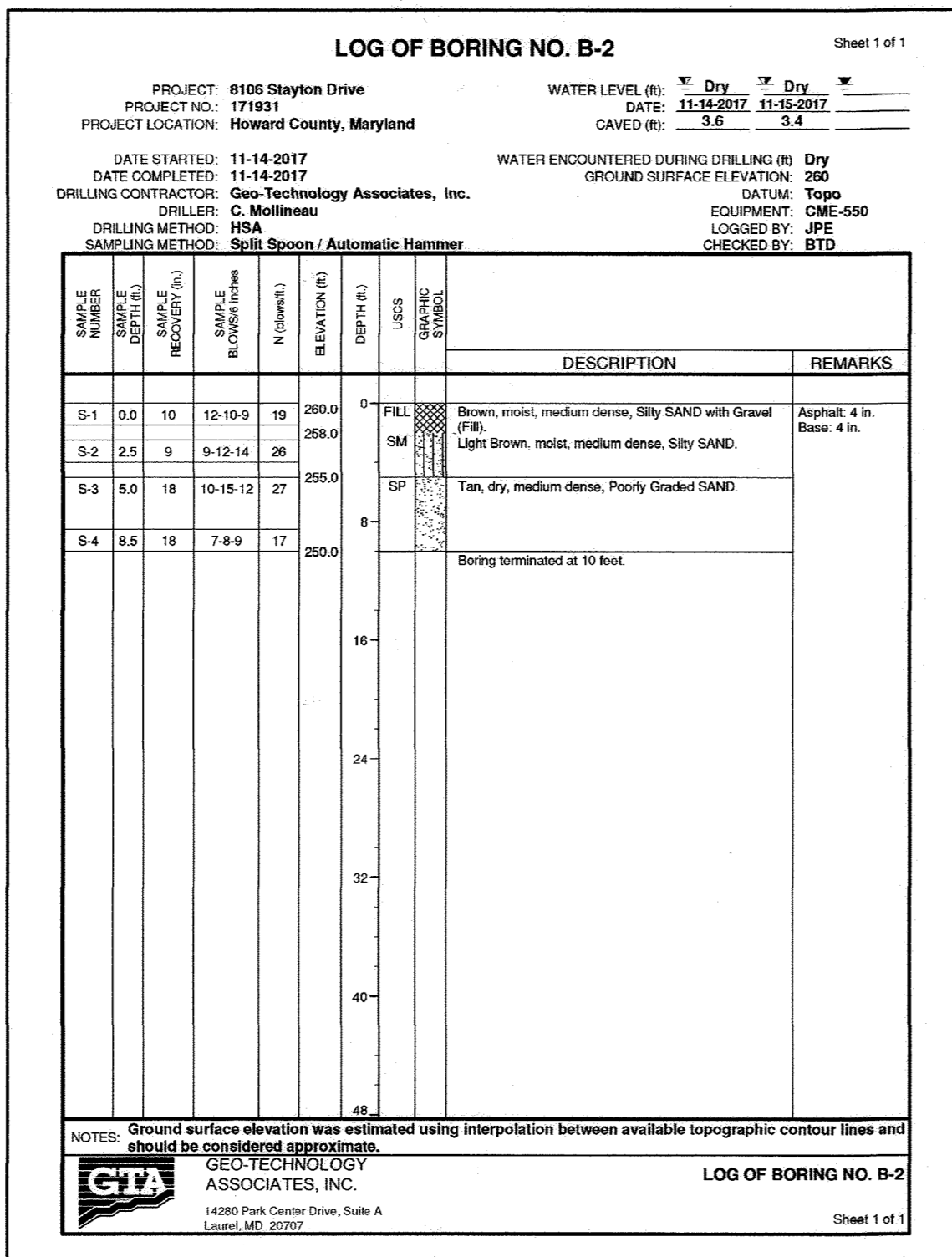
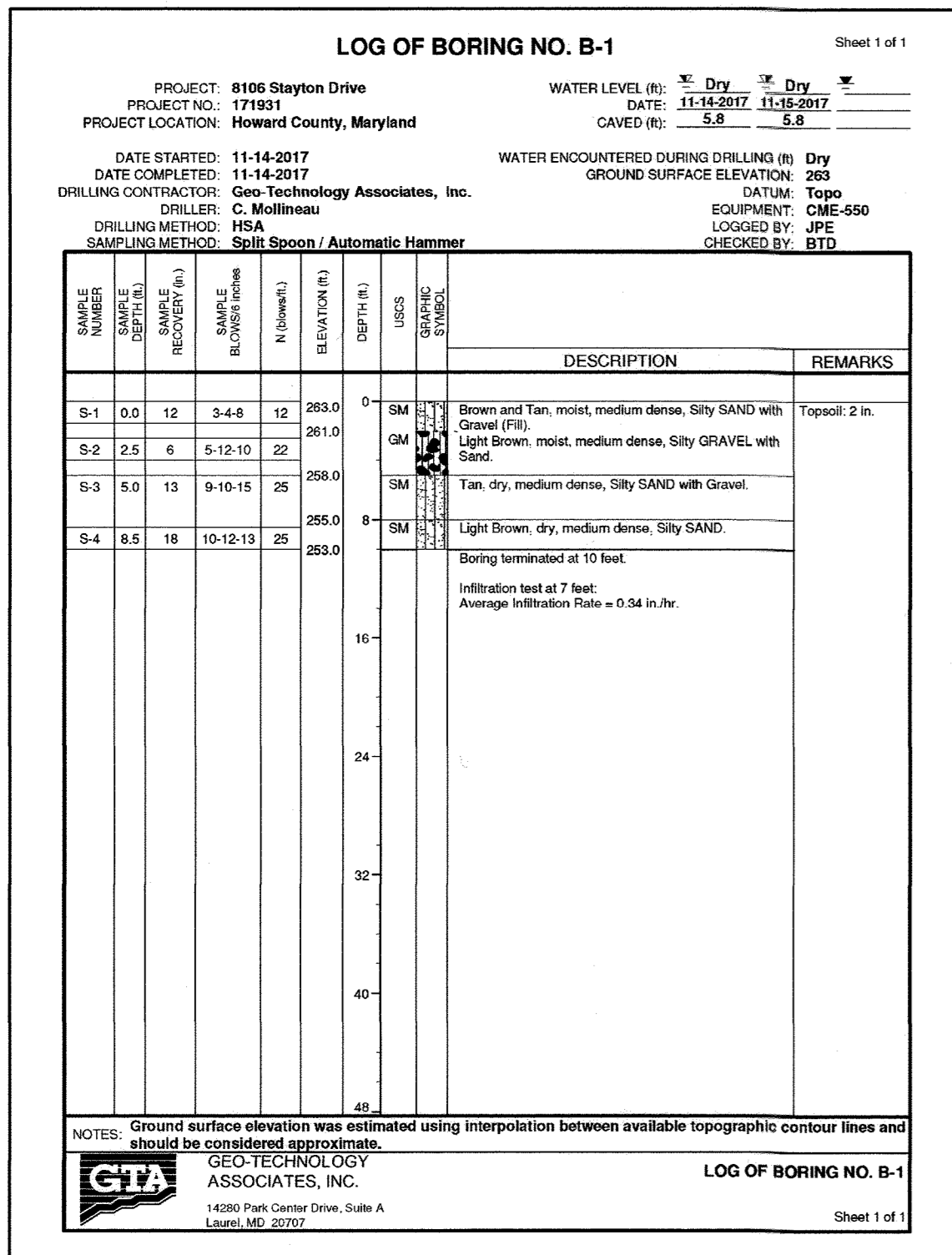
CHIEF, DEVELOPMENT ENGINEERING DIVISION

*[Signature]* DATE 5/1/2020

CHIEF, DIVISION OF LAND DEVELOPMENT

*[Signature]* DATE 5-12-2020

DIRECTOR



APPROVED: DEPARTMENT OF PLANNING AND ZONING

*[Signature]* 4.29.20  
DATE

CHIEF, DEVELOPMENT ENGINEERING DIVISION JR

*[Signature]* 5/11/2020  
DATE

CHIEF, DIVISION OF LAND DEVELOPMENT

*[Signature]* 5-13-2020  
DATE

DIRECTOR

**ASBUILT CERTIFICATION FOR PSWM**

THERE IS NO ASBUILT INFORMATION PROVIDED ON THIS SHEET  
MICHAEL G. COUGHLIN, PE NO. 36291, DATE OF ASBUILT 02/25/2022.

*[Signature]*

**OWNER/DEVELOPER**

SW PROPERTIES LLP  
8106 STATION DRIVE  
JESSUP, MD 20794  
ATTN: ALVIN LEE  
PHONE: (213)-944-4448

**PROFESSIONAL CERTIFICATION**

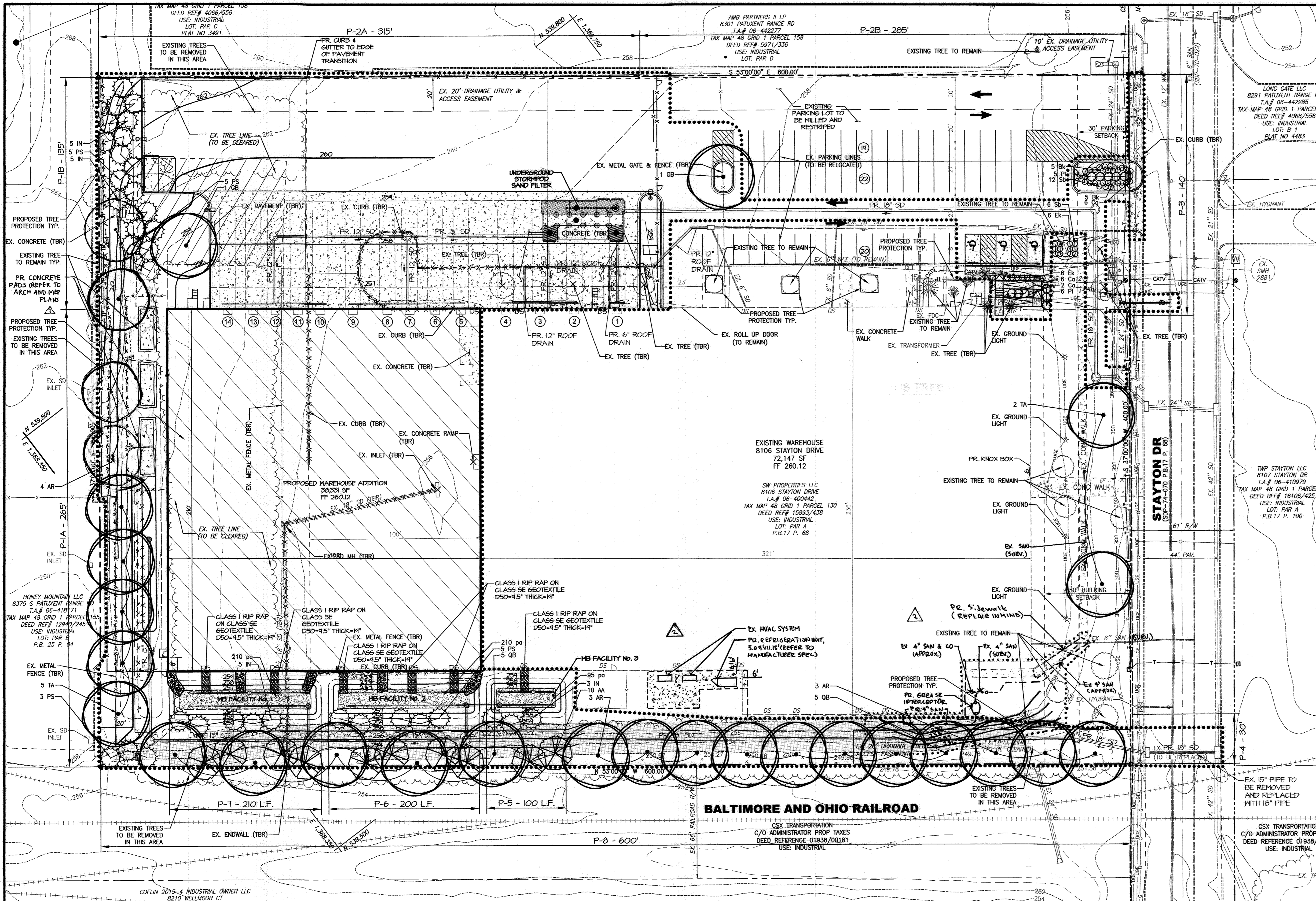
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 38291, EXPIRATION DATE: 01/13/2022

**MORRIS & RITCHIE ASSOCIATES, INC.**  
ENGINEERS, PLANNERS, SURVEYORS AND LANDSCAPE ARCHITECTS  
1220-C EAST JOPPA ROAD, SUITE 505  
TOWSON, MARYLAND 21286  
(410) 821-1690  
FAX (410) 821-1748  
Copyright 2020 Morris & Ritchie Associates, Inc.

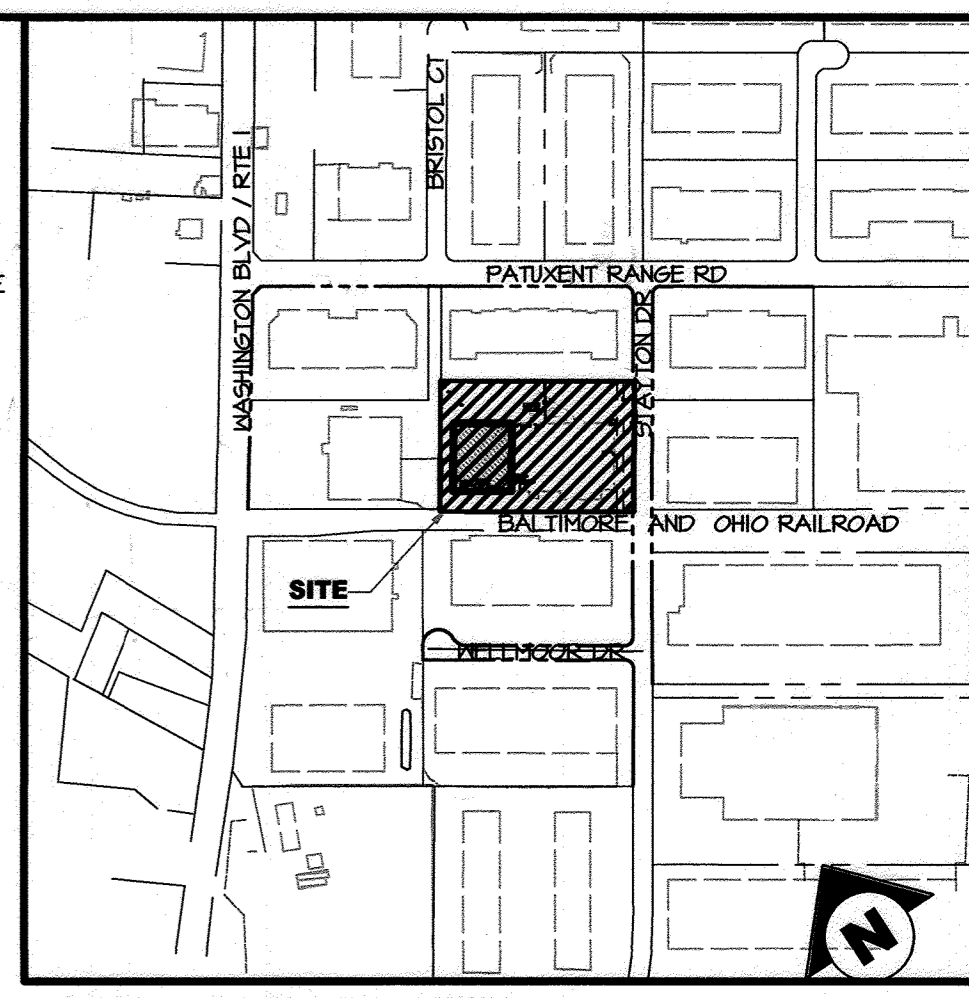
**SITE DEVELOPMENT PLAN  
SW PROPERTIES LLC  
PROPOSED WAREHOUSE ADDITION  
GEO-TECHNICAL BORING LOGS  
& LOCATION PLAN**

TAX MAP 48 ~ GRID 1 ~ PARCEL 130 ~ ZONING CE-CU ~ DEED REF 15893/00438  
PB 17 PG 68 ~ TAX ASSESSMENT DISTRICT 81 ~ 6th ELECTION DISTRICT  
DPZ FILE REFERENCES SDP-74-070, SDP-70-022  
8106 STATION DRIVE, HOWARD COUNTY, MARYLAND

DATE	REVISIONS	JOB NO.:
04/16/2021	ADDED MECHANICAL UNIT PADS AND REVISED GRADING	19637X01
02/25/2022	AS-BUILT	SCALE: AS SHOWN
		DATE: 01/13/2020
		DRAWN BY: DTP/DK
		DESIGN BY: THS
		REVIEW BY: MGC
		SHEET: 20 OF 29



- ### LEGEND
- EXISTING
  - EX. PROPERTY LINE
  - EX. ADJACENT PROPERTY LINE
  - EX. RIGHT OF WAY LINE
  - EX. EASEMENT
  - EX. BUILDING SETBACK
  - EX. WATER MAIN, VALVE, FIRE HYDRANT
  - EX. WATER METER
  - EX. SANITARY SEWER
  - EX. STORM DRAIN
  - EX. STORM DRAIN INLET
  - EX. UNDERGROUND GAS
  - EX. UNDERGROUND ELECTRIC
  - EX. GROUND LIGHT
  - EX. TRANSFORMER
  - EX. TELEPHONE LINE
  - EX. CATV CABLE
  - EX. BUILDING
  - EX. CURB
  - EX. EDGE OF PAVEMENT
  - EX. ROAD CENTER LINE
  - EX. CONCRETE
  - EX. STRIPING
  - EX. METAL FENCE
  - EX. RAILROAD
  - EX. TREES/SHRUBS
  - EX. WOODS
  - LIMIT OF DISTURBANCE
  - URBAN LAND-UDORHENT'S SOIL
  - EX. 2" CONT
  - EX. 10" CONT
  - SLOPE > 15
  - PROPOSED
  - PR. METAL FENCE
  - PR. TRUCK DOCK
  - PR. BUILDING
  - PR. STORM DRAIN
  - PR. TRENCH DRAIN
  - PR. CURB/GUTTER
  - PR. STRIPING
  - PR. ADA SIGNAGE / WHEEL STOP
  - PR. CONCRETE
  - PR. MICRO-BIO
  - (TBR) (TO BE REMOVED)
  - FR. CONT 1
  - FR. CONT 2
  - FR. CONT 10
  - FR. CURB/GUTTER
  - PR. # OF PARKING SPACES
  - PR. TRAFFIC FLOW
  - PR. ADA ACCESSIBLE
  - PR. MULCH BED
  - PR. SHADE DECIDUOUS TREE
  - PR. FLOWERING TREE
  - PR. EVERGREEN TREE
  - PR. SHRUBS
  - PR. GROUNDCOVER
  - PR. TREES TO BE REMOVED
  - PR. TREE PROTECTION



**VICINITY MAP**  
SCALE: 1" = 600'

NOTE: THE LANDSCAPING SHOWN ON THE LANDSCAPE PLANS WILL BE INSTALLED BY THE DEVELOPER.

NOTE: THE CORRECTNESS OR COMPLETENESS OF EXISTING INFORMATION SHOWN ON THE DRAWINGS IS NOT WARRANTED OR GUARANTEED. THE CONTRACTOR SHALL VERIFY THE LOCATION OF UTILITIES AND UNDERGROUND FACILITIES, BY TEST PITS OR OTHER METHODS APPROVED BY THE OWNER'S REPRESENTATIVE, AS REQUIRED TO VERIFY EXACT LOCATIONS AND DEPTHS WITH THE LIMIT OF DISTURBANCE. ALL DISCREPANCIES BETWEEN INFORMATION SHOWN ON THE DRAWINGS AND THAT VERIFIED IN THE FIELD SHALL BE REPORTED TO THE OWNER'S REPRESENTATIVE PRIOR TO BEGINNING OF WORK.

**DEVELOPER'S/OWNER'S LANDSCAPE CERTIFICATE**

I/We certify that the landscaping shown on this plan will be done according to the plan, Section 16.124 of the Howard County Code and the Landscape Manual. I/We further certify that upon completion a Letter of Landscape Installation, accompanied by an executed one year guarantee of plant materials, will be submitted to the department of planning and zoning.

*Sw Properties LLC / Sunny Lee*  
DEVELOPER'S / OWNER'S NAME SIGNATURE

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
4.29.20  
DATE

5/1/2020  
DATE

5-12-2020  
DATE

### MASTER PLANT SCHEDULE

Trees	Symbol	Quantity	Botanical Name	Common Name	Size	Spacing
	AR	10	Acer rubrum 'Red Sunset'	Red Sunset Red Maple	2.5"-3" Cal.	As shown
	GB	2	Ginkgo biloba 'Autumn Gold'	Autumn Gold Ginkgo	2.5"-3" Cal.	As shown
	QB	10	Quercus bicolor	Swamp White Oak	2.5"-3" Cal.	As shown
	TA	7	Tilia americana 'Redmond'	Redmond American Linden	2.5"-3" Cal.	As shown
Ornamental Tree	Symbol	Quantity	Botanical Name	Common Name	Size	Spacing
	AA	10	Amelanchier arborea	Downy Serviceberry	8'-10' Ht.	As shown
Evergreen Tree	Symbol	Quantity	Botanical Name	Common Name	Size	Spacing
	IN	18	Ilex 'Nellie R. Stevens'	Nellie R. Stevens Holly	5'-6' Ht.	As shown
	PS	18	Pinus strobus 'Fastigiata'	Eastern White Pine	6'-8' Ht.	As shown
Shrubs	Symbol	Quantity	Botanical Name	Common Name	Size	Spacing
	Bk	10	Buxus koreana 'Wintergreen'	Wintergreen Boxwood	2'-2.5' Ht.	As shown
	Ca	14	Clethra alnifolia	Sweet Pepperbush	2'-2.5' Ht.	As shown
	Ek	12	Euonymus kiautschovicus 'Manhattan'	Spreading Euonymous	2.5'-3' Ht.	As shown
	PI	11	Prunus laurocerasus 'Otto Luyken'	Otto Luyken Cherry Laurel	2'-2.5' Ht.	As shown
	Sb	18	Spiraea x bumalda 'Anthony Waterer'	Anthony Waterer Spiraea	2.5'-3' Ht.	As shown
Ornamental Grasses	Symbol	Quantity	Botanical Name	Common Name	Size	Spacing
	pa	515	Panicum virgatum	Switch Grass	1 Gal.	24" O.C.

**PLAN**  
SCALE: 1" = 30'

**GRAPHIC SCALE**  
0 15 30 60  
(IN FEET)  
1 INCH = 30 FT.

**ASBUILT CERTIFICATION FOR PSWM**

I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THE PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND COMPLIES WITH THE APPROVED PLANS AND SPECIFICATIONS. I HAVE VERIFIED THAT THE CONTRIBUTING DRAINAGE AREA IS SUFFICIENTLY STABILIZED TO PREVENT CLOGGING OF THE UNDERGROUND SWM FACILITY.

MIKMEL G. COUGHAN, PE NO. 38191, DATE OF ASBUILT 01/25/2022.

**DATUM**  
DESIGN & DRAWING BASED ON MARYLAND COORDINATE SYSTEM: HORIZONTAL NAD 83 (1991) VERTICAL NAVD 88

**OWNER/DEVELOPER**  
SW PROPERTIES LLP  
8106 STAYTON DRIVE  
JESSUP, MD 20794  
ATTN: ALVIN LEE  
PHONE: (213)-944-4448

**ADDRESS CHART**

LOT / PARCEL #	STREET ADDRESS	ACREAGE
LOT PAR A/D130	8106 STAYTON DRIVE	5.51 AC. (240,015.6 SF)

**PROFESSIONAL CERTIFICATION**

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A FULLY LICENSED PROFESSIONAL LANDSCAPE ARCHITECT UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 3787, EXPIRATION DATE: 06/30/2020

**MORRIS & RITCHIE ASSOCIATES, INC.**  
ENGINEERS, PLANNERS, SURVEYORS AND LANDSCAPE ARCHITECTS  
1220-C EAST JOPPA ROAD, SUITE 505  
TOWSON, MARYLAND 21286  
(410) 821-1690  
FAX (410) 821-1748  
Copyright 2020 Morris & Ritchie Associates, Inc.

**SITE DEVELOPMENT PLAN**  
**SW PROPERTIES LLC**  
**PROPOSED WAREHOUSE ADDITION**  
LANDSCAPE PLAN

TAX MAP 48 - GRID 1 - PARCEL 130 - ZONING CE-CU - DEED REF 15893/04438  
PB 17 PG 68 - TAX ASSESSMENT DISTRICT 81 - 6th ELECTION DISTRICT  
DPZ FILE REFERENCES SDP-74-070, SDP-70-022  
8106 STAYTON DRIVE, HOWARD COUNTY, MARYLAND

DATE	REVISIONS	JOB NO.:
04/16/2021	ADDED MECHANICAL UNIT PADS, REVISED GRADING AND RELOCATED TREES	19637X01
02/15/2022	Updated Per As-Built Conditions	SCALE: AS SHOWN
04/19/2023	CREATE INTERCEPTOR AND REPERMEATION UNIT ADDITIONS	DATE: 01/10/2020
		DRAWN BY: SLS
		DESIGN BY: SLS
		REVIEW BY: NCR
		SHEET: 21 OF 23



PROTECT YOURSELF, GIVE THREE WORKING DAYS NOTICE  
THIS DRAWING DOES NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY. ALL CONSTRUCTION MUST BE DONE IN COMPLIANCE WITH THE OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970 AND ALL RULES AND REGULATIONS THERE TO APPROPRIATE.



**SCHEDULE A - PERIMETER LANDSCAPE EDGE**

CATEGORY	P-1A REAR BUILDING	P-1B LOADING TO OTHER USES	P-2A LOADING TO OTHER USES	P-2B NON-RESIDENTIAL TO ALL OTHER USES (PARKING)	P-3 PARKING TO ROADWAY	P-4 LANDSCAPE EDGES ADJACENT TO ROADWAYS NON-RESIDENTIAL (FRONT BUILDING)	P-5 TO P-7 SEE SCHEDULE D STORMWATER MANAGEMENT AREA LANDSCAPING	P-8 ADJACENT TO ALL OTHER USES
LANDSCAPE TYPE: NON-RESIDENTIAL	A	C	C	A	E	B		A
LINEAR FEET OF PERIMETER	265	135	315	285	140	30		600
CREDIT FOR EXISTING VEGETATION	1 SHADE TREE	2 SHADE TREES	NO CREDIT PROVIDED	NO CREDIT PROVIDED	1 SHADE TREE	1 SHADE TREE, 1 EVERGREEN TREE		NO CREDIT PROVIDED
CREDIT FOR WALL FENCE OR BERM (YES/NO LF)	NO CREDIT PROVIDED	NO CREDIT PROVIDED	NO CREDIT PROVIDED	NO CREDIT PROVIDED	NO CREDIT PROVIDED	NO CREDIT PROVIDED		NO CREDIT PROVIDED
NUMBER OF PLANTS REQUIRED:								
SHADE TREES	5	3	8	5	4	1		10
EVERGREEN TREES	-	7	16	-	-	1		-
SHRUBS	-	-	-	-	35	-		-
NUMBER OF PLANTS PROVIDED:								
SHADE TREES	9 (SEE NOTE 'B')	1	8	5				10 Proposed Shade Trees, Plus 10 proposed flowering trees credited as 5 shade trees at a (2:1 ratio), 2 Proposed Shade trees located along Stayton Drive= 17 Shade Trees
EVERGREEN TREES	0	23 (SEE NOTE 'A')	16	0	0			3
SHRUBS (10:1 SUBSTITUTION)	0	0	0	0			Total of 65 shrubs Proposed: 35 shrubs meet the shrubs required, (30 of the shrubs count toward 3 Shade tree Requirements (Substitution Calculation of 10 shrubs= 1 shade tree)	0
ADDITIONAL PLANTING TO MEET OTHER PERIMETER REQUIREMENTS (YES/NO)	YES 'B'	YES 'A'	NO	NO	NO	NO		YES 'A'
Meeting Requirement (Yes/No)	YES	YES	YES ('A')	YES ('B')	YES	YES		YES

NOTE:  
 'A' DUE TO THE EXISTING CONDITIONS OF THE SITE, THERE IS NO ROOM TO PROVIDE SCREENING IN THE FORM OF A PRIVACY FENCE OR LANDSCAPE BUFFER IN THAT LOCATION THE 16 EVERGREEN TREES THAT ARE REQUIRED FOR CATEGORY P-2A HAVE BEEN ADDED TO THE NORTHWEST SIDE OF THE SITE WHERE CATEGORY P-1B PLANTINGS ARE LOCATED. THE 8 SHADE TREES THAT ARE REQUIRED FOR CATEGORY P-2A HAVE BEEN ADDED TO THE SOUTHEAST CORNER OF THE SITE IN CATEGORY P-3 AND ALONG STAYTON DRIVE.  
 'B' DUE TO THE EXISTING CONDITIONS OF THE SITE, THERE IS NO ROOM TO PROVIDE SCREENING IN THE FORM OF A PRIVACY FENCE OR LANDSCAPE BUFFER IN THAT LOCATION. THE 5 SHADE TREES THAT ARE REQUIRED FOR CATEGORY P-2B HAVE BEEN ADDED TO THE NORTHWEST SIDE OF THE SITE WHERE CATEGORY P-1A PLANTINGS ARE LOCATED.

**SCHEDULE B  
PARKING LOT INTERNAL LANDSCAPING**

NUMBER OF PARKING SPACES	61
NUMBER OF TREES REQUIRED:	7
NUMBER OF TREES PROVIDED:	13
SHADE TREES	1 Proposed Shade Tree, 4 existing shade trees, 2 shade tree credits (4 existing evergreen trees= 2 shade trees (2:1 ratio)), 6 shade tree credits (65 proposed shrubs= 5 shade trees (10:1 ratio))
Meeting Requirement (Yes/No)	Yes

NOTE:  
 SITE WILL HAVE LESS PARKING SPACES POST DEVELOPMENT. RATIONALE EXPLAINED IN OWNER'S LETTER. THE IMPACTS TO THE EXISTING PARKING LOT INCLUDE THE STRIPING OF PROPOSED HANDICAP PARKING SPACES. THERE ARE (8) EXISTING TREES ADJACENT TO THE PARKING LOT WILL REMAIN AS PER THE PARKING LOTS PREVIOUS CONDITION. (1) SHADE TREE HAS BEEN ADDED TO THE PARKING LOT ISLAND AND (65) SHRUBS HAVE BEEN ADDED ADJACENT TO THE PARKING LOT NEAR THE NEW RAMP AND WITHIN THE PARKING LOT ISLAND.

**SCHEDULE D - STORMWATER MANAGEMENT  
AREA LANDSCAPING (TYPE B BUFFER)**

CATEGORY	P-5 MB Facility # 3	P-6 MB Facility # 2	P-7 MB Facility # 1
LINEAR FEET OF PERIMETER	100	200	210
NUMBER OF TREES REQUIRED:			
SHADE TREES	2	4	4
EVERGREEN TREES	3	5	5
CREDIT FOR EXISTING VEGETATION (YES/NO/%)	N	N	N
CREDIT FOR OTHER LANDSCAPING (YES/NO/%)	N	N	N
NUMBER OF TREES PROVIDED:			
SHADE TREES	1 Shade tree provided, Plus 2 Flowering Trees credited as 1 Shade Trees at a (2:1 ratio) = 2 Shade Trees Provided	2 Shade trees provided, Plus 4 Flowering Trees credited as 2 Shade Trees at a (2:1 ratio) = 4 Shade Trees Provided	2 Shade trees provided, Plus 4 Flowering Trees credited as 2 Shade Trees at a (2:1 ratio) = 4 Shade Trees Provided
EVERGREEN TREES	3	5	5
OTHER VEGETATION (10:1 SUBSTITUTION)			
Meeting Requirement (Yes/No)	YES	YES	YES

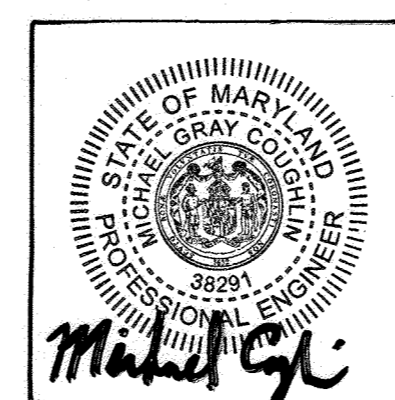
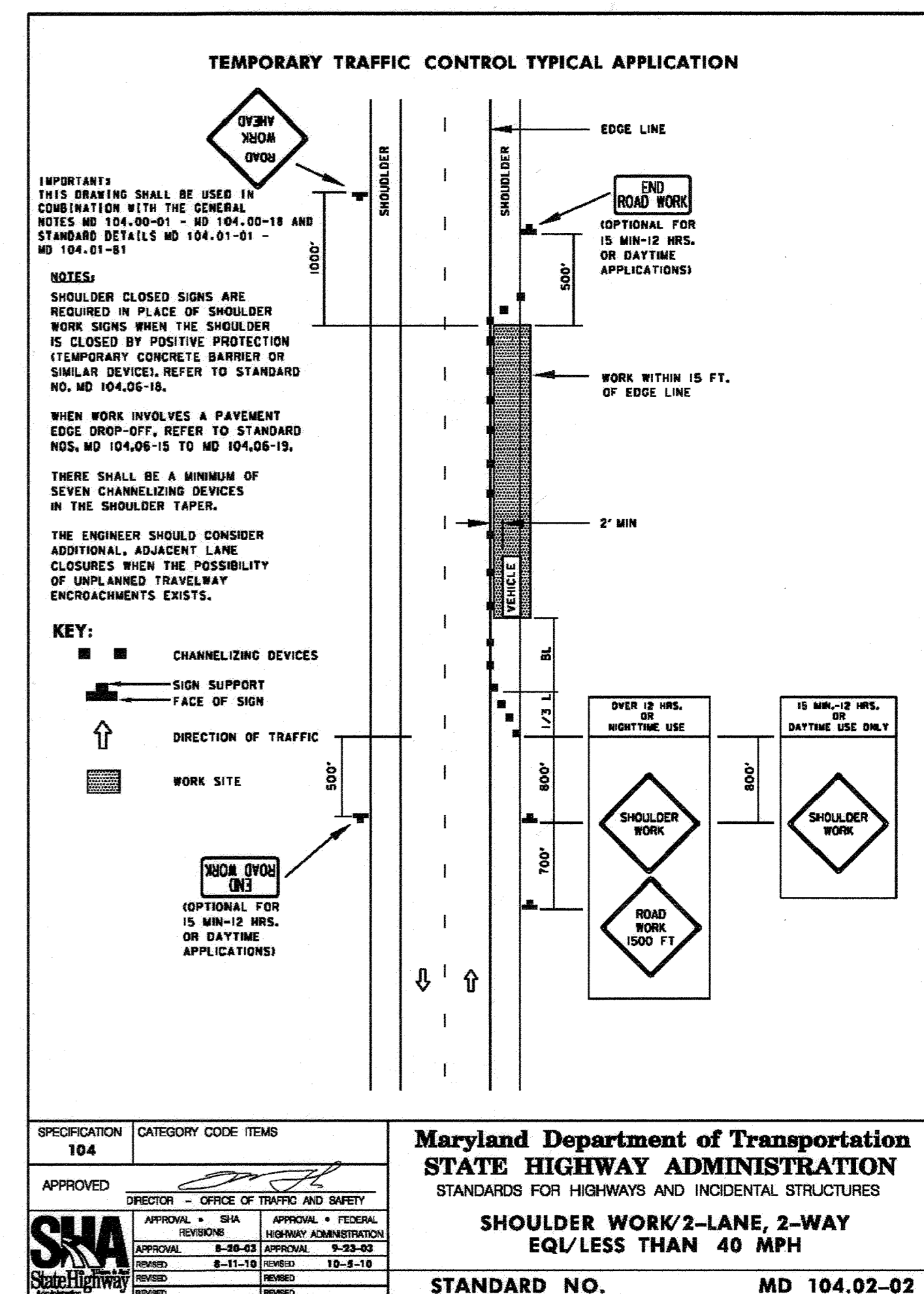
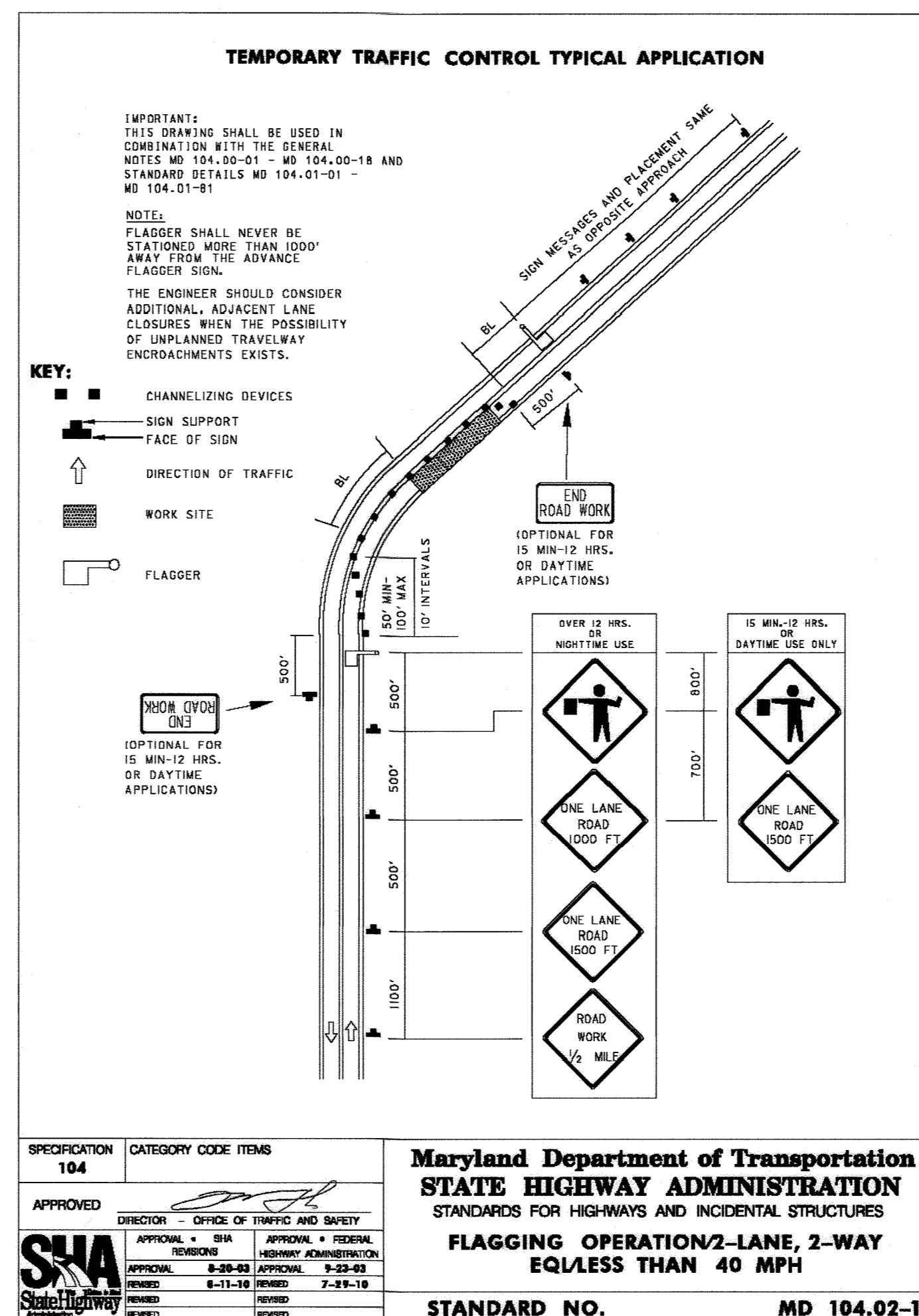
**DEVELOPER'S/OWNER'S LANDSCAPE CERTIFICATE**

I/We certify that the landscaping shown on this plan will be done according to the plan, Section 16.124 of the Howard County Code and the Landscape Manual. I/We further certify that upon completion a Letter of Landscape Installation, accompanied by an executed one year guarantee of plant materials, will be submitted to the department of planning and zoning.

Sw Properties LLC / Sunny Lee  
 DEVELOPER'S / OWNER'S NAME SIGNATURE

APPROVED: DEPARTMENT OF PLANNING AND ZONING

5.6.20  
 DATE  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION  
 5/16/20  
 DATE  
 CHIEF, DIVISION OF LAND DEVELOPMENT  
 5-12-2020  
 DATE  
 DIRECTOR



**ASBUILT CERTIFICATION FOR PSWM**  
 THERE IS NO ASBUILT INFORMATION PROVIDED ON THIS SHEET.  
 MICHAEL G. COUGHLIN, PE NO. 38291, DATE OF ASBUILT 02/15/2022

**OWNER/DEVELOPER**

SW PROPERTIES LLP  
 8106 STAYTON DRIVE  
 JESSUP, MD 20794  
 ATTN: ALVIN LEE  
 PHONE: (213)-944-4448

**PROFESSIONAL CERTIFICATION**

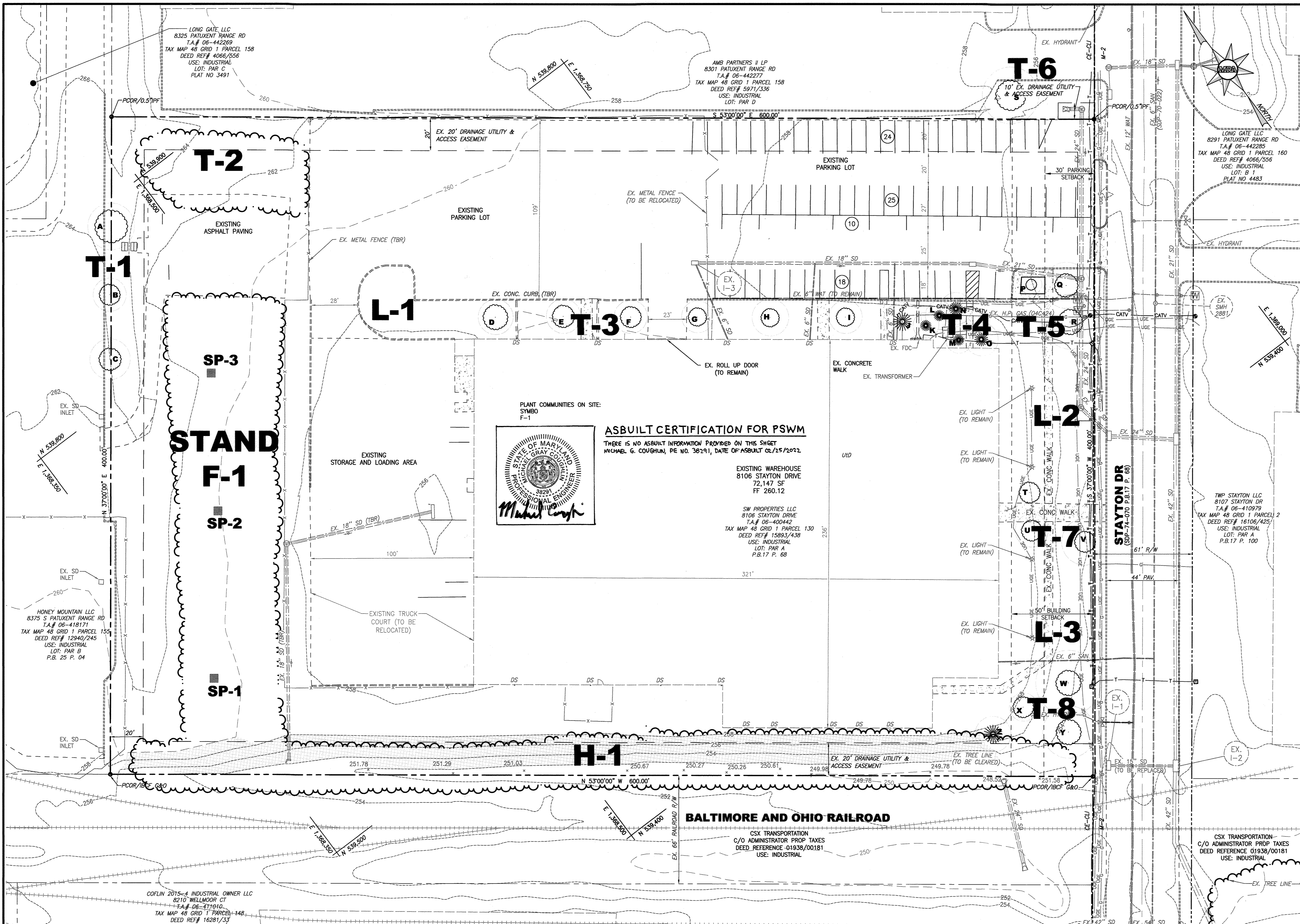
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL LANDSCAPE ARCHITECT UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 3787, EXPIRATION DATE: 06/30/2020

**MORRIS & RITCHIE ASSOCIATES, INC.**  
 ENGINEERS, PLANNERS, SURVEYORS AND LANDSCAPE ARCHITECTS  
 1220-C EAST JOPPA ROAD, SUITE 505  
 TOWSON, MARYLAND 21286  
 (410) 821-1690  
 FAX (410) 821-1748  
 Copyright 2020 Morris & Ritchie Associates, Inc.

**SITE DEVELOPMENT PLAN  
 SW PROPERTIES LLC  
 PROPOSED WAREHOUSE ADDITION  
 MOT AND  
 LANDSCAPE PLAN SCHEDULES**

TAX MAP 48 ~ GRID 1 ~ PARCEL 130 ~ ZONING CE-CL1 ~ DEED REF 15893/00438  
 PB 17 PG 68 ~ TAX ASSESSMENT DISTRICT B1 ~ 6th ELECTION DISTRICT  
 DPZ FILE REFERENCES SDP-74-070, SDP-70-022  
 8106 STAYTON DRIVE, HOWARD COUNTY, MARYLAND

DATE	REVISIONS	JOB NO.:
02/25/2022	AS-BUILT	19637X01
		SCALE: AS SHOWN
		DATE: 01/13/2020
		DRAWN BY: SLS
		DESIGN BY: SLS
		REVIEW BY: NGR
		SHEET: 23 OF 29



### LEGEND

- EXISTING PROPERTY LINE
- EX. ADJACENT PROPERTY LINE
- EX. RIGHT OF WAY LINE
- EX. EASEMENT
- EX. BUILDING SETBACK
- EX. WATER MAIN, VALVE, FIRE HYDRANT
- EX. WATER METER
- EX. SANITARY SEWER
- EX. STORM DRAIN
- EX. STORM DRAIN INLET
- EX. UNDERGROUND GAS
- EX. UNDERGROUND ELECTRIC
- EX. GROUND LIGHT
- EX. TRANSFORMER
- EX. TELEPHONE LINE
- EX. CATV CABLE
- EX. BUILDING
- EX. CURB
- EX. EDGE OF PAVEMENT
- EX. ROAD CENTER LINE
- EX. CONCRETE
- EX. STRIPING
- EX. METAL FENCE
- EX. RAILROAD
- EX. TREES/SHRUBS
- EX. WOODS
- LIMIT OF DISTURBANCE
- URBAN LAND-UDORHENTHS SOIL
- EX. 2' CONT
- EX. 10' CONT
- EX. SLOPE > 15
- EX. ZONING LINE
- SP-1 SAMPLE PLOT CRITICAL ROOT ZONE

### VICINITY MAP

1"=600'

### SITE ANALYSIS DATA CHART

1. TOTAL PROJECT AREA	5.51 ACRES (240,016 SF)
2. AREA OF PLAN SUBMISSION	2.78 ACRES (121,202 SF)
3. LIMIT OF DISTURBANCE	2.78 ACRES (121,202 SF)
4. PRESENT ZONING	CE-CL
5. PROPOSED USE	WAREHOUSE
6. DPZ FILE REFERENCES	SOP-74-070, SDP-70-022, EOP-18-043
7. SANITARY SEWER / WATER SERVICE	PUBLIC/PUBLIC
8. TAX MAP / PARCEL NO.	48 / 130
9. ELECTION DISTRICT	6
10. COUNCIL DISTRICT	3
11. EX. STEEP SLOPES > 15%	0.21 AC.
12. EX. IMPERVIOUS AREA (ON-SITE)	3.51 AC.
13. EX. OPEN SPACE (ON-SITE)	2.00 AC.
14. PR. IMPERVIOUS (ON-SITE)	4.08 AC.
15. PR. OPEN SPACE (ON-SITE)	1.43 AC.
16. EXISTING FOREST ON-SITE	0.41 AC.
17. FLOODABLE SOILS ON-SITE (SuB)	0.00 AC.
18. EXISTING WETLANDS AND BUFFER AREA	0.00 AC.
19. EXISTING FLOODPLAIN & BUFFER AREA	0.00 AC.

### GENERAL NOTES

- THE EXISTING TOPOGRAPHY IS A SURVEY OF FIELD RUN TOPO PREPARED BY MORRIS AND RITCHE ASSOCIATES, INC. DATED 11/16/2017. HOWARD COUNTY GIS TOPO (CIRCA 2011) HAS BEEN SHOWN TO SUPPLEMENT THE PLAN.
- BOUNDARY INFORMATION IS BASED ON A FIELD RUN BOUNDARY SURVEY PERFORMED BY MORRIS AND RITCHE ASSOCIATES, INC. DATED NOVEMBER 16, 2017.
- EXISTING UTILITIES ARE BASED UPON FIELD RUN SURVEY PERFORMED BY MORRIS AND RITCHE ASSOCIATES, INC. DATED 11/16/2017 AND SUPPLEMENTED BY ACOMARK DATA COLLECTED ON 11/01/2017.
- THE COORDINATES SHOWN HEREON ARE BASED UPON THE HOWARD COUNTY GEODETIC CONTROL WHICH IS BASED UPON THE MARYLAND STATE PLANE COORDINATE SYSTEM. HOWARD COUNTY MONUMENT NOS. 48A11 AND 43G11 WERE USED FOR THIS PROJECT.
- THERE IS NO FLOODPLAIN ON THIS SITE.
- THERE ARE NO PERENNIAL OR INTERMITTENT STREAMS OR WETLANDS ON THIS SITE.
- PHASE 1 ENVIRONMENTAL SITE ASSESSMENT REPORT WAS PREPARED BY ECS, DATE SEPTEMBER 18, 2014.
- THE CORRECTNESS OR COMPLETENESS OF EXISTING INFORMATION SHOWN ON THE DRAWINGS IS NOT WARRANTED OR GUARANTEED. THE CONTRACTOR SHALL VERIFY THE LOCATION OF UTILITIES AND UNDERGROUND FACILITIES, BY TEST PITS OR OTHER METHODS APPROVED BY THE OWNER'S REPRESENTATIVE, AS REQUIRED TO VERIFY EXACT LOCATIONS AND DEPTH.
- THE SITE ULTIMATELY DISCHARGES INTO THE LITTLE PATUXENT RIVER (#021311050955). LITTLE PATUXENT RIVER IS LOCATED WITHIN THE PATUXENT RIVER AREA (MARYLAND SUB-BASIN 02-13-11), AND IS CLASSIFIED AS A USE I-P STREAM DESIGNATION, (A) LITTLE PATUXENT RIVER AND ALL TRIBUTARIES.

### PERMIT INFORMATION CHART

RECORD PLAT:	PB 17 Pg 68
PARCEL:	130
DEED REFERENCE (L/P):	15893/00438
GRID:	1
ZONING:	CE-CL
TAX MAP NO.:	48
ELECT. DIST.:	6TH
CENSUS TRACT:	606901

### ADDRESS CHART

LOT / PARCEL #	STREET ADDRESS
PAR A / 130	8106 STAYTON DRIVE

### SOILS LEGEND

SYMBOL	NAME/DESCRIPTION	SOIL TYPE
UID	URBAN LAND-UDORHENTHS COMPLEX, 0 - 15 PERCENT SLOPES (ALL SOILS SHOWN ON PLAN ARE UID)	D

### HYDRIC SOILS NOTE

1. NONE OF THE SOILS ON THE SITE ARE IDENTIFIED AS HYDRIC.

### HISTORIC STRUCTURES NOTE

1. NO HISTORIC STRUCTURES OR OTHER HISTORIC RESOURCES OBSERVED ON THE PROPERTY.

### RARE, THREATENED, AND ENDANGERED (RTE) SPECIES NOTE

1. NO RTE ELEMENTS WERE OBSERVED ON THE PROPERTY. A LETTER HAS BEEN RECEIVED FROM THE MARYLAND NATURAL HERITAGE PROGRAM STATING THERE ARE NO RTE ELEMENTS ON THE PROJECT SITE. (LETTER DATED JUNE 25, 2018)

### WETLAND/STREAM/BUFFER/FLOODPLAIN NOTES

1. NO VEGETATED WETLANDS, STREAMS, OR ASSOCIATED BUFFERS ARE PRESENT ON THE PROPERTY.  
2. NO 100-YEAR FLOODPLAIN OCCURS ON THE PROPERTY.

### FOREST STAND DELINEATION NOTE

1. FOREST STAND FIELD WORK WAS PERFORMED BY MORRIS & RITCHE ASSOCIATES, INC. ON MAY 23, 2018.

**MORRIS & RITCHE ASSOCIATES, INC.**  
ENGINEERS, PLANNERS, SURVEYORS AND LANDSCAPE ARCHITECTS  
1220-C EAST JOPPA ROAD, SUITE 505  
TOWSON, MARYLAND 21286  
(410) 821-1690  
FAX (410) 821-1748  
Copyright 2020 Morris & Ritchie Associates, Inc.

### SITE DEVELOPMENT PLAN

#### SW PROPERTIES LLC

#### PROPOSED WAREHOUSE ADDITION

#### FOREST STAND DELINEATION PLAN

TAX MAP 48 ~ GRID 1 ~ PARCEL 130 ~ ZONING CE-CL ~ DEED REF 15893/00438  
PB 17 PG 68 ~ TAX ASSESSMENT DISTRICT 81 ~ 6TH ELECTION DISTRICT  
DPZ FILE REFERENCES SOP-74-070, SDP-70-022  
8106 STAYTON DRIVE, HOWARD COUNTY, MARYLAND

DATE	REVISIONS	JOB NO.:
01/25/2022	AS-BUILT	19637X01
		SCALE: AS SHOWN
		DATE: 01/13/2020
		DRAWN BY: SLS
		DESIGN BY: SLS
		REVIEW BY: NCR
		SHEET: 24 OF 29

### APPROVED: DEPARTMENT OF PLANNING AND ZONING

*[Signature]* 4-29-20  
DATE

*[Signature]* 5/1/2020  
DATE

*[Signature]* 5-12-2020  
DATE

### SITE LANDSCAPE TREE INVENTORY

Tree ID	Botanical Name	Common Name	DBH (Inches)	Condition	Vegetative Community	Notes
A	Red Maple	Acer rubrum	29	Fair	(T-3) Tree Group 1	Exposed Roots, Limb Damage
B	Red Maple	Acer rubrum	13.5	Fair	(T-3) Tree Group 1	Exposed Roots, Limb Damage
C	Red Maple	Acer rubrum	36.5	Fair	(T-3) Tree Group 1	Exposed Roots
D	Thornless Honeylocust	Gleditsia var. inermis	14.25	Fair	(T-3) Tree Group 3	Leaning Trunk
E	Thornless Honeylocust	Gleditsia var. inermis	14	Fair	(T-3) Tree Group 3	Leaning Trunk
F	Thornless Honeylocust	Gleditsia var. inermis	13.25	Fair	(T-3) Tree Group 3	Leaning Trunk
G	Thornless Honeylocust	Gleditsia var. inermis	13	Fair	(T-3) Tree Group 3	Leaning Trunk
H	Thornless Honeylocust	Gleditsia var. inermis	15	Fair	(T-3) Tree Group 3	Leaning Trunk
I	Thornless Honeylocust	Gleditsia var. inermis	13.5	Fair	(T-3) Tree Group 3	Leaning Trunk
J	Eastern Pine	Pinus strobus	15.5	Fair	(T-4) Tree Group 4	Leaning Trunk
K	Eastern Pine	Pinus strobus	10.5	Fair	(T-4) Tree Group 4	Leaning Trunk
L	Eastern Pine	Pinus strobus	11.5	Fair	(T-4) Tree Group 4	Leaning Trunk
M	Eastern Pine	Pinus strobus	30.25	Fair	(T-4) Tree Group 4	Leaning Trunk
N	Eastern Pine	Pinus strobus	13	Fair	(T-4) Tree Group 4	Leaning Trunk
O	Eastern Pine	Pinus strobus	13.5	Fair	(T-4) Tree Group 4	Leaning Trunk
P	Red Maple	Acer rubrum	8.5	Fair	(T-5) Tree Group 5	Exposed Canopy in Trunk
Q	Pin Oak	Quercus palustris	18.75	Fair	(T-5) Tree Group 5	Some Canopy die back
R	Pin Oak	Quercus palustris	22.25	Poor	(T-5) Tree Group 5	Exposed Roots, Exposed Cavity in Trunk, Canopy die back, Suckering
S	Sawtooth Oak	Quercus acutissima	29	Fair	(T-6) Tree Group 6	Exposed Roots
T	Japanese Maple	Acer palmatum	9	Fair	(T-7) Tree Group 7	Exposed Roots
U	Sugar Maple	Acer saccharum	13.5	Fair	(T-7) Tree Group 7	Exposed Roots
V	Sugar Maple	Acer saccharum	29	Fair	(T-7) Tree Group 7	Exposed Roots
W	Pin Oak	Quercus palustris	26.5	Fair	(T-8) Tree Group 8	Exposed Roots
X	Sugar Maple	Acer saccharum	11.5	Fair	(T-8) Tree Group 8	Exposed Roots
Y	Pin Oak	Quercus palustris	25.25	Fair	(T-8) Tree Group 8	Some Damaged Limbs
Z	Bittersweet	Panicum strigosus	14.5	Fair	(T-8) Tree Group 8	Leaning Trunk

### FOREST STAND DELINEATION NARRATIVE

THE PROJECT SITE CONTAINS ONE FOREST STAND WHICH ENCOMPASSES APPROXIMATELY 0.41 ACRES OF THE NET TRACT AREA (NTA) OF THE PROJECT SITE. THE CURRENT FOREST IS ISOLATED DUE TO THE SURROUNDING INDUSTRIAL USES AND THE BALTIMORE AND OHIO RAILROAD. A VIRGINIA PINE (PINUS VIRGINIANA) DOMINATED FOREST STAND IS PRESENT ON THE WESTERN PORTION OF THE PROPERTY ADJACENT TO THE STORAGE AND LOADING AREA OF THE WAREHOUSE. IT IS AN EARLY TO MID-SUCCESSIONAL STAGE FOREST. THERE ARE NO SPECIMEN TREES ON SITE. THE WOODLAND SUITABILITY INDEX WAS NOT YET RATED FOR THIS AREA. THERE WERE STEEP SLOPES GREATER THAN 15% TO THE SOUTH OF THE PROPERTY. THE SOILS CONSIST OF LTD URBAN LAND-UDORHENTHS COMPLEX, 0-15 PERCENT SLOPES. NO VEGETATED WETLANDS, STREAMS, OR ASSOCIATED BUFFERS ARE PRESENT ON THE PROPERTY. NO 100-YEAR FLOODPLAIN OCCURS ON THE PROPERTY. NO RARE THREATENED OR ENDANGERED ELEMENTS WERE OBSERVED ON THE PROPERTY AND A LETTER HAS BEEN RECEIVED FROM THE MARYLAND NATURAL HERITAGE PROGRAM STATING THERE ARE NO RTE ELEMENTS ON THE PROJECT SITE. (LETTER DATED JUNE 25, 2018). THE HABITAT VALUE WAS NOT RATED BUT THERE WERE SEVERAL BIRD SPECIES OBSERVED IN THE FOREST.

THE CANOPY CLOSURE IN THE STAND IS ESTIMATED AT 60 PERCENT AND IS DOMINATED BY VIRGINIA PINE IN THE 6-11.9 INCH DIAMETER AT BREAST HEIGHT (DBH) CLASS WITH SOME LARGER CLASS TREES WITHIN THE STAND AS WELL. THERE WAS AN ABSENCE OF MULTI LAYERS BECAUSE OF THE DENSE CANOPY AND GROUNDCOVER IS RELATIVELY SPARSE. THE UNDER STORY IS SOMEWHAT POORLY ESTABLISHED AND THE CO-DOMINANT SPECIES INCLUDED VIRGINIA PINE (PINUS VIRGINIANA), RED MAPLE (ACER RUBRUM) AND CALLERY PEAR (PYRUS CALLERYANA). OTHER SPECIES THAT WERE NOTED ESPECIALLY AS SPURGERS ARE THE FOLLOWING: SCARLET OAK (QUERCUS COCCINEA), BLACK OAK (QUERCUS VELUTINA), SOUTHERN RED OAK (QUERCUS FALCATA), SUGAR MAPLE (ACER SACCHARUM), RED MAPLE (ACER RUBRUM), AND CALLERY PEAR (PYRUS CALLERYANA). THE SHRUB LAYER WAS ALSO LIMITED AND CONSISTED OF LORIBUSH BLUEBERRY (VACCINIUM ANGSTUFOLIA), AUTUMN OLIVE (ELAEAGNUS ANGUSTIFOLIA), AND MULTIFLORA ROSE (ROSA MULTIFLORA). THERE WAS NO TRUE HERBACEOUS LAYER. SOME SPECIES INCLUDED VIRGINIA CREEPER (PARENTHOISSUS QUINQUEFOLIA), HUCKLEBERRY (GAYLUSACCIA BACCATA), JAPANESE SILTGRASS (MICROSTEGIUM VINIPEUS), POISON IVY (TOXICODENDRON RADICANS), AND JAPANESE HONEYSUCKLE (LONICERA JAPONICA).

OVERALL THE HEALTH OF THE STAND WAS FAIR TO POOR. DIEBACK IS PREVALENT IN A NUMBER OF THE PINES, RESULTING IN SOME CANOPY BREAKS. DUE TO THE ADJACENT USES, THE EXISTING SOIL, AND THE LACK OF CONNECTIVITY OF ENVIRONMENTAL RESOURCES AND GENERAL FRAGMENTATION ITS FOREST RETENTION PRIORITY IS CONSIDERED LOW.

### EXISTING VEGETATIVE COMMUNITIES

SYMBOL	TYPE	NOTE
F-1	FOREST (F)	THE FOREST IS A VIRGINIA PINE FOREST WITH AN AVERAGE STAND SIZE OF 6" - 11.9" DBH. THE GENERAL CONDITION IS FAIR TO POOR. SEE THE FOREST STAND DELINEATION PLAN FOR MORE INFORMATION.
T-1	TREE GROUP 1	SEE SITE LANDSCAPE TREE INVENTORY CHART THIS SHEET.
T-2	TREE GROUP 2	SEE SITE LANDSCAPE TREE INVENTORY CHART THIS SHEET.
T-3	TREE GROUP 3	SEE SITE LANDSCAPE TREE INVENTORY CHART THIS SHEET.
T-4	TREE GROUP 4	SEE SITE LANDSCAPE TREE INVENTORY CHART THIS SHEET.
T-5	TREE GROUP 5	SEE SITE LANDSCAPE TREE INVENTORY CHART THIS SHEET.
T-6	TREE GROUP 6	SEE SITE LANDSCAPE TREE INVENTORY CHART THIS SHEET.
T-7	TREE GROUP 7	SEE SITE LANDSCAPE TREE INVENTORY CHART THIS SHEET.
T-8	TREE GROUP 8	SEE SITE LANDSCAPE TREE INVENTORY CHART THIS SHEET.
L-1	LAWN AREA 1	SEE SITE LANDSCAPE TREE INVENTORY CHART THIS SHEET.
L-2	LAWN AREA 2	SEE SITE LANDSCAPE TREE INVENTORY CHART THIS SHEET.
L-3	LAWN AREA 3	SEE SITE LANDSCAPE TREE INVENTORY CHART THIS SHEET.
H-1	HEDGEROW 1	SEE SITE LANDSCAPE TREE INVENTORY CHART THIS SHEET.

### DATUM

DESIGN & DRAWING BASED ON MARYLAND COORDINATE SYSTEM: HORIZONTAL NAD 83 (1991) VERTICAL NAVD 88

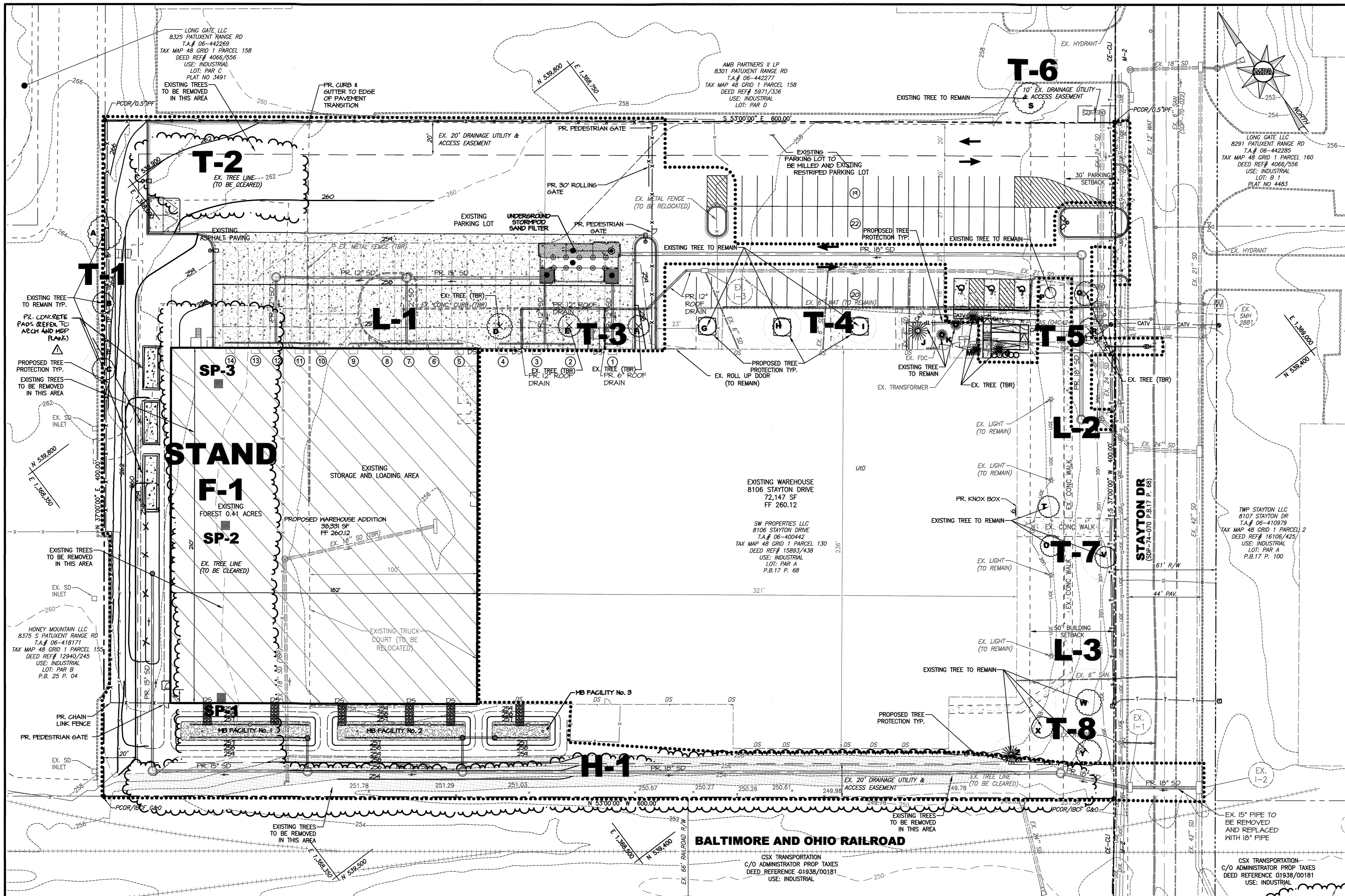
### OWNER/DEVELOPER

SW PROPERTIES LLP  
8106 STAYTON DRIVE  
JESSUP, MD 20794  
ATTN: ALVIN LEE  
PHONE: (213)-944-4448

### PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A FULLY LICENSED PROFESSIONAL LANDSCAPE ARCHITECT UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 3787, EXPIRATION DATE: 06/30/2020





**LEGEND**

- EXISTING
- EX. PROPERTY LINE
- EX. ADJACENT PROPERTY LINE
- EX. RIGHT OF WAY LINE
- EX. EASEMENT
- EX. BUILDING SETBACK
- EX. WATER MAIN
- EX. VALVE FIRE HYDRANT
- EX. WATER METER
- EX. SANITARY SEWER
- EX. STORM DRAIN
- EX. STORM DRAIN INLET
- EX. UNDERGROUND GAS
- EX. UNDERGROUND ELECTRIC
- EX. GROUND LIGHT
- EX. TRANSFORMER
- EX. TELEPHONE LINE
- EX. CATV CABLE
- EX. BUILDING
- EX. CURB
- EX. EDGE OF PAVEMENT
- EX. ROAD CENTER LINE
- EX. CONCRETE
- EX. STRIPING
- EX. METAL FENCE
- EX. RAILROAD
- EX. TREES/SHRUBS
- EX. WOODS
- LIMIT OF DISTURBANCE
- URBAN LAND-UDORMENTS SOIL
- EX. 2' CONT
- EX. 10' CONT
- EX. SLOPE > 15
- EX. ZONING LINE
- SAMPLE PLOT
- PR. TREE PROTECTION
- PR. LIMIT OF DISTURBANCE
- CRITICAL ROOT ZONE



**VICINITY MAP**  
1"=600'

**SITE ANALYSIS DATA CHART**

NO.	DESCRIPTION	AMOUNT
1.	TOTAL PROJECT AREA	5.51 ACRES (240,016 SF)
2.	AREA OF PLAN SUBMISSION	2.78 ACRES (121,202 SF)
3.	LIMIT OF DISTURBANCE	2.78 ACRES (121,202 SF)
4.	PRESENT ZONING	CE-CU
5.	WAREHOUSE	SDP-74-070, SDP-70-022
6.	DPZ FILE REFERENCES	EOP-18-043 PUBLIC/PUBLIC 48 / 130 6
7.	SANITARY SEWER / WATER SERVICE	48 / 130 6
8.	TAX MAP / PARCEL NO.	3
9.	ELECTION DISTRICT	3
10.	COUNCIL DISTRICT	3
11.	EX. STEEP SLOPES >15%	0.21 AC.
12.	EX. IMPERVIOUS AREA (ON-SITE)	3.51 AC.
13.	EX. OPEN SPACE (ON-SITE)	2.00 AC.
14.	PR. IMPERVIOUS (ON-SITE)	4.08 AC.
15.	PR. OPEN SPACE (ON-SITE)	1.37 AC.
16.	EX. IMPERVIOUS AREA (W/IN LOD)	1.5 AC.
17.	EX. OPEN SPACE (W/IN LOD)	1.925 AC.
18.	PR. IMPERVIOUS AREA (W/IN LOD)	0.945 AC.
19.	PR. OPEN SPACE (W/IN LOD)	0.00 AC.
20.	ERODIBLE SOILS ON-SITE (G&B)	0.00 AC.
21.	EXISTING WETLANDS AND BUFFER AREA	0.00 AC.
22.	EXISTING FLOODPLAIN & BUFFER AREA	0.00 AC.
23.	EXISTING FOREST ON-SITE	0.41 AC.
24.	EXISTING FOREST TO BE CLEARED	0.41 AC.
25.	FOREST CONSERVATION NET TRACT AREA	2.00 AC.
26.	ALL PREVIOUSLY DEVELOPED AREA COVERED BY IMPERVIOUS SURFACE IS EXEMPT FROM FOREST CONSERVATION REQUIREMENTS AS PER STATE HOUSE BILL NO. 706 (DECEMBER 1, 2015)	5.51 AC. - 3.51 AC. = 2.00 AC.

**GENERAL NOTES**

- THE EXISTING TOPOGRAPHY IS A SURVEY OF FIELD RUN TOPO PREPARED BY MORRIS AND RITCHIE ASSOCIATES, INC. DATED 11/16/2017, HOWARD COUNTY GIS TOPO (ORCA 2011) HAS BEEN SHOWN TO SUPPLEMENT THE PLAN.
- BOUNDARY INFORMATION IS BASED ON A FIELD RUN BOUNDARY SURVEY PERFORMED BY MORRIS AND RITCHIE ASSOCIATES, INC. DATED NOVEMBER 16, 2017.
- EXISTING UTILITIES ARE BASED UPON FIELD RUN SURVEY PERFORMED BY MORRIS AND RITCHIE ASSOCIATES, INC. DATED 11/16/2017 AND SUPPLEMENTED BY ACCURAK DATA COLLECTED ON 11/01/2017.
- THE COORDINATES SHOWN HEREON ARE BASED UPON THE HOWARD COUNTY GEODETIC CONTROL WHICH IS BASED UPON THE MARYLAND STATE PLANE COORDINATE SYSTEM. HOWARD COUNTY MONUMENT NOS. 484M1 AND 436M1 WERE USED FOR THIS PROJECT.
- THERE IS NO 100 YEAR FLOODPLAIN ON THIS SITE.
- THERE ARE NO PERENNIAL OR INTERMITTENT STREAMS OR WETLANDS ON THIS SITE. NO VEGETATED WETLANDS, STREAMS, OR ASSOCIATED BUFFERS ARE PRESENT ON THE PROPERTY.
- PHASE 1 ENVIRONMENTAL SITE ASSESSMENT REPORT WAS PREPARED BY ECS, DATE SEPTEMBER 18, 2014.
- THE CORRECTNESS OR COMPLETENESS OF EXISTING INFORMATION SHOWN ON THE DRAWINGS IS NOT WARRANTED OR GUARANTEED. THE CONTRACTOR SHALL VERIFY THE LOCATION OF UTILITIES AND UNDERGROUND FACILITIES, BY TEST PITS OR OTHER METHODS APPROVED BY THE OWNER'S REPRESENTATIVE, AS REQUIRED TO VERIFY EXACT LOCATIONS AND DEPTH.
- THE SITE ULTIMATELY DISCHARGES INTO THE LITTLE PATUXENT RIVER (#02131050955), LITTLE PATUXENT RIVER IS LOCATED WITHIN THE PATUXENT RIVER AREA (MARYLAND SUB-BASIN 02-13-11), AND IS CLASSIFIED A USE I-P STREAM DESIGNATION. (A) LITTLE PATUXENT RIVER AND ALL TRIBUTARIES.
- NO RTE ELEMENTS WERE OBSERVED ON THE PROPERTY. A LETTER HAS BEEN RECEIVED FROM THE MARYLAND NATURAL HERITAGE PROGRAM STATING THERE ARE NO RTE ELEMENTS ON THE PROJECT SITE. (LETTER DATED JUNE 25, 2018)
- NONE OF THE SOILS ON THE SITE ARE IDENTIFIED AS HYDRIC.
- FOREST STAND FIELD WORK WAS PERFORMED BY MORRIS & RITCHIE ASSOCIATES, INC. ON MAY 23, 2018.
- ALL SOILS SHOWN ON THE PLAN ARE LUD URBAN LAND-UDORMENTS COMPLEX, 0 - 15 PERCENT SLOPES

**PERMIT INFORMATION CHART**

RECORD PLAT: PB 17 Pg 68					
PARCEL 130 DEED REFERENCE (L/F) 15893/00438	GRID 1	ZONING CE-CU	TAX MAP NO. 48	ELECT. DIST. 6TH	CENSUS TRACT 606901

**ADDRESS CHART**

LOT / PARCEL #	STREET ADDRESS
PAR A / 130	8106 STAYTON DRIVE

**SITE LANDSCAPE TREE INVENTORY**

Tree ID	Botanical Name	Common Name	DBH (Inches)	Condition	Vegetative Community	Notes
A	Red Maple	Acer rubrum	39	Fair	(T-3) Tree Group 1	Exposed Roots
B	Red Maple	Acer rubrum	18.5	Fair	(T-3) Tree Group 1	Exposed Roots, Limb Damage
C	Red Maple	Acer rubrum	36.5	Fair	(T-3) Tree Group 1	Exposed Roots
D	Thornless Honeylocust	Gleditsia var. inermis	14.25	Fair	(T-3) Tree Group 3	
E	Thornless Honeylocust	Gleditsia var. inermis	34	Fair	(T-3) Tree Group 3	Leaning Trunk
F	Thornless Honeylocust	Gleditsia var. inermis	13.25	Fair	(T-3) Tree Group 3	
G	Thornless Honeylocust	Gleditsia var. inermis	13	Fair	(T-3) Tree Group 3	
H	Thornless Honeylocust	Gleditsia var. inermis	25	Fair	(T-3) Tree Group 3	Some Canopy die back
I	Thornless Honeylocust	Gleditsia var. inermis	13.5	Fair	(T-3) Tree Group 3	
J	Eastern Pine	Pinus strobus	15.5	Fair	(T-4) Tree Group 4	Leaning Trunk
K	Eastern Pine	Pinus strobus	30.5	Fair	(T-4) Tree Group 4	
L	Eastern Pine	Pinus strobus	11.5	Fair	(T-4) Tree Group 4	
M	Eastern Pine	Pinus strobus	30.75	Fair	(T-4) Tree Group 4	
N	Eastern Pine	Pinus strobus	10.75	Fair	(T-4) Tree Group 4	
O	Eastern Pine	Pinus strobus	13.5	Fair	(T-4) Tree Group 4	
P	Red Maple	Acer rubrum	8.5	Fair	(T-3) Tree Group 3	Exposed Canopy in Trunk
Q	Pink Oak	Quercus palustris	38.75	Fair	(T-3) Tree Group 5	Some Canopy die back
R	Pink Oak	Quercus palustris	22.25	Poor	(T-3) Tree Group 5	Exposed Roots, Exposed Canopy in Trunk, Canopy Die Back, Suckering
S	Sawtooth Oak	Quercus acutissima	23	Fair	(T-3) Tree Group 5	Exposed Roots
T	Japanese Maple	Acer palmatum	9	Fair	(T-3) Tree Group 7	Exposed Roots
U	Sugar Maple	Acer saccharum	13.5	Fair	(T-3) Tree Group 7	Exposed Roots
V	Red Maple	Acer rubrum	39	Fair	(T-3) Tree Group 7	Large Exposed Canopy in Trunk, Limb Damage
W	Pink Oak	Quercus palustris	26.5	Fair	(T-3) Tree Group 8	
X	Sugar Maple	Acer saccharum	11.5	Fair	(T-3) Tree Group 8	Exposed Roots
Y	Pink Oak	Quercus palustris	21.25	Fair	(T-3) Tree Group 8	Some Damaged Limbs
Z	Eastern Pine	Pinus strobus	14.5	Fair	(T-3) Tree Group 8	Leaning Trunk

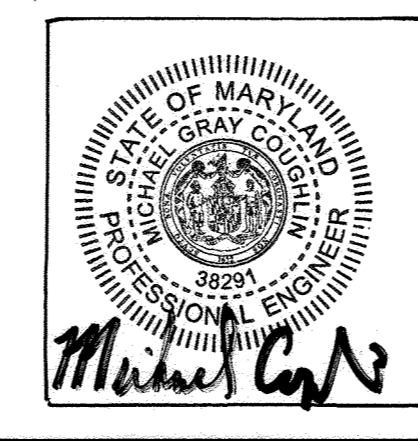
**PLAN SCALE: 1"=30'**

**EXISTING VEGETATIVE COMMUNITIES**

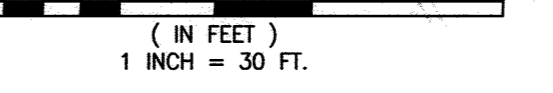
SYMBOL	TYPE	NOTE
F-1	FOREST (F)	THE FOREST IS A VIRGINIA PINE FOREST WITH AN AVERAGE STAND SIZE OF 6"-11" DBH. THE GENERAL CONDITION IS FAIR TO POOR. SEE THE FOREST STAND DELINEATION PLAN FOR MORE INFORMATION.
T-1	TREE GROUP 1	SEE SITE LANDSCAPE TREE INVENTORY CHART THIS SHEET.
T-2	TREE GROUP 2	SEE SITE LANDSCAPE TREE INVENTORY CHART THIS SHEET.
T-3	TREE GROUP 3	SEE SITE LANDSCAPE TREE INVENTORY CHART THIS SHEET.
T-4	TREE GROUP 4	SEE SITE LANDSCAPE TREE INVENTORY CHART THIS SHEET.
T-5	TREE GROUP 5	SEE SITE LANDSCAPE TREE INVENTORY CHART THIS SHEET.
T-6	TREE GROUP 6	SEE SITE LANDSCAPE TREE INVENTORY CHART THIS SHEET.
T-7	TREE GROUP 7	SEE SITE LANDSCAPE TREE INVENTORY CHART THIS SHEET.
T-8	TREE GROUP 8	SEE SITE LANDSCAPE TREE INVENTORY CHART THIS SHEET.
L-1	LAWN AREA 1	SEE SITE LANDSCAPE TREE INVENTORY CHART THIS SHEET.
L-2	LAWN AREA 2	SEE SITE LANDSCAPE TREE INVENTORY CHART THIS SHEET.
L-3	LAWN AREA 3	SEE SITE LANDSCAPE TREE INVENTORY CHART THIS SHEET.
H-1	HEDGEROW 1	SEE SITE LANDSCAPE TREE INVENTORY CHART THIS SHEET.

**AS-BUILT CERTIFICATION FOR PSWM**

THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET  
MICHAEL G. COUGHLIN, PE NO. 38291, DATE OF AS-BUILT 01/25/2022.



**GRAPHIC SCALE**



**DATUM**

DESIGN & DRAWING BASED ON MARYLAND COORDINATE SYSTEM: HORIZONTAL NAD 83 (1991) VERTICAL NAVD 88

**OWNER/DEVELOPER**

SW PROPERTIES LLP  
8106 STAYTON DRIVE  
JESSUP, MD 20794  
ATTN: ALVIN LEE  
PHONE: (213)-944-4448

**PROFESSIONAL CERTIFICATION**

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL LANDSCAPE ARCHITECT UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 3787, EXPIRATION DATE: 06/30/2020

**MORRIS & RITCHIE ASSOCIATES, INC.**  
ENGINEERS, PLANNERS, SURVEYORS AND LANDSCAPE ARCHITECTS  
1220-C EAST JOPPA ROAD, SUITE 505  
TOWSON, MARYLAND 21286  
(410) 821-1690  
FAX (410) 821-1748  
Copyright 2020 Morris & Ritchie Associates, Inc.

**SITE DEVELOPMENT PLAN**  
**SW PROPERTIES LLC**  
**PROPOSED WAREHOUSE ADDITION**  
**FOREST CONSERVATION PLAN**

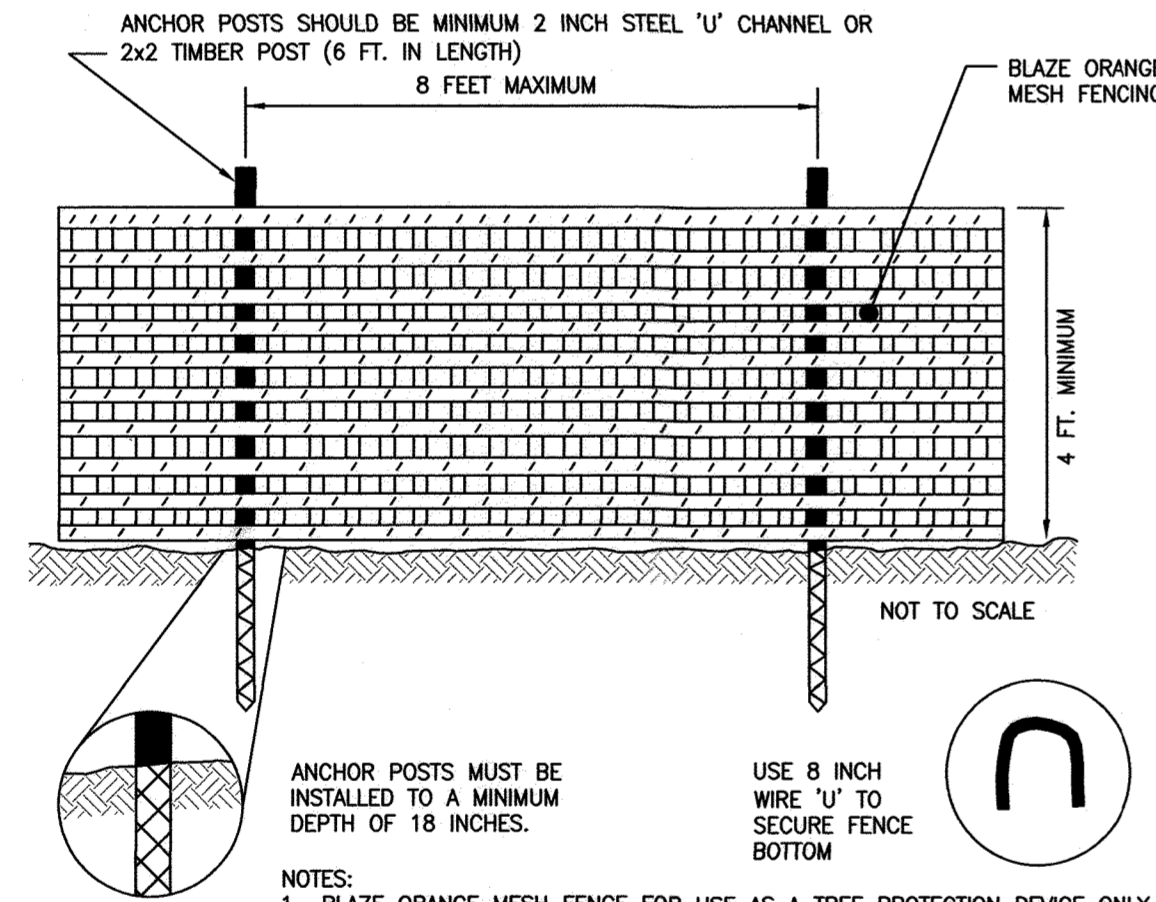
TAX MAP 48 ~ GRID 1 ~ PARCEL 130 ~ ZONING CE-CU ~ DEED REF 15893/00438  
PB 17 PG 68 ~ TAX ASSESSMENT DISTRICT 81 ~ 6TH ELECTION DISTRICT  
DPZ FILE REFERENCES SDP-74-070, SDP-70-022  
8106 STAYTON DRIVE, HOWARD COUNTY, MARYLAND

DATE	REVISIONS	JOB NO.:
04/16/2021	ADDED MECHANICAL UNIT PADS AND REVISED GRADING	1963701
02/25/2022	AS-BUILT	SCALE: AS SHOWN
		DATE: 01/10/2020
		DRAWN BY: SLS
		DESIGN BY: SLS
		REVIEW BY: NCR
		SHEET: 25 OF 29

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
4/21/20  
DATE  
5/16/20  
DATE  
5-12-2020  
DATE

**TREE PROTECTION NOTES**

- TREE PROTECTION:**  
 TREE PROTECTION AREAS AS SHOWN ON THIS PLAN SHALL BE IDENTIFIED ON THE PLAN WITH ORANGE MESH FENCE AS SPECIFIED IN DETAILS INCLUDED ON THIS SHEET. TREE PROTECTION INDICATED ON THE PLAN ARE TO INSURE THAT TREES ADJACENT TO THE PROPOSED CONSTRUCTION ARE NOT ADVERSELY IMPACTED BY THE PROPOSED DEVELOPMENT. TEMPORARY PROTECTIVE FENCING WILL BE INSTALLED ALONG THE PROPOSED LIMITS OF DISTURBANCE TO ENSURE THAT THERE IS NO ENCROACHMENT BEYOND THE PROPERTY LINE TO THE ADJACENT TREES. THE FENCING SHALL BE REMOVED CONCURRENT WITH THE REMOVAL OF THE SEDIMENT AND CONTROL DEVICES. NO TEMPORARY FENCING SHALL BE LEFT ON-SITE ONCE THE SITE IS STABILIZED AND CONSTRUCTION IS COMPLETE.  
 PRIOR TO GRADING OR OTHER SOIL DISTURBANCE ACTIVITIES, THE PROJECT ENGINEER OR THE CONSTRUCTION MANAGER SHALL ORGANIZE A PRE-CONSTRUCTION MEETING WITH A FORESTER OR ARBORIST TO IDENTIFY TREE PROTECTION MEASURES ALONG AND WITHIN THE LOD. TREE PROTECTION MEASURES MAY INCLUDE ANY OF THE FOLLOWING:  
 A) TEMPORARY ORANGE CONSTRUCTION FENCE  
 B) TREE BRANCH PRUNING  
 C) TREE ROOT PRUNING  
 D) TREE FERTILIZING  
 E) OTHER TREE PROTECTION MEASURES LIKE TRUNK PROTECTION AND ROOT BRIDGING
- STANDARD NON-DISTURBANCE NOTES:**  
 NO EQUIPMENT, VEHICLES, MACHINERY, DUMPING, STORAGE, STOCKPILES, PARKING AREAS, EQUIPMENT CLEANING AREAS, ETC. OR OTHER CONSTRUCTION ACTIVITIES, BURIAL, BURNING, OR OTHER DISPOSAL OF CONSTRUCTION MATERIALS, MUST NOT BE LOCATED INSIDE TREE PROTECTION AREAS OR ADJACENT TO TREES TO REMAIN. ALL PRECAUTIONARY MEASURES SHALL BE TAKEN TO PROTECT THE EXISTING TREE AND ITS CRITICAL ROOT ZONE. ATTACHMENT OF SIGNS, OR ANY OTHER OBJECTS TO TREES IS PROHIBITED.
- SEQUENCE OF CONSTRUCTION:**  
 A. TREE PROTECTIVE AND SEDIMENT CONTROL DEVICES SHALL BE INSTALLED.  
 B. ALL DISTURBED AREAS SHALL BE STABILIZED.  
 C. SEDIMENT CONTROL SHALL BE REMOVED ONCE SITE IS STABILIZED.
- TEMPORARY PROTECTION DURING CONSTRUCTION**  
 • AVOID INJURING ROOTS WHEN INSTALLING ANCHOR POSTS.  
 • WHEN USING FENCING, IT SHOULD BE AT LEAST 4' HIGH.  
 • FENCES OR DEVICES SHOULD BE SECURELY ANCHORED, AT LEAST 1/5 OF THE ANCHOR POST SHOULD BE BELOW GROUND LEVEL.  
 • BLAZE ORANGE PLASTIC MESH FENCING (SEE DETAIL)
- CONSTRUCTION PHASE MONITORING**  
 • SOIL COMPACTION  
 • ROOT INJURY  
 • TRUNK WOUNDS  
 • LIMB INJURY  
 • FLOODED CONDITIONS  
 • DROUGHT CONDITIONS
- POST-CONSTRUCTION PHASE**  
 • FERTILIZING  
 • WATERING  
 • MULCHING  
 • REPAIR OF TREE DAMAGE  
 • REPAIR OF DEAD LIMBS  
 • REMOVAL OF TEMPORARY TREE PROTECTION STRUCTURES  
 • ON-SITE INSPECTION BY APPROVING AUTHORITY



- NOTES:**
- BLAZE ORANGE MESH FENCE FOR USE AS A TREE PROTECTION DEVICE ONLY.
  - AVOID DAMAGE TO CRITICAL ROOT ZONE. DO NOT DAMAGE OR SEVERE LARGE ROOTS WHEN INSTALLING POSTS.
  - DEVICE SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION.

**TREE PROTECTION FENCE**

NOT TO SCALE

**FOREST CONSERVATION WORKSHEET**

**Forest Conservation Worksheet 2.1**

Note: Use 0 for all negative numbers that result from the calculations.

**Net Tract Area**  
**A. Total Tract Area**  
**B. Deductions** (Critical Area, area restricted by local ordinance or program)  
**C. Net Tract Area** Net Tract Area=Total Tract Area (A) - Deductions (B)

**Land Use Category: Commercial and Industrial Use**  
**D. Afforestation Threshold** (Net Tract Area [C] x 15%)  
**E. Conservation Threshold** (Net Tract Area [C] x 15%)

**Existing Forest Cover**  
**F. Existing Forest Cover Within the Net Tract Area**  
**G. Area of Forest Above Conservation Threshold**  
 If existing Forest Cover (F) is greater than the Conservation Threshold (E), then G = F - E; Otherwise G = 0

**Breakeven Point**  
**H. Breakeven Point** (Amount of forest that must be retained so that no mitigation is required.)  
 (1) If the Area of Forest Above the Conservation Threshold (G) is greater than 0, then  
 $H = 0.2 \times \text{the Area of Forest Above Conservation Threshold (G) + the Conservation Threshold (E)}$   
 (2) If the Area of Forest Above the Conservation Threshold (G) is equal to 0, then  
 $H = \text{The Existing Forest Cover (F)}$

**I. Forest Clearing Permitted Without Mitigation**  
 $I = \text{Existing Forest Cover (F) - Breakeven point (H)}$

**Proposed Forest Clearing**  
**J. Total Area of Forest to be Cleared**  
**K. Total Area of Forest to be Retained**  
 $K = \text{Existing Forest Cover (F) - Forest to be Cleared (J)}$

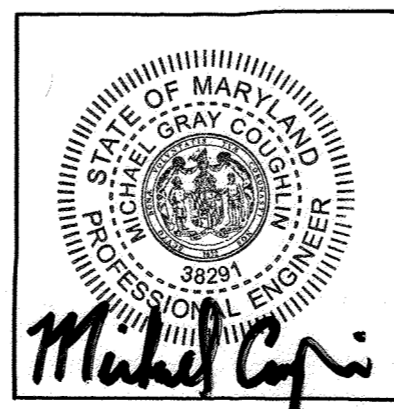
**Planting Required**  
**L. Reforestation Clearing Above Conservation Threshold**  
 (1) If the Total Area of Forest to be Retained (K) is greater than the Conservation Threshold (E), then  
 $L = \text{the Area of Forest to be Cleared (J) x 0.25}$   
 (2) If the Forest to be Retained (K) is less than or equal to the Conservation threshold (E), then  
 $L = \text{the Area of Forest Above Conservation Threshold (G) x 0.25}$   
**M. Reforestation Clearing Below the Conservation Threshold**  
 (1) If Existing Forest Cover (F) is greater than the Conservation Threshold (E) and the Forest to be Retained (K) is less than or equal to the Conservation Threshold (E), then  
 $M = 2.0 \times (\text{the Conservation Threshold (E) - Forest to be Retained (K)})$   
 (2) If Existing Forest Cover (F) is less than or equal to the Conservation Threshold (E), then  
 $M = 2.0 \times \text{Forest to be Cleared (J)}$   
**N. Credit for Retention Above the Conservation Threshold**  
 If the area of the Forest to be Retained (K) is greater than the Conservation Threshold (E), then  
 $N = K - E$   
**P. Total Reforestation Required**  $P = L + M - N$   
**Q. Total Afforestation Required**  
 If Existing Forest Cover (F) is less than the Afforestation Threshold (D), then  
 $Q = \text{Afforestation Threshold (D) - Existing Forest Cover (F)}$   
**R. Total Planting Requirement**  $R = P + Q$

**Forest Conservation Worksheet**

A =	2.0
B =	0.0
C =	2.0
D =	0.3
E =	0.3
F =	0.4
G =	0.1
H =	0.3
I =	0.1
J =	0.4
K =	0.0
L =	0.0
M =	0.6
N =	0.0
P =	0.6
Q =	0.0
R =	0.6
C:	5

**FOREST CONSERVATION NOTES**

- THIS PROJECT COMPLIES WITH THE REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY CODE FOR FOREST CONSERVATION BY PROVIDING A FEE-IN-LIEU PAYMENT. THE SITE IS IMPLEMENTING THE DEPARTMENT OF PLANNING AND ZONING IMPERVIOUS AREA POLICY TO ADDRESS THE FOREST CONSERVATION OBLIGATION. ALL PREVIOUSLY DEVELOPED AREA COVERED BY IMPERVIOUS SURFACE IS EXEMPT FROM FOREST CONSERVATION REQUIREMENTS AS PER STATE HOUSE BILL NO. 706 (DECEMBER 1, 2015).
- A FEE-IN-LIEU PAYMENT OF \$19,602 FOR FOREST CONSERVATION REQUIREMENTS WILL BE PROVIDED. A REQUEST HAS BEEN SENT TO HOWARD COUNTY FOR A FEE-IN-LIEU PAYMENT FOR THE FOREST CONSERVATION REQUIREMENTS. A WRITTEN STATEMENT LETTER HAS ACCOMPANIED THE SUBMITTAL WITH A DESCRIPTION OF THE JUSTIFICATIONS DATED JULY 18, 2019.



**ASBUILT CERTIFICATION FOR PSWM**  
 THERE IS NO ASBUILT INFORMATION PROVIDED ON THIS SHEET  
 MICHAEL G. COVAHAN, P.E. NO. 38191, DATE OF ASBUILT 01/25/2022

**DATUM**  
 DESIGN & DRAWING BASED ON MARYLAND COORDINATE SYSTEM:  
 HORIZONTAL NAD 83 (1991)  
 VERTICAL NAVD 88

**OWNER/DEVELOPER**  
 SW PROPERTIES LLP  
 8106 STAYTON DRIVE  
 JESSUP, MD 20794  
 ATTN: ALVIN LEE  
 PHONE: (213)-944-4448

**PROFESSIONAL CERTIFICATION**  
 I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL LANDSCAPE ARCHITECT UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 3787, EXPIRATION DATE: 06/30/2020

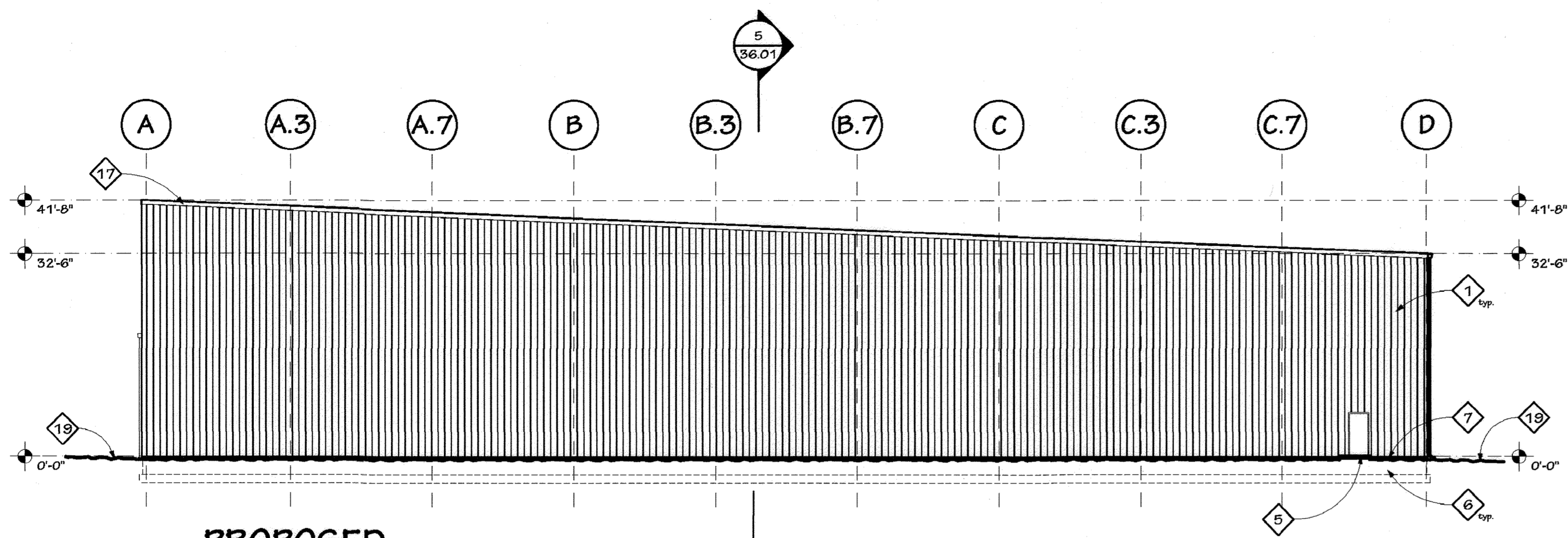
APPROVED: DEPARTMENT OF PLANNING AND ZONING

*[Signature]* 4/29/20  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION JP DATE

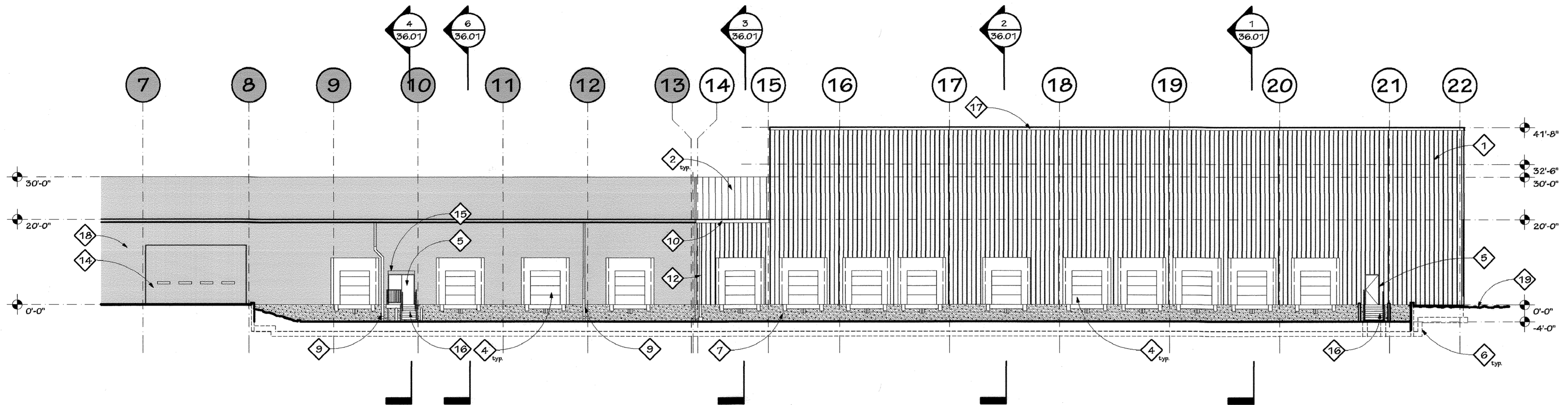
*[Signature]* 5/11/2020  
 CHIEF, DIVISION OF LAND DEVELOPMENT DS DATE

*[Signature]* 5-12-2020  
 DIRECTOR DATE

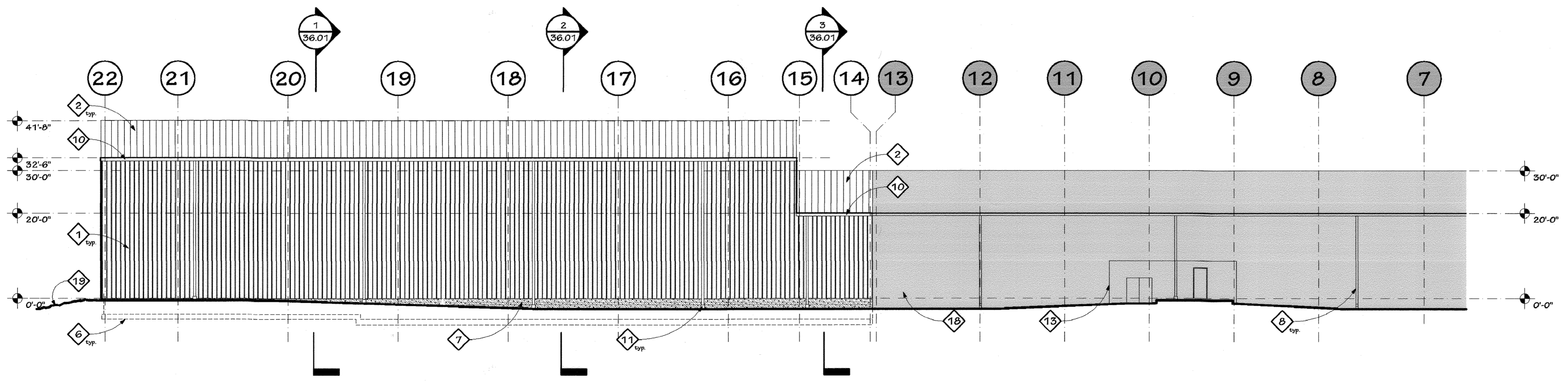
	<b>MORRIS &amp; RITCHIE ASSOCIATES, INC.</b> ENGINEERS, PLANNERS, SURVEYORS AND LANDSCAPE ARCHITECTS 1220-C EAST JOPPA ROAD, SUITE 505 TOWSON, MARYLAND 21286 (410) 821-1690 FAX (410) 821-1748 Copyright 2020 Morris & Ritchie Associates, Inc.
	<b>SITE DEVELOPMENT PLAN              SW PROPERTIES LLC              PROPOSED WAREHOUSE ADDITION              FOREST CONSERVATION PLAN              NOTES AND DETAILS</b>
TAX MAP 48 ~ GRID 1 ~ PARCEL 130 ~ ZONING CE-CU ~ DEED REF 15893/00438 PB 17 PG 68 ~ TAX ASSESSMENT DISTRICT 81 ~ 6th ELECTION DISTRICT DPZ FILE REFERENCES SDP-74-070, SDP-70-022 8106 STAYTON DRIVE, HOWARD COUNTY, MARYLAND	
DATE: 02/25/2022	REVISIONS: AS-BUILT
JOB NO.: 19637X01	SCALE: AS SHOWN
DATE: 01/13/2020	DRAWN BY: SLS
DESIGN BY: SLS	REVIEW BY: NCR
SHEET: 26	OF 29



**1** PROPOSED WEST ELEVATION  
SCALE: 1/16" = 1'-0"



**2** PROPOSED NORTH ELEVATION  
SCALE: 1/16" = 1'-0"

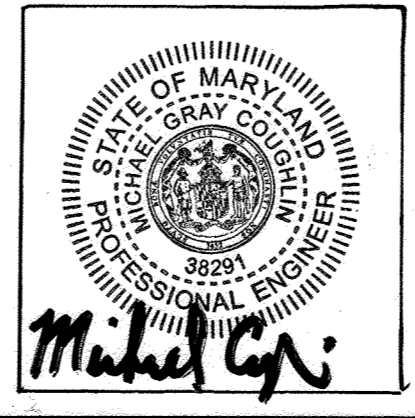


**3** PROPOSED SOUTH ELEVATION  
SCALE: 1/16" = 1'-0"

- KEYNOTES**  
THIS SHEET ONLY
- 1 PROPOSED METAL PANEL BY METAL BUILDING MANUFACTURER.
  - 2 PROPOSED METAL ROOF BY METAL BUILDING MANUFACTURER.
  - 3 PROPOSED EXTERIOR LIGHT FIXTURE - SEE ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION.
  - 4 PROPOSED OVERHEAD SECTIONAL DOOR w/ DOCK SHELTER & BUM-PERS. SEE DETAILS SHEET 38.02 AND SPECIFICATIONS FOR ADDITIONAL INFORMATION.
  - 5 PROPOSED HOLLOW METAL DOOR AND FRAME. SEE DETAILS SHEET 38.02.
  - 6 PROPOSED FOUNDATION - SEE STRUCTURAL DRAWINGS FOR ADDITIONAL INFORMATION.
  - 7 PROPOSED 1/2" FARGE COAT.
  - 8 EXISTING GUTTER & DOWNSPOUT TO REMAIN.
  - 9 MODIFY EXISTING GUTTER & DOWNSPOUT.
  - 10 PROPOSED 8" GUTTER.
  - 11 PROPOSED 6" DOWNSPOUT TO BOOT. SEE CIVIL DRAWINGS FOR ADDITIONAL INFORMATION.
  - 12 PROPOSED 6" DOWNSPOUT TO GRADE. SEE CIVIL DRAWINGS FOR ADDITIONAL INFORMATION.
  - 13 EXISTING EXTERIOR FENCE w/ HVAC EQUIPMENT BEHIND.
  - 14 EXISTING OVERHEAD DOOR TO REMAIN.
  - 15 EXISTING CANOPY.
  - 16 PROPOSED PREFABRICATED GALVANIZED METAL STAIR & LANDING. SEE SPECIFICATIONS & DETAILS SHEET 38.03.
  - 17 PROPOSED METAL FASCIA.
  - 18 EXISTING BUILDING.
  - 19 PROPOSED GRADE. SEE CIVIL DRAWINGS FOR ADDITIONAL INFORMATION.

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
 4/29/20  
 DATE  
 5/12/20  
 DATE  
 5-12-2020  
 DATE

**GENERAL NOTE**  
 THE CORRECTNESS OR COMPLETENESS OF EXISTING INFORMATION SHOWN ON THE DRAWINGS IS NOT WARRANTED OR GUARANTEED. THE CONTRACTOR SHALL VERIFY THE LOCATION OF UTILITIES AND UNDERGROUND FACILITIES, BY TEST PITS OR OTHER METHODS APPROVED BY THE OWNER'S REPRESENTATIVE, AS REQUIRED TO VERIFY EXACT LOCATIONS AND DEPTHS WITHIN THE LIMIT OF DISTURBANCE. ALL DISCREPANCIES BETWEEN INFORMATION SHOWN ON THE DRAWINGS AND THAT VERIFIED IN THE FIELD SHALL BE REPORTED TO THE OWNER'S REPRESENTATIVE PRIOR TO BEGINNING WORK.

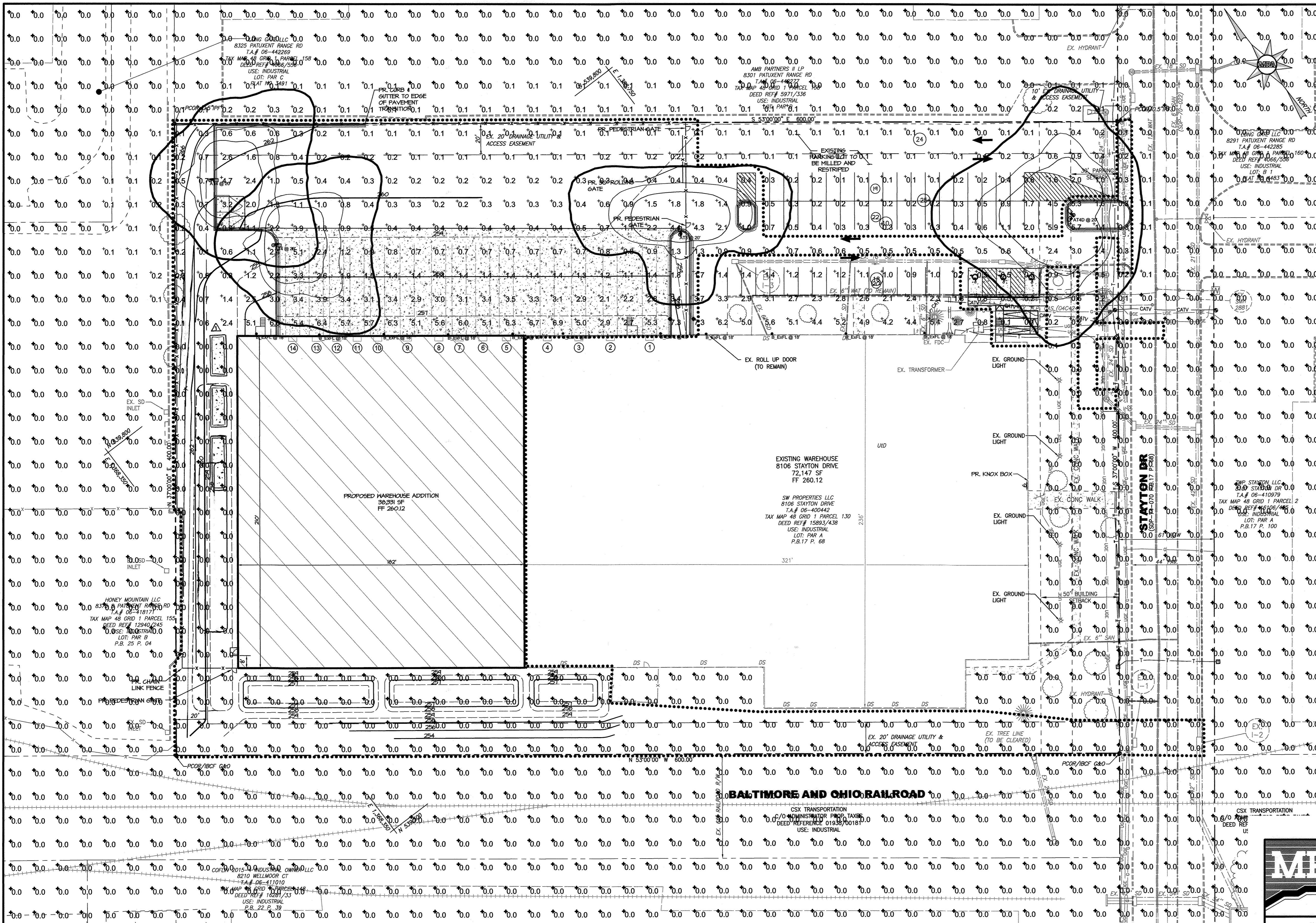


**ASBUILT CERTIFICATION FOR PSWM**  
 THERE IS NO ASBUILT INFORMATION PROVIDED ON THIS SHEET  
 MICHAEL G. COUGHLIN, PE NO. 38291, DATE OF ASBUILT 02/25/2022.

**OWNER/DEVELOPER**  
 SW PROPERTIES LLP  
 8106 STAYTON DRIVE  
 JESSUP, MD 20794  
 ATTN: ALVIN LEE  
 PHONE: (213)-944-4448

**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. 38291, EXPIRATION DATE: 01/13/2022

		<b>MORRIS &amp; RITCHE ASSOCIATES, INC.</b> ENGINEERS, PLANNERS, SURVEYORS AND LANDSCAPE ARCHITECTS 1220-C EAST JOPPA ROAD, SUITE 505 TOWSON, MARYLAND 21286 (410) 821-1690 FAX (410) 821-1748 Copyright 2020 Morris & Ritchie Associates, Inc.	
		<b>SITE DEVELOPMENT PLAN</b> <b>SW PROPERTIES LLC</b> <b>PROPOSED WAREHOUSE ADDITION</b> BUILDING ELEVATIONS TAX MAP 48 ~ GRID 1 ~ PARCEL 130 ~ ZONING CE-CU ~ DEED REF 15893/00438 PB 17 PG 68 ~ TAX ASSESSMENT DISTRICT 81 ~ 6th ELECTION DISTRICT DPZ FILE REFERENCES SDP-74-070, SDP-70-022 8106 STAYTON DRIVE, HOWARD COUNTY, MARYLAND	
DATE	REVISIONS	JOB NO.:	19637X01
02/25/2022	AS-BUILT	SCALE:	AS SHOWN
		DATE:	01/13/2020
		DRAWN BY:	DTP/DK
		DESIGN BY:	THS
		REVIEW BY:	MGC
		SHEET:	27 OF 29



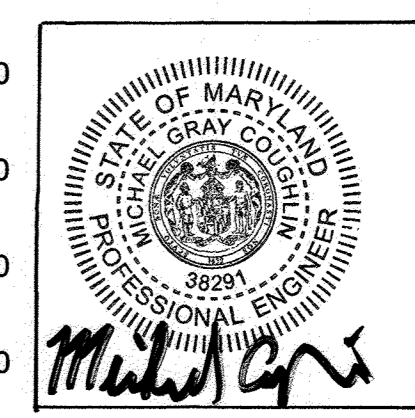
### LEGEND

**EXISTING**

- EX. PROPERTY LINE
- EX. ADJACENT PROPERTY LINE
- EX. RIGHT OF WAY LINE
- EX. EASEMENT
- EX. BUILDING SETBACK
- EX. WATER MAIN, VALVE, FIRE HYDRANT
- EX. WATER METER
- EX. SANITARY SEWER
- EX. STORM DRAIN
- EX. STORM DRAIN INLET
- EX. UNDERGROUND GAS
- EX. UNDERGROUND ELECTRIC
- EX. GROUND LIGHT
- EX. TRANSFORMER
- EX. TELEPHONE LINE
- EX. CATV CABLE
- EX. BUILDING
- EX. CURB
- EX. EDGE OF PAVEMENT
- EX. ROAD CENTER LINE
- EX. CONCRETE
- EX. STRIPING
- EX. METAL FENCE
- EX. RAILROAD
- EX. TREES/SHRUBS
- EX. WOODS
- EX. 2' CONT
- EX. 10' CONT
- EX. SLOPE > 15%
- UID
- URBAN LAND-UDORIENTS SOIL

**PROPOSED**

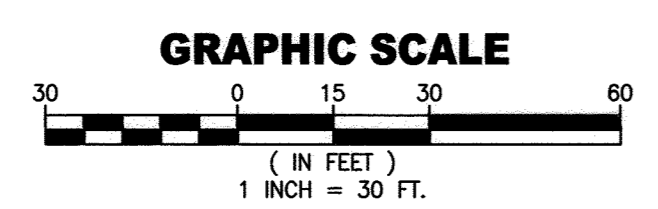
- PR. METAL FENCE
- PR. TRUCK DOCK
- PR. BUILDING
- PR. CONT 1
- PR. CONT 2
- PR. CONT 10
- PR. CURB/GUTTER
- PR. STRIPING
- PR. ADA SIGNAGE / WHEEL STOP
- PR. CONCRETE



**ASBUILT CERTIFICATION FOR PSWM**  
 THERE IS NO ASBUILT INFORMATION PROVIDED ON THIS SHEET  
 MICHAEL G. COUGHLIN, PE, NO. 38291, DATE OF ASBUILT 02/15/2022

**Statistics**

Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min	Max/Avg
Parking Lot	+	1.3 fc	6.7 fc	0.1 fc	67.0:1	13.0:1	5.15



**PLAN**  
SCALE: 1"=30'

Symbol	Label	Quantity	Manufacturer	Catalog Number	Description	Lamp	Number Lamps	Filename	Lumens Per Lamp	Light Loss Factor	Wattage
□	AT3	1	HUBBELL OUTDOOR	ASL-16L-4K-140-3	Airo ASL		1	ASL-16L-4K-140-3.lvs	7295	0.9	55.829
□	AT4	2	Hubbell Outdoor	ASL-16L-4K-140-4	Airo ASL		1	ASL-16L-4K-140-4.lvs	7470	0.9	55.8
□	AT4D	1	Hubbell Outdoor	ASL-16L-4K-140-4	Airo ASL		1	ASL-16L-4K-140-4.lvs	7470	0.9	111.6
⋄	B_ExpL	11	Holophane	PD15AHP00XWVX	PREDATOR	150W CLEAR HPS	1	PD15AHP00XWV X.lvs	16000	0.7	170

**DATUM**  
 DESIGN & DRAWING BASED ON MARYLAND COORDINATE SYSTEM: HORIZONTAL NAVD 83 (1991) VERTICAL NAVD 88

**OWNER/DEVELOPER**  
 SW PROPERTIES LLP  
 8106 STAYTON DRIVE  
 JESSUP, MD 20794  
 ATTN: ALVIN LEE  
 PHONE: (213)-944-4448

**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. 38291, EXPIRATION DATE: 01/13/2022

APPROVED: DEPARTMENT OF PLANNING AND ZONING

*[Signature]* 4/29/20  
 DATE

CHIEF, DEVELOPMENT ENGINEERING DIVISION

*[Signature]* 5/1/2020  
 DATE

CHIEF, DIVISION OF LAND DEVELOPMENT

*[Signature]* 5-12-2020  
 DATE

DIRECTOR

**GENERAL NOTE**

THE CORRECTNESS OR COMPLETENESS OF EXISTING INFORMATION SHOWN ON THE DRAWINGS IS NOT WARRANTED OR GUARANTEED. THE CONTRACTOR SHALL VERIFY THE LOCATION OF UTILITIES AND UNDERGROUND FACILITIES, BY TEST PITS OR OTHER METHODS APPROVED BY THE OWNER'S REPRESENTATIVE, AS REQUIRED TO VERIFY EXACT LOCATIONS AND DEPTHS WITHIN THE LIMIT OF DISTURBANCE. ALL DISCREPANCIES BETWEEN INFORMATION SHOWN ON THE DRAWINGS AND THAT VERIFIED IN THE FIELD SHALL BE REPORTED TO THE OWNER'S REPRESENTATIVE PRIOR TO BEGINNING WORK.

**MORRIS & RITCHIE ASSOCIATES, INC.**  
 ENGINEERS, PLANNERS, SURVEYORS AND LANDSCAPE ARCHITECTS  
 1220-C EAST JOPPA ROAD, SUITE 505  
 TOWSON, MARYLAND 21286  
 (410) 821-1690  
 FAX (410) 821-1748  
 Copyright 2020 Morris & Ritchie Associates, Inc.

**SITE DEVELOPMENT PLAN**  
**SW PROPERTIES LLC**  
**PROPOSED WAREHOUSE ADDITION**

**LIGHTING AND PHOTOMETRIC PLAN**

TAX MAP 48 ~ GRID 1 ~ PARCEL 130 ~ ZONING CE-CU ~ DEED REF 15893/00438  
 PB 17 PG 68 ~ TAX ASSESSMENT DISTRICT 81 ~ 6th ELECTION DISTRICT  
 DPZ FILE REFERENCES SDP-74-070, SDP-70-022  
 8106 STAYTON DRIVE, HOWARD COUNTY, MARYLAND

DATE	REVISIONS	JOB NO.:
04/16/2021	ADDED MECHANICAL UNIT PADS AND REVISED GRADING	19637X01
02/15/2022	AS-BUILT	SCALE: AS SHOWN
		DATE: 01/13/2020
		DRAWN BY: DTP/DK
		DESIGN BY: THS
		REVIEW BY: MCC
		SHEET: 28 OF 29

# AIRO LED SERIES

AREA/SITE/ROAD LIGHTER

**Specifications**

- Stylish vertically finned die-cast and extruded aluminum for maximum heat dissipation
- Separate optical and electrical compartment for improved thermal management and optimum component operation
- EPA:
  - BL - 50W<sup>2</sup>
  - 16L - 82 W<sup>2</sup>
  - 24L - 74 W<sup>2</sup>
- Premium engineered individual acrylic lenses deliver IES Type II, III, IV and V distributions
- Lens distributions are field rotatable (in 90° increments) or interchangeable for job site fine-tuning
- 3000K, 4000K or 5000K (70 CRI) CCT
- Zero uplight
- Configured with 8, 16, or 24 high current and high output LEDs to replace 150, 250 and 400WHD respectively
- Universal 120-277 VAC or 347-480 VAC input voltage, 50/60 Hz
- Ambient operating temperature -40°C to 40°C
- Drivers have greater than 90% power factor and less than 20% THD
- LED drivers have output power over-voltage, over-current protection and short circuit protection with auto recovery
- Field replaceable surge protection device provides 10KA and 10KV protection meeting ANSI/IEEE C62.41.2 Category C High and Surge Location Category C3. Automatically takes feature off-line for protection when device is consumed
- Photo control, occupancy sensor and wireless available for complete on/off and dimming control

**Options:**

- 7-pin ANSI C136.41-2015 photocell receptacle option available for twist lock photocell or wireless control modules (control accessories sold separately)
- 0-10V dimming leads available for use with control devices provided by others, must specify lead length
- In addition, AIRO can be specified with SiteSync™ wireless control system for reduction in energy and maintenance cost while optimizing light quality 24/7. See ordering information or visit [www.hubbelloutdoor.com/site-sync](http://www.hubbelloutdoor.com/site-sync) for more details.
- Tool-less entry to wiring/driver compartment (See page 4 illustration)
- Fixture ships with slotted mounting block to accommodate wide range of drill patterns for easy retrofit opportunities (See page 4 illustration for dimensions)
- Must arm filter accessory or option available for 2-3/8" OD brackets

**Field:**

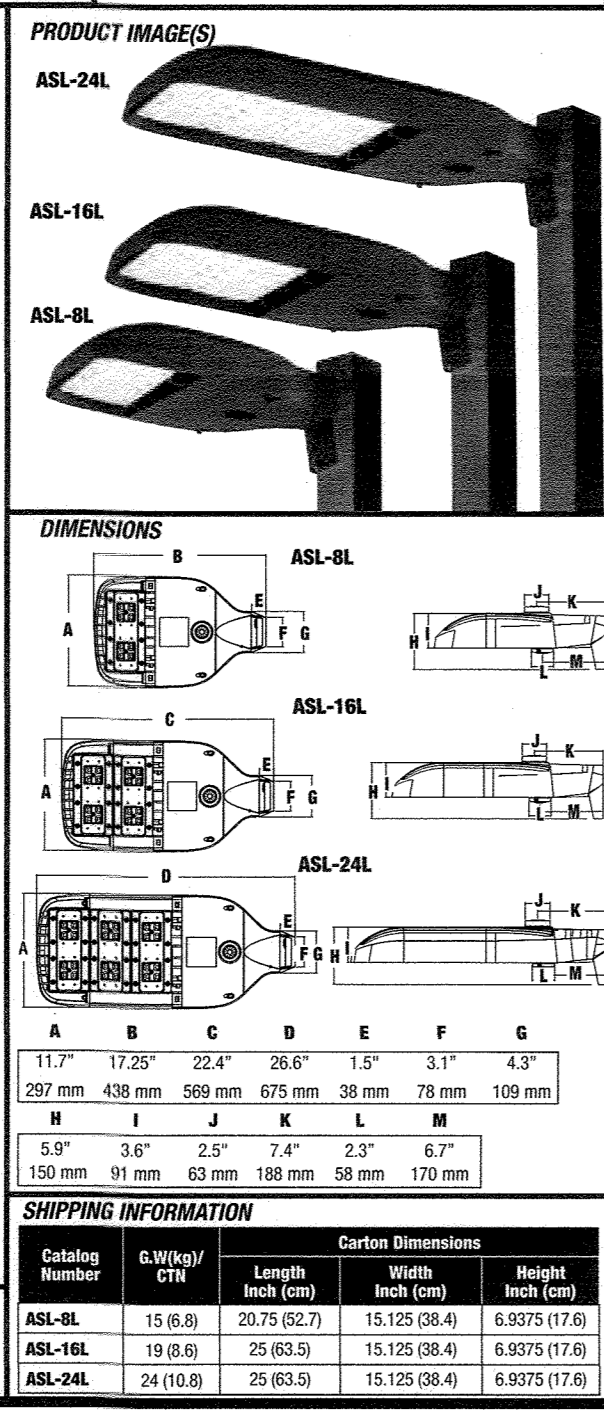
- TIG coated polyester powder paint finish applied at nominal 2.5 mil thickness
- TIG thermostat powder paint finish applied at nominal 2.5 mil thickness

**Warranty:**

- Five year limited warranty (for more information visit: <http://www.hubbelloutdoor.com/resources/warranty/>)
- Designlights Consortium (DLC) qualified, consult DLC website for more details: <http://www.designlights.org/DLC/>
- Listed to UL 1598 and CSA C22.2#250.0-24 for wet locations and 40°C ambient temperature
- 36 ratio for ANSI C136.31 high vibration applications
- IP65 optical assembly
- IDA approved

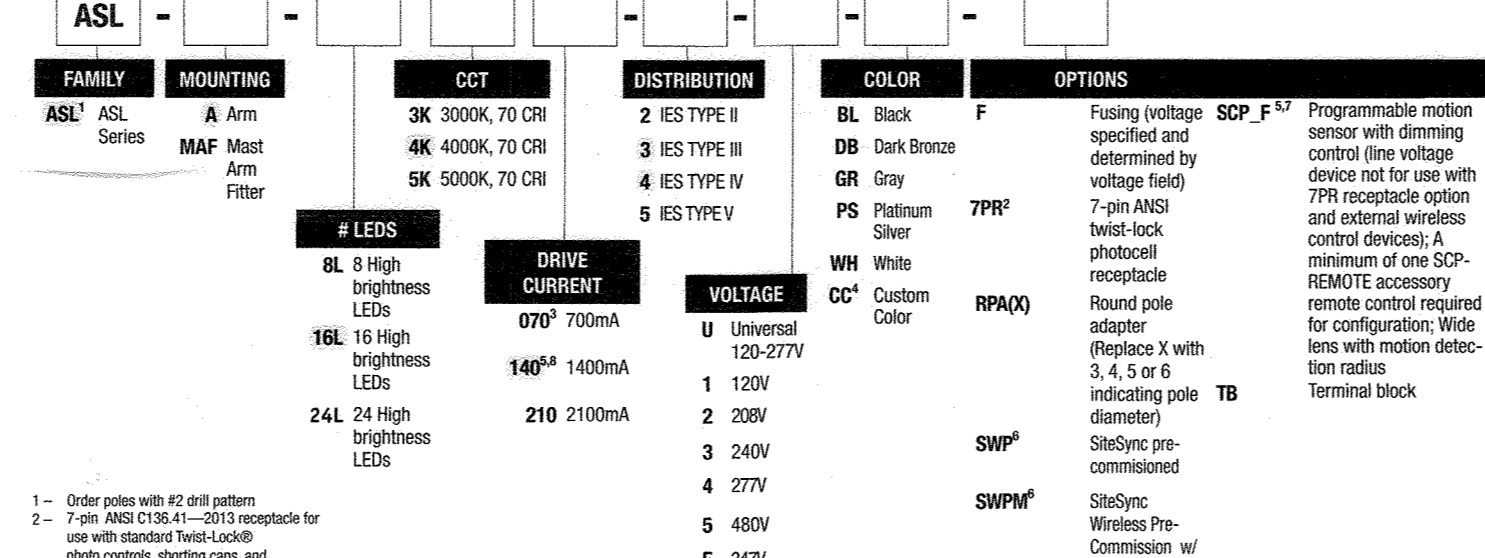
**CERTIFICATIONS/LISTINGS**

UL, DLC, ENEC



## ORDERING INFORMATION

ORDERING EXAMPLE: ASL-A-24L-K-210-4-U-DB



**1** - Order poles with #7 drill pattern  
**2** - 7-pin ANSI C136.41-2015 receptacle for use with standard twist lock photo cells, shunting caps, and ANSI C136.4 external wireless control devices with and without photocell/occupancy sensors  
**3** - For 24 configurations only  
**4** - Contact factory for minimum order quantities  
**5** - Not available with 347V or 480V  
**6** - Specify gross and net. See SiteSync product page [www.hubbelloutdoor.com/site-sync](http://www.hubbelloutdoor.com/site-sync) for more details.  
**7** - Specify mounting height: 8' or 9' or 10', 40' or 50'  
**8** - Only available with 16 and 24 configurations

**Accessories and Services (Ordered Separately)**

Catalog Number	Description
SCP-REMOTE	Remote Control for SCPV_F option. Order at least one per project to program and control the occupancy sensor.
SWUSB*	SiteSync interface software loaded on USB flash drive for use with owner supplied PC (Windows based only). Includes SiteSync license, software and USB radio bridge node.
SWTAB*	Windows tablet and SiteSync interface software. Includes tablet with preloaded software, SiteSync license and USB radio bridge node.
SWBRG	SiteSync USB radio bridge node only. Order if a replacement is required or if an extra bridge node is requested.
SW7P7*	SiteSync 7 Pin on fixture module On/Off/Dim, Daylight Sensor 120-480VAC.

\* When ordering SiteSync at least one of these two interface options must be ordered per project.  
 \* Available as a SiteSync retrofit solution for fixtures with an existing 7-pin receptacle.

**ORDERING INFORMATION - STOCK CONFIGURATIONS**

Catalog Number	Description	Mfg.	Distribution	Wattage	# Drivers	Drive Current	Voltage	CCT	Lumens	LPW	Weight (lbs. (kg))
ASL-16L-3	Medium size 16 LED configuration, Dark Bronze	Arm	Type III	115	16	1022100mA	120V-277V	4000K	12,674	110	18 (8.16)
ASL-16L-4	Medium size 16 LED configuration, Dark Bronze	Arm	Type III	115	16	1022100mA	120V-277V	4000K	12,674	113	18 (8.16)
ASL-24L-3	Large size 24 LED configuration, Dark Bronze	Arm	Type III	169	16	1022100mA	120V-277V	4000K	18,595	110	20 (9.07)
ASL-24L-4	Large size 24 LED configuration, Dark Bronze	Arm	Type IV	169	16	1022100mA	120V-277V	4000K	19,036	113	20 (9.07)

**Hubbell Control Solutions - Accessories (sold separately)**

Catalog Number	Description	HCS System
KXRFM-1R1D-1RV	On-fixture Module (7-pin, On / Off / Dim, Daylight Sensor with HUBNET Radio and Bluetooth® Radio, 120-480VAC)	NX Distributed Intelligence™
WR-RME-L	On-fixture Module (7-pin or 5-pin, On / Off / Dim, Daylight Sensor with w/SCAPE Radio, 110-480VAC)	w/SCAPE® Lighting Control

**SiteSync 7-Pin Module**

- SiteSync Features in a new form
- Available as an accessory for new construction or retrofit applications (with existing 7-Pin receptacle)
- Available on all products that have a 7-Pin receptacle
- Does not interface with occupancy sensors

## ACCESSORIES - Order Separately

Catalog Number	Description
ASL-MAF	Must arm kit with wildlife shield for mounting on 2-3/8" OD arms
SETA2-XX*	Square pole tenon adapter (4 at 90 degrees) (2 3/8" OD tenon)
SETA2-XX*	Round pole tenon adapter (4 at 90 degrees) (2 3/8" OD tenon), requires GLS-8P84-ACC-20 for each luminaire
SETA2-XX*	Hexagonal pole tenon adapter (3 at 120 degrees) (2 3/8" OD tenon)
ASL-ENS-BL	External house side shield (1 kit contains 6 shields)
ASL-ARM-TG-XX*	Arm mounting kit for side of pole attachment
SCP-REMOTE	Remote control for SCPW option. Order at least one per project to program and control
GLS-8P84-ACC-XX*	Round Pole Adapter (denotes pole diameter: 3 = 3 1/4" - 3 3/4", 4 = 3 7/8" - 4")
WB-AREA-XX	Wall bracket. Requires universal mounting block option.
PTL-1	Photocell - twist lock cell (120V) - Requires 7P9 option
PTL-6	Photocell - twist lock cell (120-277V) - Requires 7P9 option
FS2	Shunting cap - twist lock - Requires 7P9 option
ASL8LZLENS	Type II, 2 lenses included (see table to right for kit quantities)
ASL16LZLENS	Type II, 2 lenses included (see table to right for kit quantities)
ASL24LZLENS	Type II, 2 lenses included (see table to right for kit quantities)



## PERFORMANCE DATA

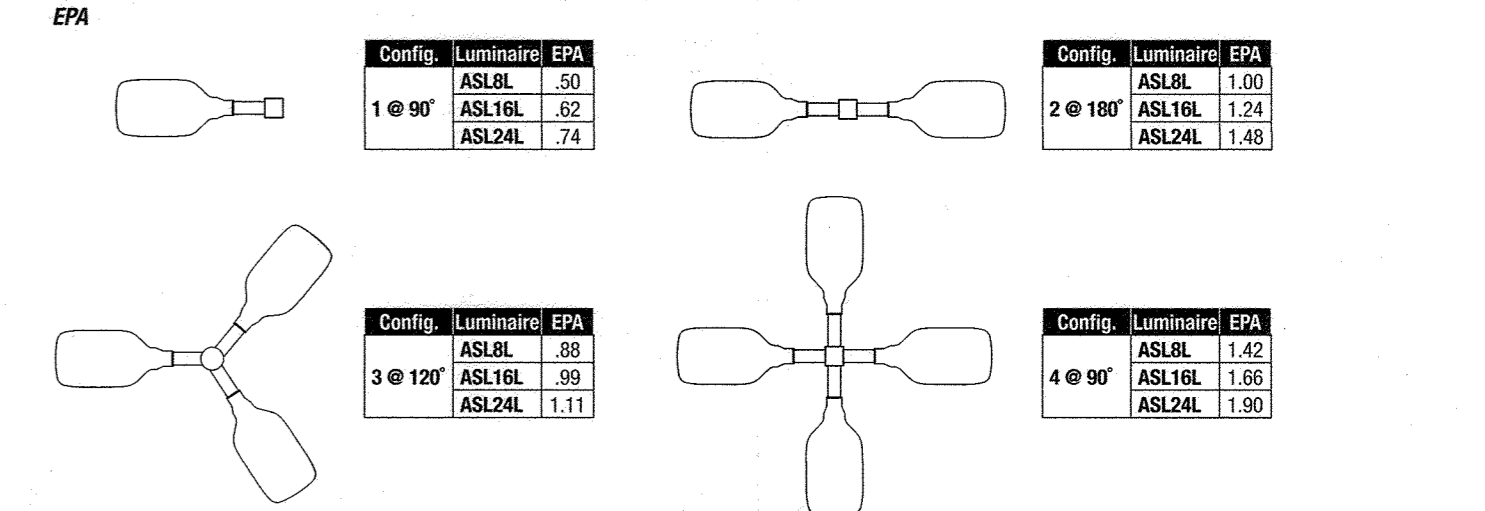
# OF LEDS	DRIVE CURRENT	SYSTEM WATTS	DIST.	5K (5000K nominal, 70 CRI)						4K (4000K nominal, 70 CRI)						3K (3000K nominal, 70 CRI)							
				LUMENS	LPW <sup>1</sup>	U	G	LUMENS	LPW <sup>1</sup>	U	G	LUMENS	LPW <sup>1</sup>	U	G								
8	2100	59	59	1	112	1	0	1	8563	111	0	1	8563	103	1	0	1	8563	103	1	0	1	
				2	224	2	0	1	6931	108	1	0	1	5752	97	1	0	1	5752	97	1	0	1
				3	336	3	0	1	6542	111	1	0	1	5688	100	1	0	1	5688	100	1	0	1
				4	448	4	0	2	7492	134	2	0	2	6530	122	1	0	1	6530	122	1	0	1
				5	560	5	0	2	7208	131	2	0	2	6502	119	1	0	1	6502	119	1	0	1

<sup>1</sup> - Lumen values are from photometric tests performed in accordance with IESNA LM-79-06. Data is considered to be representative of the configurations shown. Actual performance may differ as a result of real-world environmental and application.

## ELECTRICAL DATA

# OF LEDS	DRIVE CURRENT (mA)	INPUT VOLTAGE (V)	SYSTEM POWER (W)	CURRENT (Amps)	LUMINAIRE AMBIENT TEMPERATURE FACTOR (LATF)	LUMINAIRE AMBIENT TEMPERATURE FACTOR (LATF)	
8	16@2100mA	120	59	0.59	0°C	32°F	1.06
		120	59	0.59	15°C	59°F	1.03
		120	59	0.59	20°C	68°F	1.01
		120	59	0.59	25°C	77°F	1.00
		120	59	0.59	30°C	86°F	0.99
16	16@2100mA	120	118	1.18	0°C	104°F	0.97
		120	118	1.18	15°C	59°F	0.96
		120	118	1.18	20°C	68°F	0.95
		120	118	1.18	25°C	77°F	0.94
		120	118	1.18	30°C	86°F	0.93
24	16@1400mA	120	115	0.98	0°C	32°F	1.06
		120	115	0.98	15°C	59°F	1.03
		120	115	0.98	20°C	68°F	1.01
		120	115	0.98	25°C	77°F	1.00
		120	115	0.98	30°C	86°F	0.99

Use these factors to determine relative lumen output for average ambient temperatures from 0-40°C (32-104°F).



**CONFIGURABLE ORDERING INFORMATION NEXT PAGE**

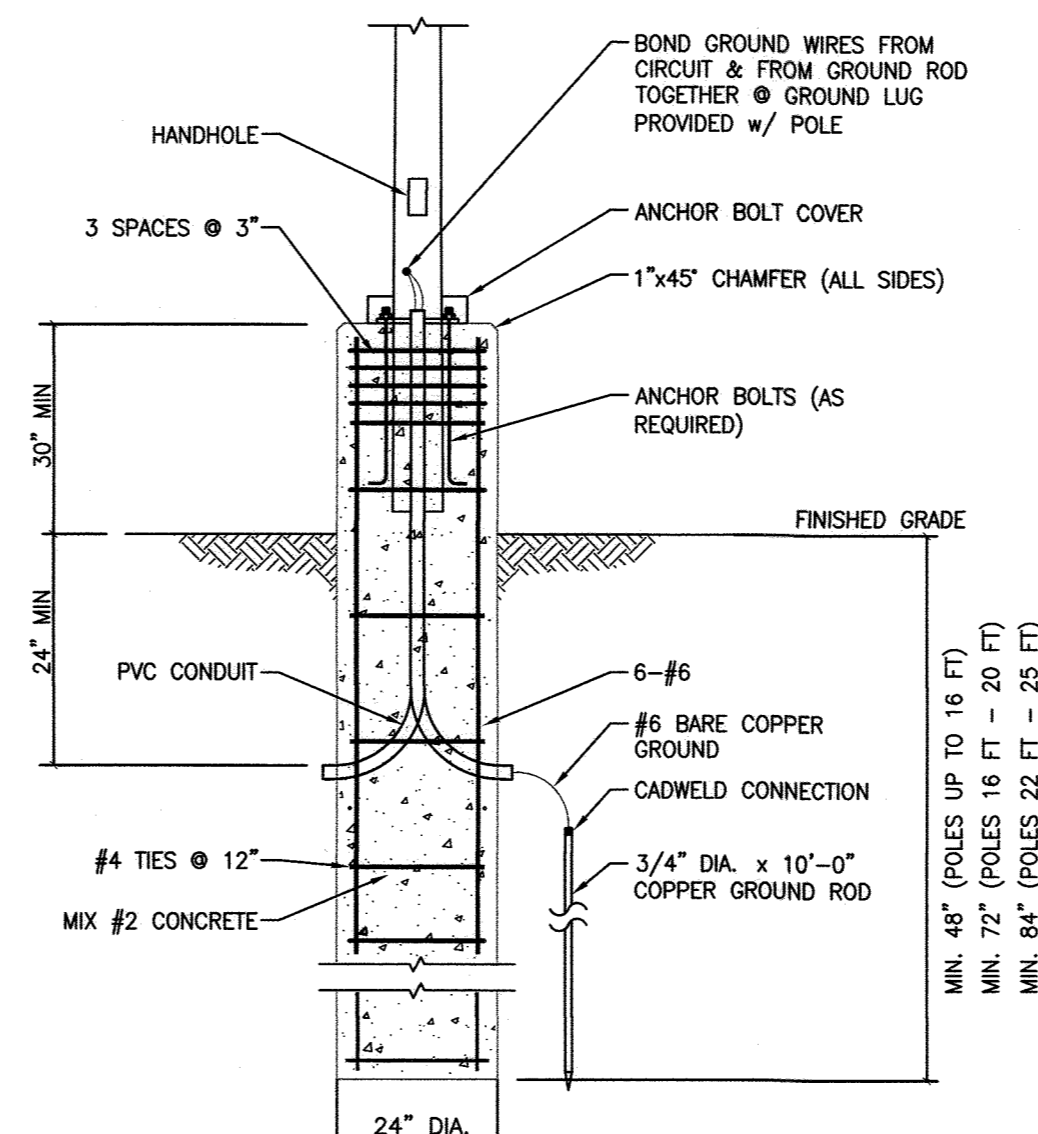
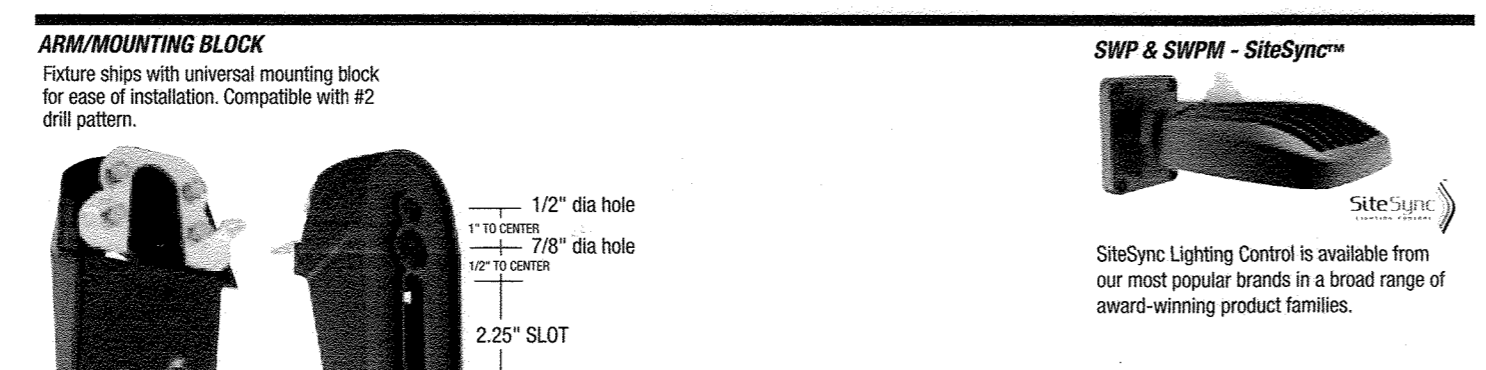
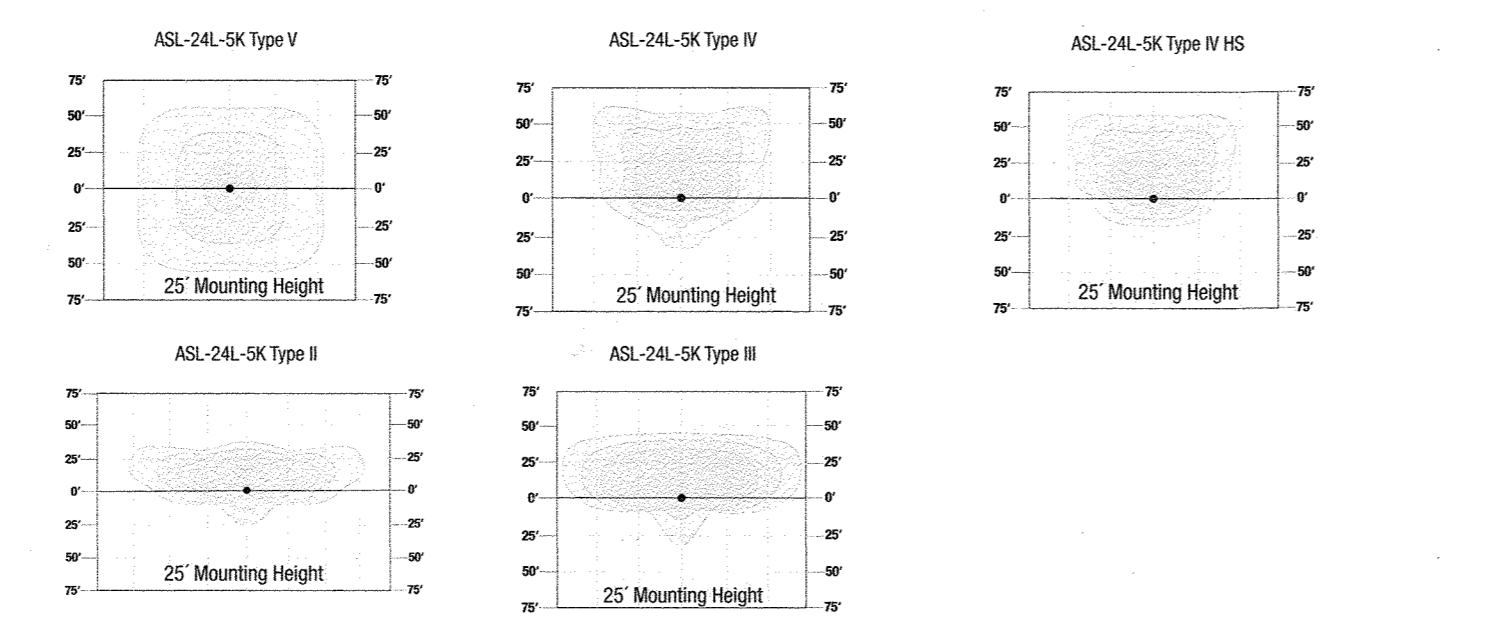
Hubbell Outdoor Lighting • 701 Millennium Boulevard • Greenville, SC 29607 • Phone: 864-678-1000  
 Due to our continued efforts to improve our products, product specifications are subject to change without notice.  
 © 2017 HUBBELL OUTDOOR LIGHTING. All Rights Reserved. For more information visit our website: [www.hubbelloutdoor.com](http://www.hubbelloutdoor.com) • Printed in USA March 14, 2019 10:32 AM ASL8L-SPE

Hubbell Outdoor Lighting • 701 Millennium Boulevard • Greenville, SC 29607 • Phone: 864-678-1000  
 Due to our continued efforts to improve our products, product specifications are subject to change without notice.  
 © 2017 HUBBELL OUTDOOR LIGHTING. All Rights Reserved. For more information visit our website: [www.hubbelloutdoor.com](http://www.hubbelloutdoor.com) • Printed in USA March 14, 2019 10:32 AM ASL16L-SPE

Hubbell Outdoor Lighting • 701 Millennium Boulevard • Greenville, SC 29607 • Phone: 864-678-1000  
 Due to our continued efforts to improve our products, product specifications are subject to change without notice.  
 © 2017 HUBBELL OUTDOOR LIGHTING. All Rights Reserved. For more information visit our website: [www.hubbelloutdoor.com](http://www.hubbelloutdoor.com) • Printed in USA March 14, 2019 10:32 AM ASL24L-SPE

## PHOTOMETRICS

For additional photometric information and IES downloads, visit our web site at [www.hubbelloutdoor.com](http://www.hubbelloutdoor.com)



**APPROVED: DEPARTMENT OF PLANNING AND ZONING**

*[Signature]* DATE: 4/29/20  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION JR

*[Signature]* DATE: 5/11/2020  
 CHIEF, DIVISION OF LAND DEVELOPMENT

*[Signature]* DATE: 5-12-2020  
 DIRECTOR

Hubbell Outdoor Lighting • 701 Millennium Boulevard • Greenville, SC 29607 • Phone: 864-678-1000  
 Due to our continued efforts to improve our products, product specifications are subject to change without notice.  
 © 2017 HUBBELL OUTDOOR LIGHTING. All Rights Reserved. For more information visit our website: [www.hubbelloutdoor.com](http://www.hubbelloutdoor.com) • Printed in USA March 14, 2019 10:32 AM ASL8L-SPE

**ASBUILT CERTIFICATION FOR PSWM**

THERE IS NO ASBUILT INFORMATION PROVIDED ON THIS SHEET  
 MICHAEL G. GOULMAY, PE No. 182,911, DATE OF ASBUILT 02/15/2022.

*[Signature]*

**OWNER/DEVELOPER**

SW PROPERTIES LLP  
 8106 STAYTON DRIVE  
 JESSUP, MD 20794  
 ATTN: ALVIN LEE  
 PHONE: (213)-944-4448

**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. 38291, EXPIRATION DATE: 01/13/2020

**MORRIS & RITCHIE ASSOCIATES, INC.**  
 ENGINEERS, PLANNERS, SURVEYORS AND LANDSCAPE ARCHITECTS  
 1220-C EAST JOPPA ROAD, SUITE 505  
 TOWSON, MARYLAND 21286  
 (410) 821-1690  
 FAX (410) 821-1748  
 Copyright 2020 Morris & Ritchie Associates, Inc.

**MRA**

**SITE DEVELOPMENT PLAN**  
**SW PROPERTIES LLC**  
**PROPOSED WAREHOUSE ADDITION**

**LIGHTING DETAILS**

TAX MAP 48 ~ GRID 1 ~ PARCEL 130 ~ ZONING CE-CLU ~ DEED REF 15893/00438  
 PB 17 PG 68 ~ TAX ASSESSMENT DISTRICT 81 ~ 6th ELECTION DISTRICT  
 DPZ FILE REFERENCES SDP-74-070, SDP-70-022  
 8106 STAYTON DRIVE, HOWARD COUNTY, MARYLAND

*[Signature]*

DATE	REVISIONS	JOB NO.:
02/15/2022	A-S-BUILT	19637X01
		SCALE: AS SHOWN
		DATE: 01/13/2020
		DRAWN BY: DTP/DK
		DESIGN BY: THS
		REVIEW BY: MGC
		SHEET: 29 OF 29

**SDP-19-043**