



HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

3430 Courthouse Drive

Ellicott City, Maryland 21043

410-313-2350

Voice/Relay

Valdis Lazdins, Director

FAX 410-313-3467

March 7, 2016

John Merancy
Williams Companies
2800 Post Oak Blvd.
Houston, Texas 77056

RE: WP-16-055, Williams Station 190
Transcontinental Gas Pipeline

Dear Mr. Merancy:

This is to advise your original Waiver Plan Exhibit was approved on March 3, 2016, and will be kept on file with this Department (DPZ). You may order copies of this plan at the public service desk of the Department of Planning and Zoning, Monday thru Friday, 8:00 a.m. to 5:00 p.m.

Within 1 year of signature approval of the waiver plan exhibit original (**on or before March 3, 2017**) the developer shall apply to the Department of Inspections, Licenses and Permits for **building permits** to initiate construction on the site.

Please be advised that the Department of Inspections, Licenses and Permits cannot formally accept your building permit application until you have submitted 2 complete sets of signed, approved site development plans. The fee for distribution copies, previously submitted, does not include these 2 sets.

If you have any questions, please contact Nicholas Haines at (410) 313-4333 or email at nhaines@howardcountymd.gov.

Sincerely,

Kent Sheubrooks, Chief
Division of Land Development

KS/NH

cc: Research
DED
Bob Frances, Plan Review Division, DILP
Real Estate Services, DPW
Department of Assessments and Taxation
BL Companies

SHEET NO.	DWG. NO.	DRAWING NAME
1	(66-0190) F-1A-9 (66-0190) F-1A-11	COVER SHEET
2	(66-0190) F-1A-9 (66-0190) F-1A-11	OVERALL PROJECT PLAN
3	(66-0190) F-1A-9	GRADING AND STORM DRAINAGE
4	(66-0190) F-1A-9	GRADING AND STORM DRAINAGE
5	(66-0190) F-1A-11	SOIL EROSION AND SEDIMENT CONTROL
6	(66-0190) F-1A-11	SOIL EROSION AND SEDIMENT CONTROL
7	(66-0190) F-1A-9	DETAIL SHEET 1
8	(66-0190) F-1A-11	DETAIL SHEET 2
9	(66-0190) F-1A-9 (66-0190) F-1A-11	GROUNDCOVER EXHIBIT

DESIGN NARRATIVE:

THE PROPOSED IMPROVEMENTS WILL INCLUDE CONSTRUCTION OF A NEW COMPRESSOR BUILDING, LOOP ROAD AND AUXILIARY BUILDINGS TO SUPPORT THE OVERALL COMPRESSOR STATION. THE PROPOSED IMPROVEMENTS ARE MOSTLY LOCATED ON THE NORTH SIDE OF THE PROPERTY IN AN EXISTING GRASSY AREA THAT IS APPROXIMATELY 2.5 ACRES. THE PROPOSED GAS PIPING AND FACILITIES ARE BEING INSTALLED ADJACENT TO EXISTING IMPERVIOUS AREA TO MINIMIZE THE AMOUNT OF IMPERVIOUS AREA WITHIN THE PROPERTY.

THE STORMWATER IMPROVEMENTS INCLUDE A SURFACE SAND FILTER WITH A SEDIMENT FOREBAY, A DETENTION POND, AND A SERIES OF SWALES. THE GROUNDWATER TABLE IS AT OR NEAR THE EXISTING GROUND ELEVATION. THEREFORE, THE SURFACE SAND FILTER WILL BE LINED AND HAVE A SUBDRAIN TO CONVEY FILTERED RUNOFF TO A RIPRAP APRON TO DISSIPATE ENERGY.

THE SURFACE SAND FILTER WAS DESIGNED TO TREAT THE WATER QUALITY VOLUME AS DESCRIBED IN THE MARYLAND DEPARTMENT OF THE ENVIRONMENT (MDE) MANUAL. THE WATER QUALITY AND PROTECTION VOLUMES ARE SUMMARIZED IN THE SUMMARY OF STORAGE REQUIREMENTS TABLE ON THIS SHEET. ADDITIONALLY, THE SURFACE SAND FILTER, IN CONJUNCTION WITH THE DETENTION POND, IS SIZED TO ATTENUATE THE PEAK RUNOFF RATE FOR THE POST-DEVELOPMENT CONDITIONS TO BE EQUAL TO OR LESS THAN PRE-DEVELOPMENT CONDITIONS FOR THE 2-YEAR, 10-YEAR AND 100-YEAR DESIGN STORMS. THE PRE- AND POST-DEVELOPMENT PEAK RUNOFF RATES FOR THE AFOREMENTIONED DESIGN STORMS ARE PROVIDED IN THE PEAK RUNOFF RATE SUMMARY TABLE ON THIS SHEET. SEE THE STORMWATER MANAGEMENT REPORT FOR ADDITIONAL INFORMATION.

THE WESTERN PORTION OF THE PROPERTY IS WITHIN THE FLOODPLAIN. THE PROJECT IMPROVEMENTS INCLUDE SOME GRADING AND PIPE WORK WITHIN THE FLOODPLAIN. THEREFORE, A JOINT PERMIT APPLICATION (AUTHORIZATION NUMBER 201561245/15-N13322) HAS BEEN SUBMITTED TO MDE TO PERMIT THE PROPOSED WORK THAT WILL RESULT IN TEMPORARY AND PERMANENT IMPACTS TO THE FLOODPLAIN. COMPENSATORY STORAGE HAS BEEN PROVIDED FOR PERMANENT IMPACTS THAT RESULT IN A LOSS OF STORAGE VOLUME WITHIN THE FLOODPLAIN. SEE THE FLOODPLAIN STORAGE SUMMARY TABLE ON THIS SHEET FOR THE IMPACT AREAS.

STORMWATER DESIGN MANUAL WAIVER

WILLIAMS REQUESTED A DESIGN MANUAL WAIVER FROM THE HOWARD COUNTY DEVELOPMENT ENGINEERING DIVISION FOR THE SAND FILTER PROPOSED AS PART OF THE COMPRESSOR STATION 190 IMPROVEMENTS. SECTION 3.31 OF THE MANUAL STATES THAT "THE BOTTOM OF THE INFILTRATION FACILITY SHALL BE SEPARATED BY AT LEAST FOUR FEET VERTICALLY FROM THE SEASONAL HIGH WATER TABLE". HOWEVER, FIELD TESTING SHOWED THAT THE SEASONAL HIGH WATER TABLE IS WITHIN 7 TO 30 INCHES OF THE EXISTING GROUND ELEVATION IN THE AREA OF THE PROPOSED SAND FILTER AND ONLY A MAXIMUM OF 36 INCHES IN OTHER AREAS ACROSS THE SITE. THEREFORE, THE MINIMUM CLEARANCE TO THE SEASONAL HIGH WATER TABLE CANNOT BE ACHIEVED.

ALTERNATIVE TREATMENT MEASURES, SUCH AS GRAVEL WETLANDS OR POCKET POND, WERE CONSIDERED BUT THE CONTRIBUTING DRAINAGE AREA TO THE TREATMENT FACILITY CANNOT SUSTAIN THE REQUIRED PLANT LIFE. THEREFORE, A SAND FILTER WITH A LINER AND SUBDRAIN IS PROPOSED TO TREAT THE STORMWATER RUNOFF. THE FILTERED WATER WILL BE KEPT SEPARATE FROM THE GROUNDWATER BY THE LINER AND WILL SURFACE FLOW TO THE MIDDLE PATUXENT RIVER. THE EXISTING TOPOGRAPHY ALLOWS FOR A CERTAIN DEPTH OF TREATMENT/STORAGE FACILITY ON TOP OF A SUBDRAIN LAYER WITH A PIPE THAT DAYLIGHTS IN THE WESTERN PORTION OF THE PROPERTY.

THE WAIVER REQUEST APPROVAL LETTER IS DATED NOVEMBER 3, 2015.

SUMMARY OF STORAGE REQUIREMENTS		
REQUIREMENT	VOLUME REQUIRED	NOTES
Water Quality Volume (WQ _v)	WQ _v = [(P)(R _a)(A)]/12 = [(1)(0.37)(25.1)]/12 = 0.78 Acre-Feet	
Recharge Volume (Re _v)	Re _v = [(S)(R _a)(A)]/12 = [(0.15)(0.37)(25.1)]/12 = 0.11 Acre-Feet	
Channel Protection Volume (Cp _v)	1.52 Acre-Feet	MDE method, Appendix B.11
Overbank Flood Protection Volume (O _v)	100.62 CFS	From HydroCad
Extreme Flood Volume (Re _v)	171.89 CFS	From HydroCad

PEAK RUNOFF RATE SUMMARY TABLE			
STORM EVENT	PRE (CFS)	POST (CFS)	REDUCTION (CFS)
1-yr	26.02	15.49	10.53
2-yr	41.93	23.64	18.29
5-yr	71.72	48.65	23.07
10-yr	100.62	76.35	24.27
25-yr	117.22	90.36	26.86
50-yr	140.91	108.55	32.36
100-yr	171.89	130.24	41.65

FLOODPLAIN STORAGE SUMMARY TABLE			
IMPACT NO.	TEMPORARY OR PERMANENT	IMPACT AREA (SF)	IMPACT VOLUME (CF)
	TEMPORARY IMPACT	11,921	0
	PERMANENT IMPACT	3,716	4,634
	TOTAL IMPACT	15,637	4,634
	TOTAL COMPENSATORY VOLUME PROVIDED		6,349

WAIVER REQUESTS (WAIVER PETITION NUMBER WP-16-055)

WILLIAMS REQUESTED THE FOLLOWING TWO WAIVERS:

1. WAIVER FROM SDP REQUIREMENTS BECAUSE:

- WILLIAMS' MODIFICATION ARE NOT A "NEW OR EXPANDED NONRESIDENTIAL DEVELOPMENT" BECAUSE ALL WORK WILL BE WHOLLY CONFINED TO THE EXISTING 26.25 FENCED-IN ACRES OF THE STATION. SEE § 16.155(A)(1)(i).
- WILLIAMS' MODIFICATIONS DO NOT "ESTABLISH A USE OR CHANGE IN USE..." BECAUSE THE STATION AND ITS USE WERE ESTABLISHED IN THE 1950S, HAVE NOT CHANGED, AND WILL NOT BE CHANGED BY THE MODIFICATIONS. SEE § 16.155(A)(1)(ii).
- THE SDP REQUIREMENTS, OF ALL THE COUNTY'S POST-ZONING APPROVAL PROCESSES, HAS THE MOST POTENTIAL TO INTERFERE WITH, OR OTHERWISE DELAY, WILLIAMS' FERC APPROVAL WHICH IS ANTICIPATED IN APRIL/MAY 2016.
- WILLIAMS' STANDARDS, REQUIREMENTS, AND PRACTICES WITH REGARD TO STORM WATER MANAGEMENT, SOIL EROSION AND SEDIMENT CONTROL, BUILDING, AND GRADING MEET OR EXCEED THE COUNTY'S STANDARDS, REQUIREMENTS, AND PRACTICES. AS A RESULT, WILLIAMS' MODIFICATIONS, AND UNDERLYING STANDARDS, FULLY SUPPORT AND ENCOURAGE THE COUNTY'S INTERESTS, AND ITS INTENT TO SERVE THOSE INTERESTS AS SET FORTH IN ITS OWN REGULATIONS.

2. WAIVER FROM FOREST CONSERVATION REQUIREMENTS BECAUSE:

- THE MODIFICATIONS WILL TAKE PLACE WHOLLY WITHIN THE STATION, AS IT EXISTS WITHIN THE FENCED-IN 26.25 ACRES.
- THE TWO NEW EQUIPMENT BUILDINGS WILL ONLY COVER 7,958 +/- SF WITHIN THE FENCED-IN 26.25 ACRES OF THE STATION.
- THE COUNTY'S FOREST CONSERVATION ACT DERIVES FROM THE STATE OF MARYLAND'S NATURAL RESOURCES LAW -NOT A FEDERAL LAW- AND IS PREEMPTED BY THE NGA AND OTHER FEDERAL LAW. SEE ALSO, DOMINION TRANSMISSION V. TOWN OF MYERSVILLE, 982 F. SUPP. 2D 570, 581 (D. MD. 2013)

FOREST CONSERVATION DATA SUMMARY - FEE-IN-LIEU	
FILE NUMBER: WP-16-055	PROJECT NAME: WILLIAMS STATION 190
FEE-IN-LIEU AMOUNT: \$94,784	NET TRACT AREA: 15.26 ACRES
CASH RECEIPT NO.:	
COMMENT: FEE-IN-LIEU FOR 2.29 ACRES OF AFFORESTATION.	

WAIVER APPROVAL:

PER THE LETTER DATED DECEMBER 2, 2015, THE PLANNING DIRECTOR APPROVED THE REQUEST TO WAIVE SECTION 16.155(A)(1)(i) SITE DEVELOPMENT PLAN APPLICABILITY, WHICH STATES THAT A SITE DEVELOPMENT PLAN, APPROVED BY THE DEPARTMENT OF PLANNING AND ZONING IS REQUIRED FOR NEW OR EXPANDED NONRESIDENTIAL DEVELOPMENT, INCLUDING COMMERCIAL, INDUSTRIAL, INSTITUTIONAL, AND UTILITY DEVELOPMENT, PLUS PUBLIC BUILDINGS, SCHOOLS, AND OTHER PUBLIC BUILDINGS, BUT EXCLUDING ROAD, WATER, SEWER OR DRAINAGE IMPROVEMENTS AND DEVELOPMENT ASSOCIATED WITH A USE PERMIT APPROVED BY THE DEPARTMENT IN ACCORDANCE WITH SECTION 128 OF THE ZONING REGULATIONS. THE PLANNING DIRECTOR ALSO APPROVED THE REQUEST TO WAIVE SECTION 16.1201(a) FOREST CONSERVATION DEFINITIONS, WHICH STATES THAT "NET TRACT AREA" MEANS THE TOTAL AREA TO THE NEAREST 1/10 ACRE, WHETHER FORESTED OR NOT, OF A PROPOSED DEVELOPMENT, EXCLUSIVE OF ANY 100-YEAR FLOODPLAIN, UTILITY TRANSMISSION LINE EASEMENTS, OR PRESERVATION PARCEL AS REFERENCED IN THE ZONING REGULATIONS.

SEPTIC DESIGN:

THE SEPTIC DESIGN WILL BE SUBMITTED WITH THE BUILDING PERMIT APPLICATION AND MUST BE APPROVED PRIOR TO HEALTH APPROVAL OF THE BUILDING PERMIT. A SEPTIC PERMIT MUST BE OBTAINED BY THE HEALTH DEPARTMENT PRIOR TO ANY WORK PERFORMED ON THE SEPTIC SYSTEM.

NATURAL RESOURCE PROTECTION

NATURAL RESOURCES ON-SITE INCLUDE THE FLOODPLAIN AND STREAM BUFFER AREAS. DURING CONSTRUCTION, CONSTRUCTION MOVEMENT WITHIN THE FLOODPLAIN AND STREAM BUFFER AREAS WILL BE LIMITED TO WHAT IS NECESSARY TO INSTALL THE IMPROVEMENTS. NO MATERIALS WILL BE STORED WITHIN THE FLOODPLAIN OR STREAM BUFFER AREAS. SILT FENCE OR COMPOST FILTER SOCKS WILL BE INSTALLED ALONG THE PERIMETER FENCE TO PREVENT SEDIMENT FROM LEAVING THE SITE VIA STORMWATER RUNOFF FROM DISTURBED AREAS.

MAINTENANCE OF NATURAL FLOW PATTERNS:

THE NATURAL FLOW PATTERN OF THE SITE IS SHEET FLOW ACROSS THE SITE FROM EAST TO WEST. THE EXISTING SITE CONDITIONS MODIFY THE NATURAL PATTERN SO THAT THE SITE DRAINAGE IS CONVEYED VIA SWALE OR PIPE TO TWO POINT DISCHARGES TO THE FLOODPLAIN LOCATED ON THE WEST-SIDE OF THE SITE. THE DISCHARGED RUNOFF FROM THESE TWO POINT DISCHARGES SURFACE FLOWS THROUGH THE FLOODPLAIN TO A LOW POINT ALONG THE WESTERN FENCE LINE AND DISCHARGES TO THE MIDDLE PATUXENT RIVER. THE PROPOSED IMPROVEMENTS MAINTAINS THE EXISTING DRAINAGE PATTERN. HOWEVER, THE PROPOSED DETENTION REDUCES THE PEAK RATE OF FLOW AT THE LOW POINT FOR STORMS UP TO THE 100-YEAR DESIGN STORM.

REDUCTION OF IMPERVIOUS AREA:

THE AMOUNT OF PROPOSED IMPERVIOUS AREA IS LIMITED TO THE MINIMUM IMPERVIOUS AREA NEEDED TO INSTALL, MAINTAIN AND OPERATE THE PROPOSED GAS IMPROVEMENTS. ADDITIONALLY, THE PROPOSED IMPROVEMENTS ARE LOCATED ADJACENT TO EXISTING IMPERVIOUS AREAS. BY CLUSTERING THE IMPROVEMENTS, THE IMPERVIOUS AREA IS MINIMIZED.

INTEGRATION OF EROSION AND SEDIMENT CONTROLS INTO STORMWATER STRATEGY:

THE EROSION AND SEDIMENT CONTROLS WERE INCORPORATED INTO THE STORMWATER STRATEGY EARLY ON TO MINIMIZE DISTURBED AREAS AND LOCATE THE STOCKPILE AND LAYDOWN AREAS NEEDED TO SUPPORT INSTALLATION OF THE IMPROVEMENTS. THE STOCKPILE AND LAYDOWN AREAS ARE TO BE LOCATED ON THE EAST SIDE OF THE SITE. THIS AREA MINIMIZES DISTURBANCE TO THE STORMWATER FLOW PATTERNS DURING CONSTRUCTION AND ALLOWS THE MAJORITY OF THE IMPROVEMENTS TO BE CONSTRUCTED WITHOUT HAVING TO INCORPORATE ADDITIONAL DISTURBANCE AREA. ONCE CONSTRUCTION IS NEARING COMPLETION AND THE STOCKPILE AND LAYDOWN AREAS ARE NO LONGER NEEDED, THE AREA WILL BE GRADED AS SHOWN ON THE GRADING AND DRAINAGE PLAN. SILT FENCE WILL BE INSTALLED AROUND THE PERIMETER OF THE FENCED AREA TO CONTROL RUNOFF AND CAPTURE SEDIMENT.

ESD PLANNING TECHNIQUES:

ENVIRONMENTAL SITE DESIGN (ESD) TECHNIQUES HAVE BEEN EMPLOYED TO MAINTAIN PRE-DEVELOPMENT RUNOFF CHARACTERISTICS. CHECK DAMS ARE PROPOSED TO BE INSTALLED ALONG THE CONVEYANCE SWALE ALONG THE PERIMETER OF THE IMPROVEMENTS AND TWO DETENTION PONDS ARE PROPOSED TO BE CONSTRUCTED AT EITHER END OF THE SITE. THESE DETENTION MEASURES WILL SLOW THE RATE OF RUNOFF FROM IMPERVIOUS AREAS TO MITIGATE PROJECT IMPACTS TO NATURAL RESOURCES AND MAINTAIN EXISTING DRAINAGE FLOW PATTERNS.

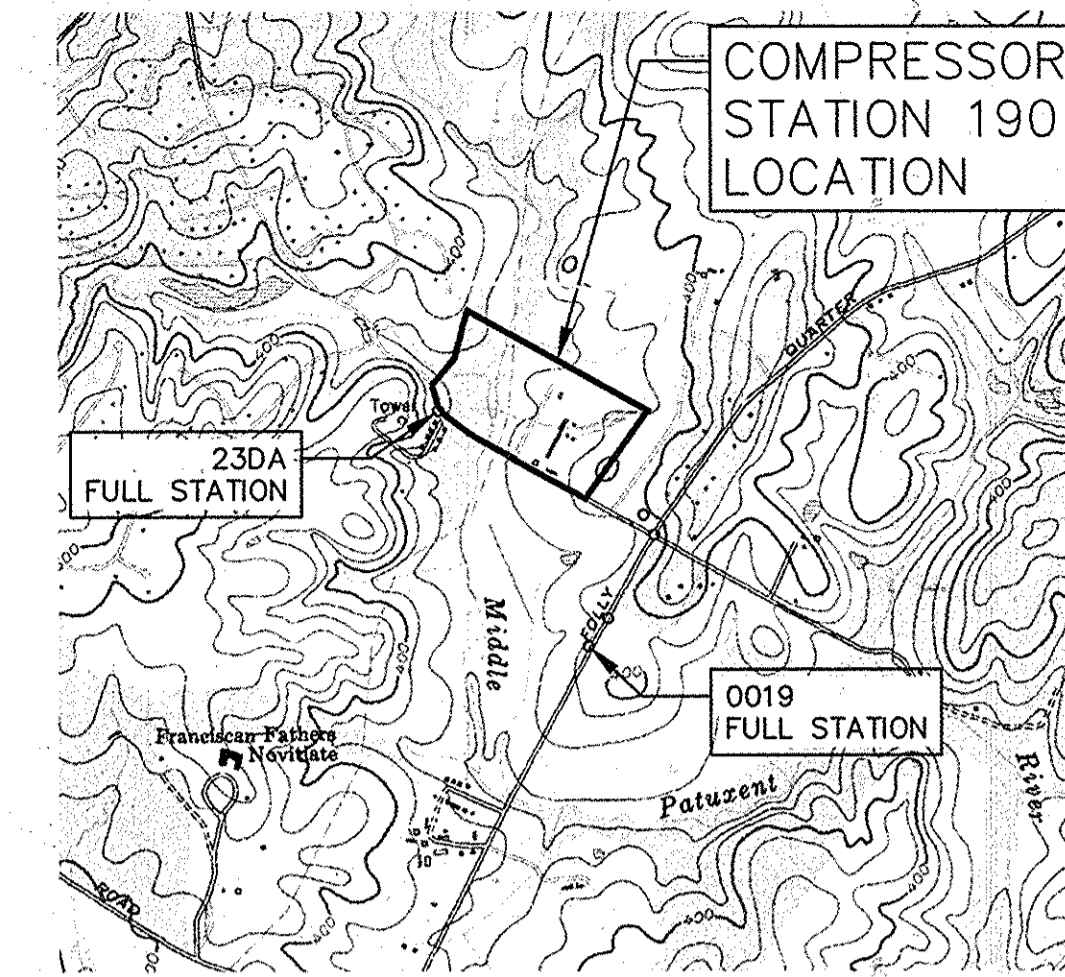
DUE TO THE HIGH GROUNDWATER ELEVATION, ALTERNATIVE STRUCTURAL BEST MANAGEMENT PRACTICES (BMPs) HAVE BEEN PROPOSED TO TREAT THE WATER QUALITY VOLUME AS DESCRIBED IN THE DESIGN NARRATIVE ON THIS SHEET.

STANDARD SEDIMENT CONTROL NOTES:

- A MINIMUM OF 48 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTIONS, LICENSES AND PERMITS, SEDIMENT CONTROL DIVISION PRIOR TO THE START OF ANY CONSTRUCTION (313-1855).
- ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE MOST CURRENT MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL AND REVISIONS THERETO.
- FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN: A) 3 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, PERIMETER SLOPES AND ALL SLOPES GREATER THAN 3:1, B) 7 DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.
- 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 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 DONE WHEN RECOMMENDED SEEDING DATES DO NOT ALLOW FOR PROPER GERMINATION AND ESTABLISHMENT OF GRASSES.
- ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMISSION FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
- SITE ANALYSIS:

TOTAL AREA OF SITE	52.09 ACRES
AREA WITHIN FLOODPLAIN	22.70 ACRES
AREA OUTSIDE FLOODPLAIN	28.15 ACRES
FLOODPLAIN BUFFER AREA	0.92 ACRES
FORESTED AREA	0.00 ACRES
AREA WITH STEEP SLOPES (>15%)	0.50 ACRES
AREA DISTURBED	15.62 ACRES
EXISTING IMPERVIOUS AREA	7.35 ACRES
AREA TO BE ROOFED, PAVED OR GRAVELED	3.12 ACRES
AREA TO BE VEGETATIVELY STABILIZED	11.77 ACRES
PERCENT IMPERVIOUS (OUTSIDE FLOODPLAIN)	26 %
TOTAL CUT	5,600 CU. YDS.
TOTAL FILL	6,000 CU. YDS.
OFFSITE WASTE/BORROW AREA LOCATION	SOIL TO REMAIN ONSITE

- ANY SEDIMENT CONTROL PRACTICE THAT IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.
- ADDITIONAL SEDIMENT CONTROL MUST BE PROVIDED, IF DEEMED NECESSARY BY THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
- ON ALL SITES WITH DISTURBED AREAS IN EXCESS OF 2 ACRES, APPROVAL OF THE INSPECTION AGENCY SHALL BE REQUESTED UPON COMPLETION OF INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROL, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING. OTHER BUILDING OR GRADING INSPECTION APPROVALS MAY NOT BE AUTHORIZED UNTIL THIS INITIAL APPROVAL BY THE INSPECTION AGENCY IS MADE.
- TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO THREE PIPE LENGTHS OR THAT WHICH SHALL BE BACK-FILLED AND STABILIZED BY THE END OF EACH WORKDAY, WHICHEVER IS SHORTER.
- ANY CHANGES OR REVISIONS TO THE SEQUENCE OF CONSTRUCTION MUST BE REVIEWED AND APPROVED BY THE PLAN APPROVAL AUTHORITY PRIOR TO PROCEEDING WITH CONSTRUCTION.
- 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 ENFORCEMENT AUTHORITY. UNLESS OTHERWISE SPECIFIED AND APPROVED BY THE APPROVAL AUTHORITY, NO MORE THAN 30 ACRES CUMULATIVELY MAY BE DISTURBED AT A GIVEN TIME.



VICINITY MAP
SCALE: 1"=2,000'
ADC MAP COORDINATES: PAGE 25, GRID E1 & PAGE 18, GRID F8.
HOWARD COUNTY GEODETIC COORDINATES:
23DA - 582416.919N, 1332809.009E
0019 - 580468.144N, 1333675.544E

HOWARD COUNTY GENERAL NOTES:

- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS MSHA STANDARDS AND SPECIFICATIONS IF APPLICABLE.
- 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 WORK.
- THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK BEING DONE.
- THE EXISTING TOPOGRAPHY IS TAKEN FROM FIELD RUN SURVEY WITH ONE FOOT CONTOUR INTERVALS PREPARED BY WILLIAMS IN APRIL 2015.
- 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. 23DM4 AND 23DM1 WERE USED FOR THIS PROJECT.
- WATER IS PRIVATE.
- SEWER IS PRIVATE.
- STORMWATER MANAGEMENT FACILITIES ARE OWNED AND MAINTAINED BY TRANSCONTINENTAL GAS PIPE LINE COMPANY, LLC.
- EXISTING UTILITIES ARE BASED ON RECORD INFORMATION AND FIELD SURVEY PERFORMED IN APRIL 2015.
- THE FLOODPLAIN LIMIT IS FROM THE HOWARD COUNTY GIS DATASET.
- THERE ARE NO WETLANDS ON THIS SITE.
- NO TRAFFIC STUDY IS REQUIRED FOR THIS PROJECT.
- NO SPECIMEN TREES ARE LOCATED ON THE PROPERTY.

SEQUENCE OF CONSTRUCTION:

- REQUEST FOR A PRE-CONSTRUCTION MEETING WITH HOWARD COUNTY.
- CLEARING AND GRUBBING AS NECESSARY FOR THE INSTALLATION OF PERIMETER CONTROLS.
- CONSTRUCTION AND STABILIZATION OF PERIMETER CONTROLS.
- REMAINING, CLEARING AND GRUBBING WITHIN INSTALLED PERIMETER CONTROLS.
- ROAD GRADING.
- GRADING FOR THE REMAINDER OF THE SITE.
- UTILITY INSTALLATION AND CONNECTIONS TO EXISTING STRUCTURES.
- CONSTRUCTION OF BUILDINGS, ROADS, AND OTHER CONSTRUCTION.
- FINAL GRADING, LANDSCAPING, AND STABILIZATION.
- INSTALLATION OF STORMWATER MANAGEMENT MEASURES.
- APPROVAL OF HOWARD COUNTY PRIOR TO REMOVAL OF SEDIMENT CONTROLS.
- REMOVAL OF CONTROLS AND STABILIZATION OF AREAS THAT ARE DISTURBED BY REMOVAL OF SEDIMENT CONTROLS.

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chief, Development Engineering Division
3-2-16
DATE

Chief, Division of Land Development
3-3-16
DATE

Director
3-9-16
DATE

PROPERTY INFORMATION:

LOT/PARCEL #: 03297608
ZONING: DEC-DEO
ELECTION DISTRICT: COUNCIL 5
TAX MAP: MAP 23, GRID 7, PARCEL 90

SUBMITTED UNDER AND SUBJECT TO OWNER'S RIGHTS AND/OR CLAIMS OF PREEMPTION UNDER THE NATURAL GAS ACT AND FEDERAL AUTHORITIES.

FOR PERMITTING PURPOSES ONLY NOT RELEASED FOR CONSTRUCTION

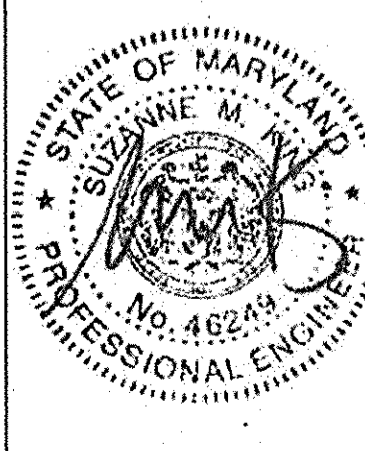
CALL BEFORE YOU DIG!
MARYLAND LAW REQUIRES 48 HOURS NOTICE BEFORE PLANNED WORK TO MARK UNDERGROUND UTILITIES PRIOR TO EXCAVATION.
MISS UTILITY: 1-800-257-7777

OWNER:

WILLIAMS
ONE WILLIAMS CENTER
TULSA, OKLAHOMA 74122
PHONE: 800-945-5426

ENGINEER:

BL COMPANIES
100 RIVER RIDGE DR.
SUITE 105
NORWOOD, MA 02062
CONTACT: SUZ KING
PHONE: 781-619-9503



REVISIONS					
NO.	DATE	BY	DESCRIPTION	W.G. NO.	CHK. APP.
0	10/16/2015	BL	SUBMITTED TO HOWARD COUNTY PLANNING & ZONING FOR REVIEW	116151	SN / SKK
1	01/29/2016	BL	SUBMITTED TO HOWARD COUNTY AS ORIGINAL MILLAR FOR WP-16-055	116151	SN / SKK

TRANSCONTINENTAL GAS PIPELINE COMPANY LLC
ATLANTIC SUNRISE PROJECT
COMPRESSOR STATION 190 IMPROVEMENTS
11910 CARROLL MILL ROAD ELICOTT CITY, HOWARD COUNTY, MARYLAND

ENVIRONMENTAL CONCEPT PLAN

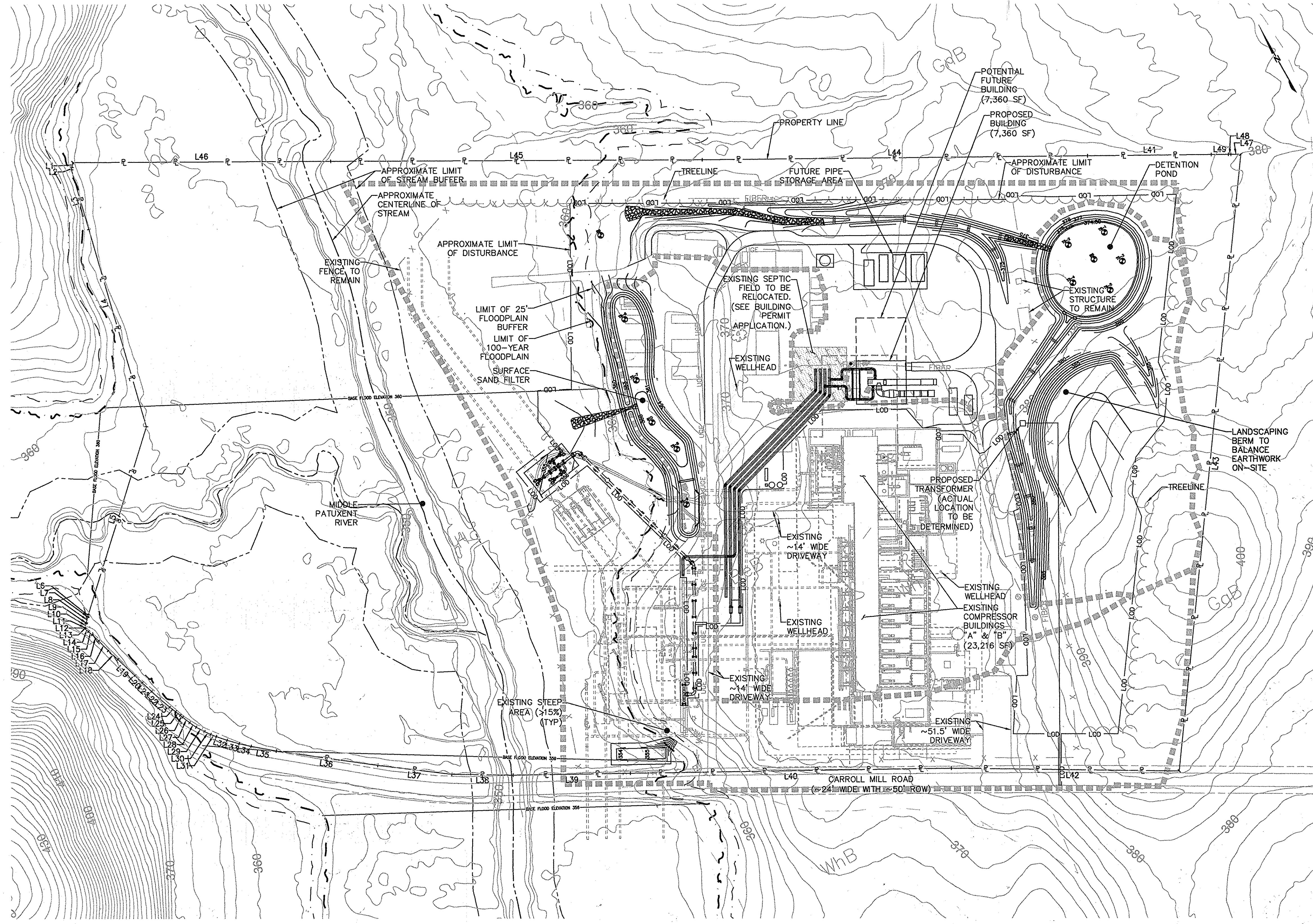
COVER SHEET

DRAWN BY: HP/TE DATE: 10/05/15 ISSUED FOR: SCALE: AS NOTED

CHECKED BY: SN DATE: 10/09/15 DRAWING FOR CONSTRUCTION: REVISION: 1

APPROVED BY: SKK DATE: 10/16/15 DRAWING NUMBER: (66-0190)F-1A-9/ (66-0190)F-1A-11 SHEET 1 OF 9

Drawing Location & Name: G:\OBST14\14C14C4809 DWG\Facilities\Station 190 FCS_ECP_14C4809_190.dwg
 Drawn By & Date/Time: Sking Feb 29, 2016 - 10:30:00am



Line #	Length	Direction
L1	8.7	N39° 39' 36.30"E
L2	5.0	N39° 37' 44.42"E
L3	115.0	N12° 59' 56.76"E
L4	381.4	N13° 00' 01.90"E
L5	364.4	N46° 18' 33.36"E
L6	3.8	N45° 28' 34.07"E
L7	1.3	N45° 00' 00.00"E
L8	10.3	N43° 13' 42.71"E
L9	2.0	N42° 36' 50.60"E
L10	7.6	N42° 21' 53.34"E
L11	0.3	N43° 01' 30.24"E
L12	0.3	N41° 11' 09.33"E
L13	1.6	N44° 15' 21.39"E
L14	8.5	N23° 23' 06.80"W
L15	9.1	N18° 18' 54.30"W
L16	16.7	N17° 53' 51.59"W
L17	25.4	N15° 21' 32.77"W
L18	23.9	N17° 51' 55.54"W
L19	43.5	N17° 23' 04.87"W
L20	19.1	N16° 01' 09.97"W
L21	23.6	N17° 12' 54.34"W
L22	20.5	N18° 38' 02.84"W
L23	23.9	N20° 32' 36.22"W
L24	13.9	N23° 24' 35.18"W
L25	10.9	N22° 37' 11.51"W
L26	5.5	N22° 36' 28.56"W
L27	16.4	N21° 59' 44.87"W
L28	14.8	N26° 24' 34.70"W
L29	17.4	N33° 02' 03.10"W
L30	12.4	N34° 50' 21.40"W
L31	11.1	N38° 51' 12.15"W
L32	21.1	N42° 01' 35.92"W
L33	23.4	N44° 33' 32.66"W
L34	22.4	N47° 54' 15.87"W
L35	47.4	N50° 18' 54.50"W
L36	189.0	N52° 38' 33.56"W
L37	137.5	N53° 53' 15.43"W
L38	113.4	N59° 56' 31.62"W
L39	216.2	N61° 40' 42.66"W
L40	582.5	N61° 40' 40.89"W
L41	228.5	N61° 22' 06.89"W
L42	420.8	N60° 04' 13.98"W
L43	1150.5	N34° 52' 29.38"E
L44	710.8	N61° 21' 48.55"W
L45	685.6	N61° 01' 04.25"W
L46	476.0	N61° 01' 10.69"W
L47	18.2	N61° 19' 32.02"W
L48	4.8	N61° 19' 54.52"W
L49	31.5	N61° 21' 48.42"W

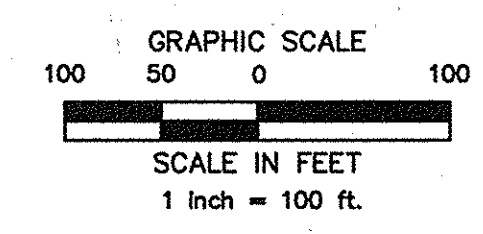
SITE SOIL TYPES

BeB	BENEVOLA SILT LOAMS, 3 TO 8 PERCENT SLOPES
GgB	GLENELG LOAMS, 3 TO 8 PERCENT SLOPES
GnB	GLENVILLE-BAILE SILT LOAMS, 0 TO 8 PERCENT SLOPES
Ho	HATBORO-CODORUS SILT LOAMS, 0 TO 3 PERCENT SLOPES
WhA	WILTSHIRE SILT LOAM, 0 TO 3 PERCENT SLOPES
WhB	WILTSHIRE SILT LOAM, 3 TO 8 PERCENT SLOPES

LEGEND

	PROPERTY BOUNDARY
	LIMIT OF DISTURBANCE (APPROXIMATE)
	EXISTING MAJOR CONTOUR (10' INTERVAL)
	EXISTING MINOR CONTOUR (2' INTERVAL)
	FENCE
	SOIL BOUNDARY
	SOIL TYPE DESIGNATION
	TREELINE
	CENTERLINE STREAM/STREAM BUFFER
	SPOT ELEVATION
	TREE OR BUSH
	EXISTING ELECTRIC LINE
	UTILITY POLE AND UTILITY LINE
	GUY POLE
	GUY POLE OR ANCHOR
	POST
	SIGN
	WATER WELL
	UTILITY BOX
	MONUMENT (PROPERTY BOUNDARY MARKER)
	IRON PIPE OR PIN (PROPERTY BOUNDARY MARKER)
	RIGHT-OF-WAY
	EXISTING ROAD
	100-YR BASE FLOOD ELEVATION
	25' FLOODPLAIN BUFFER
	PROPOSED MAJOR CONTOUR (5' INTERVAL)
	PROPOSED MAJOR CONTOUR (1' INTERVAL)
	TEST PIT LOCATION
	EXISTING AREAS WITH SLOPES GREATER THAN 15%
	PROPOSED WATERSHED BOUNDARY

- ### NOTES:
- EXISTING TOPOGRAPHY SHOWN ON OVERALL PROJECT AREA PLAN IS FROM HOWARD COUNTY GIS, MAP 23.
 - PROPERTY BOUNDARY IS FROM HOWARD COUNTY GIS. BEARINGS AND DISTANCES SHOWN FOR REFERENCE ONLY.
 - THE "-----" LINETYPE FOR THE PROPERTY LINE IS USED IN LIEU OF THE COUNTY STANDARD LINETYPE TO BE IN COMPLIANCE WITH THE WILLIAMS CAD MAPPING STANDARDS & GENERAL GUIDELINES FOR DRAFTING. THIS ALTERNATIVE LINETYPE IS REQUIRED BY WILLIAMS TO STANDARDIZE PLANS ACROSS MULTIPLE JURISDICTIONS.



APPROVED- DEPARTMENT OF PLANNING AND ZONING	
	3-2-16
CHIEF, DEVELOPMENT ENGINEERING DIVISION	DATE
	3-3-16
CHIEF, DIVISION OF LAND DEVELOPMENT	DATE
	3-3-16
DIRECTOR	DATE

SUBMITTED UNDER AND SUBJECT TO OWNER'S RIGHTS AND/OR CLAIMS OF PREEMPTION UNDER THE NATURAL GAS ACT AND FEDERAL AUTHORITIES.

FOR PERMITTING PURPOSES ONLY NOT RELEASED FOR CONSTRUCTION

CALL BEFORE YOU DIG!
 MARYLAND LAW REQUIRES 48 HOURS NOTICE BEFORE PLANNED WORK TO MARK UNDERGROUND UTILITIES PRIOR TO EXCAVATION.
 MISS UTILITY: 1-800-257-7777

OWNER:
 WILLIAMS
 ONE WILLIAMS CENTER
 TULSA, OKLAHOMA 74172
 PHONE: 800-945-5426

ENGINEER:

 BL COMPANIES
 100 RIVER RIDGE DR.
 SUITE 105
 NORWOOD, MA 02062
 CONTACT: SUZ KING
 PHONE: 781-619-9503

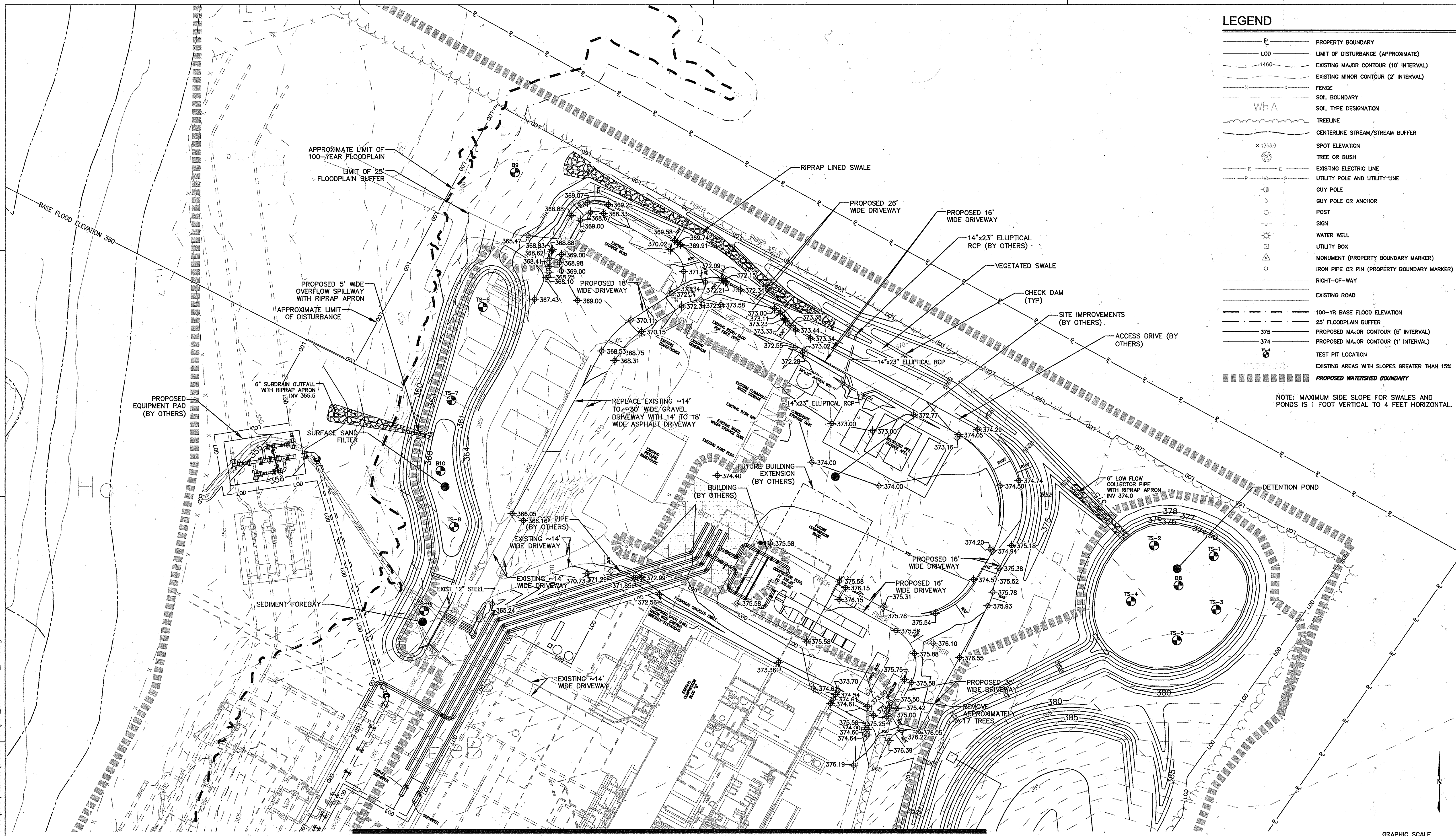
REVISIONS				NO.	CHK.	APP.
NO.	DATE	BY	DESCRIPTION	NO.	CHK.	APP.
0	10/16/2015	BL	SUBMITTED TO HOWARD COUNTY PLANNING & ZONING FOR REVIEW	116151	SN	SMK
1	01/29/2016	BL	SUBMITTED TO HOWARD COUNTY AS ORIGINAL W/PLANS FOR WP-16-055	116151	SN	SMK

TRANSCONTINENTAL GAS PIPELINE COMPANY LLC ATLANTIC SUNRISE PROJECT COMPRESSOR STATION 190 IMPROVEMENTS 11910 CARROLL MILL ROAD ELLICOTT CITY, HOWARD COUNTY, MARYLAND ENVIRONMENTAL CONCEPT PLAN OVERALL PROJECT AREA PLAN			
DRAWN BY: HP/IE	DATE: 10/05/15	ISSUED FOR BID:	SCALE: AS NOTED
CHECKED BY: SM	DATE: 10/09/15	ISSUED FOR CONSTRUCTION:	REVISION: 2
APPROVED BY: SMK	DATE: 10/16/15	DRAWING NUMBER: (66-0190)F-1A-11	SHEET 2 OF 9

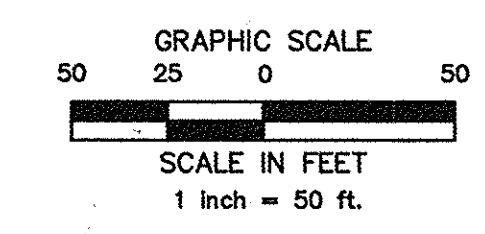
WP-16-055

LEGEND	
	PROPERTY BOUNDARY
	LIMIT OF DISTURBANCE (APPROXIMATE)
	EXISTING MAJOR CONTOUR (10' INTERVAL)
	EXISTING MINOR CONTOUR (2' INTERVAL)
	FENCE
	SOIL BOUNDARY
	SOIL TYPE DESIGNATION
	TREELINE
	CENTERLINE STREAM/STREAM BUFFER
	SPOT ELEVATION
	TREE OR BUSH
	EXISTING ELECTRIC LINE
	UTILITY POLE AND UTILITY-LINE
	GUY POLE
	GUY POLE OR ANCHOR
	POST
	SIGN
	WATER WELL
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	IRON PIPE OR PIN (PROPERTY BOUNDARY MARKER)
	RIGHT-OF-WAY
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	25' FLOODPLAIN BUFFER
	PROPOSED MAJOR CONTOUR (5' INTERVAL)
	PROPOSED MAJOR CONTOUR (1' INTERVAL)
	TEST PIT LOCATION
	EXISTING AREAS WITH SLOPES GREATER THAN 15%
	PROPOSED WATERSHED BOUNDARY

NOTE: MAXIMUM SIDE SLOPE FOR SWALES AND PONDS IS 1 FOOT VERTICAL TO 4 FEET HORIZONTAL.



MATCH LINE: SEE SHEET NO. 4



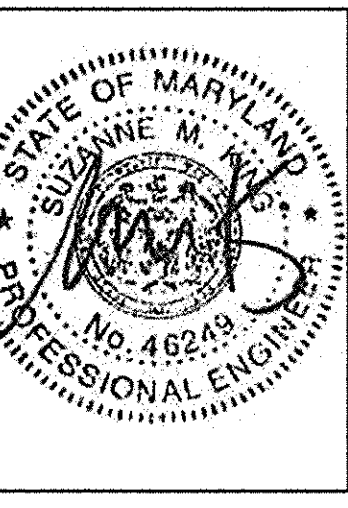
APPROVED: DEPARTMENT OF PLANNING AND ZONING
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
 DATE: 3-2-16
 CHIEF, DIVISION OF LAND DEVELOPMENT
 DATE: 3-3-16
 DIRECTOR
 DATE: 3-3-16

PROPERTY INFORMATION:
 LOT/PARCEL #: 03297608
 ZONING: RC-DEO
 ELECTION DISTRICT: COUNCIL 5
 TAX MAP: MAP 23, GRID 7, PARCEL 90

SUBMITTED UNDER AND SUBJECT TO OWNER'S RIGHTS AND/OR CLAIMS OF PREEMPTION UNDER THE NATURAL GAS ACT AND FEDERAL AUTHORITIES.
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OWNER:
 WILLIAMS
 ONE WILLIAMS CENTER
 TULSA, OKLAHOMA 74172
 PHONE: 800-945-5426

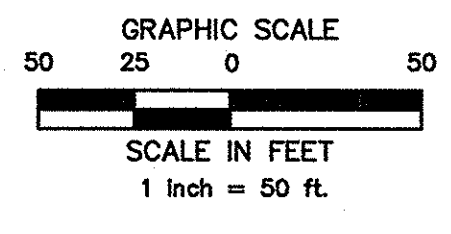
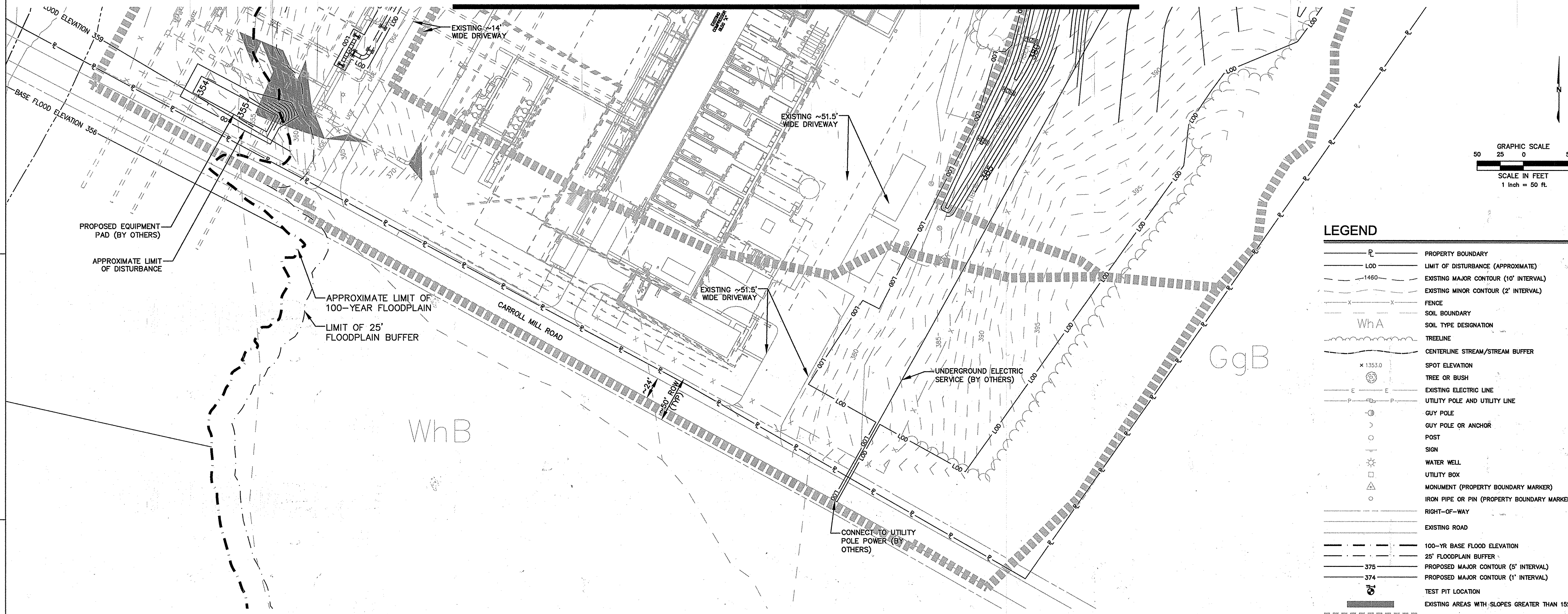
ENGINEER:
 BL COMPANIES
 100 RIVER RIDGE DR.
 SUITE 105
 NORWOOD, MA 02062
 CONTACT: SUZ KING
 PHONE: 781-619-9503



REVISIONS			
NO.	DATE	BY	DESCRIPTION
0	10/16/2015	RL	SUBMITTED TO HOWARD COUNTY PLANNING & ZONING FOR REVIEW
1	01/20/2016	RL	SUBMITTED TO HOWARD COUNTY AS ORIGINAL W/LAR FOR WP-16-055

TRANSCONTINENTAL GAS PIPELINE COMPANY LLC
 ATLANTIC SUNRISE PROJECT
 COMPRESSOR STATION 190 IMPROVEMENTS
 11910 CARROLL MILL ROAD ELLICOTT CITY, HOWARD COUNTY, MARYLAND
 ENVIRONMENTAL CONCEPT PLAN
 GRADING AND DRAINAGE PLAN
 DRAWN BY: HP/TE DATE: 10/05/15 ISSUED FOR BID: SCALE: AS NOTED
 CHECKED BY: SN DATE: 10/09/15 ISSUED FOR CONSTRUCTION: REVISION: 2
 APPROVED BY: SMK DATE: 10/16/15 DRAWING NUMBER: (66-0190)F-1A-11 SHEET 3 OF 3
 W.C. 1161511

Drawn By & Date/Time: Sking Feb 23, 2016 - 10:31am
 Drawing Location & Name: G:\OBS\14\14C\14C4909\DWG\Facilities Station 190 FOS_ECP_4C4909_190.dwg



LEGEND

	PROPERTY BOUNDARY
	LIMIT OF DISTURBANCE (APPROXIMATE)
	EXISTING MAJOR CONTOUR (10' INTERVAL)
	EXISTING MINOR CONTOUR (2' INTERVAL)
	FENCE
	SOIL BOUNDARY
	SOIL TYPE DESIGNATION
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	EXISTING ROAD
	100-YR BASE FLOOD ELEVATION
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	PROPOSED MAJOR CONTOUR (5' INTERVAL)
	PROPOSED MAJOR CONTOUR (1' INTERVAL)
	TEST PIT LOCATION
	EXISTING AREAS WITH SLOPES GREATER THAN 15%
	PROPOSED WATERSHED BOUNDARY

Drawn By & Date/Time: Sking Feb 23, 2016 - 10:31am
 Drawing Location & Name: G:\JOBS\14\14C\14C4909\DWG\Facilities\Station 190\FCS_ECP_404909_190.dwg

APPROVED: DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION
 DATE: 3-2-16

CHIEF, DIVISION OF LAND DEVELOPMENT
 DATE: 3-3-16

DIRECTOR
 DATE: 3-3-16

PROPERTY INFORMATION:

LOT/PARCEL #: 03297608
 ZONING: RC-DEO
 ELECTION DISTRICT: COUNCIL 5
 TAX MAP: MAP 23, GRID 7, PARCEL 90

SUBMITTED UNDER AND SUBJECT TO OWNER'S RIGHTS AND/OR CLAIMS OF PREEMPTION UNDER THE NATURAL GAS ACT AND FEDERAL AUTHORITIES.

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CALL BEFORE YOU DIG!
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 MISS UTILITY: 1-800-257-7777

OWNER:

WILLIAMS
 ONE WILLIAMS CENTER
 TULSA, OKLAHOMA 74172
 PHONE: 800-945-5426

ENGINEER:

BL COMPANIES
 100 RIVER RIDGE DR.
 SUITE 105
 NORWOOD, MA 02062
 CONTACT: SUZ KING
 PHONE: 781-619-9503



REVISIONS

NO.	DATE	BY	DESCRIPTION	W.D. NO.	CHK.	APP.
0	10/15/2015	BL	SUBMITTED TO HOWARD COUNTY PLANNING & ZONING FOR REVIEW	116151	SN	SMK
1	01/20/2016	BL	SUBMITTED TO HOWARD COUNTY AS ORIGINAL W/LAR FOR WP-16-055	116151	SN	SMK

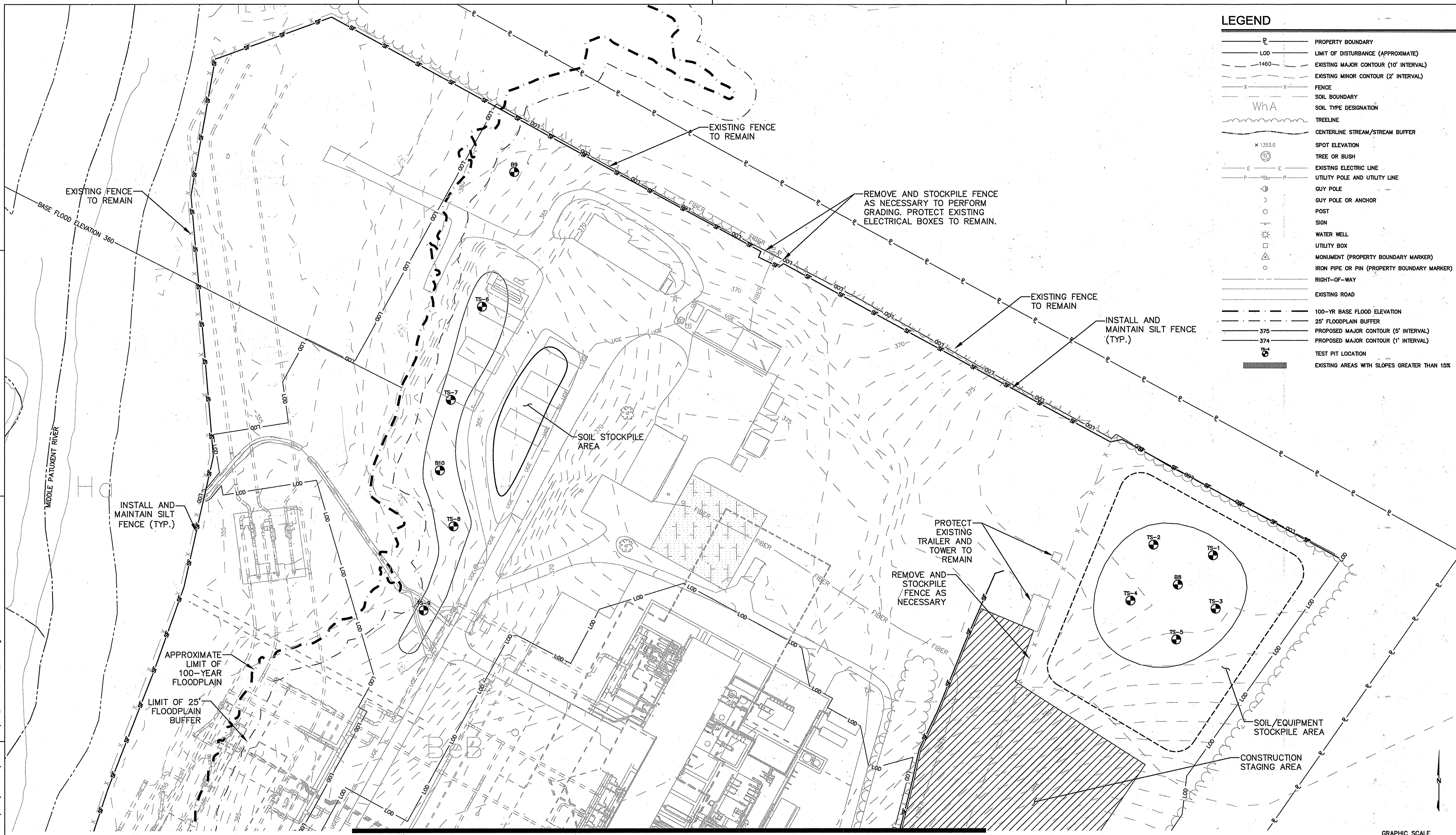
TRANSCONTINENTAL GAS PIPELINE COMPANY LLC
 ATLANTIC SUNRISE PROJECT
 COMPRESSOR STATION 190 IMPROVEMENTS
 11910 CARROLL MILL ROAD ELLICOTT CITY, HOWARD COUNTY, MARYLAND

ENVIRONMENTAL CONCEPT PLAN
 GRADING AND DRAINAGE PLAN

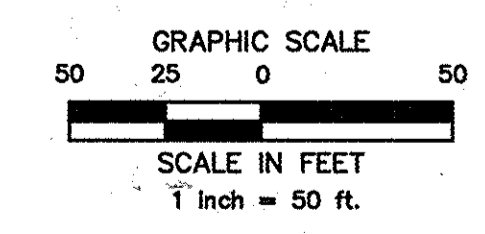
DRAWN BY: HP/IE	DATE: 10/05/15	ISSUED FOR BID:	SCALE: AS NOTED
CHECKED BY: SN	DATE: 10/09/15	ISSUED FOR CONSTRUCTION:	REVISION: 2
APPROVED BY: SMK	DATE: 10/16/15	DRAWING NUMBER: (66-0190)F-1A-11	SHEET 4 OF 9

LEGEND

	PROPERTY BOUNDARY
	LIMIT OF DISTURBANCE (APPROXIMATE)
	EXISTING MAJOR CONTOUR (10' INTERVAL)
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	FENCE
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	PROPOSED MAJOR CONTOUR (5' INTERVAL)
	PROPOSED MAJOR CONTOUR (1' INTERVAL)
	TEST PIT LOCATION
	EXISTING AREAS WITH SLOPES GREATER THAN 15%



MATCH LINE: SEE SHEET NO. 4



APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chad Phillips 3-2-16
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

Keith Deane 3-3-16
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

Valerie J. J... 3-3-16
DIRECTOR DATE

PROPERTY INFORMATION:

LOT/PARCEL #: 03297608
ZONING: RC-DEO
ELECTION DISTRICT: COUNCIL 5
TAX MAP: MAP 23, GRID 7, PARCEL 90

SUBMITTED UNDER AND SUBJECT TO OWNER'S RIGHTS AND/OR CLAIMS OF PREEMPTION UNDER THE NATURAL GAS ACT AND FEDERAL AUTHORITIES.

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MARYLAND LAW REQUIRES 48 HOURS NOTICE BEFORE PLANNED WORK TO MARK UNDERGROUND UTILITIES PRIOR TO EXCAVATION.
MISS UTILITY: 1-800-257-7777

OWNER:

WILLIAMS
ONE WILLIAMS CENTER
TULSA, OKLAHOMA 74172
PHONE: 800-945-5426

ENGINEER:

BL COMPANIES
100 RIVER RIDGE DR.
SUITE 105
NORWOOD, MA 02062
CONTACT: SUZ KING
PHONE: 781-619-9503



REVISIONS			
NO.	DATE	BY	DESCRIPTION
0	10/15/2015	RL	SUBMITTED TO HOWARD COUNTY PLANNING & ZONING FOR REVIEW
1	01/20/2016	RL	SUBMITTED TO HOWARD COUNTY AS ORIGINAL W/LAR FOR W-16-005

NO.	DATE	BY	DESCRIPTION
1161511	SN	SMK	
1161511	SN	SMK	

TRANSCONTINENTAL GAS PIPELINE COMPANY LLC
ATLANTIC SUNRISE PROJECT
COMPRESSOR STATION 190 IMPROVEMENTS
11910 CARROLL MILL ROAD ELLICOTT CITY, HOWARD COUNTY, MARYLAND

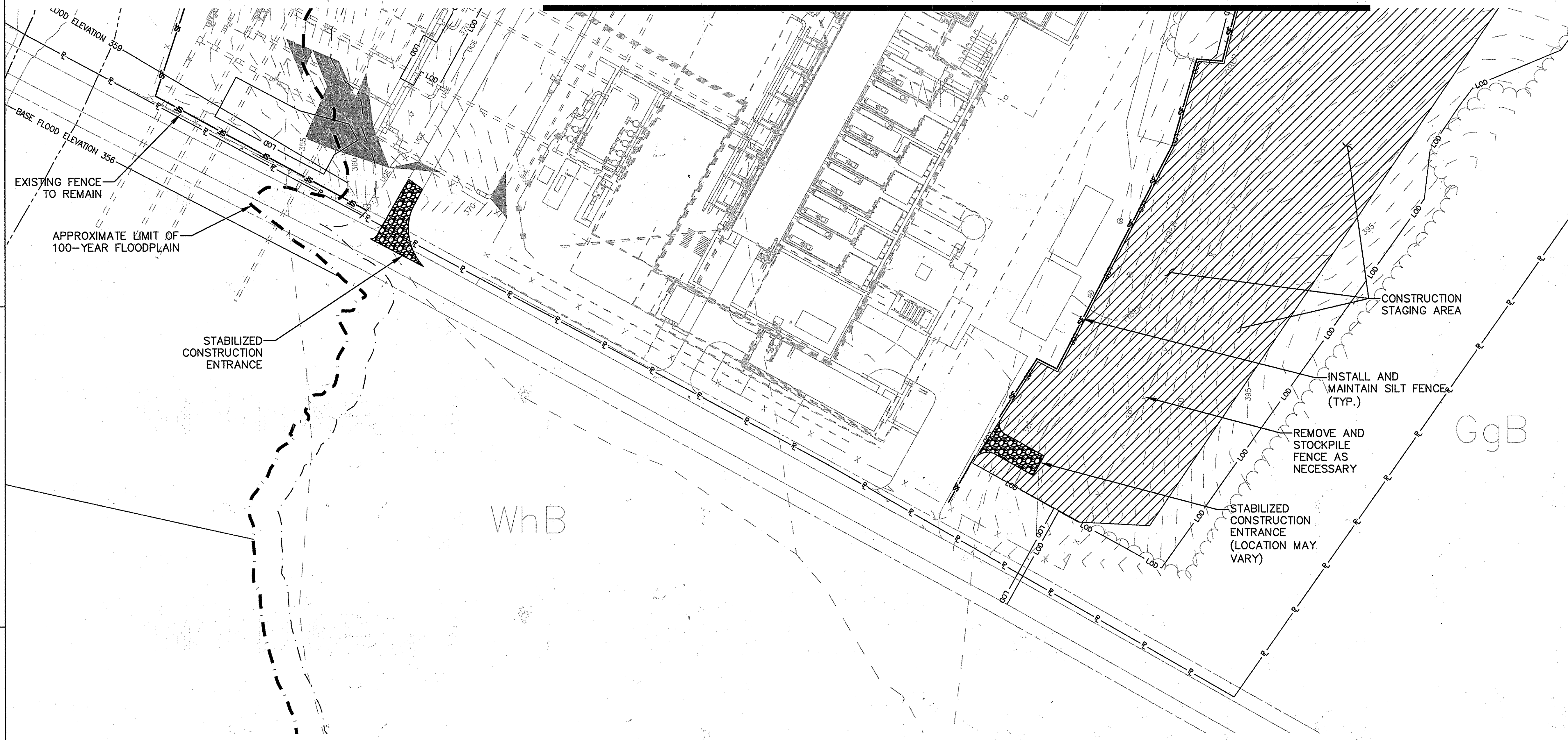
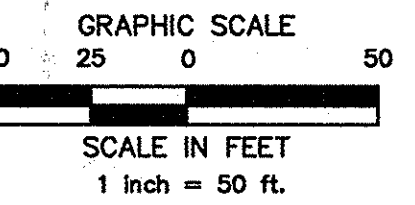
ENVIRONMENTAL CONCEPT PLAN
SOIL EROSION AND SEDIMENT CONTROL

Williams

DRAWN BY: HP/TE	DATE: 10/05/15	ISSUED FOR BID:	SCALE: AS NOTED
CHECKED BY: SN	DATE: 10/09/15	ISSUED FOR CONSTRUCTION:	REVISION: 2
APPROVED BY: SMK	DATE: 10/16/15	DRAWING NUMBER: (66-0190)F-1A-11	SHEET 5 OF 9

WC: 1161511

Drawn By & Date/Time: Sking Feb 29, 2016 - 10:32am
 Drawing Location & Name: G:\OBIS14\14C\14C4909\DWG\Facilities\Station 190 FCS_ECP14C4909_190.dwg



LEGEND

	PROPERTY BOUNDARY
	LIMIT OF DISTURBANCE (APPROXIMATE)
	EXISTING MAJOR CONTOUR (10' INTERVAL)
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	FENCE
	SOIL BOUNDARY
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	TEST PIT LOCATION
	EXISTING AREAS WITH SLOPES GREATER THAN 15%

Drawn By & Date/Time: Sking Feb. 23, 2016 - 10:33am
 Drawing Location & Name: G:\DBS14\14C\14C4909\DWG\Facilities\Station 190\FCS_ECP\14C4909_190.dwg

APPROVED: DEPARTMENT OF PLANNING AND ZONING	
	3-2-16
CHIEF, DEVELOPMENT ENGINEERING DIVISION	DATE
	3-3-16
CHIEF, DIVISION OF LAND DEVELOPMENT	DATE
	3-3-16
DIRECTOR	DATE

PROPERTY INFORMATION:

LOT/PARCEL #: 03297608

ZONING: RC-DEO

ELECTION DISTRICT: COUNCIL 5

TAX MAP: MAP 23, GRID 7, PARCEL 90

SUBMITTED UNDER AND SUBJECT TO OWNER'S RIGHTS AND/OR CLAIMS OF PREEMPTION UNDER THE NATURAL GAS ACT AND FEDERAL AUTHORITIES.

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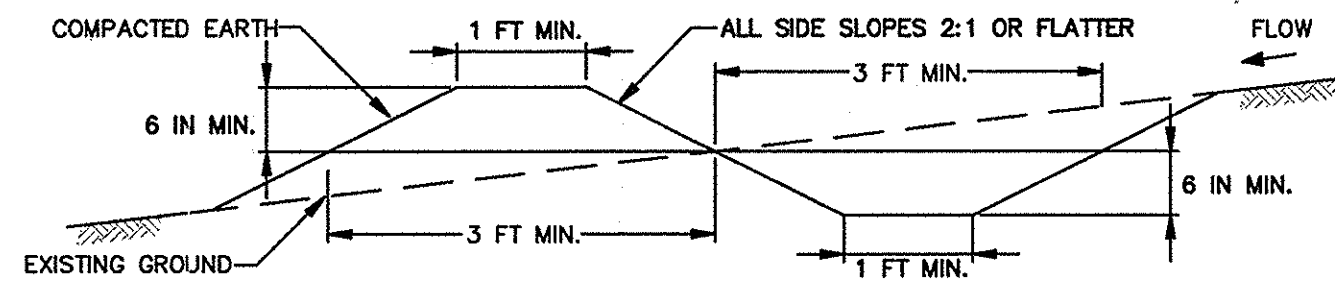
REVISIONS			
NO.	DATE	BY	DESCRIPTION
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1	01/29/2016	SL	SUBMITTED TO HOWARD COUNTY AS ORIGINAL W/LAR FOR WP-19-066

TRANSCONTINENTAL GAS PIPELINE COMPANY LLC
 ATLANTIC SUNRISE PROJECT
 COMPRESSOR STATION 190 IMPROVEMENTS
 11910 CARROLL MILL ROAD ELLICOTT CITY, HOWARD COUNTY, MARYLAND

ENVIRONMENTAL CONCEPT PLAN

SOIL EROSION AND SEDIMENT CONTROL

DRAWN BY: HP/TE	DATE: 10/05/15	ISSUED FOR BID:	SCALE: AS NOTED
CHECKED BY: SM	DATE: 10/09/15	ISSUED FOR CONSTRUCTION:	REVISION: 2
APPROVED BY: SMK	DATE: 10/16/15	DRAWING NUMBER: (66-0190)F-1A-11	SHEET 6 OF 9
WC: 1161511			

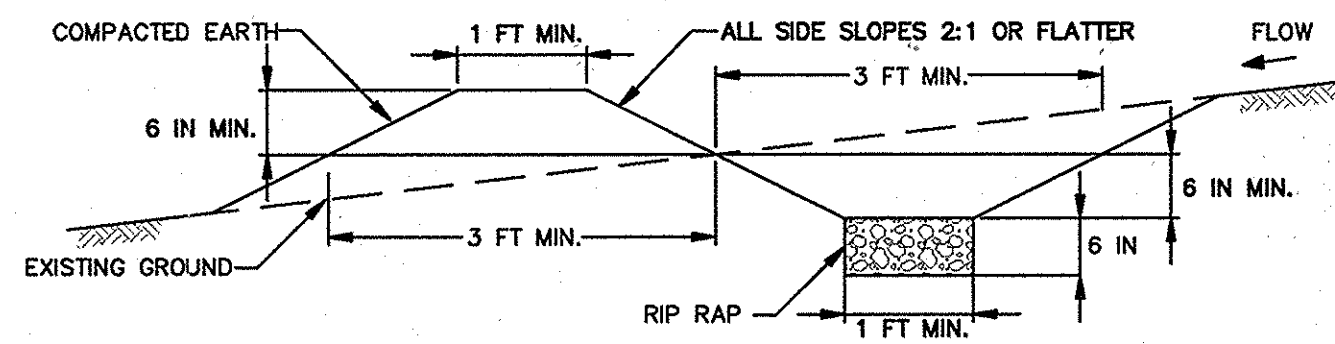


CROSS-SECTION

- NOTES:
1. REMOVE AND DISPOSE OF ALL TREES, BRUSH, STUMPS, OBSTRUCTIONS, AND OTHER OBJECTIONABLE MATERIAL SO AS NOT TO INTERFERE WITH PROPER FUNCTION OF SWALE.
 2. EXCAVATE OR SHAPE SWALE TO LINE, GRADE, AND CROSS SECTION AS SPECIFIED. BANK PROJECTIONS OR OTHER IRREGULARITIES ARE NOT ALLOWED.
 3. COMPACT FILL.
 4. CONSTRUCT SWALE ON AN UNINTERRUPTED, CONTINUOUS GRADE, ADJUSTING THE LOCATION DUE TO FIELD CONDITIONS AS NECESSARY TO MAINTAIN POSITIVE DRAINAGE.

VEGETATED SWALE

N.T.S

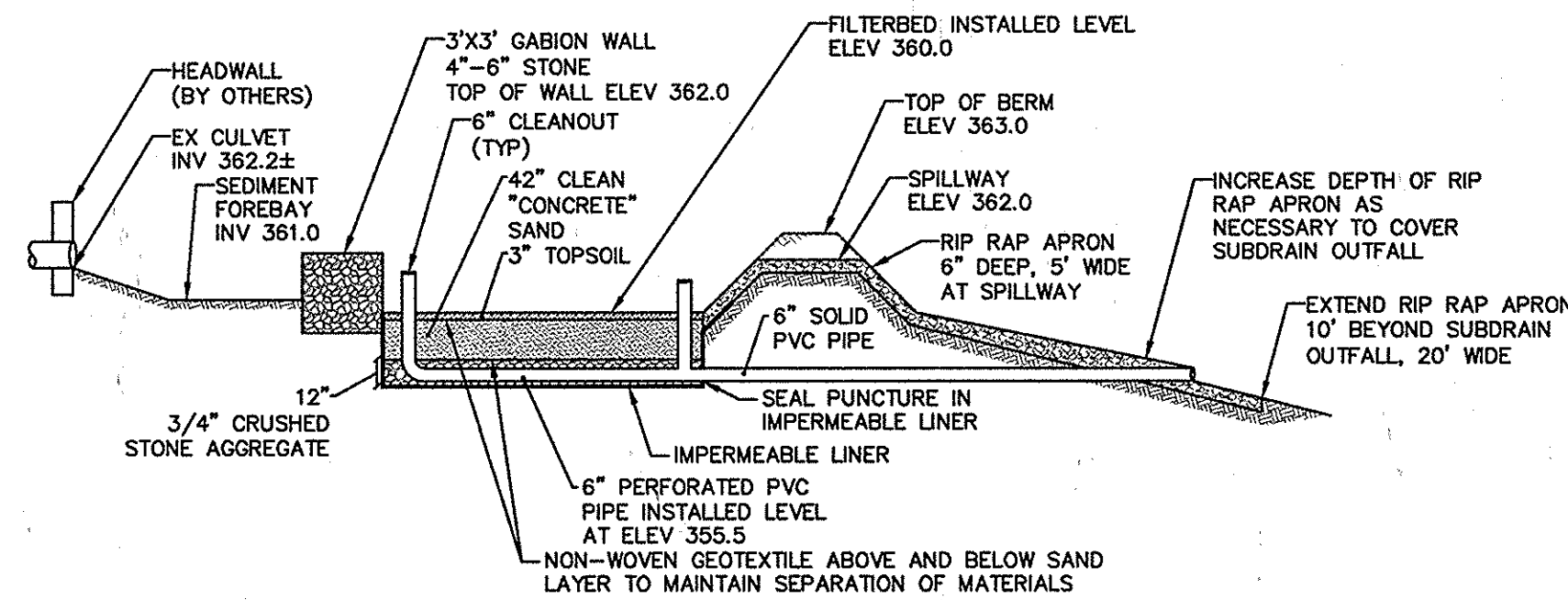


CROSS-SECTION

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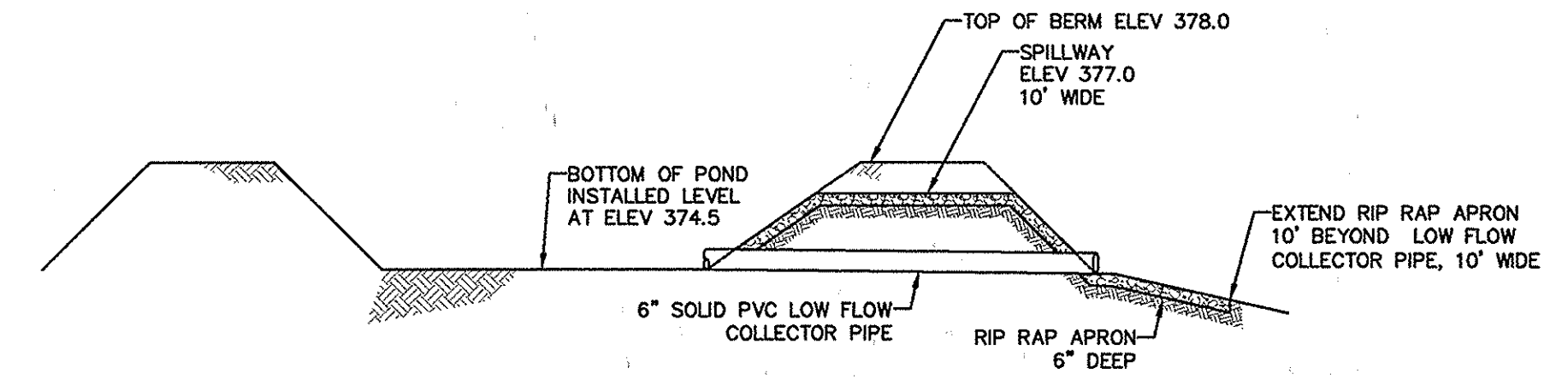
RIP RAP LINED SWALE

N.T.S



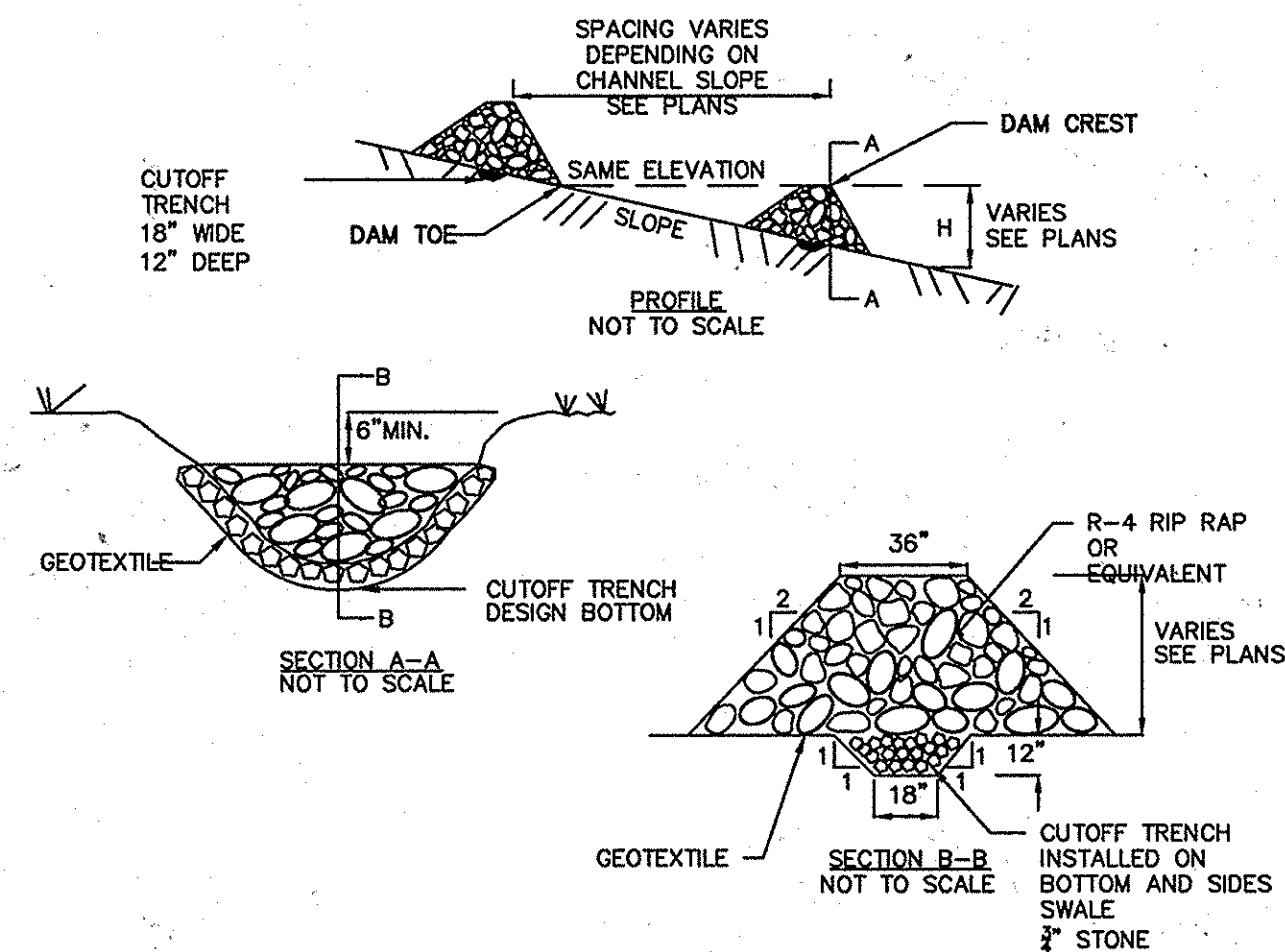
SURFACE SAND FILTER

N.T.S



DETENTION POND

N.T.S



- NOTES:
1. CHECK DAMS SHALL BE INSTALLED SUCH THAT COMPLETE COVERAGE OF THE ENTIRE WIDTH OF THE SWALE IS ACHIEVED.
 2. INSTALL A CUTOFF TRENCH A MINIMUM OF 12 INCHES INTO THE SWALE BOTTOM AND SIDES TO PREVENT CUTTING AROUND THE DAM.
 3. ENSURE THAT SWALE CULVERT ENTRANCES BELOW CHECK DAMS ARE NOT SUBJECT TO DAMAGE OR BLOCKAGE FROM DISPLACED STONE.

CHECK DAM

N.T.S

Drawing By & Date/Time: Sking Feb 29, 2016 - 10:33am
Drawing Location & Name: G:\JOBS\14\14C\14C4909\DWG\Facilities\Station 190 FCS_ECP_14C4909_190.dwg

APPROVED- DEPARTMENT OF PLANNING AND ZONING

[Signature] 3-2-16
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

[Signature] 3-3-16
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

[Signature] 3-3-16
DIRECTOR DATE

PROPERTY INFORMATION:

LOT/PARCEL #: 03297608
ZONING: RC-DEO
ELECTION DISTRICT: COUNCIL 5
TAX MAP: MAP 23, GRID 7, PARCEL 90

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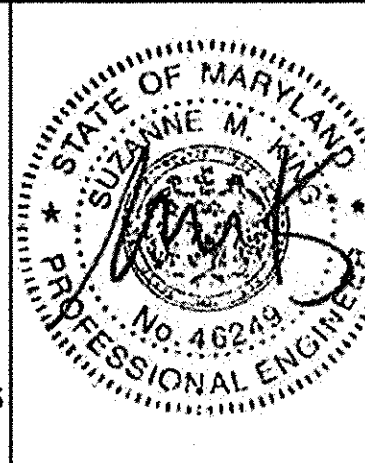
CALL BEFORE YOU DIG!
MARYLAND LAW REQUIRES 48 HOURS NOTICE BEFORE PLANNED WORK TO MARK UNDERGROUND UTILITIES PRIOR TO EXCAVATION.
MISS UTILITY: 1-800-257-7777

OWNER:

WILLIAMS
ONE WILLIAMS CENTER
TULSA, OKLAHOMA 74172
PHONE: 800-945-5426

ENGINEER:

BL COMPANIES
100 RIVER RIDGE DR.
SUITE 105
NORWOOD, MA 02062
CONTACT: SUZ KING
PHONE: 781-619-9503

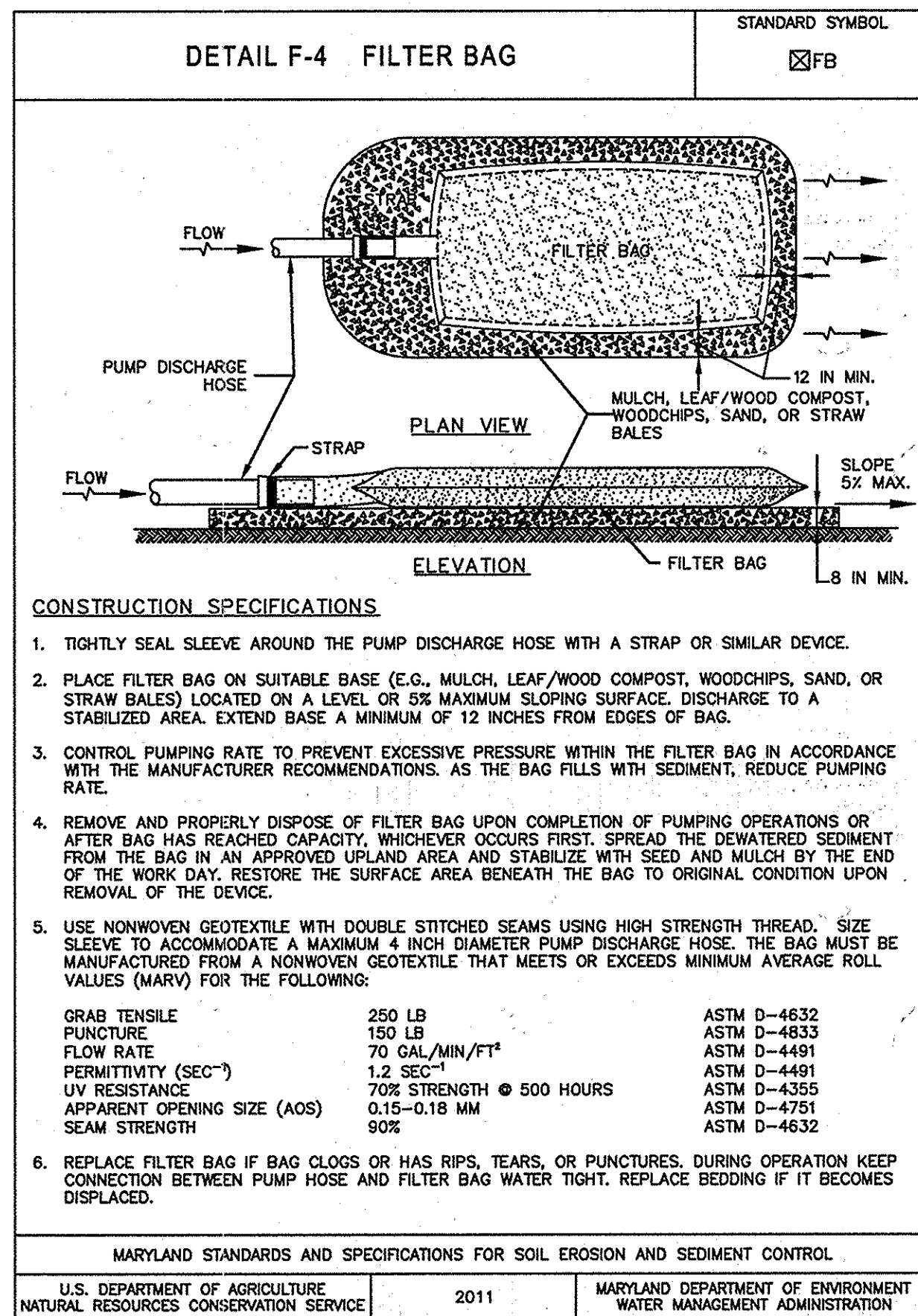
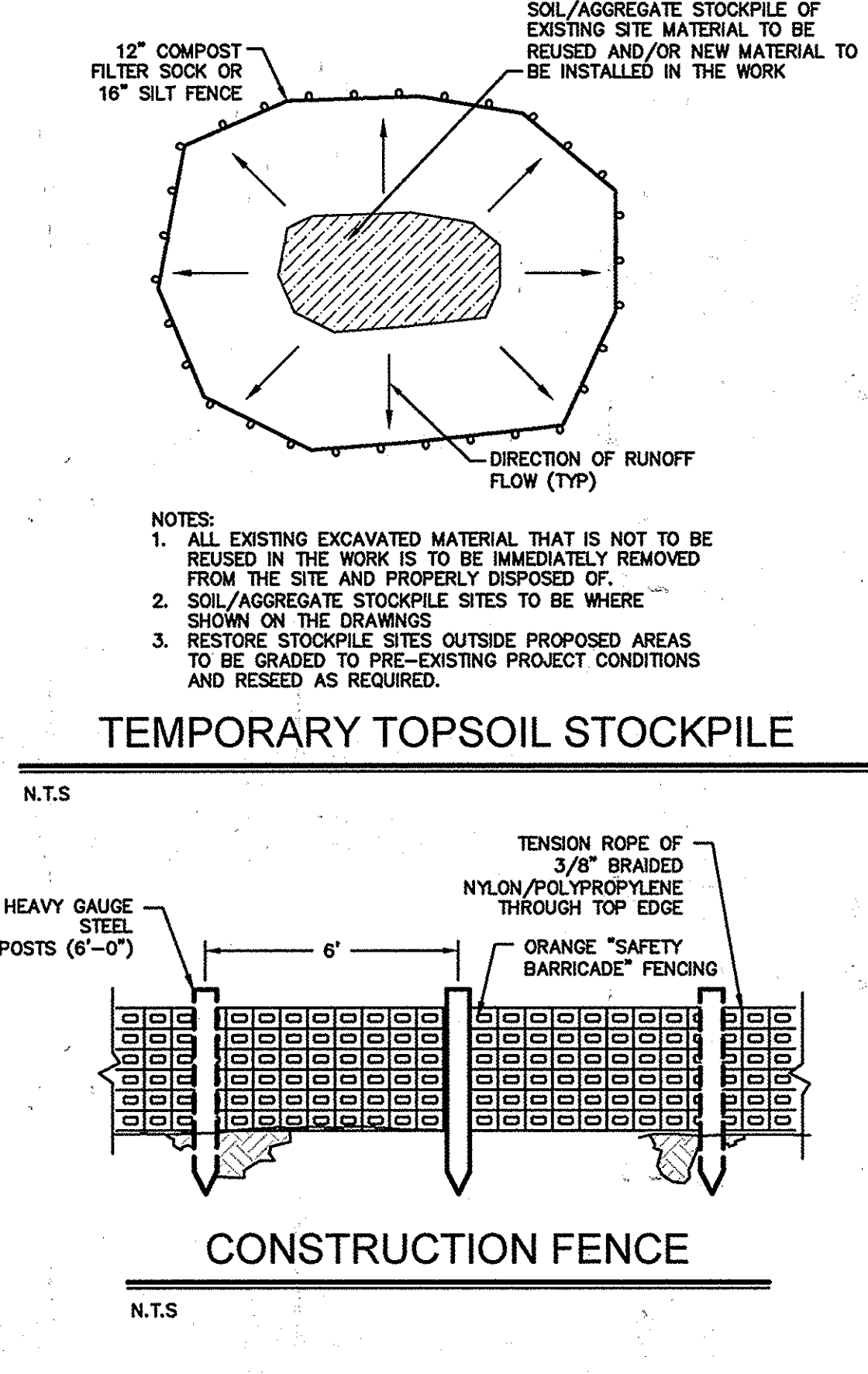
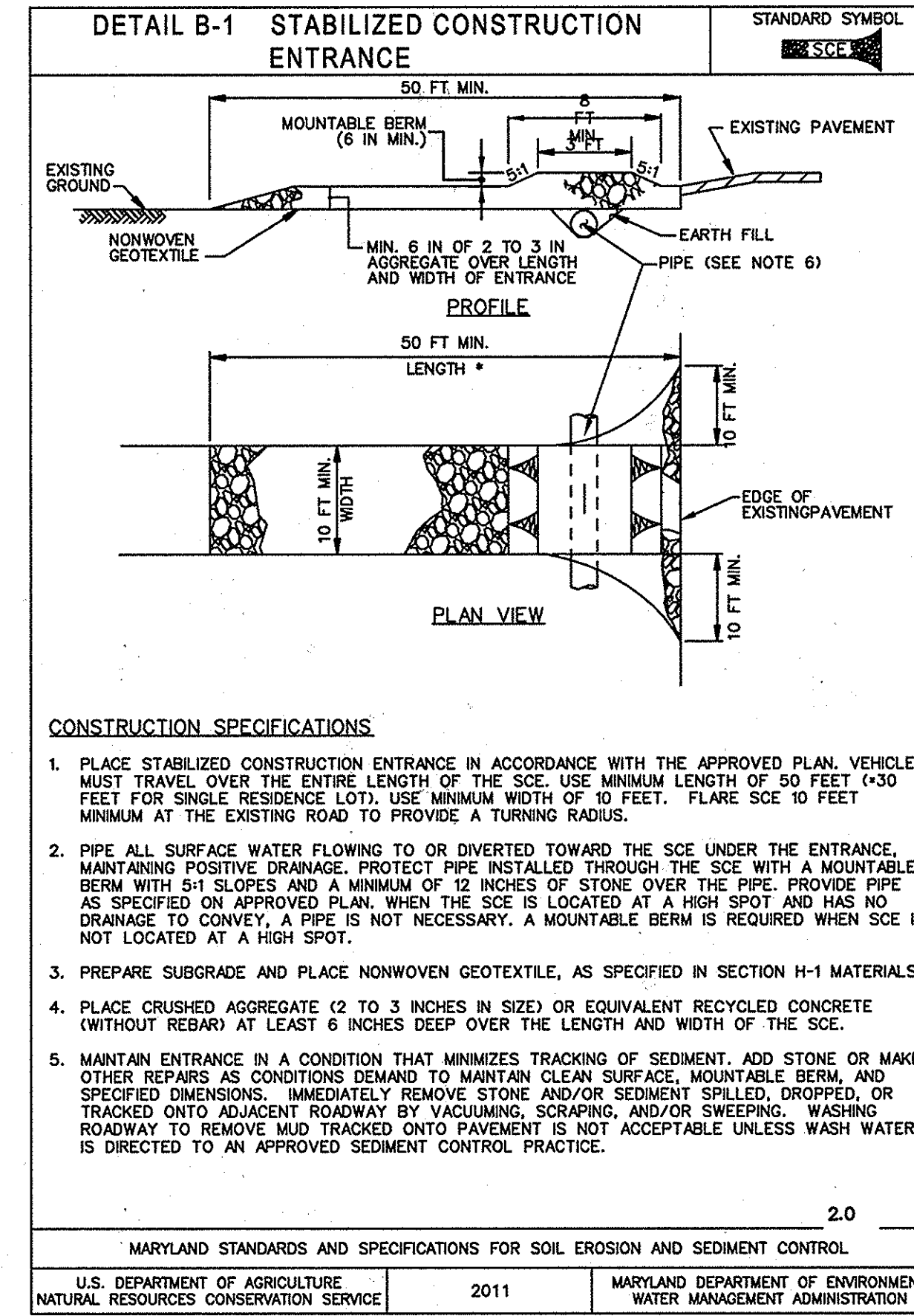
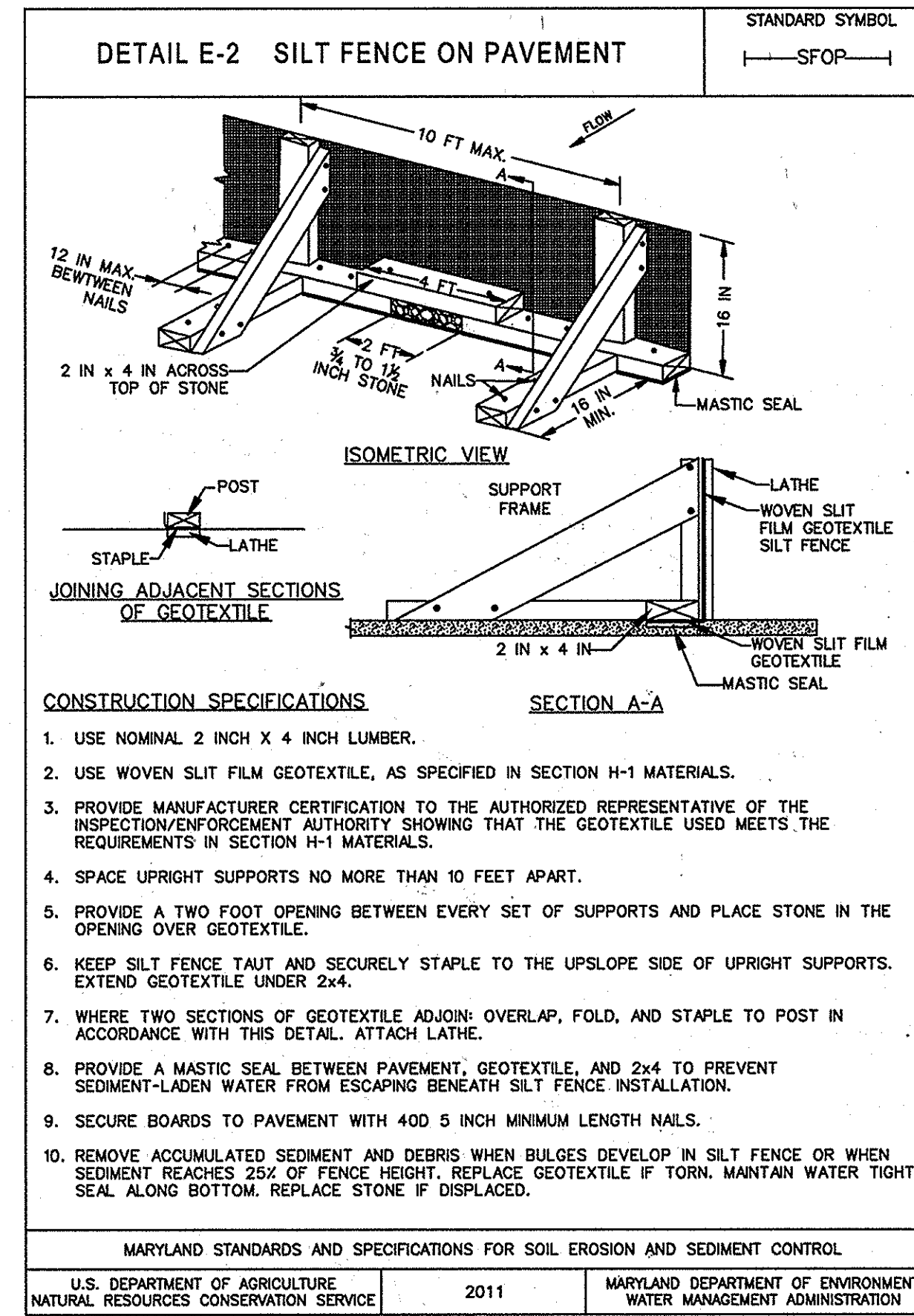
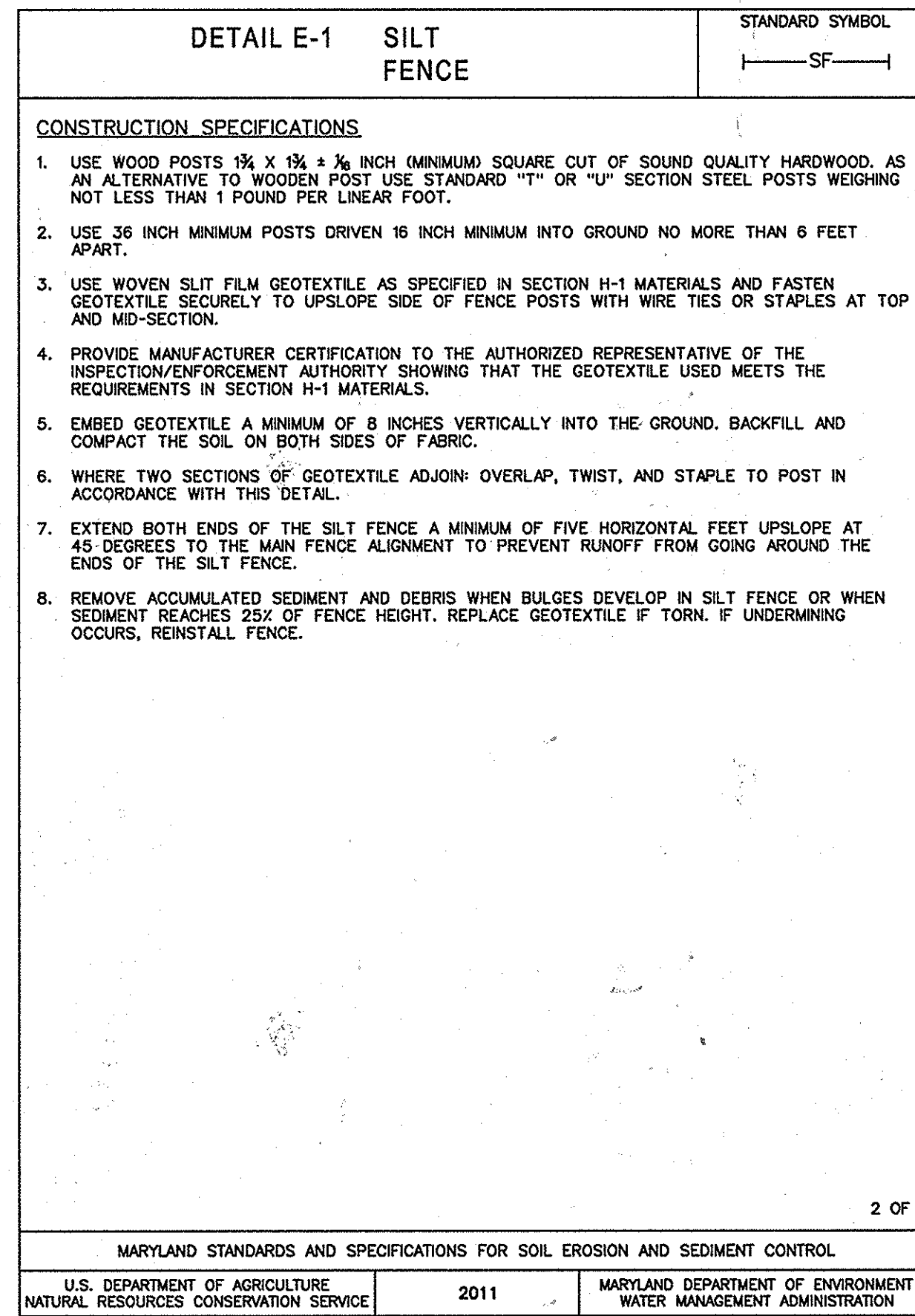
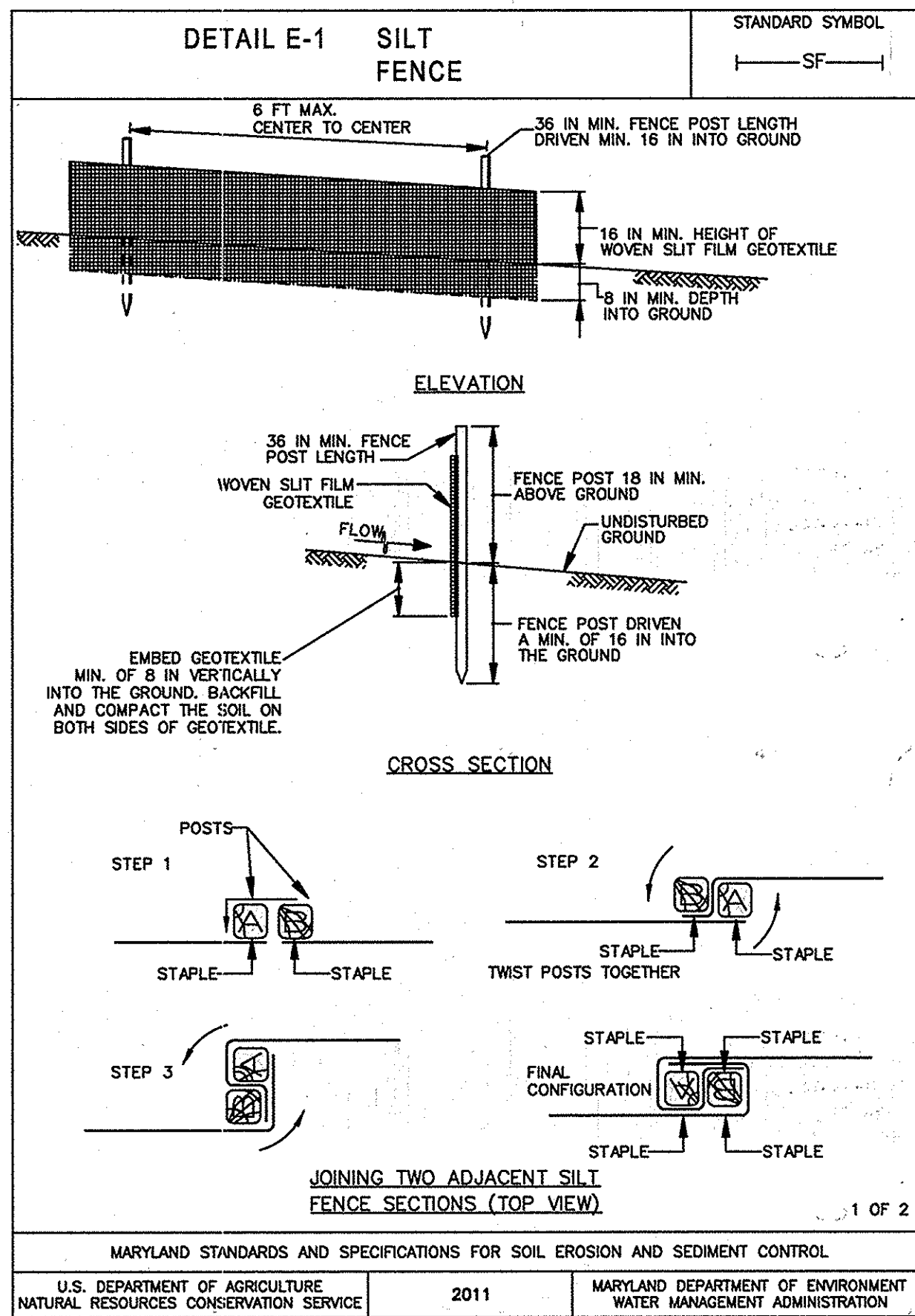


REVISIONS						
NO.	DATE	BY	DESCRIPTION	W.D. NO.	CHK.	APP.
0	10/16/2015	BL	SUBMITTED TO HOWARD COUNTY PLANNING & ZONING FOR REVIEW	1161511	SK	SMK
1	01/29/2016	BL	SUBMITTED TO HOWARD COUNTY AS ORIGINAL BIDDAL FOR W-16-025	1161511	SK	SMK

TRANSCONTINENTAL GAS PIPELINE COMPANY LLC.
ATLANTIC SUNRISE PROJECT
COMPRESSOR STATION 190 IMPROVEMENTS
11910 CARROLL MILL ROAD ELLICOTT CITY, HOWARD COUNTY, MARYLAND

ENVIRONMENTAL CONCEPT PLAN DETAILS

DRAWN BY: HP/IE DATE: 10/05/15 ISSUED FOR BID: SCALE: AS NOTED
CHECKED BY: SK DATE: 10/09/15 ISSUED FOR CONSTRUCTION: REVISION: 2
APPROVED BY: SMK DATE: 10/16/15 DRAWING NUMBER: (66-0190)F-1A-9 SHEET 7 OF 9



Drawing By & Date/Time: Sking Jan. 26, 2016 3:32pm
 Drawing Location & Name: G:\JOB\14\14C\14C-909\DWG\Facilities\Station 190.dwg
 190 FCS_ECP_14C-909_190.dwg

APPROVED: DEPARTMENT OF PLANNING AND ZONING

[Signature] 3-2-16
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

[Signature] 3-3-16
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

[Signature] 3-3-16
 DIRECTOR DATE

PROPERTY INFORMATION:

LOT/PARCEL #: 03297608

ZONING: RC-DEO

ELECTION DISTRICT: COUNCIL 5

TAX MAP: MAP 23, GRID 7, PARCEL 90

SUBMITTED UNDER AND SUBJECT TO OWNER'S RIGHTS AND/OR CLAIMS OF PREEMPTION UNDER THE NATURAL GAS ACT AND FEDERAL AUTHORITIES.

FOR PERMITTING PURPOSES ONLY NOT RELEASED FOR CONSTRUCTION

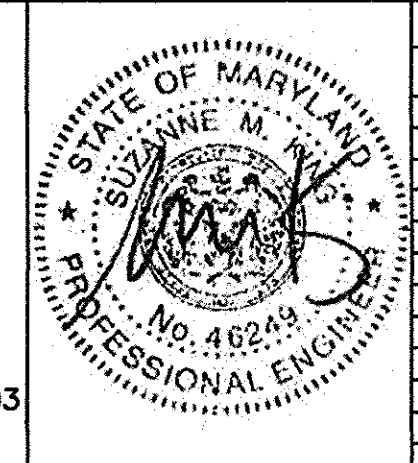
CALL BEFORE YOU DIG!
 MARYLAND LAW REQUIRES 48 HOURS NOTICE BEFORE PLANNED WORK TO MARK UNDERGROUND UTILITIES PRIOR TO EXCAVATION.
 MISS UTILITY: 1-800-257-7777

OWNER:

WILLIAMS
 ONE WILLIAMS CENTER
 TULSA, OKLAHOMA 74172
 PHONE: 800-945-5426

ENGINEER:

BL COMPANIES
 100 RIVER RIDGE DR.
 SUITE 105
 NORWOOD, MA 02062
 CONTACT: SUZ KING
 PHONE: 781-619-9503



REVISIONS						
NO.	DATE	BY	DESCRIPTION	W.D.	CHK.	APP.
0	10/16/2015	BL	SUBMITTED TO HOWARD COUNTY PLANNING & ZONING FOR REVIEW	1161511	SN	SMK
1	01/29/2016	BL	SUBMITTED TO HOWARD COUNTY AS ORIGINAL W/LAR FOR #P-16-008	1161511	SN	SMK

TRANSCONTINENTAL GAS PIPELINE COMPANY LLC
 ATLANTIC SUNRISE PROJECT
 COMPRESSOR STATION 190 IMPROVEMENTS
 11910 CARROLL MILL ROAD ELLICOTT CITY, HOWARD COUNTY, MARYLAND

EROSION & SEDIMENTATION CONTROL DETAILS

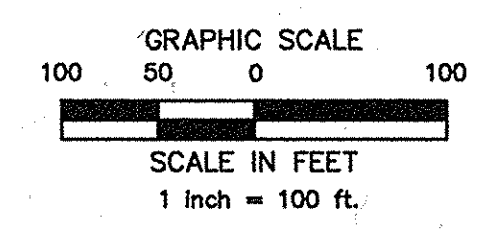
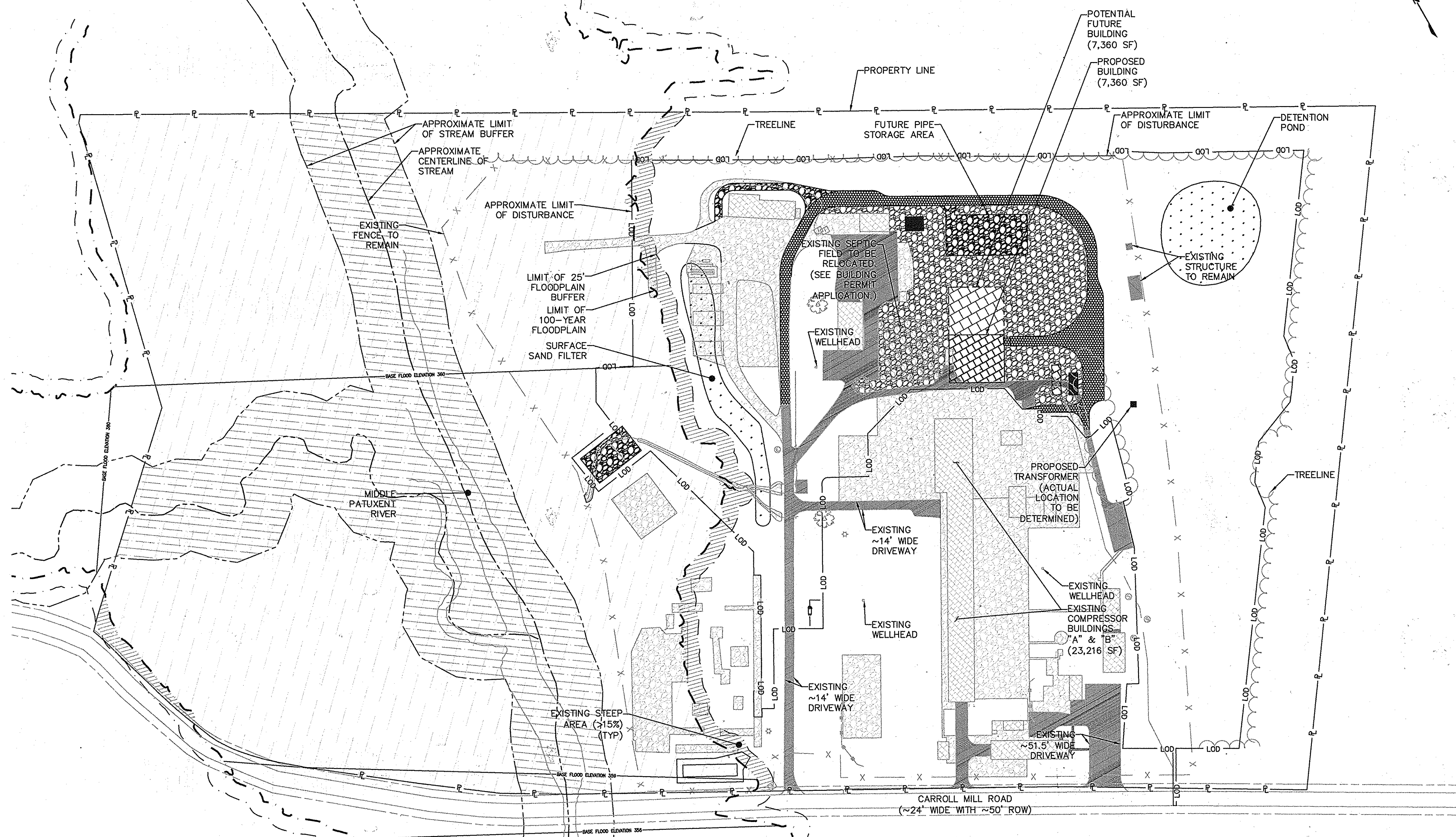
DRAWN BY: HP/TE DATE: 10/05/15 ISSUED FOR BID: SCALE: AS NOTED

CHECKED BY: SN DATE: 10/09/15 ISSUED FOR CONSTRUCTION: REVISION: 1

APPROVED BY: SMK DATE: 10/16/15 DRAWING NUMBER: (66-0190)F-1A-11 SHEET 8 OF 9

- ### LEGEND
- PROPERTY BOUNDARY
 - LIMIT OF DISTURBANCE (APPROXIMATE)
 - EXISTING MAJOR CONTOUR (10' INTERVAL)
 - EXISTING MINOR CONTOUR (2' INTERVAL)
 - FENCE
 - SOIL BOUNDARY
 - SOIL TYPE DESIGNATION
 - TREELINE
 - CENTERLINE STREAM/STREAM BUFFER
 - SPOT ELEVATION
 - TREE OR BUSH
 - EXISTING ELECTRIC LINE
 - UTILITY POLE AND UTILITY LINE
 - GUY POLE
 - GUY POLE OR ANCHOR
 - POST
 - SIGN
 - WATER WELL
 - UTILITY BOX
 - MONUMENT (PROPERTY BOUNDARY MARKER)
 - IRON PIPE OR PIN (PROPERTY BOUNDARY MARKER)
 - RIGHT-OF-WAY
 - EXISTING ROAD
 - 100-YR BASE FLOOD ELEVATION
 - 25' FLOODPLAIN BUFFER

- ### GROUND COVER LEGEND
- EXISTING DRIVEWAY/CONCRETE
 - EXISTING GRAVEL
 - EXISTING BUILDING
 - 100-YEAR FLOODPLAIN
 - FLOOD PLAIN BUFFER
 - STREAM BUFFER
 - PROPOSED DRIVEWAY
 - PROPOSED GRAVEL AREA
 - POTENTIAL GRAVEL AREA (STORMWATER DESIGNED BASED UPON MAXIMUM IMPERVIOUS AREA)
 - PROPOSED BUILDING
 - POTENTIAL FUTURE BUILDING
 - PROPOSED CONCRETE PAD
 - STORMWATER DETENTION POND



Drawn By & Date/Time: Sking Feb. 29, 2016 - 10:35am
 Drawing Location & Name: G:\JOBS\14\14C\14C4909 DWG\Facilities\Station 190 FCS_ECP_14C4909_190.dwg

APPROVED- DEPARTMENT OF PLANNING AND ZONING

 CHIEF, DEVELOPMENT ENGINEERING DIVISION
 DATE: 3-2-16

CHIEF, DIVISION OF LAND DEVELOPMENT
 DATE: 3-3-16

DIRECTOR
 DATE: 3-3-16

PROPERTY INFORMATION:
 LOT/PARCEL #: 03297608
 ZONING: RC-DEO
 ELECTION DISTRICT: COUNCIL 5
 TAX MAP: MAP 23, GRID 7, PARCEL 90

SUBMITTED UNDER AND SUBJECT TO OWNER'S RIGHTS AND/OR CLAIMS OF PREEMPTION UNDER THE NATURAL GAS ACT AND FEDERAL AUTHORITIES.

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 PHONE: 781-619-9503



REVISIONS			
NO.	DATE	BY	DESCRIPTION
1	01/20/2016	BL	SUBMITTED TO HOWARD COUNTY AS ORIGINAL MATERIAL FOR WP-16-055

TRANSCONTINENTAL GAS PIPELINE COMPANY LLC
 ATLANTIC SUNRISE PROJECT
 COMPRESSOR STATION 190 IMPROVEMENTS
 11910 CARROLL MILL ROAD ELLICOTT CITY, HOWARD COUNTY, MARYLAND

ENVIRONMENTAL CONCEPT PLAN
GROUNDCOVER EXHIBIT

DRAWN BY: HP/TE	DATE: 10/05/15	ISSUED FOR BID:	SCALE: AS NOTED
CHECKED BY: SN	DATE: 10/09/15	ISSUED FOR CONSTRUCTION:	REVISION: 2
APPROVED BY: SMK	DATE: 10/16/15	DRAWING NUMBER: (66-0190)F-1A-11	SHEET 9 OF 9