

# Public Notice

U.S. Army Corps  
of Engineers

In Reply to Application Number  
NAB-2019-00114-P13 (Throop Borough/Sulfur Creek Stream  
Stabilization Project)

Baltimore District  
PN-20-17

Comment Period: March 10, 2020 to April 9, 2020

---

**THE PURPOSE OF THIS PUBLIC NOTICE IS TO INFORM INTERESTED PARTIES OF THE PROPOSED ACTIVITY AND TO SOLICIT COMMENTS. NO DECISION HAS BEEN MADE AS TO WHETHER OR NOT A PERMIT WILL BE ISSUED AT THIS TIME.**

This District has received an application for a Department of the Army permit pursuant to Section 404 of the Clean Water Act (33 USC 1344), as described below:

**APPLICANT:**

Throop Borough  
436 Sanderson Street  
Throop, Pennsylvania 18512

**WATERWAY AND LOCATION OF THE PROPOSED WORK:** The proposed project is located off Sanderson Street, in Sulfur Creek, before the confluence with the Lackawanna River, in Throop Borough, Lackawanna County, Pennsylvania (Latitude: 41° 27' 9" N; Longitude 75° 37' 23" W).

**OVERALL PROJECT PURPOSE:** To stabilize and rehabilitate approximately 1,700 linear feet of Sulfur Creek and to protect it from further erosion.

**PROJECT DESCRIPTION:** To remove accumulated sediments from the lower reaches of Sulfur Creek, re-grade the stream channel, and armor the stream banks with existing riprap stone to prevent future erosion. All excavated material will be disposed of at an approved location.

**EFFECTS ON AQUATIC RESOURCES:** The proposed work will impact approximately 1,700 linear feet (2.7 acres) of the existing stream. Approximately 3,600 cubic yards of accumulated sediments will be removed from the existing stream channel. In addition, of the approximate 7,635 square feet of existing R-7 riprap in the stream, an estimated 5,609 square feet of this riprap will be removed from the site, while the remaining 2,026 square feet will be relocated and reused at specific locations along the existing stream banks. Lastly, six (6) proposed rock vanes, impacting approximately 360 square feet of stream, will be statically placed within the stream channel to limit stream channel erosion. No impacts to wetlands are proposed as a result of this project.

**LEAD FEDERAL AGENCY:** The U.S. Army Corps of Engineers, as the lead federal agency, is responsible for all coordination pursuant to applicable federal authorities.

**APPLICANT'S PROPOSED AVOIDANCE, MINIMIZATION, AND COMPENSATORY MITIGATION:** Steps were taken to ensure avoidance and minimization of impacts to waters of the United States to the maximum extent possible. Removing accumulated sediment from the stream channel will create more stream capacity to hold the 2-year and 100-year storm events. In turn, this will decrease the imminent threat of flooding to the homes down grade of the existing Sulfur Creek levee system. Compensatory mitigation is not being proposed by the applicant for impacts to the approximate 1,700 linear feet of stream.

**CORPS EVALUATION REQUIREMENTS:** This project will be evaluated pursuant to Corps Regulatory Program Regulations (33 CFR Parts 320-332). The decision whether to issue a permit will be based on an evaluation of the probable impacts, including cumulative impacts of the proposed activity on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefit, which reasonable may be expected to accrue from the proposal, must be balanced against its reasonably foreseeable detriments. All factors, which may be relevant to the proposal will be considered, including the cumulative effects thereof; among those are conservation, economic, aesthetics, general environmental concerns, wetlands, cultural values, fish and wildlife values, flood hazards, flood plain values, land use, navigation, shoreline erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, and consideration of property ownership and in general, the needs and welfare of the people. The evaluation of the impact of this project will also include application of the Clean Water Act Section 404(b)(1) Guidelines promulgated by the Administrator, U.S. Environmental Protection Agency.

**ENDANGERED SPECIES:** A preliminary review of this application indicates that the proposed work will have no effect federally-listed threatened or endangered species or their critical habitat, pursuant to Section 7 of the Endangered Species Act, as amended. As the evaluation of this application continues, additional information may become available which could modify this preliminary determination.

**HISTORIC RESOURCES:** Pursuant to Section 106 of the National Historic Preservation Act of 1966 and applicable guidance, the Corps has reviewed the latest published version of the National Register of Historic Places and initially determined that no registered properties listed as eligible for inclusion, therein, are located at the site of the proposed work. The Corps has made the preliminary determination that the proposed project would have no effect on historic properties. The Corps final eligibility and effect determination will be based on coordination with the State Historic Preservation Office as appropriate and required, and with full consideration given to the proposed undertaking's potential direct and indirect effects on historic properties within the Corps' identified permit area.

**TRIBAL RESOURCES:** Section 106 of the National Historic Preservation Act also requires federal agencies to consult with federally-recognized American Indian tribes that attach religious and cultural significance to historic properties that may be affected by the agency's undertaking. Corps Tribal Consultation Policy mandates an open, timely, meaningful, collaborative, and effective deliberative communication process that emphasizes trust, respect, and shared responsibility. The policy further emphasizes that, to the extent practicable and permitted by law, consultation works toward mutual consensus and begins at the earliest planning stages, before decisions are made and actions taken. The Corps final eligibility and effect determination will be based on coordination with interested tribes, in accordance with the Corps current tribal standard operating procedures as appropriate and required, and with full consideration given to the proposed undertaking's potential direct and indirect effects on tribal resources.

**MODIFICATION OF CIVIL WORKS PROJECTS: 33 USC 408 (SECTION 408):** All Section 408 proposals will be coordinated internally at USACE. The Section 408 decision will be issued along with the Section 404 and/or Section 10 decision. Please see the following link for more information regarding Section 408:  
<https://www.nab.usace.army.mil/section408/>.

**WATER QUALITY CERTIFICATION:** The applicant is required to obtain a water quality certification in accordance with Section 401 of the Clean Water Act.

**SUBMISSION OF COMMENTS:** The Corps of Engineers is soliciting comments from the public; federal, state, and local agencies and officials; Indian Tribes; and other interested parties in order to consider and evaluate the impacts of this proposed activity. Any comments received will be considered by the Corps of Engineers to determine whether to issue, modify, condition or deny a permit for this proposal. To make this decision, comments are used to assess impacts on endangered species, historic properties, water quality, general environmental effects, and the other public interest factors listed above. Comments are used in the preparation of an Environmental Assessment and/or an Environmental Impact Statement pursuant to the National Environmental Policy Act. Comments provided will become part of the public record for this action and are subject to release to the public through the Freedom of Information Act. Comments are also used to determine the need for a public hearing and to determine the overall public interest of the proposed activity.

Written comments concerning the work described above related to the factors listed above or other pertinent factors must be received by the U.S. Army Corps of Engineers, Baltimore District within the comment period specified above through postal mail at the address below or electronic submission to the project manager email address below. Written comments should reference the Application Number NAB-2019-00114-P13.

**PUBLIC HEARING REQUESTS:** Any person who has an interest which may be adversely affected by the issuance of this permit may request a public hearing. The request, which must be in writing, must be received within the comment period as specified above to receive consideration. Also it must clearly set forth the interest which may be adversely affected by this activity and the manner in which the interest may be adversely affected. The public hearing request may be submitted by electronic mail or mailed to the following address:

amy.h.elliott@usace.army.mil  
Mrs. Amy Elliott  
U.S. Army Corps of Engineers, Baltimore District  
Regulatory Branch  
State College Field Office  
1631 South Atherton Street  
State College, PA 16801

It is requested that you communicate this information concerning the proposed work to any persons known by you to be interested, who did not receive a copy of this notice.

General information regarding the Corps' permitting process can be found on our website at <https://www.nab.usace.army.mil/Missions/Regulatory.aspx>. This public notice has been prepared in accordance with Corps implementing regulations at 33 CFR 325.3. If you have any questions concerning this specific project, or would like to request a paper copy of this public notice, please contact Mrs. Amy Elliott, at 814-235-0573, or at amy.h.elliott@usace.army.mil. This public notice is issued by the Chief, Regulatory Branch.

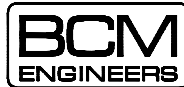
# JOINT PERMIT APPLICATION DRAWINGS FOR THROOP BOROUGH SULFUR CREEK STREAM STABILIZATION

## THROOP BOROUGH, LACKAWANNA COUNTY, PA

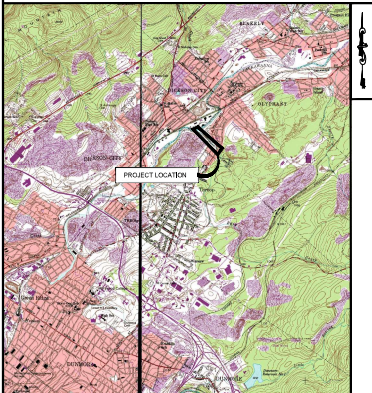
— ● —

### FEBRUARY 2018

REV AUGUST 2019  
REV JANUARY 2020  
REV FEBRUARY 2020



A DIVISION OF  
1001 LACKAWANNA TRAIL  
CLARKE SUMMIT, PA 16811  
+1-814-887-3339



THROOP BOROUGH  
SULFUR CREEK STREAM REHABILITATION

THROOP BOROUGH      LACKAWANNA COUNTY, PA

SCALE: 1" = 100'

OLYMPIANT/SCRANTON QUADRANGLE

SHEET INDEX	
SHEET NO.	SHEET NAME
G001	COVER SHEET
C001	CIVIL STANDARDS
C101	EXISTING SITE AND DEMOLITION PLAN
C102	EXISTING SITE AND DEMOLITION PLAN
C103	GRAVING PLAN AND PROFILE
C104	GRAVING PLAN AND PROFILE
C105	GRAVING PLAN AND PROFILE
C201	GRAVING SECTIONS
C202	GRAVING SECTIONS
C203	GRAVING SECTIONS
C204	GRAVING SECTIONS
C301	CIVIL DETAILS
C302	CIVIL DETAILS



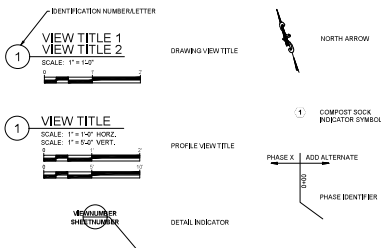
PENNSYLVANIA ACT 307 AS AMENDED REQUIRES 3 BUSINESS DAYS FOR CONSTRUCTION PHASE AND 10 BUSINESS DAYS IN DESIGN PHASE TO STOP CALL

POCS SERIAL NUMBER  
**20163000931**

**LEGEND**

	EXISTING	PROPOSED
FEATURE TEXT	FEATURE TEXT	FEATURE TEXT
PROPERTY LINE	---	---
RIGHT-OF-WAY LINE	---	ROV
EASEMENT LINE	---	---
MAJOR CONTOUR LINE	- - - - -	- - - - -
MINOR CONTOUR LINE	- - - - -	- - - - -
BUILDING SETBACK	---	---
BUILDING OUTLINE	---	---
FENCE LINE	— X —	— X —
EDGE OF PAVEMENT	---	---
PAVE	[Solid Gray Box]	[Solid Gray Box]
EDGE OF GRAVEL	---	---
GRAVEL	[Patterned Box]	[Patterned Box]
CONCRETE CURB	---	---
DETENTIONABLE	---	---
25-YR FLOOD	---	---
50-YR FLOOD	---	---
100-YR FLOOD	---	---
500-YR FLOOD	---	---
DRAINAGE LINE, MANHOLE & INLET	MI SD SS	MI SD SS
SANITARY SEWER MANHOLE & MANHOLE	SW SS	SW SS
WATER MAIN & VALVE	W W	W W
GAS MAIN & VALVE	G	G
OVERHEAD ELECTRIC & UTILITY POLE	— EE — EE —	— EE — EE —
UNDERGROUND ELECTRIC	— EE —	— EE —
OVERHEAD COMMUNICATION & UTILITY POLE	— CO — CO —	— CO — CO —
UNDERGROUND COMMUNICATION	— CO —	— CO —
GUARDRAIL	[Box]	[Box]
SILT FENCE	SF	SF
SUPER SILT FENCE	SSF	SSF
COMPOST SOCK 6"	CS-6	CS-6
COMPOST SOCK 12"	CS-12	CS-12
COMPOST SOCK 18"	CS-18	CS-18
PERMIT BOUNDARY	PERM	PERM
LIMIT OF DISTURBANCE	LOD	LOD
ROCK CONSTRUCTION ENTRANCE	[Symbol]	[Symbol]
STOCKPILE AREA	[Symbol]	[Symbol]
BENCHMARK	[Symbol]	[Symbol]
FIRE HYDRANT	[Symbol]	[Symbol]
GLY VALVE	[Symbol]	[Symbol]
IRON PIN	[Symbol]	[Symbol]
TREE (T = TRUNK DIA.)	[Symbol]	[Symbol]
SHRUB (S = SHRUB DIA.)	[Symbol]	[Symbol]
SINGLE POLE SIGN	[Symbol]	[Symbol]
UTILITY POLE	[Symbol]	[Symbol]
GLY POLE	[Symbol]	[Symbol]
PUMP WATER FILTER SINK	[Symbol]	[Symbol]
DEWATERING PUMP AND HOSEPIPE DISCHARGE LINE	[Symbol]	[Symbol]

**DRAWING CONVENTIONS**



**GENERAL NOTES**

1. SURVEY DATA—HORIZONTAL STATE PLANE (NAD 83) (NORTH ZONE), VERTICAL (MAD 88).
2. EXISTING CONTOURS AND SPOT ELEVATIONS, ELEVATIONS OF EXISTING MANHOLES, AND OTHER SITE FEATURES THAT WERE SURVEYED ARE REPRESENTED BY THE ENGINEER TO BE ACCURATE TO APPROXIMATELY ± 0.1 FOOT. CONTOURS ARE ACCURATE TO ± 0.2 FOOT.
3. THE CONTRACTOR IS RESPONSIBLE TO MAKE A PRE-CONSTRUCTION NOTIFICATION PRIOR TO MAKING ANY EXCAVATION, WHERE UTILITIES EXIST THAT MAY REQUIRE SUPPORT, SHORING, HAND EXCAVATION, OR OTHER EXTRAORDINARY MEASURES. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY.
4. THE CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFICATION OF DIMENSIONS AND CLEARANCES FOR PROPOSED WORK BEFORE ORDERING OF MATERIAL OR EQUIPMENT AND BEFORE BEGINNING OF ANY MODIFICATIONS TO THE SITE.
5. THE SITE IS LOCATED IN A FLOODPLAIN. SPECIAL REQUIREMENTS SHALL BE TAKEN TO PROTECT WORK AGAINST FLOOD DAMAGE. THE CONTRACTOR SHALL REFER TO THE EROSION AND SEDIMENT CONTROL PLAN.

**ABBREVIATIONS**

- EX EXISTING
- MH MANHOLE
- SS SEWER MANHOLE
- IN INCH
- SP SPOUR POOL


Vertical labels: G, F, E, D, C, B, A

LEGEND (EXISTING/PROPOSED)

DRAWING CONVENTIONS

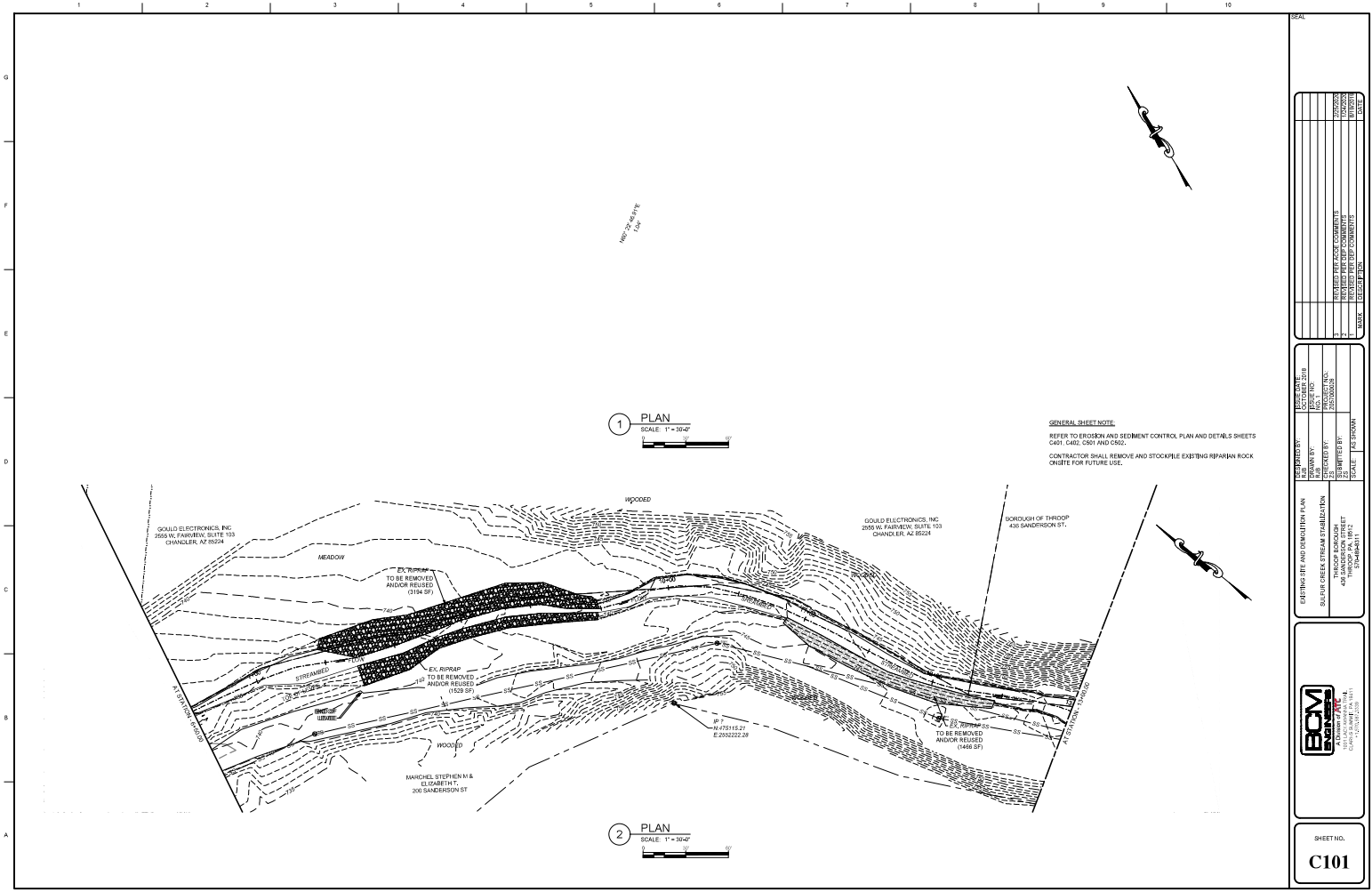
ABBREVIATIONS

DATE	SCALE	PROJECT NO.	SHEET NO.	JOB NO.
REPORTED BY	DESIGNED BY	CHECKED BY	DRAWN BY	
SITE ST. MARKINGS				
SULLY CREEK STREAM STABILIZATION				
TRANSFER FLOODPLAIN				
400' THROUGH PA. PERMIT				
C:\PROJECTS				



**BCM**  
A Division of BIC  
CORPORATE HEADQUARTERS  
1800 WEST 11TH AVENUE  
DENVER, CO 80202

SHEET NO.  
**C001**



1 PLAN  
SCALE: 1" = 3047'

2 PLAN  
SCALE: 1" = 3047'

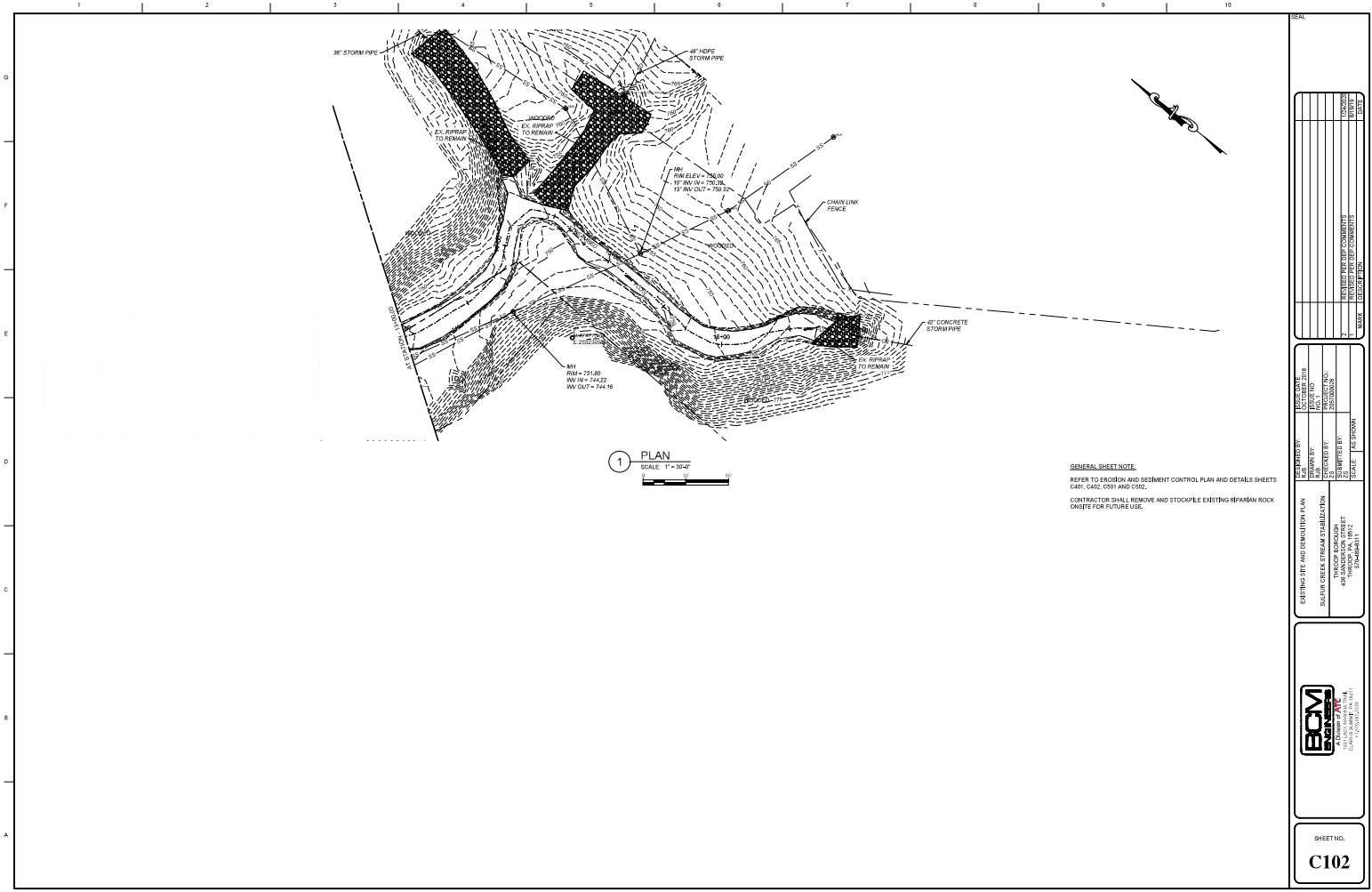
**GENERAL SHEET NOTE:**  
REFER TO EROSION AND SEDIMENT CONTROL PLAN AND DETAILS SHEETS C401, C402, C501 AND C502.  
CONTRACTOR SHALL REMOVE AND STOCKPILE EXISTING RIPARIAN ROCK ON-SITE FOR FUTURE USE.

NO.	REVISION	DATE
1	ISSUED FOR PERMITS	01/24/2018
2	ISSUED FOR PERMITS	01/24/2018
3	ISSUED FOR PERMITS	01/24/2018
4	ISSUED FOR PERMITS	01/24/2018
5	ISSUED FOR PERMITS	01/24/2018
6	ISSUED FOR PERMITS	01/24/2018
7	ISSUED FOR PERMITS	01/24/2018
8	ISSUED FOR PERMITS	01/24/2018
9	ISSUED FOR PERMITS	01/24/2018
10	ISSUED FOR PERMITS	01/24/2018
11	ISSUED FOR PERMITS	01/24/2018
12	ISSUED FOR PERMITS	01/24/2018
13	ISSUED FOR PERMITS	01/24/2018
14	ISSUED FOR PERMITS	01/24/2018
15	ISSUED FOR PERMITS	01/24/2018
16	ISSUED FOR PERMITS	01/24/2018
17	ISSUED FOR PERMITS	01/24/2018
18	ISSUED FOR PERMITS	01/24/2018
19	ISSUED FOR PERMITS	01/24/2018
20	ISSUED FOR PERMITS	01/24/2018

DESIGNED BY:	SCALE:
DRAWN BY:	DATE:
CHECKED BY:	PROJECT NO.:
APPROVED BY:	ISSUED BY:
DATE:	SCALE:


**BCM**  
 CONSULTING AND DESIGN PLAN  
 1000 W. FAIRVIEW SUITE 103  
 CHANDLER, AZ 85224  
 TEL: 480.948.8888  
 FAX: 480.948.8889  
 WWW.BCMCONSULTING.COM

SHEET NO.  
**C101**

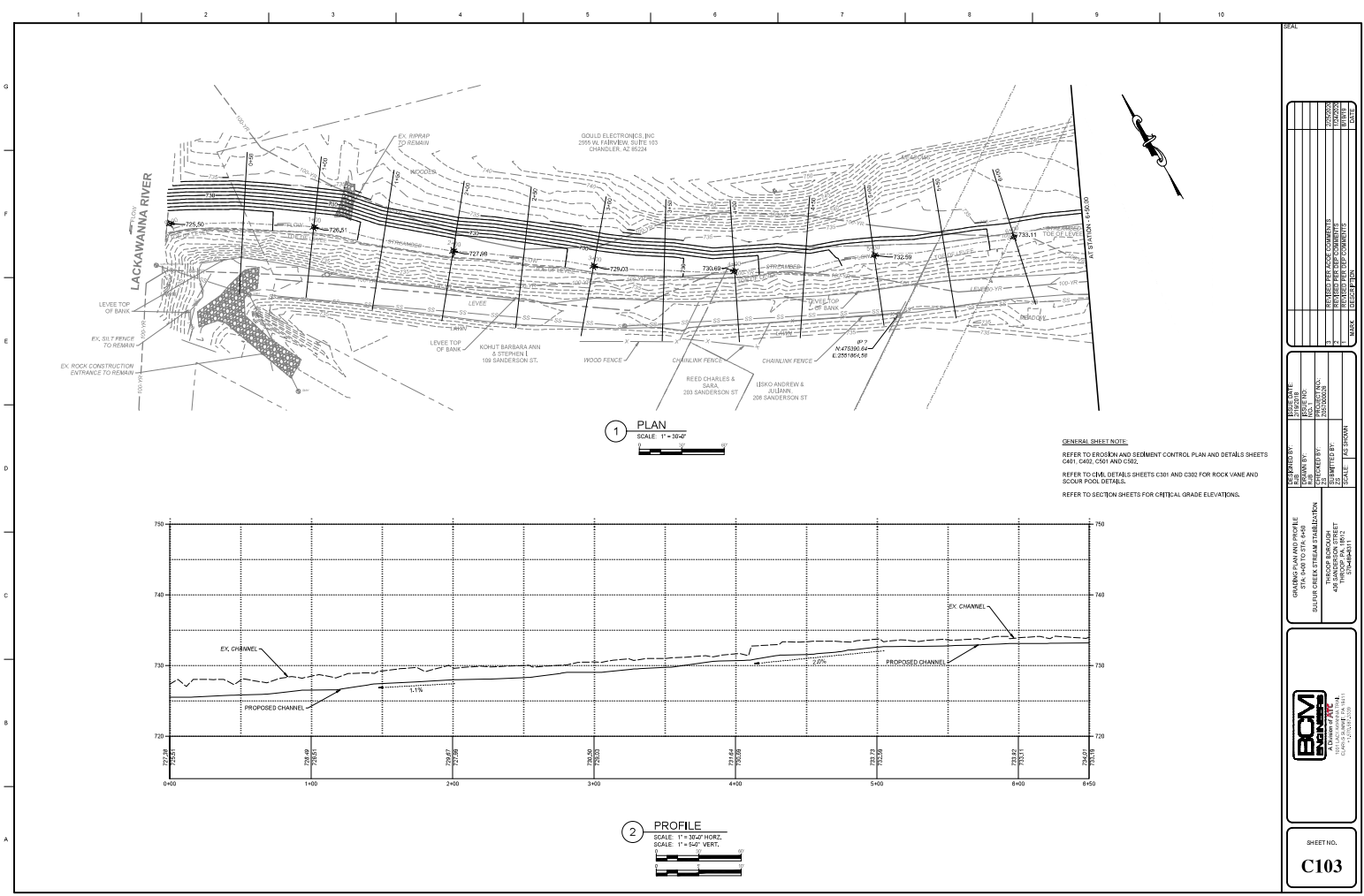


1 PLAN  
SCALE: 1" = 30'-0"

**GENERAL SHEET NOTE:**  
REFER TO EROSION AND SEDIMENT CONTROL PLAN AND DETAILS SHEETS C401, C402, C501 AND C502.  
CONTRACTOR SHALL REMOVE AND STOCKPILE EXISTING HPMAN ROCK ON SITE FOR FUTURE USE.

	
SHEET NO. <b>C102</b>	
PROJECT: SITE AND EROSION PLAN LOCATION: SULLY CREEK STREAM STABILIZATION CONTRACT NO.: 407 SHEET NO.: 102	DATE: 2/14/2014 SCALE: AS SHOWN
DESIGNED BY: [REDACTED] CHECKED BY: [REDACTED] DRAWN BY: [REDACTED]	PROJECT NO.: 201300008 SCALE: AS SHOWN
REVISIONS: NO. DESCRIPTION DATE	REVISIONS: NO. DESCRIPTION DATE



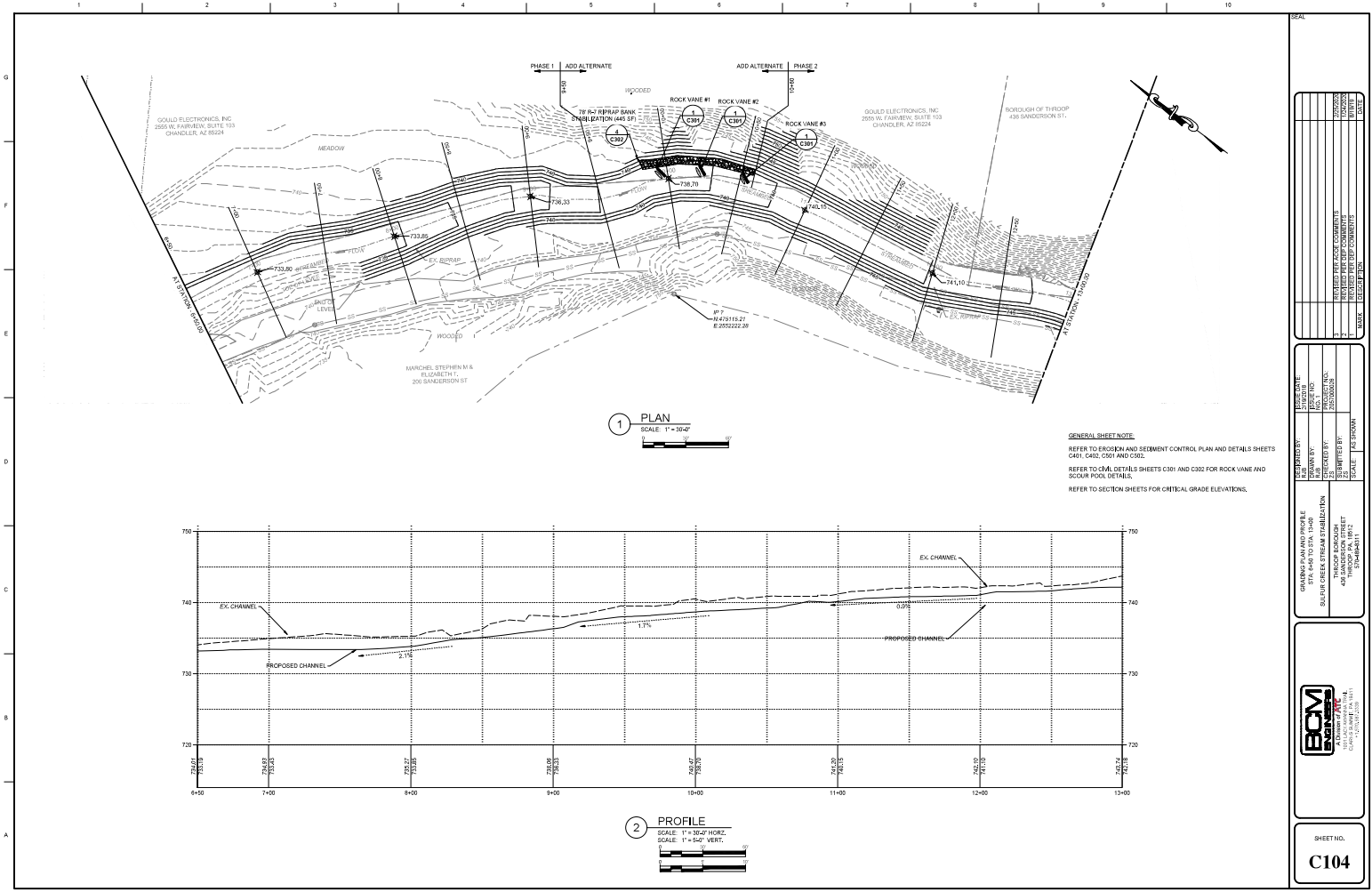


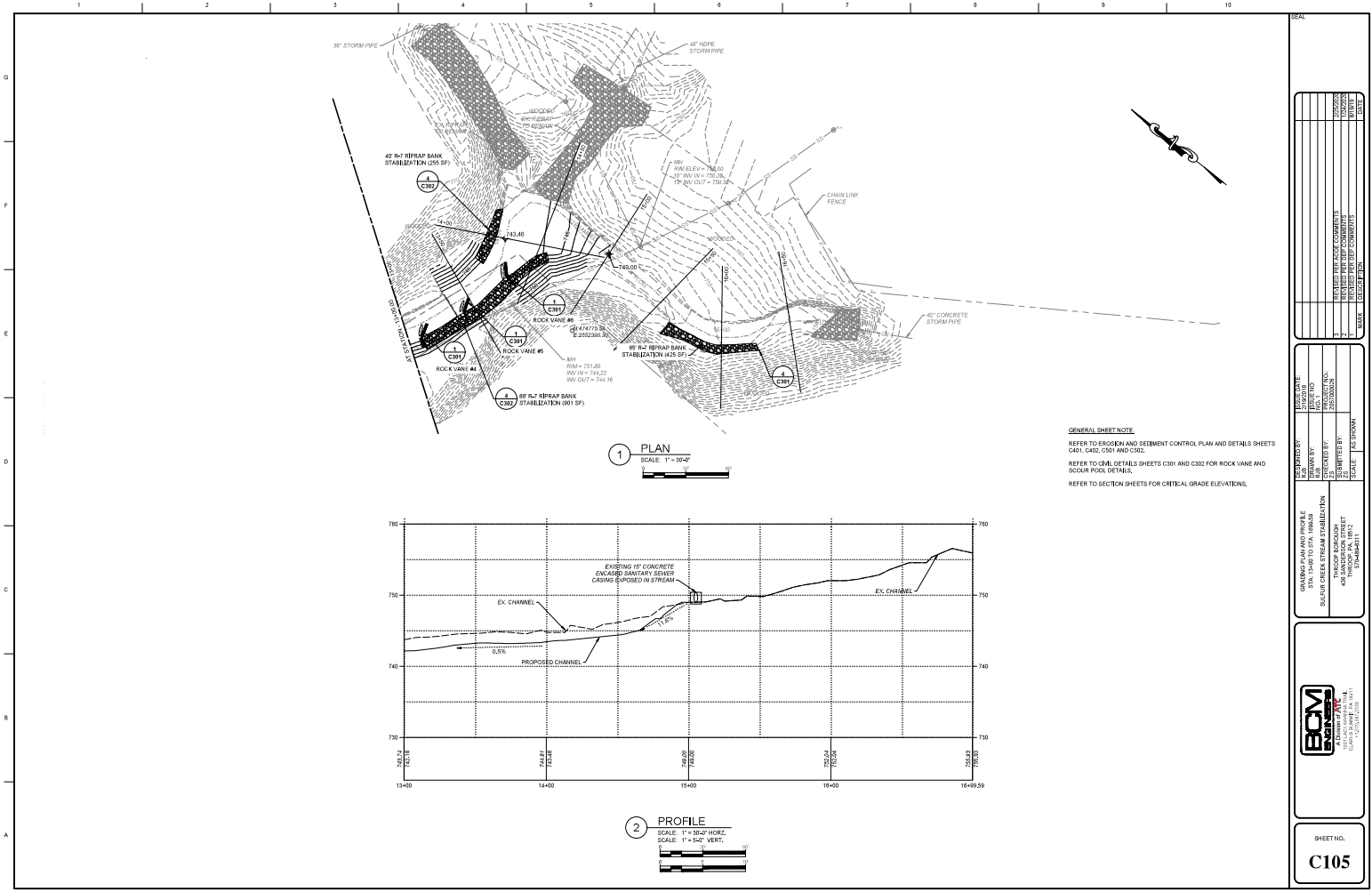
DATE: 11/15/2022	SCALE: AS SHOWN
PROJECT NO.: 22530003	PROJECT NAME: SANDERSON ST
DATE: 11/15/2022	SCALE: AS SHOWN
PROJECT NO.: 22530003	PROJECT NAME: SANDERSON ST
DATE: 11/15/2022	SCALE: AS SHOWN
PROJECT NO.: 22530003	PROJECT NAME: SANDERSON ST

DATE: 11/15/2022	SCALE: AS SHOWN
PROJECT NO.: 22530003	PROJECT NAME: SANDERSON ST
DATE: 11/15/2022	SCALE: AS SHOWN
PROJECT NO.: 22530003	PROJECT NAME: SANDERSON ST
DATE: 11/15/2022	SCALE: AS SHOWN
PROJECT NO.: 22530003	PROJECT NAME: SANDERSON ST

**BCM**  
BENTON CONSULTING  
A Division of BCC  
2000 N. 12th Street, Suite 200  
Chandler, AZ 85224

SHEET NO.  
**C103**





1 PLAN  
SCALE: 1" = 30'

2 PROFILE  
SCALE: 1" = 30' HORIZ.  
SCALE: 1" = 5' VERT.

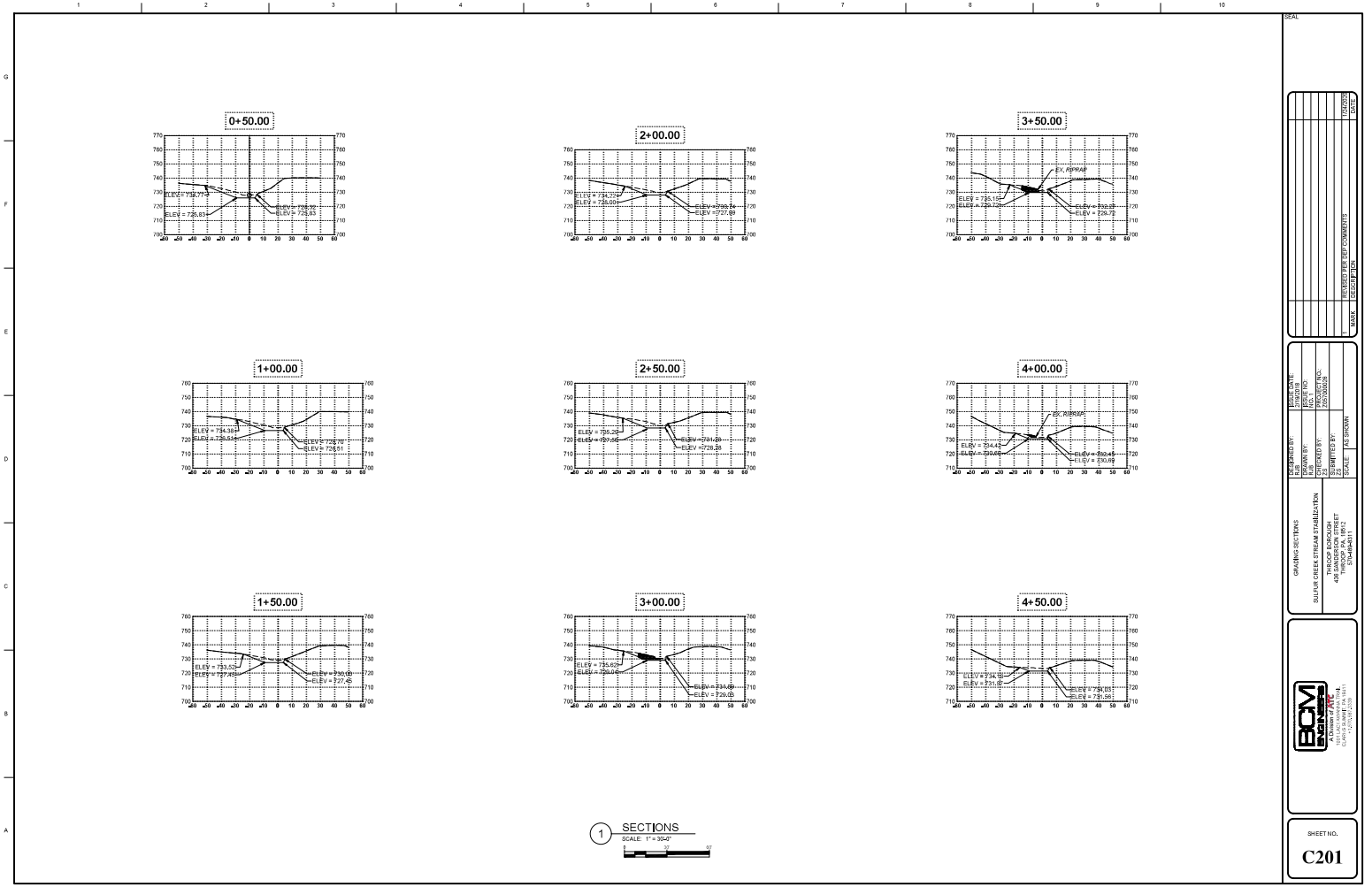
GENERAL SHEET NOTE  
 REFER TO EROSION AND SEDIMENT CONTROL PLAN AND DETAILS SHEETS C001, C002, C003 AND C004.  
 REFER TO CIVIL DETAILS SHEETS C001 AND C002 FOR ROCK VANE AND SCOUR POOL DETAILS.  
 REFER TO SECTION SHEETS FOR CRITICAL GRADE ELEVATIONS.

DATE	
REVISION	
NO.	
DESCRIPTION	
BY	
CHECKED	
DATE	

REPORTED BY	SCALE
DRAWN BY	SCALE
CHECKED BY	SCALE
DATE	SCALE
PROJECT NO.	SCALE
DATE	SCALE
CHECKED BY	SCALE
DATE	SCALE
PROJECT NO.	SCALE
DATE	SCALE

REPORTED BY: [Name]  
 DRAWN BY: [Name]  
 CHECKED BY: [Name]  
 DATE: [Date]  
 PROJECT NO.: [Number]  
 SHEET NO.: [Number]

SHEET NO.  
**C105**



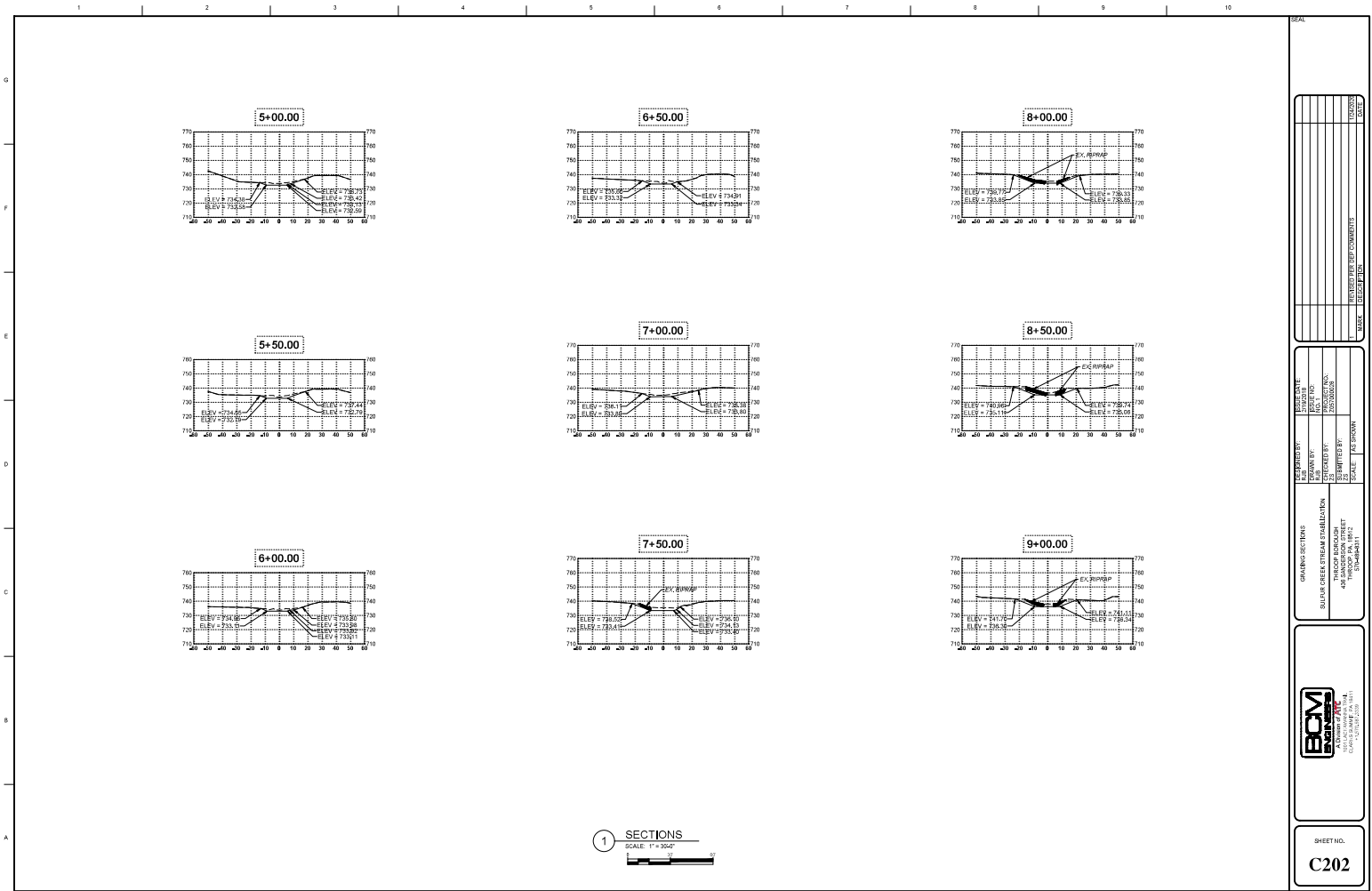
NO.	REVISIONS	DATE

DESIGNED BY:	SCALE:	DATE:
DRAWN BY:	PROJECT NO.:	DATE:
CHECKED BY:	PROJECT NO.:	DATE:
APPROVED BY:	PROJECT NO.:	DATE:

**BCM**  
A Division of F&C  
10011 BURNING TREE ROAD  
SUITE 100  
MEMPHIS, TN 38118  
(901) 981-3400

SHEET NO.  
**C201**

A  
B  
C  
D  
E  
F  
G  
1 2 3 4 5 6 7 8 9 10



REVISIONS	
NO.	DESCRIPTION

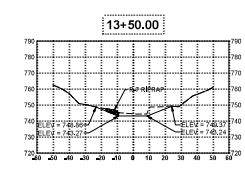
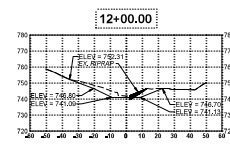
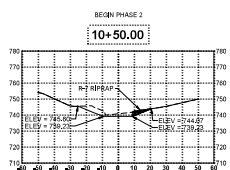
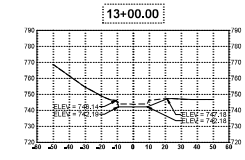
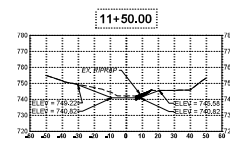
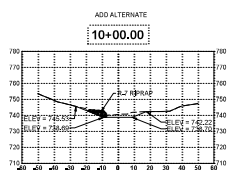
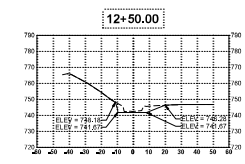
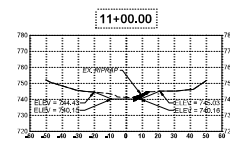
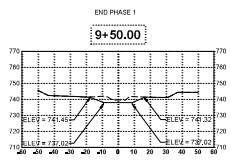
DESIGNED BY: EY	CHECKED BY: EY	DATE: 12/12/2018
DRAWN BY: EY	SCALE: AS SHOWN	
SULLIVAN COUNTY HEALTH DEPARTMENT TRANSIT DIVISION 409 TRANSIT BLVD CATAPGUS, NY 12014		



SHEET NO.  
**C202**

1 2 3 4 5 6 7 8 9 10

G  
F  
E  
D  
C  
B  
A



1 SECTIONS  
SCALE: 1" = 30'-0"

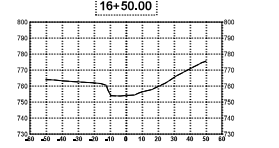
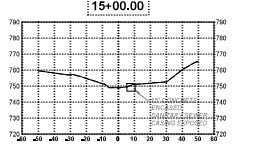
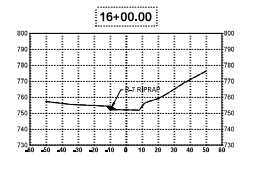
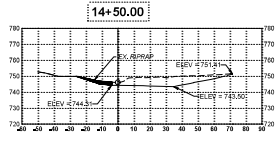
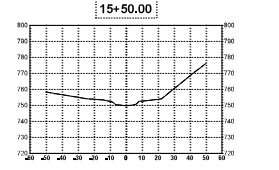
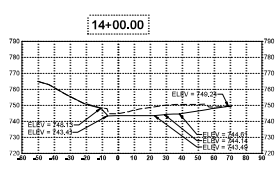

DESIGNED BY: _____	CHECKED BY: _____
DRAWN BY: _____	DATE: _____
SCALE: _____	PROJECT NO.: _____
PROJECT TITLE: _____	PROJECT LOCATION: _____
DATE: _____	SCALE: _____

**BCM**  
BENTON CONSULTANTS, INC.  
A DIVISION OF BCI  
2415 W. STATE ST., SUITE 100  
SPRINGFIELD, MO 65804  
TEL: 417-875-1100  
WWW.BCMCONSULTANTS.COM

SHEET NO.  
**C203**

1 2 3 4 5 6 7 8 9 10

G  
F  
E  
D  
C  
B  
A



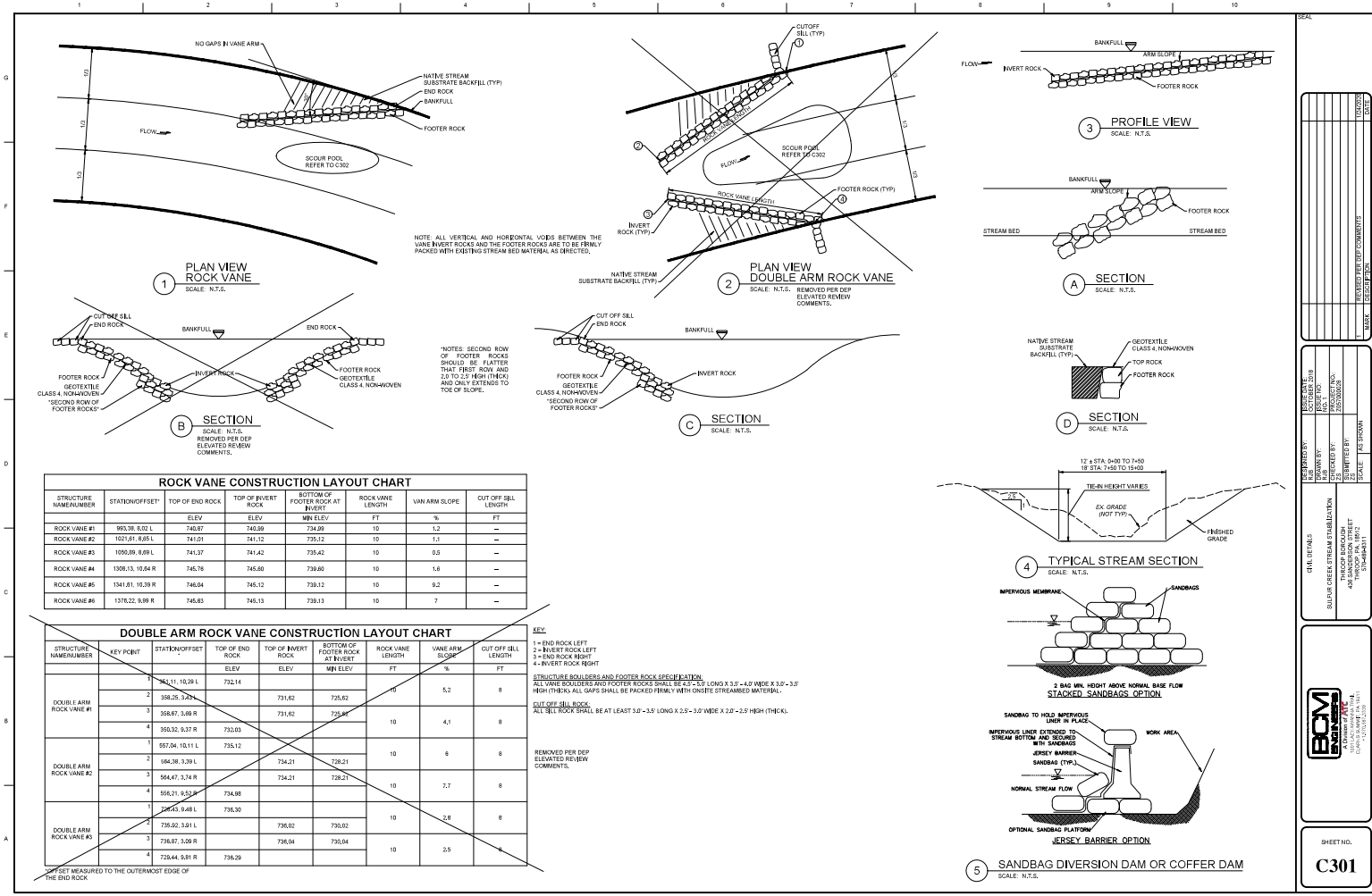
1 SECTIONS  
SCALE: 1" = 30'-0"

PROJECT NO.	DATE
DESIGNED BY	SCALE
DRAWN BY	PROJECT NO.
CHECKED BY	DATE
APPROVED BY	SCALE
DATE	SCALE

DESIGN SYSTEMS  
 SULLIVAN CREEK STREAM STABILIZATION  
 THROUGH FORDSON  
 AND THROUGH PA. 1802  
 COUNTY OF WASHINGTON  
 WASHINGTON

**BCM**  
 BROWN CALDWELL  
 CONSULTANTS  
 1000 15TH AVENUE, S.W.  
 BOULDER, CO 80502  
 (303) 440-0000  
 WWW.BCMCONSULTANTS.COM

SHEET NO.  
**C204**



**ROCK VANE CONSTRUCTION LAYOUT CHART**

STRUCTURE NAME/NUMBER	STATION/OFFSET	TOP OF END ROCK		TOP OF INVERT ROCK		ROCK VANE LENGTH	VANE ARM SLOPE	CUT OFF SILL LENGTH
		ELEV	ELEV	MIN ELEV	FT			
ROCK VANE #1	963.39, 8.02 L	740.87	740.89	734.29	10	1.2	--	
ROCK VANE #2	1021.81, 9.68 L	741.09	741.12	735.13	10	1.1	--	
ROCK VANE #3	1090.09, 9.99 R	741.37	741.42	735.42	10	0.9	--	
ROCK VANE #4	1309.13, 10.84 R	745.76	745.80	739.80	10	1.6	--	
ROCK VANE #5	1341.91, 10.99 R	748.04	748.12	739.12	10	9.2	--	
ROCK VANE #6	1378.22, 9.99 R	748.93	748.13	739.13	10	7	--	

**DOUBLE ARM ROCK VANE CONSTRUCTION LAYOUT CHART**

STRUCTURE NAME/NUMBER	KEY POINT	STATION/OFFSET	TOP OF END ROCK		TOP OF INVERT ROCK		ROCK VANE LENGTH	VANE ARM SLOPE	CUT OFF SILL LENGTH
			ELEV	ELEV	MIN ELEV	FT			
DOUBLE ARM ROCK VANE #1	1	742.11, 10.39 L		732.14					
	2	338.25, 3.22 R		731.62	725.62	0	5.2	8	
	3	336.87, 3.69 R		731.62	725.62				
	4	350.32, 0.37 R		733.83		10	4.1	8	
DOUBLE ARM ROCK VANE #2	1	557.04, 10.11 L		735.12					
	2	564.38, 3.39 L		734.21	728.21	10	6	8	
	3	564.47, 3.74 R		734.21	728.21				
	4	558.21, 0.52 R		734.98		10	7.7	8	
DOUBLE ARM ROCK VANE #3	1	346.53, 0.68 L		736.30					
	2	735.62, 3.61 L		736.02	730.02	10	2.8	8	
	3	736.87, 3.09 R		736.04	730.04				
	4	728.44, 0.81 R		735.29		10	2.5	8	

OFFSET MEASURED TO THE OUTERMOST EDGE OF THE END ROCK

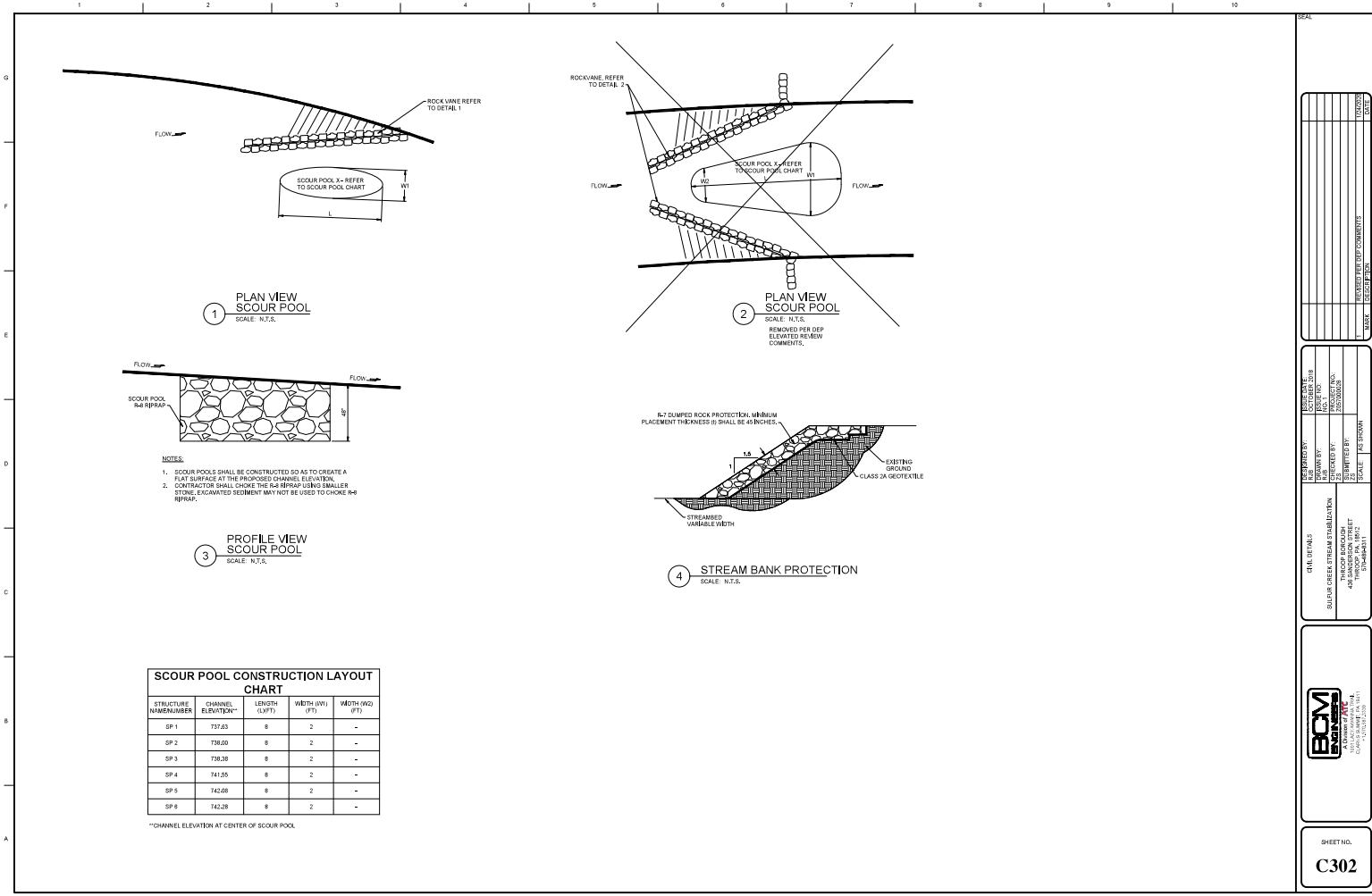
DATE:	10/20/2023
SCALE:	AS SHOWN
DESIGNED BY:	AS SHOWN
CHECKED BY:	AS SHOWN
APPROVED BY:	AS SHOWN
REVISIONS:	AS SHOWN

DESIGNED BY:	AS SHOWN
CHECKED BY:	AS SHOWN
APPROVED BY:	AS SHOWN
REVISIONS:	AS SHOWN

DESIGNED BY:	AS SHOWN
CHECKED BY:	AS SHOWN
APPROVED BY:	AS SHOWN
REVISIONS:	AS SHOWN

SHEET NO. **C301**





1 PLAN VIEW SCOUR POOL  
SCALE: N.T.S.

2 PLAN VIEW SCOUR POOL  
SCALE: N.T.S.  
REMOVED PER DEP ELEVATED REVIEW COMMENTS.

3 PROFILE VIEW SCOUR POOL  
SCALE: N.T.S.

4 STREAM BANK PROTECTION  
SCALE: N.T.S.

- NOTES:
1. SCOUR POOLS SHALL BE CONSTRUCTED SO AS TO CREATE A FLAT SURFACE AT THE PROPOSED CHANNEL ELEVATION.
  2. CONTRACTOR SHALL CHOKE THE R4-R8 RIPRAP USING SMALLER STONE. EXCAVATED SEDIMENT MAY NOT BE USED TO CHOKE R4-R8 RIPRAP.

**SCOUR POOL CONSTRUCTION LAYOUT CHART**

STRUCTURE NUMBER	CHANNEL ELEVATION**	LENGTH (L)(FT)	WIDTH (W)(FT)	WIDTH (WD)(FT)
SP 1	737.83	8	2	-
SP 2	738.00	8	2	-
SP 3	738.38	8	2	-
SP 4	741.55	8	2	-
SP 5	742.08	8	2	-
SP 6	742.28	8	2	-

\*\*CHANNEL ELEVATION AT CENTER OF SCOUR POOL.

NO.	DESCRIPTION	DATE

DESIGNED BY:	SCALE: AS SHOWN
DRAWN BY:	SCALE: AS SHOWN
CHECKED BY:	SCALE: AS SHOWN
DATE:	SCALE: AS SHOWN

BCM  
**BCM**  
 BUILDING CONSTRUCTION MATERIALS  
 11111 11111 11111  
 11111 11111 11111