

PLAN PREPARATION

PROJECT MANAGER: TERRY W. SCHMIDT, P.E.
PROJECT ENGINEER: TERRY W. SCHMIDT, P.E.

FEDERAL PROJECT NO.						
DISTRICT	COUNTY	TOWNSHIP	BOROUGH	ROUTE	SECTION	TOTAL SHEETS
2-0	CENTRE	RUSH	-	0322	C09	9

COMMONWEALTH OF PENNSYLVANIA



DEPARTMENT OF TRANSPORTATION

DRAWINGS
FOR
CONSTRUCTION
OF
PHILIPSBURG WETLAND
WATER MANAGEMENT PLAN
FOR

STATE ROUTE 0322 SECTION c09
IN CENTRE COUNTY

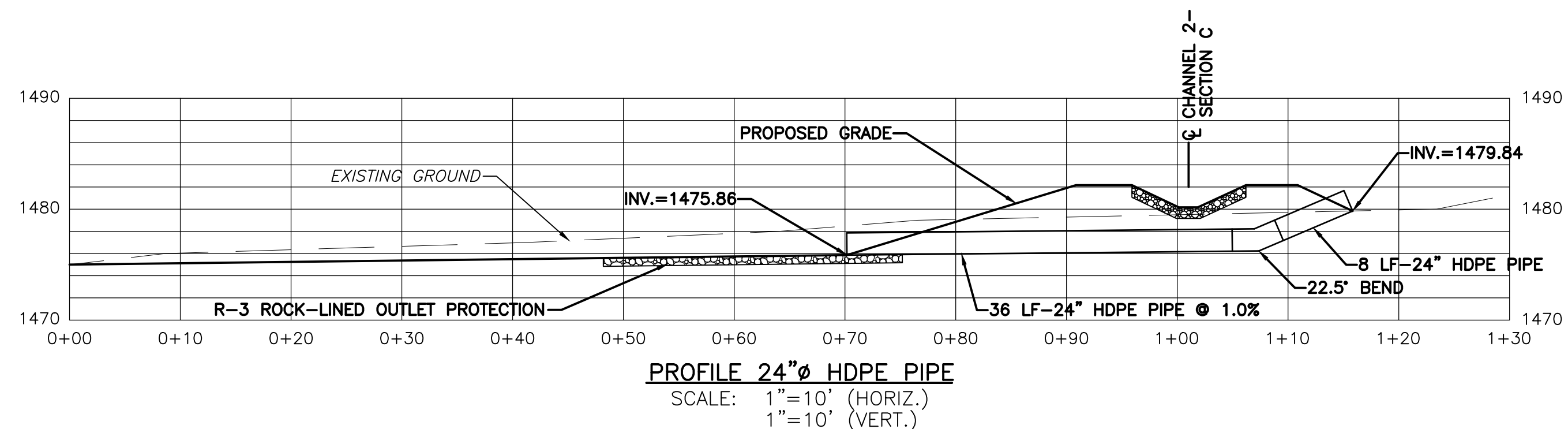
INDEX OF DRAWINGS

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C-2	2 OF 9	SITE PLAN
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C-5	5 OF 9	LIMESTONE-LINED CHANNEL 2 - PLAN & PROFILE
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C-8	8 OF 9	LIMESTONE-LINED CHANNEL 2 - SECTIONS
C-9	9 OF 9	LIMESTONE-LINED CHANNEL 2 - SECTIONS

PREPARED BY:
SKELLY AND LOY, Inc.
Engineers-Consultants
2601 North Front Street
Harrisburg, Pennsylvania 17110
(717) 232-0593 (717) 800 892-6532

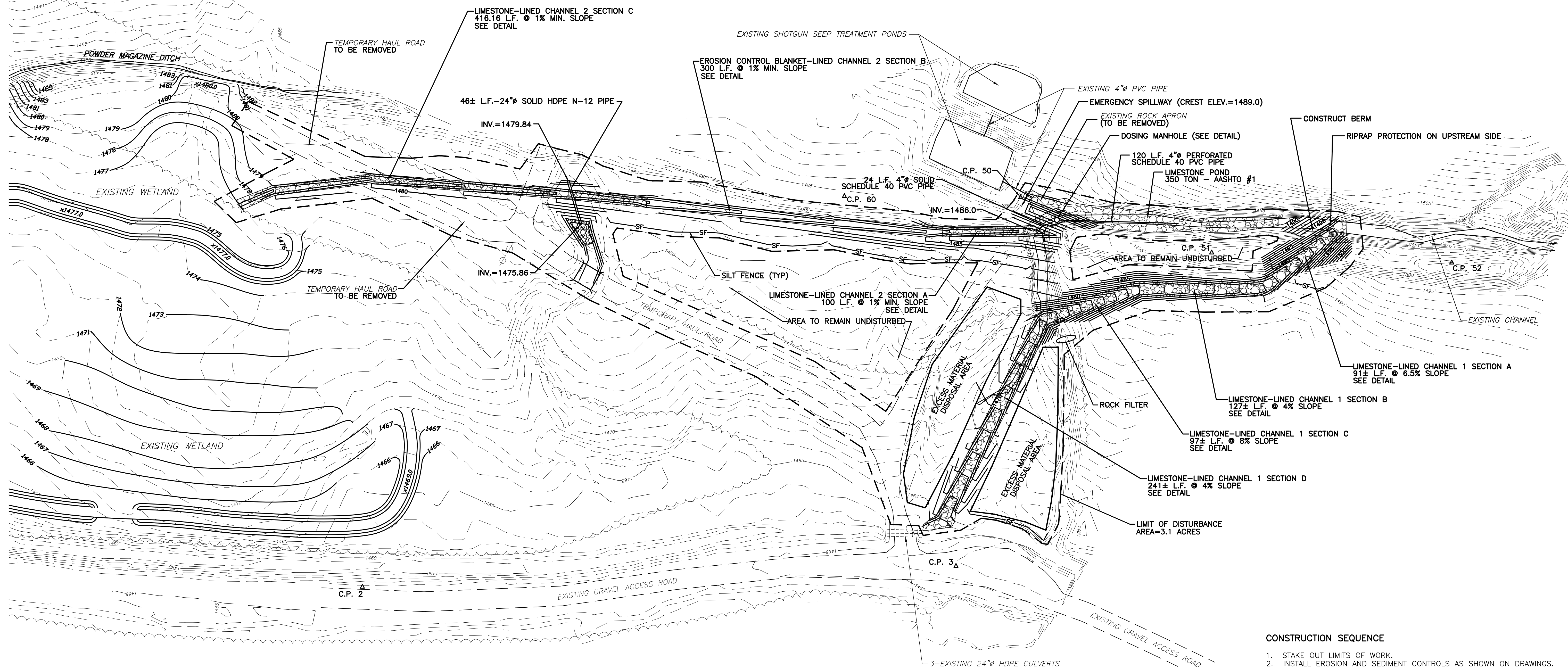
TERRY W. SCHMIDT, P.E.
P.E. LIC. NO. 044833-E

DATE



NOTES:

1. THE EXISTING BASE MAP INFORMATION AS SHOWN ON THIS PLAN WAS PROVIDED BY DEWBERRY-GOODKIND, INC. INCLUDING FIELD SURVEY WORK PERFORMED IN 2005.
2. THE PROPOSED CONTOURS SHOWN IN CHANNEL 1 AND CHANNEL 2 REPRESENT FINAL GRADE OF FINISHED SURFACE.
3. ALL DISTURBED AREAS NOT RECEIVING STONE MATERIAL SHALL BE SEEDED, FERTILIZED, AND MULCHED IN ACCORDANCE WITH THE PENNSYLVANIA DEPARTMENT OF TRANSPORTATION PUBLICATION 408 SPECIFICATIONS, LATEST EDITION.
4. FOR ESTIMATE OF QUANTITIES, SEE TABLE ON SHEET 9 OF 9.



SURVEY CONTROL POINTS - COORDINATE TABLE

NORTHING	EASTING	ELEVATION	DESCRIPTION
264046.325	1843388.413	1464.51	CONTROL POINT NO. 2
263446.701	1843409.312	1466.36	CONTROL POINT NO. 3
263361.482	1843781.917	1490.84	CONTROL POINT NO. 50
263158.388	1843726.015	1498.85	CONTROL POINT NO. 51
262945.972	1843715.873	1504.97	CONTROL POINT NO. 52
263559.410	1843783.025	1484.41	CONTROL POINT NO. 60

- LEGEND**
- EXISTING CONTOURS
 - PROPOSED CONTOURS
 - AS-BUILT WETLAND CONTOURS
 - EXISTING ACCESS ROAD
 - EXISTING STORM PIPES
 - EXISTING TREE LINE
 - EXISTING POWER POLES
 - PROPOSED LIMESTONE AREAS
 - SURVEY CONTROL POINT
 - 18" SILT FENCE



CONSTRUCTION SEQUENCE

1. STAKE OUT LIMITS OF WORK.
2. INSTALL EROSION CONTROL AND SEDIMENT CONTROLS AS SHOWN ON DRAWINGS.
3. CLEAR AND GRUB SITE.
4. INSTALL 24" HDPE N-12 CULVERT PIPE AT ELEVATIONS SHOWN AND ROCK-LINED OUTLET PROTECTION AT OUTLET END OF PIPE.
5. GRADE AND CONSTRUCT LIMESTONE-LINED CHANNEL 2 FROM THE OUTLET (SECTION C) TO THE UPSTREAM END (SECTION A). STABILIZE CHANNEL AS CONSTRUCTION PROGRESSES.
6. INSTALL EROSION CONTROL MAT IN CHANNEL 2 ACCORDING TO MANUFACTURERS' INSTRUCTIONS AND PLACE R-3 LIMESTONE RIPRAP IN LIMESTONE-LINED CHANNEL 2 SECTIONS A AND C IN CONJUNCTION WITH STEP 5 AS WORK PROGRESSES.
7. REMOVE TEMPORARY HAUL ROAD.
8. CONSTRUCT EMBANKMENT AT START OF CHANNEL 2.
9. INSTALL DOSING MANHOLE AND SIPHON ACCORDING TO MANUFACTURERS' INSTRUCTIONS TO ELEVATIONS SHOWN ON DRAWINGS.
10. INSTALL 4" SOLID AND PERFORATED PVC SCHEDULE 40 PIPE.
11. GRADE AND CONSTRUCT LIMESTONE-LINED CHANNEL 1 FROM THE OUTLET (SECTION D) TO THE UPSTREAM END (SECTION A). STABILIZE CHANNEL AS CONSTRUCTION PROGRESSES.
12. PLACE GEOTEXTILE AND R-4 LIMESTONE RIPRAP IN LIMESTONE-LINED CHANNEL 1 IN CONJUNCTION WITH STEP 11 AS WORK PROGRESSES.
13. CONSTRUCT BERM IN EXISTING CHANNEL TO DIVERT WATER INTO LIMESTONE-LINED CHANNEL 1.
14. PLACE 350 TONS AASHTO #1 LIMESTONE IN LIMESTONE POND AREA AS SHOWN ON DRAWINGS.
15. SEED AND MULCH ALL DISTURBED AREAS.
16. REMOVE ALL EROSION AND SEDIMENT CONTROLS ONCE 70% VEGETATIVE COVER HAS BEEN ACHIEVED.

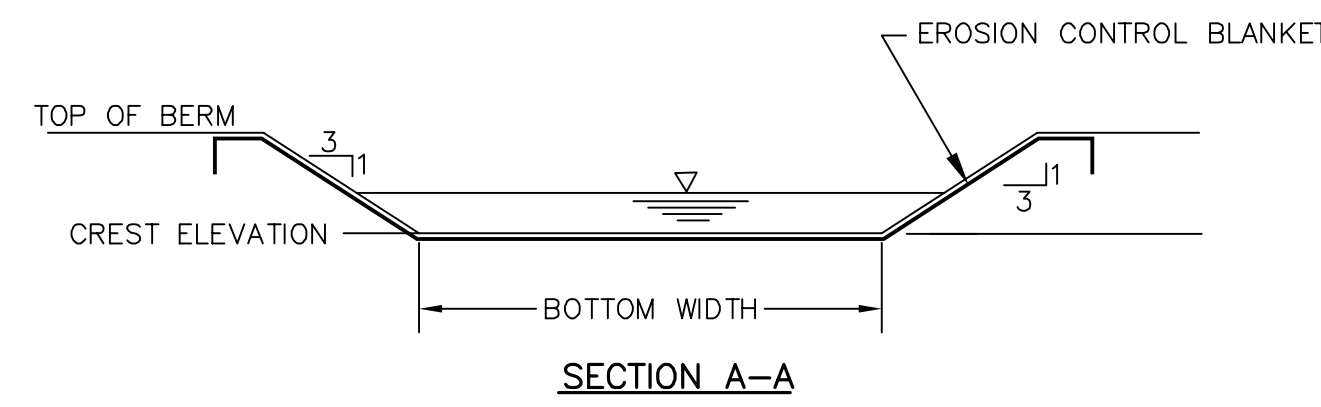
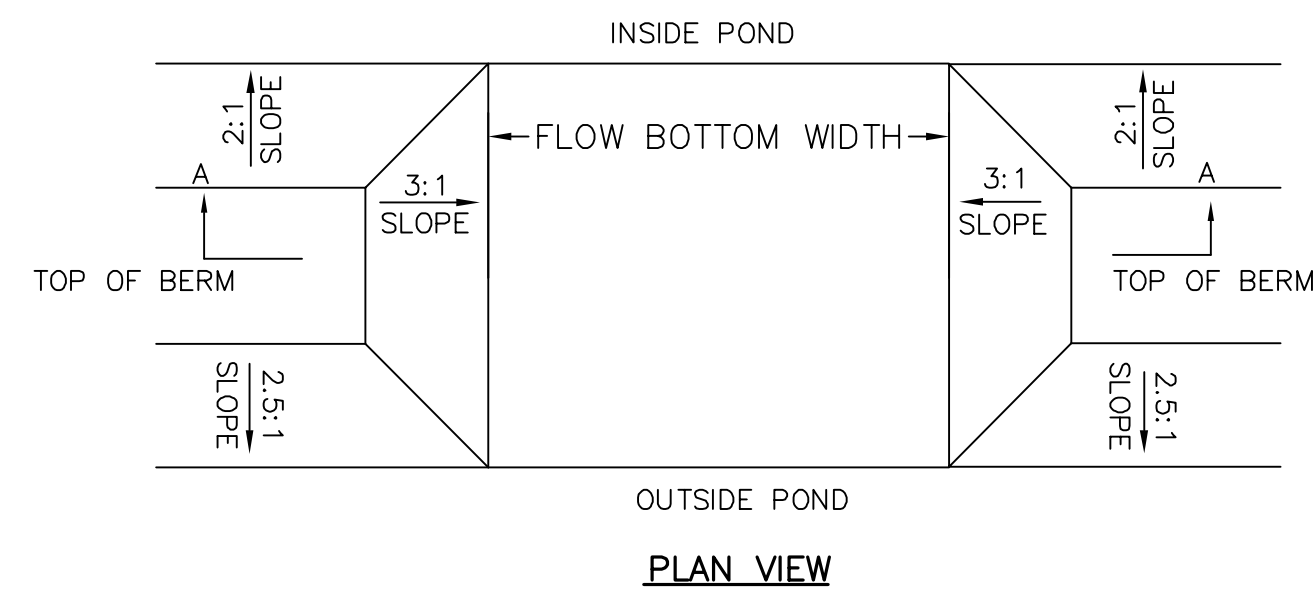
DRAWING NO.	C-2	SHEET	2 OF 9
"PLAN" FOR PHILIPSBURG WETLAND WATER MANAGEMENT PLAN			
FLUSH TOWNSHIP		CENTRE COUNTY, PA	
SITE PLAN			
ISSN	DATE	TWS	DATE
NAW	10/3/05	BAS	10/3/05
CHRR	10/3/05	APPLY	10/3/05
SCALE 1" = 50'			
REV	DESCRIPTION	BY	DATE
1	REISED CONSTRUCTION SEQUENCE AND LEGEND	BAS	12/27/05
2	MOD. 24" PIPE ON PLAN, ADDED PROFILE, MOD. CONST. SEQ.	TWS	10/20/06

SKELLY AND LOY, INC.
ENGINEERS-CONSULTANTS

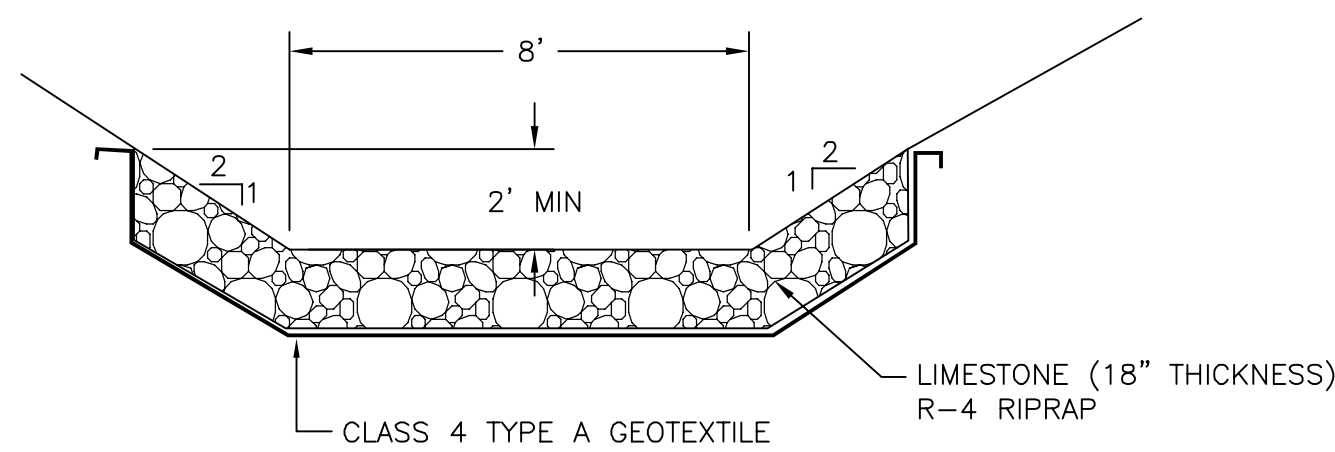
2801 NORTH FRONT STREET
HARRISBURG, PENNSYLVANIA
717-234-0000 (PHONE) FAX (717) 234-1700
EMAIL: skellyloy@skellyloy.com

JOB NUMBER:	1204239008	DATE:	OCTOBER 3 2005
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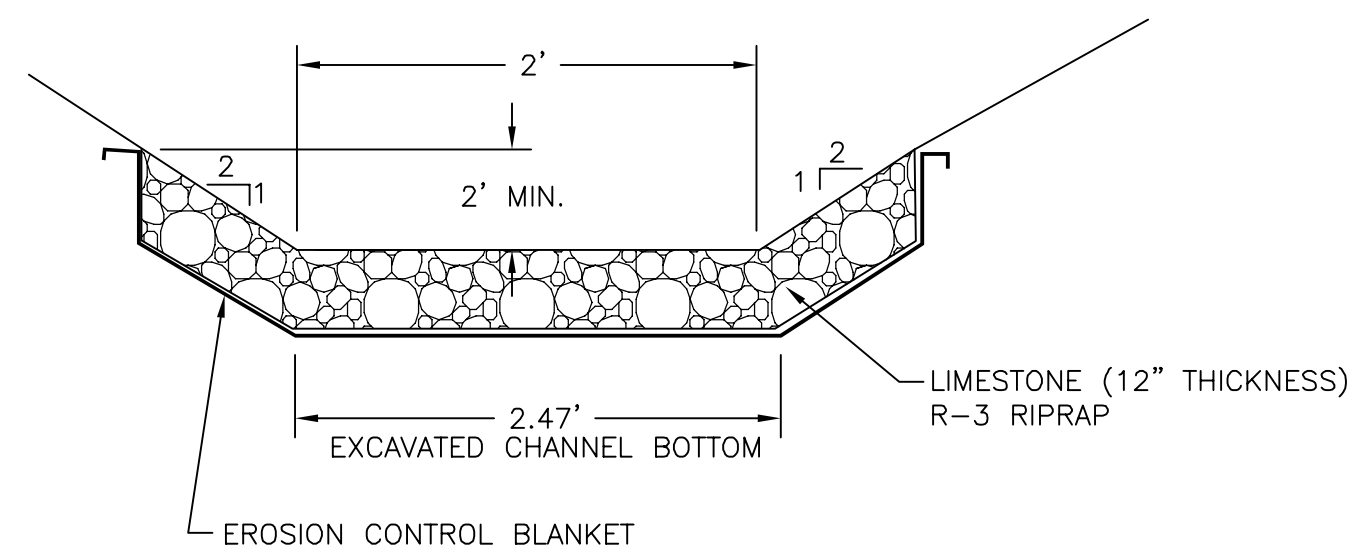
BASIN	TOP OF BERM ELEV.	SPILLWAY CREST ELEV.	FLOW BOTTOM WIDTH (FT)	TEMPORARY SPILLWAY LINING
LIMESTONE POND	1491.0	1489.0	5' MIN.	EROSION CONTROL BLANKET



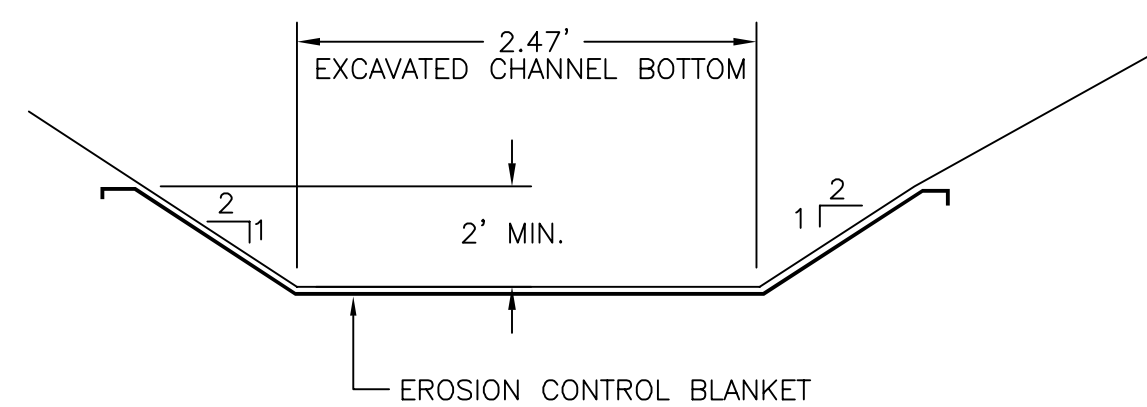
TYPICAL GRASS-LINED EMERGENCY SPILLWAY DETAIL
NO SCALE



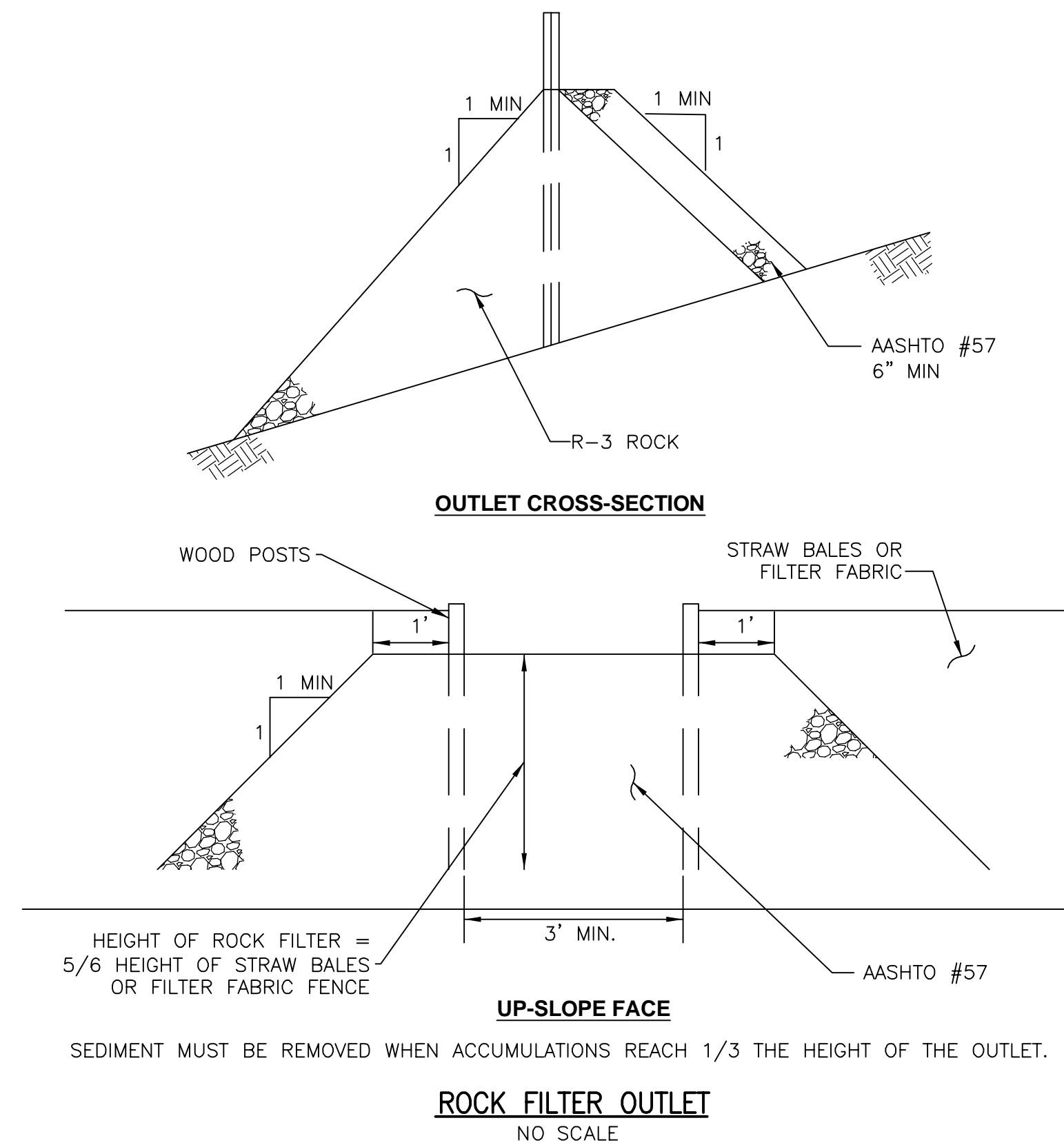
TYPICAL LIMESTONE-LINED CHANNEL 1 (SECTIONS A, B, C, & D)
NO SCALE



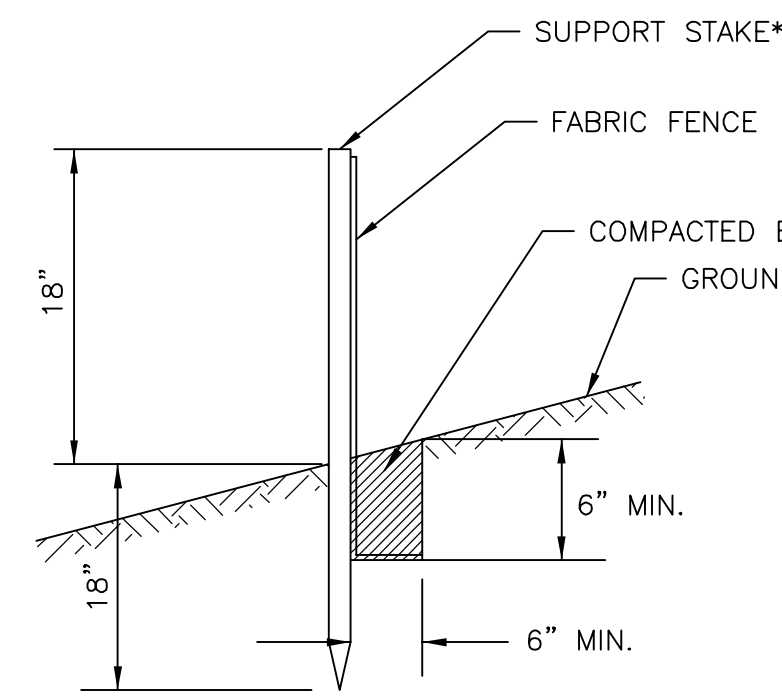
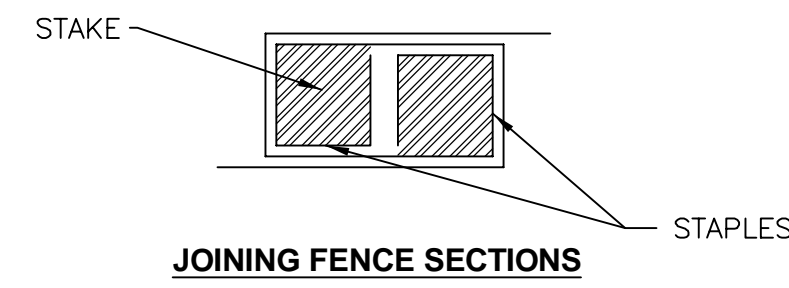
TYPICAL LIMESTONE-LINED CHANNEL 2 (SECTIONS A & C)
NO SCALE



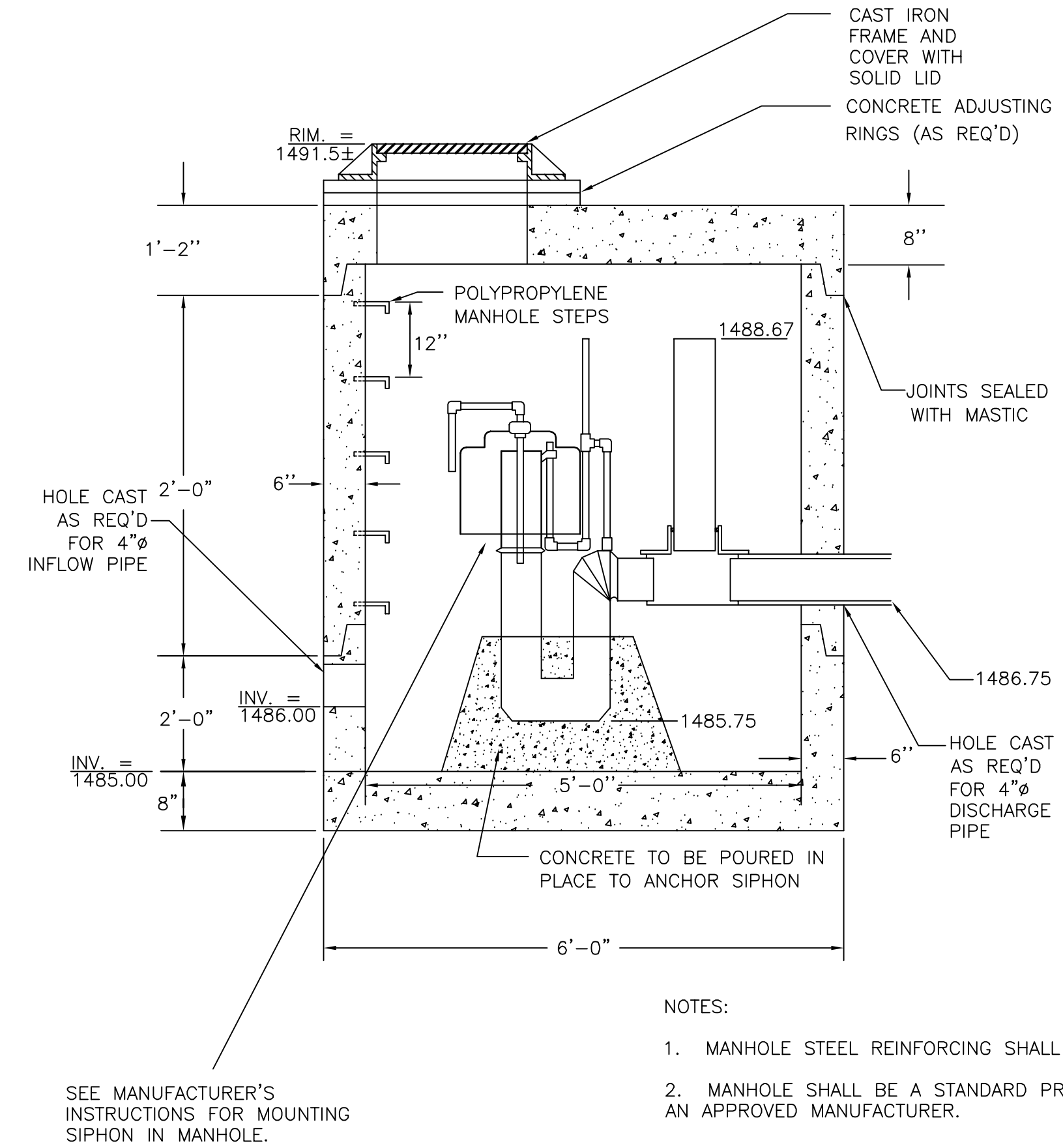
TYPICAL EROSION CONTROL MAT-LINED CHANNEL 2 (SECTION B)
NO SCALE



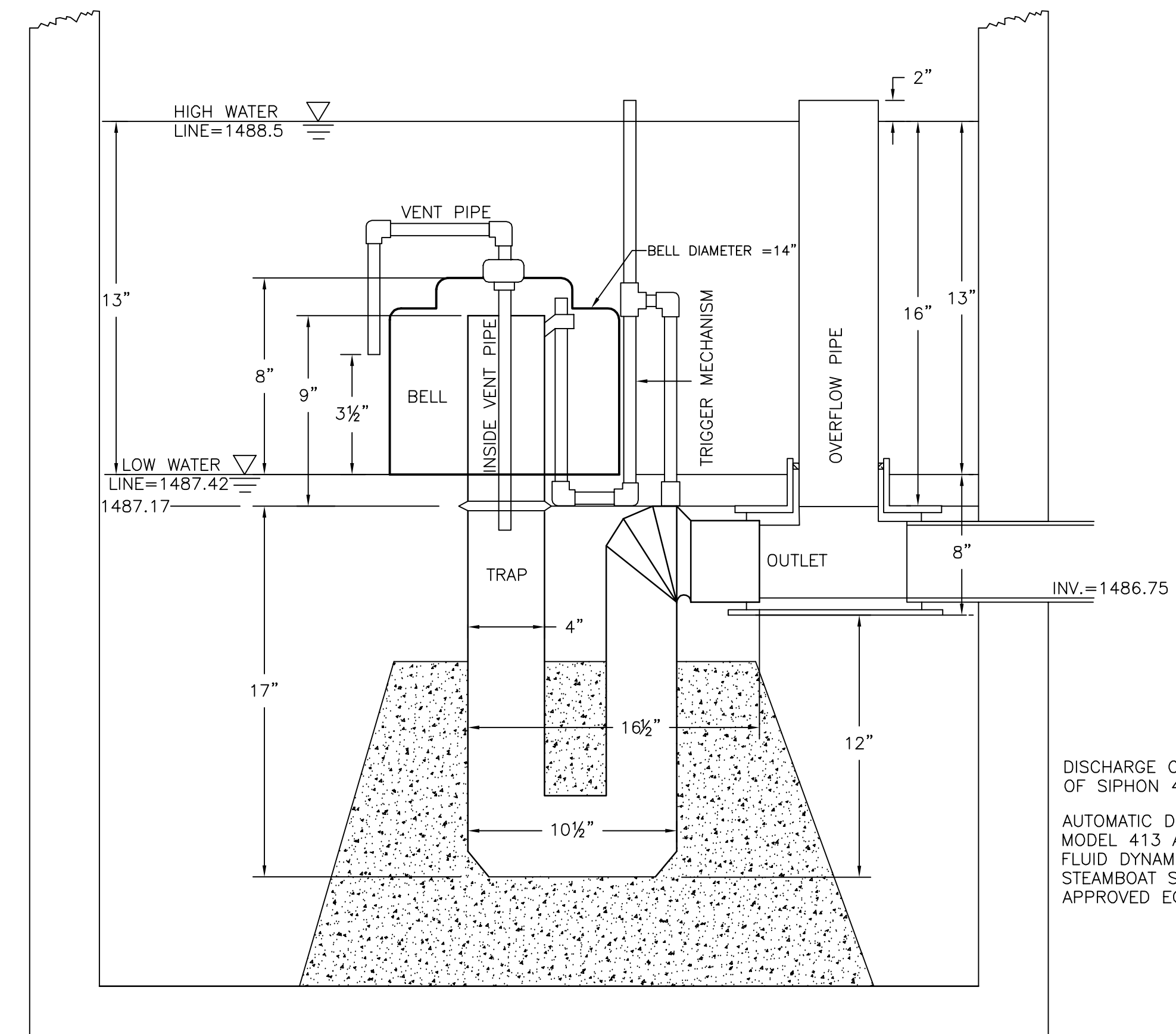
HEIGHT OF ROCK FILTER = 5/6 HEIGHT OF STRAW BALES OR FILTER FABRIC FENCE
SEDIMENT MUST BE REMOVED WHEN ACCUMULATIONS REACH 1/3 THE HEIGHT OF THE OUTLET.



* STAKES SPACED @ 8' MAXIMUM. USE 2" X 2" WOOD OR EQUIVALENT STEEL STAKES.
FILTER FABRIC FENCE MUST BE PLACED AT LEVEL EXISTING GRADE. BOTH ENDS OF THE BARRIER MUST BE EXTENDED AT LEAST 8 FEET UP SLOPE AT 45 DEGREES TO THE MAIN BARRIER ALIGNMENT.
SEDIMENT MUST BE REMOVED WHEN ACCUMULATIONS REACH 1/2 THE ABOVE GROUND HEIGHT OF THE FENCE.
ANY SECTION OF FILTER FABRIC FENCE WHICH HAS BEEN UNDERMINED OR TOPPED MUST BE IMMEDIATELY REPLACED WITH A ROCK FILTER OUTLET. SEE ROCK FILTER OUTLET DETAIL.



NOTES:
1. MANHOLE STEEL REINFORCING SHALL MEET ASTM C-478 SPECIFICATIONS.
2. MANHOLE SHALL BE A STANDARD PRECAST MANHOLE CONSTRUCTED BY AN APPROVED MANUFACTURER.



DISCHARGE CONNECTION OF SIPHON 4.215 O.D.
AUTOMATIC DOSING SIPHON TO BE MODEL #413 AS MANUFACTURED BY FLUID DYNAMIC SIPHONS, INC., STEAMBOAT SPRINGS, CO. OR APPROVED EQUIVALENT.

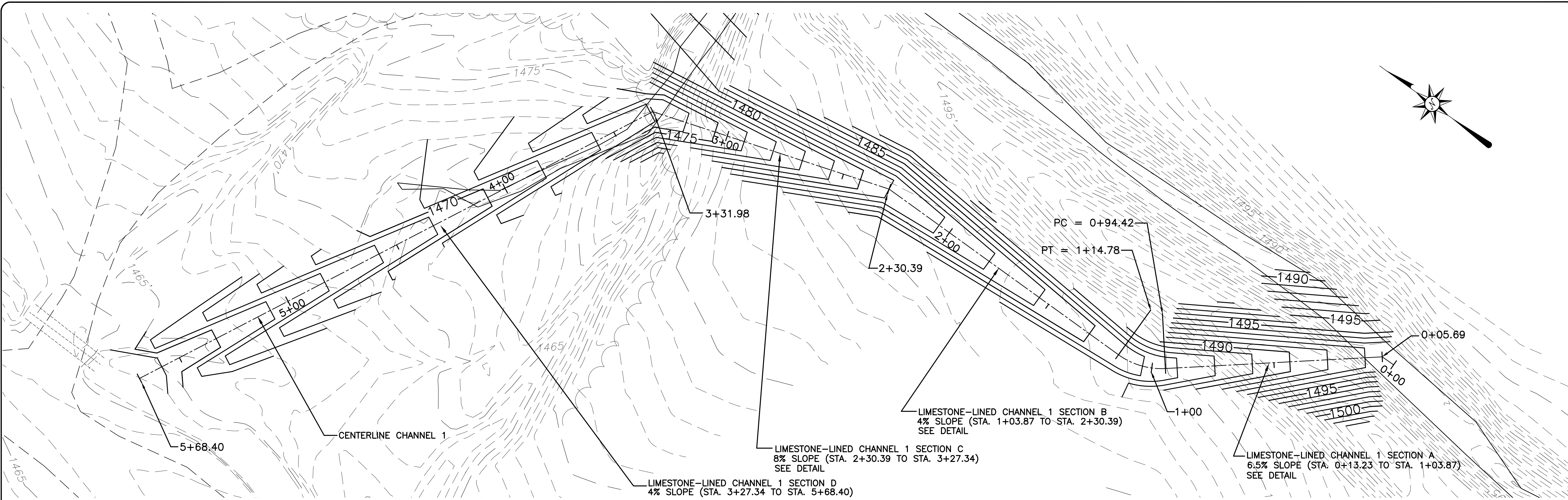
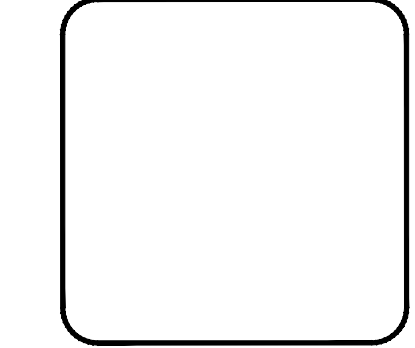
DOSING MANHOLE
NO SCALE

DRAWING NO.	C-3	SHEET	3 OF 9
RUSH TOWNSHIP CENTRE COUNTY PA			
DETAILS			
ISSN	DATE	BY	SCALE
NAW	10/3/05		AS SHOWN
DESKN			
BAS	10/3/05		
CHKR			
TWS	10/3/05		
APPR			
DATE	12/27/05		
REV			
1	REV		
REVISIONS			
NO.	DESCRIPTION	DATE	BY
1	REVISED CONSTRUCTION SEQUENCE AND LEGEND		

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email: skellyloy@skellyloy.com

JOB NUMBER: 1204239008
DATE: OCTOBER 3 2005

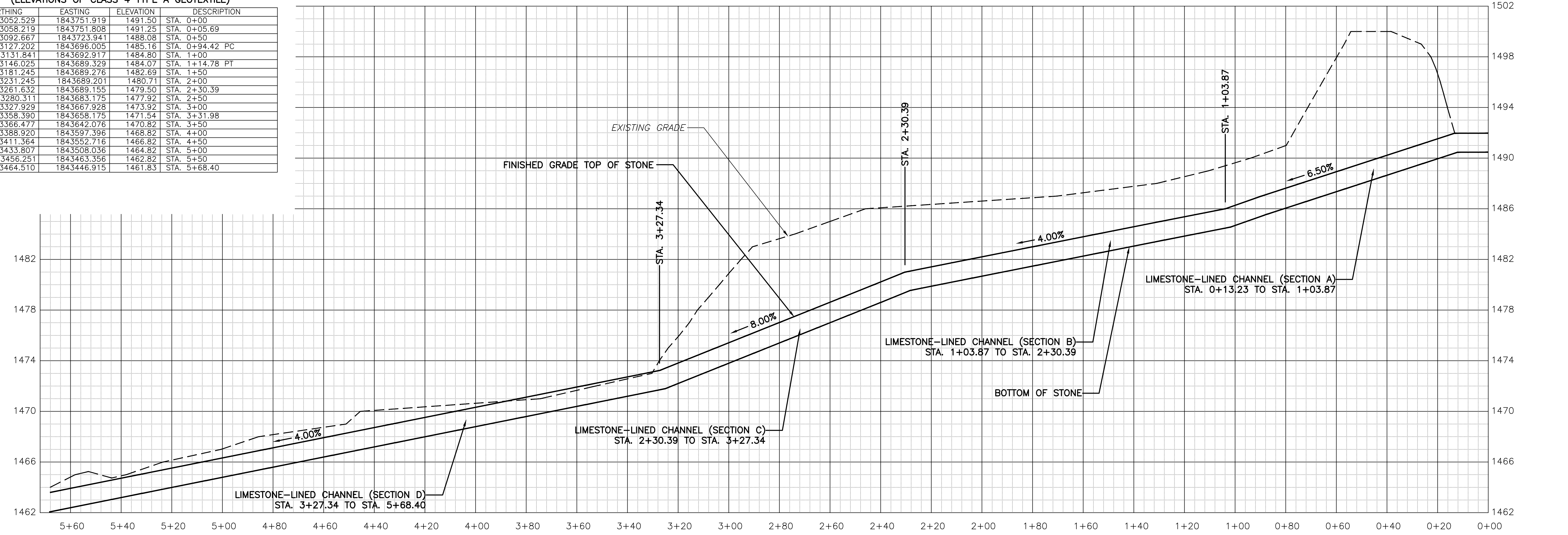
REV	DESCRIPTION	BY	DATE



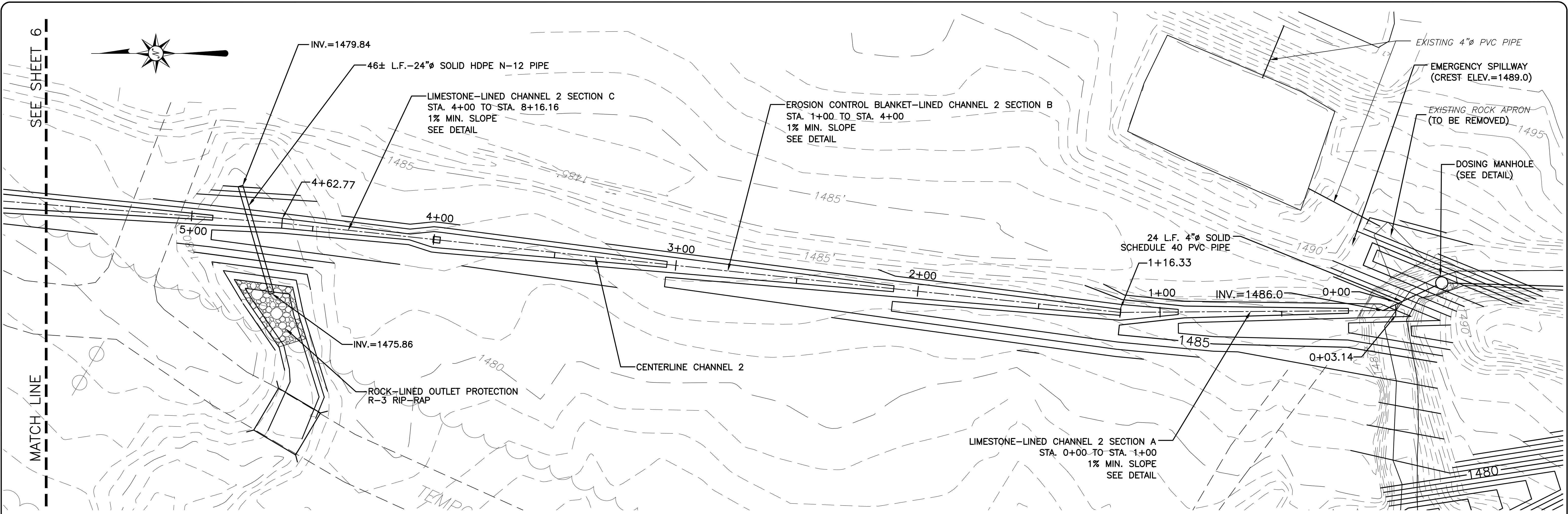
LIMESTONE-LINED CHANNEL 1 - PLAN
 SCALE: 1"=20'

CHANNEL 1 CENTERLINE - COORDINATE TABLE
 (ELEVATIONS OF CLASS 4 TYPE A GEOTEXTILE)

NORTHING	EASTING	ELEVATION	DESCRIPTION
263052.529	1843751.919	1491.50	STA. 0+00
263058.219	1843751.808	1491.25	STA. 0+05.69
263092.667	1843723.941	1488.08	STA. 0+50
263127.202	1843696.005	1485.16	STA. 0+94.42 PC
263131.841	1843692.917	1484.80	STA. 1+00
263146.025	1843689.329	1484.07	STA. 1+14.78 PT
263181.245	1843689.276	1482.69	STA. 1+50
263231.245	1843689.201	1480.71	STA. 2+00
263261.632	1843689.155	1479.50	STA. 2+30.39
263280.311	1843683.175	1477.92	STA. 2+50
263327.929	1843667.928	1473.92	STA. 3+00
263358.390	1843658.175	1471.54	STA. 3+31.98
263366.477	1843642.076	1470.82	STA. 3+50
263388.920	1843597.396	1468.82	STA. 4+00
263411.364	1843552.716	1466.82	STA. 4+50
263433.807	1843508.036	1464.82	STA. 5+00
263456.251	1843463.356	1462.82	STA. 5+50
263464.510	1843446.915	1461.83	STA. 5+68.40



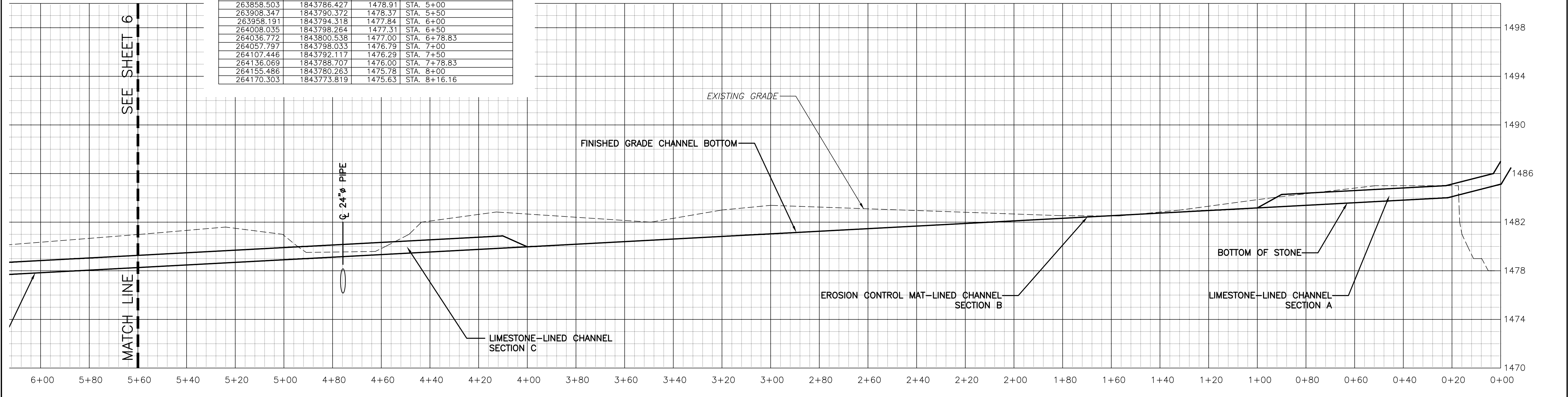
LIMESTONE-LINED CHANNEL 1 - CENTERLINE PROFILE
 SCALE: 1"=20' (HORIZ.)
 1"=4' (VERT.)



CHANNEL 2 CENTERLINE - COORDINATE TABLE
(ELEVATIONS OF EROSION CONTROL BLANKET)

NORTHING	EASTING	ELEVATION	DESCRIPTION
263362.520	1843750.525	1486.00	STA. 0+00
263363.710	1843747.616	1484.98	STA. 0+03.14
263410.566	1843747.297	1483.81	STA. 0+50
263460.564	1843746.956	1483.68	STA. 1+00
263476.894	1843746.845	1483.00	STA. 1+16.33
263510.382	1843750.338	1482.64	STA. 1+50
263560.112	1843755.526	1482.11	STA. 2+00
263609.831	1843760.825	1481.57	STA. 2+50
263659.546	1843766.151	1481.04	STA. 3+00
263709.262	1843771.477	1480.51	STA. 3+50
263758.977	1843776.805	1480.00	STA. 4+00
263808.690	1843782.160	1479.44	STA. 4+50
263821.385	1843783.528	1479.30	STA. 4+62.77
263868.503	1843786.427	1478.91	STA. 5+00
263908.347	1843790.372	1478.37	STA. 5+50
263958.191	1843794.318	1477.84	STA. 6+00
264008.035	1843798.264	1477.31	STA. 6+50
264036.772	1843800.538	1477.00	STA. 6+78.83
264057.797	1843798.033	1476.79	STA. 7+00
264107.446	1843792.117	1476.29	STA. 7+50
264136.069	1843788.707	1476.00	STA. 7+78.83
264155.486	1843780.263	1475.78	STA. 8+00
264170.303	1843773.819	1475.63	STA. 8+16.16

LIMESTONE-LINED CHANNEL 2 - PLAN
SCALE: 1"=20'



LIMESTONE-LINED CHANNEL 2 - CENTERLINE PROFILE
SCALE: 1"=20' (HORIZ.)
1"=4' (VERT.)

DRAWING NO. C-5

SHEET 5 OF 9

"PLAN" FOR PHILIPSBURG WETLAND WATER MANAGEMENT PLAN

CENTRE COUNTY, PA

RUSH TOWNSHIP

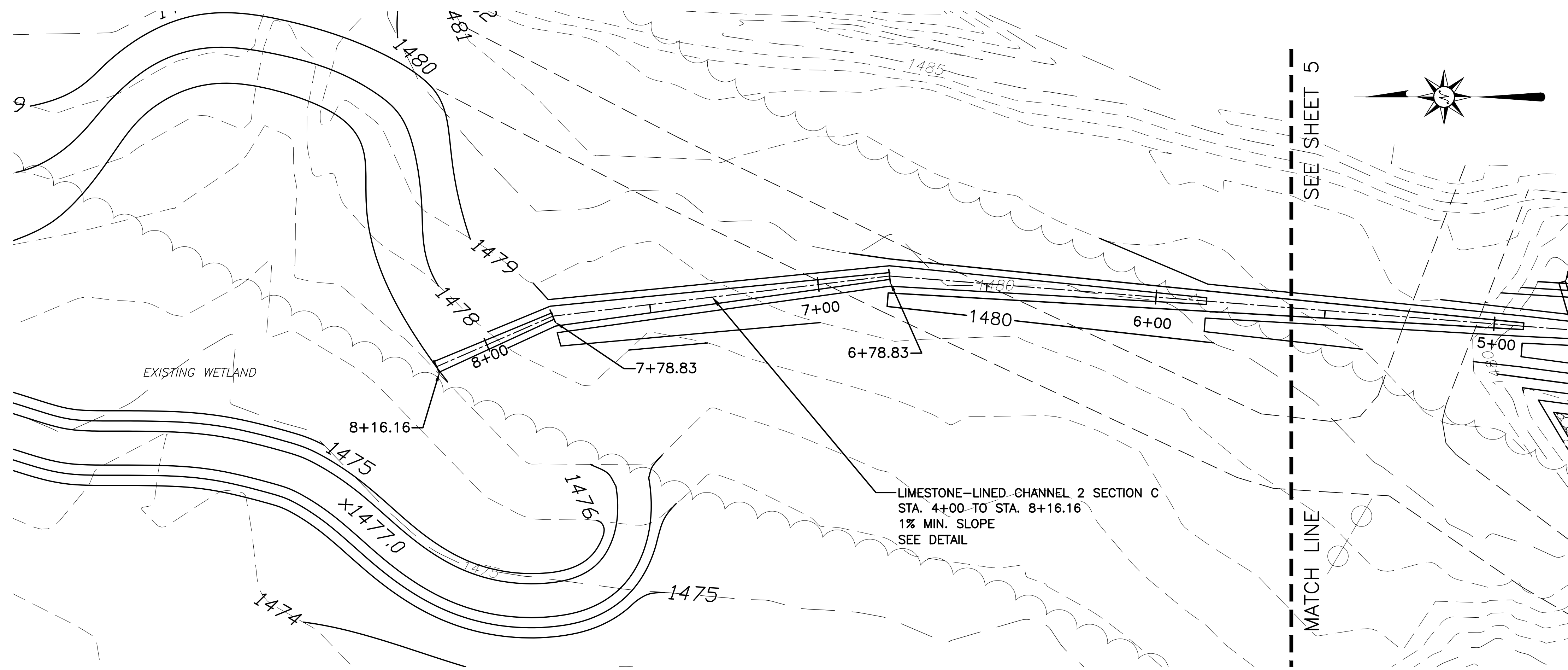
LIMESTONE-LINED CHANNEL 2 - PLAN & PROFILE

ISSN	DATE	BY	APPY	SCALE	AS SHOWN
NAW	10/3/05				
DFSWN	10/3/05				
BAS	10/3/05				
CHR	10/3/05				
TWS	10/3/05				
APV	10/3/05				

REV	DESCRIPTION	DATE	BY	APPY
1	MODIFIED 24" PIPE ON PLAN AND PROFILE	10/20/05		

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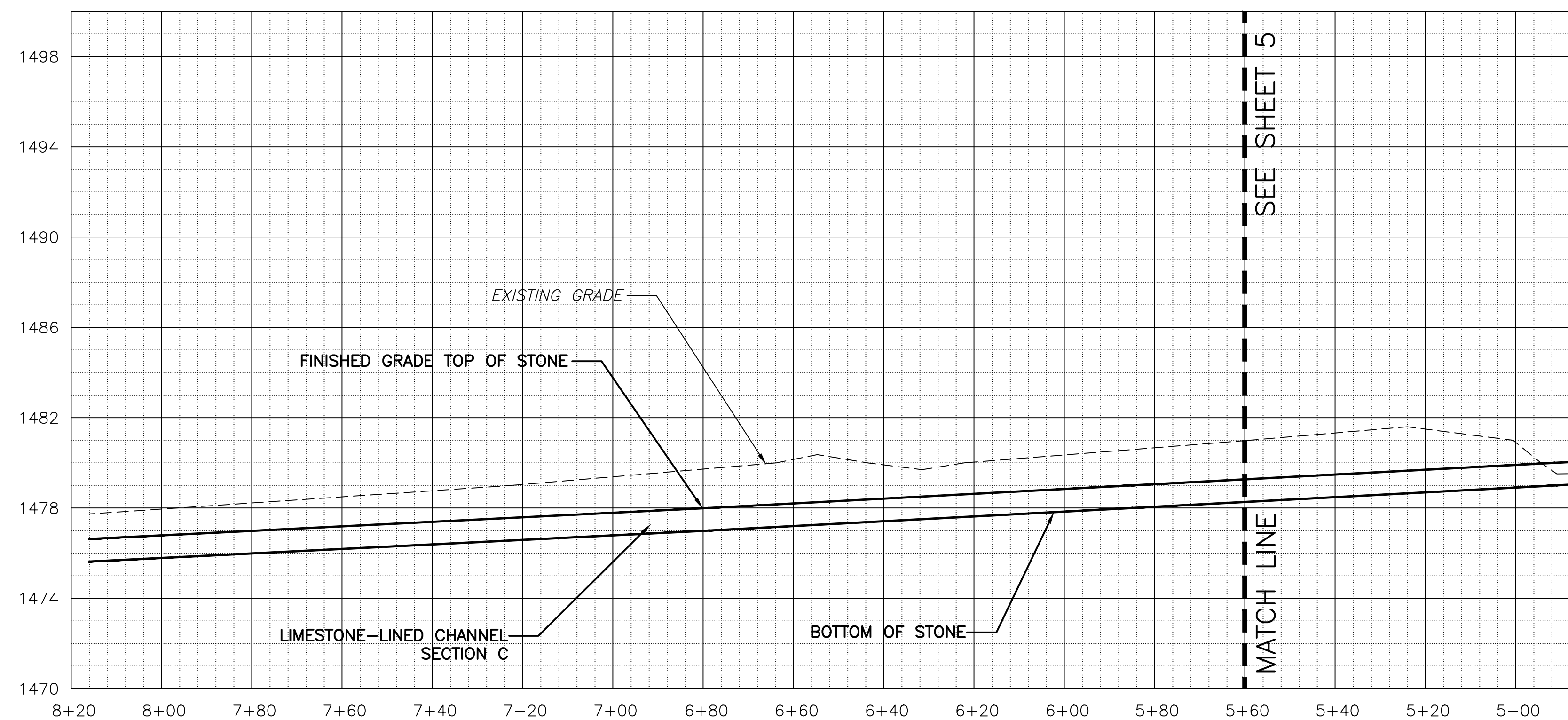
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 DATE: OCTOBER 3 2005



LIMESTONE-LINED CHANNEL 2 - PLAN
SCALE: 1"=20'

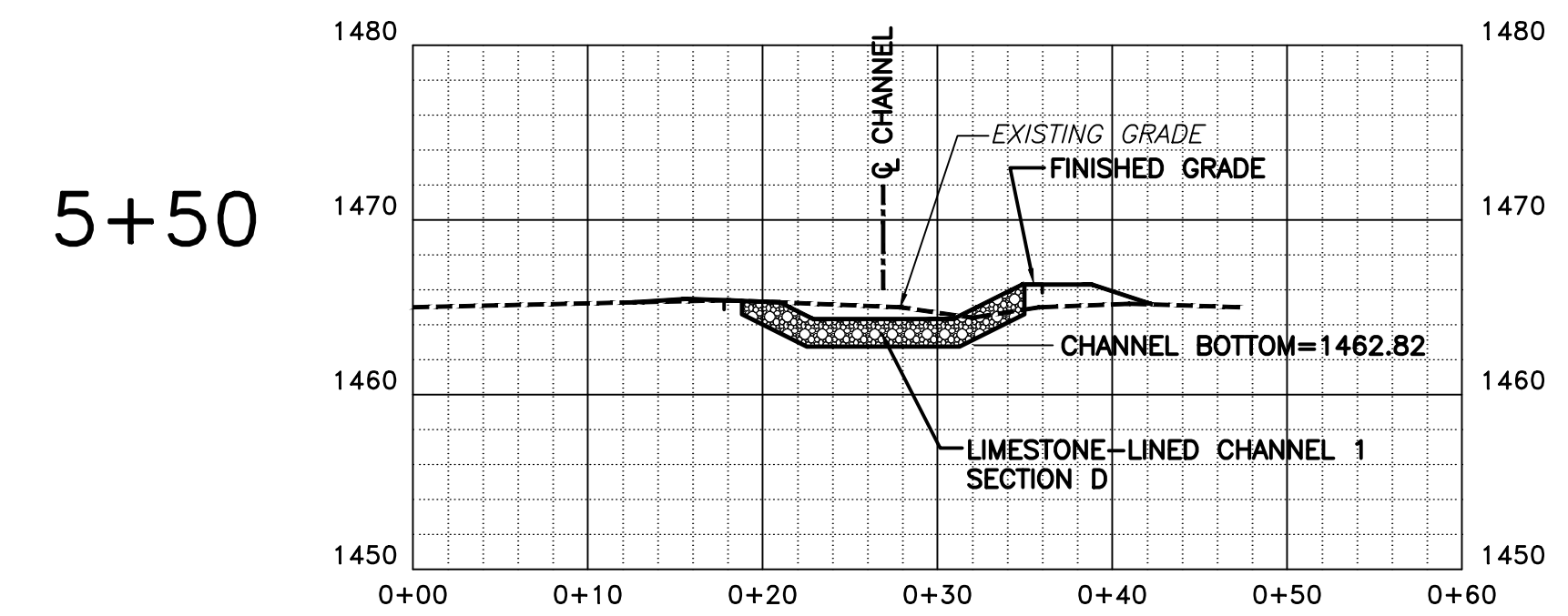
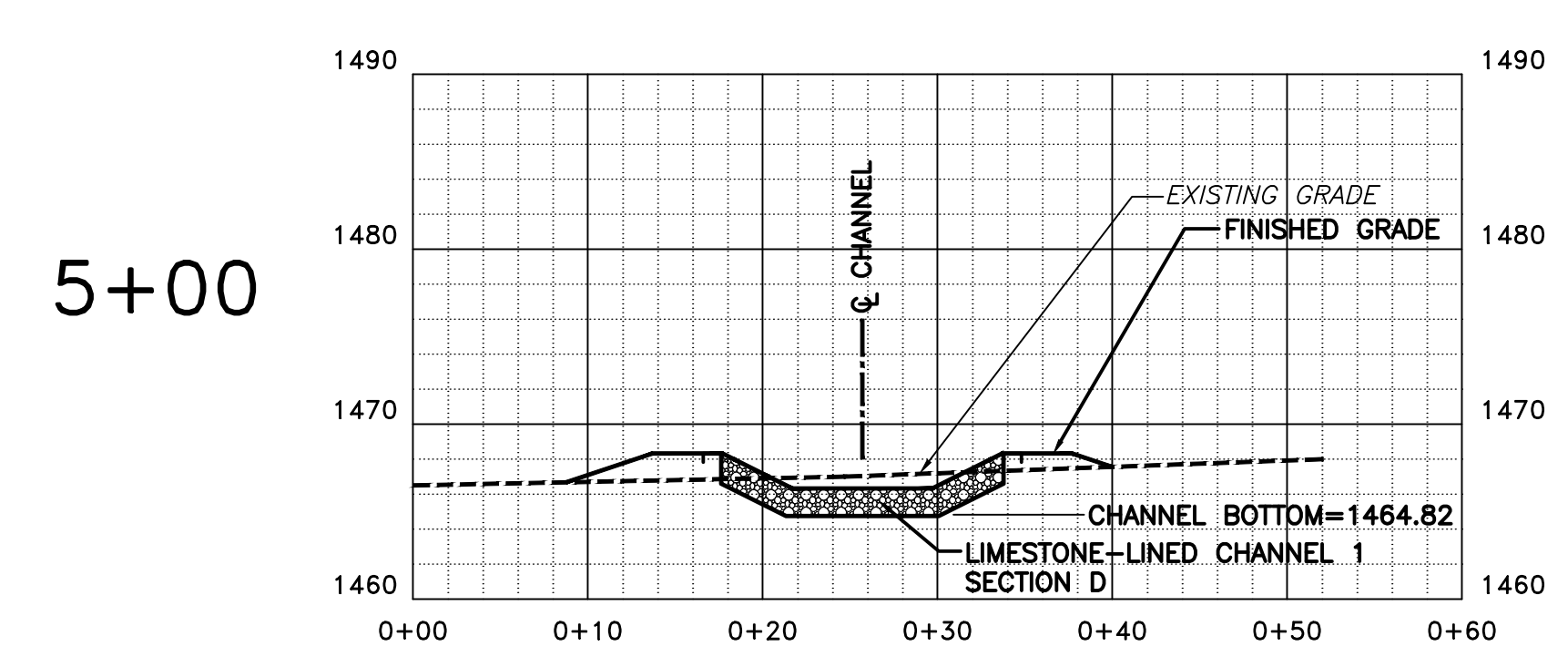
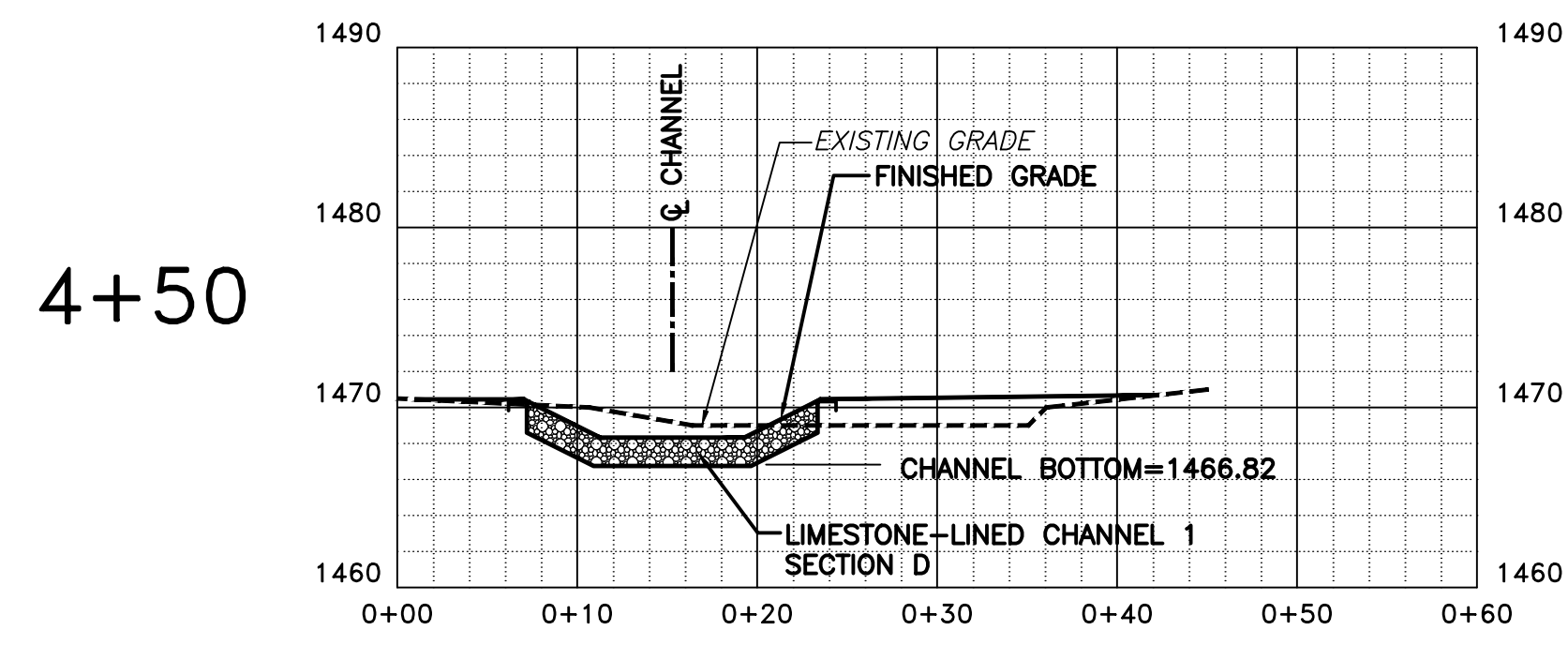
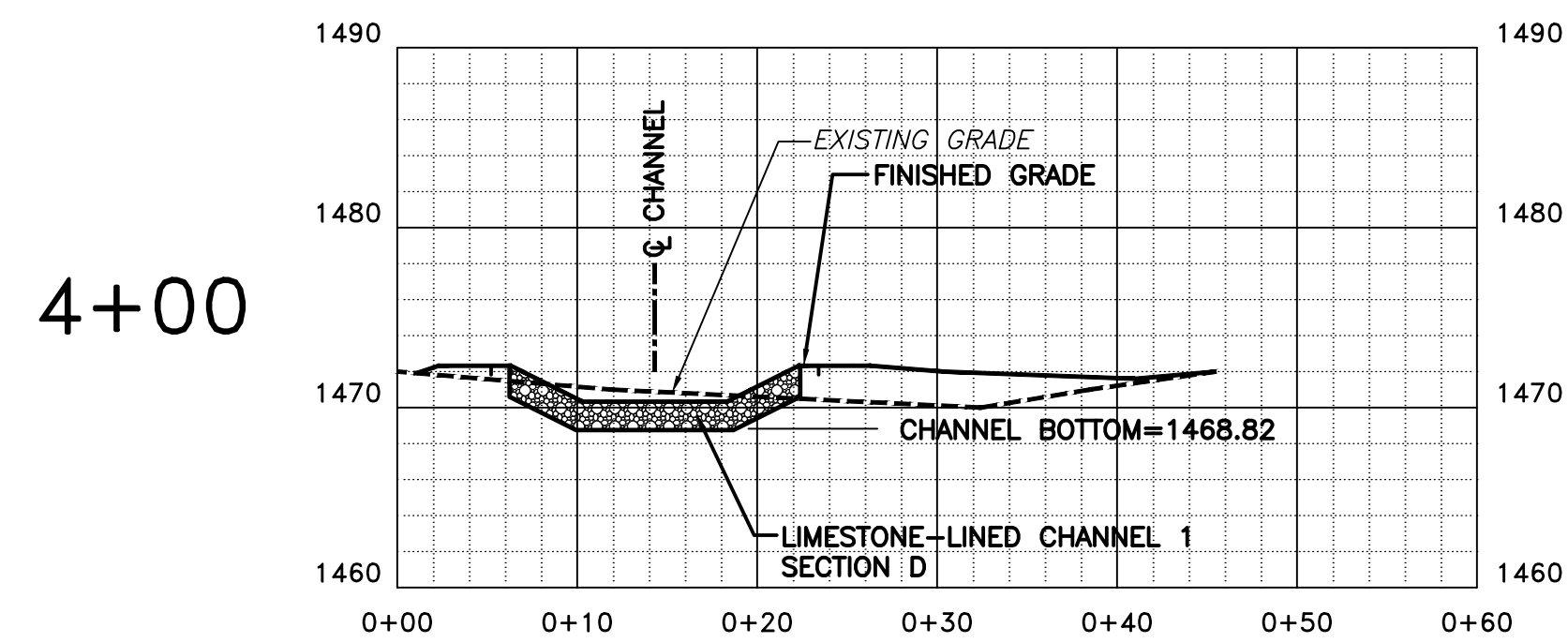
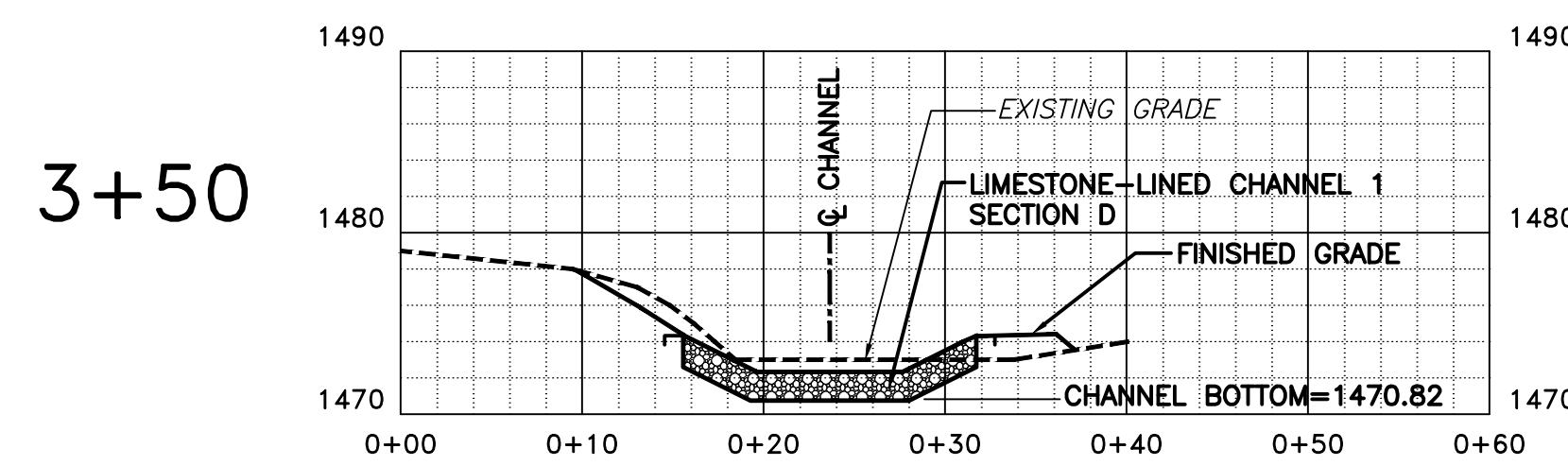
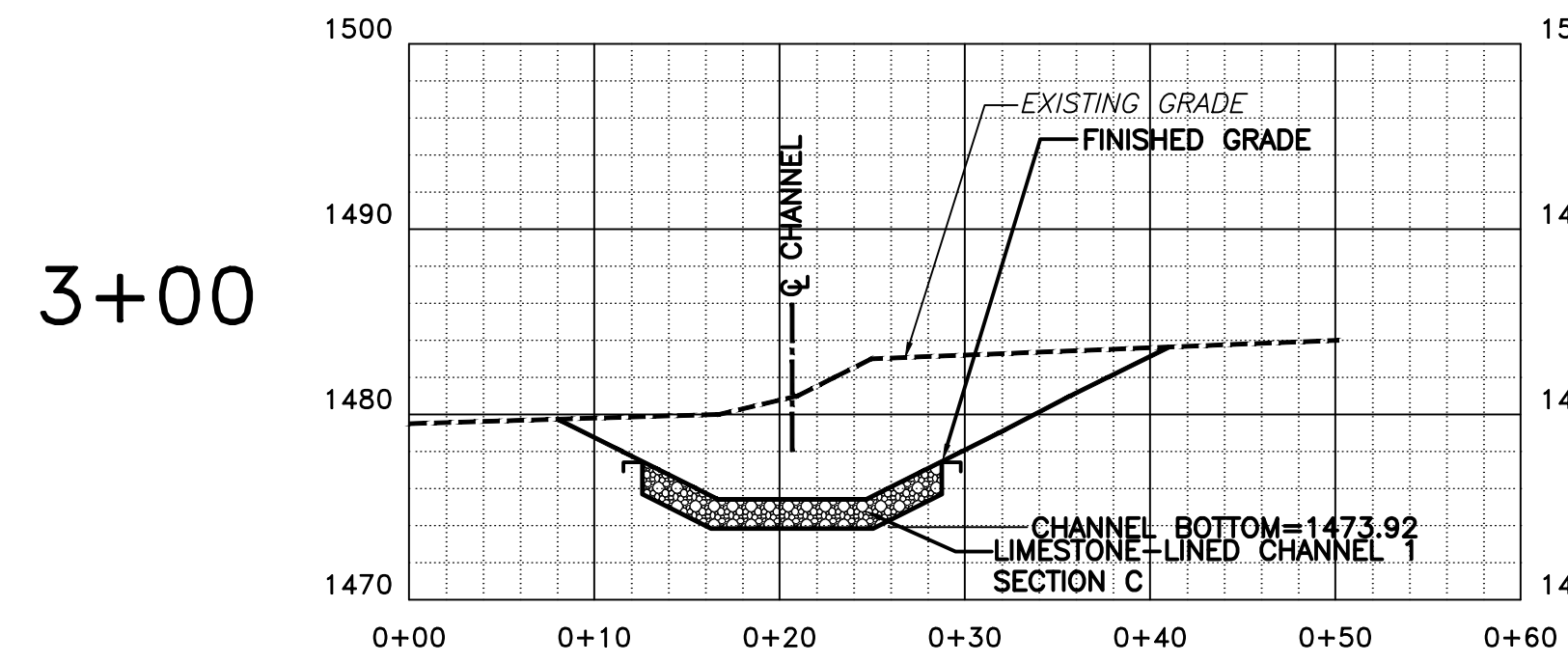
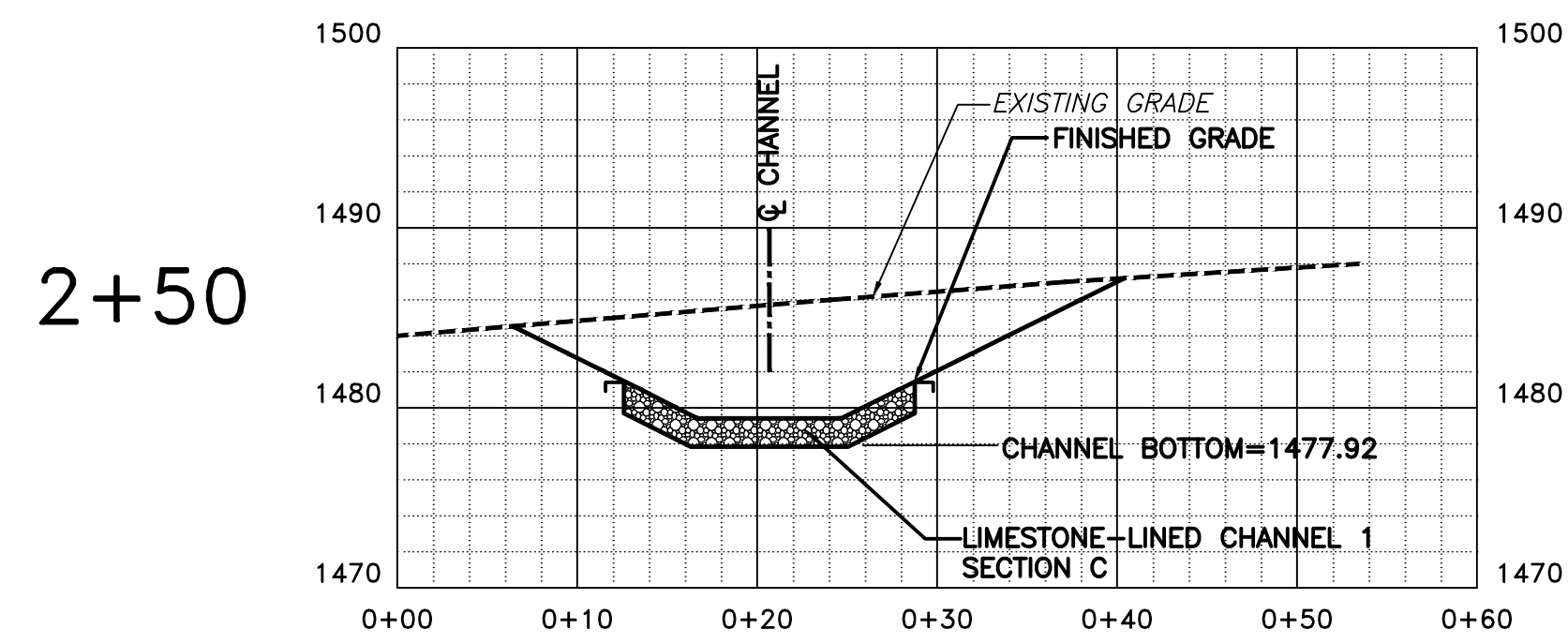
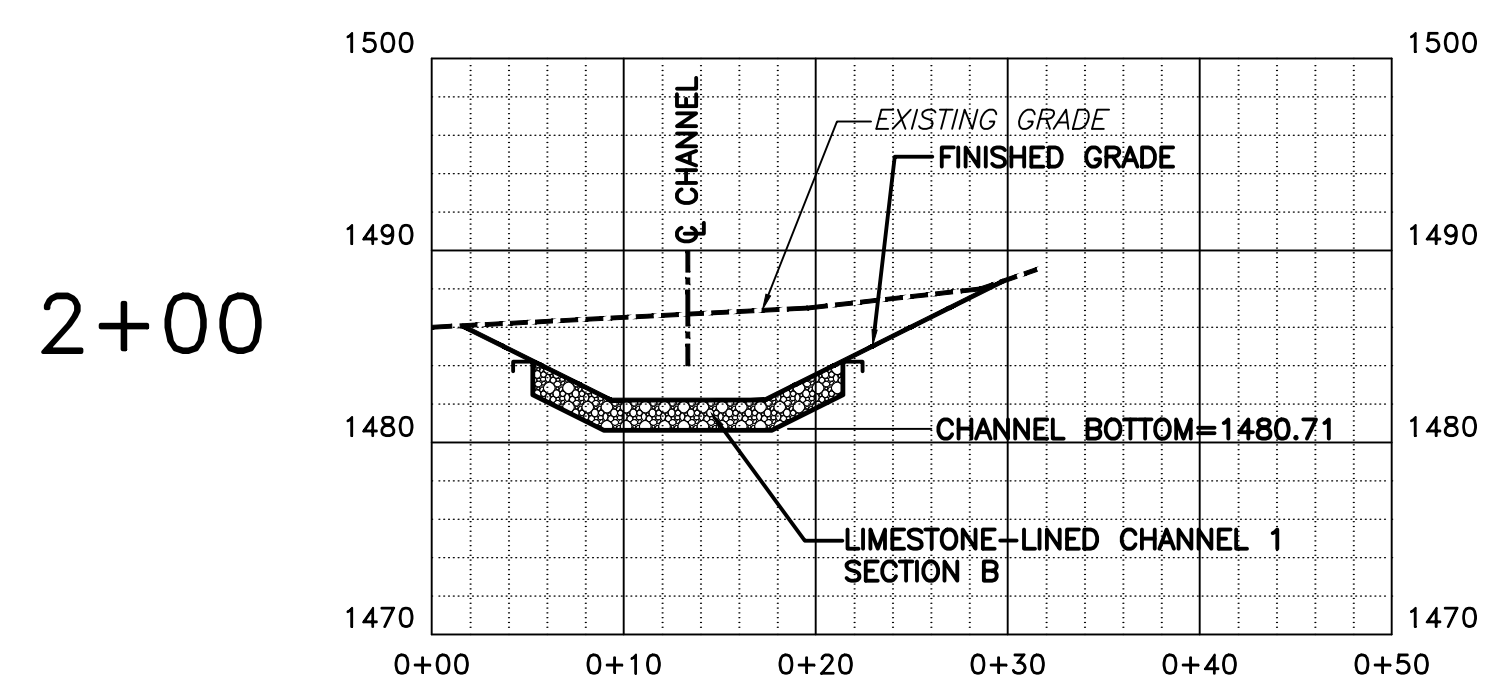
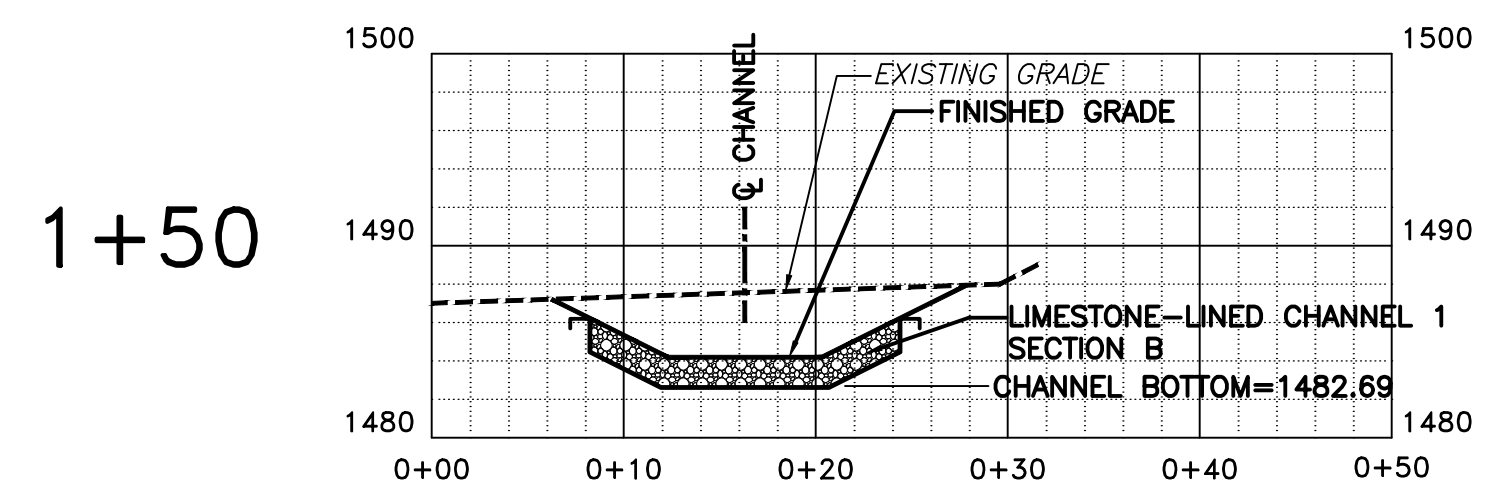
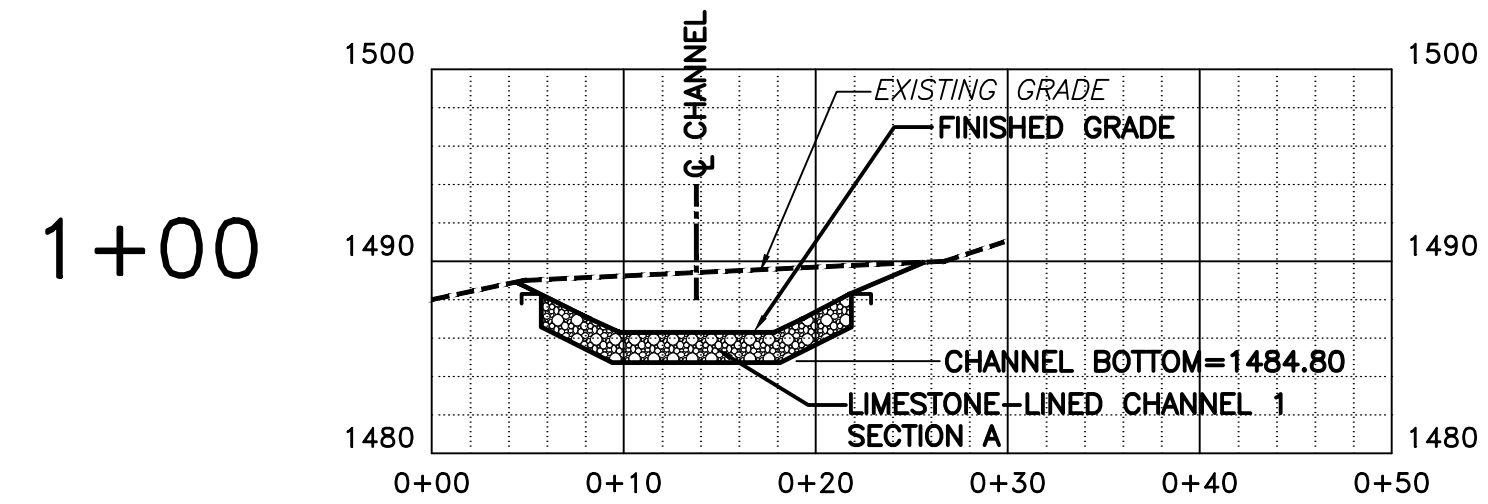
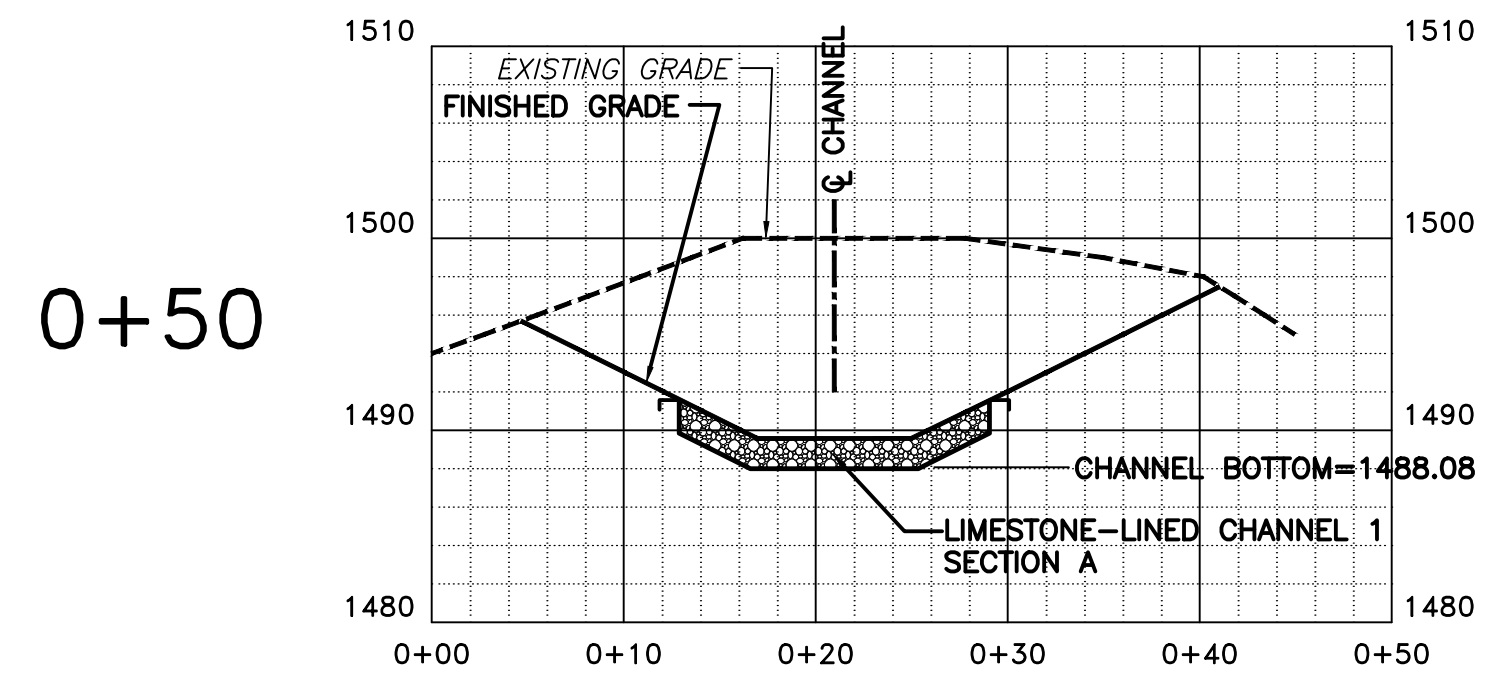
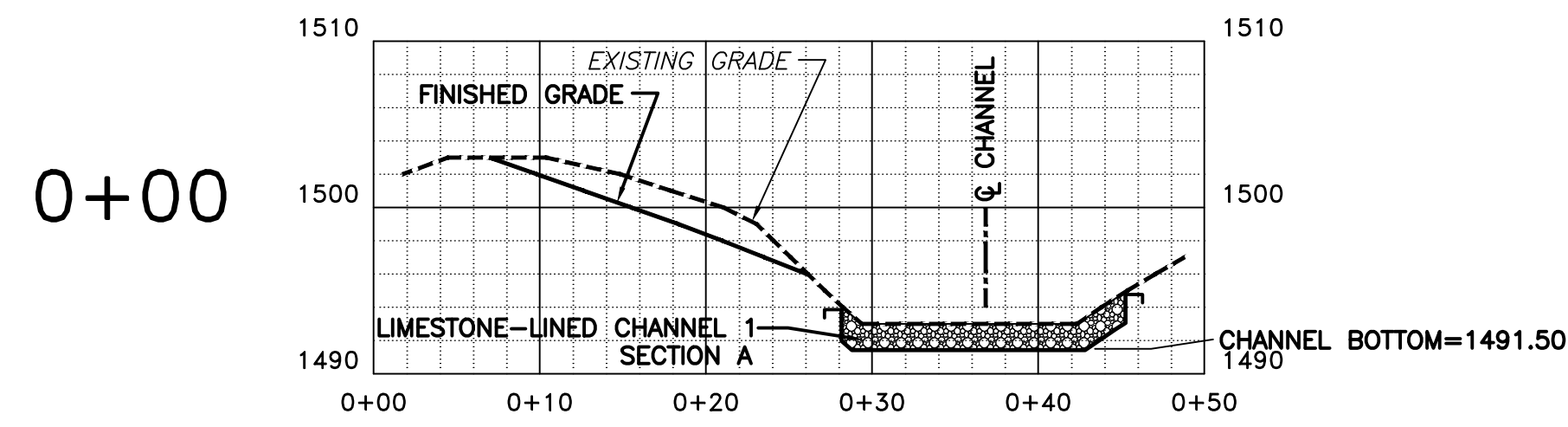
CHANNEL 2 CENTERLINE - COORDINATE TABLE
(ELEVATIONS OF EROSION CONTROL BLANKET)

NORTHING	EASTING	ELEVATION	DESCRIPTION
263362.520	1843750.525	1486.00	STA. 0+00
263363.710	1843747.616	1484.98	STA. 0+03.14
263410.566	1843747.297	1483.81	STA. 0+50
263460.564	1843746.956	1483.68	STA. 1+00
263476.894	1843746.845	1483.00	STA. 1+16.33
263510.382	1843750.338	1482.64	STA. 1+50
263560.112	1843755.526	1482.11	STA. 2+00
263609.831	1843760.825	1481.57	STA. 2+50
263659.546	1843766.151	1481.04	STA. 3+00
263709.262	1843771.477	1480.51	STA. 3+50
263758.977	1843776.805	1480.00	STA. 4+00
263808.690	1843782.160	1479.44	STA. 4+50
263821.385	1843783.528	1479.30	STA. 4+62.77
263858.503	1843786.427	1478.91	STA. 5+00
263908.347	1843790.372	1478.37	STA. 5+50
263958.191	1843794.318	1477.84	STA. 6+00
264008.035	1843798.264	1477.31	STA. 6+50
264036.772	1843800.538	1477.00	STA. 6+78.83
264057.797	1843798.033	1476.79	STA. 7+00
264107.446	1843792.117	1476.29	STA. 7+50
264136.069	1843788.707	1476.00	STA. 7+78.83
264155.486	1843780.263	1475.78	STA. 8+00
264170.303	1843773.819	1475.63	STA. 8+16.16



LIMESTONE-LINED CHANNEL 2 - CENTERLINE PROFILE
SCALE: 1"=20' (HORIZ.)
1"=4' (VERT.)

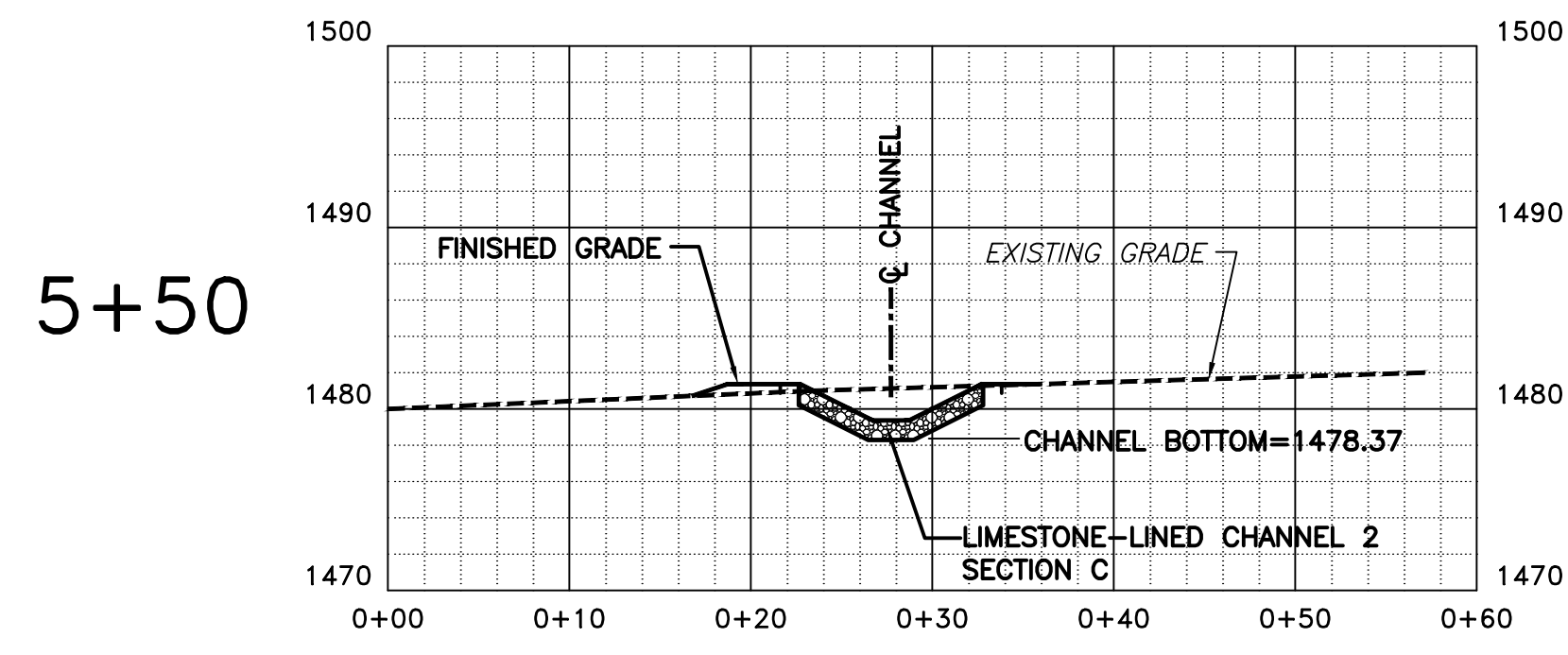
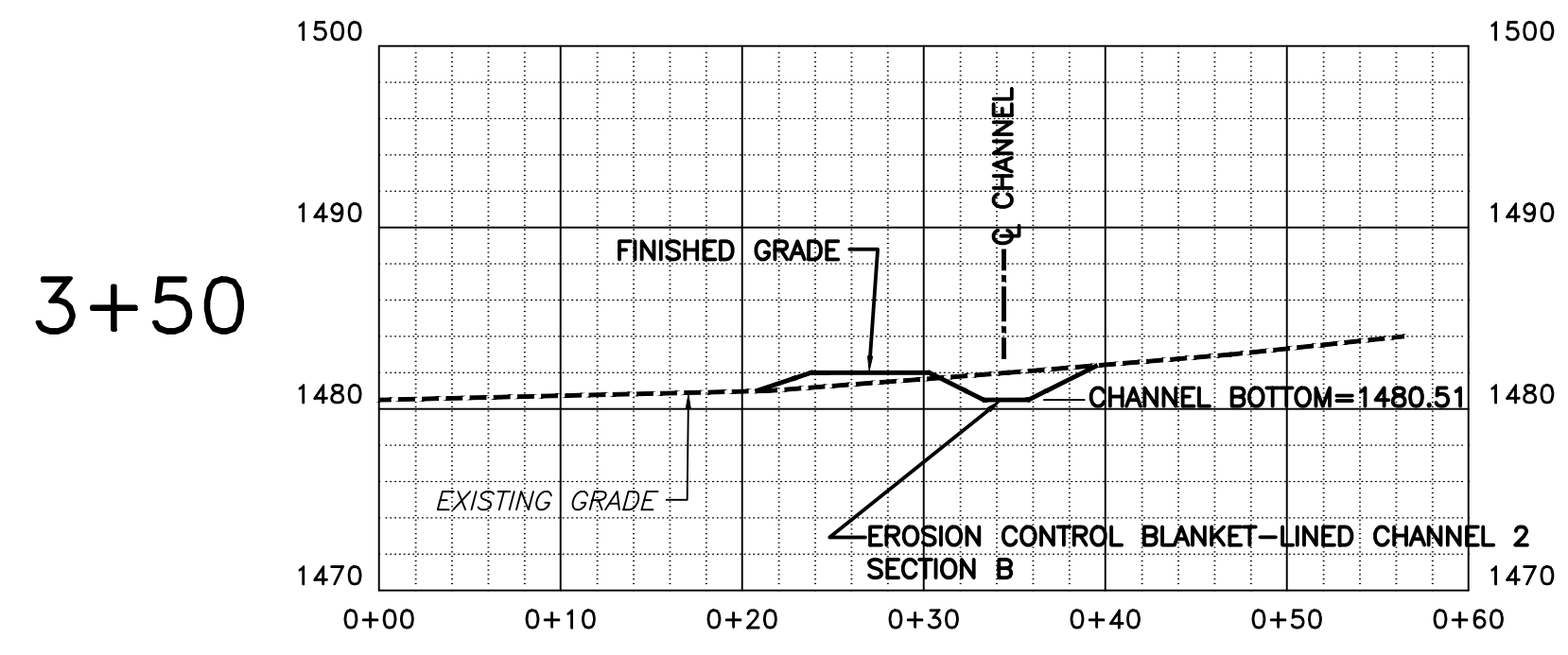
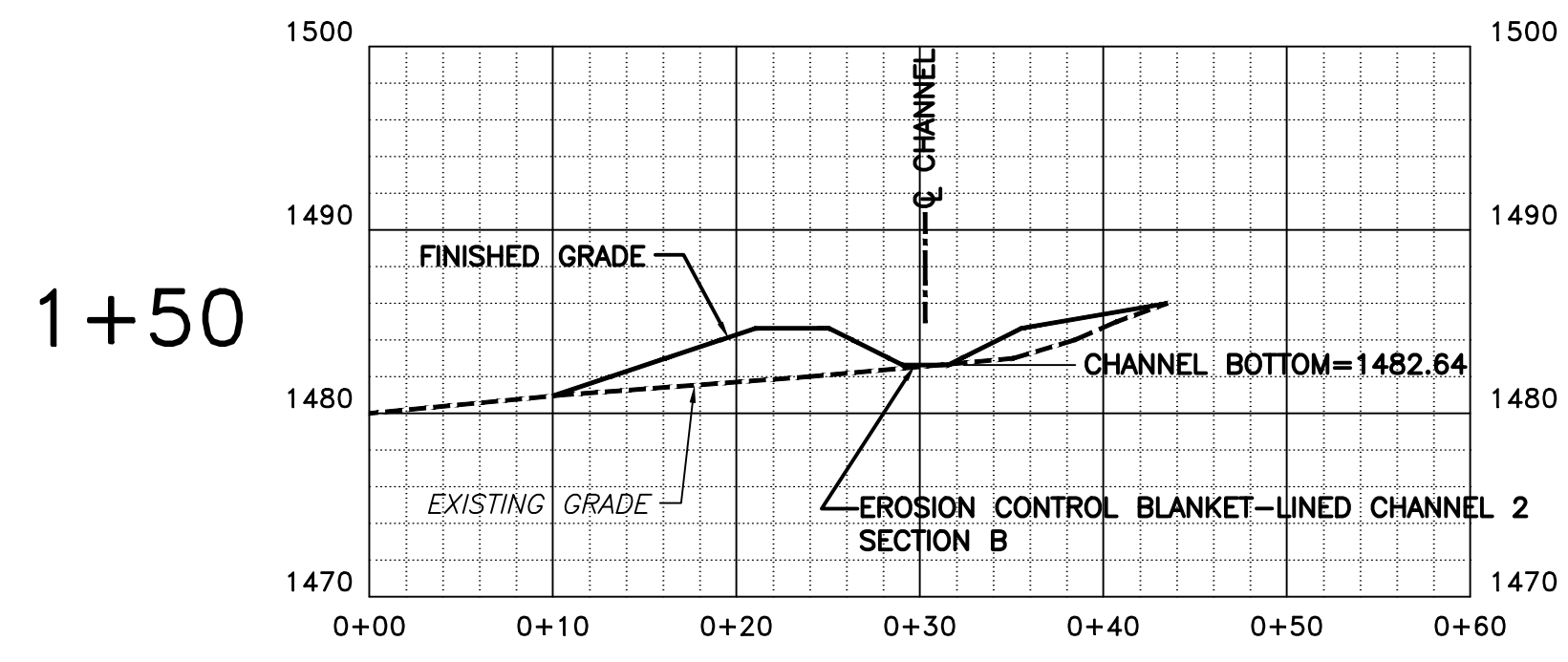
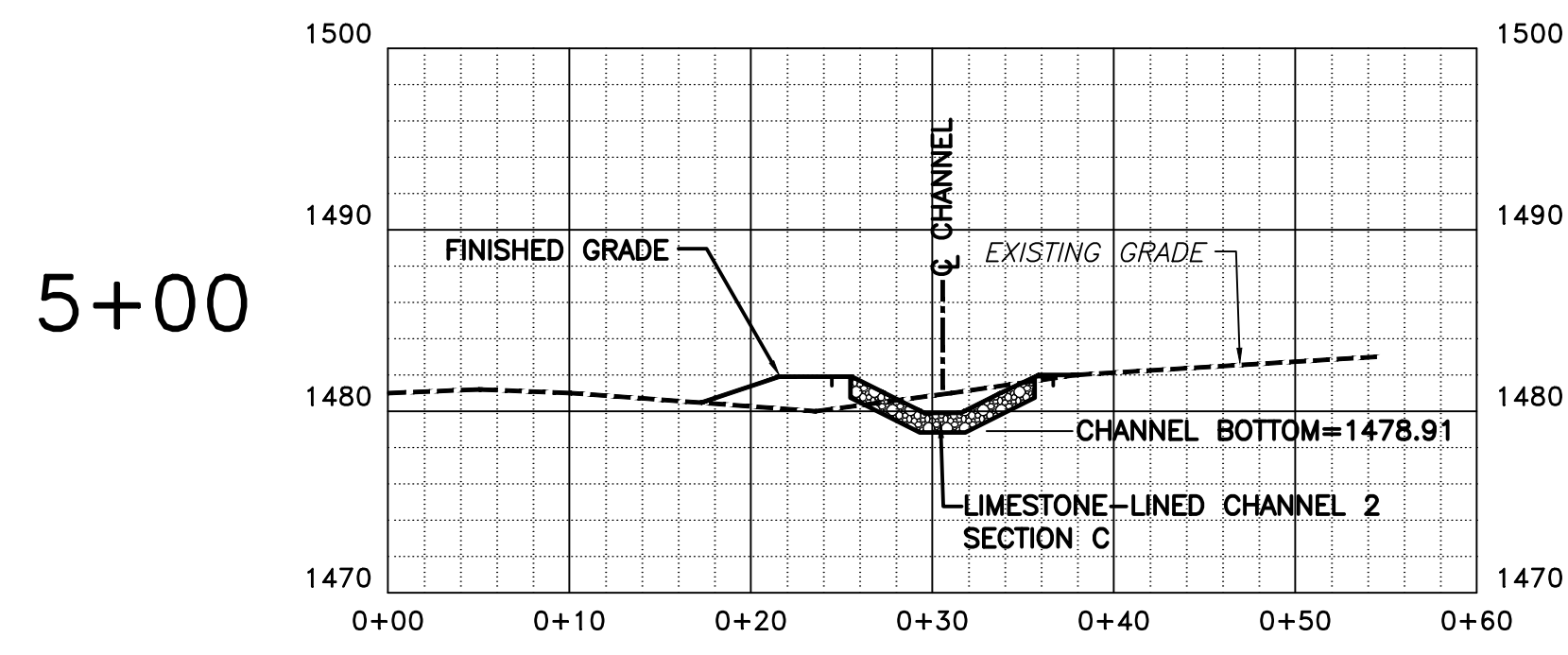
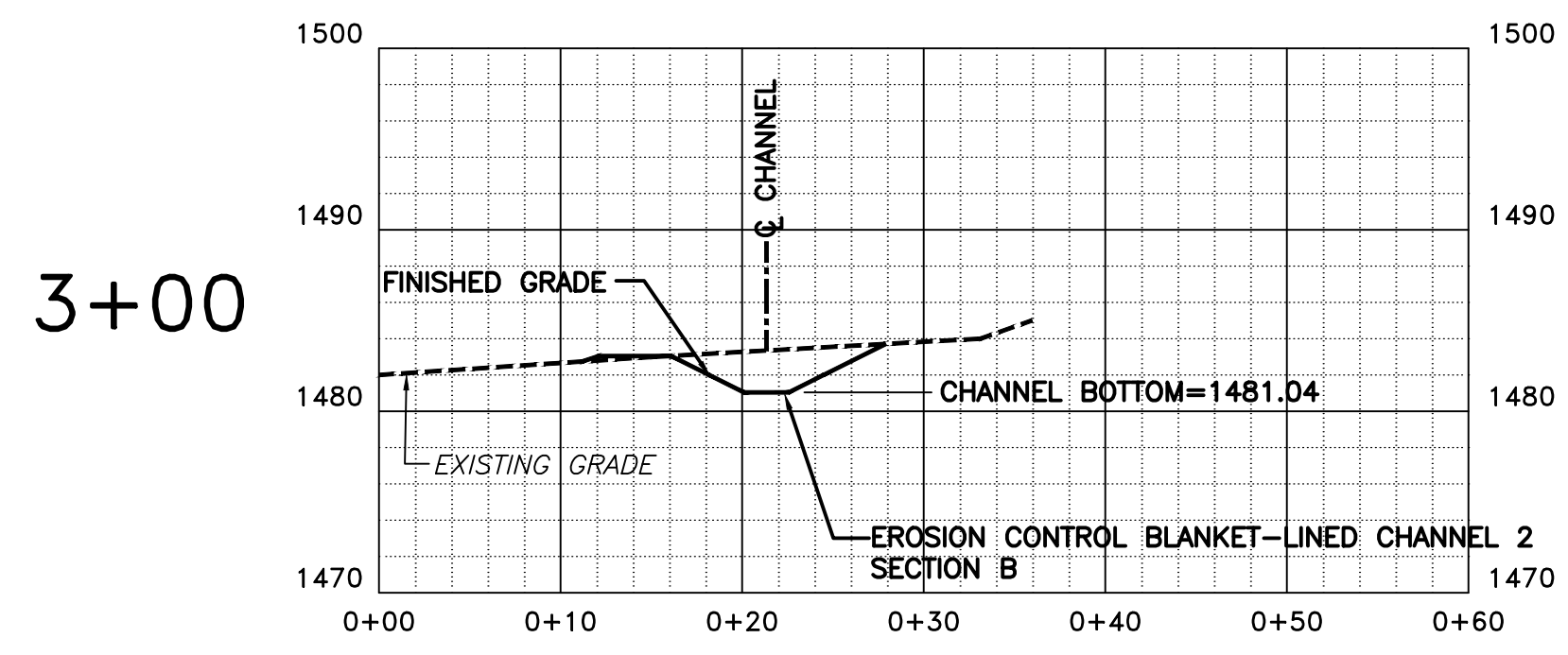
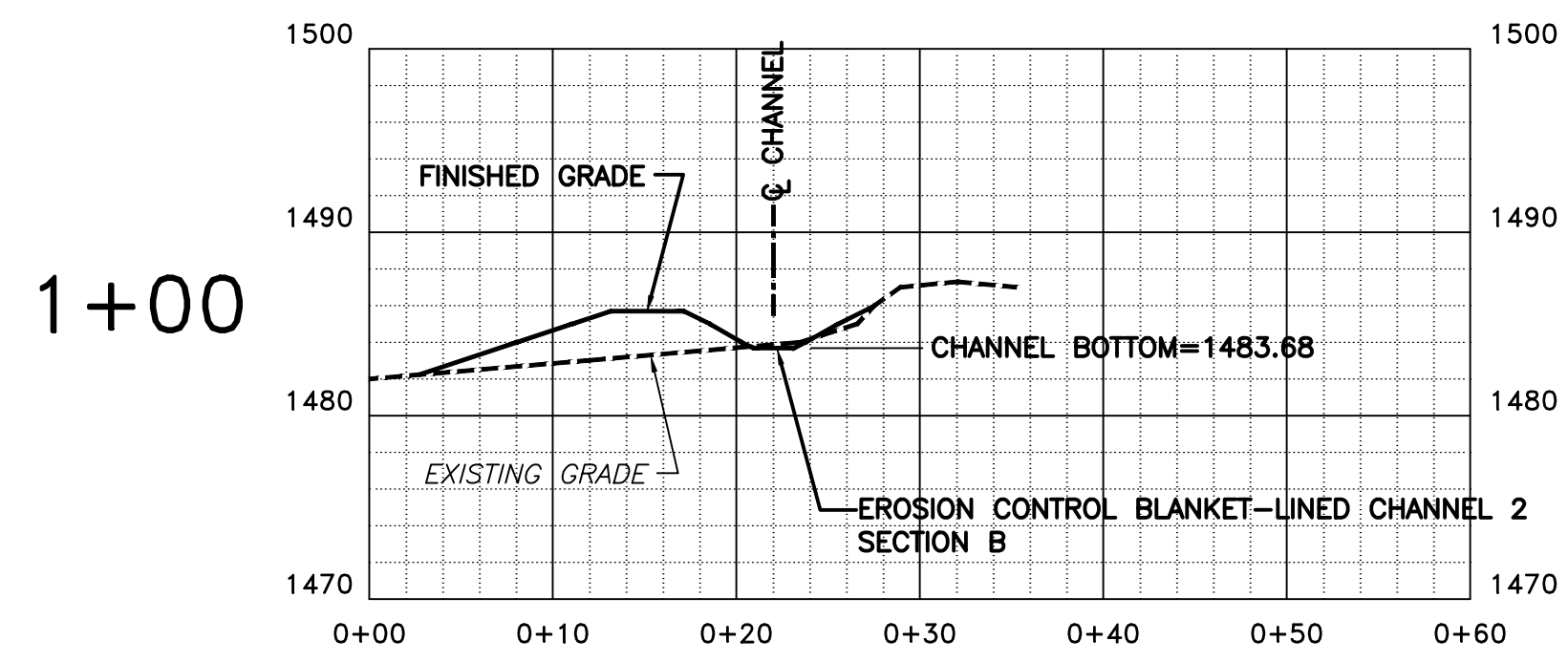
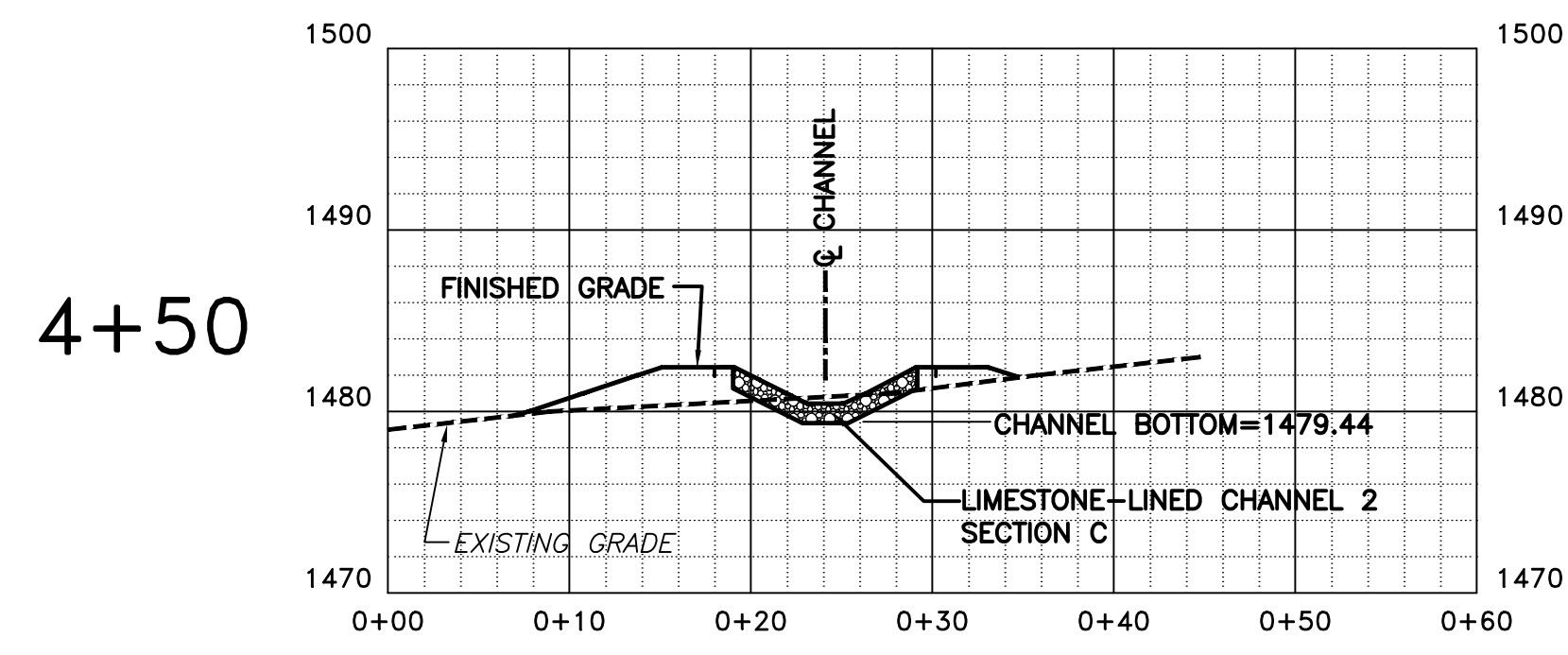
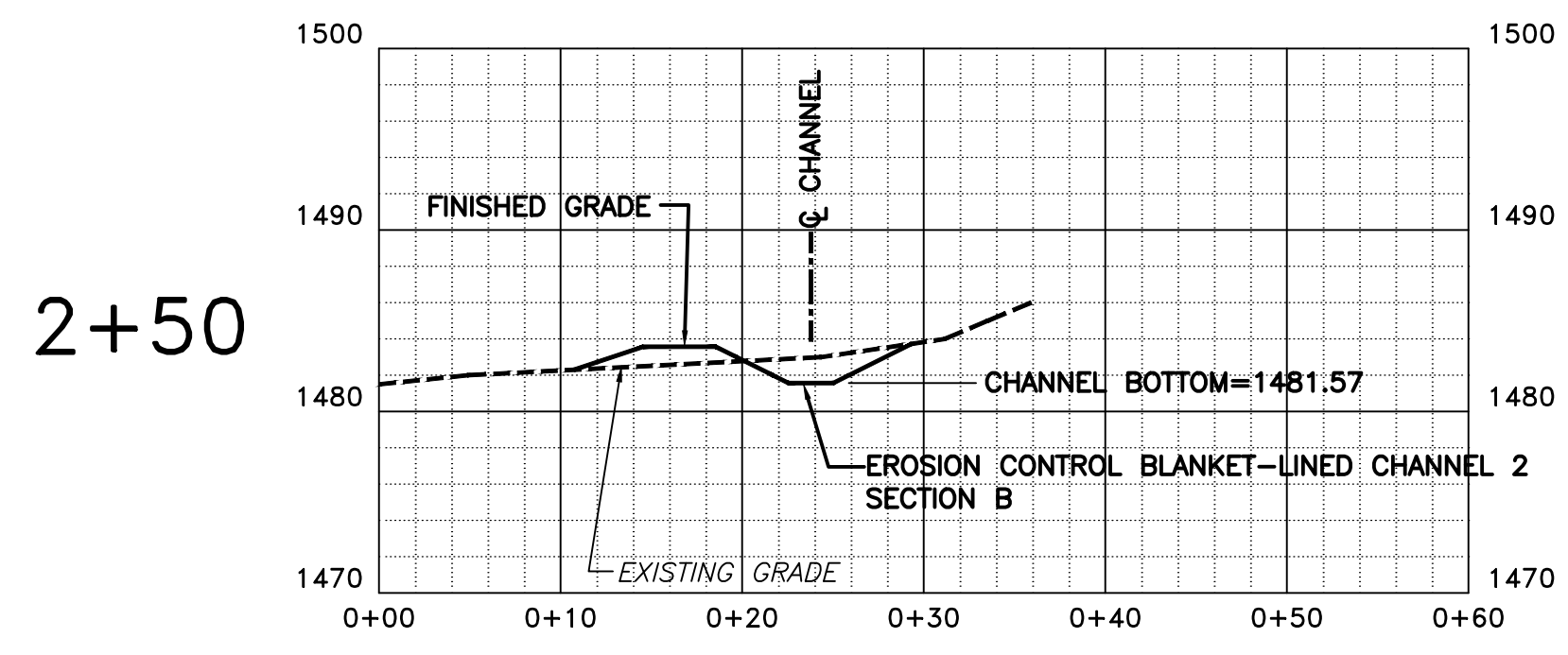
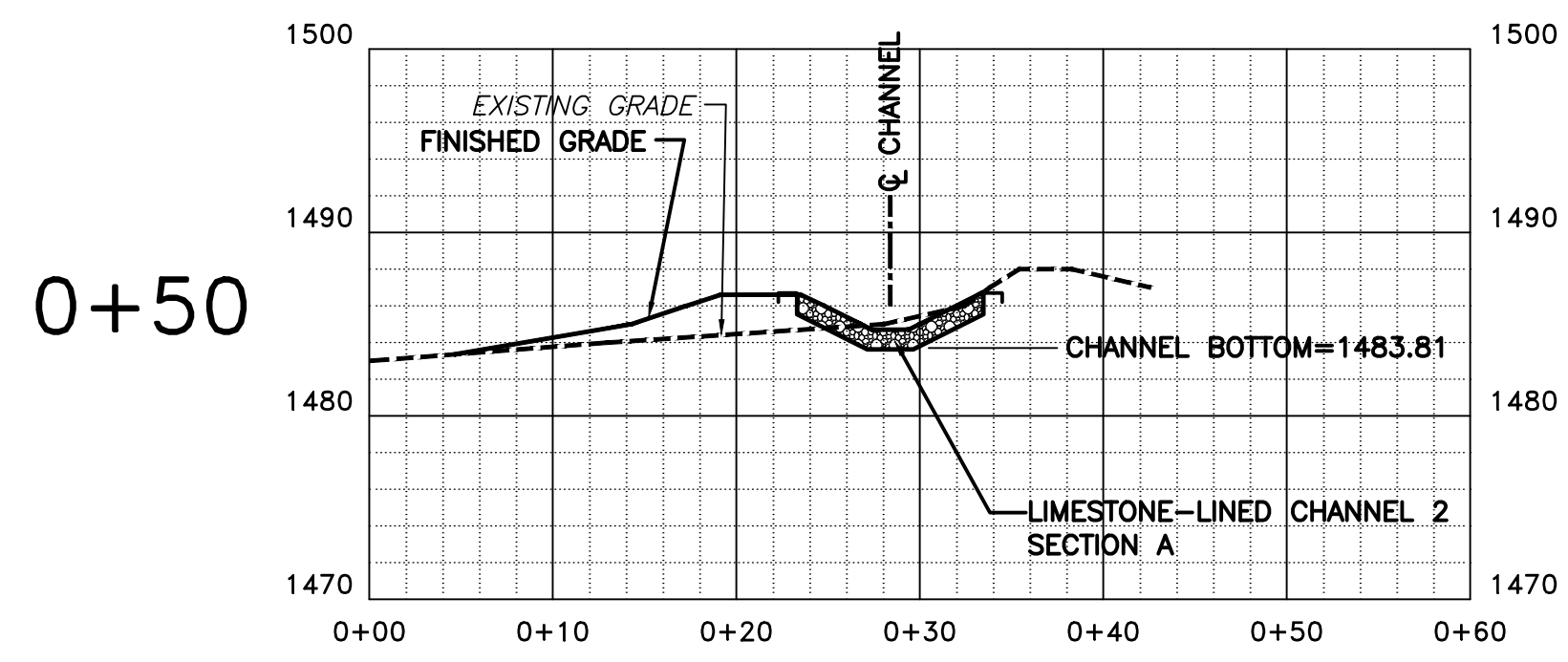
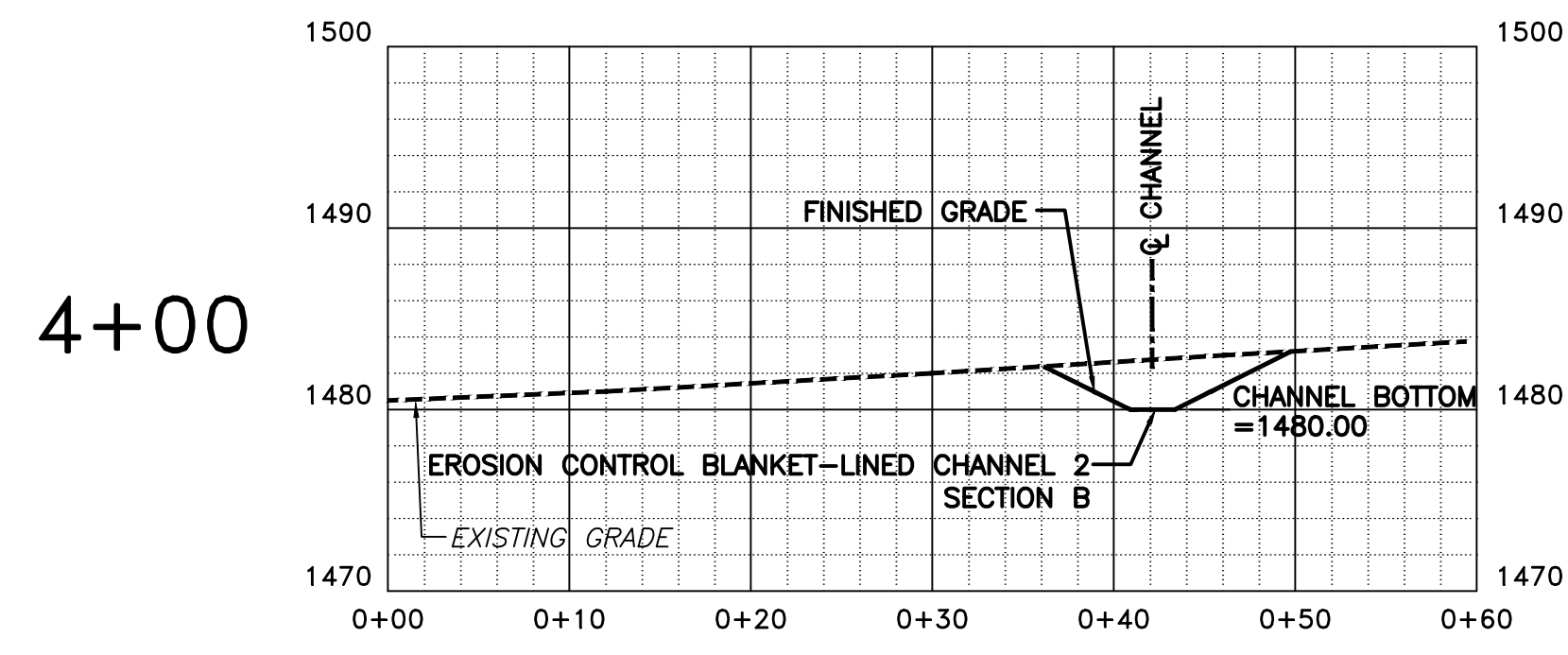
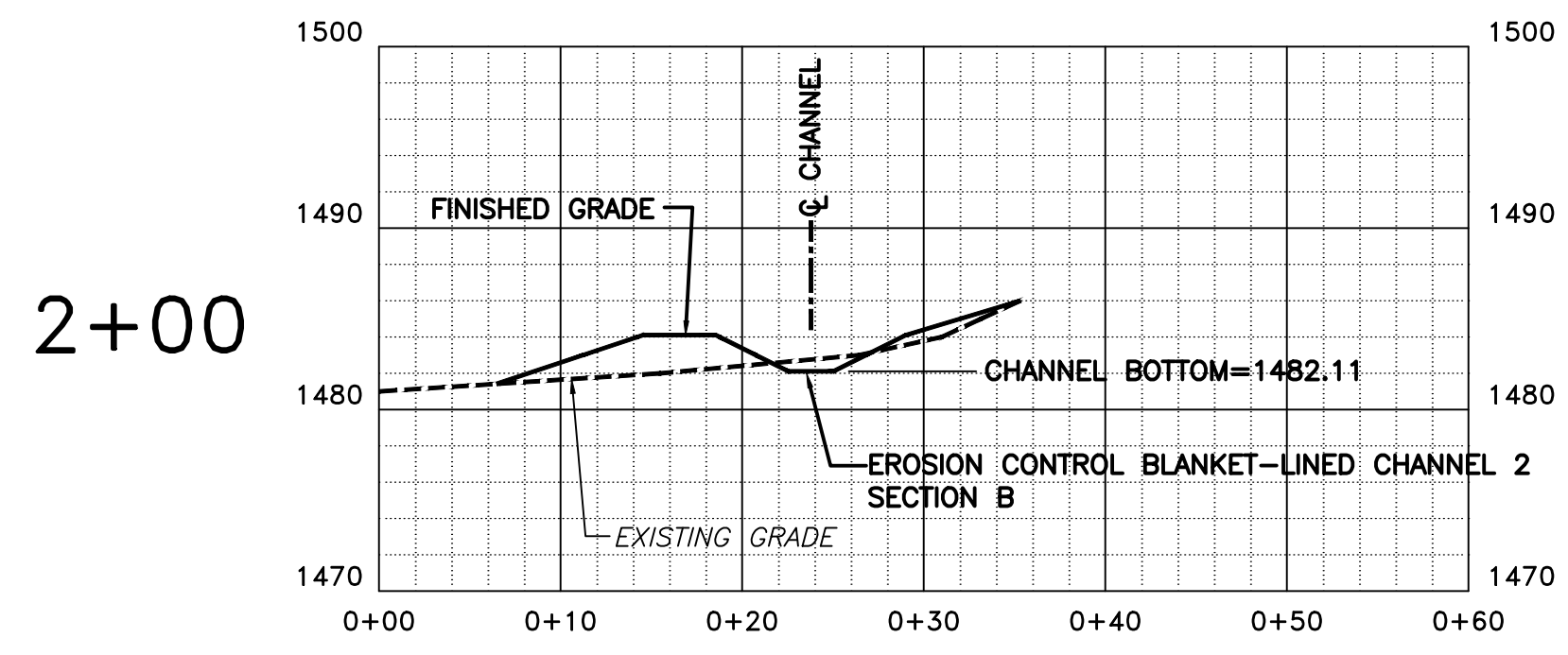
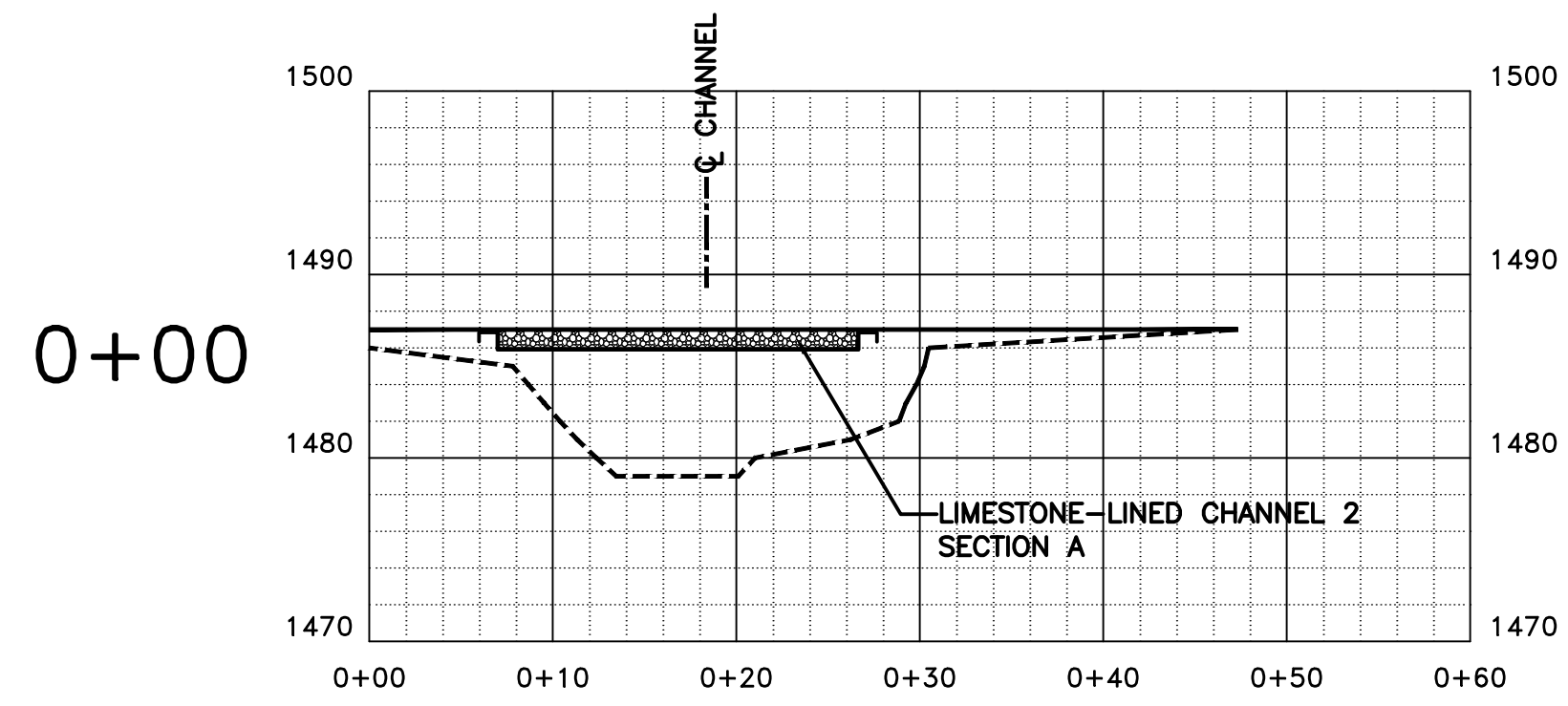
DRAWING NO. C-6	SHEET 6 OF 9
"PLAN" FOR PHILIPSBURG WETLAND WATER MANAGEMENT PLAN <small>PHILIPSBURG WETLAND WATER MANAGEMENT PLAN</small> <small>CENTRE COUNTY, PA</small> <small>FUSH TOWNSHIP</small> LIMESTONE-LINED CHANNEL 2 - PLAN & PROFILE	
DESIGN NAW	DATE 10/3/05
DESIGN BAS	DATE 10/3/05
CHECK TWS	DATE 10/3/05
APPROVE APV	DATE AS SHOWN
SCALE AS SHOWN	SCALE AS SHOWN
REV	BY APV DATE
DESCRIPTION	
SKELLY AND LOY, INC. ENGINEERS-CONSULTANTS 2801 NORTH FRONT STREET PHILIPSBURG, PENNSYLVANIA (717) 326-0000 (PH) (717) 326-1700 (FAX) email: sales@skellyloy.com	
JOB NUMBER: 1204239008	DATE: OCTOBER 3 2005



LIMESTONE-LINED CHANNEL 1 - SECTIONS
SCALE: 1"=10' (HORIZ.)
1"=10' (VERT.)

ISSN	DATE
NAW	10/3/05
DESWAN	
BAS	10/3/05
CHR	
TWS	10/3/05
APPY	
SCALE	AS SHOWN

REV	DESCRIPTION	BY	DATE



LIMESTONE-LINED CHANNEL 2 - SECTIONS
SCALE: 1"=10' (HORIZ.)
1"=10' (VERT.)

DRAWING NO. **C-8**
SHEET 8 OF 9

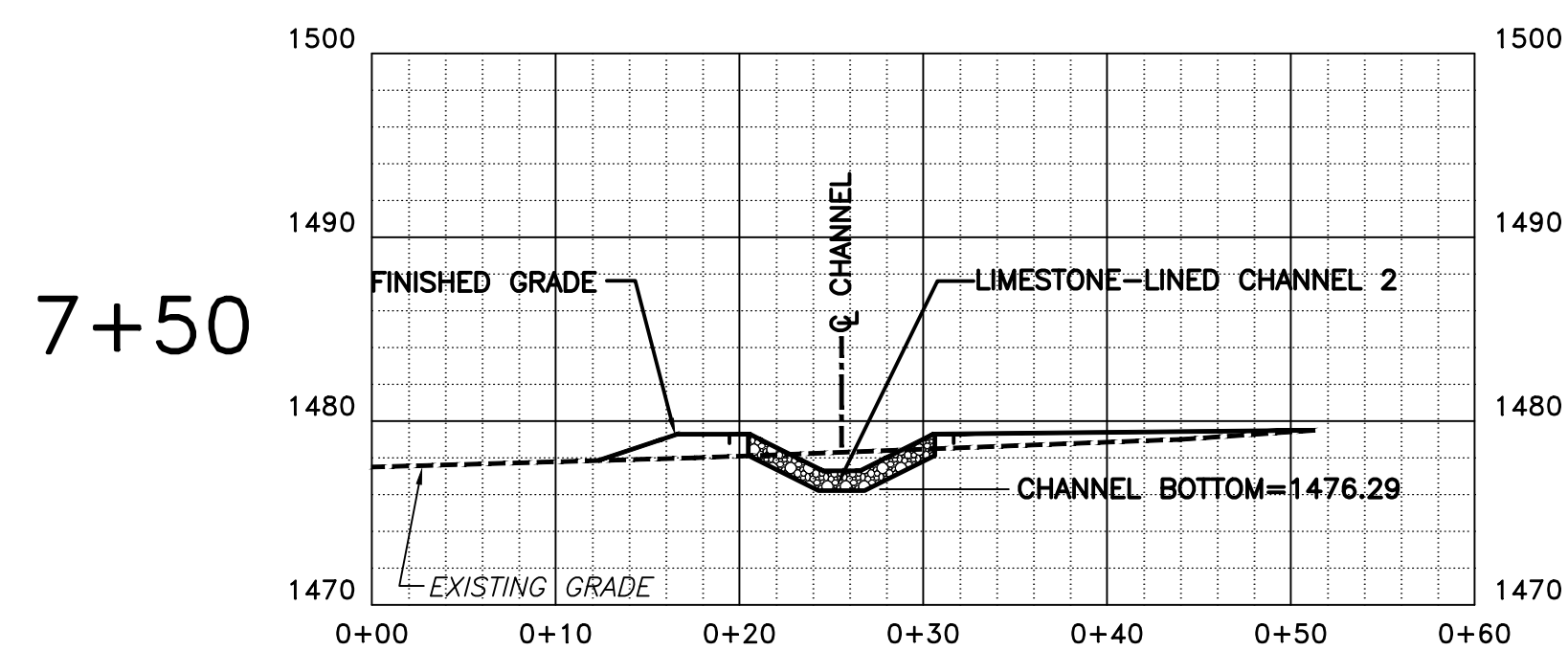
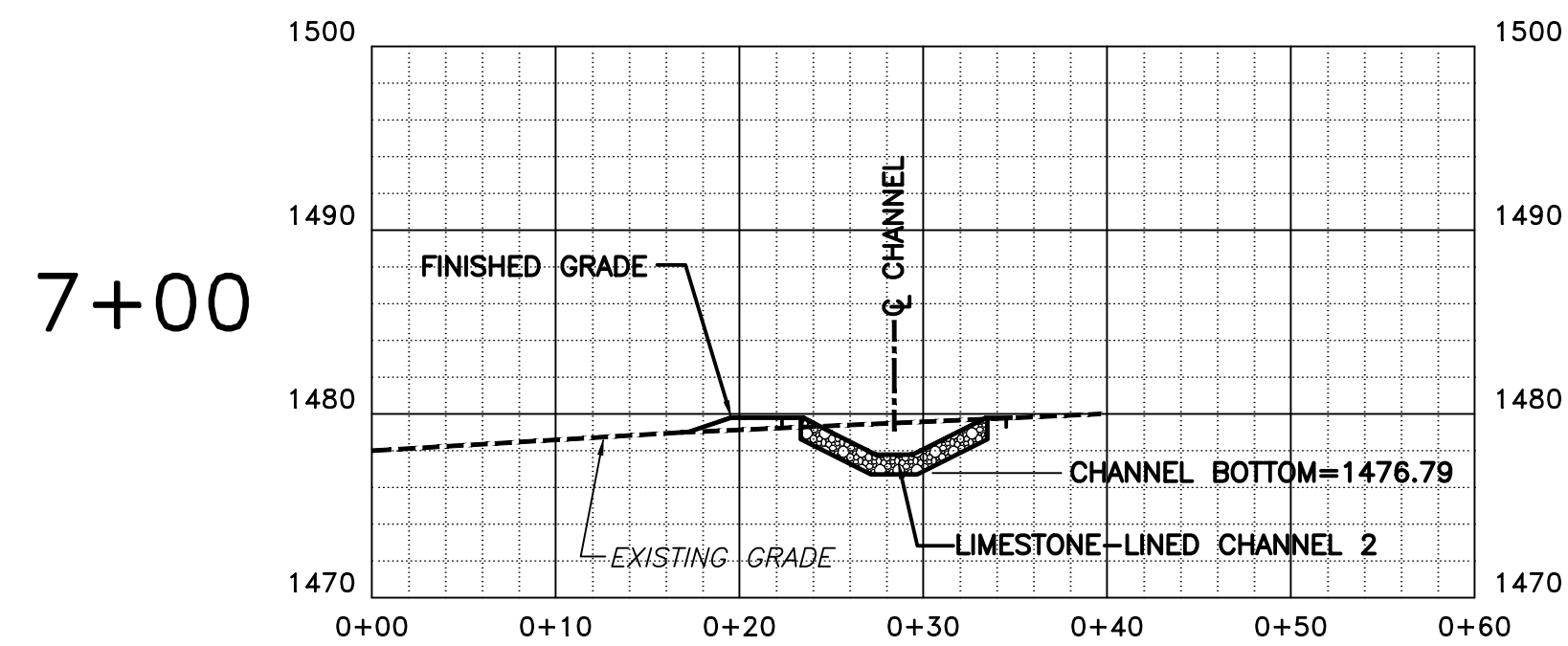
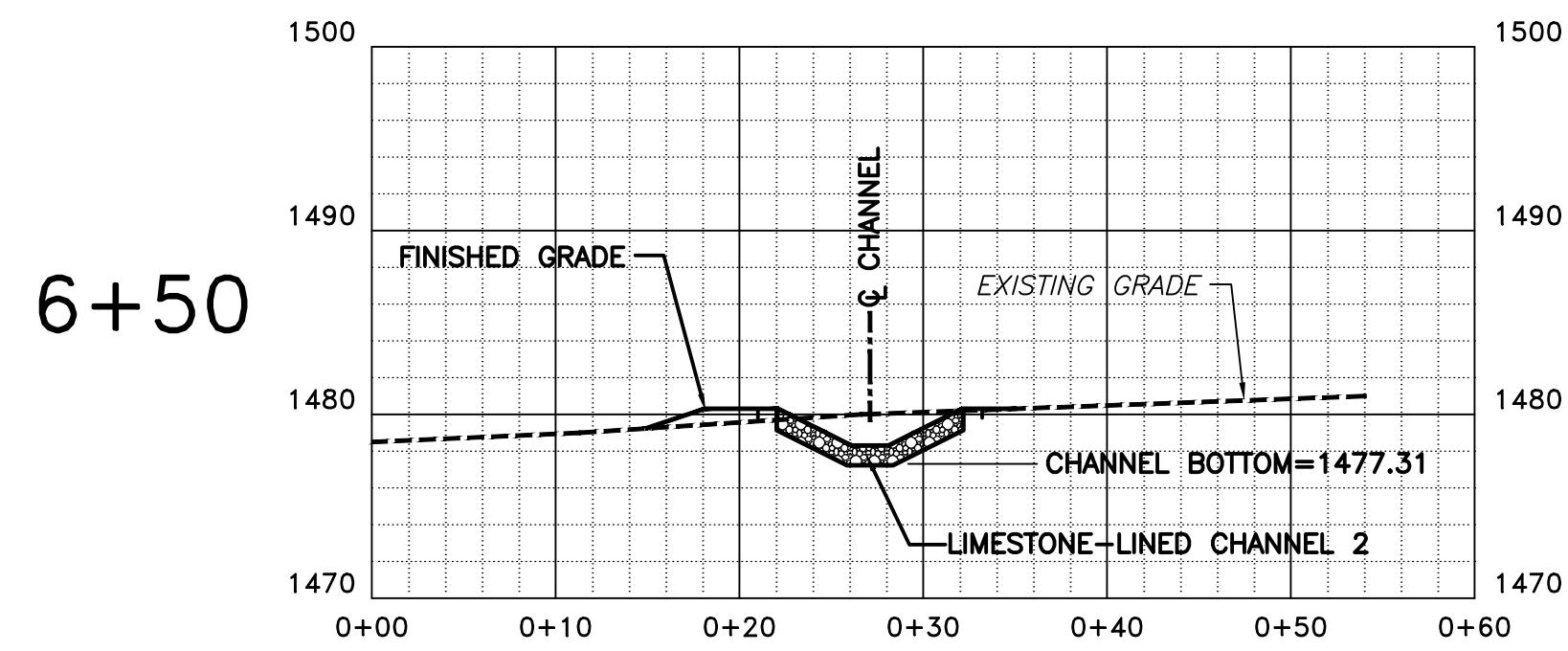
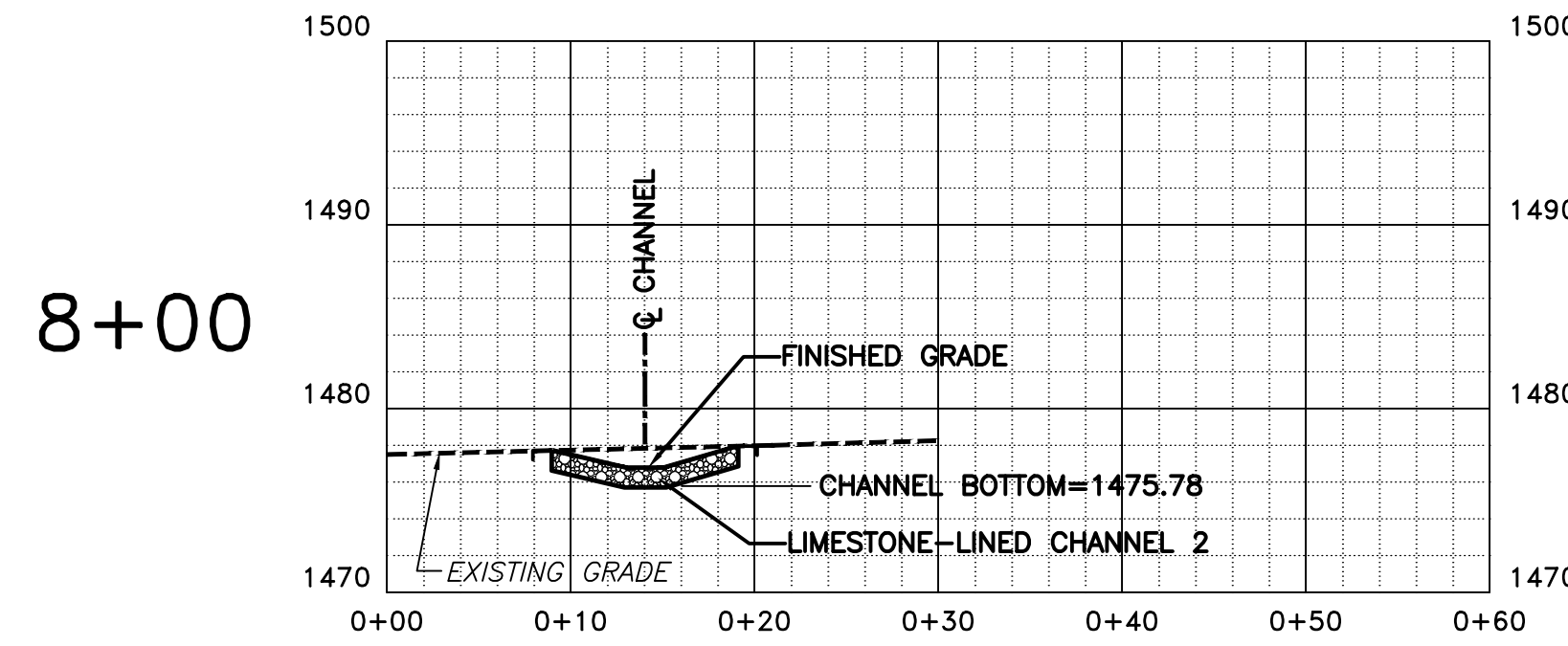
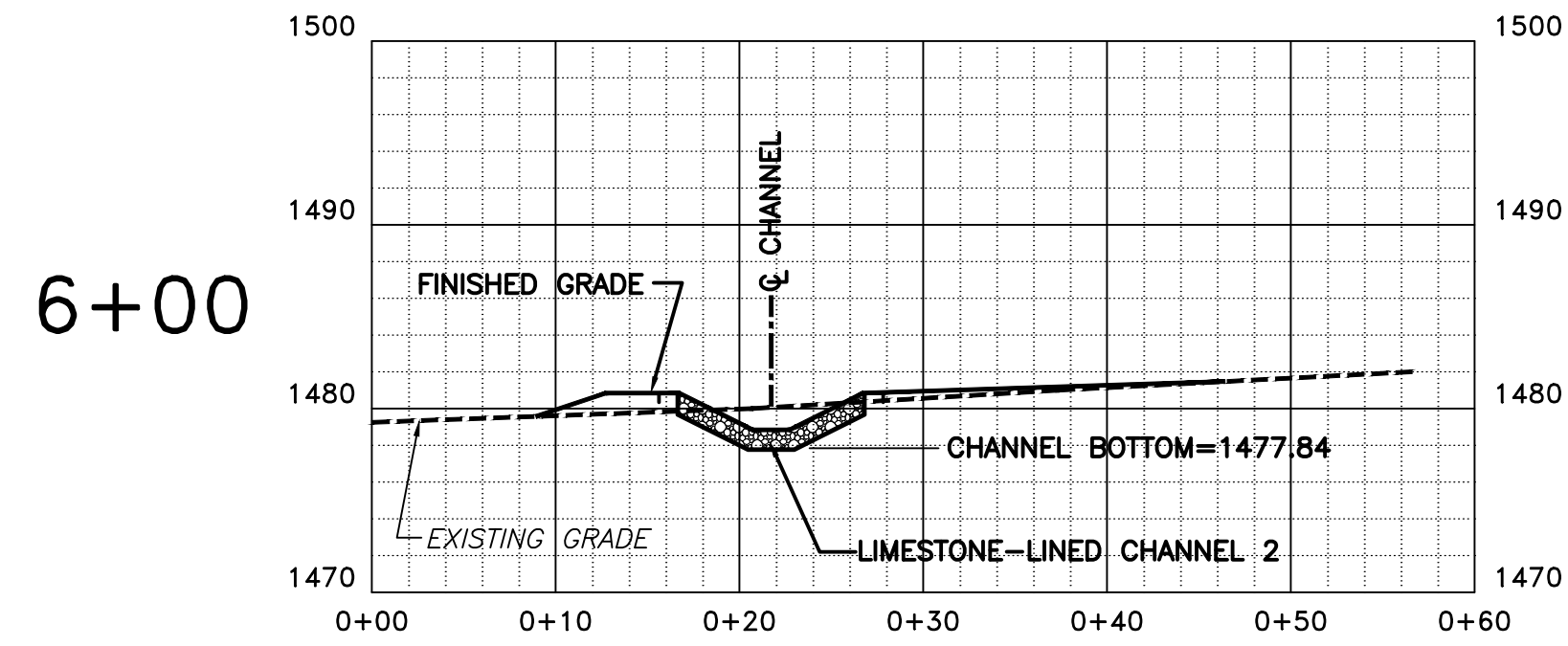
"PLAN" FOR PHILIPSBURG WETLAND WATER MANAGEMENT PLAN
RUSH TOWNSHIP CENTRE COUNTY, PA
LIMESTONE-LINED CHANNEL 2 - SECTIONS

ISSN	DATE	SCALE
MAW	10/3/05	AS SHOWN
DFSW	10/3/05	
CHR	10/3/05	
APV	10/3/05	

REV	DESCRIPTION	BY	DATE

SKELLY AND LOY, INC.
ENGINEERS-CONSULTANTS
2601 NORTH FRONT STREET
HARRISBURG, PENNSYLVANIA
(717)250-0000 (412)650-1100 FAX (717)250-1100
email: skellyloy@skellyloy.com

JOB NUMBER: 1204239008
DATE: OCTOBER 3, 2005



LIMESTONE-LINED CHANNEL 2 - SECTIONS
 SCALE: 1"=10' (HORIZ.)
 1"=10' (VERT.)

WETLAND QUANTITY ESTIMATE		
ITEM DESCRIPTION	ESTIMATED QUANTITY	UNIT
0201-0001 Clearing and Grubbing	1	LS
0686-0010 Construction Survey	1	LS
0203-0001 Class 1 Excavation	1943	CY
0204-0001 Class 2 Excavation	529	CY
0703-0200 No. 1 Coarse Aggregate	275	CY
0850-0031 Rock, Class R3	272	CY
0850-0032 Rock, Class R-4	750	CY
0806-0051 Erosion Control Blanket	1280	SY
0212-0014 Geotextile, Class 4, Type A	1200	SY
0865-0001 Silt Barrier Fence, 18" Height	570	FT
9605-1500 Manhole Modified w/ Frame and Cover	1	EA
9991-0001 Dosing Siphon	1	LS
4" Solid PVC schedule 40, 65 lf		
4" Perforated PVC schedule 40, 120 lf		
Class A Concrete, 1.5 cy		
0804-0011 Seeding and Soil Supplement - Formula B	264	LBS
0805-0022 Mulching - Straw	8	Tons
0601-0315 24" Thermoplastic Pipe w/22.5° Bend	46	FT
9000-0200 Spillway	1	LS
Excavation/ Embankment		
Erosion Control Blanket		
9000-0250 Rock Filter	1	EA
Rock, Class R-3, 4 CY		

DRAWING NO. **C-9**
 SHEET 9 OF 9

"PLAN" FOR PHILIPSBURG WETLAND WATER MANAGEMENT PLAN
 RUSH TOWNSHIP CENTRE COUNTY, PA
LIMESTONE-LINED CHANNEL 2 - SECTIONS

ISSN	DATE
NAW	10/3/05
DESSN	
BAS	10/3/05
CHR	
TWS	10/3/05
APPV	
SCALE	AS SHOWN

NO.	DATE	BY	DESCRIPTION
1	10/20/05	TWS	MODIFIED WETLAND QUANTITY ESTIMATE TABLE
		APPV	

SKELLY AND LOY, INC.
 ENGINEERS-CONSULTANTS
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 HARRISBURG, PENNSYLVANIA
 (717) 236-0000 (phone) (717) 236-1100 (fax)
 email: sales@skellyloy.com

JOB NUMBER: 1204239008
 DATE: OCTOBER 3, 2005