



January 24, 2020

Re: Proposed Alamance Quarry and Construction Materials Quarry-

Comment Responses to the NC DEQ letter dated 1/9/2020

1. Provide proof that your company has obtained buffer authorization from the Division of Water Resources for impacts to the buffer from the access road and fencing
Paul Stimpson coordinated with Sue Homewood, DWR on 1/22/20; the perimeter security fencing will be exempt because trees will not be cut in the areas of the stream buffer. The perimeter security fencing will be meandered as needed. A note has been added on sheet C301E that no trees will be cut where the perimeter security fencing is within a stream buffer area
2. Provide details on the installation of the arch culvert installation and the work across the stream to prevent sedimentation during installation and construction.
Paul Stimpson coordinated with Tamara Eplin on 1/21/20. The construction sequence for the Arch span culvert has been updated, on sheet C301B, to include the temporary culvert equipment crossing on the west side of the proposed arch culvert. Also, a detail for the temporary culvert equipment crossing has been added to sheet C301B
3. Show the sediment baffle placement on the plans indicative of field conditions. Proper baffle placement in the basins affects the desired volume between baffles and allows access for maintenance
Paul Stimpson coordinated with Tamara Eplin on 1/21/20. The skimmer basin detail has been modified on sheet C502 to adjust the baffle spacing for 25% increments. The baffle placement for each skimmer basin has been modified on plan sheet C302. Also, construction specifications and maintenance information for the porous baffles has been added to sheet C502

The following sheets were revised to incorporate comments from the 1/9/20 letter: C201, C202, C203, C301, C301B, C301E, C302, C303 and C502.

Respectfully submitted,

LABELLA ASSOCIATES, P.C.

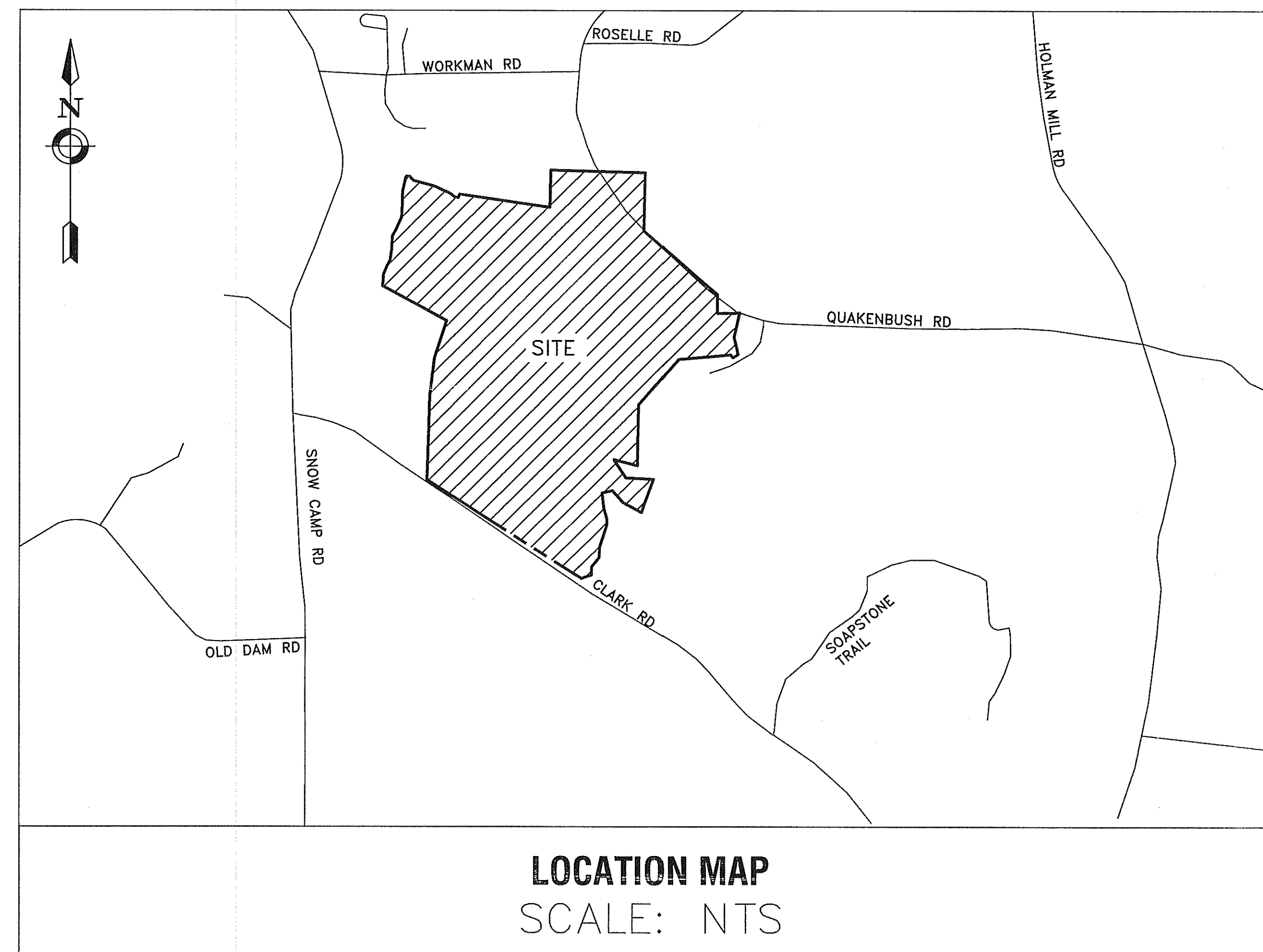
Paul A. Stimpson, PE

A handwritten signature in black ink that reads "Paul A. Stimpson". The signature is written in a cursive, flowing style.

Civil Group Leader

ALAMANCE QUARRY & CONSTRUCTION MATERIALS

342 CLARK ROAD
SNOW CAMP, NC 27349
ALAMANCE COUNTY, NC



SHEET INDEX

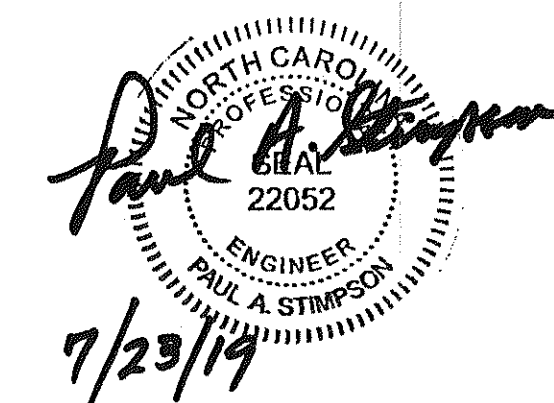
- COVER SHEET
- C101 EXISTING CONDITIONS
- C201 MINE MAP
- C202 PLANT AND STOCKPILE PLAN
- C203 MINE PLAN
- C204 RECLAMATION PLAN
- C301 OVERALL SEDIMENTATION & EROSION CONTROL PLAN
- C301A – C301F 1"=60' EROSION CONTROL PLANS
- C302 SKIMMER BASIN GRADING
- C303 ENTRANCE ROAD PLAN AND PROFILE
- C304 DRAINAGE AREAS
- C305 PARKING AND ENTRANCE ROAD DETAILS
- C401 SITE DETAILS
- C402 SITE DETAILS
- C403 SITE DETAILS
- C501 EROSION AND SEDIMENT CONTROL DETAILS
- C502 EROSION AND SEDIMENT CONTROL DETAILS

SITE DEVELOPER/OWNER

ALAMANCE AGGREGATES, LLC



615 St. George Square
Suite 300
Winston-Salem, NC 27106
336-842-4065
C#0430
labelapc.com
PROJECT NO: 2190335



615 St. George Square
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Paul A. Stimpson
NORTH CAROLINA
PROFESSIONAL ENGINEER
22052
7/23/19

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ALAMANCE
AGGREGATES, LLC
Mr. Chad Threatt, VP

Snow Camp Mine

NO.	DATE	DESCRIPTION
REVISIONS		
PROJECT NUMBER: 2190335		
DRAWN BY: KCG/ATC		
REVIEWED BY: PAS		
ISSUED FOR: CONSTRUCTION		
DATE: 7/18/19		
DRAWING NAME:		

EXISTING CONDITIONS

DRAWING NUMBER:

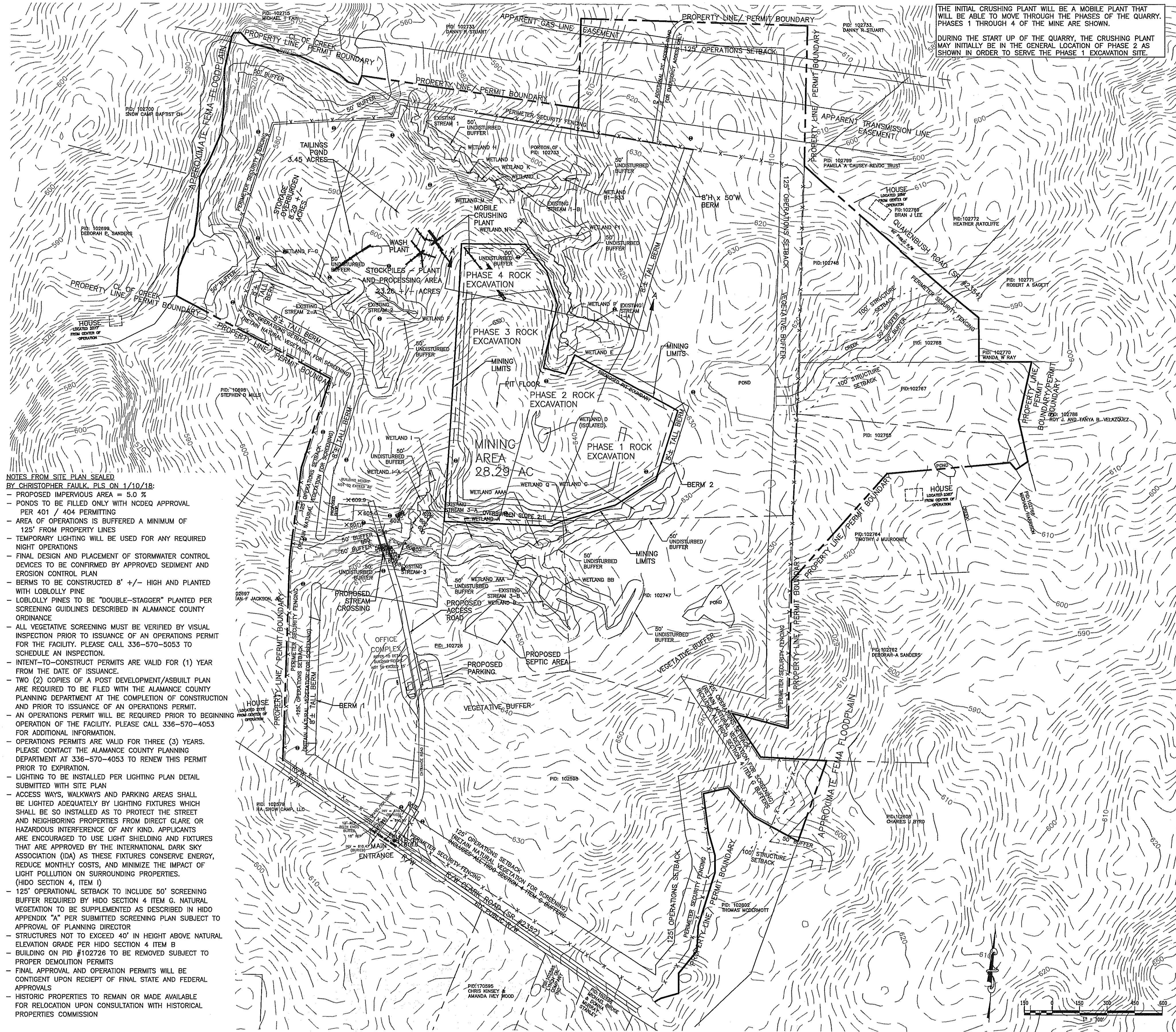
C101

GENERAL NOTES

- EXISTING SITE FEATURES, TOPOGRAPHY, AND PROPERTY DATA FROM INFORMATION PROVIDED BY COE FORESTRY AND SURVEYING, ALSO, SITE PLAN INFORMATION OBTAINED FROM DRAWING SEALED BY CHRISTOPHER FAULK, PLS DATED 1/10/18. STREAM SURVEY FROM NEIL PRESLAR DATED 2/19/19.
- OBTAIN ALL APPLICABLE PERMITS AND PLAN APPROVALS PRIOR TO BEGINNING WORK.
- CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL EXISTING FEATURES PRIOR TO START OF CONSTRUCTION. CALL 811. ANY DISCREPANCY IN LOCATION, SIZE, OR DESCRIPTION OF EXISTING FEATURES SHOWN ON THE PLANS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER IMMEDIATELY.
- THE CONTRACTOR WILL BE REQUIRED TO DO ALL WORK NECESSARY TO PROVIDE SUITABLE CONNECTIONS WITH ALL ROADS, STORM DRAINS, AND UTILITIES ENTERING THIS PROJECT.
- NO SUBSURFACE INVESTIGATIONS OF DETERMINATION HAS BEEN MADE BY THE ENGINEER. THE CONTRACTOR SHOULD MAKE HIS OWN INVESTIGATION AS TO THE SUBSURFACE CONDITIONS.
- CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING, RELOCATING, AVOIDING, AND PROTECTING ALL EXISTING UTILITIES AND FEATURES ON SITE.
- PRIOR TO FINAL ACCEPTANCE THE CONTRACTOR SHALL ULTIMATELY BE RESPONSIBLE FOR ENSURING THE SATISFACTORY COMPLETION OF THE TOTAL PROJECT.
- CONTRACTOR SHALL BE RESPONSIBLE FOR THE COORDINATION OF THE REMOVAL AND/OR RELOCATION OF ANY EXISTING UTILITY POLES, GUY WIRES, AND/OR ANY OTHER EXISTING FEATURES AS REQUIRED.
- CONTRACTOR MUST CONSTRUCT ALL WORK UNDER THE SUPERVISION OF A QUALIFIED GEOTECHNICAL FIRM.
- ALL WORKMANSHIP AND MATERIALS TO CONFORM WITH NCDOT SPECIFICATIONS AND DRAWINGS UNLESS OTHERWISE NOTED.

LEGEND

PROPERTY LINE	---
EXISTING BUILDING	[Symbol]
PROPOSED BUILDING	[Symbol]
EXISTING MINOR CONTOURS	---
EXISTING MAJOR CONTOURS	---



NOTES FROM SITE PLAN SEALED BY CHRISTOPHER FAULK, PLS. ON 1/10/18:

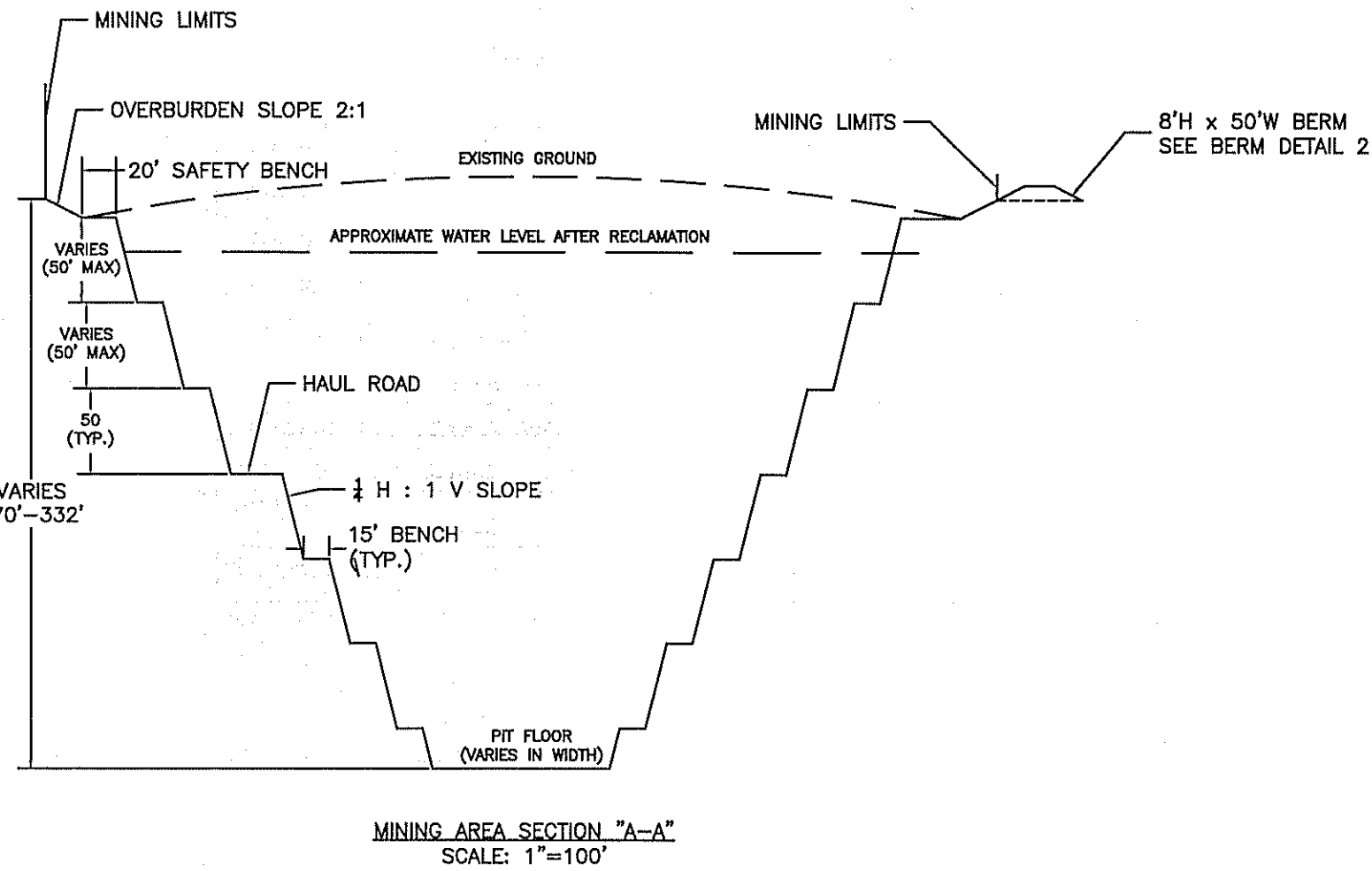
- PROPOSED IMPERVIOUS AREA = 5.0 AC
- PONDS TO BE FILLED ONLY WITH NCDEQ APPROVAL PER 401 / 404 PERMITTING
- AREA OF OPERATIONS IS BUFFERED A MINIMUM OF 125' FROM PROPERTY LINES
- TEMPORARY LIGHTING WILL BE USED FOR ANY REQUIRED NIGHT OPERATIONS
- FINAL DESIGN AND PLACEMENT OF STORMWATER CONTROL DEVICES TO BE CONFIRMED BY APPROVED SEDIMENT AND EROSION CONTROL PLAN
- BERMS TO BE CONSTRUCTED 8' +/- HIGH AND PLANTED WITH LOGSLOLLY PINE
- LOGSLOLLY PINES TO BE "DOUBLE-STAGGER" PLANTED PER SCREENING GUIDELINES DESCRIBED IN ALAMANCE COUNTY ORDINANCE
- ALL VEGETATIVE SCREENING MUST BE VERIFIED BY VISUAL INSPECTION PRIOR TO ISSUANCE OF AN OPERATIONS PERMIT FOR THE FACILITY. PLEASE CALL 336-570-5053 TO SCHEDULE AN INSPECTION.
- INTENT TO-CONSTRUCT PERMITS ARE VALID FOR (1) YEAR FROM THE DATE OF ISSUANCE.
- TWO (2) COPIES OF A POST DEVELOPMENT/ASBUILT PLAN ARE REQUIRED TO BE FILED WITH THE ALAMANCE COUNTY PLANNING DEPARTMENT AT THE COMPLETION OF CONSTRUCTION AND PRIOR TO ISSUANCE OF AN OPERATIONS PERMIT.
- AN OPERATIONS PERMIT WILL BE REQUIRED PRIOR TO BEGINNING OPERATION OF THE FACILITY. PLEASE CALL 336-570-4053 FOR ADDITIONAL INFORMATION.
- OPERATIONS PERMITS ARE VALID FOR THREE (3) YEARS. PLEASE CONTACT THE ALAMANCE COUNTY PLANNING DEPARTMENT AT 336-570-4053 TO RENEW THIS PERMIT PRIOR TO EXPIRATION.
- LIGHTING TO BE INSTALLED PER LIGHTING PLAN DETAIL SUBMITTED WITH SITE PLAN
- ACCESS WAYS, WALKWAYS AND PARKING AREAS SHALL BE LIGHTED ADEQUATELY BY LIGHTING FIXTURES WHICH SHALL BE SO INSTALLED AS TO PROTECT THE STREET AND NEIGHBORING PROPERTIES FROM DIRECT GLARE OR HAZARDOUS INTERFERENCE OF ANY KIND. APPLICANTS ARE ENCOURAGED TO USE LIGHT SHIELDING AND FIXTURES THAT ARE APPROVED BY THE INTERNATIONAL DARK SKY ASSOCIATION (IDA) AS THESE FIXTURES CONSERVE ENERGY, REDUCE MONTHLY COSTS, AND MINIMIZE THE IMPACT OF LIGHT POLLUTION ON SURROUNDING PROPERTIES. (HID0 SECTION 4, ITEM I)
- 125' OPERATIONAL SETBACK TO INCLUDE 50' SCREENING BUFFER REQUIRED BY HID0 SECTION 4 ITEM G. NATURAL VEGETATION TO BE SUPPLEMENTED AS DESCRIBED IN HID0 APPENDIX "A" PER SUBMITTED SCREENING PLAN SUBJECT TO APPROVAL OF PLANNING DIRECTOR
- STRUCTURES NOT TO EXCEED 40' IN HEIGHT ABOVE NATURAL ELEVATION GRADE PER HID0 SECTION 4 ITEM B
- BUILDING ON PID #102726 TO BE REMOVED SUBJECT TO PROPER DEMOLITION PERMITS
- FINAL APPROVAL AND OPERATION PERMITS WILL BE CONTINGENT UPON RECEIPT OF FINAL STATE AND FEDERAL APPROVALS
- HISTORIC PROPERTIES TO REMAIN OR MADE AVAILABLE FOR RELOCATION UPON CONSULTATION WITH HISTORICAL PROPERTIES COMMISSION

THE INITIAL CRUSHING PLANT WILL BE A MOBILE PLANT THAT WILL BE ABLE TO MOVE THROUGH THE PHASES OF THE QUARRY. PHASES 1 THROUGH 4 OF THE MINE ARE SHOWN.

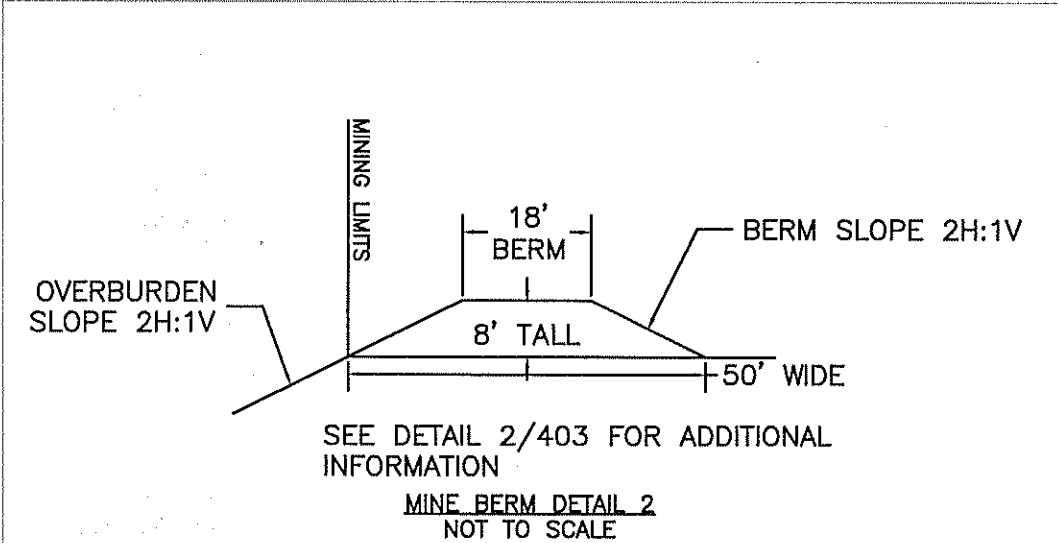
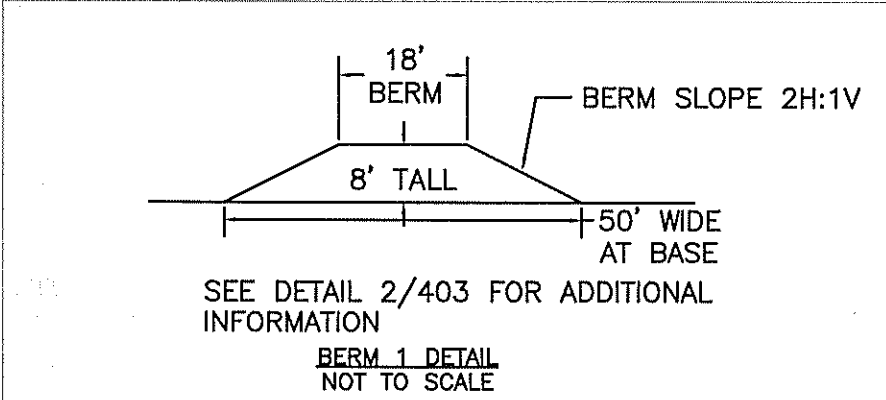
DURING THE START UP OF THE QUARRY, THE CRUSHING PLANT MAY INITIALLY BE IN THE GENERAL LOCATION OF PHASE 2 AS SHOWN IN ORDER TO SERVE THE PHASE 1 EXCAVATION SITE

LEGEND	
PROPERTY LINE	---
EXISTING BUILDING	[Symbol]
PROPOSED BUILDING	[Symbol]
MINE PERIMETER	---
PROPOSED SECURITY FENCE	-X-X-X-X-
50' UNDISTURBED BUFFER	---
100' STRUCTURE SETBACK BUFFER	---
125' OPERATIONS SETBACK BUFFER	---
PROPOSED SKIMMER BASIN	[Symbol]
DISTURBED AREA	[Symbol]

CATEGORY	APPROXIMATE IMPACT ACRES
TAILING/SEDIMENT PONDS	6.86
STOCKPILE	25.86
WASTEPILES	13.01
PROCESSING/HAUL ROAD	5.24
MINE EXCAVATION	28.29
OTHER (SHOP, EMERGENCY ACCESS, FENCE, ETC.)	6.87
TOTAL IMPACT	85.93



THE INITIAL & ULTIMATE CLEARING LIMITS ARE THE SAME. THE OVERBURDEN SOIL WILL BE REMOVED OVER ALL THE PHASES 1 THROUGH 4 AT ONE TIME. THE PHASES HAVE BEEN SHOWN FOR ROCK EXCAVATION DELINEATIONS.



UNNAMED TRIBUTARIES TO REEDY BRANCH AND UNNAMED TRIBUTARIES TO CANE CREEK FLOW THROUGH THE SITE. REEDY AND CANE CREEKS ARE IN THE CAPE FEAR RIVER BASIN ARE CLASSIFIED AS WS V AND NUTRIENT SENSITIVE WATERS BY NCDWR

Paul A. Stimpson
NORTH CAROLINA PROFESSIONAL SEAL 22052
ENGINEER
PAUL A. STIMPSON
1/24/2020

ALAMANCE AGGREGATES, LLC
Mr. Chad Threatt, VP

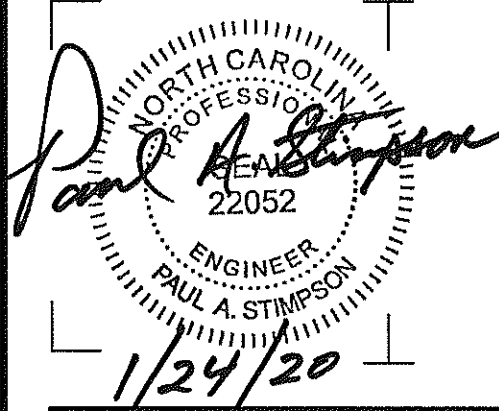
Snow Camp Mine

1	1/20/20	ADDITIONAL STREAM INFO - ALAM. AGG. & LAND QUALITY COMMENTS
NO.	DATE:	DESCRIPTION:
REVISIONS		
PROJECT NUMBER: 2190335		
DRAWN BY: KCG/ATC		
REVIEWED BY: PAS		
ISSUED FOR: CONSTRUCTION		
DATE: 1/23/20		
DRAWING NAME:		

MINE MAP

DRAWING NUMBER:

C201



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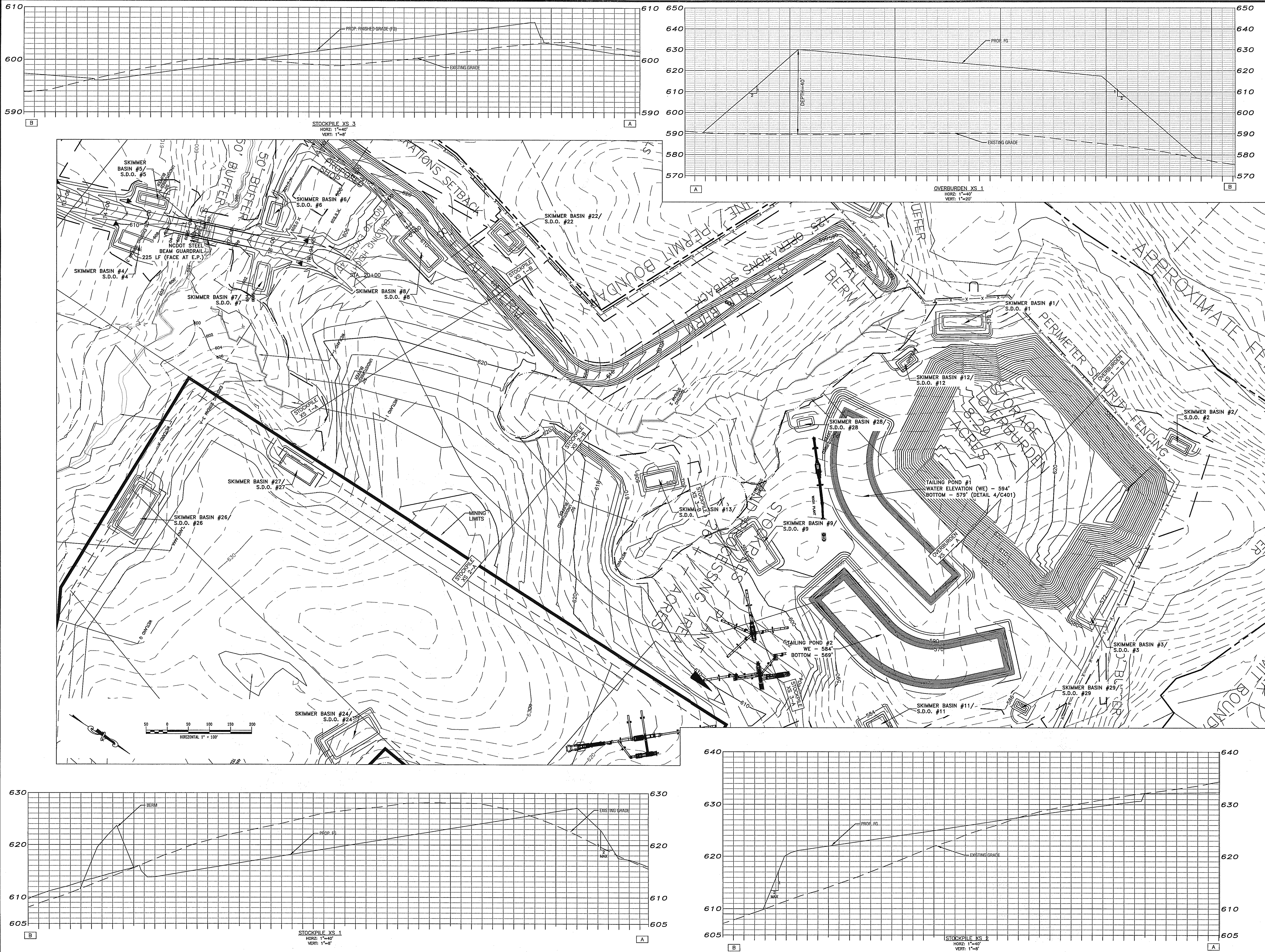
Snow Camp Mine

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REVISIONS		
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DATE: 1/23/20		
DRAWING NAME:		

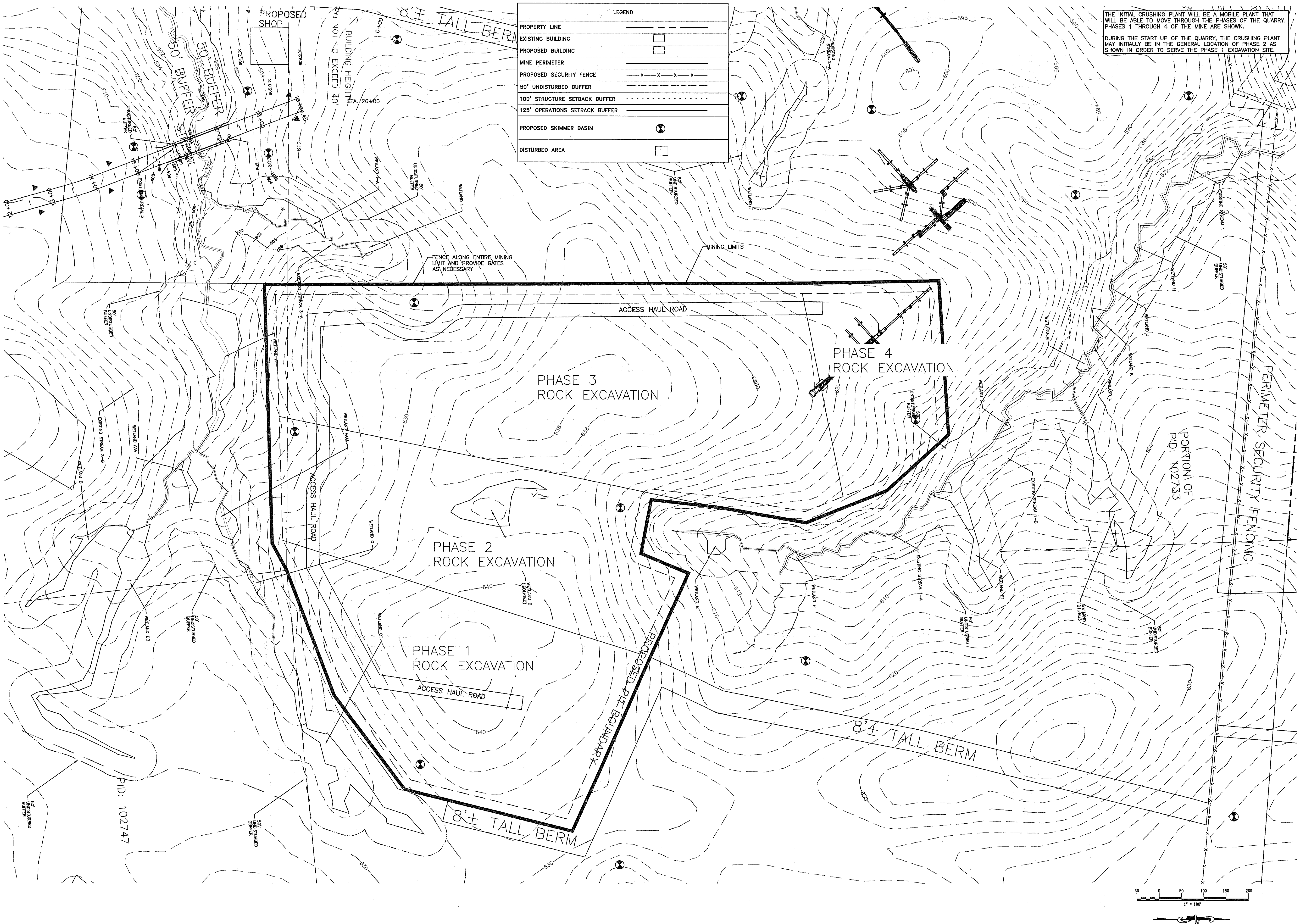
PLANT AND
STOCKPILE PLAN

DRAWING NUMBER:

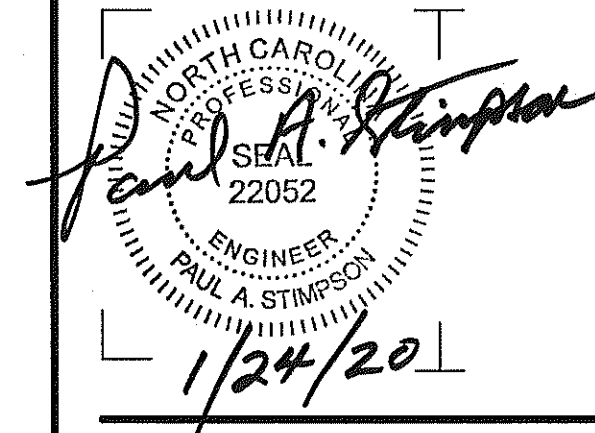
C202



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Snow Camp Mine

1	1/20/20	ADDITIONAL STREAM INFO - ALAM. AGG. & LAND QUALITY COMMENTS
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DRAWN BY:		KCG/ATC
REVIEWED BY:		PAS
ISSUED FOR:		CONSTRUCTION
DATE:		1/23/20
DRAWING NAME:		

MINE PLAN

DRAWING NUMBER:

C203

HALF OF OVERBURDEN SOIL TO BE SOLD DURING MINE OPERATION. OTHER HALF OF OVERBURDEN TO BE USED TO FILL THE TAILING PONDS, ALL SKIMMER BASINS, AND THEN EQUALLY SPREAD AND COMPACT REMAINING SOIL OVER GRAVEL PLANT AND STOCKPILE AREAS.

7/23/19

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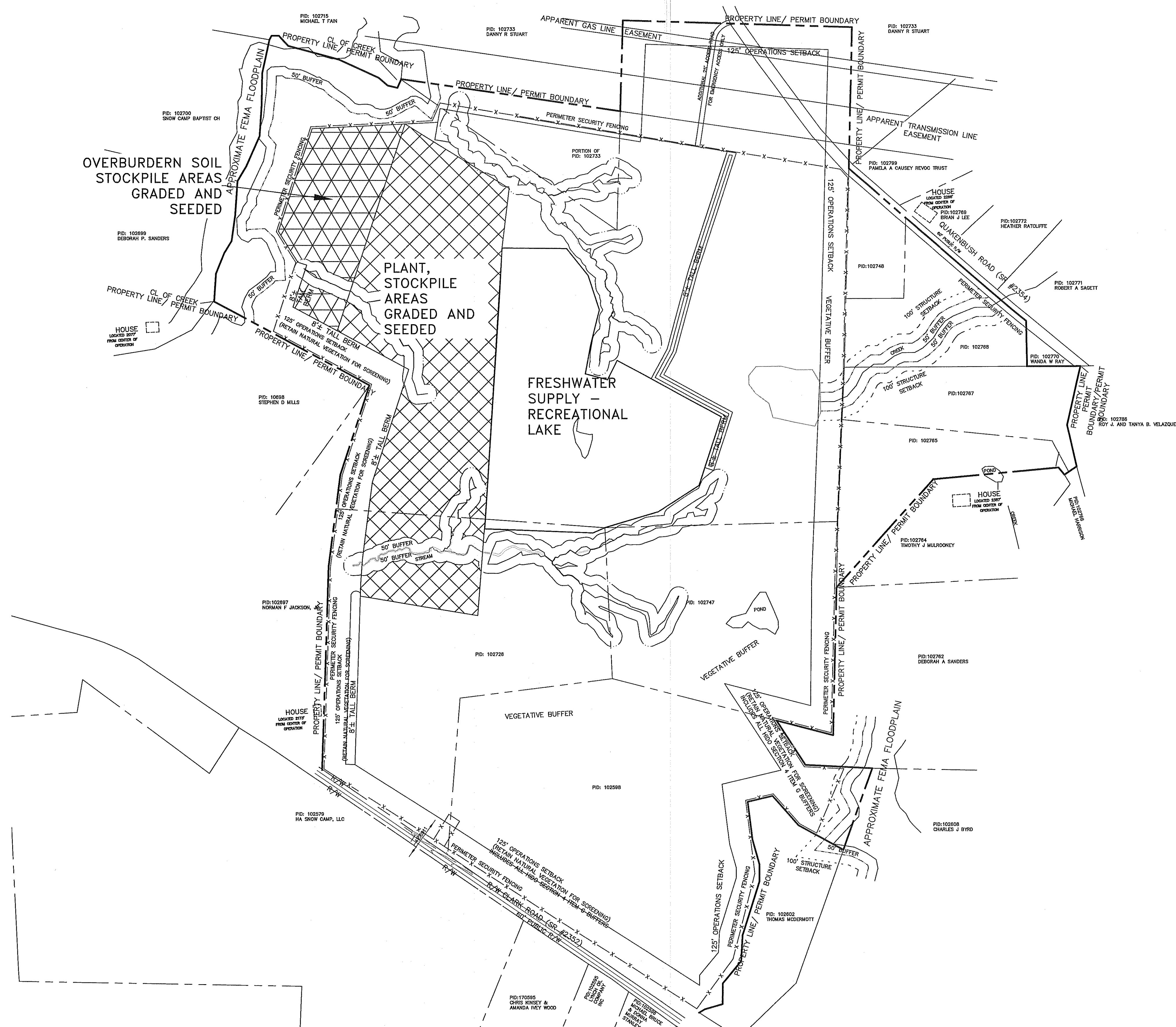
Snow Camp Mine

NO.	DATE:	DESCRIPTION:
REVISIONS		
PROJECT NUMBER:		
2190335		
DRAWN BY:		
KGC/ATC		
REVIEWED BY:		
PAS		
ISSUED FOR:		
CONSTRUCTION		
DATE:		
7/18/19		
DRAWING NAME:		

RECLAMATION PLAN

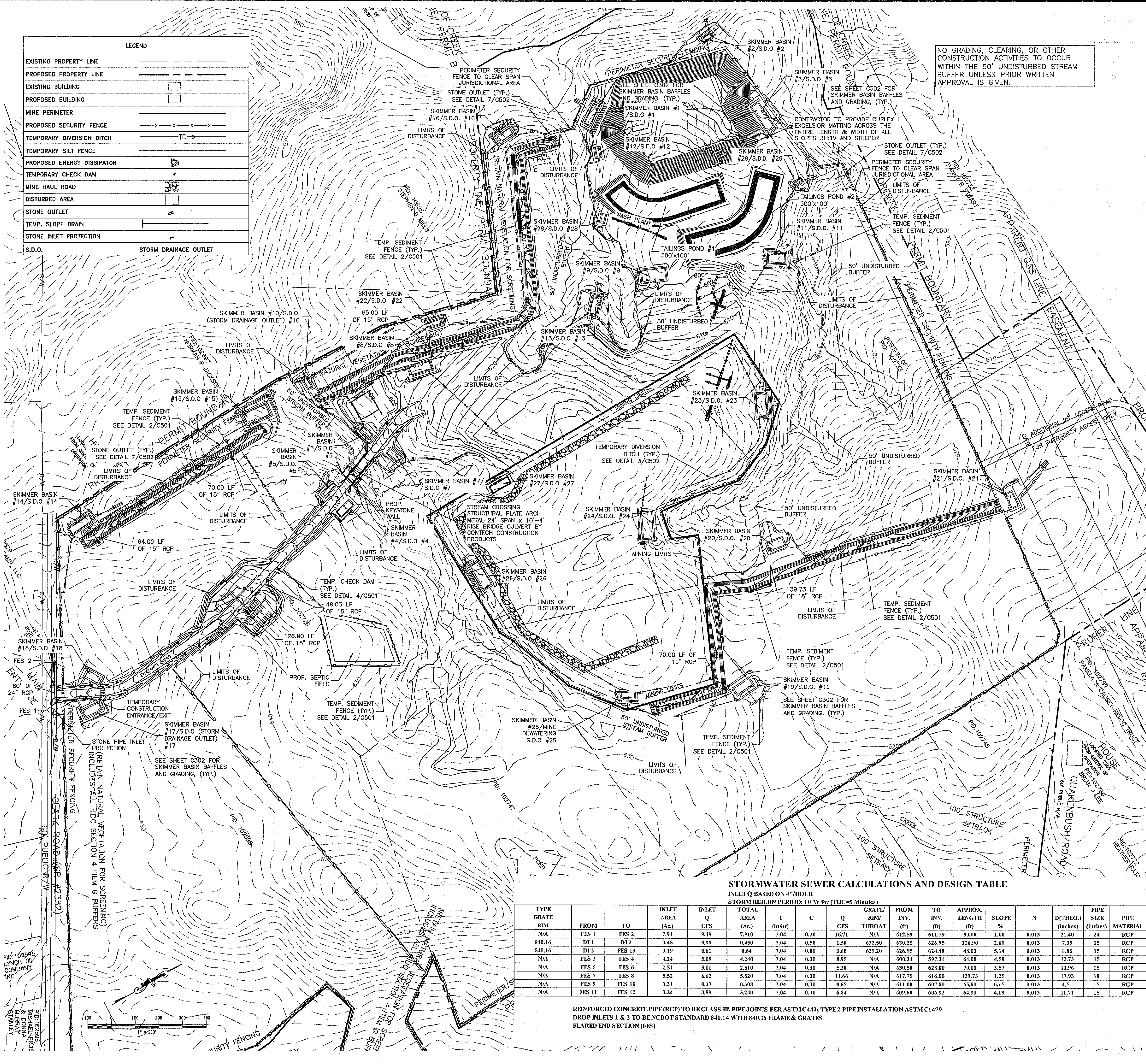
DRAWING NUMBER

C204



Date & Time: 1/23/2020 7:44 PM By: Gertson, Keith
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LEGEND	
EXISTING PROPERTY LINE	---
PROPOSED PROPERTY LINE	---
EXISTING BUILDING	
PROPOSED BUILDING	
MINE PERIMETER	---
PROPOSED SECURITY FENCE	-x-x-x-x-
TEMPORARY DIVERSION DITCH	TD→
TEMPORARY SILT FENCE	-----
PROPOSED ENERGY DISSIPATOR	
TEMPORARY CHECK DAM	
MINE HAUL ROAD	
DISTURBED AREA	
STONE OUTLET	
TEMP. SLOPE DRAIN	
STONE INLET PROTECTION	
S.D.O.	STORM DRAINAGE OUTLET



STORMWATER SEWER CALCULATIONS AND DESIGN TABLE

INLET Q BASED ON 4" HOUR

STORM RETURN PERIOD: 10 Yr for (TOC=5 Minutes)

TYPE	GRATE				INLET AREA (Ac.)	INLET Q CFS	TOTAL AREA (Ac.)	I (in/hr)	C	Q CFS	GRATE/ RIM/ THROAT	FROM INV. (ft)	TO INV. (ft)	APPROX. LENGTH (ft)	SLOPE %	N	D(THEO.) (inches)	PIPE SIZE (inches)	PIPE MATERIAL
N/A	FROM	TO																	
N/A	FES 1	FES 2			7.91	9.49	7.910	7.04	0.30	16.71	N/A	612.59	611.79	80.00	1.00	0.013	21.40	24	RCP
840.16	D11	D12			0.45	0.90	0.450	7.04	0.50	1.58	632.50	630.25	626.95	126.90	2.60	0.013	7.39	15	RCP
840.16	D12	FES 13			0.19	0.61	0.64	7.04	0.80	3.60	629.20	626.95	624.48	48.03	5.14	0.013	8.86	15	RCP
N/A	FES 3	FES 4			4.24	5.09	4.240	7.04	0.30	8.95	N/A	608.24	597.31	64.00	4.58	0.013	12.73	15	RCP
N/A	FES 5	FES 6			2.51	3.01	2.510	7.04	0.30	5.30	N/A	630.50	628.00	70.00	3.57	0.013	10.96	15	RCP
N/A	FES 7	FES 8			5.52	6.62	5.520	7.04	0.30	11.66	N/A	617.75	616.00	139.73	1.25	0.013	17.93	18	RCP
N/A	FES 9	FES 10			0.31	0.37	0.308	7.04	0.30	0.65	N/A	611.00	607.00	65.00	6.15	0.013	4.51	15	RCP
N/A	FES 11	FES 12			3.24	3.89	3.240	7.04	0.30	6.84	N/A	609.60	606.92	64.00	4.19	0.013	11.71	15	RCP

REINFORCED CONCRETE PIPE (RCP) TO BE CLASS III, PIPE JOINTS PER ASTM C443; TYPE 2 PIPE INSTALLATION ASTM C1479

DROP INLETS 1 & 2 TO BENDOT STANDARD 840.14 WITH 840.16 FRAME & GRATES

FLARED END SECTION (FES)

NO GRADING, CLEARING, OR OTHER CONSTRUCTION ACTIVITIES TO OCCUR WITHIN THE 50' UNDISTURBED STREAM BUFFER UNLESS PRIOR WRITTEN APPROVAL IS GIVEN.

TOTAL DISTURBED AREA = 86.37 ACRES

EROSION CONTROL SEQUENCE NOTES

- OBTAIN GRADING/EROSION CONTROL PLAN APPROVAL AND PERMIT.
- CONTACT EROSION CONTROL INSPECTOR TO ESTABLISH A PRE CONSTRUCTION CONFERENCE AND INSPECTION SCHEDULE.
- SELF INSPECTION---EFFECTIVE OCTOBER 1, 2010, PERSONS CONDUCTING LAND-DISTURBING ACTIVITIES, LARGER THAN ONE (1) ACRE MUST INSPECT THEIR PROJECT AFTER EACH PHASE OF THE PROJECT, AND DOCUMENT THE INSPECTION IN WRITING ON APPROVED FORMS.
- THE PHASES ARE AS FOLLOWS:
 - INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROL MEASURES.
 - CLEARING AND GRUBBING OF EXISTING GROUND COVER.
 - COMPLETION OF ANY PHASE OF GRADING OR FILLS.
 - INSTALLATION OF STORM DRAINAGE FACILITIES.
 - COMPLETION OF CONSTRUCTION OF DEVELOPMENT.
 - ESTABLISHMENT OF PERMANENT GROUND COVER SUFFICIENT TO RESTRAIN EROSION.
- CLEAR SITE ONLY AS NECESSARY TO INSTALL INITIAL EROSION CONTROL MEASURES AS FOLLOWS:
 - TEMPORARY CONSTRUCTION ENTRANCE/EXIT AT CLARK ROAD.
 - THIS SITE HAS TEMPORARY SKIMMER BASINS AND SEDIMENT BASINS AS SHOWN.
 - TEMPORARY DIVERSION BERMS.
 - TEMPORARY SILT FENCING AND STONE OUTLETS.
 - SEED AMENDMENTS AND DISTURBED AREAS OF DEVICES (INCLUDING "CLEAN" WATER DIVERSION) UPON COMPLETION OF CONSTRUCTION. SEE GROUND STABILIZATION CRITERIA BELOW FOR MORE INFORMATION.
- BEGIN CLEARING, GRUBBING, AND STRIPPING OF SITE AS REQUIRED. EARTHEN-MATERIAL STOCKPILES ON-SITE FOR LATER DISTRIBUTION AND/OR REMOVAL. AREAS DEDICATED FOR MANAGEMENT OF LAND CLEARING AND DEMOLITION DEBRIS, CONSTRUCTION AND DOMESTIC WASTE, AND HAZARDOUS OR TOXIC WASTE SHALL BE LOCATED AT LEAST 50 FEET AWAY FROM STORM DRAIN INLETS AND SURFACE WATERS UNLESS IT CAN BE SHOWN THAT NO OTHER ALTERNATIVES ARE REASONABLY AVAILABLE, AND WITHIN AREAS PROTECTED BY EROSION CONTROL MEASURES.
- BEGIN SITE GRADING. MAINTAIN EROSION CONTROL DEVICES IN ACCORDANCE WITH THE MAINTENANCE PLAN. INSTALL ADDITIONAL EROSION CONTROL MEASURES AS REQUIRED.
- INSTALL STORM DRAINAGE SYSTEM AND UTILITIES. STORM PIPING MUST BE INSTALLED TO THE POINT WHERE IT ENTERS EACH DEVICE. COMPLETION OF PIPING WILL ONLY BE ALLOWED ONCE THE SITE HAS BEEN DEEMED STABLE BY THE EROSION CONTROL INSPECTOR. INSTALL PROTECTION AROUND ALL INLETS AS STORM DRAIN SYSTEM IS INSTALLED.

DESCRIPTION	STABILIZATION TIMEFRAME	STABILIZATION EXCEPTIONS
PERMANENT DIKES, SWALES, DITCHES, & SLOPES	7 DAYS	NONE
SLOPES STEEPER THAN 3:1	7 DAYS	IF SLOPES ARE 10' OR LESS IN LENGTH & RENEWED STEEPER THAN 2:1, 14 DAYS ALLOWED
SLOPES 3:1 OR FLATTER	14 DAYS	7 DAYS FOR SLOPES > 50' IN LENGTH
ALL OTHER AREAS WITH SLOPES FLATTER THAN 4:1	14 DAYS	NONE

- PRIOR TO THE CONTRACTOR DEMOLISHING FROM THE SITE (AT APPROXIMATELY 45 DAYS PRIOR TO DEMOLITION), THE FINANCIAL RESPONSIBLE PARTY (OR THEIR DESIGNER) WILL NOTIFY THE ENGINEER AND THE DESIGNATED EROSION CONTROL INSPECTOR OF THEIR ANTICIPATED DATE TO LEAVE THE SITE. AN ON-SITE INSPECTION WILL BE CONDUCTED PRIOR TO THE LEAVE DATE BY THE ENGINEER AND/OR THE DESIGNATED EROSION CONTROL INSPECTOR TO MAKE CERTAIN ALL ACTIONS ITEMS HAVE BEEN ADDRESSED BY THE CONTRACTOR.
- CONTINUE TO MAINTAIN EROSION CONTROL MEASURES UNTIL VEGETATIVE COVER HAS BEEN ESTABLISHED OVER ALL DISTURBED AREAS AND SITE HAS BEEN STABILIZED. REMOVE EROSION CONTROL MEASURES ONLY AFTER FINAL INSPECTION AND APPROVAL BY ENGINEER.

EROSION CONTROL MAINTENANCE PLAN (CONTRACTOR MUST INCLUDE MAINTENANCE IN BASE BID)

- INSPECT ALL SEDIMENTATION AND EROSION CONTROL DEVICES FOR STABILITY AND FUNCTION EACH WEEK AND FOLLOWING EACH RAINFALL EVENT.
- REMOVE SILT/SEDIMENT FROM TEMPORARY DEVICES WHEN ACCUMULATED VOLUME HAS REACHED 50% CAPACITY.
- REMOVED ACCUMULATED SILT/SEDIMENT FROM BEHIND TEMPORARY SEDIMENT FENCE WHEN DEPTH EXCEEDS APPROXIMATELY 0.5'. REPAIR AND REPLACE SILT FENCE AS NECESSARY.
- SEED AND STABILIZE TEMPORARY DIVERSION BERMS IMMEDIATELY AFTER CONSTRUCTION INCLUDING "CLEAN" WATER DIVERSION BERMS. RE-GRADE/REPAIR BERMS AS REQUIRED.
- CONTRACTOR SHALL APPOINT AN ON-SITE INSPECTOR AND MAINTAIN RECORDS OF INSPECTIONS IN ACCORDANCE WITH THE PROVISION OF THE GENERAL NPDES STORMWATER DISCHARGE PERMIT FOR CONSTRUCTION ACTIVITIES.

DETAILED CONSTRUCTION SEQUENCE

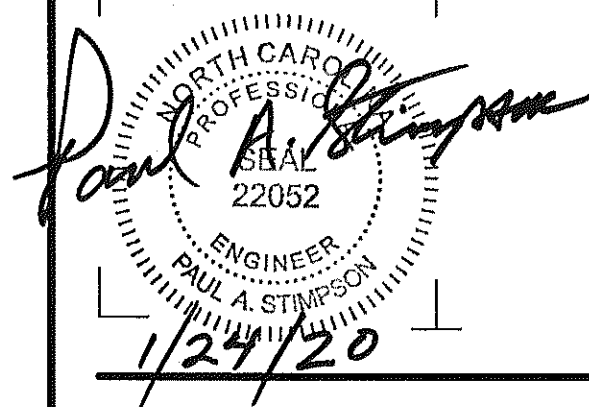
- CONSTRUCT THE TEMPORARY SURGE STONE CONSTRUCTION ENTRANCE/EXIT OFF CLARK ROAD.
- INSTALL SILT FENCE AND STONE OUTLETS FROM CLARK ROAD TO THE SOUTH SIDE OF THE STREAM LOCATED AT 16+87. SILT FENCE TO BE LOCATED ON BOTH SIDES OF THE ROAD AND SOUTH BANKS OF THE STREAM.
- INSTALL SKIMMER BASIN 6 AND SKIMMER BASIN 7 AND THEIR ASSOCIATED TEMPORARY DIVERSION DITCHES AND SLOPE DRAIN (IF CALLED FOR).
- INSTALL IMPERVIOUS CLEAN WATER DIKE AND BYPASS PUMPING SYSTEM AS SHOWN ON SHEET C402. INSTALL THE PERMANENT 54" PIPE AND ENDWALLS AT STATION 16+87.
- APPLY 10" STONE BASE LAYER TO ENTRANCE ROAD AND COMPACT.
- BACKFILL, PREPARE SLOPES AND OTHER DISTURBED AREAS AND STABILIZE.
- INSTALL SILT FENCE AND STONE OUTLETS ALONG NORTH SIDE OF THE STREAM.
- INSTALL SILT FENCE AND STONE OUTLETS AROUND THE EXISTING STREAM BUFFER AND PROPERTY BOUNDARY (WHERE DENOTED ON PLANS). INSTALL SKIMMER BASINS 4, 5, 13, 11, 3, 2, 1, 12, 8, 4, AND 10 AND THEIR ASSOCIATED TEMPORARY DIVERSION DITCHES AND SLOPE DRAINS (IF CALLED FOR).
- PLACE ALL SILT FENCE AND STONE OUTLETS DOWN SLOPE OF ALL PROPOSED BERMS.
- BEGIN GRADING THE INITIAL MINE AREA, MOVE AND PLACE MATERIAL FOR BERMS. PLACE AND COMPACT MATERIAL FOR PLANT AND STOCKPILE AREA. ALL BERMS SHALL BE CONSTRUCTED AND STABILIZED WITHIN 1 YEAR OF STARTING MINING ACTIVITIES.
- CONSTRUCT TAILINGS PONDS BEFORE MINING OPERATION BEINGS.
- SEED AND MULCH ALL AREAS THAT ARE NOT COVERED WITH ASPHALT OR STONE.
- STABILIZE ALL CHANNELS AND SLOPES WITH MATTING AS NOTED ON THE PLANS.

SEEDING NOTE:

SEED MIXTURE, SEEDS RATE, AND SOIL AMENDMENTS TO BE APPROVED BY AN ENVIRONMENTAL PROFESSIONAL AND SUBMITTED TO OWNER AND ENGINEER PRIOR TO APPLICATION. SEED MIXTURE TO BE A MIXTURE OF RED CLOVER, CREEPING RED RESCUE, AND A GRASS, SUCH AS, OAT, WHEAT, OR RYE.

CONTRACTOR NOTE:
REFER TO SHEET C302
FOR SKIMMER BASIN
BAFFLES AND GRADING

615 St. George Square
Suite 300
Winston-Salem, NC 27103
336-842-4065
C#0430
labellapc.com



**ALAMANCE
AGGREGATES, LLC**

Mr. Chad Threatt, VP

Snow Camp Mine

1	1/20/20	ADDITIONAL STREAM INFO - ALAM. AGG. & LAND QUALITY COMMENTS
NO.	DATE:	DESCRIPTION:

PROJECT NUMBER: 2190335

DRAWN BY: KCG/ATC

REVIEWED BY: PAS

ISSUED FOR: CONSTRUCTION

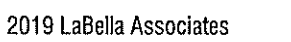
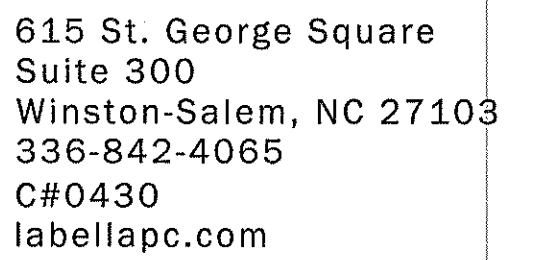
DATE: 1/23/20

DRAWING NAME:

**OVERALL
SEDIMENTATION &
EROSION CONTROL
PLAN**

DRAWING NUMBER:

C301

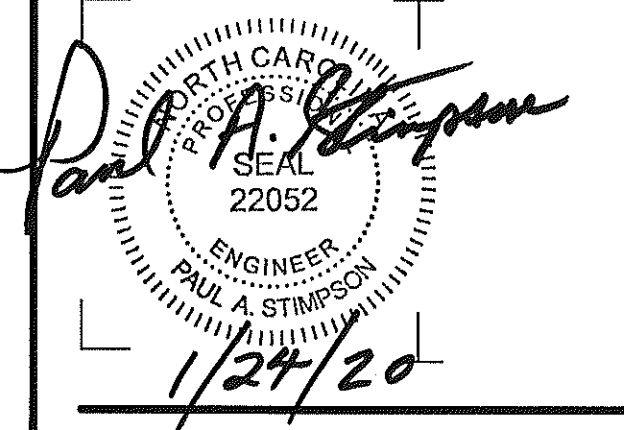


Snow Camp Mine

1"=60'
**SEDIMENTATION &
EROSION CONTROL
PLAN**

C301A





**ALAMANCE
AGGREGATES, LLC**
Mr. Chad Threatt, VP

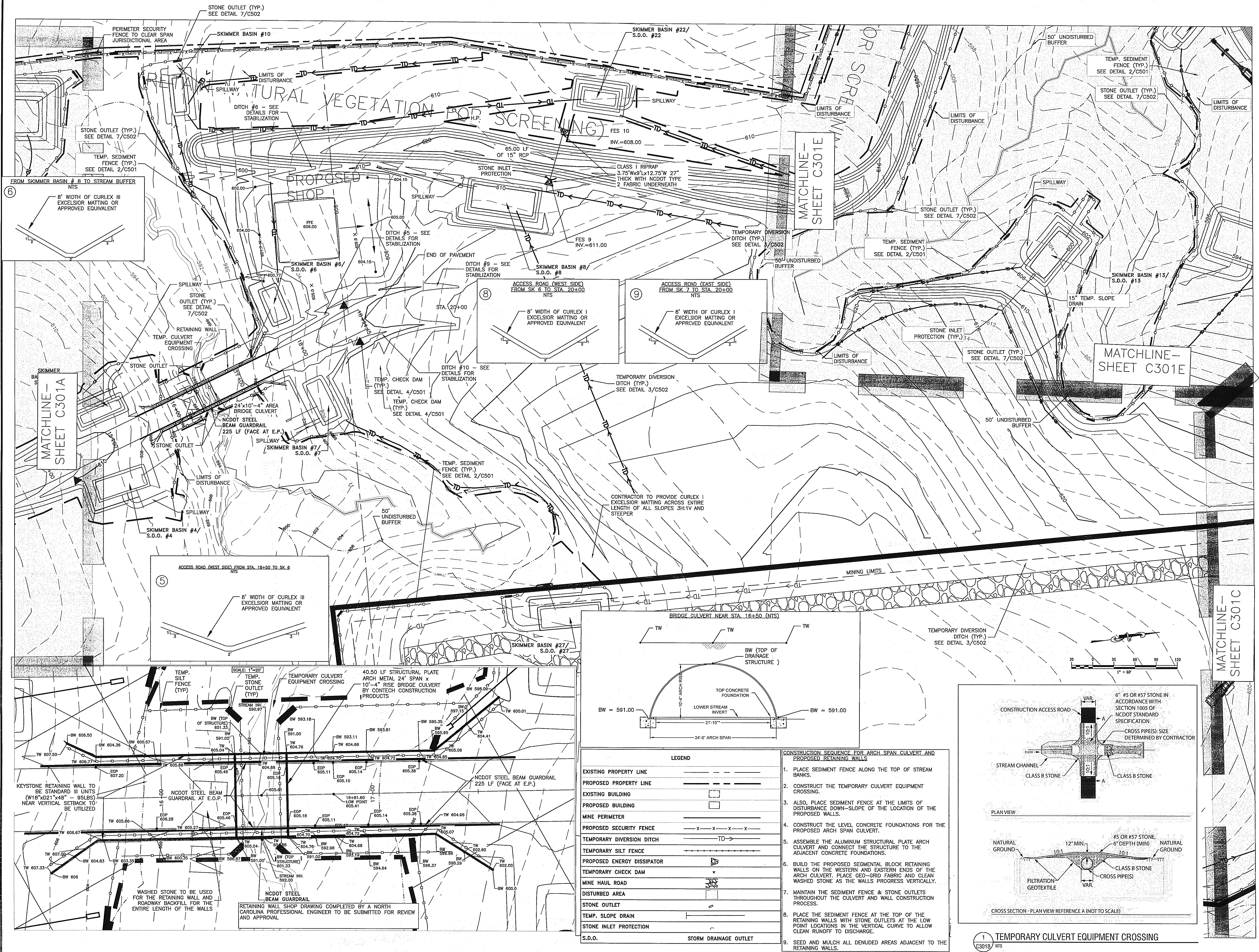
Snow Camp Mine

1	1/20/20	ADDITIONAL STREAM INFO - ALAM. AGG. & LAND QUALITY COMMENTS
NO.	DATE:	DESCRIPTION:
REVISIONS		
PROJECT NUMBER:	2190335	
DRAWN BY:	KCG/ATC	
REVIEWED BY:	PAS	
ISSUED FOR:	CONSTRUCTION	
DATE:	1/23/20	
DRAWING NAME:		

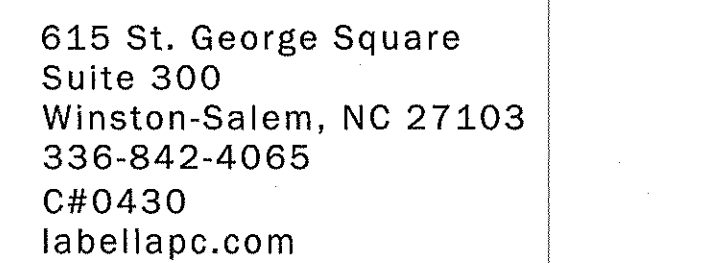
**1"=60'
SEDIMENTATION &
EROSION CONTROL
PLAN**

DRAWING NUMBER:

C301B



Date & Time: 1/23/2020 7:47 PM By: Carson Kean
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Winston-Salem, NC 27103
336-842-4065
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**ALAMANCE
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Mr. Chad Threatt, VP

Snow Camp Mine

NO:	DATE:	DESCRIPTION:
REVISONS		
PROJECT NUMBER:		2190335
DRAWN BY:		KCG/ATC
REVIEWED BY:		PAS
ISSUED FOR:		CONSTRUCTION
DATE:		7/22/19

DRAWING NAME:

1"=60'
**SEDIMENTATION &
EROSION CONTROL
PLAN**

DRAWING NUMBER

C301C



Date & Time: 7/22/2019 10:24 AM By: Garton, Kevin
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AGGREGATES, LLC**
Mr. Chad Threatt, VP

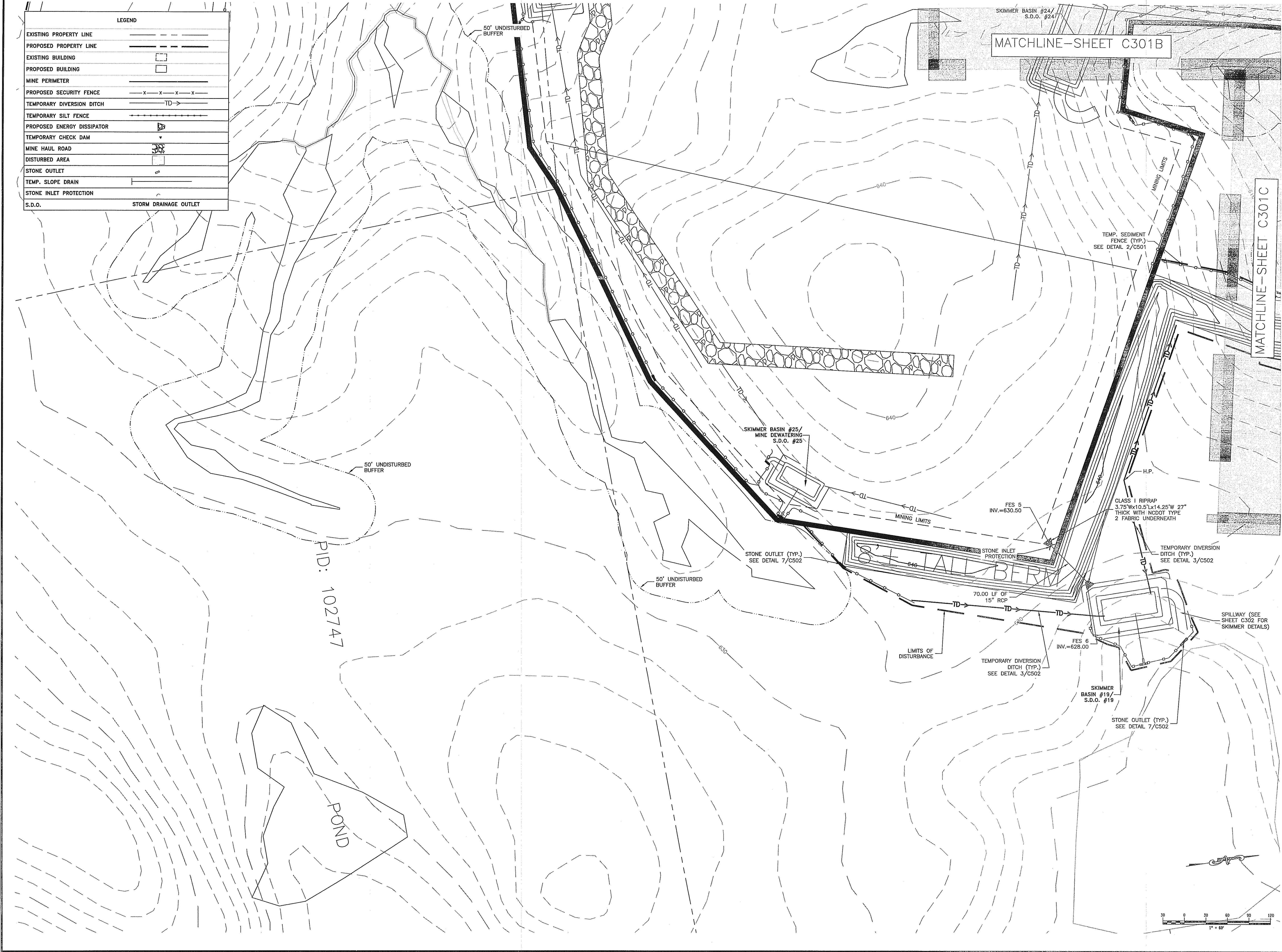
Snow Camp Mine

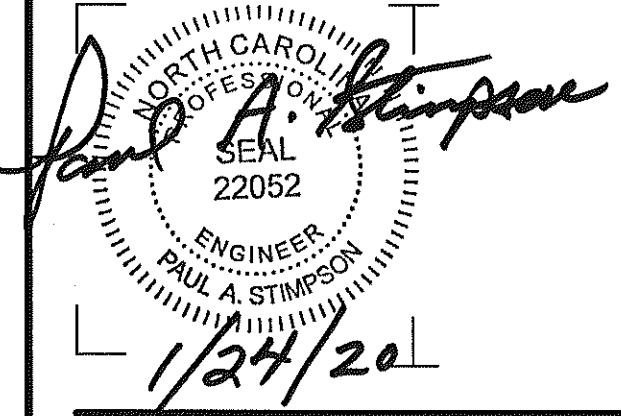
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REVISIONS		
PROJECT NUMBER: 2190335		
DRAWN BY: KCG/ATC		
REVIEWED BY: PAS		
ISSUED FOR: CONSTRUCTION		
DATE: 7/18/19		
DRAWING NAME:		

1"=60'
**SEDIMENTATION &
EROSION CONTROL
PLAN**

DRAWING NUMBER:

C301D





ALAMANCE
AGGREGATES, LLC

Mr. Chad Threatt, VP

Snow Camp Mine

1	1/20/20	ADDITIONAL STREAM INFO - ALAM. AGG. & LAND QUALITY COMMENTS
NO.	DATE:	DESCRIPTION:
REVISIONS		
PROJECT NUMBER:	2190335	

DRAWN BY: KCG/ATC

REVIEWED BY: PAS

ISSUED FOR: CONSTRUCTION

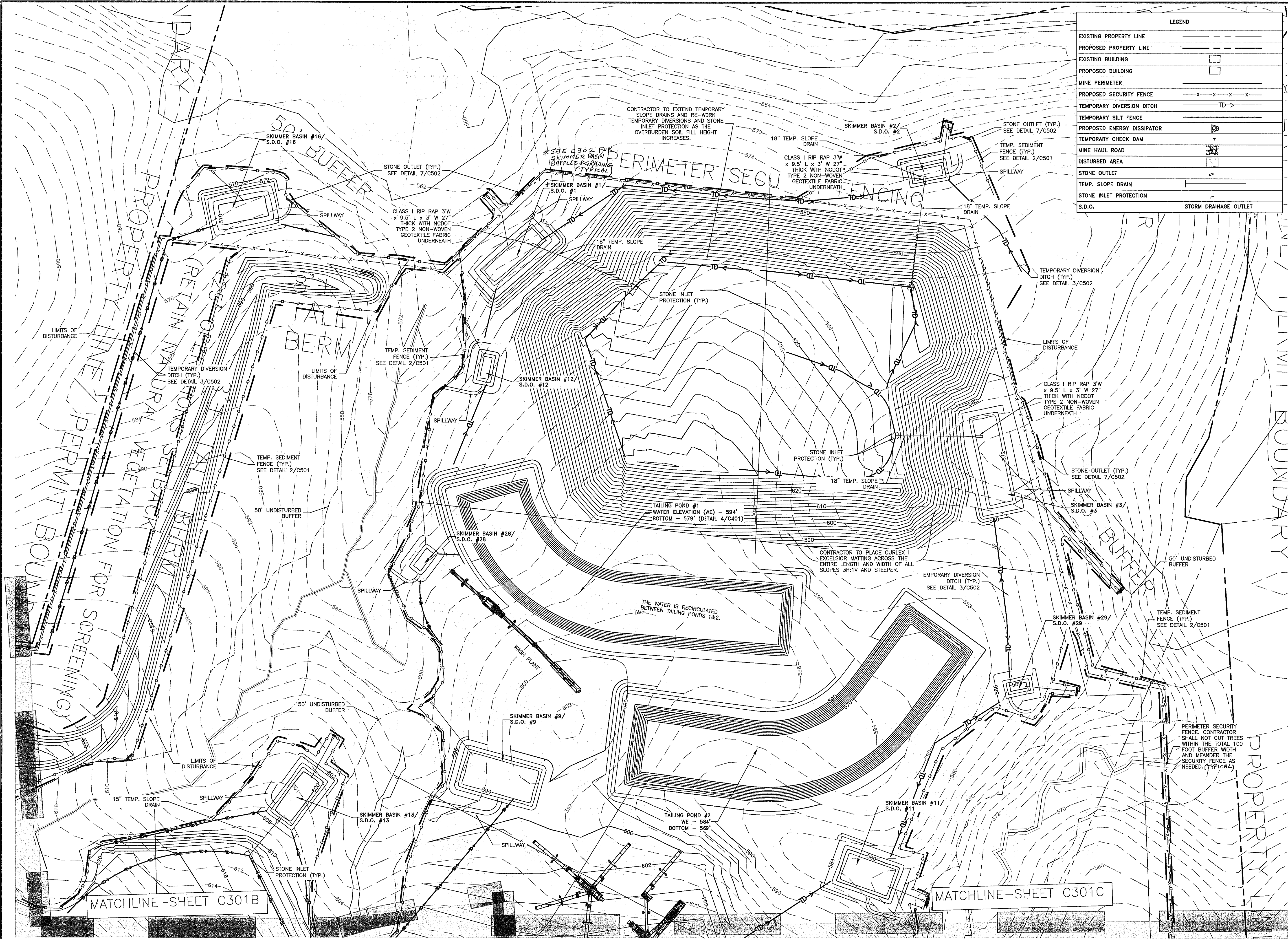
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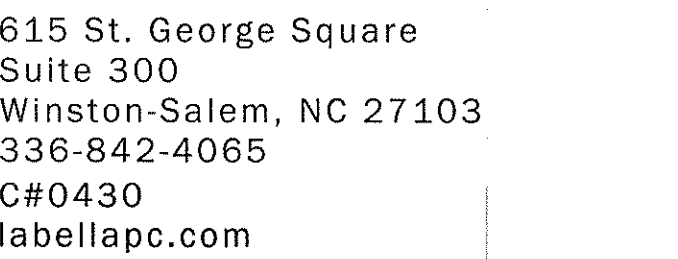
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SEDIMENTATION &
EROSION CONTROL
PLAN

DRAWING NUMBER:

C301E



Date & Time: 1/23/2020 7:50 PM By: Gordon, Kevin
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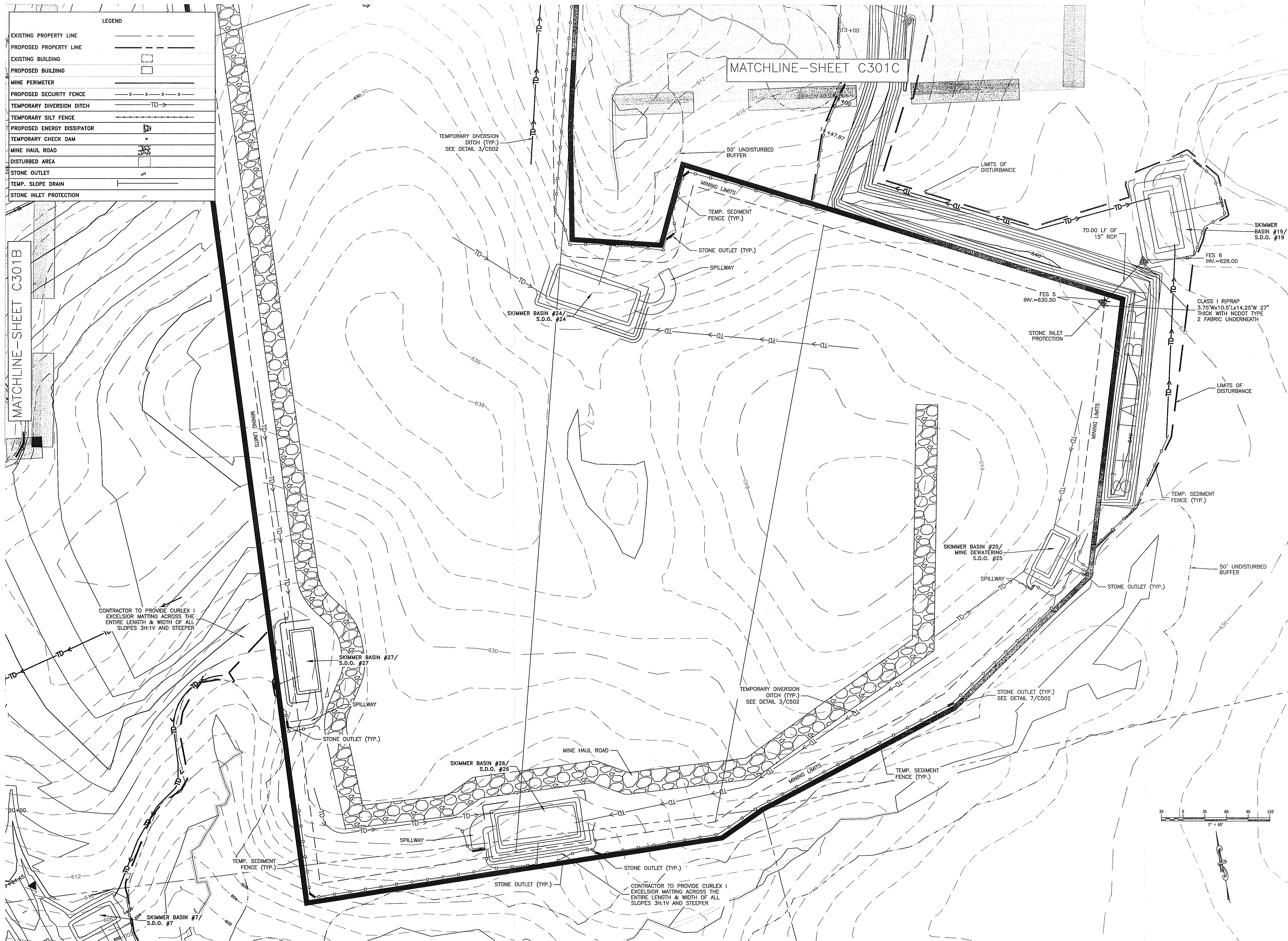
Snow Camp Mine

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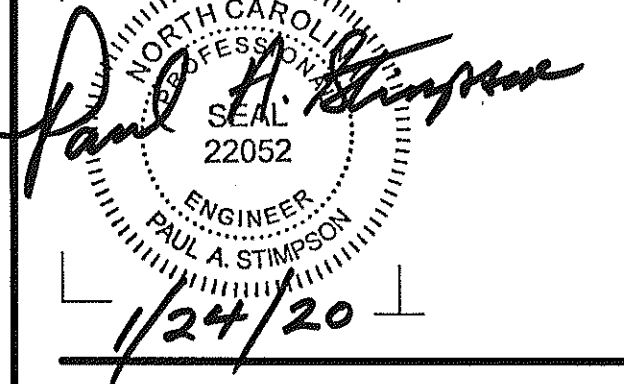
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**SEDIMENTATION &
EROSION CONTROL
PLAN**

DRAWING NUMBER:

C301F



Date & Time: 7/18/2019 2:23 PM By: Garton, Kevin
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Mr. Chad Threatt, VP

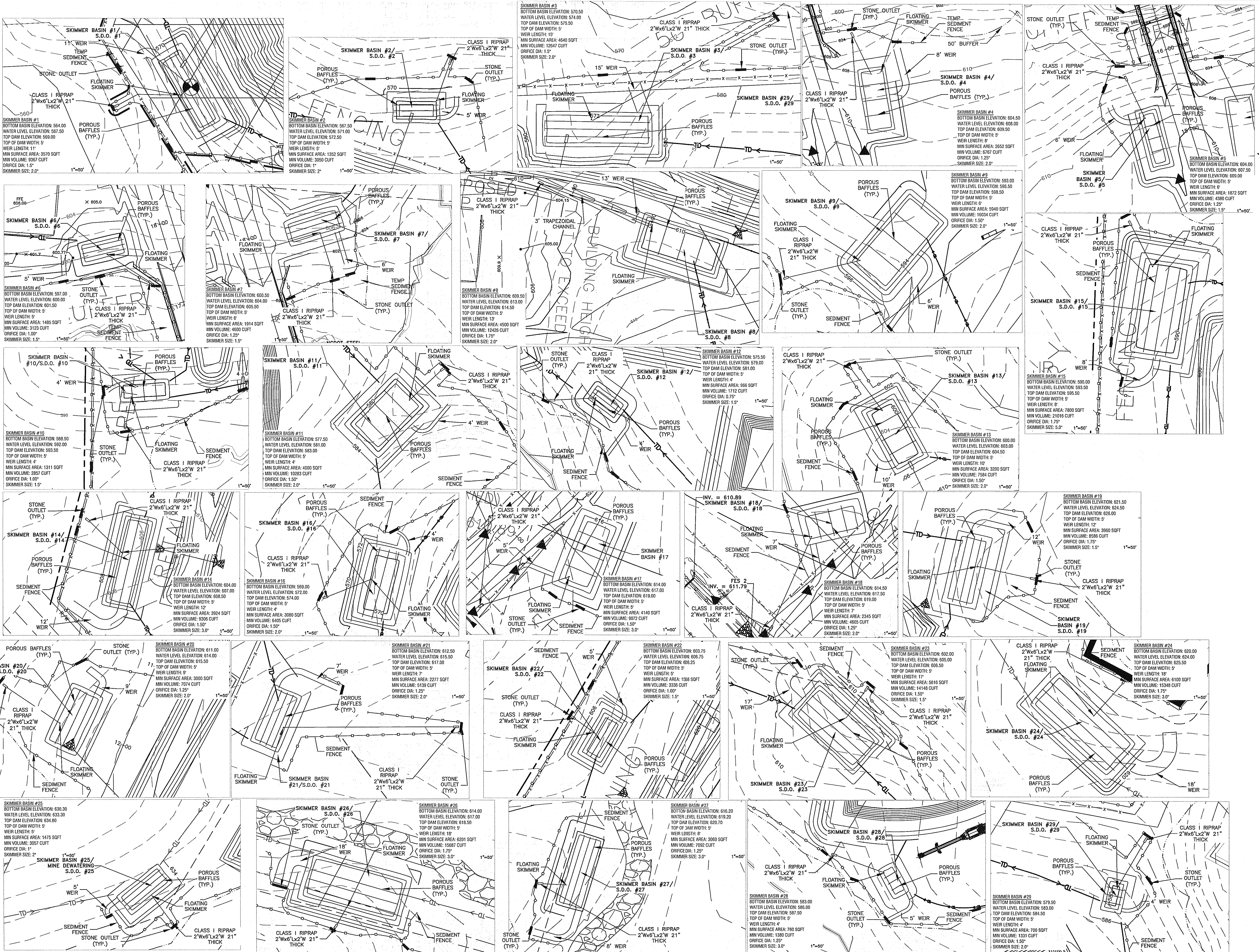
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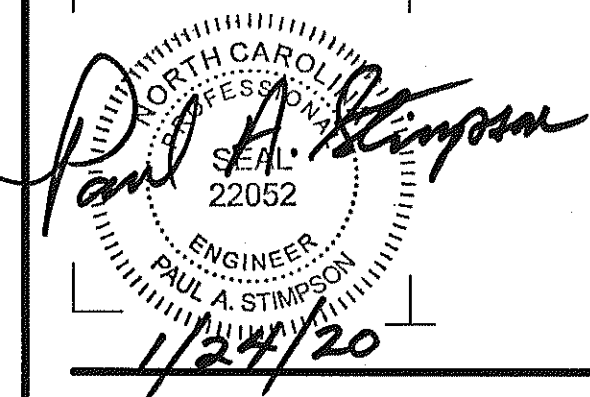
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NO.	DATE:	DESCRIPTION:
REVISIONS		
PROJECT NUMBER: 2190335		
DRAWN BY: KCG/ATC		
REVIEWED BY: PAS		
ISSUED FOR: CONSTRUCTION		
DATE: 1/23/20		
DRAWING NAME:		

**SKIMMER BASIN
GRADING**

DRAWING NUMBER:

C302





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Mr. Chad Threatt, VP

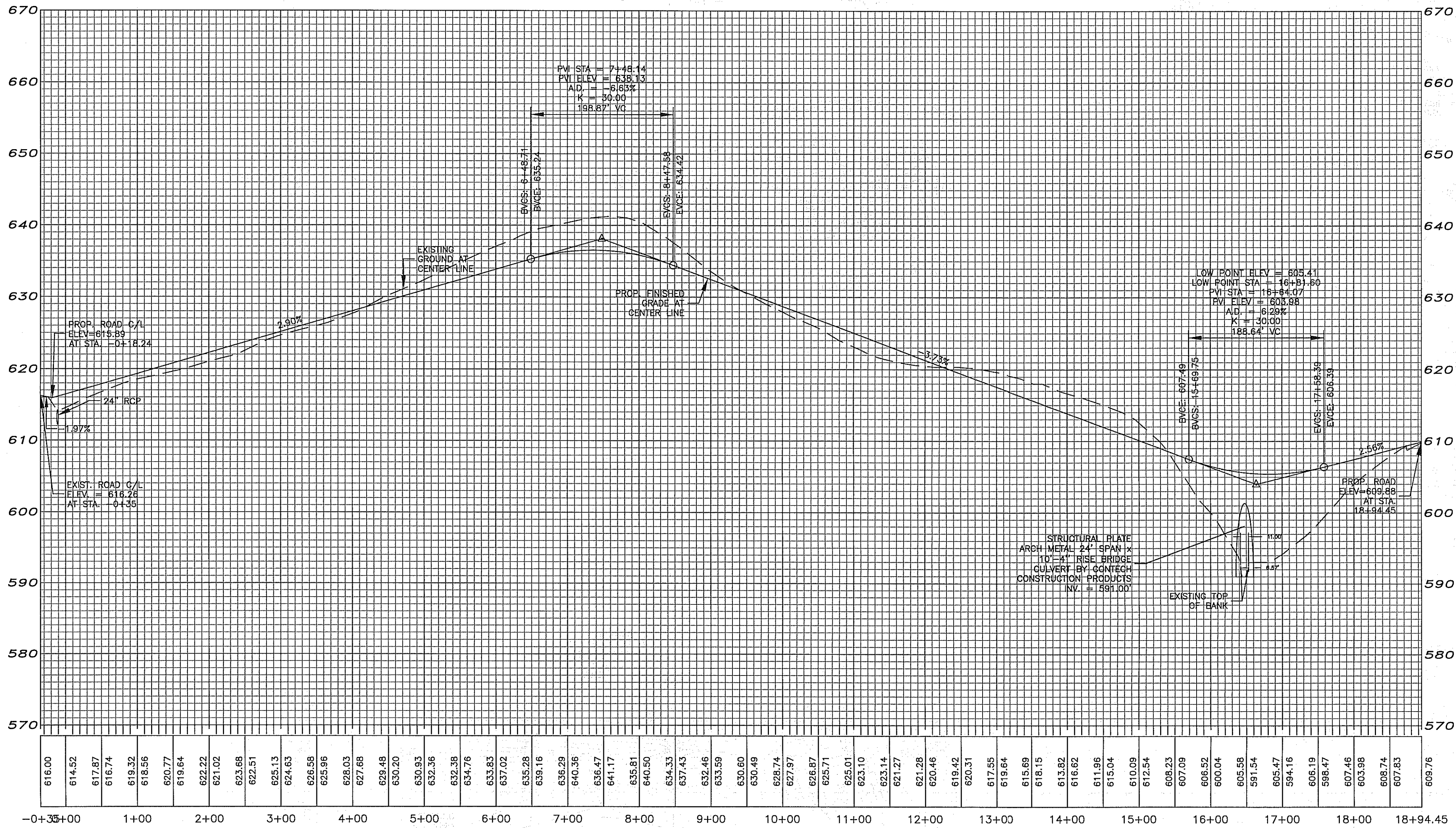
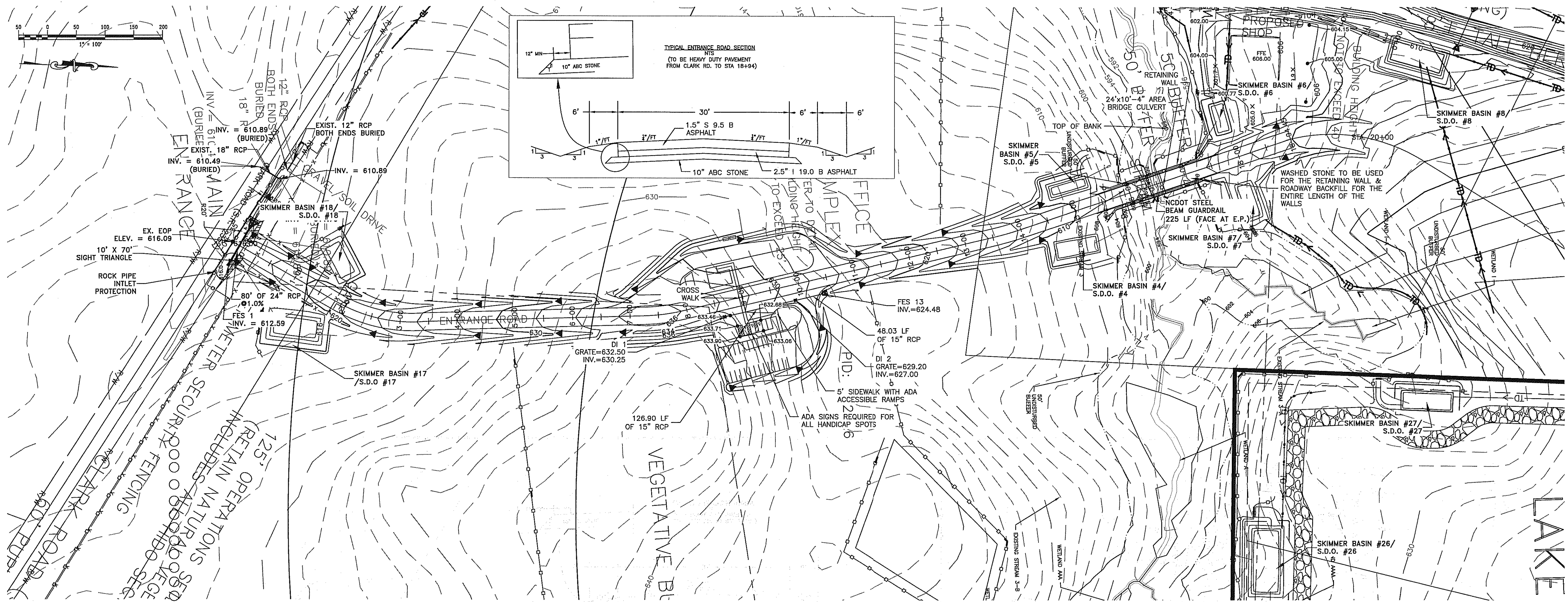
Snow Camp Mine

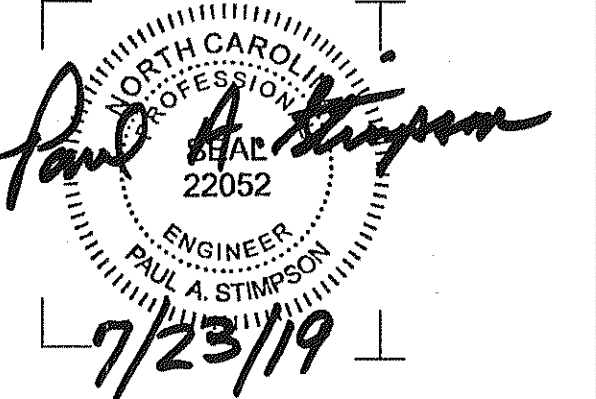
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NO.	DATE:	DESCRIPTION:
REVISIONS		
PROJECT NUMBER:	2190335	
DRAWN BY:	KCG/ATC	
REVIEWED BY:	PAS	
ISSUED FOR:	CONSTRUCTION	
DATE:	1/23/20	
DRAWING NAME:		

ENTRANCE ROAD
PLAN AND PROFILE

DRAWING NUMBER:

C303





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Mr. Chad Threatt, VP

Snow Camp Mine

NO.	DATE	DESCRIPTION
REVISIONS		
PROJECT NUMBER: 2190335		
DRAWN BY: KCG/ATC		
REVIEWED BY: PAS		
ISSUED FOR: CONSTRUCTION		
DATE: 7/18/19		
DRAWING NAME:		

DRAINAGE AREAS

DRAWING NUMBER:

C304



Paul A. Simpson
NORTH CAROLINA
PROFESSIONAL
ENGINEER
22052
7/23/19

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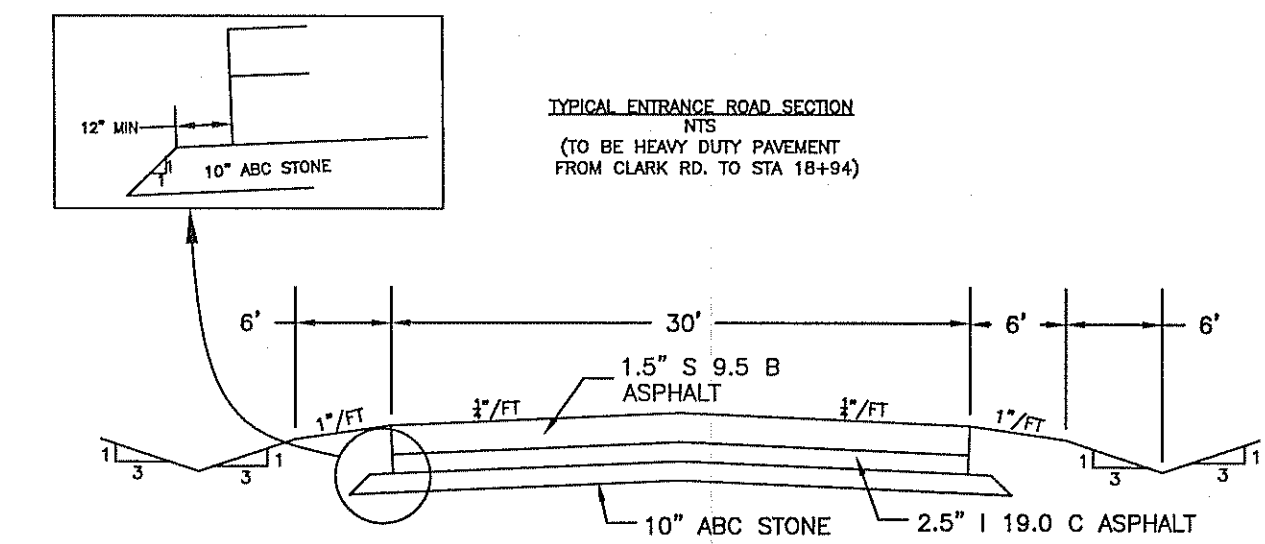
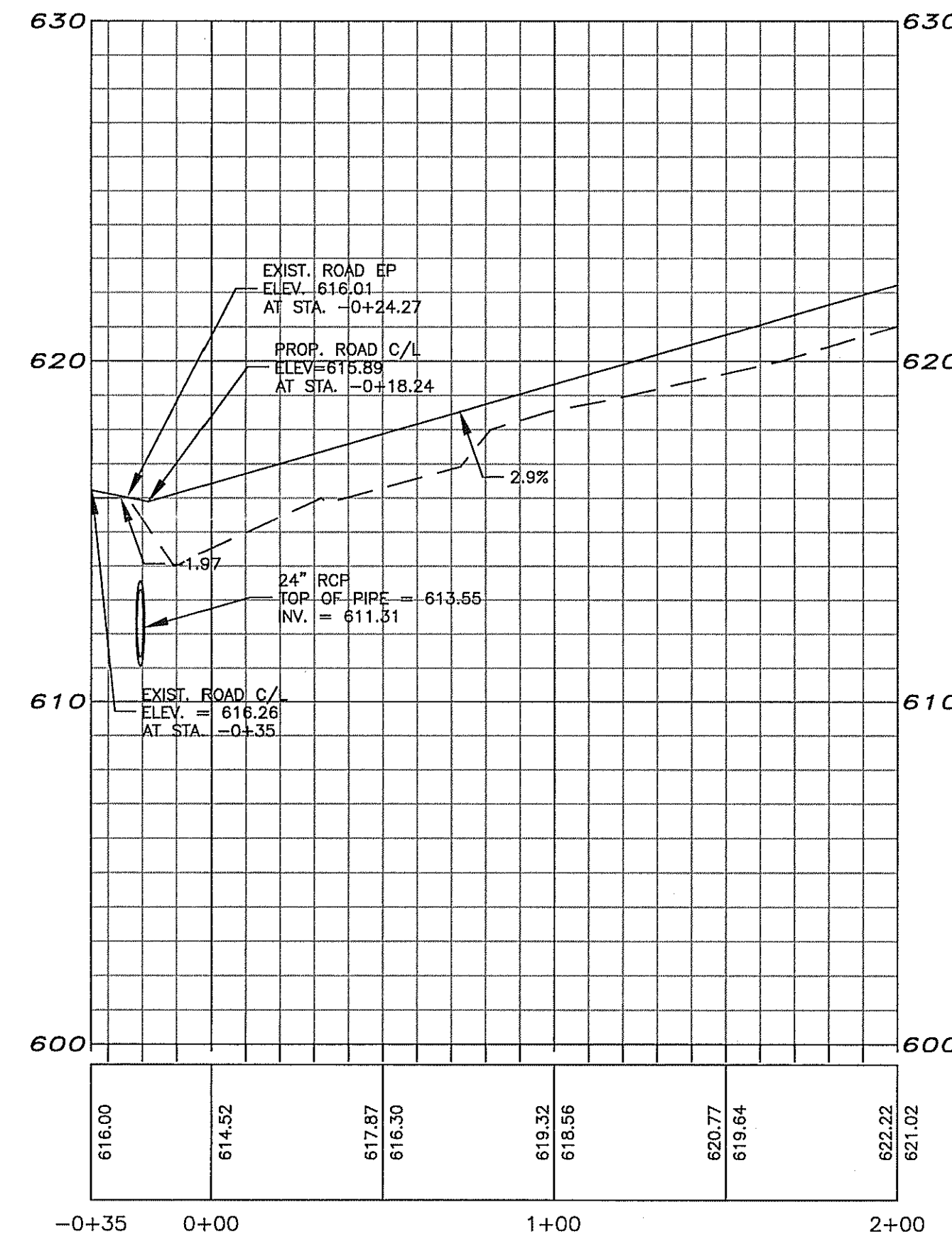
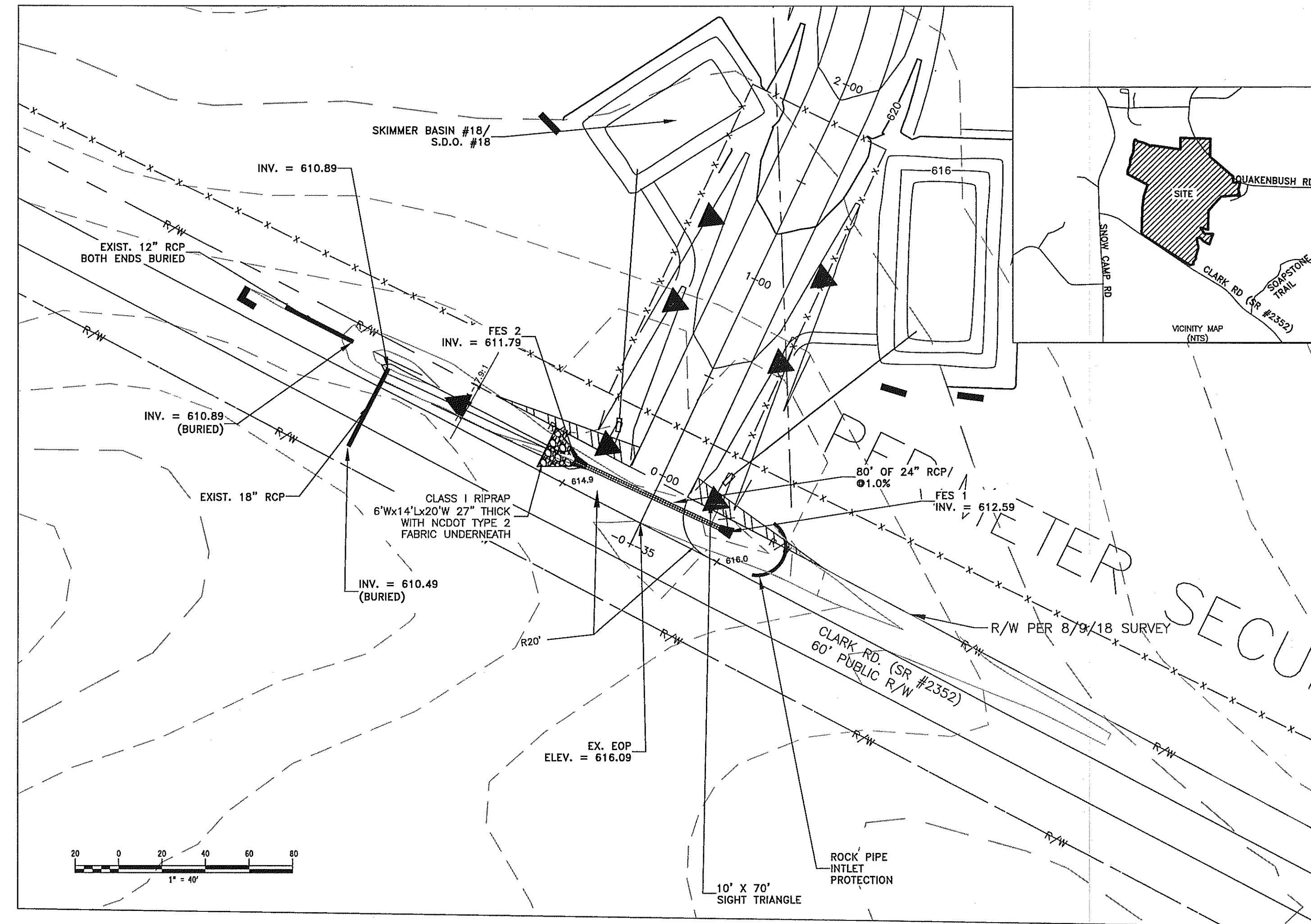
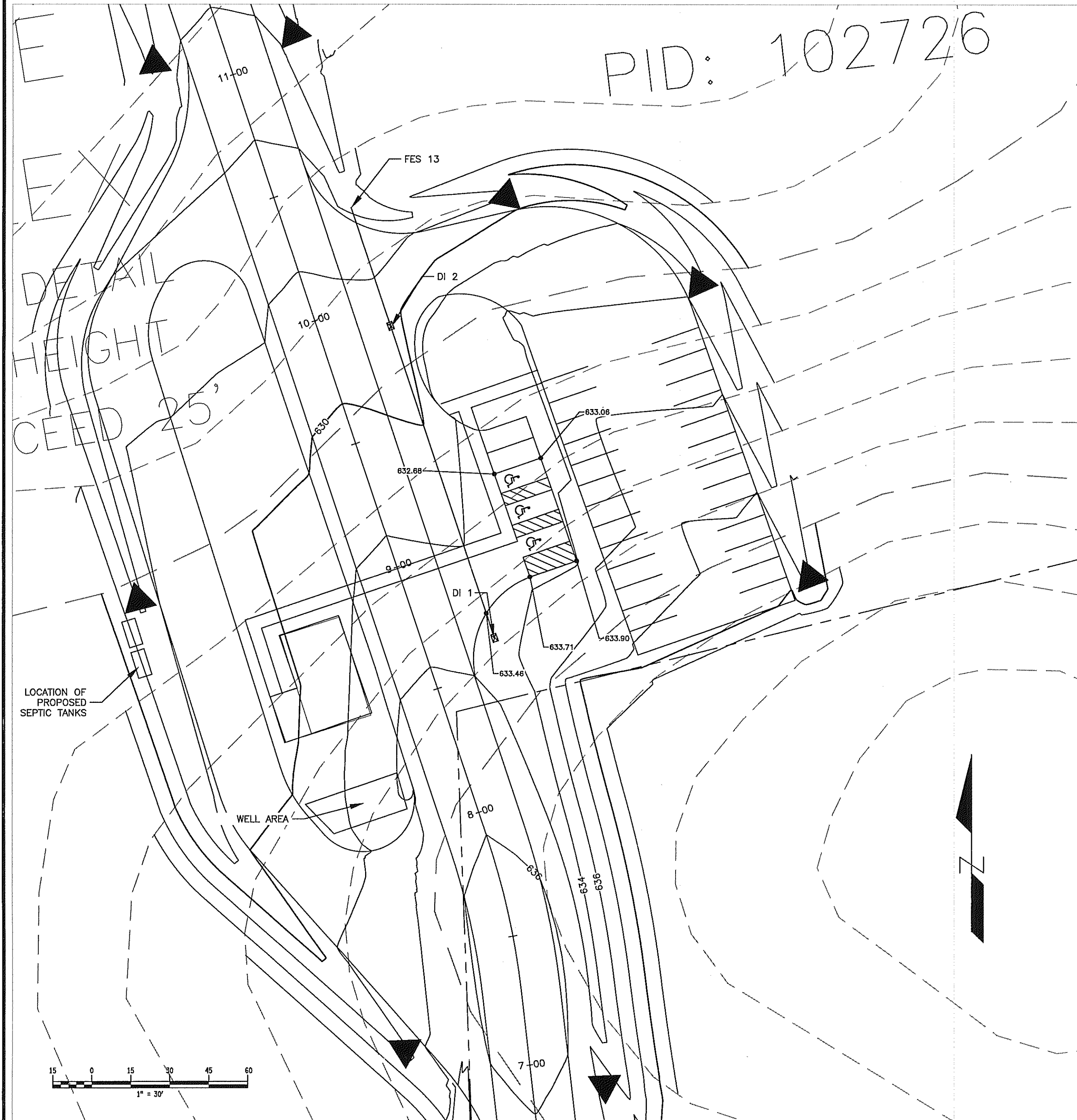
Snow Camp Mine

NO.	DATE	OWNER/NOCD/MLR COMMENTS
1	7/19/19	
REVISIONS		
PROJECT NUMBER:		
2190335		
DRAWN BY:		
KCG/ATC		
REVIEWED BY:		
PAS		
ISSUED FOR:		
CONSTRUCTION		
DATE:		
10/24/18		
DRAWING NAME:		

**PARKING AND ENTRANCE
ROAD DETAILS**

DRAWING NUMBER:

C305



FIELD SURVEY INFORMATION OBTAINED FROM ALAMANCE AGGREGATES ON JAN. 9 2018
EXISTING GROUND PROFILE AT CLARK ROAD AND WETLAND POINTS OBTAINED FROM
ALAMANCE AGGREGATE ON AUGUST 9, 2018
ALL OTHER TOPOGRAPHY OBTAINED FROM GIS

Paul A. Simpson
NORTH CAROLINA
REGISTERED PROFESSIONAL ENGINEER
SINCE 1998
22052
7/23/19

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ALAMANCE
AGGREGATES, LLC
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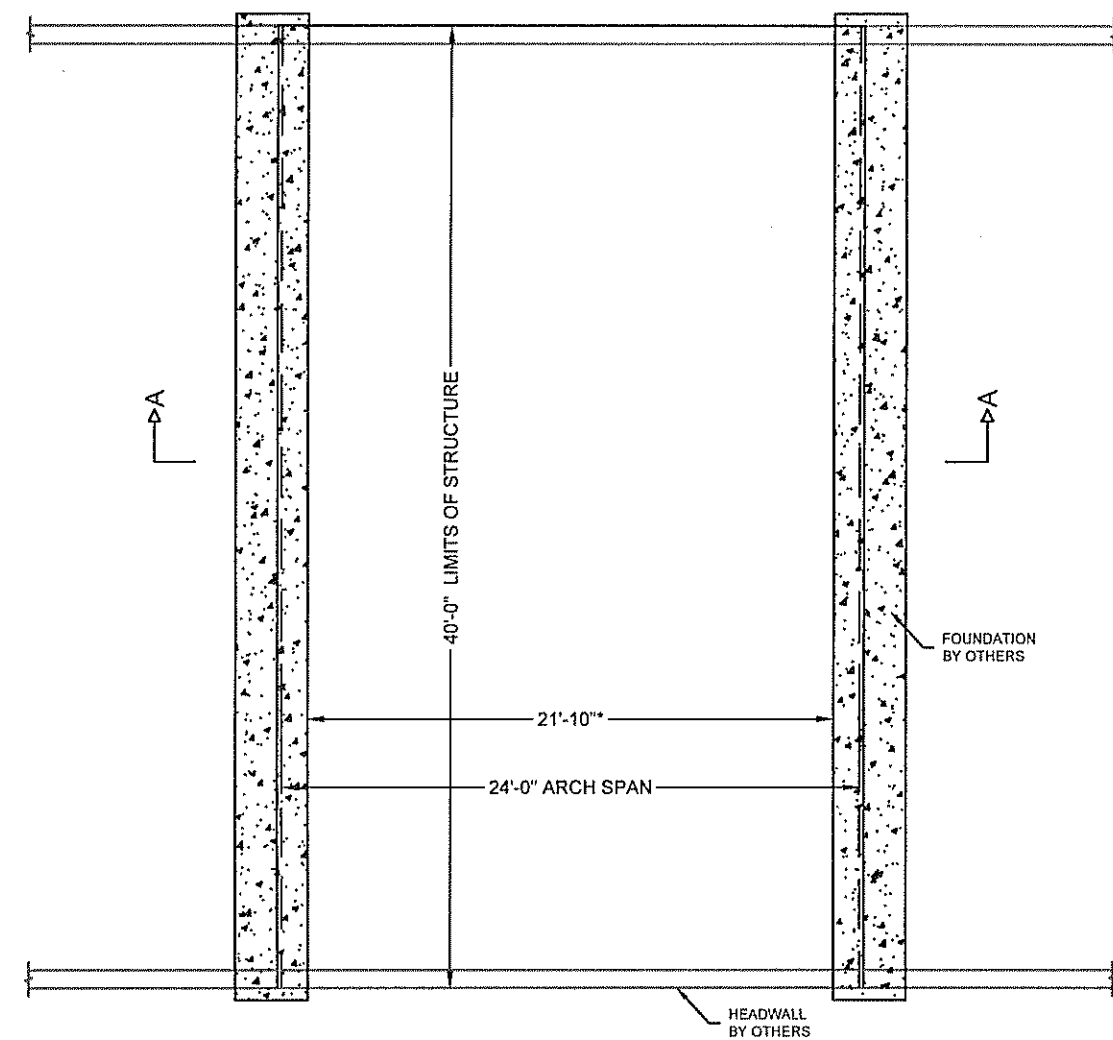
Snow Camp Mine

NO.	DATE	DESCRIPTION
REVISIONS		
PROJECT NUMBER: 2190335		
DRAWN BY: KCG/ATC		
REVIEWED BY: PAS		
ISSUED FOR: CONSTRUCTION		
DATE: 7/18/19		
DRAWING NAME:		

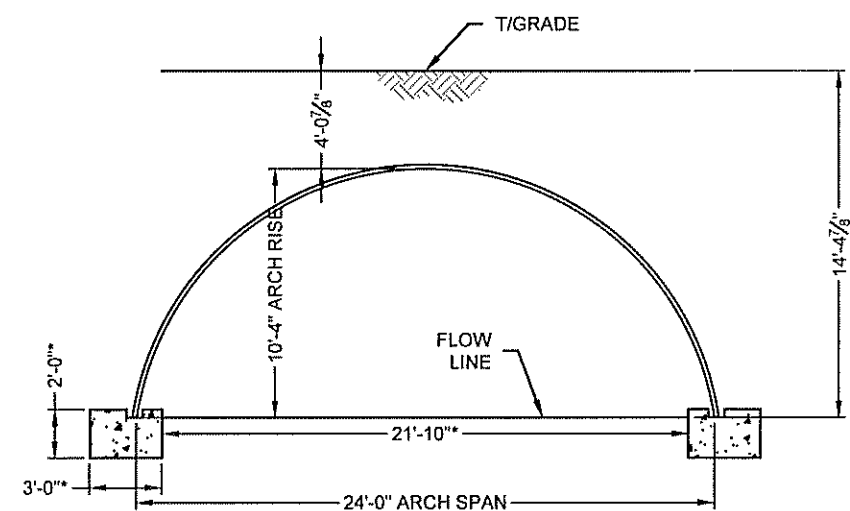
SITE DETAILS

DRAWING NUMBER:

C401



BRIDGE PLAN



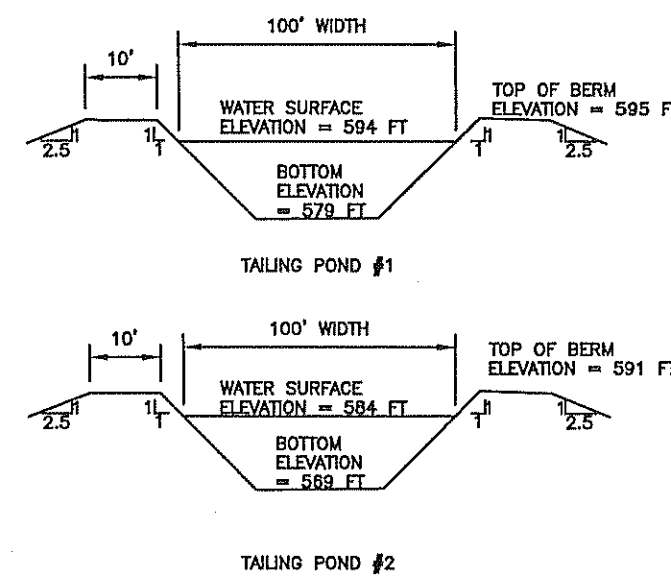
CROSS SECTION A-A

5 CONTECH METAL ARCH BRIDGE CULVERT
C 401 NTS

- NOTES:
- MEASUREMENTS ARE TO THE INSIDE CRESTS OF THE CORRUGATION
 - DIMENSIONS ARE SUBJECT TO MANUFACTURING TOLERANCES

- *PRELIMINARY FOUNDATION DESIGN NOTES:
- PRELIMINARY SIZING BASED ON ASSUMED 8000 PSF BEARING CAPACITY, 4'-1" OF COVER, AND CAT 773 LIVE LOADING
 - SCOUR NOT CONSIDERED IN THIS PRELIMINARY DESIGN
 - FINAL DESIGN MAY VARY

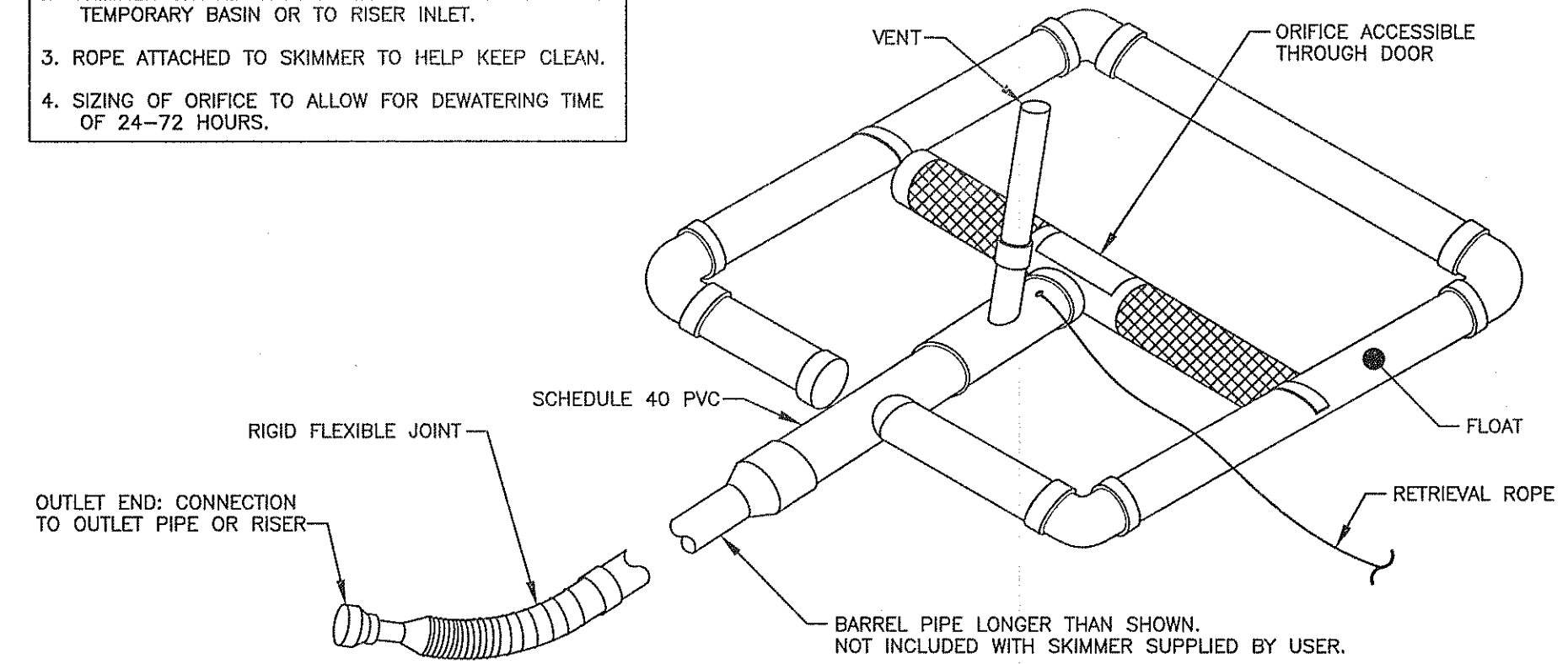
NOTE:
THE SETTLING PONDS WILL BE REMOVED WHEN THE RECLAMATION PLAN IS COMPLETED IN THE FIELD.



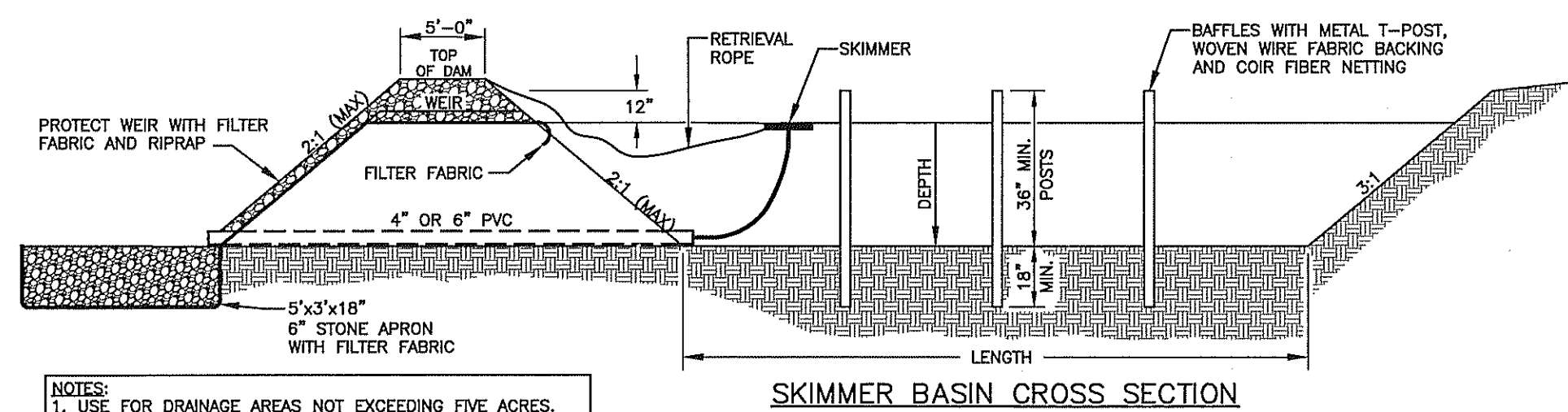
NOTE:
EACH TAILING POND SHALL HAVE A MINIMUM FREEBOARD OF 1.0 FEET AND SHALL HAVE DIMENSIONS AT THE SURFACE OF 500 FEET LONG BY 100 FEET WIDE.
THE SLOPES OF THE OUTER SIDES OF THE TAILING PONDS WILL VARY DEPENDING ON THE SURROUNDING SURFACE.

4 TAILING POND DETAIL
C 401 NTS

- NOTES:
- SKIMMER IS TO BE A SURFACE DEWATERING DEVICE SUCH AS BMP SKIMMER OR APPROVED DEVICE.
 - SKIMMER SHOULD RISE TO LEVEL OF WEIR HEIGHT IN TEMPORARY BASIN OR TO RISER INLET.
 - ROPE ATTACHED TO SKIMMER TO HELP KEEP CLEAN.
 - SIZING OF ORIFICE TO ALLOW FOR DEWATERING TIME OF 24-72 HOURS.



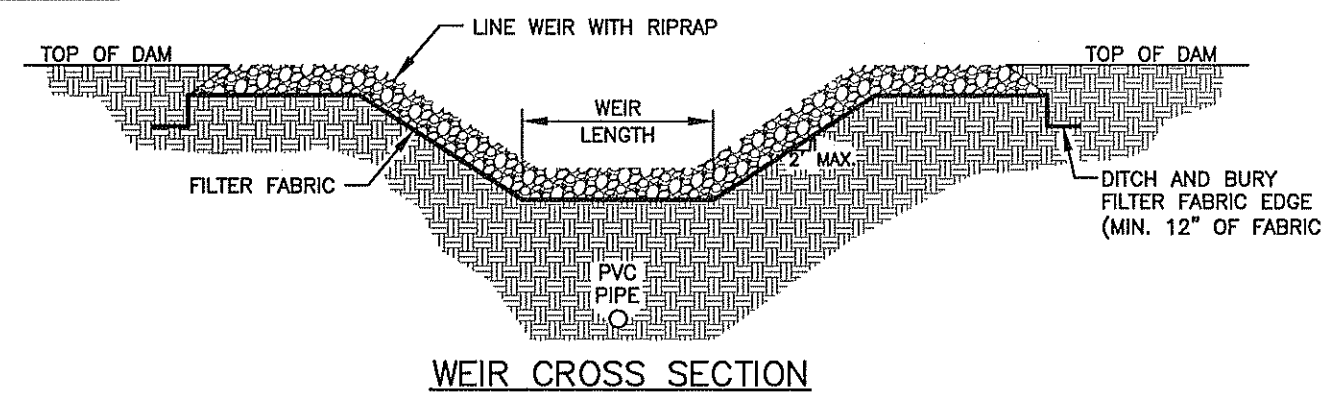
3 SKIMMER DETAIL
C 401 NTS



- NOTES:
- USE FOR DRAINAGE AREAS NOT EXCEEDING FIVE ACRES.
 - EARTH BERM SHALL BE STABILIZED w/SEEDING ACCORDING TO TOWN SPECIFICATIONS.

DESIGN OF SPILLWAYS	WEIR LENGTH ¹ (FT)
DRAINAGE AREA (ACRES)	
1	4.0
2	6.0
3	8.0
4	10.0
5	12.0

¹ DIMENSIONS SHOWN ARE MINIMUM

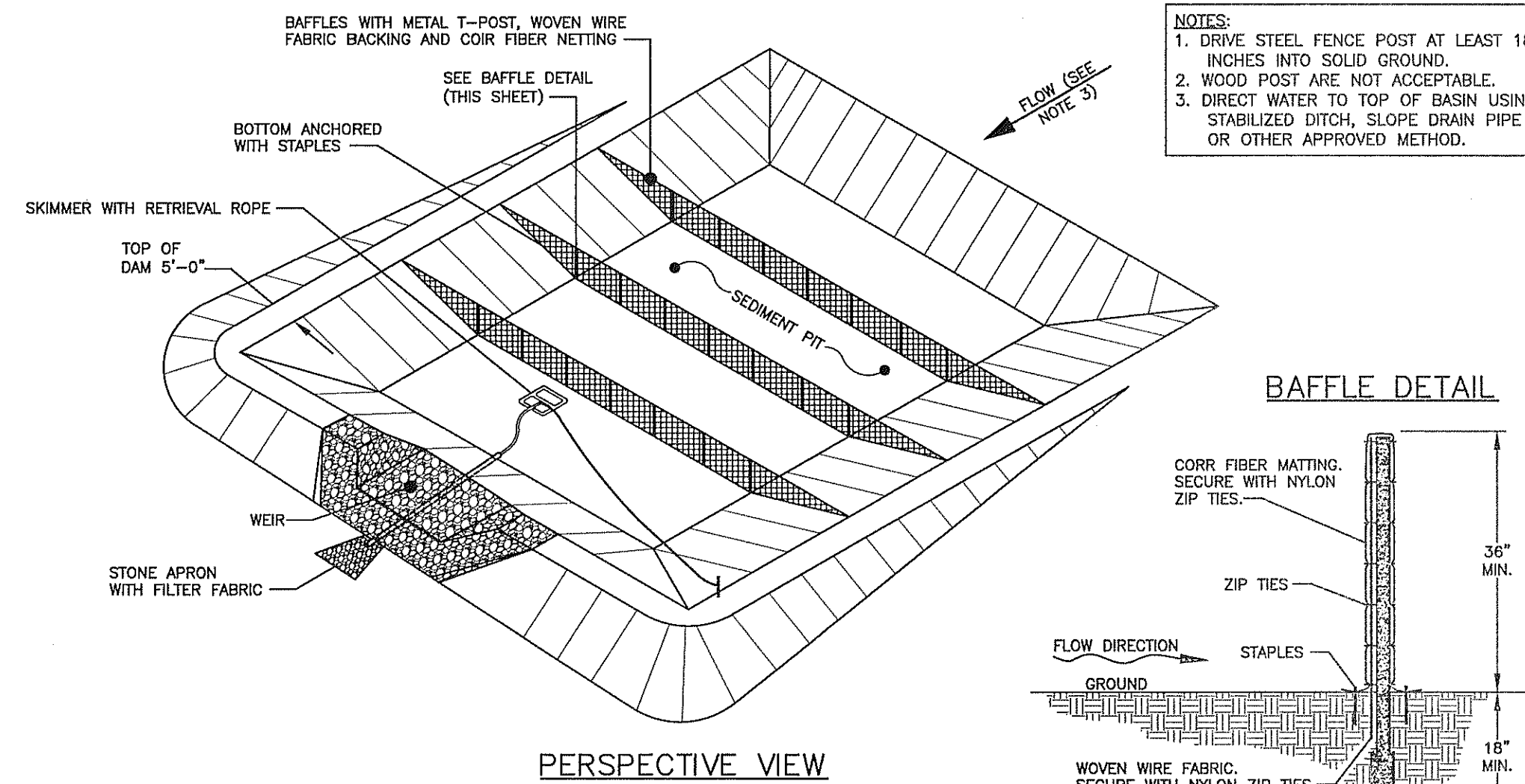


WEIR CROSS SECTION

MAINTENANCE

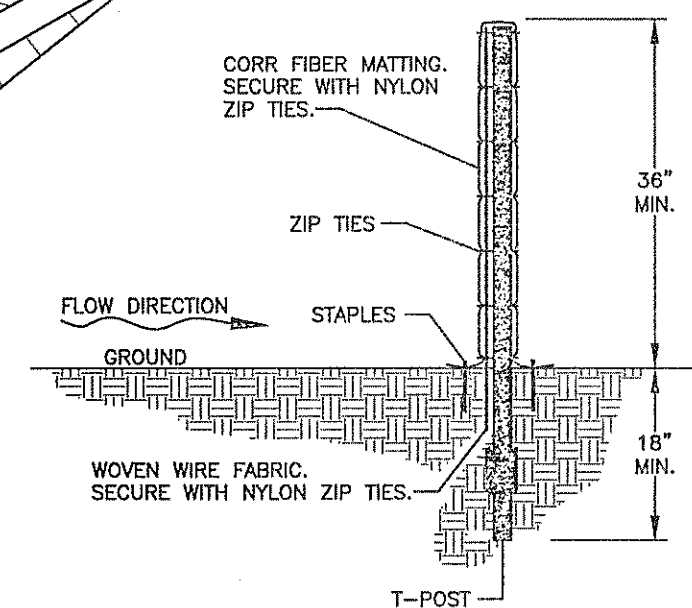
- INSPECT TEMPORARY SKIMMER BASIN AND EMPTY SKIMMER OF ALL DEBRIS AFTER EACH PERIOD OF SIGNIFICANT RAINFALL. REMOVE SEDIMENT AND RESTORE BASIN TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO ONE-HALF THE DESIGN DEPTH OF THE BASIN. PLACE THE SEDIMENT IN A DESIGNATED DISPOSAL AREA. REPAIR BAFFLES.
- CHECK THE STRUCTURE FOR DAMAGE FROM EROSION OR PIPING. PERIODICALLY CHECK THE DEPTH OF THE SPILLWAY TO ENSURE IT IS A MINIMUM OF 1.5 FEET BELOW THE LOW POINT OF THE EMBANKMENT. IMMEDIATELY FILL ANY SETTLEMENT OF THE EMBANKMENT TO SLIGHTLY ABOVE DESIGN GRADE. ANY RIPRAP DISPLACED FROM THE SPILLWAY MUST BE REPLACED IMMEDIATELY.
- STABILIZE THE EMBANKMENT AND ALL DISTURBED AREAS ABOVE THE SEDIMENT POOL AND DOWNSTREAM FROM THE BASIN IMMEDIATELY AFTER CONSTRUCTION WITH SEEDING AND MATTING, AS NEEDED.

2 TEMPORARY SKIMMER BASIN (2 OF 2)
C 401 NTS



- NOTES:
- DRIVE STEEL FENCE POST AT LEAST 18 INCHES INTO SOLID GROUND.
 - WOOD POST ARE NOT ACCEPTABLE.
 - DIRECT WATER TO TOP OF BASIN USING STABILIZED DITCH, SLOPE DRAIN PIPE OR OTHER APPROVED METHOD.

BAFFLE DETAIL



PERSPECTIVE VIEW

1 TEMPORARY SKIMMER BASIN (1 OF 2)
C 401 NTS

7/23/19

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Mr. Chad Threatt, VP

Snow Camp Mine

NO.	DATE	DESCRIPTION
REVISIONS		
PROJECT NUMBER: 2190335		
DRAWN BY: KCG/ATC		
REVIEWED BY: PAS		
ISSUED FOR: CONSTRUCTION		
DATE: 7/18/19		
DRAWING NAME:		

SITE DETAILS

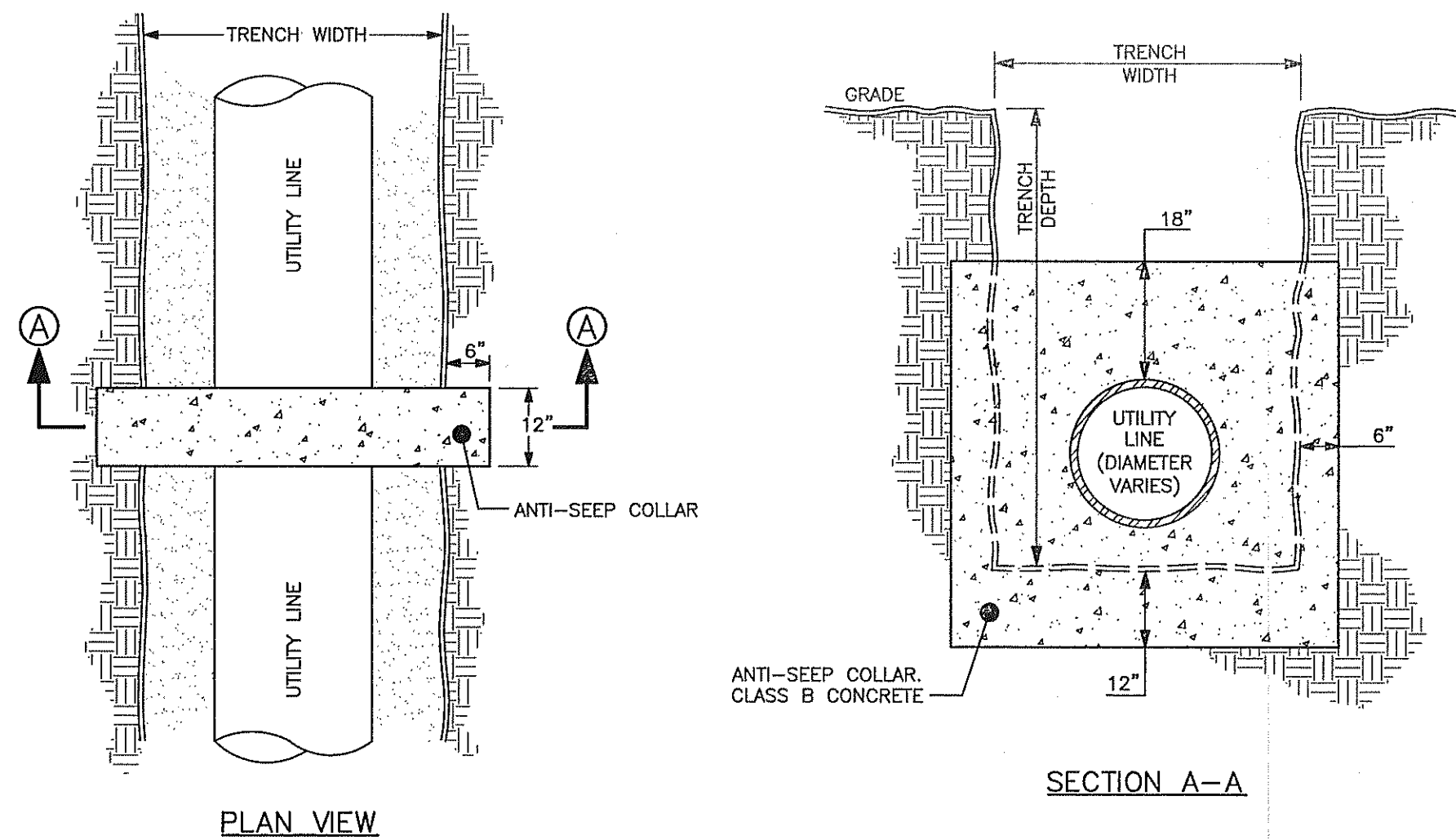
DRAWING NUMBER:

C402

Channel Number	Description	Max. Bed Slope	Side Slope (H:V)	Bottom Width (ft)	Discharge (cfs)	Bottom Stabilization Method	Side Stabilization Method
1	FES 2 to STA. 6+50	2.90%	3:1	2	7.05	Curlex I	Curlex I
2	FES 1 to Sta. 6+50	2.96%	3:1	2	12.66	Curlex I	Curlex I
3	West Side Access Road Sta. 7+00 to 14+00	4.10%	3:1	2	3.5	Curlex I	Curlex I
4	East Side Access Road Sta. 8+50 to 14+00	3.63%	3:1	2	5.12	Curlex I	Curlex I
5	Access Road (West Side) Sta. 18+50 to SK 6	11.25%	3:1	2	4.55	Curlex III	Curlex III
6	SK 8 to Stream Buffer	6.93%	2:1	3	13.64	Curlex III	Curlex III
7	Exist. 18" RCP to FES 2	1.00%	2:1	1	20.59	Curlex I	Curlex I
8	SK 6 to Sta. 20+00	3.25%	2:1	2	4.55	Curlex I	Curlex I
9	SK 7 to Sta. 20+00	3.50%	2:1	2	5.81	Curlex I	Curlex I

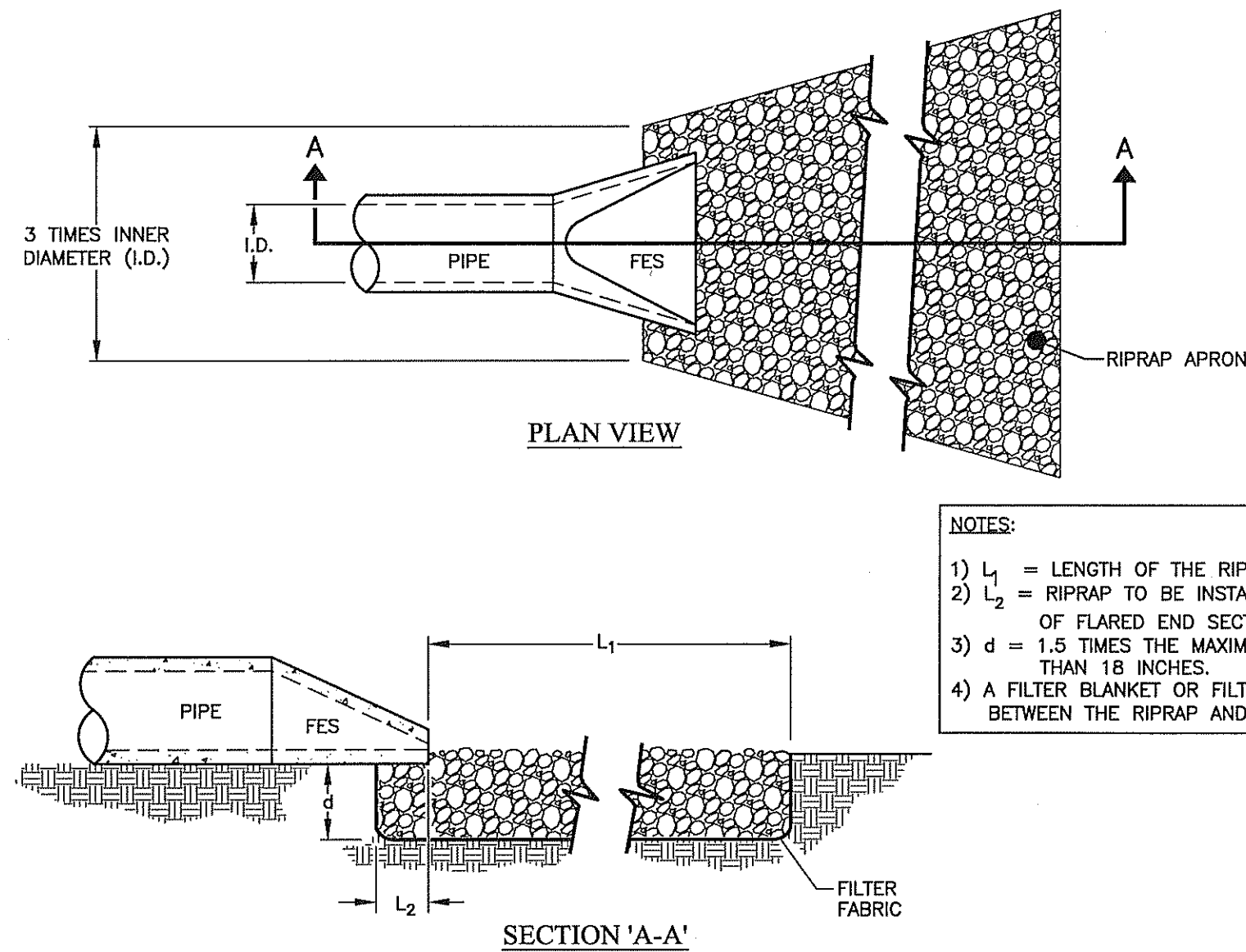
4 CHANNEL STABILIZATION SCHEDULE

C 402 NTS



3 ANTI-SEEP COLLAR

C 402 NTS

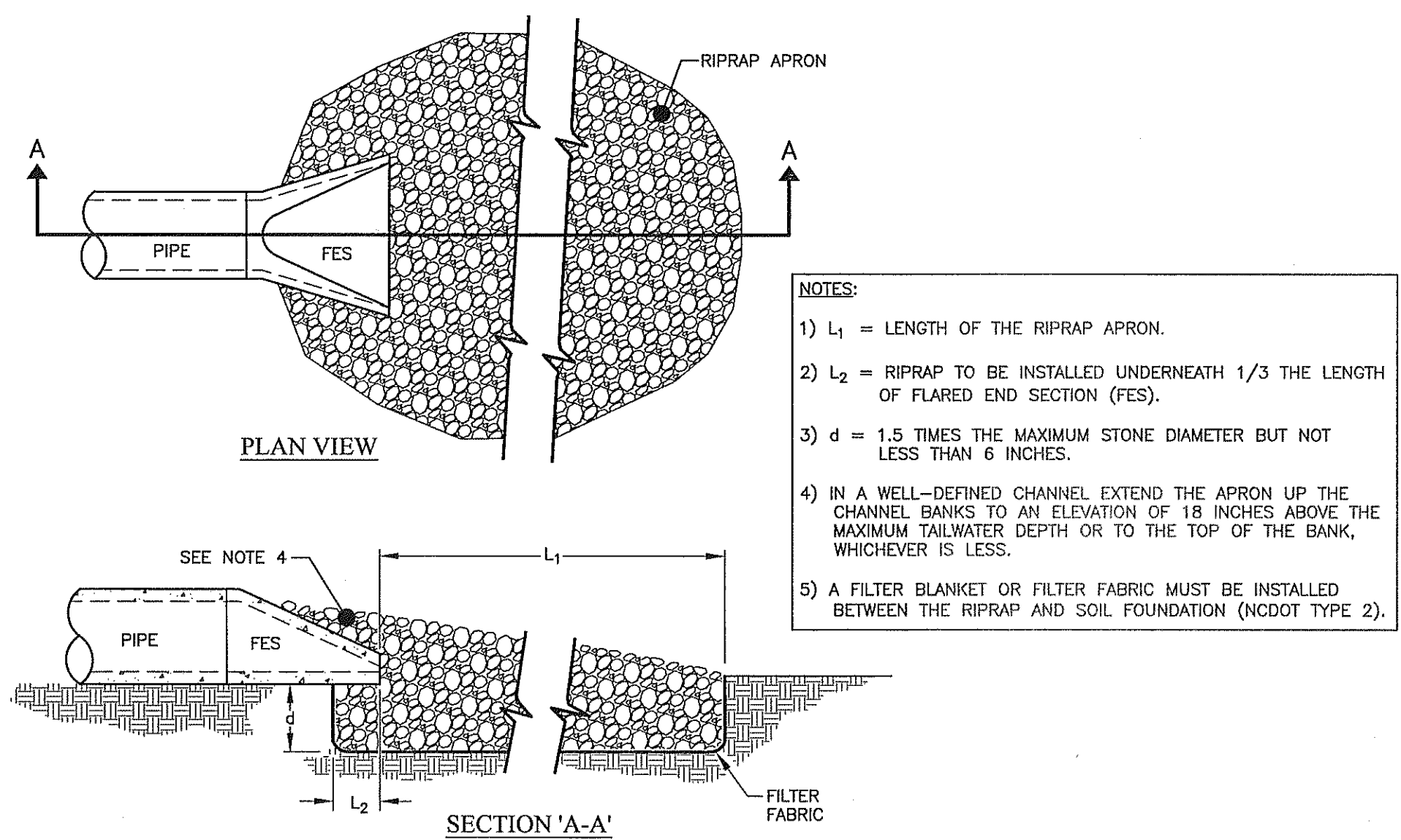


NOTES:

- 1) L_1 = LENGTH OF THE RIPRAP APRON.
- 2) L_2 = RIPRAP TO BE INSTALLED UNDERNEATH 1/3 THE LENGTH OF FLARED END SECTION (FES).
- 3) d = 1.5 TIMES THE MAXIMUM STONE DIAMETER BUT NOT LESS THAN 18 INCHES.
- 4) A FILTER BLANKET OR FILTER FABRIC MUST BE INSTALLED BETWEEN THE RIPRAP AND SOIL FOUNDATION (NC DOT TYPE 2).

2 PIPE OUTLET TO FLAT AREA NO WELL-DEFINED CHANNEL

C 402 NTS



NOTES:

- 1) L_1 = LENGTH OF THE RIPRAP APRON.
- 2) L_2 = RIPRAP TO BE INSTALLED UNDERNEATH 1/3 THE LENGTH OF FLARED END SECTION (FES).
- 3) d = 1.5 TIMES THE MAXIMUM STONE DIAMETER BUT NOT LESS THAN 6 INCHES.
- 4) IN A WELL-DEFINED CHANNEL, EXTEND THE APRON UP THE CHANNEL BANKS TO AN ELEVATION OF 18 INCHES ABOVE THE MAXIMUM TAILWATER DEPTH OR TO THE TOP OF THE BANK, WHICHEVER IS LESS.
- 5) A FILTER BLANKET OR FILTER FABRIC MUST BE INSTALLED BETWEEN THE RIPRAP AND SOIL FOUNDATION (NC DOT TYPE 2).

1 PIPE OUTLET TO WELL-DEFINED CHANNEL

C 402 NTS

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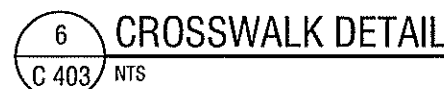
Snow Camp Mine

NO.	DATE:	DESCRIPTION:
REVISIONS		
PROJECT NUMBER:		
2190335		
DRAWN BY:		
KCG/ATC		
REVIEWED BY:		
PAS		
ISSUED FOR:		
CONSTRUCTION		
DATE:		
7/18/19		
DRAWING NAME:		

SITE DETAILS

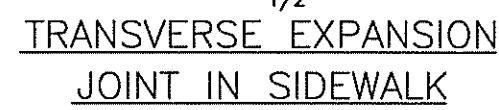
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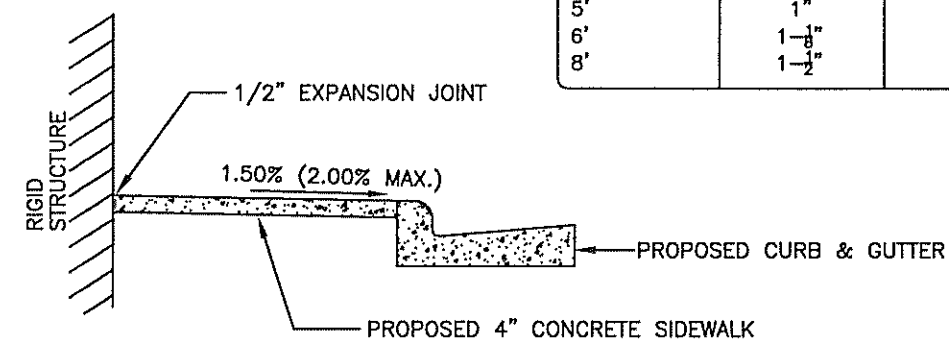
GENERAL NOTES:

1. A GROOVE JOINT 1" DEEP WITH 1/8" RADII SHALL BE REQUIRED IN THE CONCRETE SIDEWALK AT 5' INTERVALS. ONE 1/2" EXPANSION JOINT WILL BE REQUIRED AT INTERVALS OF NOT MORE THAN 45' AND MATCHING EXPANSION/CONSTRUCTION JOINT IN ADJACENT CURB. A SEAMED 1/2" EXPANSION JOINT WILL BE REQUIRED WHERE THE SIDEWALK JOINS ANY RIGID STRUCTURE.
2. SIDEWALK AT DRIVEWAY ENTRANCES TO BE 6" THICK.
3. WIDTH OF SIDEWALK ON THOROUGHFARE STREETS SHALL BE A MINIMUM OF 6'. WIDTH OF SIDEWALKS IN THE CENTRAL BUSINESS DISTRICT WILL BE DETERMINED BY THE CODD.
4. SIDEWALK SIDEWALKS ON THROUGHFARE STREETS SHALL BE BASED ON TYPICAL STREET SECTION, A MINIMUM OF 5'. SIDEWALK TO BE POURED TO END OF RADIUS AT INTERSECTING STREETS.
5. CONCRETE COMPRESSIVE STRENGTH SHALL BE 3600 PSI. IN 28 DAYS.
6. ZONING CONDITIONS MAY REQUIRE ADDITIONAL WIDTH SIDEWALKS WHICH SHALL SUPERSEDE THESE STANDARD DIMENSIONS SHOWN.
7. LIDS FOR JUNCTION BOXES AND UTILITY VAULTS SHALL BE NON-SKID AS SPECIFIED BY ENGINEER.
8. JOINT MATERIALS SHALL LIMIT SHRINK/SWELL SO POST CONSTRUCTION INSTALLATION RESULTS IN A MAXIMUM OF 1/4" FROM FLUSH.



DETAILS SHOWING EXPANSION JOINTS
IN CONCRETE SIDEWALK

EXAMPLE SIDEWALK CONSTRUCTION DIMENSIONS:		
WIDTH	RISE	CROSS-SLOPE
4'	$\frac{3}{4}$ "	1.56%
5'	1"	1.67%
6'	$1\frac{1}{8}$ "	1.56%
8'	$1\frac{1}{2}$ "	1.56%



PARKING SPACE PAVEMENT MARKINGS

SIGNAGE (MUST NOT OBLITUSK ACCESSIBLE ROUTE) → (A) (B) (A) (B) (C) (C) (C)

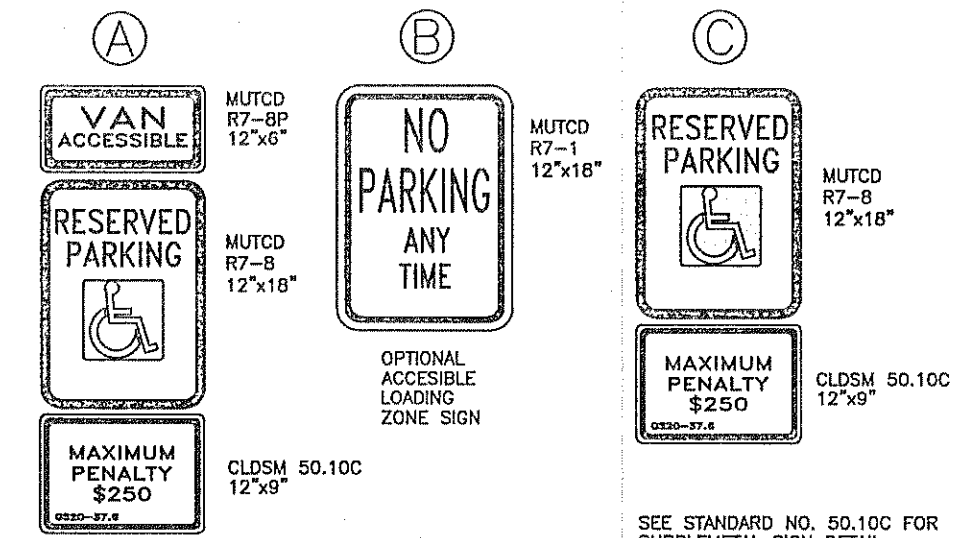
ACCESSIBLE ROUTE (SEE NOTE 2) →

AS SHOWN ON PLANS →

NOTE:
ONE OUT OF EVERY SIX (6) ACCESSIBLE SPACES, BUT NOT LESS THAN ONE, IS REQUIRED TO BE VAN ACCESSIBLE, PER SECTION 1106.0 OF NO STATE BUILDING CODE

11' 5' 6' 6' 6' 5' 6'

VAN ACCESSIBLE SPACE (OPTION 1) **VAN ACCESSIBLE SPACE (OPTION 2)**

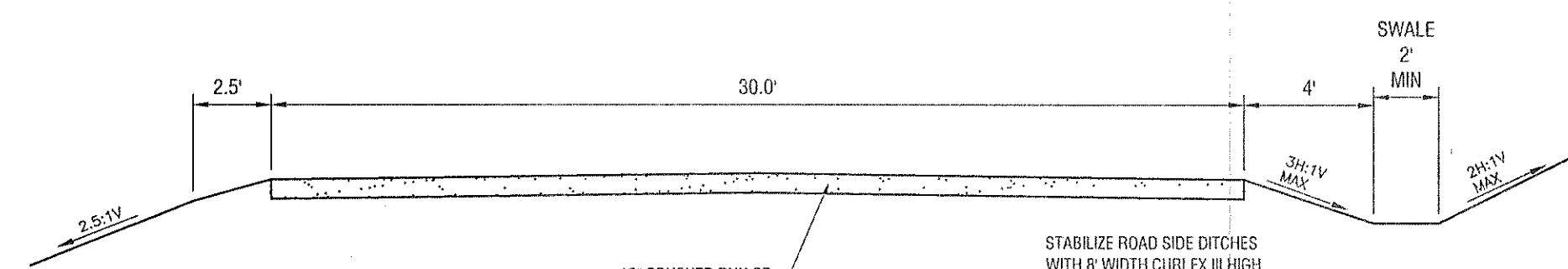


NOTES:

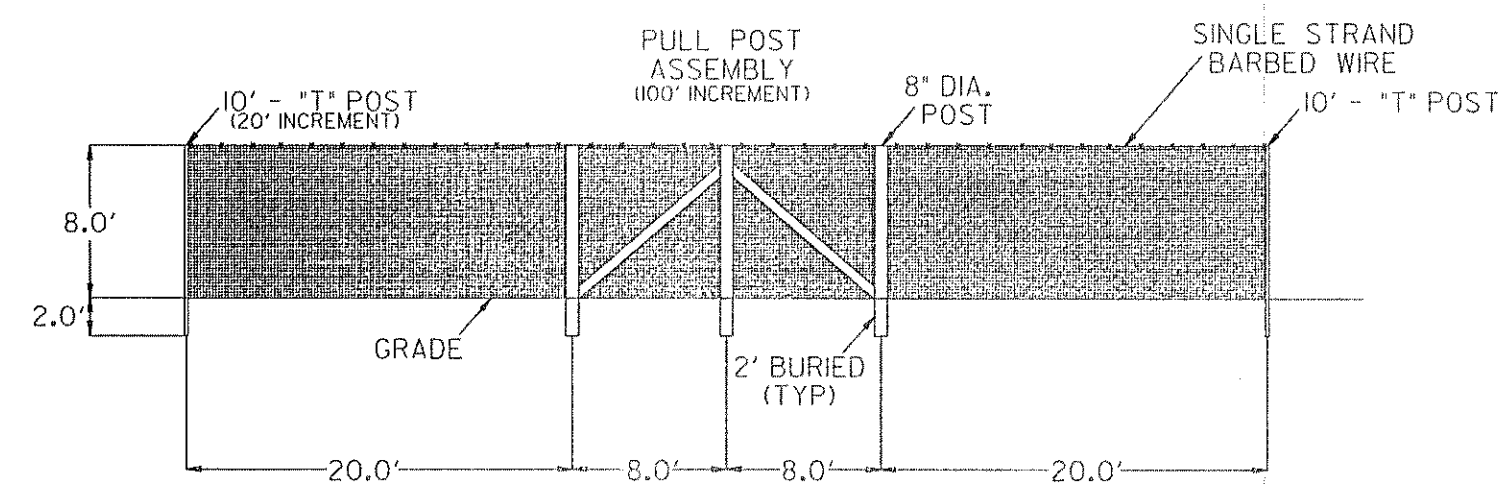
1. ALL 12"x18" ACCESSIBLE SIGNS SHALL BE MOUNTED AT 7 FEET FROM GRADE. BOTTOM EDGE OF SIGN FACE (MOUNT), MOUNTING HEIGHT CAN BE REDUCED TO 5 FEET IF PLACED IN AN AREA BETWEEN SIDEWALK AND BUILDING FACE IF OTHER PEDESTRIANS ARE NOT EXPECTED TO USE.
2. IF ACCESSIBLE ROUTE IS A RAMPED SIDEWALK AREA, THEN RAMPS ARE REQUIRED AT LOADING ZONE AREA. MAINTAIN MIN. 4' WIDE CONTINUOUS PASSAGE.
3. VERTICAL CLEARANCE FOR VANS MUST BE GREATER THAN 96-INCHES.

THIS DETAIL IS TO PROVIDE GENERAL GUIDANCE FOR PARKING LAYOUT AND TO BE USED IN CONJUNCTION WITH THE DETAIL FOR ACCESSIBLE ROUTE (MOUNTED) U.S. DEPARTMENT OF TRANSPORTATION AND NORTH CAROLINA DEPARTMENT OF TRANSPORTATION SUPPLEMENT AND INC BUILDING CODE FOR ADDITIONAL INFORMATION.

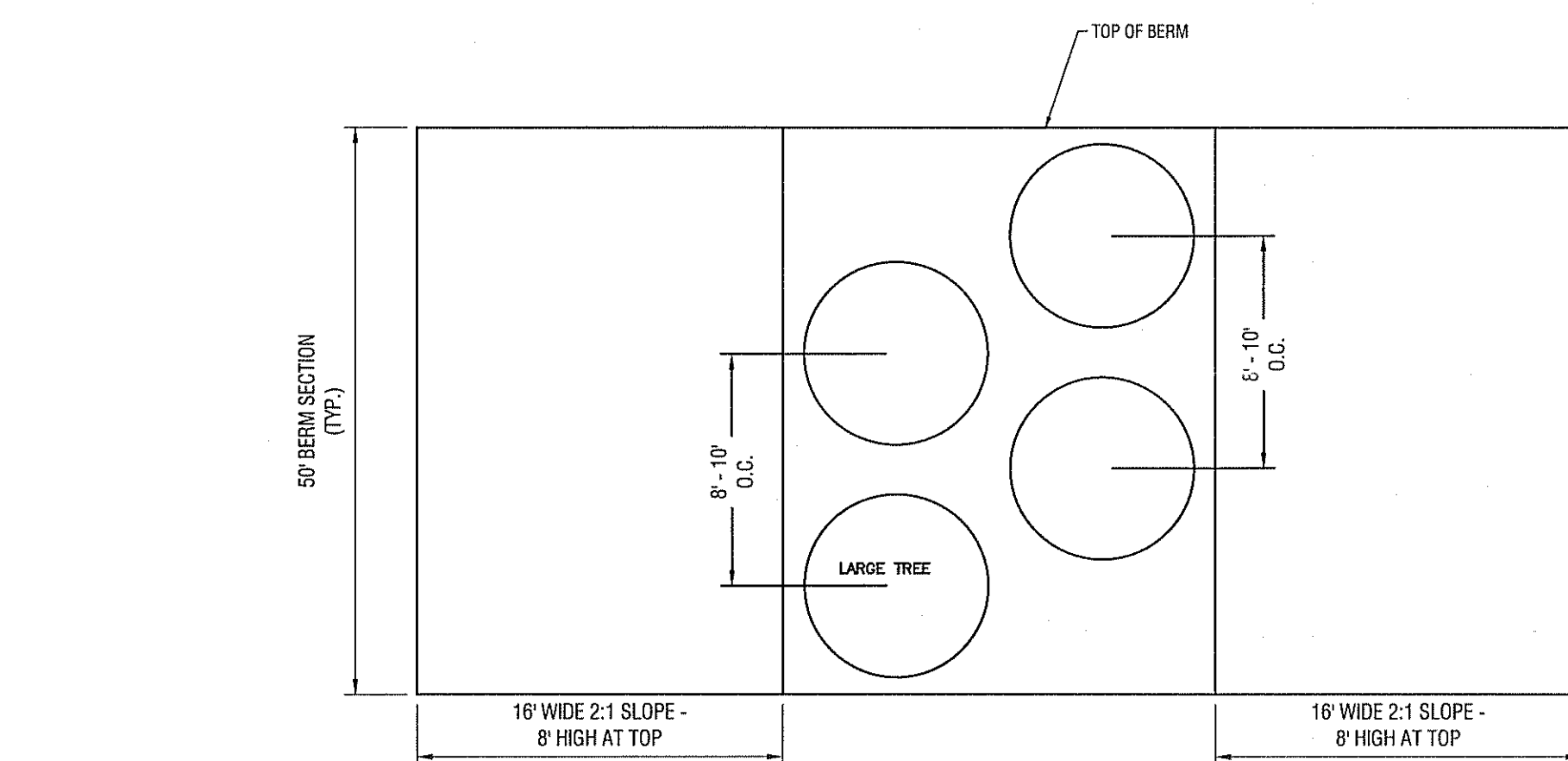
4 ACCESSIBLE PARKING AND SIGNAGE DETAILS
C 403 NTS



3 HAUL ROAD TYP. SECTION
C 403 NTS



1 FIXED KNOTTED WIRE FENCING PERIMETER FENCE DETAIL



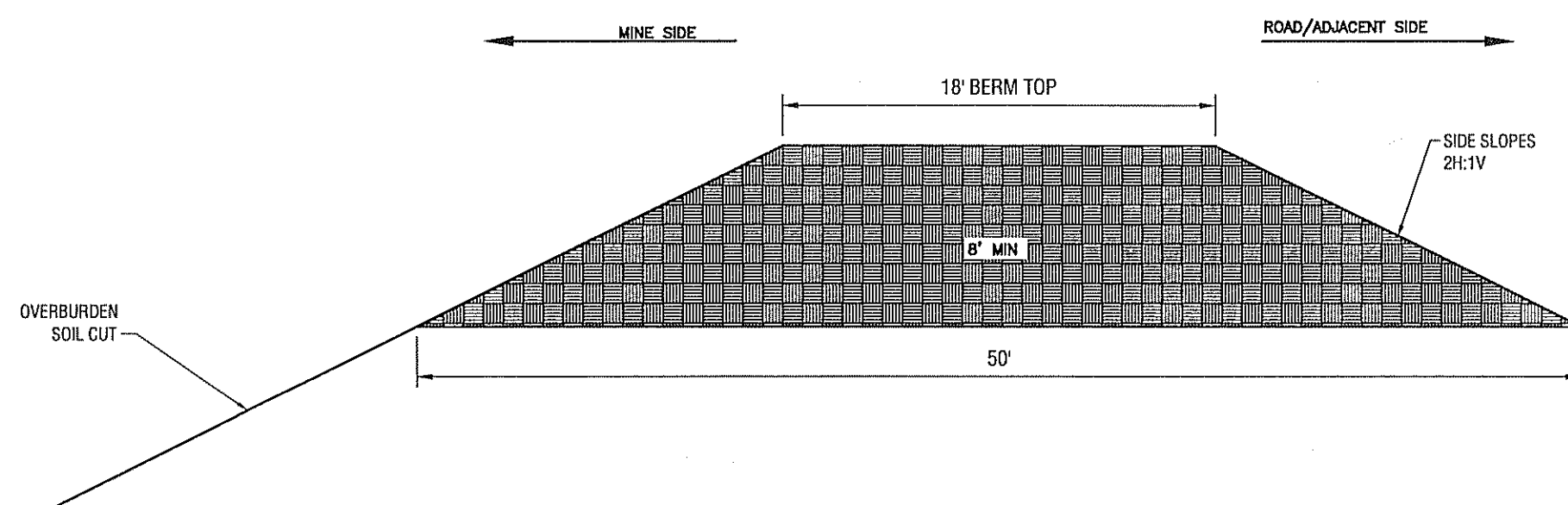
NOTES:

LARGE TREES SHALL BE 2" CALIPER AND 12' HEIGHT H
AT PLANTING, BALLED AND BURLAP. TREES SHALL BE DOUBLE-STAGGERED WITH 8-10' CENTERS

SEED THE ENTIRE BERM AFTER TREE AND SHRUB PLANTING WITH PANICUM VIRGATUM, SWITCH
GRASS, AT A RATE OF 8 LBS/ACRE. DO NOT MOW.

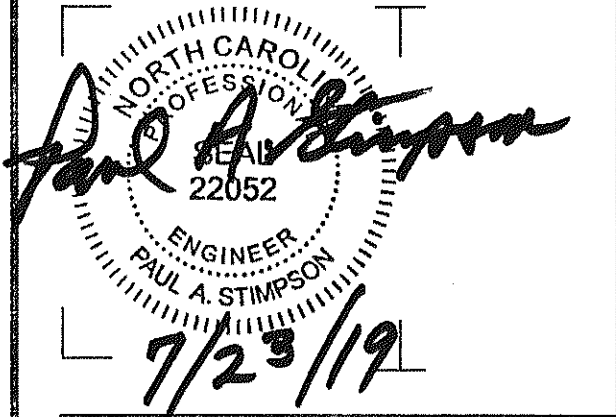
SEE TABLE BELOW FOR ALLOWABLE TREES AND SHRUBS.

LARGE TREE	
Scientific Name	Common Name
Pinus Tanda	Loblolly Pine



2 BARRIER BERM
C 403 NTS

Date & Time: 7/18/2019 2:44 PM By: Garton, Kevin
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**ALAMANCE
AGGREGATES, LLC**
Mr. Chad Threatt, VP

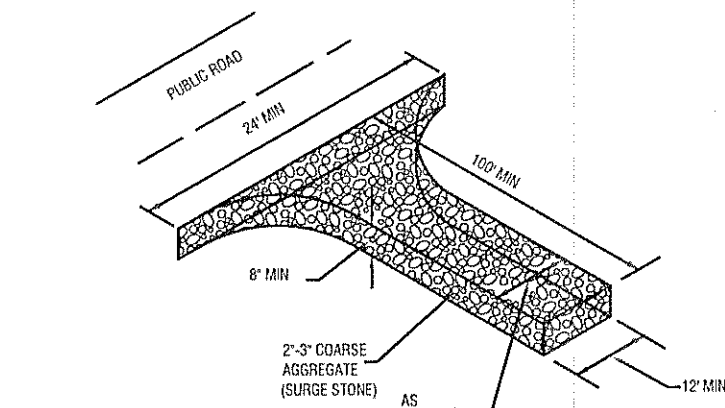
Snow Camp Mine

NO.	DATE:	DESCRIPTION:
REVISIONS		
PROJECT NUMBER: 2190335		
DRAWN BY: KCG/ATC		
REVIEWED BY: PAS		
ISSUED FOR: CONSTRUCTION		
DATE: 7/18/19		
DRAWING NAME:		

**EROSION AND
SEDIMENT CONTROL
DETAILS**

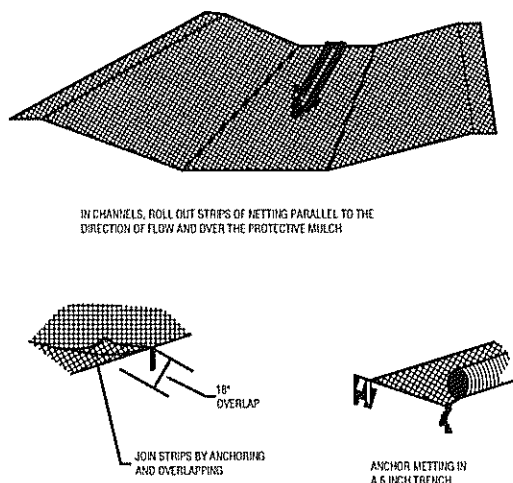
DRAWING NUMBER:

C501



- CONSTRUCTION SPECIFICATIONS:**
- CLEAR THE ENTRANCE AND DOT AREA OF ALL VEGETATION, ROOTS, AND OTHER OBSTRUCTABLE MATERIAL, AND PROPERLY YARDING IT.
 - PLACE THE GRAVEL TO THE SPECIFIC GRADE AND DIMENSIONS SHOWN ON THE PLANS AND SUBMITTAL.
 - PROVIDE DRAINAGE TO CARRY WATER TO A SEDIMENT TRAP OR OTHER SUITABLE OUTLET.
 - USE UNKNOWN SEDIMENTABLE MATERIALS BECAUSE THEY IMPROVE STABILITY OF THE FOUNDATION IN LOCATIONS SUBJECT TO SEEPAGE OR HIGH WATER TABLE.
- MAINTENANCE:**
- MAINTAIN THE GRAVEL PAD IN A CONDITION TO PREVENT MUD OR SEDIMENT FROM LEAVING THE CONSTRUCTION SITE. THIS MAY REQUIRE PERIODIC TOP DRESSINGS WITH A HIGH STONE. AFTER EACH RAINFALL, INSPECT THE ENTRANCE USED TO TRAP SEDIMENT AND CLEAN OUT AS NECESSARY. IMMEDIATELY REMOVE ALL OBSTRUCTABLE MATERIAL, SPILLED, WASHED OR TRACKED INTO PUBLIC HIGHWAYS.

10 TEMPORARY CONSTRUCTION ENTRANCE
C501



INSTALLATION OF NETTING AND MATTING:

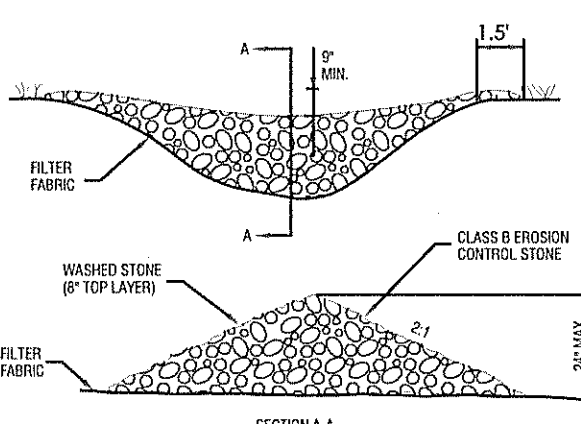
PRODUCTS DESIGNED TO CONTROL EROSION SHOULD BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. ANY MAT OF BLANKET-TYPE PRODUCT USED AS A PROTECTIVE MULCH SHOULD PROVIDE COVER OF AT LEAST 30% OF THE SURFACE WHERE IT IS APPLIED.

- APPLY LIME, FERTILIZER AND SEED BEFORE LAYING THE NET OR MAT. IF OPEN WEAVE NETTING IS USED, LIME MAY BE INCORPORATED BEFORE INSTALLING THE NET AND FERTILIZER AND SEED APPLIED TO AFTERWARDS.
- START LAYING THE NET FROM THE TOP OF THE CHANNEL OR SLOPE AND UNROLL IT DOWN THE SLOPE. ALLOW NETTING TO LAY LOOSELY ON THE SOIL, BUT WITHOUT WRINKLES OR AIR ENTRAPMENT.
- TO SECURE THE NET, BURY THE UPLOUSE END IN A SLOT OR TRENCH NO LESS THAN 6 INCHES DEEP. COVER WITH SOIL, AND TAMP FIRMLY AS SHOWN IN THIS DETAIL. STAPLE THE NET EVERY 12 INCHES ACROSS THE TOP AND AND AND EVERY 4 FEET ALONG THE SIDES AND BOTTOM. WHERE 2 STRIPS OF NET ARE LAYED SIDE BY SIDE, THE ADJACENT EDGES SHOULD BE OVERLAPPED 3 INCHES (SHOWN TOGETHER). EACH STRIP OF NETTING SHOULD ALSO BE STAPLED DOWN THE CENTER, EVERY 3 FT. DO NOT STRETCH THE NET WHEN APPLYING STAPLES.

MAINTENANCE:

INSPECT ALL MULCHES PERIODICALLY, AND AFTER RAINSTORMS TO CHECK FOR HILL EROSION, DISLOCATION, OR FILL LINE. WHERE EROSION IS OBSERVED, APPLY ADDITIONAL MULCH. IF WASHOUT OCCURS, REPAIR THE SLOPE GRASS, RESEED, AND REINSTALL MULCH. CONTINUE INSPECTIONS UNTIL VEGETATION IS FULLY ESTABLISHED.

8 CHANNEL PROTECTION
C501



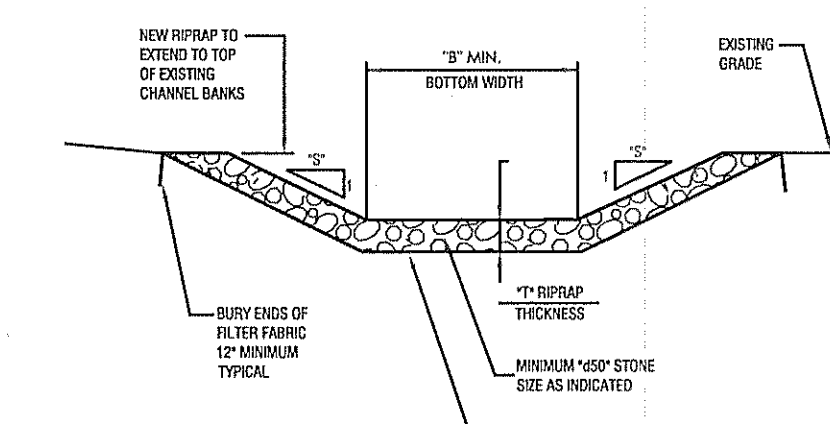
- CONSTRUCTION SPECIFICATIONS:**
- PLACE STONE TO THE LINES AND DIMENSIONS SHOWN IN THE PLAN OR A FILTER FABRIC FOUNDATION.
 - KEEP THE GREENER STONE SECTION AT LEAST 6 INCHES BELOW NATURAL GROUND LEVEL WHERE THE DAM ADJUTS THE CHANNEL BANKS.
 - EXTEND STONE AT LEAST 1.5 FT BEYOND THE DETON BANKS TO KEEP OVERFLOW WATER FROM UNDERCUTTING THE DAM AS IT ENTERS THE CHANNEL.
 - SET SPACING BETWEEN DAMS TO ASSURE THAT THE ELEVATION AT THE TOP OF THE LOWER DAM IS THE SAME AS THE TOP ELEVATION OF THE UPPER DAM.
 - PROTECT THE CHANNEL DOWNSTREAM FROM THE LOWEST CHECK DAM, CONSIDERING THAT WATER WILL FLOW OVER AND AROUND THE DAM.
 - MAKE SURE THAT THE CHANNEL, READY ABOVE THE MOST UPSTREAM DAM, IS STABLE.
 - ENSURE THAT CHANNEL APPURTENANCES, SUCH AS CULVERT ENTRIES BELOW CHECK DAMS, ARE NOT SUBJECT TO DAMAGE OR BLOCKAGE FROM DISPLACED STONES.

MAINTENANCE:

- INSPECT CHECK DAMS AND CHANNELS FOR DAMAGE AFTER EACH RUNOFF EVENT.
- ANCHOR THE SUBGRADE AND DEPOSIT OVER THE CHECK DAM AND PROTECT FROM FLOODS AROUND THE EDGES OF THE DAM. CORRECT ALL DAMAGE IMMEDIATELY. IF SHOROTERM EROSION OCCURS BETWEEN DAMS, REPAIR A PROTECTIVE RIPRAP LAYER IN THAT PORTION OF THE CHANNEL.
- REMOVE SEDIMENT ACCUMULATED BEHIND THE DAMS AS NEEDED TO PREVENT DAMAGE TO CHANNEL. VEGETATION ALONG THE CHANNEL, TO GROW THROUGH THE STONE CHECK DAM AND PREVENT LARGE FLOWS FROM CARRYING SEDIMENT OVER THE DAM. ADD STONES TO DAMS AS NEEDED TO MAINTAIN DESIGN WEIGHT AND CROSS SECTION.

4 TEMPORARY GRAVEL CHECK DAM
C501

7 RIP RAP OUTLET PROTECTION
C501



SUBGRADE PREPARATION: PREPARE THE SUBGRADE FOR RIPRAP AND FILTER TO THE REQUIRED LINES AND DIMENSIONS INDICATED IN THE PLAN. COMPACT ANY FILL REQUIRED IN THE SUBGRADE TO A DENSITY APPROXIMATING THAT OF THE SURROUNDING UNDISTURBED MATERIAL. ON SLOPES, ALL DISPOSITIONS WITH RIPRAP. REMOVE BRUSH, TREES, STUMPS AND OTHER OBSTRUCTABLE MATERIAL. CUT THE SUBGRADE SUFFICIENTLY DEEP THAT THE TOP SURFACE OF THE RIPRAP WILL BE AT THE ELEVATION OF THE SURROUNDING AREA. CHANNELS SHOULD BE EXCAVATED SUFFICIENTLY TO ALLOW PLACEMENT OF THE RIPRAP IN A MANNER SUCH THAT THE PROPOSED SLOPE DOWNSTREAM AND GRADE OF THE RIPRAP MEET DESIGN SPECIFICATIONS.

STONE PLACEMENT: PLACE THE FILTER FABRIC DIRECTLY ON THE PREPARED SUBGRADE. OVERLAP THE EDGES AT AT LEAST 12 INCHES AND SPACE EACH END EVERY 3 FEET ALONG THE OVERLAP. BURY THE UPPER AND LOWER EDGES OF THE CLOTH A MINIMUM OF 12 INCHES IN THE GROUND. TAKE CARE NOT TO DAMAGE THE CLOTH WHEN PLACING RIPRAP. IF DAMAGE OCCURS, REMOVE THE RIPRAP AND REPAIR THE SHEET BY ADDING ADDITIONAL LAYER OF FILTER MATERIAL, WITH A MINIMUM OVERLAP OF 12 INCHES AROUND THE DAMAGED AREA. IF EXTENSIVE DAMAGE IS SUSPECTED, REMOVE AND REPLACE THE ENTIRE SHEET.

WHEN LARGE STONES ARE USED OR MACHINERY IS AVAILABLE, A 4-INCH LAYER OF THE GRAVEL OR SAND MAY BE NEEDED TO PROTECT THE FILTER CLOTH.

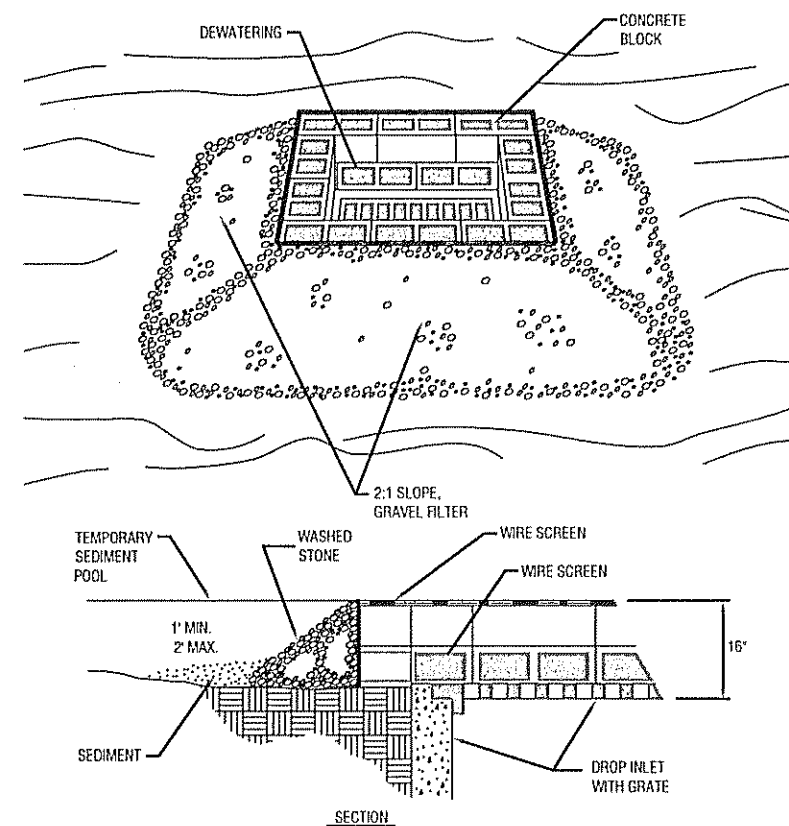
THE PROPOSED SLOPE SHOULD BE FREE OF POCKETS OF SMALL STONE OR CLUSTERS OF LARGE STONES. HAND PLACING MAY BE NECESSARY TO ACHIEVE THE PROPER DISTRIBUTION OF STONE SIZE TO PROVIDE A RELATIVELY SMOOTH, UNIFORM SURFACE. THE PROPOSED GRADE OF THE RIPRAP SHOULD BE LINED SMOOTHLY GRADUALLY WITH THE SURROUNDING AREA. NO OVERLAP OR PROTRUSION OF RIPRAP SHOULD BE APPARENT WHICH WOULD IMPAIR STREAM FLOW.

3 RIP RAP CHANNEL PROTECTION
A501

**SEEDING
SOIL AND VEGETATION**

PER NC WILDLIFE REQUEST, OVER SEED DISTURBED AREA WITH A MIXTURE OF RED CLOVER, GREENING RED FESCUE, AND A GRASS SUCH AS PINE, OAT OR WHEAT. THE SEEDING MIXTURE, SEEDING RATE, AND SOIL PREPARATION IS TO BE DETERMINED BY AN ENVIRONMENTAL PROFESSIONAL AND SUBMITTED PRIOR TO APPLICATION.

9 PERMANENT SEEDING SCHEDULE
C501

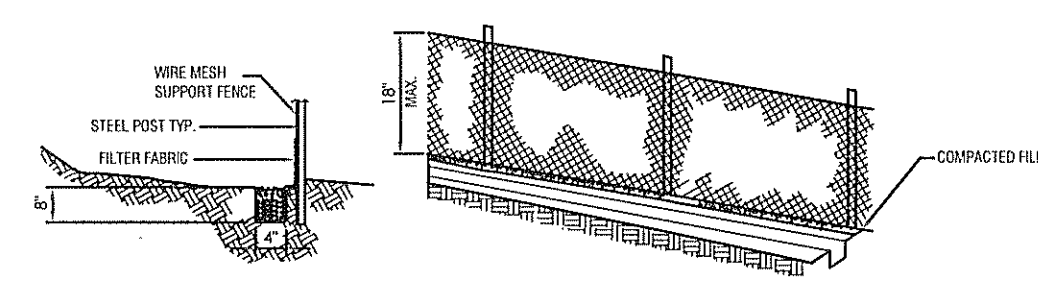


- CONSTRUCTION SPECIFICATIONS:**
- LAY DOWN BLOCK ON EACH SIDE OF THE STRUCTURE ON ITS SIDE IN THE BOTTOM ROW TO ALLOW POOL DRAINAGE. THE FOUNDATION SHOULD BE EXCAVATED AT LEAST 2 INCHES BELOW THE CRIST OF THE STONE DRAIN. PLACE THE BOTTOM ROW OF BLOCKS AGAINST THE EDGE OF THE SEDIMENT DRAIN FOR LATERAL SUPPORT AND TO AVOID WASHOUTS WHEN OVERFLOW OCCURS. IF NEEDED, ONE LATERAL SUPPORT TO SUBSEQUENT ROWS BY PLACING 2" x 4" WOOD STUDS THROUGH BLOCK OPENINGS.
 - COVER THE ENTIRE SURFACE WITH A COMPATIBLE WIRE MESH WITH 1/2" HOLE SPACING OVER ALL BLOCK OPENINGS TO HOLD GRAVEL IN PLACE.
 - USE CLEAN GRAVEL, 1/2" TO 3/4" IN DIAMETER, PLACED IN PILES BELOW THE TOP OF THE BLOCK TO A 1:1 SLOPE ON FLAT AND PROPORTION TO THE SLOPE. DOT AND WASHOUT ARE NOT RECOMMENDED.

MAINTENANCE:

- INSPECT THE BARRIER AFTER EACH RAIN AND MAKE REPAIRS AS NEEDED.
- REMOVE SEDIMENT AS NECESSARY TO PROVIDE ADEQUATE STORAGE VOLUME FOR SUBSEQUENT RAINS.
- WHEN THE CONTRIBUTING DRAINAGE AREA HAS BEEN ADEQUATELY STABILIZED, REMOVE ALL MATERIALS AND ANY UNSTABLE SOIL, EITHER SALVAGE OR DISPOSE OF IT PROPERLY. BRING THE DISTURBED AREA TO PROPER GRADE. THEN GRASS AND COMPOST IT. APPROPRIATELY STABILIZE ALL BARE AREAS AROUND THE INLET.

6 TEMPORARY BLOCK AND GRAVEL DROP INLET PROTECTION
C501



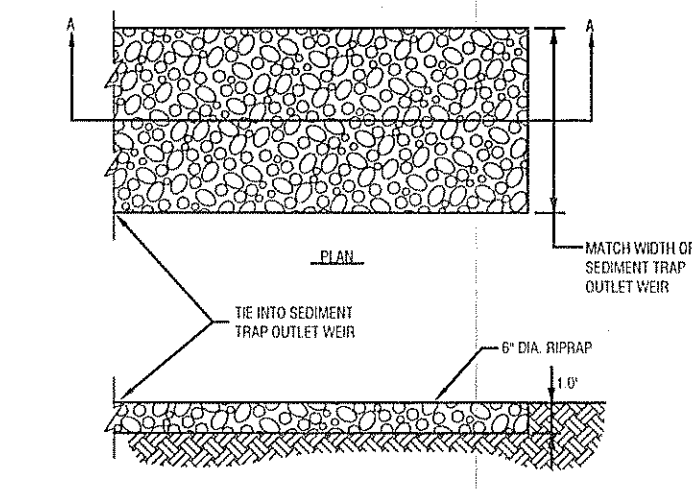
- MATERIAL SPECIFICATIONS:**
- USE A MINIMUM 10 MIL FILTER FABRIC OF AT LEAST 30% BY WEIGHT OF POLYESTER OR POLYESTER, WHICH IS CERTIFIED BY THE MANUFACTURER OR SUPPLIER AS CONFORMING TO THE REQUIREMENTS IN ASTM D669.
 - ENQUIRE THAT FILTER FABRIC SHOULD CONTAIN ULTRAVIOLET RAY INHIBITORS AND STABILIZERS.
 - ENSURE THAT POSTS FOR SEDIMENT FENCES ARE 1.35 LBS/400 FEET STEEL WITH A MINIMUM LENGTH OF 4 FEET. MAKE SURE THAT STEEL POSTS HAVE PROJECTIONS TO FACILITATE FASTENING THE FABRIC.
 - FOR REINFORCEMENT OF STANDARD STRENGTH FILTER FABRIC, USE WIRE FENCE WITH A MINIMUM 14-GAUGE AND A MINIMUM MESH SPACING OF 6 INCHES.

- CONSTRUCTION SPECIFICATIONS:**
- CONSTRUCT THE SEDIMENT BARRIER OF STANDARD STRENGTH OR EXTRA STRENGTH SYNTHETIC FILTER FABRIC.
 - ENSURE THAT THE HEIGHT OF THE SEDIMENT FENCE DOES NOT EXCEED 18 INCHES ABOVE THE GROUND SURFACE. WINDWARD FENCES MAY BE PLACED TO CAUSE FAILURE OF THE STRUCTURE.
 - CONSTRUCT THE FILTER FABRIC FROM A CONTINUOUS ROLL CUT TO THE LENGTH OF THE BARRIER TO AVOID JOINTS. WHEN JOINTS ARE NECESSARY, SECURELY FASTEN THE FILTER CLOTH ON AT A SUPPORT POST WITH OVERLAP TO THE NEXT POST.
 - SUPPORT STANDING STRENGTH FILTER FABRIC BY WARE MESH POSTING SECURELY TO THE UPOUSE SIDE OF THE POSTS USING HEAVY DUTY 1/2" WIRE. EXTEND THE WIRE MESH SUPPORT TO THE BOTTOM OF THE TRENCH.
 - WHERE A WIRE MESH SUPPORT FENCE IS USED, SPACE POSTS A MINIMUM OF 4 FEET APART. STEEL SUPPORT POSTS SHOULD BE DRIVEN SECURELY INTO THE GROUND TO A MINIMUM OF 18 INCHES. WIRE MESH SUPPORT FENCE MATERIAL SHALL BE APPROXIMATELY EQUAL QUANTITY TO LARGE DAMAGED STEEL WIRE WITH A 4" x 4" MAX. SPACING PATTERN.
 - EXTEND A TRENCH APPROXIMATELY 4 INCHES WIDE AND 4 INCHES DEEP ALONG THE PROPOSED LINE OF POSTS AND UPOUSE FROM THE BARRIERS.
 - BACKFILL THE TRENCH WITH COMPACTED SOIL PLACED OVER THE FILTER FABRIC.
 - DO NOT ATTACH FILTER FABRIC TO DRAINING TREES.

MAINTENANCE:

- SURVEY SEDIMENT FENCES AT LEAST ONCE A WEEK AND AFTER EACH RAINFALL. MAKE ANY REQUIRED REPAIRS IMMEDIATELY. SHOULD THE FABRIC OF A SEDIMENT FENCE COLLAPSE, TEAR, OR DISAPPEAR OR BECOME INEFFECTIVE, REPLACE IT PROPERLY. REPLACE RIPRAP IF RUN OFF JOINTS.
- REMOVE SEDIMENT DEPOSITS AS NECESSARY TO PROVIDE ADEQUATE STORAGE VOLUME FOR THE NEXT RAIN AND TO REDUCE PRESSURE ON THE FENCE. TAKE CARE TO AVOID UNDERMINING THE FENCE DURING CLEANING. REMOVE ALL EXCESS MATERIALS AND UNSTABLE ROCKS FROM THE AREA TO GRADE AND STABILIZE IT AFTER THE CONTRIBUTING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.

2 TEMPORARY SEDIMENT FENCE
C501

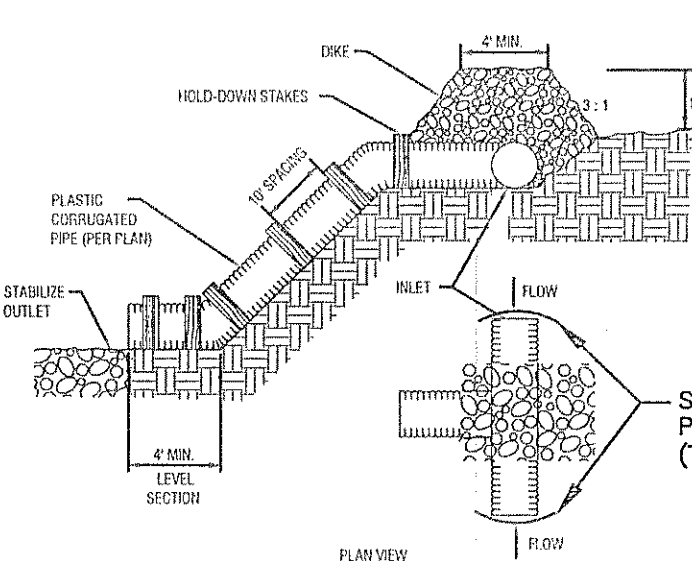


- CONSTRUCTION SPECIFICATIONS:**
- ENSURE THAT THE SUBGRADE FOR THE RIPRAP FOLLOWS THE REQUIRED LINES AND GRADES SHOWN IN THE PLAN. COMPACT ANY FILL REQUIRED IN THE SUBGRADE TO THE DENSITY OF THE SURROUNDING UNDISTURBED MATERIAL. LOW AREAS IN THE SUBGRADE ON UNDISTURBED SOIL MAY ALSO BE FILLED BY INCREASING THE RIPRAP THICKNESS.
 - RIPRAP MAY BE PLACED BY EQUIPMENT.
 - THE MINIMUM THICKNESS OF THE RIPRAP SHOULD BE 1.5 TIMES THE MINIMUM STONE DIMENSION.
 - RIPRAP MAY BE FIELD STONE OR TROUGH SHAPED STONE. IT SHOULD BE HARD, ANGULAR, HEAVILY WEATHER-RESISTANT AND WELL GRADED.
 - CONSTRUCT THE RIPRAP ON ZERO GRADE WITH NO OVERLAP. AT THE END, MAKE THE TOP OF THE RIPRAP AT THE DOWNSTREAM TWO LEVEL, WITH THE PROPOSED AREA ON SLOPE (THE LOW).
 - ENSURE THAT THE RIPRAP IS PROPERLY A LINED WITH THE PROPOSED STREAM AND PREFERABLE STRAIGHT THROUGHOUT ITS LENGTH. IF A CURVE IS NEEDED TO FIT THE CONTOUR, PLACE IT IN THE UPPER SECTION OF THE RIPRAP.
 - IMMEDIATELY AFTER CONSTRUCTION, STABILIZE ALL DISTURBED AREAS WITH VEGETATION.

MAINTENANCE:

INSPECT RIPRAP OUTLET STRUCTURES AFTER HEAVY RAINS TO SEE IF ANY EROSION OCCURS. IF EROSION OCCURS, THE RIPRAP HAS BEEN PLACED OR A STONE LAYER IS NOT DISCLOSED. IMMEDIATELY MAKE ALL NEEDED REPAIRS TO PREVENT FURTHER DAMAGE.

5 TEMPORARY SEDIMENT TRAP RIP RAP OUTLET PROTECTION
C501



CONSTRUCTION SPECIFICATIONS:

A CHANNEL FAILURE OF SLOPE EROSION IS CAUSED BY WATER SATURATING THE SOIL AND SINKING ALONG THE PIPE. THIS CREATES VIBES FROM COMPRESSION AND PULLS AND CAUSES WASHOUTS. PROTECT INCLUDING AROUND AND UNDER THE PIPE. WASHOUTS WITH STABLE SOIL MATERIAL AND HAND COMPACTED IN 6 INCH LIFTS TO ACHIEVE FIRM CONTACT BETWEEN THE PIPE AND THE SOIL AT ALL POINTS WILL ELIMINATE THIS TYPE OF FAILURE.

- PLACE SLOPE DRAIN ON UNDISTURBED SOIL OR WELL-COMPACTED FILL AT LOCATIONS AND ELEVATIONS SHOWN ON THE PLANS.
- SUPPORT THE SLOPE OF THE SECTION OF PIPE UNDER THE DRAIN TOWARD ITS OUTLET.
- HAND TAMP THE SOIL UNDER AND AROUND THE ENTRANCE SECTION OF THE DRAIN TO EXCEED 6 INCHES.
- ENSURE THAT THE DRAIN IS AT THE TOP OF THE SLOPE AND MAINTAINS OVERLAP OF 1.5 FT. DEPTH, 4 FT. TOP WIDTH, AND 3 FT. SLOPE.
- ENSURE THAT ALL SLOPE (SLOPE) CONNECTIONS ARE WATERPROOF.
- ENSURE THAT ALL FILL MATERIAL IS WELL-COMPACTED. REGULARLY FASTEN THE EXPOSED SECTION OF THE DRAIN WITH GRADINGS OR STAKES SPACED NO MORE THAN 5 FEET APART.
- EXTEND THE DRAIN BEYOND THE TOP OF THE SLOPE AND ADEQUATELY PROTECT THE OUTLET FROM EROSION.
- REMOVE THE EXCESSIVE COMPACTED ONE INCH NO LESS THAN 1 FEET ABOVE THE TOP OF THE PIPE AT EVERY JOINT.
- IMMEDIATELY STABILIZE ALL DISTURBED AREAS FOLLOWING CONSTRUCTION.

MAINTENANCE:

INSPECT THE SLOPE DRAIN AND SUPPORTING OVERLAP AFTER EVERY RAINFALL AND IMMEDIATELY MAKE NECESSARY REPAIRS. WHEN THE PROTECTED AREA HAS BEEN PERMANENTLY STABILIZED, TEMPORARY MEASURES MAY BE REMOVED. MATERIALS DISPOSED OF PROPERLY. AND ALL DISTURBED AREAS STABILIZED APPROPRIATELY.

1 TEMPORARY SLOPE DRAIN
C501

