

# Public Notice

U.S. Army Corps  
of Engineers

In Reply to Application Number  
**CENAB-OP-RPA-2008-01999-P25 (Jermyn Borough Flood Protection  
Project/Rushbrook Creek)**

Baltimore District  
PN- 13-29

Comment Period: 9 May, 2013 to 8 June, 2013

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**THE PURPOSE OF THIS PUBLIC NOTICE IS TO SOLICIT COMMENTS FROM THE PUBLIC REGARDING THE WORK DESCRIBED BELOW. 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 10 of the Rivers and Harbors Act of 1899 and/or Section 404 of the Clean Water Act (33. U.S.C. 1344)** as described below:

**APPLICANT:** Pennsylvania Department of Environmental Protection (PADEP)  
Department of General Services  
Bureau of Engineering and Architecture  
Headquarters Building, 18<sup>th</sup> and Herr Streets  
Harrisburg, Pennsylvania 17125

**WATERWAY AND LOCATION OF THE PROPOSED WORK:** The project is located in Rushbrook Creek (Cold Water Fisheries designated stream) in Carbondale Township, Mayfield Borough, and Jermyn Borough, in Lackawanna County, Pennsylvania. The project involves work along three (3) segments of Rushbrook Creek, consisting of: (1) approximately 148 linear feet of stream located adjacent to PA Route 107 in Carbondale Township; (2) approximately 260 linear feet of stream on the northwest side of the PA Route 107 and Old PA Route 6 (Scranton Carbondale Road) intersection in Mayfield Borough; and (3) approximately 2,180 linear feet of stream beginning on the southeast side of the PA Route 107 and Old PA Route 6 (Scranton Carbondale Road) intersection and extending to near River Street in Jermyn Borough.

**PROPOSED WORK:** The PADEP proposes to construct a flood protection project along three (3) segments of Rushbrook Creek. The combined project will result in approximately 2,600 linear feet (1.43 acres) of permanent impacts to Rushbrook Creek for streambank stabilization, channel excavation to increase stream capacity, and culvert installations. The depth of proposed excavation throughout the three (3) stream segments varies from a few inches to approximately 2.5 feet of material at the box culvert locations. All excavated materials will be used as backfill of the streambank stabilization features or disposed of at an upland disposal site. The proposed work is as follows:

**Carbondale Township:** Beginning at the upstream project limits, in Carbondale Township, facing downstream, the construction proposal includes temporary construction, access, and stream diversion along 148 linear feet of stream channel, the installation of approximately 120 linear feet of R-7 riprap along the left stream bank for stabilization, and excavation of the stream substrate.

**Mayfield Borough:** The proposed work along the segment of stream channel located on the northwest side of the PA Route 107 and Old PA Route 6 (Scranton Carbondale Road) intersection in Mayfield Borough includes temporary construction, access, and stream diversion along 260 linear feet of stream channel. Specifically the proposed work involves: (1) the installation of a steel H-pile trash rack which is comprised of approximately eight (8) steel pilings, measuring 6 feet long by 8 inches by 8 inches, concreted into a 14-inch diameter by 2-foot deep hole, spaced approximately 4 feet apart within the stream bed extending the width of the stream channel (the local authorities are proposed to be responsible for monitoring and maintenance of the trash rack to ensure that debris is not causing a backup of the water); (2) a construction of approximately 70 linear feet of precast concrete block wall along the left stream bank; (3) approximately 180 linear feet of precast concrete block wall along the right stream bank for stabilization; (4) excavation of the stream substrate; and (5) the removal of trees is proposed within this stream segment for the purposes of construction and to protect the stability and integrity of the concrete walls.

**Jermyn Borough:** The proposed work along the segment of stream channel located on the southeast side of the PA Route 107 and Old PA Route 6 (Scranton Carbondale Road) intersection in Jermyn Borough includes the construction of approximately 1,950 linear feet of precast concrete block walls along the left and right streambanks for stabilization. [Existing conditions within this stream segment include approximately 1,325 linear feet of the stream channel being previously manipulated by the installation of a combination of gabion basket walls, concrete block walls, stone walls, bridges and culverts along the left and right streambanks.] The width of the channel will be approximately 22 feet wide along the length of the project. [The existing average width of the channel is approximately 20 feet, with the minimum width of approximately 16 feet and the maximum width of approximately 30 feet.] Also proposed is the excavation of material within the stream channel invert along the entire 1,950-linear-foot length of this stream segment. The proposal also includes the replacement of five (5) of seven (7) original bridge structures within this stream segment. Four (4) of the original bridge structures (Lincoln Avenue, Jefferson Avenue, Madison Avenue, and South Washington Avenue) are existing, currently being utilized, and are undersized. These four (4) bridge structures are proposed to be replaced with four (4), 22-foot-wide by 8-foot-long precast concrete V-bottom box culverts with depressed inverts and alternating baffles. Three of the original bridge structures (Mellow Court, Shields Court, and Johnson Court) were washed out during past flooding events and are no longer in place. The Johnson Court previously-existing crossing is proposed to be replaced with a 22-foot-wide by 8-foot-long precast V-bottom concrete box culvert with depressed inverts and alternating baffles. The previously-existing Mellow Court and Shields Court bridge structures are not proposed to be replaced. Also proposed within this stream segment are three (3) sections of embedded concrete V-shaped grade controls to match the V-shaped bottom of the proposed box culverts for the purpose of concentrating low flows in the middle of the stream to enhance movement of aquatic life and keep normal flow away from the toes of the concrete sidewalls. Multiple trees are present within the project area, and the removal of the existing trees is proposed along the entire length of this stream segment for the purposes of construction and to protect the stability and integrity of the concrete walls. Additionally, a short earthen levee is proposed to be constructed in uplands adjacent to the downstream limits of the project near River Street.

**PROJECT PURPOSE:** The PADEP proposes to construct a flood protection project along three (3) segments of Rushbrook Creek to provide flood protection for the 1% annual chance flood (100-year flood) for the residents along Rushbrook Creek and the Borough of Jermyn, in Lackawanna County, Pennsylvania.

**ALTERNATIVES ANALYSIS:** The applicant has investigated nine project alternatives during the project design process. The project alternatives are as follows:

**Alternative 1:** The applicant evaluated the alternative of converting the stream into a 16-foot-wide rectangular concrete-lined channel through Jermyn Borough. This alternative also included the installation of the trash rack, five (5) precast concrete box culverts (if necessary), and a short low levee. The PROS for this alternative include the necessary land acquisition of fewer properties, estimated to be between two (2) and four (4) properties, and removal of fewer structures than other alternatives; the potential that some of the bridges may not need to be replaced due to the bridge openings, once concreted, being adequate to carry adequate flow; the ease of maintenance of the concrete-lined channel; and the likelihood that rehabilitation of the concrete channel would not be necessary for decades. The CONS include the loss of approximately 3,000 linear feet of natural streambed and banks of Rushbrook Creek (Cold Water Fisheries designated stream) which would negatively impact the wild trout population and macroinvertebrate life within the stream.

**Alternative 2:** Another alternative evaluated was to construct a roller compacted concrete (RCC) detention dam upstream of Jermyn Borough (in Carbondale Township) which would replace the previously-existing Rushbrook Dam which was breached in November 2010, and to construct a trapezoidal channel through Jermyn Borough with a natural invert, and 2:1 side slope banks stabilized with vegetated turf reinforced mats. This alternative also included the installation of a trash rack and short low levee. The PROS of this alternative include the likelihood that the alternative would solve the downstream flooding problem, Rushbrook Creek would have a lower peak flow downstream of the dam, and the wild trout and macroinvertebrate life impacts would be minimal. The CONS include the high costs involved for land acquisition, to include the property of the proposed dam (must be acquired in Fee Simple), consisting of approximately four (4) properties and removal of associated structures. Additionally, this alternative would require a width of approximately 40 feet along the stream channel which would result in most adjacent properties to lose 10 or more feet of currently usable property. Also, this alternative would result in an impoundment of the Cold Water Fishery stream.

**Alternative 3:** The applicant also investigated a natural flood control channel alternative. This alternative would involve the construction of a natural stream restoration design consisting of an approximately 84-foot-wide by 7-foot-deep channel, with 1.5:1 side slopes, a natural low-flow channel measuring approximately 33 feet wide by 1.5 feet deep within the flood control channel, five (5) bridges spanning 100 feet, and a short low levee. The PROS for this alternative include the stream being restored to a natural system, and minimal impacts to the wild trout population and macroinvertebrate life upon completion of the project. The CONS include the high land acquisition costs due to the necessity that Jermyn Borough purchase approximately 13 properties and remove 13 existing houses, with multiple other adjacent properties losing land. This would be necessary in order to meet the required widths to construct the natural stream channel in

comparison with the existing conditions and location of the stream channel through Jermyn Borough. Also, the costs associated with the 100-foot-span bridge are estimated to exceed approximately \$750,000. Maintenance needs of this alternative are higher, and the Borough has concerns that this alternative would not provide the necessary flood control for the community.

**Alternative 4:** This alternative involved an 8-foot by 6-foot precast box culvert diversion under Rush Brook Street, a trash rack system, and a short low levee. The diversion culvert would remain dry until a 10-year event is exceeded. During a 10-year event, the flow would split between the existing undisturbed stream channel through Jermyn Borough and the diversion culvert. During a 100-year event, the flow would be divided equally between the undisturbed stream channel and the diversion culvert. The PROS for this alternative include that the majority of the work would be performed within the Rushbrook Street Right of Way, the need for land acquisition would be less, and maintenance would be low. Additionally, the wild trout population and macroinvertebrate life would have minor impacts during construction but would recover. The CONS include the high costs of construction due to the culvert installation requiring that Rushbrook Street be reconstructed to PennDOT specifications. Also, safety grab chains would not be installed due to the likelihood that debris would obstruct the culvert entrance, which poses concerns to human safety during high flows and the potential of being trapped in the culvert.

**Alternative 5:** Another alternative that was investigated is the installation of five (5) V-bottom precast concrete box culverts, a trapezoidal channel with a natural invert, vegetated turf reinforced mats along constructed 1.5:1 side slopes, a 150-foot-long concrete channel with 150-foot-long concrete wall on the upstream side of the S.R. 107 bridge, trash rack system, and short low levee. The PROS for this alternative include the low costs of construction, potentially the least impact on adjacent properties, and minimal impact on the aquatic environment. The CONS include the uncertainty that the turf reinforced mats will not fail during high flow velocities; the need for the Borough to purchase between two (2) and four (4) properties and remove the existing structures; the vegetated side slopes requiring regular maintenance; and the potential that the Washington Street bridge would need to be replaced with a larger structure in order to pass the 100-year discharge, which would require at least one building to be removed, resulting in substantially increased costs.

**Alternative 6:** Selected alternative.

**Alternative 7:** The alternative to purchase all properties and remove all structures within the 100-year floodplain of Rushbrook Creek within the Borough or the purchase of all properties and removal of only the structures that sustain flooding on the first floor during a 100-year flood event. The PROS of this alternative include no project maintenance; once the structures are removed, the vacant lots could be used as open space by the Borough; and no impact to the wild trout population and macroinvertebrate life. The CONS for this alternative include the issue that the Capital Budget Funding which is allocated to this project cannot be used for this option. The Borough must pursue buyouts through a Federal program which would require a non-federal cost share. Additionally, the complete buyout of the floodplain properties would result in a severely reduced Borough population and tax revenues. The partial buyout would be less of an impact on the community, but would still result in adverse impacts to Borough population and tax revenues.



Also, the roads, bridges, utilities, and improved lands would still incur damages resulting in costly infrastructures repairs and mud and debris removal by the Borough.

**Alternative 8:** The alternative of flood proofing of the structures located within the floodplain was also investigated. This alternative would involve raising buildings; blocking off openings in cellar walls; filling basements; and relocating utilities, to include furnaces, water heaters, AC units, fuel tanks, and electric panels to above the 100-year water elevation. The PROS of this alternative include the elimination of or reduced flood damages to structures and their contents, individual property owner flood damage repair costs being reduced, and Federal assistance through FEMA may be available. The CONS include the high costs involved with relocating the utilities and the raising of an average-sized home (estimated costs of \$45,000 per home). Also, the flooding issue would not be eliminated, so roads, bridges and utilities are still at risk of damage from flood events, which would incur expenses to the Borough.

**Alternative 9:** The “No Action” alternative was also investigated. However, this alternative will not result in the necessary protection of the properties from continued flood damage, and the transport of debris and eroded material downstream will continue.

Therefore, the selected alternative, as identified in the “Proposed Work” section of this Public Notice has been determined by the applicant to be the least environmentally damaging practicable alternative to provide permanent flood protection after taking into consideration construction costs, logistics, and existing technology in light of the overall project purpose.

**MITIGATION STATEMENT:** No mitigation is proposed for project impacts. As stated, the applicant has determined that this selected alternative is the least environmentally damaging practicable alternative to provide permanent flood protection after taking into consideration construction costs, logistics, and existing technology in light of the overall project purpose. The applicant also states that by constructing walls along the left and right streambanks and leaving the stream invert in its natural state, except at the culverts, it is believed that adverse impacts from the proposed project have been avoided and minimized. Additionally, the applicant states that the proposed culvert replacements provide alternating baffles along the invert that are designed to PennDOT standards which are spelled out in the “Joint Agency Guidance for the Analysis of Environmental Impacts and Other issues for Short Span Structures” which will allow passive sediment build-up along the culvert invert. Also, the applicant has concluded that unavoidable adverse effects from construction of the proposed project will be temporary and that there will be no permanent loss of aquatic resource function and services after natural flow is restored in Rushbrook Creek when the project is completed. The applicant concludes with the statement that since the project will not result in permanent losses of aquatic resource functions and services, no compensatory mitigation is required under Section 404 of the Clean Water Act.

All work is proposed to be completed in accordance with the closed plan(s). If you have any questions concerning this matter, please contact Mrs. Tarrie Ostrofsky at 570-835-4263 by phone, 570-835-5422 by FAX, [Tarrie.L.Ostrofsky@usace.army.mil](mailto:Tarrie.L.Ostrofsky@usace.army.mil) by e-mail or 1631 South Atherton Street, Suite 101, State College, Pennsylvania 16801-6260 by mail.

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 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. Comments are also used to determine the need for a public hearing and to determine the overall public interest of the proposed activity.

**ESSENTIAL FISH HABITAT:** The Magnuson-Stevens Fishery Conservation and Management Act (MSFCMA), as amended by the Sustainable Fisheries Act of 1996 (Public Law 04-267), requires all Federal agencies to consult with the National Marine Fisheries Service (NMFS) on all actions, or proposed actions, permitted, funded, or undertaken by the agency that may adversely effect Essential Fish Habitat (EFH). The Corps has determined this project will not affect any EFH.

**WATER QUALITY CERTIFICATION:** The applicant is required to obtain a water quality certification in accordance with Section 401 of the Clean Water Act from the **Pennsylvania Department of Environmental Protection**. The Section 401 certifying agency has a statutory limit of one year from the date of this public notice to make its decision.

**COASTAL ZONE MANAGEMENT PROGRAMS:** Where applicable, the applicant has certified in this application that the proposed activity complies with and will be conducted in a manner consistent with the approved Coastal Zone Management (CZM) Program. By this public notice, we are requesting the State concurrence or objection to the applicant's consistency statement. It should be noted that the CZM Program has a statutory limit of 6 months to make its consistency determination.

The applicant must obtain any State or local government permits which may be required.

A preliminary review of this application indicates that the proposed work will not affect Federal listed threatened or endangered species or their critical habitat, pursuant to Section 7 of the Endangered Species Act, as amended. Additionally, the Pennsylvania Natural Diversity Inventory Environmental Review was performed on July 20, 2012 with the search resulting in the findings of no anticipated impacts to threatened and endangered and/or special concern species and resources. However, the designated water quality use of Rushbrook Creek in accordance with Chapter 93 is a Cold Water Fishery. In 1997 the Pennsylvania Fish and Boat Commission determined that Rushbrook Creek supports a wild trout population from its mouth to the upstream limit delineated by the Rushbrook Dam and that wild trout still occupy Rushbrook Creek within the project area. As the evaluation of this application continues, additional information may become available which could modify this preliminary determination.

The Pennsylvania Historical and Museum Commission (PHMC), in a letter dated October 11, 2012, has indicated that in the opinion of the PHMC, no archaeological resources will be affected by this project. Also included in the October 11, 2012 letter, the PHMC states that one property which is listed in or eligible for listing in the National Register of Historic Places is located near the project area. However, in the opinion of the PHMC, the activity described in the proposal will have no effect on such resources. Also, if the scope and/or nature of the project activities should change, the Bureau of Historic Preservation would require additional review. Currently unknown archeological, scientific, prehistoric, or historical data may be lost or destroyed by the work to be accomplished under the request permit.

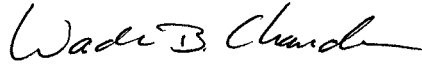
The evaluation of the impact of this project on the public interest will include application of the guidelines promulgated by the Administrator, U.S. Environmental Protection Agency, under authority of Section 404 of the Clean Water Act.

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 by the District Engineer, U.S. Army Corps of Engineers, Baltimore District, Attn: Mrs. Tarrie Ostrofsky, State College Field Office, 1631 South Atherton Street, Suite 101, State College, Pennsylvania 16801, 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.

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

Written comments concerning the work described above related to the factors listed above or other pertinent factors must be received within the comment period specified above to receive consideration. Please submit written comments to:

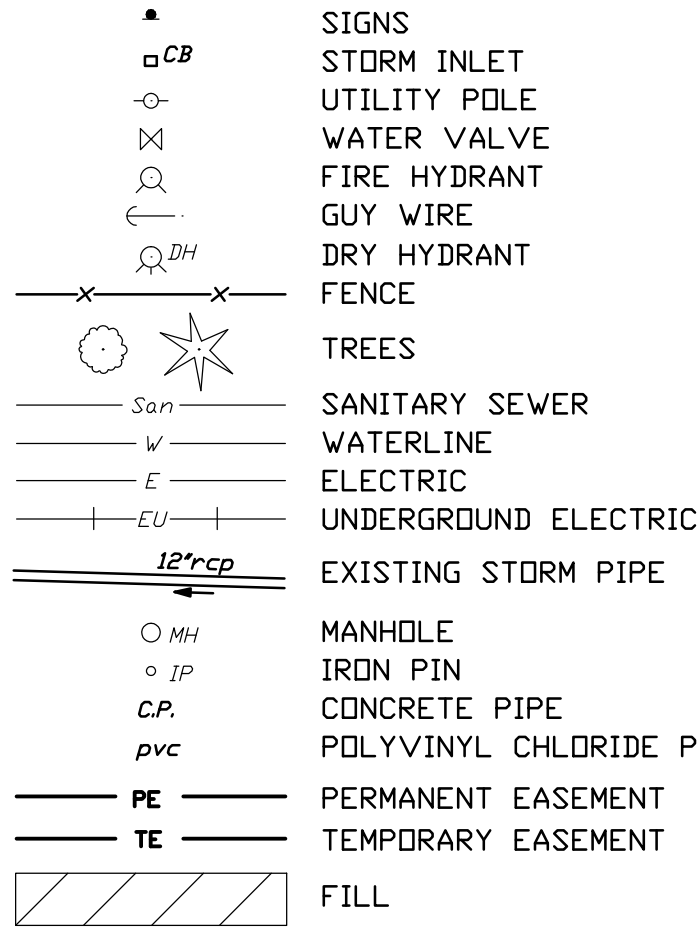
U.S. Army Corps of Engineers  
Baltimore District  
Attn: Mrs. Tarrie Ostrofsky  
State College Field Office  
1631 South Atherton Street, Suite 101  
State College, Pennsylvania 16801

  
Wade B. Chandler  
Chief, Pennsylvania Section

Enclosures



LEGEND



CALL BEFORE YOU DIG!

PENNSYLVANIA LAW REQUIRES  
3 WORKING DAYS NOTICE FOR  
CONSTRUCTION PHASE AND 10 WORKING  
DAYS IN DESIGN STAGE - STOP CALL



POCS SERIAL NUMBER  
20090891820

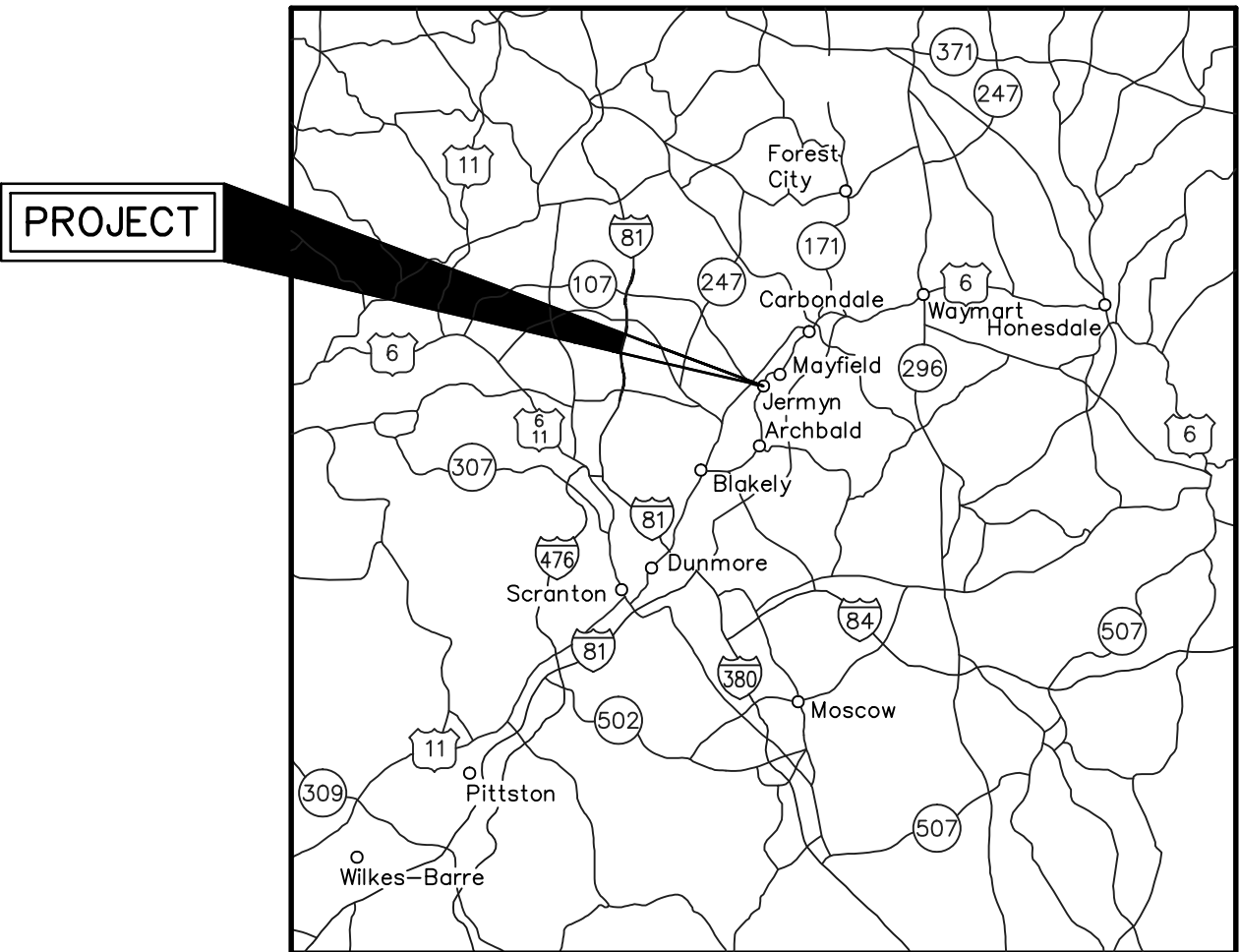


PLAN

Scale: 1 in. = 100 ft.

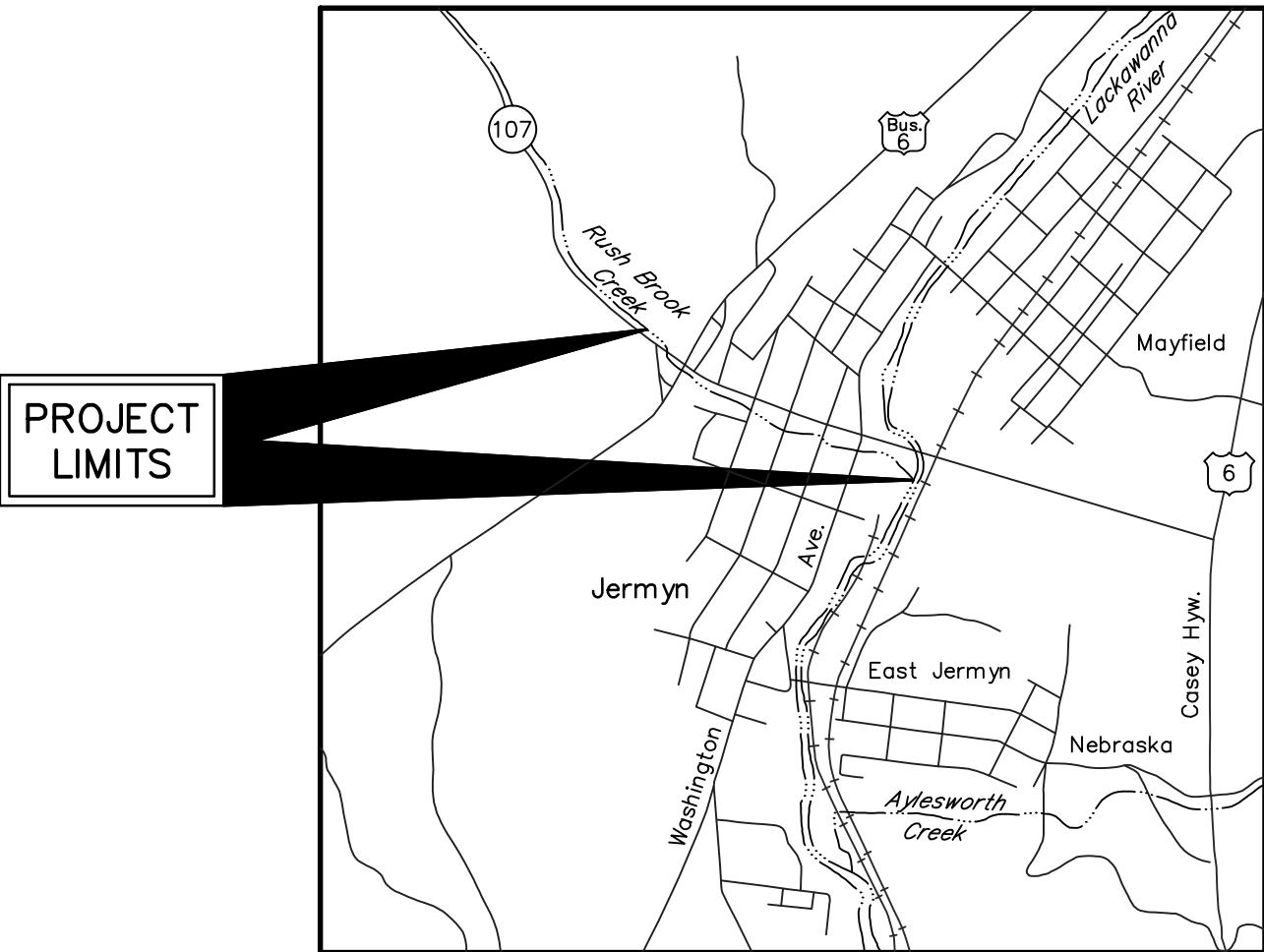
GENERAL NOTES:

- The topography shown on the drawings is based on a survey conducted by Larsen Design Group in 2005.
- All elevations are based on N.G.V.D. Elevations of features are to be taken from bench marks (B.M.) listed on the drawings.
- Existing contours and existing ground lines are intended to show the general ground configuration. Payment for excavation and fill items will be based upon survey cross sections made by the Department immediately prior to commencement of work.
- Data concerning utilities has been obtained from available information. Accuracy or completeness of this data is not guaranteed.
- The Contractor's attention is drawn to the "Sponsor Adjustments" tables. The items listed are not part of the Contract. See General Requirement - Flood Protection Projects - Supplemental Provisions - Sponsor Adjustments.
- Rights-of-Way Acquisition drawings, which show more detailed dimensions for rights-of-way and Contractor's working area limits are on file at the Office of Water Management, Department of Environmental Protection, Harrisburg, Pennsylvania. These drawings will be furnished to the successful bidder.
- Minor adjustments in alignment and grade may be made to facilitate construction with the approval of the Department.
- Clearing and grubbing is not shown on the drawings but it shall extend to the permanent easement line unless directed otherwise by the Department.
- Indiscriminate cutting of trees will not be permitted. Approval of the Department will be required prior to cutting any trees. See Technical Specification 8 - Clearing and Grubbing.
- The Contractor shall fill and/or grade areas adjacent to the new construction for positive drainage as directed by the Department.
- All seeding shall be Permanent Seeding unless otherwise noted.
- Spoil and/or borrow areas are to be secured by the Contractor at his cost. See General Requirement, Special Provision - Securing Borrow and/or Spoil Areas.
- (No.) indicates Pay Item numbers which correspond to those in the Bid Form.
- Concrete Notes are shown on Drawing No. D-7.



LOCATION MAP

Scale: 1 in. = 9 mi.



VICINITY MAP

Scale: 1 in. = 2000 ft.

HYDRAULIC DATA

Drainage Area = 5.94 Square Miles

1% Annual Chance (100yr.) Discharge = 2,360 Cubic Feet per Second

Freeboard (Channel Walls) = 1.0 Foot

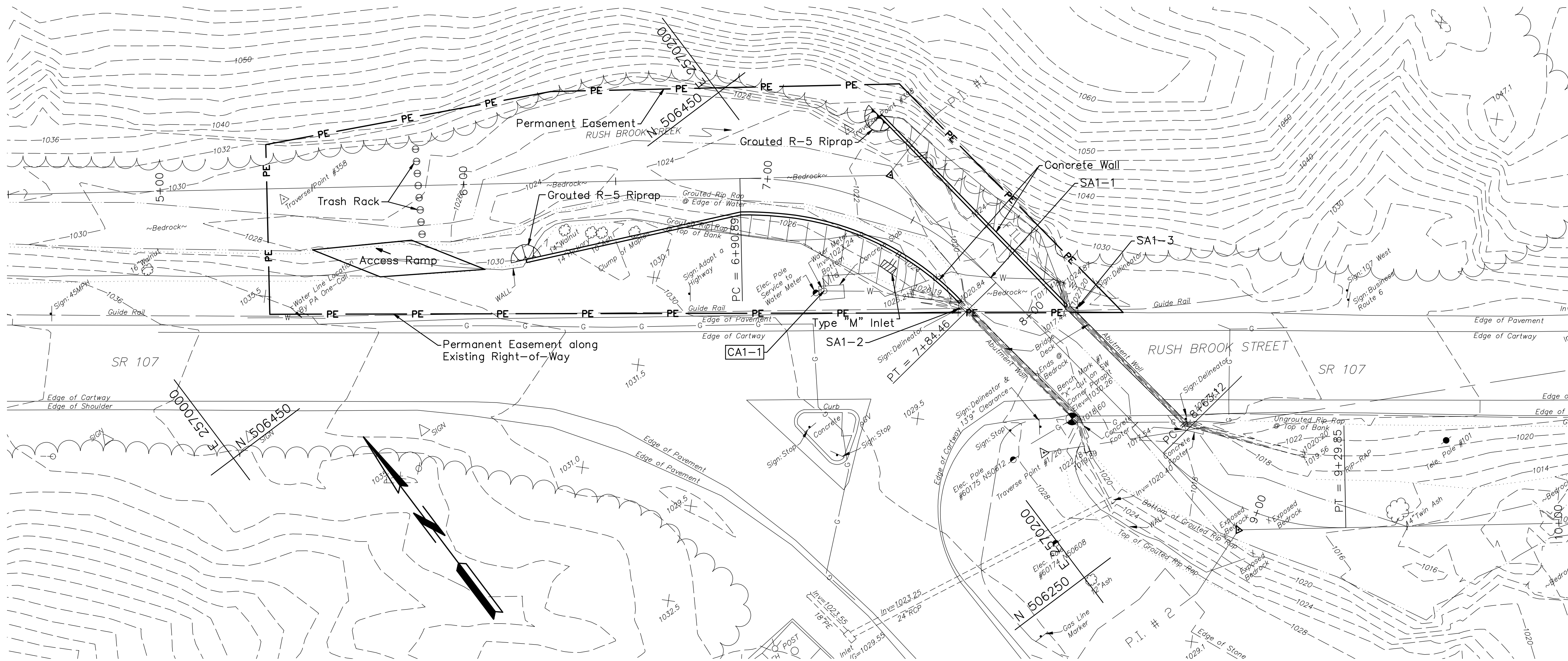
At Design Q, the depth of water and low chord clearance for culverts is as follows:

	DEPTH	FREEBOARD
PA Route 107	6.40'	1.60'
Lincoln Ave.	6.29'	0.70'
Jefferson Ave.	6.17'	0.83'
Madison Ave.	6.24'	0.76'
Johnson Ct.	6.60'	0.40'
Washington Ave.	7.00'	0.00'

NO.	DATE	REVISION	APPR.
SUBMITTED			
PROJECT COORDINATOR - D.E.P.			
APPROVED			
CHIEF - DIVISION OF PROJECT DEVELOPMENT - D.E.P.			
APPROVED			
DIRECTOR - BUREAU OF WATERWAYS ENGINEERING AND WETLANDS - D.E.P.			
PROFESSIONAL'S SIGNATURE			
DATE			
PROFESSIONAL'S SIGNATURE			
DATE			
COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION OFFICE OF WATER MANAGEMENT			
COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF GENERAL SERVICES HARRISBURG, PENNSYLVANIA			
PROJECT NO. D.G.S. 181-21			
RUSHBROOK CREEK PROJECT			
BOROUGH OF JERMYN LACKAWANNA COUNTY, PENNSYLVANIA			
GENERAL PLAN			
DRAWN BY	DATE	DRAWING NO.	
A.J.M.	8-15-12	GP-1	
CHECKED BY	SCALE		
	As Shown		

ALL DIMENSIONS AND EXISTING  
CONDITIONS SHALL BE CHECKED  
AND VERIFIED BY CONTRACTOR  
AT THE SITE.





CONTRACTOR ADJUSTMENTS

No.	Description	Location		Adjustment Required
		Station	Offset	
CA1-1	Water Meter Manhole	7+43.0	32.0' Rt.	Protect, Do Not Disturb
CA1-2	Guide Rail	5+35.0 to 8+00.0	44.0' Rt.	Remove and Reinstall as Necessary

SPONSOR ADJUSTMENTS

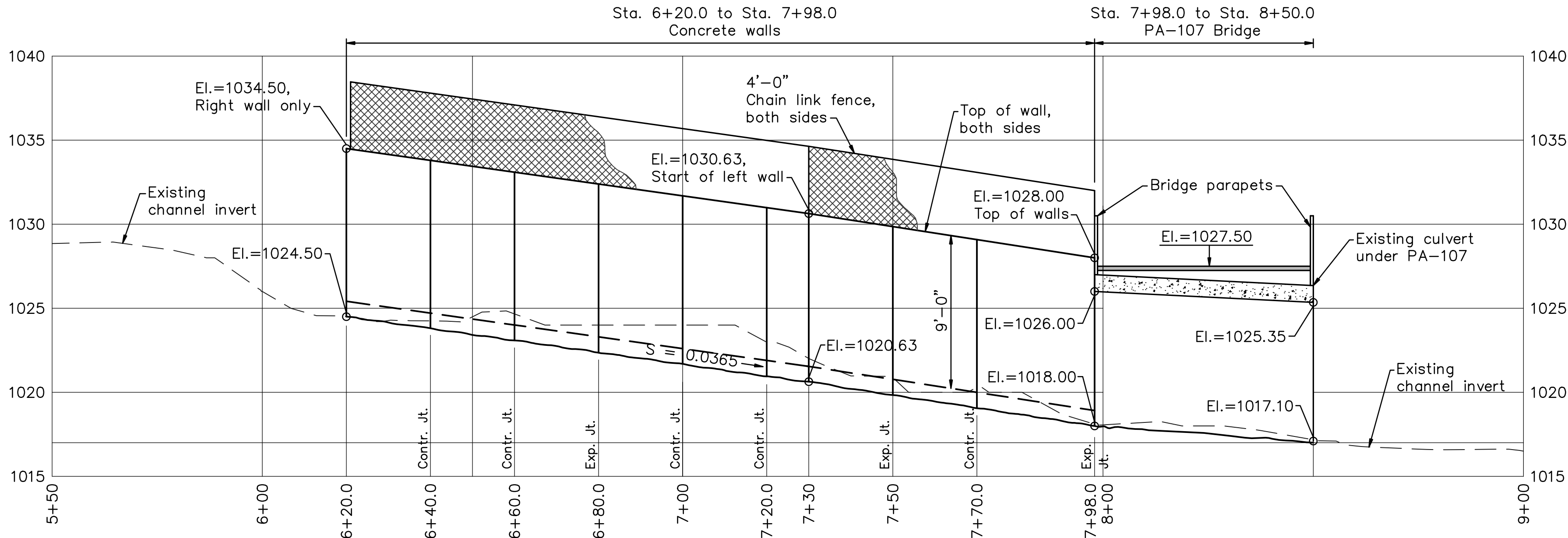
No.	Description	Location		Adjustment Required
		Station	Offset	
SA1-1	12" Water line	7+82.0	0'	Remove/Relocate
SA1-2	Sign	7+82.0	14.5' Rt.	Remove and reinstall
SA1-3	Sign	8+09.0	13.0' Lt.	Remove and reinstall

PLAN

Scale: 1 in. = 20 ft.

CURVE DATA

Curve No.	P.I. Coordinates		$\Delta$	D	R	T	L	P.C. Station	P.T. Station
	North	East							
P.O.T. #1	506,827.00	2,569,628.00							
P.I. #1	506,394.20	2,570,228.80	46°-47'-08"	50°-00'-00"	114.59'	49.57'	93.57'	6+90.89	7+84.46
P.I. #2	506,232.00	2,570,250.00	46°-42'-25"	70°-00'-00"	81.85'	35.34'	66.72'	8+63.12	9+29.85



PROFILE

Scale: { Horiz. 1 in. = 20 ft.  
Vert. 1 in. = 5 ft.

NOTES:

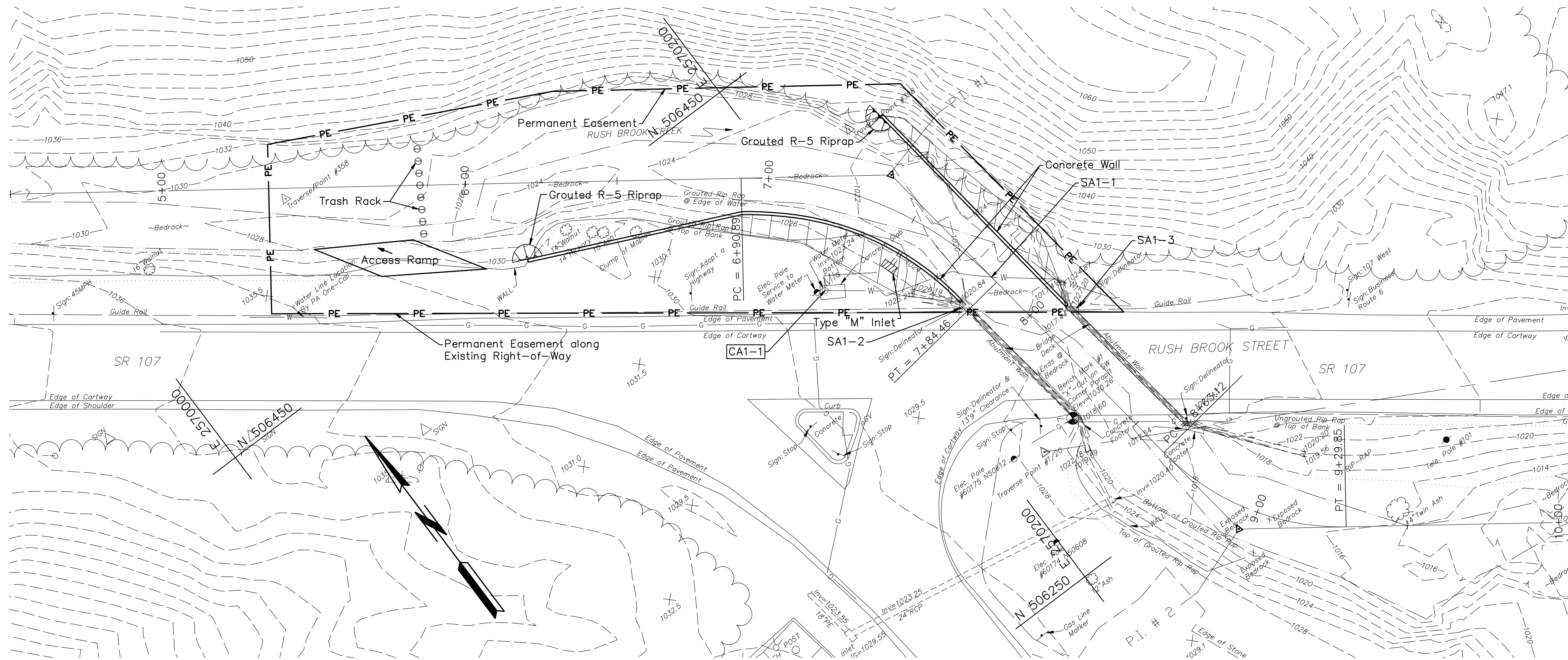
MText Holder

BENCH MARK DATA

BM No.	Elevation	Location
BM No. 1	1030.26	"X"-cut on SW corner of parapet of SR-107, Rushbrook Street culvert

NO.	DATE	REVISION	APPR.			
SUBMITTED						
PROJECT COORDINATOR - D.E.P.						
APPROVED						
CHIEF - DIVISION OF PROJECT DEVELOPMENT - D.E.P.						
APPROVED						
DIRECTOR - BUREAU OF WATERWAYS ENGINEERING AND WETLANDS - D.E.P.						
PROFESSIONAL'S SIGNATURE				DATE	PROFESSIONAL'S SIGNATURE	DATE
COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION OFFICE OF WATER MANAGEMENT						
COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF GENERAL SERVICES HARRISBURG, PENNSYLVANIA						
PROJECT NO. D.G.S. 181-21						
RUSHBROOK CREEK PROJECT						
BOROUGH OF JERMYN LACKAWANNA COUNTY, PENNSYLVANIA						
PLAN AND PROFILE STA. 5+00 TO STA. 9+00						
DRAWN BY	J.A.D.	DATE	11-30-09	DRAWING NO.	P-1	
CHECKED BY		SCALE	As Shown			

ALL DIMENSIONS AND EXISTING CONDITIONS SHALL BE CHECKED AND VERIFIED BY CONTRACTOR AT THE SITE.



NOTES:  
MText Holder

BENCH MARK DATA

BM No.	Elevation	Location
BM No. 1	1030.26	"X"-cut on SW corner of parapet of SR-107, Rushbrook Street culvert

CONTRACTOR ADJUSTMENTS

No.	Description	Location		Adjustment Required
		Station	Offset	
CA1-1	Water Meter Manhole	7+43.0	32.0' Rt.	Protect, Do Not Disturb
CA1-2	Guide Rail	5+35.0 to 8+00.0	44.0' Rt.	Remove and Reinstall as Necessary

SPONSOR ADJUSTMENTS

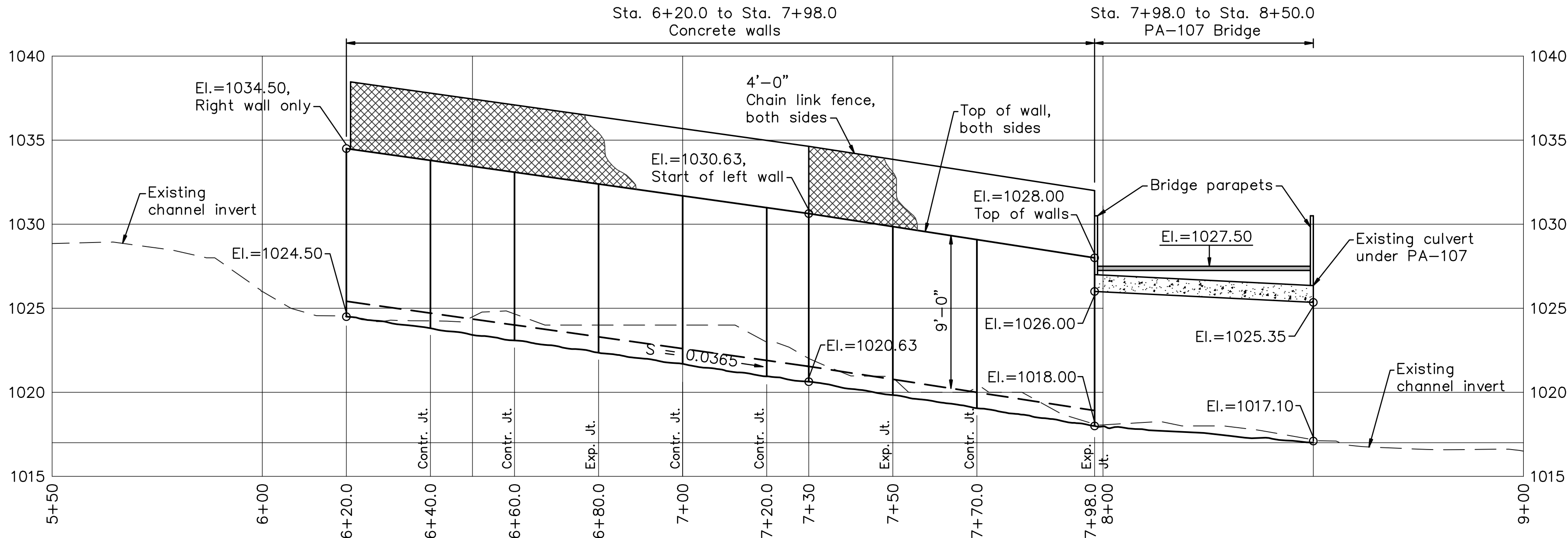
No.	Description	Location		Adjustment Required
		Station	Offset	
SA1-1	12" Water line	7+82.0	CL	Remove/Relocate
SA1-2	Sign	7+82.0	14.5' Rt.	Remove and reinstall
SA1-3	Sign	8+09.0	13.0' Lt.	Remove and reinstall

PLAN

Scale: 1 in. = 20 ft.

CURVE DATA

Curve No.	P.I. Coordinates		$\Delta$	D	R	T	L	P.C. Station	P.T. Station
	North	East							
P.O.T. #1	506,827.00	2,569,628.00							
P.I. #1	506,394.20	2,570,228.80	46°-47'-08"	50°-00'-00"	114.59'	49.57'	93.57'	6+90.89	7+84.46
P.I. #2	506,232.00	2,570,250.00	46°-42'-25"	70°-00'-00"	81.85'	35.34'	66.72'	8+63.12	9+29.85



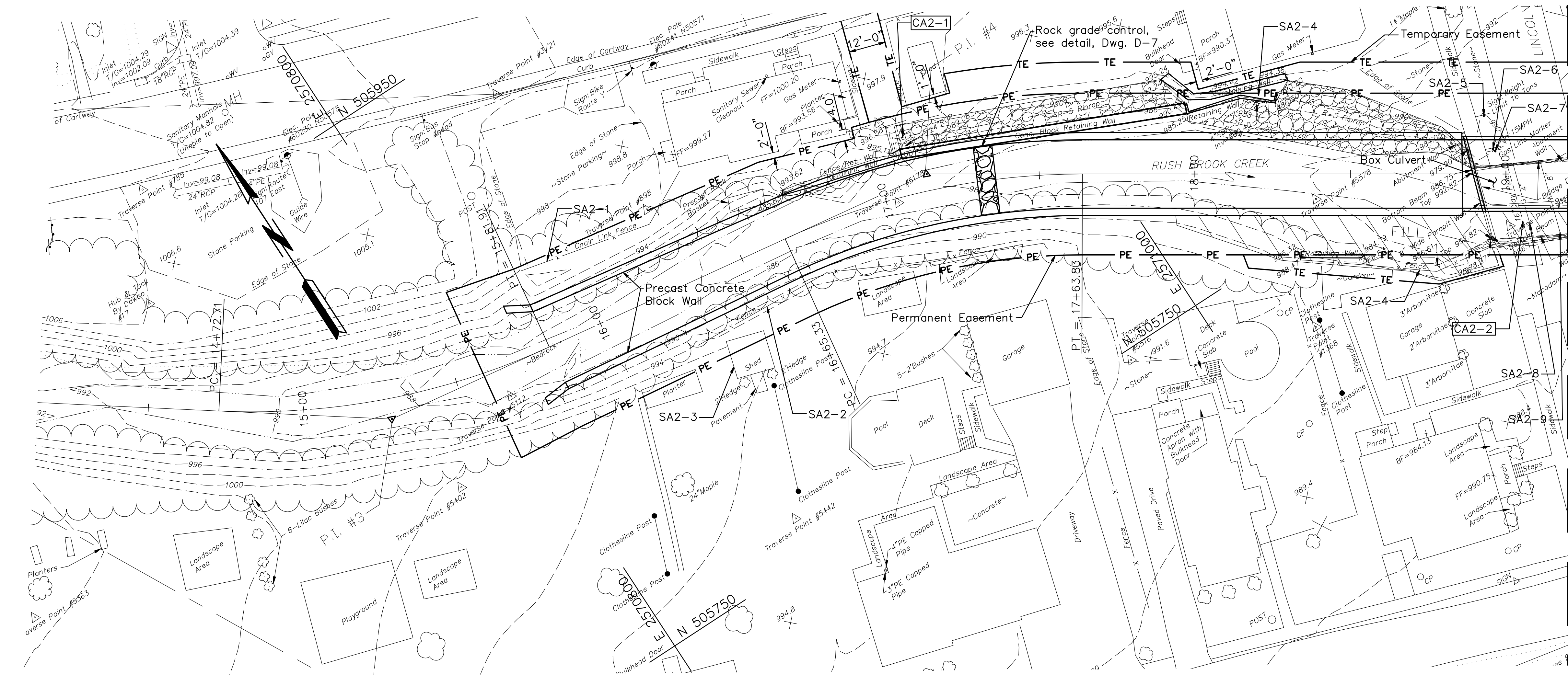
PROFILE

Scale: { Horiz. 1 in. = 20 ft.  
Vert. 1 in. = 5 ft.

ALL DIMENSIONS AND EXISTING  
CONDITIONS SHALL BE CHECKED  
AND VERIFIED BY CONTRACTOR  
AT THE SITE.

NO.	DATE	REVISION	APPR.			
SUBMITTED						
PROJECT COORDINATOR - D.E.P.						
APPROVED						
CHIEF - DIVISION OF PROJECT DEVELOPMENT - D.E.P.						
APPROVED						
DIRECTOR - BUREAU OF WATERWAYS ENGINEERING AND WETLANDS - D.E.P.						
PROFESSIONAL'S SIGNATURE				DATE	PROFESSIONAL'S SIGNATURE	DATE
COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION OFFICE OF WATER MANAGEMENT						
COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF GENERAL SERVICES HARRISBURG, PENNSYLVANIA						
PROJECT NO. D.G.S. 181-21						
RUSHBROOK CREEK PROJECT						
BOROUGH OF JERMYN LACKAWANNA COUNTY, PENNSYLVANIA						
PLAN AND PROFILE STA. 5+00 TO STA. 9+00						
DRAWN BY	J.A.D.	DATE	11-30-09	DRAWING NO.	P-1	
CHECKED BY		SCALE	As Shown			





MATCH LINE STA. 19+20.0, DRAWING P-3

NOTES:  
MText Holder

CONTRACTOR ADJUSTMENTS

No.	Description	Location		Adjustment Required
		Station	Offset	
CA2-1	24" RC Pipe	17+09.8	15.6' Lt.	Extend through wall
CA2-2	16" Clay Pipe	19+01.2	CL	Extend through culvert

CURVE DATA

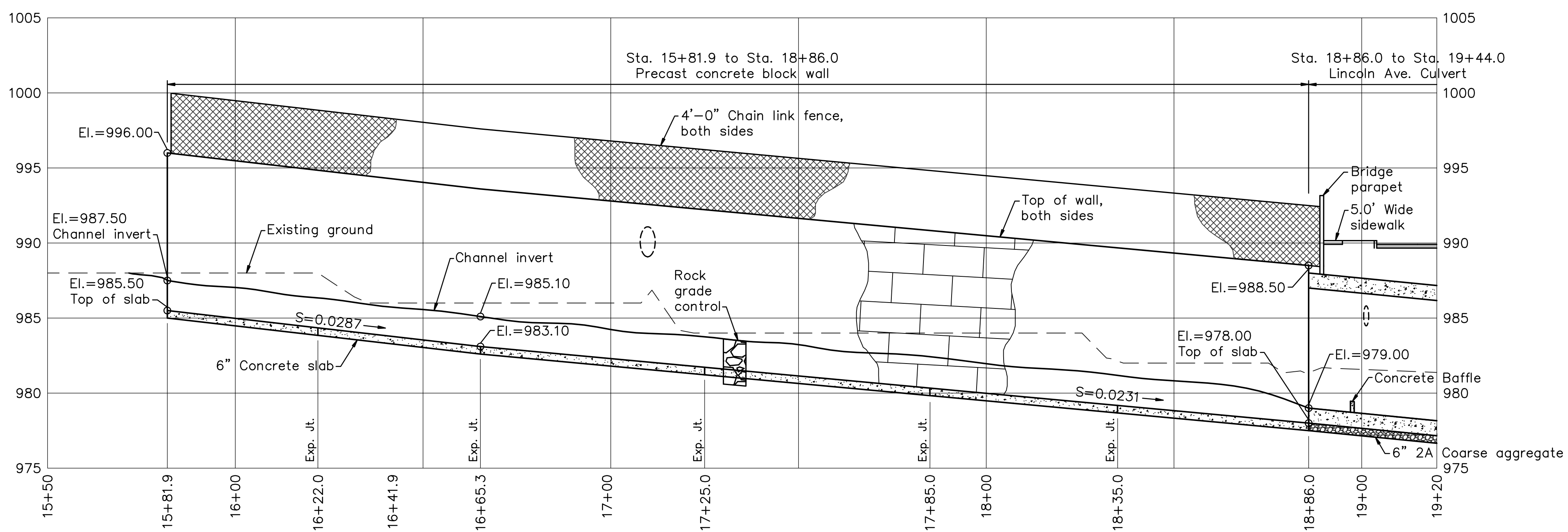
Curve No.	P.I. Coordinates		$\Delta$	D	R	T	L	P.C. Station	P.T. Station
	North	East							
P.I. #3	505,860.80	2,570,763.80	27°-18'-03"	25°-00'-00"	229.18'	55.66'	109.21'	14+72.71	15+81.91
P.I. #4	505,832.70	2,570,950.80	24°-37'-32"	25°-00'-00"	229.18'	50.02'	98.50'	16+65.33	17+63.83

PLAN

Scale: 1 in. = 20 ft.

SPONSOR ADJUSTMENTS

No.	Description	Location		Adjustment Required
		Station	Offset	
SA2-1	4'-0" Chain link fence	15+84.0 to 16+32.8	24.0' Lt.	Remove
SA2-2	Fence	16+33.0 to 17+52.0	18.0' Rt.	Remove
SA2-3	Shed	16+42.0	23.0' Rt.	Remove and relocate outside P.E.
SA2-4	4" SDR-35 Pipe	18+19.8	23.0' Lt.	Extend through wall
SA2-4	Fence	18+34.5 to 18+95.0	28.0' Rt.	Remove
SA2-5	16 Ton Weight Limit Sign	18+93.0	19.0' Lt.	Remove
SA2-6	15 MPH Sign	18+96.0	8.5' Lt.	Remove and reinstall
SA2-7	Gas Line Marker Sign	18+97.0	8.0' Lt.	Remove and reinstall
SA2-8	4" Gas line	19+03.0	CL	Relocate
SA2-9	8" Water line	19+12.0	CL	Relocate



PROFILE

Scale: { Horiz. 1 in. = 20 ft.  
Vert. 1 in. = 5 ft.

NO.	DATE	REVISION	APPR.
SUBMITTED			
PROJECT COORDINATOR - D.E.P.			
APPROVED			
CHIEF - DIVISION OF PROJECT DEVELOPMENT - D.E.P.			
APPROVED			
DIRECTOR - BUREAU OF WATERWAYS ENGINEERING AND WETLANDS - D.E.P.			
PROFESSIONAL'S SIGNATURE DATE PROFESSIONAL'S SIGNATURE DATE			
COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION OFFICE OF WATER MANAGEMENT			
COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF GENERAL SERVICES HARRISBURG, PENNSYLVANIA			
PROJECT NO. D.G.S. 181-21			
RUSHBROOK CREEK PROJECT			
BOROUGH OF JERMYN LACKAWANNA COUNTY, PENNSYLVANIA			
PLAN AND PROFILE STA. 14+50 TO STA. 19+20			
DRAWN BY J.A.D.	DATE 11-30-09	DRAWING NO. P-2	
CHECKED BY	SCALE As Shown		

ALL DIMENSIONS AND EXISTING  
CONDITIONS SHALL BE CHECKED  
AND VERIFIED BY CONTRACTOR  
AT THE SITE.



CONTRACTOR ADJUSTMENTS

No.	Description	Location		Adjustment Required
		Station	Offset	
CA3-1	Inlet & Pipe	19+28.0	9.0' Lt.	Replace inlet, connect to culvert
CA3-2	18" Clay Pipe	19+55.8	24.1' Rt.	Extend through wall
CA3-3	Deck	22+50.0	23.0' Rt.	Protect, do not disturb
CA3-4	15" PE Pipe	23+17.2	8.8' Lt.	Extend through culvert
CA3-5	12" PE Pipe	23+59.9	10.6' Lt.	Extend through wall
CA3-6	12" PE Pipe	23+60.2	11.9' Rt.	Extend through wall

SPONSOR ADJUSTMENTS

No.	Description	Location		Adjustment Required
		Station	Offset	
SA3-1	Fence	19+34.7	13.0' Lt.	Remove
SA3-2	Fence	19+78.0 to 20+94.0	25.0' Lt.	Remove to outside T.E. during construction, then reinstall
SA3-3	Fence	22+05.0 to 23+06.0	15.0' Rt.	Remove
SA3-4	Fence	23+55.5	12.0' Rt.	Remove

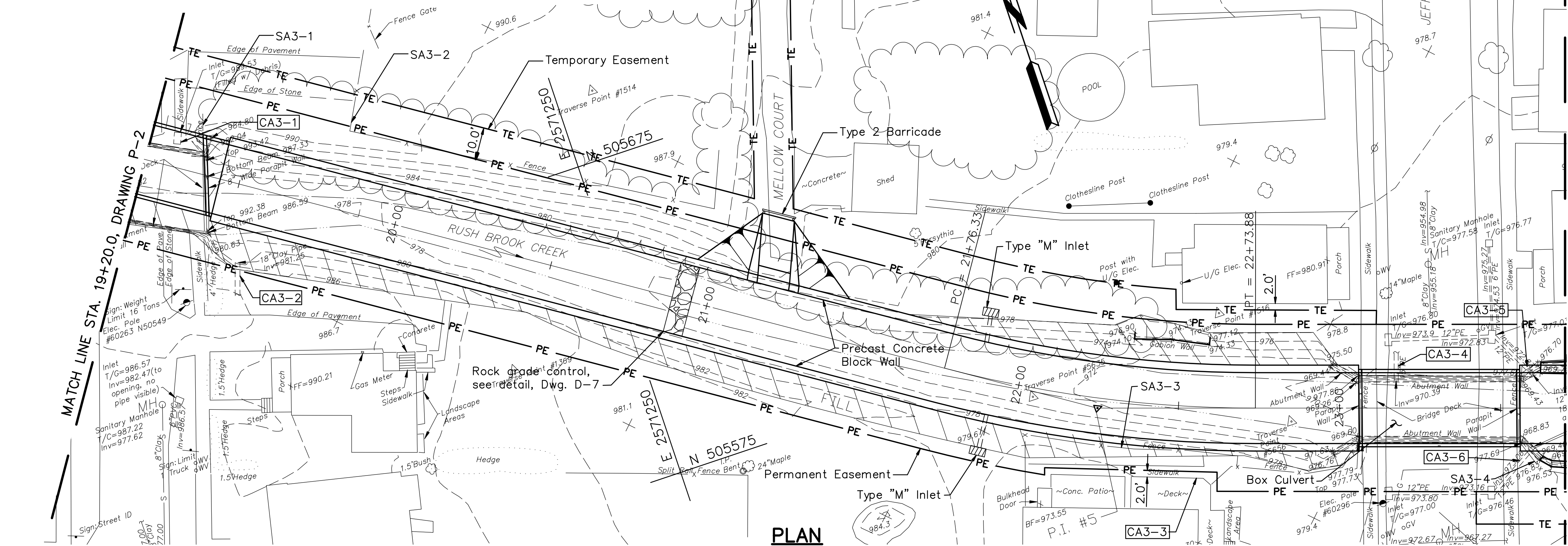
CURVE DATA

Curve No.	P.I. Coordinates		$\Delta$	D	R	T	L	P.C. Station	P.T. Station
	North	East							
P.I. #5	505,552.80	2,571,379.00	14°-37'-58"	15'-00'-00"	381.71'	49.04'	97.55'	21+76.33	22+73.88

NOTES:

MText Holder

MATCH LINE STA. 23+70.0, DRAWING P-4



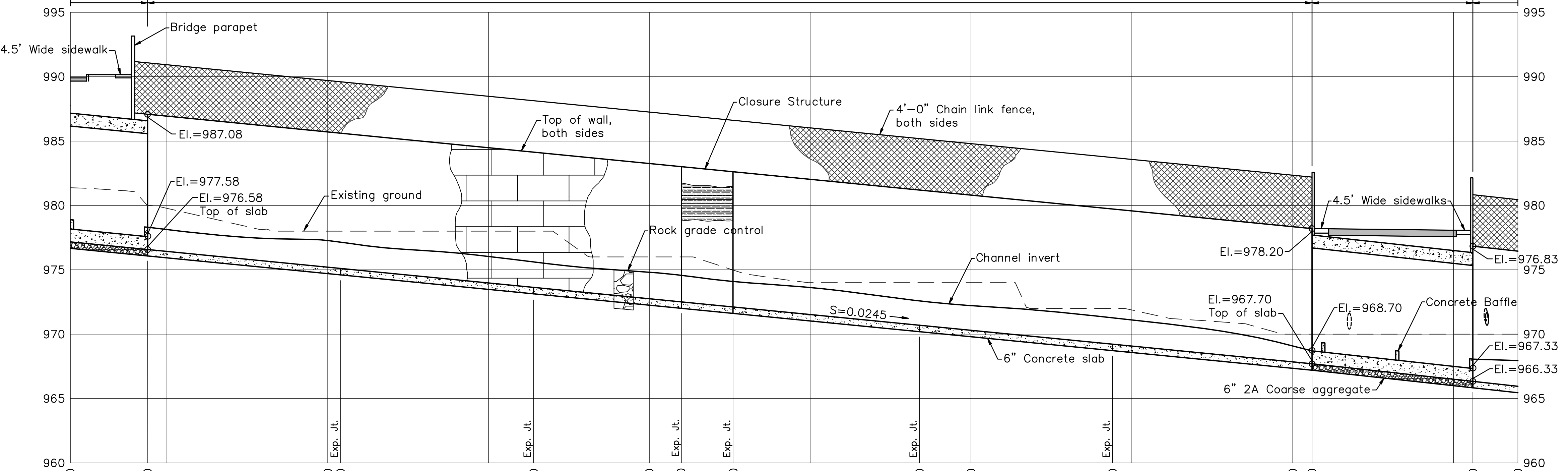
PLAN

Scale: 1 in. = 20 ft.

Sta. 19+44.0 to Sta. 23+06.0  
Precast concrete block wall

Sta. 23+06.0 to Sta. 23+56.0  
Jefferson Ave. Culvert

Sta. 18+86.0 to Sta. 19+44.0  
Lincoln Ave. Culvert



PROFILE

Scale: { Horiz. 1 in. = 20 ft.  
Vert. 1 in. = 5 ft.

NO.	DATE	REVISION	APPR.
SUBMITTED			
PROJECT COORDINATOR - D.E.P.			
APPROVED			
CHIEF - DIVISION OF PROJECT DEVELOPMENT - D.E.P.			
APPROVED			
DIRECTOR - BUREAU OF WATERWAYS ENGINEERING AND WETLANDS - D.E.P.			
PROFESSIONAL'S SIGNATURE DATE PROFESSIONAL'S SIGNATURE DATE			
COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION OFFICE OF WATER MANAGEMENT			
COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF GENERAL SERVICES HARRISBURG, PENNSYLVANIA			
PROJECT NO. D.G.S. 181-21			
RUSHBROOK CREEK PROJECT			
BOROUGH OF JERMYN LACKAWANNA COUNTY, PENNSYLVANIA			
PLAN AND PROFILE STA. 19+20 TO STA. 23+70			
DRAWN BY	DATE	DRAWING NO.	
J.A.D.	11-30-09	P-3	
CHECKED BY	SCALE	As Shown	

ALL DIMENSIONS AND EXISTING  
CONDITIONS SHALL BE CHECKED  
AND VERIFIED BY CONTRACTOR  
AT THE SITE.

CONTRACTOR ADJUSTMENTS

No.	Description	Location		Adjustment Required
		Station	Offset	
CA4-1	Garage	25+39.8	19.1' Lt.	Protect, Do not disturb
CA4-2	12" CMP	27+35.5	5.7' Lt	Extend through culvert
CA4-3	Inlet and 12" Pipe	27+53.0	13.0' Rt.	Replace Inlet, Connect to Culvert
CA4-4	Inlet and 12" Pipe	27+80.0	13.0' Lt.	Replace Inlet, Connect to Culvert
CA4-5	Electric Pole #60340	27+81.0	15.0' Lt.	Protect, Do not disturb

CURVE DATA

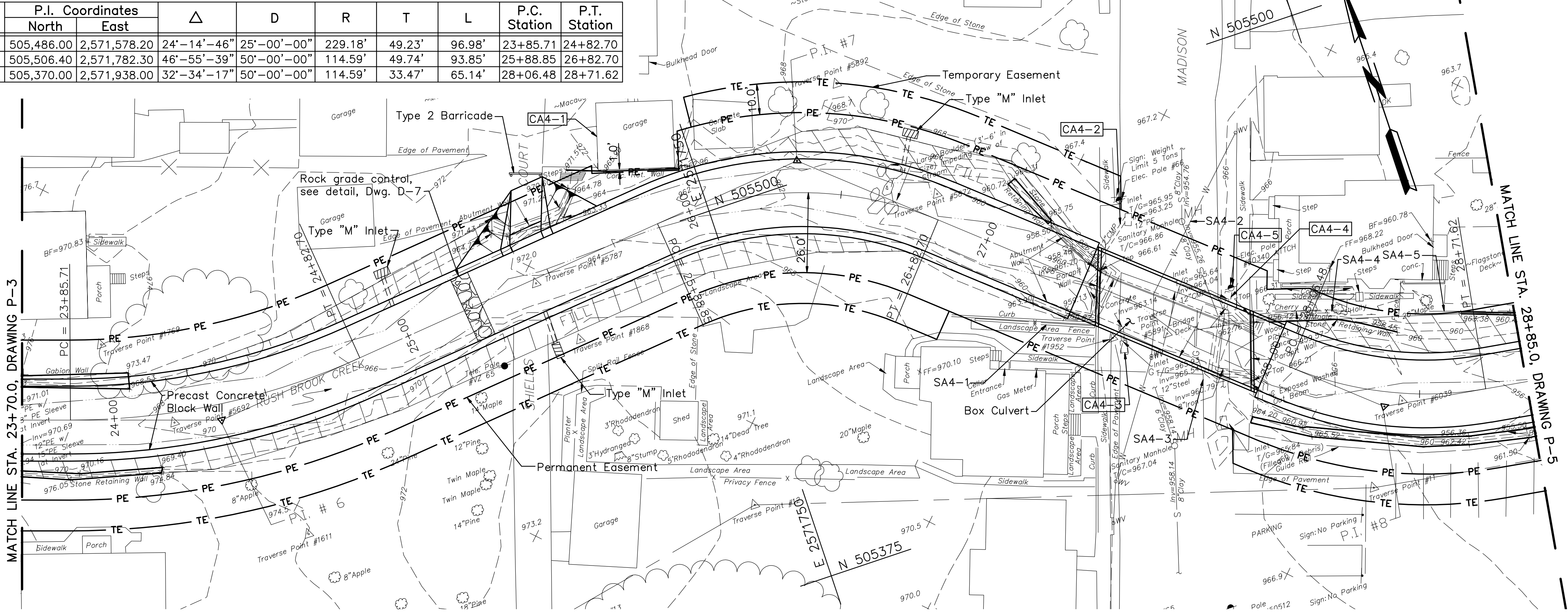
Curve No.	P.I. Coordinates		$\Delta$	D	R	T	L	P.C. Station	P.T. Station
	North	East							
P.I. #6	505,486.00	2,571,578.20	24°-14'-46"	25°-00'-00"	229.18'	49.23'	96.98'	23+85.71	24+82.70
P.I. #7	505,506.40	2,571,782.30	46°-55'-39"	50°-00'-00"	114.59'	49.74'	93.85'	25+88.85	26+82.70
P.I. #8	505,370.00	2,571,938.00	32°-34'-17"	50°-00'-00"	114.59'	33.47'	65.14'	28+06.48	28+71.62

SPONSOR ADJUSTMENTS

No.	Description	Location		Adjustment Required
		Station	Offset	
SA4-1	Fence	27+20.0	20.0' Rt.	Remove
SA4-2	Water line	27+58.4	0	Relocate below box culvert
SA4-3	Gas line	27+75.0	0	Relocate below box culvert
SA4-4	Wood Picket Fence	27+89.0	12.5' Lt.	Remove
SA4-5	Fence	28+52.0 to 29+21.0	26.0' Lt.	Remove

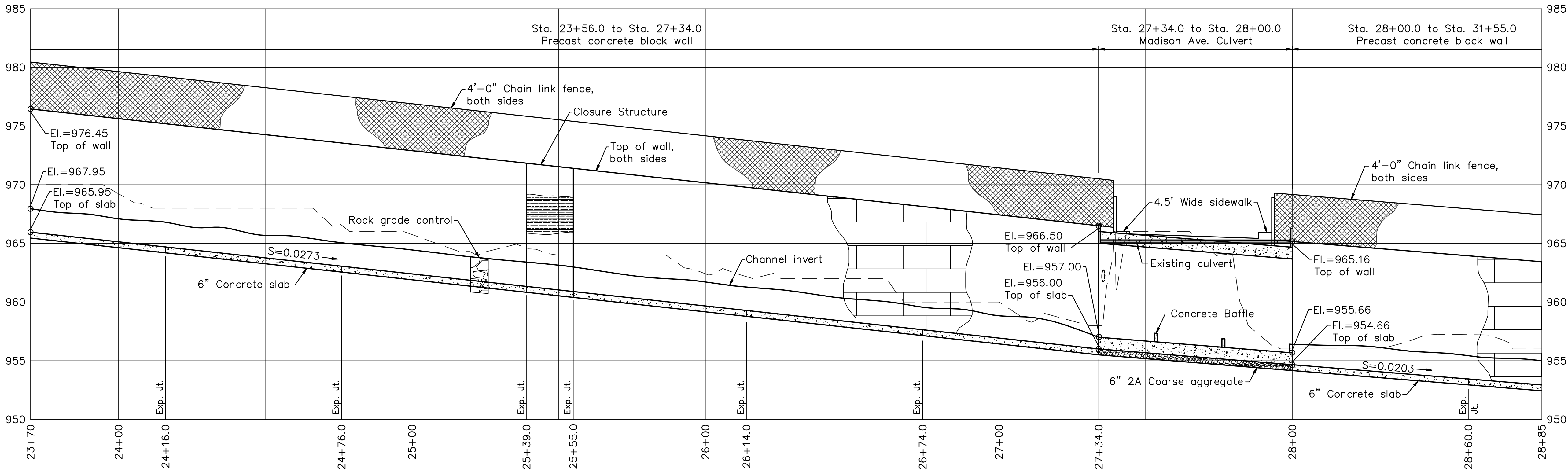
NOTES:

MText Holder



PLAN

Scale: 1 in. = 20 ft.



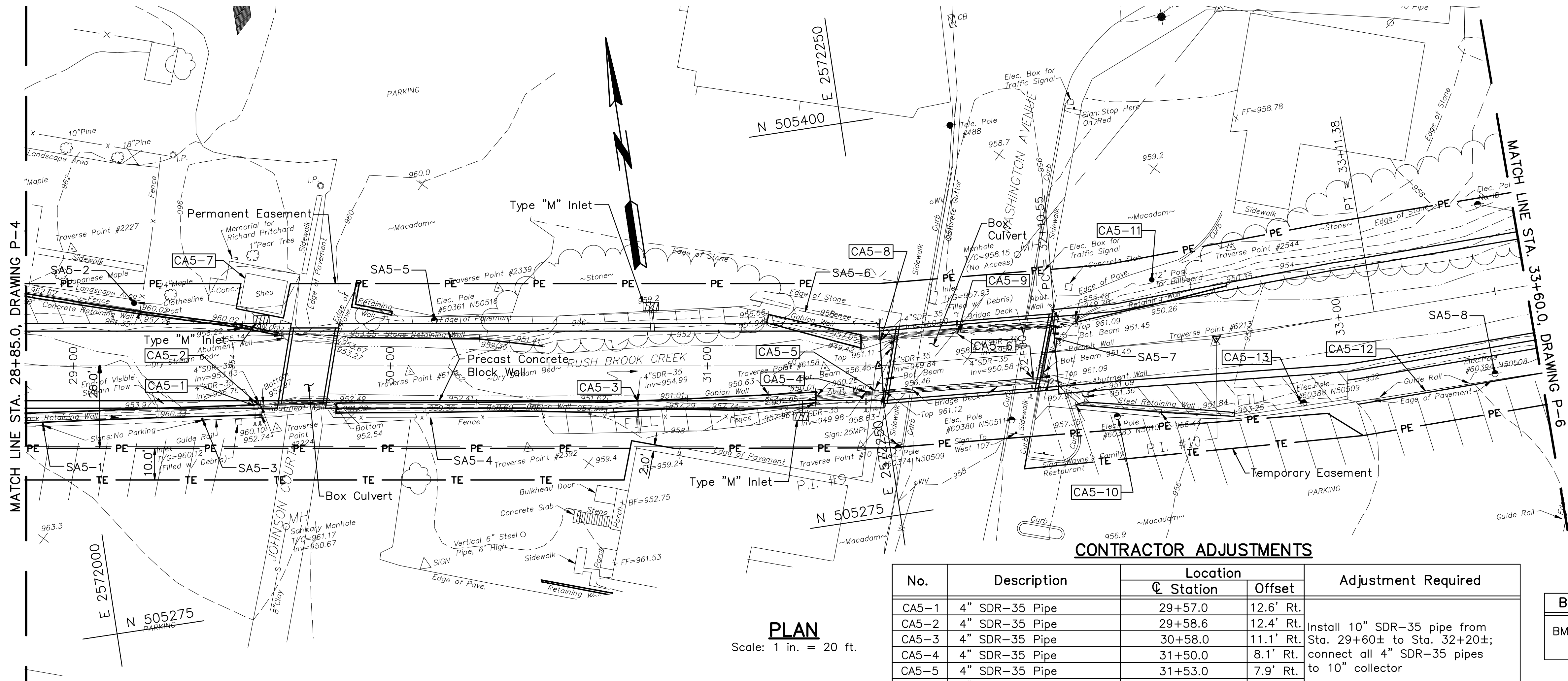
PROFILE

Scale: { Horiz. 1 in. = 20 ft.  
Vert. 1 in. = 5 ft.

NO.	DATE	REVISION	APPR.
SUBMITTED			
PROJECT COORDINATOR - D.E.P.			
APPROVED			
CHIEF - DIVISION OF PROJECT DEVELOPMENT - D.E.P.			
APPROVED			
DIRECTOR - BUREAU OF WATERWAYS ENGINEERING AND WETLANDS - D.E.P.			
PROFESSIONAL'S SIGNATURE DATE PROFESSIONAL'S SIGNATURE DATE			
COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION OFFICE OF WATER MANAGEMENT			
COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF GENERAL SERVICES HARRISBURG, PENNSYLVANIA			
PROJECT NO. D.G.S. 181-21			
RUSHBROOK CREEK PROJECT			
BOROUGH OF JERMYN LACKAWANNA COUNTY, PENNSYLVANIA			
PLAN AND PROFILE STA. 23+70 TO STA. 28+85			
DRAWN BY	DATE	DRAWING NO.	
J.A.D.	11-30-09	P-4	
CHECKED BY	SCALE	As Shown	

ALL DIMENSIONS AND EXISTING  
CONDITIONS SHALL BE CHECKED  
AND VERIFIED BY CONTRACTOR  
AT THE SITE.





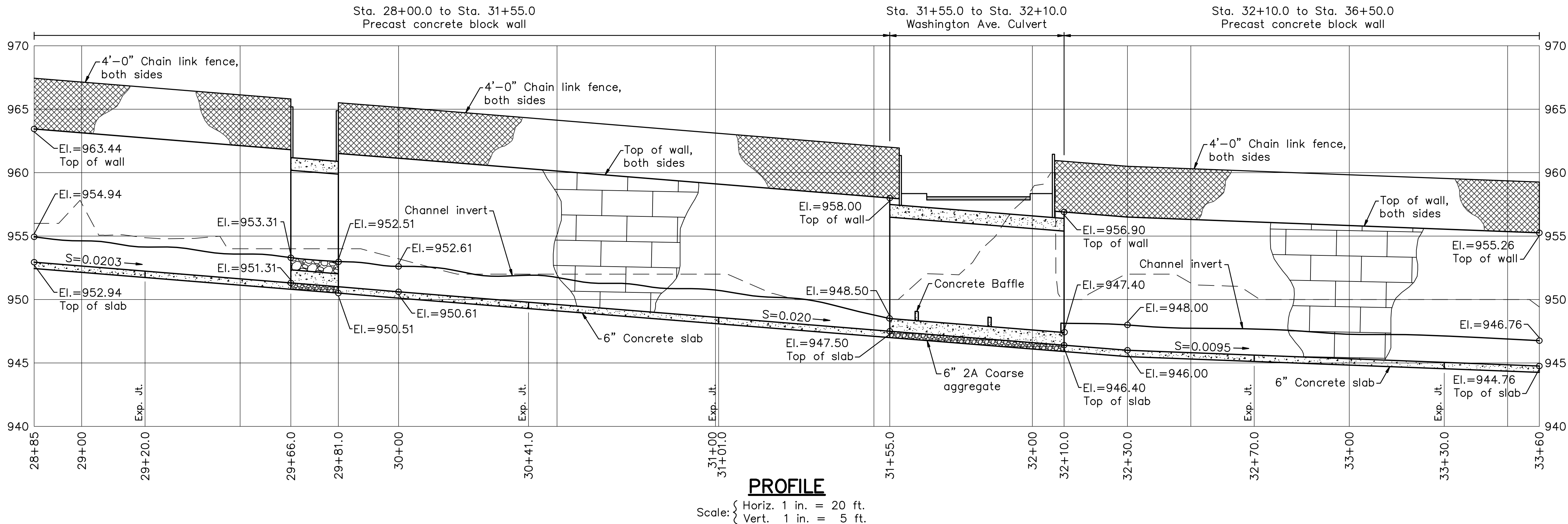
NOTES:  
MText Holder

No.	Description	Location		Adjustment Required
		Station	Offset	
SA5-1	No Parking Sign	28+90.0	18.5' Rt.	Remove and reinstall
SA5-2	Clothesline Post	29+19.5	20.0' Lt.	Remove and reinstall
SA5-3	No Parking Sign	29+40.8	16.5' Rt.	Remove and reinstall
SA5-4	Fence	29+82.0 to 31+55.0	15.5' Rt.	Remove
SA5-5	Electric Pole	30+13.7	14.0' Lt.	Relocate outside P.E.
SA5-6	Fence	31+14.2 to 31+57.0	17.0' Lt.	Remove
SA5-7	Water line	32+09.0	C	Relocate below box culvert
SA5-8	Electric Pole	33+45.0	25.0' Rt.	Relocate

No.	Description	Location		Adjustment Required
		Station	Offset	
CA5-1	4" SDR-35 Pipe	29+57.0	12.6' Rt.	Install 10" SDR-35 pipe from Sta. 29+60± to Sta. 32+20±; connect all 4" SDR-35 pipes to 10" collector
CA5-2	4" SDR-35 Pipe	29+58.6	12.4' Rt.	
CA5-3	4" SDR-35 Pipe	30+58.0	11.1' Rt.	
CA5-4	4" SDR-35 Pipe	31+50.0	8.1' Rt.	
CA5-5	4" SDR-35 Pipe	31+53.0	7.9' Rt.	
CA5-6	4" SDR-35 Pipe	32+02.2	7.6' Rt.	Protect, Do not disturb
CA5-7	Shed	29+57.0	18.0' Lt.	
CA5-8	4" SDR-35 Pipe	31+55.4	8.4' Lt.	Extend through culvert
CA5-9	4" SDR-35 Pipe	31+79.7	8.3' Lt.	Extend through culvert
CA5-10	Electric Pole#60383-N5010	32+25.0	22.0' Rt.	Protect, Do not disturb
CA5-11	12" Post for Billboard	32+42.7	19.7' Lt.	Protect, Do not disturb
CA5-12	Guide Rail	33+23.1	27.4' Rt.	Protect, Do not disturb
CA5-13	Electric Pole#60388-N50509	33+23.1	25.0' Rt.	Protect, Do not disturb

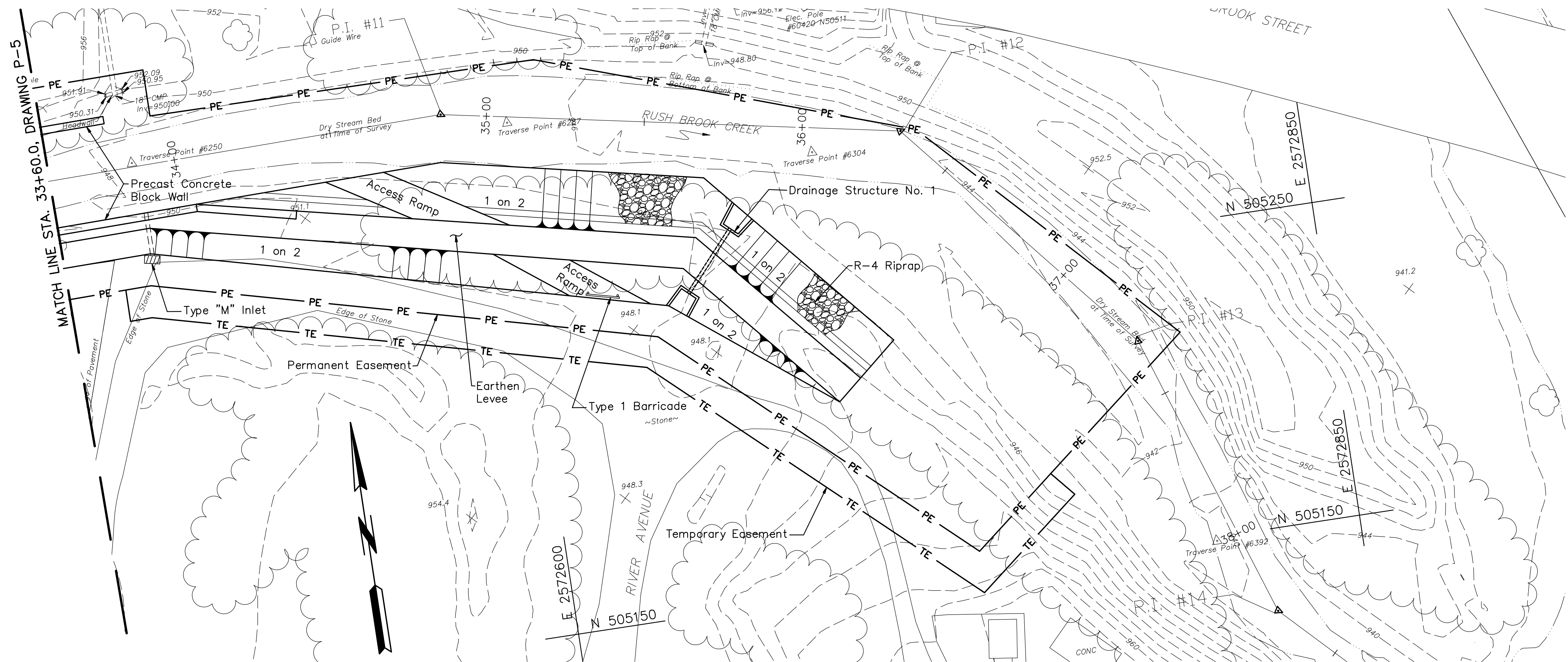
BENCH MARK DATA		
BM No.	Elevation	Location
BM No. 5	958.72	NE corner bolt painted yellow on mast arm, SW corner of Washington Ave. and Rush Brook St.

Curve No.	P.I. Coordinates		Δ	D	R	T	L	P.C. Station	P.T. Station
	North	East							
P.I. #9	505,322.50	2,572,250.30	4°-37'-39"	5°-00'-00"	1145.92'	50.44'	100.83'	32+10.55	31+54.04
P.I. #10	505,315.00	2,572,357.00	5°-02'-29"	5°-00'-00"	1145.92'	50.44'	100.83'	32+10.55	33+11.38



NO.	DATE	REVISION	APPR.
SUBMITTED			
PROJECT COORDINATOR - D.E.P.			
APPROVED			
CHIEF - DIVISION OF PROJECT DEVELOPMENT - D.E.P.			
APPROVED			
DIRECTOR - BUREAU OF WATERWAYS ENGINEERING AND WETLANDS - D.E.P.			
PROFESSIONAL'S SIGNATURE _____ DATE _____			
COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION OFFICE OF WATER MANAGEMENT			
COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF GENERAL SERVICES HARRISBURG, PENNSYLVANIA			
PROJECT NO. D.G.S. 181-21			
RUSHBROOK CREEK PROJECT			
BOROUGH OF JERMYN LACKAWANNA COUNTY, PENNSYLVANIA			
PLAN AND PROFILE STA. 28+85 TO STA. 33+60			
DRAWN BY J.A.D.	DATE 11-30-09	DRAWING NO. P-5	
CHECKED BY	SCALE As Shown		

ALL DIMENSIONS AND EXISTING  
CONDITIONS SHALL BE CHECKED  
AND VERIFIED BY CONTRACTOR  
AT THE SITE.



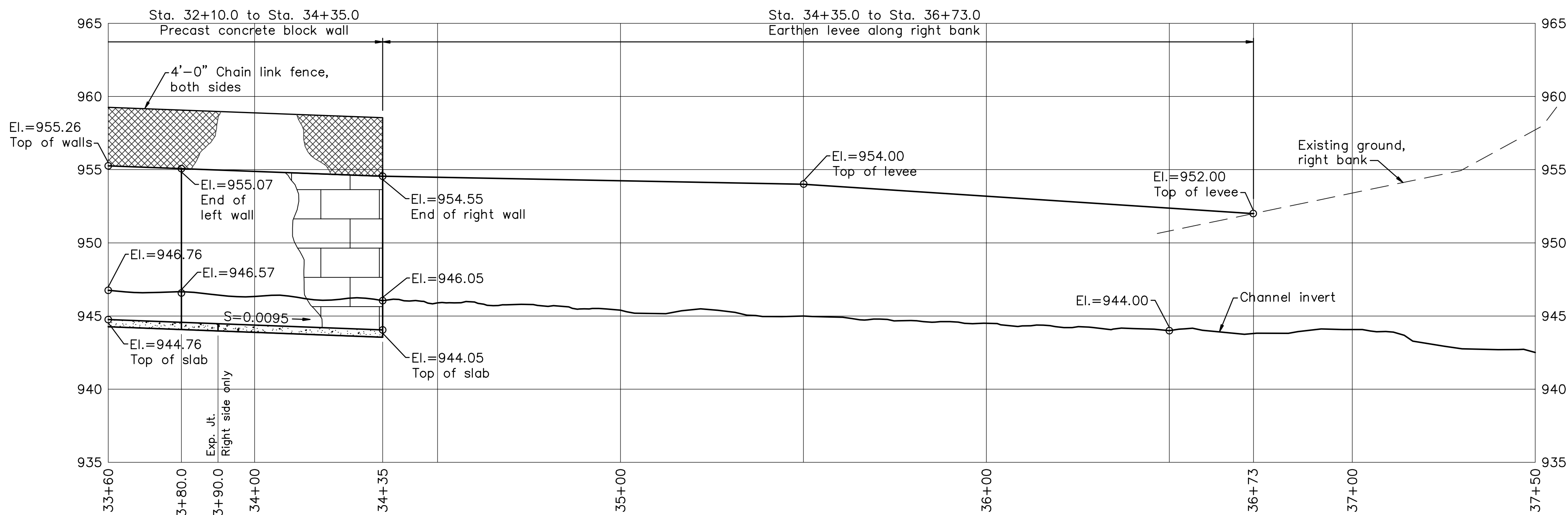
**NOTES:**  
MText Placeholder

**CURVE DATA**

Curve No.	P.I. Coordinates		$\Delta$	D	R	T	L	P.C. Station	P.T. Station
	North	East							
P.I. #11	505,319.00	2,572,581.50	11°-42'-47"						34+85.47
P.I. #12	505,292.00	2,572,724.50	39°-21'-22"						36+31.00
P.I. #13	505,215.00	2,572,789.00	21°-08'-23"						37+31.44
P.I. #14	505,124.00	2,572,820.00	25°-56'-48"						38+27.58
P.O.T. #2	505,040.60	2,572,902.70							39+45.03

**PLAN**

Scale: 1 in. = 20 ft.



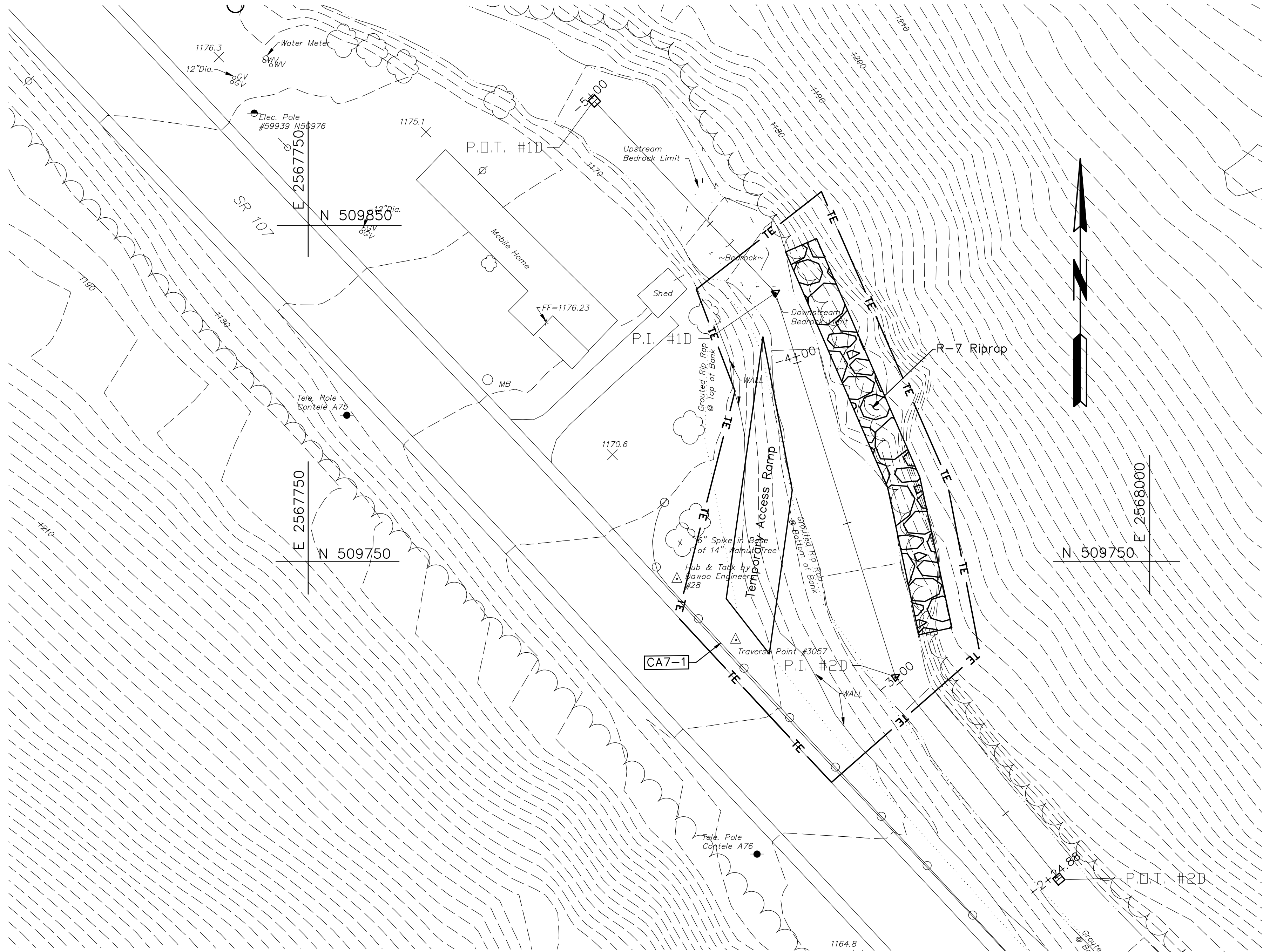
**PROFILE**

Scale: { Horiz. 1 in. = 20 ft.  
Vert. 1 in. = 5 ft.

NO.	DATE	REVISION	APPR.
SUBMITTED			
PROJECT COORDINATOR - D.E.P.			
APPROVED			
CHIEF - DIVISION OF PROJECT DEVELOPMENT - D.E.P.			
APPROVED			
DIRECTOR - BUREAU OF WATERWAYS ENGINEERING AND WETLANDS - D.E.P.			
PROFESSIONAL'S SIGNATURE DATE PROFESSIONAL'S SIGNATURE DATE			
COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION OFFICE OF WATER MANAGEMENT			
COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF GENERAL SERVICES HARRISBURG, PENNSYLVANIA			
PROJECT NO. D.G.S. 181-21			
RUSHBROOK CREEK PROJECT			
BOROUGH OF JERMYN LACKAWANNA COUNTY, PENNSYLVANIA			
PLAN AND PROFILE STA. 33+60 TO STA. 38+50			
DRAWN BY J.A.D.	DATE 11-30-09	DRAWING NO. P-6	
CHECKED BY	SCALE As Shown		

ALL DIMENSIONS AND EXISTING  
CONDITIONS SHALL BE CHECKED  
AND VERIFIED BY CONTRACTOR  
AT THE SITE.





**PLAN**  
Scale: 1 in. = 20 ft.

**CURVE DATA**

Curve No.	P.I. Coordinates		$\Delta$	D	R	T	L	P.C. Station	P.T. Station
	North	East							
P.O.T. #1D	509,886.82	2,567,835.07							
P.I. #1D	509,829.85	2,567,888.85							
P.I. #2D	509,715.70	2,567,924.46							
P.O.T. #2D	509,655.68	2,567,973.01							

**CONTRACTOR ADJUSTMENTS**

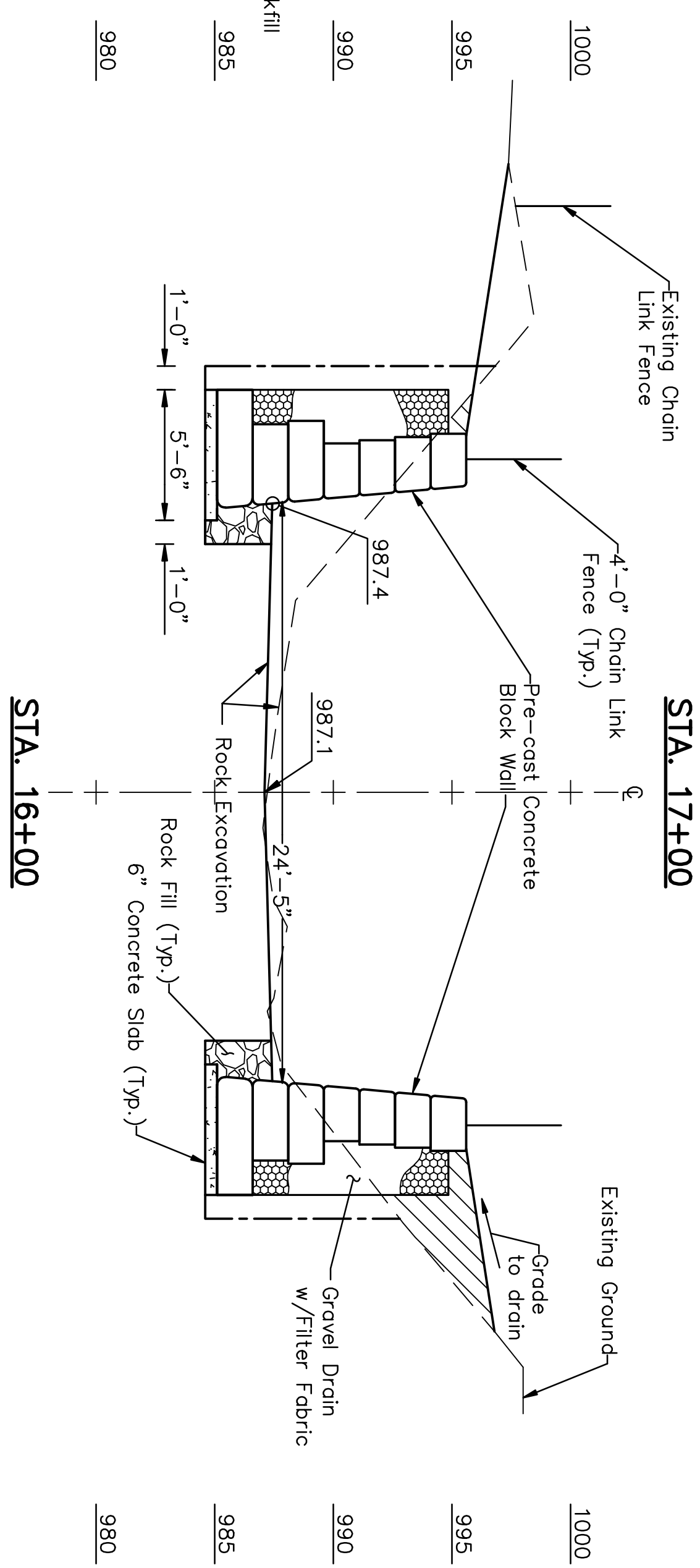
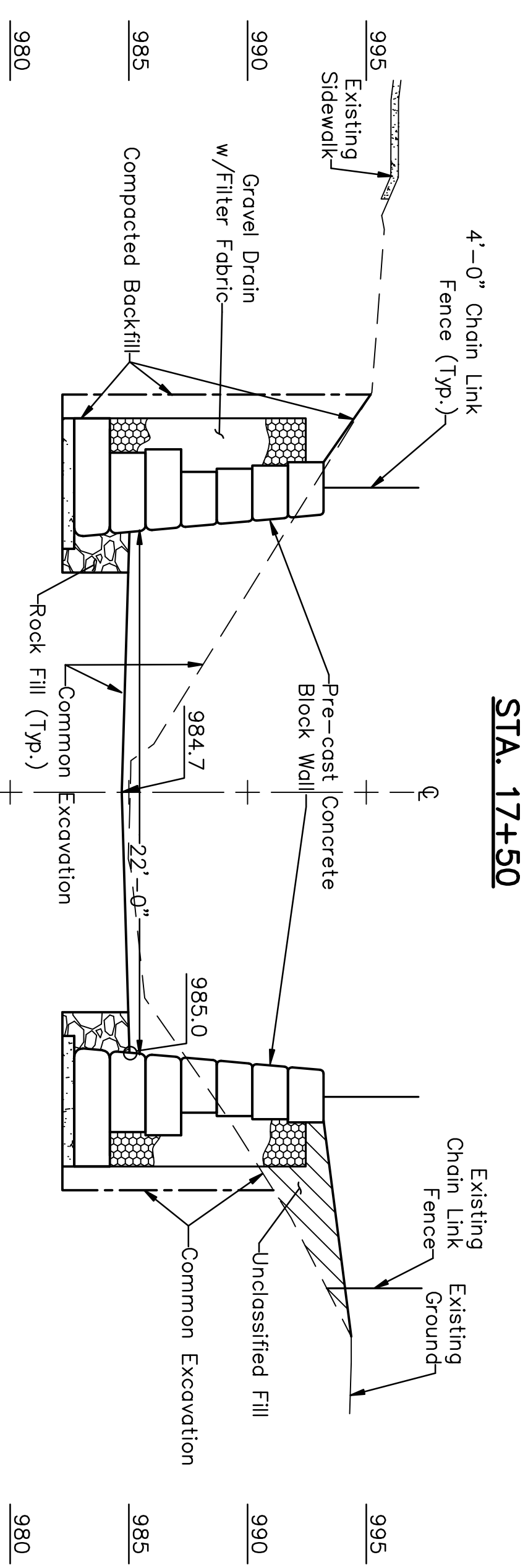
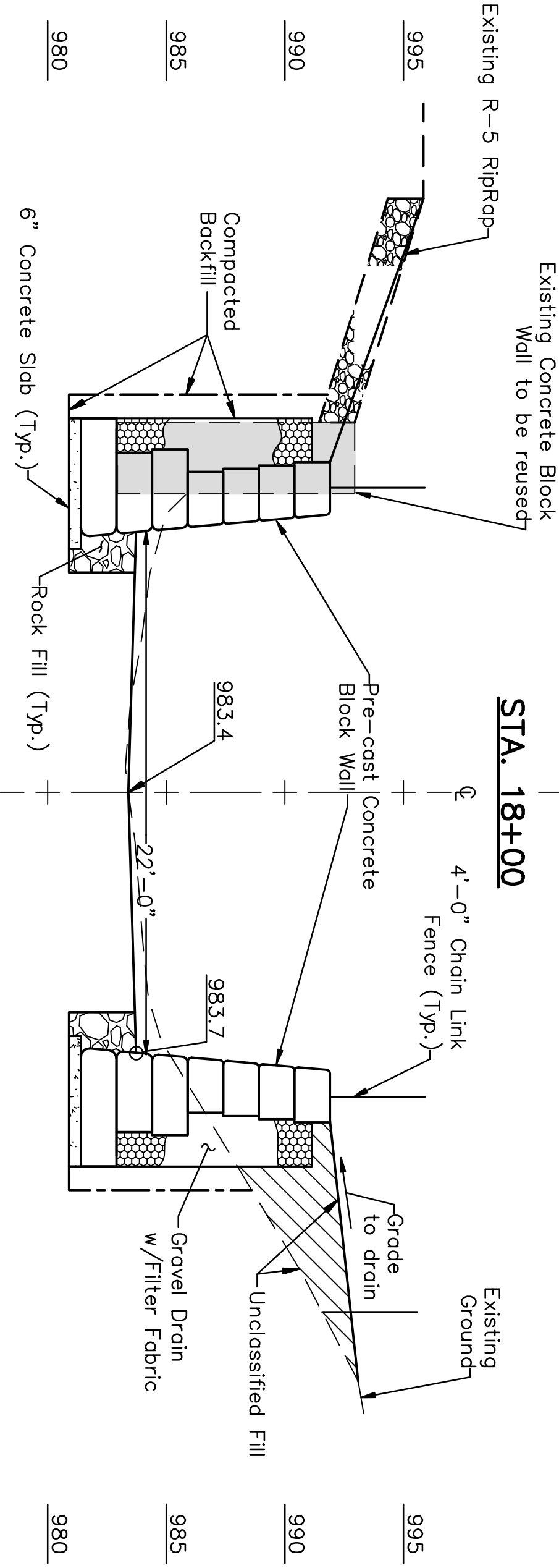
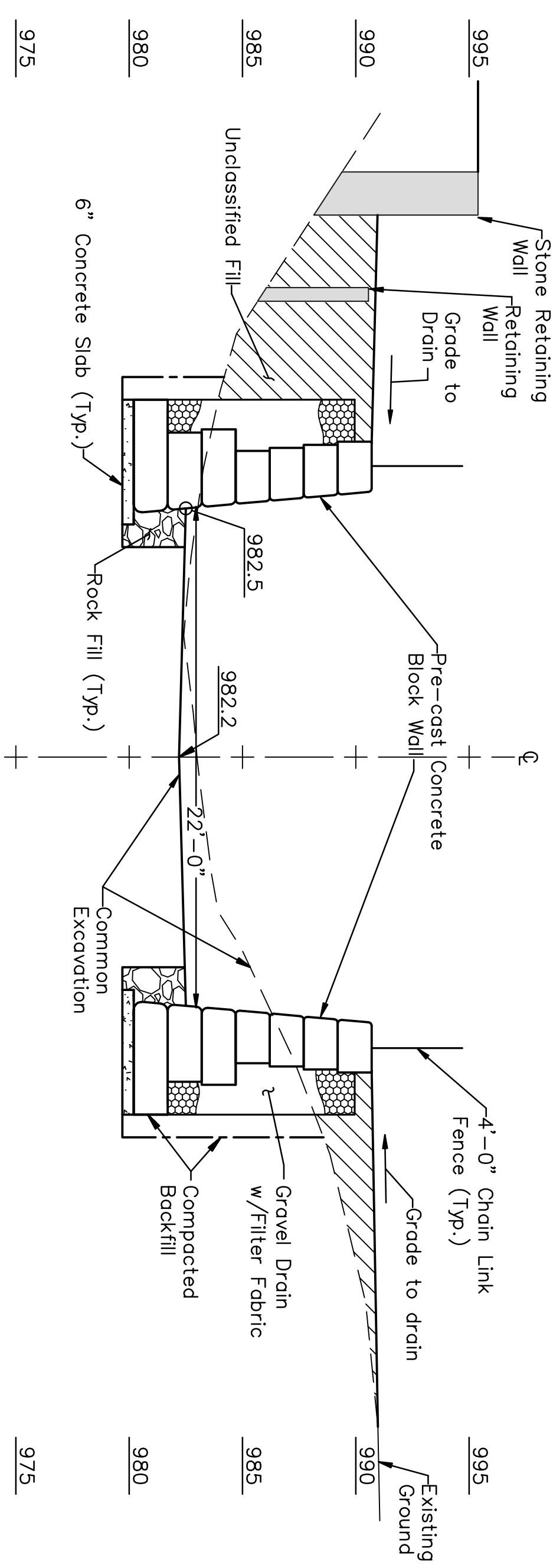
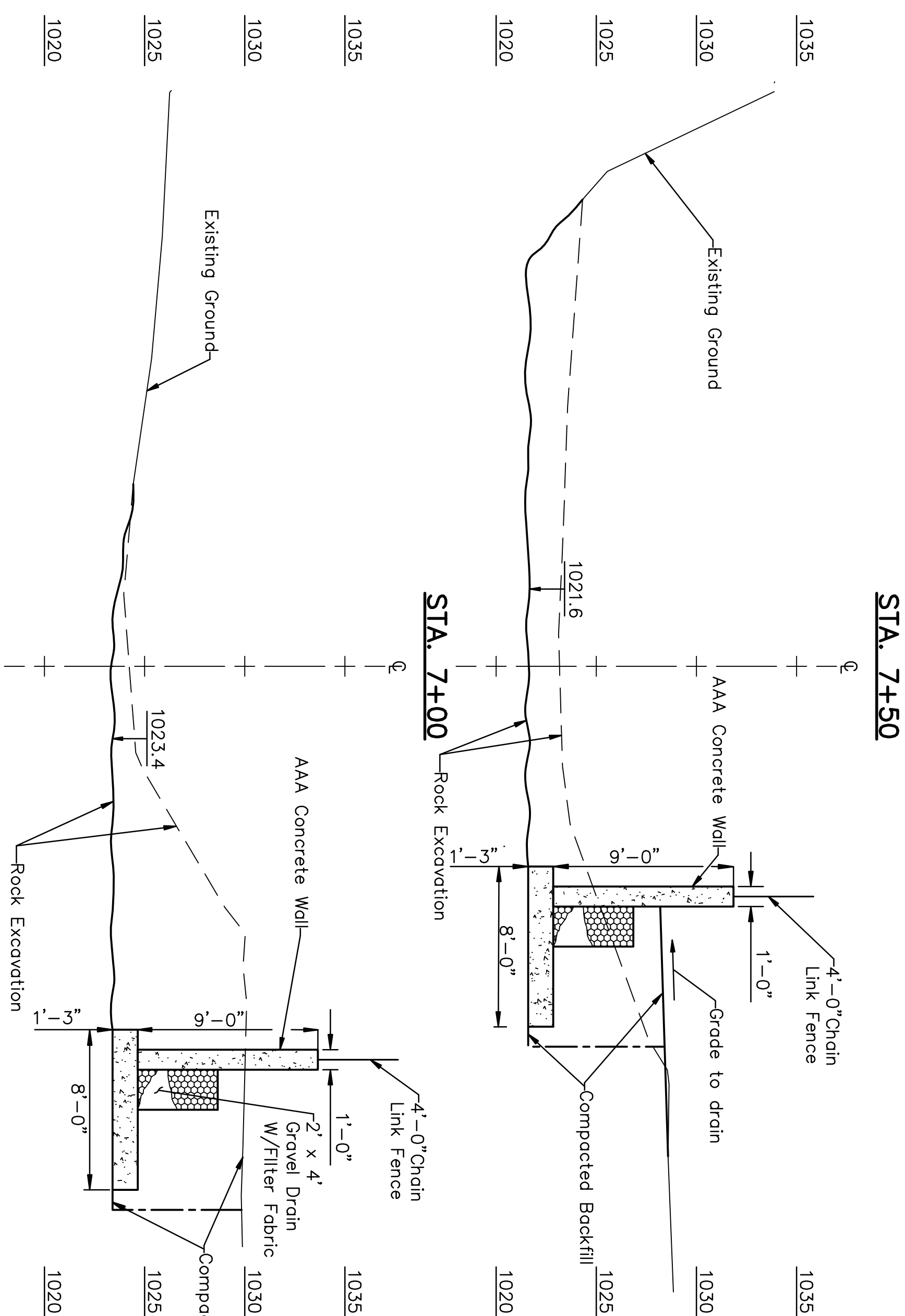
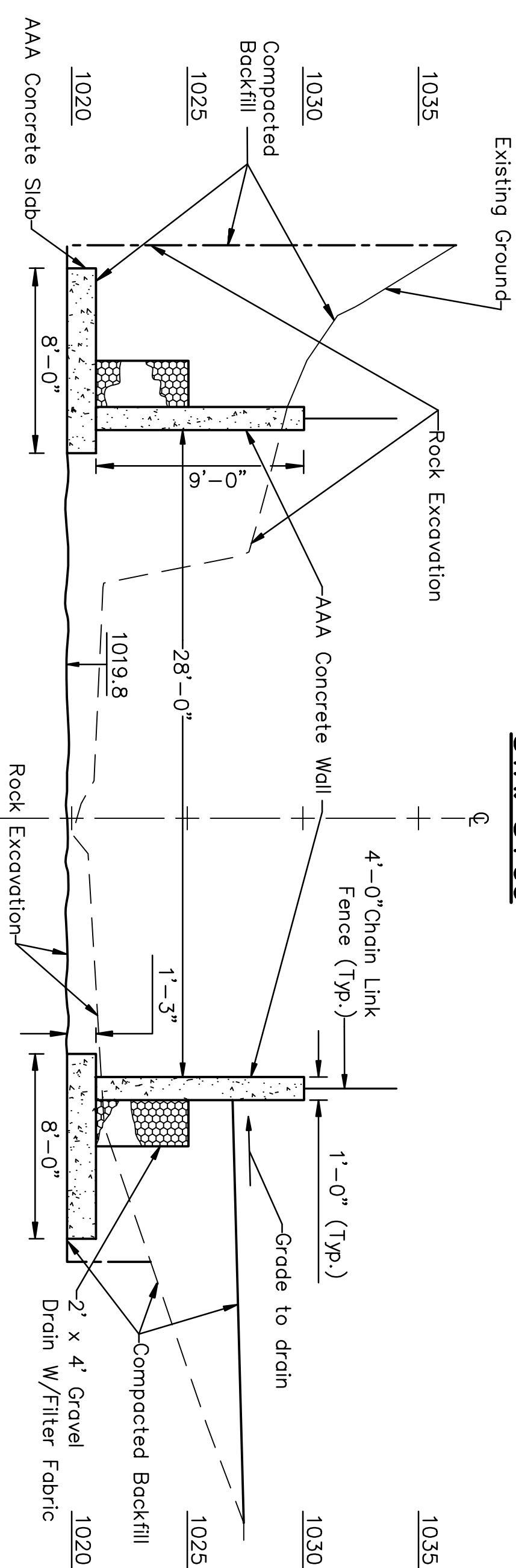
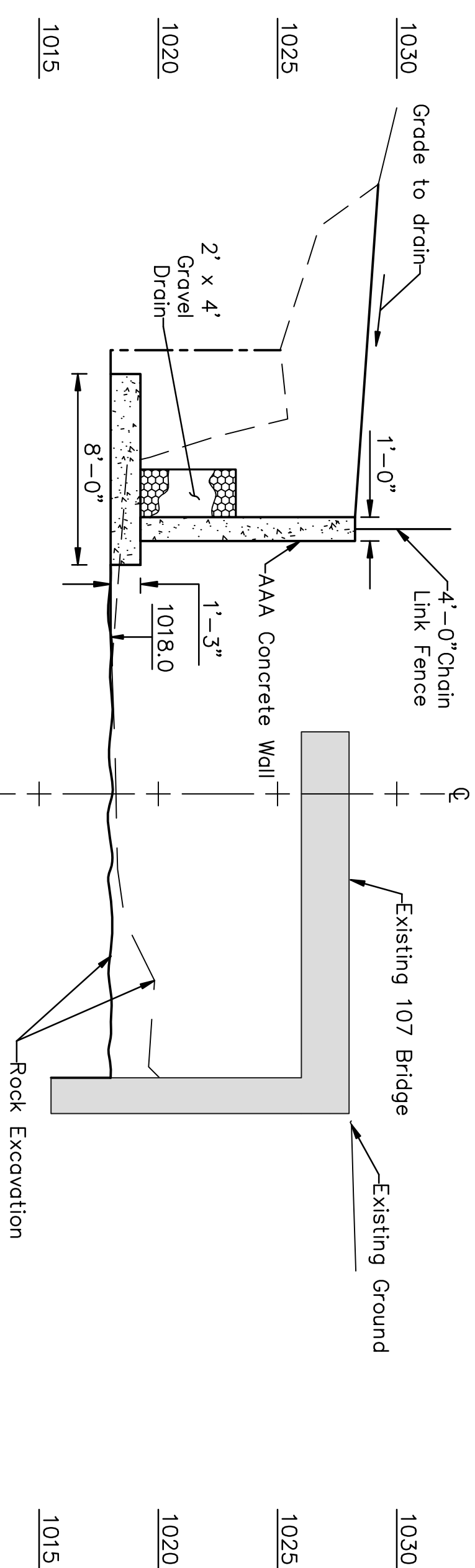
No.	Description	Location		Adjustment Required
		Station	Offset	
CA7-1	Guide rail	-3+50 to -3+00	40.0' Rt.	Remove and Reinstall as necessary

**NOTES:**

MText Holder

NO.	DATE	REVISION	APPR.
SUBMITTED			
PROJECT COORDINATOR - D.E.P.			
APPROVED			
CHIEF - DIVISION OF PROJECT DEVELOPMENT - D.E.P.			
APPROVED			
DIRECTOR - BUREAU OF WATERWAYS ENGINEERING AND WETLANDS - D.E.P.			
PROFESSIONAL'S SIGNATURE			
DATE			
PROFESSIONAL'S SIGNATURE			
DATE			
COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION OFFICE OF WATER MANAGEMENT			
COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF GENERAL SERVICES HARRISBURG, PENNSYLVANIA			
PROJECT NO. D.G.S. 181-21			
RUSHBROOK CREEK PROJECT			
BOROUGH OF JERMYN LACKAWANNA COUNTY, PENNSYLVANIA			
PLAN AND PROFILE STA. -5+00 TO STA. -2+24.88			
DRAWN BY	DATE	DRAWING NO.	
J.A.D.	11-30-09	P-7	
CHECKED BY	SCALE	As Shown	

ALL DIMENSIONS AND EXISTING  
CONDITIONS SHALL BE CHECKED  
AND VERIFIED BY CONTRACTOR  
AT THE SITE.

[illegible]

COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION OFFICE OF WATER MANAGEMENT
COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF GENERAL SERVICES HARRISBURG, PENNSYLVANIA
PROJECT NO. D.G.S. 181-21

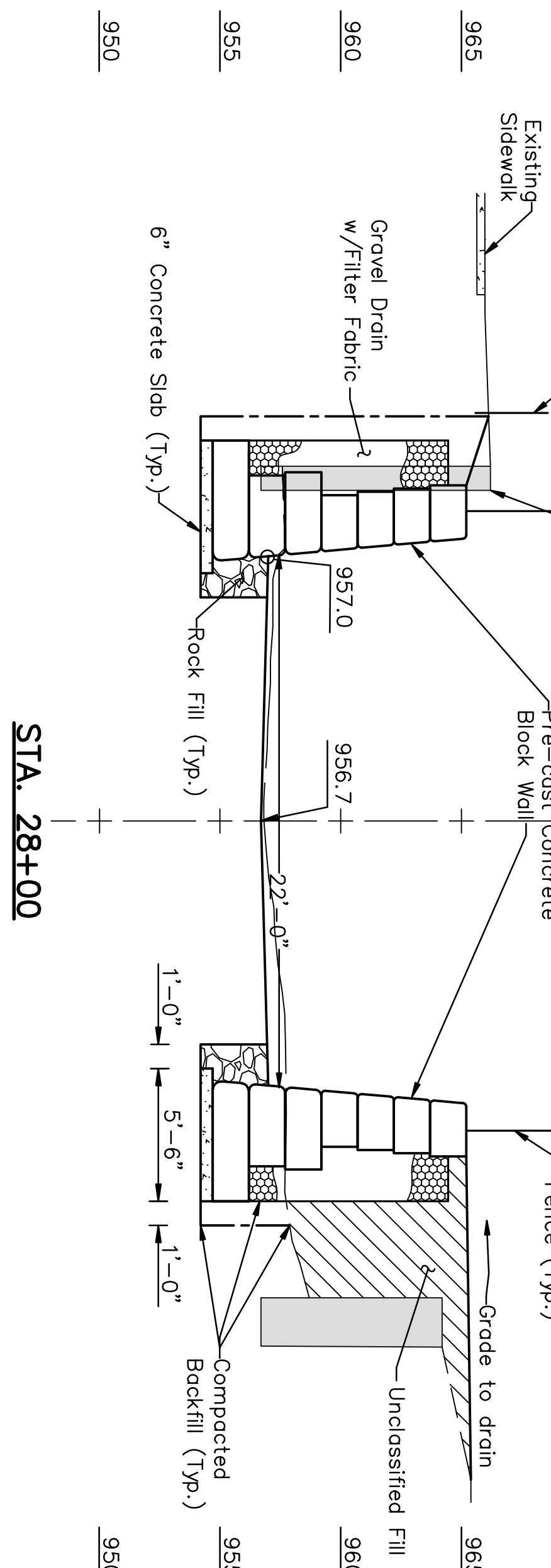
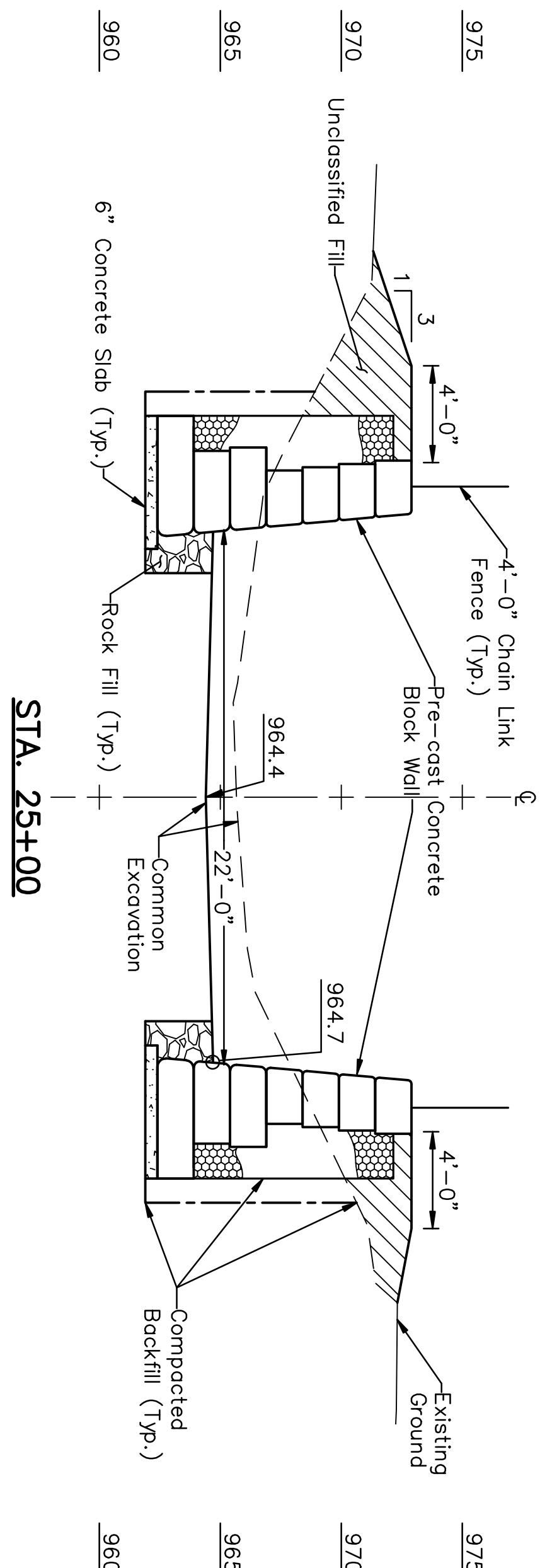
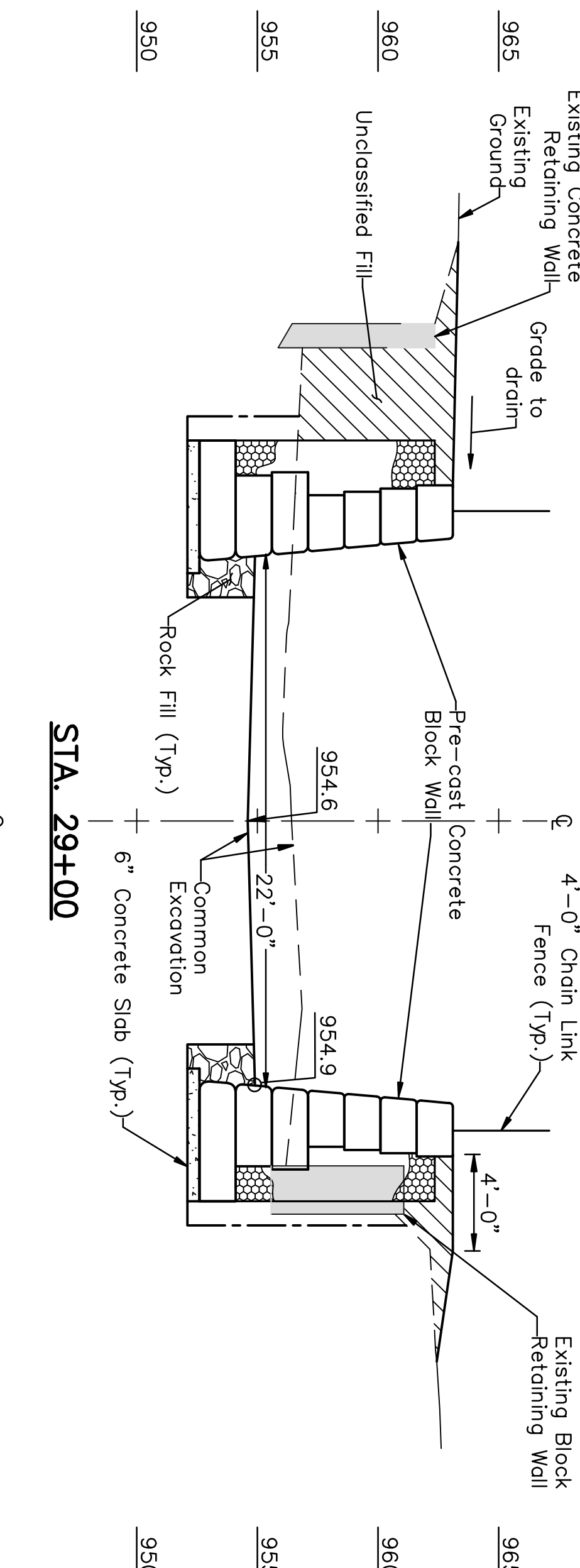
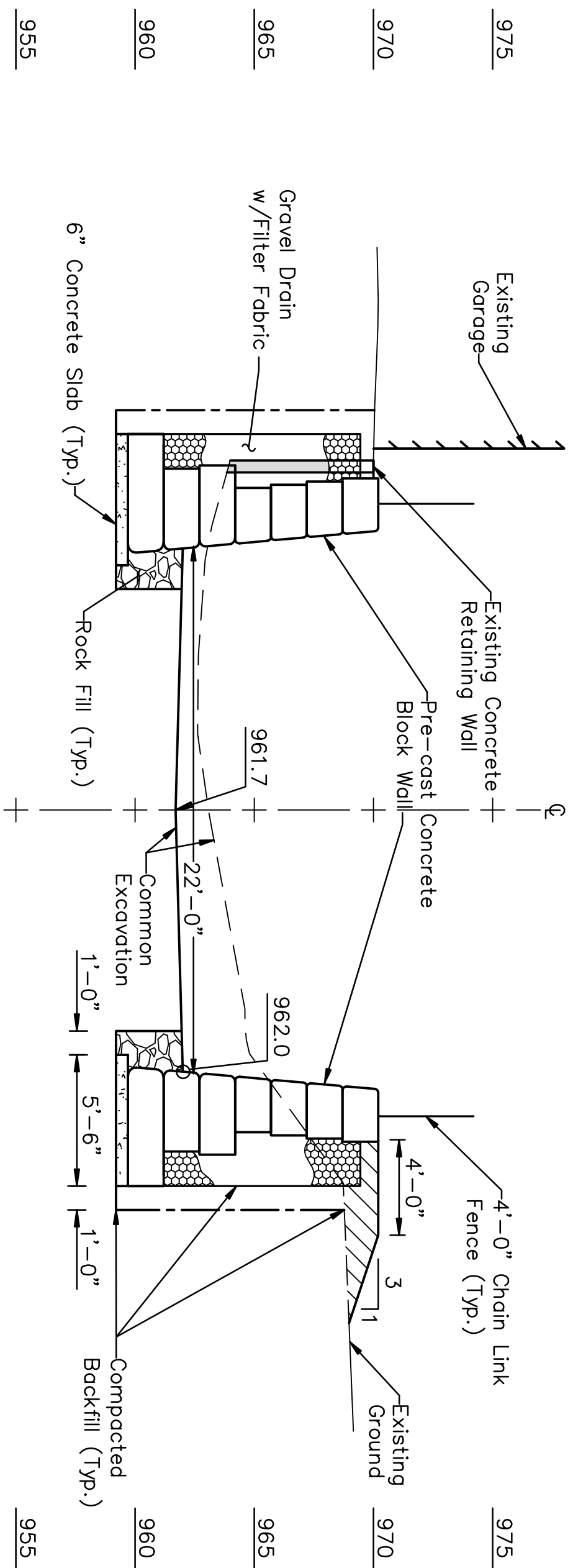
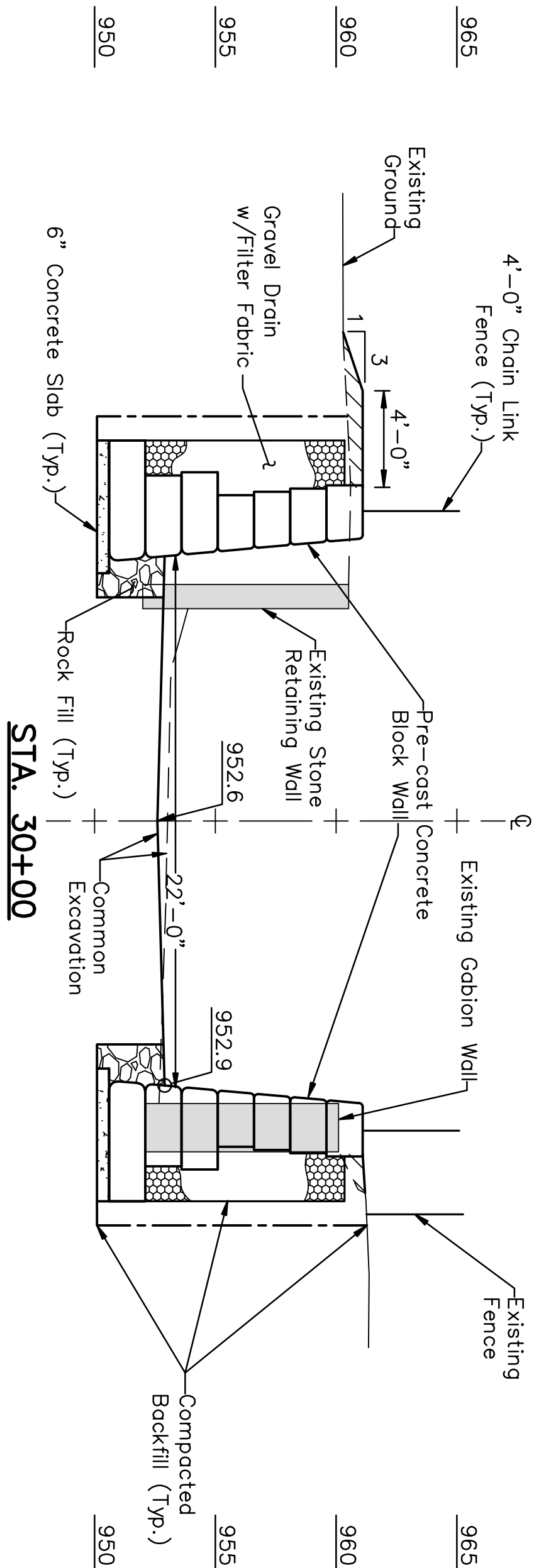
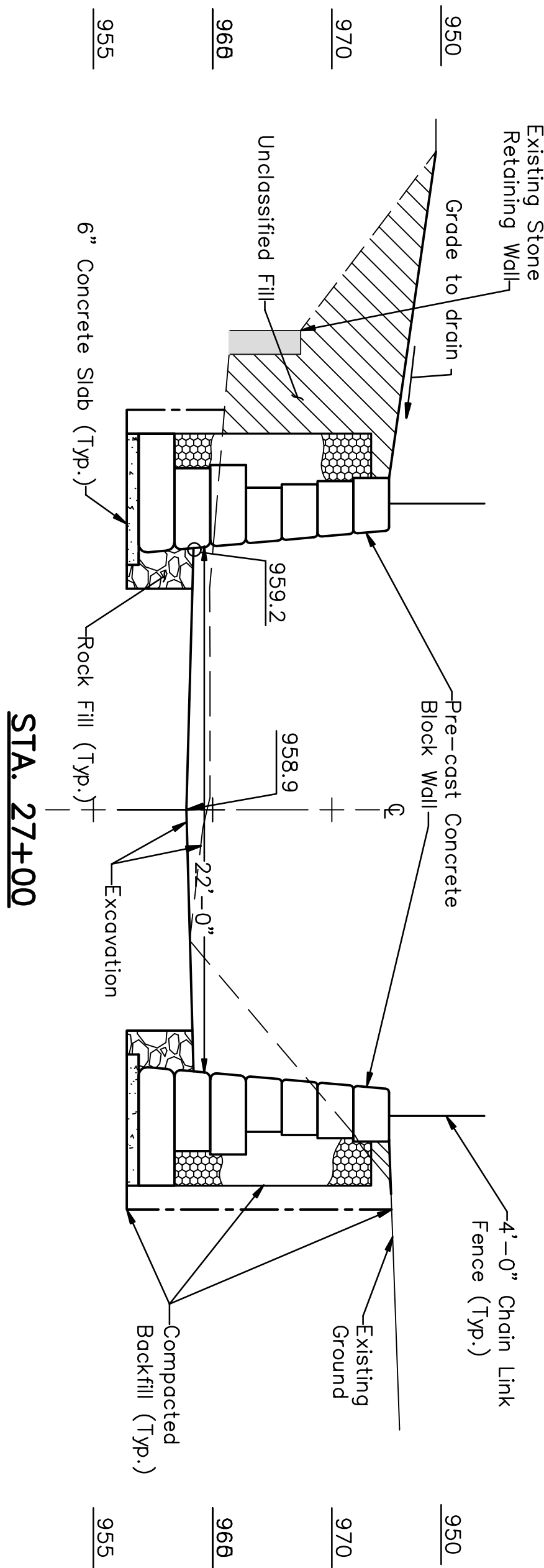
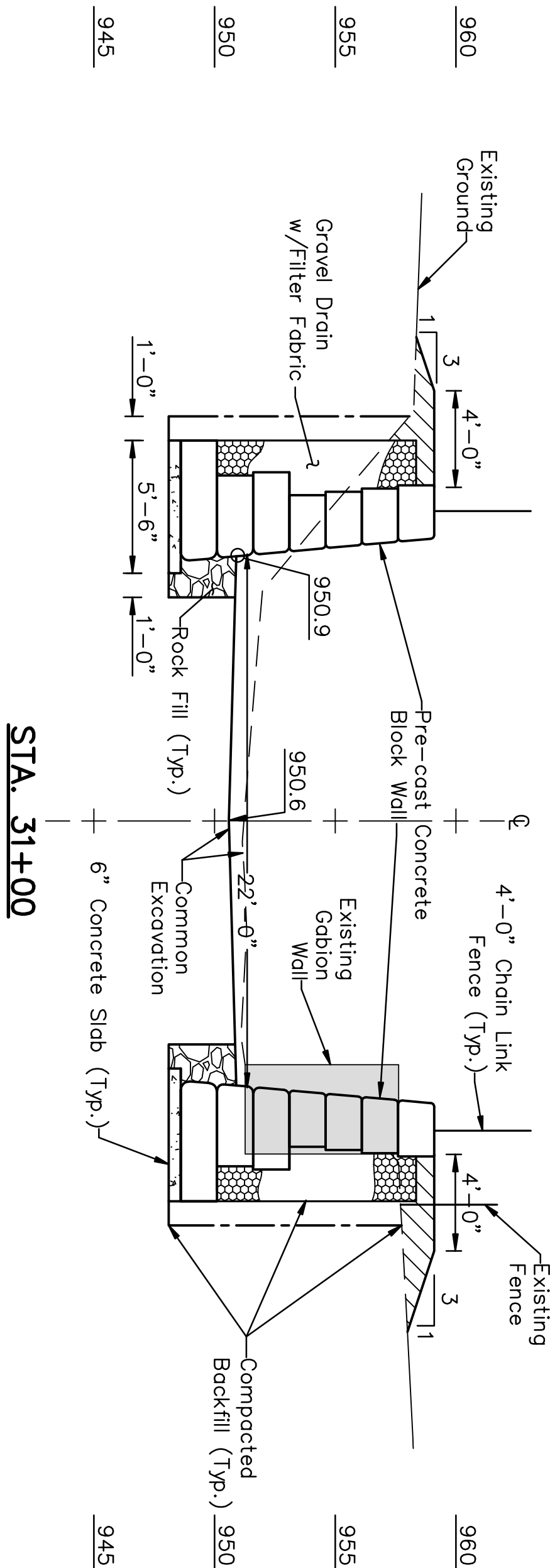
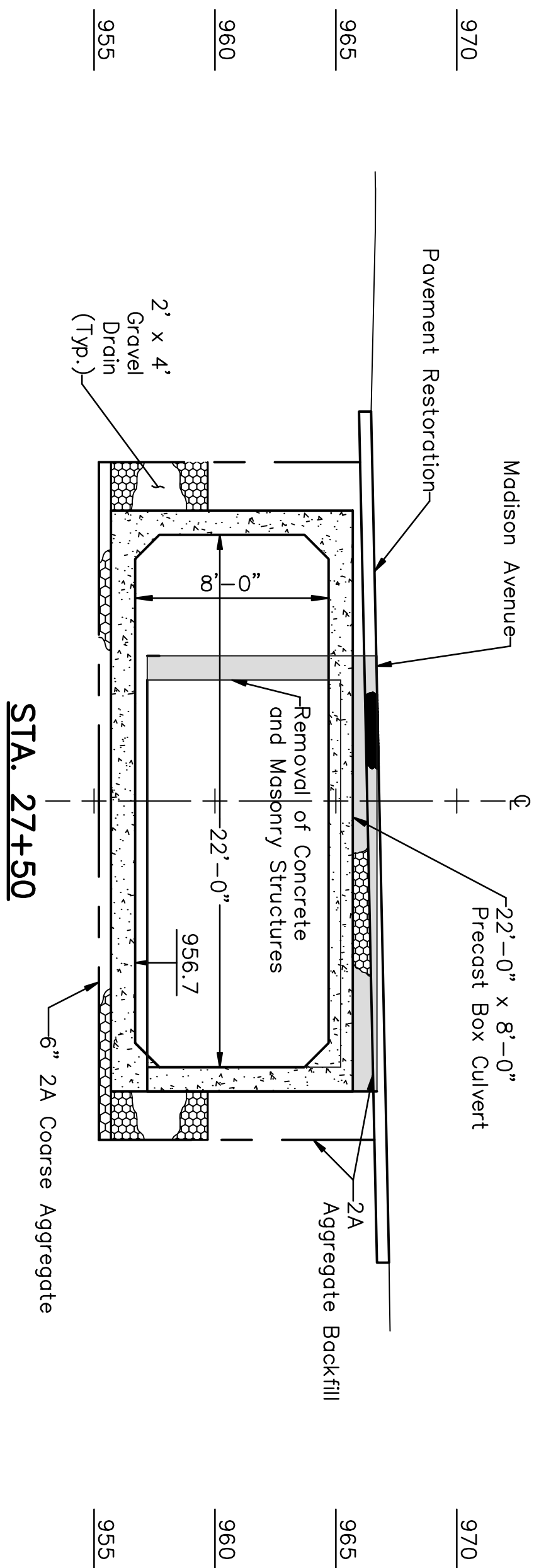
**RUSHBROOK CREEK PROJECT**  
BOROUGH OF JERMYN  
LACKAWANNA COUNTY, PENNSYLVANIA

**CROSS SECTIONS  
STA. 6+50 TO STA. 18+00**

DRYING BY	DATE	DRAINING NO.  <b>X-1</b>
J.A.D.	01-19-10	
CHECKED BY	SCALE 1 in. = 5 ft.	



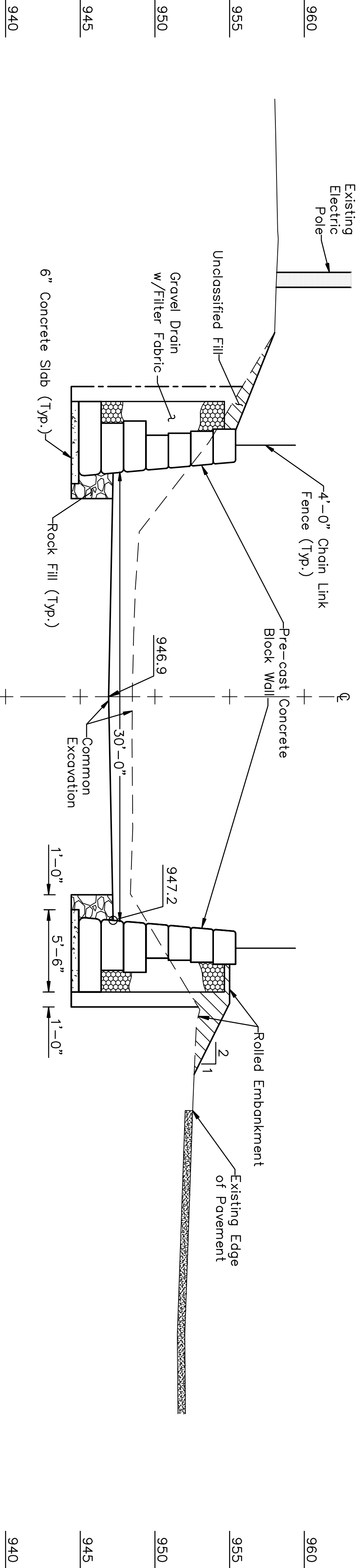




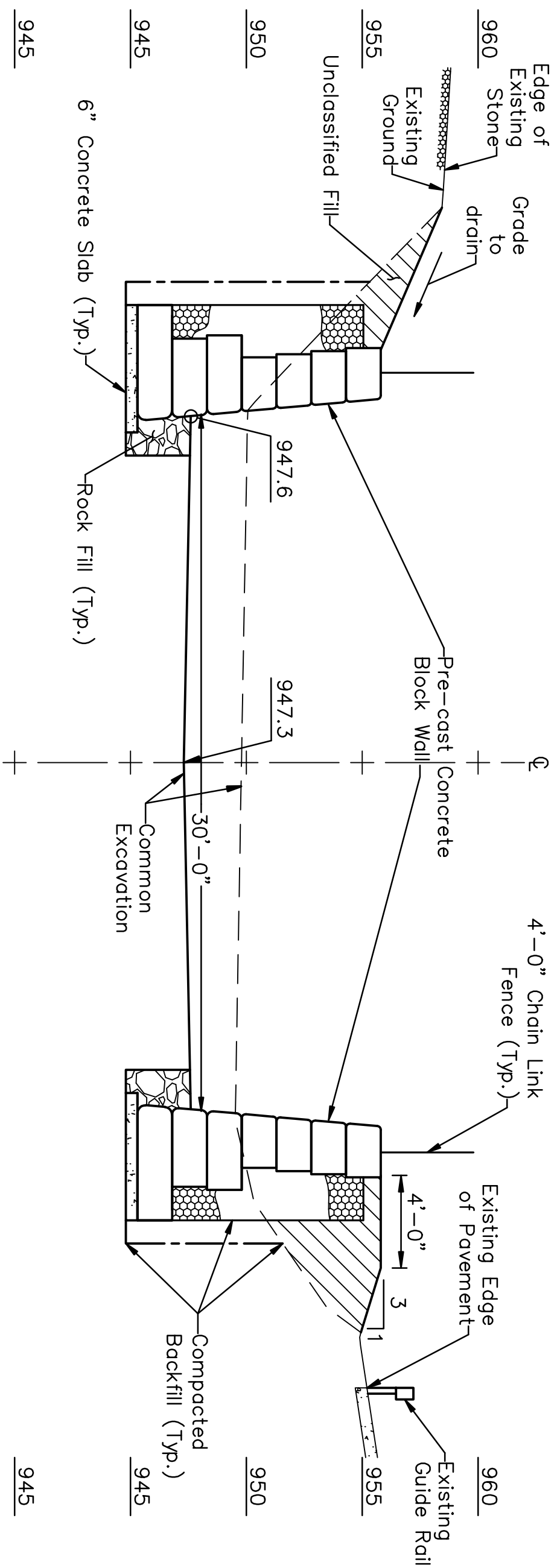
ALL DIMENSIONS AND EXISTING  
CONDITIONS SHALL BE CHECKED  
AND APPROVED BY CONTRACTOR  
AT THE SITE.

DRAWN BY J.A.D.		DATE 01-19-10		DRAWING NO.	
CHECKED BY		SCALE 1 in. = 5 ft.		X-3	
COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION OFFICE OF WATER MANAGEMENT COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF GENERAL SERVICES HARRISBURG, PENNSYLVANIA PROJECT NO. D.G.S. 181-21 RUSHBROOK CREEK PROJECT BOROUGH OF JERMYN LACKAWANNA COUNTY, PENNSYLVANIA STA. 25+00 TO STA. 31+00					
APPROVED CHIEF - DIVISION OF PROJECT DEVELOPMENT - D.E.P. DIRECTOR - BUREAU OF WATERWAYS ENGINEERING AND RELIANCE - D.E.P.					
SUBMITTED PROJECT COORDINATOR - D.E.P. APPROVED CHIEF - DIVISION OF PROJECT DEVELOPMENT - D.E.P. NO. DATE REVISION APPR.					

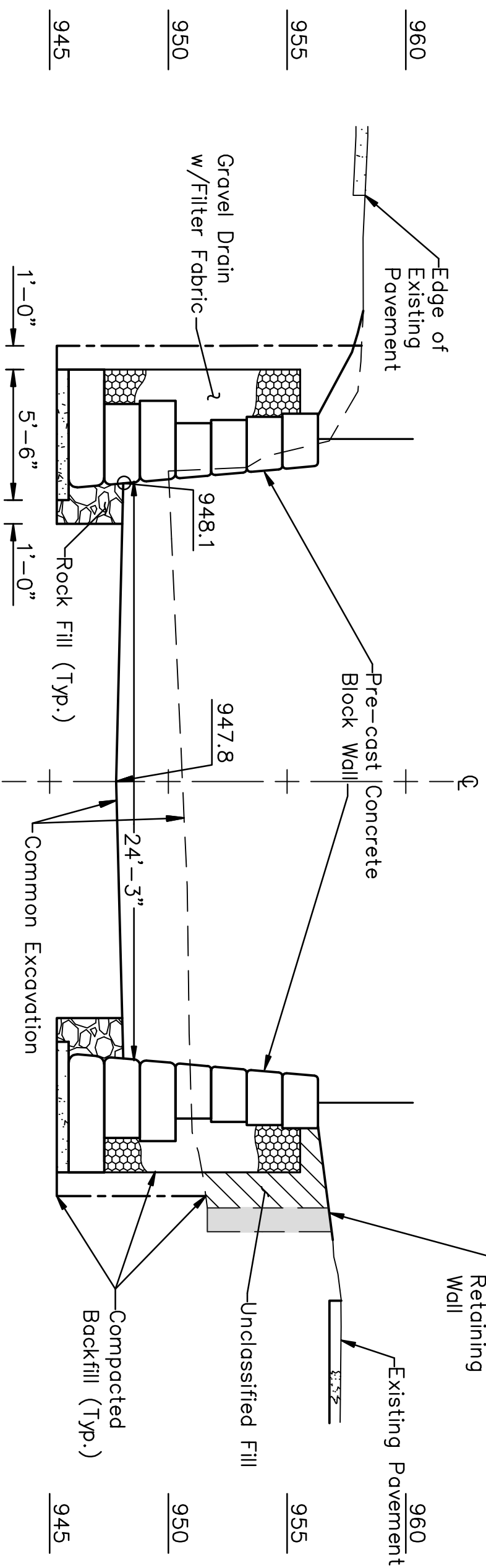




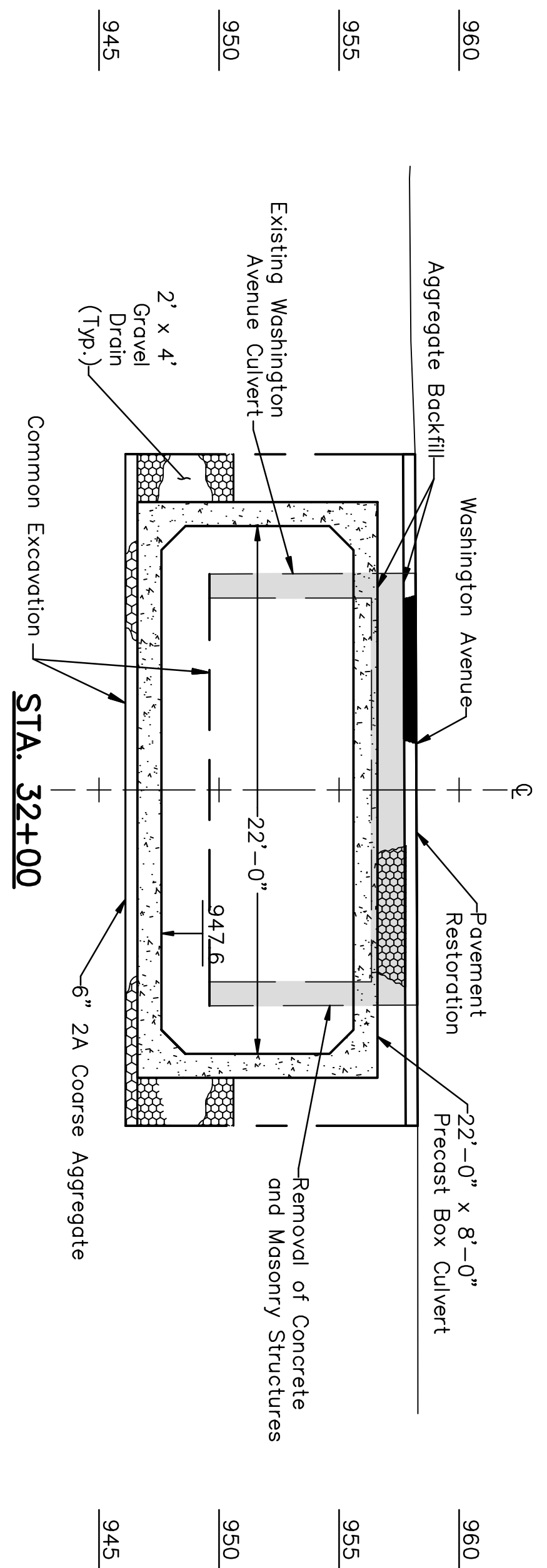
STA. 33+50



STA. 33+00



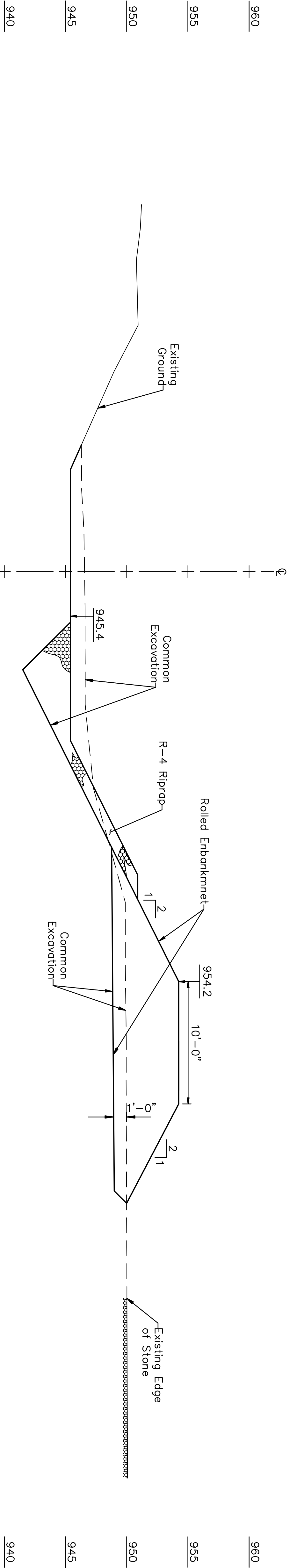
STA. 32+50



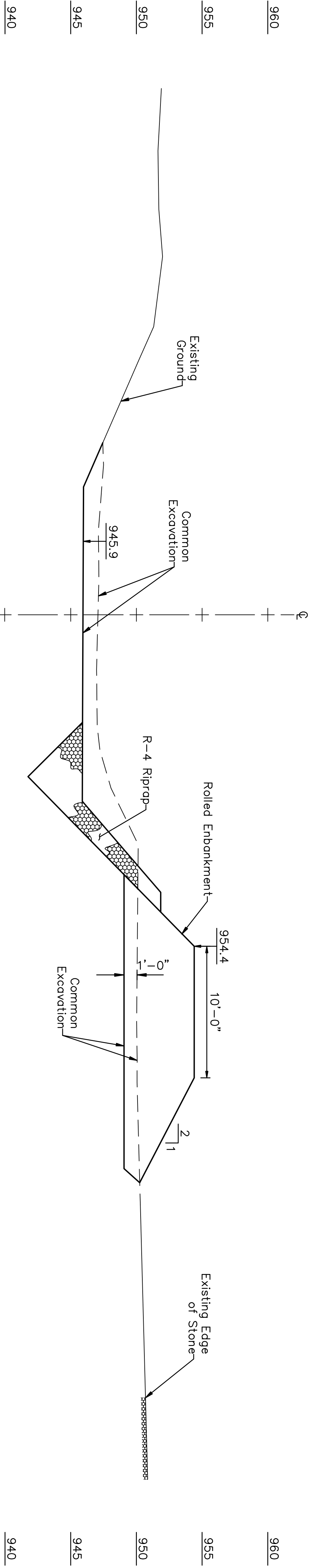
STA. 32+00

ALL DIMENSIONS AND EXISTING CONDITIONS SHALL BE CHECKED AND VERIFIED BY CONTRACTOR AT THE SITE.

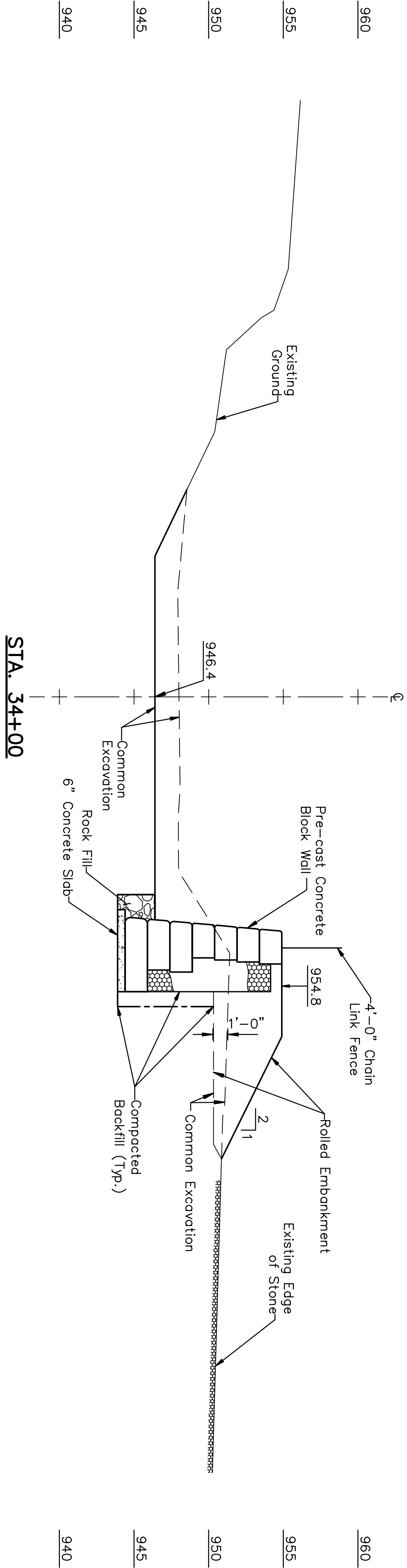
DRAWN BY J.A.D.		DATE 01-19-10		DRAWING NO. X-4	
CHECKED BY		SCALE 1 in. = 5 ft.			
COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION OFFICE OF WATER MANAGEMENT					
COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF GENERAL SERVICES HARRISBURG, PENNSYLVANIA					
PROJECT NO. D.G.S. 181-21					
RUSHBROOK CREEK PROJECT BOROUGH OF JERMYN LACKAWANNA COUNTY, PENNSYLVANIA					
CROSS SECTIONS STA. 32+00 TO STA. 33+50					
SUBMITTED					
PROJECT COORDINATOR - D.E.P.					
APPROVED					
CHIEF - DIVISION OF PROJECT DEVELOPMENT - D.E.P.					
APPROVED					
DIRECTOR - BUREAU OF WATERWAYS ENGINEERING AND WEIGANDS - D.E.P.					
NO.	DATE	REVISION	APPR.		



STA. 35+00



STA. 34+50

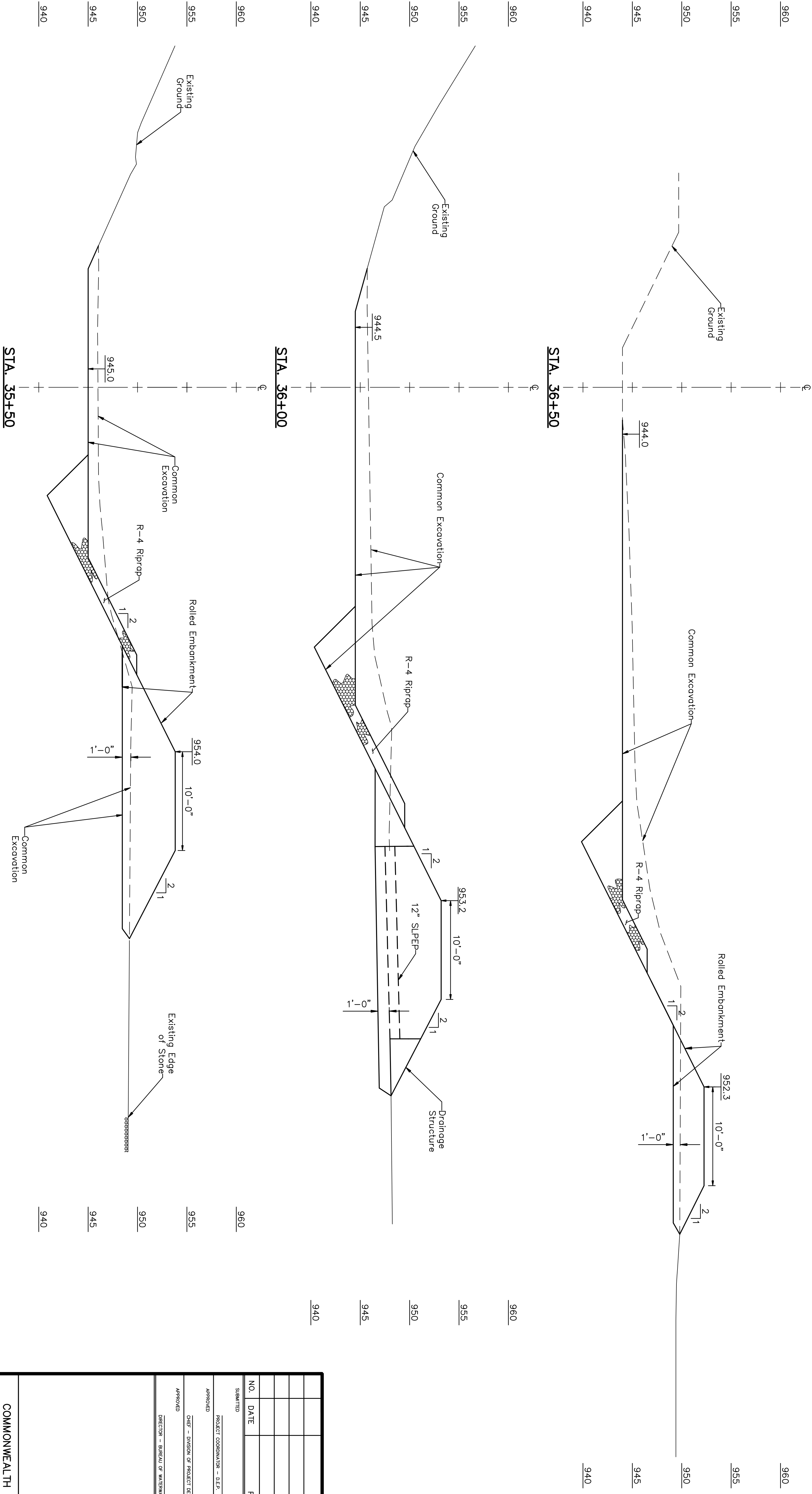


STA. 34+00

ALL DIMENSIONS AND EXISTING  
CONDITIONS SHALL BE CHECKED  
AND CORRECTED BY CONTRACTOR  
AT THE SITE.

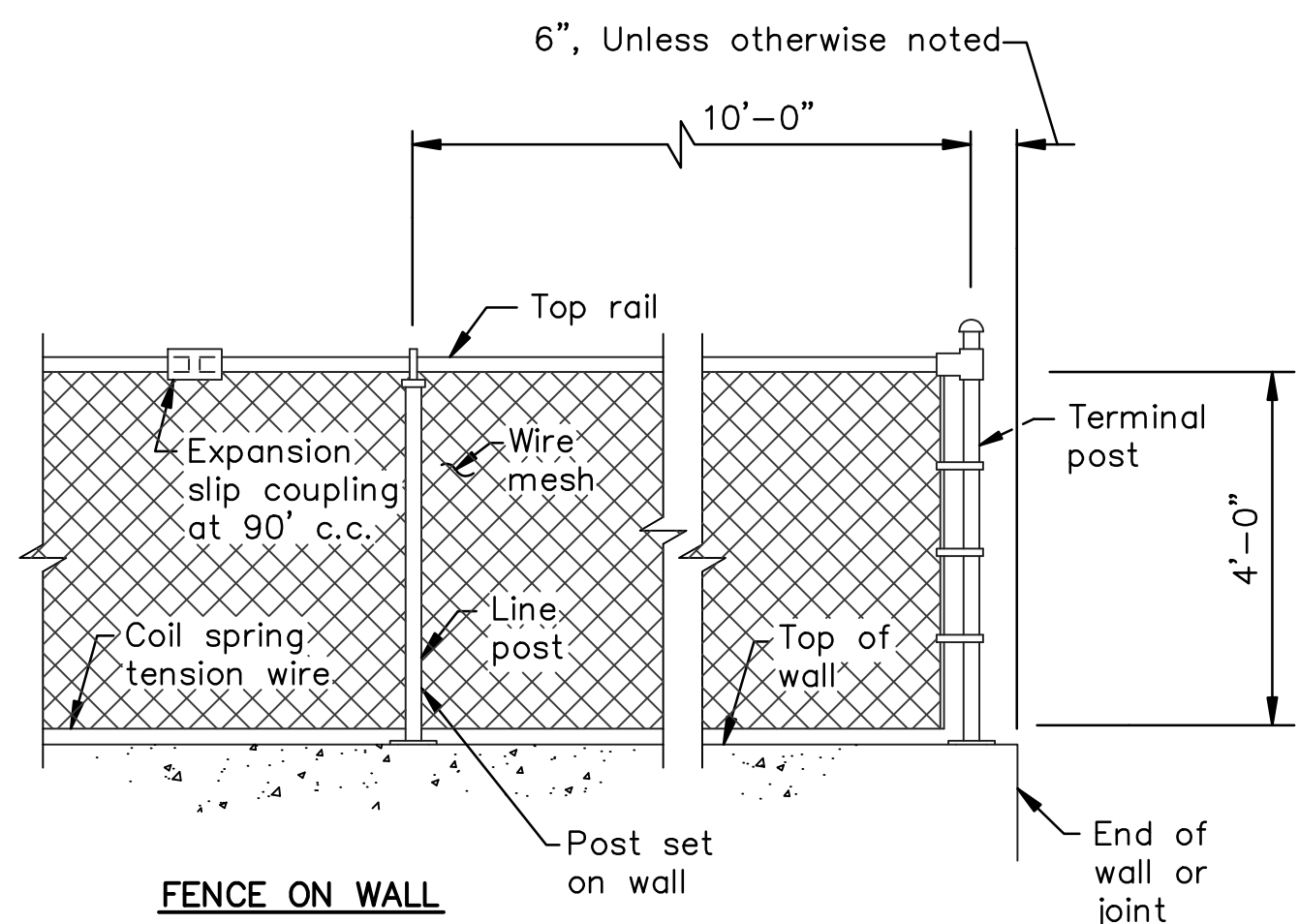
NO.	DATE	REVISION	APPR.		
SUBMITTED					
PROJECT COORDINATOR - D.E.P. _____					
APPROVED					
CHIEF - DIVISION OF PROJECT DEVELOPMENT - D.E.P. _____					
APPROVED					
DIRECTOR - BUREAU OF WATERWAYS ENGINEERING AND MEASURES - D.E.P. _____					
COMMONWEALTH OF PENNSYLVANIA					
DEPARTMENT OF ENVIRONMENTAL PROTECTION					
OFFICE OF WATER MANAGEMENT					
COMMONWEALTH OF PENNSYLVANIA					
DEPARTMENT OF GENERAL SERVICES					
HARRISBURG, PENNSYLVANIA					
PROJECT NO. D.G.S. 181-21					
RUSHBROOK CREEK PROJECT					
BOROUGH OF JERMYN					
LACKAWANNA COUNTY, PENNSYLVANIA					
CROSS SECTIONS					
STA. 34+00 TO STA. 35+00					
DRAWN BY	DATE	DRAWING NO.			
J.A.D.	01-19-10				
CHECKED BY	SCALE				
	1 in. = 5 ft.				

X-5

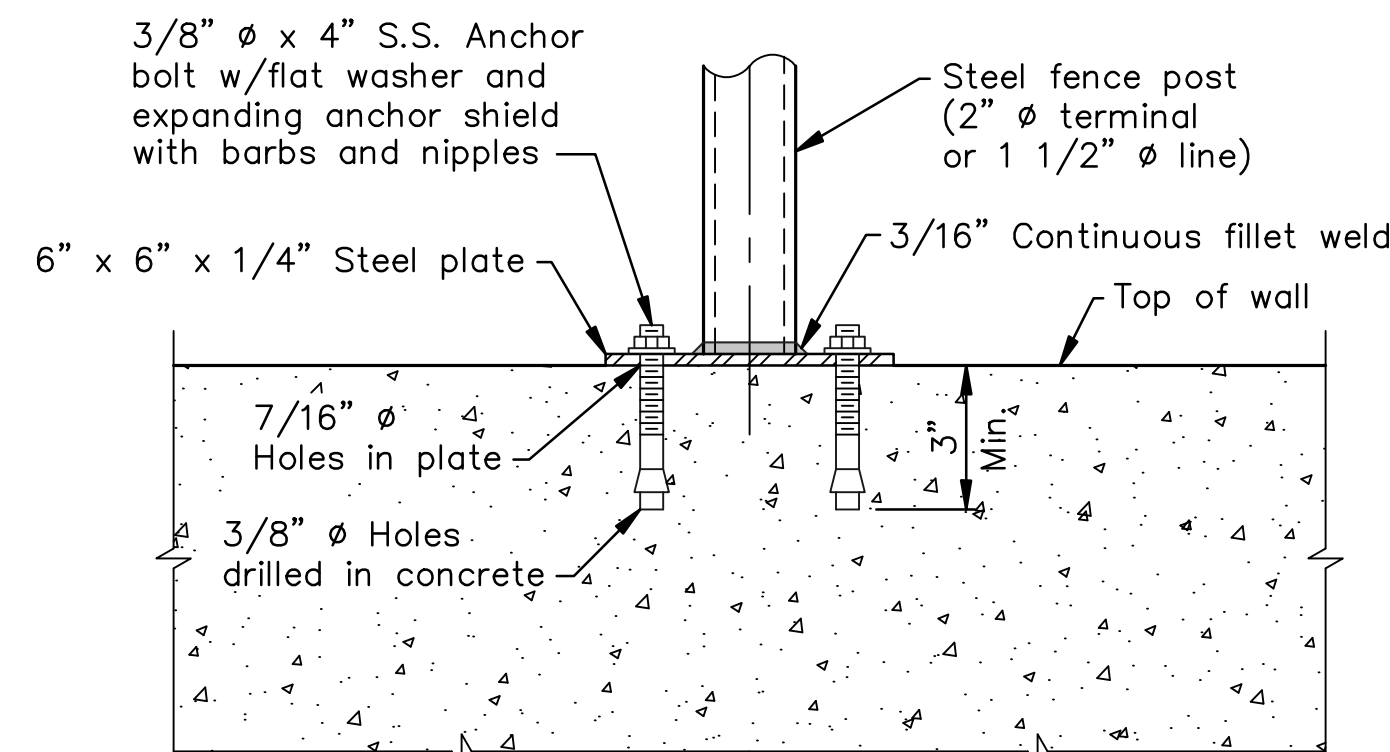


ALL DIMENSIONS AND EXISTING CONDITIONS SHALL BE CHECKED AND VERIFIED BY CONTRACTOR AT THE SITE.

NO.	DATE	REVISION	APPR.		
SUBMITTED					
PROJECT COORDINATOR - D.E.P. _____					
APPROVED					
CHIEF - DIVISION OF PROJECT DEVELOPMENT - D.E.P. _____					
APPROVED					
DIRECTOR - BUREAU OF WATERWAYS ENGINEERING AND RELIANCE - D.E.P. _____					
COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION OFFICE OF WATER MANAGEMENT					
COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF GENERAL SERVICES HARRISBURG, PENNSYLVANIA					
PROJECT NO. D.G.S. 181-21					
RUSHBROOK CREEK PROJECT					
BOROUGH OF JERMYN LACKAWANNA COUNTY, PENNSYLVANIA					
CROSS SECTIONS					
STA. 35+50 TO STA. 36+50					
DRAWN BY J.A.D.	DATE 01-19-10	DRAWING NO.			
CHECKED BY	SCALE 1 in. = 5 ft.	X-6			

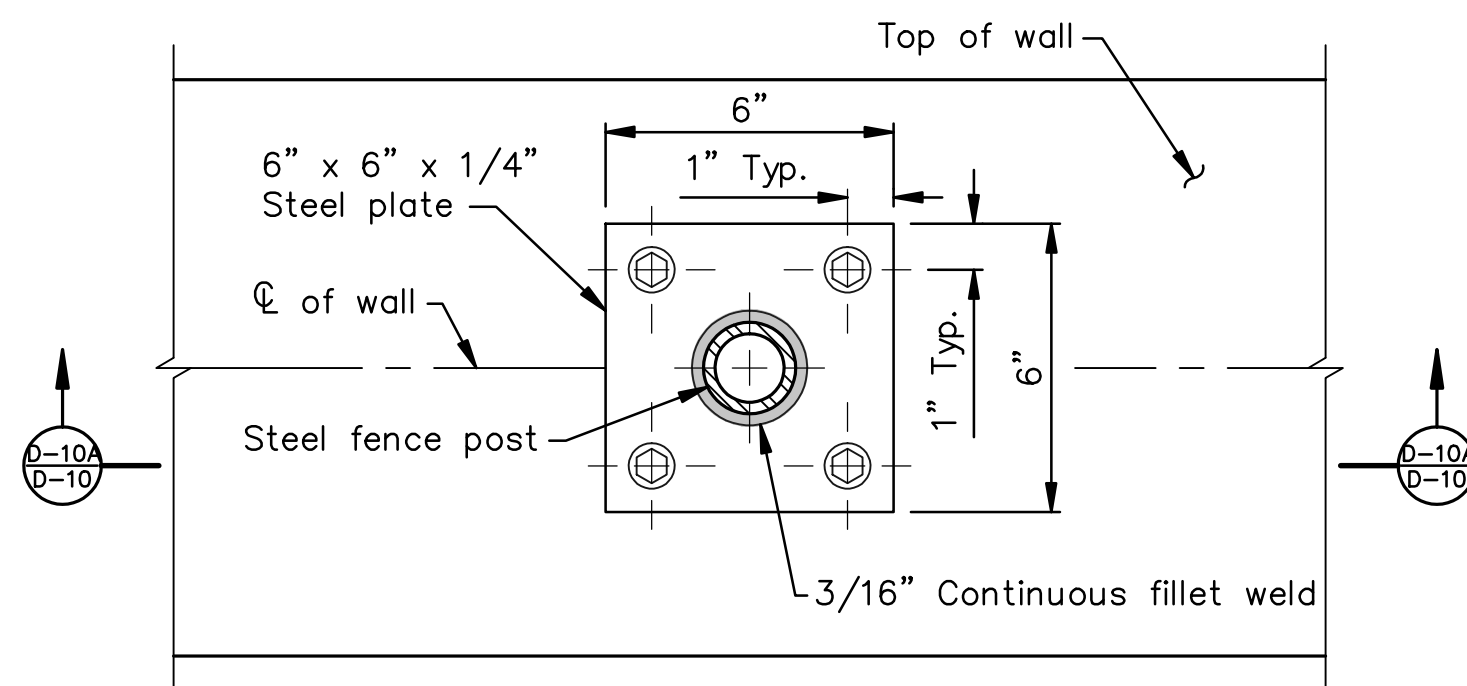


**CHAIN LINK FENCE**  
No Scale

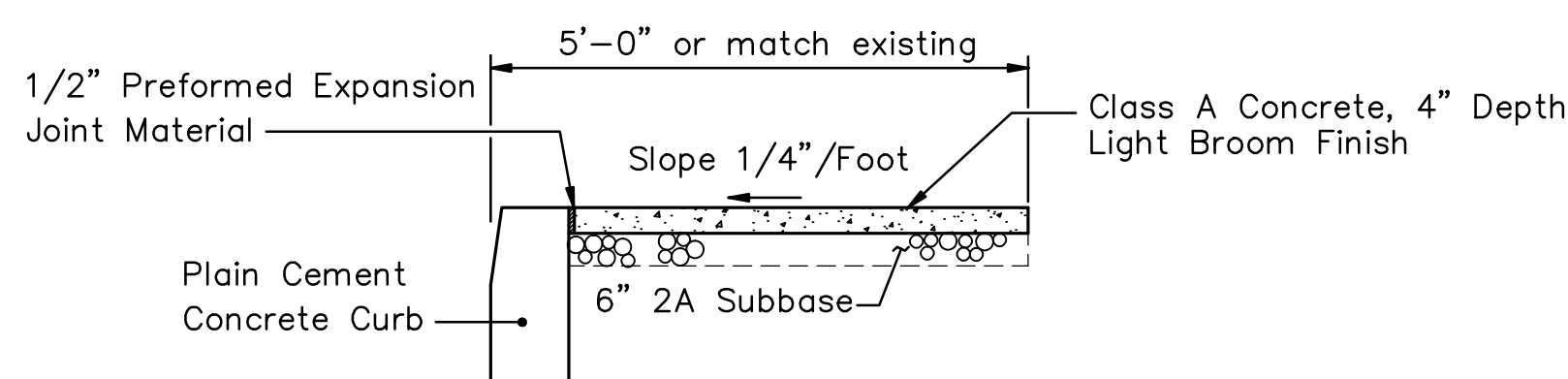


Note: Galvanizing is to be done after all fabricating, drilling of holes, and welding is complete.

**SECTION 8-10A  
6-10**

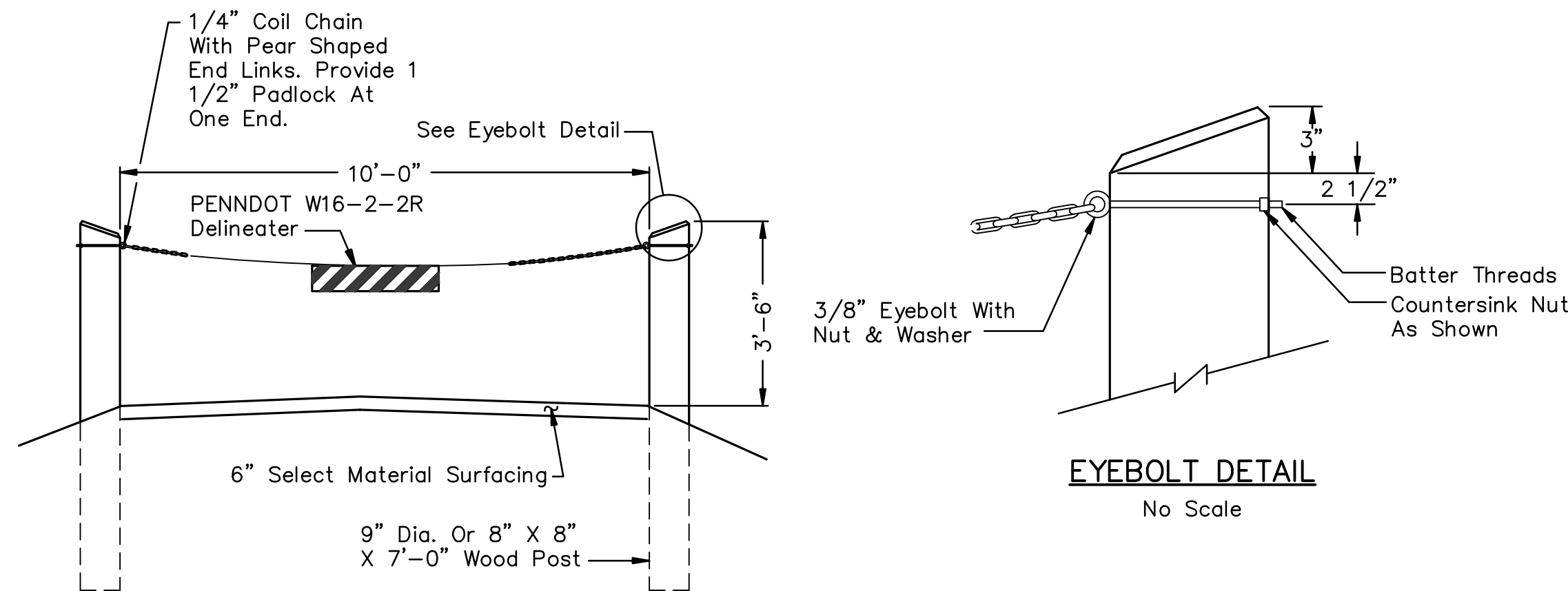


**WALL-MOUNTED GALVANIZED STEEL FENCE POST**  
No Scale

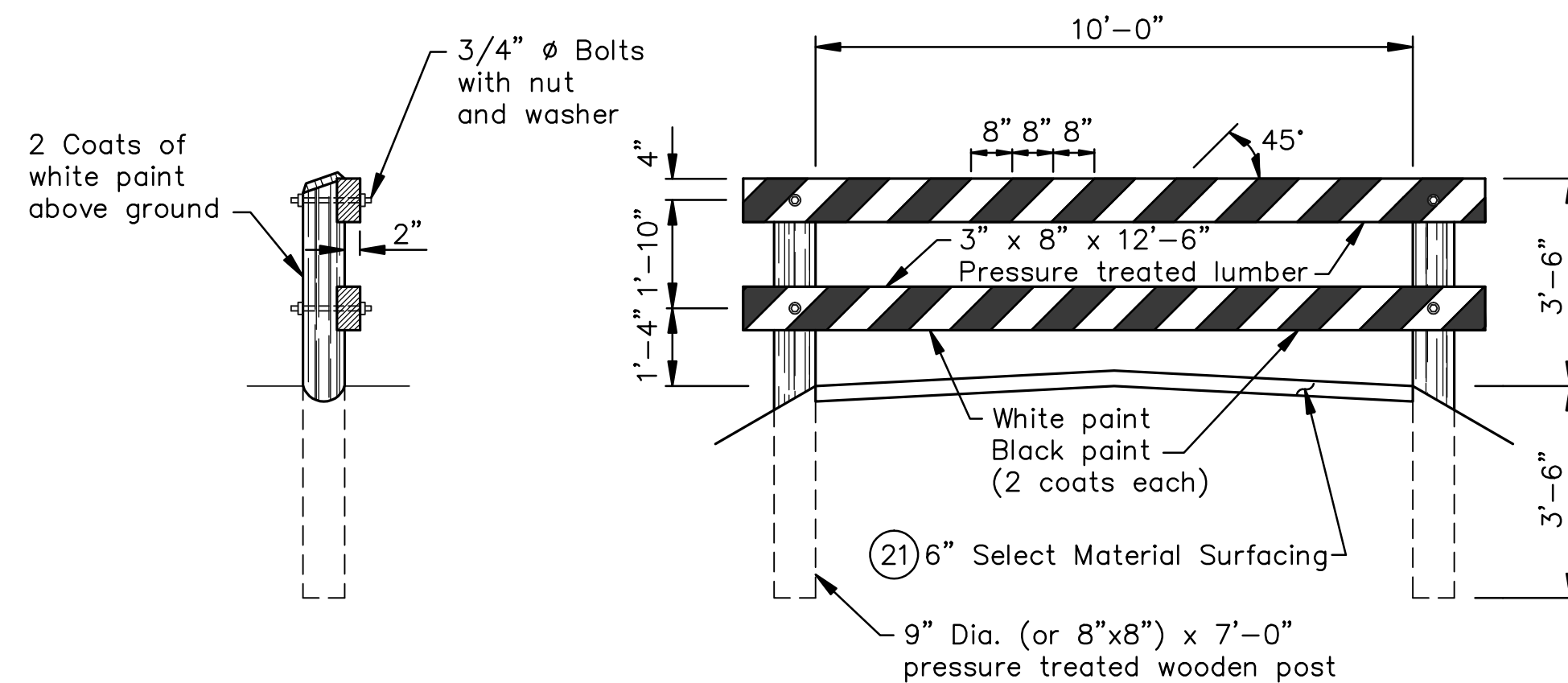


**CEMENT CONCRETE SIDEWALK 31**  
No Scale

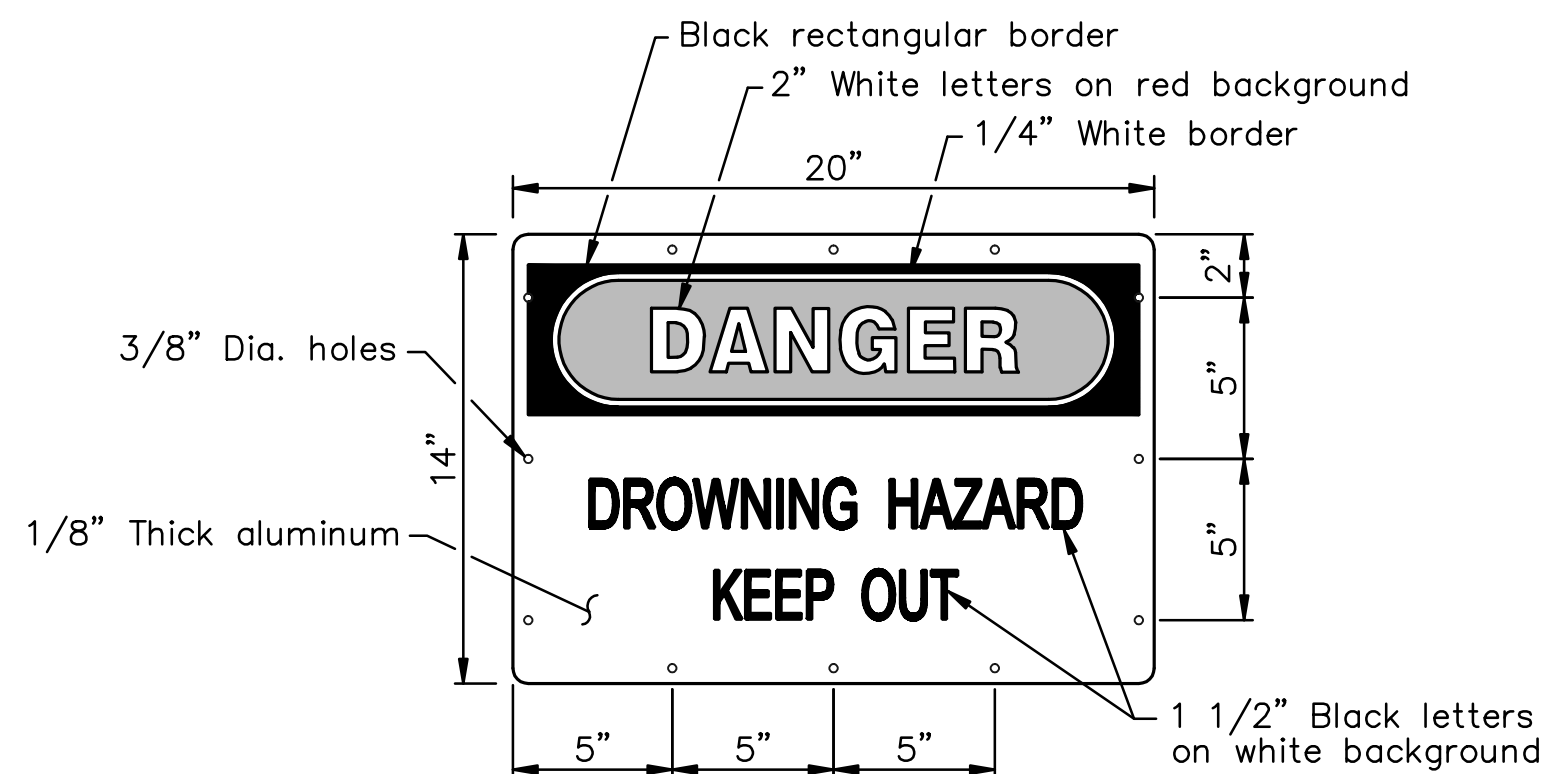
- NOTES:
1. Form Outside Edges And Joints With a 1/4" Radius Edging Tool.
  2. Form Transverse False Joints At 5-foot Intervals, Approximately 1/4" Wide And 1" Deep.
  3. Provide Expansion Joints Every 20 Feet And Separate Slabs With 1/2" Preformed Expansion Joint Material.



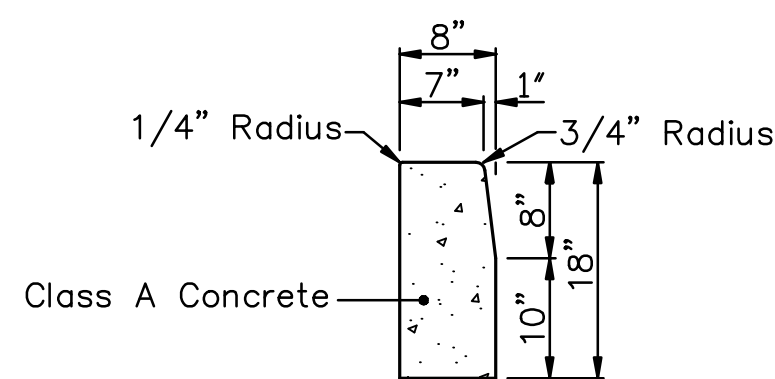
**TYPE 1 ACCESSIBLE BARRICADE 31**  
No Scale



**TYPE 2 BARRICADE 31**  
No Scale

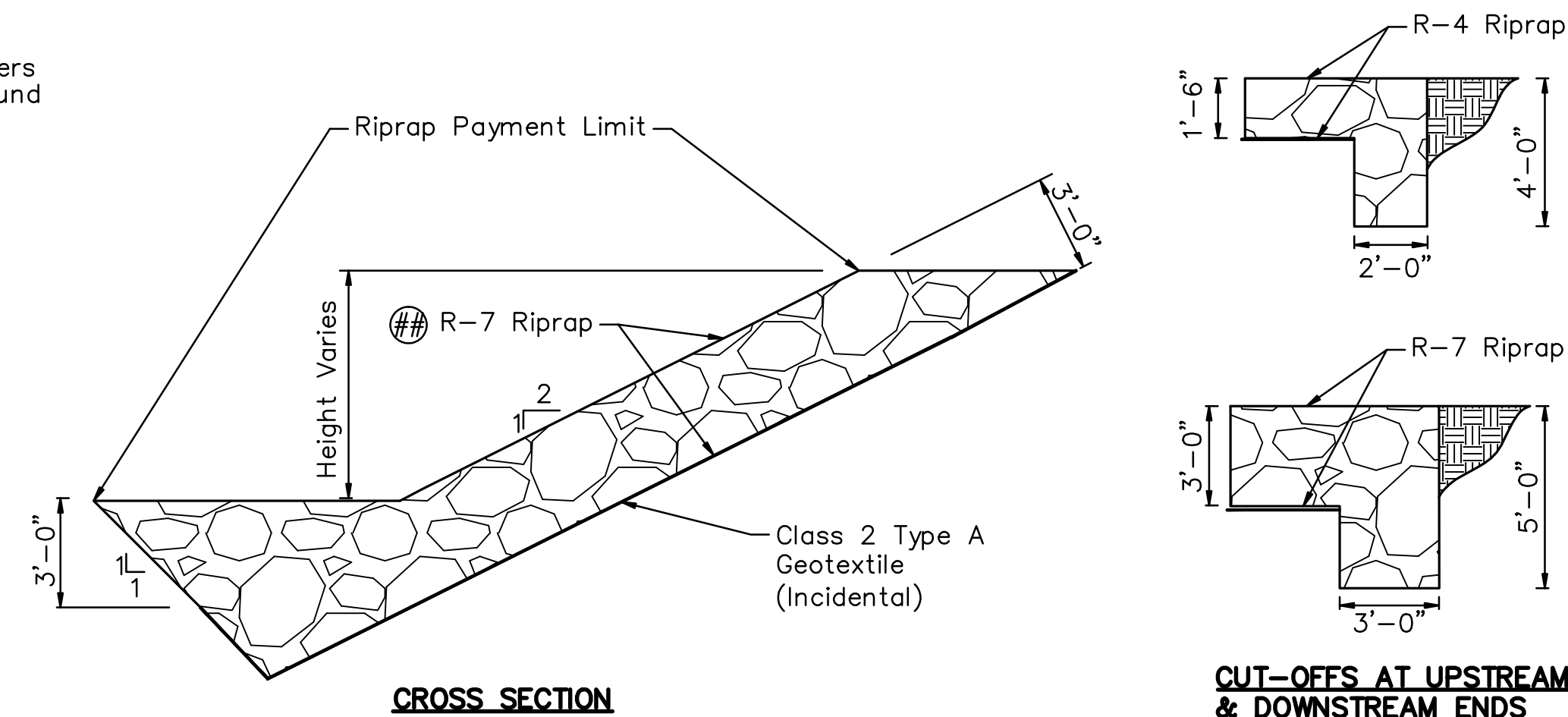
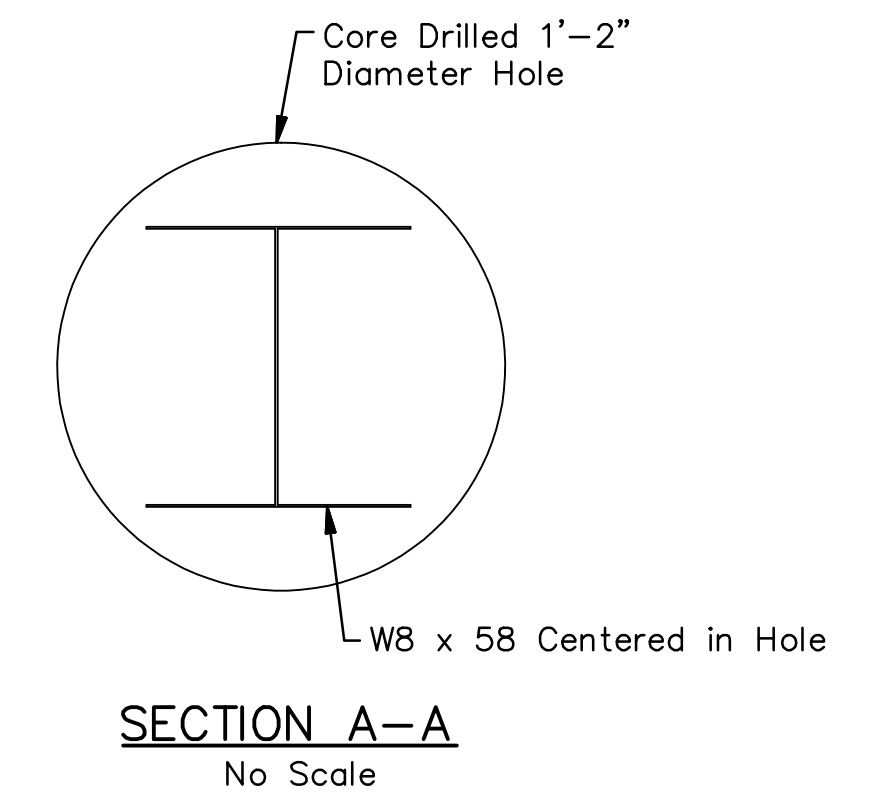
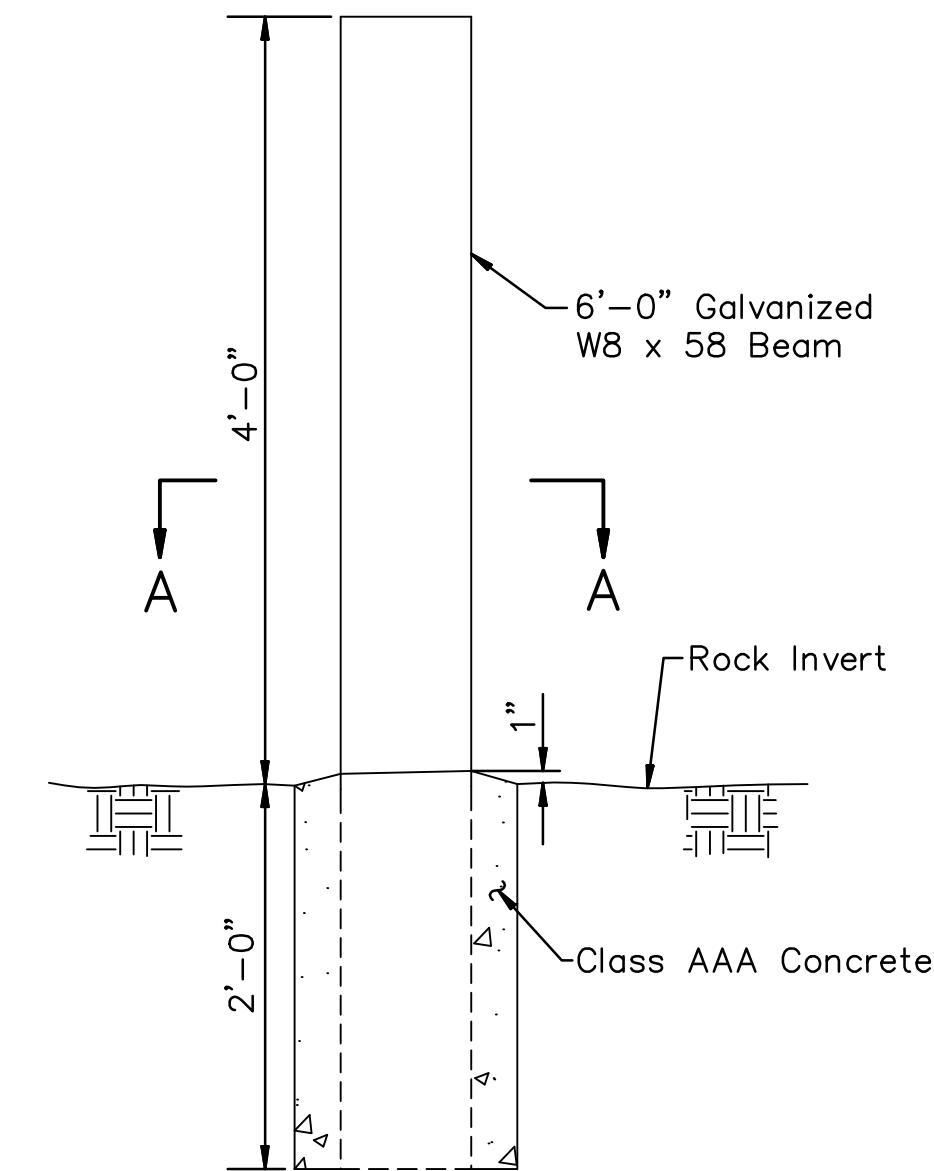
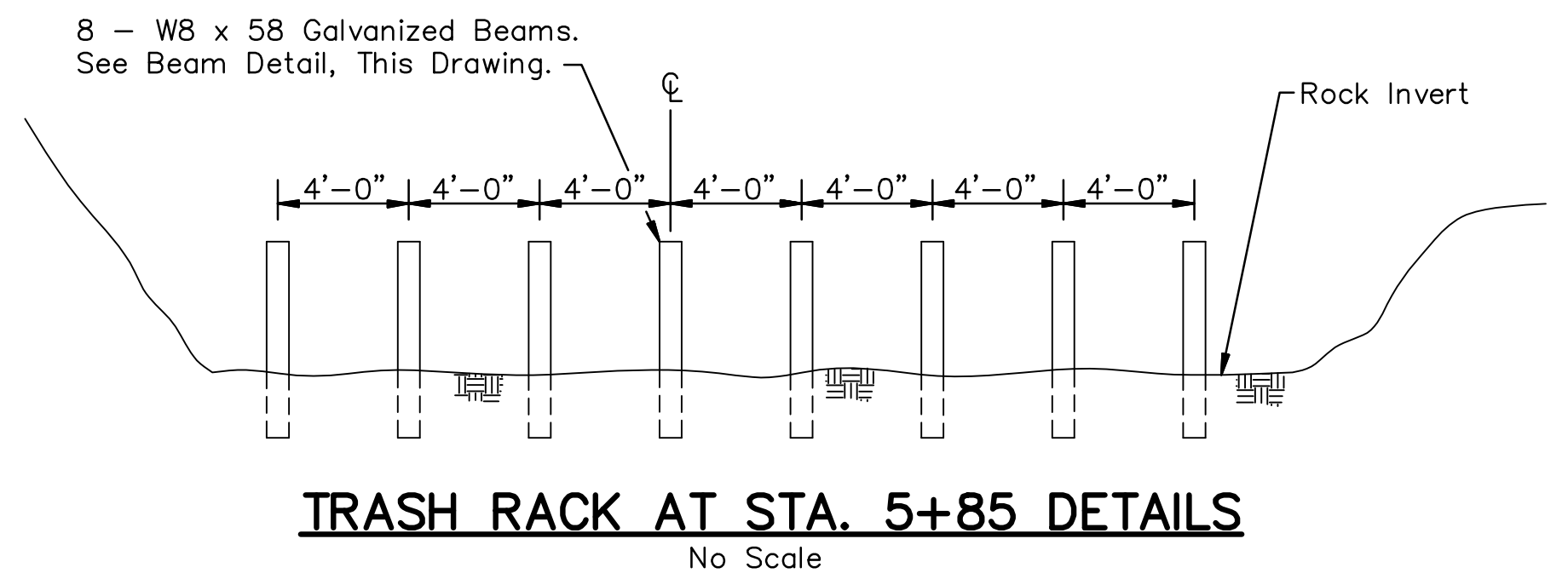
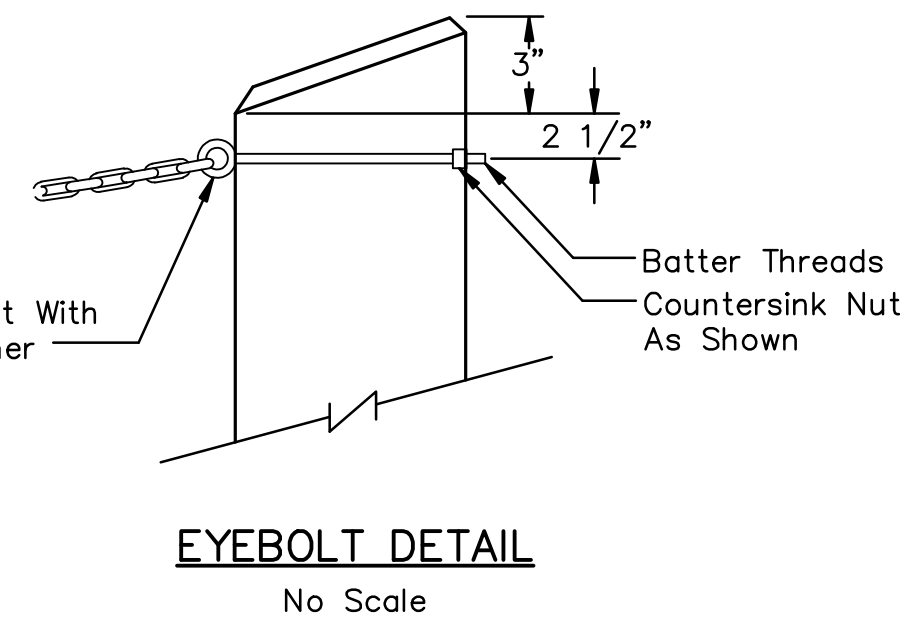


**WARNING SIGN DETAILS 40**  
No Scale

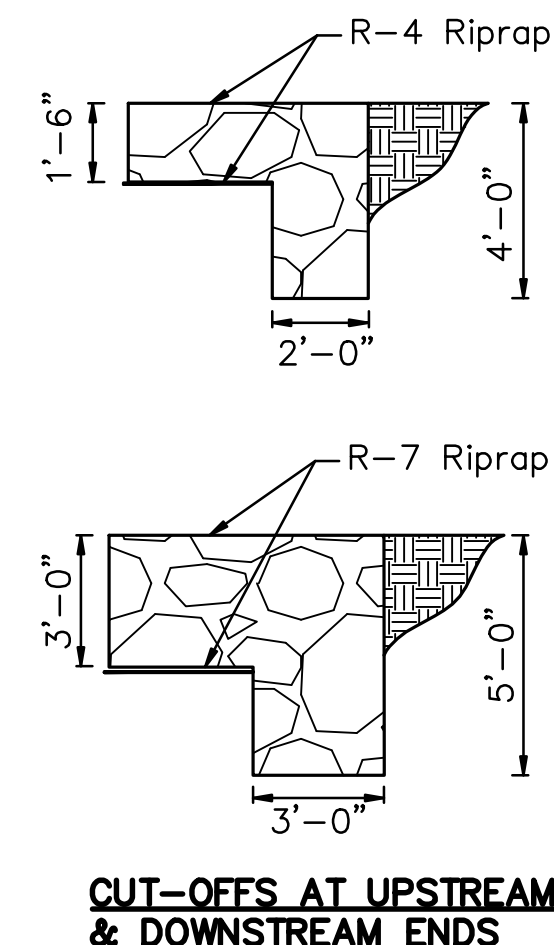


Place 3/4" Preformed Expansion Joint Material At Structures And At The End Of Work Day. Cut Material To Conform To Area Adjacent To Curb Or To Conform To Cross Sectional Area Of Curb.

**PLAIN CEMENT CONCRETE CURB 32**  
No Scale



**RIPRAP SLOPE PROTECTION DETAIL**  
No Scale

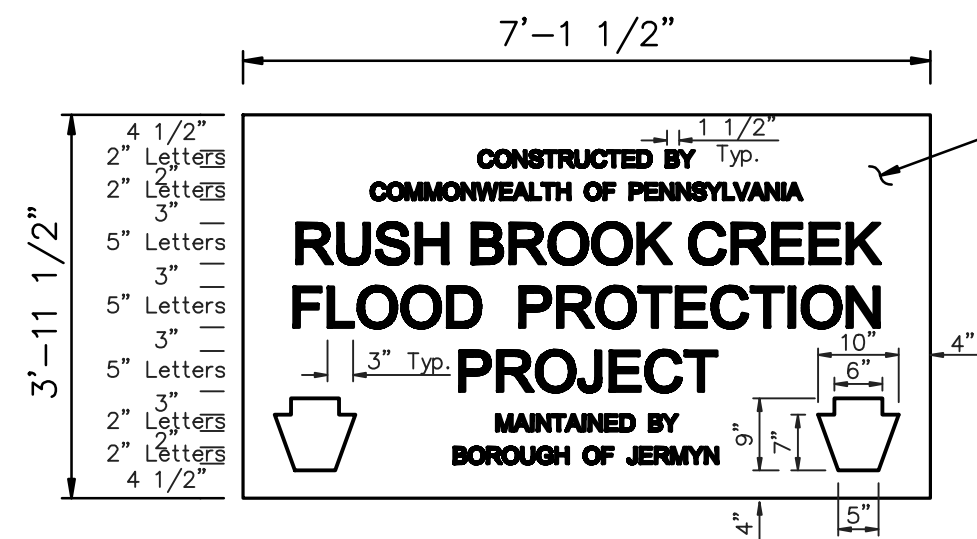


NO.	DATE	REVISION	APPR.
SUBMITTED			
PROJECT COORDINATOR - D.E.P.			
APPROVED			
CHIEF - DIVISION OF PROJECT DEVELOPMENT - D.E.P.			
APPROVED			
DIRECTOR - BUREAU OF WATERWAYS ENGINEERING AND WETLANDS - D.E.P.			
PROFESSIONAL'S SIGNATURE			
DATE			
COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION OFFICE OF WATER MANAGEMENT			
COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF GENERAL SERVICES HARRISBURG, PENNSYLVANIA			
PROJECT NO. D.G.S. 181-21			
RUSHBROOK CREEK PROJECT			
BOROUGH OF JERMYN LACKAWANNA COUNTY, PENNSYLVANIA			
MISCELLANEOUS DETAILS			
DRAWN BY	DATE	DRAWING NO.	
JAD	XX/XX/XXXX	D-10	
CHECKED BY	SCALE		
	As Shown		

ALL DIMENSIONS AND EXISTING  
CONDITIONS SHALL BE CHECKED  
AND VERIFIED BY CONTRACTOR  
AT THE SITE.

PERMANENT PROJECT SIGN NOTES:

1. Posts and cross members for frame shall be Pressure Treated Lumber, S4S, conforming to T.S. 49.4A.
2. All wood shall be painted with a brown, exterior grade, latex based, wood stain, conforming to T.S. 49.4C.
3. Sign panel shall be a 3-layer plastic sheet made from recycled HDPE, conforming to T.S. 49.4B.
4. Lettering and keystone outlines shall be routed on both sides of the sign panel.  
5-inch x 3-inch letters shall be routed 3/4" wide x 3/16" deep.  
2-inch x 1 1/2-inch letters shall be routed 1/4" wide x 3/16" deep.  
Keystones shall be routed 3/16" deep.
5. All hardware is stainless steel, conforming to T.S. 49.4E. with threaded ends of all bolted connections slightly peened.



FRONT AND BACK VIEW

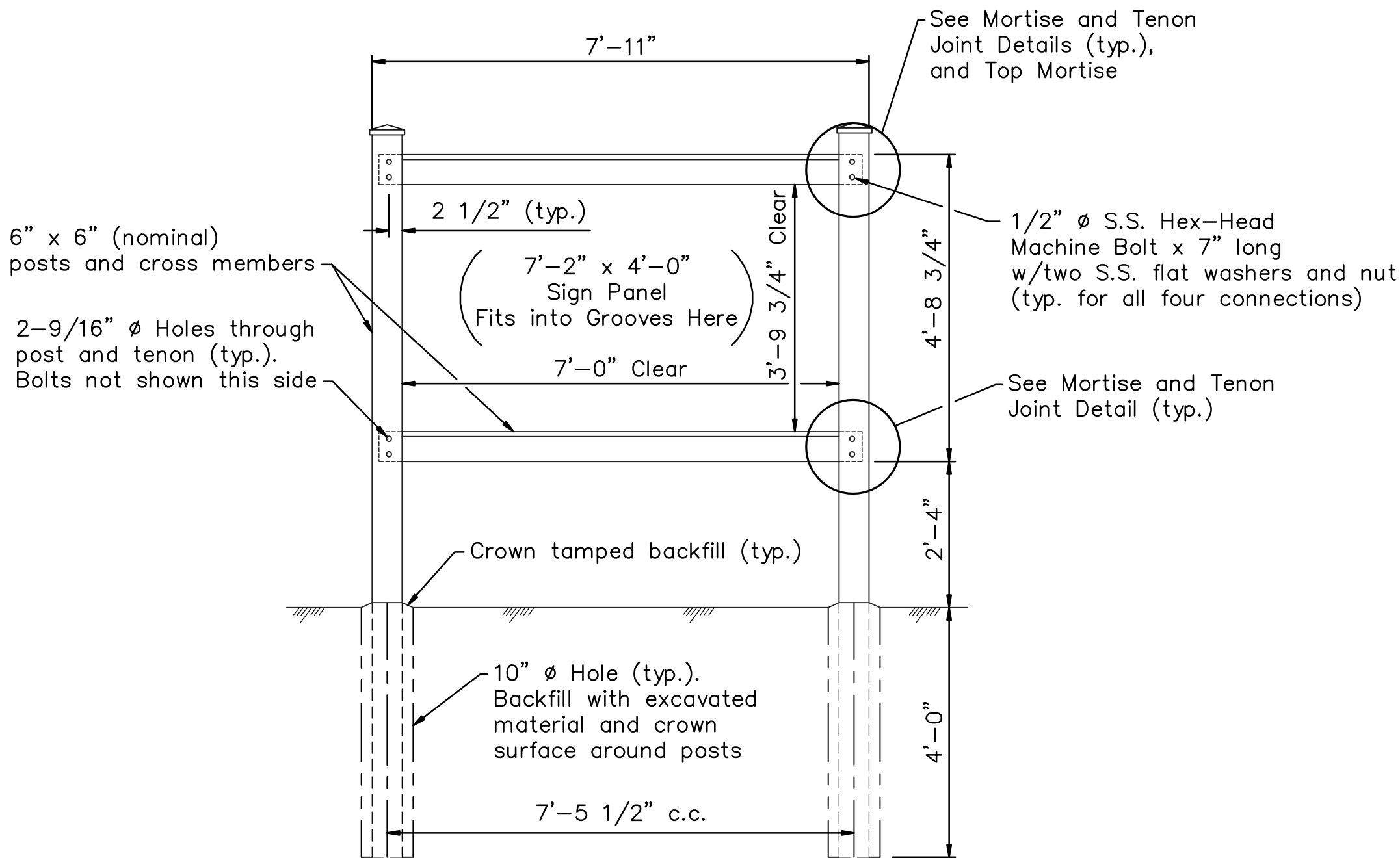
SIGN PANEL

Scale: 1/2 in. = 1 ft.

Brown-colored 6" x 6"  
Wood-Plastic Composite Post Cap.  
Drill hole top center for  
S.S. Nail Fastener (typ.)

3" (10d) S.S.  
Spiral or Ribbed Nail (Typ.)

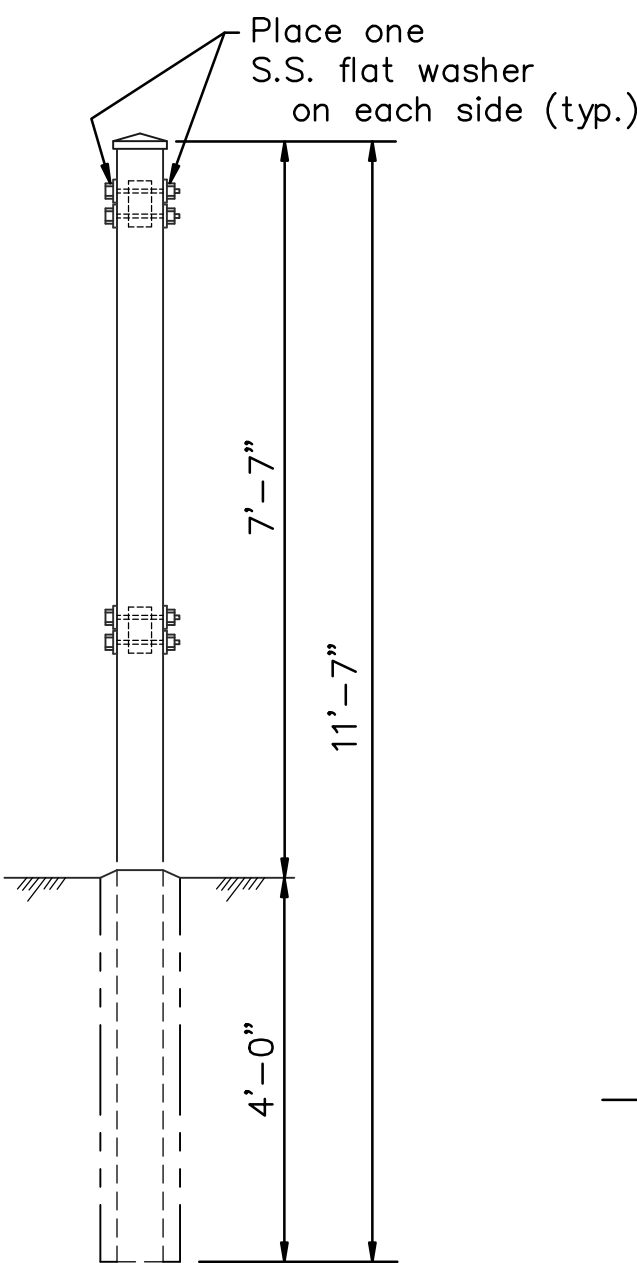
TOP VIEW



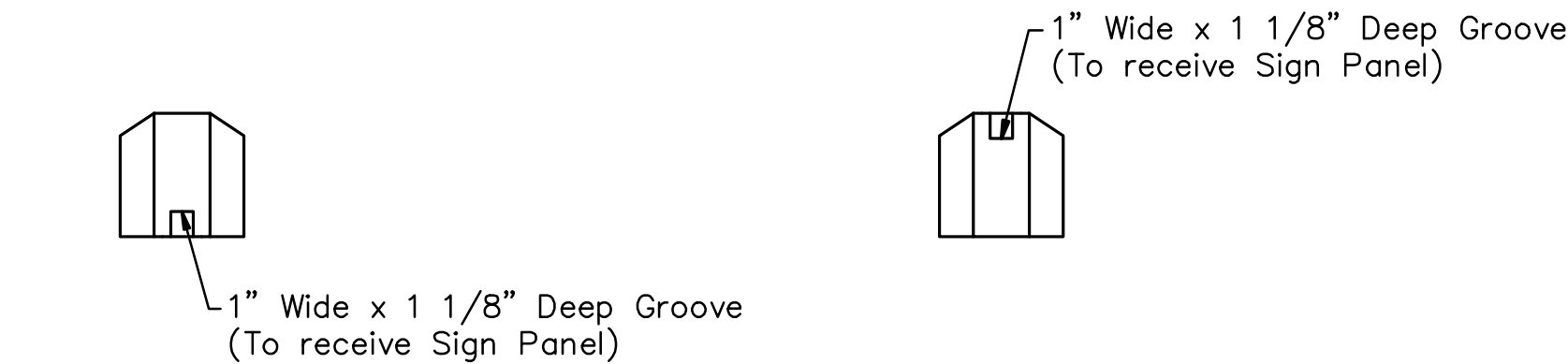
FRONT AND BACK VIEW

FRAME

Scale: 1/2 in. = 1 ft.

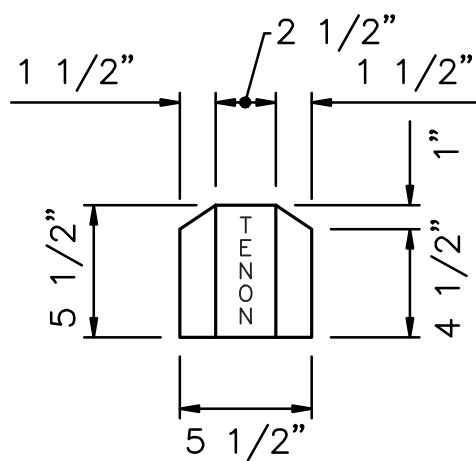


SIDE VIEW

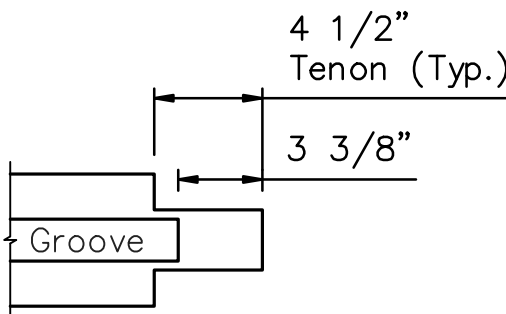


TOP MEMBER

BOTTOM MEMBER



TOP VIEW OF END OF  
BOTTOM CROSS MEMBER



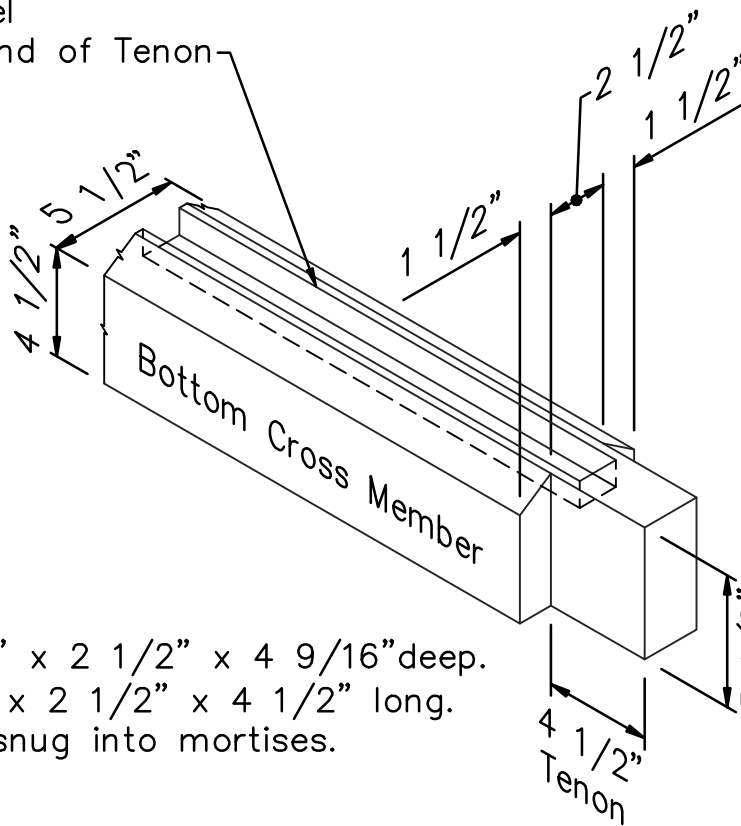
BOTTOM VIEW OF END OF  
TOP CROSS MEMBER

Note: Grooves stop 3 3/8" from ends  
of Cross Member Tenons.

CROSS MEMBERS

Scale: 1/8 in. = 1 in.

Centered 1" Wide x 1 1/8" Deep  
Groove for Sign Panel  
Ends 3 3/8" from end of Tenon



Mortise = 5 1/2" x 2 1/2" x 4 9/16" deep.  
Tenon = 5 1/2" x 2 1/2" x 4 1/2" long.  
Tenons shall fit snug into mortises.

Top of post  
inside cap

3" S.S. Spiral  
or Ribbed Nail

TOP MORTISE

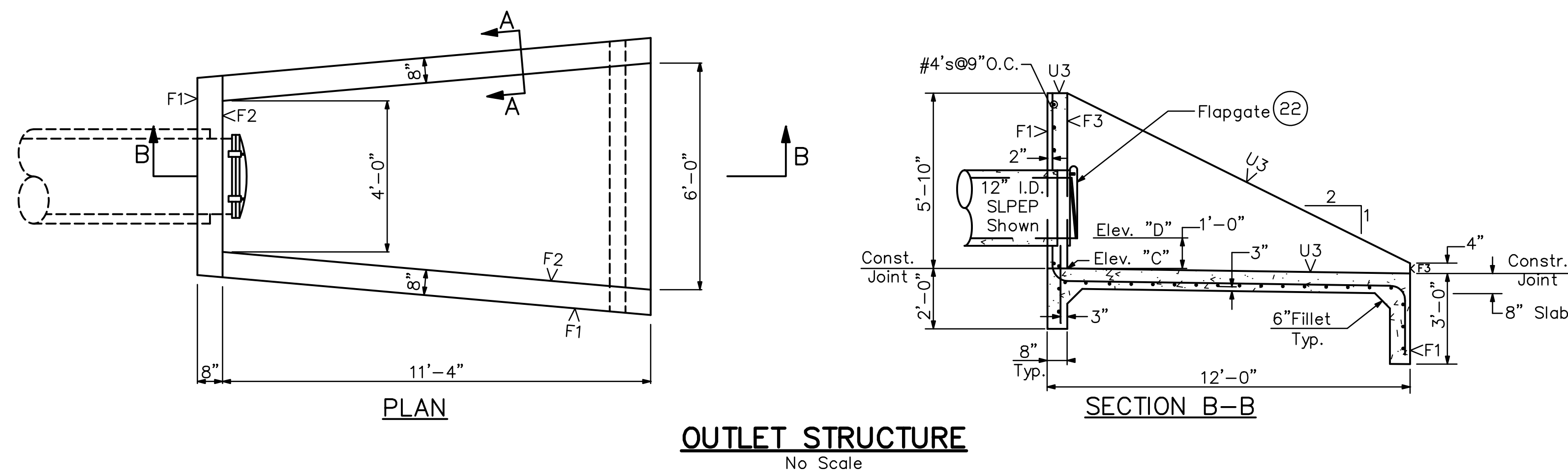
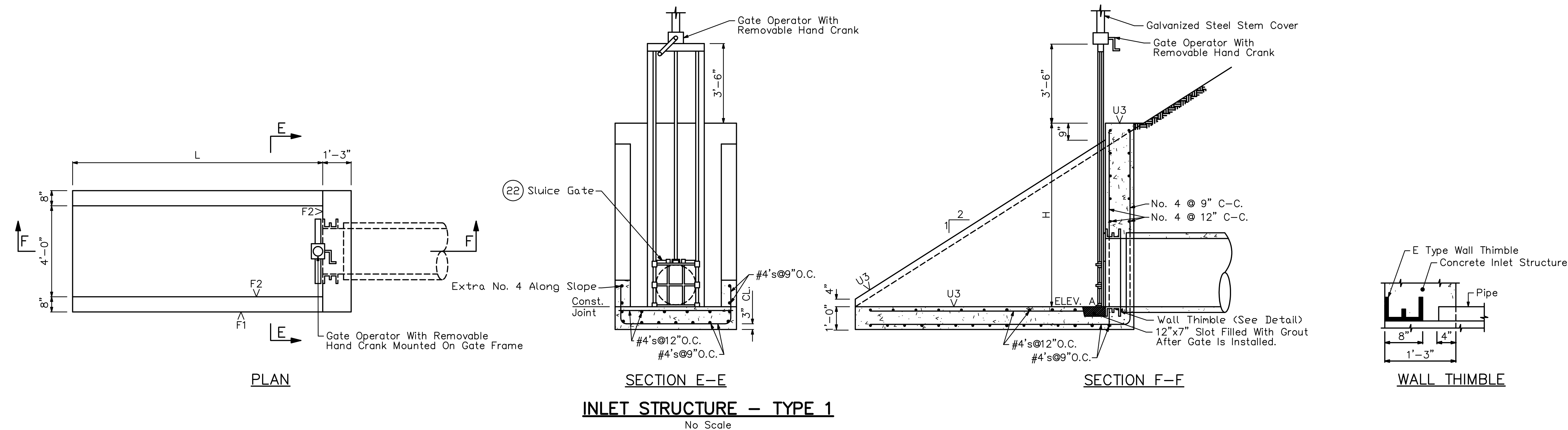
MORTISE AND TENON JOINT (TYP.)

MORTISE AND TENON JOINT DETAILS

Scale: 1/8 in. = 1 in.

NO.	DATE	REVISION	APPR.
SUBMITTED			
PROJECT COORDINATOR - D.E.P.			
APPROVED			
CHIEF - DIVISION OF PROJECT DEVELOPMENT - D.E.P.			
APPROVED			
DIRECTOR - BUREAU OF WATERWAYS ENGINEERING AND WETLANDS - D.E.P.			
PROFESSIONAL'S SIGNATURE			
DATE			
COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION OFFICE OF WATER MANAGEMENT			
COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF GENERAL SERVICES HARRISBURG, PENNSYLVANIA			
PROJECT NO. D.G.S. 181-21			
RUSHBROOK CREEK PROJECT BOROUGH OF JERMYN LACKAWANNA COUNTY, PENNSYLVANIA			
PERMANENT PROJECT SIGN DETAILS			
DRAWN BY	DATE	DRAWING NO.	
JAD	XX/XX/XXXX	D-11	
CHECKED BY	SCALE		
	As Shown		

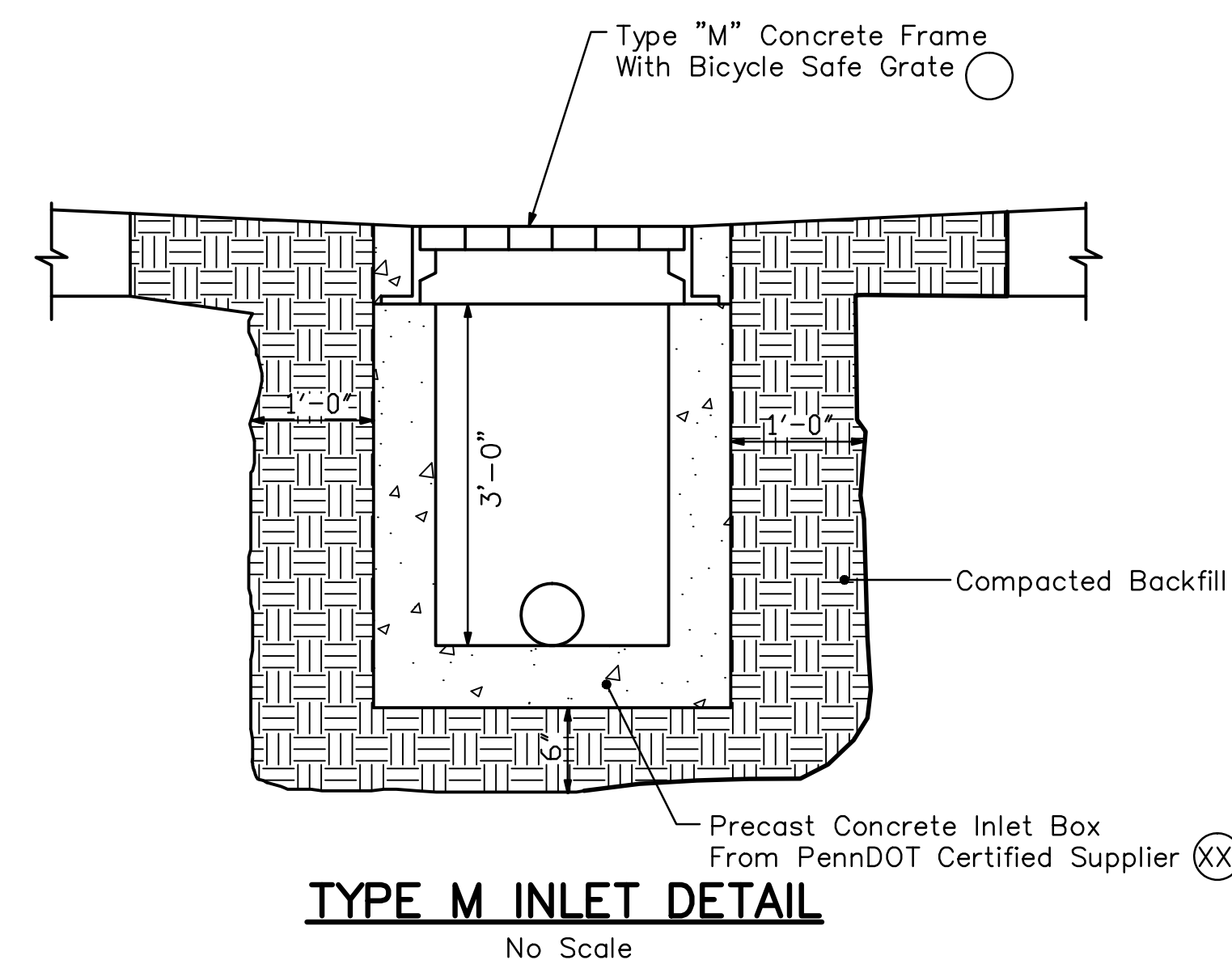
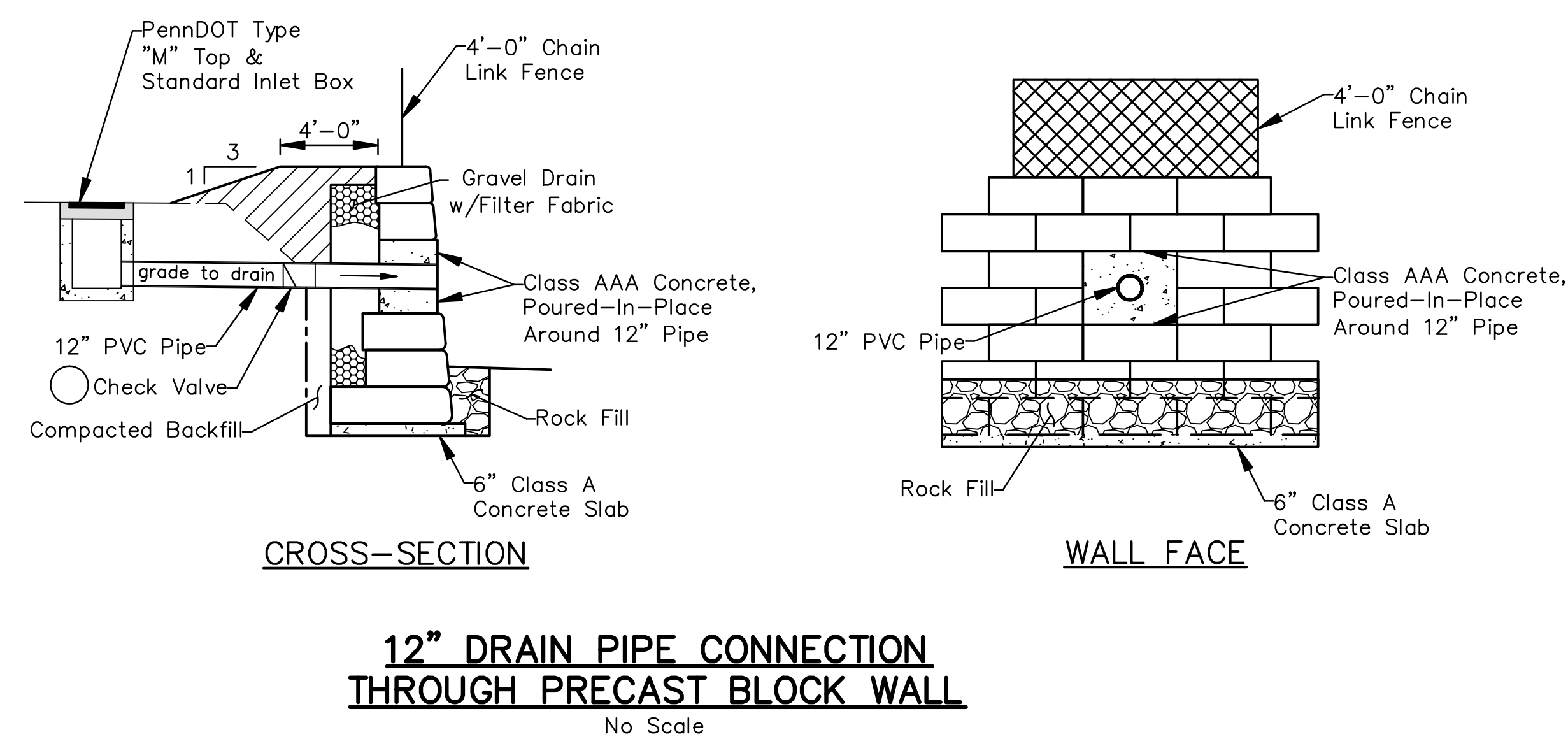
ALL DIMENSIONS AND EXISTING  
CONDITIONS SHALL BE CHECKED  
AND VERIFIED BY CONTRACTOR  
AT THE SITE.



DRAINAGE STRUCTURE DATA TABLE													
DRAINAGE STRUCTURE NUMBER	STATION	INLET STRUCTURE							PIPE		OUTLET STRUCTURE		
		TYPE	SLUICE GATE SIZE	ELEV. A	ELEV. B	LENGTH L	HEIGHT H	CONNECTIONS	LENGTH	SIZE	FLAPGATE	ELEV. C	ELEV. D
1	35+66	1	12"x12"	948.0	--	5.8'	3.5'	12" SLPEP	25'-0"±	12" SLPEP	12" DIA.	946.5	947.5

NOTES:

1. For General Notes See Drawing GP-1.
2. For Concrete Notes See Drawing D-7.
3. All Elevations With  $\pm$  Sign Shall Be Determined By The Department At The Site.

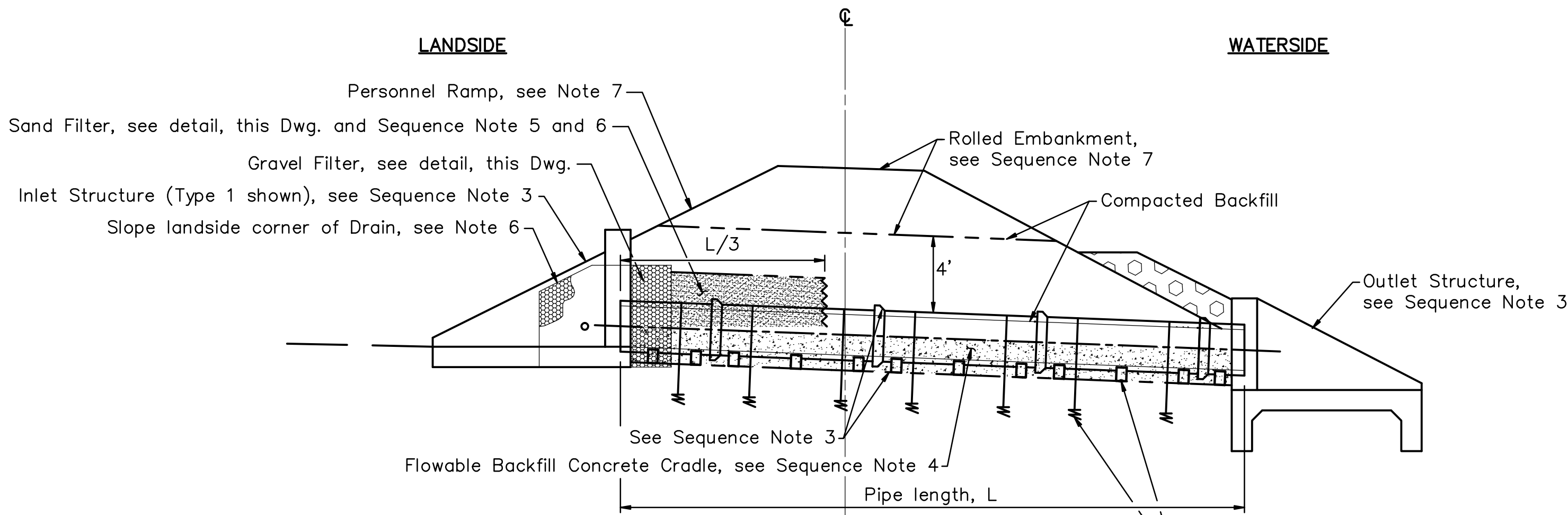


NO.	DATE	REVISION	APPR.
SUBMITTED _____ PROJECT COORDINATOR – D.E.P.			
APPROVED _____ CHIEF – DIVISION OF PROJECT DEVELOPMENT – D.E.P.			
APPROVED _____ DIRECTOR – BUREAU OF WATERWAYS ENGINEERING AND WETLANDS – D.E.P.			
_____ PROFESSIONAL'S SIGNATURE		_____ PROFESSIONAL'S SIGNATURE	
DATE		DATE	
COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION OFFICE OF WATER MANAGEMENT			
COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF GENERAL SERVICES HARRISBURG, PENNSYLVANIA			
PROJECT NO. D.G.S. 181-21			
RUSHBROOK CREEK PROJECT  BOROUGH OF JERMYN LACKAWANNA COUNTY, PENNSYLVANIA			
DRAINAGE STRUCTURES DETAILS			
DRAWN BY  JAD	DATE  XX/XX/XXXX	DRAWING NO.  D-8	
CHECKED BY	SCALE  As Shown		

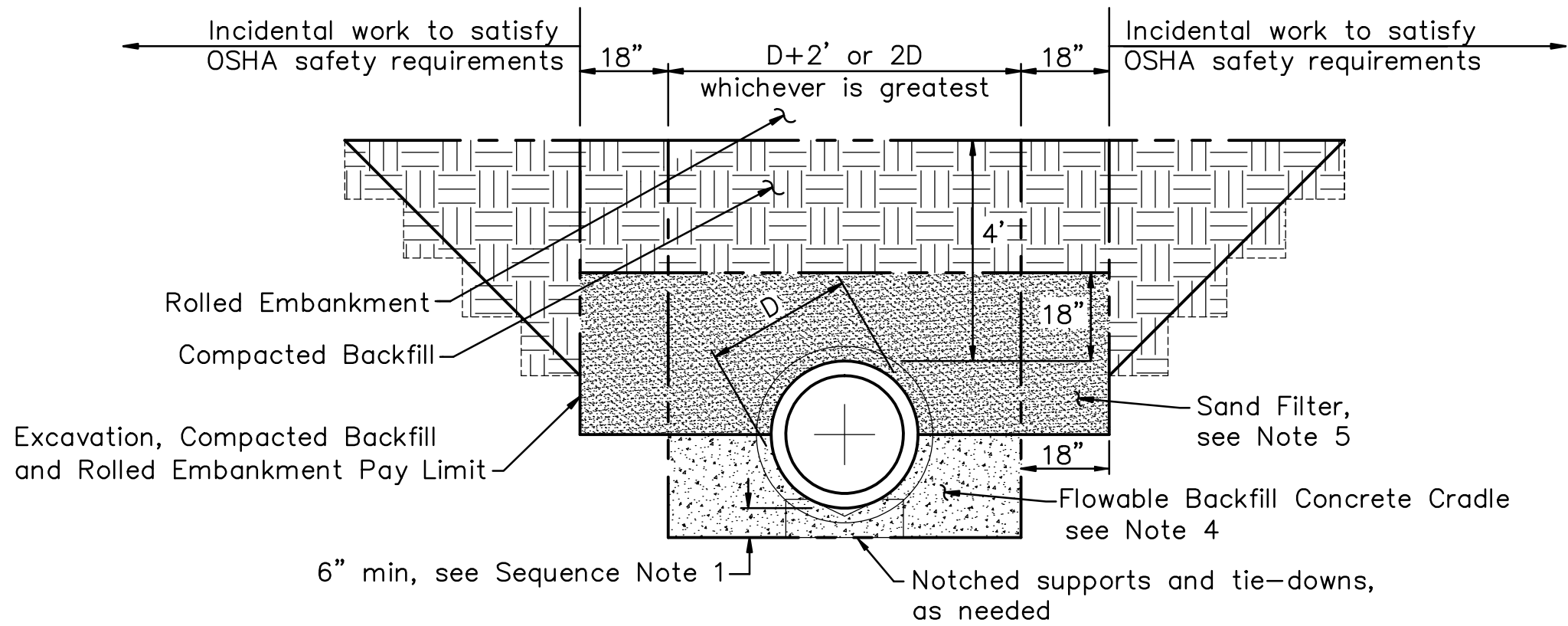


SEQUENCE OF WORK:

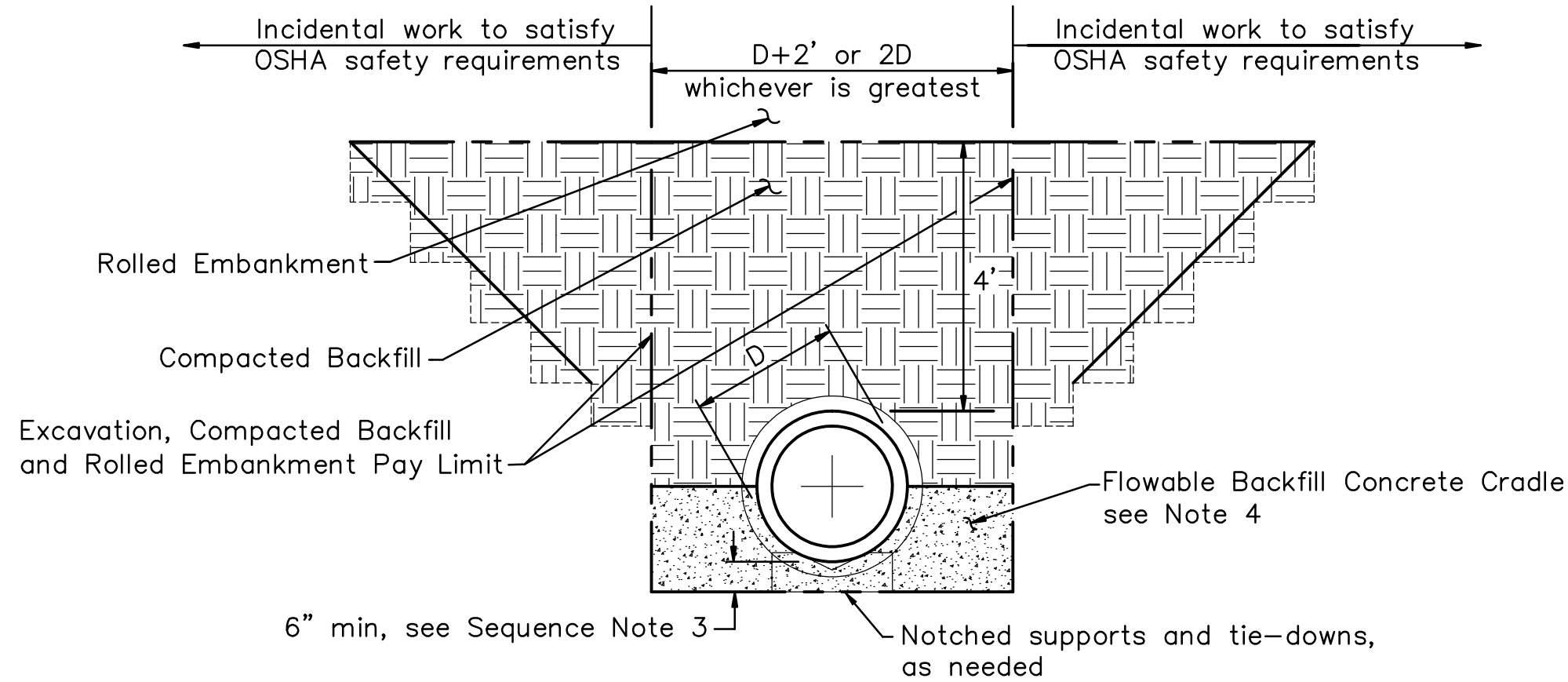
1. Use Trench Excavation along pipe alignment to establish an undisturbed surface, 6" below the outer wall of pipe. Layback side slopes as shown to satisfy OSHA Safety Requirements, but this excavation is incidental to the work shown.
2. Place SLPEP to final alignment using notched supports and floatation prevention methods approved by the Department in writing.
3. Joint pipes according to TS-16.5C and construct inlet and outlet structures as shown on Dwg. D-8. Note that weepholes are required at the inlet structure sidewalls. Bulkhead the inlet and outlet structure sidewalls adequately to contain Concrete Cradle placement.
4. Place Flowable Backfill Concrete Cradle along the full pipe length up to the midpoint of SLPEP. Minimal vibration may be required to obtain full cradle. Cure concrete with wet burlap for at least 48 hours before placing Rolled Embankment.
5. After Concrete Cradle has cured, increase Trench Excavations width for Sand Filter placement on the landside 1/3 pipe length, as shown on Typical Profile and Details, this drawing on all drainage structures.
6. Install Sand Filter, Compacted Backfill and Gravel Filter in adjacent 4" layers to the limits shown on the details on all drainage structures. Note that the filter fabric is only used as a separator between the filter-to-embankment interface and is not to cross the sand-to-gravel interface at any time.
7. Continue Rolled Embankment as soon as 4 feet minimum pipe clearance is provided.



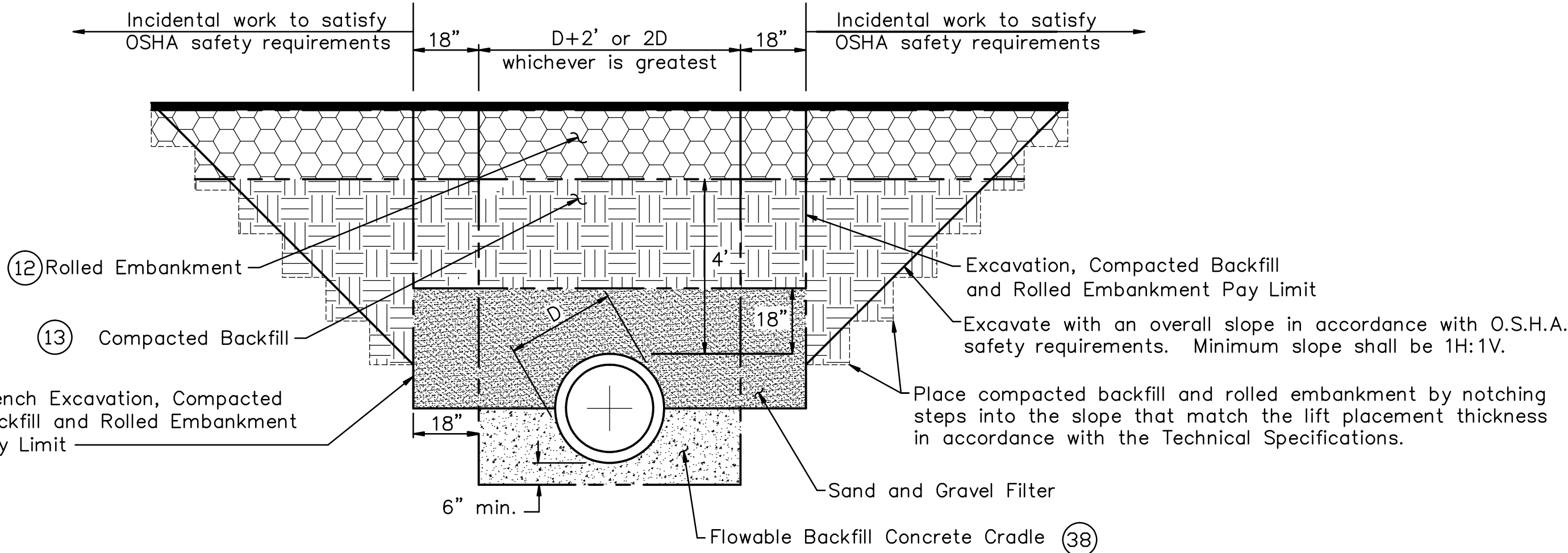
DRAINAGE STRUCTURE  
TYPICAL PROFILE  
No Scale



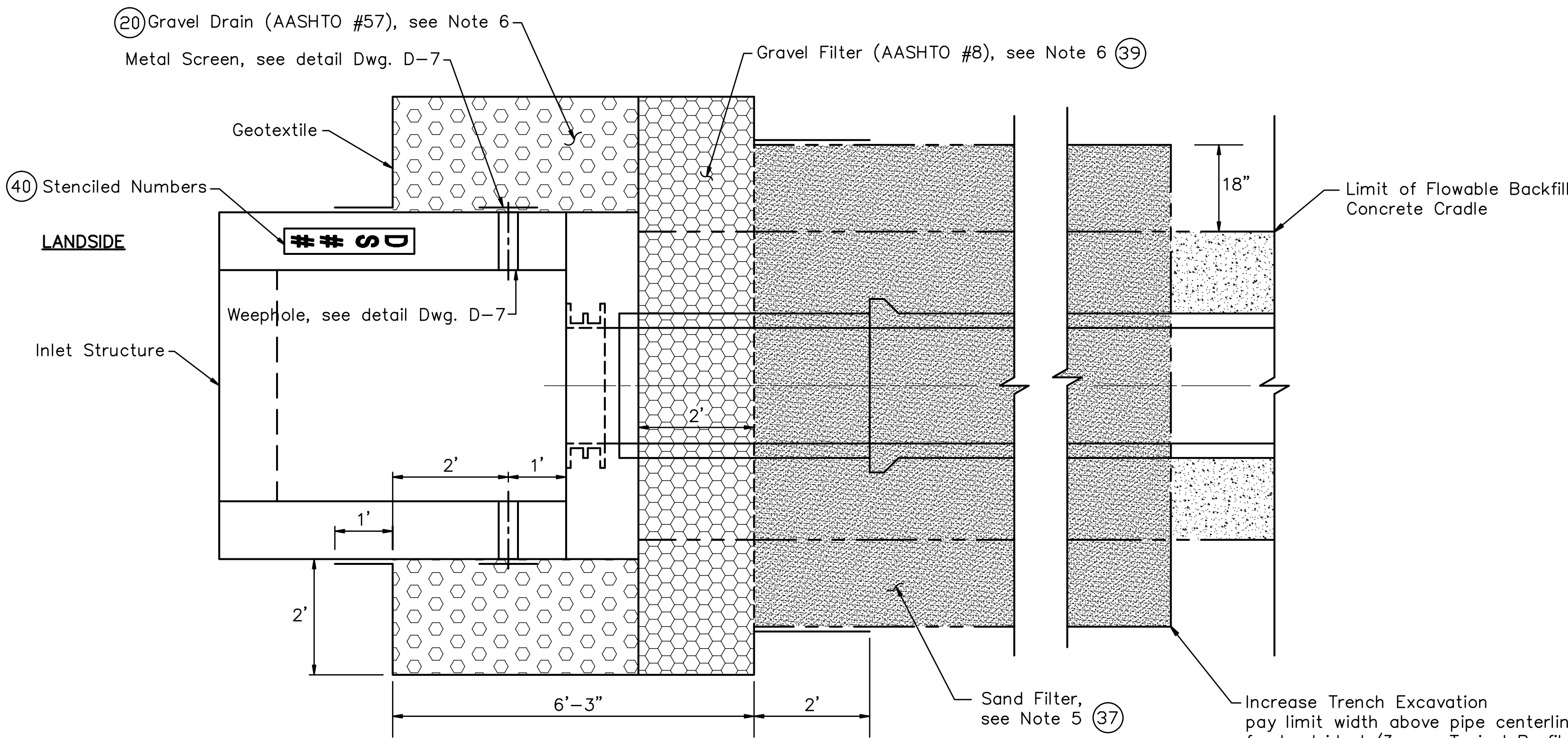
SAND AND GRAVEL FILTER ABOVE PIPE  
No Scale



COMPLETE IMPERVIOUS FILL  
No Scale



CULVERT PAYMENT SECTION  
No Scale



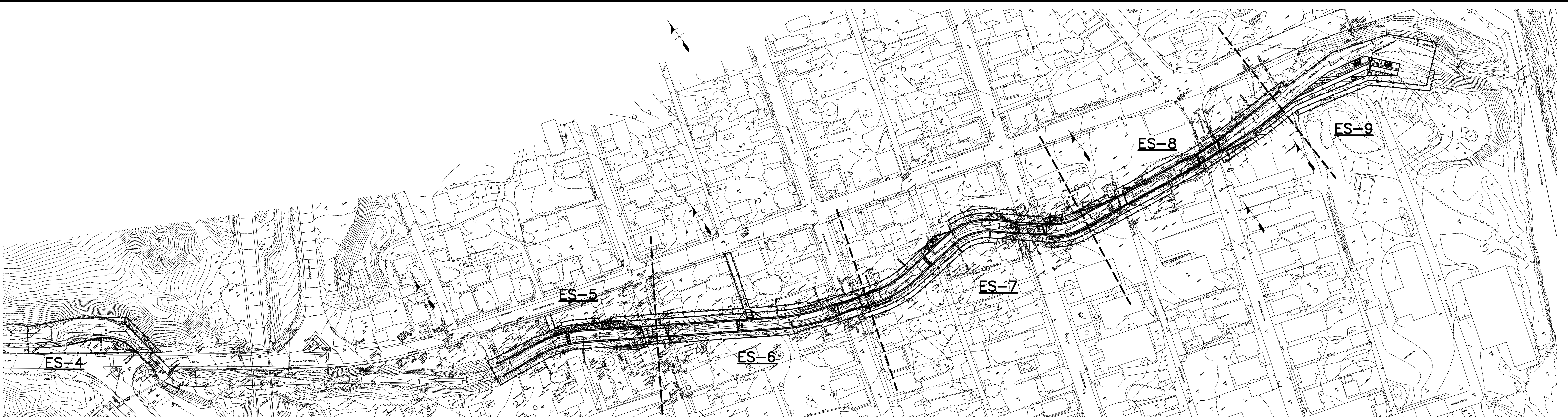
SAND AND GRAVEL FILTER  
No Scale

NOTES:

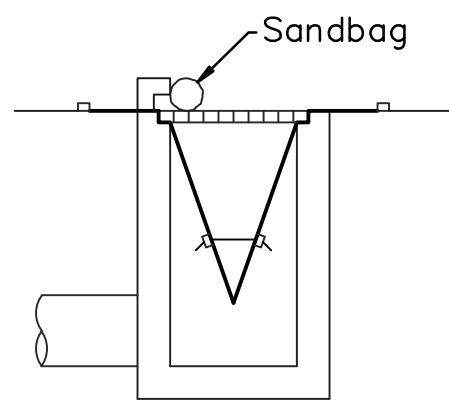
1. For General Notes, see Dwg. GP-1.
2. For Drainage Structure Profiles, see Dwg. D-9.
3. For Inlet and Outlet Structure Details, see Dwg. D-8.
4. Flowable Backfill Concrete Cradle shall comply with TS-\_\_\_ and requires a 48-hour cure with wet burlap.
5. Sand Filter material shall comply with PennDOT, Section 703.1, Fine Aggregate Cement Concrete Sand, Type A. Satisfactory placement of Sand Filter material shall be determined based on non-movement of material placed in 4" layers.
6. Gravel Filter shall comply with TS-\_\_\_, except that Coarse Aggregate shall comply with AASHTO #8 or AASHTO #57 as shown. Gravel Filter and weepholes shall be provided at Inlet Structures only. Gravel Filter is 4.5' in height at the headwall. Slope top surface of drain as necessary to provide 1' clearance from landside slope.
7. Provide a 3' wide ramp from the levee crown to the top of each inlet structure for ease of access with the portable actuator. Do not exceed 10% slope.

NO.	DATE	REVISION	APPR.
SUBMITTED			
PROJECT COORDINATOR - D.E.P.			
APPROVED			
CHIEF - DIVISION OF PROJECT DEVELOPMENT - D.E.P.			
APPROVED			
DIRECTOR - BUREAU OF WATERWAYS ENGINEERING AND WETLANDS - D.E.P.			
PROFESSIONAL'S SIGNATURE			
DATE			
COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION OFFICE OF WATER MANAGEMENT			
COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF GENERAL SERVICES HARRISBURG, PENNSYLVANIA			
PROJECT NO. D.G.S. 181-21			
RUSHBROOK CREEK PROJECT			
BOROUGH OF JERMYN LACKAWANNA COUNTY, PENNSYLVANIA			
DRAINAGE STRUCTURE TRENCH FILL DETAILS			
DRAWN BY	DATE	DRAWING NO.	
JAD	XX/XX/XXXX		
CHECKED BY	SCALE		
	As Shown		

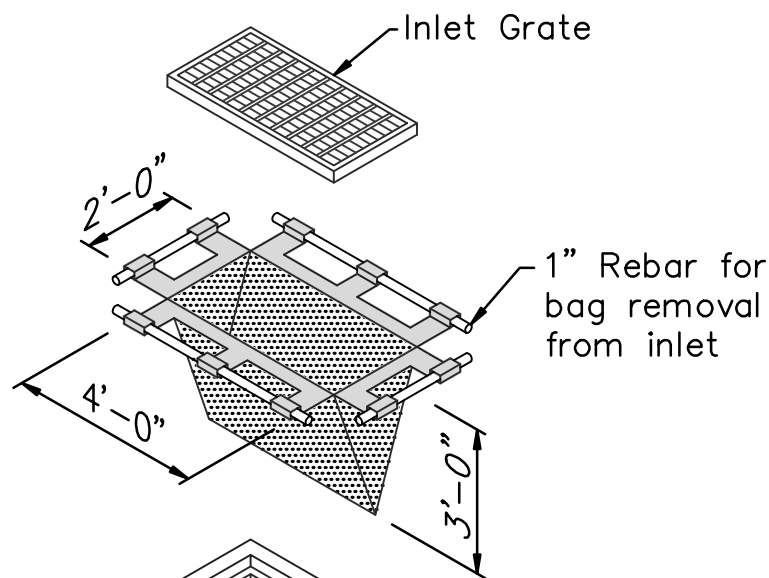




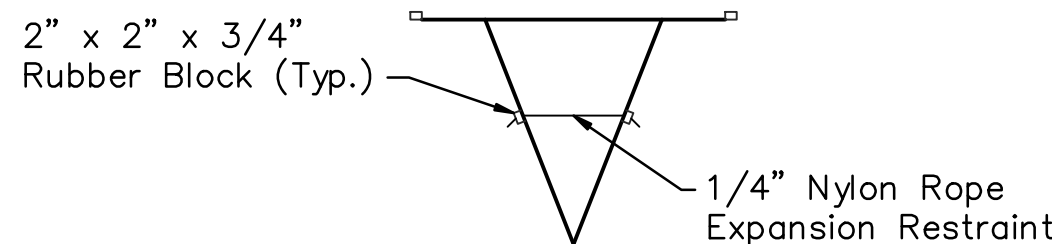
PLAN



INSTALLATION DETAIL



ISOMETRIC VIEW



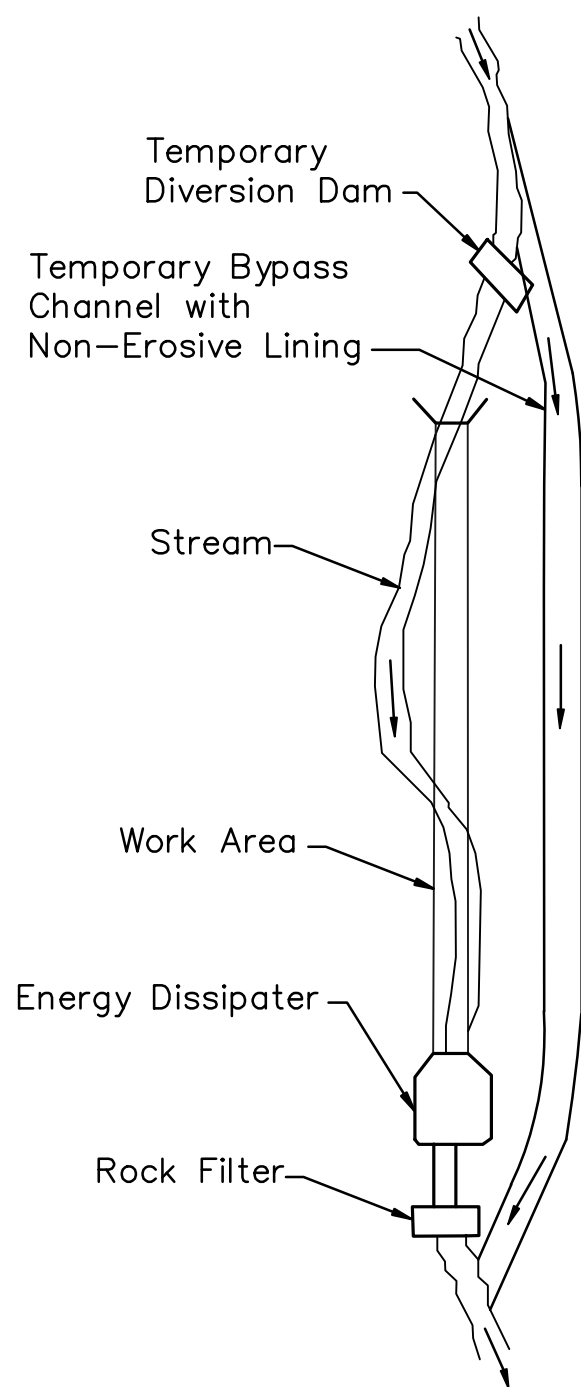
BAG DETAIL

**FILTER BAG INLET PROTECTION**

No Scale

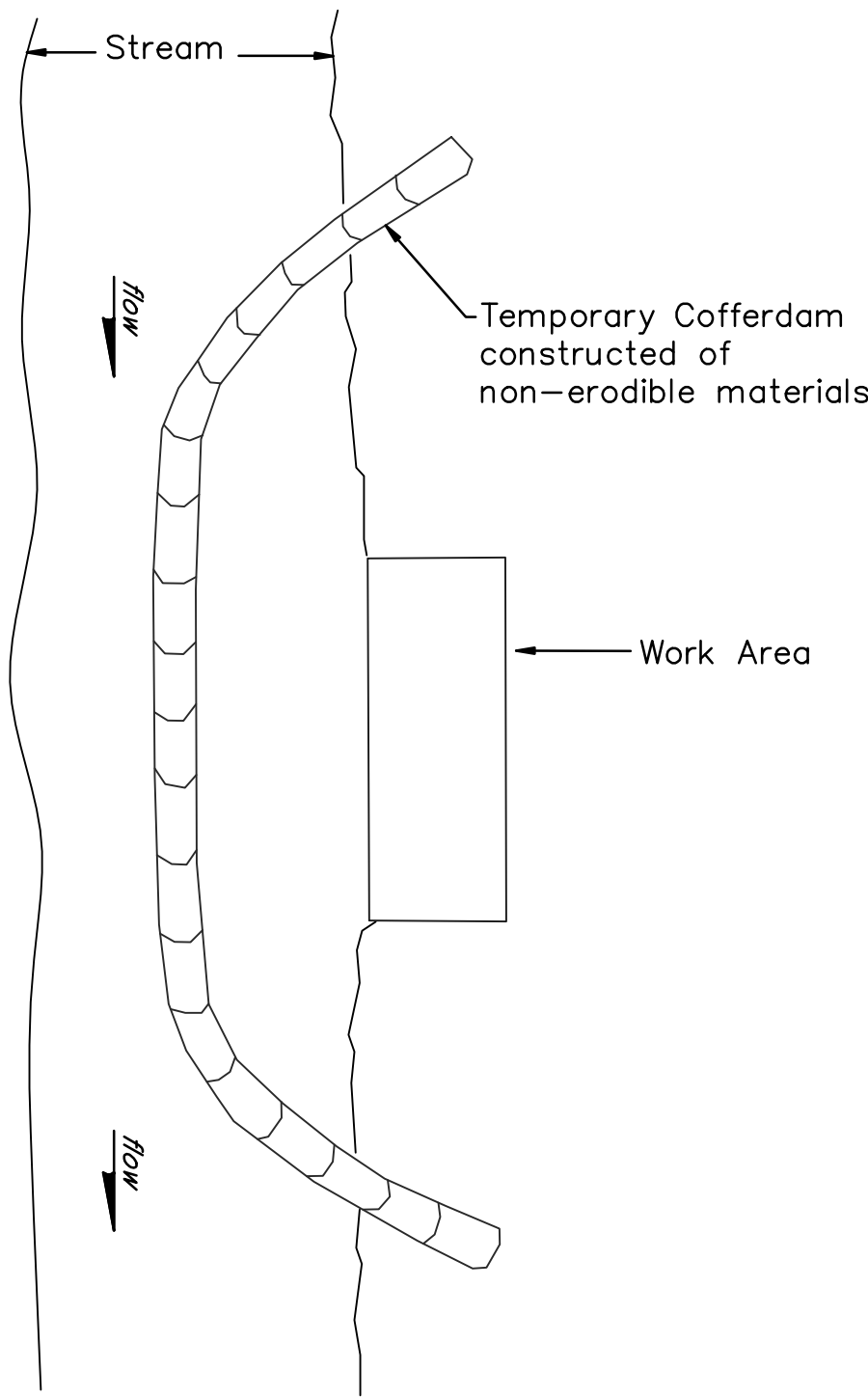
**NOTE:**

Maximum Drainage Area = 1/2 acre.  
Inlet protection is not required for inlet tributary to sediment basin or trap. Berms required for all installations.  
Maintain earthen berm until roadway is stoned. Maintain road subbase berm maintained until roadway is paved.  
Six inch minimum height asphalt berm shall be maintained until roadway surface receives final coat.



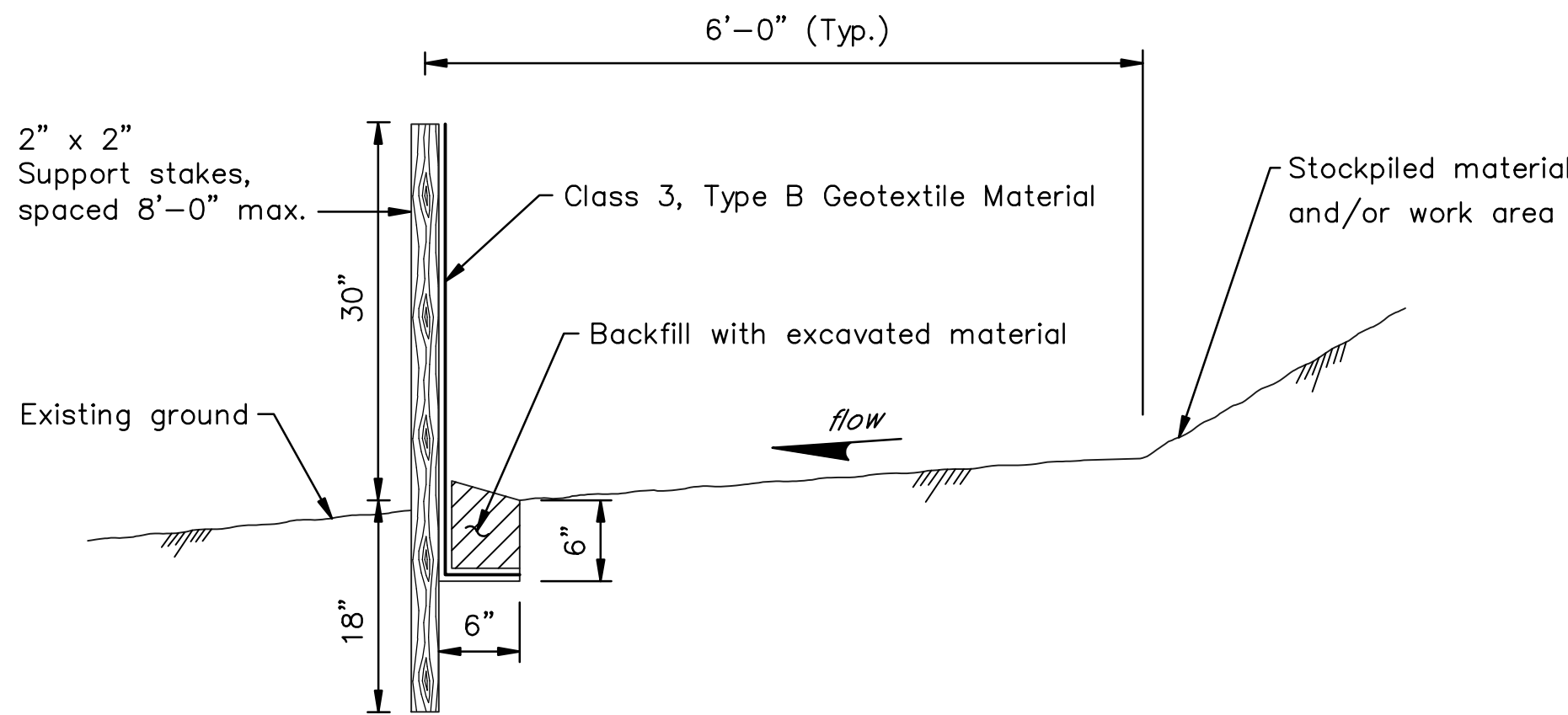
**BYPASS CHANNEL DETAIL**

No Scale



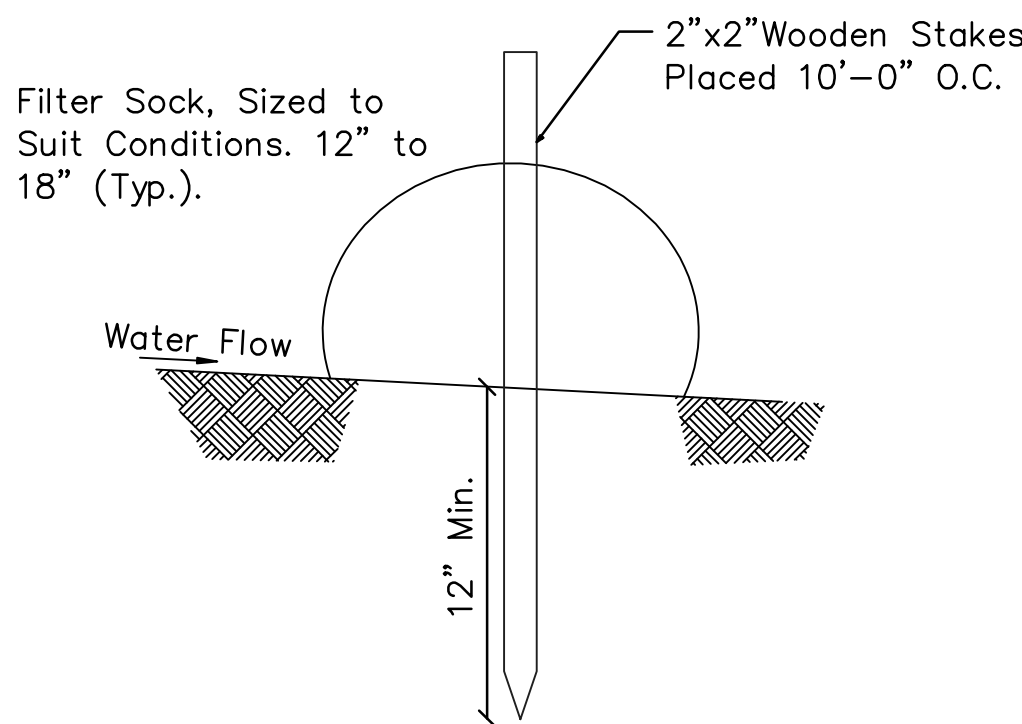
**CHANNEL BYPASS DETAIL**

No Scale



**FILTER FABRIC FENCE**

No Scale



**COMPOST FILTER SOCK**

No Scale

DETAILED E&S CONTROL PLAN			
CONTRACTOR:			
DATE:			
SIGNATURE:			

NO.	DATE	REVISION	APPR.

SUBMITTED	PROJECT COORDINATOR - D.E.P.
APPROVED	CHIEF - DIVISION OF PROJECT DEVELOPMENT - D.E.P.
APPROVED	DIRECTOR - BUREAU OF WATERWAYS ENGINEERING AND WETLANDS - D.E.P.

PROFESSIONAL'S SIGNATURE	DATE	PROFESSIONAL'S SIGNATURE	DATE

COMMONWEALTH OF PENNSYLVANIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
OFFICE OF WATER MANAGEMENT

COMMONWEALTH OF PENNSYLVANIA  
DEPARTMENT OF GENERAL SERVICES  
HARRISBURG, PENNSYLVANIA

PROJECT NO. D.G.S. 181-21

RUSHBROOK CREEK PROJECT

BOROUGH OF JERMYN  
LACKAWANNA COUNTY, PENNSYLVANIA

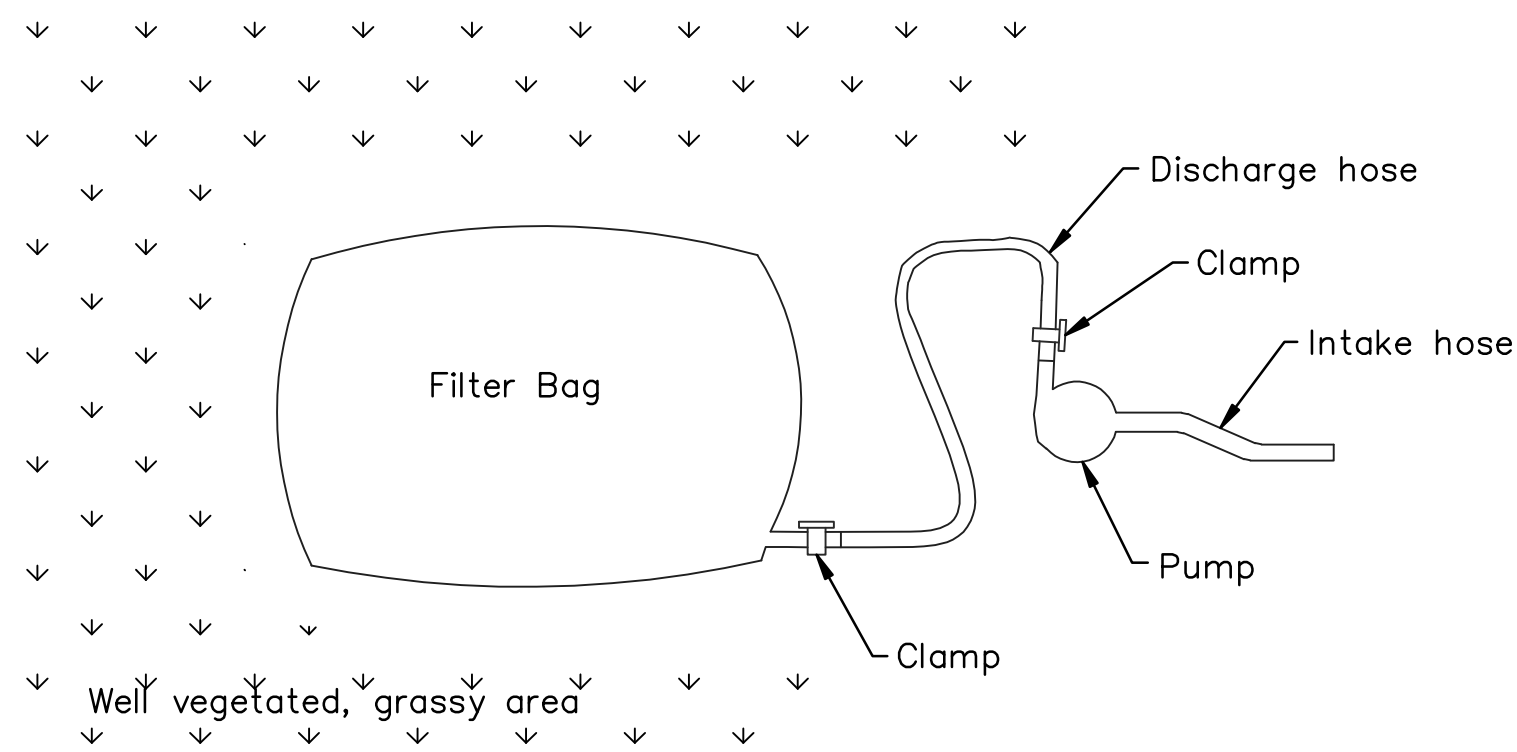
EROSION AND SEDIMENT CONTROL  
GENERAL PLAN AND DETAILS

DRAWN BY	DATE	DRAWING NO.
A.J.M.	8-15-12	ES-1
CHECKED BY	SCALE	
	As Shown	

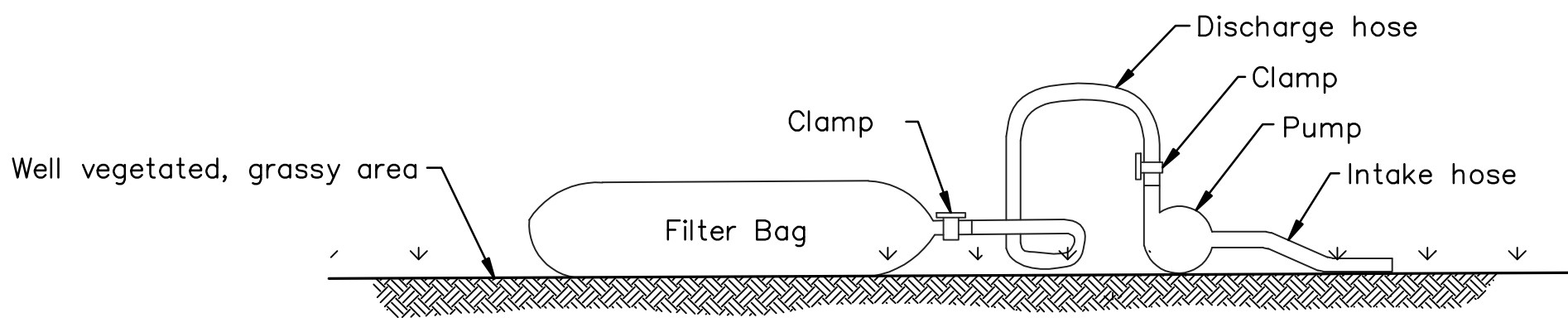
ALL DIMENSIONS AND EXISTING  
CONDITIONS SHALL BE CHECKED  
AND VERIFIED BY CONTRACTOR  
AT THE SITE.







PLAN VIEW



ELEVATION VIEW

**PUMPED WATER FILTER BAG**

No Scale

**NOTE:**

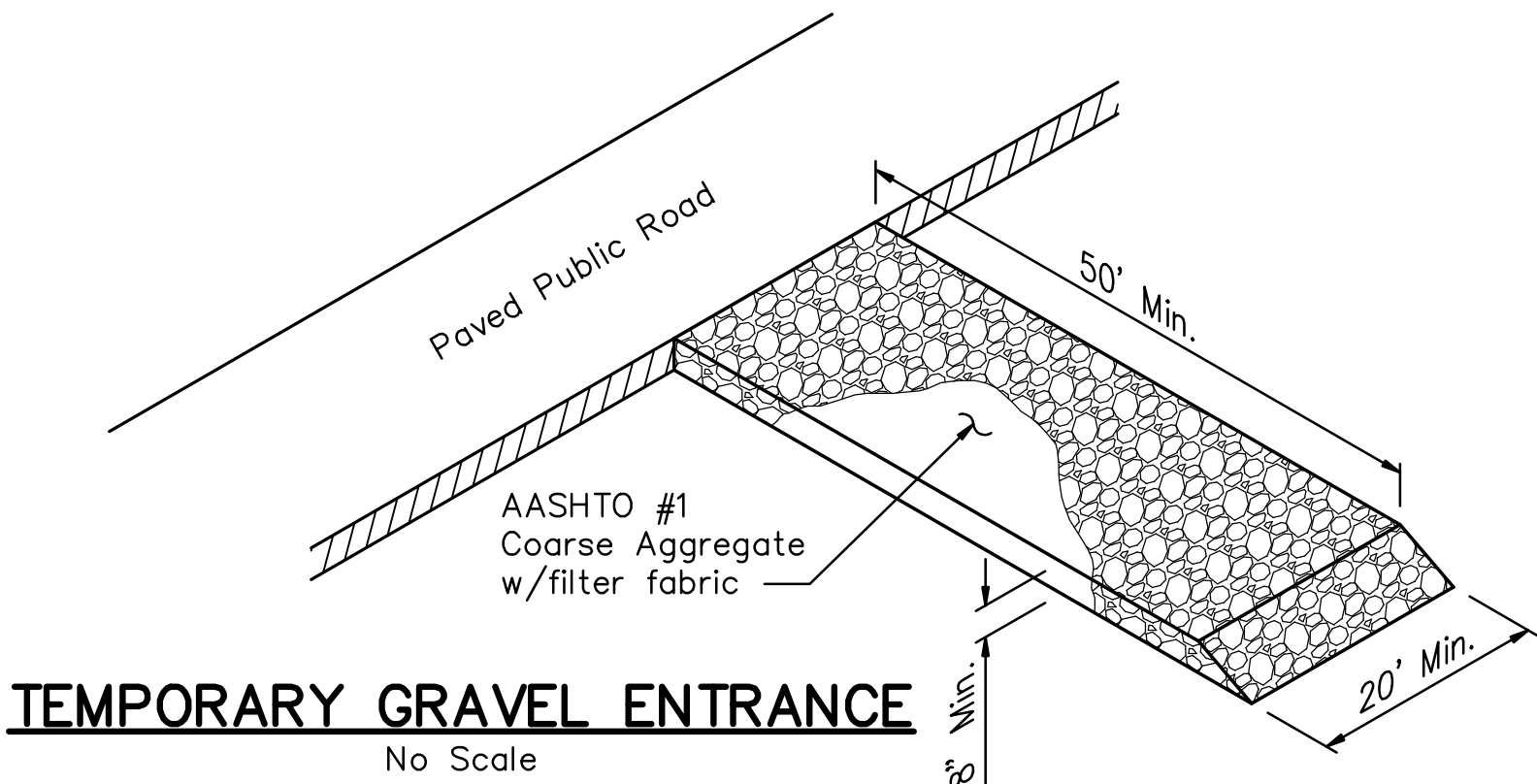
Filter bags shall be made from non-woven geotextile material sewn with high strength, double stitched "J" type seams. They shall be capable of trapping particles larger than 150 microns.

Provide a suitable means of accessing the bag with machinery required for disposal purposes. Filter bags shall be replaced when they become 1/2 full. Spare bags shall be kept available for replacement of those that have failed or are filled.

Locate bags in well-vegetated (grassy) area, and discharge onto stable, erosion resistant areas. Where this is not possible, provide a geotextile flow path. Bags shall not be placed on slopes greater than 5%.

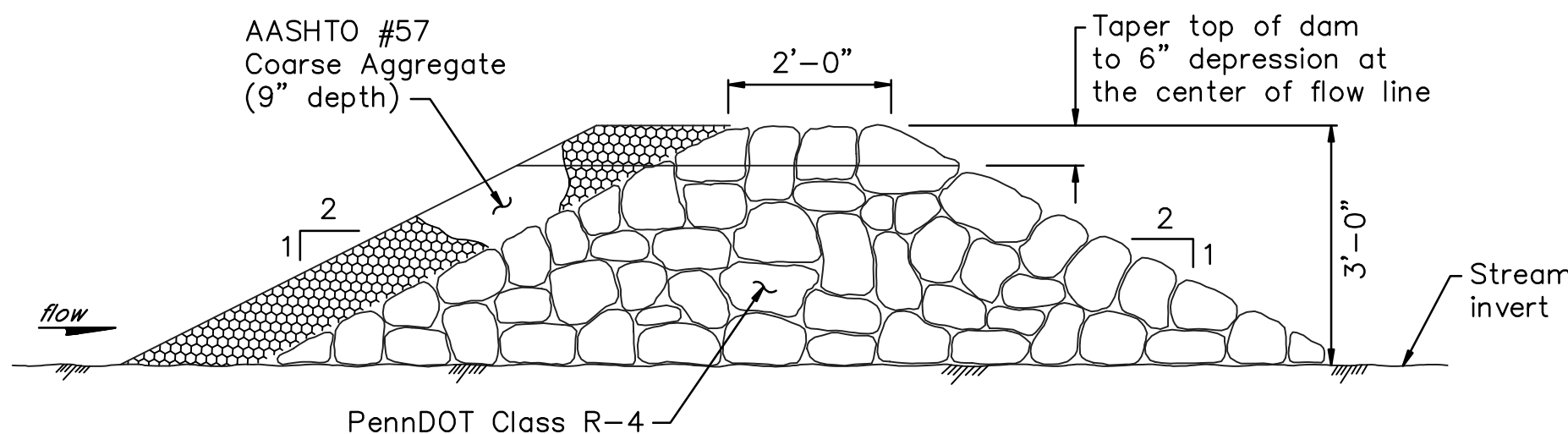
Insert the pump discharge hose into the bags in the manner specified by the Manufacturer and securely clamp.

The pumping rate shall be no greater than 750 gpm or 1/2 the maximum specified by the Manufacturer, whichever is less. Pump intakes should be floating and screened.



**TEMPORARY GRAVEL ENTRANCE**

No Scale



**TEMPORARY ROCK DAM**

No Scale

Note: Install in existing creek bed immediately downstream of proposed work areas.

DETAILED E&S CONTROL PLAN			
CONTRACTOR:			
DATE:			
SIGNATURE:			

**NOTES:**

- For General E&S Notes, see Dwg. ES-3.
- For General E&S Details, see Dwg. ES-1 and ES-2.
- For E&S Detailed Plans, see Dwg. ES-4 thru ES-10.

NO.	DATE	REVISION	APPR.
SUBMITTED			
PROJECT COORDINATOR - D.E.P.			
APPROVED			
CHIEF - DIVISION OF PROJECT DEVELOPMENT - D.E.P.			
APPROVED			
DIRECTOR - BUREAU OF WATERWAYS ENGINEERING AND WETLANDS - D.E.P.			
PROFESSIONAL'S SIGNATURE      DATE      PROFESSIONAL'S SIGNATURE      DATE			
COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION OFFICE OF WATER MANAGEMENT			
COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF GENERAL SERVICES HARRISBURG, PENNSYLVANIA			
PROJECT NO. D.G.S. 181-21			
RUSHBROOK CREEK PROJECT			
BOROUGH OF JERMYN LACKAWANNA COUNTY, PENNSYLVANIA			
EROSION AND SEDIMENT CONTROL DETAILS			
DRAWN BY A.J.M.	DATE 8-15-12	DRAWING NO.	
CHECKED BY	SCALE As Shown	ES-2	

ALL DIMENSIONS AND EXISTING  
CONDITIONS SHALL BE CHECKED  
AND VERIFIED BY CONTRACTOR  
AT THE SITE.



E&S GENERAL NOTES

The following General Directives apply to all phases of construction activities:

1. Contractor shall conduct all work in accordance with the latest version of the "Erosion and Sediment Pollution Control Program Manual", published by the DEP Bureau of Watershed Management.
2. A copy of the approved Erosion and Sediment Control Plan must be available at the project site at all times.
3. Special care shall be taken to prevent sediment laden stormwater from entering all stormwater management and conveyance facilities until the site has been properly stabilized.
4. During construction, the Contractor is to make certain all runoff is directed to the sediment control devices. Erosion and sediment BMPs must be constructed, stabilized, and functional before site disturbance begins within the tributary areas of those BMPs.
5. All erosion and sedimentation pollution control measures shall remain in place until the site has been stabilized. Vegetated areas are considered to be stabilized when a uniform 70 percent vegetative cover of erosion resistant perennial species has been achieved, or the disturbed area is covered with an acceptable BMP which permanently minimizes accelerated erosion and sedimentation. Until such time as this standard is achieved, interim stabilization measures and temporary erosion and sediment control BMPs that are used to treat project runoff may not be removed. Until the site is stabilized, all erosion and sediment control BMPs must be maintained properly. Maintenance must include inspections of all erosion and sediment control BMPs after each runoff event and on a weekly basis. All preventative and remedial maintenance work, including cleanout, repair, replacement, regrading, reseeding, mulching and renetting must be performed immediately. If erosion and sediment control BMPs fail to perform as expected, replacement BMPs or modifications of those installed will be required.
6. After final site stabilization has been achieved, temporary erosion and sediment BMPs must be removed. Areas disturbed during removal of the BMPs must be stabilized immediately.
7. Erosion and sediment BMPs must be constructed, stabilized, and functional before site disturbance begins within the tributary areas of those BMPs.
8. All soil stockpiles shall be seeded with a grass cover immediately to avoid prolonged exposure of the bare soil material to rainfall events. If the area is expected to be disturbed again during the construction process, the temporary seed mixture may be utilized. Stockpiles shall not be greater than 35 feet in height, nor shall stockpile slopes be steeper than 2 to 1. Whenever possible, place all excavated material upslope from disturbed areas. Stockpiles shall be set parallel to grade to reduce runoff.
9. All vehicles and equipment must enter and exit disturbed areas through temporary rock construction entrances.
10. In all cases during construction, the area of disturbance should be minimized.
11. Silt barrier BMP's shall be placed end to end, securely staked in place, and maintained until area is stabilized.
12. All pumping of sediment laden water shall be through a sediment control BMP, such as a pumped water filter bag or equivalent sediment removal facility, over undisturbed vegetated areas.
13. Upon general completion of the site improvements, topsoil shall be placed and final grading passes shall be made perpendicular to the direction of runoff.
14. Reseed and reestablish any barren and disturbed areas not having established ground cover.
15. Any disturbed area must be stabilized immediately. If the area is expected to be disturbed again during the construction process, the temporary seed mixture may be utilized. During non-germinating periods, mulch must be applied at the recommended rates. Disturbed areas which are not at finished grade and which will be redistributed within 1 year may be stabilized in accordance with temporary seeding specifications. Disturbed areas which are either at finished grade or will not be redistributed within 1 year must be stabilized in accordance with permanent seeding specifications.
16. In all cases, care should be taken to prevent the entry of soil, stone, or other materials and refuse into existing drainage pipes and swales, as well as wetland areas on the site.
17. The Contractor shall be cognizant of appropriate seasons for planting grass seed mixtures, and plan his construction schedule to appropriately utilize the best times of the year for germination of the seed and stabilization of the site.
18. Wherever the term "Seeding" is mentioned in the Construction Sequence or in the Erosion and Sediment Pollution Control Plan, the term means the entire soil preparation, seeding, mulching, and maintenance in accordance with TS 32-Seeding.
19. Sediment and soil material that is removed from clogged or full BMPs shall be disposed of by thoroughly mixing with other suitable fill materials on the project site, and incorporated into fill in upland areas of the project site. The fill area and other disturbed areas shall be stabilized in accordance with the Erosion and Sediment Pollution Control Plan. In no case shall the sediment or "waste" soil material be carelessly dumped or otherwise placed in a manner that causes the material to again be eroded and transported by runoff, either on or off the project site.
20. The Contractor shall dispose of waste materials obtained from demolition activities in a legal manner, and shall recycle as much of the waste material as possible, in accordance with applicable sections of the contract specifications. All building materials and wastes must be removed from the site and recycled or disposed of in accordance with the Department's Solid Waste Management Regulations at 25 PA Code 260.1 et seq., 271.1, and 287.1 et seq. No building materials or wastes or unused building materials shall be burned, buried, dumped, or discharged at the site.

21. Should any soil materials be removed from the site at any time, the soil materials must be disposed of properly. The Contractor will be responsible for the proper removal and disposal of any excess topsoil and fill material from the site. The receiving site must have a Soil Erosion and Sedimentation Control Plan approved by the Department prior to the placement of any fill. In addition, the receiving site may require a NPDES Permit.
22. Immediately upon discovering unforeseen circumstances posing the potential for accelerated erosion and/or sediment pollution, the Contractor shall implement appropriate best management practices to eliminate the potential for accelerated erosion and/or sediment pollution. Should additional or unexpected erosion or sedimentation occur during construction, or questions regarding the maintenance control practices arise, contact the Bureau of Waterways Engineering and Wetlands.
23. The Chapter 93 Water Classification for Rushbrook Creek is CWF.

TEMPORARY CONTROL MEASURES

1. During construction, the Contractor shall keep the site well drained at all times. Erosion and sediment BMPs must be constructed, stabilized, and functional before site disturbance begins within the tributary areas of those BMPs.
2. Any waste material accumulated during construction, which will not be reused in later construction, shall be removed from the site and disposed of in a responsible and legal manner.
3. All unstabilized soil stockpiled temporarily shall be covered with a tarp or other suitable stabilization (seeded) in order to prevent washoff when precipitation is imminent.
4. Silt barrier BMP's shall be placed at critical erosion areas, as shown on the plan, in order to prevent sediment from entering onto public roadways, adjacent properties and waterways.
5. Stabilized construction entrances shall be placed at the point of construction ingress and egress to the project site. This structure will prevent tracking and flowing of sediment onto the public roadway. The entrance shall remain functional for the duration of the project, or determined no longer necessary for a specific site by the Department.
6. Where dust or wind erosion is a problem, the unstable surface(s) shall be sprinkled with water or other suitable dust suppressor.
7. Any water pumped from sanitary, storm, or utility trenches, for any reason, shall be directed through a BMP such as a sediment filter bag discharging over non-disturbed areas.
8. The Contractor shall employ measures during construction to prevent spills of fuels or lubricants. If a spill occurs, it shall be controlled immediately to prevent its entry into nearby waterways.
9. All earth moving activities shall be carried out in such a manner as to minimize the amount of disturbed area.
10. Responsibility for implementing erosion and sedimentation control shall be designated to a minimum of one individual who will be present at the project site daily.
11. When the Engineer, Municipal Official, or County Representative determines that erosion control measures are necessary, that were not foreseen in the design stage, said Official shall estimate the erosion potential and select measures on the basis of both cost effectiveness and the consequences of the erosion.
12. Any temporary erosion control measure applied to exposed soil surfaces shall remain functional until vegetation cover is sufficiently established.
13. All temporary erosion and sedimentation control materials shall be subject to applicable regulations of the Department of Transportation Form 408 Specifications, most recent edition.
14. After final site stabilization has been achieved, temporary erosion and sediment BMP controls must be removed. Areas disturbed during removal of the BMPs must be stabilized immediately.

MAINTENANCE PROGRAM

1. Until the site is stabilized, all erosion and sediment control BMPs must be maintained properly. Maintenance must include inspections of all erosion and sediment control BMPs after each runoff event and on a weekly basis. All preventative and remedial maintenance work, including cleanout, repair, replacement, regrading, reseeding, mulching and renetting must be performed immediately. If erosion and sediment control BMPs fail to perform as expected, replacement BMPs or modifications of those installed will be required.
2. The Permittee and Contractor must ensure that visual site inspections are conducted weekly, and after each measurable precipitation event by qualified personnel, trained and experienced in erosion and sediment control, to ascertain that the erosion and sediment control (E&S) BMPs are operational and effective in preventing pollution to the waters of the Commonwealth. A written report of each inspection shall be kept, and include:

1) A summary of the site conditions, E&S BMPs, and compliance; and

2) The date, time, and the name of the person conducting the inspection.
3. A rock construction entrance shall be placed at the point of construction ingress and egress. The structure will prevent tracking and flowing of sediment onto existing stabilized areas. Clean and redress the rock construction entrance when the voids become choked with mud and sediment. The entrance shall remain functional for the duration of the project.
4. Where dust or wind erosion is a problem, the unstable surface(s) shall be sprinkled with water or other suitable dust suppressor.

SEQUENCE OF CONSTRUCTION

All earth disturbance activities shall proceed in accordance with the following sequence. Each stage shall be completed and immediately stabilized before any following stage is initiated. Clearing, grubbing, and topsoil stripping shall be limited only to those areas described in each stage. All proposed stream diversion and dewatering measures shall conform and be implemented in accordance with the Erosion and Sediment Control Plans.

Immediately upon discovering unforeseen circumstances posing the potential for accelerated erosion and/or sediment pollution, the Contractor shall implement appropriate best management practices to eliminate the potential for accelerated erosion and/or sediment pollution.

1. At least 7 days before starting any earth disturbance activities, the Contractor shall invite all Sub-Contractors involved in those activities, the Department the Erosion and Sediment Control Plan Preparer, and a Representative of the County Conservation District to an on-site pre-construction meeting.
2. At least 3 days before starting any earth disturbance activities, all Contractors involved in those activities shall notify the Pennsylvania One Call System Incorporated at 1-800-242-1776 for the location of existing underground utilities.
3. Construct the temporary rock construction entrances as shown on the plans. All vehicles entering the site shall do so via the rock construction entrances. Any mud or sediment tracked onto macadam roadways shall be removed by the Contractor at the end of each working day. Washing of the roadway is not permitted. The Contractor is also responsible for all traffic control devices associated with the access drive throughout the term of construction activities.
4. Field-mark all waters of the Commonwealth boundaries including stream buffers, wetland boundaries, floodways, etc.
5. Field-mark the project limit of disturbance.
6. Install silt barrier BMP's as necessary to perform construction of the project to protect the water body from sediment runoff.
7. Clear and grub the area of proposed construction. Strip topsoil and stockpile at the temporary areas provided, surround with filter fabric and seed per temporary seeding specifications, fertilize and mulch.
8. Construct the project beginning at the downstream end and progress upstream, in 500 foot segments.
9. Coordinate and overlap segments to provide continuous erosion and sedimentation control for the entire project length.
10. Replace topsoil and stabilize all exposed or disturbed areas by performing final grading operations at the soil material stockpile areas. Seed, fertilize and mulch exposed or disturbed areas.
11. Perform fine grading operations at disturbed areas adjacent to the channel/culvert, and seed the disturbed areas with permanent seed mixture.
12. Upon completion of all earth disturbance activities, removal of all temporary BMPs, and permanent \*stabilization of all disturbed areas, the Contractor shall contact the Department for a final inspection. Proper disposal and/or recycling of the BMPs is required by the Site Contractor as per General E&S Notes.

\*Stabilization – Permanent stabilization is defined as a minimum uniform 70% perennial vegetative cover or other permanent non-vegetative cover with a density sufficient to resist accelerated surface erosion and subsurface characteristics sufficient to resist sliding and other movements.

5. Any temporary erosion control measure applied to exposed soil surfaces shall remain functional until vegetative cover is sufficiently established.
6. Permanent soil protection will be completed as early as practical.
7. Any debris accumulated at silt barrier BMP's shall be removed and properly disposed. Barriers shall be checked daily and realigned or reset as required. Remove sediment when it reaches on half of barrier height.
8. Any sediment removed from BMPs during construction will be returned to upland areas on site and incorporated into the site grading.
9. All channels must be kept free of obstructions such as fill ground, fallen leaves and woody debris, accumulated sediment, and construction materials/wastes. Channels should be kept mowed and/or free of all weedy, brushy or woody growth.
10. Vegetated channels shall be constructed free of rocks, tree roots, stumps or other projections that will impede normal channel flow and/or prevent good lining to soil contact. The channel shall be initially over-excavated to allow for topsoil placement.
11. Vegetative stabilization shall be periodically inspected for proper growth. Any areas not responding shall be promptly reseeded. Areas which show signs of erosion prior to stabilization shall be graded, reseeded and mulched as soon as possible. Sod shall be utilized at areas where seeding does not appear to be properly stabilizing an area.
12. Clean and redress the rock filter berms when the voids become choked with mud and sediment. Rock filter berms shall remain functional for the duration of the project.

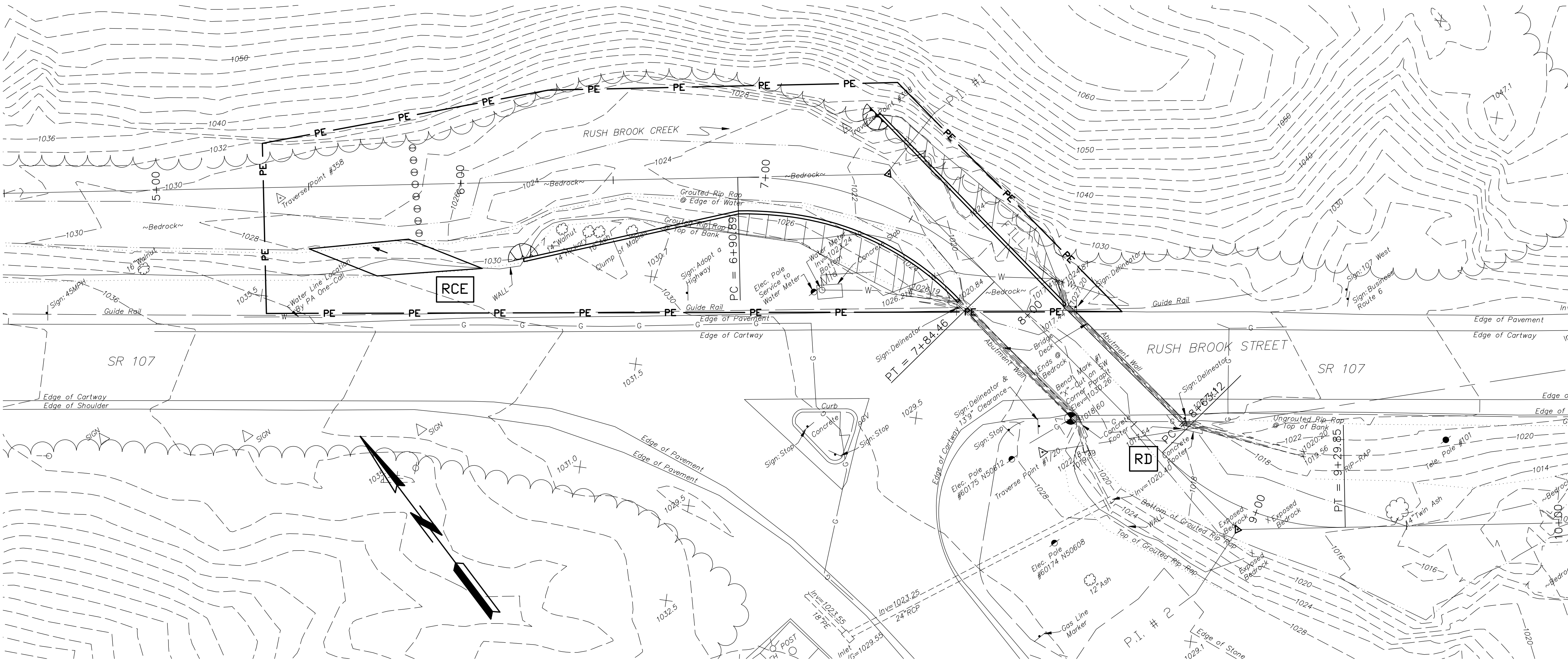
DETAILED E&S CONTROL PLAN		
CONTRACTOR:		
DATE:		
SIGNATURE:		

NOTES:

1. For General E&S Notes, see Dwg. ES-3.
2. For General E&S Details, see Dwg. ES-1 and ES-2.
3. For E&S Detailed Plans, see Dwg. ES-4 thru ES-10.

NO.	DATE	REVISION	APPR.
SUBMITTED			
PROJECT COORDINATOR – D.E.P.			
APPROVED			
CHIEF – DIVISION OF PROJECT DEVELOPMENT – D.E.P.			
APPROVED			
DIRECTOR – BUREAU OF WATERWAYS ENGINEERING AND WETLANDS – D.E.P.			
PROFESSIONAL'S SIGNATURE		DATE	PROFESSIONAL'S SIGNATURE
			DATE
COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION OFFICE OF WATER MANAGEMENT			
COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF GENERAL SERVICES HARRISBURG, PENNSYLVANIA			
PROJECT NO. D.G.S. 181-21			
RUSHBROOK CREEK PROJECT			
BOROUGH OF JERMYN LACKAWANNA COUNTY, PENNSYLVANIA			
EROSION AND SEDIMENT CONTROL GENERAL NOTES			
DRAWN BY	DATE	DRAWING NO.	
A.J.M.	8-15-12	ES-3	
CHECKED BY	SCALE		
	As Shown		

ALL DIMENSIONS AND EXISTING  
CONDITIONS SHALL BE CHECKED  
AND VERIFIED BY CONTRACTOR  
AT THE SITE.



PLAN

LEGEND

PE

PERMANENT EASEMENT

TE

TEMPORARY EASEMENT

RD

TEMPORARY ROCK DAM

RCE

TEMPORARY ROCK CONSTRUCTION ENTRANCE

DETAILED E&S CONTROL PLAN	
CONTRACTOR:	
DATE:	
SIGNATURE:	

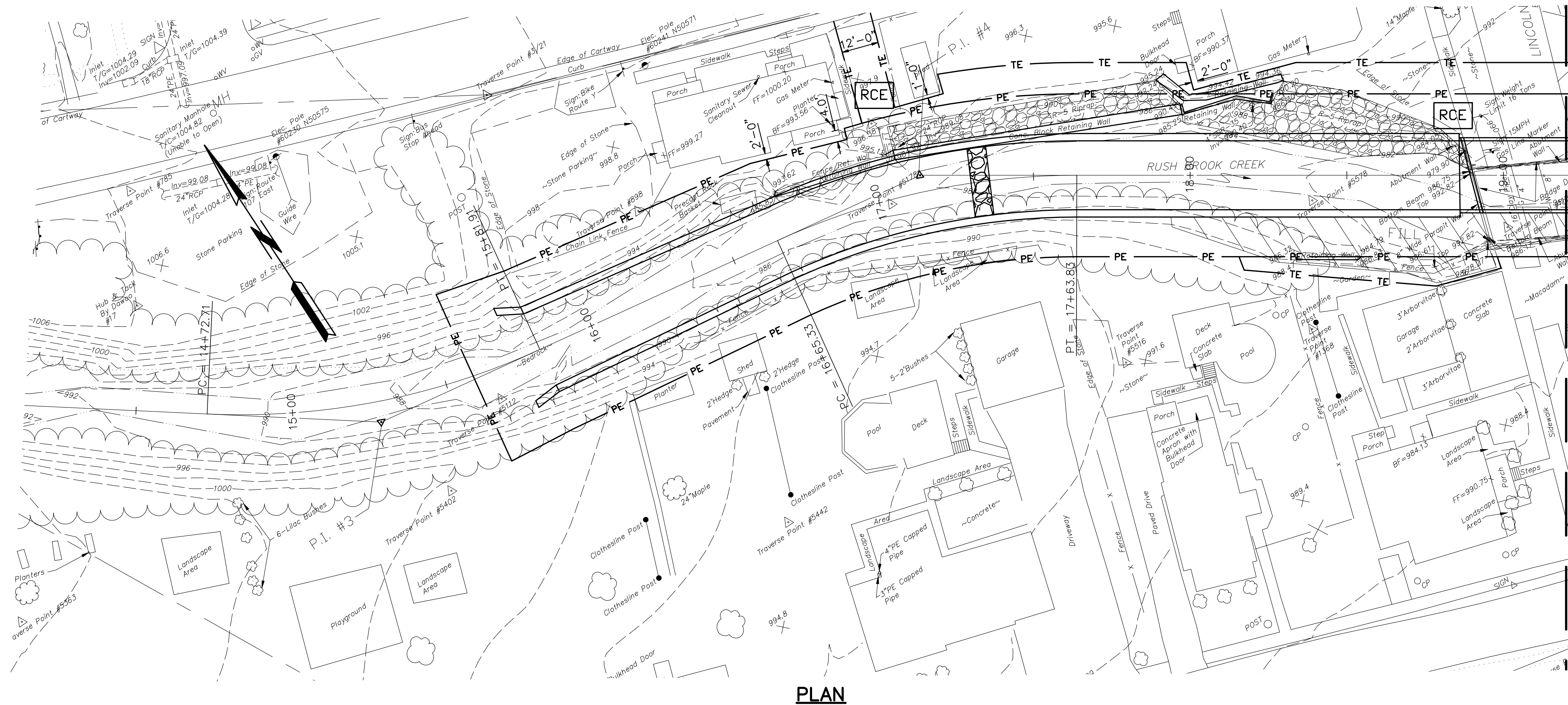
NOTES:

1. For General E&S Notes, see Dwg. ES-3.
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NO.	DATE	REVISION	APPR.
SUBMITTED			
PROJECT COORDINATOR - D.E.P.			
APPROVED			
CHIEF - DIVISION OF PROJECT DEVELOPMENT - D.E.P.			
APPROVED			
DIRECTOR - BUREAU OF WATERWAYS ENGINEERING AND WETLANDS - D.E.P.			
PROFESSIONAL'S SIGNATURE      DATE      PROFESSIONAL'S SIGNATURE      DATE			
COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION OFFICE OF WATER MANAGEMENT			
COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF GENERAL SERVICES HARRISBURG, PENNSYLVANIA			
PROJECT NO. D.G.S. 181-21			
RUSHBROOK CREEK PROJECT			
BOROUGH OF JERMYN LACKAWANNA COUNTY, PENNSYLVANIA			
E & S PLAN STA. 5+00 TO STA. 9+00			
DRAWN BY J.A.D.	DATE 11-30-09	DRAWING NO. <div>ES-4</div>	
CHECKED BY	SCALE As Shown		

ALL DIMENSIONS AND EXISTING  
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AND VERIFIED BY CONTRACTOR  
AT THE SITE.





**LEGEND**

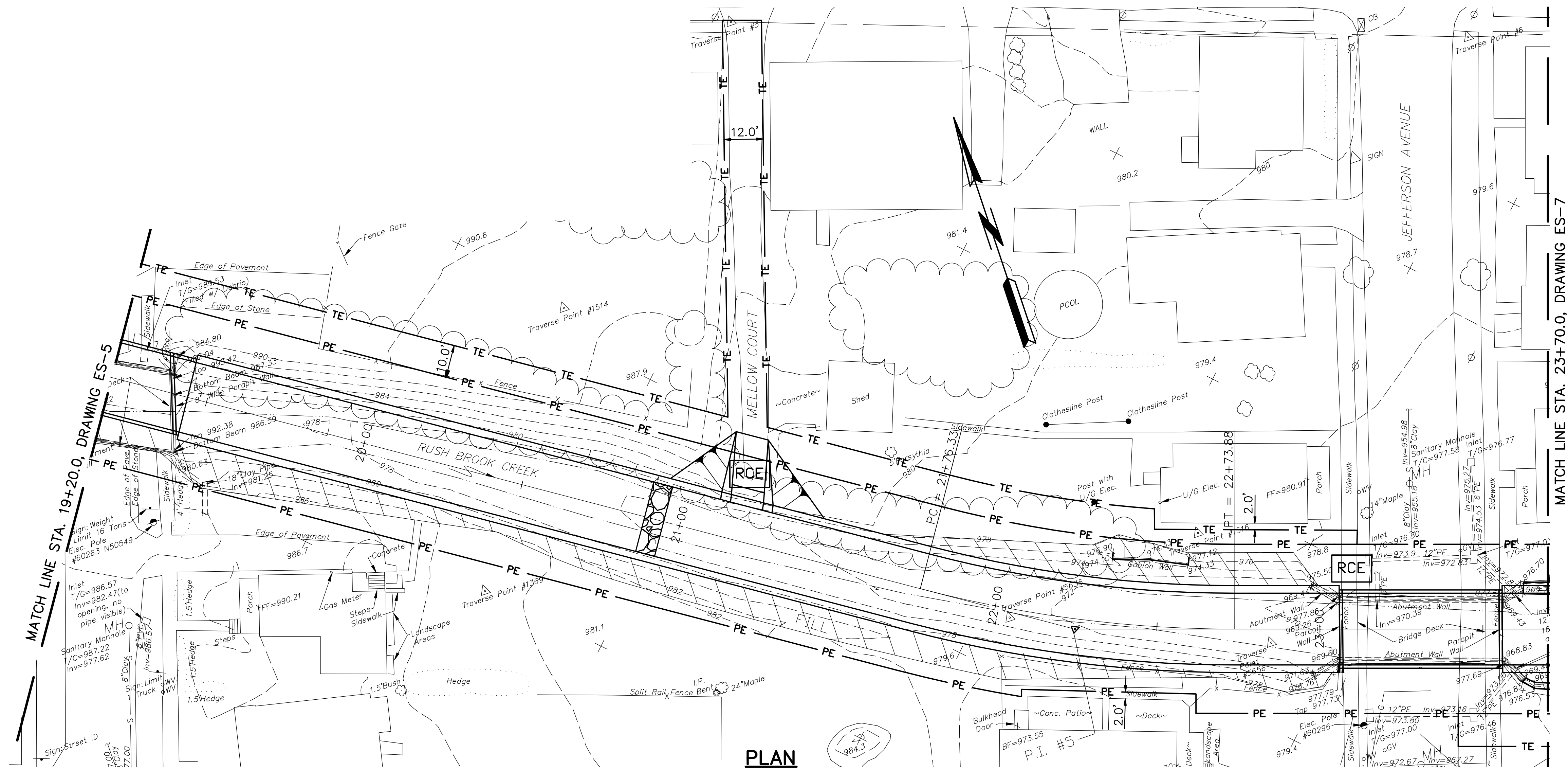
PE PERMANENT EASEMENT  
TE TEMPORARY EASEMENT  
RD TEMPORARY ROCK DAM  
RCE TEMPORARY ROCK CONSTRUCTION ENTRANCE

DETAILED E&S CONTROL PLAN	
CONTRACTOR:	
DATE:	
SIGNATURE:	

- NOTES:**
- For General E&S Notes, see Dwg. ES-3.
  - For General E&S Details, see Dwg. ES-1 and ES-2.
  - For E&S Detailed Plans, see Dwg. ES-4 thru ES-10.

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APPROVED						
CHIEF - DIVISION OF PROJECT DEVELOPMENT - D.E.P.						
APPROVED						
DIRECTOR - BUREAU OF WATERWAYS ENGINEERING AND WETLANDS - D.E.P.						
PROFESSIONAL'S SIGNATURE				DATE	PROFESSIONAL'S SIGNATURE	DATE
COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION OFFICE OF WATER MANAGEMENT						
COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF GENERAL SERVICES HARRISBURG, PENNSYLVANIA						
PROJECT NO. D.G.S. 181-21						
RUSHBROOK CREEK PROJECT						
BOROUGH OF JERMYN LACKAWANNA COUNTY, PENNSYLVANIA						
E & S PLAN STA. 14+50 TO STA. 19+20						
DRAWN BY	DATE	DRAWING NO.				
J.A.D.	11-30-09					
CHECKED BY	SCALE					
	As Shown	ES-5				

ALL DIMENSIONS AND EXISTING  
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AT THE SITE.



PLAN

LEGEND

- PE PERMANENT EASEMENT
- TE TEMPORARY EASEMENT
- RD TEMPORARY ROCK DAM
- RCE TEMPORARY ROCK CONSTRUCTION ENTRANCE

DETAILED E&S CONTROL PLAN

CONTRACTOR:	
DATE:	
SIGNATURE:	

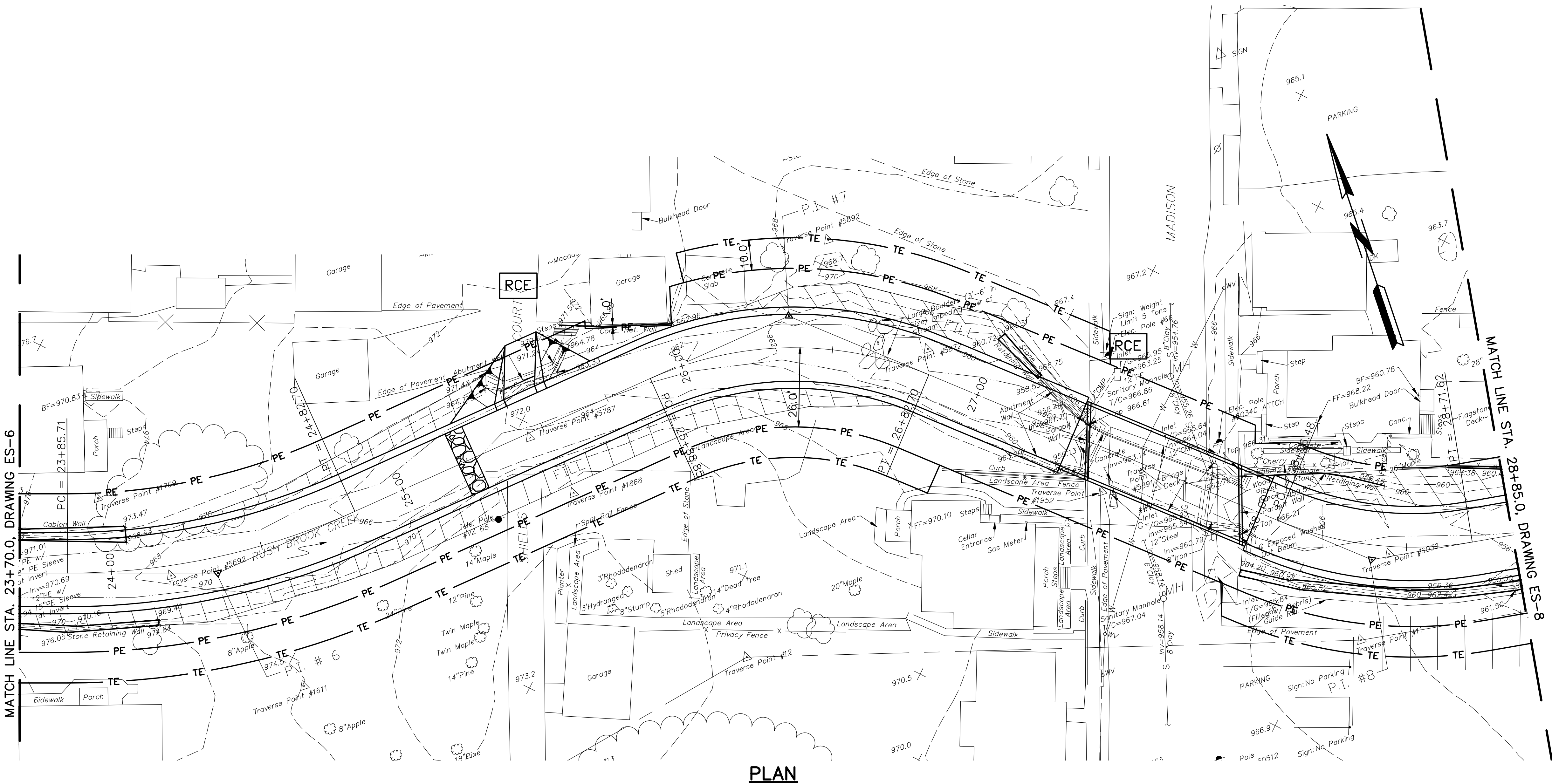
NOTES:

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- For E&S Detailed Plans, see Dwg. ES-4 thru ES-10.

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APPROVED			
CHIEF - DIVISION OF PROJECT DEVELOPMENT - D.E.P.			
APPROVED			
DIRECTOR - BUREAU OF WATERWAYS ENGINEERING AND WETLANDS - D.E.P.			
PROFESSIONAL'S SIGNATURE _____ DATE _____ PROFESSIONAL'S SIGNATURE _____ DATE _____			
COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION OFFICE OF WATER MANAGEMENT			
COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF GENERAL SERVICES HARRISBURG, PENNSYLVANIA			
PROJECT NO. D.G.S. 181-21			
RUSHBROOK CREEK PROJECT			
BOROUGH OF JERMYN LACKAWANNA COUNTY, PENNSYLVANIA			
E & S PLAN STA. 19+20 TO STA. 23+70			
DRAWN BY J.A.D.	DATE 11-30-09	DRAWING NO. ES-6	
CHECKED BY	SCALE As Shown		

ALL DIMENSIONS AND EXISTING CONDITIONS SHALL BE CHECKED AND VERIFIED BY CONTRACTOR AT THE SITE.

MATCH LINE STA. 23+70.0, DRAWING ES-6



PLAN

### LEGEND

- PE PERMANENT EASEMENT  
TE TEMPORARY EASEMENT  
RD TEMPORARY ROCK DAM  
RCE TEMPORARY ROCK CONSTRUCTION ENTRANCE

### DETAILED E&S CONTROL PLAN

CONTRACTOR:	
DATE:	
SIGNATURE:	

### NOTES:

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- For General E&S Details, see Dwg. ES-1 and ES-2.
- For E&S Detailed Plans, see Dwg. ES-4 thru ES-10.

NO.	DATE	REVISION	APPR.

SUBMITTED
PROJECT COORDINATOR - D.E.P.
APPROVED
CHIEF - DIVISION OF PROJECT DEVELOPMENT - D.E.P.
APPROVED
DIRECTOR - BUREAU OF WATERWAYS ENGINEERING AND WETLANDS - D.E.P.

PROFESSIONAL'S SIGNATURE DATE PROFESSIONAL'S SIGNATURE DATE

COMMONWEALTH OF PENNSYLVANIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
OFFICE OF WATER MANAGEMENT

COMMONWEALTH OF PENNSYLVANIA  
DEPARTMENT OF GENERAL SERVICES  
HARRISBURG, PENNSYLVANIA

PROJECT NO. D.G.S. 181-21

RUSHBROOK CREEK PROJECT

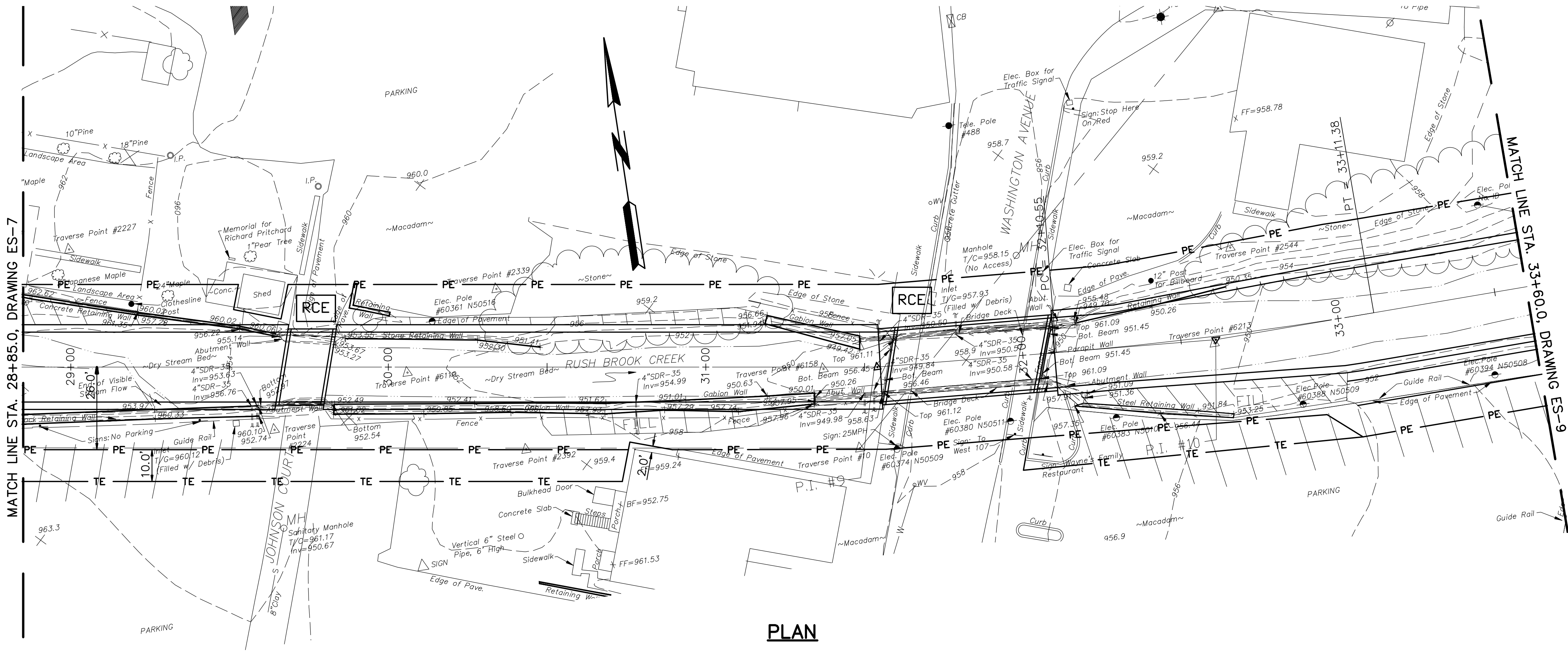
BOROUGH OF JERMYN  
LACKAWANNA COUNTY, PENNSYLVANIA

E & S PLAN  
STA. 23+70 TO STA. 28+85

DRAWN BY J.A.D.	DATE 11-30-09	DRAWING NO. ES-7
CHECKED BY	SCALE As Shown	

ALL DIMENSIONS AND EXISTING  
CONDITIONS SHALL BE CHECKED  
AND VERIFIED BY CONTRACTOR  
AT THE SITE.





LEGEND

PE

PERMANENT EASEMENT

TE

TEMPORARY EASEMENT

RD

TEMPORARY ROCK DAM

RCE

TEMPORARY ROCK CONSTRUCTION ENTRANCE

DETAILED E&S CONTROL PLAN

CONTRACTOR:	
DATE:	
SIGNATURE:	

- NOTES:
1. For General E&S Notes, see Dwg. ES-3.

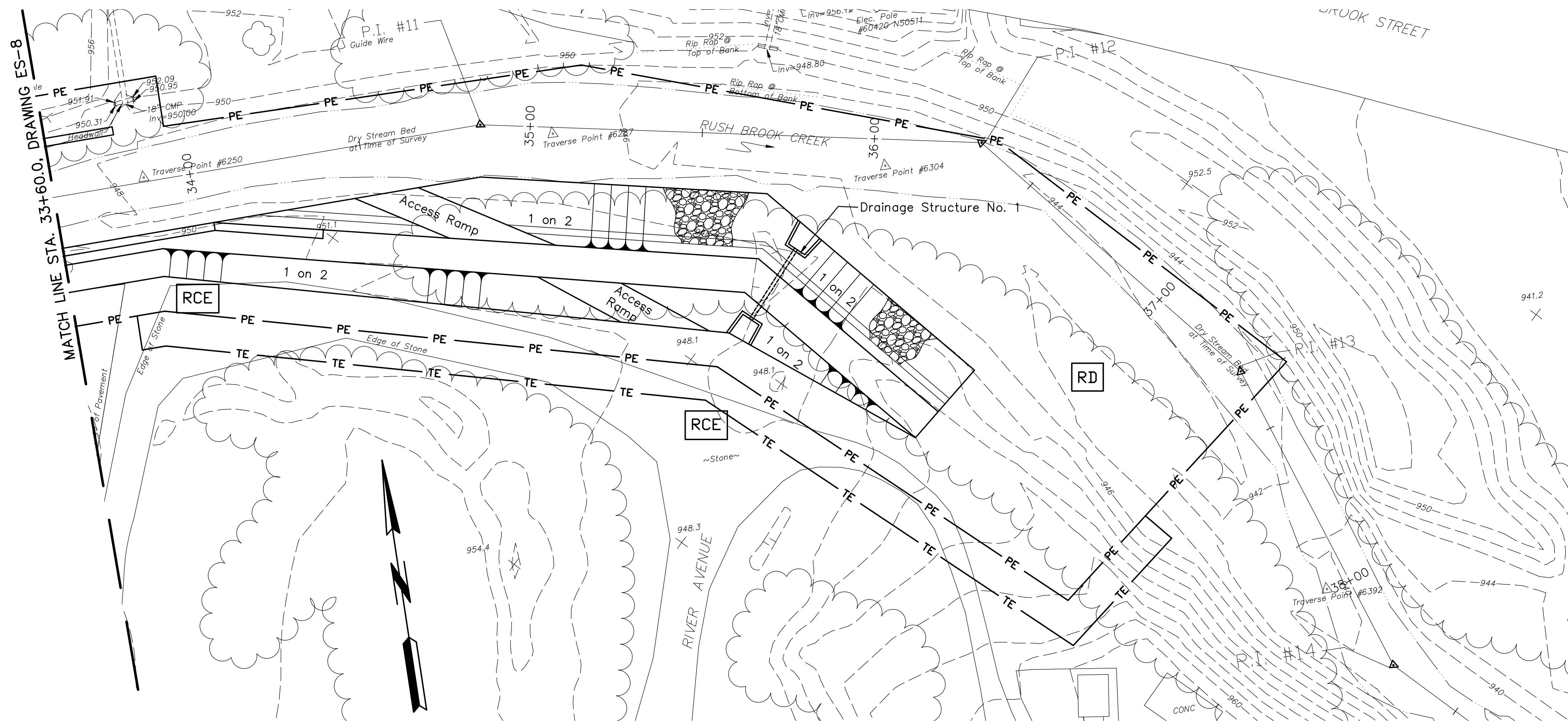
2. For General E&S Details, see Dwg. ES-1 and ES-2.

3. For E&S Detailed Plans, see Dwg. ES-4 thru ES-10.

NO.	DATE	REVISION	APPR.
SUBMITTED			
PROJECT COORDINATOR - D.E.P.			
APPROVED			
CHIEF - DIVISION OF PROJECT DEVELOPMENT - D.E.P.			
APPROVED			
DIRECTOR - BUREAU OF WATERWAYS ENGINEERING AND WETLANDS - D.E.P.			
PROFESSIONAL'S SIGNATURE      DATE      PROFESSIONAL'S SIGNATURE      DATE			
COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION OFFICE OF WATER MANAGEMENT			
COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF GENERAL SERVICES HARRISBURG, PENNSYLVANIA			
PROJECT NO. D.G.S. 181-21			
RUSHBROOK CREEK PROJECT			
BOROUGH OF JERMYN LACKAWANNA COUNTY, PENNSYLVANIA			
E & S PLAN STA. 28+85 TO STA. 33+60			
DRAWN BY J.A.D.	DATE 11-30-09	DRAWING NO. ES-8	
CHECKED BY	SCALE As Shown		

ALL DIMENSIONS AND EXISTING  
CONDITIONS SHALL BE CHECKED  
AND VERIFIED BY CONTRACTOR  
AT THE SITE.





PLAN

LEGEND

- PE PERMANENT EASEMENT
- TE TEMPORARY EASEMENT
- RD TEMPORARY ROCK DAM
- RCE TEMPORARY ROCK CONSTRUCTION ENTRANCE

DETAILED E&S CONTROL PLAN

CONTRACTOR:	
DATE:	
SIGNATURE:	

NOTES:

- For General E&S Notes, see Dwg. ES-3.
- For General E&S Details, see Dwg. ES-1 and ES-2.
- For E&S Detailed Plans, see Dwg. ES-4 thru ES-10.

NO.	DATE	REVISION	APPR.
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APPROVED			
DIRECTOR - BUREAU OF WATERWAYS ENGINEERING AND WETLANDS - D.E.P.			
PROFESSIONAL'S SIGNATURE      DATE      PROFESSIONAL'S SIGNATURE      DATE			
COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION OFFICE OF WATER MANAGEMENT			
COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF GENERAL SERVICES HARRISBURG, PENNSYLVANIA			
PROJECT NO. D.G.S. 181-21			
RUSHBROOK CREEK PROJECT			
BOROUGH OF JERMYN LACKAWANNA COUNTY, PENNSYLVANIA			
E & S PLAN STA. 33+60 TO STA. 38+50			
DRAWN BY J.A.D.	DATE 11-30-09	DRAWING NO. ES-9	
CHECKED BY	SCALE As Shown		

ALL DIMENSIONS AND EXISTING  
CONDITIONS SHALL BE CHECKED  
AND VERIFIED BY CONTRACTOR  
AT THE SITE.