



# PUBLIC NOTICE

U.S. ARMY CORPS OF ENGINEERS  
LOS ANGELES DISTRICT

BUILDING STRONG®

## APPLICATION FOR PERMIT Potrero Canyon Bridge & Country Club Bridges

**Public Notice/Application No.:** SPL-2015-00144-JMR

**Project:** Potrero Canyon Bridge & Country Club Bridges (19B SC 004 F0244 01C)

**Comment Period:** December 16, 2020 through January 15, 2020

**Project Manager:** Jesse Rice; (602) 230-6854; [Jesse.M.Rice@usace.army.mil](mailto:Jesse.M.Rice@usace.army.mil)

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### Applicant

Rod Lane  
Arizona Department of Transportation  
1221 South 2nd Avenue (T100)  
Tucson, Arizona 85713-1602

### Contact

Israel Garcia  
Arizona Department of Transportation  
1611 West Jackson Street  
Phoenix, Arizona 85007

### Location

Potrero Creek within the city of Nogales, Santa Cruz County, AZ (at: 31.3902, -110.9586).

### Activity

The Arizona Department of Transportation (ADOT) is proposing to complete a bridge scour improvement and bank protection project beneath the Potrero Canyon Bridge on Business Route 19 and the Country Club Bridges on Interstate 19 (see attached drawings). For more information, see Additional Project Information section below.

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### Submittal of Public Comments

Interested parties are hereby notified an application has been received for a Department of the Army permit for the activity described herein and shown on the attached drawings. We invite you to review today's public notice and provide views on the proposed work. By providing substantive, site-specific comments to the Corps Regulatory Division, you provide information that supports the Corps' decision-making process. All comments received during the comment period become part of the record and will be considered in the decision. This permit will be issued, issued with special conditions, or denied under Section 404 of the Clean Water Act.

**During the Coronavirus Health Emergency, Regulatory Program staff are teleworking. Please do not mail hard copy documents, including comments to any Regulatory staff. Instead, your comments should be submitted electronically to: [Jesse.M.Rice@usace.army.mil](mailto:Jesse.M.Rice@usace.army.mil). Should you have any questions or concerns about the Corps' proposed action or our comment period, you may contact Jesse Rice directly at (602) 230-6854.**

The mission of the U.S. Army Corps of Engineers Regulatory Program is to protect the Nation's aquatic resources, while allowing reasonable development through fair, flexible and balanced permit decisions. The Corps evaluates permit applications for essentially all construction activities that occur in the Nation's waters, including wetlands. The Regulatory Program in the Los Angeles District is executed to protect aquatic resources by developing and implementing short- and long-term initiatives to improve regulatory products, processes, program transparency, and customer feedback considering current staffing levels and historical funding trends.

Corps permits are necessary for any work, including construction and dredging, in the Nation's navigable water and their tributary waters. The Corps balances the reasonably foreseeable benefits and detriments of proposed projects, and makes permit decisions that recognize the essential values of the Nation's aquatic ecosystems to the general public, as well as the property rights of private citizens who want to use their land. The Corps strives to make its permit decisions in a timely manner that minimizes impacts to the regulated public.

During the permit process, the Corps considers the views of other Federal, state and local agencies, interest groups, and the general public. The results of this careful public interest review are fair and equitable decisions that allow reasonable use of private property, infrastructure development, and growth of the economy, while offsetting the authorized impacts to the waters of the United States. The permit review process serves to first avoid and then minimize adverse effects of projects on aquatic resources to the maximum practicable extent. Any remaining unavoidable adverse impacts to the aquatic environment are offset by compensatory mitigation requirements, which may include restoration, enhancement, establishment, and/or preservation of aquatic ecosystem system functions and services.

### **Evaluation Factors**

The decision whether to issue a permit will be based on an evaluation of the probable impact 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 reasonably 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. Factors that will be considered include conservation, economics, 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 production and, in general, the needs and welfare of the people. In addition, if the proposal would discharge dredged or fill material, the evaluation of the activity will include application of the EPA Guidelines (40 CFR Part 230) as required by Section 404 (b)(1) of the Clean Water Act.

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

## **Preliminary Review of Selected Factors**

**EIS Determination**- A preliminary determination has been made an environmental impact statement is not required for the proposed work.

**Water Quality**- The applicant is required to obtain water quality certification, under Section 401 of the Clean Water Act, from the Arizona Department of Environmental Quality. Section 401 requires any applicant for an individual Section 404 permit provide proof of water quality certification to the Corps of Engineers prior to permit issuance.

**Coastal Zone Management**- Not applicable within the State of Arizona.

**Essential Fish Habitat**- No Essential Fish Habitat (EFH), as defined by the Magnuson-Stevens Fishery Conservation and Management Act, occurs within the project area and no EFH is affected by the proposed project.

**Cultural Resources**- The latest version of the National Register of Historic Places has been consulted and this site is not listed. This review constitutes the extent of cultural resources investigations by the District Engineer, and he is otherwise unaware of the presence of such resources.

**Endangered Species**- Preliminary determinations indicate the proposed activity may affect federally-listed endangered or threatened species, or their critical habitat. Therefore, consultation under Section 7 of the Endangered Species Act is required.

**Public Hearing**- Any person may request, in writing, within the comment period specified in this notice, that a public hearing be held to consider this application. Requests for public hearing shall state with particularity the reasons for holding a public hearing.

## **Proposed Activity for Which a Permit is Required**

**Basic Project Purpose**- The basic project purpose comprises the fundamental, essential, or irreducible purpose of the proposed project, and is used by the Corps to determine whether the applicant's project is water dependent (i.e., requires access or proximity to or siting within the special aquatic site to fulfill its basic purpose). Establishment of the basic project purpose is necessary only when the proposed activity would discharge dredged or fill material into a special aquatic site (e.g., wetlands, pool and riffle complex, mudflats, coral reefs). The basic project purpose for the proposed project is **Transportation**. The project **is not** water dependent.

**Overall Project Purpose**- The overall project purpose serves as the basis for the Corps' 404(b)(1) alternatives analysis and is determined by further defining the basic project purpose in a manner that more specifically describes the applicant's goals for the project, and which allows a reasonable range of alternatives to be analyzed. The overall project purpose for the proposed project is to provide protection to the Potrero Canyon bridge and the Country Club bridges, which ADOT has determined are vulnerable to erosion/scour.

## **Additional Project Information**

**Baseline information**- Lands adjacent to the project limits consist primarily of a mixture of industrial, residential and undeveloped land. The project area is generally mapped within the Semidesert Grassland biotic community but includes elements of Interior Riparian Deciduous Forest

and Riparian Scrubland. Potrero Creek has intermittent flows at this location and flows to the east towards Las Lagunas de Anza wetlands, which are adjacent to the project site. The wetlands are a unique feature in the region and are a result of a geological feature which forces a perched water table to the surface. Water is present in the wetlands in all but the driest years and has played an important role in the area's history. However, over time several areas of the wetlands have been filled to accommodate other uses in the area (with most of these occurring prior to passage of the Clean Water Act). Examples include filling for agricultural uses in the early 1800's, the Nogales drive-in movie theater in 1951, and the construction of Interstate 19 in 1974. Today, much of the undeveloped area is preserved for outdoor education and recreation.

Interstate 19 crosses through the wetlands just west of the Las Lagunas de Anza park on an elevated roadbed. The interstate crosses over Potrero Creek and Country Club Road (which is aligned parallel to the creek) is located on two concrete bridges (referred to as the Country Club Bridges). To the east of the park and nearly parallel to the interstate is Business 19, which provides local access to residences and businesses. Business 19 crosses the creek at the Potrero Canyon Bridge in an area where the creek is narrower and slightly incised.

Approximately 0.8 mile downstream of the Potrero Canyon bridge, Potrero Creek joins Nogales Wash. From the confluence of Potrero Creek and Nogales Wash, Potrero Creek joins the Santa Cruz River approximately 3.6 miles to the north (downstream). The primary vegetation found within the riparian zones at the Country Club bridges area includes glossy privet (*Ligustrum lucidum*), Johnsongrass (*Sorghum halepense*), prostate knotweed (*Polygonum aviculare*), Gooding's willow (*Salix gooddingii*), velvet ash (*Fraxinus velutina*), Arizona walnut (*Juglans major*), and curly dock (*Rumex crispus*). The primary vegetation found within the riparian zones at the Potrero Canyon bridge area includes Siberian elm (*Ulmus pumila*), Gooding's willow, rough cocklebur (*Xanthium strumarium*), netleaf hackberry (*Celtis reticulata*), and softstem bulrush (*Schoenoplectus tabernaemontani*). Soils in the project area are mapped as Comoro gravelly loams and Guest soils, and are not described as hydric soils.

Project description- The Arizona Department of Transportation (ADOT) is planning a bridge scour improvement and bank protection project beneath the Interstate 19 Country Club bridges (northbound and southbound) and the Potrero Canyon bridge and (Figures 1 and 2). Work is anticipated to take 120 days to complete and would begin in early 2021.

The scope of work would consist of:

- Excavating soil and constructing a reinforced concrete scour floor beneath all three bridges 3 feet below the channel bed. The concrete floor would extend across the entire width of the channel (to the existing bank protection on each side of the creek) and 10 feet upstream and downstream beyond each bridge's pier limits. A concrete cutoff wall extending 4 to 6 feet below the concrete floor would be constructed along the upstream and downstream edges of each floor to prevent undermining.
- Applying 4 inches of shotcrete to the existing rail bank (stream bank armoring) at the Potrero Canyon bridge.
- Backfilling excavated material over the completed scour floors and restoring the project area.
- Completing other bridge preservation activities such as repairing damaged bridge girders.

Potrero Creek has intermittent flow. In order to maintain flows through the worksite, each scour floor would be constructed in two phases. In each phase, flows would be temporarily diverted to one side of the channel while the scour floor is constructed on the other side. Armored earthen berms

constructed from material excavated for the scour floors would be used to create a 20-foot-wide opening to reroute any flow away from the construction zone. Staging and stockpiling areas would occur outside Waters of the United States (Waters) and all wetland areas. The proposed amount of impacts to waters of the U.S. is identified in the table below. See the attached drawings and impact sheets.

Drainage Name	Amount of Waters (acres)	Permanent Impacts (acres)	Temporary Impacts (acres)
Potrero Creek at Potrero Canyon bridge – Wetlands (Figure 3a)	0.300	0.111	0.066
Potrero Creek at Potrero Canyon bridge – Other Waters (Non-Wetlands)	0.070	0.037	0.004
Potrero Creek at Country Club Bridges – Wetlands (Figure 3b)	0.890	0.239	0.497
Potrero Creek at Country Club Bridges – Other Waters (Non-Wetlands)	0.670	0.000	0.005
<b>Totals (acres)</b>	<b>1.19 Wetlands/ 0.740 Other Waters (Non-Wetlands) = 1.93 Total</b>	<b>0.350 Wetlands/ 0.037 Other Waters (Non-Wetlands) = 0.387 Total</b>	<b>0.563 Wetlands/0.009 Other Waters (Non-Wetlands) = 0.572 Total</b>

Proposed Mitigation– The proposed mitigation may change as a result of comments received in response to this public notice, the applicant's response to those comments, and/or the need for the project to comply with the 404(b)(1) Guidelines. In consideration of the above, the proposed mitigation sequence (avoidance/minimization/compensation), as applied to the proposed project is summarized below:

**Avoidance:** Work in Waters cannot be avoided because the area that is most vulnerable to scour is directly beneath the Potrero Canyon bridge and the Country Club bridges within the OHWM. Establishing a stable base for the scour floors necessitates excavating Waters, including jurisdictional wetlands.

**Minimization:** Permanent impacts to Waters, including wetlands, would be restricted to the minimum extent necessary to provide scour protection. Impacts to Waters and wetlands would be minimized by limiting access to the work areas, by scheduling construction outside the monsoon season, and by using temporary earthen berms made from native materials, which would be anchored and armored with Jersey barriers or plastic liners, to dewater the area of construction within the creek channel. Water would not be rerouted outside of the ordinary high-water mark of Potrero Creek. Wetlands in the construction area that are not authorized for permanent or temporary impact by a Section 404 permit issued by the U.S. Army Corps of Engineers (Corps) would be flagged and/or fenced for avoidance. All disturbed soils that would not be landscaped or otherwise permanently stabilized by construction would be seeded using species native to the project vicinity.

**Compensation:** ADOT proposes to compensate for unavoidable adverse impacts through the purchase of advance credits from the Tucson Audubon Society's in-lieu fee program. The amount of credits required is still being determined.

## **Proposed Special Conditions**

The following list is comprised of proposed Permit Special Conditions, which are required of similar types of projects:

Special conditions are still being developed and may change based on a full evaluation of project impacts and the responses to this public notice.

For additional information please call Jesse Rice of my staff at (602) 230-6854 or via e-mail at [Jesse.M.Rice@usace.army.mil](mailto:Jesse.M.Rice@usace.army.mil). This public notice is issued by the Chief, Regulatory Division.

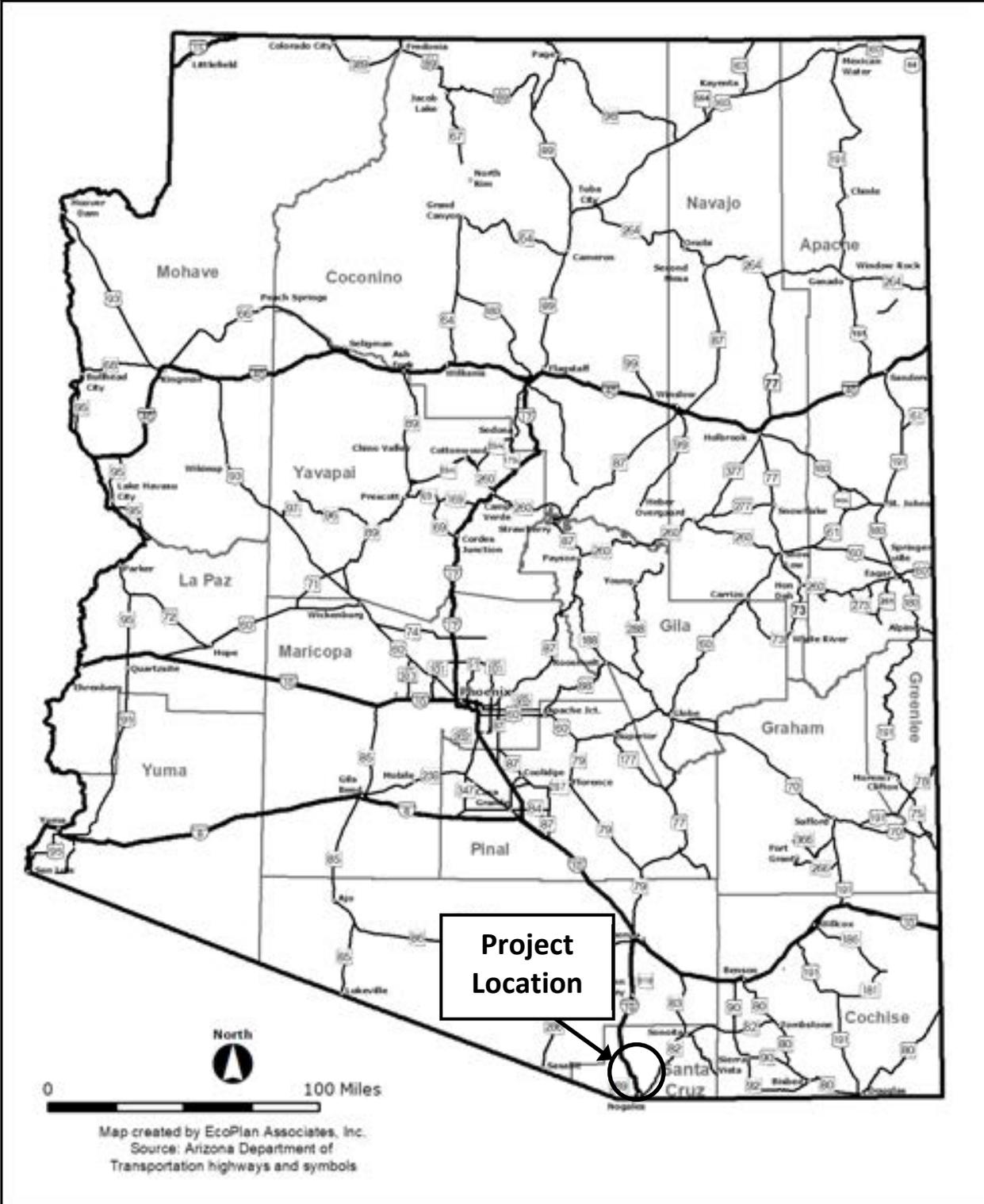


### *Regulatory Program Goals:*

- To provide strong protection of the nation's aquatic environment, including wetlands.
- To ensure the Corps provides the regulated public with fair and reasonable decisions.
- To enhance the efficiency of the Corps' administration of its regulatory program.

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**DEPARTMENT OF THE ARMY  
LOS ANGELES DISTRICT, U.S. ARMY CORPS OF ENGINEERS  
WWW.SPL.USACE.ARMY.MIL/MISSIONS/REGULATORY**

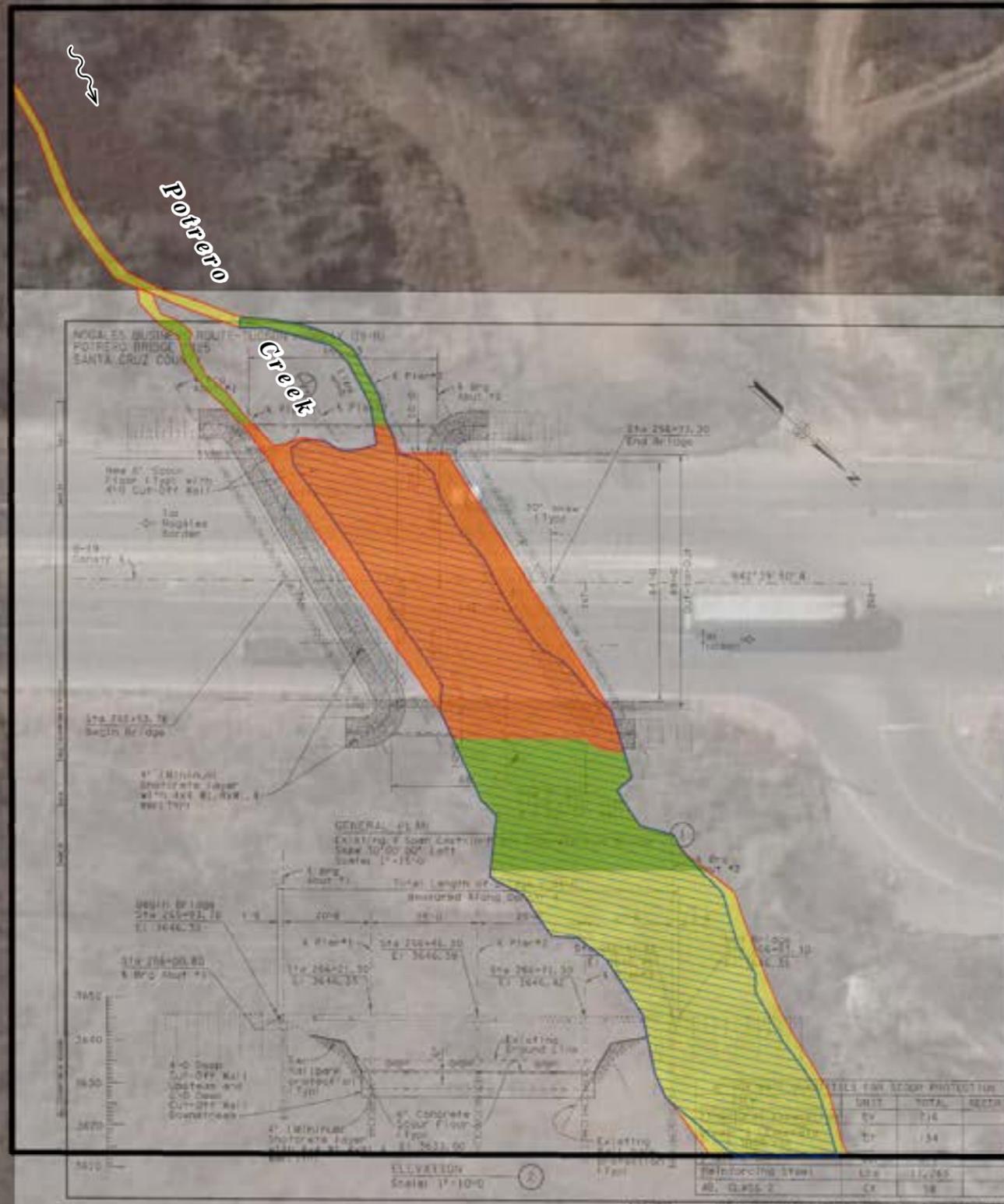


**B19-A(203)T**  
**19B SC 004 F0244 01C**  
**Potrero Canyon Bridge & Country Club Bridge**

Figure 1. Project location



Figure 2. Project area



**GENERAL NOTES:**

Construction Specifications - Arizona Department of Transportation Standard Specifications for Road and Bridge Construction, Edition of 2008, and Special Provisions.

Design Specifications - AASHTO LRFD Bridge Design Specifications, 8th Edition 2011.

All concrete shall be Class 75' (f) - 3000 psi.

Reinforcing steel shall conform to ASTM Specification A615. All reinforcing shall be furnished as Grade 60 (F60200) mill.

All bars and hooks shall meet the requirements of AASHTO Article 5.10.1. All bend dimensions for reinforcing steel shall be out-to-out of bars. All placement dimensions for reinforcing steel shall be to center of bars unless noted otherwise.

All reinforcing steel shall have 2 inch clear cover unless otherwise noted.

Ground dimensions shall be verified in the field by the contractor. Dimensions shall not be scaled from the drawings.

Unless otherwise noted all stations, elevations and dimensions shown are based on Record Plans and may not necessarily correspond to structure conditions, low existing, and shall be adjusted as required and as directed by the Engineer.

The contractor shall provide minimum plans (shims) in concrete slab (See section C-07.01).

The contractor shall restore existing slope bank protection and barbed wire fence disturbed during construction of the bridge, unless otherwise directed by the Department.

Quantity shown for Structural Excavation is for existing and existing with new. Actual present quantity shall be determined from the contractor survey and shall be verified and approved by the Engineer.

All work will occur within existing Right of Way. No new Right of Way or Easements are required.

Right of Way information is not shown in the plan. See details see right of way plans from Project No. 0117.

UNIT	TOTAL	SECTION
CV	716	
CR	134	

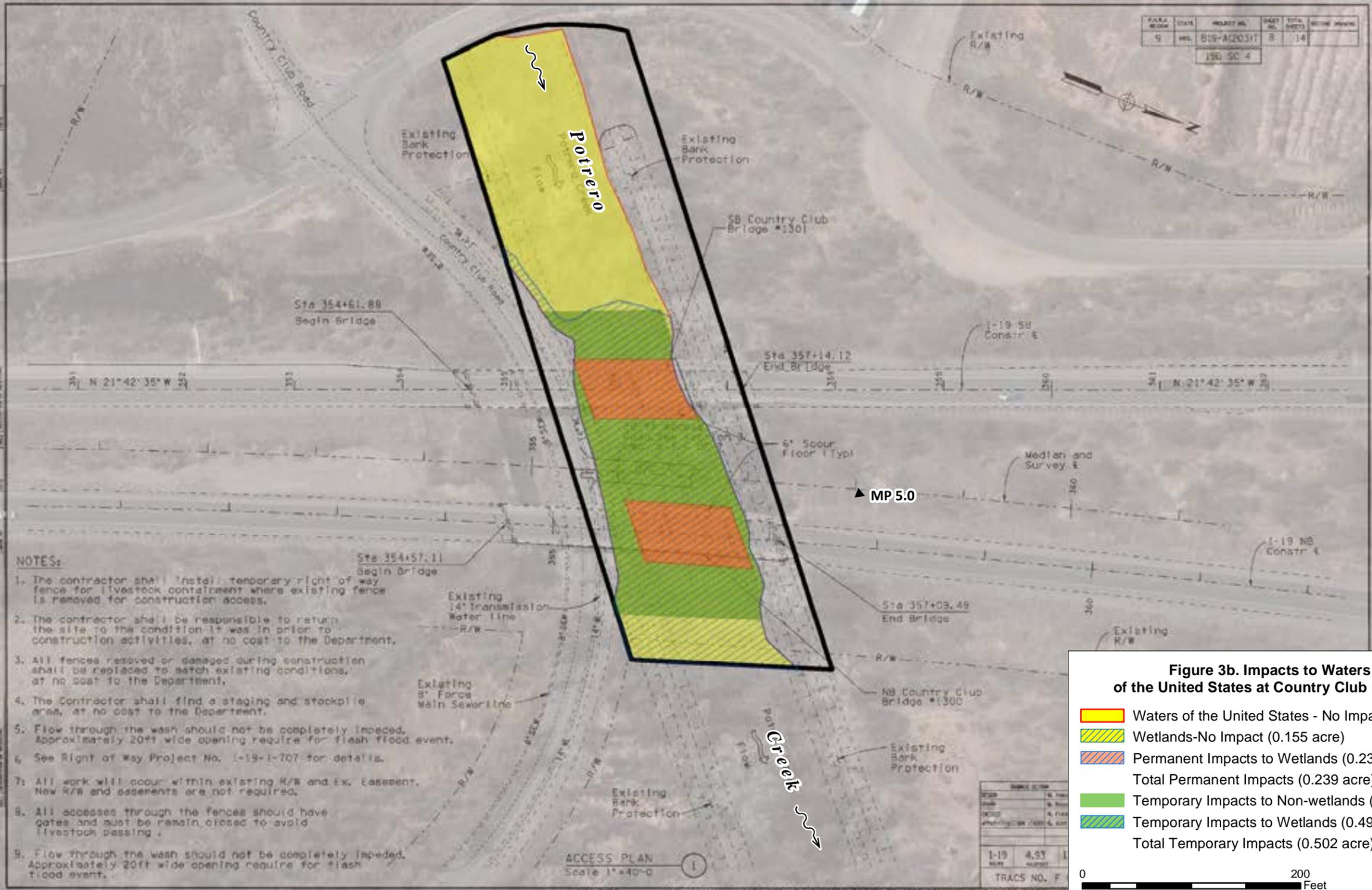
**Figure 3a. Impacts to Waters of the United States at Potrero Canyon Bridge**

- Waters of the United States - No Impact (0.145 acre)
- Wetlands-No Impact (0.122 acre)
- Permanent Impacts to Non-wetlands (0.037 acre)
- Permanent Impacts to Wetlands (0.111 acre)
- Total Permanent Impacts (0.148 acre)**
- Temporary Impacts to Non-wetlands (0.004 acre)
- Temporary Impacts to Wetlands (0.066 acre)
- Total Temporary Impacts (0.070 acre)**

0  100 Feet

1 inch = 50 feet

**North**



- NOTES:**
1. The contractor shall install temporary right of way fence for livestock containment where existing fence is removed for construction access.
  2. The contractor shall be responsible to return the site to the condition it was in prior to construction activities, at no cost to the Department.
  3. All fences removed or damaged during construction shall be replaced to match existing conditions, at no cost to the Department.
  4. The Contractor shall find a staging and stockpile area, at no cost to the Department.
  5. Flow through the wash should not be completely impeded. Approximately 20ft wide opening require for flash flood event.
  6. See Right of Way Project No. 1-19-1-707 for details.
  7. All work will occur within existing R/W and Ex. Easement. New R/W and easements are not required.
  8. All accesses through the fences should have gates and must be remain closed to avoid livestock passing.
  9. Flow through the wash should not be completely impeded. Approximately 20ft wide opening require for flash flood event.

**Figure 3b. Impacts to Waters of the United States at Country Club Bridges**

	Waters of the United States - No Impact (0.816 acre)
	Wetlands-No Impact (0.155 acre)
	Permanent Impacts to Wetlands (0.239 acre)
<b>Total Permanent Impacts (0.239 acre)</b>	
	Temporary Impacts to Non-wetlands (0.005 acre)
	Temporary Impacts to Wetlands (0.497 acre)
<b>Total Temporary Impacts (0.502 acre)</b>	

0 200 Feet  
1 inch = 100 feet

North



**Figure 4a. Impacts to Waters of the United States at Potrero Canyon Bridge**

- Waters of the United States - No Impact (0.145 acre)
- Wetlands-No Impact (0.122 acre)
- Permanent Impacts to Non-wetlands (0.037 acre)
- Permanent Impacts to Wetlands (0.111 acre)  
Total Permanent Impacts (0.148 acre)
- Temporary Impacts to Non-wetlands (0.004 acre)
- Temporary Impacts to Wetlands (0.066 acre)  
Total Temporary Impacts (0.070 acre)

0  100  
Feet  
1 inch = 50 feet





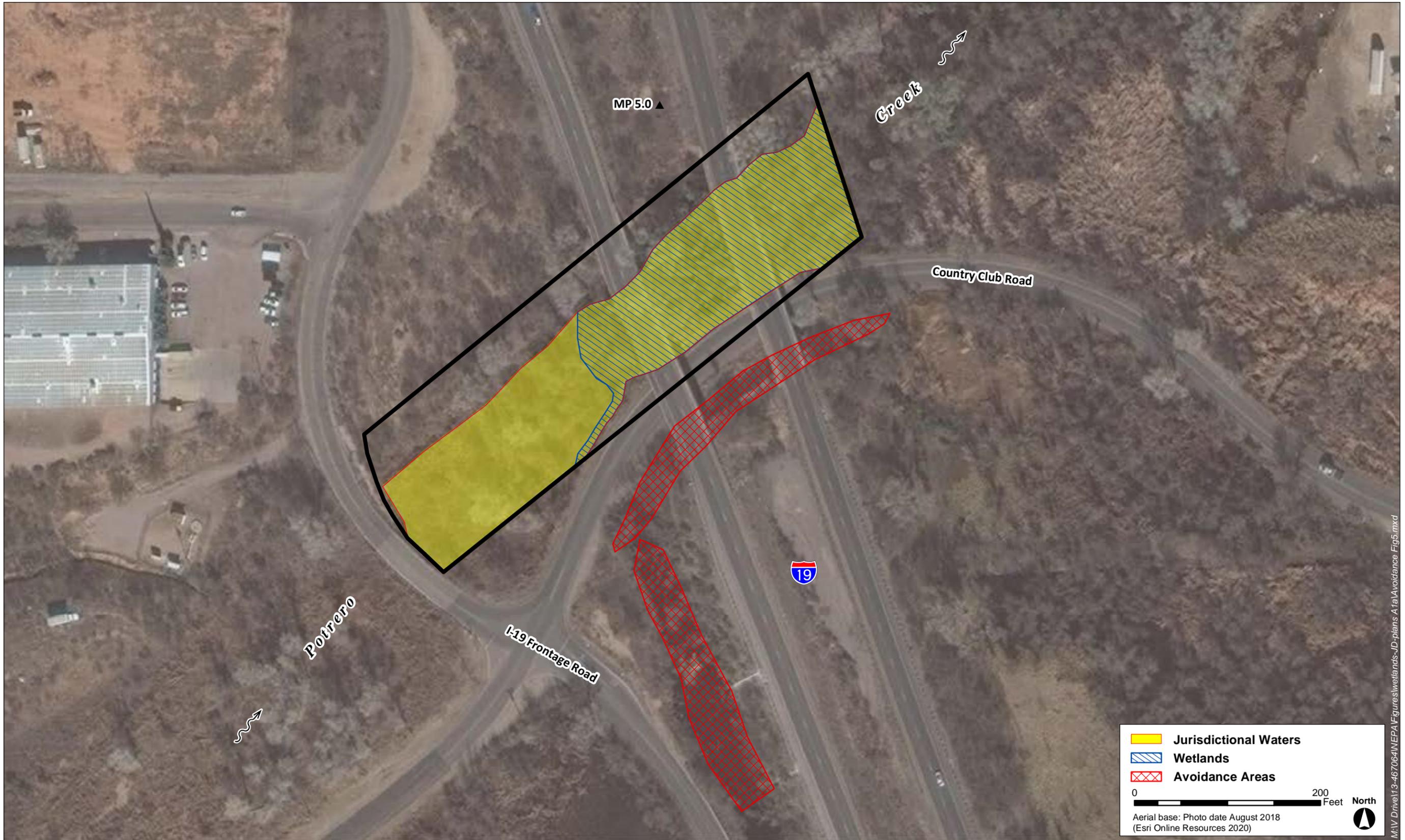
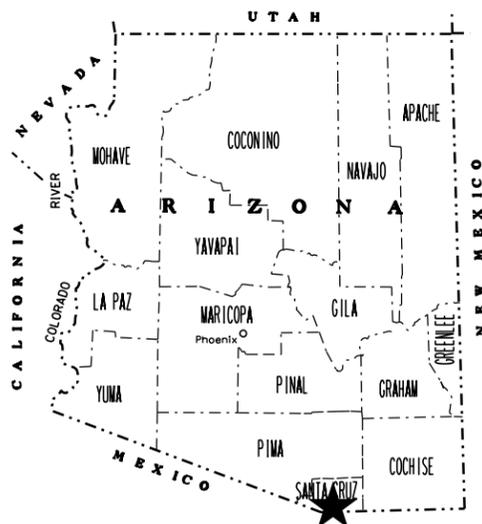


Figure 5. Avoidance areas



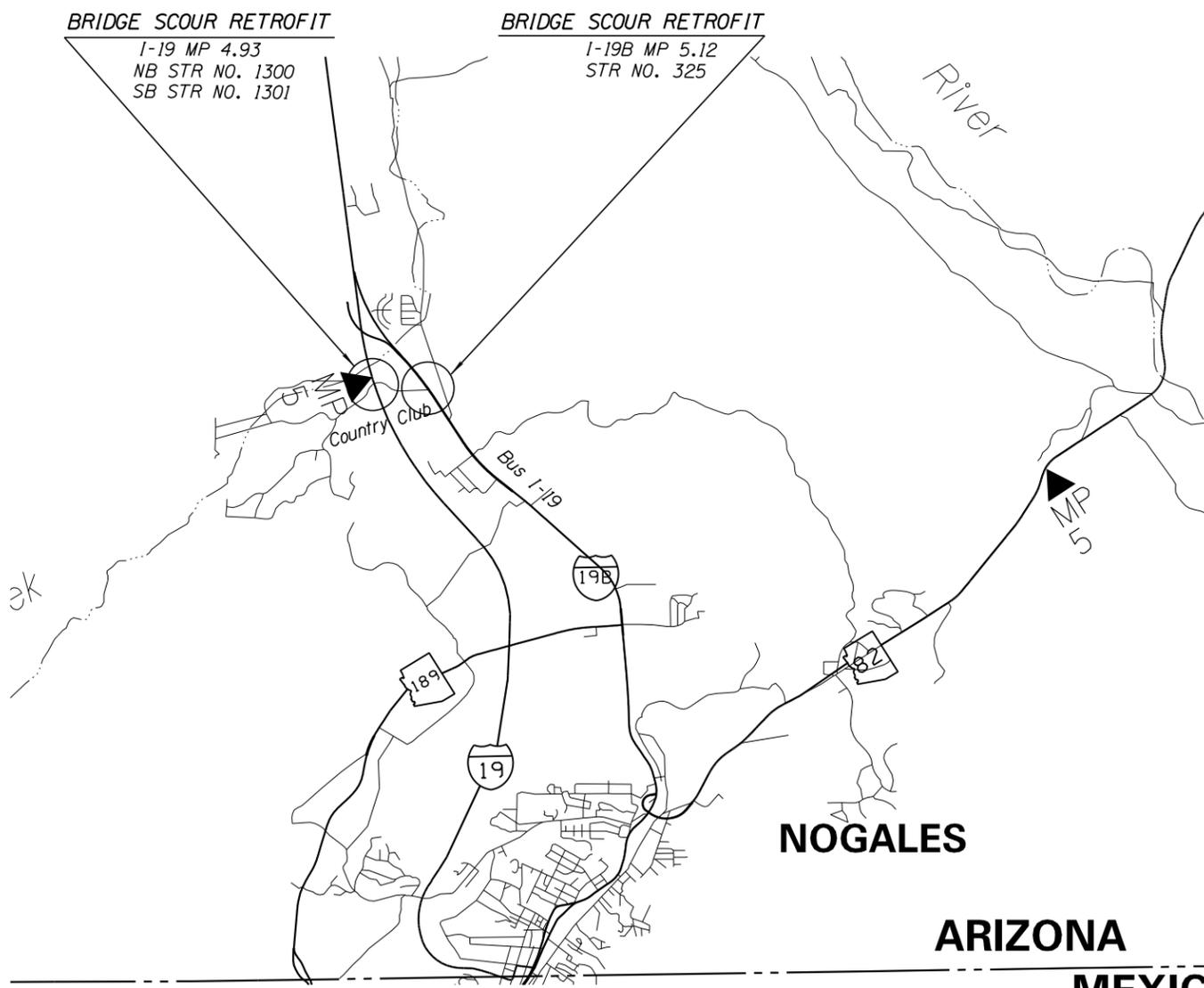
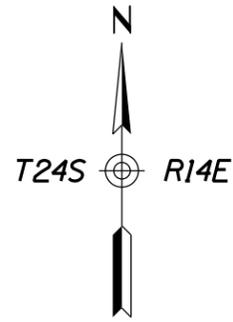
STATE OF ARIZONA  
 DEPARTMENT OF TRANSPORTATION  
 INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION



PROJECT PLANS

STATE HIGHWAY  
 NOGALES-TUCSON HIGHWAY  
 I-19 & I-19B

PRELIMINARY  
**STAGE IV**  
 REVIEW  
 NOT FOR  
 CONSTRUCTION  
 OR RECORDING



Constructed by:  
 \_\_\_\_\_  
 Construction Company

Completion Date \_\_\_\_\_

Red-Lines by:  
 \_\_\_\_\_  
 Construction Administrator Name & Company

Completion Date \_\_\_\_\_

Record Drawings by:  
 \_\_\_\_\_  
 Record Drawings Designer Name & Company

Completion Date \_\_\_\_\_

**POTRERO CANYON BRIDGE & COUNTRY CLUB BRIDGE**

PROJECT NO. 19B SC 004 F0244 01C  
 FEDERAL AID NO. B19-A(203)T

ARIZONA DEPARTMENT OF TRANSPORTATION  
 INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION  
 DALLAS HAMMIT, P.E., STATE ENGINEER

REC. DWGS. DATA	REC. DWG. DATE	_____ OF _____
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NOGALES BUSINESS ROUTE-TUCSON HIGHWAY (19-B)  
 POTRERO BRIDGE #325  
 SANTA CRUZ COUNTY

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	ARIZ.	B19-A(203)T	2	14	

19B SC 4

**GENERAL NOTES:**

Construction Specification - Arizona Department of Transportation Standard Specifications for Road and Bridge Construction, Edition of 2008, and Special Provisions.

Design Specification - AASHTO LRFD Bridge Design Specifications, 8th Edition 2017.

All concrete shall be Class "S" (f'c = 3000 psi)

Reinforcing steel shall conform to ASTM Specification A615. All reinforcing steel shall be furnished as Grade 60 (fs=24000 psi)

All bends and hooks shall meet the requirements of AASHTO Article 5.10.2. All bend dimensions for reinforcing steel shall be out-to-out of bars. All placement dimensions for reinforcing steel shall be to center of bars unless noted otherwise.

All reinforcing steel shall have 2 inch clear cover unless otherwise noted.

Ground dimensions shall be verified in the field by the contractor. Dimensions shall not be scaled from the drawings.

Unless otherwise noted all stations, elevations and dimensions shown are based on "Record" plans and may not necessarily correspond to structure conditions now existing, and shall be adjusted as required and as directed by the Engineer.

The contractor shall provide weakened plane joints in concrete slab (See section C-07.01).

The contractor shall restore existing slope bank protection and barbed wire fence disturbed during construction of the scour countermeasure at no cost to the Department.

Quantity shown for Structural Excavation is for estimating and establishing unit cost only. Actual payment quantity shall be determined from the contractor survey and shall be verified and approved by the Engineer.

All work will occur within existing Right of Way; No new Right of Way or Easements are required.

Right of Way Information is not shown in the plan, for details see right of way plans from Project No. H5127

MADE BY

DATE

NO.1 DESCRIPTION OF REVISIONS

MADE BY

DATE

NO.2 DESCRIPTION OF REVISIONS

MADE BY

DATE

NO.1 DESCRIPTION OF REVISIONS

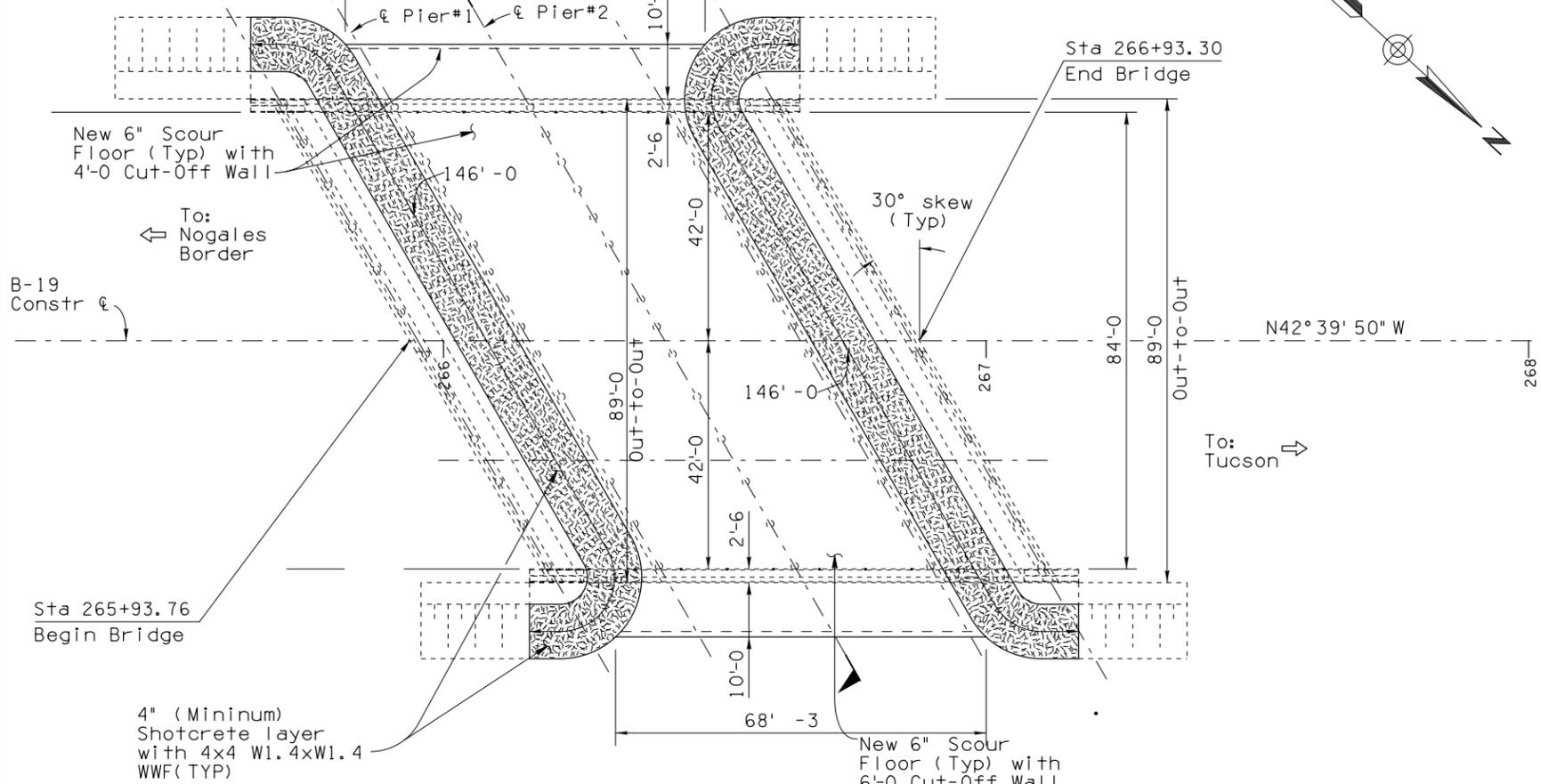
MADE BY

DATE

NO.2 DESCRIPTION OF REVISIONS

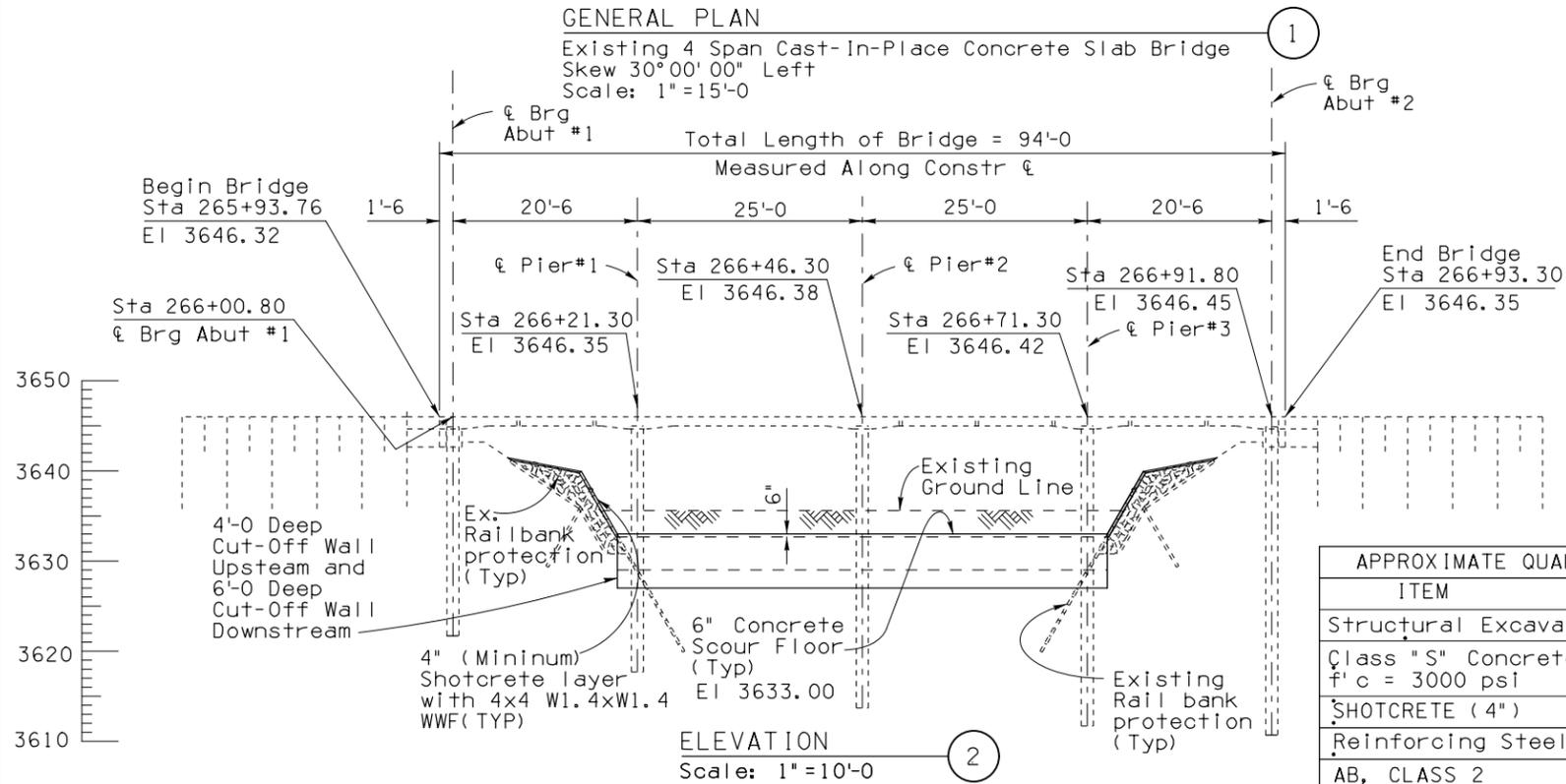
MADE BY

DATE



**GENERAL PLAN**

Existing 4 Span Cast-In-Place Concrete Slab Bridge  
 Skew 30° 00' 00" Left  
 Scale: 1"=15'-0"



**ELEVATION**

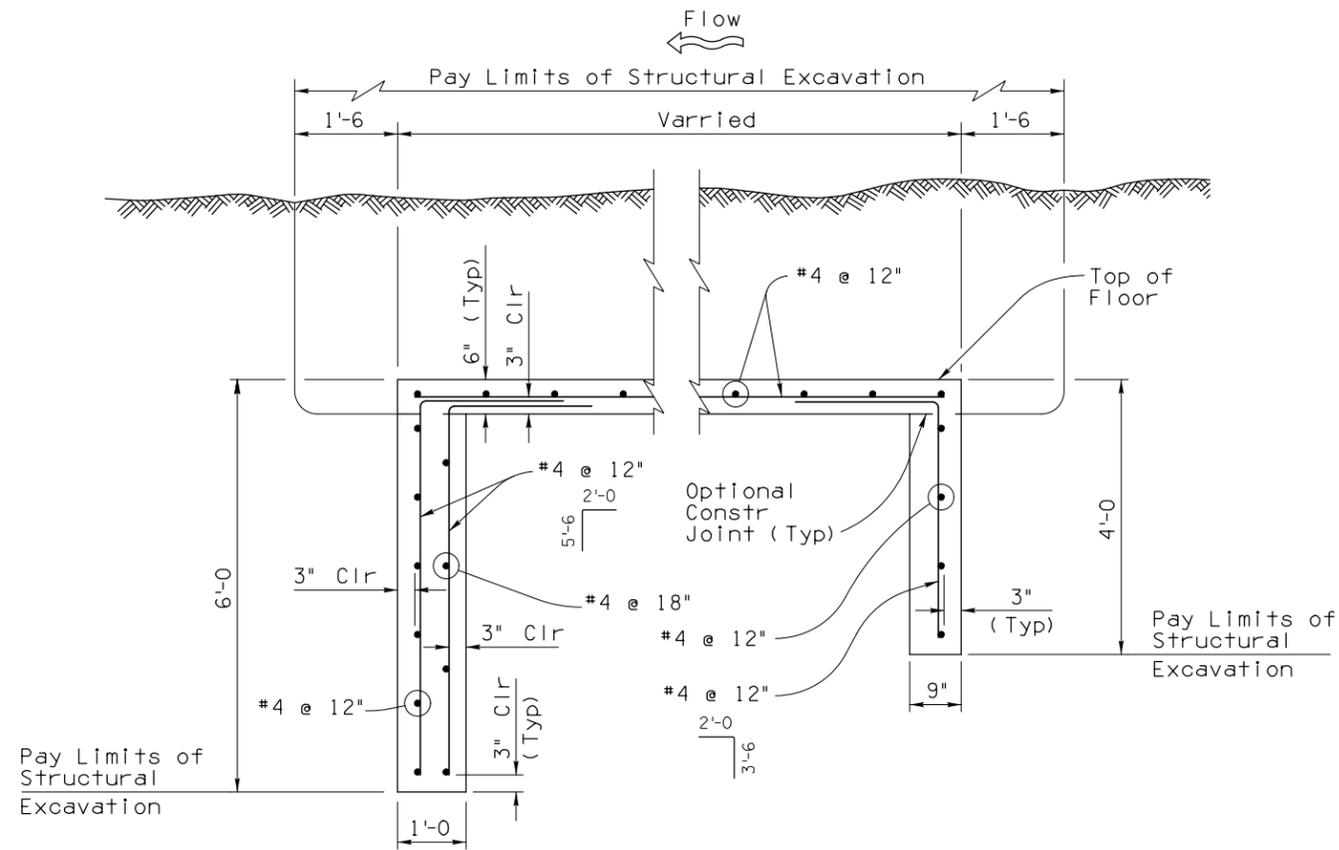
Scale: 1"=10'-0"

APPROXIMATE QUANTITIES FOR SCOUR PROTECTION			
ITEM	UNIT	TOTAL	RECORD
Structural Excavation	CY	716	
Class "S" Concrete f'c = 3000 psi	CY	134	
SHOTCRETE (4")	SQ. YD	519	
Reinforcing Steel	Lbs	11,265	
AB, CLASS 2	CY	58	

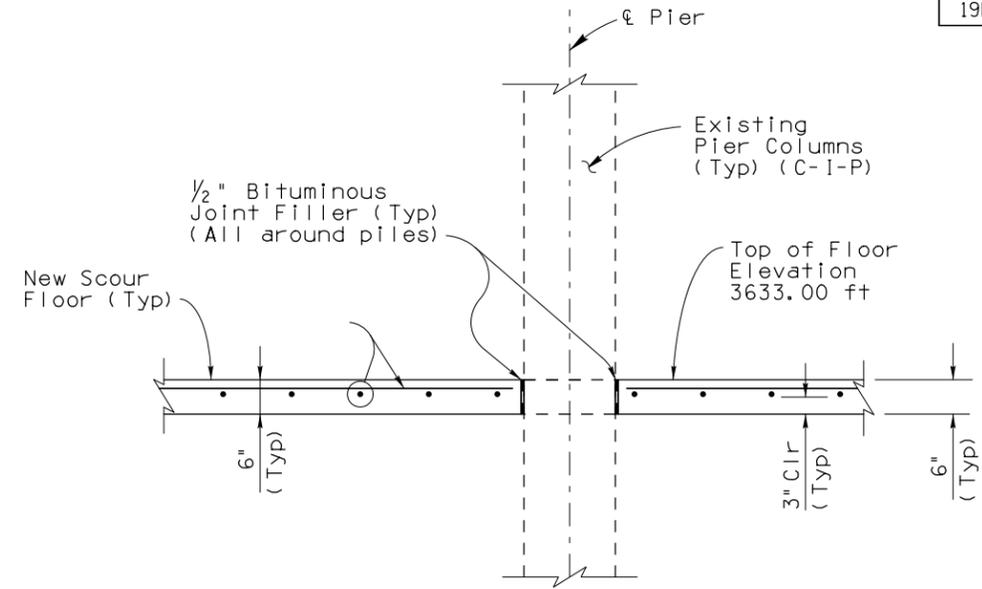
DRAINAGE SECTION		DATE	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION <b>BRIDGE GROUP</b>	PRELIMINARY <b>STAGE IV</b> Review NOT FOR CONSTRUCTION OR RECORDING DWG. S-1.1 OF 7
DESIGN	M. Hasan	04-20		
DRAWN	M. Hasan	04-20		
CHECKED	N. Flala	04-20		
APPROVED-SECTION LEADER		S. Alam	04-20	
I-19B	5.12	325	LOCATION	
ROUTE	MILEPOST	STRUCTURE NO.	POTRERO CANYON BRIDGE	
TRACS NO. F 0244 01C			B19-A(203)T	OF

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	ARIZ.	B19-A(203)T	3	14	

19B SC 4



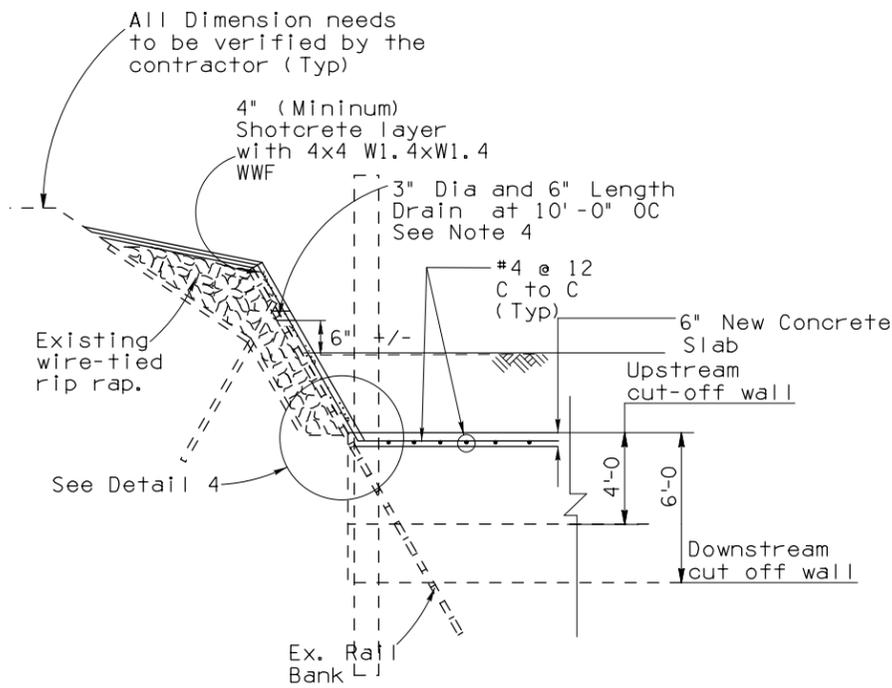
SECTION 1  
Scale: 3/4" = 1'-0"



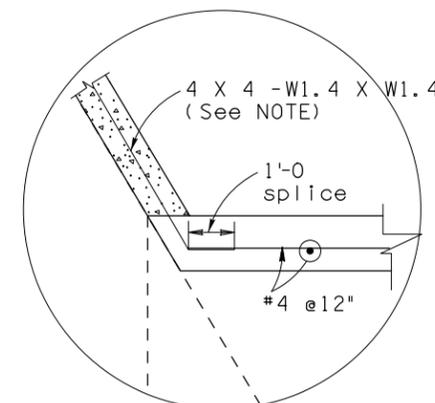
TYPICAL CONCRETE PILE CONNECTION DETAIL 3  
Scale: 3/4" = 1'-0"

NOTES:

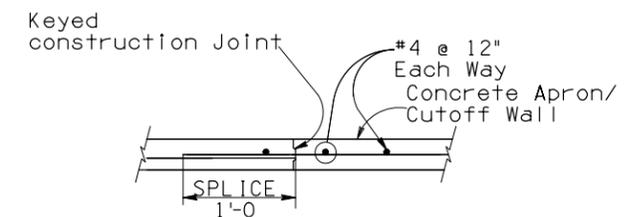
1. All work will be completed within existing right of way
2. All Excavated material shall be placed back over the new concrete floor and shall be graded to the original ground line as directed by the Engineer at no cost to the Department.
3. Welded Wire Fabric is incidental to the shotcrete.



TYP. SECTION AT PIERS-STR POTRERO CANYON BRIDGE 2  
N. T. S.



DETAIL 4  
N. T. S.



CONSTRUCTION JOINT DETAIL 5  
N. T. S.

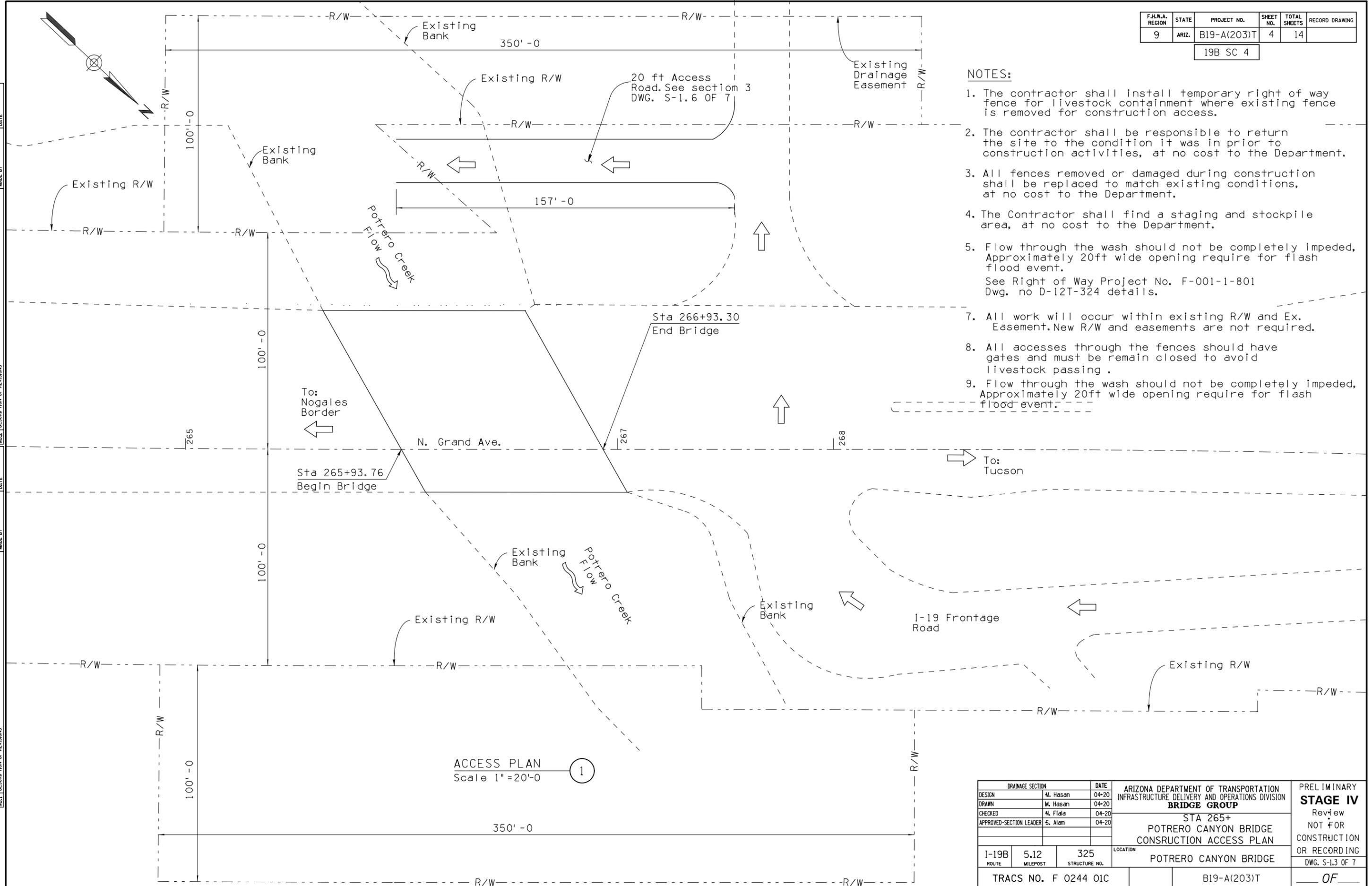
DRAINAGE SECTION			DATE	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION BRIDGE GROUP		PRELIMINARY
DESIGN	M. Hasan	04-20		STA 265+ POTRERO CANYON BRIDGE SCOUR PROTECTION DETAILS		STAGE IV Review NOT FOR CONSTRUCTION OR RECORDING DWG. S-12 OF 7
DRAWN	M. Hasan	04-20				
CHECKED	N. Flala	04-20				
APPROVED-SECTION LEADER	S. Alam	04-20		LOCATION POTRERO CANYON BRIDGE		
I-19B	5.12	325		TRACS NO. F 0244 01C		
ROUTE	MILEPOST	STRUCTURE NO.		B19-A(203)T		OF

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	ARIZ.	B19-A(203)T	4	14	

19B SC 4

**NOTES:**

1. The contractor shall install temporary right of way fence for livestock containment where existing fence is removed for construction access.
2. The contractor shall be responsible to return the site to the condition it was in prior to construction activities, at no cost to the Department.
3. All fences removed or damaged during construction shall be replaced to match existing conditions, at no cost to the Department.
4. The Contractor shall find a staging and stockpile area, at no cost to the Department.
5. Flow through the wash should not be completely impeded. Approximately 20ft wide opening require for flash flood event.  
See Right of Way Project No. F-001-1-801 Dwg. no D-12T-324 details.
7. All work will occur within existing R/W and Ex. Easement. New R/W and easements are not required.
8. All accesses through the fences should have gates and must be remain closed to avoid livestock passing .
9. Flow through the wash should not be completely impeded. Approximately 20ft wide opening require for flash flood event.



NO. 1	DESCRIPTION OF REVISIONS	DATE	MADE BY

ACCESS PLAN  
Scale 1" = 20'-0" (1)

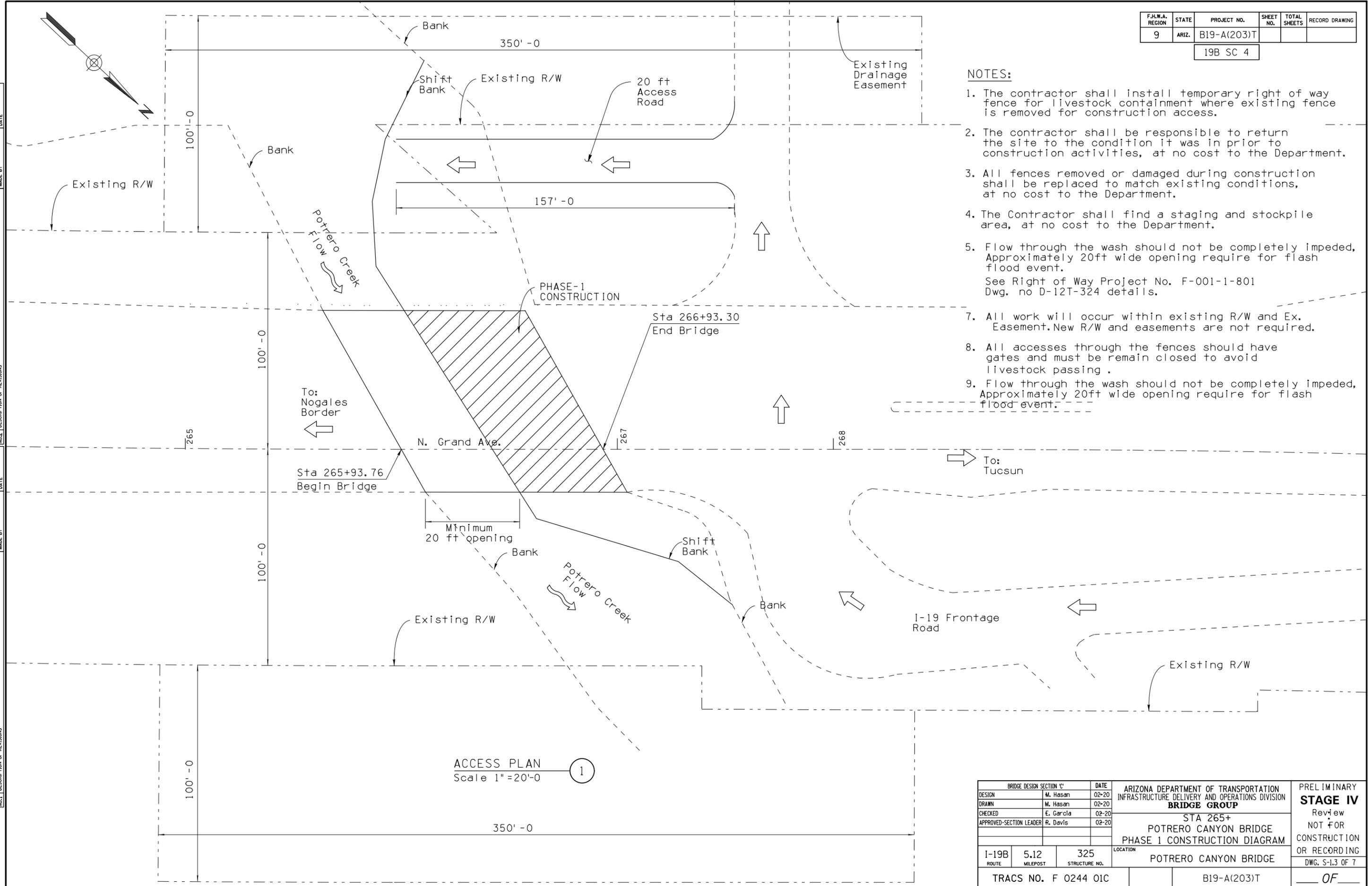
DRAINAGE SECTION			DATE	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION <b>BRIDGE GROUP</b>	PRELIMINARY <b>STAGE IV</b> Review NOT FOR CONSTRUCTION OR RECORDING DWG. S-13 OF 7
DESIGN	M. Hasan	04-20			
DRAWN	M. Hasan	04-20			
CHECKED	N. Flala	04-20			
APPROVED-SECTION LEADER	S. Alam	04-20			
I-19B	5.12	325	LOCATION	POTRERO CANYON BRIDGE	
ROUTE	MILEPOST	STRUCTURE NO.			
TRACS NO. F 0244 01C			B19-A(203)T		

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	ARIZ.	B19-A(203)T			

19B SC 4

**NOTES:**

1. The contractor shall install temporary right of way fence for livestock containment where existing fence is removed for construction access.
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See Right of Way Project No. F-001-1-801 Dwg. no D-12T-324 details.
7. All work will occur within existing R/W and Ex. Easement. New R/W and easements are not required.
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9. Flow through the wash should not be completely impeded. Approximately 20ft wide opening require for flash flood event.



ACCESS PLAN  
Scale 1" = 20'-0" (1)

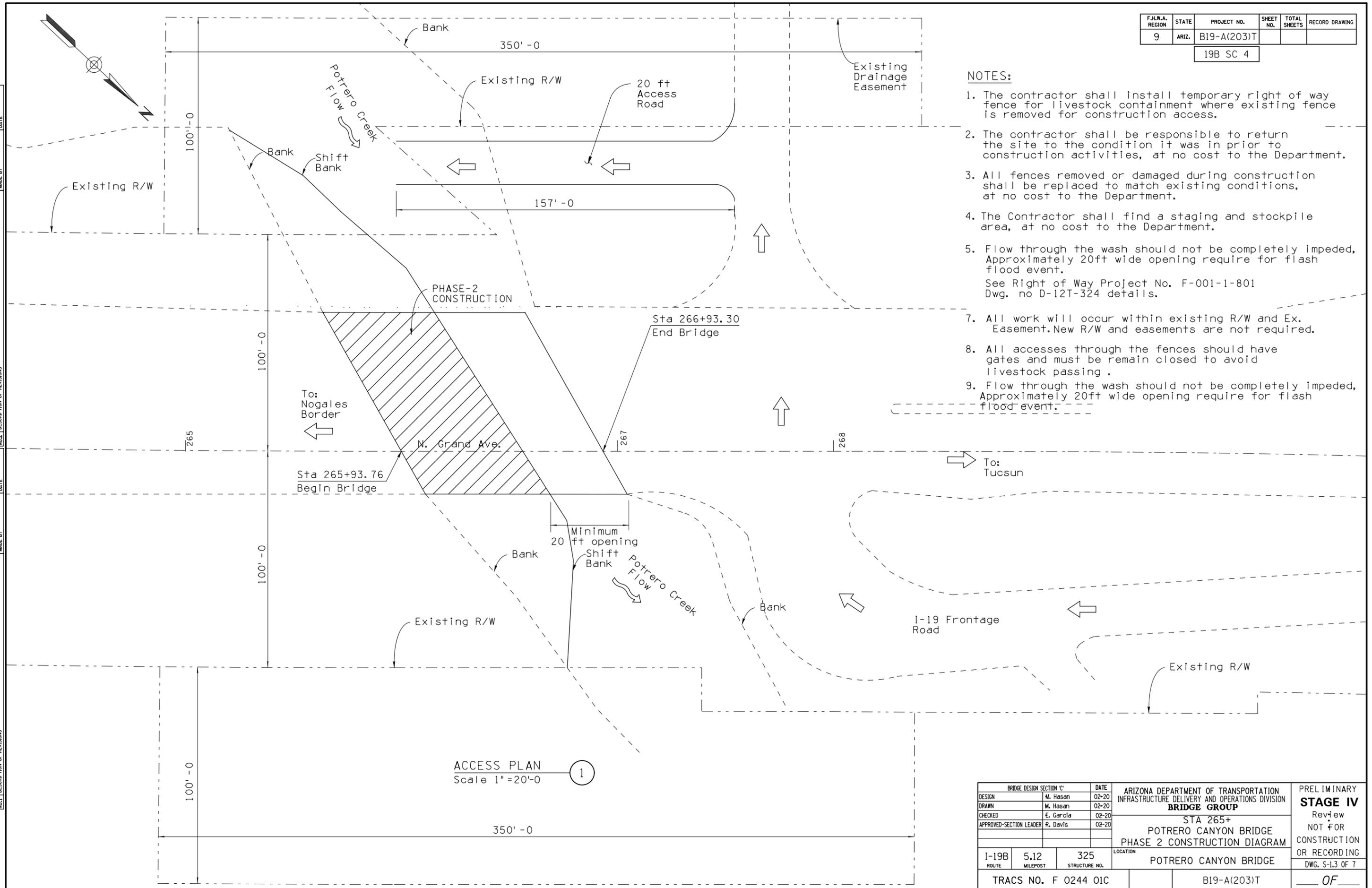
BRIDGE DESIGN SECTION 'C'			DATE	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION		PRELIMINARY <b>STAGE IV</b> Review NOT FOR CONSTRUCTION OR RECORDING DWG. S-13 OF 7
DESIGN	M. Hasan	02-20	<b>BRIDGE GROUP</b>			
DRAWN	M. Hasan	02-20				
CHECKED	E. Garcia	02-20	STA 265+ POTRERO CANYON BRIDGE PHASE 1 CONSTRUCTION DIAGRAM			
APPROVED-SECTION LEADER	R. Davis	02-20				
I-19B ROUTE	5.12 MILEPOST	325 STRUCTURE NO.	LOCATION POTRERO CANYON BRIDGE			
TRACS NO. F 0244 01C			B19-A(203)T			OF

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	ARIZ.	B19-A(203)T			

19B SC 4

**NOTES:**

1. The contractor shall install temporary right of way fence for livestock containment where existing fence is removed for construction access.
2. The contractor shall be responsible to return the site to the condition it was in prior to construction activities, at no cost to the Department.
3. All fences removed or damaged during construction shall be replaced to match existing conditions, at no cost to the Department.
4. The Contractor shall find a staging and stockpile area, at no cost to the Department.
5. Flow through the wash should not be completely impeded. Approximately 20ft wide opening require for flash flood event.  
See Right of Way Project No. F-001-1-801  
Dwg. no D-12T-324 details.
7. All work will occur within existing R/W and Ex. Easement. New R/W and easements are not required.
8. All accesses through the fences should have gates and must be remain closed to avoid livestock passing .
9. Flow through the wash should not be completely impeded. Approximately 20ft wide opening require for flash flood event.



NO. 1	DESCRIPTION OF REVISIONS	DATE	MADE BY

ACCESS PLAN (1)  
Scale 1" = 20'-0"

BRIDGE DESIGN SECTION 'C'			DATE	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION		PRELIMINARY <b>STAGE IV</b> Review NOT FOR CONSTRUCTION OR RECORDING DWG. S-13 OF 7
DESIGN	M. Hasan	02-20	<b>BRIDGE GROUP</b>			
DRAWN	M. Hasan	02-20				
CHECKED	E. Garcia	02-20	STA 265+ POTRERO CANYON BRIDGE PHASE 2 CONSTRUCTION DIAGRAM			
APPROVED-SECTION LEADER	R. Davis	02-20				
I-19B ROUTE	5.12 MILEPOST	325 STRUCTURE NO.	LOCATION POTRERO CANYON BRIDGE			DWG. S-13 OF 7
TRACS NO. F 0244 01C			B19-A(203)T			OF

GENERAL NOTES:

Construction Specification - Arizona Department of Transportation Standard Specifications for Road and Bridge Construction, Edition of 2008, and Special Provisions.

Design Specification - AASHTO LRFD Bridge Design Specifications, 8th Edition 2017.

All concrete shall be Class "S" ( $f_c' = 3000$  psi)

Reinforcing steel shall conform to ASTM Specification A615. All reinforcing shall be furnished as Grade 60 ( $f_s = 24000$  psi)

All bends and hooks shall meet the requirements of AASHTO Article 5.10.2. All bend dimensions for reinforcing steel shall be out-to-out of bars. All placement dimensions for reinforcing steel shall be to center of bars unless noted otherwise.

All reinforcing steel shall have 2 inch clear cover unless otherwise noted.

Ground dimensions shall be verified in the field by the contractor. Dimensions shall not be scaled from the drawings.

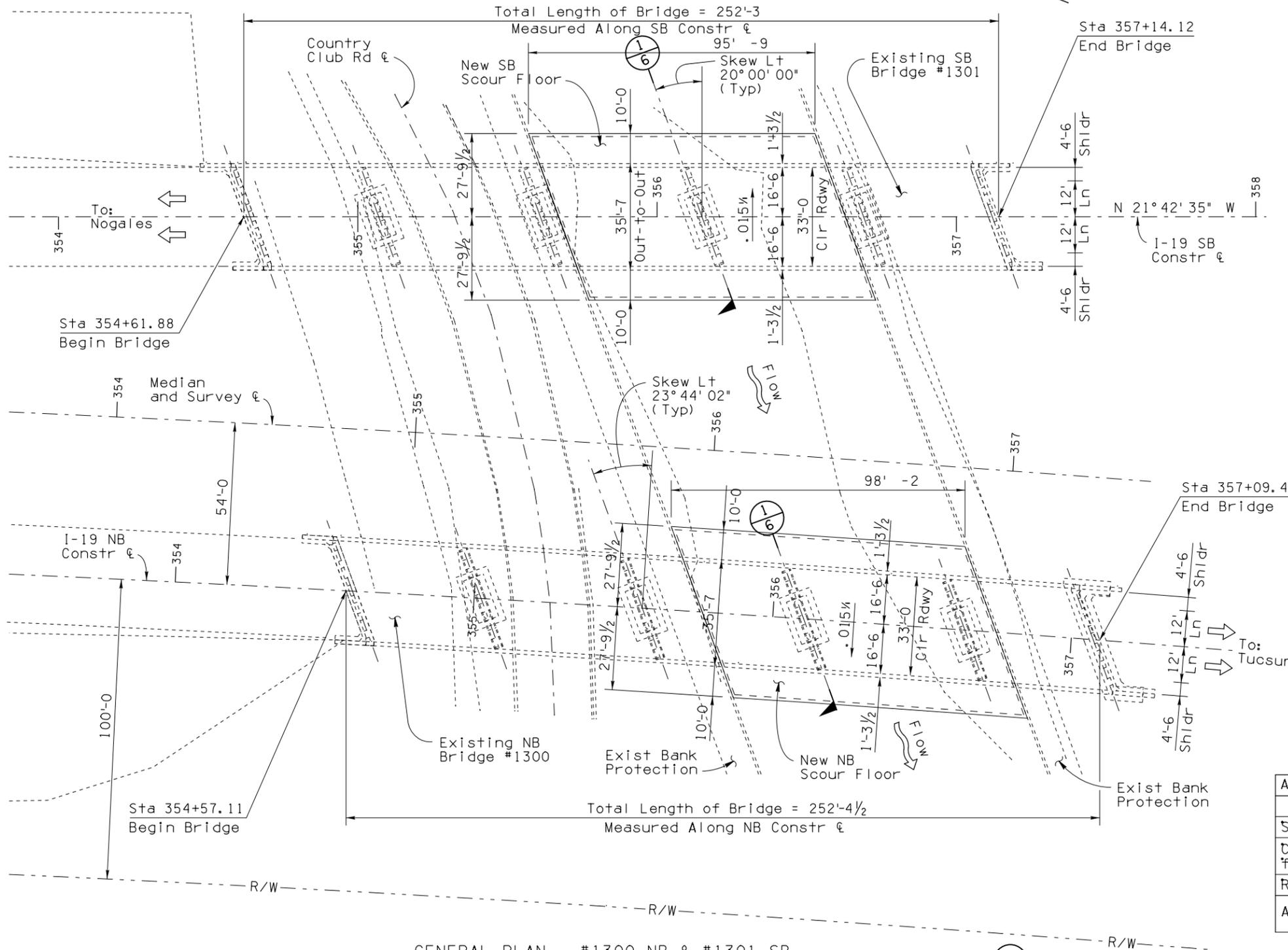
Unless otherwise noted all stations, elevations and dimensions shown are based on "Record" plans and may not necessarily correspond to structure conditions now existing, and shall be adjusted as required and as directed by the Engineer.

The contractor shall provide weakened plane joints in concrete slab (See section C-07.01).

Quantity shown for Structural Excavation is for estimating and establishing unit cost only. Actual payment quantity shall be determined from the contractor survey and shall be verified and approved by the Engineer.

All work will occur within existing Right of Way; No new Right of Way or Easements are required.

Right of Way Information is not shown in the plan, for details see right of way plans from project I-19-1(34)3 File No. D-12T-323



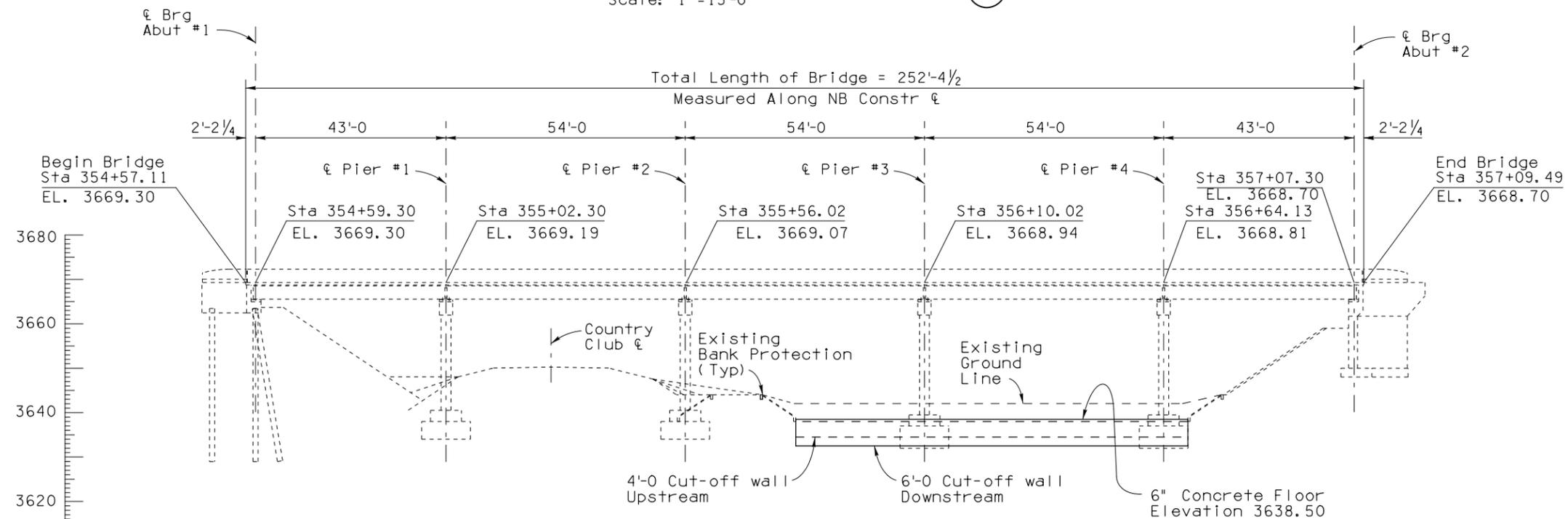
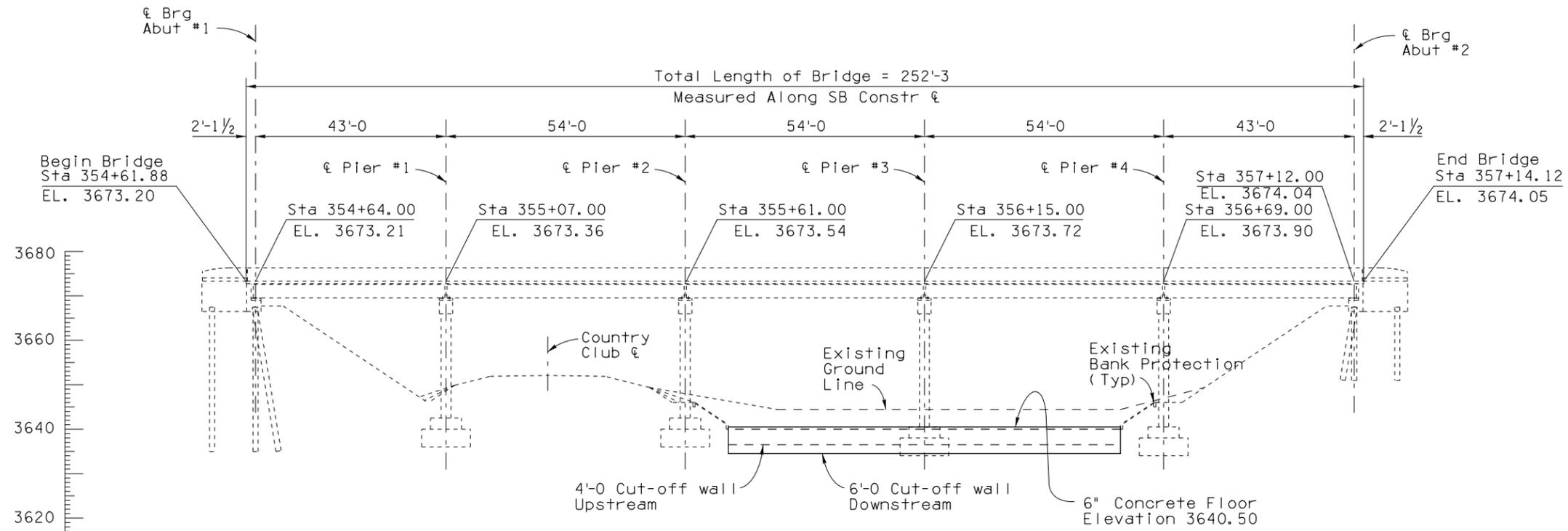
GENERAL PLAN - #1300 NB & #1301 SB  
Two Existing 5 Simple Span Prestressed Concrete Girder Bridges  
NB Bridge Skew 23°44'02" Left  
SB Bridge Skew 20°00'00" Left  
Scale: 1"=20'-0"

ITEM	UNIT	NB	SB	REC. NB	REC. SB
Structural Excavation	CY	675	656		
Class "S" Concrete $f_c' = 3000$ psi	CY	134	131		
Reinforcing Steel	Lbs	9,555	9,360		
AB, CLASS 2	CY		37		

DESIGN		M. Hasan	04-20	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION <b>BRIDGE GROUP</b> STA 354+ COUNTRY CLUB BRIDGE NB & SB GENERAL PLAN	PRELIMINARY <b>STAGE IV</b> Review NOT FOR CONSTRUCTION OR RECORDING DWG. S-14 OF 4
DRAWN		M. Hasan	04-20		
CHECKED		N. Flala	04-20		
APPROVED-SECTION LEADER		S. Alam	04-20		
I-19	4.93	1300/1301	LOCATION	COUNTRY CLUB BRIDGE NB & SB	
TRACS NO. F 0244 01C			B19-A(203)T		

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	ARIZ.	B19-A(203)T	6	14	

19B SC 4

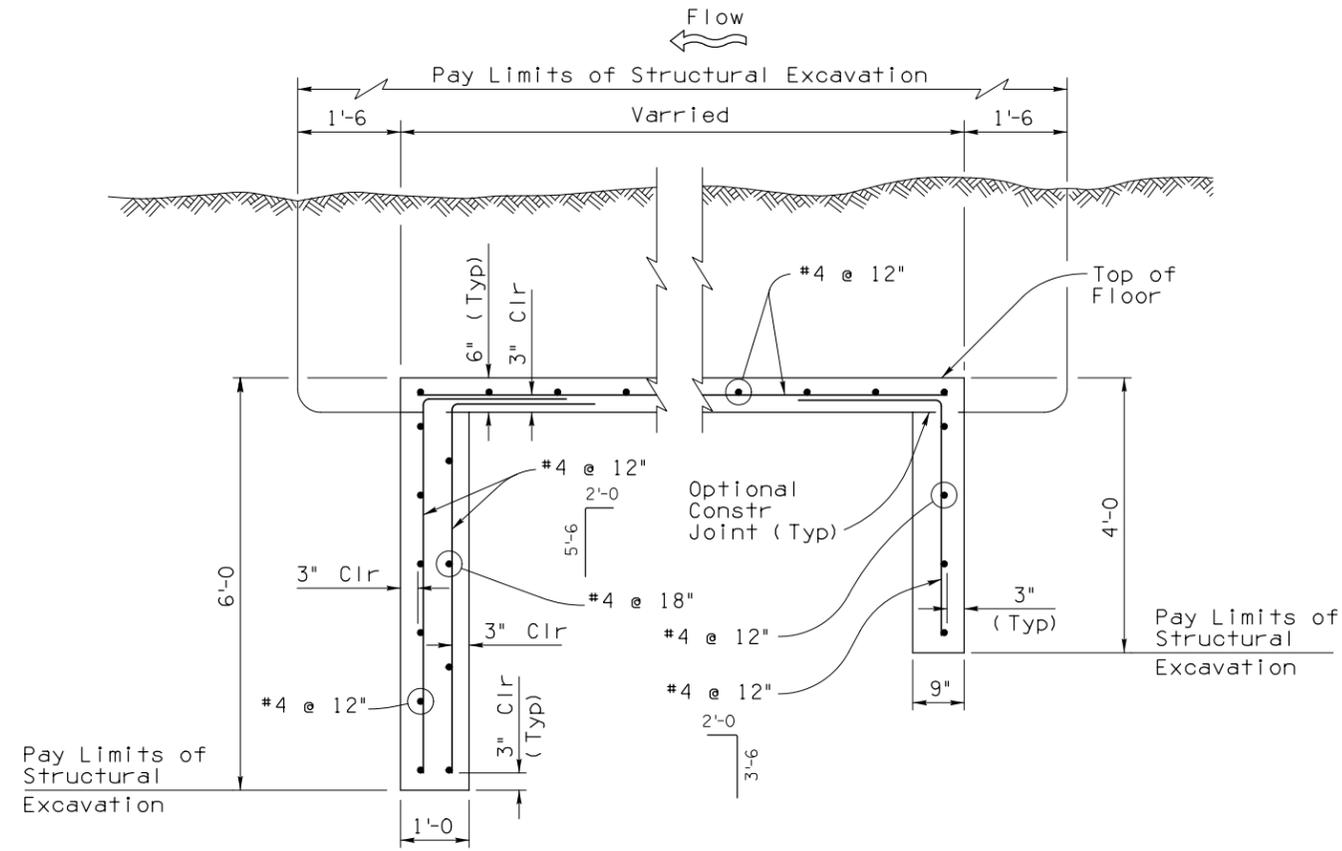


NO.1 DESCRIPTION OF REVISIONS  
NO.2 DESCRIPTION OF REVISIONS

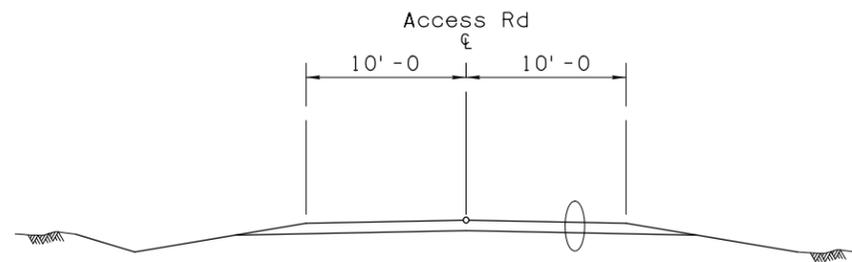
DRAINAGE SECTION			DATE	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION <b>BRIDGE GROUP</b> STA 354+ COUNTRY CLUB NB & SB SCOUR PROTECTION ELEVATION LOCATION COUNTRY CLUB NB & SB	PRELIMINARY <b>STAGE IV</b> Review NOT FOR CONSTRUCTION OR RECORDING DWG. S-15 OF 7
DESIGN	M. Hasan	04-20			
DRAWN	M. Hasan	04-20			
CHECKED	N. Flala	04-20			
APPROVED-SECTION LEADER	S. Alam	04-20			
I-19 ROUTE	4.93 MILEPOST	1300/1301 STRUCTURE NO.		TRACS NO. F 0244 01C	B19-A(203)T

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	ARIZ.	B19-A(203)T	7	14	

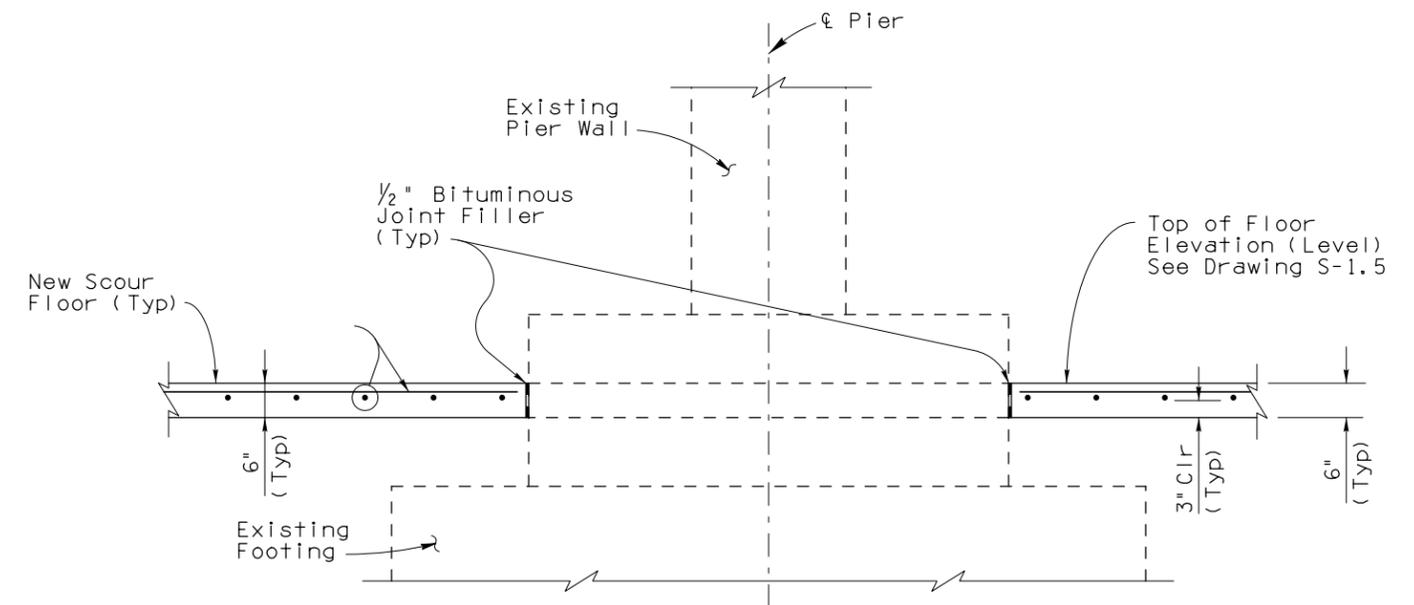
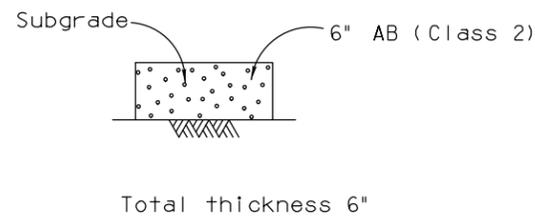
19B SC 4



SECTION 1  
Scale: 3/4" = 1'-0"



TYPICAL ACCESS ROAD SECTION  
N.T.S.



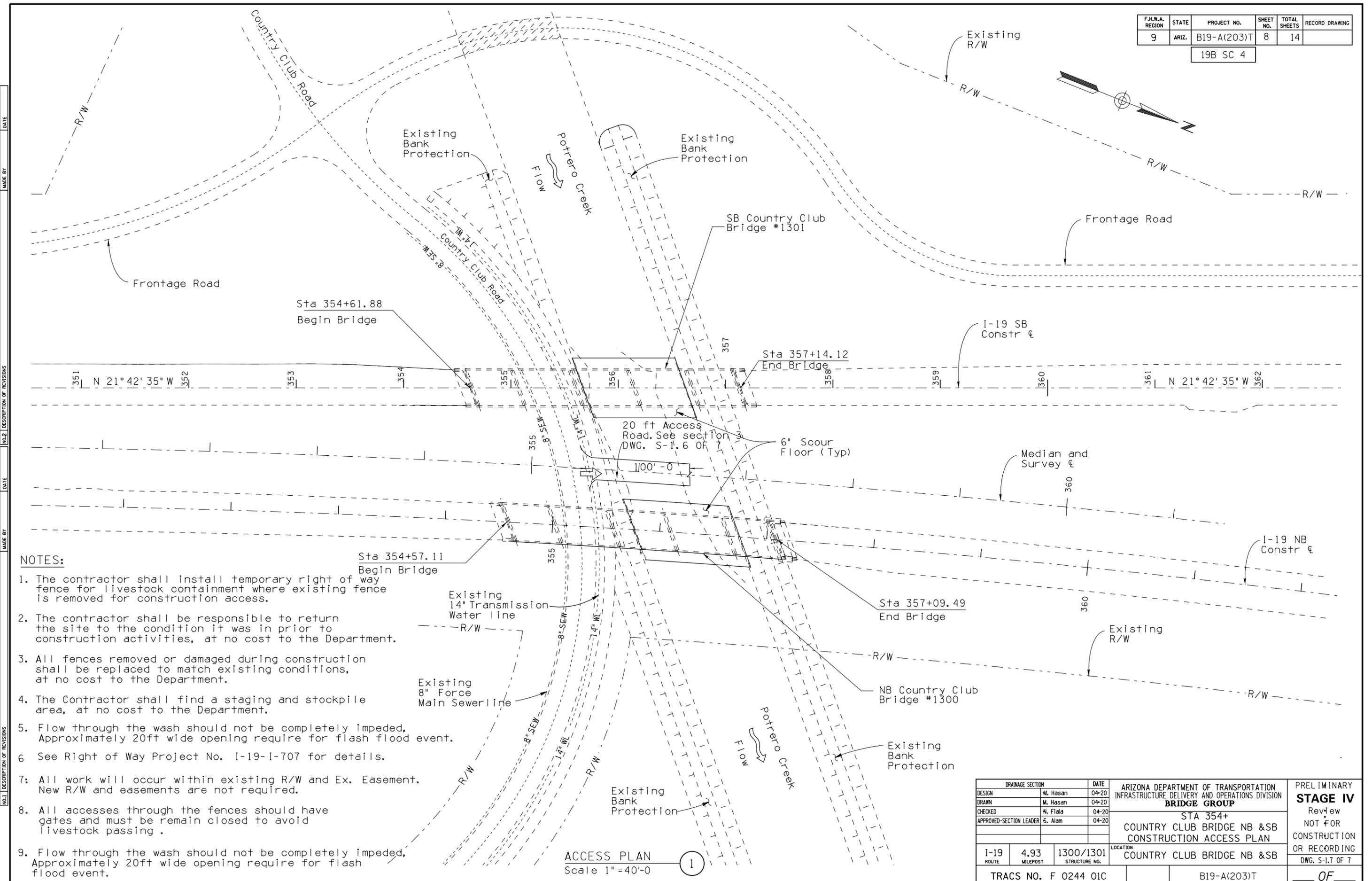
TYPICAL PIER CONNECTION DETAIL  
Scale: 3/4" = 1'-0"

NOTES:

1. All work will be completed within existing right of way
2. All Excavated material shall be placed back over the new concrete floor and shall be graded to the original ground line as directed by the Engineer at no cost to the Department.

DRAINAGE SECTION			DATE	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION <b>BRIDGE GROUP</b>	PRELIMINARY <b>STAGE IV</b> Review NOT FOR CONSTRUCTION OR RECORDING DWG. S-1.6 OF 7
DESIGN	M. Hasan	04-20			
DRAWN	M. Hasan	04-20			
CHECKED	N. Flala	04-20			
APPROVED-SECTION LEADER	S. Alam	04-20			
I-19	4.93	1300/1301	LOCATION	COUNTRY CLUB NB & SB	
ROUTE	MILEPOST	STRUCTURE NO.		B19-A(203)T	
TRACS NO. F 0244 01C				OF	

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	ARIZ.	B19-A(203)T	8	14	
19B SC 4					

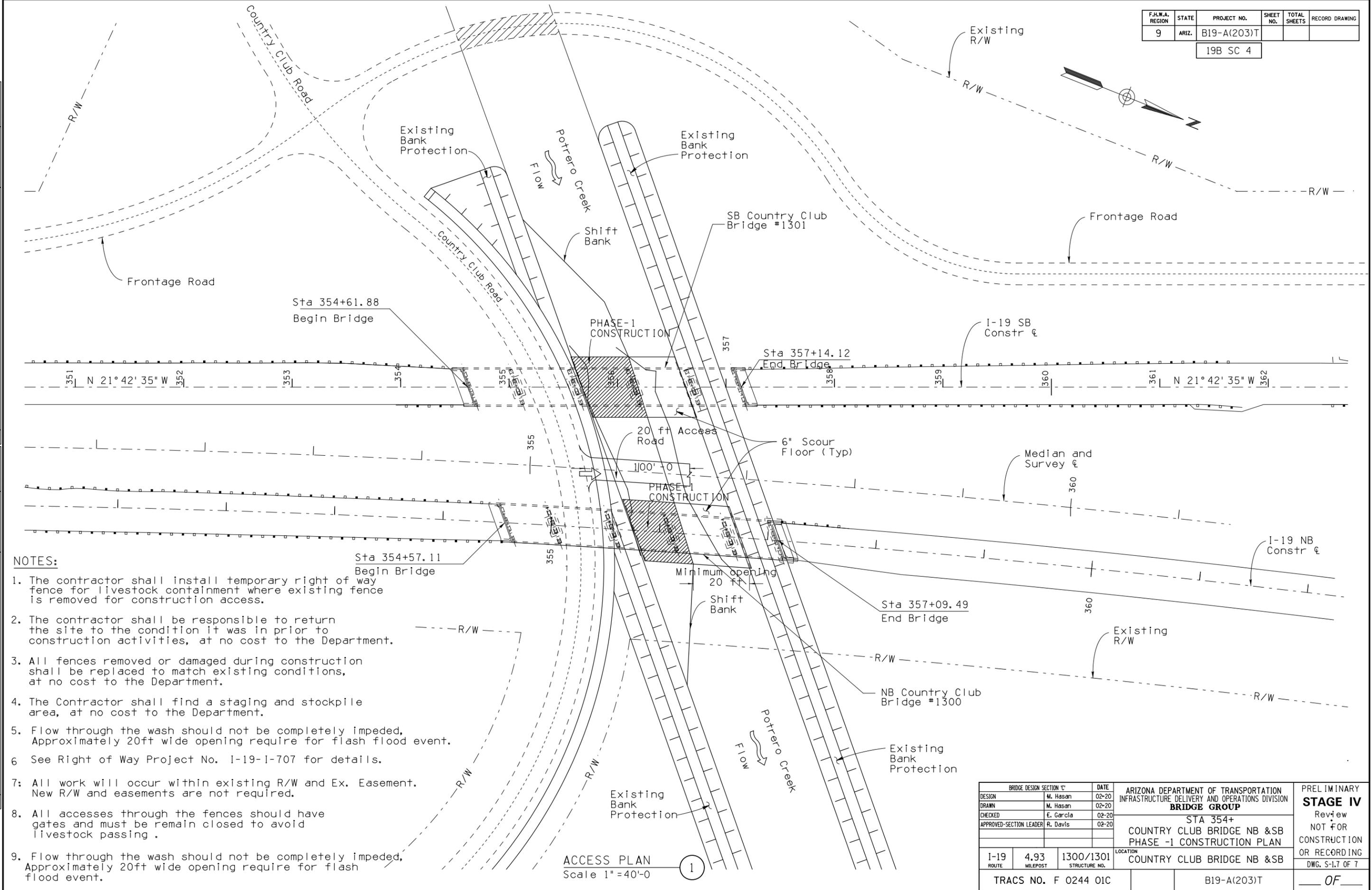


- NOTES:**
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  4. The Contractor shall find a staging and stockpile area, at no cost to the Department.
  5. Flow through the wash should not be completely impeded, Approximately 20ft wide opening require for flash flood event.
  6. See Right of Way Project No. I-19-I-707 for details.
  7. All work will occur within existing R/W and Ex. Easement. New R/W and easements are not required.
  8. All accesses through the fences should have gates and must be remain closed to avoid livestock passing .
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**ACCESS PLAN**  
Scale 1" = 40'-0"

DESIGN		M. Hasan	04-20	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION <b>BRIDGE GROUP</b>	<b>PRELIMINARY STAGE IV</b> Review NOT FOR CONSTRUCTION OR RECORDING DWG. S-1.7 OF 7
DRAWN		M. Hasan	04-20		
CHECKED		N. Flala	04-20		
APPROVED-SECTION LEADER		S. Alam	04-20		
I-19	4.93	1300/1301	LOCATION	COUNTRY CLUB BRIDGE NB & SB	
TRACS NO. F 0244 01C			B19-A(203)T		

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	ARIZ.	B19-A(203)T			
19B SC 4					

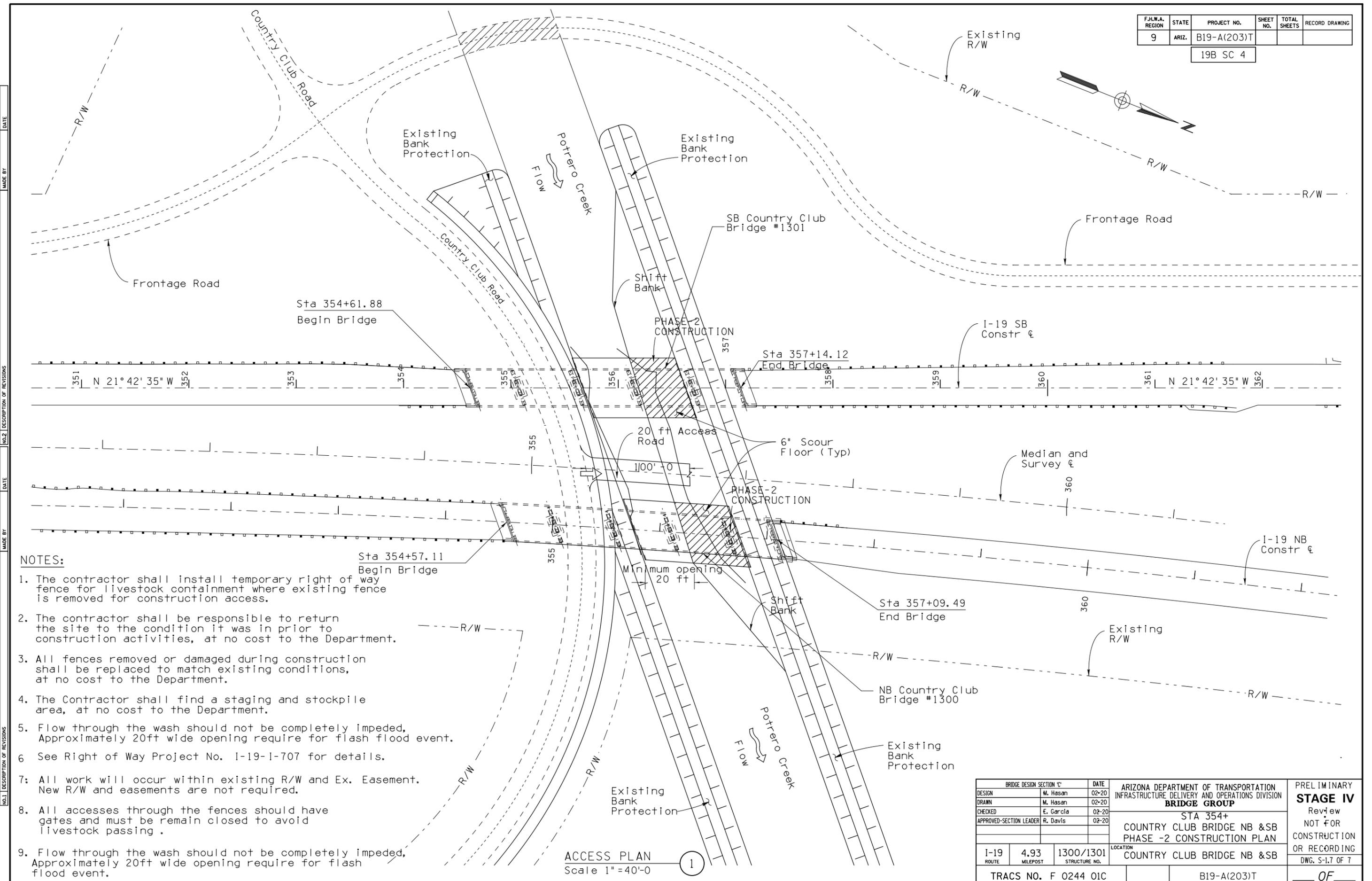


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ACCESS PLAN  
Scale 1"=40'-0"

BRIDGE DESIGN SECTION 'C'			DATE	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION <b>BRIDGE GROUP</b>	PRELIMINARY <b>STAGE IV</b> Review NOT FOR CONSTRUCTION OR RECORDING DWG. S-1.7 OF 7
DESIGN	M. Hasan	02-20			
DRAWN	M. Hasan	02-20			
CHECKED	E. Garcia	02-20			
APPROVED-SECTION LEADER			R. Davis 02-20	STA 354+ <b>COUNTRY CLUB BRIDGE NB &amp; SB</b> <b>PHASE -1 CONSTRUCTION PLAN</b> LOCATION <b>COUNTRY CLUB BRIDGE NB &amp; SB</b>	
I-19	4.93	1300/1301			
ROUTE	MILEPOST	STRUCTURE NO.			
TRACS NO. F 0244 01C				B19-A(203)T	

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	ARIZ.	B19-A(203)T			
19B SC 4					



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ACCESS PLAN  
Scale 1" = 40'-0"

BRIDGE DESIGN SECTION 'C'			DATE	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION <b>BRIDGE GROUP</b>	PRELIMINARY <b>STAGE IV</b> Review NOT FOR CONSTRUCTION OR RECORDING DWG. S-1.7 OF 7
DESIGN	M. Hasan	02-20			
DRAWN	M. Hasan	02-20			
CHECKED	E. Garcia	02-20			
APPROVED-SECTION LEADER			R. Davis	02-20	
I-19 ROUTE	4.93 MILEPOST	1300/1301 STRUCTURE NO.	LOCATION	COUNTRY CLUB BRIDGE NB & SB	
TRACS NO. F 0244 01C			B19-A(203)T		

F.A.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	ARIZ.	B19-A(203)T	11	14	

19B SC 4

**Notes:**

Quantities shown are for estimating and establishing unit cost only. Actual payment quantity shall be verified in the field and approved by the Engineer.

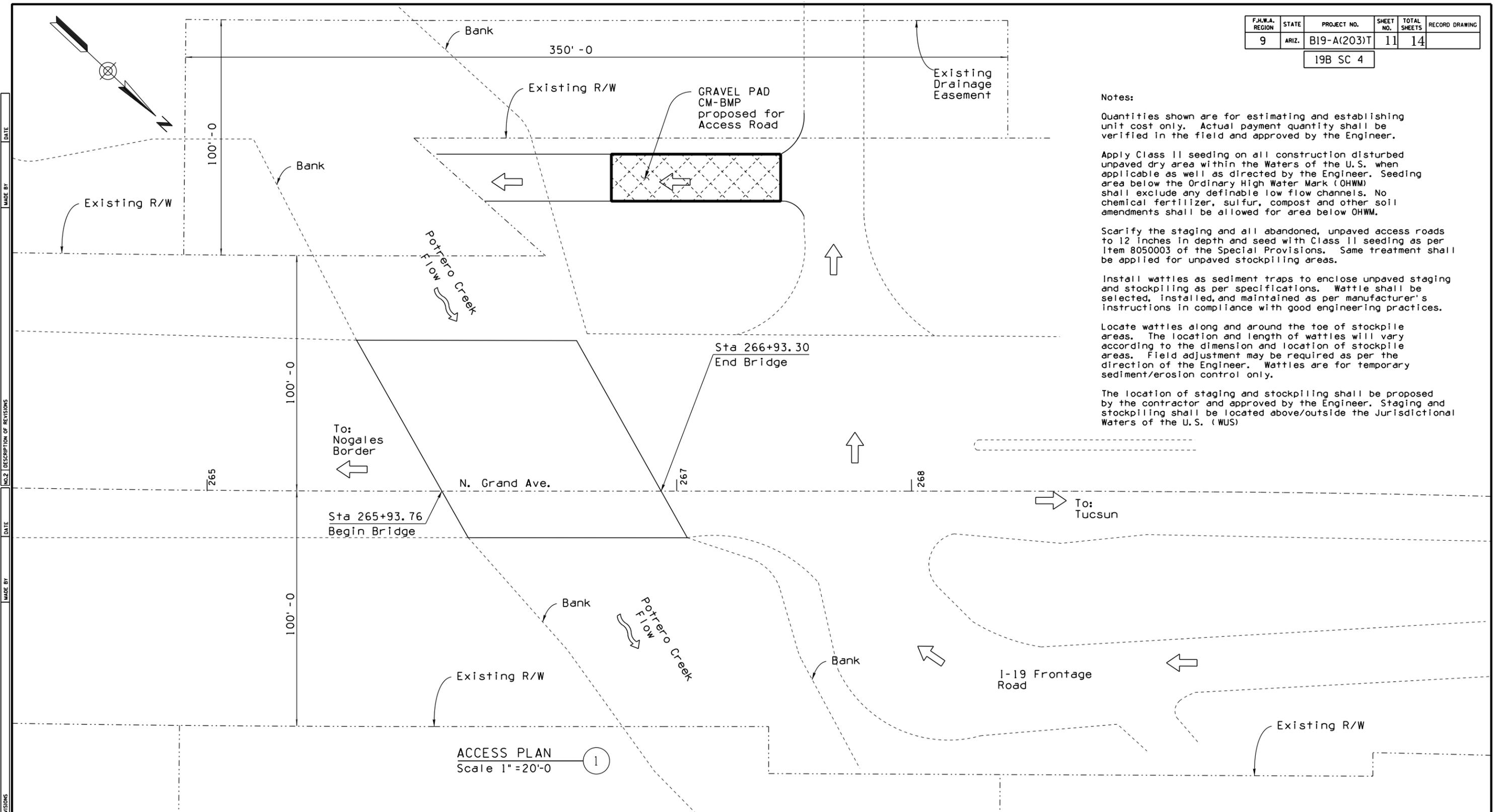
Apply Class II seeding on all construction disturbed unpaved dry area within the Waters of the U.S. when applicable as well as directed by the Engineer. Seeding area below the Ordinary High Water Mark (OHWM) shall exclude any definable low flow channels. No chemical fertilizer, sulfur, compost and other soil amendments shall be allowed for area below OHWM.

Scarify the staging and all abandoned, unpaved access roads to 12 inches in depth and seed with Class II seeding as per Item 8050003 of the Special Provisions. Same treatment shall be applied for unpaved stockpiling areas.

Install wattles as sediment traps to enclose unpaved staging and stockpiling as per specifications. Wattle shall be selected, installed, and maintained as per manufacturer's instructions in compliance with good engineering practices.

Locate wattles along and around the toe of stockpile areas. The location and length of wattles will vary according to the dimension and location of stockpile areas. Field adjustment may be required as per the direction of the Engineer. Wattles are for temporary sediment/erosion control only.

The location of staging and stockpiling shall be proposed by the contractor and approved by the Engineer. Staging and stockpiling shall be located above/outside the Jurisdictional Waters of the U.S. (WUS)



NO. 1 DESCRIPTION OF REVISIONS  
MADE BY  
DATE  
NO. 2 DESCRIPTION OF REVISIONS  
MADE BY  
DATE

Gradation C Rock Mulch (fractured/crushed rocks in angular shape)	
Sieve Size	Percent Passing
3.75 Inch	100
2.5 Inch	50 — 75
2 Inch	30 — 50
1 Inch	10 — 20

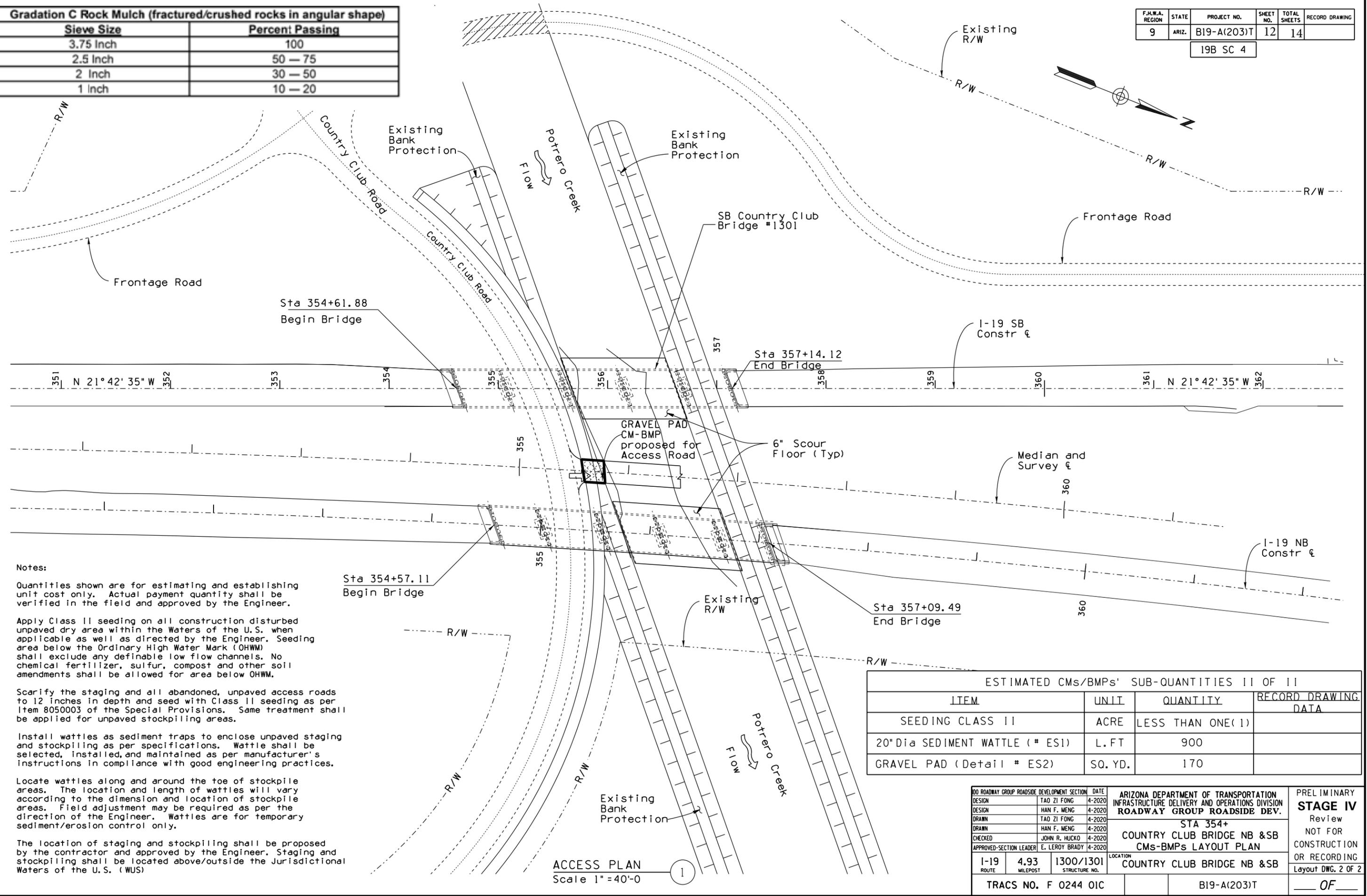
ESTIMATED CMs/BMPs' SUB-QUANTITIES 1 OF 11			
ITEM	UNIT	QUANTITY	RECORD DRAWING DATA
SEEDING CLASS II	ACRE	LESS THAN ONE (1)	
20" Dia SEDIMENT WATTLE (# ES1)	L. FT.	900	
GRAVEL PAD (Detail # ES2)	SQ. YD.	170	

DO ROADWAY GROUP ROADSIDE DEVELOPMENT SECTION		DATE	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION ROADWAY GROUP ROADSIDE DEV.	PRELIMINARY <b>STAGE IV</b> Review NOT FOR CONSTRUCTION OR RECORDING Layout DWG. 1 OF 2
DESIGN	TAO ZI FONG	4-2020		
DRAWN	HAN F. MENG	4-2020		
CHECKED	JOHN R. HUCKO	4-2020		
APPROVED-SECTION LEADER	E. LEROY BRADY	4-2020		
I-19B ROUTE	5.12 MILEPOST	325 STRUCTURE NO.	LOCATION POTRERO CANYON BRIDGE	
TRACS NO. F 0244 01C			B19-A(203)T	OF

Gradation C Rock Mulch (fractured/crushed rocks in angular shape)	
Sieve Size	Percent Passing
3.75 Inch	100
2.5 Inch	50 — 75
2 Inch	30 — 50
1 Inch	10 — 20

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	ARIZ.	B19-A(203)T	12	14	
19B SC 4					

MADE BY: DATE: NO. 2 DESCRIPTION OF REVISIONS: NO. 1 DESCRIPTION OF REVISIONS: DATE:



**Notes:**

Quantities shown are for estimating and establishing unit cost only. Actual payment quantity shall be verified in the field and approved by the Engineer.

Apply Class II seeding on all construction disturbed unpaved dry area within the Waters of the U.S. when applicable as well as directed by the Engineer. Seeding area below the Ordinary High Water Mark (OHWM) shall exclude any definable low flow channels. No chemical fertilizer, sulfur, compost and other soil amendments shall be allowed for area below OHWM.

Scarify the staging and all abandoned, unpaved access roads to 12 inches in depth and seed with Class II seeding as per Item 8050003 of the Special Provisions. Same treatment shall be applied for unpaved stockpiling areas.

Install wattles as sediment traps to enclose unpaved staging and stockpiling as per specifications. Wattle shall be selected, installed, and maintained as per manufacturer's instructions in compliance with good engineering practices.

Locate wattles along and around the toe of stockpile areas. The location and length of wattles will vary according to the dimension and location of stockpile areas. Field adjustment may be required as per the direction of the Engineer. Wattles are for temporary sediment/erosion control only.

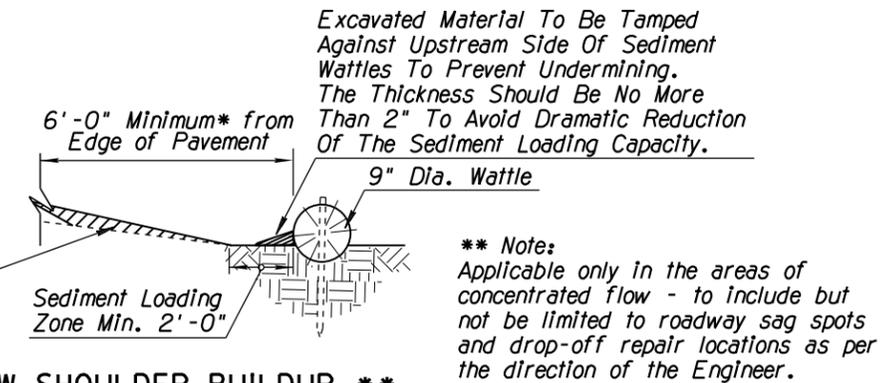
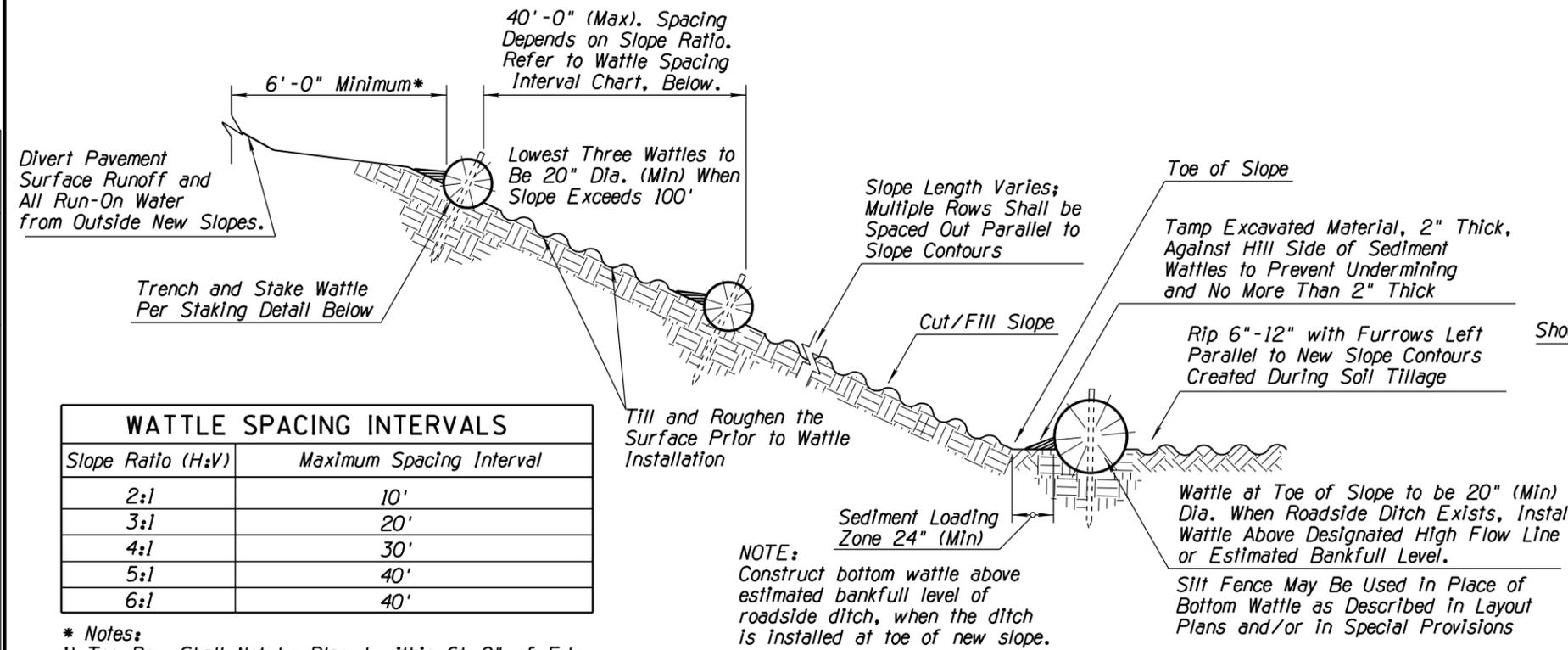
The location of staging and stockpiling shall be proposed by the contractor and approved by the Engineer. Staging and stockpiling shall be located above/outside the Jurisdictional Waters of the U.S. (WUS)

ESTIMATED CMs/BMPs' SUB-QUANTITIES II OF II			
ITEM	UNIT	QUANTITY	RECORD DRAWING DATA
SEEDING CLASS II	ACRE	LESS THAN ONE(1)	
20" Dia SEDIMENT WATTLE (# ES1)	L. FT	900	
GRAVEL PAD (Detail # ES2)	SQ. YD.	170	

ACCESS PLAN  
Scale 1" = 40'-0"

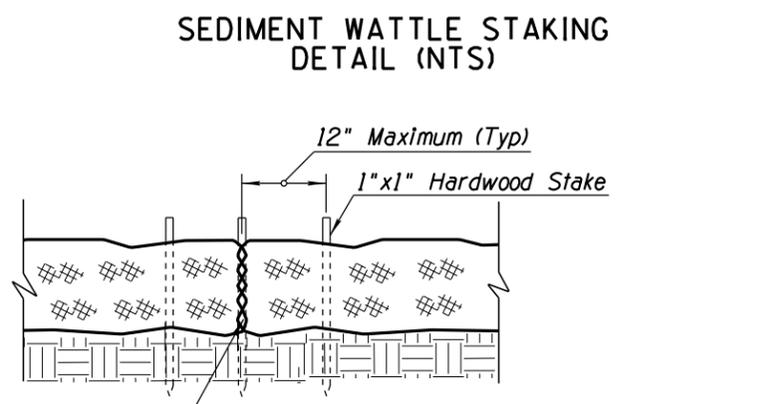
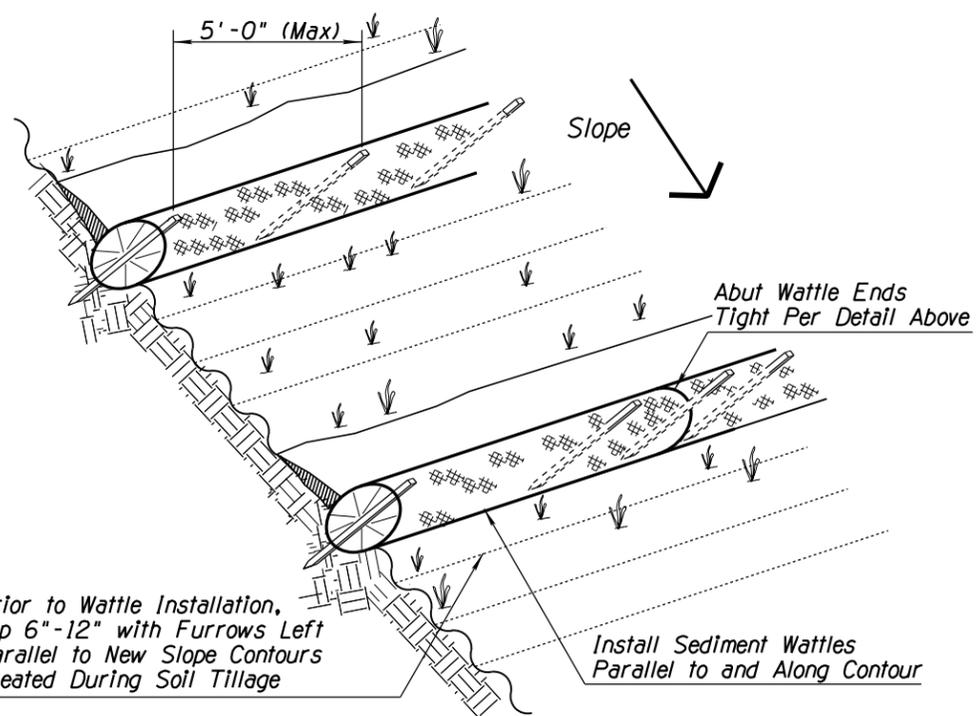
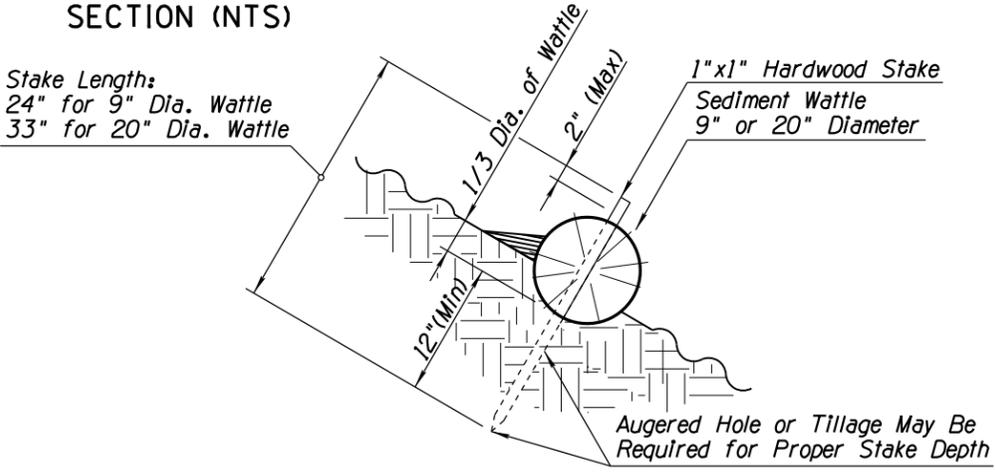
ROADWAY GROUP ROADSIDE DEVELOPMENT SECTION			DATE
DESIGN	TAO ZI FONG		4-2020
DESIGN	HAN F. MENG		4-2020
DRAWN	TAO ZI FONG		4-2020
DRAWN	HAN F. MENG		4-2020
CHECKED	JOHN R. HUCKO		4-2020
APPROVED-SECTION LEADER	E. LEROY BRADY		4-2020

ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION ROADWAY GROUP ROADSIDE DEV.		PRELIMINARY <b>STAGE IV</b> Review NOT FOR CONSTRUCTION OR RECORDING Layout DWG. 2 OF 2
STA 354+ COUNTRY CLUB BRIDGE NB & SB CMs-BMPs LAYOUT PLAN		
I-19 ROUTE	4.93 MILEPOST	1300/1301 STRUCTURE NO.
TRACS NO. F 0244 OIC		B19-A(203)T



Slope Ratio (H:V)	Maximum Spacing Interval
2:1	10'
3:1	20'
4:1	30'
5:1	40'
6:1	40'

- \* Notes:**
- 1) Top Row Shall Not be Placed within 6'-0" of Edge of Pavement and 9'-0" from Outside Surface of Barrier.
  - 2) For erosive soils, place rows of wattles closer together.
  - 3) For soils with low erosive potential, place rows of wattles further apart.



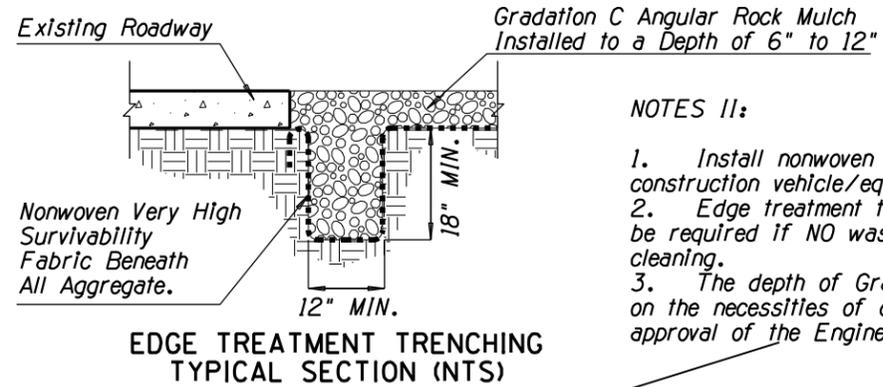
**NEW SHOULDER BUILDUP \*\* PROTECTION SECTION (NTS)**

- NOTES:**
1. Install Sediment Wattles as slopes are constructed to grade or as directed by the Engineer. Select, install and maintain in conformance with manufacturers' specifications to meet site conditions for slope protection and in accordance with good engineering practices. No Sediment Wattles shall be installed in urban freeway medians, nor where cable barrier systems are employed.
  2. Sediment Wattles shall be in continuous contact with trench bottom and sides. Do not overlap wattle ends on top of each other. A 20" Dia. wattle may be made from 2-3 rolled excelsior or straw blankets.
  3. Butt adjoining wattles tightly against each other. Drive the first end stake of the second wattle at an angle toward the first wattle to help about them tightly.
  4. Repair any rills or gullies promptly. Make field adjustments and corrections of Wattle BMP immediately if it is causing flooding, erosion, and/or affecting roadway safety.
  5. Construction of cut slopes 2:1 and steeper in soil and rock materials that can be ripped shall be constructed, whenever possible, by Minibenching. Refer to Slope Minibenching BMP Detail.
  6. Loosening surface soil is not required where Minibenches are used. For seeded areas, tillage shall be performed to form minor ridges and furrows parallel to new slope contours and as specified in Section 805 of the Standard Specifications and these special provisions.
  7. Divert and direct run-on water from outside of the slopes to the spillways and/or rock riprap/rock mulch. Diversion dikes and/or ditches are necessary on natural undisturbed slopes beyond the top limits of new slopes to divert run-on water.
  8. Installation and maintenance of Sediment Wattle BMPs shall not negatively impact traffic safety, nor the designed function of roadway or bridge drainage facilities.
  9. Install and maintain Sediment Wattle BMPs to carry the stormwater of at least 2-year, 24-hour events.
  10. The Sediment Wattle BMP's pay/bid item shall include all materials used for this BMP: all ground preparation, furnishing, installing, maintenance, final removal, and disposal of this temporary BMP, as well as returning the area to an acceptable condition as approved by the Engineer.
  11. Refer to Standard Specification Section 810-2.06(C) for Sediment Wattle material specifications.
  12. Make field adjustments and corrections to ensure NO sensitive biological resources (native species / habitats) will be adversely impacted.

**DETAIL ES1**  
SEDIMENT WATTLE

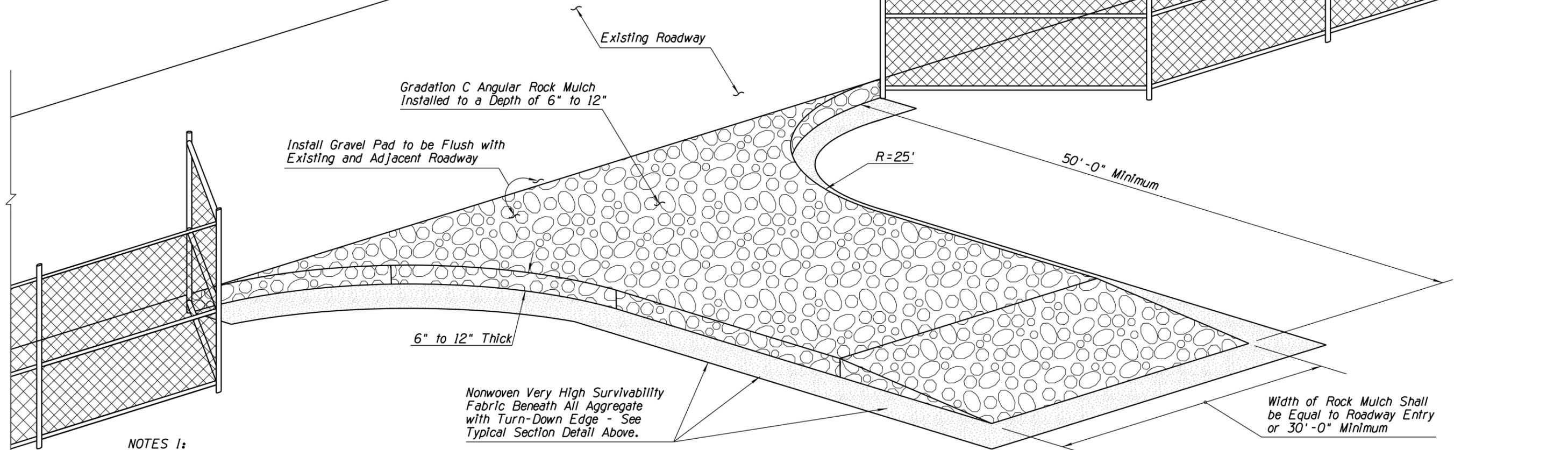
DESIGN	TAO ZI FONG	4-2020	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION <b>ROADSIDE DEVELOPMENT SECTION</b>	PRELIMINARY <b>STAGE IV</b> Review NOT FOR CONSTRUCTION OR RECORDING
DESIGN	HAN MENG	4-2020		
DRAWN	TAO ZI FONG	4-2020	<b>STORMWATER QUALITY PROTECTION &amp; EROSION/SEDIMENT CONTROL DETAILS</b>	SHEET 1 OF 1
DRAWN	HAN MENG	4-2020		
CHECKED	JOHN R. HUCKO	4-2020	LOCATION POTRERO CANYON BRIDGE & COUNTRY CLUB BRIDGE	OF
TEAM LEADER	E LEROY BRADY	4-2020		
ROUTE	1-19B	MP	TRACS NO. F0244 OIC	B19-A(203)T

NO. 1 DESCRIPTION OF REVISION  
NO. 2 DESCRIPTION OF REVISION  
DATE  
MADE BY



**NOTES II:**

1. Install nonwoven fabric when water is applied for construction vehicle/equipment cleaning on Gravel Pad.
2. Edge treatment trenching and nonwoven fabric shall not be required if NO wash water is used for vehicle/equipment cleaning.
3. The depth of Gravel Pad varies from 6" to 12" based on the necessities of construction vehicle/equipment as per the approval of the Engineer.



**NOTES I:**

1. Install Stabilized Construction Entrance/Exit Gravel Pad BMP for traffic entering or exiting a construction site where sedimentation, clay, silt or other pollutants can be tracked onto public roads and/or adjacent water bodies, as approved by the Engineer. It may also be applied for construction entrance/exit wind erosion/dust control, as approved by the Engineer.
2. Locate new Construction Entrance(s)/Exit(s) at appropriate project entrance/exit points as determined in field with the approval of the Engineer. Relocate Stabilized Construction Entrance/Exit Gravel Pad BMP as needed as project progresses. Replace Rock Mulch materials in drive paths when dirt or mud accumulates.
3. Nonwoven Very High Survivability Fabric shall conform to the standards of Sub-section 1014-4.04 of the Standard Specifications.
4. Rock Mulch materials shall be fractured/crushed rocks in angular shape and as defined in the Sub-section 810-2.03 of the Standard Specifications. Natural river-run materials, especially rounded natural river rocks are not acceptable.
5. Make field adjustments and corrections of Construction Entrance/Exit Gravel Pad BMP immediately if it is causing flooding and/or affecting roadway safety.
6. When paid separately, the Stabilized Construction Entrance/Exit Gravel Pad BMP's pay/bid item shall include all materials used for this BMP: all ground preparation, furnishing, installing, final removal, and disposal of this temporary BMP, as well as returning the area to an acceptable condition as approved by the Engineer.
7. \* Fence/barricade pay/bid item shall not be included as a component of the Stabilized Construction Entrance/Exit Gravel Pad BMP pay/bid item.
8. Make field adjustments and corrections to ensure NO sensitive biological resources (native species / habitats) will be adversely impacted.

**BIRD'S EYE VIEW (NTS)**

# DETAIL ES2

## STABILIZED CONSTRUCTION ENTRANCE/EXIT GRAVEL PAD

DESIGN	TAO ZI FONG	4-2020	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION ROADSIDE DEVELOPMENT SECTION	PRELIMINARY <b>STAGE IV</b> Review NOT FOR CONSTRUCTION OR RECORDING
DESIGN	HAN MENG	4-2020		
DRAWN	TAO ZI FONG	4-2020	STORMWATER QUALITY PROTECTION & EROSION/SEDIMENT CONTROL DETAILS	SHEET _____ OF _____
DRAWN	HAN MENG	4-2020		
CHECKED	JOHN R. HUCKO	4-2020		
TEAM LEADER	E LEROY BRADY	4-2020		
ROUTE	1-19B	MP	LOCATION	POTRERO CANYON BRIDGE & COUNTRY CLUB BRIDGE
TRACS NO. F0244 OIC			B19-A(203)T	