

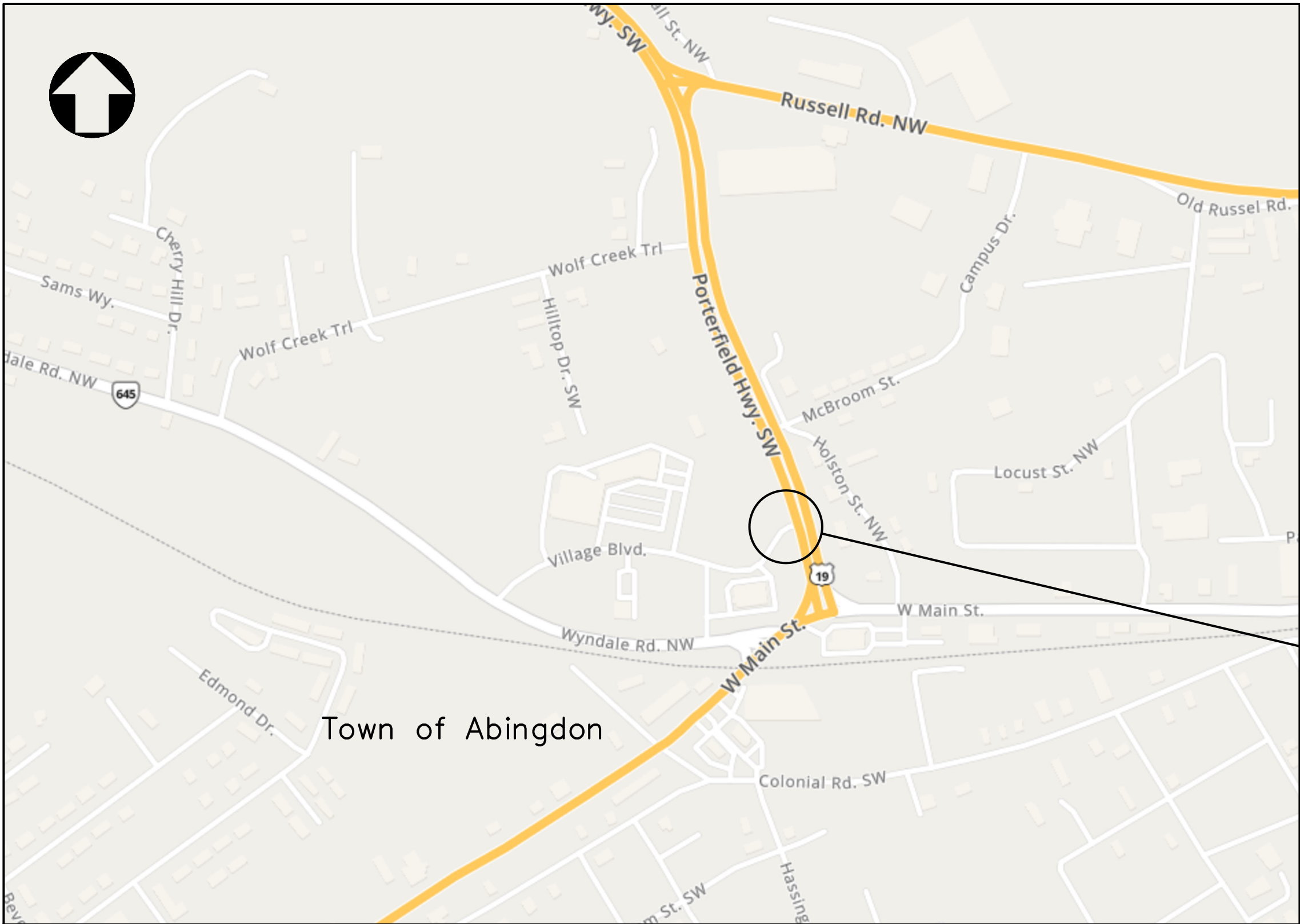
FOR INDEX OF SHEETS, SEE SHEET 2.

STATE	FEDERAL AID		STATE		SHEET NO.
	ROUTE	PROJECT	ROUTE	PROJECT	
VA.	—	N/A	—		1



TOWN OF ABINGDON, VIRGINIA

PROPOSED BRIDGE RAIL REPAIR OF VILLAGE BOULEVARD OVER WOLF CREEK



Project Site
Village Boulevard

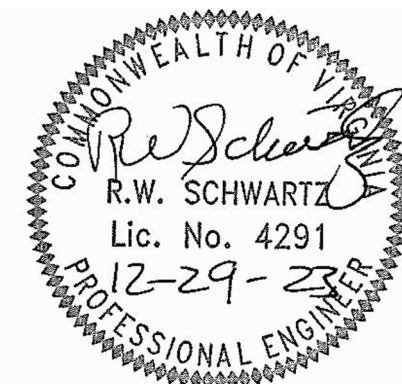

General construction note:

This project shall be constructed in accordance with Supplemental Specifications, VDOT Road and Bridge Specifications dated 2020 and the VDOT Road and Bridge Standards, 2016.

Legend:

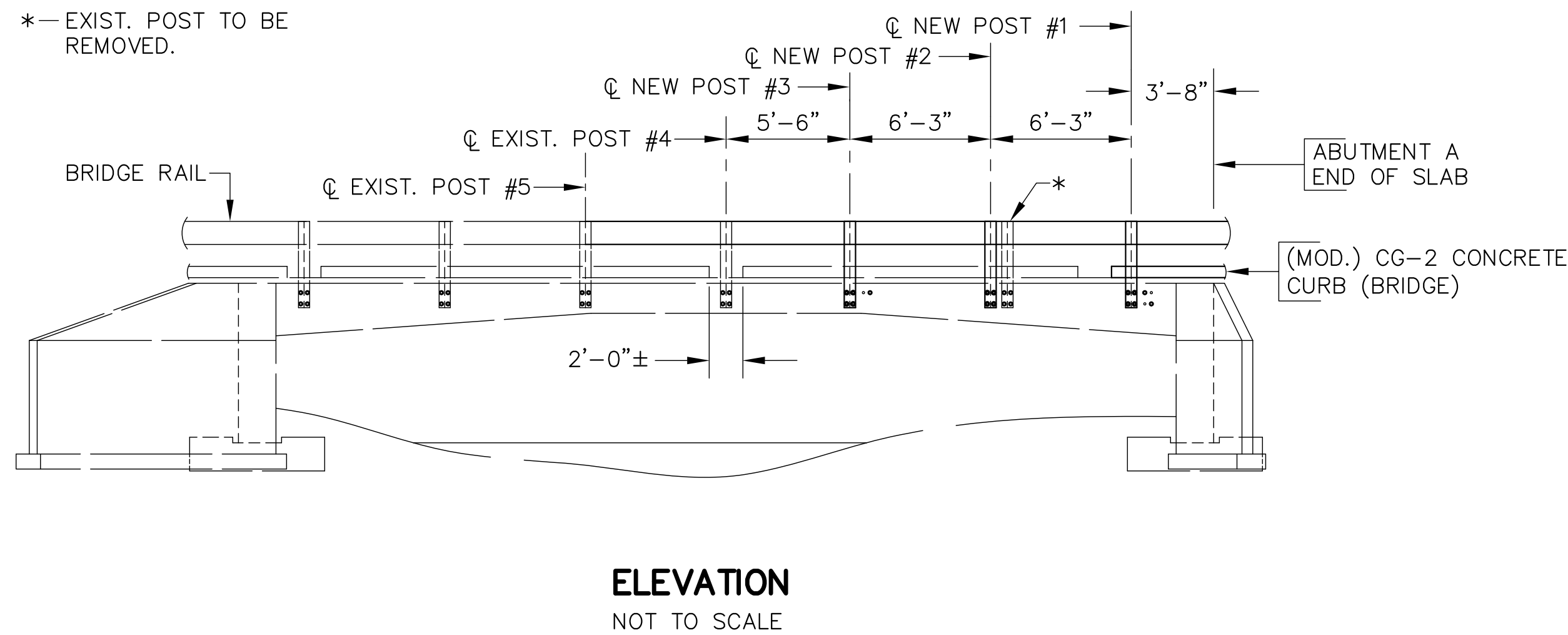
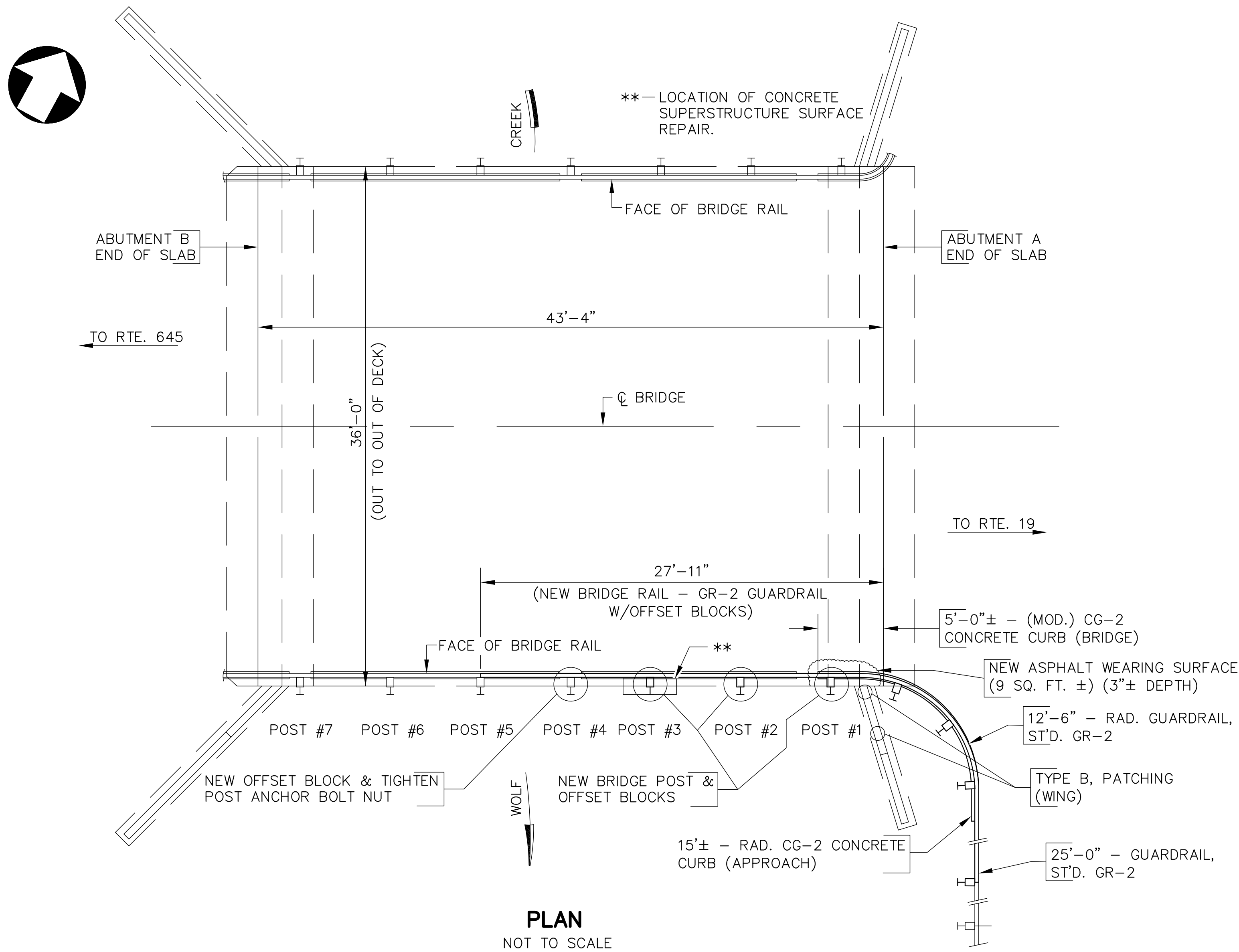
- | | |
|-----------|-----------------------|
| — — — — — | Existing object lines |
| — — — — — | Proposed object lines |
| — — — — — | Existing reinf. steel |
| — — — — — | Proposed reinf. steel |
| — — — — — | Cutting plane line |
| — — — — — | Center line |
| — — — — — | Hidden lines |

Location Map
Not to scale

PLANS		REVISED				SCHWARTZ & ASSOCIATES, INC. CONSULTING ENGINEERS 7331 TIMBERLAKE ROAD LYNCHBURG, VA.	
SHEET NO.	DATE:						
						VILLAGE BOULEVARD OVER WOLF CREEK TOWN OF ABINGDON, VA COVER	
DESIGNED BY: RWS		DRAWN BY: RES		CHECKED BY: RWS			
SCALE: As shown		PLAN NO.:					
DATE: DECEMBER 29, 2023		SHEET 1 OF 6		COMM. NO. 2023022			

CADD REFERENCE NO. COVER.dwg

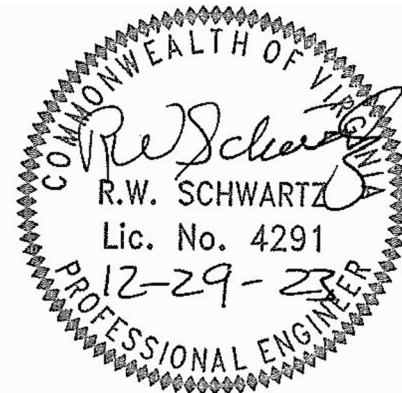
CADD REFERENCE NO.: BRIDGE2023022.DWG



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2	PLAN, ELEVATION, QUANTITY TABLE & INDEX OF SHEETS
3	GENERAL NOTES AND SEQUENCE OF CONSTRUCTION
4	MISCELLANEOUS DETAILS
5	MISCELLANEOUS DETAILS CONT.
6	TRAFFIC CONTROL

ESTIMATED QUANTITIES		
Item	Units	Quantity
Mobilization	LS	1
Maintenance of Traffic	LS	1
Concrete Superstructure Surface Repair	SF	12
Rad. Concrete Curb, CG-2 (Approach)	LF	15
(MOD.) CG-2 Concrete Curb (Bridge)	LF	5
Bridge Rail & 3 post Replacements	LF	28
Rad. Guardrail, GR-2	LF	12.5
Guardrail, GR-2	LF	25
Removal of Existing Guardrail	LF	37.5
Type B Patching	SY	0.44

⊗ - Denotes items to be paid for on basis of plan quantities in accordance with current road and bridge specifications.
LS = Lump Sum



SCHWARTZ & ASSOCIATES, INC.
CONSULTING ENGINEERS
7331 TIMBERLAKE ROAD
LYNCHBURG, VA.

VILLAGE BOULEVARD OVER WOLF CREEK
TOWN OF ABINGDON, VA
PLAN, ELEVATION, QUANTITY
TABLE & INDEX OF SHEETS

DESIGNED BY: RWS	DRAWN BY: RES	CHECKED BY: RWS
SCALE: NOT TO SCALE	PLAN NO.: NA	
DATE: DECEMBER 29, 2023	SHEET: 2	OF 6

CADD REFERENCE NO.: BRIDGE2023010.DWG

GENERAL NOTE:

Widths: Overall width 36’–0” out to out.

Span layout: 43’–4” Single Span Precast Structure.

Capacity: HS20 loading & Alternate Military Live Load.

Specifications:

Construction: Virginia Department of Transportation Road and Bridge Specifications, 2020.

These plans are incomplete unless accompanied by the Supplemental Specifications and Special Provisions included in the contract documents.

This project is to be constructed in accordance with the Virginia Department of Transportation Work Area Protection Manual, August 2011 and current revisions.

All existing reinforcing steel is Epoxy coated

Bridge No. of existing bridge is 8001.

Existing as–built bridge plans are available from Schwartz & Associates, Inc..

The locations and limits of repairs shall be determined by the Engineer.

All existing concrete removed shall be removed to horizontal and vertical planes and to sound concrete and pneumatic hammers shall be worked at an angle of 45 to 60 degrees.

Contractor shall exercise extreme caution when removing existing concrete so that none of the portion of the structure or reinforcing steel to remain in place is damaged. Existing concrete shall be removed with pneumatic hammer (max. weight 35 lbs.) except use 15 lb. hammer for final trim work. Pneumatic hammers shall be worked at an angle of 45 to 60 degrees (Section 412.03 (a)).

The Contractor shall submit to the Engineer a detailed plan for containing construction related material (i.e. sand, concrete debris, uncured concrete, tools, materials, etc.) and preventing its falling onto or around Wolf Creek, or any other area accessible to pedestrians. This work shall be included in the price bid for appropriate bid items.

The contractor shall use all new bolts, washers and nuts.

The Contractor shall plan and execute the work such that no more than 10,000 square feet of land disturbance occurs at any given time.

The Contractor shall provide the Engineer safe access to all areas of work throughout course of construction and for final inspection after all work is complete.

All areas disturbed during this project, not covered by other notes, shall be restored to its original or better conditions as directed by the engineer. All costs for this work shall be included in other items.

All temporary erosion and siltation control shall be in accordance with the Virginia Erosion and Sediment Control Handbook, these drawings & Contract Documents.

All costs for furnishing and maintenance of all erosion and siltation control items, as directed by the Engineer, shall be included in the appropriate bid items.

All costs for covering or removing existing signs during construction & uncovering or re–erecting signs at project completion shall be included in the lump sum bid item "Maintenance of Traffic."

Before proceeding with any work within or adjacent to the existing structure, the contractor shall become familiar with existing conditions. During construction operations, it shall be the contractor's responsibility to maintain the integrity of the existing structure where the existing structure is modified to accommodate new construction, and to protect from damage those portions of the structure which are to remain.

All of the concrete within a span lane that is to be removed shall be removed before recasting any concrete within that span lane unless otherwise directed by the engineer.

All costs for "Rad. Concrete Curb, CG–2 (Approach) shall include excavation, removal and disposal of excess material, furnishing and backfilling behind new curb.

All costs for removal and disposal of existing curbs shall be included in unit price bid "Rad. Concrete Curb, CG–2 (Approach).

All costs for furnishing and placement of New Asphalt Wearing Surface shall be included in unit price bid "(Mod.) CG–2 Concrete Curb (Bridge)".

The use of stay–in–place forms will not be permitted.

Contractor shall take extreme caution in his operations so that no damage is done to utilities in the vicinity of bridge or on the bridge.

The contractor shall verify, in field all dimensions, skew and elevations before beginning construction and before submitting shop drawings.

No traffic or equipment will be allowed on the downstream exterior pre–cast deck section until the Concrete Superstructure Surface Repair is completed and has obtained 100% Design Strength (4,000 psi).

I. TRAFFIC CONTROL:

All new concrete shall have obtained full design strength before allowing traffic on new portion of structure.

Bridge shall be constructed in one stage.

II. CONCRETE

All concrete used for repairs, shall be Self–Consolidated Concrete (Bag Mix), Minimum f’c = 4,000 PSI.

All cost of adhesive anchors shall be included in unit price bid for item where used.

In areas of the structure where existing concrete is to be removed and replaced by new class concrete, and where new concrete is cast against existing concrete, the requirements of Section 412 of the Specifications shall apply, except as amended below:

- Whenever existing reinforcing bars are exposed, concrete shall be removed no less than 1 inch behind the bar.
- Existing concrete shall be removed as shown on the plan details or as directed by the Engineer, to horizontal and vertical planes only, and to sound concrete, taking care not to damage the existing reinforcing steel.
- Within twenty–four hours prior to placing new concrete, faces of existing concrete shall be cleaned by abrasive blast cleaning. Concrete material shall be blasted for a time sufficient to expose sound concrete and coarse aggregate.
- Immediately prior to placing new concrete, exposed reinforcing steel and faces of existing concrete shall be cleaned of all dust and debris.
- The perimeter of all surface repair areas shall be saw cut rectangular pattern.

The locations and limits of all surface repairs shall be determined by the Engineer.

Prior to casting Concrete, contractor shall pre–wet existing concrete surfaces with water for a minimum of 2 hours. All costs shall be included in the appropriate item.

III. BLASTING – GENERAL

All concrete areas blasted shall be blasted for a time sufficient to expose sound concrete and coarse aggregate, unless otherwise noted. They shall be blasted using an abrasive material or a mixture of water (8,000 psi min.) and abrasive.

IV. REINFORCING STEEL:

When drilling for adhesive anchors, extreme caution shall be taken in order that existing reinforcing steel is not damaged. Any reinforcing steel damaged shall be corrected at the Contractor’s expense.

Great care shall be taken during the removal of concrete in the superstructure in order that the existing reinforcing steel to be re–used is not damaged.

Any existing reinforcing steel that is to remain in structure and is damaged in concrete removal, as determined by the engineer, shall be corrected at the Contractor’s expense.

V. INCIDENTALS:

The locations of existing utilities, including underground utilities, is indicated on the drawings insofar as their existence and location were known at the time of preparation of the drawings. However, nothing in these contract documents shall be construed as a guarantee that such utilities are in the location indicated or that they actually exist, or that other utilities are not within the area of operations. The Contractor shall make all necessary investigations to determine the existence and locations of such utilities. The Contractor shall pay for any damage to and for maintenance and protection of existing utilities and structures.

All costs for grading, shaping, seeding, fertilizing, liming, overseeding, furnishing & placing topsoil and mulching, in disturbed areas of the project shall be included in other bid items. Contractor shall replace all damaged shrubs, flowers, etc. any shrubs or flowers damaged shall be replaced with the original size and type that was damaged. All costs shall be included in other bid items.

The costs of any necessary construction surveying shall be included in unit price bid for other items in contract.

VI. OPERATIONS:

- SELF–CONSOLIDATED CONCRETE:

All Concrete shall be cast in no more than one continuous operation.

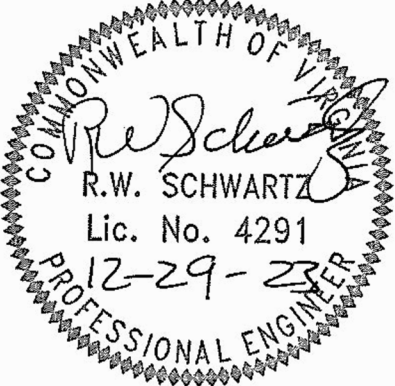

- ADHESIVE ANCHOR:

Adhesive anchors shall be drilled, holes cleaned out, adhesive material installed and adhesive anchor bolts installed in one continuous operation.

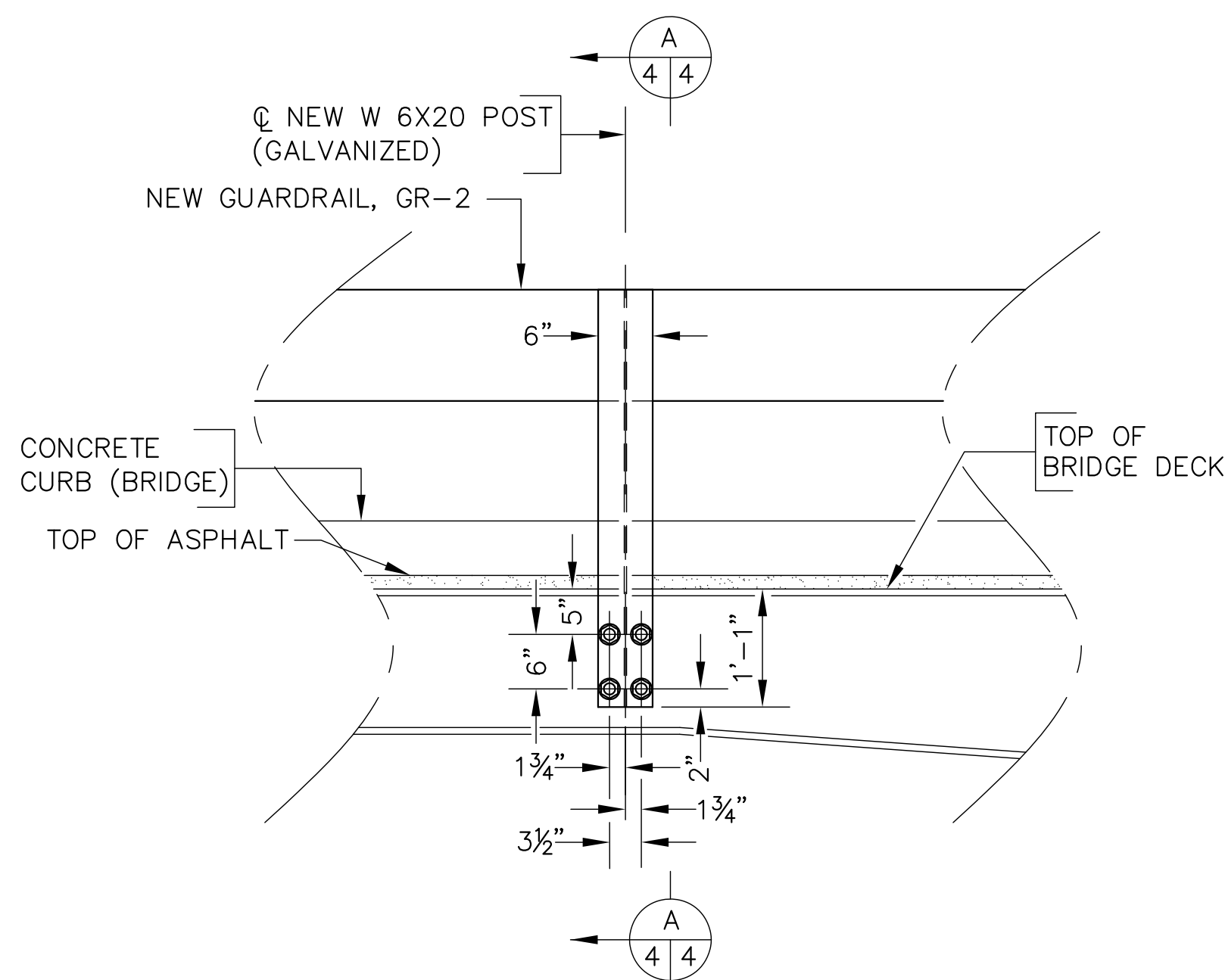
SEQUENCE OF CONSTRUCTION:

- INSTALL TRAFFIC CONTROL.
- REMOVE EXISTING BRIDGE RAIL, CONCRETE CURG AND GUARDRAIL.
- CONCRETE SUPERSTRUCTURE SURFACE REPAIR.
- TYPE B PATCHING.
- INSTALL ALL THREAD POST ADHESIVE ANCHORS.
- INSTALL NEW ASPHALT WEARING SURFACE.
- (MOD.) CG–2 CONCRETE CURB (BRIDGE).
- RAD. CONCRETE CURB, CG–2 (APPROACH).
- INSTALL NEW BRIDGE RAIL, POSTS OFFSET BLOCKS AND APPROACH GUARDRAIL.
- COMPLETE ALL INCIDENTAL ITEMS.
- REMOVE ALL TRAFFIC CONTROL.
- GENERAL CLEAN UP.

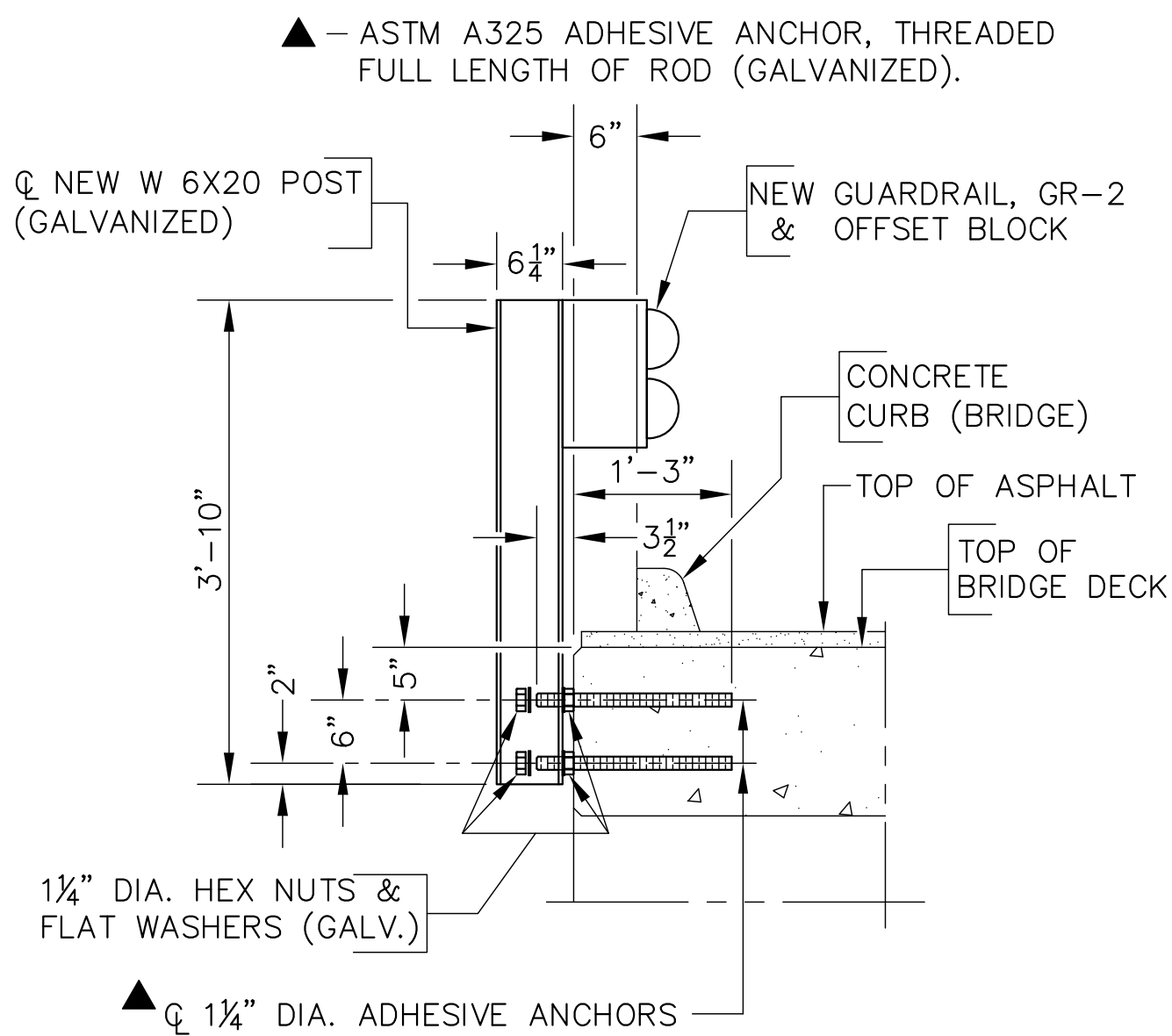
UNLESS OTHERWISE APPROVED OR DIRECTED BY THE ENGINEER IN WRITING, THE CONTRACTOR SHALL PLAN AND PROSECUTE WORK IN ACCORDANCE WITH THE ABOVE NOTED CONSTRUCTION SEQUENCE.

	 <div>SCHWARTZ & ASSOCIATES, INC. CONSULTING ENGINEERS 7331 TIMBERLAKE ROAD LYNCHBURG, VA.</div>		
	VILLAGE BOULEVARD OVER WOLF CREEK TOWN OF ABINGDON, VA GENERAL NOTES AND SEQUENCE OF CONSTRUCTION		
	DESIGNED BY: RWS	DRAWN BY: RES	CHECKED BY: RWS
	SCALE: AS NOTED	PLAN NO.: NA	
COMM. NO. 2023022	DATE: DECEMBER 29, 2023		SHEET: 3 OF 6

CADD REFERENCE NO.: BRIDGE2023022.DWG

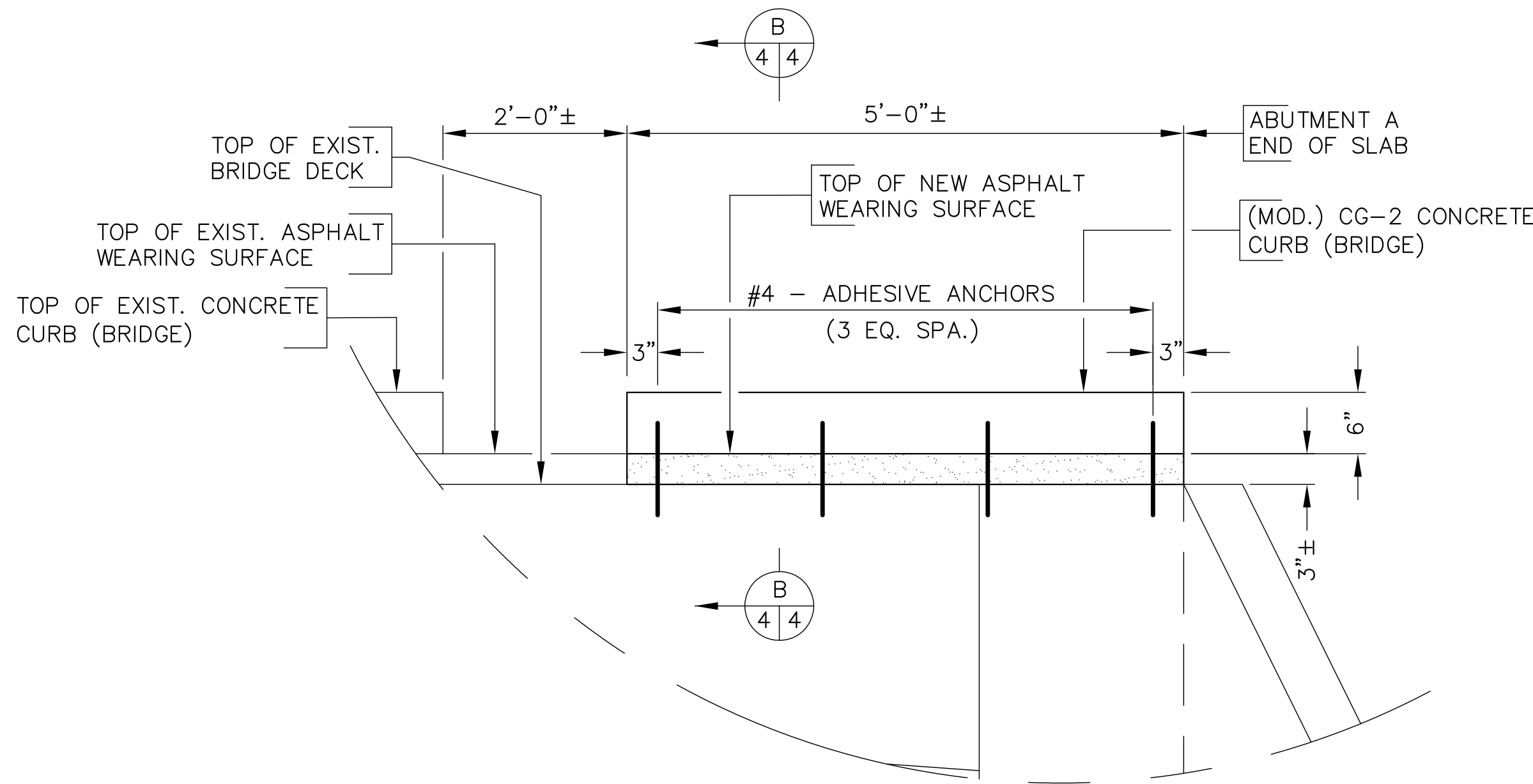


**PARTIAL ELEVATION – GUARDRAIL POST
& ADHESIVE ANCHOR BOLTS**
NOT TO SCALE

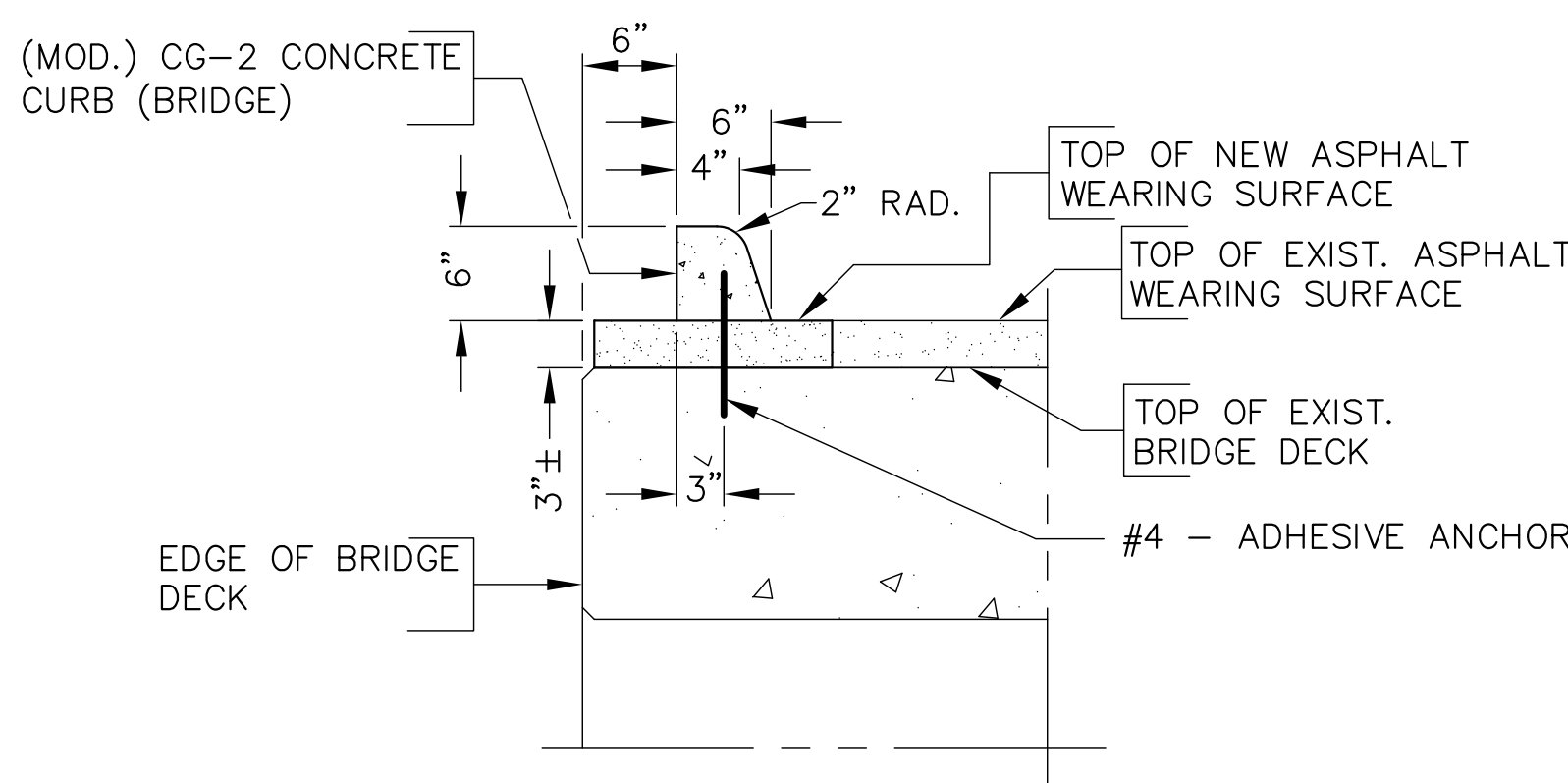


SECTION A-A
NOT TO SCALE

NOTE: #4 – ADHESIVE ANCHORS SHALL EXTEND INTO EXISTING DECK 3" AND EXTEND UP INTO NEW (MOD.) CG-2 CURB (BRIDGE) 3".

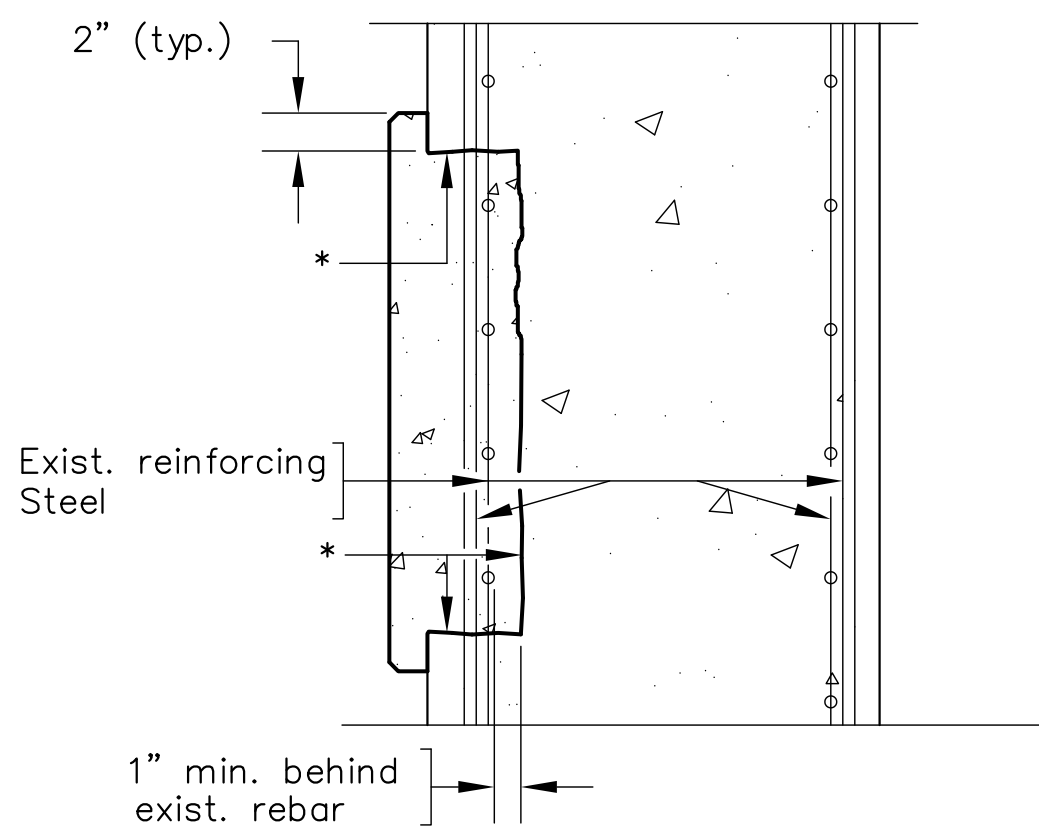


**PARTIAL ELEVATION – (MOD.) CG-2
CONCRETE CURB (BRIDGE)**
(BRIDGE RAIL AND POSTS NOT SHOWN FOR CLARITY)
NOT TO SCALE



SECTION B-B
(BRIDGE RAIL AND POSTS NOT SHOWN FOR CLARITY)
NOT TO SCALE

**TYPICAL DETAIL OF CONCRETE
SUPERSTRUCTURE SURFACE REPAIR**



* – Remove existing concrete to this line.

TYPICAL SECTION
Not to scale

NOTES ON CONCRETE SUPERSTRUCTURE SURFACE REPAIR

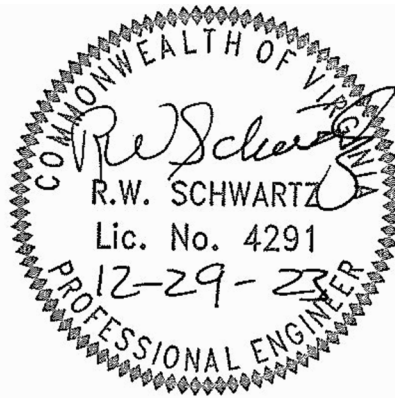
Concrete superstructure surface repair shall be used to cover exposed reinforcing steel and other areas of concrete deterioration, as directed by the engineer.

All patching shall be done with self-consolidated concrete (bag mix)..

Remove existing concrete to sound concrete, as directed by the engineer, taking care not to damage any existing reinforcing steel. Sandblast faces of existing concrete that will contact the new self-consolidated concrete.

There shall be a minimum cover of 2 3/4" on all exposed reinforcing steel.

Locations of Concrete Superstructure Surface Repair will be determined in field by the engineer.

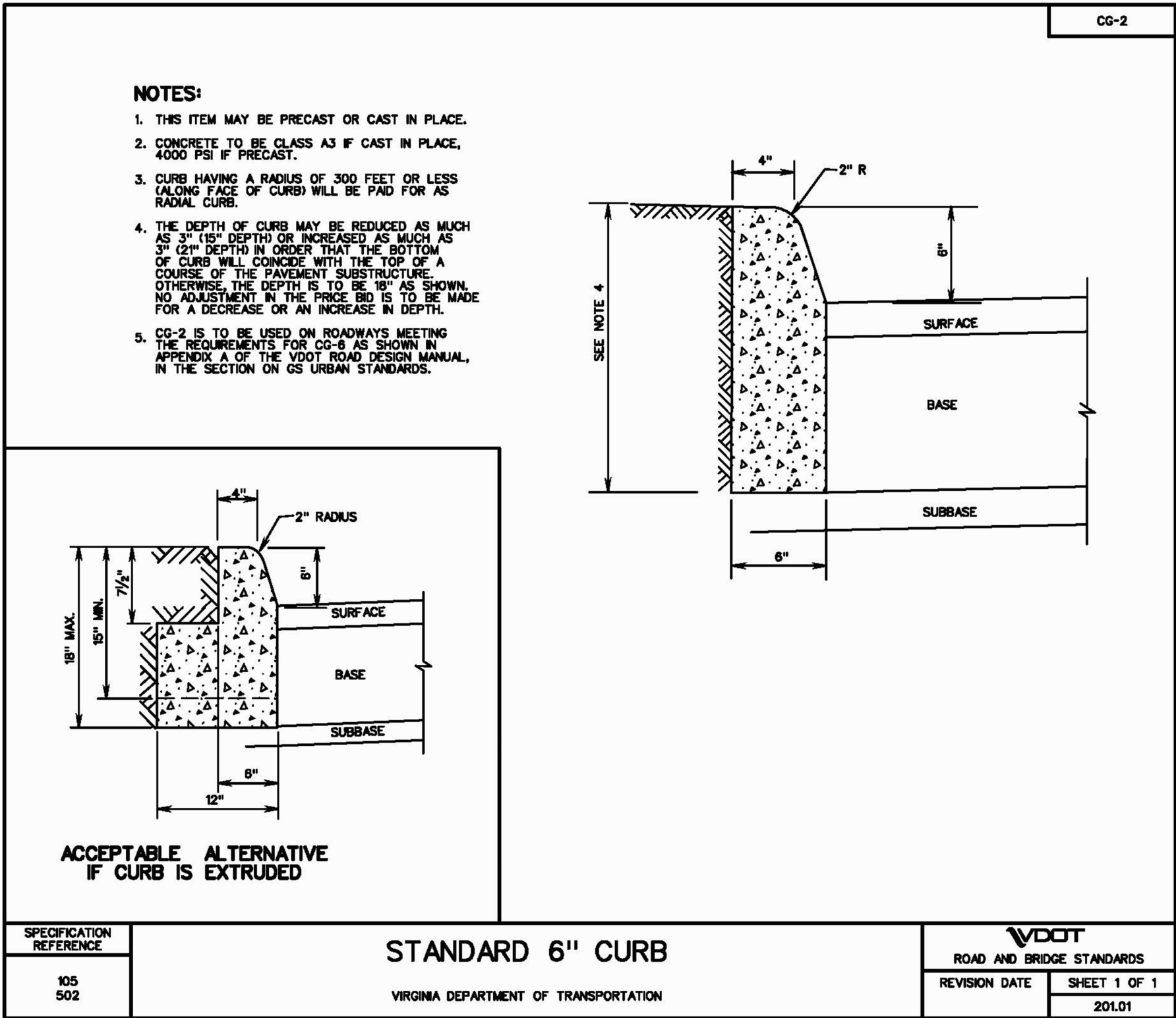


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LYNCHBURG, VA.

**VILLAGE BOULEVARD OVER WOLF CREEK
TOWN OF ABINGDON, VA
MISCELLANEOUS DETAILS**

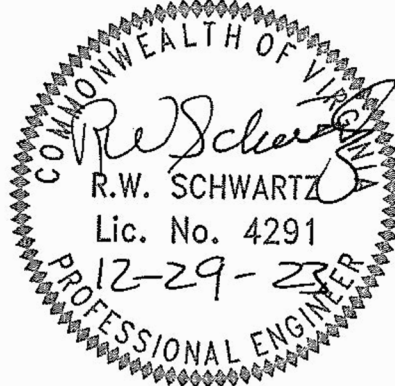
DESIGNED BY: RWS	DRAWN BY: RES	CHECKED BY: RWS
SCALE: NOT TO SCALE	PLAN NO.: NA	
DATE: DECEMBER 29, 2023	SHEET: 4	OF 6

CADD REFERENCE NO.: BRIDGE2023022.DWG



VDOT STANDARD CG-2 CURB

NOT TO SCALE



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VILLAGE BOULEVARD OVER WOLF CREEK
TOWN OF ABINGDON, VA
MISCELLANEOUS DETAILS CONT.

DESIGNED BY: RWS	DRAWN BY: RES	CHECKED BY: RWS
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DATE: DECEMBER 29, 2023	SHEET: 5	OF 6

COMM. NO. 2023022




LEGEND – REQUIRED SIGNAGE FOR TRAFFIC CONTROL

- ① – VILLAGE BOULEVARD M4–VP1b 48"X48" ROAD CLOSED AHEAD W20–3 48"X48"
- ② – ROAD CLOSED R11–2 48"X30" TYPE III barricade (8'–0")
- ③ – TYPE III barricade (8'–0")
- ④ – VILLAGE BOULEVARD M4–VP1b 48"X48" ROAD CLOSED R11–2 48"X30" TYPE III barricade (4'–0")
- ⑤ – DENOTES CONCRETE TRAFFIC BARRIER
- DENOTES SIGNS
- – DENOTES GROUP 2 CHANNELIZING DEVICES

NOTE:

FOUR (4) CONCRETE TRAFFIC BARRIER ARE ON SITE AND ARE OWNED BY THE TOWN OF ABINGDON. CONTRACTOR CAN USE THESE BARRIERS DURING CONSTRUCTION AS WELL AS THE GROUP 2 CHANNELIZING DEVICES. AT THE COMPLETION OF THE PROJECT, THE CONTRACTOR SHALL DELIVER THE CONCRETE BARRIERS AND GROUP 2 CHANNELIZING DEVICES TO A DETERMINED LOCATION BY THE TOWN OF ABINGDON. ALL COSTS SHALL BE INCLUDED IN LUMP SUM BID FOR "MAINTENANCE OF TRAFFIC".

	 SCHWARTZ & ASSOCIATES, INC. CONSULTING ENGINEERS 7331 TIMBERLAKE ROAD LYNCHBURG, VA.		
	VILLAGE BOULEVARD OVER WOLF CREEK TOWN OF ABINGDON, VA TRAFFIC CONTROL		
	DESIGNED BY: RWS	DRAWN BY: RES	CHECKED BY: RWS
	SCALE: NOT TO SCALE	PLAN NO.: NA	DATE: DECEMBER 29, 2023
COMM. NO. 2023022	SHEET: 6 OF 6		