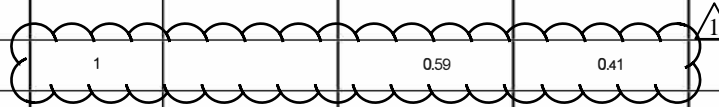


CONSTRUCTION CODE

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	NHPP	NHPP	NHPP	NHPP	NHPP	NHPP	NHPP	NHPP	NHPP	
				90% FED/10% ST	90% FED/10% ST	90% FED/10% ST	90% FED/10% ST	90% FED/10% ST	90% FED/10% ST	90% FED/10% ST	90% FED/10% ST	90% FED/10% ST	90% FED/10% ST
				ROADWAY	BRIDGE	BRIDGE	BRIDGE	BRIDGE	BRIDGE	BRIDGE	BRIDGE	BRIDGE	BRIDGE
				0005	0013	0013	0013	0013	0047	0047	0047	0047	0047
				RURAL	S.N. 038-0003/4	S.N. 038-0005/6	S.N. 038-0007/8	S.N. 038-0009/10	S.N. 038-0001/2	S.N. 038-0129	S.N. 038-0031	S.N. 038-2509	S.N. 038-0086
50101800	REMOVAL OF EXISTING SUPERSTRUCTURES NO. 2	EACH	1		1								
50102400	CONCRETE REMOVAL	CU YD	419.4		197.7	131.8	56.2			30.1			3.6
50104650	SLOPE WALL REMOVAL	SQ YD	8465		3110	1931	1236	2188					
50104720	REMOVAL OF EXISTING CONCRETE DECK	EACH	2				2						
50157300	PROTECTIVE SHIELD	SQ YD	4525		780	1624	996			766			359
50200100	STRUCTURE EXCAVATION	CU YD	1264.2		536.7	316.4	263.1	148					
50300100	FLOOR DRAINS	EACH	32					24	8				
50300225	CONCRETE STRUCTURES	CU YD	654.7		282.7	195.3	76.9	51		12.5	36.3		
50300255	CONCRETE SUPERSTRUCTURE	CU YD	2320.4		755	568.4	371.3	583.8		1.2	23		17.7
50300260	BRIDGE DECK GROOVING	SQ YD	1410								1410		
50300300	PROTECTIVE COAT	SQ YD	10977.6		3036	2471	1206.6	1811	810	11	1582		50
50301350	CONCRETE SUPERSTRUCTURE (APPROACH SLAB)	CU YD	708.1			234	234	240.1					
50500105	FURNISHING AND ERECTING STRUCTURAL STEEL	L SUM	1		0.59	0.41							
50500405	FURNISHING AND ERECTING STRUCTURAL STEEL	POUND	3920				3920						



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PLOT DATE = 3/13/2026	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

SUMMARY OF QUANTITIES

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(38-4,38-5)BR,D,CR	IROQUOIS	437	6
CONTRACT NO. 66M80				
ILLINOIS FED. AID PROJECT				

CONSTRUCTION CODE

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	NHPP	NHPP	NHPP	NHPP	NHPP	NHPP	NHPP	NHPP	NHPP	
				90% FED/10% ST	90% FED/10% ST	90% FED/10% ST	90% FED/10% ST	90% FED/10% ST	90% FED/10% ST	90% FED/10% ST	90% FED/10% ST	90% FED/10% ST	90% FED/10% ST
				ROADWAY	BRIDGE	BRIDGE	BRIDGE	BRIDGE	BRIDGE	BRIDGE	BRIDGE	BRIDGE	BRIDGE
				0005	0013	0013	0013	0013	0047	0047	0047	0047	0047
				RURAL	S.N. 038-0003/4	S.N. 038-0005/6	S.N. 038-0007/8	S.N. 038-0009/10	S.N. 038-0001/2	S.N. 038-0129	S.N. 038-0031	S.N. 038-2509	S.N. 038-0086
50500505	STUD SHEAR CONNECTORS	EACH	35538		16812	12132	6594						
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	1009750		232960	256360	179600	330640		1720	7040		1430
50800515	BAR SPLICERS	EACH	36								36		
51500100	NAME PLATES	EACH	8		2	2	2	2					
52000110	PREFORMED JOINT STRIP SEAL	FOOT	370		234						136		
52100010	ELASTOMERIC BEARING ASSEMBLY, TYPE I	EACH	128		36	36	28	28					
52100510	ANCHOR BOLTS, 3/4"	EACH	176		24	96	56						
52100520	ANCHOR BOLTS, 1"	EACH	48		48								
52100530	ANCHOR BOLTS, 1 1/4"	EACH	24		24								
53101408	BRIDGE DECK LATEX CONCRETE OVERLAY, 2 1/4 INCHES	SQ YD	1585	84							1501		
53101412	BRIDGE DECK LATEX CONCRETE OVERLAY, 3 1/4 INCHES	SQ YD	798						798				
54260515	SLOPED METAL END SECTION, STANDARD 542411, 15", 1:6	EACH	1	1									
54390210	INSERTION CULVERT LINER 30"	FOOT	572	572									
550A0070	STORM SEWERS, CLASS A, TYPE 1 15"	FOOT	576	576									

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PLOT DATE = 3/13/2026	DATE -	REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(38-4,38-5)BR,D,CR	IROQUOIS	437	7
ILLINOIS FED. AID PROJECT			CONTRACT NO. 66M80	

CONSTRUCTION CODE

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	NHPP	NHPP	NHPP	NHPP	NHPP	NHPP	NHPP	NHPP	NHPP	
				90% FED/10% ST	90% FED/10% ST	90% FED/10% ST	90% FED/10% ST	90% FED/10% ST	90% FED/10% ST	90% FED/10% ST	90% FED/10% ST	90% FED/10% ST	90% FED/10% ST
				ROADWAY	BRIDGE	BRIDGE	BRIDGE	BRIDGE	BRIDGE	BRIDGE	BRIDGE	BRIDGE	BRIDGE
				0005	0013	0013	0013	0013	0047	0047	0047	0047	
				RURAL	S.N. 038-0003/4	S.N. 038-0005/6	S.N. 038-0007/8	S.N. 038-0009/10	S.N. 038-0001/2	S.N. 038-0129	S.N. 038-0031	S.N. 038-2509	S.N. 038-0086
Z0001899	JACK AND REMOVE EXISTING BEARINGS	EACH	28				28						
* Z0007101	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 1	L SUM	1								1		
* Z0007102	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 2	L SUM	1				1						
Z0007103	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 3	L SUM	1				1						
* Z0010501	CLEANING AND PAINTING STEEL BRIDGE NO. 1	L SUM	1								1		
* Z0010502	CLEANING AND PAINTING STEEL BRIDGE NO. 2	L SUM	1				1						
Z0010503	CLEANING AND PAINTING STEEL BRIDGE NO. 3	L SUM	1				1						
53101002	BRIDGE DECK SCARIFICATION 3/4"	SQ YD	1585	84							1501		
53101011	BRIDGE DECK SCARIFICATION 3"	SQ YD	798						798				
53212754	STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 INCHES)	SQ FT	2181		86	35	24		873	48	714	16	385
Z0013798	CONSTRUCTION LAYOUT	L SUM	1	1									
53016001	DECK SLAB REPAIR (FULL DEPTH, TYPE I)	SQ YD	15						5		5		5
53016000	DECK SLAB REPAIR (PARTIAL)	SQ YD	10										10
Z0021904	SILICONE JOINT SEALER, 1"	FOOT	59										59
Z0021906	SILICONE JOINT SEALER, 1.5"	FOOT	9										9
Z0021907	SILICONE JOINT SEALER, 1.75"	FOOT	191.5						91.5		100		

* SPECIALTY ITEM

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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

SUMMARY OF QUANTITIES

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(38-4,38-5)BR,D,CR	IROQUOIS	437	15
CONTRACT NO. 66M80				
ILLINOIS FED. AID PROJECT				

TOTAL BILL OF MATERIAL

ITEM	UNIT	SN 038-0003 (S.B.)		SN 038-0004 (N.B.)		TOTAL
		SUPER	SUB	SUPER	SUB	
Stone Riprap, Class A4	Sq. Yd.		1,226		1,235	2,461
Filter Fabric	Sq. Yd.		1,226		1,235	2,461
Removal of Existing Superstructures No. 1	Each	1				1
Removal of Existing Superstructures No. 2	Each			1		1
Concrete Removal	Cu. Yd.		100.9		96.8	197.7
Slope Wall Removal	Sq. Yd.		1,555		1,555	3,110
Protective Shield	Sq. Yd.	390		390		780
Structure Excavation	Cu. Yd.		273.0		263.7	536.7
Concrete Structures	Cu. Yd.		143.5		139.2	282.7
Concrete Superstructure	Cu. Yd.	377.5		377.5		755.0
Protective Coat	Sq. Yd.	1,518		1,518		3,036
Furnishing and Erecting Structural Steel	L. Sum.	0.295		0.295		0.59
Stud Shear Connectors	Each	8,406		8,406		16,812
Reinforcement Bars, Epoxy Coated	Pound	100,030	17,130	100,030	15,770	232,960
Name Plates	Each	1		1		2
Preformed Joint Strip Seal	Foot	117		117		234
Elastomeric Bearing Assembly, Type I	Each	18		18		36
Anchor Bolts, 3/4"	Each	12		12		24
Anchor Bolts, 1"	Each	24		24		48
Anchor Bolts, 1 1/4"	Each	12		12		24
Granular Backfill for Structures	Cu. Yd.		250		244	494
Geocomposite Wall Drain	Sq. Yd.		131		129	260
Pipe Underdrains for Structures 4"	Foot		227		226	453
Structural Repair of Concrete (Depth Equal to or Less Than 5 Inches)	Sq. Ft.		39		47	86
Diamond Grinding (Bridge Section)	Sq. Yd.	1,417		1,417		2,834
Bridge Deck Grooving (Longitudinal)	Sq. Yd.	757		757		1,514
Concrete Wearing Surface, 5"	Sq. Yd.	280		280		560
Precast Bridge Approach Slab	Sq. Ft.	2,400		2,400		4,800
Bar Terminators	Each	220		220		440

GENERAL NOTES

All new structural steel shall be metallized. See Special Provision for "Metallizing of Structural Steel."

Calculated weight of Structural Steel = 43,460 lbs (M270 Grade 36)
558,720 lbs (M270 Grade 50)

No field welding is permitted except as specified in the contract documents.
Fasteners shall be ASTM F 3125 Grade A325 Type 1, hot-dip galvanized bolts in uncoated metallized areas. Bolts 7/8 in. diameter, holes 1 1/16 in. diameter, unless otherwise noted. See special provision for "Metallizing of Structural Steel".

Reinforcement bars designated (E) shall be epoxy coated.

The concrete for bridge decks finished according to Article 503.16(a) of the Standard Specifications shall be placed and compacted parallel to the skew in uniform increments along centerline of bridge. The machine used for finishing shall be set parallel to the skew for striking off and screeding the concrete.

Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of 1/8 in. (0.01 ft.). Adjustment shall be made either by grinding the surface or by shimming the bearings.

Layout of the slope protection system may be varied to suit ground conditions in the field as directed by the Engineer.

Plan dimensions and details relative to the existing structure have been taken from existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.

The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to address the presence of lead on this project.

Falsework, netting or other suitable protection shall be provided to prevent debris from falling on the track during demolition and construction operations.

2 weeks prior to project start, flagging protection to be put in place with direction of CN's network Operations Engineer.

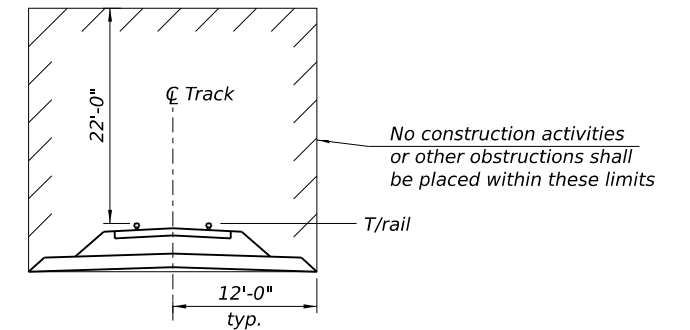
Applicant must contact joint utility location service to determine location of all utilities.

Exceptions to these standards must be approved by CN.

No freefall deck drains will be permitted in the span over the tracks or within 10 ft. of cross arms of a railroad pole line.

SCOPE OF WORK

1. Remove and replace existing superstructure.
2. Make new deck composite full length.
3. Reconfigure existing abutments and wingwalls to semi-integral configuration.
4. Remove and replace pier caps.
5. Remove and replace bearings at all locations.
6. Construct approach slabs.
7. Remove and replace north and south slopewalls with Riprap Class A4.
8. Repair substructure units as needed.



MINIMUM CONSTRUCTION CLEARANCE ENVELOPE

CLEARANCE ENVELOPE

(Dimensions @ Rt. L to C Track)

BYPASS FLOWRATE FROM BRIDGE LIMITS (END OF APPROACH SLAB) TO ROADWAY (SN 038-0003: S.B. BRIDGE)

	NW Curbline	SW Curbline	NE Curbline	SE Curbline
Q (C.F.S.)	N/A	0.721	N/A	0.869

BYPASS FLOWRATE FROM BRIDGE LIMITS (END OF APPROACH SLAB) TO ROADWAY (SN 038-0004: N.B. BRIDGE)

	NW Curbline	SW Curbline	NE Curbline	SE Curbline
Q (C.F.S.)	N/A	0.721	N/A	0.869

STA. 604+61.85
RE-BUILT BY
STATE OF ILLINOIS
F.A.I. RT. 57 SEC. (38-5VB-1)BR
LOADING HL-93
STR. NO. 038-0003

STA. 604+61.85
RE-BUILT BY
STATE OF ILLINOIS
F.A.I. RT. 57 SEC. (38-5VB-1)BR
LOADING HL-93
STR. NO. 038-0004

NAME PLATE

See Std. 515001

NAME PLATE

See Std. 515001

Note: Existing Name Plate shall be cleaned and relocated next to new Name Plate. Cost included with Name Plates.

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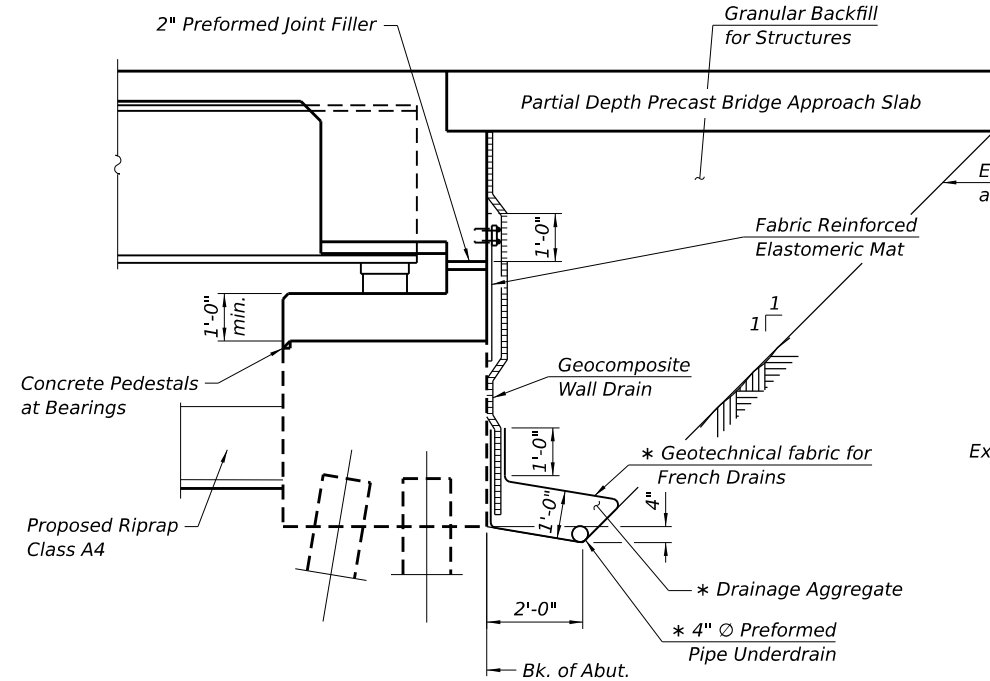
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PLOT DATE =	CHECKED - MDC	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**GENERAL DATA
STRUCTURE NO. 038-0003 & 038-0004**

SHEET 2 OF 50 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(38-5VB-1)BR	IROQUOIS	437	137
CONTRACT NO. 66M80				
ILLINOIS FED. AID PROJECT				



SECTION THRU SEMI-INTEGRAL ABUTMENT

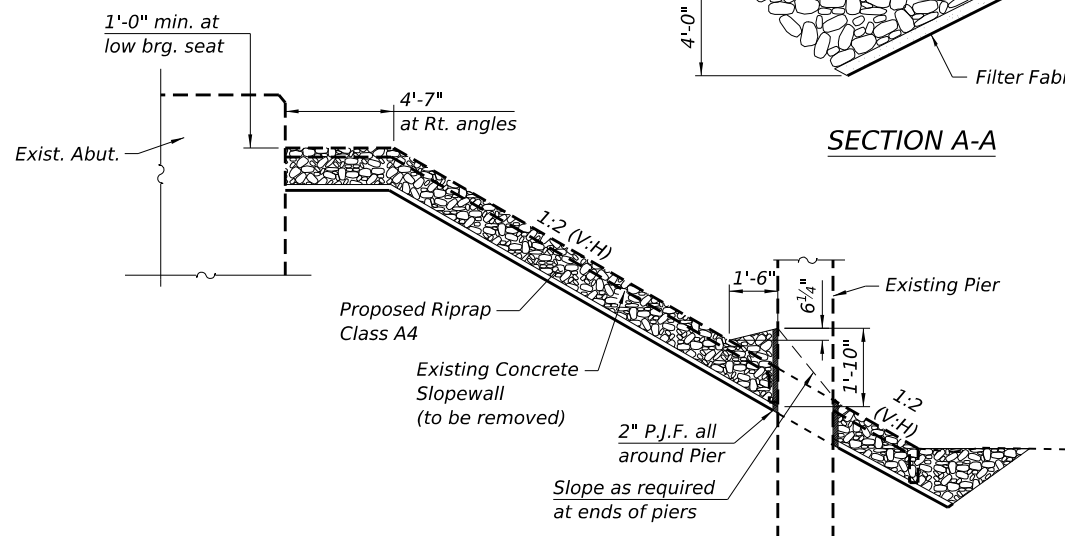
(Horiz. dim. at Rt. L's)

* Included in the cost of Pipe Underdrains for Structures.

Note:

All drainage system components shall extend 2'-0" from the end of each wingwall except an outlet pipe shall extend until intersecting with the side slopes. The pipes shall drain into concrete headwalls. (See Article 601.05 of the Standard Specifications and Highway Standard 601101).

Excavation is paid for as Structure Excavation



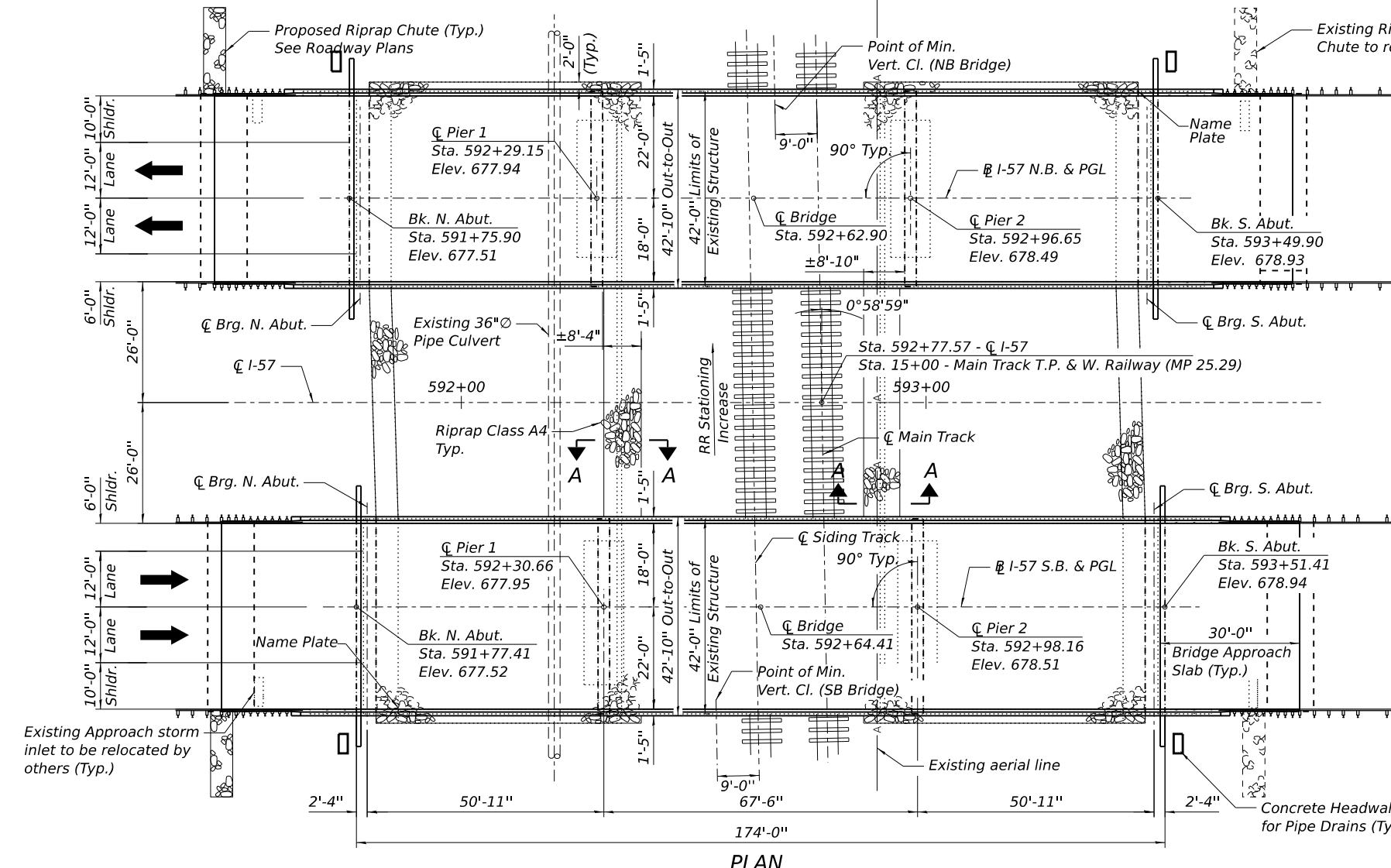
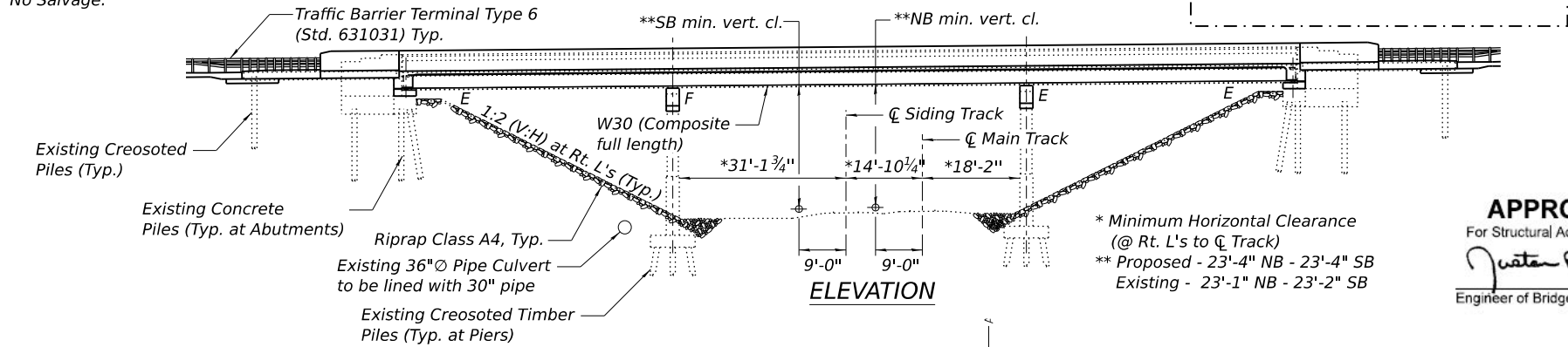
SECTION THRU RIPRAP SLOPEWALL

(North and South Slope Wall Replacement)

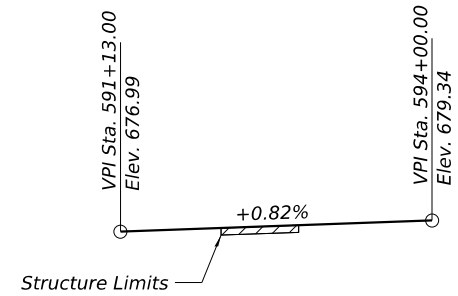
Benchmark: BM 334 - "Cut Square" located in the SW corner of SN 038-0006 - Station 593+61.21, 66.34' Rt. Elev. 681.71

Existing Structures: Structure 038-0005 (NB) and 038-0006 (SB) were originally constructed in 1967 as Section 38-5VB. In 1976, a bituminous wearing surface was applied. In 1999, the structural steel was painted. In 2000, the deck was scarified and a 3" microsilica overlay was applied. In 2014, the structural steel was painted. The structures are three span bridges (50'-11", 67'-6" and 50'-11") and consist of continuous non-composite multi-girder steel WF beams. The substructure consists of concrete stub abutments on concrete piles, and multi-column piers on creosoted timber piles. The bridges are 174'-0" long from back-to-back abutments. The out-to-out of deck width is 42'-0". Aluminum handrails on concrete parapets are present on both sides. The superstructure will be removed and replaced and the tops of the substructure units will be modified to fit the new superstructure. The structure will be constructed while traffic is routed to the other side of I-57 via median crossovers.

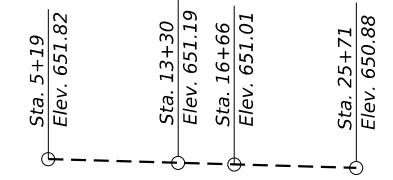
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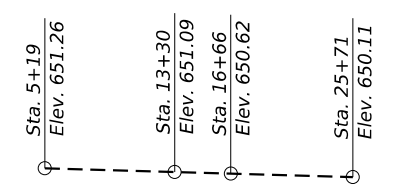
NOTE:
Up to 1/4" to be ground off the bridge deck and bridge approach slabs. Elevations shown in plan represent elevation after grinding.



PROFILE GRADE
(Along I-57 NB/SB)
(The profile grade shown is the final grade after grinding)



PROFILE GRADE EXIST. T.P. & W. RAILWAY
(Top of Rail, Main Track)



PROFILE GRADE EXIST. T.P. & W. RAILWAY
(Top of Rail, Siding Track)

INDEX OF SHEETS

- 1 General Plan and Elevation
- 2 General Data
- 3-5 Top of Slab Elevations (NB)
- 6-8 Top of Slab Elevations (SB)
- 9 Top of North Approach Slab Elevation (NB)
- 10 Top of South Approach Slab Elevation (NB)
- 11 Top of North Approach Slab Elevation (SB)
- 12 Top of South Approach Slab Elevation (SB)
- 13 Superstructure (NB)
- 14 Superstructure Details (NB)
- 15 Diaphragm Details (NB)
- 16 Superstructure (SB)
- 17 Superstructure Details (SB)
- 18 Diaphragm Details (SB)
- 19-20 Bridge Approach Slab Details (NB)
- 21-22 Bridge Approach Slab Details (SB)
- 23 Framing Plan (NB)
- 24 Framing Plan (SB)
- 25-26 Structural Steel Details
- 27 Abutment Bearing Details
- 28 Pier Bearing Details
- 29 Abutment Concrete Removal
- 30 North Abutment (NB)
- 31 South Abutment (NB)
- 32 North Abutment (SB)
- 33 South Abutment (SB)
- 34 Pier Removal and Repairs
- 35 Pier 1 Details (NB)
- 36 Pier 2 Details (NB)
- 37 Pier 1 Details (SB)
- 38 Pier 2 Details (SB)
- 39 Concrete Parapet Slipforming Option

LOADING HL-93
Allow 25#/sq. ft. for future wearing surface.

DESIGN SPECIFICATIONS

- NEW CONSTRUCTION**
- 2020 AASHTO LRFD Bridge Design Specifications, 9th Edition
- EXISTING SUBSTRUCTURE**
- 2002 AASHTO Standard Specifications for Highway Bridges, 17th Edition
- 2006 Seismic Retrofitting Manual for Highway Structures: Part I - Bridges (FHWA-HRT-06-032)

DESIGN STRESSES

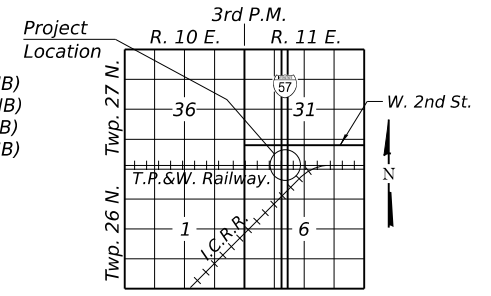
- FIELD UNITS (NEW CONST.)**
- $f_c = 4,000$ psi (Superstructure)
 - $f_c = 3,500$ psi (Substructure)
 - $f_y = 60,000$ psi (Reinforcement)
 - $f_y = 50,000$ psi (M270 Grade 50)
- All structural steel shall be metalized
- FIELD UNITS (EX. CONST.)**
- $f_c = 1,400$ psi (Substructure)
 - $f_s = 20,000$ psi (Reinforcement)

SEISMIC DATA

Seismic Retrofit Category (SRC) = A
Design Spectral Acceleration at 1.0 sec. ($S_{0.1}$) = 0.111g
Design Spectral Acceleration at 0.2 sec. ($S_{0.2}$) = 0.179g
Soil Site Class = D
Performance Level = I

SCOPE OF WORK

1. Remove and replace existing superstructure.
2. Make new deck composite full length.
3. Reconfigure existing abutments and wingwalls to semi-integral configuration.
4. Remove and replace pier caps.
5. Remove and replace bearings at all locations.
6. Construct approach slabs.
7. Remove and replace sloped walls with Riprap Class A4.
8. Repair substructure units as needed.



LOCATION SKETCH

GENERAL PLAN & ELEVATION
I-57 OVER T.P. & W. RAILWAY

F.A.I. ROUTE 57 - SEC. (38-5VB)BR

IROQUOIS COUNTY

STATION 592+63.65

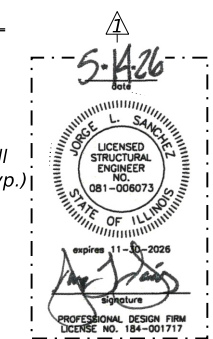
STRUCTURE NUMBER 038-0005 (N.B.)

STRUCTURE NUMBER 038-0006 (S.B.)

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



GENERAL PLAN & ELEVATION			
STRUCTURE NO. 038-0005 (NB) & 038-0006 (SB)			
SCALE:	SHEET 1	OF 39 SHEETS	STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(38-4,38-5)BR,D,CR	IROQUOIS	437	186
ILLINOIS FED. AID PROJECT			CONTRACT NO. 66M80	

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Stone Riprap, Class A4	Sq. Yd.	--	1,986	1,986
Filter Fabric	Sq. Yd.	--	1,986	1,986
Removal of Existing Superstructures	Each	2	--	2
Concrete Removal	Cu. Yd.	--	131.8	131.8
Slope Wall Removal	Sq. Yd.	--	1,931	1,931
Protective Shield	Sq. Yd.	1,624	--	1,624
Structure Excavation	Cu. Yd.	--	316.4	316.4
Concrete Structures	Cu. Yd.	--	195.3	195.3
Concrete Superstructure	Cu. Yd.	568.4	--	568.4
Bridge Deck Grooving (longitudinal)	Sq. Yd.	2,063	--	2,063
Protective Coat	Sq. Yd.	2,471	--	2,471
Concrete Superstructure (Approach Slab)	Cu. Yd.	234	--	234
Furnishing and Erecting Structural Steel	L. Sum	0.41	--	0.41
Stud Shear Connectors	Each	12,132	--	12,132
Reinforcement Bars, Epoxy Coated	Pound	231,000	25,360	256,360
Name Plates	Each	2	--	2
Elastomeric Bearing Assembly, Type 1	Each	36	--	36
Anchor Bolts, 3/4"	Each	--	96	96
Granular Backfill for Structures	Cu. Yd.	--	316.4	316.4
Epoxy Crack Injection	Foot	--	17	17
Geocomposite Wall Drain	Sq. Yd.	--	176	176
Pipe Underdrains for Structures 4"	Foot	--	292	292
Bar Terminators	Each	616	--	616
Structural Repair of Concrete (Depth Equal to or Less than 5 Inches)	Sq. Ft.	--	35	35
Diamond Grinding (Bridge Section)	Sq. Yd.	2,063	--	2,063

GENERAL NOTES

All new structural steel shall be metallized. See Special Provision for "Metallizing of Structural Steel."

Calculated weight of Structural Steel = 42,280 lbs (M270 Grade 36)
375,600 lbs (M270 Grade 50)

No field welding is permitted except as specified in the contract documents. Fasteners shall be ASTM F 3125 Grade A325 Type 1, hot-dip galvanized bolts in uncoated metallized areas. Bolts 7/8 in. diameter, holes 1 1/16 in. diameter, unless otherwise noted. See special provision for "Metallizing of Structural Steel".

Reinforcement bars designated (E) shall be epoxy coated. The finishing machine rails shall be placed on the top of the flange of the exterior beams within the deck pour. Beam blocks shall be placed between beams at all tie locations in each bay for the full width of the deck pour.

Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of 1/8 in. (0.01 ft.). Adjustment shall be made either by grinding the surface or by shimming the bearings.

Plan dimensions and details relative to the existing structure have been taken from existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.

Contractor to notify G&W Public Projects Department 30 Days prior to starting construction.

G&W flagging services will be required for all work within G&W right-of-way or any work that has a "potential to foul".

The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to address the presence of lead on this project.

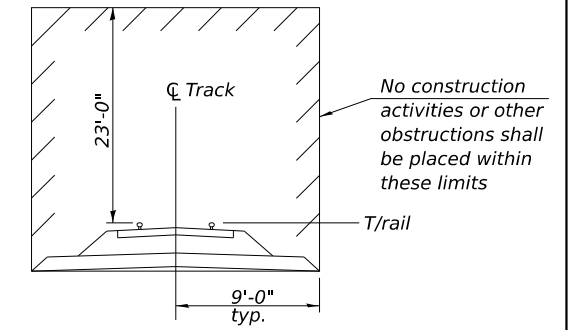
STA. 592+63.65
RE-BUILT 20__ BY
STATE OF ILLINOIS
F.A.I. Rt. 57 Sec. (38-5VB)BR
LOADING HL-93
STR. NO. 038-0005

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STR. NO. 038-0006

NAME PLATE

See Std. 515001

Existing Name Plate shall be cleaned and relocated next to new Name Plate. Cost included with Name Plates.



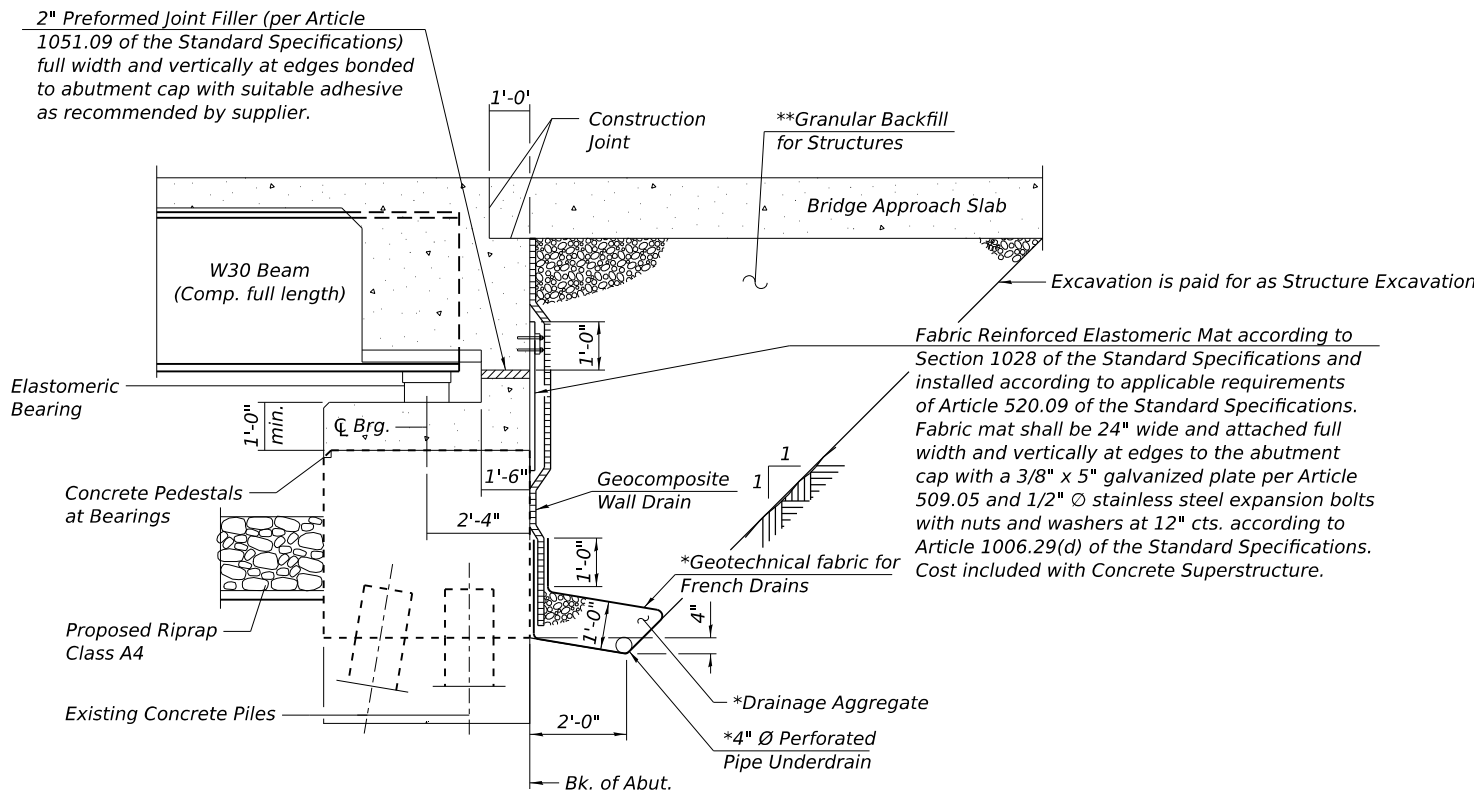
MINIMUM CONSTRUCTION CLEARANCE ENVELOPE
(Dimensions @ Rt. L to C_{Track})

BYPASS FLOWRATE FROM BRIDGE LIMITS (END OF APPROACH SLAB) TO ROADWAY (SN 038-0005: N.B. BRIDGE)

	NW Curbline	SW Curbline	NE Curbline	SE Curbline
Q (C.F.S.)	0.711	N/A	0.589	N/A

BYPASS FLOWRATE FROM BRIDGE LIMITS (END OF APPROACH SLAB) TO ROADWAY (SN 038-0006: S.B. BRIDGE)

	NW Curbline	SW Curbline	NE Curbline	SE Curbline
Q (C.F.S.)	0.589	N/A	0.711	N/A



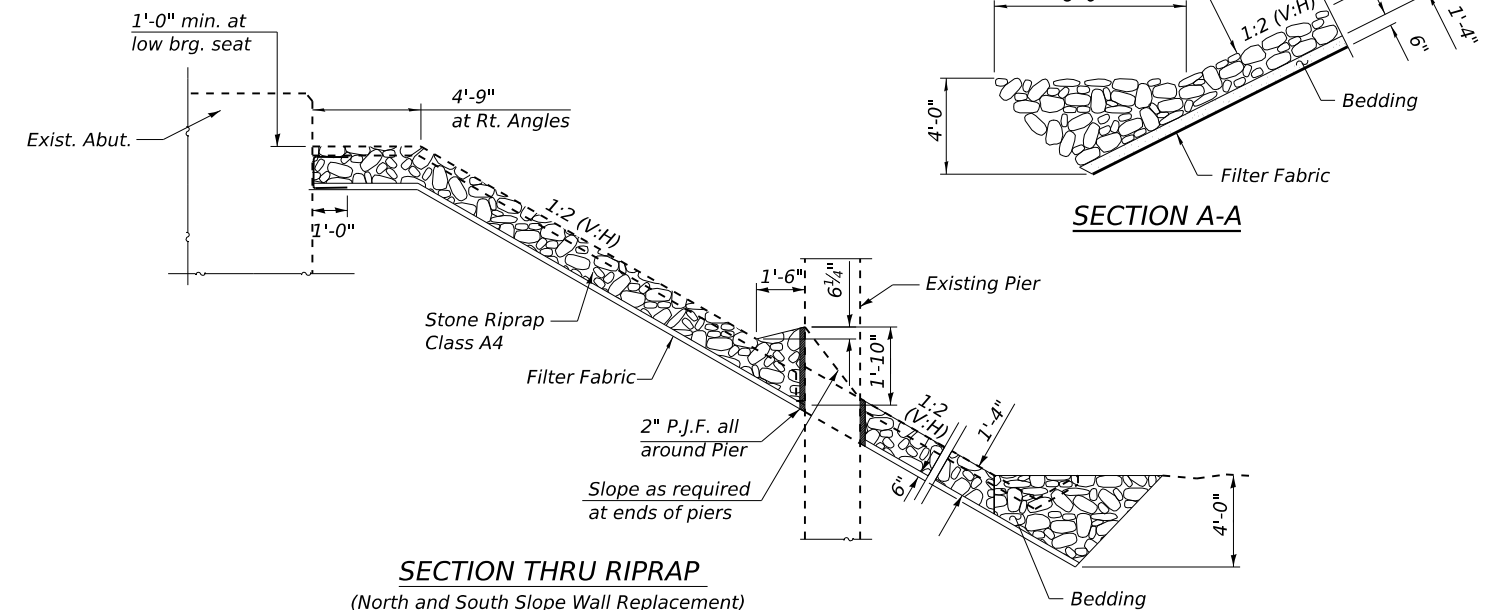
SECTION THRU SEMI-INTEGRAL ABUTMENT
(Horiz. dim. at Rt. L's)

* Included in the cost of Pipe Underdrains for Structures.

** Granular Backfill for Structures shall follow Standard Specification 586 except the course aggregate shall be grade CA 7, CA 11, or CA 14.

Note:

All drainage system components shall extend to 2'-0" from the end of each wingwall except an outlet pipe shall extend until intersecting with the side slopes. The pipes shall drain into concrete headwalls. (See Article 601.05 of the Standard Specifications and Highway Standard 601101).



SECTION THRU RIPRAP
(North and South Slope Wall Replacement)

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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**GENERAL DATA
STRUCTURE NO. 038-0005 (NB) & 038-0006 (SB)**

SCALE: SHEET 2 OF 39 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(38-4,38-5)BRD.CR	IROQUOIS	437	187
CONTRACT NO. 66M80				
ILLINOIS FED. AID PROJECT				

MODEL: Default
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INTERIOR BEAM MOMENT TABLE						
		0.4 Sp. 1	Pier 1	0.5 Sp. 2	PIER 2	0.6 Sp. 3
I_s	(in ⁴)	8230	8230	8230	8230	8230
$I_c(n)$	(in ⁴)	22045.9	—	22045.9	—	22045.9
$I_c(3n)$	(in ⁴)	16297.8	—	16297.8	—	16297.8
$I_c(cr)$	(in ⁴)	—	10840	—	10840	—
S_s	(in ³)	541.6	541.6	541.6	541.6	541.6
$S_c(n)$	(in ³)	779.4	—	779.4	—	779.4
$S_c(3n)$	(in ³)	709.4	—	709.4	—	709.4
$S_c(cr)$	(in ³)	—	594.3	—	594.3	—
S_x	(in ³)	777.47	—	776.98	—	777.47
DC1	(k/')	0.956	0.956	0.956	0.956	0.956
M _{DC1}	(k)	159.4	345.3	199.3	345.3	159.4
DC2	(k/')	0.192	0.192	0.192	0.192	0.192
M _{DC2}	(k)	32	69.3	40	69.3	32
DW	(k/')	0.17	0.17	0.17	0.17	0.17
M _{DW}	(k)	27.8	60.2	34.7	60.2	27.8
LLDF		0.633	0.61	0.587	0.61	0.633
M _{ℓ + IM}	(k)	547.3	551.4	564.1	551.4	547.3
f _ℓ (Strength I)	(ksi)	0.0	0.0	0.0	0.0	0.0
M _u + 1/3 f _x	(k)	1238.6	—	1338.3	—	1238.6
Φ _r M _n	(k)	3786.8	—	3786.8	—	3786.8
f _s DC1	(ksi)	3.5	7.7	4.4	7.7	3.5
f _s DC2	(ksi)	0.5	1.4	0.7	1.4	0.5
f _s DW	(ksi)	0.5	1.2	0.6	1.2	0.5
f _s (ℓ + IM)	(ksi)	8.4	11.1	8.7	11.1	8.4
f _ℓ (Service II)	(ksi)	0.0	0.0	0.0	0.0	0.0
f _s + 1/2 (Service II)	(ksi)	15.5	24.6	17	24.6	15.5
Service II Resistance	(ksi)	47.5	47.5	47.5	47.5	47.5
f _s + 1/3 (Strength I)	(ksi)	—	32.4	—	32.4	—
Φ _r F _n	(ksi)	—	50	—	50	—
V _f	(k)	16.3	—	16.7	—	16.3

BEAM REACTION TABLE				
	N Abut.	Pier 1	PIER 2	S. ABUT
LLDF	0.767	0.77	0.77	0.767
OCF	—	—	—	—
R _{DC1}	(k) * 41.9	63.4	63.4	* 41.9
R _{DC2}	(k) 3.5	12.7	12.7	3.5
R _{DW}	(k) 3.1	11	11	3.1
R _ℓ	(k) 54.6	102.8	102.8	54.6
R _{IM}	(k) 14.2	22.6	22.6	14.2
R _{Total} (Strength I) (Impact)	(k) 181.7	331.1	331.1	181.7
R _{Total} (Strength I) (No Impact)	(k) 156.8	291.6	291.6	156.8

RDC1 includes service reaction due to weight of approach slab and parapet on approach slab.

I_s, S_s : Non-composite moment of inertia and section modulus of the steel section used for computing f_s (Total-Strength I, and Service II) due to non-composite dead loads (in.⁴ and in.³).

$I_c(n), S_c(n)$: Composite moment of inertia and section modulus of the steel and deck based upon the modular ratio, "n", used for computing f_s (Total-Strength I, and Service II) in uncracked sections due to short-term composite live loads (in.⁴ and in.³).

$I_c(3n), S_c(3n)$: Composite moment of inertia and section modulus of the steel and deck based upon 3 times the modular ratio, "3n", used for computing f_s (Total-Strength I, and Service II) in uncracked sections, due to long-term composite (superimposed) dead loads (in.⁴ and in.³).

$I_c(cr), S_c(cr)$: Composite moment of inertia and section modulus of the steel and longitudinal deck reinforcement, used for computing f_s (Total-Strength I and Service II) in cracked sections, due to both short-term composite live loads and long-term composite (superimposed) dead loads (in.⁴ and in.³).

S_x : Section modulus about the major axis of a section to the controlling flange, tension or compression, taken as yield moment with respect to the controlling flange over the yield strength of the controlling flange (in.³).

DC1: Un-factored non-composite dead load (kips/ft.).
 M_{DC1}: Un-factored moment due to non-composite dead load (kip-ft.).
 DC2: Un-factored long-term composite (superimposed excluding future wearing surface) dead load (kips/ft.).
 M_{DC2}: Un-factored moment due to long-term composite (superimposed excluding future wearing surface) dead load (kip-ft.).
 DW: Un-factored long-term composite (superimposed future wearing surface only) dead load (kips/ft.).
 M_{DW}: Un-factored moment due to long-term composite (superimposed future wearing surface only) dead load (kip-ft.).
 LLDF: Live Load Distribution Factor for moment and shear computed according to Article 4.6.2.2 and further IDOT provisions.
 M_{ℓ + IM}: Un-factored live load moment plus dynamic load allowance (impact) (kip-ft.).
 M_u: Strength I load combination of factored design moments (kip-ft.).
 $1.25 (M_{DC1} + M_{DC2}) + 1.5 M_{DW} + 1.75 M_{ℓ + IM}$
 f_ℓ: Factored calculated flange lateral bending stress as calculated using Article 6.10.1.6 and as further simplified by IDOT provisions (ksi).
 Φ_r M_n: Factored nominal flexural resistance of the section determined as specified in Article 6.10.7.1 or A6 as applicable (kip-ft.).

f_s DC1: Un-factored stress at edge of flange for controlling steel flange due to vertical non-composite dead loads as calculated below (ksi).
 M_{DC1} / S_s

f_s DC2: Un-factored stress at edge of flange for controlling steel flange due to vertical composite dead loads as calculated below (ksi).
 $M_{DC2} / S_c(3n)$ or $M_{DC2} / S_c(cr)$ as applicable.

f_s DW: Un-factored stress at edge of flange for controlling steel flange due to vertical composite future wearing surface loads as calculated below (ksi).
 $M_{DW} / S_c(3n)$ or $M_{DW} / S_c(cr)$ as applicable.

f_s (ℓ + IM): Un-factored stress at edge of flange for controlling steel flange due to vertical composite live load plus impact loads as calculated below (ksi).
 $M_{ℓ + IM} / S_c(n)$ or $M_{ℓ + IM} / S_c(cr)$ as applicable.

f_s + f_ℓ / 2 (Service II): Sum of stresses as computed below (ksi).
 $f_s DC1 + f_s DC2 + f_s DW + 1.3 f_s (ℓ + IM) + f_ℓ / 2$

Service II Resistance: Composite (0.95R_nF_{yℓ}) or noncomposite (0.80R_nF_{yℓ}) stress capacity according to Article 6.10.4.2 (ksi).

f_s + f_ℓ / 3 (Strength I): Sum of stresses as computed below on non-compact sections (ksi).
 $1.25 (f_s DC1 + f_s DC2) + 1.5 f_s DW + 1.75 f_s (ℓ + IM) + f_ℓ / 3$

Φ_r F_n: Factored nominal flexural resistance of the section as specified in Article 6.10.7.2 or 6.10.8 as applicable (ksi).
 V_r: Maximum factored shear range in span computed according to Article 6.10.10.
 OCF: Obtuse Correction Factor according to Article 4.6.2.2.3c or as further simplified by IDOT provisions.
 R_{DC1}: Un-factored reaction due to non-composite dead load (kip).
 R_{DC2}: Un-factored reaction due to long-term composite (superimposed excluding future wearing surface) dead load (kip).
 R_{DW}: Un-factored reaction due to long-term composite (superimposed future wearing surface only) dead load (kip).
 R_ℓ: Un-factored live load reaction (kip).
 R_{IM}: Un-factored dynamic load allowance (impact) (kip).
 R_{Total} (Strength I) (Impact): Strength I load combination of factored design reactions (kip).
 $1.25 (R_{DC1} + R_{DC2}) + 1.5 R_{DW} + 1.75 (R_{ℓ} + R_{IM})$
 R_{Total} (Strength I) (No Impact): Strength I load combination of factored design reactions, not including dynamic load allowance (Impact) (kip).
 $1.25 (R_{DC1} + R_{DC2}) + 1.5 R_{DW} + 1.75 (R_{ℓ})$



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STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

STRUCTURAL STEEL DETAILS
 STRUCTURE NO. 038-0005 (NB) & 038-0006 (SB)

SCALE: SHEET 25 OF 39 SHEETS STA. TO STA.

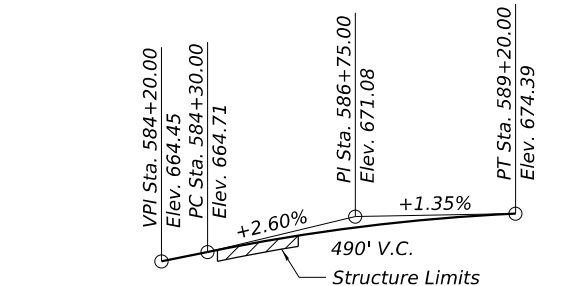
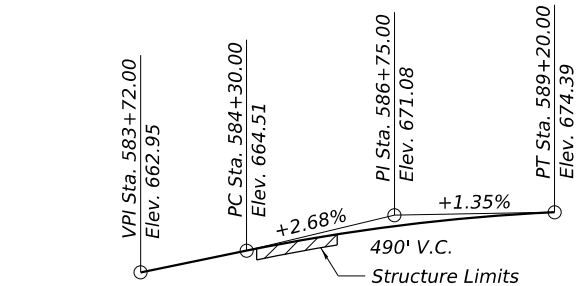
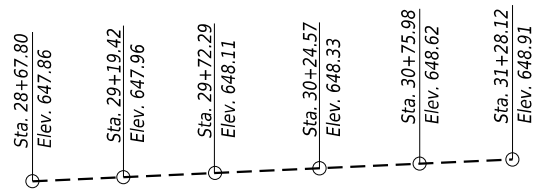
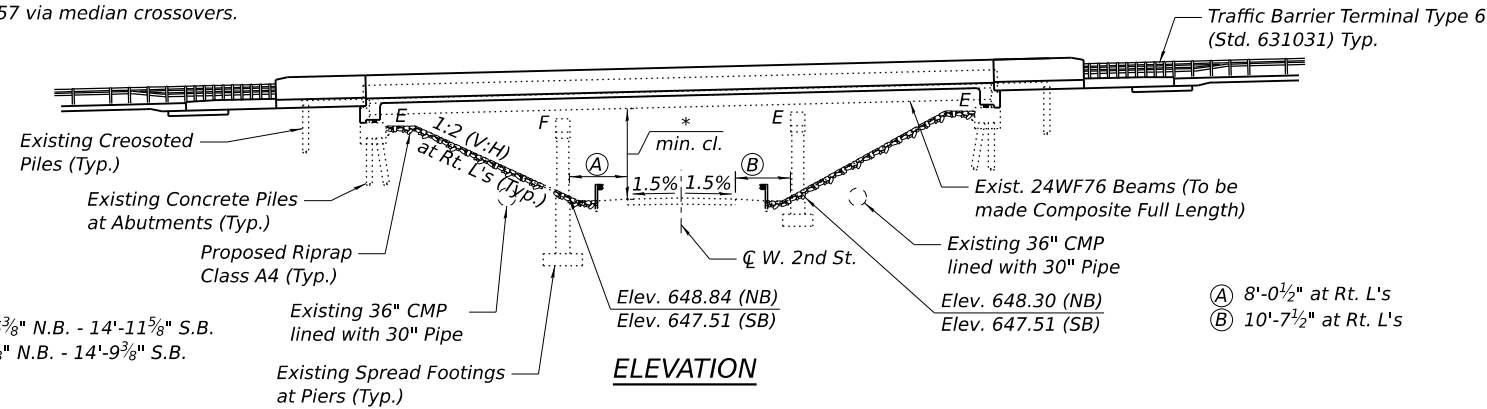
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(38-4, 38-5) BR. D. CR	IROQUOIS	437	210
CONTRACT NO. 66M80				
ILLINOIS FED. AID PROJECT				

Benchmark: BM 331: "Cut square" located in the NE corner of the NW wingwall of SN 038-0008 - Station 584+49.23, 66.35' Rt, Elev. 667.39

Existing Structures: Structure 038-0007 (NB) and 038-0008 (SB) were originally constructed in 1967 as Section 38-5-HB-1. In 1976, a bituminous wearing surface was applied. In 2000, the deck was scarified and a 3" microsilica overlay was applied. In 2012, the structural steel was painted. The structures are three span bridges (31'-5", 39'-2" and 31'-5") and consist of continuous non-composite multi-girder steel WF beams. The substructure consists of concrete stub abutments on concrete piles and multi-column piers on spread footings. The bridges are 106'-8" long from back to back abutments. The out to out of deck width is 42'-0". The piers are skewed at 1°11'00" left ahead but the abutments and centerline of pier bearings are at rt angles to the centerline of I-57. Aluminum handrails on concrete parapets are present on both sides. The deck is to be removed and replaced while traffic is routed to the other side of I-57 via median crossovers.

No Salvage.

* Proposed 15'-5 3/8" N.B. - 14'-11 5/8" S.B.
Existing 15'-5 1/8" N.B. - 14'-9 3/8" S.B.



DESIGN SPECIFICATIONS

2002 AASHTO Standard Specifications for Highway Bridges, 17th Edition
2006 Seismic Retrofitting Manual for Highway Structures: Part I - Bridges (FHWA-HRT-06-032)

LOADING HS20-44

Allow 25#/sq. ft. for future wearing surface.

DESIGN STRESSES

FIELD UNITS (NEW CONST.)
f_c = 4,000 psi (Superstructure)
f_c = 3,500 psi (Substructure)
f_y = 60,000 psi (Reinforcement)

FIELD UNITS (EX. CONST.)
f_c = 1,400 psi (Substructure)
f_s = 20,000 psi (Reinforcement)
f_s = 20,000 psi (Structural Steel)

SEISMIC DATA

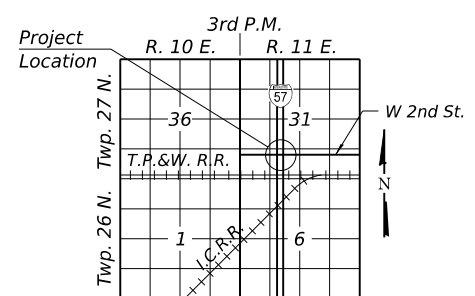
Seismic Retrofit Category (SRC) = A
Design Spectral Acceleration at 1.0 sec. (S_{D1}) = 0.111g
Design Spectral Acceleration at 0.2 sec. (S_{D05}) = 0.179g
Soil Site Class = D
Performance Level = I

SCOPE OF WORK:

1. Remove and replace existing concrete deck and approach slabs.
2. Clean and paint existing beam ends.
3. Make new deck composite full length by installing shear studs.
4. Reconfigure existing abutments and wingwalls to semi-integral configuration.
5. Strengthen pier caps using fiber wraps.
6. Remove and replace elastomeric bearings at abutments.
7. Repair existing substructure units.
8. Remove and replace slopewall with Riprap Class A4

INDEX OF SHEETS

- 1 General Plan and Elevation
- 2 General Data
- 3-5 Top of Slab Elevations (NB)
- 6-8 Top of Slab Elevations (SB)
- 9 Top of North Approach Slab Elevation (NB)
- 10 Top of South Approach Slab Elevation (NB)
- 11 Top of North Approach Slab Elevation (SB)
- 12 Top of South Approach Slab Elevation (SB)
- 13 Superstructure (NB)
- 14 Superstructure Details (NB)
- 15 Diaphragm Details (NB)
- 16 Superstructure (SB)
- 17 Superstructure Details (SB)
- 18 Diaphragm Details (SB)
- 19-20 Bridge Approach Slab Details (NB)
- 21-22 Bridge Approach Slab Details (SB)
- 23 Framing Plan (NB)
- 24 Framing Plan (SB)
- 25 Structural Steel Details
- 26 North Abutment Bearing Details (NB)
- 27 South Abutment Bearing Details (NB)
- 28 North Abutment Bearing Details (SB)
- 29 South Abutment Bearing Details (SB)
- 30 Abutment Concrete Removal
- 31 North Abutment (NB)
- 32 South Abutment (NB)
- 33 North Abutment (SB)
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- 35 Pier 1 Repairs (NB)
- 36 Pier 2 Repairs (NB)
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- 38 Pier 2 Repairs (SB)
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- 40 Pier 2 Details (NB)
- 41 Pier 1 Details (SB)
- 42 Pier 2 Details (SB)
- 43 Concrete Parapet Slipforming Option



LOCATION SKETCH

GENERAL PLAN & ELEVATION

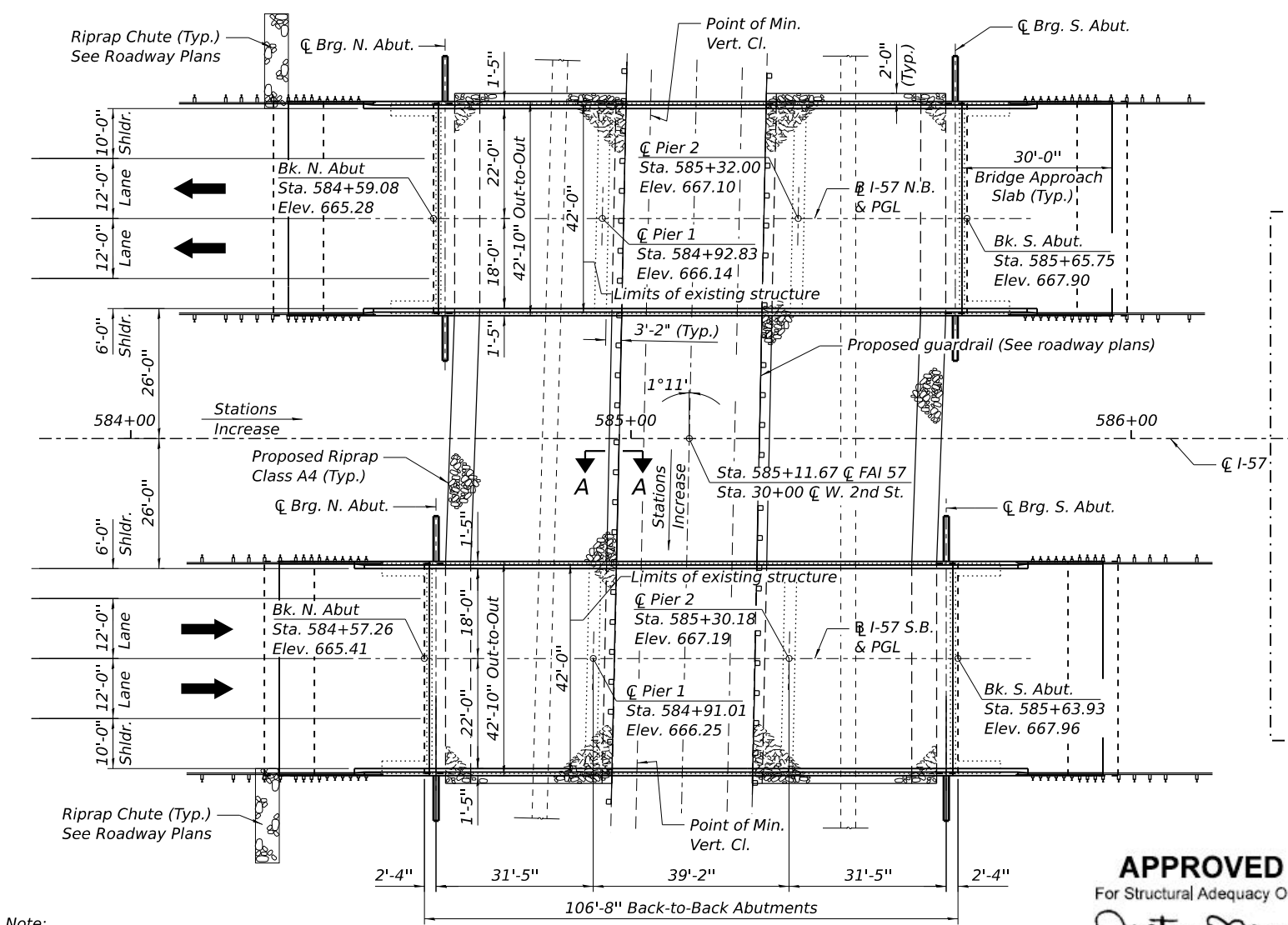
I-57 OVER W. 2ND ST.
F.A.I. ROUTE 57 - SEC. (38-5HB-1)D

IROQUOIS COUNTY

STATION 585+11.67

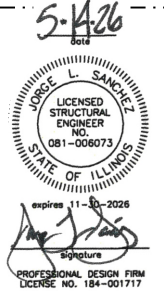
STRUCTURE NUMBER 038-0007 (N.B.)

STRUCTURE NUMBER 038-0008 (S.B.)



Note:
Up to 1/4 inch to be ground off the bridge deck and bridge approach slabs. Elevations shown in Plan represent elevation after grinding.
For Section A-A, see Sheet 2 of 43.

APPROVED
For Structural Adequacy Only
Justin Mann
Engineer of Bridges & Structures



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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN & ELEVATION
STRUCTURE NO. 038-0007 (NB) & 038-0008 (SB)

SCALE: SHEET 1 OF 43 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(38-4, 38-5) BR. D. CR	IROQUOIS	437	225
CONTRACT NO. 66M80				

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Stone Riprap, Class A4	Sq. Yd.	--	1,123	1,123
Filter Fabric	Sq. Yd.	--	1,123	1,123
Concrete Removal	Cu. Yd.	--	56.2	56.2
Slope Wall Removal	Sq. Yd.	--	1,236	1,236
Removal of Existing Concrete Deck	Each	2	--	2
Protective Shield	Sq. Yd.	996	--	996
Structure Excavation	Cu. Yd.	--	263.1	263.1
Concrete Structures	Cu. Yd.	--	76.9	76.9
Concrete Superstructures	Cu. Yd.	371.3	--	371.3
Bridge Deck Grooving (longitudinal)	Sq. Yd.	1,463.8	--	1,463.8
Protective Coat	Sq. Yd.	1,206.6	--	1,206.6
Concrete Superstructure (Approach Slab)	Cu. Yd.	234	--	234
Furnishing and Erecting Structural Steel	Pound	3920	--	3920
Stud Shear Connectors	Each	6,594	--	6,594
Reinforcement Bars, Epoxy Coated	Pound	174,320	5,280	179,600
Name Plates	Each	2	--	2
Elastomeric Bearing Assembly, Type 1	Each	28	--	28
Anchor Bolts, 3/4"	Each	56	--	56
Granular Backfill for Structures	Cu. Yd.	--	263.1	263.1
Epoxy Crack Injection	Foot	--	161	161
Geocomposite Wall Drain	Sq. Yd.	--	154.9	154.9
Pipe Underdrains for Structures 4"	Foot	--	282	282
Fiber Wrap	Sq. Ft.	--	788	788
Bar Terminators	Each	640	--	640
Jack and Remove Existing Bearing	Each	--	28	28
Containment and Disposal of Lead Paint Cleaning Residues No. 1	L. Sum.	1	--	1
Containment and Disposal of Lead Paint Cleaning Residues No. 2	L. Sum.	1	--	1
Cleaning and Painting Steel Bridge 1	L. Sum.	1	--	1
Cleaning and Painting Steel Bridge 2	L. Sum.	1	--	1
Structural Repair of Concrete (depth equal to or less than 5 inches)	Sq. Ft.	--	24	24
Diamond Grinding (Bridge Section)	Sq. Yd.	1,463	--	1,463

STA. 585+11.67
RE-BUILT 20__ BY
STATE OF ILLINOIS
F.A.I. Rt. 57 Sec. (38-5HB-1)D
LOADING HL-93
STR. NO. 038-0007

STA. 585+11.67
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F.A.I. Rt. 57 Sec. (38-5HB-1)D
LOADING HL-93
STR. NO. 038-0008

NAME PLATE
See Std. 515001

Existing Name Plate shall be cleaned and relocated next to new Name Plate. Cost included with Name Plates.

BYPASS FLOWRATE FROM BRIDGE LIMITS (END OF APPROACH SLAB) TO ROADWAY (SN 038-0007: N.B. BRIDGE)

	NW Curbline	SW Curbline	NE Curbline	SE Curbline
Q (C.F.S.)	0.418	N/A	0.505	N/A

BYPASS FLOWRATE FROM BRIDGE LIMITS (END OF APPROACH SLAB) TO ROADWAY (SN 038-0008: S.B. BRIDGE)

	NW Curbline	SW Curbline	NE Curbline	SE Curbline
Q (C.F.S.)	0.505	N/A	0.418	N/A

GENERAL NOTES

No field welding is permitted except as specified in the contract documents.

Prior to pouring the new concrete deck, all heavy or loose rust, loose mill scale, and other loose detrimental foreign material shall be removed from the surfaces in contact with concrete (SSPC-SP3 standards). Tightly adhered paint may remain unless otherwise noted. Removal shall be accomplished by methods that will not damage the steel and the cost will be paid for according to Article 109.04 of the Standard Specifications.

As directed by the Engineer, existing construction accessories welded to the top flange of beams and girders shall be removed. The weld areas shall be ground flush and inspected for cracks using magnetic particle testing (MT) or dye penetrant testing (PT) by qualified personnel approved by the Engineer. Any cracks that cannot be removed by grinding 1/4 in. deep shall be identified and reported to the Bureau of Bridges & Structures for further disposition. The cost of removing welded accessories, grinding and inspecting weld areas and grinding cracks will be paid for according to Article 109.04 of the Standard Specifications.

Reinforcement bars designated (E) shall be epoxy coated.

Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of 1/8 in. (0.01 ft.). Adjustment shall be made either by grinding the surface or by shimming the bearings.

Plan dimensions and details relative to the existing structure have been taken from existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.

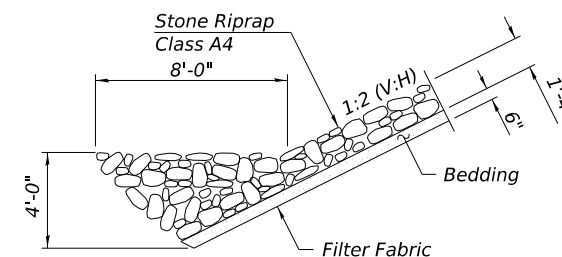
Cleaning and painting of the existing structural steel shall be as specified in the special provision for "Cleaning and Painting Existing Steel Structures". All beams, bearings and other structural steel within 5'-0" ft. (measured along the beam) of either side of the deck joints shall be cleaned per Near White Blast Cleaning - SSPC-SP10. The exterior surfaces and bottom of the bottom flange of the fascia beams shall be cleaned per Commercial Grade Power Tool Cleaning - SSPC-SP15.

The designate areas cleaned per Near White Blast Cleaning and per Commercial Grade Power Tool Cleaning shall be painted according to the requirements of the Organic Zinc-Rich Primer/Epoxy Intermediate Coat/Urethane Topcoat (OZ/E/U) paint system. The color of the final finish coat for all interior steel surfaces shall be Gray, Munsell No. 5B 7/1. The color of the final finish coat for the exterior and bottom flange of the fascia beams shall be Interstate Green, Munsell No. 7.5G 4/8.

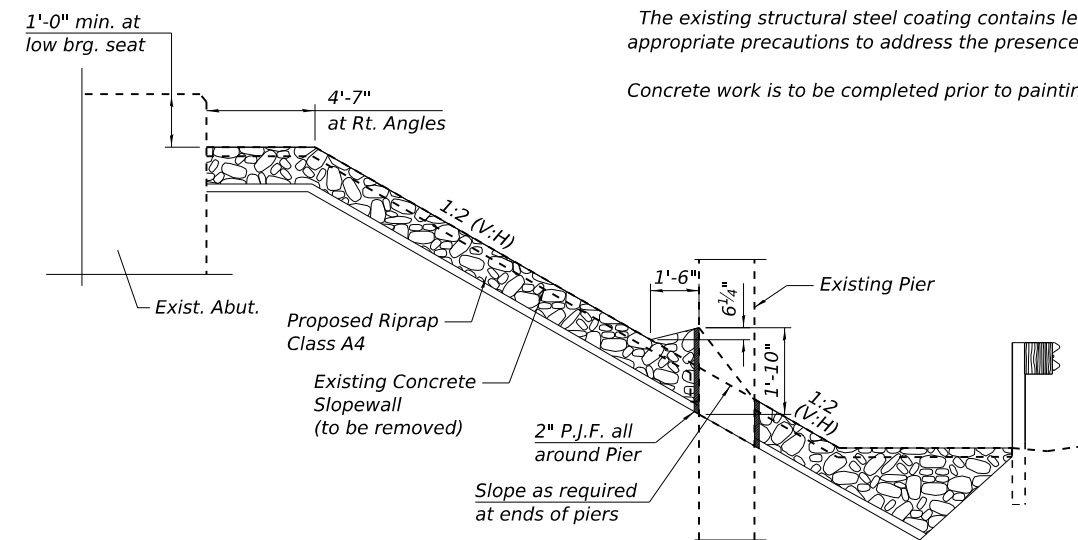
The finishing machine rails shall be placed on the top of the top flange of the exterior beams within the deck pour. Beam blocks shall be placed between beams at all tie locations in each bay for the full width of the deck pour.

The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to address the presence of lead on this project.

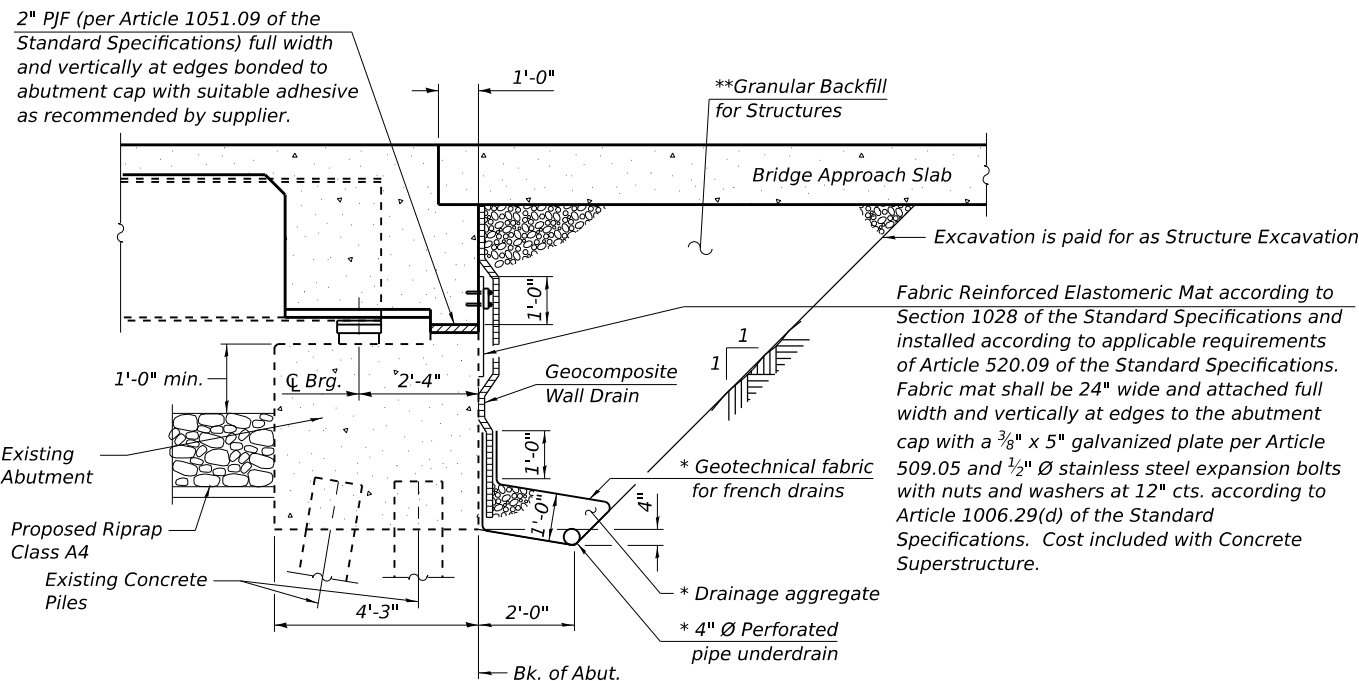
Concrete work is to be completed prior to painting of beams.



SECTION THRU RIPRAP (SECTION A-A)



SECTION THRU RIPRAP SLOPEWALL (North and South Slope Wall Replacement)



SECTION THRU SEMI-INTEGRAL ABUTMENT (Horiz. dim. at Rt. L's)

* Included in the cost of Pipe Underdrains for Structures.

** Granular Backfill for Structures shall follow Standard Specification 586 except the course aggregate shall be grade CA 7, CA 11, or CA 14.

Note:
All drainage system components shall extend to 2'-0" from the end of each wingwall except an outlet pipe shall extend until intersecting with the side slopes. The pipes shall drain into concrete headwalls. (See Article 601.05 of the Standard Specifications and Highway Standard 601101).

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	CHECKED - JLS	REVISED -
PLOT DATE = 5/14/2026	DATE - 04/21/2025	REVISED -

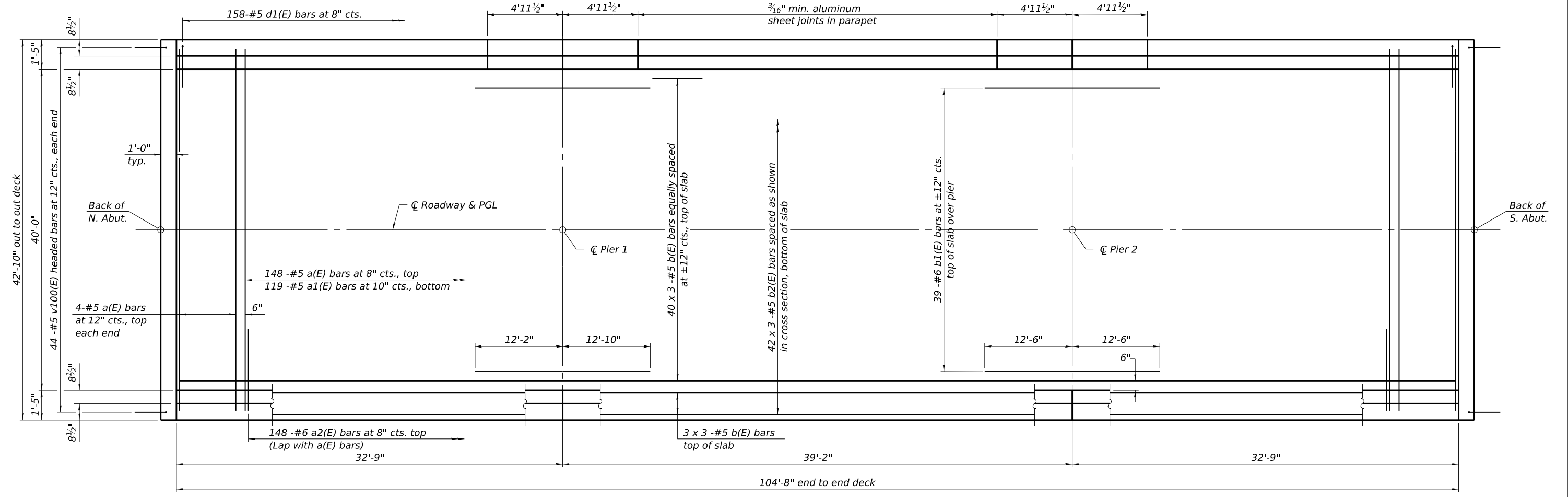
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**GENERAL DATA
STRUCTURE NO. 038-0007 (NB) & 038-0008 (SB)**

SCALE: SHEET 2 OF 43 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(38-4, 38-5) BR. D. CR	IROQUOIS	437	226
ILLINOIS FED. AID PROJECT			CONTRACT NO. 66M80	

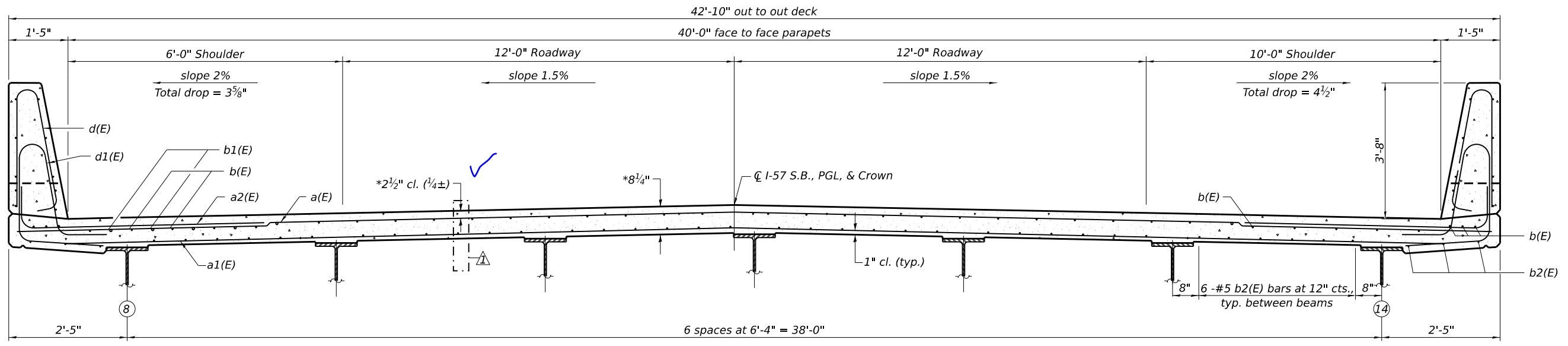
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MINIMUM BAR LAP

#5 bar = 3'-10"
 #6 bar = 4'-10"

Notes:
 See sheet 17 of 43 for superstructure details and Bill of Material.
 Bars indicated thus 20 x 3-#5 etc. indicates 20 lines of bars with 3 lengths per line.



SI-SB-2-0

4-4-2025



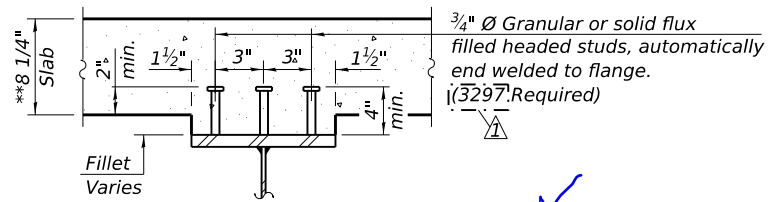
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	DRAWN - LAG	REVISED -
	CHECKED - JLS	REVISED -
PLOT DATE = 5/14/2026	DATE - 04/21/2025	REVISED -

STATE OF ILLINOIS
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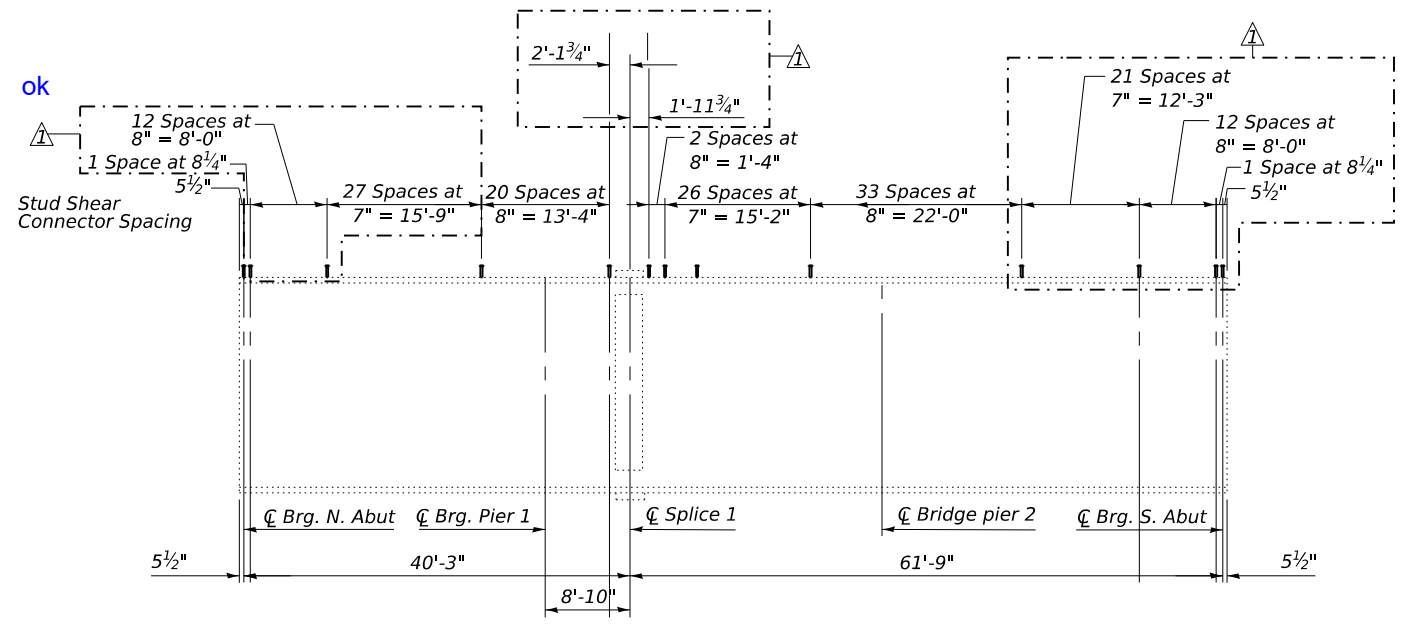
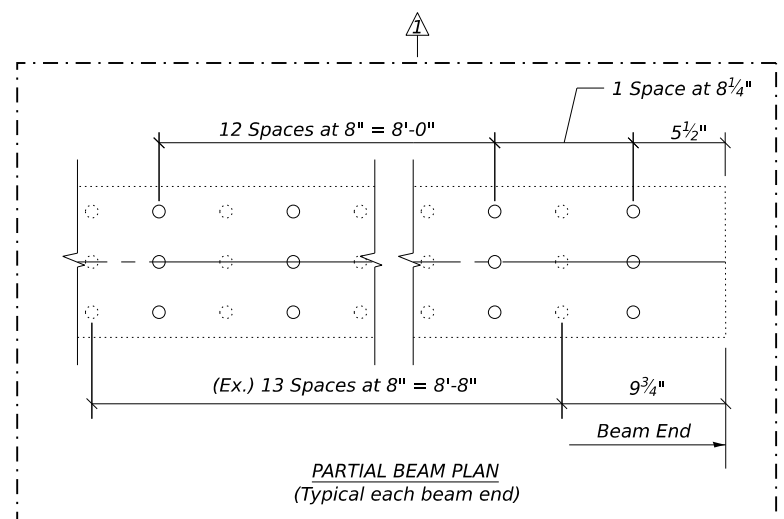
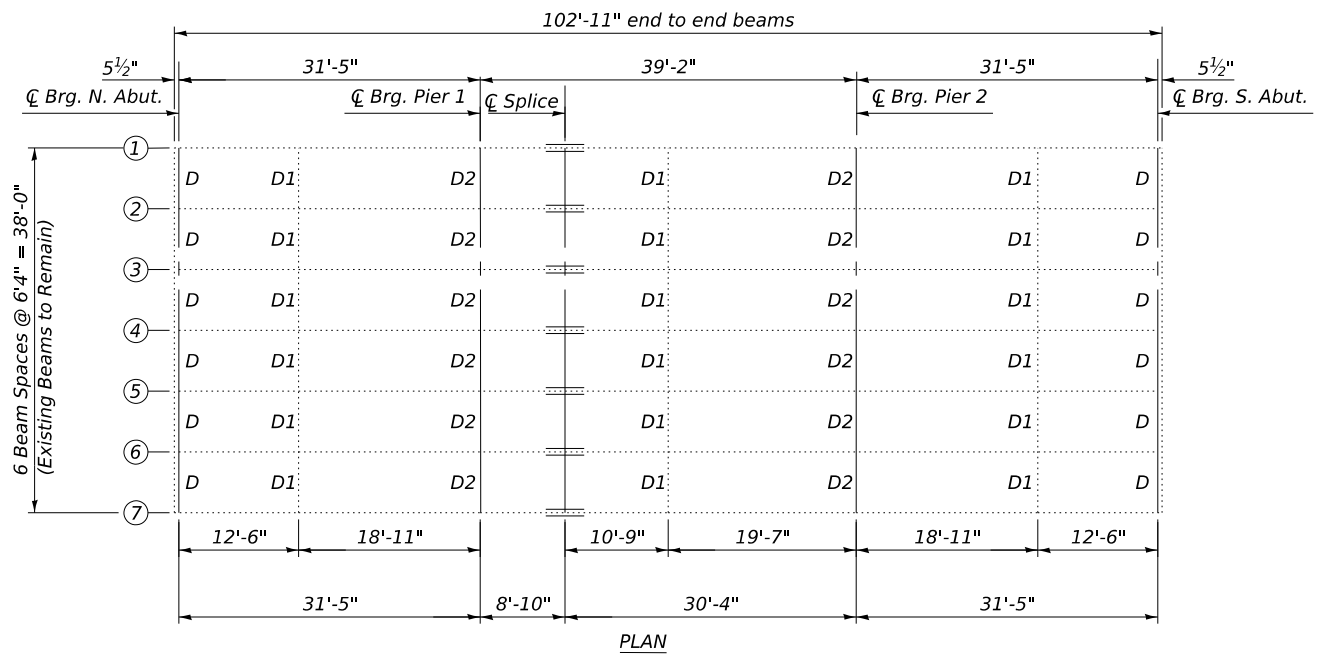
SUPERSTRUCTURE
 STRUCTURE NO. 038-0008 (SB)

SCALE: SHEET 16 OF 43 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(38-4, 38-5) BR. D. CR	IROQUOIS	437	240
CONTRACT NO. 66M80				
ILLINOIS FED. AID PROJECT				



SECTION A-A
**Prior to grinding



BEAM ELEVATION
(All beams are W24X76)

Notes:
Existing Diaphragm designations D, D1 & D2 are shown for reference only, from existing plans. All Existing diaphragms shall remain in place. Existing W24x76 beams are to remain in place.
Cast included in Removal of Existing Concrete Deck.

MODEL: Default
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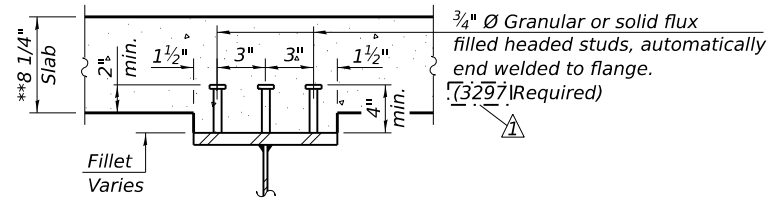
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	CHECKED - JLS	REVISED -
PLOT DATE = 5/14/2026	DATE - 04/21/2025	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STEEL FRAMING PLAN
STRUCTURE NO. 038-0007 (NB)

SCALE: SHEET 23 OF 43 SHEETS STA. TO STA.

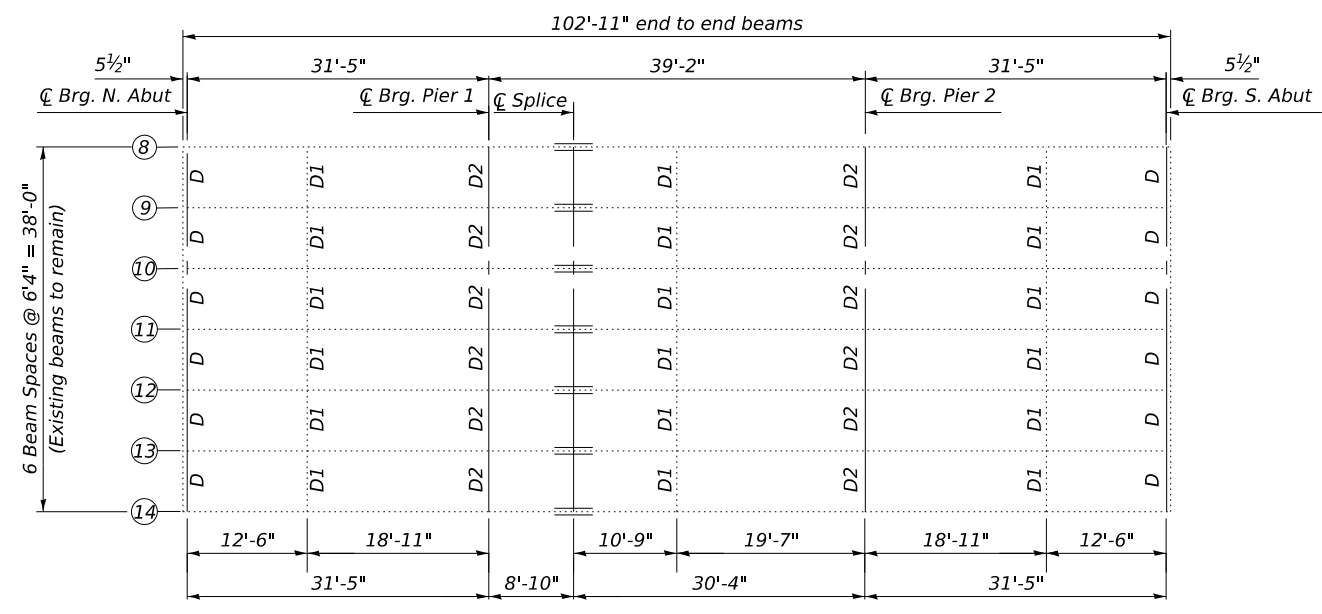
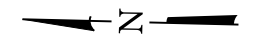
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(38-4, 38-5) BR. D. CR	IROQUOIS	437	247
CONTRACT NO. 66M80				
ILLINOIS FED. AID PROJECT				



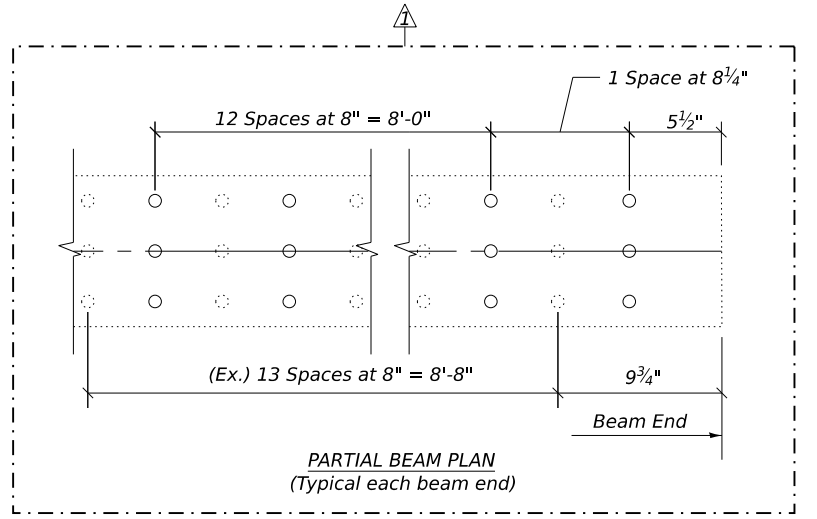
SECTION A-A

**Prior to grinding

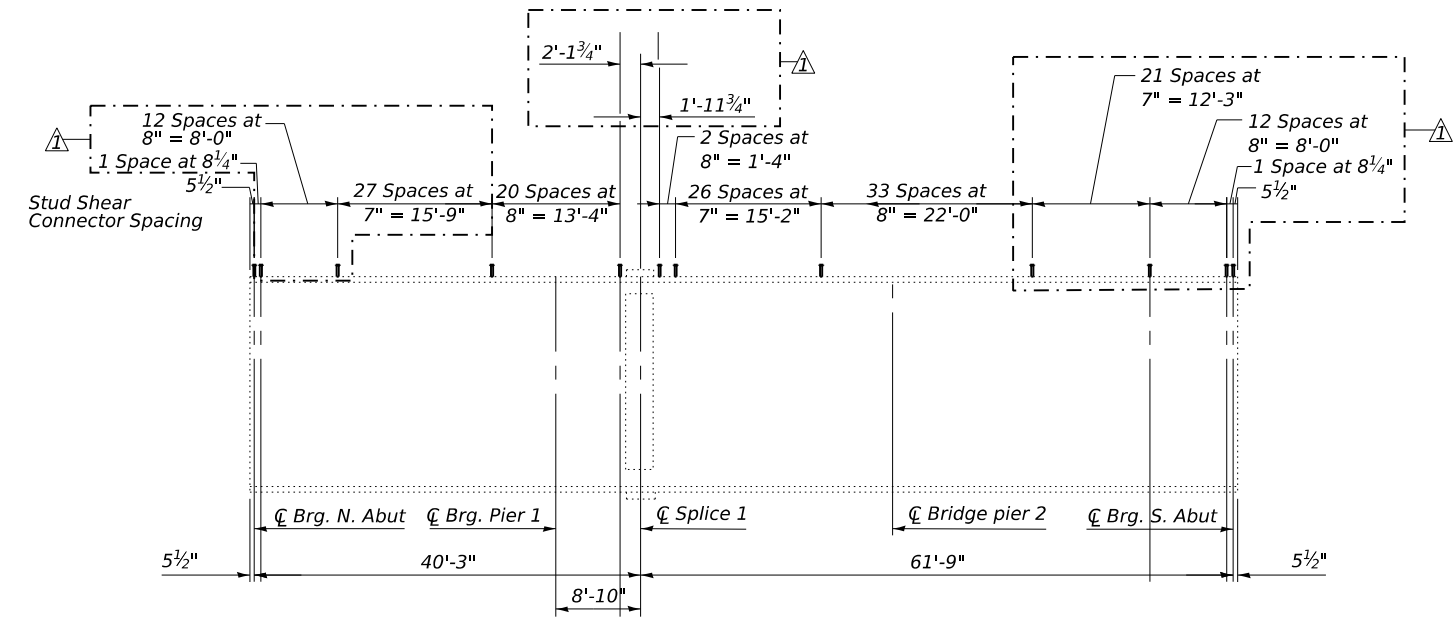
same



PLAN



PARTIAL BEAM PLAN
(Typical each beam end)



BEAM ELEVATION
(All beams are W24X76)

Notes:
 Existing Diaphragm designations D, D1 & D2 are shown for reference only, from existing plans. All Existing diaphragms shall remain in place.
 Existing W24x76 beams are to remain in place.
 Cost included in Removal of Existing Concrete Deck.

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PLOT DATE = 5/14/2026	DATE - 04/21/2025	REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

STEEL FRAMING PLAN
 STRUCTURE NO. 038-0008 (SB)

SCALE: SHEET 24 OF 43 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(38-4, 38-5) BR. D. CR	IROQUOIS	437	248
CONTRACT NO. 66M80				
ILLINOIS		FED. AID PROJECT		

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INTERIOR GIRDER MOMENT TABLE					
		0.4 Sp. 1 0.6 Sp. 3	Pier 1	0.5 Sp. 2	PIER 2
I_s	(in ⁴)	2100	2100	2100	2100
$I_c(n)$	(in ⁴)	7469.6	3262.2	7469.6	3262.2
$I_c(3n)$	(in ⁴)	5712.7	3262.2	5712.7	3262.2
S_s	(in ³)	175.8	175.8	175.8	175.8
$S_c(n)$	(in ³)	297.5	218.1	297.5	218.1
$S_c(3n)$	(in ³)	269.2	218.1	269.2	218.1
Z	(in ³)	175.8	175.8	175.8	175.8
\varnothing	(k')	0.734	0.734	0.734	0.734
M_\varnothing	('k)	49.9	92.8	48.1	92.8
S_\varnothing	(k')	0.3	0.3	0.3	0.3
M_{S_\varnothing}	('k)	20.8	38.8	20.1	38.8
M_ℓ	('k)	156.3	118.3	156.7	118.3
M_{IM}	('k)	46.9	35.5	47.0	35.5
$\frac{5}{3} [M_\ell + M_{IM}]$	('k)	338.6	256.2	339.5	256.2
M_a	('k)	532.2	504.1	530.0	504.1
M_u	('k)	901.8	-	915.8	-
$f_s \varnothing non-comp$	(ksi)	3.4	6.3	3.3	6.3
$f_s \varnothing (comp)$	(ksi)	0.9	2.1	0.9	2.1
$f_s (\frac{5}{3} M_{LL} + M_{IM})$	(ksi)	13.7	14.1	13.7	14.1
$f_s (Overload)$	(ksi)	18.0	22.6	17.9	22.6
$f_s (Total)$	(ksi)	-	29.3	-	29.3
VR	(k)	31.0	50.0	32.0	50.0

I_s, S_s : Non-composite moment of inertia and section modulus of the steel section used for computing f_s (Total and Overload) due to non-composite dead loads (in.⁴ and in.³).

$I_c(n), S_c(n)$: Composite moment of inertia and section modulus of the steel and deck based upon the modular ratio, "n", used for computing f_s (Total and Overload) due to long-term composite live loads (in.⁴ and in.³).

$I_c(3n), S_c(3n)$: Composite moment of inertia and section modulus of the steel and deck based upon 3 times the modular ratio, "3n", used for computing f_s (Total and Overload) due to long-term composite (superimposed) dead loads (in.⁴ and in.³).

Z: Plastic Section Modulus of the steel section in non-composite areas (in.³).

\varnothing : Un-factored non-composite dead load (kip-ft.).

M_\varnothing : Un-factored moment due to non-composite dead load (kip-ft.).

S_\varnothing : Un-factored long-term composite (superimposed) dead load (kips/ft.).

M_{S_\varnothing} : Un-factored moment due to long-term composite (superimposed) dead load (kip-ft.).

M_ℓ : Un-factored live load moment (kip-ft.).

M_{IM} : Un-factored moment due to impact (kip-ft.).

M_a : Factored design moment (kip-ft.).

$1.3 [M_\varnothing + M_{S_\varnothing} + \frac{5}{3} (M_\ell + M_{IM})]$

M_u : Compact composite moment capacity according to AASHTO LFD 10.50.1.1 or compact non-composite moment capacity according to AASHTO LFD 10.48.1 (kip-ft.).

$f_s (Overload)$: Sum of stresses as computed from the moments below (ksi).

$[M_\varnothing + M_{S_\varnothing} + \frac{5}{3} (M_\ell + M_{IM})]$

$f_s (Total)$: Sum of stresses as computed from the moments below on non-compact section (ksi).

$1.3 [M_\varnothing + M_{S_\varnothing} + \frac{5}{3} (M_\ell + M_{IM})]$

VR: Maximum ℓ + impact shear range within the composite portion of the span for stud shear connector design (kips).

GIRDER REACTION TABLE					
		N Abut.	Pier 1	Pier 2	S. Abut
R_\varnothing	(k)	* 33.0	41.0	41.0	* 33.0
R_ℓ	(k)	31.7	40.5	40.5	31.7
R_{IM}	(k)	9.5	12.1	12.1	9.5
R_{Total}	(k)	132.1	167.2	167.2	132.1

* RDL includes service reaction due to weight of approach slab and parapet on approach.



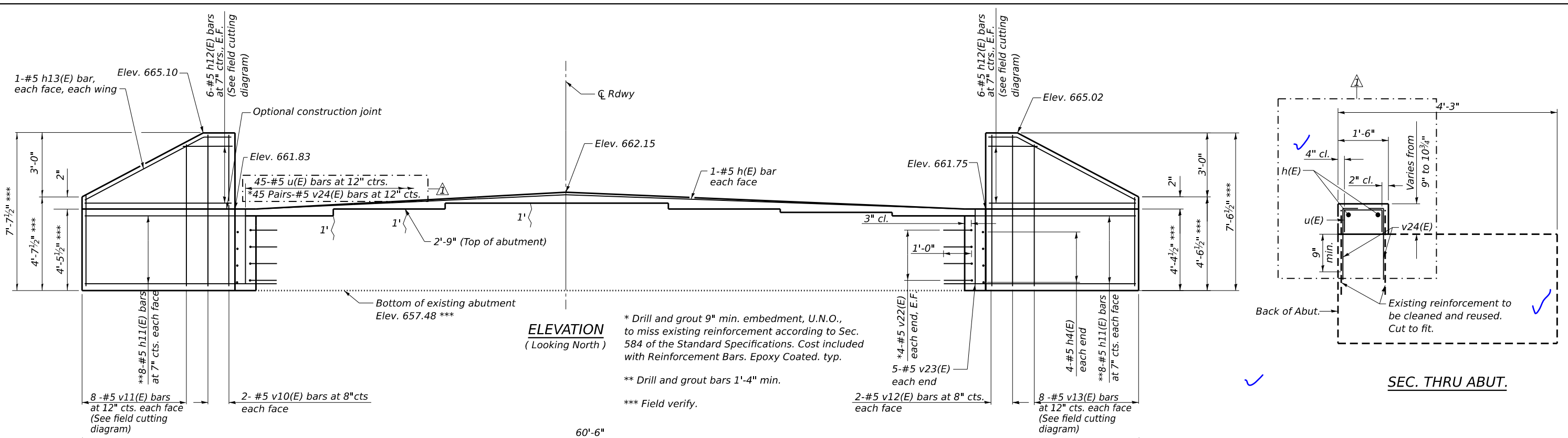
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	CHECKED - JLS	REVISED -
PLOT DATE = 5/13/2026	DATE - 04/21/2025	REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

STRUCTURAL STEEL DETAILS
 STRUCTURE NO. 038-0007 (NB) & 038-0008 (SB)

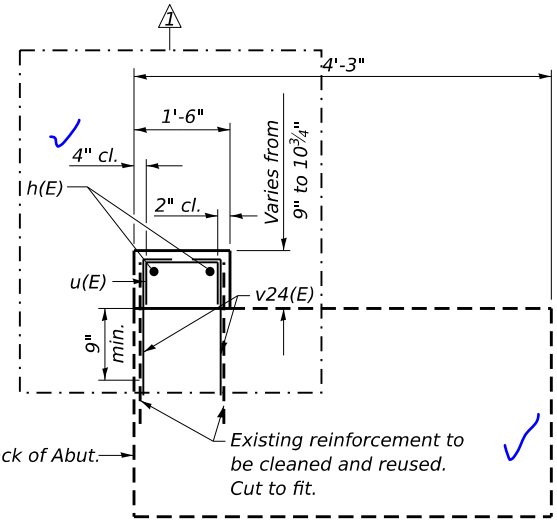
SCALE: SHEET 25 OF 43 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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CONTRACT NO. 66M80				
ILLINOIS FED. AID PROJECT				

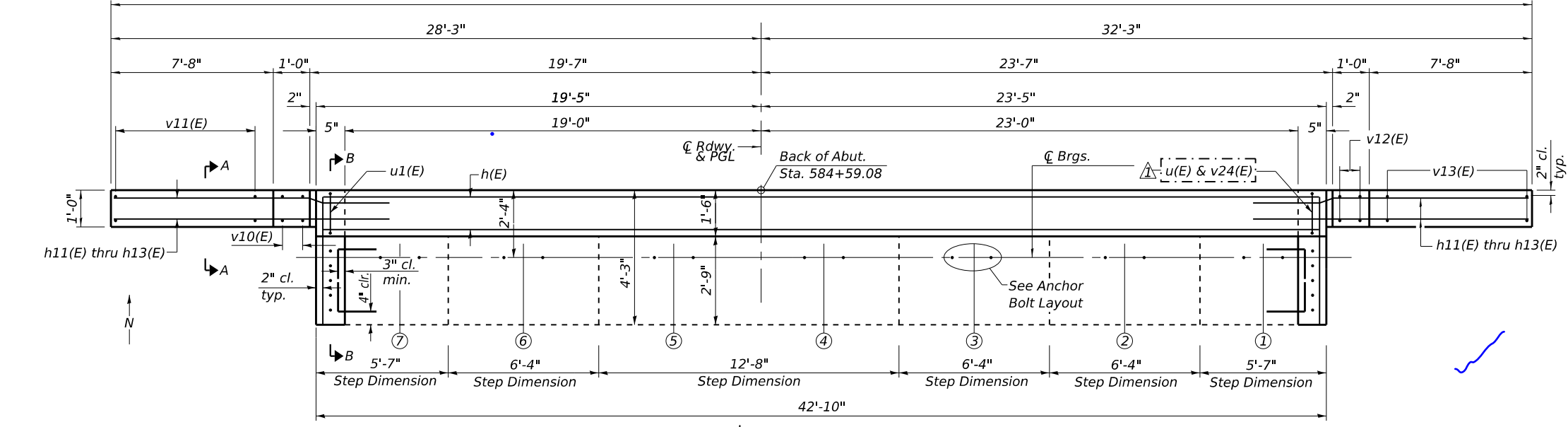


ELEVATION
(Looking North)

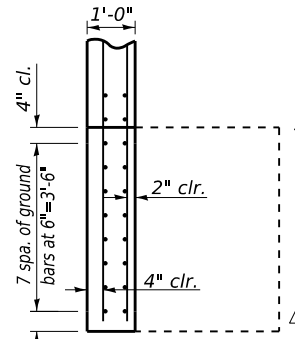
* Drill and grout 9" min. embedment, U.N.O., to miss existing reinforcement according to Sec. 584 of the Standard Specifications. Cost included with Reinforcement Bars. Epoxy Coated. typ.
 ** Drill and grout bars 1'-4" min.
 *** Field verify.



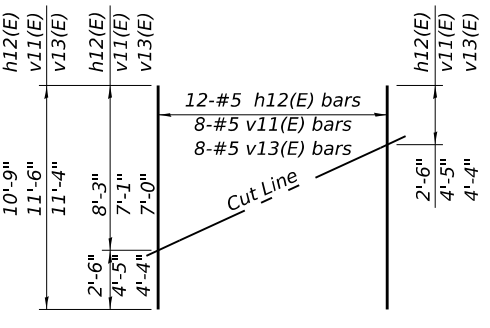
SEC. THRU ABUT.



PLAN

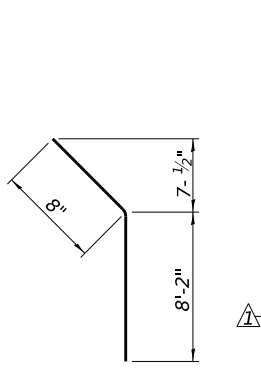


SECTION A-A
(Opposite Wing Similar)

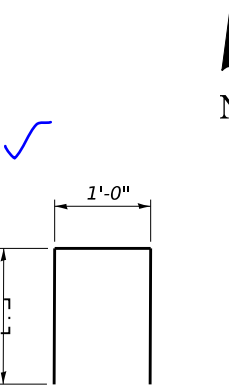


FIELD CUTTING DIAGRAM

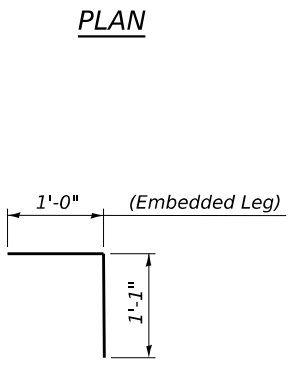
Order h12(E), v11(E) and v13(E) full length. Cut as shown and use remainder of bars in opposite face.



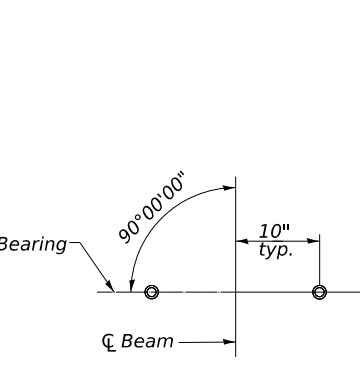
BAR h13(E)



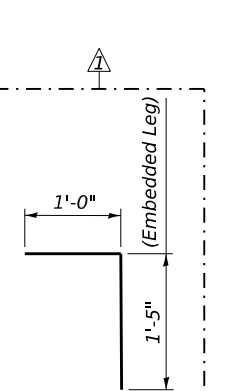
BAR u(E)



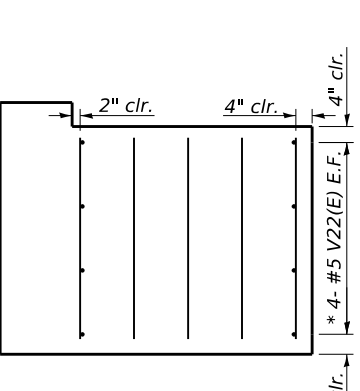
BAR v22(E)



ANCHOR BOLT LAYOUT



BAR v24(E)



SECTION B-B

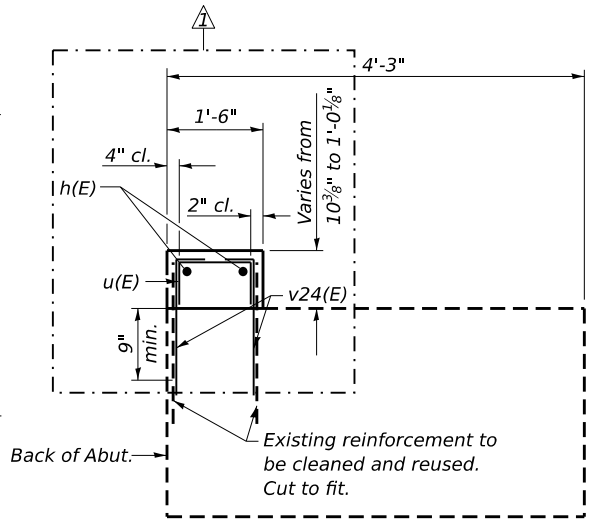
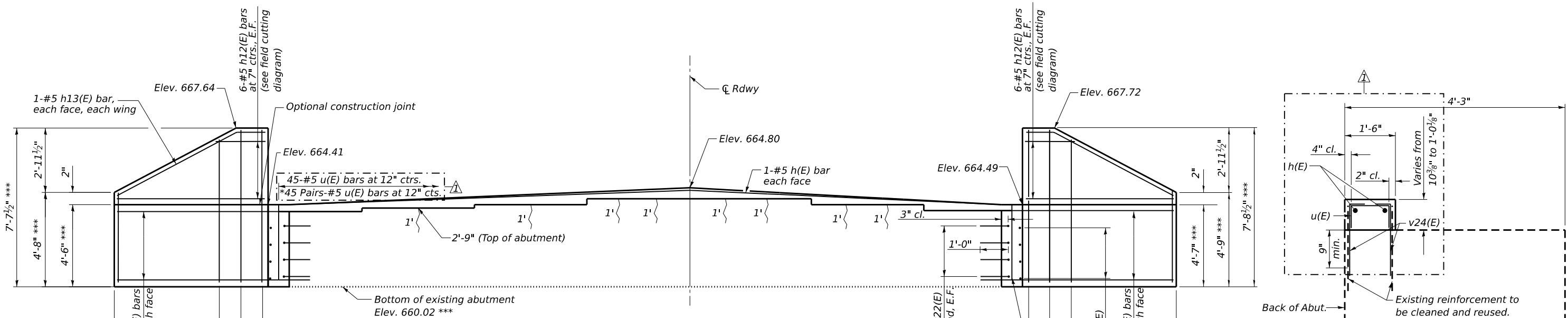
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	2	#5	42'-6"	—
h4(E)	8	#5	3'-11"	—
h11(E)	32	#5	10'-5"	—
h12(E)	12	#5	10'-9"	—
h13(E)	4	#5	8'-10"	—
u(E)	45	#5	2'-2"	—
v10(E)	4	#5	7'-3"	—
v11(E)	8	#5	11'-6"	—
v12(E)	4	#5	7'-2"	—
v13(E)	8	#5	11'-4"	—
v22(E)	16	#5	2'-1"	—
v23(E)	10	#5	3'-2"	—
v24(E)	90	#5	2'-5"	—
Structure Excavation		Cu. Yd.	65.4	
Concrete Structures		Cu. Yd.	6.4	
Reinforcement Bars, Epoxy Coated		Pound	1,290	
Epoxy Crack Injection		Foot	6	

Notes:
 Space reinforcement in cap to miss anchor bolts.
 Pour steps monolithically with cap.
 E.F. = each face
 Existing Reinforcement to be cleaned, straightened and incorporated into new construction. Cost included with concrete removal

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 DATE: 4-4-2025
 CHAMLIN & ASSOCIATES
 STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
 NORTH ABUTMENT STRUCTURE NO. 038-0007 (NB)
 SHEET 31 OF 43 SHEETS STA. TO STA.
 REV. 5/28/26

MODEL: Default
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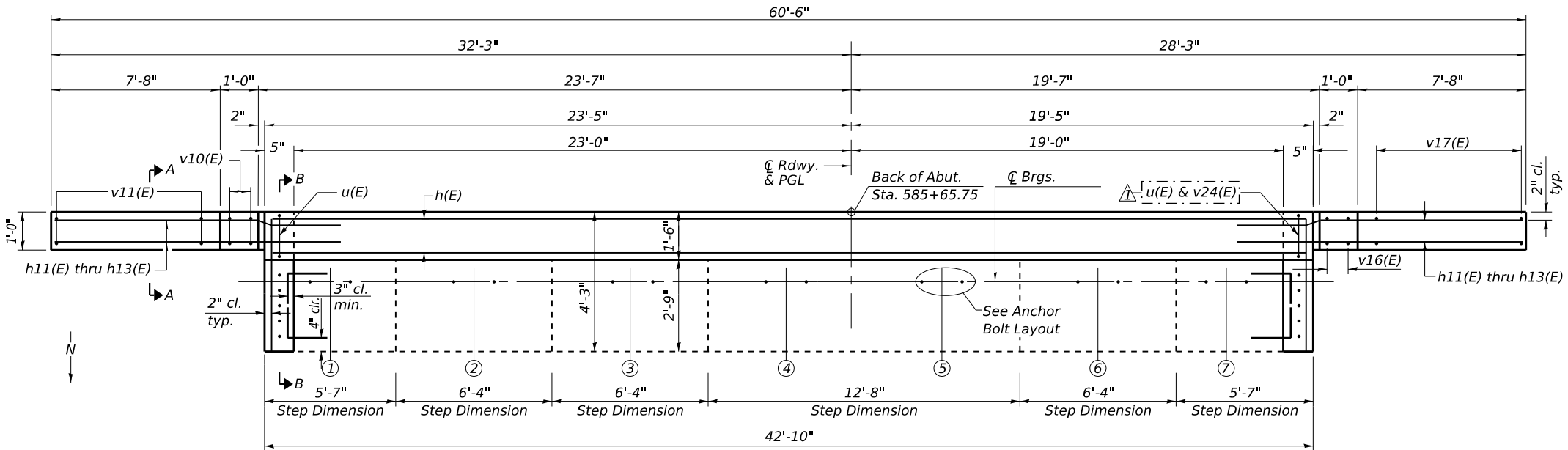


ELEVATION
 (Looking South)

* Drill and grout 9" min. embedment, U.N.O., to miss existing reinforcement according to Sec. 584 of the Standard Specifications. Cost included with Reinforcement Bars. Epoxy Coated. typ.

** Drill and grout bars 1'-4" min.

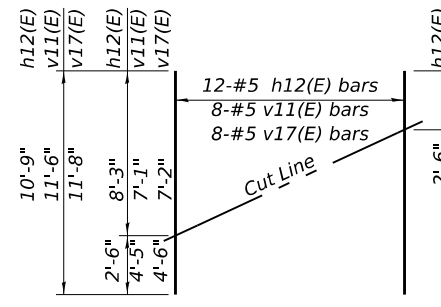
*** Field verify.



BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	2	#5	42'-6"	
h4(E)	8	#5	3'-11"	
h11(E)	34	#5	10'-5"	
h12(E)	12	#5	10'-9"	
h13(E)	4	#5	8'-10"	
u(E)	45	#5	2'-2"	
v10(E)	4	#5	7'-3"	
v11(E)	8	#5	11'-6"	
v16(E)	4	#5	7'-4"	
v17(E)	8	#5	11'-8"	
v22(E)	16	#5	2'-1"	
v23(E)	10	#5	3'-2"	
v24(E)	90	#5	2'-5"	
Structure Excavation		Cu. Yd.	65.7	
Concrete Structures		Cu. Yd.	6.8	
Reinforcement Bars, Epoxy Coated		Pound	1,310	
Epoxy Crack Injection		Foot	11	

SECTION A-A
 (Opposite Wing Similar)



BAR h13(E)

BAR u(E)

BAR v22(E)

ANCHOR BOLT LAYOUT

BAR v24(E)

SECTION B-B

~ Epoxy Crack Injection

Notes:
 Space reinforcement in cap to miss anchor bolts.
 Pour steps monolithically with cap.
 E.F. = each face

Existing Reinforcement to be cleaned, straightened and incorporated into new construction. Cost included with concrete removal

AI-SB-0

4-4-2025

USER NAME = CHAMLIN	DESIGNED - PDF	REVISED - 05/12/2026 PDF
	DRAWN - LAG	REVISED -
	CHECKED - JLS	REVISED -
PLOT DATE = 5/14/2026	DATE - 04/21/2025	REVISED -

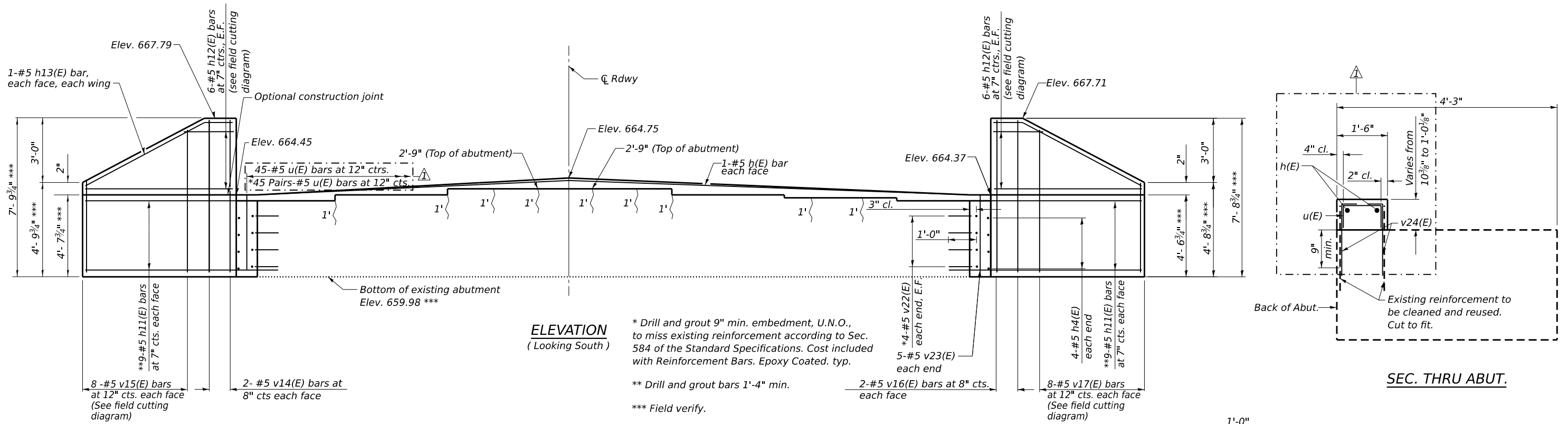
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOUTH ABUTMENT
STRUCTURE NO. 038-0007 (NB)

SCALE: SHEET 32 OF 43 SHEETS STA. TO STA.

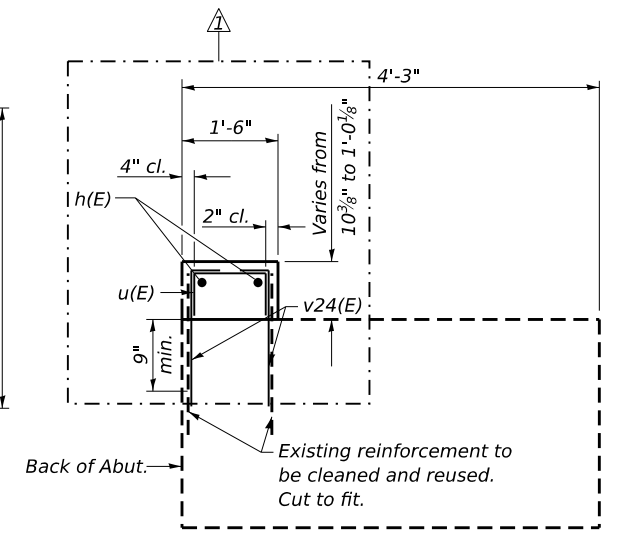
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(38-4, 38-5) BR. D. CR	IROQUOIS	437	256
CONTRACT NO. 66M80				
ILLINOIS		FED. AID PROJECT		

MODEL: Default
 FILE NAME: C:\Users\68501-05\DOT\1457 Structure Projects\TP&W RR and 2nd St\SURVEY D366M80\SN038-0007_0008\Consultant_Data\Chamlin_2025\Design\0380007_0008-56M80-034-S_ABUT_0008.dgn

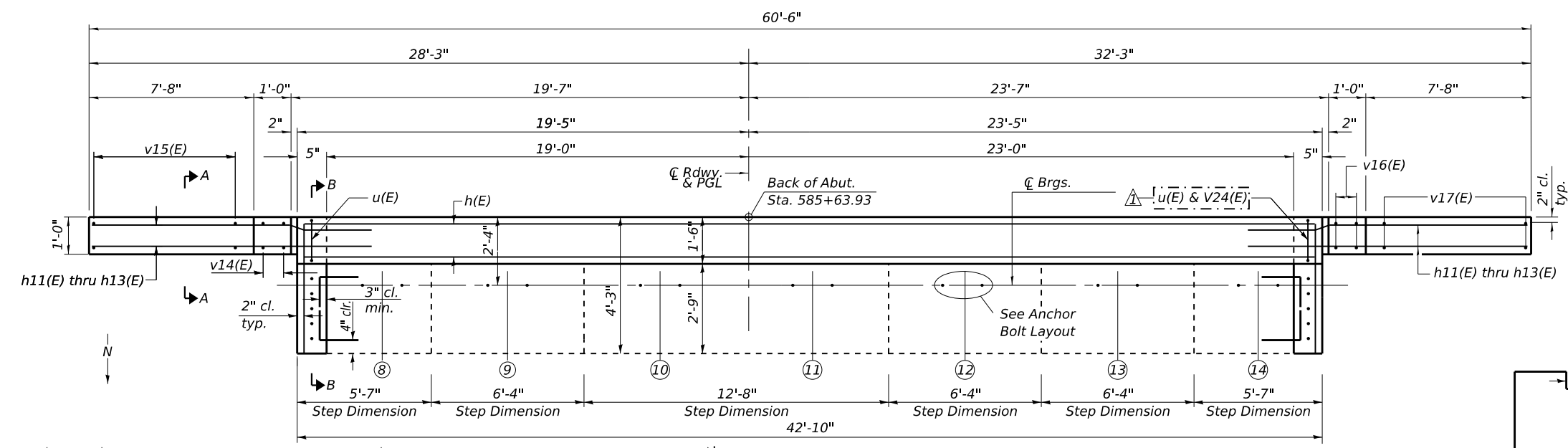


ELEVATION
 (Looking South)

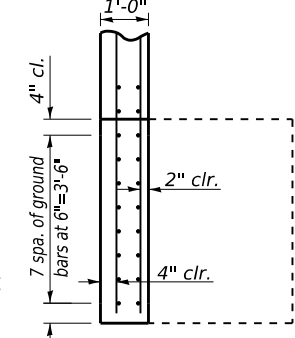
* Drill and grout 9" min. embedment, U.N.O., to miss existing reinforcement according to Sec. 584 of the Standard Specifications. Cost included with Reinforcement Bars. Epoxy Coated. typ.
 ** Drill and grout bars 1'-4" min.
 *** Field verify.



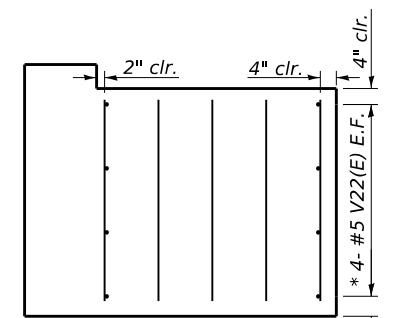
SEC. THRU ABUT.



PLAN



SECTION A-A
 (Opposite Wing Similar)



SECTION B-B

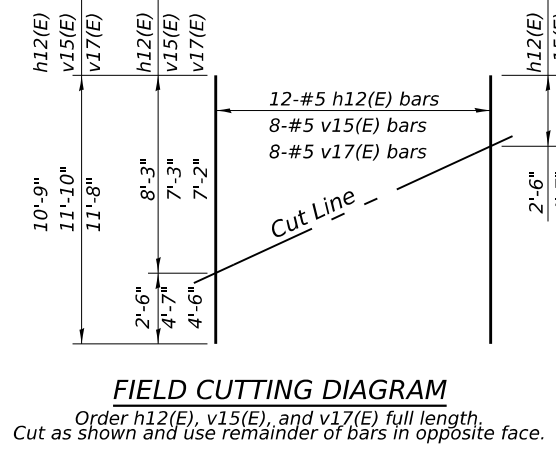
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	2	#5	42'-6"	—
h4(E)	8	#5	3'-11"	—
h11(E)	36	#5	10'-5"	—
h12(E)	12	#5	10'-9"	—
h13(E)	4	#5	8'-10"	—
u(E)	45	#5	2'-2"	┘
v14(E)	4	#5	7'-5"	—
v15(E)	8	#5	11'-10"	—
v16(E)	4	#5	7'-4"	—
v17(E)	8	#5	11'-8"	—
v22(E)	16	#5	2'-1"	┘
v23(E)	10	#5	3'-2"	—
v24(E)	90	#5	2'-5"	┘
Structure Excavation		Cu. Yd.	66.0	
Concrete Structures		Cu. Yd.	6.8	
Reinforcement Bars, Epoxy Coated		Pound	1,340	
Epoxy Crack Injection		Foot	15	

~ Epoxy Crack Injection

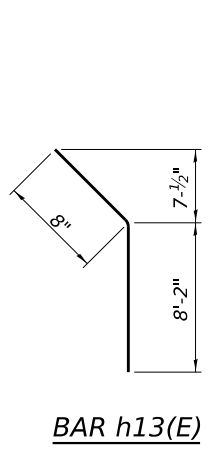
Notes:
 Space reinforcement in cap to miss anchor bolts.
 Pour steps monolithically with cap.
 E.F. = each face

Existing Reinforcement to be cleaned, straightened and incorporated into new construction. Cost included with concrete removal

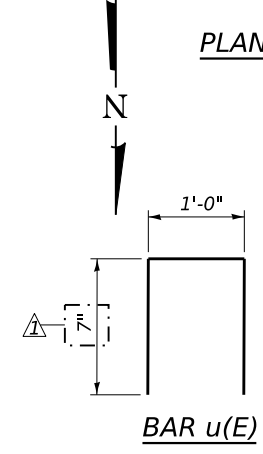


FIELD CUTTING DIAGRAM

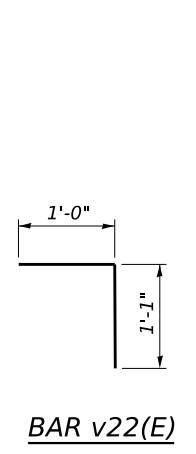
Order h12(E), v15(E), and v17(E) full length. Cut as shown and use remainder of bars in opposite face.



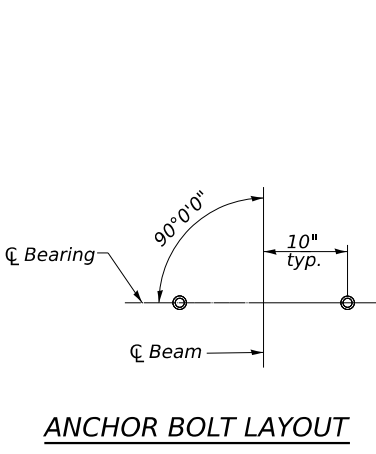
BAR h13(E)



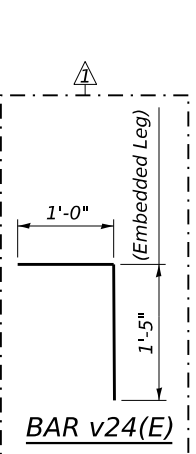
BAR u(E)



BAR v22(E)



ANCHOR BOLT LAYOUT



BAR v24(E)



USER NAME = CHAMLIN	DESIGNED - PDF	REVISED - 05/12/2026 PDF
	DRAWN - LAG	REVISED -
	CHECKED - JLS	REVISED -
DATE - 04/21/2025	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOUTH ABUTMENT
STRUCTURE NO. 038-0008 (SB)

SCALE: SHEET 34 OF 43 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(38-4, 38-5) BR. D. CR	IROQUOIS	437	258
CONTRACT NO. 66M80				
ILLINOIS FED. AID PROJECT				