MONTAGUE TOWN BRIDGES

BIN	Structure Number	Over	Under	41 Open Status	58 Deck Condition	59 Superstructure	60 Substructure Co	62 Culvert Conditio	Routine Inspection	Inspection Freque	Fracture Critical In	Special Member In
5Y3	M280055Y3MUNDUM	HWY PAPER MILL RD	WATER MILLERS RIVER	A	6	5	5	N	1/29/2018	24	1/29/2018	00/00/00
0R5	M280110R5MUNCLO	HWY SOLAR AVE	RR BMRR (ABANDONED)	K	0	5	6	N	2/12/1998	6	9/17/1998	00/00/00
5Y4	M280145Y4MUNPED	HWY E MINERAL RD	WATER MILLERS RIVER									
OR2	*M2816AOR2MUNNBI*	*HWY SIXTH ST*	*WATER UTILITY CANAL*	*K*	*4*	*6*	*6*	*N*	*9/23/2019*	*U*	*00/00/00*	*00/00/00*
0R3	M280160R3MUNCLO	HWY SIXTH ST	WATER UTILITY CANAL	K	0	3	6	N	7/22/1998	6	7/22/1998	00/00/00
0R4	M280170R4MUNNBI	HWY ELEVENTH ST	WATER UTILITY CANAL	P	7	6	5	N	11/15/2020	24	41900	00/00/00
AGH	M28022AGHMUNNBI	HWY S FERRY RD	WATER SAWMILL RIVER	A	7	8	8	N	5/4/2020	24	00/00/00	00/00/00
AGJ	M28023AGJMUNNBI	HWY MEADOW RD	WATER SAWMILL RIVER	A	7	**6**	7	N	12/5/2019	24	00/00/00	9/3/2011
0MB	M280240MBMUNNBI	HWY MAIN ST	WATER SAWMILL RIVER	A	7	6	6	N	11/12/2019	24	00/00/00	9/3/2011
0MC	M280250MCMUNNBI	HWY CENTER ST	WATER SAWMILL RIVER	P	5	3	6	N	10/30/2019	6	00/00/00	10/31/2018
0R6	M280260R6MUNNBI	HWY SOUTH ST	WATER SAWMILL RIVER	D	6	4	6	N	10/24/2019	12	00/00/00	10/17/2018
AQ9	M28028AQ9MUNNBI	HWY PROSPECT ST	HWY SPRING ST	A	8	8	8	N	10/17/2018	24	00/00/00	00/00/00
BVA	M28030BVAMUNBRI	HWY CHSTNT HL LO	WATER CHSTNT HL BRK	A	5	5	**2**	N	8/9/2019	6	00/00/00	2/5/2019
0MD	M280340MDMUNNBI	HWY N LEVERET RD	WATER SAWMILL RIVER	P	5	4	4	N	3/14/2019	12	00/00/00	3/14/2019
AP9	M28035AP9MUNNBI	HWY DAVIS RD	WATER LYONS BROOK	A	7	8	8	N	5/9/2020	24	00/00/00	00/00/00
5NB	M280365NBMUNBRI	HWY SWAMP RD	WATER GODDARD BROOK	A	5	5	6	N	5/3/2017	24	00/00/00	00/00/00
5NC	M280375NCMUNCUL	HWY E CHSTNT HL	WATER CHSTNT HL BRK	A	N	N	N	7	00/00/00	24	00/00/00	00/00/00
0R9	M280400R9MUNNBI	HWY SPLDNG BK RD	WATER SAWMILL RIVER	A	7	7	6	N	7/13/2017	24	00/00/00	00/00/00
0R8	M280410R8MUNNBI	HWY MORMN HLW RD	WATER LYONS BROOK	A	N	6	6	N	7/14/2017	24	00/00/00	00/00/00
63N	M2804363NMUNPED	OTHER 5TH ST PED	WATER UPPER CANAL									
63P	M2804463PMUNPED	OTHER PAPR MLL PED	WATER UPPER CANAL									

MONTAGUE TOWN BRIDGES

Structure Number Last 3 Characters

BRI=Less than NBI length, usually between 10 and 20' span - meets state definition of bridge, inspected by MassDOT

CLO=Bridge is Closed, No longer Inspected as required of NBI Bridges

CUL=Culvert, less than 10' span

DUM=Dummy entry - town-line bridge is inventoried under the number for the other town in this case Erving E-10-005

NBI=National Bridge Inventory bridge - meets fed definition of bridge >20' span, requires inspection at least every 2 years (inspected by MassDOT)

PED=Pedestrian bridge, not covered by law requiring inspection of highway bridges

Open Status

A=Open

D=Open with Temporary Shoring in Place

K=Closed

P=Posted for reduced load capacity

Fracture Critical Inspection

Additional inspection focused on bridges with members that the failure of a single major tension member or member element will cause a significant portion or the entire bridge to collapse due to a lack of redundancy

Generally this applies to truss bridges

Special Member Inspection

Once the condition of the deck, superstrucutre, or substrucutre falls to a condition rating of 4 (poor) or below,
that part gets inspected more frequently, every 12 months for a 4, every 6 months for a 3

MONTAGUE TOWN BRIDGES

Bridge Condition Ratings

N NOT APPLICABLE

9 EXCELLENT CONDITION

8 VERY GOOD CONDITION - no problems noted.

7 GOOD CONDITION - some minor problems.

6 SATISFACTORY CONDITION - structural elements show some minor deterioration.

5 FAIR CONDITION - all primary structural elements are sound but may have minor section loss, cracking, spalling or scour.

4 POOR CONDITION - advanced section loss, deterioration, spalling or scour.

3 SERIOUS CONDITION - loss of section, deterioration of primary structural elements. Fatigue cracks in steel or shear cracks in concrete may be present.

2 CRITICAL CONDITION - advanced deterioration of primary structural elements. Fatigue cracks in steel or shear cracks in concrete may be present or scour may have removed substructure support. Unless closely monitored it may be necessary to close the bridge until corrective action is taken.

1 "IMMINENT" FAILURE CONDITION - major deterioration or section loss present in critical sructural components or obvious vertical or horizontal movement affecting structure stability. Bridge is closed to traffic but corrective action may put it back in light service.

0 FAILED CONDITION - out of service; beyond corrective action.

MASSACHUSETTS DEPARTMENT OF TRANSPORTATION
STRUCTURES INSPECTION FIELD REPORT
ROUTINE & SPECIAL MEMBER INSPECTION

2-DIST	B.I.N.	BR. DEPT. NO.
02	0R2	M-28-16A

CITY/TOWN	8.-STRUCTURE NO.	11-Kilo. POINT	41-STATUS	90-ROUTINE INSP. DATE
MONTAGUE	M2816A-0R2-MUN-NBI	000.032	P:POSTED	SEP 23, 2019

07-FACILITY CARRIED	MEMORIAL NAME/LOCAL NAME	27-YR BUILT	106-YR REBUILT	YR REHAB'D (NON 106)
HWY SIXTH ST		1988	0000	0000

06-FEATURES INTERSECTED	26-FUNCTIONAL CLASS	DIST. BRIDGE INSPECTION ENGINEER M. Barrett
WATER UTILITY CANAL	Urban Local	

43-STRUCTURE TYPE	22-OWNER	21-MAINTAINER	TEAM LEADER S. R. Finck
310 : Steel Truss - Thru	Town Agency	Town Agency	

107-DECK TYPE	WEATHER	TEMP. (air)	TEAM MEMBERS
5 : Steel plate	Clear	26°C	W. MORIN

ITEM 58 — DECK: 4

		DEF
1.Wearing surface	N	-
2.Deck Condition	4	S-P
3.Stay in Place Forms	N	-
4.Curbs	6	-
5.Median	N	-
6.Sidewalks	N	-
7.Parapets	N	-
8.Railing	6	-
9.Anti Missile Fence	N	-
10.Drainage System	N	-
11.Lighting Standards	N	-
12.Utilities	7	-
13.Deck Joints	N	-
14.	N	-
15.	N	-
16.	N	-

CURB REVEAL (In millimeters)	N	S
	150	150

APPROACHES

		DEF
a. Appr. pavement condition	6	-
b. Appr. Roadway Settlement	7	-
c. Appr. Sidewalk Settlement	N	-
d.	N	-

OVERHEAD SIGNS (Attached to bridge) (Y/N): N

		DEF
a. Condition of Welds	N	-
b. Condition of Bolts	N	-
c. Condition of Signs	N	-

ITEM 59 — SUPERSTRUCTURE: 6

			DEF
1.Stringers		N	-
2.Floorbeams		7	-
3.Floor System Bracing		7	-
4.Girders or Beams		N	-
5.Trusses - General		6	-
a. Upper Chords	7		-
b. Lower Chords	6		-
c. Web Members	6		M-P
d. Lateral Bracing	7		-
e. Sway Bracings	N		-
f. Portals	N		-
g. End Posts	6		-
6.Pin & Hangers		N	-
7.Conn Plt's, Gussets & Angles		7	-
8.Cover Plates		N	-
9.Bearing Devices		7	-
10.Diaphragms/Cross Frames		N	-
11. Pins, Snap Rings		5	M-P
12.Welds		7	-
13.Member Alignment		7	-
14.Paint/Coating		5	M-P
15.		N	-

Year Painted: N

COLLISION DAMAGE: *Please explain*
None ( ) Minor (X) Moderate ( ) Severe ( )

LOAD DEFLECTION: *Please explain*
None (X) Minor ( ) Moderate ( ) Severe ( )

LOAD VIBRATION: *Please explain*
None (X) Minor ( ) Moderate ( ) Severe ( )

Any Fracture Critical Member: (Y/N) Y

Any Cracks: (Y/N) N

ITEM 60 — SUBSTRUCTURE: 6

	Dive	Cur		DEF
1. Abutments	Dive	Cur	6	
a. Pedestals	N	N		-
b. Bridge Seats	N	6		-
c. Backwalls	N	6		-
d. Breastwalls	N	6		M-P
e. Wingwalls	N	7		-
f. Slope Paving/Rip-Rap	N	6		M-P
g. Pointing	N	N		-
h. Footings	N	N		-
i. Piles	N	H		-
j. Scour	N	7		-
k. Settlement	N	7		-
l.	N	N		-
m.	N	N		-
2. Piers or Bents			N	
a. Pedestals	N	N		-
b. Caps	N	N		-
c. Columns	N	N		-
d. Stems/Webs/Pierwalls	N	N		-
e. Pointing	N	N		-
f. Footing	N	N		-
g. Piles	N	N		-
h. Scour	N	N		-
i. Settlement	N	N		-
j.	N	N		-
k.	N	N		-
3. Pile Bents			N	
a. Pile Caps	N	N		-
b. Piles	N	N		-
c. Diagonal Bracing	N	N		-
d. Horizontal Bracing	N	N		-
e. Fasteners	N	N		-

UNDERMINING (Y/N) If YES please explain: Y

COLLISION DAMAGE:
None (X) Minor ( ) Moderate ( ) Severe ( )

SCOUR: *Please explain*
None (X) Minor ( ) Moderate ( ) Severe ( )

I-60 (Dive Report): N *I-60 (This Report):* 6

93B-U/W (DIVE) Insp 00/00/0000

X=UNKNOWN N=NOT APPLICABLE H=HIDDEN/INACCESSIBLE R=REMOVED

CITY/TOWN	B.I.N.	BR. DEPT. NO.	8.-STRUCTURE NO.	INSPECTION DATE
MONTAGUE	0R2	M-28-16A	M2816A-0R2-MUN-NBI	SEP 23, 2019

ITEM 61 — CHANNEL & CHANNEL PROTECTION: 7

	Dive	Cur	DEF
1.Channel Scour	N	7	-
2.Embankment Erosion	N	6	M-P
3.Debris	N	6	M-P
4.Vegetation	N	N	-
5.Utilities	N	N	-
6.Rip-Rap/Slope Protection	N	N	-
7.Aggradation	N	7	-
8.Fender System	N	N	-

STREAM FLOW VELOCITY: Tidal ( ) High ( ) Moderate (X) Low ( ) None ( )

ITEM 61 (Dive Report): N *ITEM 61 (This Report):* 7

93b-U/W INSP. DATE: 00/00/0000

ITEM 36 — TRAFFIC SAFETY

	36	COND	DEF
A. Bridge Railing	0	6	M-P
B. Transitions	0	N	-
C. Approach Guardrail	0	5	M-P
D. Approach Guardrail Ends	0	6	-

WEIGHT POSTING — Not Applicable ☐

	H	3	3S2	Single
Actual Posting	20	25	36	N
Recommended Posting	20	25	36	N

Waived Date: 00/00/0000 EJDMT Date: 00/00/0000

	At bridge E	At bridge W	Other Advance E	Other Advance W
Signs In Place (Y=Yes,N=No, NR=NotRequired)	Y	NR	Y	Y
Legibility/ Visibility	7 / 7		7 / 7	7 / 7

CLEARANCE POSTING — Not (X)

	N ft	N in	S ft	S in	meter
Actual Field Measurement		0		0	
Posted Clearance		0		0	

Signs In Place (Y=Yes,N=No, NR=Not Required) / Legibility/ Visibility	At bridge N	At bridge S	Advance N	Advance S

ACCESSIBILITY (Y/N/P)

	Needed	Used
Lift Bucket	N	N
Ladder	N	N
Boat	N	N
Waders	N	N
Inspector 50	Y	Y
Rigging	N	N
Staging	N	N
Traffic Control	Y	Y
RR Flagger	N	N
Police	Y	Y
Other:		
	N	N

TOTAL HOURS 24

PLANS (Y/N): Y

(V.C.R.) (Y/N): N

TAPE#:

List of field tests performed:

RATING

Rating Report (Y/N): Y

Date: 03/01/2011

Inspection data at time of existing rating

I 58: 6 I 59: 7 I 60: 7 Date : 09/14/2007

(To be filled out by DBIE)

Request for Rating or Rerating (Y/N): N

If YES please give priority: HIGH ( ) MEDIUM ( ) LOW ( )

REASON:

CONDITION RATING GUIDE (For Items 58, 59, 60 and 61)

	CODE	CONDITION	DEFECTS
	N	NOT APPLICABLE	
G	9	EXCELLENT	Excellent condition.
G	8	VERY GOOD	No problem noted.
G	7	GOOD	Some minor problems.
F	6	SATISFACTORY	Structural elements show some minor deterioration.
F	5	FAIR	All primary structural elements are sound but may have minor section loss, cracking, spalling or scour.
P	4	POOR	Advanced section loss, deterioration, spalling or scour.
P	3	SERIOUS	Loss of section, deterioration, spalling or scour have seriously affected primary structural components. Local failures are possible. Fatigue cracks in steel or shear cracks in concrete may be present.
C	2	CRITICAL	Advanced deterioration of primary structural elements. Fatigue cracks in steel or shear cracks in concrete may be present or scour may have removed substructure support. Unless closely monitored it may be necessary to close the bridge until corrective action is taken.
C	1	"IMMINENT" FAILURE	Major deterioration or section loss present in critical structural components or obvious vertical or horizontal movement affecting structure stability. Bridge is closed to traffic but corrective action may put it back in light service.
	0	FAILED	Out of service - beyond corrective action.

DEFICIENCY REPORTING GUIDE

DEFICIENCY: A defect in a structure that requires corrective action.

CATEGORIES OF DEFICIENCIES:

M= Minor Deficiency - Deficiencies which are minor in nature, generally do not impact the structural integrity of the bridge and could easily be repaired. Examples include but are not limited to: Spalled concrete, Minor pot holes, Minor corrosion of steel, Minor scouring, Clogged drainage, etc.

S= Severe/Major Deficiency - Deficiencies which are more extensive in nature and need more planning and effort to repair. Examples include but are not limited to: Moderate to major deterioration in concrete, Exposed and corroded rebars, Considerable settlement, Considerable scouring or undermining, Moderate to extensive corrosion to structural steel with measurable loss of section, etc.

C-S= Critical Structural Deficiency - A deficiency in a structural element of a bridge that poses an extreme unsafe condition due to the failure or imminent failure of the element which will affect the structural integrity of the bridge.

C-H= Critical Hazard Deficiency - A deficiency in a component or element of a bridge that poses an extreme hazard or unsafe condition to the public, but does not impair the structural integrity of the bridge. Examples include but are not limited to: Loose concrete hanging down over traffic or pedestrians, A hole in a sidewalk that may cause injuries to pedestrians, Missing section of bridge railing, etc.

URGENCY OF REPAIR:

I = Immediate- [Inspector(s) immediately contact District Bridge Inspection Engineer (DBIE) to report the Deficiency and to receive further instruction from him/her].

A = ASAP- [Action/Repair should be initiated by District Maintenance Engineer or the Responsible Party (if not a State owned bridge) upon receipt of the Inspection Report].

P = Prioritize- [Shall be prioritized by District Maintenance Engineer or the Responsible Party (if not a State owned bridge) and repairs made when funds and/or manpower is available].

STRUCTURES INSPECTION FIELD REPORT

ROUTINE & SPECIAL MEMBER INSPECTION

2-DIST	B.I.N.	BR. DEPT. NO.
02	0R2	M-28-16A

CITY/TOWN	8.-STRUCTURE NO.	11-Kilo. POINT	90-ROUTINE INSP. DATE	93*-SPEC. MEMB. INSP. DATE
MONTAGUE	M2816A-0R2-MUN-NBI	000.032	Sep 23, 2019	Sep 23, 2019

07-FACILITY CARRIED	MEMORIAL NAME/LOCAL NAME	27-YR BUILT	106-YR REBUILT	*YR REHAB'D (NON 106)
HWY SIXTH ST		1988	0000	0000

06-FEATURES INTERSECTED	26-FUNCTIONAL CLASS	DIST. BRIDGE INSPECTION ENGINEER
WATER UTILITY CANAL	Urban Local	M. Barrett

43-STRUCTURE TYPE	22-OWNER	21-MAINTAINER	TEAM LEADER
310 : Steel Truss - Thru	Town Agency	Town Agency	S. R. Finck

107-DECK TYPE	WEATHER	TEMP. (air)	TEAM MEMBERS
5 : Steel plate	Clear	26°C	W. MORIN

WEIGHT POSTING — *Not Applicable* ☐

	H	3	3S2	Single
Actual Posting	20	25	36	N
Recommended Posting	20	25	36	N

Waived Date: 00/00/0000 EJDMT Date: 00/00/0000

Signs In Place (Y=Yes,N=No, NR=Not Required) / Legibility/ Visibility

	At bridge E	At bridge W	Advance E	Advance W
Signs In Place	Y	NR	Y	Y
Legibility/ Visibility	7/7		7/7	7/7

PLANS (Y/N): Y

(V.C.R.) (Y/N): N

TAPE#:

RATING

Rating Report (Y/N): Y Date: 03/01/2011

Request for Rating or Rerating (Y/N): N

If YES please give priority: HIGH ( ) MEDIUM ( ) LOW ( )

REASON:

Inspection data at time of existing rating

I 58: 6 I 59: 7 I 60: 7 I 62: - Date :09/14/2007

SPECIAL MEMBER(S):

	MEMBER	CRACK (Y/N):	WELD'S CONDITION (0-9)	LOCATION OF CORROSION, SECTION LOSS (%), CRACKS, COLLISION DAMAGE, STRESS CONCENTRATION, ETC.	CONDITION PREVIOUS (0-9)	CONDITION PRESENT (0-9)	INV. RATING OF MEMBER FROM RATING ANALYSIS H-20	3	3S2	Deficiencies
A	Item 58.2 - Deck Condition	N		See remarks in comments section.	5	4	20	48	75	S-P
B										
C										
D										
E										

List of field tests performed:

-

	I-58	I-59	I-60	I-62
(Overall Previous Condition)	5	6	7	-
(Overall Current Condition)	4	6	6	-

DEFICIENCY: A defect in a structure that requires corrective action.

CATEGORIES OF DEFICIENCIES:

M= Minor Deficiency - Deficiencies which are minor in nature, generally do not impact the structural integrity of the bridge and could easily be repaired. Examples include but are not limited to: Spalled concrete, Minor pot holes, Minor corrosion of steel, Minor scouring, Clogged drainage, etc.

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C-S= Critical Structural Deficiency - A deficiency in a structural element of a bridge that poses an extreme unsafe condition due to the failure or imminent failure of the element which will affect the structural integrity of the bridge.

C-H= Critical Hazard Deficiency - A deficiency in a component or element of a bridge that poses an extreme hazard or unsafe condition to the public, but does not impair the structural integrity of the bridge. Examples include but are not limited to: Loose concrete hanging down over traffic or pedestrians, A hole in a sidewalk that may cause injuries to pedestrians, Missing section of bridge railing, etc.

URGENCY OF REPAIR:

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A = ASAP- [Action/Repair should be initiated by District Maintenance Engineer or the Responsible Party (if not a State owned bridge) upon receipt of the Inspection Report].

P = Prioritize- [Shall be prioritized by District Maintenance Engineer or the Responsible Party (if not a State owned bridge) and repairs made when funds and/or manpower is available].

X=UNKNOWN **N=NOT APPLICABLE** **H=HIDDEN/INACCESSIBLE** **R=REMOVED**

CITY/TOWN	B.I.N.	BR. DEPT. NO.	8.-STRUCTURE NO.	INSPECTION DATE
MONTAGUE	0R2	M-28-16A	M2816A-0R2-MUN-NBI	SEP 23, 2019

REMARKS

BRIDGE ORIENTATION

Bridge carries Sixth Street, east to west, over the Utility Canal which flows north to south.

Trusses are labeled north and south. The 32 panels and 32 floorbeams of the ACROW panel bridge are numbered from west to east. **See Sketches 1 - 5.**

GENERAL REMARKS

Traffic Direction:

Bridge is open to one-way traffic, traveling east to west.

Weight Posting:

East Weight Posting sign acts as both the "Advance" and "At Bridge".

West Approach to the bridge has two "DO NOT ENTER" signs along with a "Advance" Weight Posting. **See Photo 1.**

ITEM 58 - DECK

Item 58.2 - Deck Condition

Deck consists of Steel Deck Panels, 27.5" wide x 5' long with five, longitudinal joists (stringers). Each longitudinal joist is 5' long, with flanges, 2" wide x 0.25" thick and webs, 4" high x 025" thick. **See Sketch 5.**

Each Steel Deck Unit is numbered, west to east, per panel location (area between floorbeams), and then from north to south.

Steel Deck Units:

- Have some pack rusting between the top flange of the fascia stringers and the steel panels, making the top surface bumpy.
- Some of the Steel Deck Units, have holes, near the outer edges of the panels. **See Photo 2.**
  - Panels 5 & 6, Deck Unit 4
  - Panel 31, Deck Unit 4

Deck Underside:

- Fascia Stringers have rust delamination with section loss.
- Following deck units have rust holes in the web and bottom flanges: **See Photo 3.**
  - Panel 5, Deck Unit 3
  - Panel 6, Deck Units 2, 4, & 5
  - Panels 7, 8, & 9, Deck Unit 5
  - Panel 11, Deck Unit 4
  - Panel 12, Deck Units 4 & 6
  - Panel 14, Deck Unit 2
  - Panel 22, Deck Unit 1

Anchor Clips at several locations are either broken or loose:

- Between Floorbeams 7 & 8.
- Between Floorbeams 8 & 9.
- Between Floorbeams 14 & 15.
- Between Floorbeams 17 & 18.
- Between Floorbeams 20 & 21.

CITY/TOWN	B.I.N.	BR. DEPT. NO.	8.-STRUCTURE NO.	INSPECTION DATE
MONTAGUE	0R2	M-28-16A	M2816A-0R2-MUN-NBI	SEP 23, 2019

REMARKS

Item 58.4 - Curbs
Steel Curbs are the angles along the outer edges of the steel deck. **See Sketch 3.**

Curbs have random scrape marks along the length of the bridge.

North and South Curbs, at the East End, are bent due to collision damage. **See Photo 4.**

Item 58.8 - Railing
Bridge Railing is continuous with the approach guardrail, which consists of single panel steel W-beam guardrail attached to H-posts.

Some of the bolts connected to vertical truss members and some of U-bolts are broken or missing.

South Railing & South Truss, West End, are covered by vegetation.

Item 58.12 - Utilities
2" diameter metal conduit that travels along the outside face of the South Truss.

APPROACHES

Approaches a - Appr. pavement condition
East Approach Roadway has a large HMA patch next to the concrete header.

West Approach Roadway has HMA patching along the edge of the concrete header, there is a full width transverse crack x 1/2" wide within the HMA patch.

ITEM 59 - SUPERSTRUCTURE

Item 59.2 - Floorbeams
Floorbeams have areas of minor surface rust. **See Photo 5.**

Some Floorbeams are slightly lifting up from the floorbeam bracing system. **See Photo 6.**

Item 59.3 - Floor System Bracing
Floorbeam Bracing System has areas of light rust staining. **See Photo 6.**

Item 59.5 - Trusses - General
Item 59.5.a - Upper Chords
Top surface of Upper Chords have areas of light rust staining. **See Photo 7.**

Item 59.5.b - Lower Chords
A few small dents scattered throughout the lower chord. **See Photo 8.**

North Truss, Interior Lower Chord, next to the East Backwall is bent. Appears to be from original construction. Exterior Lower Chord (at the same location) is "NOT" bend or twisted. **See Photos 9 & 10.**

North Truss, Lower Chord, West Abutment, is almost in contact with the top of the canal wall, leaving only 1/2" of clearance. **See Photo 11.**

CITY/TOWN	B.I.N.	BR. DEPT. NO.	8.-STRUCTURE NO.	INSPECTION DATE
MONTAGUE	0R2	M-28-16A	M2816A-0R2-MUN-NBI	SEP 23, 2019

REMARKS

Item 59.5.c - Web Members
North Truss, Northeast End Post, Interior Web Member Base, is bent from collision damage.

Item 59.5.g - End Posts
Northeast End Post, interior vertical web member base, is bent from collision damage. **See Photo 12.**

Item 59.11 - Pins, Snap Rings
Panel connections between each Truss is held in place by 10 pins with snap rings on each end of the pin.

A few of these snap rings are corroded.

Item 59.14 - Paint/Coating
Galvanized Coating on the entire superstructure is fading. **See Photos 5, 6, & 7.**

SuperStructure Collision Notes
There is minor collision damage to the northeast corner of the bridge. See Photo 12.

ITEM 60 - SUBSTRUCTURE

Item 60.1 - Abutments
Item 60.1.b - Bridge Seats
West Bridge Seat is covered with road sand and dead vegetation. **See Photos 9 & 10.**

Item 60.1.c - Backwalls
Top of the Backwalls are the concrete headers at the deck ends.

East Concrete Header, top South End, is spalled. **See Photo 13.**

Item 60.1.d - Breastwalls
East & West Stub Abutments for this bridge are 6' to 8' behind the canal walls.

East Breastwall, under the south truss, has a 4' long x up to 1/8" wide horizontal crack. **See Photo 14.**

Item 60.1.f - Slope Paving/Rip-Rap
Stub Abutments for this bridge are behind the concrete canal walls, which provide protection for both abutments.

SubStructure Undermining Notes
East stub abutment rests on 1" diameter stone and piles. The breastwall is 24' wide x 8' deep from the front face to the back surface. The base of the breastwall is undermined, 18' wide x up to 1' high x up to 20" penetration. See Photo 15.

ITEM 61 - CHANNEL AND CHANNEL PROTECTION

Item 61.2 - Embankment Erosion
East Breastwall is undermined along the front face, 24' length x 1' height x 20" penetration. **See Photo 15.**

Item 61.3 - Debris
Canal has miscellaneous debris (tires, logs, bikes, etc).

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REMARKS

TRAFFIC SAFETY

Item 36a - Bridge Railing
Refer to Item 58.8. - Railing.

Item 36b - Transitions
Approach guardrail travels across the bridge from approach to approach, with no transition.

Item 36c - Approach Guardrail
Approach guardrails consist of single panel steel W-beam on steel H-posts with steel offset blocks.

Southwest & Southeast approach guardrails have some scrapes.

Item 36d - Approach Guardrail Ends
Southwest Approach Guardrail continues beyond the limits of the bridge.

Northwest, Northeast, & Southeast approach guardrails have terminal ends.

Northwest Approach Guardrail End has collision damage. **See Photo 16.**

Sketch / Photo Log

Sketch 1 : Plan
Sketch 2 : South Elevation
Sketch 3 : Cross Section
Sketch 4 : ACROW Panel Details
Sketch 5 : Steel Deck Panel Unit with five longitudinal joists (stringers)
Photo 1 : West Approach, has two "DO NOT ENTER" signs along with a "Advance" Weight Posting.
Photo 2 : Steel Deck Panels have some pack rusting, between top flange of the fascia joints and steel panels. A few Deck Panels have through holes near the outer edges of the panels.
Photo 3 : Deck Underside has rust delamination with section loss of some fascia stringers. Stringers have rust holes through the webs and bottom flanges.
Photo 4 : Northeast corner of the Steel Curb is bent due to collision damage.
Photo 5 : Floorbeams have areas of minor surface rust. West Abutment is undermined.
Photo 6 : Some Floorbeams, are slightly lifting up from Floorbeam Bracing System. Floorbeam Bracing System has areas of light rust staining.
Photo 7 : Top surface of Upper Chords have areas of light rust staining.
Photo 8 : Lower Cord has a few small dents scattered throughout the bridge.
Photo 9 : North Truss, Lower Interior Cord, East Back Wall, is bent and twisted. This appears to be from original construction.
Photo 10 : North Truss, Lower Exterior Cord, East Back Wall is "NOT" bent or twisted.
Photo 11 : North Truss, Lower Chord, West Abutment, is almost in contact with the top of the canal wall, leaving only 1/2" of clearance.
Photo 12 : Northeast End Post, interior vertical web member base, is bent from collision damage.
Photo 13 : East Concrete Header, South End, is spalled.
Photo 14 : East Breastwall, under South Truss, has a 4' long x up to 1/8" wide horizontal crack.
Photo 15 : East Breastwall is undermined along the front face with up to 20" penetration.
Photo 16 : Northwest Approach Guardrail End has collision damage at the bridge abutment.

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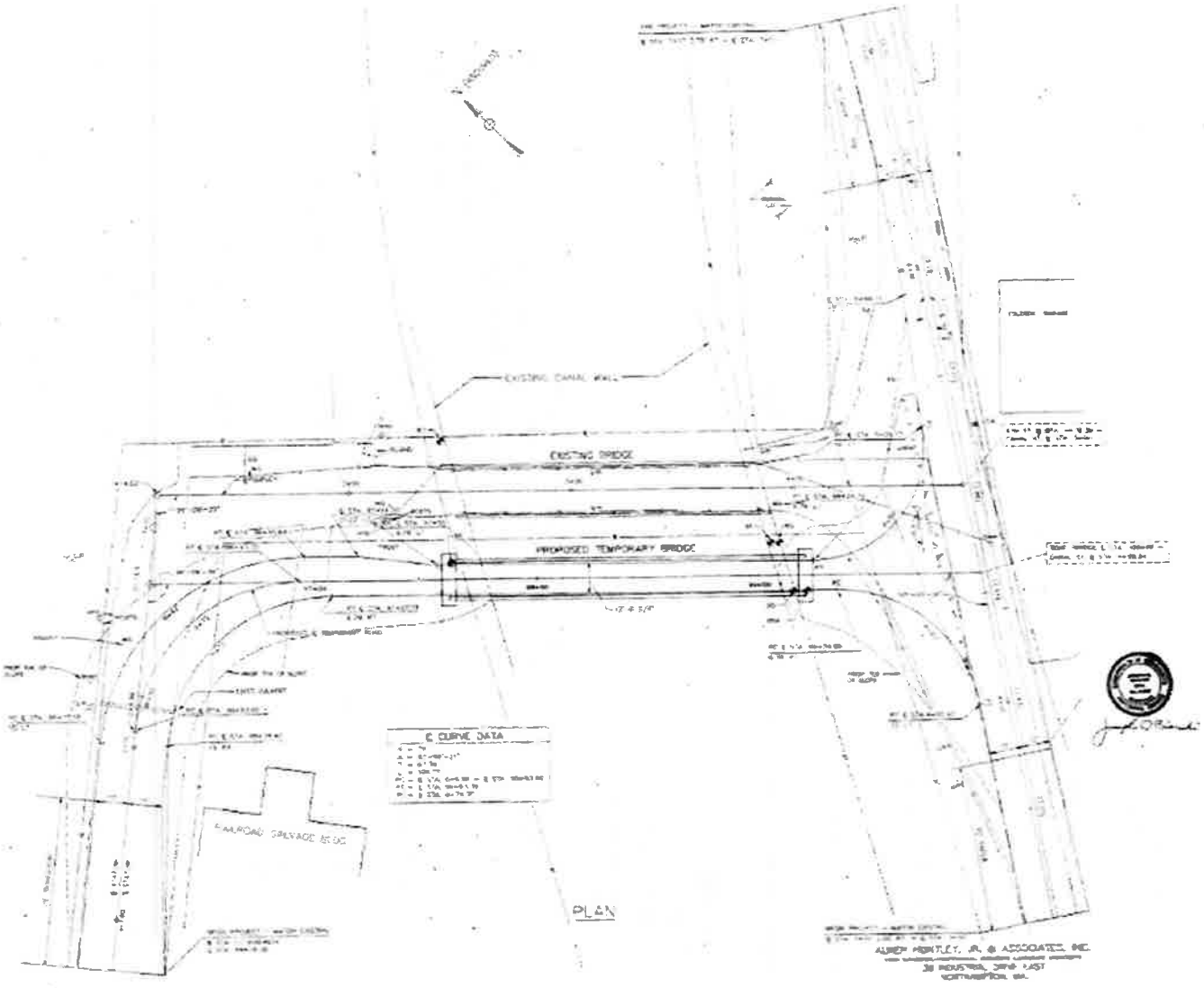
SKETCHES



Sketch 1: Plan

CITY/TOWN	B.I.N.	BR. DEPT. NO.	8.-STRUCTURE NO.	INSPECTION DATE
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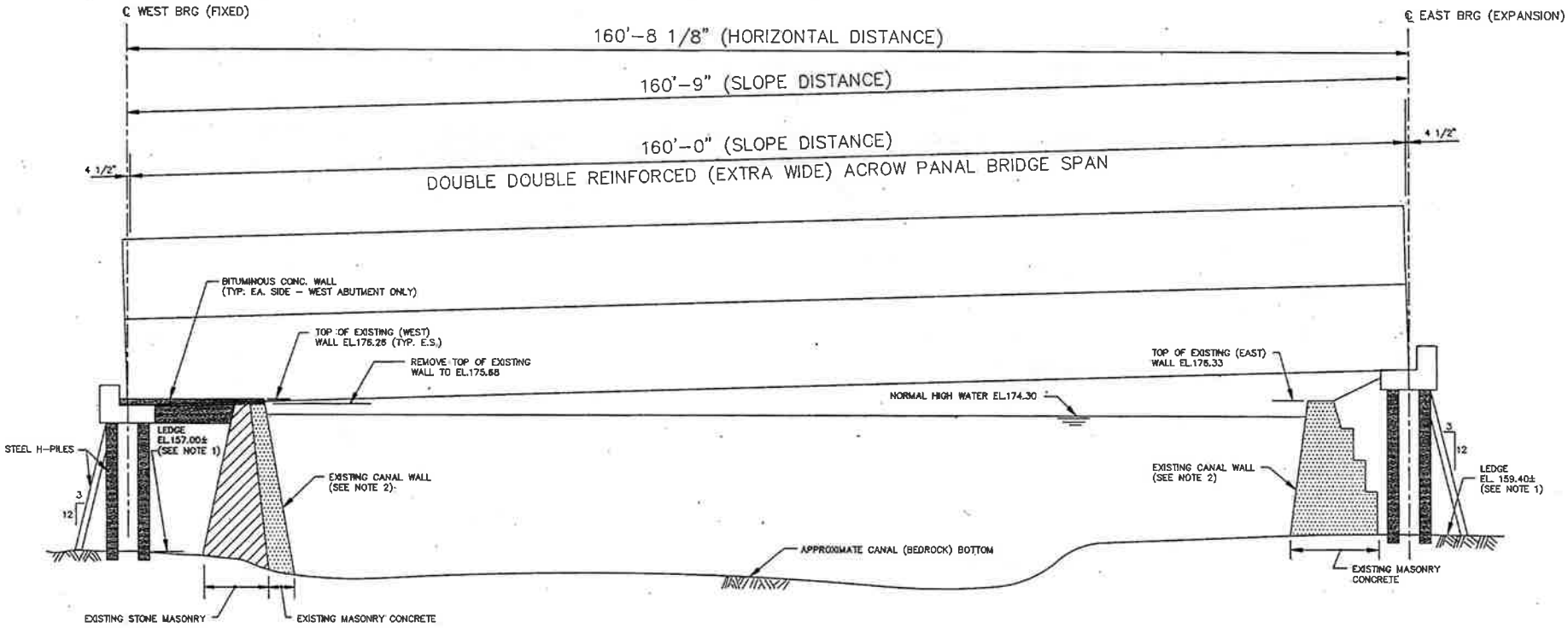
SKETCHES



SOUTH ELEVATION

Sketch 2: South Elevation

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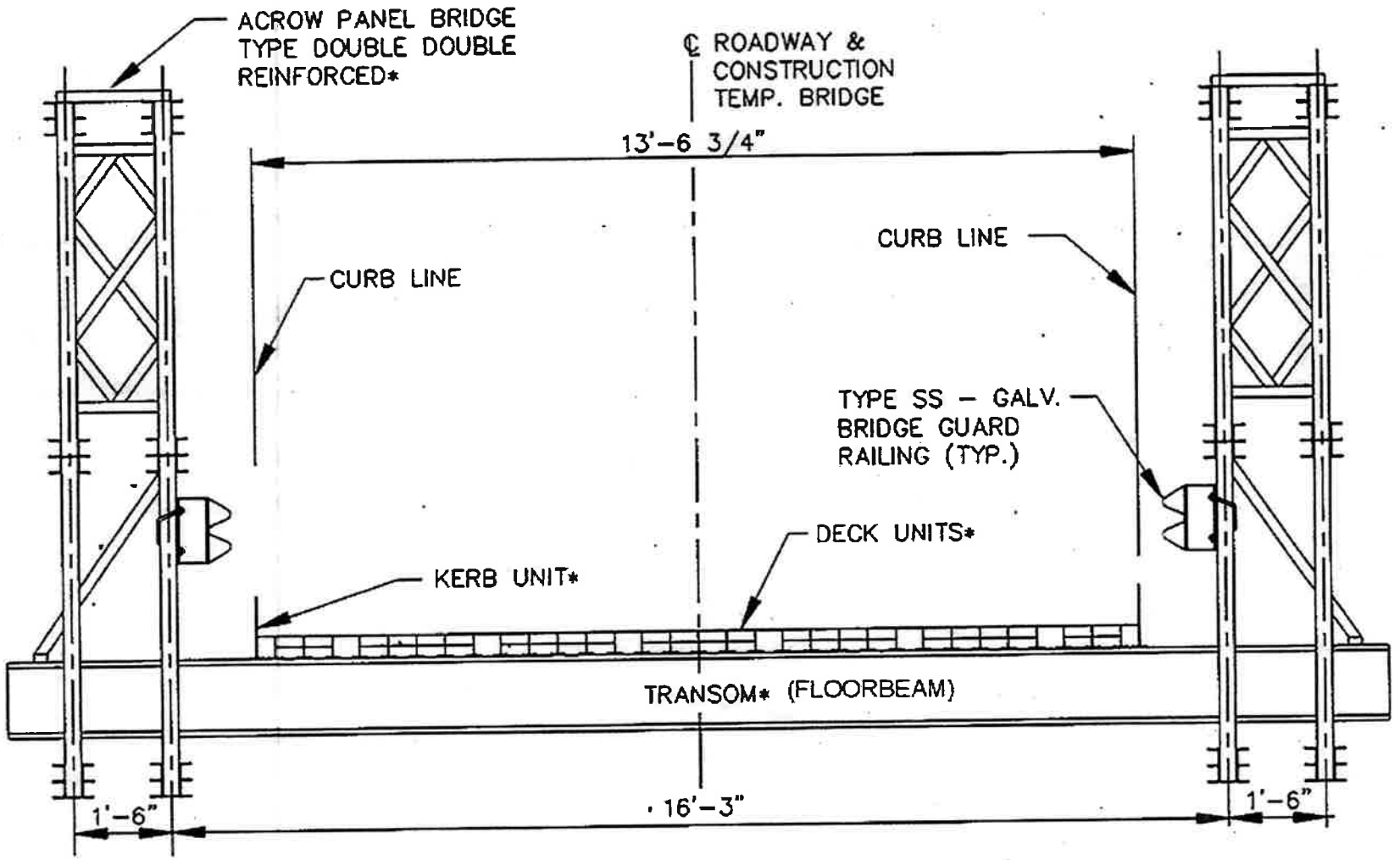
SKETCHES



TYPICAL SECTION

Sketch 3: **Cross Section**

CITY/TOWN	B.I.N.	BR. DEPT. NO.	8.-STRUCTURE NO.	INSPECTION DATE
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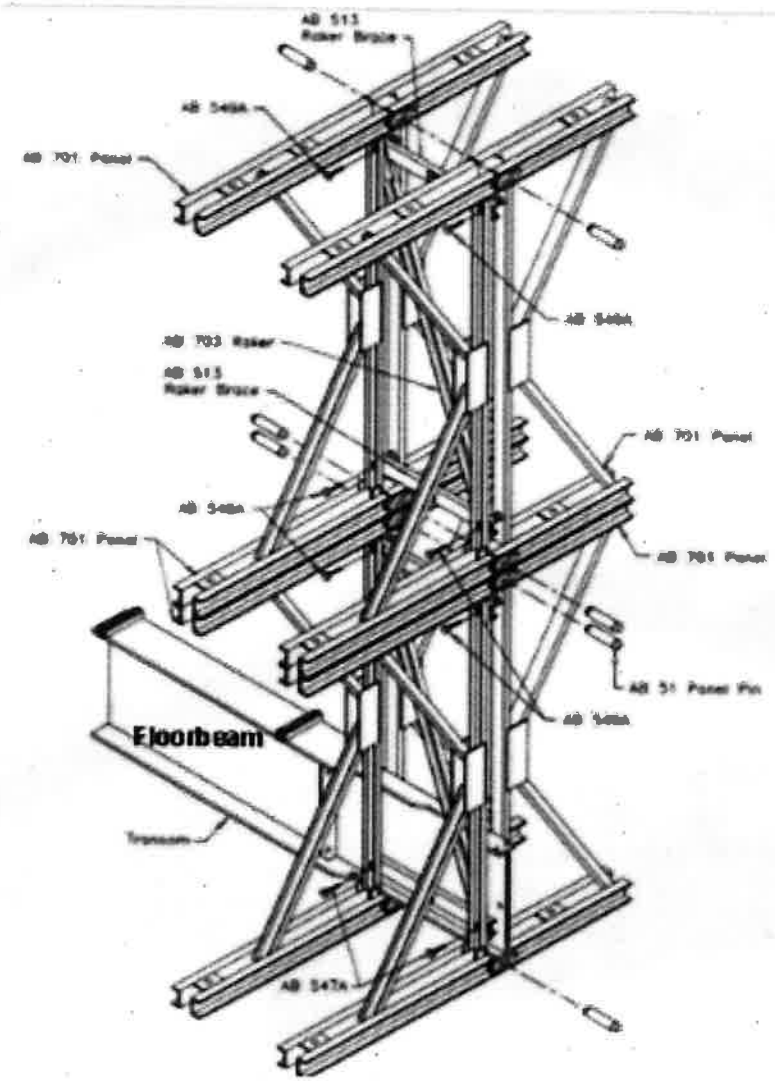
SKETCHES



Sketch 4: **ACROW Panel Details**

CITY/TOWN	B.I.N.	BR. DEPT. NO.	8.-STRUCTURE NO.	INSPECTION DATE
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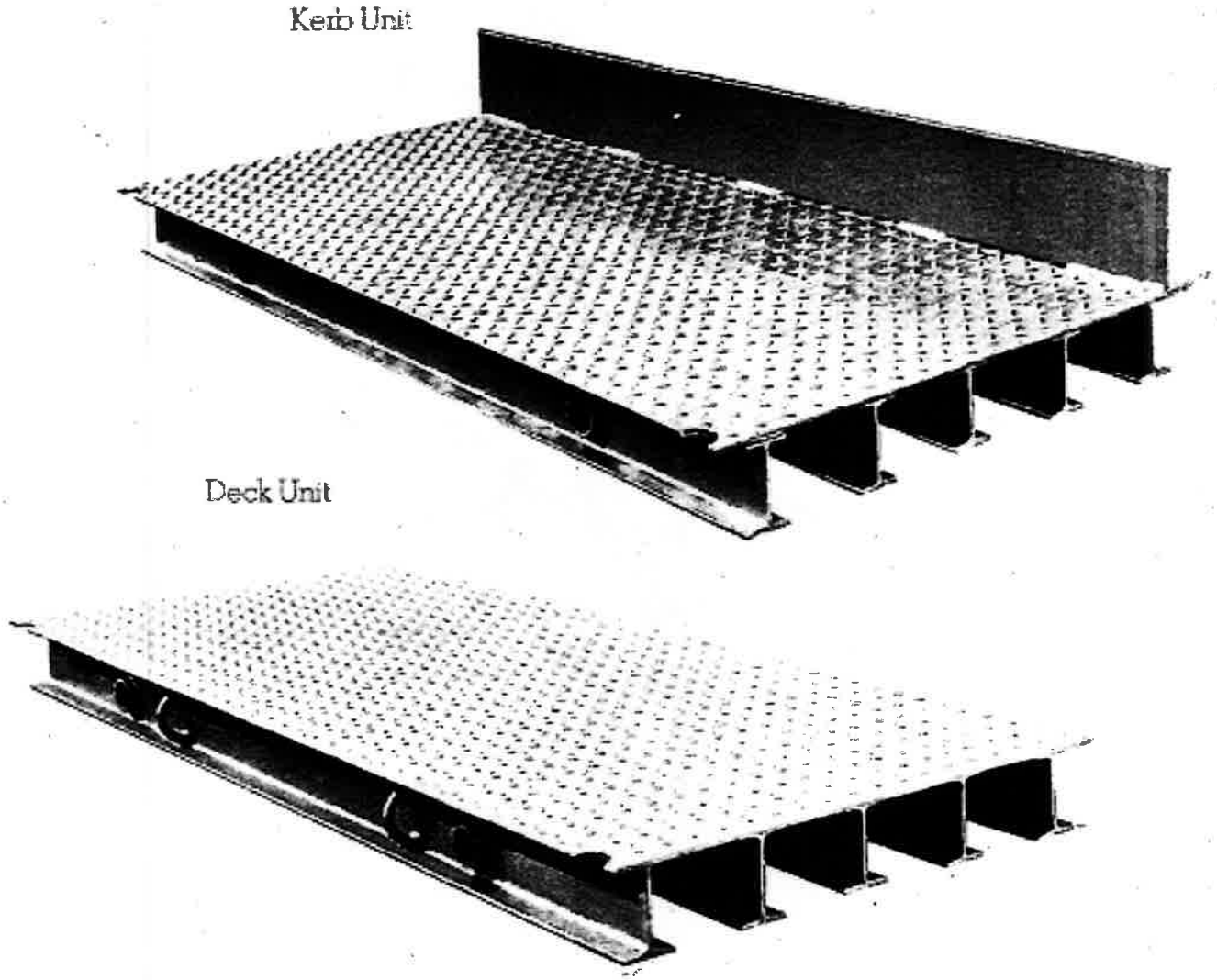

Sketch 5: **Steel Deck Panel Unit with five longitudinal joists (stringers)**

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PHOTOS

Photo 1: West Approach, has two "DO NOT ENTER" signs along with a "Advance" Weight Posting.

Photo 2: Steel Deck Panels have some pack rusting, between top flange of the fascia joints and steel panels. A few Deck Panels have through holes near the outer edges of the panels.

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PHOTOS

Photo 3: Deck Underside has rust delamination with section loss of some fascia stringers. Stringers have rust holes through the webs and bottom flanges.

Photo 4: Northeast corner of the Steel Curb is bent due to collision damage.

CITY/TOWN	B.I.N.	BR. DEPT. NO.	8.-STRUCTURE NO.	INSPECTION DATE
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PHOTOS

Photo 5: Floorbeams have areas of minor surface rust. West Abutment is undermined.

Photo 6: Some Floorbeams, are slightly lifting up from Floorbeam Bracing System. Floorbeam Bracing System has areas of light rust staining.

CITY/TOWN	B.I.N.	BR. DEPT. NO.	8.-STRUCTURE NO.	INSPECTION DATE
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PHOTOS

Photo 7: Top surface of Upper Chords have areas of light rust staining.

Photo 8: Lower Cord has a few small dents scattered throughout the bridge.

CITY/TOWN	B.I.N.	BR. DEPT. NO.	8.-STRUCTURE NO.	INSPECTION DATE
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PHOTOS

Photo 9: North Truss, Lower Interior Cord, East Back Wall, is bent and twisted. This appears to be from original construction.

Photo 10: North Truss, Lower Exterior Cord, East Back Wall is "NOT" bent or twisted.

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PHOTOS

Photo 11: North Truss, Lower Chord, West Abutment, is almost in contact with the top of the canal wall, leaving only 1/2" of clearance.

Photo 12: Northeast End Post, interior vertical web member base, is bent from collision damage.

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PHOTOS

Photo 13: East Concrete Header, South End, is spalled.

Photo 14: East Breastwall, under South Truss, has a 4' long x up to 1/8" wide horizontal crack.

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PHOTOS

Photo 15: East Breastwall is undermined along the front face with up to 20" penetration.

Photo 16: Northwest Approach Guardrail End has collision damage at the bridge abutment.

CITY/TOWN	B.I.N.	BR. DEPT. NO.	8.-STRUCTURE NO.	INSPECTION DATE
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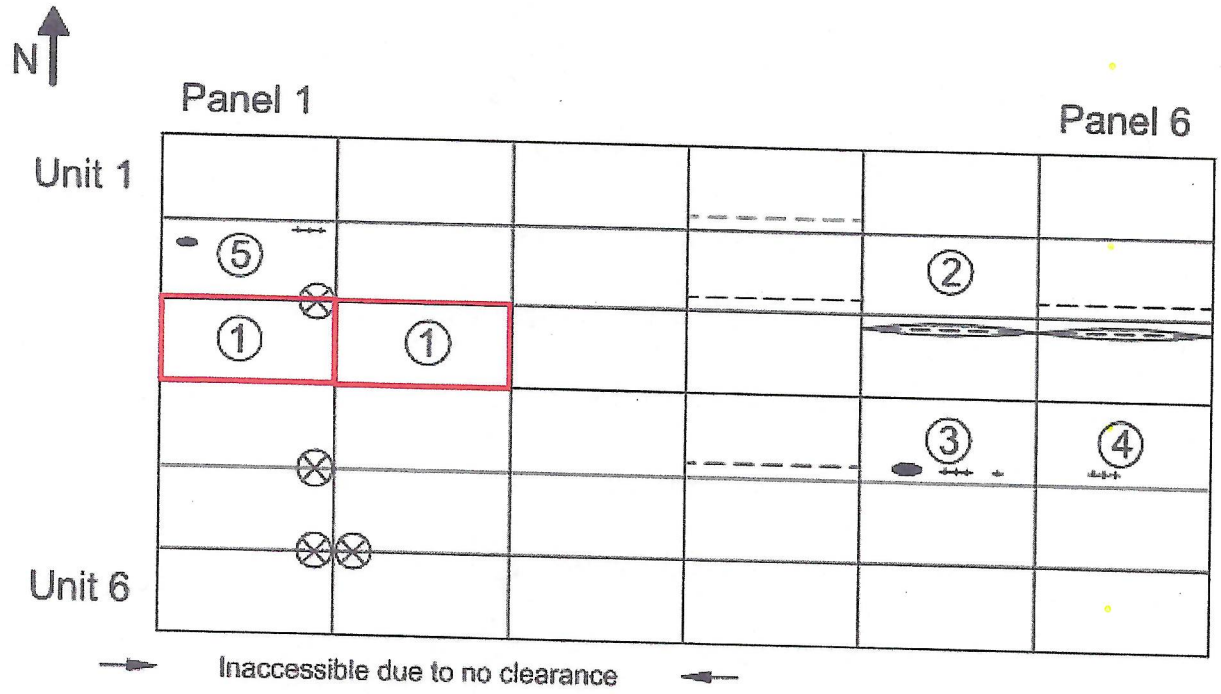
SKETCHES

DECK PANEL AND LONGITUDINAL JOIST DEFICIENCIES



⊗ : Loose Deck Panel to Floorbeam Connection Bolt

: Tear in Deck

: Hole in Deck

- - - - - - - : Longitudinal Joists with Heavy Section Loss

- - - - - - - : Longitudinal Joists with Heavy Rust and Minor Section Loss

1: Stringers are buckled $\frac{1}{8}$" laterally up to 3"H

2: (2) tears up to 1"L x $\frac{1}{2}$"W

3: (1) 4'L x 2"W hole, (2) tears up to 9"L

4: (1) 9"L tear

5: (10) holes up to $\frac{1}{2}$" diameter, (1) 2" diameter hole, (2) tears up to 6"L

Sketch 7: Deck Panel and Longitudinal Joist Deficiencies - Panels 1 through 6

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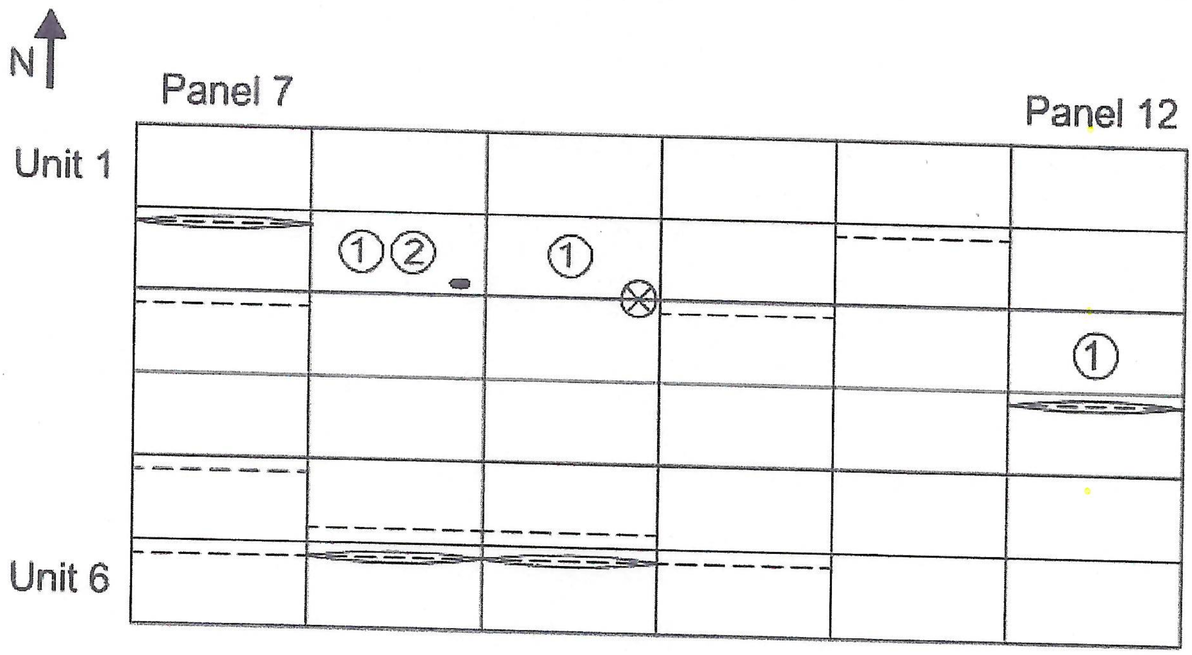
SKETCHES

DECK PANEL AND LONGITUDINAL JOIST DEFICIENCIES



⊗: Loose Deck Panel to Floorbeam Connection Bolt

: Tear in Deck

: Hole in Deck

: Longitudinal Joists with Heavy Section Loss

: Longitudinal Joists with Heavy Rust and Minor Section Loss

1: Verified Deck Unit Fascia Stringer tack welds failed

2: $\frac{1}{2}$" diameter hole

Sketch 8: Deck Panel and Longitudinal Joist Deficiencies - Panels 7 through 12

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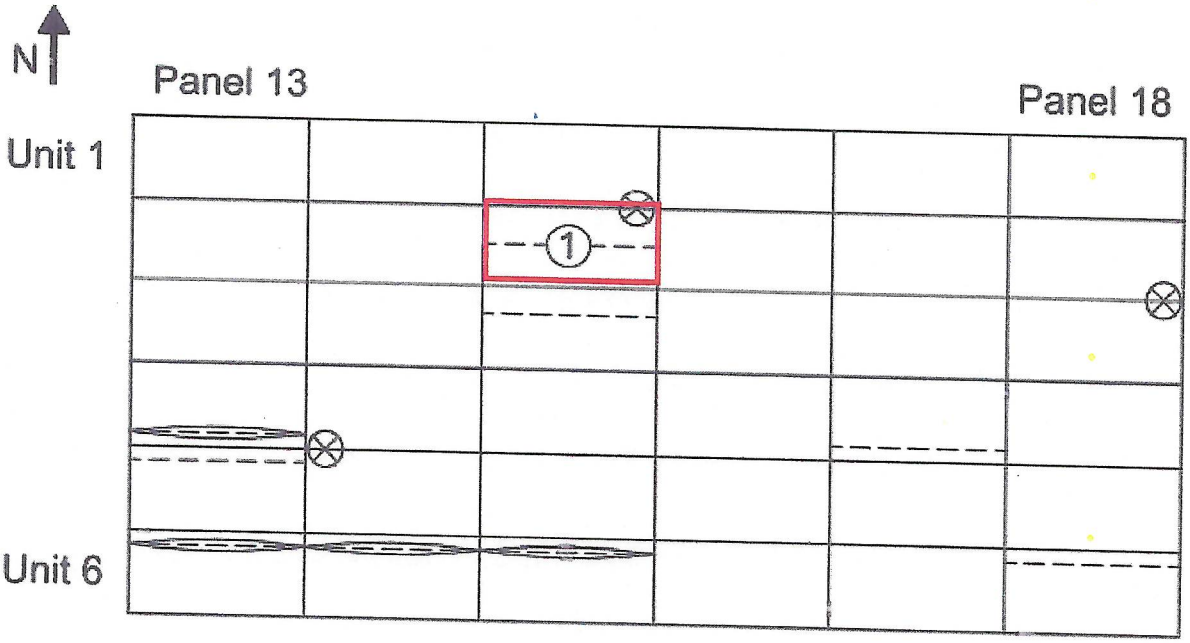
SKETCHES

DECK PANEL AND LONGITUDINAL JOIST DEFICIENCIES



⊗: Loose Deck Panel to Floorbeam Connection Bolt

----: Tear in Deck

●: Hole in Deck

▬▬▬: Longitudinal Joists with Heavy Section Loss

- - - - - - - -: Longitudinal Joists with Heavy Rust and Minor Section Loss

1: Stringers are buckled $\frac{1}{8}$" laterally up to 3"H

Sketch 9: Deck Panel and Longitudinal Joist Deficiencies - Panels 13 through 18

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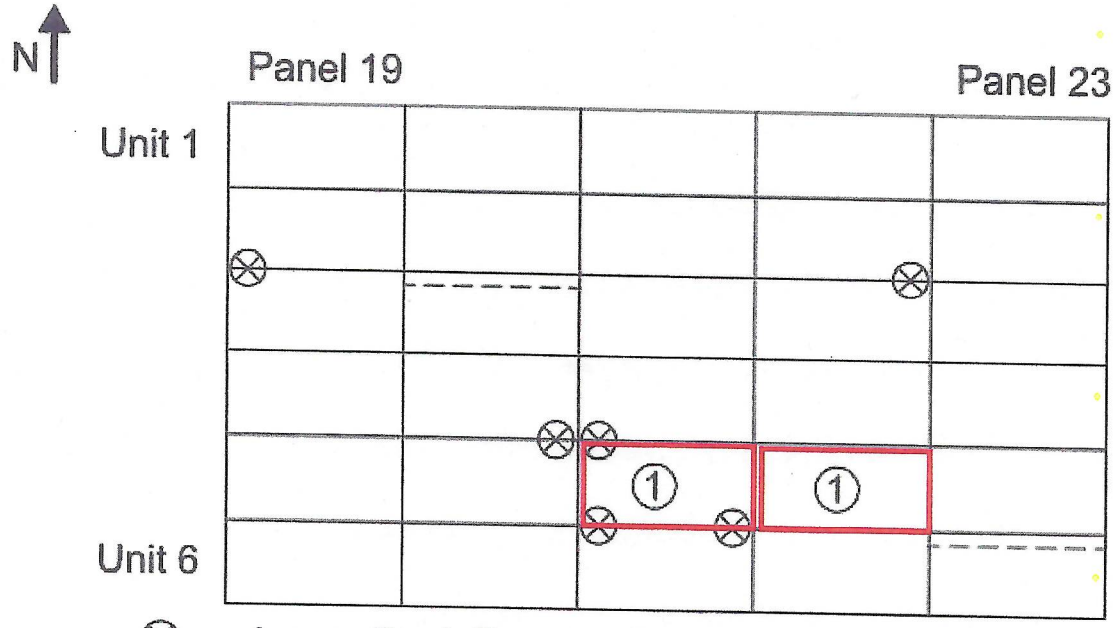
SKETCHES

DECK PANEL AND LONGITUDINAL JOIST DEFICIENCIES



⊗: Loose Deck Panel to Floorbeam Connection Bolt

: Tear in Deck

: Hole in Deck

: Longitudinal Joists with Heavy Section Loss

: Longitudinal Joists with Heavy Rust and Minor Section Loss

1: Stringers are buckled $\frac{1}{8}$" laterally up to 3"H

Sketch 10: Deck Panel and Longitudinal Joist Deficiencies - Panels 19 through 23

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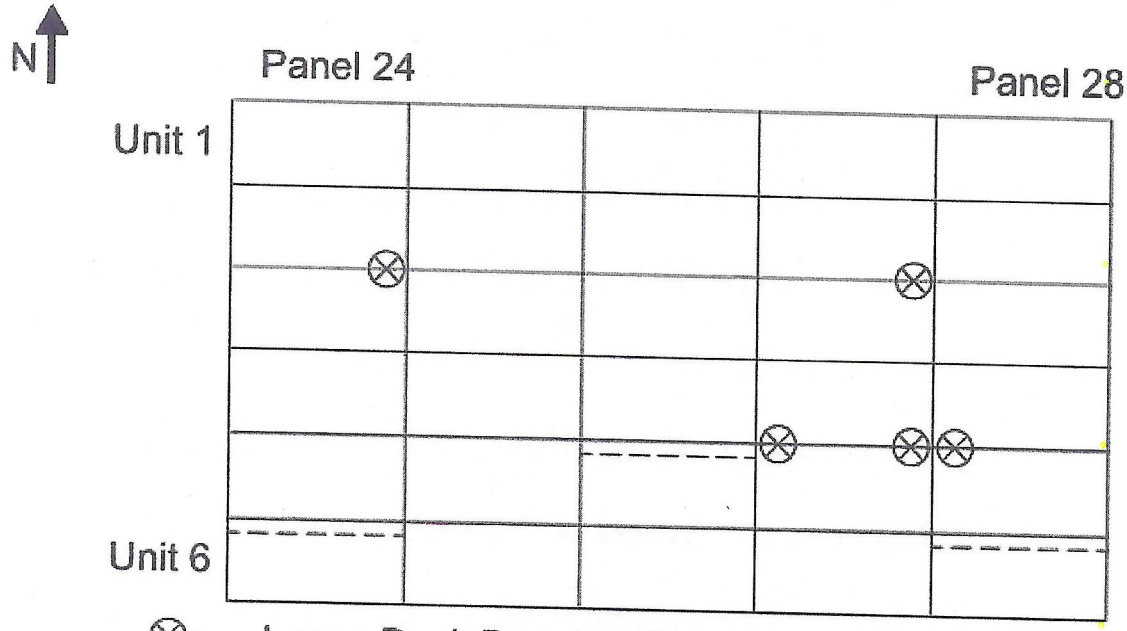
SKETCHES

DECK PANEL AND LONGITUDINAL JOIST DEFICIENCIES



⊗ : Loose Deck Panel to Floorbeam Connection Bolt

: Tear in Deck

: Hole in Deck

: Longitudinal Joists with Heavy Section Loss

: Longitudinal Joists with Heavy Rust and Minor Section Loss

Sketch 11: Deck Panel and Longitudinal Joist Deficiencies - Panels 24 through 28

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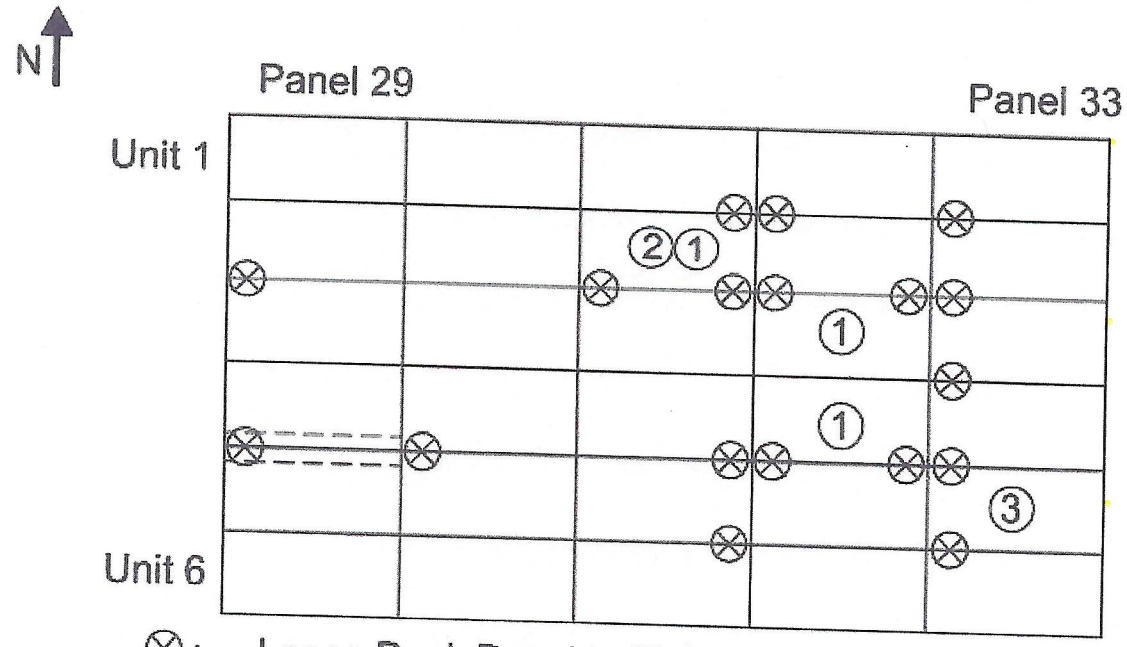
SKETCHES

DECK PANEL AND LONGITUDINAL JOIST DEFICIENCIES



⊗: Loose Deck Panel to Floorbeam Connection Bolt

: Tear in Deck

: Hole in Deck

- - - - - - - -: Longitudinal Joists with Heavy Section Loss

- - - - - - - -: Longitudinal Joists with Heavy Rust and Minor Section Loss

1: Verified Deck Unit Fascia tack welds failed

2: 5" long tear

3: Full panel width x up to 2"D gouge at east end

Sketch 12: Deck Panel and Longitudinal Joist Deficiencies - Panels 29 through 33