

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

**PROPOSED
HIGHWAY PLANS**

F.A.P. 345 US 20 (LAKE STREET)
SECTION 8R-1-RS-4
EAST OF WELD RD. TO WEST OF SHALES PARKWAY
BRIDGE REPAIRS AND RESURFACING

COOK AND KANE COUNTIES
C-91-113-11

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
345	8R-1-RS-4	KANE/COOK	124	1
FED. ROAD DIST. NO.	ILLINOIS	CONTRACT NO.	60M46	

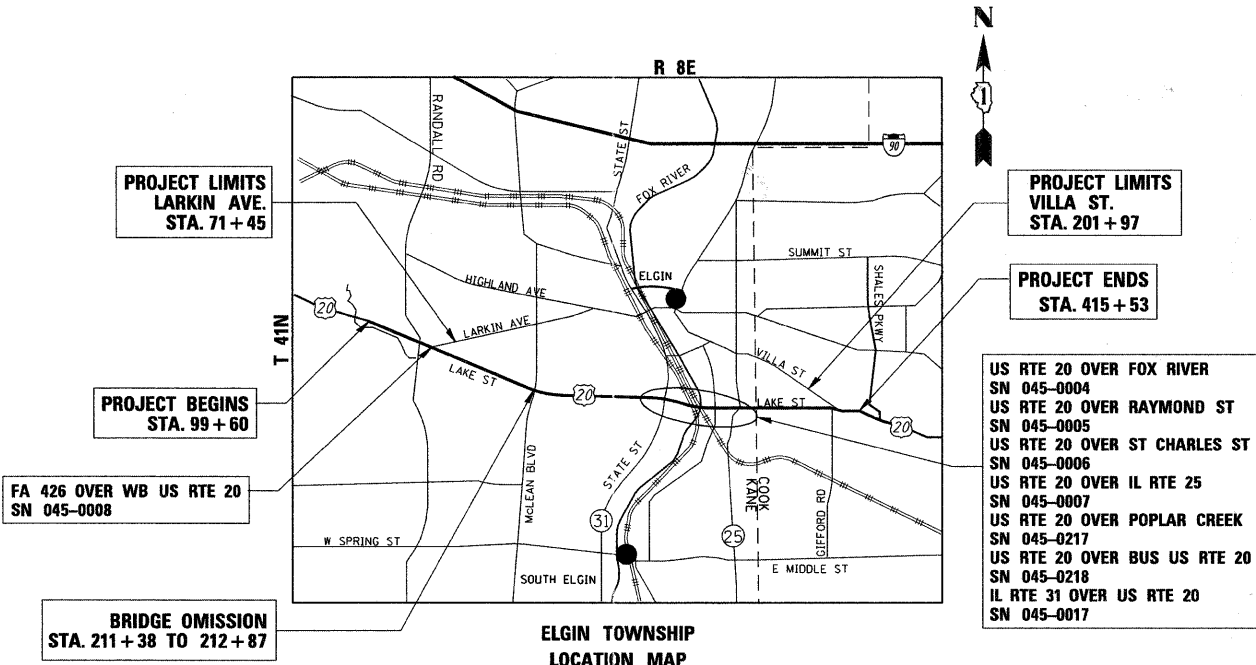
D-91-113-11 *124-2 = 122
*122 + 6 = 128

FOR INDEX OF SHEETS, SEE SHEET NO. 2

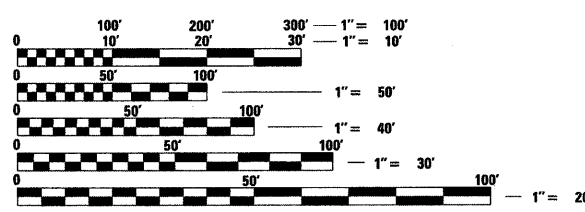
THIS IMPROVEMENT IS LOCATED
WITHIN THE CITY OF ELGIN

TRAFFIC DATA

2007 ADT: 30,000-58,200
POSTED SPEED LIMIT - 55 MPH



ELGIN TOWNSHIP
LOCATION MAP
1" = 5000'
GROSS OF PROJECT = 31593 = 5.96 MI.
NET LENGTH OF PROJECT = 31443 = 5.95 MI.



FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

J.U.L.I.E.
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION
1-800-892-0123
OR 811

CONTRACT NO. 60M46

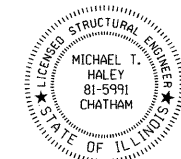
ABNA ENGINEERING, INC.
ROBERT J. LOEHR, S.E.
3992
Robert J. Loehr
DATE: 03/31/2011
SIGNATURE AND SEAL APPLIES TO DRWG NO 101 TO 108



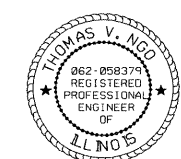
ABNA ENGINEERING, INC.
THOMAS P. PAGLICCHI, P.E.
062-056747
Thomas P. Paglicchi
DATE: 03/31/2011
SIGNATURE AND SEAL APPLIES TO DRWG NO 109 TO 111



LIN ENGINEERING, LTD.
MICHAEL T. HALEY, S.E.
81-5991
Michael T. Haley
DATE: 03/31/2011
SIGNATURE AND SEAL APPLIES TO DRWG NO 69 TO 100



MILLENNIA PROFESSIONAL SERVICES
THOMAS V. NGO, P.E.
062-058379
Thomas V. Ngo
DATE: 03/31/2011
SIGNATURE AND SEAL APPLIES TO DRWG NO 1 TO 68



STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
SUBMITTED MARCH 30, 2011
Diana M. O'Keefe
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER
May 13 2011
Scott E. Stitt, P.E.
Acting ENGINEER OF DESIGN AND ENVIRONMENT
May 13 2011
Christine M. Road
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

MILLENNIA PROFESSIONAL SERVICES
200 22ND Street, Suite 216, Lombard, IL 60148
630.705.0110 voice, 630.839.2566 fax
www.mps-il.com

PRINTED BY THE AUTHORITY
OF THE STATE OF ILLINOIS

Rev. 6-6-11

DISTRICT ONE - PLAN PREP ENGINEER: KEN ENG (847) 705-4247

INDEX OF SHEETS

1 COVER SHEET

2 INDEX OF SHEETS, HIGHWAY STANDARDS, GENERAL NOTES, AND COMMITMENTS

3-6 SUMMARY OF QUANTITIES

7-8 TYPICAL SECTIONS

9-22 PLAN AND PAVEMENT MARKING PLAN

23-25 SIGNING SCHEDULE

26-39 SIGNING PLAN

40-60 SIGN DETAILS

61-62 SUGGESTED STAGES OF CONSTRUCTION AND TRAFFIC CONTROL STAGE I

63-64 SUGGESTED STAGES OF CONSTRUCTION AND TRAFFIC CONTROL STAGE II

65 SUGGESTED STAGES OF CONSTRUCTION AND TRAFFIC CONTROL (IL RTE 31 OVER US RTE 20)

66 SUGGESTED STAGES OF CONSTRUCTION AND TRAFFIC CONTROL (WB US RTE 20 OVER BUS. US RTE 20)

67 **DETOUR PLAN**

68 ~~Not used~~

BRIDGE REPAIR PLAN (LIN ENGINEERING)

69-72 IL RTE 31 OVER US 20 (SN 045-0017)

73-79 US 20 BY-PASS OVER FOX RIVER (SN 045-004)

80-83 US 20 OVER RAYMOND ST (SN 045-0005)

84-86 US 20 OVER ST. CHARLES ST (SN 045-0006)

87-89 US 20 OVER IL 25 (LIBERTY STREET) (SN 045-0007)

90-93 US 20 OVER POPLAR CREEK (SN 016-0217)

94-100 W.B. US 20 OVER BUS US 20 (SN 016-0218)

BRIDGE REPAIR PLAN (ABNA)

101-108 FA 426 OVER WB US RTE 20 (SN 045-0008)

109-111 SUGGESTED STAGES OF CONSTRUCTION

112 DETECTOR LOOP PLAN

113 PAVEMENT PATCHING FOR HMA SURFACED PAVEMENT (BD22)

114 CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT (BD24)

115 BUTT JOINTS AND HMA TAPER (BD32)

116 HMA TAPER AT EDGE OF P.C.C. PAVEMENT (BD33)

117 FREEWAY ENTRANCE AND EXIT RAMP CLOSURE DETAILS (TC08)

117A **SINGLE AND MULTILANE WEAVE (TC9)**

118 TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS AND DRIVEWAYS (TC10)

118A&B **MULTI-LANE FREEWAY PAVEMENT MARKING (TC12)**

119 RAISED REFLECTIVE PAVEMENT MARKERS, SNOW PLOW RESISTANT (TC11)

120 DISTRICT ONE TYPICAL PAVEMENT MARKINGS (TC13)

121 TRAFFIC CONTROL AND PROTECTION FOR AT TURN BAYS (TC14) (TO REMAIN OPEN TO TRAFFIC)

121A **PAVEMENT MARKING LETTERS AND SYMBOLS FOR TRAFFIC STAGING (TC16)**

122 TRAFFIC CONTROL DETAILS FOR FREEWAY SHOULDER CLOSURES PARTIAL RAMP CLOSURES (TC17)

122A **SIGNING FOR FLAGGING OPERATIONS AT WORK ZONE OPENINGS (TC18)**

123 ARTERIAL ROAD INFORMATION SIGN (TC22)

123A **TRAFFIC CONTROL DETAILS FOR FREEWAY CENTER LANE LOSURE SHOULDER LANE (TC25)**

124 **DETECTOR LOOP INSTALLATION DETAILS FOR ROADWAY (TS07)**

124A **MILE POST MARKERS - CORE SIGNS - MAJOR GUIDE SIGN LAYOUT - ARROWS (TC27)**

LIST OF ILLINOIS DOT HIGHWAY STANDARDS

000001-06 STANDARD SYMBOLS, ABBREVIATIONS, AND PATTERNS

001006 DECIMAL OF AN INCH AND OF A FOOT

280001-05 TEMPORARY EROSION CONTROL SYSTEMS

442201-03 CLASS C AND D PATCHES

482011-03 HMA SHOULDER STRIPS/SHOULDERS WITH RESURFACING OR WIDENING AND RESURFACING PROJECTS

606001-04 CONCRETE CURB TYPE B AND COMBINATION CONCRETE CURB AND GUTTER

635011-02 REFLECTOR MARKER AND MOUNTING DETAILS

701201-04 LANE CLOSURE, 2L, 2W, DAY ONLY, FOR SPEEDS >= 45 MPH

701301-04 LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS

701306-03 LANE CLOSURE, 2L, 2W, SLOW MOVING OPERATIONS DAY ONLY, FOR SPEEDS >= 45 MPH

701311-03 LANE CLOSURE, 2L, 2W, MOVING OPERATIONS - DAY ONLY

701336-06 LANE CLOSURE, 2L, 2W, WORK AREAS IN SERIES, FOR SPEEDS > 45 MPH

701400-05 APPROACH TO LANE CLOSURE, FREEWAY/EXPRESSWAY

701401-01 LANE CLOSURE, FREEWAY/EXPRESSWAY

701402-08 LANE CLOSURE, FREEWAY/EXPRESSWAY, WITH BARRIER

701406-06 LANE CLOSURE, FREEWAY/EXPRESSWAY, DAY OPERATIONS ONLY

701411-07 LANE CLOSURE, MULTILANE, AT ENTRANCE OR EXIT RAMP, FOR SPEEDS > 45 MPH

701421-03 LANE CLOSURE, MULTILANE, DAY OPERATIONS ONLY FOR SPEEDS > OR = 45 MPH TO 55 MPH

701426-04 LANE CLOSURE, MULTILANE, INTERMITTENT OR MOVING OPERATIONS FOR SPEEDS > OR = 45 MPH

701446-02 **TWO LANE LANE CLOSURE, FREEWAY/EXPRESSWAY**

701901-01 **TRAFFIC CONTROL DEVICES**

704001-06 TEMPORARY CONCRETE BARRIERS

720001-01 SIGN PANEL MOUNTING DETAILS

720011-01 METAL POSTS FOR SIGNS, MARKERS AND DELINEATORS

729001-01 APPLICATIONS OF TYPE A AND B METAL POSTS (FOR SIGNS AND MARKERS)

780001-02 TYPICAL PAVEMENT MARKINGS

COMMITMENTS

THE CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES AND STAGING/TRAFFIC CONTROL WITH ANY ONGOING PROJECTS IN THE AREA, POSSIBLY INCLUDING CONTRACT 60K90 (MCLEAN BLVD. INTERCHANGE), 62529 (RESURFACING IMMEDIATELY WEST OF THIS CONTRACT), AND LOCAL STREET IMPROVEMENTS AND/OR SEWER WORK UNDERWAY BY PERMIT IN THE CITY OF ELGIN IN THE VICINITY OF IL ROUTE 31 AND/OR IL ROUTE 25 NEAR US 20.

GENERAL NOTES

- BEFORE STARTING ANY EXCAVATION, THE CONTRACTOR SHALL CALL "J.U.L.I.E." AT 800-892-0123 FOR FIELD LOCATIONS OF BURIED ELECTRIC, TELEPHONE, AND GAS FACILITIES. 48 HOUR NOTIFICATION IS REQUIRED.
- THE CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES WITH THE UTILITY COMPANIES, CITY OF ELGIN.
- THE CONTRACTOR WILL NOT BE ALLOWED TO SET UP A YARD OR FIELD OFFICE ON STATE PROPERTY WITHOUT WRITTEN PERMISSION FROM THE DEPARTMENT.
- ANY PAVEMENT MARKINGS AND RAISED REFLECTIVE PAVEMENT MARKERS OBLITERATED BY MILLING AND RESURFACING OPERATIONS ON SIDE STREETS AND ENTRANCES SHALL BE REPLACED AND PAID FOR IN KIND.
- ALL DAMAGE TO EXISTING PAVEMENT MARKING OR RAISED REFLECTIVE PAVEMENT MARKERS OUTSIDE THE REMOVAL LINE SHOWN ON THE PLANS SHALL BE REPLACED AT THE CONTRACTORS EXPENSE. NO ADDITIONAL COST TO THE DEPARTMENT.
- BEFORE BEGINNING ANY WORK, THE CONTRACTOR SHALL RETAIN AND RECORD FOR FUTURE REFERENCES, ALL EXISTING PAVEMENT MARKING LINES AND RAISED REFLECTIVE PAVEMENT MARKERS IN ORDER THAT THESE LOCATIONS CAN BE RE-ESTABLISHED FOR STRIPING. EXACT LOCATIONS OF ALL STRIPING SHALL BE AS DIRECTED BY THE ENGINEER.
- ALL PAVEMENT PATCHING LOCATIONS WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL DIMENSIONS AND CONDITIONS EXISTING IN THE FIELD PRIOR TO CONSTRUCTION AND ORDERING MATERIALS.
- THE CONTRACTOR SHALL CONTACT THE DISTRICT ONE TRAFFIC CONTROL SUPERVISOR AT (847) 705-4470 A MINIMUM OF 72 HOURS IN ADVANCE OF BEGINNING WORK.
- THE ENGINEER SHALL CONTACT DON CHIARUGI, THE TRAFFIC FIELD ENGINEER AT (847) 741-9857 A MINIMUM OF TWO (2) WEEKS PRIOR TO THE PLACEMENT OF PERMANENT PAVEMENT MARKINGS.
- THE CONTRACTOR SHALL BE REQUIRED TO PROVIDE ACCESS TO ABUTTING PROPERTY AT ALL TIMES DURING THE CONSTRUCTION OF THIS PROJECT.
- DO NOT SCALE PLANS FOR CONSTRUCTION DIMENSIONS.
- DOUBLE LANE MARKERS ARE TO BE USED AS SHOWN ON THE DISTRICT ONE DETAIL "TYPICAL APPLICATIONS - RAISED REFLECTIVE PAVEMENT MARKERS (SNOW-PLOW RESISTANT)" SHOWN ON THE PLANS.
- WHEN MILLED PAVEMENT IS OPEN TO TRAFFIC THE MAXIMUM GRADE DIFFERENTIAL BETWEEN PASSES OF THE MILLING MACHINE SHALL NOT EXCEED 1 1/2 INCHES WHERE THE SPEED LIMIT IS 45 MPH OR LESS AND 1 INCH WHERE THE SPEED LIMIT IS GREATER THAN 45 MPH. WITH WRITTEN APPROVAL FROM THE ENGINEER, A MAXIMUM GRADE DIFFERENTIAL OF 3 INCHES MAY BE ALLOWED IF THE EDGE OF THE MILLING IS SLOPED A MINIMUM 1:3 (V:H).
- BUTT JOINTS WILL BE INSTALLED AT THE ENDS OF ALL RESURFACING (WHERE RESURFACING MEETS EXISTING PAVEMENT), IN ACCORDANCE WITH THE "BUTT JOINT AND HOT-MIX ASPHALT TAPER DETAILS" SHEET INCLUDED IN THE PLANS UNLESS OTHERWISE SPECIFIED.
- PAVEMENT MARKING TAPE, TYPE III SHALL BE USED FOR SHORT TERM PAVEMENT MARKINGS ON ALL FINAL SURFACES. THE COST OF THE PAVEMENT MARKING TAPE, TYPE III AND IT'S REMOVAL SHALL BE INCLUDED IN THE COST OF SHORT TERM PAVEMENT MARKING.
- THE CONTRACTOR SHALL PLACE PROPOSED PAVEMENT MARKINGS IN ACCORDANCE WITH DISTRICT 1 TYPICAL PAVEMENT MARKINGS DETAIL (TC-13).
- THE RESIDENT ENGINEER AND CONTRACTOR SHALL VERIFY ALL EXISTING PAVEMENT MARKING PRIOR TO THE PROJECT STARTING. IF A DISCREPANCIES OCCURS BETWEEN EXISTING PAVEMENT MARKINGS AND THE PROPOSED PAVEMENT MARKINGS, THE RESIDENT ENGINEER SHALL CONTACT THE BUREAU OF TRAFFIC OPERATIONS.

FILE NAME = P:\2009\ME\09006.Var\Var-Phil\CADD\W021_US20\Shs\02-Index_Notes.dgn
 USER = JLN
 DATE = 6/1/2011
 MILLENNIA PROFESSIONAL SERVICES



200 22ND Street, Suite 215, Lombard, IL 60148
 630.705.0110 voice, 630.829.2660 fax
 www.mps-ill.com

MILLENNIA PROFESSIONAL SERVICES

DESIGNED - CJD	REVISED - Rev. 6-6-11
DRAWN - CJD	REVISED -
CHECKED - TVN	REVISED -
DATE - 6/1/2011	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**US ROUTE 20 (LAKE STREET)
 RANDALL RD TO SHALES PARKWAY**

**INDEX OF SHEETS, HIGHWAY
 STANDARDS, GENERAL NOTES,
 AND COMMITMENTS**

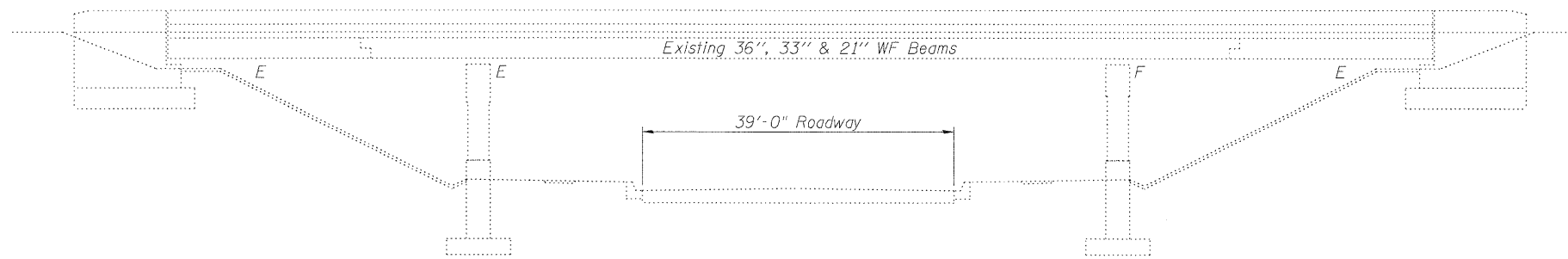
F.A.P. / R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
345	BR-1-RS-4	KANE/COOK	124	2
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT			CONTRACT NO. 60M46	

P:\2009\ME\09006.Var\Var-Phil\CADD\W021_US20\Shs\02-Index_Notes.dgn

Existing Structure: S.N. 045-0006 built in 1960 as F.A. Route 6, Section 8R-HB-5 at Station 218+04.95. In 1986, bridge was widened, expansion joints reconstructed, overlay placed, bearings replaced and substructure was rehabilitated and widened. In 2003, steel beams were repaired and straightened. Structure consists of a three span steel WF beam bridge with 160'-2" back-to-back abutments, varying out-to-out deck width from 75'-5 3/4" to 78'-10 1/4", multi-column piers on spread footings and pile supported abutments. Stage construction shall be utilized to maintain one lane of traffic in each direction at all times.

GENERAL NOTES

Plan dimensions and details relative to 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.
See Roadway Plans for maintenance of traffic details.



ELEVATION

SCOPE OF WORK

1. Replace the preformed joint seals at the abutments and hinge joints with Silicone Joint Sealer.
2. Repair deck slab.
3. Clean drains.

DESIGN STRESSES

FIELD UNITS (New Const.)

$f'_c = 3,500$ psi
 $f_y = 60,000$ psi (Reinforcement)

FIELD UNITS (Existing Superstructure)

$f_c = 1,400$ psi
 $f_s = 20,000$ psi (Reinforcement)
 $f_s = 18,000$ psi (Structural Steel)

LOADING HS 20

(Original Construction)

DESIGN SPECIFICATIONS

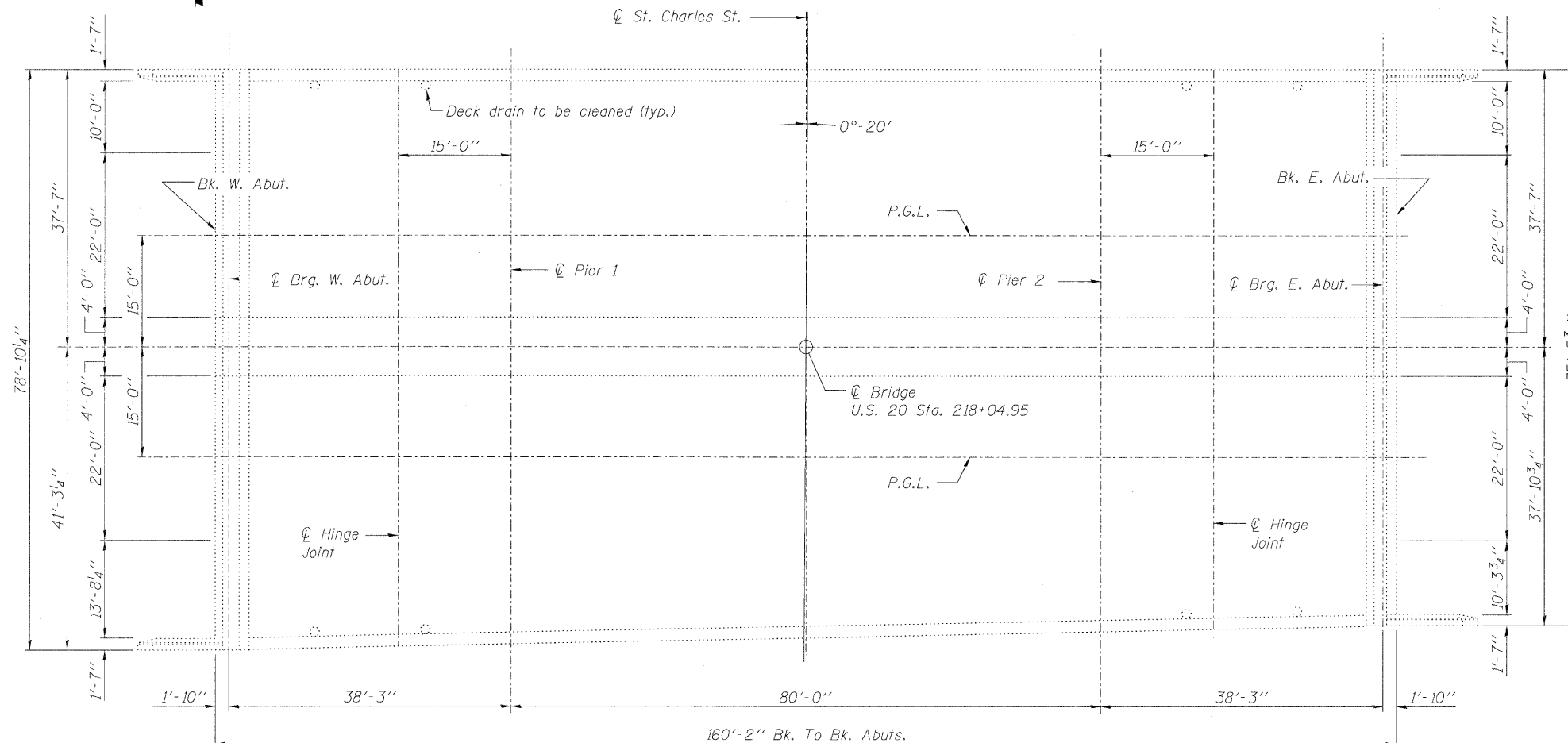
(New Construction)
2002 AASHTO "Standard Specifications for Highway Bridges"

INDEX OF SHEETS

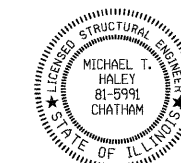
1. General Plan and Elevation
2. Stage Construction Details
3. Superstructure Repair

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Floor Drains to be Cleaned	Each	8	-	8
Silicone Joint Sealer, 2 3/4"	Foot	79	-	79
Silicone Joint Sealer, 1 3/4"	Foot	76	-	76
Silicone Joint Sealer, 1"	Foot	155	-	155
Deck Slab Repair (Full depth, Type I)	Sq. Yd.	0.7	-	0.7
Deck Slab Repair (Full depth, Type II)	Sq. Yd.	79.1	-	79.1
Deck Slab Repair (Partial)	Sq. Yd.	100.4	-	100.4
Protective Shield	Sq. Yd.	658	-	658

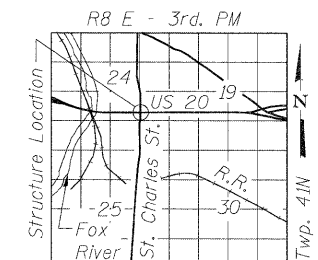


PLAN



Michael J. Haley
Michael T. Haley
Licensed Structural Engineer
State of Illinois No. 81-5991
Expires 11/30/2012

3-24-2011
Date



LOCATION SKETCH

**GENERAL PLAN AND ELEVATION
US 20 OVER ST. CHARLES STREET
FAP RTE 345 - SECTION 8R-1-RS-4
KANE COUNTY
STATION 218+04.95
STRUCTURE NO. 045-0006**



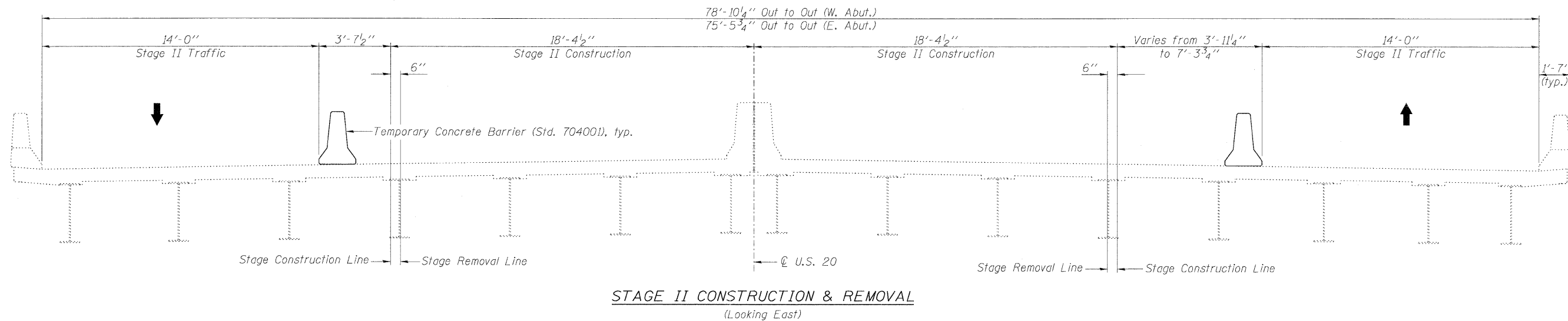
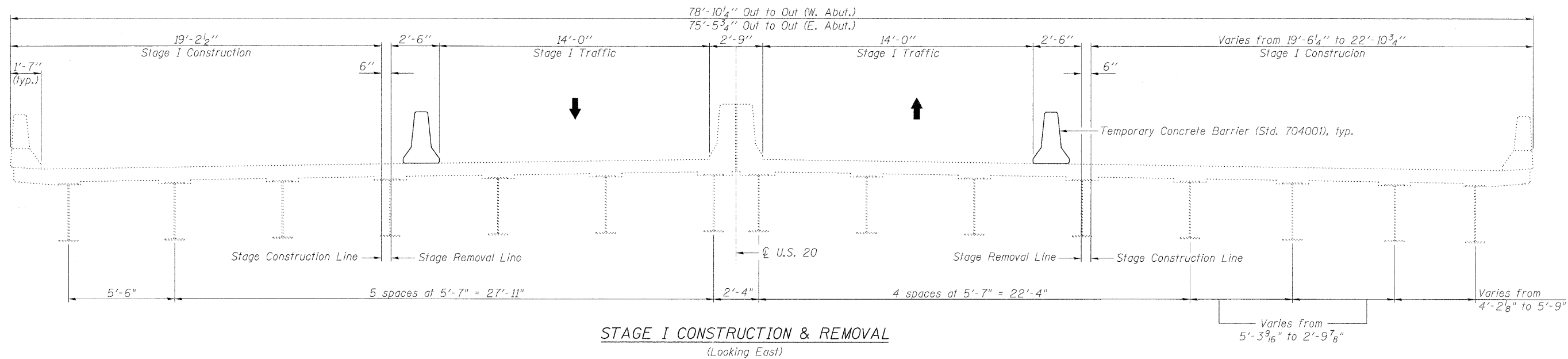
USER NAME =	DESIGNED - TBP	REVISED -
FILE NAME =	CHECKED - ADB	REVISED -
PLOT SCALE =	DRAWN - AJF	REVISED -
PLOT DATE =	CHECKED - MTH	REVISED -

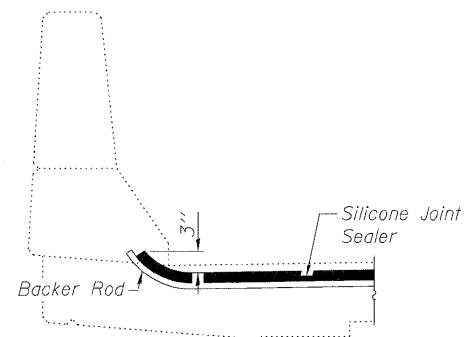
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**GENERAL PLAN AND ELEVATION
STRUCTURE NO. 045-0006**

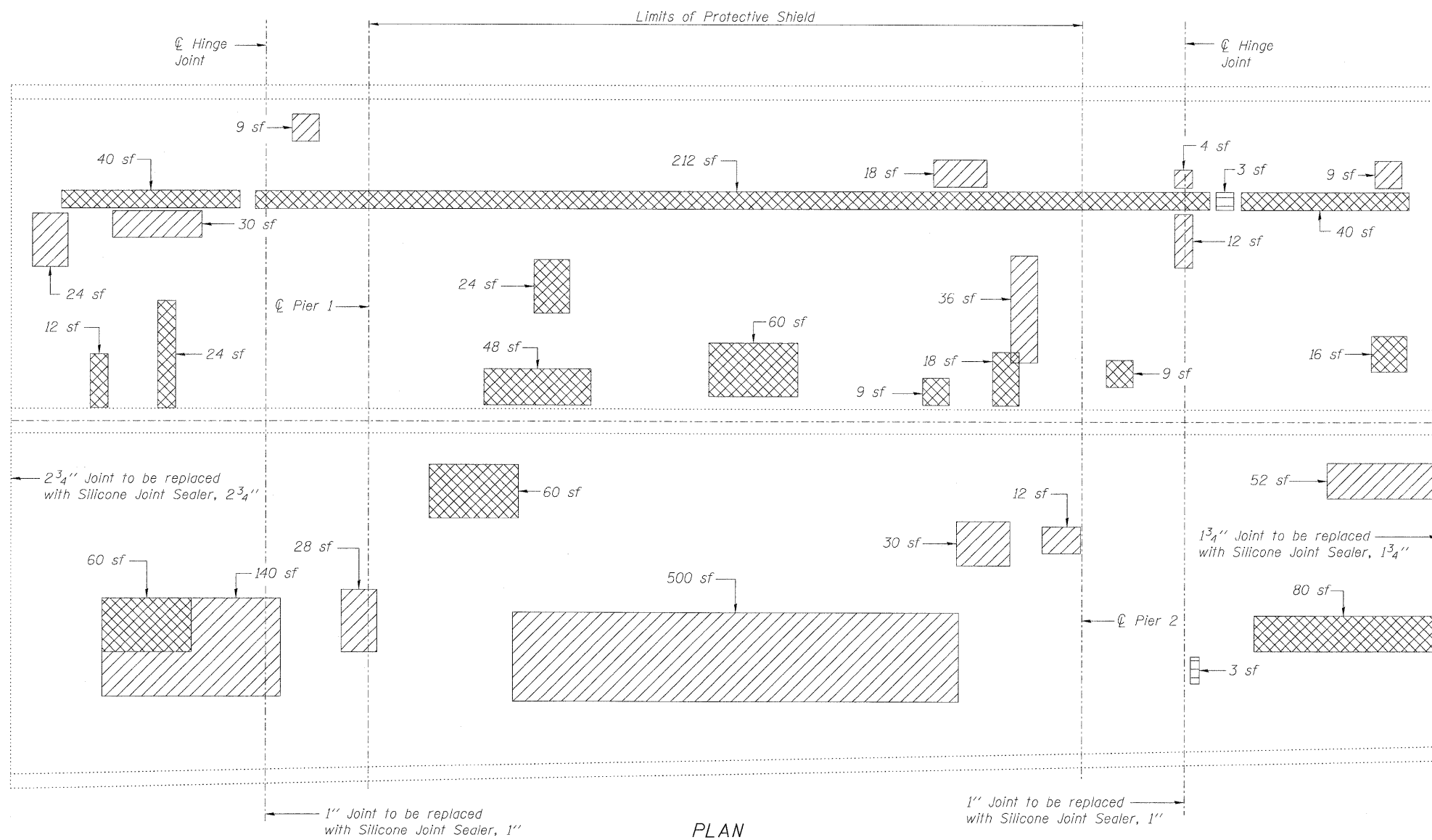
SHEET NO. 1 OF 3 SHEETS

F.A.P. RTE. 345	SECTION 8R-1-RS-4	COUNTY KANE	TOTAL SHEETS 124	SHEET NO. 84
			CONTRACT NO. 60M46	
ILLINOIS FED. AID PROJECT				





SILICONE JOINT SEALER END TREATMENT



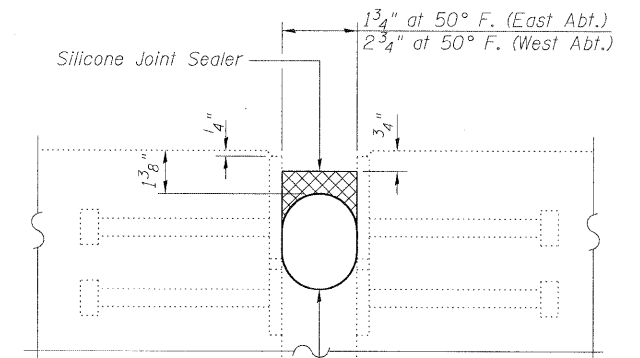
PLAN

LEGEND

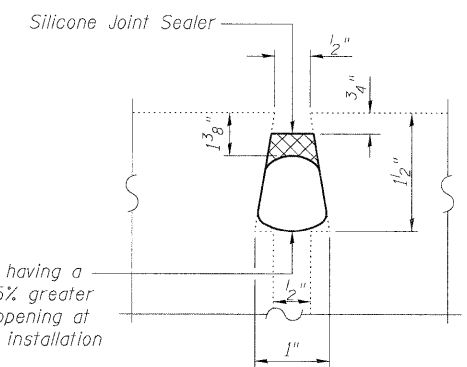
- Deck Slab Repair (Full Depth, Type I)
- Deck Slab Repair (Full Depth, Type II)
- Deck Slab Repair (Partial)
- sf Square Feet

Notes:

Repair of the existing deck slab shall include but may not be limited to the areas shown. The actual area to be repaired will be determined by the Engineer at the time of construction.
 Limits of Protective Shield shall extend longitudinally from Pier 1 to Pier 2 and transversely from North to South fascia beams.
 Cost of existing joint removal is included in the cost of Silicone Joint Sealer.
 Cost of concrete overlay removal for deck slab repair is included with the cost of Deck Slab Repair.



PROPOSED JOINT DETAIL @ ABUTMENTS



PROPOSED JOINT DETAIL @ HINGES

BILL OF MATERIAL

ITEM	UNIT	TOTAL
Deck Slab Repair (Full Depth, Type I)	Sq. Yd.	0.7
Deck Slab Repair (Full Depth, Type II)	Sq. Yd.	79.1
Deck Slab Repair (Partial)	Sq. Yd.	100.4
Silicone Joint Sealer, 1"	Foot	76
Silicone Joint Sealer, 1 3/4"	Foot	76
Silicone Joint Sealer, 2 3/4"	Foot	155
Protective Shield	Sq. Yd.	658