06-14-13 LETTING ITEM 131

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
347	JR-HB-I-1	DUPAGE	30	1
	ILLINOIS	CONTRACT NO. 60N77		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PROPOSED
HIGHWAY PLANS

F.A.P. ROUTE 347: IL 38 (ROOSEVELT ROAD) AT IL 56 (BUTTERFIELD ROAD)
SECTION JR-HB-I-1

BRIDGE DECK OVERLAY AND BRIDGE JOINT REPAIRS
DUPAGE COUNTY
JOB NO. C-91-357-11

FOR INDEX OF SHEETS, SEE SHEET NO. 2
FOR LIST OF STANDARDS, SEE SHEET NO. 2

IMPROVEMENTS LOCATED IN OAKBROOK TERRACE, IL

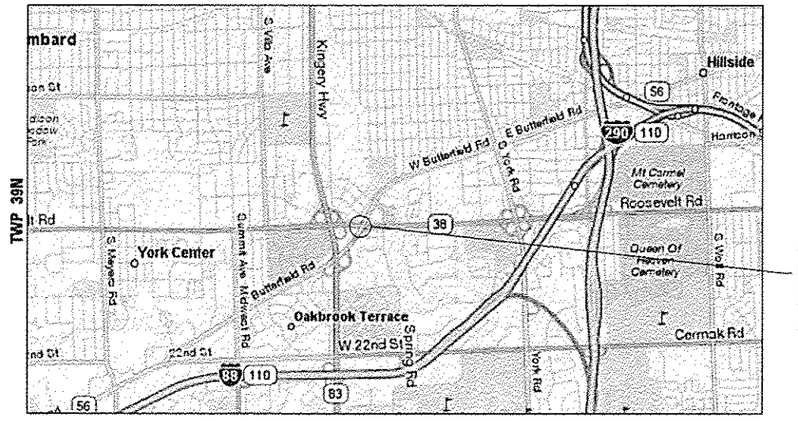
IL 38:
ADT = 17300 (2009)
POSTED SPEED: 55 MPH

IL 56:
ADT = 60,500 (2009)
POSTED SPEED: 45 MPH

D-91-357-11

LOCATION OF SECTION INDICATED THUS:- ■■■■-

R 11E – 3rd P.M.



SN 022-0114
PROJECT LOCATION
STA. 37+00.00 (START)
STA. 40+50.00 (END)

YORK TOWNSHIP

LOCATION MAP

GROSS & NET LENGTH = 350.00 FT. = 0.07 MILE

GRAPHIC SCALES:

COVER SHEET	HORIZONTAL	0.5 MI 1.0 MI
PROPOSED ROADWAY PLAN	HORIZONTAL	0 50' 100'
MAINTENANCE OF TRAFFIC	HORIZONTAL	0 50' 100'
PAVEMENT MARKING PLAN	HORIZONTAL	0 50' 100'

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

PREPARED BY:
LIN ENGINEERING, LTD.
SPRINGFIELD, ILLINOIS 62711
(217) 679-2928

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED December 10 20 12
John Fortmann, Jr.
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER
May 10 20 13
John D. Baranzelli, P.E. by
acting ENGINEER OF DESIGN AND ENVIRONMENT
May 10 20 13
Omer Osman, P.E. by
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

PROJECT ENGINEER: ROBERT T. BORO, PE (847) 705-4237
PROJECT MANAGER: ISSAM RAYYAN, PE (847) 705-4178

CONTRACT NO. 60N77

FRED M. LIN 062-056704 LICENSED PROFESSIONAL ENGINEER OF ILLINOIS
SEAL

Fred M. Lin
FRED M. LIN, P.E.
ILLINOIS REGISTERED ENGINEER NO. 062-056704
REGISTRATION EXPIRES NOV. 30, 2013

PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS

INDEX OF SHEETS

STATE STANDARDS

280001-07	TEMPORARY EROSION CONTROL SYSTEMS
609006-05	BRIDGE APPROACH PAVEMENT (DRAIN DETAIL)
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631031-11	TRAFFIC BARRIER TERMINAL, TYPE 6
635006-03	REFLECTOR AND TERMINAL MARKER PLACEMENT
635011-02	REFLECTOR MARKER AND MOUNTING DETAILS
701411-08	LANE CLOSURE, MULTILANE, AT ENTRANCE OR EXIT RAMP, FOR SPEEDS ≥ 45 MPH
701422-05	LANE CLOSURE, MULTILANE, FOR SPEEDS ≥ 45 MPH TO 55 MPH
701426-05	LANE CLOSURE, MULITLANE, INTERMITTENT OR MOVING OPER., FOR SPEEDS ≥ 45 MPH
701431-08	LANE CLOSURE, MULITLANE, UNDIVIDED WITH CROSSOVER, FOR SPEEDS ≥ 45 MPH TO 55 MPH
701901-02	TRAFFIC CONTROL DEVICES
704001-07	TEMPORARY CONCRETE BARRIER
720001-01	SIGN PANEL MOUNTING DETAILS
720011-01	METAL POSTS FOR SIGNS, MARKERS & DELINEATORS
728001-01	TELESCOPING STEEL SIGN SUPPORT
729001-01	APPLICATIONS OF TYPES A & B METAL POSTS (FOR SIGNS & MARKERS)
780001-03	TYPICAL PAVEMENT MARKINGS

DISTRICT STANDARDS

TC11	RAISED REFLECTIVE PAVEMENT MARKERS (SNOW-PLOW RESISTANT)
TC13	TYPICAL PAVEMENT MARKINGS
TC22	ARTERIAL ROAD INFORMATION SIGN

COMMITMENTS

NO COMMITMENTS HAVE BEEN MADE FOR THIS PROJECT.

GENERAL NOTES

1. THESE PLANS HAVE BEEN PREPARED FROM INFORMATION ACQUIRED FROM EXISTING PLANS AND NOTES RECEIVED FROM IDOT FIELD MAINTENANCE ENGINEERS.

2. PLAN DIMENSIONS AND DETAILS RELATIVE TO EXISTING PLANS ARE SUBJECT TO VARIATIONS FOUND IN THE FIELD. THE CONTRACTOR SHALL FIELD VERIFY EXISTING DIMENSIONS AND DETAILS AFFECTING NEW CONSTRUCTION AND MAKE NECESSARY ADJUSTMENTS PRIOR TO CONSTRUCTION OR ORDERING MATERIALS. ANY ADJUSTMENTS PROPOSED BY THE CONTRACTOR MUST BE APPROVED BY THE ENGINEER. SUCH VARIATIONS SHALL NOT BE CAUSE FOR ADDITIONAL COMPENSATION FOR A CHANGE IN THE SCOPE OF WORK, HOWEVER, THE CONTRACTOR WILL BE PAID FOR THE QUANTITY ACTUALLY FURNISHED BASED UPON THE UNIT PRICE.

3. QUANTITIES FOR DECK SLAB REPAIR ARE APPROXIMATE. LOCATIONS WILL BE DETERMINED BY THE ENGINEER FOLLOWING THE SCARIFICATION. ACTUAL REPAIR LOCATIONS SHALL BE SHOWN ON THE AS-BUILT PLANS.

4. FORTY-EIGHT HOURS BEFORE STARTING EXCAVATION. THE CONTRACTOR WILL CALL J.U.L.I.E. (1-800-892-0123) OR 811 FOR LOCATIONS OF THE EXISTING UTILITIES.

5. THE CONTRACTOR WILL NOT BE ALLOWED TO SET UP A YARD OR FIELD OFFICE ON STATE PROPERTY WITHOUT WRITTEN PERMISSION FROM THE DEPARTMENT.

6. DO NOT SCALE PLANS FOR CONSTRUCTION DIMENSIONS.

7. WHEN ARTIFICIAL LIGHTING IS UTILIZED IN NIGHT OPERATIONS, THE CONTRACTOR SHALL EXERCISE THE UTMOST PRECAUTIONS IN PREVENTING ADVERSE VISIBILITY TO THE MOTORING PUBLIC AS WELL AS ADJOINING RESIDENTIAL AREAS.

8. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS, AS REQUIRED, PRIOR TO COMMENCING WITH CONSTRUCTION.

9. THE CONTRACTOR SHALL CONTACT THE TRAFFIC CONTROL SUPERVISOR AT (847) 705-4470 A MINIMUM OF 72 HOURS IN ADVANCE OF BEGINNING WORK.

10. THE CONTRACTOR SHALL CONTACT DON CHIARUGI, THE AREA TRAFFIC FIELD TECHNICIAN, AT (847) 741-9857 TWO (2) WEEKS PRIOR TO THE PLACEMENT OF PERMANENT PAVEMENT MARKINGS.

11. ALL DAMAGE TO EXISTING PAVEMENT MARKINGS OUTSIDE THE REMOVAL LINE SHOWN ON THE PLANS SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.

12. THE CONTRACTOR SHALL USE CARE IN REMOVING OR EXCAVATING NEAR ALL EXISTING ITEMS WHICH WILL REMAIN. ANY DAMAGE DONE TO EXISTING ITEMS BY THE CONTRACTOR SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.

13. THE WORK AND MATERIALS REQUIRED TO CONNECT ANY CULVERT OR SEWER TO ANOTHER DRAINAGE STRUCTURE OR PIPE WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE CONSIDERED AS INCLUDED IN THE CONTRACT UNIT PRICE BID FOR THE CULVERT OR SEWER ITEMS.

14. REMOVAL OF EXISTING CORRUGATED STEEL PIPE ENCOUNTERED DURING EXCAVATION SHALL NOT BE MEASURED FOR SEPARATE PAYMENT, BUT SHALL BE CONSIDERED INCIDENTAL TO THE COST FOR EARTH EXCAVATION.

15. BEFORE BEGINNING ANY WORK, THE CONTRACTOR SHALL RETAIN AND RECORD FOR FUTURE REFERENCE, ALL EXISTING PAVEMENT MARKING LINES (RAISED REFLECTIVE PAVEMENT MARKERS) IN ORDER THAT THESE LOCATIONS CAN BE RE-ESTABLISHED FOR STRIPING. EXACT LOCATIONS OF ALL PAVEMENT MARKINGS SHALL BE AS DIRECTED BY THE ENGINEER.

16. AN OPER 2410 FORM REPORTING A WIDTH RESTRICTION DURING CONSTRUCTION SHALL BE SUBMITTED TO IDOT CENTRAL OFFICE IN SPRINGFIELD, BUREAU OF OPERATIONS A MINIMUM OF 21 DAYS PRIOR TO INSTALLING TEMPORARY CONCRETE BARRIER.

HMA MIXTURE REQUIREMENTS

MIXTURE TYPE	AIR VOIDS @ Ndes	LIFT THICKNESS
SURFACE COURSE (VARIABLE THICK. - APPROACH SLAB/BUTT JOINT)		
POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, MIX "F", N90 (IL 9.5 mm)	4% @ 90 Gyr.	1-3/4"
SURFACE COURSE (2" - TEMPORARY PAVEMENT)		
HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N70 (IL 9.5 mm)	4% @ 70 Gyr.	2"
BINDER COURSE (8" - TEMPORARY PAVEMENT)		
HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N70	4% @ 70 Gyr.	2-1/4" MIN.

THE UNIT WEIGHT USED TO CALCULATE ALL HMA SURFACE MIXTURE QUANTITIES IS 112 LBS/SQ YD/IN.

THE "AC TYPE" FOR POLYMERIZED HMA MIXES SHALL BE "SBS/SBR PG 76-22" AND FOR NON-POLYMERIZED HMA THE "AC TYPE" SHALL BE "PG 64-22" UNLESS MODIFIED BY DISTRICT ONE SPECIAL PROVISIONS.

FOR USE OF RECYCLED MATERIALS SEE DISTRICT ONE SPECIAL PROVISIONS.

URBAN
100% STATE

CODE NUMBER	ITEM	UNIT	TOTAL QUANTITY	0014 STRUCTURE	0004 ROADWAY
20100500	TREE REMOVAL, ACRES	ACRES	0.4		0.4
20200100	EARTH EXCAVATION	CU YD	24		24
20201200	REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL	CU YD	5		5
20400800	FURNISHED EXCAVATION	CU YD	15	15	
20800150	TRENCH BACKFILL	CU YD	22		22
• 21101625	TOPSOIL FURNISH AND PLACE, 6"	SQ YD	86		86
• 25000300	SEEDING, CLASS 3	ACRE	0.25		0.25
• 25100630	EROSION CONTROL BLANKET	SQ YD	86		86
28000400	PERIMETER EROSION BARRIER	FOOT	54		54
28000500	INLET AND PIPE PROTECTION	EACH	1		1
28000510	INLET FILTERS	EACH	1		1
28100105	STONE RIPRAP, CLASS A3	SQ YD	1000		1000
28200200	FILTER FABRIC	SQ YD	1000		1000
40600100	BITUMINOUS MATERIALS (PRIME COAT)	GALLON	587	71	516
40600300	AGGREGATE (PRIME COAT)	TON	1		1
40603595	POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, MIX "F", N90	TON	49	49	
44003100	MEDIAN REMOVAL	SQ FT	2895		2895
44004250	PAVED SHOULDER REMOVAL	SQ YD	1049		1049
50102400	CONCRETE REMOVAL	CU YD	104.0	104.0	
50104650	SLOPE WALL REMOVAL	SQ YD	51	51	
50157300	PROTECTIVE SHIELD	SQ YD	379	379	
50300255	CONCRETE SUPERSTRUCTURE	CU YD	138.8	138.8	
50300260	BRIDGE DECK GROOVING	SQ YD	1159	1159	

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URBAN
100% STATE

CODE NUMBER	ITEM	UNIT	TOTAL QUANTITY	0014 STRUCTURE	0004 ROADWAY
50300300	PROTECTIVE COAT	SQ YD	243	243	
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	20360	20360	
50800515	BAR SPLICERS	EACH	78	78	
51100100	SLOPE WALL 4 INCH	SQ YD	51	51	
52000110	PREFORMED JOINT STRIP SEAL	FOOT	143	143	
52100520	ANCHOR BOLTS, 1"	EACH	80	80	
54002020	EXPANSION BOLTS, 3/4 INCH	EACH	342	342	
60100945	PIPE DRAINS 12"	FOOT	60		60
60500060	REMOVING INLETS	EACH	1		1
60900140	TYPE B INLET BOX, STANDARD 609006	EACH	1		1
60900515	CONCRETE THRUST BLOCKS	EACH	2		2
• 63000001	STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT POSTS	FOOT	50.0		50.0
• 63100085	TRAFFIC BARRIER TERMINAL, TYPE 6	EACH	2		2
63200310	GUARDRAIL REMOVAL	FOOT	185		185
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	6		6
67100100	MOBILIZATION	L SUM	1		1
70103815	TRAFFIC CONTROL SURVEILLANCE	CAL DA	20		20
70301000	WORK ZONE PAVEMENT MARKING REMOVAL	SQ FT	4194		4194
70400100	TEMPORARY CONCRETE BARRIER	FOOT	550		550
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	550		550
70600260	IMPACT ATTENUATORS, TEMPORARY (FULLY REDIRECTIVE, NARROW), TEST LEVEL 3	EACH	3		3
70600332	IMPACT ATTENUATORS, RELOCATE (FULLY REDIRECTIVE, NARROW), TEST LEVEL 3	EACH	3		3
78100200	TEMPORARY RAISED REFLECTIVE PAVEMENT MARKERS	EACH	24		24

23

• DENOTES SPECIALTY ITEM

LIN ENGINEERING, LTD.
Consulting Engineers
Springfield, Illinois

USER NAME = Plotted by Fred 576	DESIGNED - SEW	REVISED -	
	DRAWN - RK	REVISED -	
PLOT SCALE = 2.0000 ' / IN.	CHECKED - SEW	REVISED -	
PLOT DATE = 12/5/2012	DATE - 11/2011	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES
IL 56 (BUTTERFIELD RD.) OVER IL 38 (ROOSEVELT RD.)

SCALE: N/A | SHEET NO. 1 OF 2 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
347	JR-HB-1-1	DUPAGE	30	3
		CONTRACT NO. 60N77		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

URBAN
100% STATE

CODE NUMBER	ITEM	UNIT	TOTAL QUANTITY	0014 STRUCTURE	0004 ROADWAY
* 78000200	THERMOPLASTIC PAVEMENT MARKING - LINE 4"	FOOT	6205		6205
* 78000500	THERMOPLASTIC PAVEMENT MARKING - LINE 8"	FOOT	2036.0		2036.0
* 78000600	THERMOPLASTIC PAVEMENT MARKING - LINE 12"	FOOT	226		226
* 78008210	POLYUREA PAVEMENT MARKING TYPE I - LINE 4"	FOOT	869		869
* 78100100	RAISED REFLECTIVE PAVEMENT MARKER	EACH	106		106
* 78100105	RAISED REFLECTIVE PAVEMENT MARKER (BRIDGE)	EACH	12		12
* 78200410	GUARDRAIL MARKERS, TYPE A	EACH	8		8
* 78200530	BARRIER WALL MARKERS, TYPE C	EACH	147		147
* 78300100	PAVEMENT MARKING REMOVAL	SQ FT	4666		4666
78300200	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	EACH	142		142
85000200	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1		1
* A2005020	TREE, GYMNOCLADUS DIOICUS (KENTUCKY COFFEETREE), 2-1/2" CALIPER, BALLED AND BURLAPPED	EACH	9		9
X0326394	FLOOR DRAINS TO BE CLEANED	EACH	8	8	
X0326766	CLEAN & RESEAL RELIEF JOINT	FOOT	52	52	
X4401198	HOT-MIX ASPHALT SURFACE REMOVAL, VARIABLE DEPTH	SQ YD	707	707	
X5210025	ELASTOMERIC BEARING ASSEMBLY, TYPE II (SPECIAL)	EACH	40	40	
X6060714	CONCRETE MEDIAN (SPECIAL)	SQ FT	2895		2895
X7010216	TRAFFIC CONTROL AND PROTECTION, (SPECIAL)	L SUM	1		1
X7030030	WET REFLECTIVE TEMPORARY TAPE TYPE III, 4 INCH	FOOT	12173		12173
X7030045	WET REFLECTIVE TEMPORARY TAPE TYPE III, 8 INCH	FOOT	1353		1353
Z0001500	APPROACH SLAB REMOVAL & REPLACEMENT	SQ YD	30	30	
Z0001899	JACK AND REMOVE EXISTING BEARINGS	EACH	40	40	
Z0006014	BRIDGE DECK LATEX CONCRETE OVERLAY, 2 1/2 INCHES	SQ YD	1155	1155	

URBAN
100% STATE

CODE NUMBER	ITEM	UNIT	TOTAL QUANTITY	0014 STRUCTURE	0004 ROADWAY
Z0012144	BRIDGE DECK SCARIFICATION, 2 1/2"	SQ YD	1155	1155	
Z0012754	STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 INCHES)	SQ FT	259	259	
Z0015802	PLUG EXISTING DECK DRAINS	EACH	16	16	
Z0016002	DECK SLAB REPAIR (FULL DEPTH, TYPE II)	SQ YD	3	3	
Z0018500	DRAINAGE STRUCTURES TO BE CLEANED	EACH	1		1
Z0030850	TEMPORARY INFORMATION SIGNING	SQ FT	154		154
Z0062456	TEMPORARY PAVEMENT	SQ YD	1370		1370
Z0064600	SELECTIVE CLEARING	ACRES	0.4		0.4
Z0073200	TEMPORARY SHORING AND CRIBBING	EACH	3	3	
Z0073510	TEMPORARY TRAFFIC SIGNAL TIMING	EACH	1		1
X5538600	STORM SEWERS TO BE CLEANED 36"	FOOT	500		500
X0327577	PROTECT AND MAINTAIN EXISTING UNDERPASS LUMINAIRE	L SUM	1		1

* DENOTES SPECIALTY ITEM

Rev.

LIN ENGINEERING, LTD.
Consulting Engineers
Springfield, Illinois

USER NAME = Plotted by Fred 576
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PLOT DATE = 12/5/2012

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CHECKED - SEW | REVISED -
DATE - 11/2011 | REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES
IL 56 (BUTTERFIELD RD.) OVER IL 38 (ROOSEVELT RD.)

SCALE: N/A | SHEET NO. 2 OF 2 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
347	JR-HB-1-1	DUPAGE	30	4
		CONTRACT NO. 60N77		

FED. ROAD DIST. NO. 1 | ILLINOIS | FED. AID PROJECT

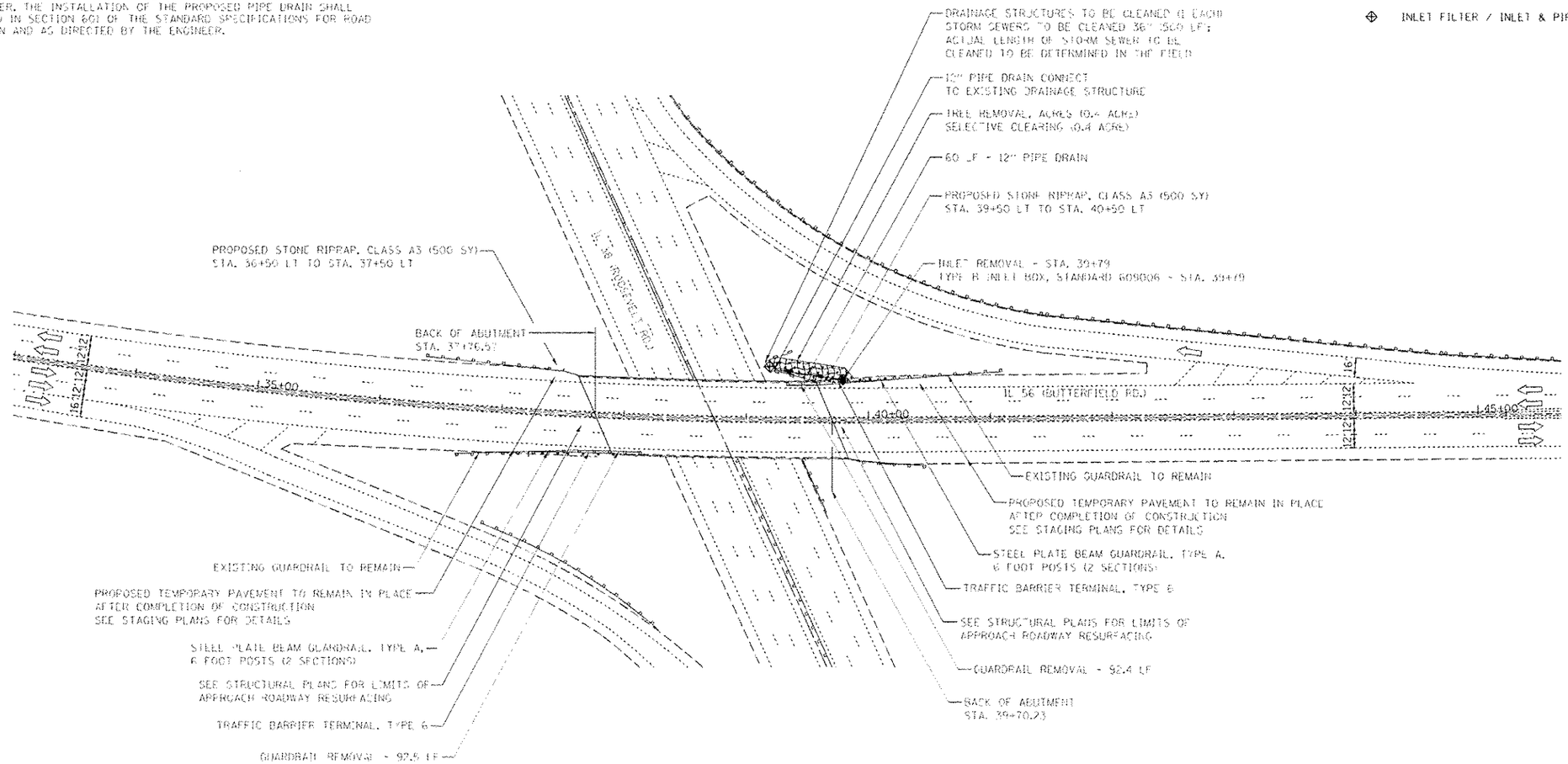
NOTES:

1. IN ADDITION TO FIELD REVIEW AND AERIAL DATA, PLAN DIMENSIONS AND DETAILS RELATIVE TO THE EXISTING FACILITIES HAVE BEEN TAKEN FROM EXISTING PLANS AND ARE SUBJECT TO CONSTRUCTION VARIATIONS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY SUCH DIMENSIONS AND DETAILS IN THE FIELD. SUCH VARIATIONS SHALL NOT BE A CAUSE FOR ADDITIONAL COMPENSATION DUE TO A CHANGE IN THE SCOPE OF THE WORK. HOWEVER, THE CONTRACTOR WILL BE PAID FOR THE QUANTITY ACTUALLY FURNISHED AT THE BID PRICE FOR THE WORK.

2. ALL PROPOSED INVERTS AND RIM ELEVATIONS SHALL BE FIELD DETERMINED AND APPROVED BY THE ENGINEER. THE INSTALLATION OF THE PROPOSED PIPE DRAIN SHALL BE COMPLETED AS STATED IN SECTION 601 OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND AS DIRECTED BY THE ENGINEER.

LEGEND

- EROSION CONTROL BLANKET
- SEEDING, CLASS 3
- PERIMETER EROSION BARRIER (PEB)
- INLET FILTER / INLET & PIPE PROTECTION

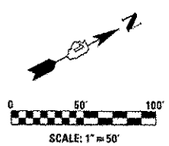


LIMITS OF PROPOSED IMPROVEMENTS:

STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT POSTS
STA. 37+23.69 TO STA. 37+48.48 RT
STA. 40+00.41 TO STA. 40+25.50 LT

GUARDRAIL REMOVAL
STA. 37+23.69 TO STA. 38+15.35 RT
STA. 39+32.65 TO STA. 40+25.50 LT

TRAFFIC BARRIER TERMINAL, TYPE 6
STA. 37+48.48 TO STA. 37+93.80 RT
STA. 39+54.47 TO STA. 40+00.41 LT

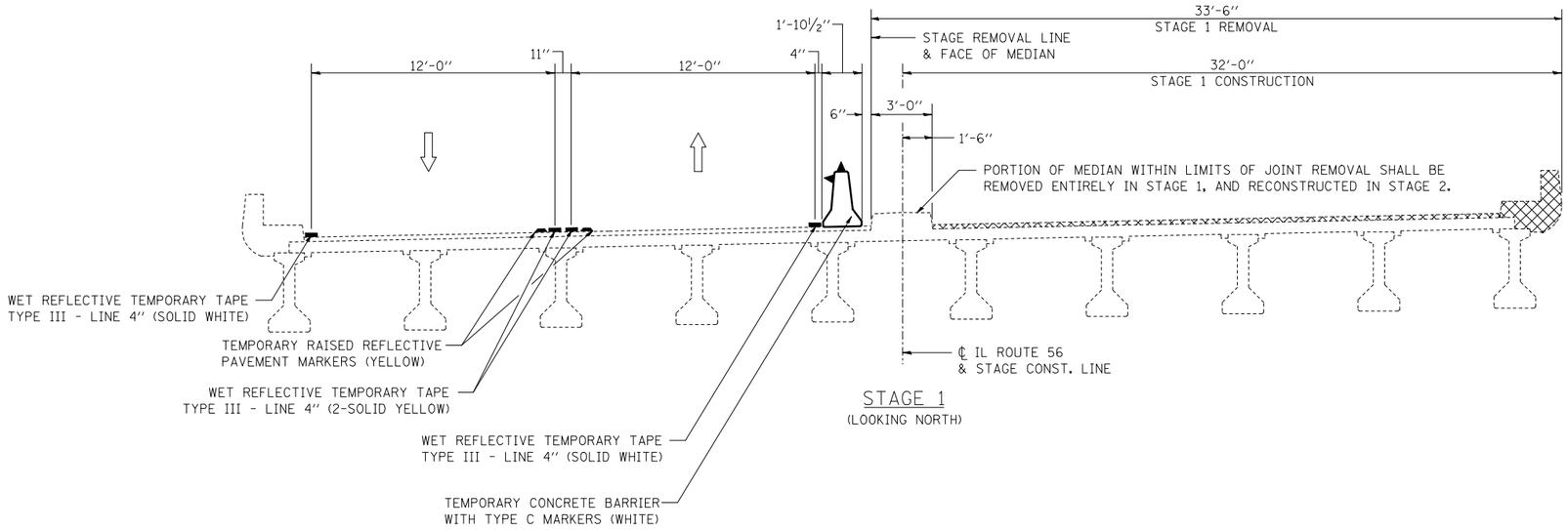


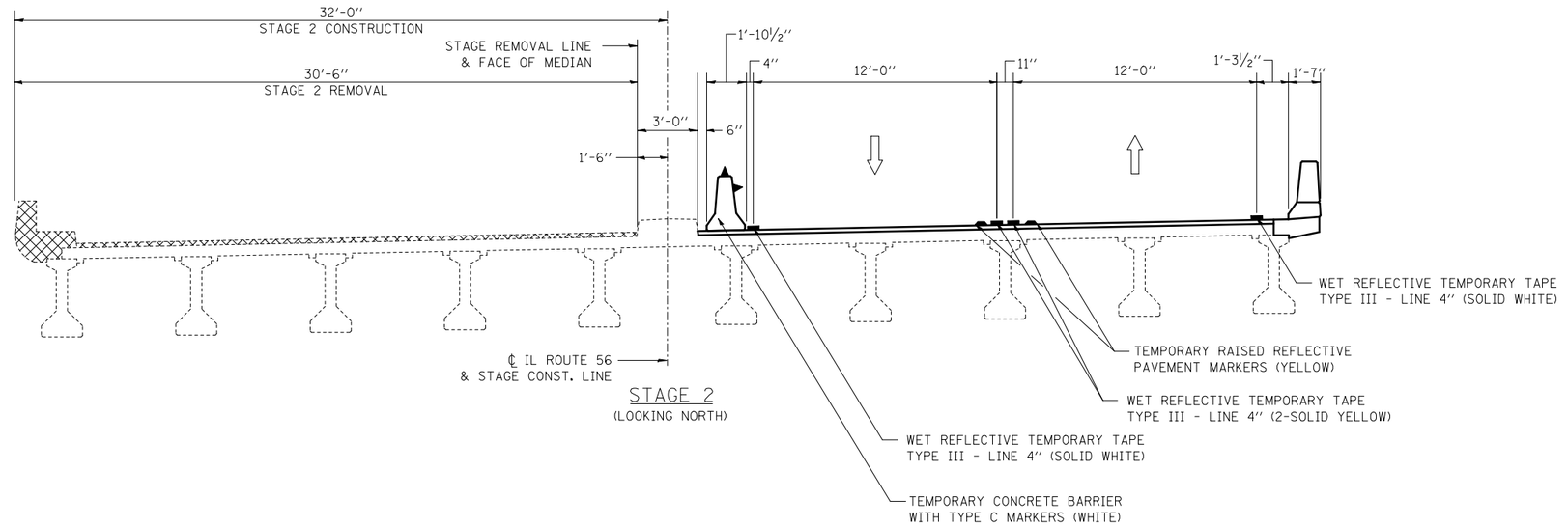
LIN ENGINEERING, LTD. Consulting Engineers Springfield, Illinois	USER NAME = $USER$	DESIGNED - SEW	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
		DRAWN - RK	REVISED -	
	PLOT SCALE = $SCALE$	CHECKED - SEW	REVISED -	
	PLOT DATE = $DATE$	DATE - 11/2011	REVISED -	

PROPOSED ROADWAY PLAN
IL 56 (BUTTERFIELD RD.) OVER IL 38 (ROOSEVELT RD.)

SCALE: 1"=50' | SHEET NO. 1 OF 1 SHEETS | STA. 33+00 TO STA. 45+68

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
347	JR-HB-1-1	DUPAGE	30	5
		CONTRACT NO. 60N77		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		





NOTES:

1. ALL HORIZONTAL DIMENSIONS ARE MEASURED RADIALLY, UNLESS OTHERWISE NOTED.
2. SEE STRUCTURAL PLANS FOR BEAM SPACING INFORMATION.
3. CROSS HATCHING INDICATES REMOVAL OF EXISTING CONCRETE.

LIN ENGINEERING,LTD. Consulting Engineers Springfield, Illinois	USER NAME = Plotted by Fred 576	DESIGNED - SEW	REVISED -
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	PLOT SCALE = 100.0000 ′ / IN.	CHECKED - SEW	REVISED -
	PLOT DATE = 12/5/2012	DATE - 11/2011	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC TYPICAL SECTIONS
IL 56 (BUTTERFIELD RD.) OVER IL 38 (ROOSEVELT RD.)

SCALE: N.T.S. | SHEET NO. 1 OF 1 SHEETS | STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
347	JR-HB-I-1	DUPAGE	30	6
		CONTRACT NO. 60N77		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

PRE-STAGE:

1. REMOVE EXISTING RAISED MEDIAN AND PLACE TEMP. PAVEMENT FROM STA. 31+90 TO 36+90, AND STA. 40+60 TO STA. 45+25, UNDER HIGHWAY STANDARD 701422-05. CONTRACTOR SHALL RECORD DIMENSIONS OF EXISTING MEDIAN TO BE APPROVED BY THE ENGINEER PRIOR TO REMOVAL. DEPTH OF MEDIAN SHALL BE RECORDED AFTER REMOVAL. RECORDING OF DIMENSIONS AND MEDIAN REMOVAL SHALL BE PAID AS "MEDIAN REMOVAL".

2. REMOVE EXISTING SHOULDER AND PLACE TEMP. PAVEMENT FROM STA. 35+20 LT. TO STA. 37+63 LT., AND STA. 39+57 LT. TO STA. 42+16 LT. UNDER HIGHWAY STANDARD 701422-05.

3. TEMP. PAVEMENT SHALL REMAIN IN PLACE AFTER COMPLETION OF PROJECT AT LOCATIONS LISTED IN NOTE 2.

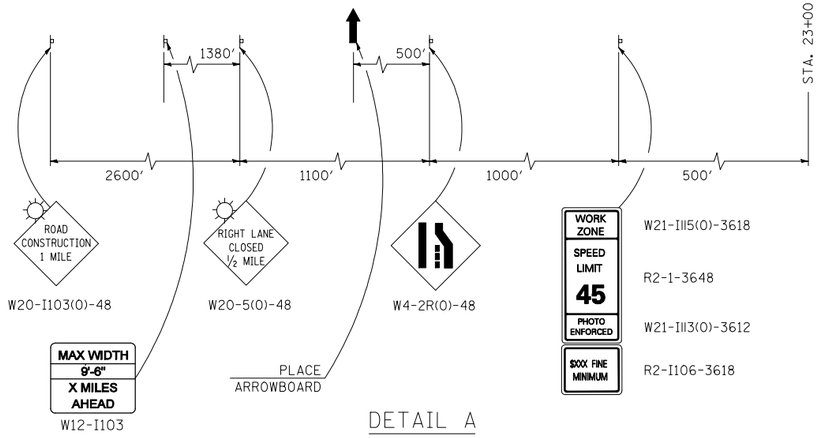
STAGE 1 CONSTRUCTION:

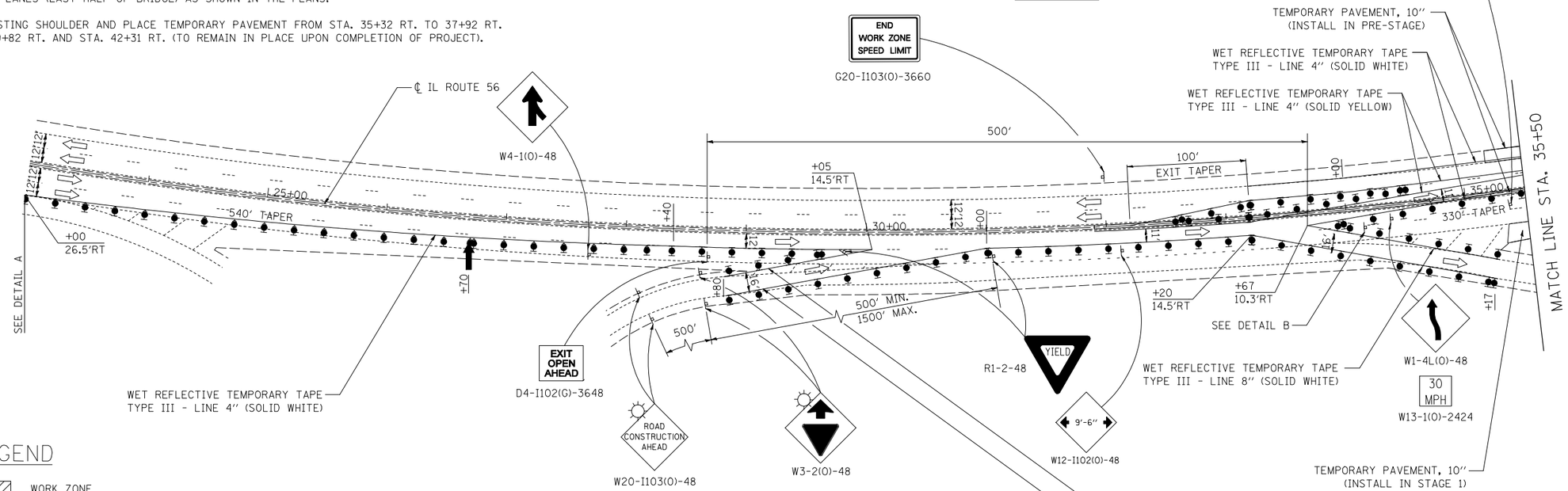
1. REMOVE CONFLICTING EXISTING PAVEMENT MARKINGS AND RAISED REFLECTIVE PAVEMENT MARKERS UNDER HIGHWAY STANDARD 701426-05.

2. CLOSE NORTHBOUND LANES AND CROSS-OVER IN ACCORDANCE WITH HIGHWAY STANDARDS 701411-08, 701431-08, AND AS SHOWN IN THE PLANS.

3. PERFORM BRIDGE, BRIDGE APPROACH PAVEMENT, AND GUARDRAIL RECONSTRUCTION ON NORTHBOUND LANES (EAST HALF OF BRIDGE) AS SHOWN IN THE PLANS.

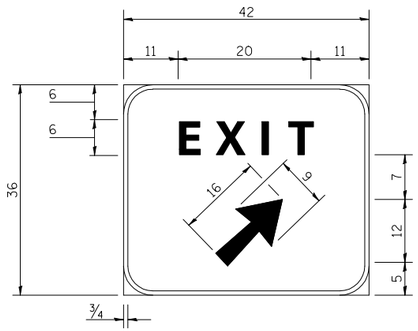
4. REMOVE EXISTING SHOULDER AND PLACE TEMPORARY PAVEMENT FROM STA. 35+32 RT. TO 37+92 RT. AND STA. 39+82 RT. AND STA. 42+31 RT. (TO REMAIN IN PLACE UPON COMPLETION OF PROJECT).





LEGEND

- WORK ZONE
- IMPACT ATTENUATORS, TEMPORARY (FULLY REDIRECTIVE, NARROW), TEST LEVEL 3
- TEMPORARY CONCRETE BARRIER
- SIGN
- DIRECTION INDICATOR BARRICADE WITH STEADY BURN MONODIRECTIONAL LIGHT
- TYPE II BARRICADE OR DRUM WITH STEADY BURN MONODIRECTIONAL LIGHT
- ARROWBOARD
- TYPE III BARRICADE W/2 FLASHING BEACONS (NO. OF BARRICADES AS DIRECTED BY ENGINEER)

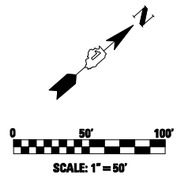


DETAIL B

Background - Green
Border and legend - White
"D" size letters
All dimensions shown are in INCHES
EXIT SIGN - SPECIAL

NOTES:

1. ANY CLOSURE TO IL ROUTE 38 (ROOSEVELT RD.) OR EASTBOUND IL 56 SHALL BE IN ACCORDANCE WITH HIGHWAY STANDARD 701422-05.



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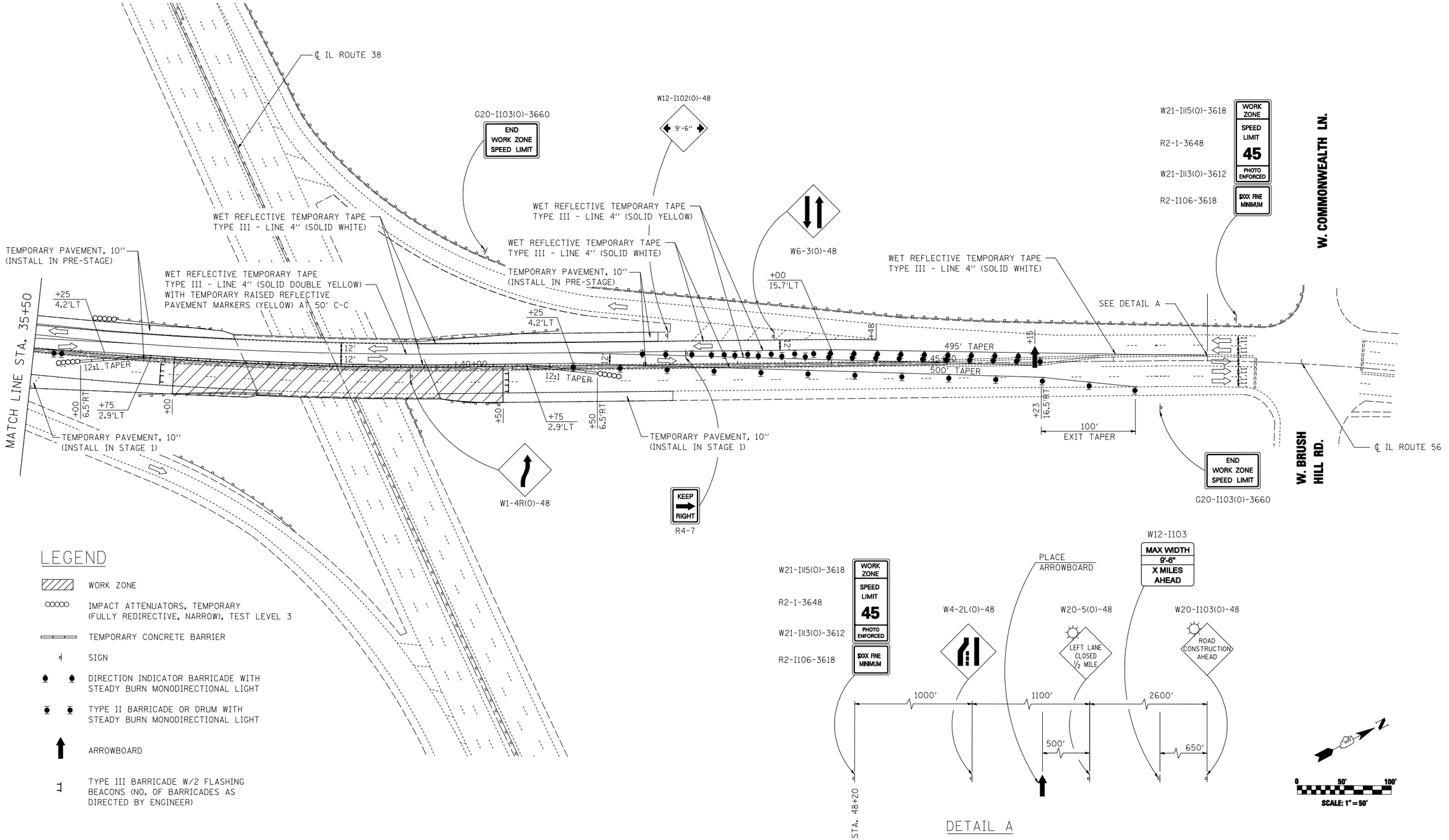
		DRAWN - RK	REVISED -
	PLOT SCALE = 100.0000 ' / IN.	CHECKED - SEW	REVISED -
	PLOT DATE = 12/5/2012	DATE - 11/2011	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC – STAGE 1
IL 56 (BUTTERFIELD RD.) OVER IL 38 (ROOSEVELT RD.)

SCALE: 1"=50' | SHEET NO. 1 OF 2 SHEETS | STA. 23+00 TO STA. 35+50

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
347	JR-HB-I-1	DUPAGE	30	7
		CONTRACT NO. 60N77		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



LEGEND

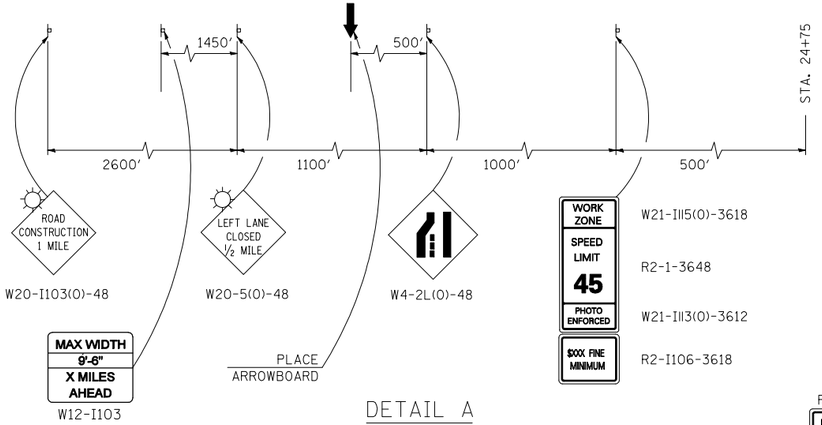
- WORK ZONE
- IMPACT ATTENUATORS, TEMPORARY (FULLY REDIRECTIVE, NARROW), TEST LEVEL 3
- TEMPORARY CONCRETE BARRIER
- SIGN
- DIRECTION INDICATOR BARRICADE WITH STEADY BURN MONODIRECTIONAL LIGHT
- TYPE II BARRICADE OR DRUM WITH STEADY BURN MONODIRECTIONAL LIGHT
- ARROWBOARD
- TYPE III BARRICADE W/2 FLASHING BEACONS (NO. OF BARRICADES AS DIRECTED BY ENGINEER)

DETAIL A

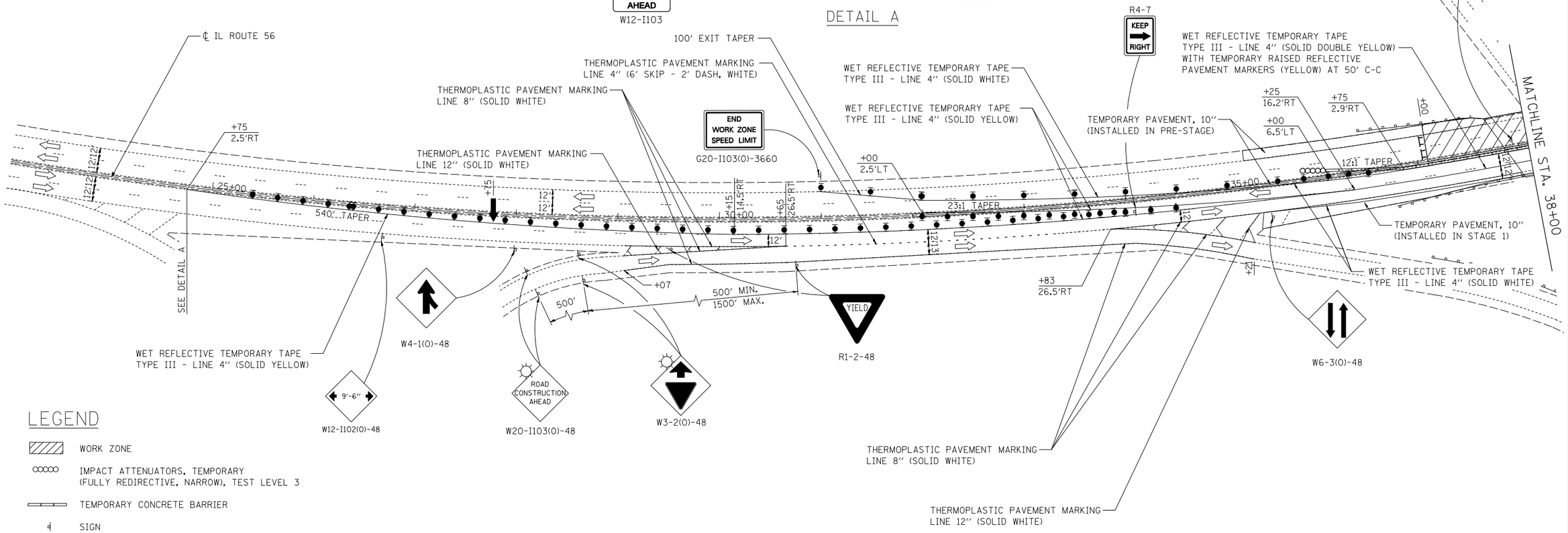
LIN ENGINEERING,LTD. Consulting Engineers Springfield, Illinois	USER NAME = Plotted by Fred 576	DESIGNED - SEW	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	MAINTENANCE OF TRAFFIC – STAGE 1 IL 56 (BUTTERFIELD RD.) OVER IL 38 (ROOSEVELT RD.)			F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN - RK	REVISED -					347	JR-HB-I-1	DUPAGE	30	8
	PLOT SCALE = 100.0000 ' / IN.	CHECKED - SEW	REVISED -							CONTRACT NO. 60N77		
	PLOT DATE = 12/5/2012	DATE - 11/2011	REVISED -		SCALE: 1"=50'	SHEET NO. 2 OF 2 SHEETS	STA. 35+50 TO STA. 50+00	FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

STAGE II CONSTRUCTION:

1. APPLY PERMANENT PAVEMENT MARKINGS FOR GORE AREAS AND AUXILLARY LANE EDGE LINES UNDER HIGHWAY STANDARD 701426-05. (FROM STA. 29+07 RT. TO STA. 35+35 RT.)
2. CLOSE SOUTHBOUND LANES AND CROSS-OVER IN ACCORDANCE WITH HIGHWAY STANDARDS 701411-08, 701431-08, AND AS SHOWN IN THE PLANS.
3. PERFORM BRIDGE, BRIDGE APPROACH PAVEMENT, DRAINAGE, AND GUARDRAIL RECONSTRUCTION ON SOUTHBOUND LANES (WEST HALF OF BRIDGE) AS SHOWN IN THE PLANS.
4. REMOVE TEMPORARY MEDIAN PAVEMENT AND RECONSTRUCT REMOVED PORTIONS OF RAISED MEDIAN IN ACCORDANCE WITH HIGHWAY STANDARD 701422-05. MEDIAN TO BE RECONSTRUCTED AT DEPTH AND DIMENSIONS AS NOTED DURING PRE-STAGE. MEDIAN RECONSTRUCTION SHALL BE PAID FOR AS "CONCRETE MEDIAN (SPECIAL)".
5. APPLY PERMANENT PAVEMENT MARKINGS AND RAISED REFLECTIVE PAVEMENT MARKERS FOR ALL OTHER LOCATIONS UNDER HIGHWAY STANDARD 701426-04.



DETAIL A



LEGEND

- WORK ZONE
- IMPACT ATTENUATORS, TEMPORARY (FULLY REDIRECTIVE, NARROW), TEST LEVEL 3
- TEMPORARY CONCRETE BARRIER
- SIGN
- DIRECTION INDICATOR BARRICADE WITH STEADY BURN MONODIRECTIONAL LIGHT
- TYPE II BARRICADE OR DRUM WITH STEADY BURN MONODIRECTIONAL LIGHT
- ARROWBOARD
- TYPE III BARRICADE W/2 FLASHING BEACONS (NO. OF BARRICADES AS DIRECTED BY ENGINEER)

NOTES:

1. ANY CLOSURE TO IL ROUTE 38 (ROOSEVELT RD.) SHALL BE IN ACCORDANCE WITH HIGHWAY STANDARD 701422-05.

N

0 50' 100'
SCALE: 1" = 50'

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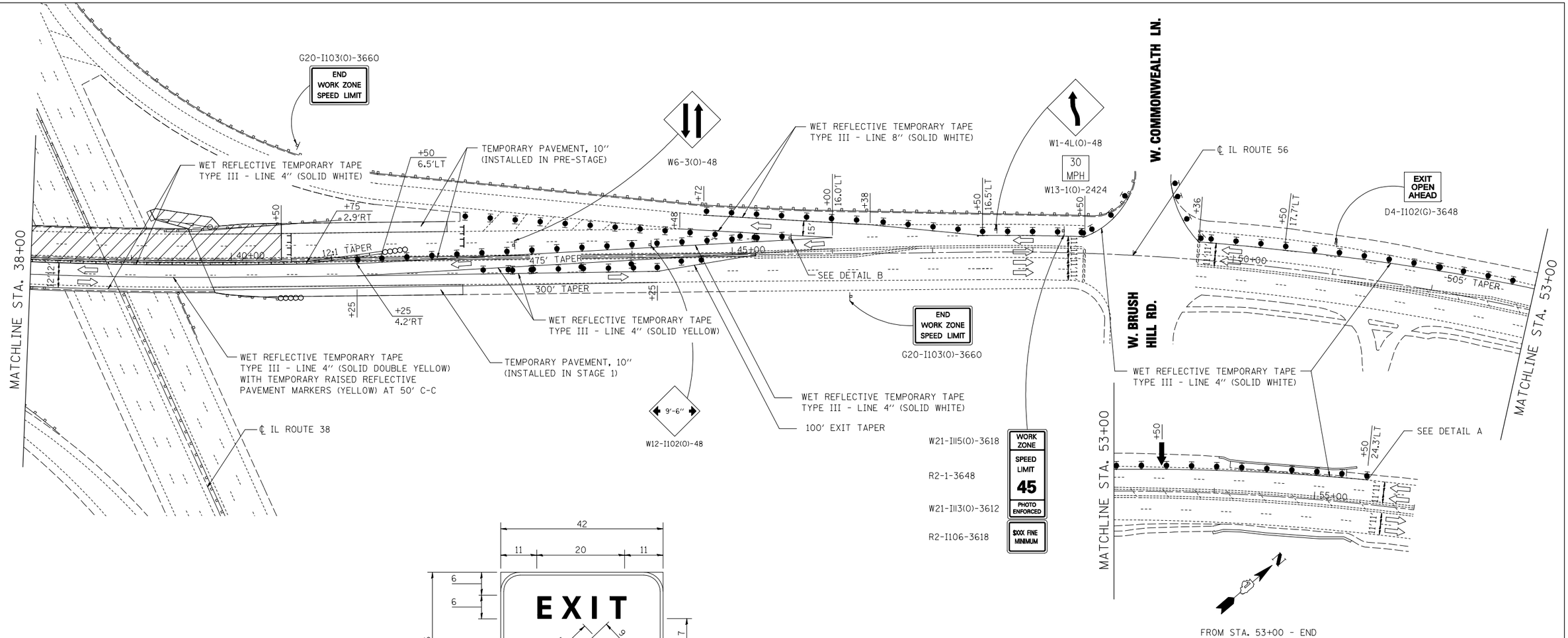
	PLOT DATE = 12/5/2012	DATE - 11/2011	REVISED -

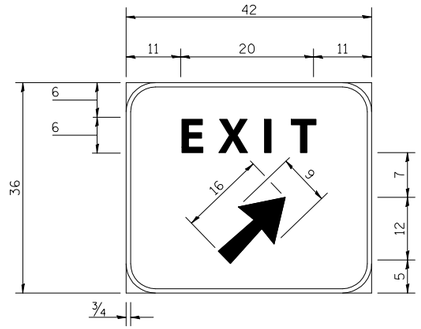
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC – STAGE 2
IL 56 (BUTTERFIELD RD.) OVER IL 38 (ROOSEVELT RD.)

SCALE: 1"=50' | SHEET NO. 1 OF 2 SHEETS | STA. 23+00 TO STA. 35+50

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
347	JR-HB-I-1	DUPAGE	30	9
		CONTRACT NO. 60N77		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



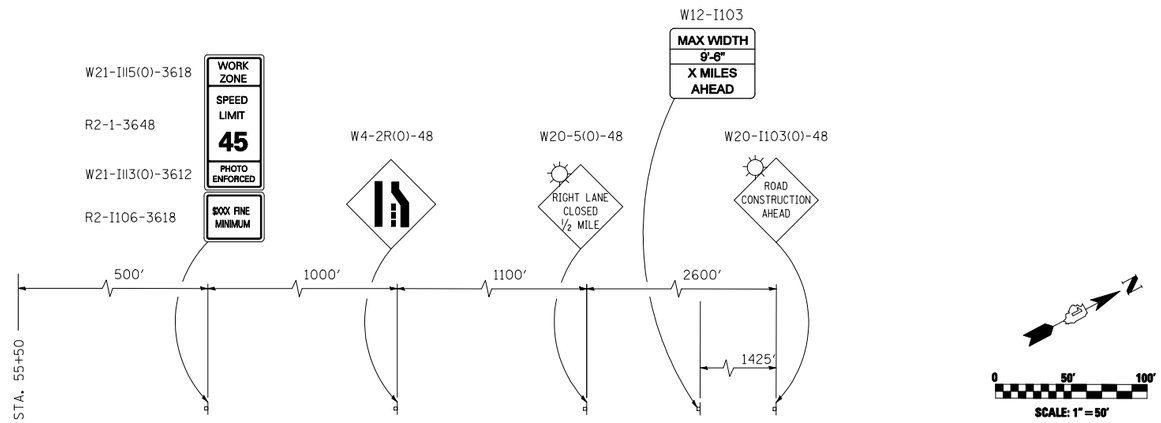


DETAIL B

Background - Green
Border and legend - White
"D" size letters
All dimensions shown are in INCHES
EXIT SIGN - SPECIAL

LEGEND

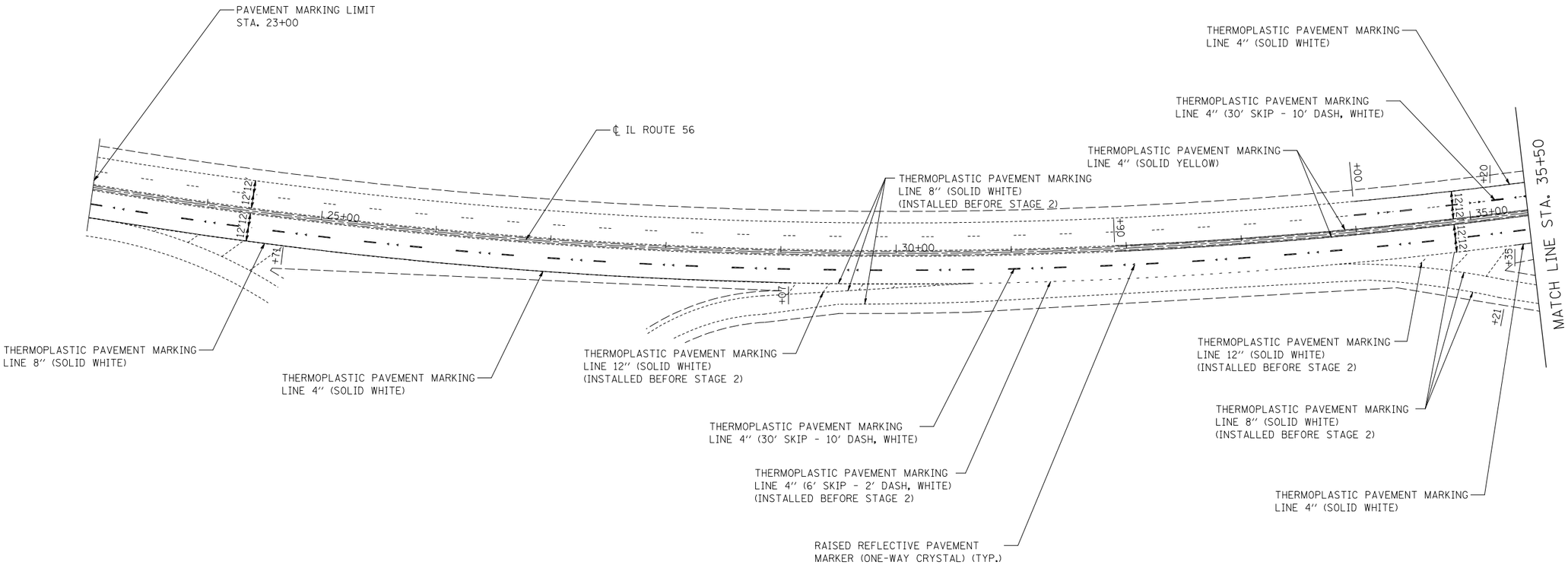
- WORK ZONE
- IMPACT ATTENUATORS, TEMPORARY (FULLY REDIRECTIVE, NARROW), TEST LEVEL 3
- TEMPORARY CONCRETE BARRIER
- SIGN
- DIRECTION INDICATOR BARRICADE WITH STEADY BURN MONODIRECTIONAL LIGHT
- TYPE II BARRICADE OR DRUM WITH STEADY BURN MONODIRECTIONAL LIGHT
- ARROWBOARD
- TYPE III BARRICADE W/2 FLASHING BEACONS (NO. OF BARRICADES AS DIRECTED BY ENGINEER)



DETAIL A

LIN ENGINEERING, LTD. Consulting Engineers Springfield, Illinois	USER NAME = Plotted by Fred 576	DESIGNED - SEW	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	MAINTENANCE OF TRAFFIC – STAGE 2
		DRAWN - RK	REVISED -		IL 56 (BUTTERFIELD RD.) OVER IL 38 (ROOSEVELT RD.)
	PLOT SCALE = 100.0000 ' / IN.	CHECKED - SEW	REVISED -		
	PLOT DATE = 12/5/2012	DATE - 11/2011	REVISED -		SCALE: 1"=50' | SHEET NO. 2 OF 2 SHEETS | STA. 35+50 TO STA. 50+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
347	JR-HB-I-1	DUPAGE	30	10
		CONTRACT NO. 60N77		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



NOTES:

PROPOSED PAVEMENT MARKINGS AND RAISED REFLECTIVE PAVEMENT MARKERS ARE TO BE INSTALLED IN ACCORDANCE WITH HIGHWAY STANDARD 780001-03 AND DISTRICT ONE STANDARDS TC-11 AND TC-13.

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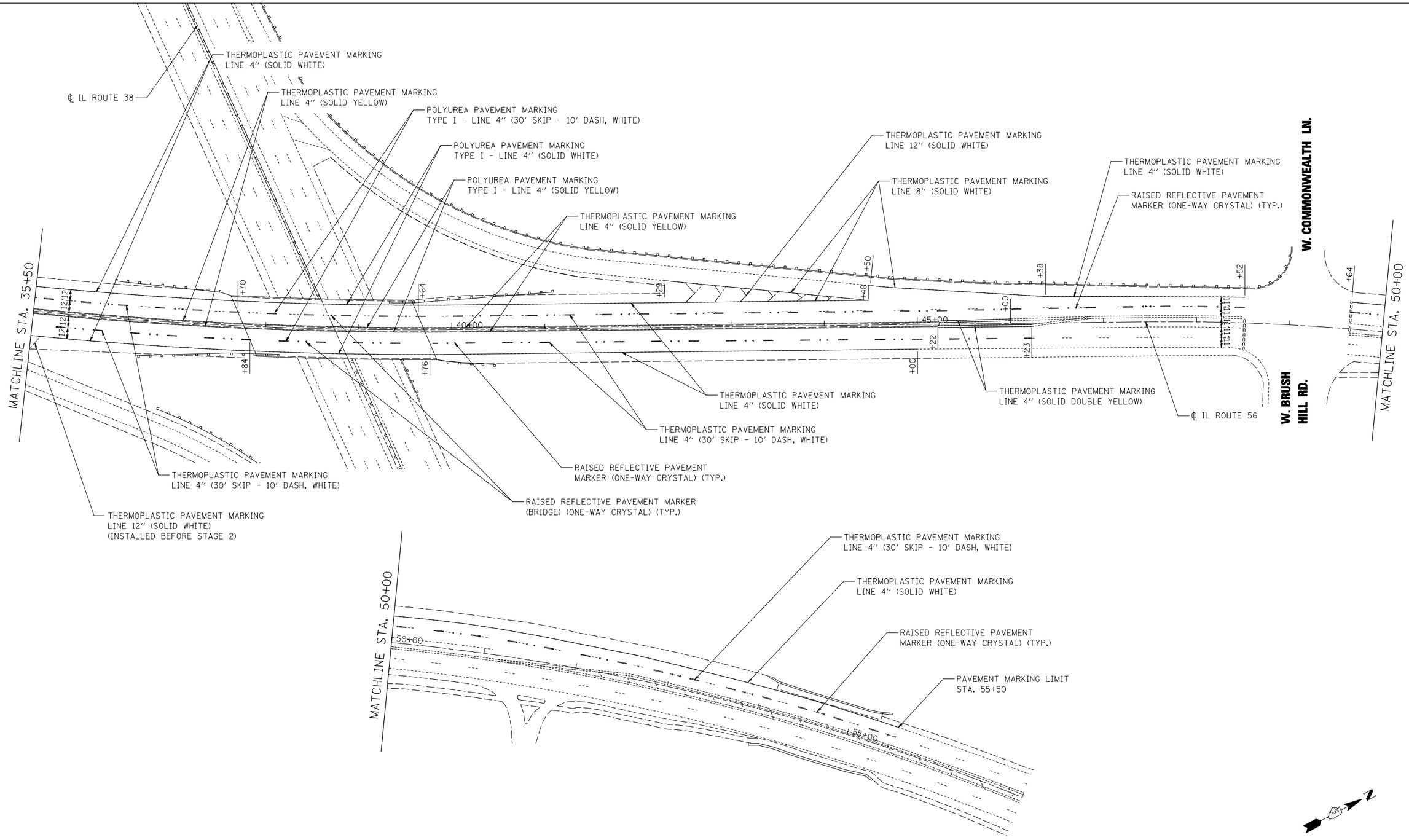
		DRAWN - RK	REVISED -
	PLOT SCALE = 100.0000 ' / IN.	CHECKED - SEW	REVISED -
	PLOT DATE = 12/5/2012	DATE - 11/2011	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKING PLAN
IL 56 (BUTTERFIELD RD.) OVER IL 38 (ROOSEVELT RD.)

SCALE: 1"=50' | SHEET NO. 1 OF 2 SHEETS | STA. 23+00 TO STA. 35+50

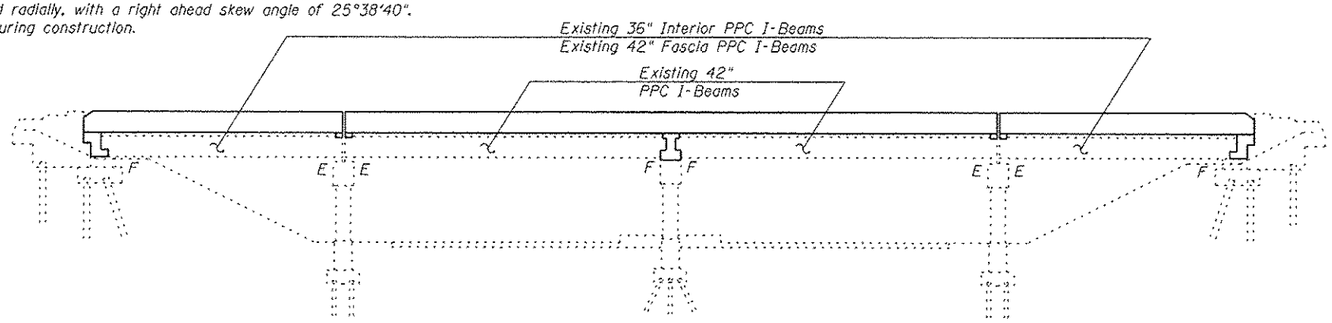
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
347	JR-HB-I-1	DUPAGE	30	11
		CONTRACT NO. 60N77		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



LIN ENGINEERING,LTD. Consulting Engineers Springfield, Illinois	USER NAME = Plotted by Fred 576	DESIGNED - SEW	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	PAVEMENT MARKING PLAN IL 56 (BUTTERFIELD RD.) OVER IL 38 (ROOSEVELT RD.)
		DRAWN - RK	REVISED -		
	PLOT SCALE = 100.0000 ' / IN.	CHECKED - SEW	REVISED -		SCALE: 1"=50' | SHEET NO. 2 OF 2 SHEETS | STA. 35+50 TO STA. 50+00
	PLOT DATE = 12/5/2012	DATE - 11/2011	REVISED -		

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
347	JR-HB-I-1	DUPAGE	30	12
		CONTRACT NO. 60N77		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

Existing Structure:
Structure No. 022-0114, constructed in 1966 as F.A. 7, Section JR-HB. In 1985 under FAU 3545, the deck was scarified and a 2½" plasticized concrete overlay was provided; all existing transverse joints were replaced with a preformed joint seal; the longitudinal joint at the median was closed. Existing structure is a four span bridge utilizing PPC I-Beams, supported by multi-column concrete piers and pile bent abutments, 193'-8" back to back abutments along the ℄. 64'-0" out to out deck measured radially, with a right ahead skew angle of 25°38'40". Stage Construction shall be utilized to maintain traffic during construction.

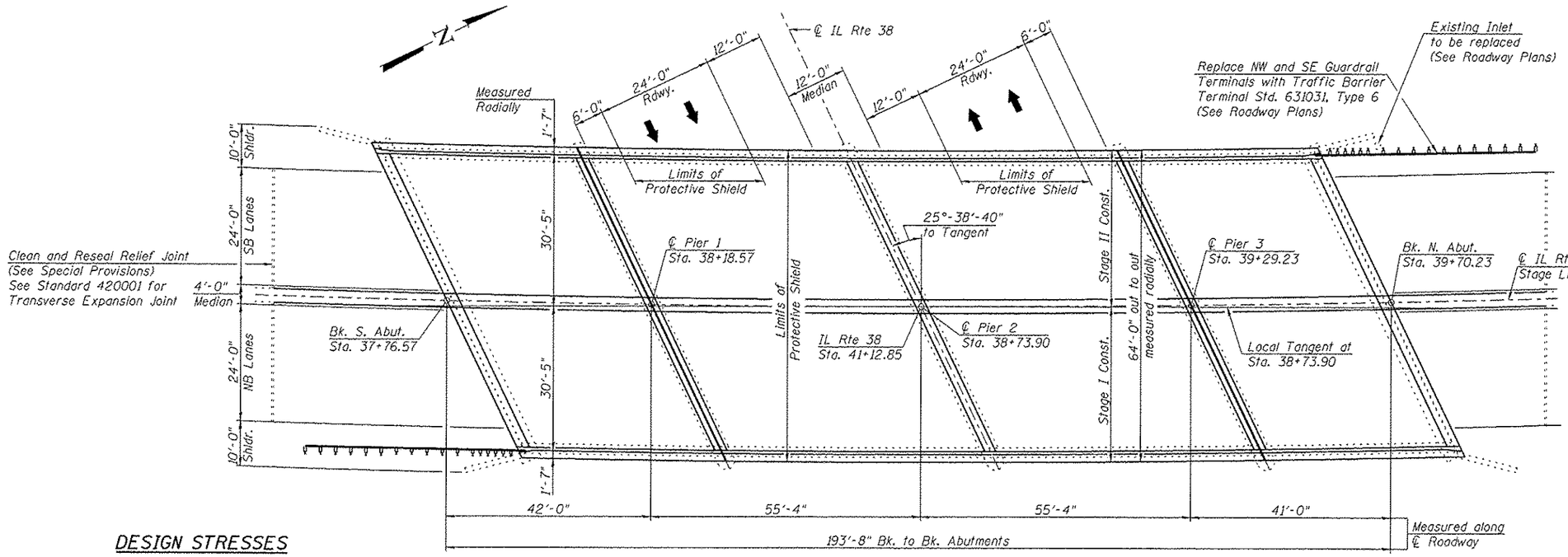


ELEVATION

SCOPE OF WORK

1. Remove and replace concrete deck adjacent to transverse joints in order to provide preformed joint strip seal joints at piers 1 and 3.
2. Remove concrete adjacent to transverse joints and close joint with a new concrete diaphragm at abutments and pier 2.
3. Remove and reconstruct concrete parapets.
4. Plug or clean deck drains.
5. Scarify existing concrete overlay and replace with new latex concrete overlay.
6. Remove and replace existing asphalt overlay on approach slabs.
7. Repair deck slab and approach slab.
8. Apply Protective Coat to top of new concrete at abutment and pier joints and top and inside vertical face of parapets.
9. Clean and Reseal Relief Joints.
10. Repair deteriorated concrete on piers and slope wall.
11. Jack and remove existing expansion bearings and replace with elastomeric bearings.

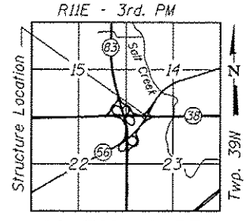
INDEX OF SHEETS



PLAN

EXISTING CURVE DATA

Δ = 34° 58' 12" (LT)
D = 1° 20' 35"
R = 4266.15'
T = 1343.86'
L = 2603.76'
E = 206.66'
P.C. = Sta. 14+10.83
P.T. = Sta. 40+14.53
P.I. = Sta. 27+54.69



LOCATION SKETCH

DESIGN STRESSES

FIELD UNITS

Existing Construction
fc = 1,400 psi
fs = 20,000 psi (Reinforcement)

New Construction
f'c = 3,500 psi
fy = 60,000 psi (Reinforcement)
fy = 36,000 psi (Structural Steel) (M270 Gr. 36)

PRECAST PRESTRESSED UNITS

Existing Construction
f'c = 5,000 psi
f'ci = 4,000 psi
fsu = 248,000 psi
fsi = 173,600 psi

DESIGN SPECIFICATIONS

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

LOADING HS 20-44

(Original Construction)

LICENSED STRUCTURAL ENGINEER
MICHAEL T. HALEY
81-5991
CHATHAM
STATE OF ILLINOIS

Michael T. Haley 12-4-12
Michael T. Haley — Date
Licensed Structural Engineer
State of Illinois No. 81-5991
Expires 11/30/2014

GENERAL PLAN AND ELEVATION
IL RTE 56 OVER IL RTE 38
FAP RTE 347 SECTION JR-HB-I-1
DUPAGE COUNTY
STATION 38+73.90
STRUCTURE NO. 022-0114

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

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN AND ELEVATION
STRUCTURE NO. 022-0114
SHEET NO. 1 OF 15 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
347	JR-HB-I-1	DUPAGE	30	13
		CONTRACT NO. 60N77		
	ILLINOIS FED. AID PROJECT			

GENERAL NOTES

Reinforcement bars designated (E) shall be epoxy coated.

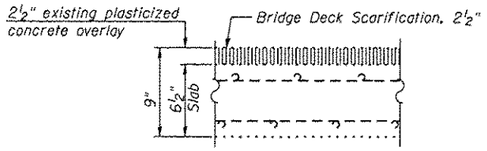
Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall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

Joint openings shall be adjusted according to Article 520.04 of the Std. Specs. when the concrete is poured at an ambient temperature other than 50° F.

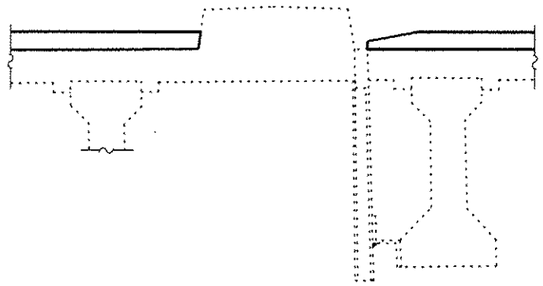
The existing bearing plate coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project.

All structural steel shall conform to AASHTO Classification M270 Gr. 36 unless otherwise noted.

Existing bridge underdeck lighting is present at this location. All existing locations shall be protected and maintained in accordance with the special provision for "PROTECT AND MAINTAIN EXISTING UNDERPASS LUMINAIRE" and as determined by the Engineer.

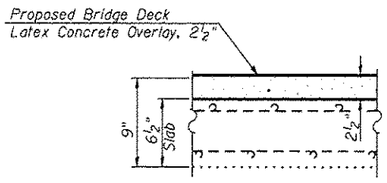


EXISTING BRIDGE DECK CROSS SECTION

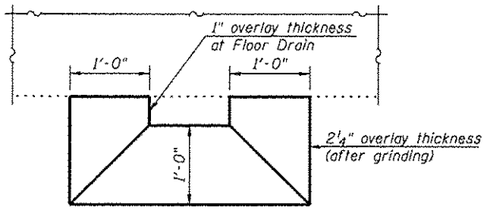


DRAIN DETAILS

(Except at Floor Drains Being Plugged)



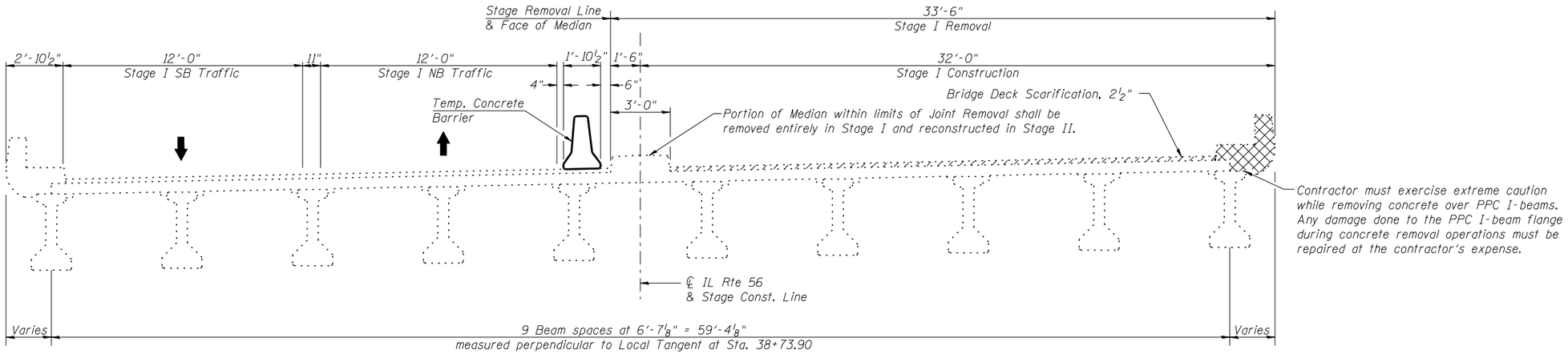
PROPOSED BRIDGE DECK CROSS SECTION



OVERLAY AT DRAIN

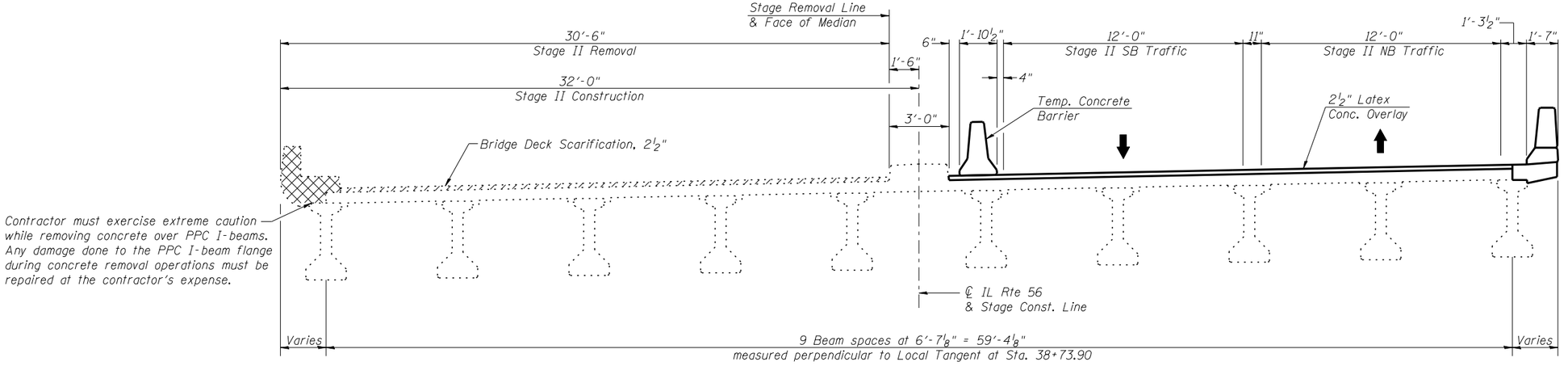
TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Furnished Excavation	Cu. Yd.	-	15	15
Bituminous Materials (Prime Coat)	Gallon	71	-	71
Polymerized Hot-Mix Asphalt Surface Course, Mix "F", N90	Tons	49	-	49
Concrete Removal	Cu. Yd.	104.0	-	104.0
Slope Wall Removal	Sq. Yd.	-	51	51
Protective Shield	Sq. Yd.	379	-	379
Concrete Superstructure	Cu. Yd.	138.8	-	138.8
Bridge Deck Grooving	Sq. Yd.	1159	-	1159
Protective Coat	Sq. Yd.	243	-	243
Reinforcement Bars, Epoxy Coated	Pound	20360	-	20360
Bar Splicers	Each	78	-	78
Slope Wall, 4 Inch	Sq. Yd.	-	51	51
Preformed Joint Strip Seal	Foot	143	-	143
Anchor Bolts, 1"	Each	80	-	80
Floor Drains to be Cleaned	Each	8	-	8
Clean & Reseal Relief Joint	Foot	52	-	52
Hot-Mix Asphalt Surface Removal, Variable Depth	Sq. Yd.	707	-	707
Elastomeric Bearing Assembly, Type II (Special)	Each	40	-	40
Approach Slab Removal & Replacement	Sq. Yd.	30	-	30
Jack and Remove Existing Bearings	Each	40	-	40
Bridge Deck Latex Concrete Overlay, 2½"	Sq. Yd.	1155	-	1155
Bridge Deck Scarification, 2½"	Sq. Yd.	1155	-	1155
Structural Repair of Concrete (Depth Equal to or Less Than 5 in.)	Sq. Ft.	-	259	259
Plug Existing Deck Drains	Each	16	-	16
Deck Slab Repair (Full Depth, Type II)	Sq. Yd.	3	-	3
Temporary Shoring and Cribbing	Each	-	3	3
Expansion Bolts, ¾"	Each	342	-	342



STAGE I REMOVAL & CONSTRUCTION

(Looking North)



STAGE II REMOVAL & CONSTRUCTION

(Looking North)

Notes:

All horizontal dimensions are measured radially, unless otherwise noted.
See sheet 4 of 15 for details of Temporary Concrete Barrier.
See Roadway plans for quantities of Temporary Concrete Barrier.
Cross Hatching indicates removal of existing concrete.
Hatch areas indicate Bridge Deck Scarification, 2½"

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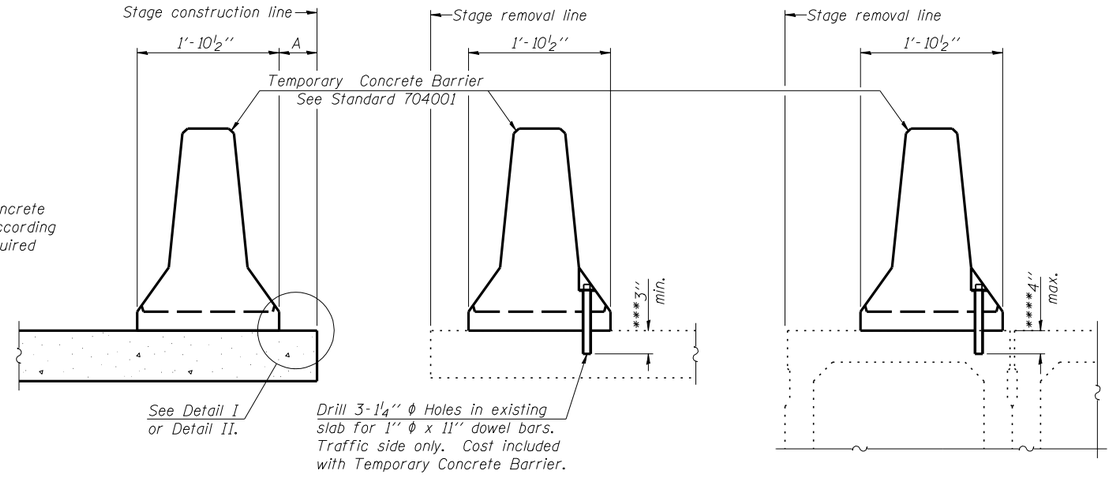
	PLOT SCALE =	DRAWN - AJF	REVISED -
	PLOT DATE =	CHECKED - MTH	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STAGE CONSTRUCTION DETAILS
STRUCTURE NO. 022-0114
SHEET NO. 3 OF 15 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
347	JR-HB-I-1	DUPAGE	30	15
		CONTRACT NO. 60N77		
	ILLINOIS	FED. AID PROJECT		

When "A" is 3'-6" or less, the temporary concrete barrier shall be anchored to the new slab according to Detail I or Detail II. No anchorage is required when "A" is greater than 3'-6".



NEW SLAB

EXISTING SLAB

EXISTING DECK BEAM

NOTES

Detail I - With Bar Splicer or Couplers:
Connect one (1) 1'' x 7' 'x ''W'' steel PL to the top layer of couplers with 2-⅝'' ϕ bolts screwed to coupler at approximate ℄ of each barrier panel.

Detail II - With Extended Reinforcement Bars:
Connect one (1) 1'' x 7'' x ''W'' steel PL to the concrete slab or concrete wearing surface with 2-⅝'' ϕ Expansion Anchors or cast in place inserts spaced between the top layer of reinforcement at approximate ℄ of each barrier panel.

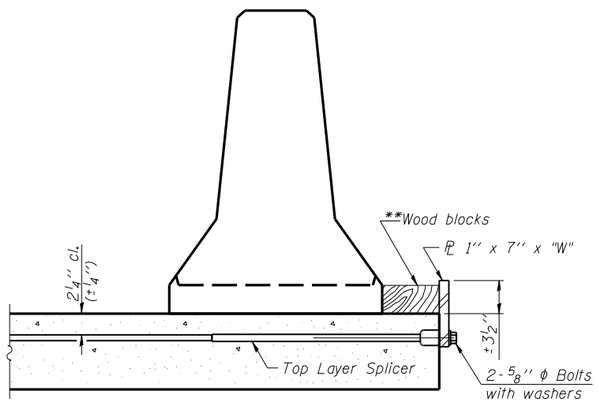
Cost of anchorage is included with Temporary Concrete Barrier.

The 1'' x 7'' x ''W'' plate shall not be removed until stage II construction forms and all reinforcement bars are in place and the concrete is ready to be placed.

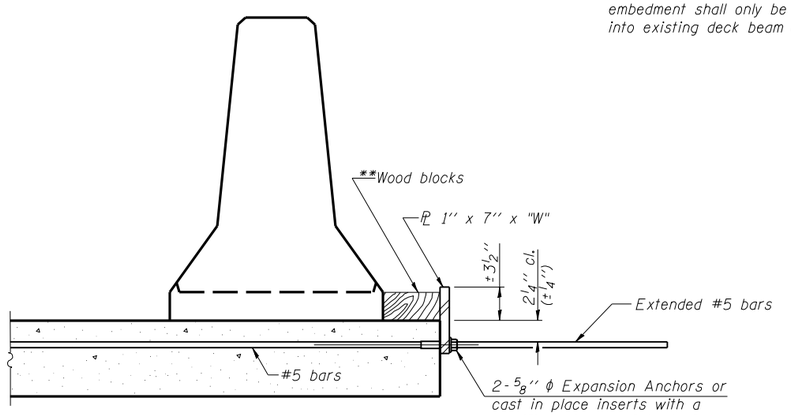
SECTIONS THRU SLAB OR DECK BEAM

*** Dimension shown is minimum required embedment into concrete. If hot-mix asphalt wearing surface is present, minimum embedment shall be in addition to wearing surface depth.

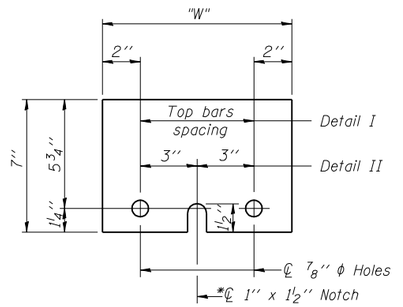
**** If existing deck beam is to remain in place after stage construction, embedment shall only be into wearing surface and not into existing deck beam concrete.



DETAIL I



DETAIL II



STEEL RETAINER PL 1'' x 7'' x ''W''

* Required only with Detail II

** Wood blocks may be omitted when required to provide minimum stage traffic lane width. When the wood blocks are omitted, the concrete barrier shall be in direct contact with the steel retainer plate.

"W" = Top bars spacing + 4''

R-27

7-1-10

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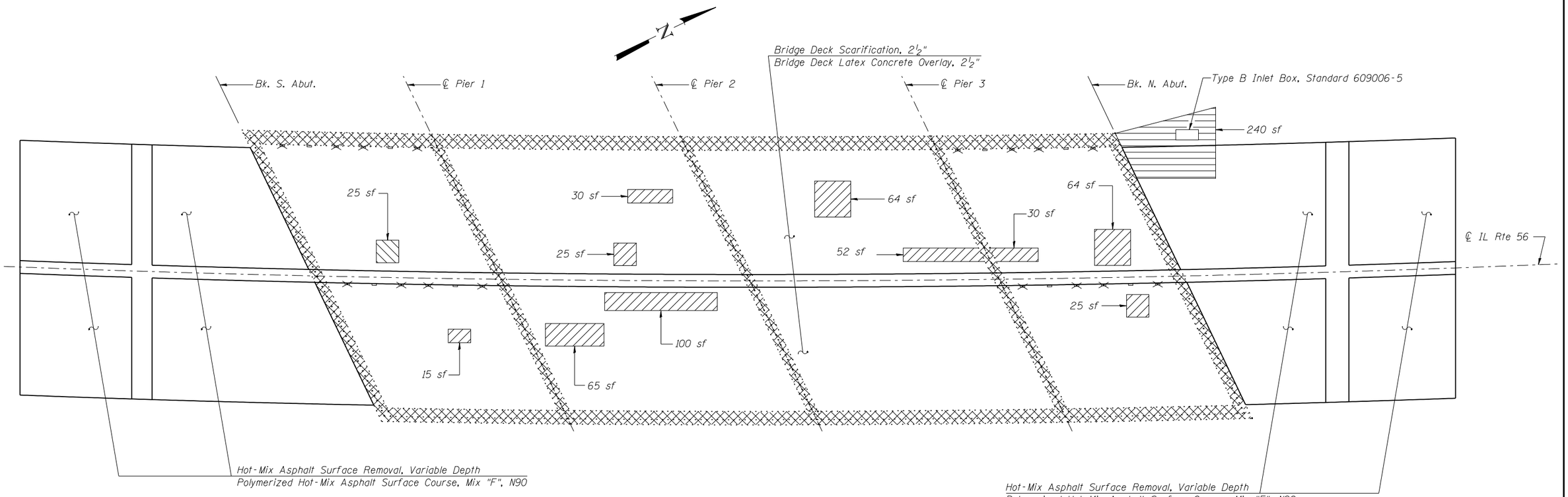
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TEMPORARY CONCRETE BARRIER FOR STAGE CONSTRUCTION
STRUCTURE NO. 022-0114
SHEET NO. 4 OF 15 SHEETS

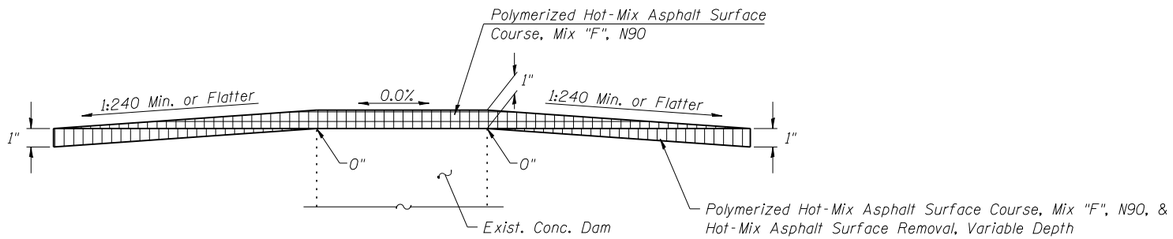
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
347	JR-HB-1-1	DUPAGE	30	16
		CONTRACT NO. 60N77		
	ILLINOIS FED. AID PROJECT			



PLAN

LEGEND

- Concrete Removal
- Approach Slab Removal & Replacement
- Deck Slab Repair (Full Depth, Type II)
- Deck Slab Repair (Partial) (For Information Only)
- Polymerized Hot-Mix Asphalt Surface Course, Mix "F", N90
- Polymerized Hot-Mix Asphalt Surface Course, Mix "F", N90 & Hot-Mix Asphalt Surface Removal, Variable Depth
- Plug Existing Deck Drains
- Clean Existing Deck Drains
- sf — Square Feet



NORTH AND SOUTH APPROACHES

(Looking West)

Notes:

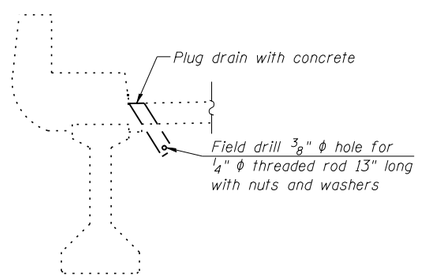
Deck Condition Survey performed September, 2011.

There is an estimated 52 sq. yards of Partial Depth Deck Slab Repair required. Partial depth repairs shall be included with Bridge Deck Scarification, see Special Provision for Bridge Deck Latex Concrete Overlay.

Repair of the existing deck slab shall include but may not be limited to the areas shown. The actual areas to be repaired will be determined by the Engineer at the time of construction. The Engineer shall show actual location of repairs on As-Built plans.

See sheet 6 thru 8 of 15 for details of concrete removal.

Furnished Excavation includes excavation at Type B Inlet Box, Standard 609006.



DRAIN ELIMINATION DETAIL

BILL OF MATERIAL

Item	Unit	Total
Protective Shield	Sq. Yd.	379
Deck Slab Repair (Full Depth, Type II)	Sq. Yd.	3
Concrete Removal	Cu. Yd.	104.0
Bridge Deck Latex Concrete Overlay, 2½"	Sq. Yd.	1155
Bridge Deck Scarification, 2½"	Sq. Yd.	1155
Plug Existing Deck Drains	Each	16
Floor Drains to be Cleaned	Each	8
Approach Slab Removal & Replacement	Sq. Yd.	30
Hot-Mix Asphalt Surface Removal, Variable Depth	Sq. Yd.	707
Polymerized Hot-Mix Asphalt Surface Course, Mix "F", N90	Tons	49
Furnished Excavation	Cu. Yd.	15

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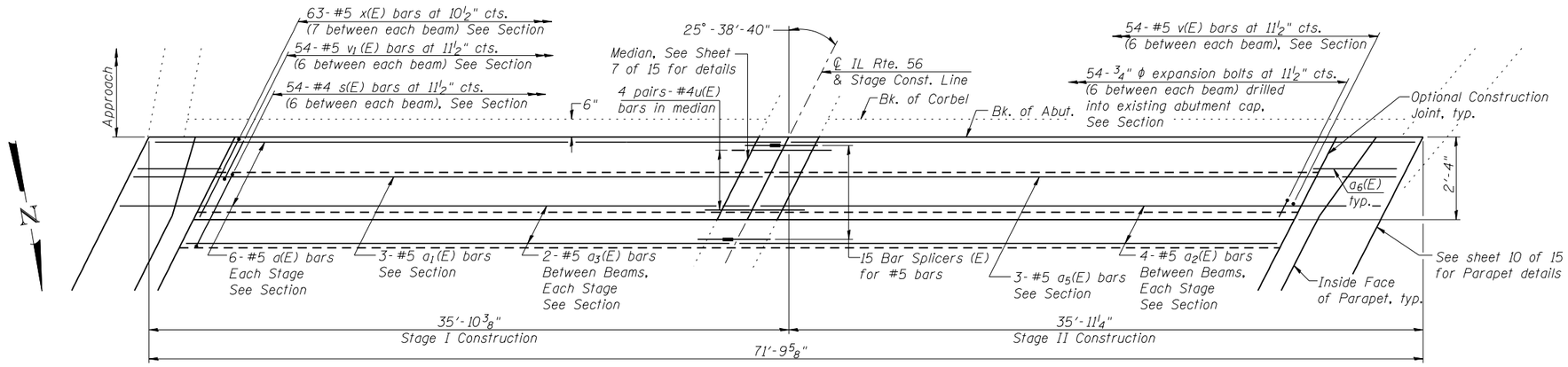
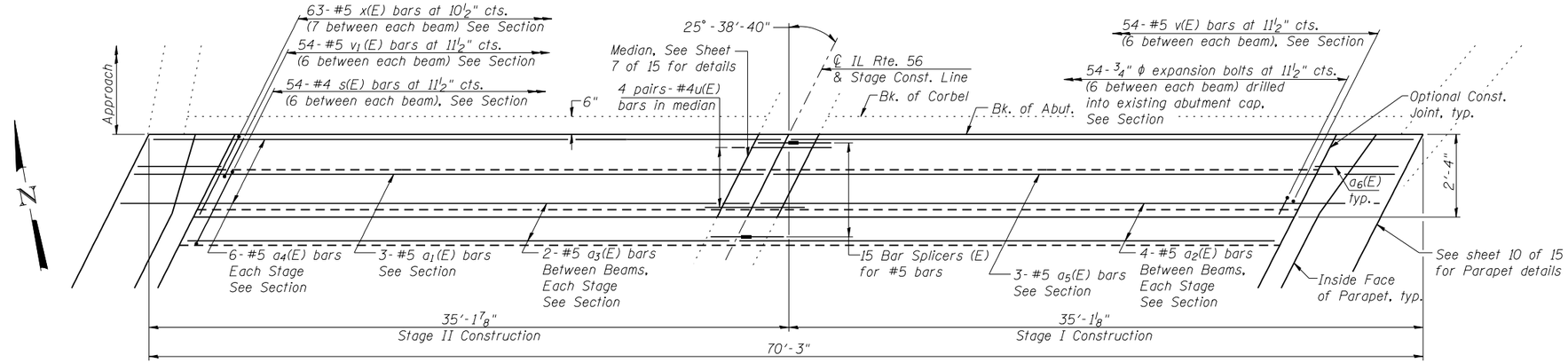
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DECK SLAB REPAIR
STRUCTURE NO. 022-0114
SHEET NO. 5 OF 15 SHEETS

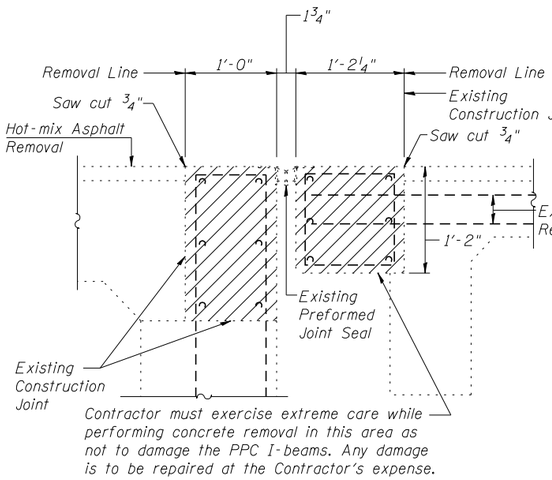
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
347	JR-HB-I-1	DUPAGE	30	17
		CONTRACT NO. 60N77		
	ILLINOIS FED. AID PROJECT			



SOUTH ABUTMENT

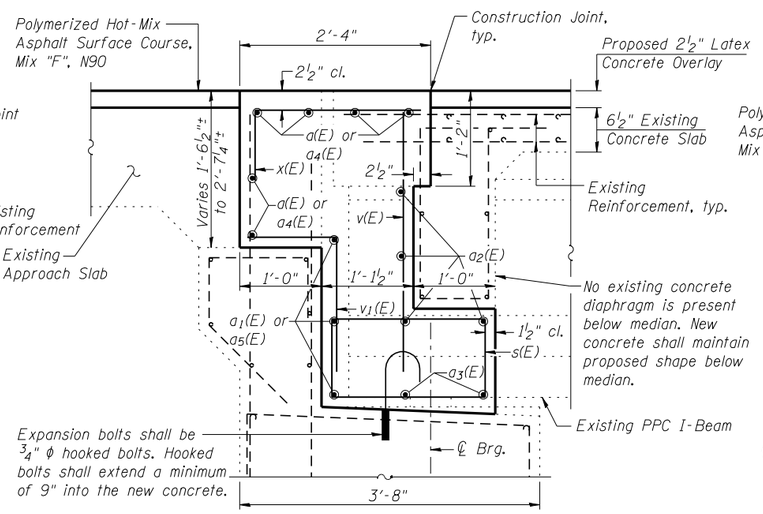


NORTH ABUTMENT



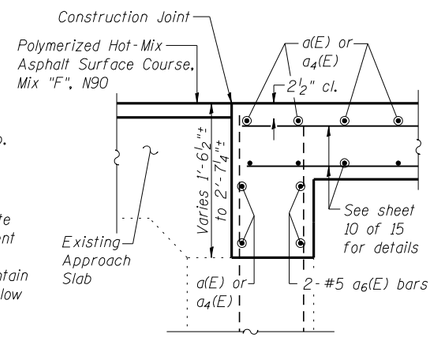
EXISTING CROSS SECTION THRU ABUTMENTS

(Dimensions at Rt. L's)
(Removal limits include existing median)



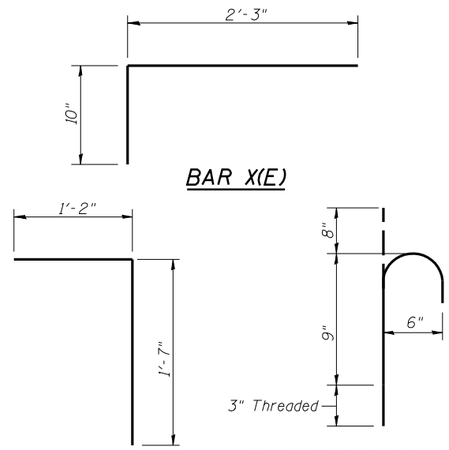
PROPOSED SECTION AT ABUTMENTS

(From fascia beam to fascia beam)
(Dimensions at Rt. L's)



PROPOSED SECTION AT ABUTMENTS

(Outside of fascia beam)
(Dimensions at Rt. L's)

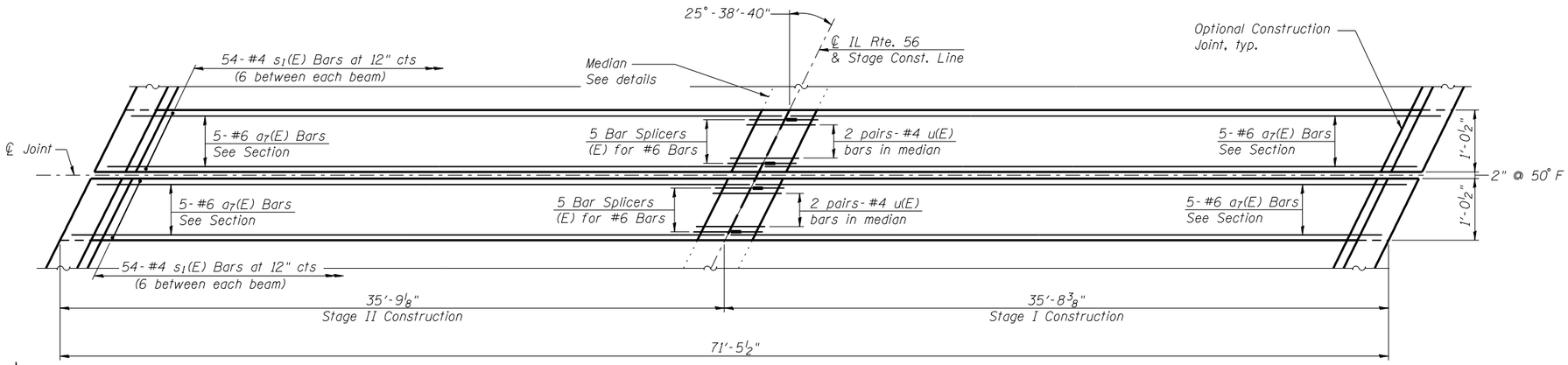


BILL OF MATERIAL

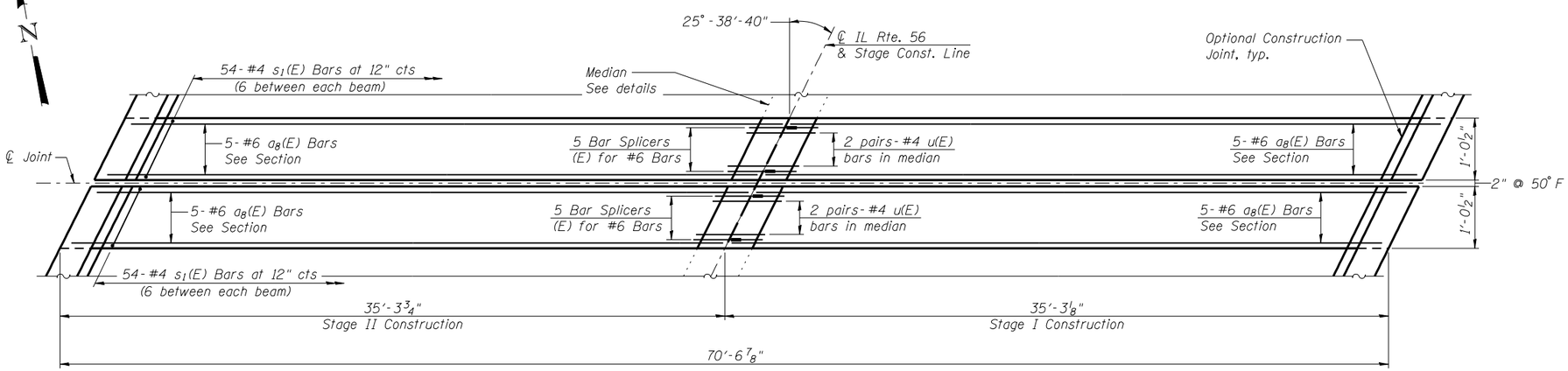
(Two Abutments)

Bar	No.	Size	Length	Shape
a(E)	12	#5	35'-2"	——
a1(E)	6	#5	33'-10"	——
a2(E)	72	#5	6'-1"	——
a3(E)	36	#5	5'-0"	——
a4(E)	12	#5	34'-5"	——
a5(E)	6	#5	31'-5"	——
a6(E)	8	#5	3'-11"	——
s(E)	108	#4	6'-9"	□
u(E)	16	#4	4'-9"	⌐
v(E)	108	#5	3'-2"	——
v1(E)	108	#5	2'-9"	⌐
x(E)	126	#5	3'-1"	⌐
Reinforcement Bars, Epoxy Coated			Pound	3570
Concrete Superstructure			Cu. Yd.	38.0
Expansion Bolts, ¾"			Each	108

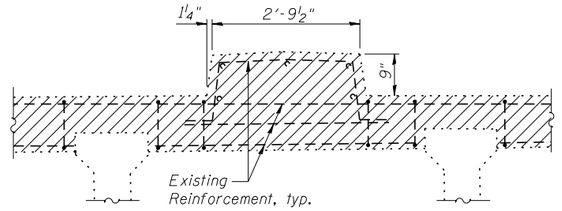
Notes:
1. Hatched area indicates concrete removal. Perimeter of concrete removal areas shall be saw cut ¾" prior to removal of the concrete.
2. Existing reinforcement bars in the concrete removal area extending into new construction shall be cleaned and incorporated into the new construction unless otherwise noted. Cost included with Concrete Removal.
3. Any reinforcement bars that are damaged during concrete removal operations shall be repaired or replaced using an approved bar splicer or anchorage system, in accordance with IDOT Standard Specifications Article 501.03. Cost included in "Concrete Removal"
4. Overlay removal is included in pay item Bridge Deck Scarification, 2½".
5. Removal of the existing joint system is included with Concrete Removal.
6. See sheet 7 of 15 for details of u(E) bar.



PIER 1

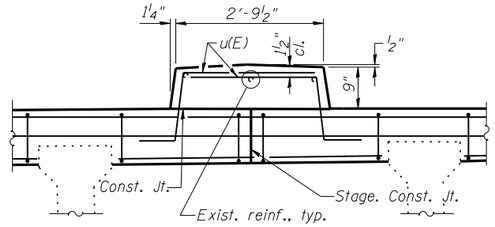


PIER 3



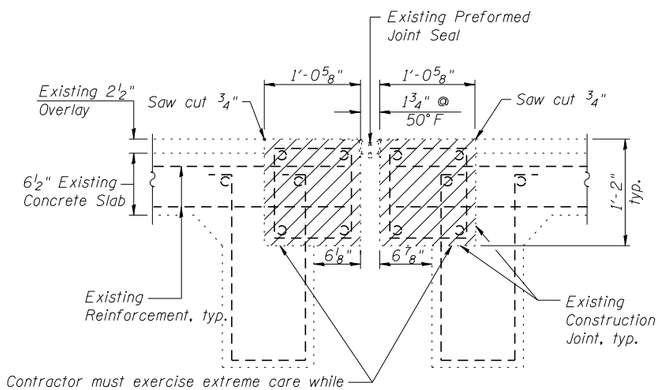
EXISTING SECTION OF MEDIAN AT ABUTMENT AND PIER JOINTS

(Dimensions at Rt. L's)
(Piers 1 & 3 shown, Pier 2 and abutments similar)



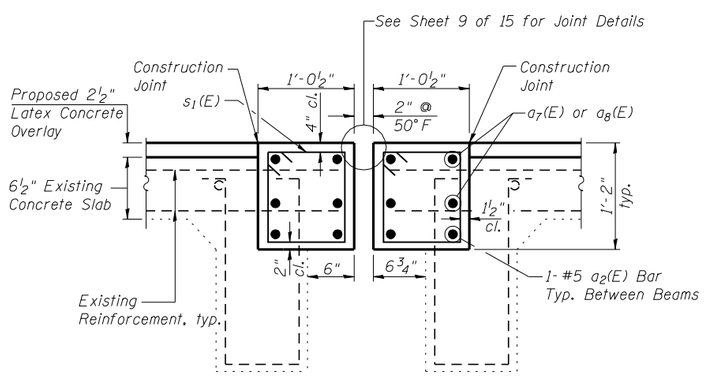
PROPOSED SECTION OF MEDIAN AT ABUTMENT AND PIER JOINTS

(Dimensions at Rt. L's)
(Piers 1 & 3 shown, Pier 2 and abutments similar)



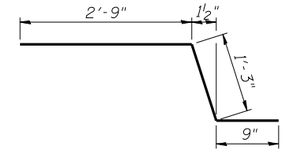
EXISTING SECTION AT PIERS 1 & 3

(Dimensions at Rt. L's)
(Removal limits include existing median)

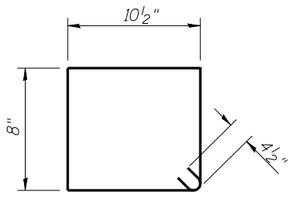


PROPOSED SECTION AT PIERS 1 & 3

(Dimensions at Rt. L's)



BAR u(E)



BAR s1(E)

BILL OF MATERIAL

(Piers 1 & 3)

Bar	No.	Size	Length	Shape
$a_2(E)$	36	#5	6'-1"	———
$a_7(E)$	20	#6	35'-3"	———
$a_8(E)$	20	#6	34'-10"	———
$s_1(E)$	216	#4	3'-10"	□
u(E)	16	#4	4'-9"	⌐
Reinforcement Bars, Epoxy Coated			Pound	2940
Concrete Superstructure			Cu. Yd.	13.3

Notes:
1. Hatched area indicates concrete removal. Perimeter of concrete removal areas shall be saw cut ¾" prior to removal of the concrete.
2. Existing reinforcement bars in the concrete removal area extending into new construction shall be cleaned and incorporated into the new construction. Cost included with Concrete Removal.
3. Any reinforcement bars that are damaged during concrete removal operations shall be repaired or replaced using an approved bar splicer or anchorage system, in accordance with IDOT Standard Specifications Article 501.03. Cost included in "Concrete Removal"
4. Overlay removal is included in pay item Bridge Deck Scarification, 2½".
5. Removal of the existing joint system is included with Concrete Removal.

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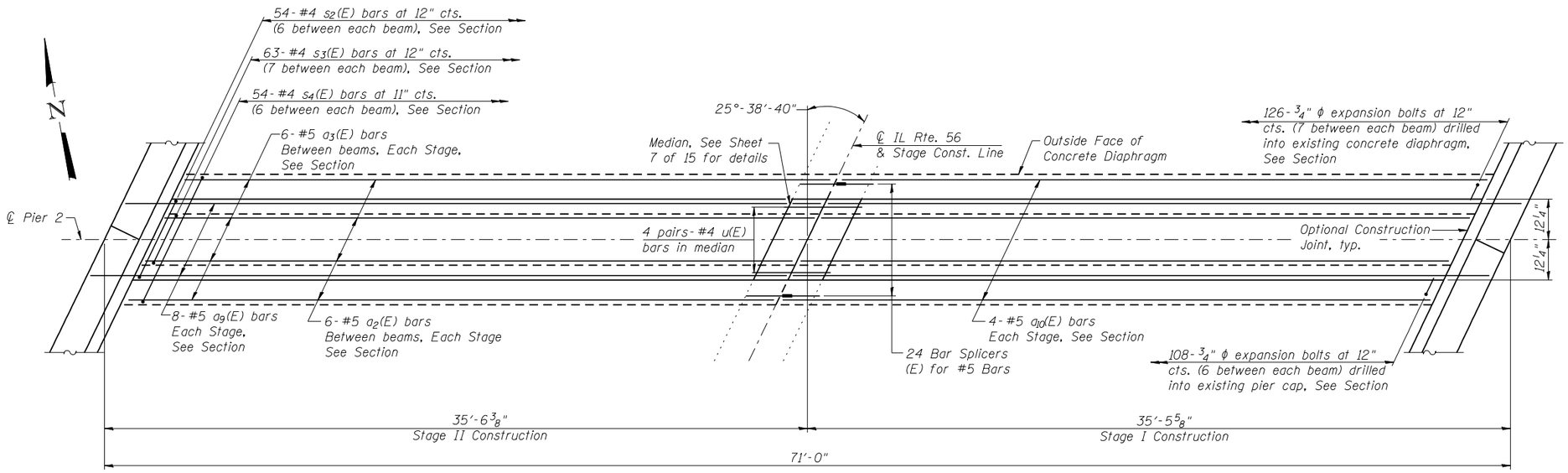
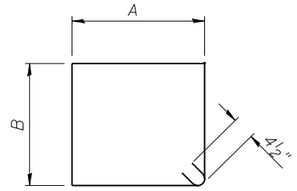
DEPARTMENT OF TRANSPORTATION

JOINT REPLACEMENT DETAILS AT PIERS
STRUCTURE NO. 022-0114
SHEET NO. 7 OF 15 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
347	JR-HB-1-1	DUPAGE	30	19
		CONTRACT NO. 60N77		
	ILLINOIS FED. AID PROJECT			

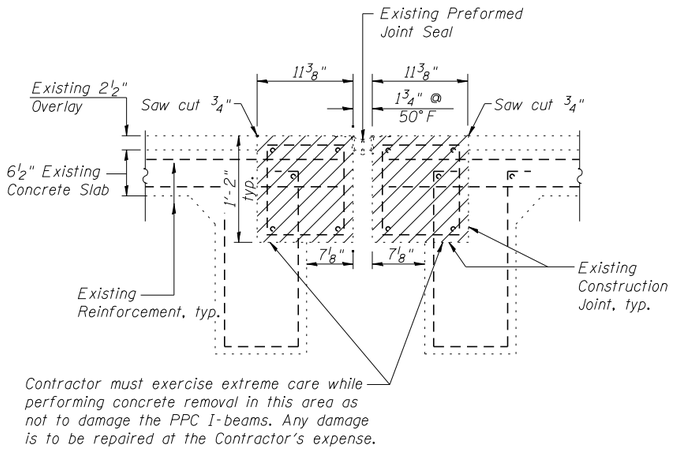


PIER 2



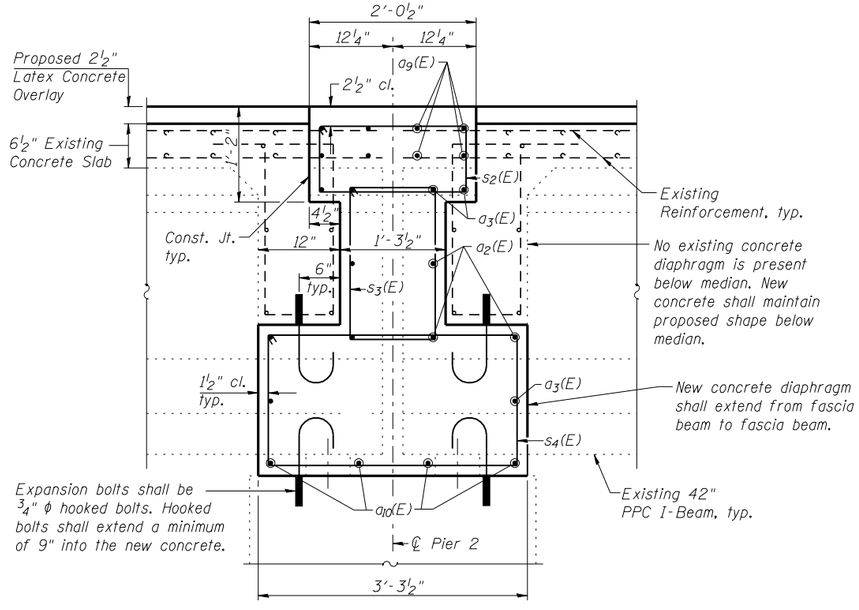
BAR s_2(E) thru s_4(E)

Bar	A	B
s_2(E)	1'-11"	10"
s_3(E)	1'-1"	2'-1"
s_4(E)	3'-4"	1'-7"



EXISTING SECTION AT PIER 2

(Dimensions at Rt. L's)
(Removal limits include existing median)



PROPOSED SECTION AT PIER 2

(Dimensions at Rt. L's)

BILL OF MATERIAL

(Pier 2)

Bar	No.	Size	Length	Shape
a_2(E)	54	#5	6'-1"	
a_3(E)	54	#5	5'-0"	
a_9(E)	16	#5	35'-8"	
a_{10}(E)	8	#5	32'-8"	
s_2(E)	54	#4	6'-3"	
s_3(E)	63	#4	7'-1"	
s_4(E)	54	#4	10'-7"	
u(E)	8	#4	4'-9"	
Reinforcement Bars, Epoxy Coated			Pound	2420
Concrete Superstructure			Cu. Yd.	21.5
Expansion Bolts, 3/4"			Each	234

Notes:
1. Hatched area indicates concrete removal. Perimeter of concrete removal areas shall be saw cut 3/4" prior to removal of the concrete.
2. Existing reinforcement bars in the concrete removal area extending into new construction shall be cleaned and incorporated into the new construction. Cost included with Concrete Removal.
3. Any reinforcement bars that are damaged during concrete removal operations shall be repaired or replaced using an approved bar splicer or anchorage system, in accordance with IDOT Standard Specifications Article 501.03. Cost included in "Concrete Removal"
4. Overlay removal is included in pay item Bridge Deck Scarification, 2 1/2".
5. Removal of the existing joint system is included with Concrete Removal.
6. See sheet 7 of 15 for detail of u(E) bar.
7. See sheet 6 of 15 for detail of 3/4" ϕ expansion bolt.

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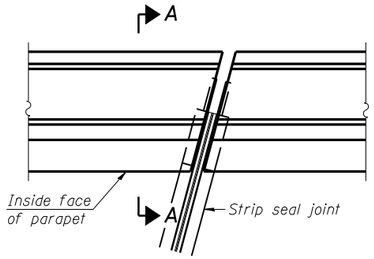
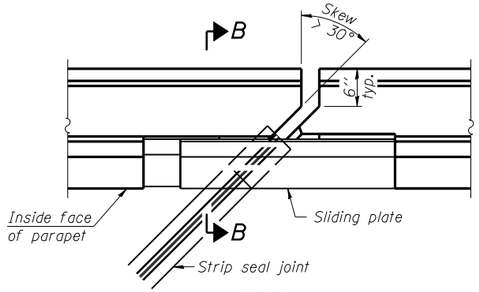
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

JOINT REPLACEMENT DETAILS AT PIERS
STRUCTURE NO. 022-0114
SHEET NO. 8 OF 15 SHEETS

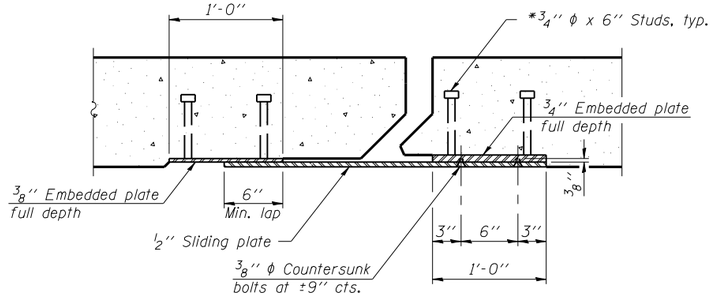
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
347	JR-HB-1-1	DUPAGE	30	20
		CONTRACT NO. 60N77		
	ILLINOIS FED. AID PROJECT			



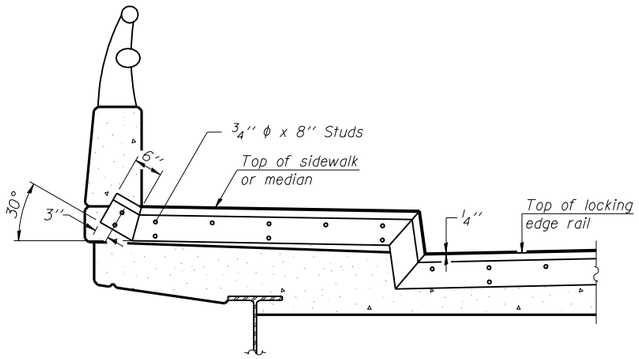
PLAN
(For skews ≤ 30°)



PLAN
(For skews > 30°)
Showing point block

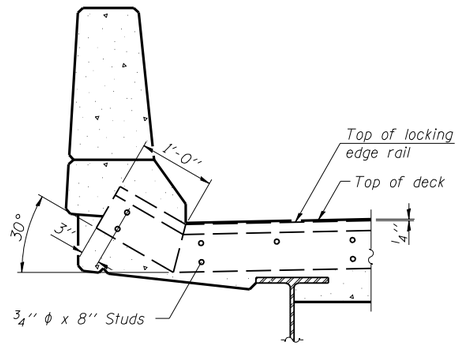


SECTION C-C

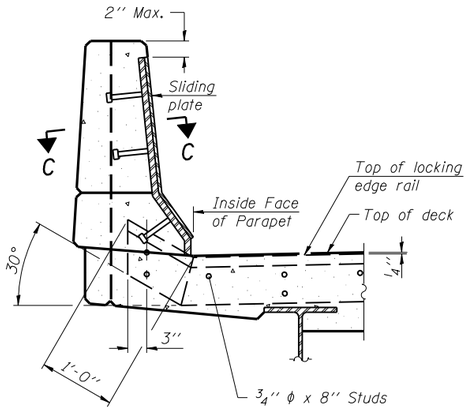


TYPICAL END TREATMENT AT SIDEWALK OR MEDIAN

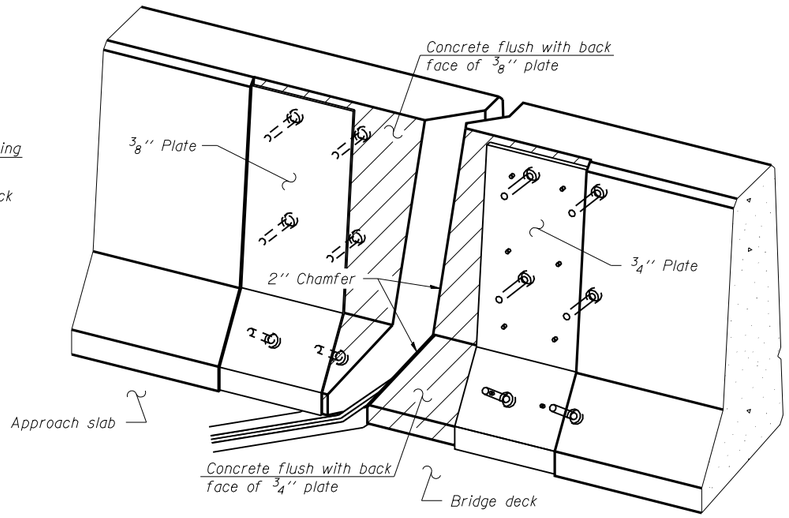
Shorter plates with a single row of studs at 12'' cts. may be necessary on medians which are shallower than 9''. See manufacturer's recommendation.



SECTION A-A



SECTION B-B



TRIMETRIC VIEW
(Showing back plates only)

Notes:

The strip seal shall be made continuous and shall have a minimum thickness of 1/4''. The configuration of the strip seal shall match the configuration of the Locking Edge Rails. Open or "webbed" strip seal gland configurations are not permitted. The gland shall be sized for a maximum rated movement of 4 inches.

The Locking Edge Rails depicted are conceptual only, except for the minimum dimensions shown. The actual configuration of the Locking Edge Rails and matching strip seal may vary from manufacturer to manufacturer. Flanged edge rails will not be allowed. Locking Edge Rails may be spliced at slope discontinuities.

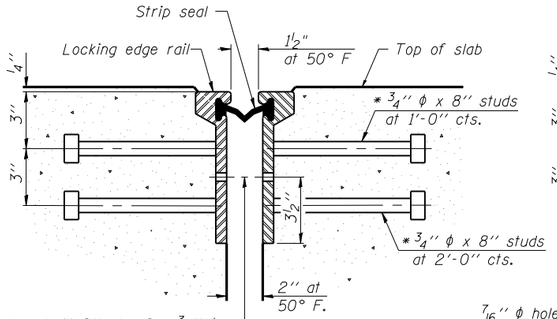
The manufacturer's recommended installation methods shall be followed.

The joint opening and deck dimensions detailed on the superstructure are based on a rolled rail expansion joint. If the Contractor elects to use the welded rail expansion joint, the opening and deck dimensions shall be modified according to the dimensions detailed on this sheet. Required modifications shall be made at no additional cost to the State.

All steel components shall be galvanized after fabrication according to Article 520.03 of the Standard Specifications.

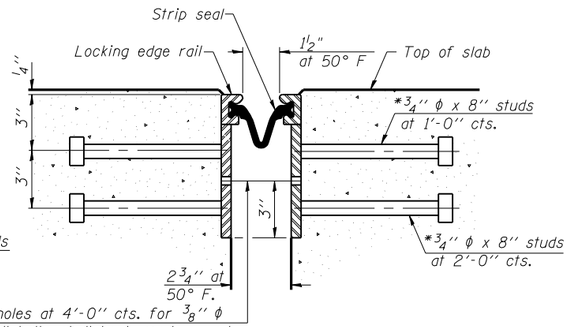
Maximum space between rail segments shall be 3/16'', sealed with a suitable sealant. Joints in rails within 10 ft. of curbs shall be welded.

Parapet plates and anchorage studs for skews > 30° included in the cost of Preformed Joint Strip Seal.



7/16'' ϕ holes at 4'-0'' cts. for 3/8'' ϕ bolts. All bolts shall be burned, sawed, or chipped off flush with the plates after forms are removed, typ.

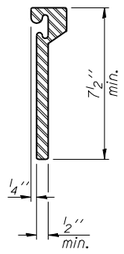
SECTION THRU ROLLED RAIL JOINT



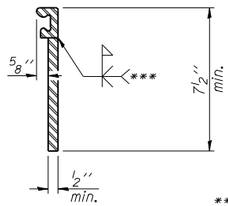
7/16'' ϕ holes at 4'-0'' cts. for 3/8'' ϕ bolts. All bolts shall be burned, sawed, or chipped off flush with the plates after forms are removed, typ.

SECTION THRU WELDED RAIL JOINT

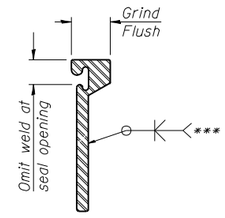
* Granular or solid flux filled headed studs conforming to Article 1006.32 of the Std. Specs., automatically end welded.



ROLLED EXTRUDED RAIL



WELDED RAIL



*** Back gouge not required if complete joint penetration is verified by mock-up.

LOCKING EDGE RAIL SPLICE

The inside of the locking edge rail groove shall be free of weld residue.

Rolled rail shown, welded rail similar.

LOCKING EDGE RAILS

BILL OF MATERIAL

Item	Unit	Total
Preformed Joint Strip Seal	Foot	143

EJ-SSJ 1-27-12

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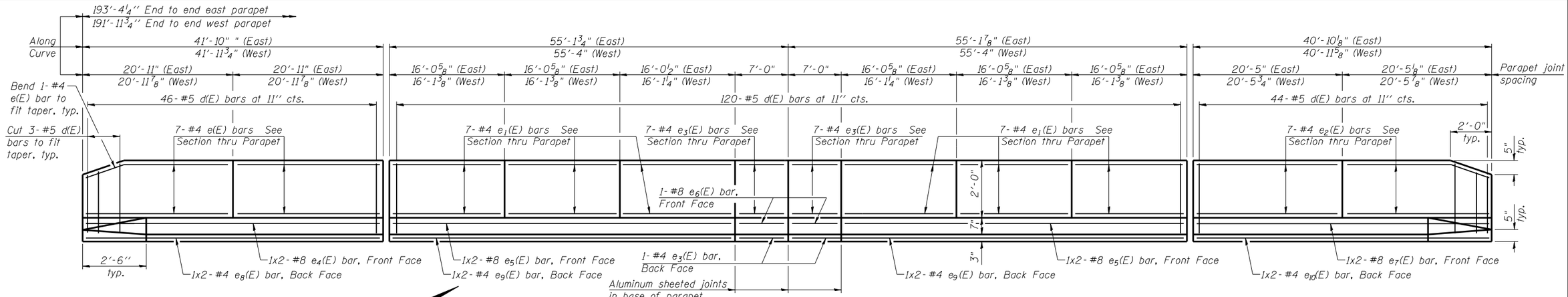
	PLOT DATE =	CHECKED - MTH	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

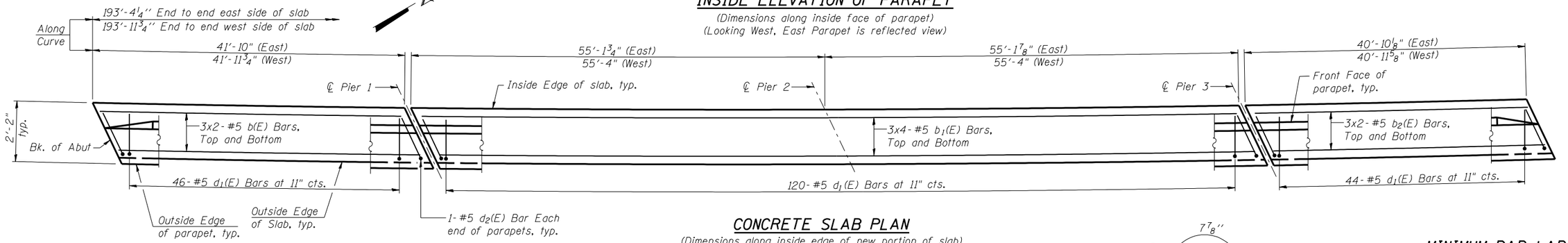
PREFORMED JOINT STRIP SEAL
STRUCTURE NO. 022-0114
SHEET NO. 9 OF 15 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
347	JR-HB-I-1	DUPAGE	30	21
		CONTRACT NO. 60N77		
	ILLINOIS FED. AID PROJECT			



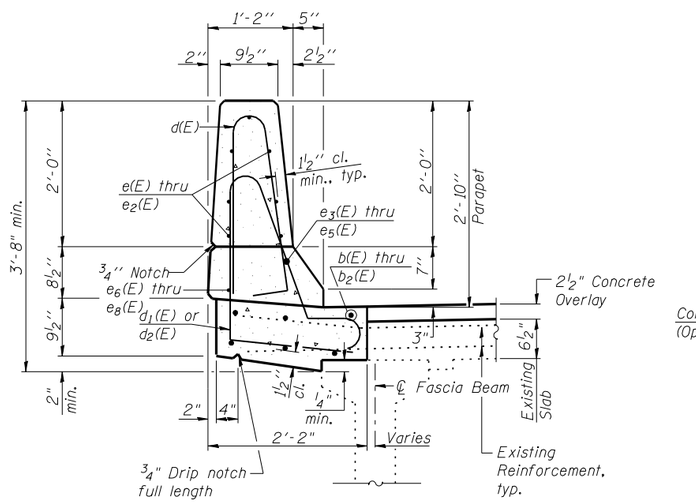
INSIDE ELEVATION OF PARAPET

(Dimensions along inside face of parapet)
(Looking West, East Parapet is reflected view)



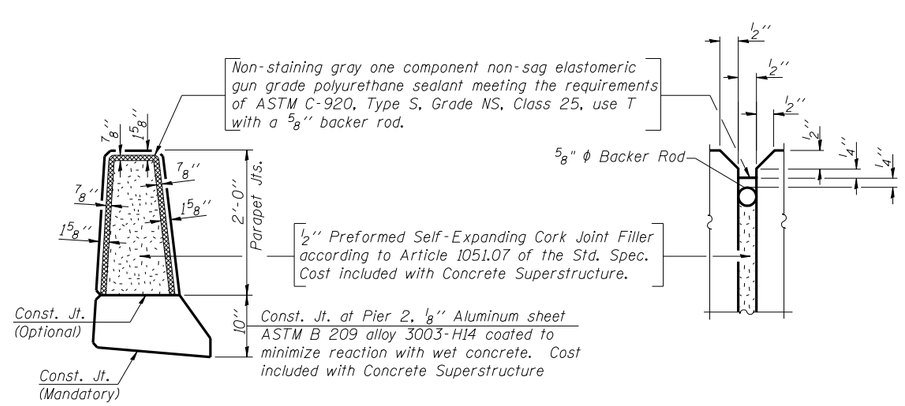
CONCRETE SLAB PLAN

(Dimensions along inside edge of new portion of slab)



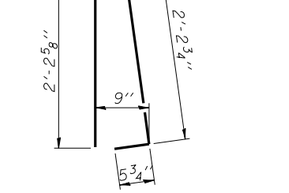
SECTION THRU PARAPET

(West Parapet shown, East similar)

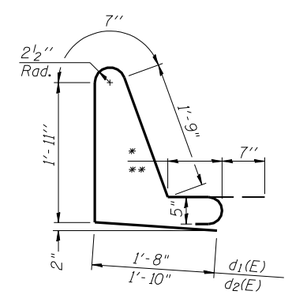


PARAPET JOINT DETAILS

Note:
Bend existing top transverse bars in field as shown in section thru parapet to tie with proposed b(E) thru b_2(E) bars in top.



BAR d(E)



BARS d1(E) & d2(E)

*6" bar d1(E)
**8" bar d2(E)

MINIMUM BAR LAP

#4 bar = 2'-0''
#5 bar = 2'-7"
#8 bar = 5'-2''

BILL OF MATERIAL

(East and West Parapet/Slab)

Bar	No.	Size	Length	Shape
b(E)	24	#5	21'-8''	
b1(E)	48	#5	29'-5"	
b2(E)	24	#5	21'-7"	
d(E)	420	#5	5'-7''	
d1(E)	420	#5	7'-0''	
d2(E)	12	#5	7'-4''	
e(E)	28	#4	20'-8''	
e1(E)	84	#4	15'-9"	
e2(E)	28	#4	20'-2"	
e3(E)	32	#4	6'-8"	
e4(E)	4	#8	23'-5"	
e5(E)	8	#8	30'-1"	
e6(E)	4	#8	6'-8"	
e7(E)	4	#8	22'-11"	
e8(E)	4	#4	21'-10"	
e9(E)	8	#4	28'-5"	
e10(E)	4	#4	21'-4"	
Reinforcement Bars, Epoxy Coated		Pound	11430	
Concrete Superstructure		Cu. Yds.	66.0	

Bars indicated thus 1 x 2-#8 etc. indicates 1 line of bars with 2 lengths per line.

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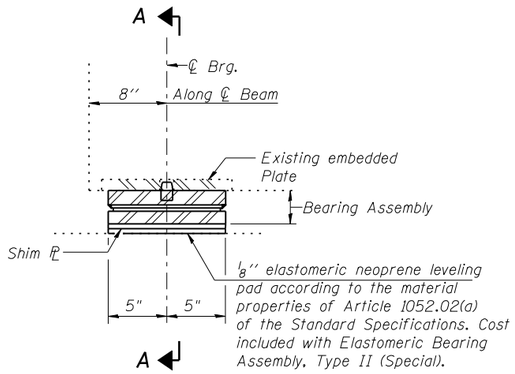
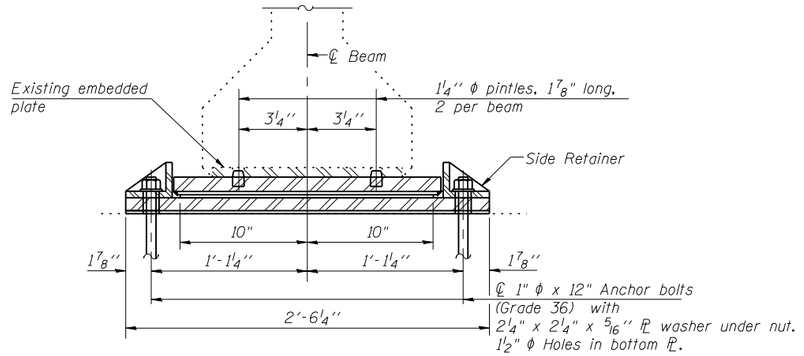
PARAPET REPLACEMENT DETAILS
STRUCTURE NO. 022-0114
SHEET NO. 10 OF 15 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
347	JR-HB-1-1	DUPAGE	30	22
		CONTRACT NO. 60N77		
	ILLINOIS FED. AID PROJECT			

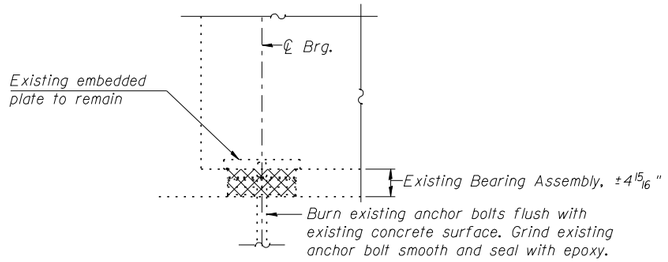


SECTION AT PIER

(Anchor bolt not shown)



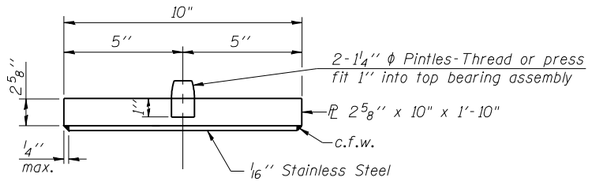
SECTION A-A



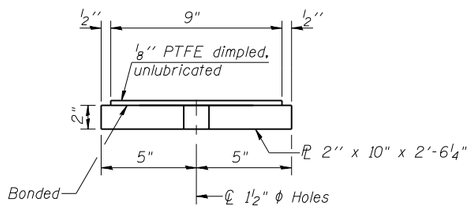
EXISTING BEARING REMOVAL DETAIL

Cost included with Jack and Remove Existing Bearings.

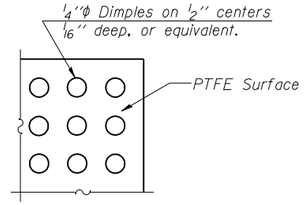
TYPE II ELASTOMERIC EXP. BRG. UNDER 36" PPC I-BEAMS AT PIERS 1 SOUTH & 3 NORTH



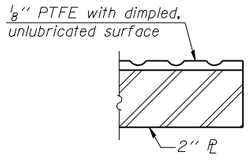
TOP BEARING ASSEMBLY



BOTTOM BEARING ASSEMBLY



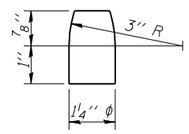
PLAN-PTFE SURFACE



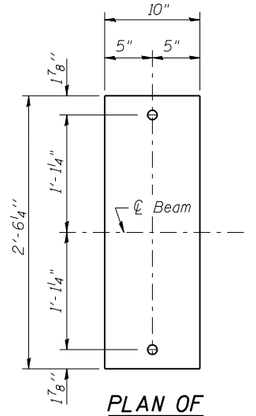
SECTION THRU PTFE

INTERIOR BEAM REACTION TABLE

Pier 1 South/Pier 3 North		
R_{ℓ}	(k)	27
$R_{\downarrow}$	(k)	56
R_I	(k)	16.8
R_{Total}	(k)	99.8
Minimum Jack Capacity (Tons)		48



PINTLE



PLAN OF BOTTOM PLATE

Notes:

Cross-Hatched area indicates Bearing removal. See Special Provision for Jack and Remove Existing Bearings.

Prior to ordering any material, the Contractor shall verify in the field all bearing height and shim thickness dimensions.

Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 36 (Fy=36ksi). The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.

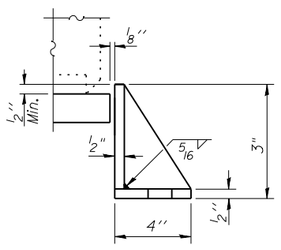
Anchor bolts for Type II bearings shall be placed in holes in the concrete drilled through holes in the bottom bearing plate after members are in place. Side retainers shall be placed after bolts are installed.

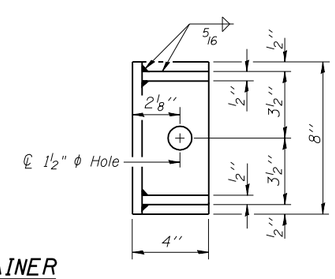
Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.

Side retainers and other steel members required for the bearing assembly shall be included in the cost of Elastomeric Bearing Assembly, Type II (Special).

The 1/8" PTFE sheet shall be bonded directly to the top steel plate with a two-component, medium viscosity epoxy resin, conforming to the requirements of the Federal Specification MMM-A-134, Type I. The bond agent shall be applied on the full area of the contact surfaces.

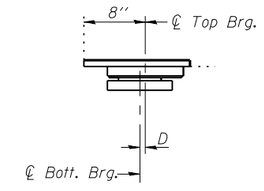
All bearing plates, side retainers, anchor bolts, nuts, washers and pintles shall be galvanized according to AASHTO M111 or M232 as applicable.





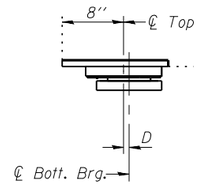
SIDE RETAINER

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.



BELOW 50°F.

(Move bott. brg. away from fixed brg.)

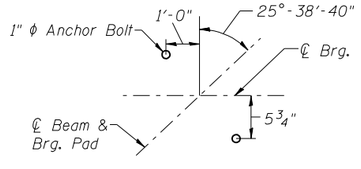


ABOVE 50°F.

(Move bott. brg. toward fixed brg.)

SETTING ANCHOR BOLTS AT EXP. BRG.

D=1/8" per each 100' of expansion for every 15° temp. change from the normal temp. of 50°F.



ANCHOR BOLT LOCATION

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly, Type II (Special)	Each	16
Anchor Bolts, 1"	Each	32
Jack and Remove Existing Bearings	Each	16

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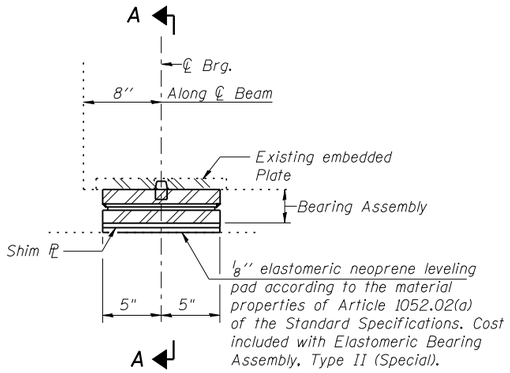
DEPARTMENT OF TRANSPORTATION

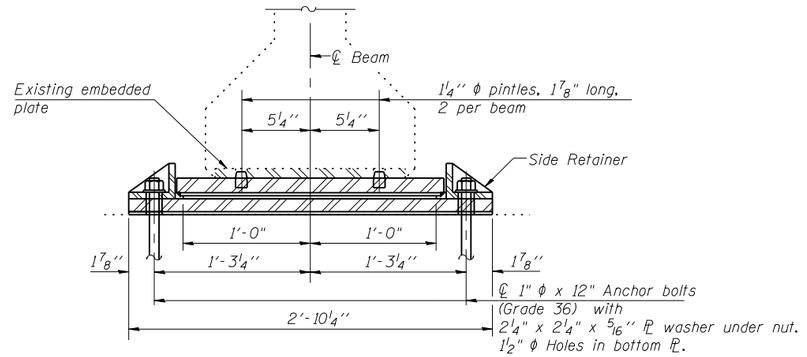
BEARING DETAILS
STRUCTURE NO. 022-0114
SHEET NO. 11 OF 15 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
347	JR-HB-1-1	DUPAGE	30	23
		CONTRACT NO. 60N77		
	ILLINOIS FED. AID PROJECT			

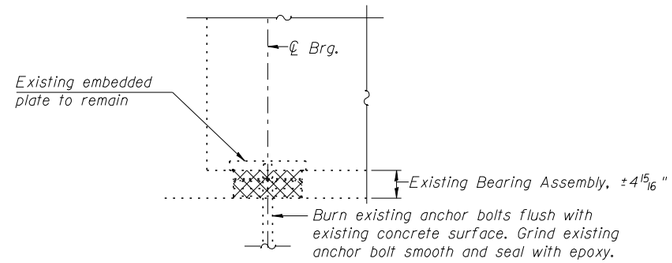


SECTION AT PIER

(Anchor bolt not shown)



SECTION A-A



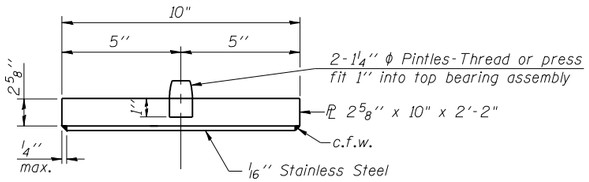
EXISTING BEARING REMOVAL DETAIL

Cost included with Jack and Remove Existing Bearings.

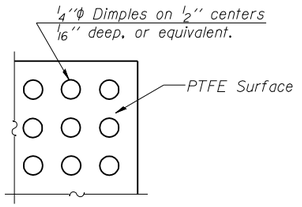
TYPE II ELASTOMERIC EXP. BRG. UNDER 42" PPC I-BEAMS AT PIERS 1 & 3

INTERIOR BEAM REACTION TABLE

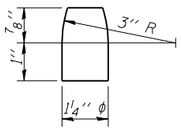
Pier 1 North/Pier 3 South		
R_{ℓ}	(k)	41
R_{ℓ}	(k)	59
R_I	(k)	17.7
R_{Total}	(k)	117.7
Minimum Jack Capacity (Tons)		60



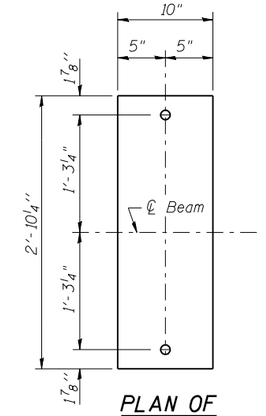
TOP BEARING ASSEMBLY



PLAN-PTFE SURFACE



PINTLE



PLAN OF BOTTOM PLATE

Notes:

Cross-Hatched area indicates Bearing removal. See Special Provision for Jack and Remove Existing Bearings.

Prior to ordering any material, the Contractor shall verify in the field all bearing height and shim thickness dimensions.

Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 36 (Fy=36ksi). The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.

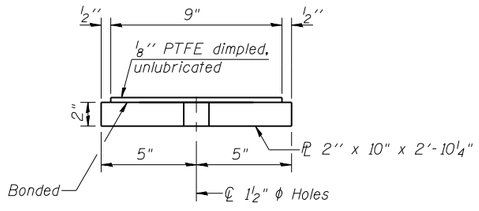
Anchor bolts for Type II bearings shall be placed in holes in the concrete drilled through holes in the bottom bearing plate after members are in place. Side retainers shall be placed after bolts are installed.

Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.

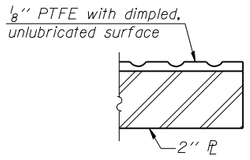
Side retainers and other steel members required for the bearing assembly shall be included in the cost of Elastomeric Bearing Assembly, Type II (Special).

The ⅛'' PTFE sheet shall be bonded directly to the top steel plate with a two-component, medium viscosity epoxy resin, conforming to the requirements of the Federal Specification MMM-A-134, Type I. The bond agent shall be applied on the full area of the contact surfaces.

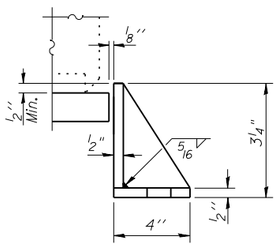
All bearing plates, side retainers, anchor bolts, nuts, washers and pintles shall be galvanized according to AASHTO M111 or M232 as applicable.



BOTTOM BEARING ASSEMBLY

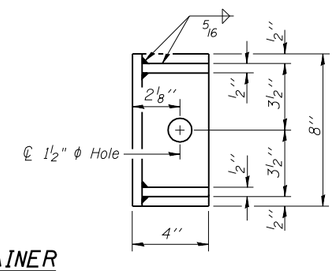


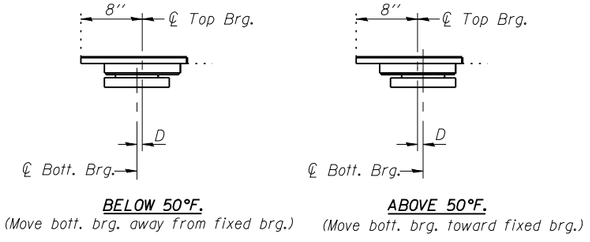
SECTION THRU PTFE



SIDE RETAINER

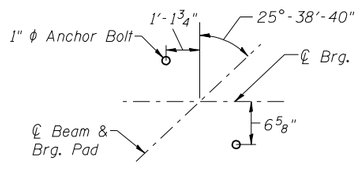
Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.





SETTING ANCHOR BOLTS AT EXP. BRG.

D=⅛'' per each 100' of expansion for every 15° temp. change from the normal temp. of 50°F.



ANCHOR BOLT LOCATION

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly, Type II (Special)	Each	24
Anchor Bolts, 1"	Each	48
Jack and Remove Existing Bearings	Each	24

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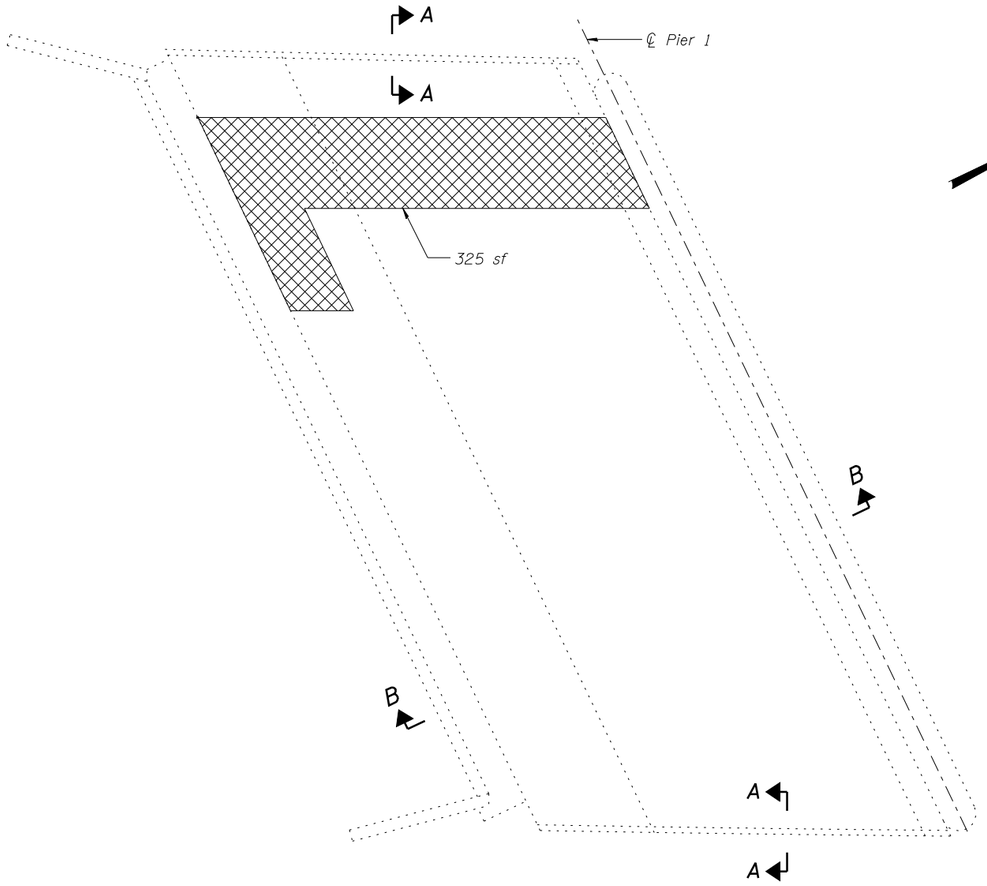
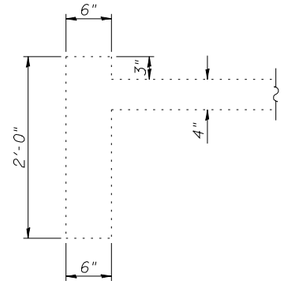
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BEARING DETAILS
STRUCTURE NO. 022-0114
SHEET NO. 12 OF 15 SHEETS

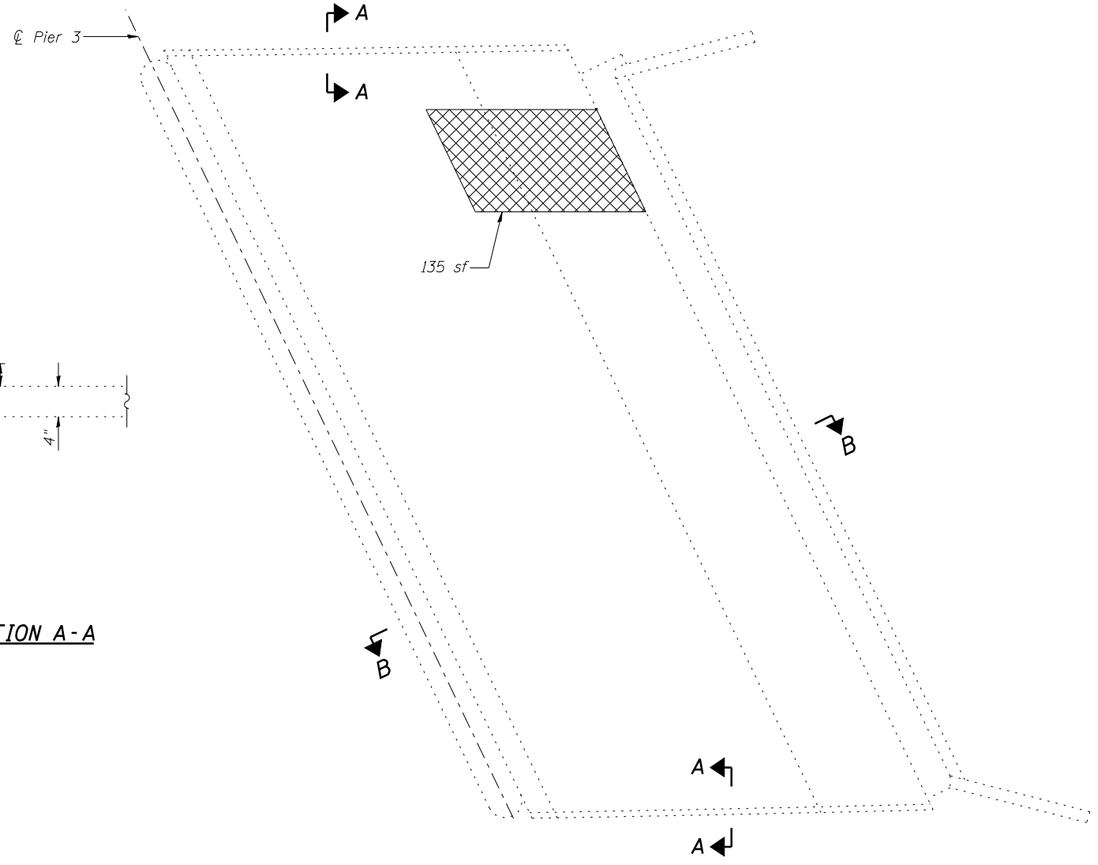
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
347	JR-HB-1-1	DUPAGE	30	24
		CONTRACT NO. 60N77		
	ILLINOIS FED. AID PROJECT			



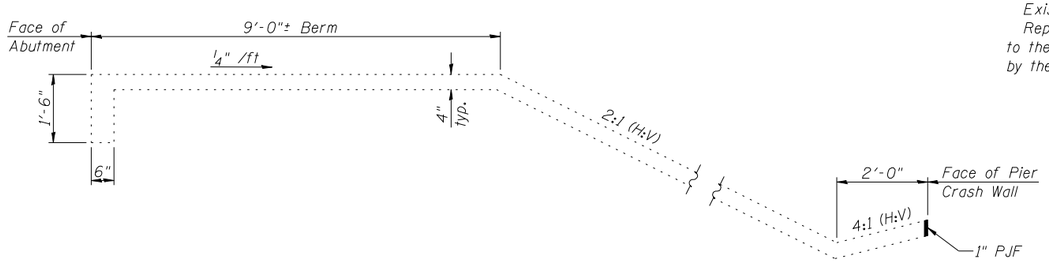
SOUTH SLOPE WALL PLAN



SECTION A-A



NORTH SLOPE WALL PLAN



SECTION B-B

Notes:

Slopewall shall be reinforced with welded wire fabric, 6" x 6" - W4.0 x W4.0, weighing 58 lbs. per 100 sq. ft.

Existing reinforcement shall be cleaned and incorporated into the new construction. Cost included with Slope Wall Removal.

Existing and new welded wire fabric must be lapped at least 6".

Repair of the existing slope walls shall include but may not be limited to the areas shown. The actual areas to be repaired will be determined by the Engineer at the time of construction.

LEGEND

Remove and Replace Slope Wall

sf Square Feet

BILL OF MATERIAL

Item	Unit	Total
Slope Wall Removal	Sq. Yd.	51
Slope Wall 4 Inch	Sq. Yd.	51

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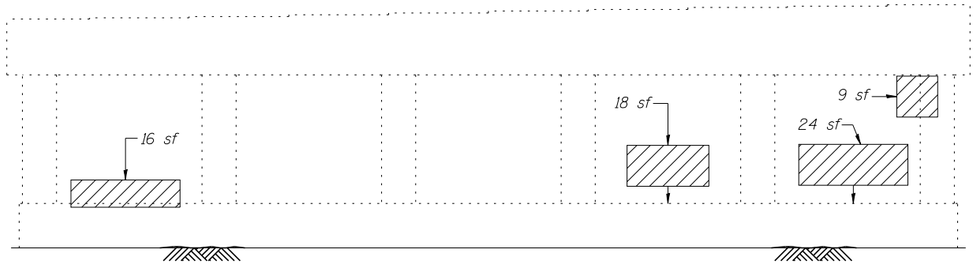
	FILE NAME =	CHECKED - TBP	REVISED -
	PLOT SCALE =	DRAWN - AJF	REVISED -
	PLOT DATE =	CHECKED - MTH	REVISED -

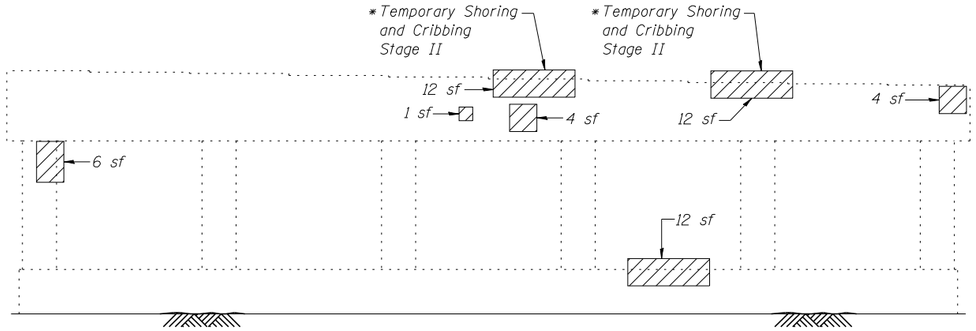
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SLOPE WALL REPAIR
STRUCTURE NO. 022-0114
SHEET NO. 13 OF 15 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
347	JR-HB-I-1	DUPAGE	30	25
		CONTRACT NO. 60N77		
	ILLINOIS	FED. AID PROJECT		

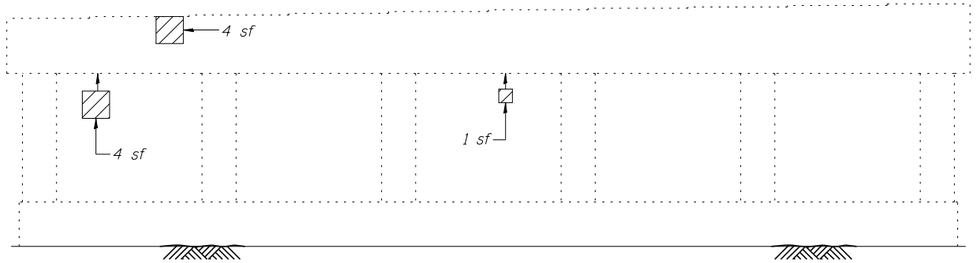


PIER 1
(Looking North)

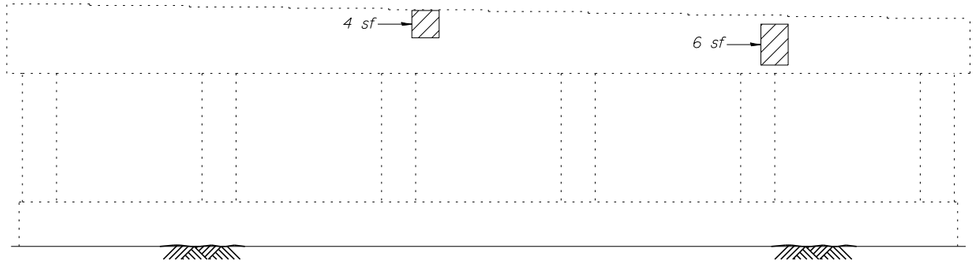


PIER 1
(Looking South)

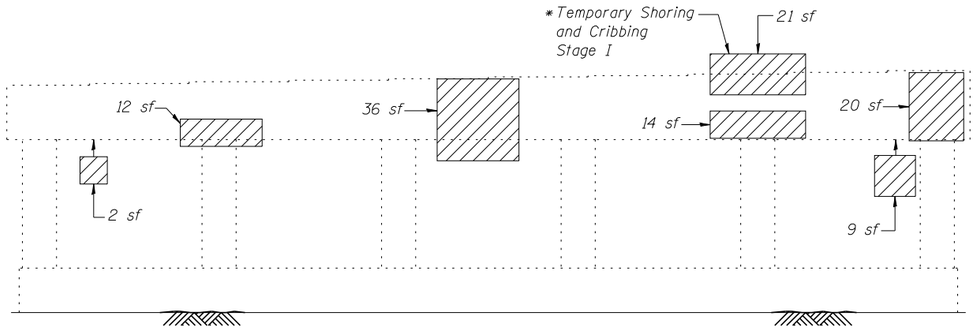
* Repair required underneath bearing. This work shall be performed prior to deck repairs. Once the concrete has attained the required strength and the curing period is complete, the new bearing shall be installed and the cribbing shall be removed.



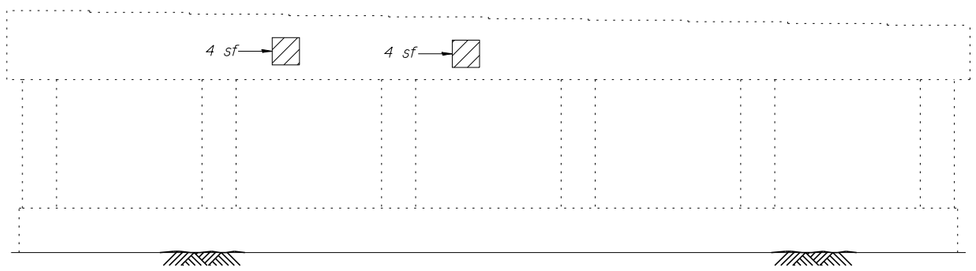
PIER 2
(Looking North)



PIER 2
(Looking South)



PIER 3
(Looking North)



PIER 3
(Looking South)

LEGEND

Structural Repair of Concrete (Depth Equal to or Less Than 5 Inches)

sf Square Feet

Note:
Repair of the existing piers shall include but may not be limited to the areas shown. The actual areas to be repaired will be determined by the Engineer at the time of construction.

PIERS 1 & 3 BEAM REACTIONS
(From Spans 2 & 3)

Dead Load = 41 k
LL+Imp = 76 k
Total = 117 k
Min. Jack Capacity = 60 tons

BILL OF MATERIAL

Item	Unit	Total
Structural Repair of Concrete (Depth Equal to or Less Than 5 Inches)	Sq. Ft.	259
Temporary Shoring and Cribbing	Each	3

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Consulting Engineers
Springfield, Illinois

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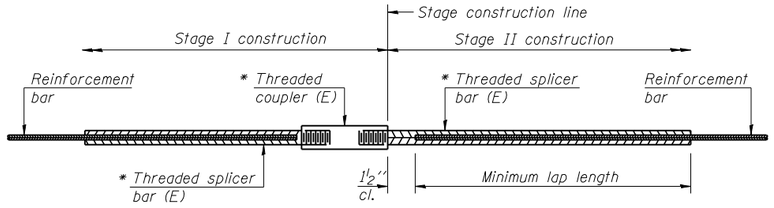
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIER REPAIR
STRUCTURE NO. 022-0114
SHEET NO. 14 OF 15 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
347	JR-HB-1-1	DUPAGE	30	26
		CONTRACT NO. 60N77		
	ILLINOIS	FED. AID PROJECT		



STANDARD BAR SPLICER ASSEMBLY

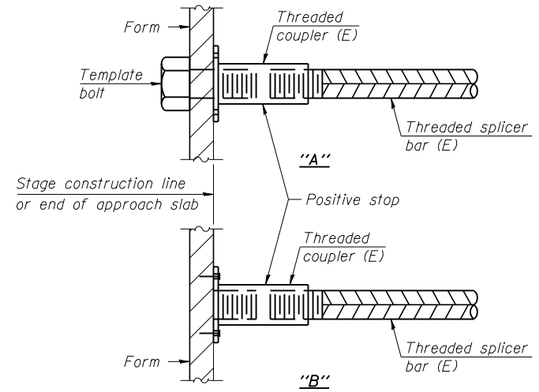
Minimum Lap Lengths						
Bar size to be spliced	Table 1	Table 2	Table 3	Table 4	Table 5	Table 6
3, 4	1'-5"	1'-11"	2'-1"	2'-4"	2'-7"	2'-11"
5	1'-9"	2'-5"	2'-7"	2'-11"	3'-3"	3'-8"
6	2'-1"	2'-11"	3'-1"	3'-6"	3'-10"	4'-5"
7	2'-9"	3'-10"	4'-2"	4'-8"	5'-2"	5'-10"
8	3'-8"	5'-1"	5'-5"	6'-2"	6'-9"	7'-8"
9	4'-7"	6'-5"	6'-10"	7'-9"	8'-7"	9'-8"

Table 1: Black bar, 0.8 Class C
Table 2: Black bar, Top bar lap, 0.8 Class C
Table 3: Epoxy bar, 0.8 Class C
Table 4: Epoxy bar, Top bar lap, 0.8 Class C
Table 5: Epoxy bar, Class C
Table 6: Epoxy bar, Top bar top, Class C

Threaded splicer bar length = min. lap length + 1½" + thread length

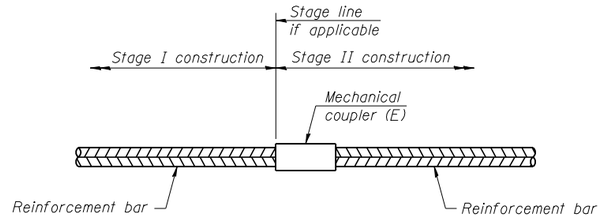
* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Table for minimum lap length
Abutments	#5	30	Table 3
Piers 1 & 3	#6	20	Table 3
Piers 1 & 3	#5	4	Table 3
Pier 2	#5	24	Table 3



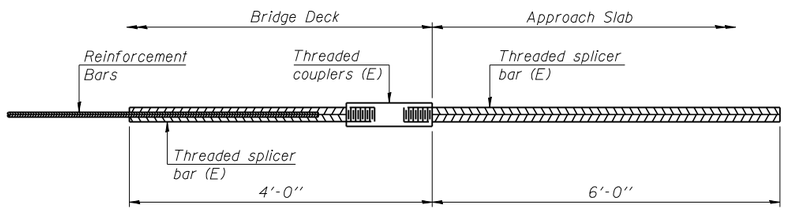
INSTALLATION AND SETTING METHODS

"A" : Set bar splicer assembly by means of a template bolt.
"B" : Set bar splicer assembly by nailing to wood forms or cementing to steel forms.
(E) : Indicates epoxy coating.



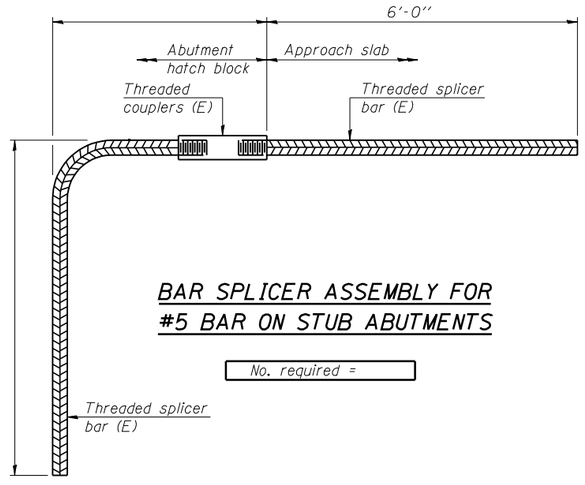
STANDARD MECHANICAL SPLICER

Location	Bar size	No. assemblies required



BAR SPLICER ASSEMBLY FOR #5 BAR ON INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

No. required =



BAR SPLICER ASSEMBLY FOR #5 BAR ON STUB ABUTMENTS

No. required =

NOTES

Splicer bars shall be deformed with threaded ends and have a minimum 60 ksi yield strength.

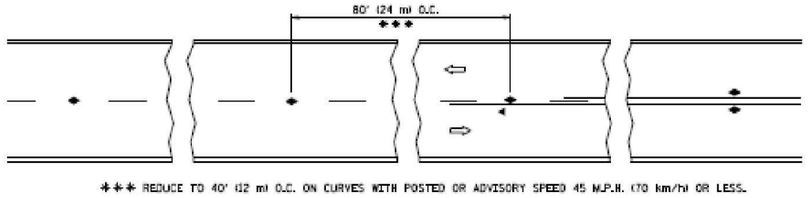
All reinforcement shall be lapped and tied to the splicer bars.

Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars. See Section 508 of the Standard Specifications.

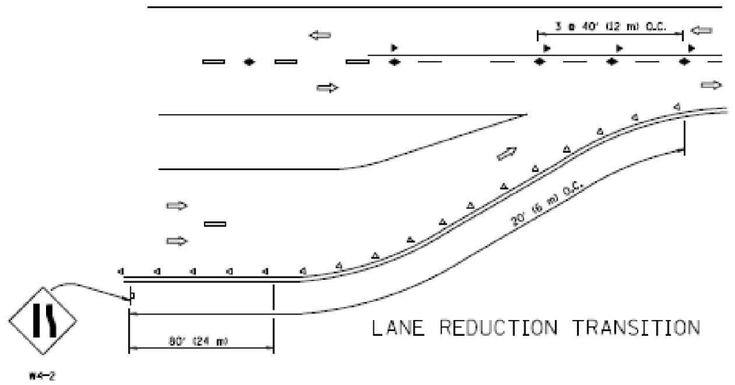
See approved list of bar splicer assemblies and mechanical splicers for alternatives.

BSD-1 1-27-12

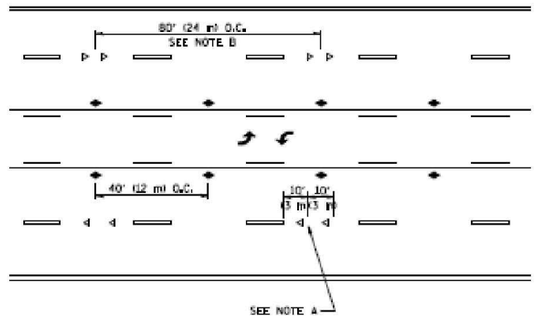
LIN ENGINEERING, LTD. Consulting Engineers Springfield, Illinois	USER NAME =	DESIGNED - PSS	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS STRUCTURE NO. 022-0114	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	FILE NAME =	CHECKED - TBP	REVISED -			347	JR-HB-1-1	DUPAGE	30	27
	PLOT SCALE =	DRAWN - AJF	REVISED -						CONTRACT NO. 60N77	
	PLOT DATE =	CHECKED - MTH	REVISED -		SHEET NO. 15 OF 15 SHEETS			ILLINOIS	FED. AID PROJECT	



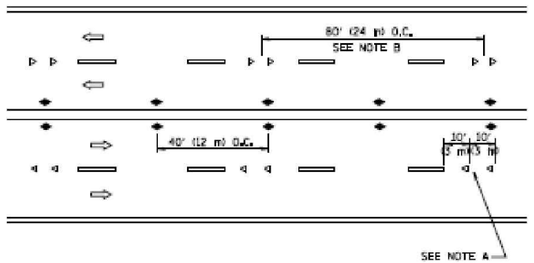
TWO-LANE/TWO-WAY



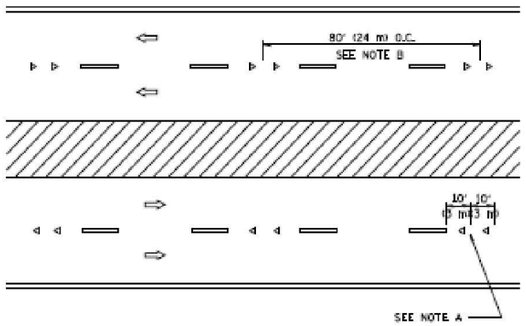
LANE REDUCTION TRANSITION



TWO-WAY LEFT TURN



MULTI-LANE/UNDIVIDED



MULTI-LANE/DIVIDED

GENERAL NOTES

1. MARKERS USED WITH DASHED LINES SHALL BE CENTERED IN THE GAP BETWEEN SEGMENTS.
2. MARKERS USED ADJACENT TO SOLID LINES SHALL BE OFFSET 2 TO 3 (50 TO 75) TOWARD TRAFFIC AS SHOWN.
3. MARKERS THROUGH TANGENTS LESS THAN 500' (150 m) IN LENGTH BETWEEN CURVES SHALL BE INSTALLED AT THE LESSER OF THE TWO CURVE SPACINGS.

SYMBOLS

- YELLOW STRIPE
- WHITE STRIPE
- ONE-WAY AMBER MARKER
- ONE-WAY CRYSTAL MARKER (W/O)
- TWO-WAY AMBER MARKER

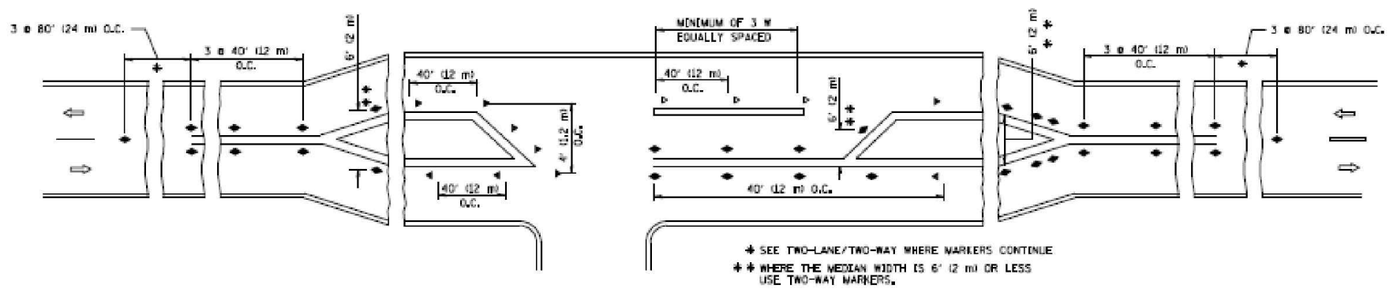
LANE MARKER NOTES

A. USE DOUBLE LANE LINE MARKERS SPACED AS SHOWN.

B. REDUCE TO 40' (12 m) O.C. ON CURVES WHERE ADVISORY SPEEDS ARE 10 M.P.H (20 km/h) LOWER THAN POSTED SPEEDS.

DESIGN NOTES

1. DOUBLE LANE LINE MARKERS SHALL BE USED UNLESS SPECIFIED OTHERWISE.
2. EXCEPT AS SHOWN ON THE LANE REDUCTION TRANSITION AND FREEWAY EXIT RAMP DETAIL, MARKERS ARE NOT TO BE SPECIFIED ON RIGHT EDGE LINES.
3. THE EXACT MARKER LIMITS, SPACING, AND COLOR SHOULD BE INCLUDED IN THE PLANS.
4. MARKERS SHOULD NOT BE USED ALONGSIDE CURBS EXCEPT FOR EXTREMELY SHORT SECTIONS OF CURBS WHERE NOT MORE THAN TWO MARKERS WOULD BE INVOLVED.

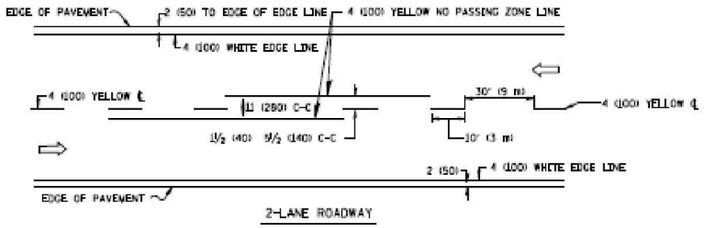


LEFT TURN

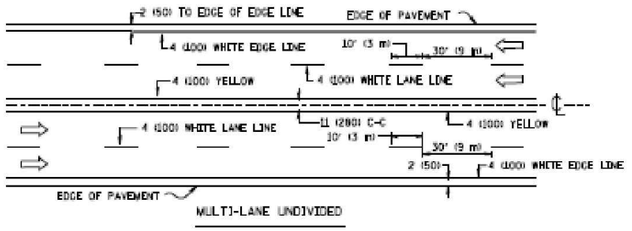
RAISED REFLECTIVE PAVEMENT MARKERS (SNOW PLOW RESISTANT)

All dimensions are in inches (millimeters) unless otherwise shown.

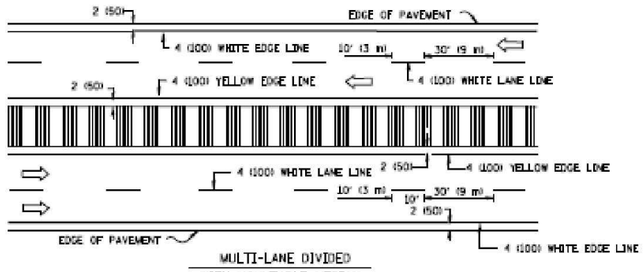
LIN ENGINEERING,LTD. Consulting Engineers Springfield, Illinois	USER NAME = Plotted by Fred 576	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	DISTRICT 1 STANDARDS IL 56 (BUTTERFIELD RD.) OVER IL 38 (ROOSEVELT RD.)	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN -	REVISED -			347	JR-HB-I-1	DUPAGE	30	28
	PLOT SCALE = 2.0000 ' / IN.	CHECKED -	REVISED -				TC-11		CONTRACT NO. 60N77	
	PLOT DATE = 12/5/2012	DATE -	REVISED -		SCALE: N.T.S. SHEET NO. 1 OF 3 SHEETS		FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT	



2-LANE ROADWAY



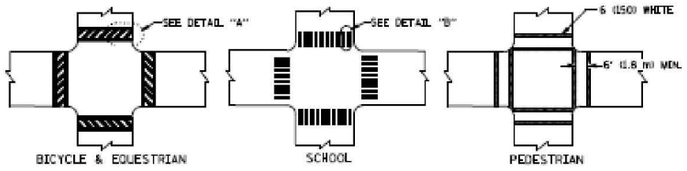
MULTI-LANE UNDIVIDED



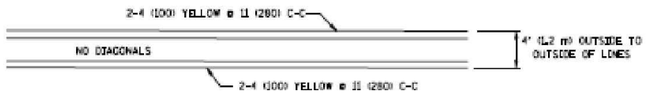
MULTI-LANE DIVIDED
WITH MOUNTABLE MEDIAN

NOTE: MEDIANS WITH BARRIER CURB DO NOT REQUIRE AN EDGE LINE

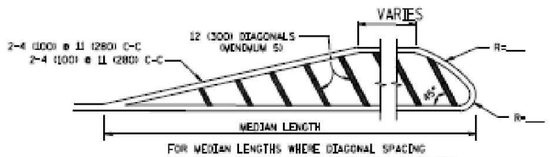
TYPICAL LANE AND EDGE LINE MARKING



TYPICAL CROSSWALK MARKING



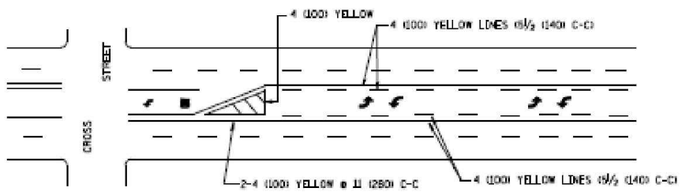
4' (1.2 m) WIDE MEDIANS ONLY



FOR MEDIAN LENGTHS WHERE DIAGONAL SPACING CANNOT BE ATTAINED, USE 5 (FIVE) EQUALLY SPACED DIAGONAL LINES.

DIAGONAL LINE SPACING: 50' (15 m) C-C (LESS THAN 30MPH (50 km/h))
75' (25 m) C-C 30MPH (50 km/h) TO 45MPH (70 km/h)
150' (45 m) C-C (MORE THAN 45MPH (70 km/h))

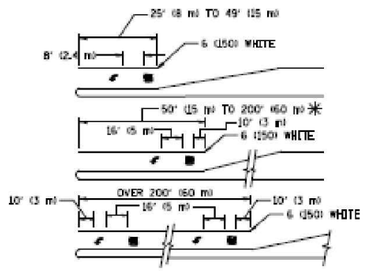
MEDIANS OVER 4' (1.2 m) WIDE



A MINIMUM OF TWO PAIRS OF TURN ARROWS SHALL BE USED, WHITE IN COLOR. ADDITIONAL PAIRS SHALL BE PLACED AT 200' (60 m) TO 300' (90 m) INTERVALS.

MEDIAN WITH TWO-WAY LEFT TURN LANE

TYPICAL PAINTED MEDIAN MARKING

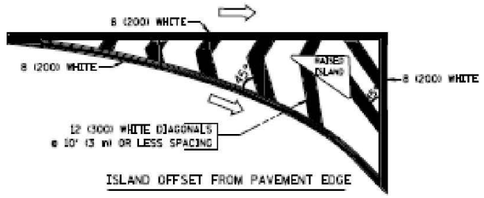


FULL SIZE LETTERS 8' (2.4 m) AND ARROWS SHALL BE USED.
AREA = 15.6 SQ. FT. (1.5 m²) AREA = 20.8 SQ. FT. (1.9 m²)

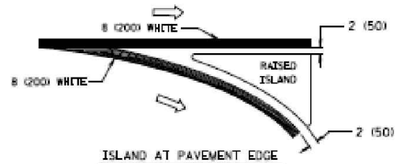
* TURN LANES IN EXCESS OF 400' (120 m) IN LENGTH MAY HAVE AN ADDITIONAL SET OF ARROW - "ONLY" INSTALLED MIDWAY BETWEEN THE OTHER TWO SETS OF ARROW - "ONLY".

TYPICAL LEFT (OR RIGHT) TURN LANE

TYPICAL TURN LANE MARKING



ISLAND OFFSET FROM PAVEMENT EDGE



ISLAND AT PAVEMENT EDGE

TYPICAL ISLAND MARKING

TYPE OF MARKING	WIDTH OF LINE	PATTERN	COLOR	SPACING / REMARKS
CENTERLINE ON 2 LANE PAVEMENT	4 (100)	SKIP-DASH	YELLOW	10' (3 m) LINE WITH 30' (9 m) SPACE
CENTERLINE ON MULTI-LANE UNDIVIDED PAVEMENT	2 @ 4 (100)	SOLID	YELLOW	11 (280) C-C
NO PASSING ZONE LINES: FOR ONE DIRECTION FOR BOTH DIRECTIONS	4 (100) 2 @ 4 (100)	SOLID SOLID	YELLOW YELLOW	5½ (140) C-C FROM SKIP-DASH CENTERLINE 11 (280) C-C OWIT SKIP-DASH CENTERLINE BETWEEN
LANE LINES	4 (100) 5 (125) ON FREEWAYS	SKIP-DASH SKIP-DASH	WHITE WHITE	10' (3 m) LINE WITH 30' (9 m) SPACE
DOTTED LINES (EXTENSIONS OF CENTER, LANE OR TURN LANE MARKINGS)	SAME AS LINE BEING EXTENDED	SKIP-DASH	SAME AS LINE BEING EXTENDED	2' (600) LINE WITH 6' (1.8 m) SPACE
EDGE LINES	4 (100)	SOLID	YELLOW-LEFT WHITE-RIGHT	OUTLINE MOUNTABLE MEDIANS IN YELLOW; EDGE LINES ARE NOT USED NEXT TO BARRIER CURB
TURN LANE MARKINGS	6 (150) LINES FULL SIZE LETTERS & SYMBOLS (8' (2.4m))	SOLID	WHITE	SEE TYPICAL TURN LANE MARKING DETAIL
TWO WAY LEFT TURN MARKING	2 @ 4 (100) EACH DIRECTION 8' (2.4m) LEFT ARROW	SKIP-DASH AND SOLID IN PAIRS	YELLOW WHITE	10' (3 m) LINE WITH 30' (9 m) SPACE FOR SKIP-DASH; 5½ (140) C-C BETWEEN SOLID LINE AND SKIP-DASH LINE SEE TYPICAL TWO-WAY LEFT TURN MARKING DETAIL
CROSSWALK LINES (PEDESTRIAN): A. DIAGONALS (BIKE & EQUESTRIAN) B. LONGITUDINAL BARS (SCHOOL)	2 @ 6 (150) 12 (300) @ 45° 12 (300) @ 90°	SOLID SOLID SOLID	WHITE WHITE WHITE	NOT LESS THAN 6' (1.8 m) APART 2' (600) APART 2' (600) APART SEE TYPICAL CROSSWALK MARKING DETAILS.
STOP LINES	24 (600)	SOLID	WHITE	PLACE 4' (1.2 m) IN ADVANCE OF AND PARALLEL TO CROSSWALK, IF PRESENT. OTHERWISE, PLACE AT DESIRED STOPPING POINT, PARALLEL TO CROSSROAD CENTERLINE WHERE POSSIBLE
PAINTED MEDIANS	2 @ 4 (100) WITH 12 (300) DIAGONALS @ 45° NO DIAGONALS USED FOR 4' (1.2 m) WIDE MEDIANS	SOLID	YELLOW: TWO WAY TRAFFIC WHITE: ONE WAY TRAFFIC	11 (280) C-C FOR THE DOUBLE LINE SEE TYPICAL PAINTED MEDIAN MARKING.
GORE MARKING AND CHANNELIZING LINES	8 (200) WITH 12 (300) DIAGONALS @ 45°	SOLID	WHITE	DIAGONALS: 15' (4.5 m) C-C (LESS THAN 30MPH (50 km/h)) 20' (6 m) C-C 30MPH (50 km/h) TO 45MPH (70 km/h) 30' (9 m) C-C (OVER 45MPH (70 km/h))
RAILROAD CROSSING	24 (600) TRANSVERSE LINES; "RR" IS 6' (1.8 m) LETTERS; 16 (400) LINE FOR "X"	SOLID	WHITE	SEE STATE STANDARD 780001 AREA OF: "R"=3.6 SQ. FT. (0.33 m²) EACH "X"=54.0 SQ. FT. (5.0 m²)
SHOULDER DIAGONALS	12 (300) @ 45°	SOLID	WHITE - RIGHT YELLOW - LEFT	50' (15 m) C-C (LESS THAN 30MPH (50 km/h)) 75' (25 m) C-C (30 MPH (50 km/h) TO 45MPH (70 km/h)) 150' (45 m) C-C (OVER 45MPH (70 km/h))

FOR FURTHER DETAILS ON PAVEMENT MARKING REFER TO STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND STATE STANDARD 780001.

All dimensions are in inches (millimeters) unless otherwise shown.

DISTRICT ONE TYPICAL PAVEMENT MARKINGS

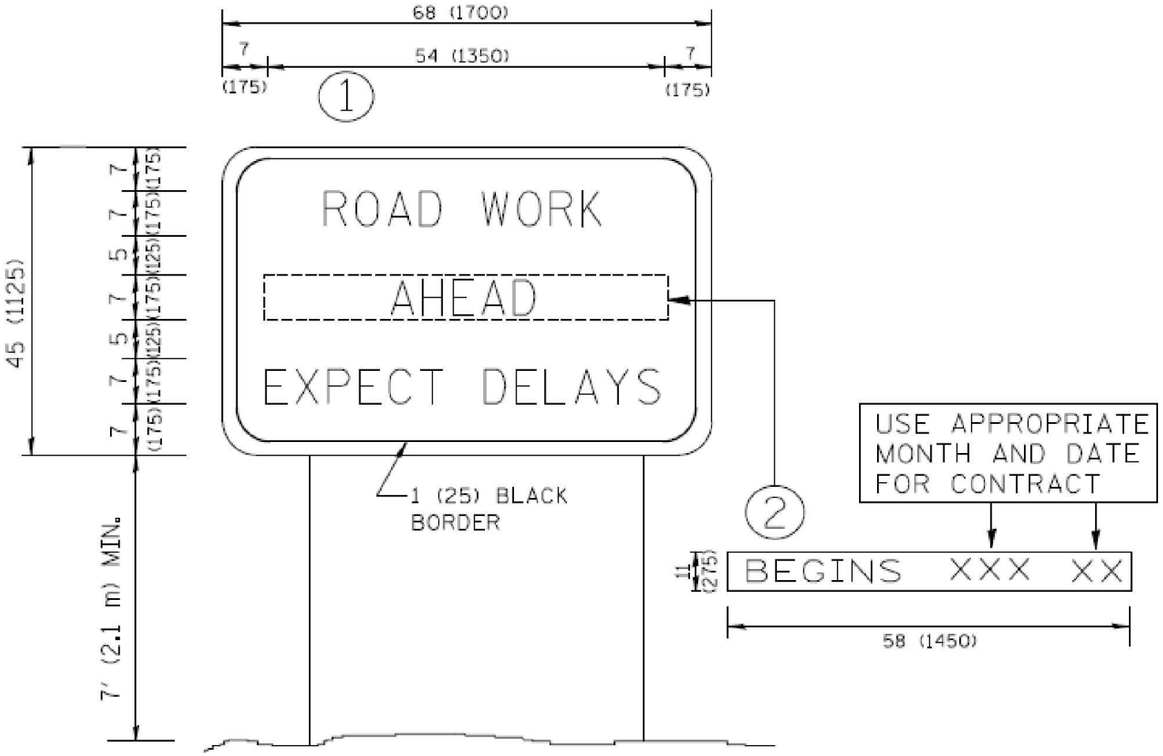
LIN ENGINEERING, LTD. Consulting Engineers Springfield, Illinois	USER NAME = Plotted by Fred 576	DESIGNED -	REVISED -
		DRAWN -	REVISED -
	PLOT SCALE = 2.0000 ' / IN.	CHECKED -	REVISED -
	PLOT DATE = 12/5/2012	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DISTRICT 1 STANDARDS
IL 56 (BUTTERFIELD RD.) OVER IL 38 (ROOSEVELT RD.)

SCALE: N.T.S. | SHEET NO. 2 OF 3 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
347	JR-HB-I-1	DUPAGE	30	29
	TC-13	CONTRACT NO. 60N77		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



NOTES:

1. USE BLACK LETTERING ON ORANGE BACKGROUND.
2. ERECT SIGNS IN ADVANCE OF THE LOCATION FOR THE "ROAD CONSTRUCTION AHEAD" SIGN AT LOCATIONS AS DIRECTED BY THE ENGINEER.
3. ERECT SIGN (1) WITH INSTALLED PANEL (2) ONE WEEK PRIOR TO THE START OF CONSTRUCTION.
4. REMOVE PANEL (2) SOON AFTER THE START OF CONSTRUCTION.
5. SEE SPECIAL PROVISION FOR "TEMPORARY INFORMATION SIGNING" FOR ADDITIONAL INFORMATION.
6. ONE SIGN ASSEMBLY EQUALS 25.70 SQ. FT. (2.3 SQ. M.)
7. SHALL BE PAID FOR AS TEMPORARY INFORMATION SIGNING.

ARTERIAL ROAD INFORMATION SIGN

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.