F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1238	125SB-1-R	LAKE	38	1
FED. ROAD DIST. NO.	ILLINOIS	CONTRACT NO. 60D57		

D-91-045-08

PROJECT LOCATED IN THE VILLAGE OF LAKE BLUFF

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PLANS FOR PROPOSED FEDERAL AID HIGHWAY

F.A.U. ROUTE 1238 (IL ROUTE 176) ROCKLAND ROAD
OVER US ROUTE 41 (SKOKIE HWY)
SECTION: 125SB–1–R
LAKE COUNTY
C–91–045–08
PPC DECK BEAM REPLACEMENT PROJECT
SN 049–0131
PROJECT: ACM-1238(011)

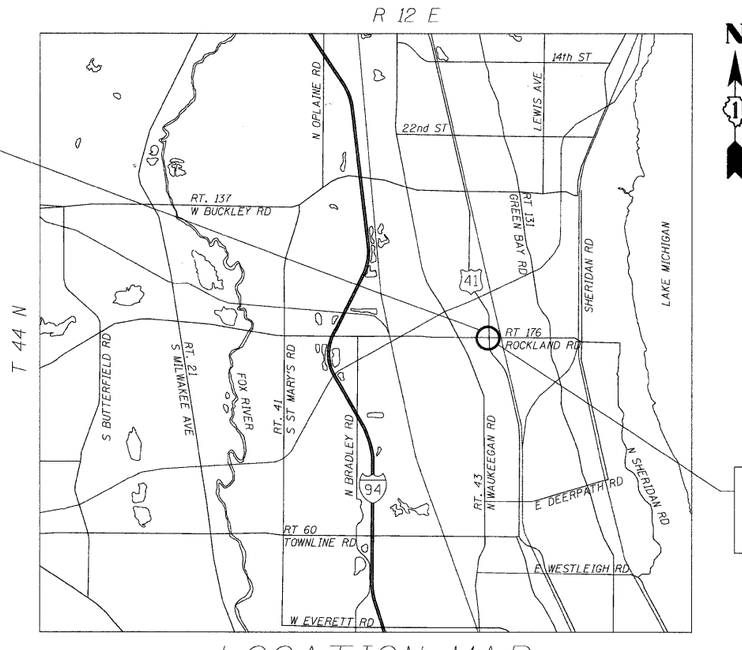
FOR INDEX OF SHEETS, SEE SHEET NO. 2

DESIGN DESIGNATION
MINOR ARTERIAL (URBAN)

ADT 17,800 (2007)
POSTED SPEED LIMIT 40 MPH
STRUCTURE NO. 049–0131

LOCATION OF SECTION INDICATED THUS: –■–

PROJECT BEGINS
STA. 99+20



PROJECT ENDS
STA. 102+90

LOCATION MAP

2500′ 5000′
1″ = 2000′

NET AND GROSS LENGTH OF PROJECT = 370′ = 0.070 MI

100′ 200′ 300′ — 1″ = 100′
0 10′ 20′ 30′ — 1″ = 10′
0 50′ 100′ — 1″ = 50′
0 50′ 100′ — 1″ = 40′
0 50′ 100′ — 1″ = 30′
0 50′ 100′ — 1″ = 20′

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

PROJECT MANAGER: KIM HARVEY (847) 705–4055
PROJECT ENGINEER: ERSKINE W. KLYCE (847) 705–4594

CONTRACT NO. 60D57

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED October 16, 2009
Diane M. O'Keefe
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER
December 4, 2009
Charles J. Ingersoll
ENGINEER OF DESIGN AND ENVIRONMENT
December 4, 2009
Christine M. Reed
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

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LOMCO, INC.
CONSULTING ENGINEERS
1560 WALL ST, SUITE 222
NAPERVILLE, ILLINOIS 60563 PH: (630) 577-9100

STATE OF ILLINOIS
WILLIAM W. KLYCE
062-047827
REGISTERED PROFESSIONAL ENGINEER
Expires 11/30/10

WILLIAM W. KLYCE
062-047827
REGISTERED PROFESSIONAL ENGINEER
11/30/09

SHEET NO.	TITLE
1	TITLE SHEET
2	GENERAL NOTES, STATE STANDARDS AND INDEX OF SHEETS
3-4	SUMMARY OF QUANTITIES
5	TYPICAL SECTIONS
6	STAGING TYPICAL SECTIONS
7	CONSTRUCTION STAGING PLAN - STAGE 1
8	CONSTRUCTION STAGING PLAN - STAGE 2
9	CONSTRUCTION STAGING PLAN - STAGE 3
10	DETOUR PLAN
11	PLAN AND PROFILE
12	PAVEMENT MARKING PLAN
13	EROSION CONTROL PLAN
14-31	STRUCTURAL PLANS
32	PAVEMENT PATCHING FOR HMA SURFACED PAVEMENT
33	BUTT JOINT AND HMA TAPER DETAILS
34	TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS
35	RAISED REFLECTIVE PAVEMENT MARKERS (SNOW-PLOW RESISTANT)
36	DISTRICT ONE TYPICAL PAVEMENT MARKINGS
37	PAVEMENT MARKING LETTERS AND SYMBOLS FOR TRAFFIC STAGING
38	ARTERIAL ROAD INFORMATION SIGN

HIGHWAY STANDARDS

STATE STANDARDS

SHEET NO.	TITLE
000001-05	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
001001-02	AREAS OF REINFORCEMENT REBARS
280001-05	TEMPORARY EROSION CONTROL SYSTEMS
420401-08	BRIDGE APPROACH PAVEMENT CONNECTOR
442201-03	CLASS C AND CLASS D PATCHES
515001-03	NAME PLATE FOR BRIDGE
630001-08	STEEL PLATE BEAM QUADRAIL
631031-08	TRAFFIC BARRIER TERMINAL, TYPE 6
635006-03	REFLECTOR AND TERMINAL MARKER PLACEMENT
635011-02	REFLECTOR MARKER AND MOUNTING DETAILS
701301-03	LANE CLOSURE 2L, 2W SHORT TIME OPERATIONS
701321-10	LANE CLOSURE 2L, 2W, BRIDGE REPAIR WITH BARRIER
701400-04	APPROACH TO LANE CLOSURE, FREEWAY/EXPRESSWAY
701446-01	TWO LANE CLOSURE FREEWAY/EXPRESSWAY
701901-01	TRAFFIC CONTROL DEVICES
704001-06	TEMPORARY CONCRETE BARRIER
720001-01	SIGN PANEL MOUNTING DETAILS
720006-06	SIGN PANEL ERECTION DETAILS
720011-01	METAL POSTS FOR SIGNS, MARKERS AND DELINEATORS
729001-01	APPLICATION OF TYPES A & B METAL POSTS (FOR SIGN & MARKERS)
780001-02	TYPICAL PAVEMENT MARKINGS

GENERAL NOTES

ALL ELEVATIONS ARE BASED ON UNITED STATES COAST AND GEODETIC SURVEY DATUM.

DIMENSIONS ARE IN ENGLISH UNITS UNLESS OTHERWISE NOTED.

BEFORE STARTING ANY EXCAVATION, THE CONTRACTOR SHALL CALL "JULIE" AT 800-892-0123 FOR FIELD LOCATIONS OF BURIED ELECTRIC, TELEPHONE, AND GAS FACILITIES (48 HOURS NOTIFICATION IS REQUIRED).

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

IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL DIMENSIONS AND CONDITIONS EXISTING IN THE FIELD PRIOR TO CONSTRUCTION AND ORDERING MATERIALS.

ANY REFERENCE TO STANDARDS IN THE PLANS OR SPECIAL PROVISIONS SHALL BE INTERPRETED TO BE THE LATEST STANDARDS OF THE DEPARTMENT LISTED IN THE PLANS WITH THE LATEST NUMBERS.

WHEN ARTIFICIAL LIGHTING IS UTILIZED IN NIGHT OPERATIONS, THE CONTRACTOR SHALL EXERCISE THE UTMOST PRECAUTIONS IN PREVENTING ADVERSE VISIBILITY TO THE MOTORING PUBLIC AND ADJOINING PROPERTIES.

THE RESIDENT ENGINEER SHALL CONTACT MS. DEBBIE HANLON, AREA TRAFFIC ENGINEER, AT (847) 438-2300 AT A MINIMUM OF 2 WEEKS PRIOR TO THE PLACEMENT OF PERMANENT PAVEMENT MARKING.

THE RESIDENT ENGINEER SHALL CONTACT THE TRAFFIC CONTROL SUPERVISOR AT (847) 705-4470 A MINIMUM OF 72 HOURS PRIOR TO THE PLACEMENT OF ANY TEMPORARY TRAFFIC CONTROL DEVICES.

ALL WORK IS TO BE COMPLETED BY THE COMPLETION DATE. THE COMPLETION DATE FOR THIS CONTRACT IS SEPTEMBER 3, 2010.

LONCO, INC.
CONSULTING ENGINEERS
1560 WALL ST, SUITE 222
NAPERVILLE, ILLINOIS 60563 PH (630) 577-9100

DESIGNED - MJY	REVISED -	
DRAWN - ST, TSC	REVISED -	
CHECKED - MJY, DC	REVISED -	
DATE - 10/16/2009	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES, STATE STANDARDS AND INDEX OF SHEETS
IL ROUTE 176 (ROCKLAND AVE) OVER US ROUTE 41 (SKOKIE HWY)

SCALE: NONE | SHEET NO. 2 OF 38 SHEETS | STA. 99+20 TO STA. 102+90

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1238	125SB-1-R	LAKE	38	2
	D-91-045-08	CONTRACT NO. 60D57		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

SUMMARY OF QUANTITIES			URBAN	80% FEDERAL, 20% STATE	
CODE NO.	ITEM	UNIT	TOTAL QUANTITIES	ROADWAY 1000	BRIDGE X281-2A
20200100	EARTH EXCAVATION	CU YD	160	160	
21101815	COMPOST FURNISH AND PLACE, 4"	SQ YD	299	299	
25000310	SEEDING, CLASS 4	ACRE	0.1	0.1	
25000400	NITROGEN FERTILIZER NUTRIENT	POUND	9	9	
25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	9	9	
25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	9	9	
25100630	EROSION CONTROL BLANKET	SQ YD	299	299	
28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	10	10	
28000400	PERIMETER EROSION BARRIER	FOOT	307	307	
28000510	INLET FILTERS	EACH	4	4	
40600200	BITUMINOUS MATERIALS (PRIME COAT)	TON	2	2	
40600300	AGGREGATE (PRIME COAT)	TON	4	4	
40600400	MIXTURE FOR CRACKS, JOINTS, AND FLANGEWAYS	TON	3	3	
40600982	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	SQ YD	44	44	
40601005	HOT-MIX ASPHALT REPLACEMENT OVER PATCHES	TON	10	10	
40603340	HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N70	TON	152	152	
42001430	BRIDGE APPROACH PAVEMENT CONNECTOR (FLEXIBLE)	SQ YD	98	98	
44000100	PAVEMENT REMOVAL	SQ YD	377	377	
44000156	HOT-MIX ASPHALT SURFACE REMOVAL, 1 3/4"	SQ YD	787	787	
44000700	APPROACH SLAB REMOVAL	SQ YD	105		105
44001700	COMBINATION CONCRETE CURB AND GUTTER REMOVAL AND REPLACEMENT	FOOT	239	239	
44002207	HOT-MIX ASPHALT REMOVAL OVER PATCHES, 1 3/4"	SQ YD	99	99	
44201749	CLASS D PATCHES, TYPE I, 9 INCH	SQ YD	18	18	
44201753	CLASS D PATCHES, TYPE II, 9 INCH	SQ YD	36	36	
44201757	CLASS D PATCHES, TYPE III, 9 INCH	SQ YD	45	45	
44300200	STRIP REFLECTIVE CRACK CONTROL TREATMENT	FOOT	1320	1320	
50101500	REMOVAL OF EXISTING SUPERSTRUCTURES	EACH	1		1
50102400	CONCRETE REMOVAL	CU YD	5		5
50300225	CONCRETE STRUCTURES	CU YD	29		29

SUMMARY OF QUANTITIES			URBAN	80% FEDERAL, 20% STATE	
CODE NO.	ITEM	UNIT	TOTAL QUANTITIES	ROADWAY 1000	BRIDGE X281-2A
50300255	CONCRETE SUPERSTRUCTURE	CU YD	171		171
50300300	PROTECTIVE COAT	SQ YD	470		470
50400305	PRECAST PRESTRESSED CONCRETE DECK BEAMS (17" DEPTH)	SQ FT	4433		4433
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	39360		39360
50800515	BAR SPLICERS	EACH	460		460
50901720	BICYCLE RAILING	FOOT	85		85
50901750	PARAPET RAILING	FOOT	131		131
51205200	TEMPORARY SHEET PILING	SQ FT	550		550
51500100	NAME PLATES	EACH	1		1
X5810100	WATERPROOFING MEMBRANE (SYSTEM SPECIAL)	SQ YD	545		545
58300100	PORTLAND CEMENT MORTAR FAIRING COURSE	FOOT	1391		1391
59000200	EPOXY CRACK INJECTION	FOOT	374		374
60300105	FRAME AND GRATES TO BE ADJUSTED	EACH	4	4	
60300305	FRAME AND LIDS TO BE ADJUSTED	EACH	2	2	
* 63000001	STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT POSTS	FOOT	135	135	
* 63100085	TRAFFIC BARRIER TERMINAL, TYPE 6	EACH	2	2	
* 63100167	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	EACH	1	1	
* 63200710	STEEL PLATE BEAM GUARD RAIL REMOVAL, TYPE A	FOOT	282	282	
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	6	6	
67100100	MOBILIZATION	L SUM	1	1	
70100405	TRAFFIC CONTROL AND PROTECTION, STANDARD 701321	EACH	1	1	
70101800	TRAFFIC CONTROL AND PROTECTION, (SPECIAL)	L SUM	1	1	
70102550	TRAFFIC CONTROL AND PROTECTION FOR TEMPORARY DETOUR	EACH	1	1	
70103815	TRAFFIC CONTROL SURVEILLANCE	CAL DA	9	9	
70106800	CHANGEABLE MESSAGE SIGN	CAL MO	24	24	
70400100	TEMPORARY CONCRETE BARRIER	FOOT	672	672	
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	1156	1156	
* 78000100	THERMOPLASTIC PAVEMENT MARKING - LETTERS AND SYMBOLS	SQ FT	37	37	
* 78000200	THERMOPLASTIC PAVEMENT MARKING - LINE 4"	FOOT	2220	2220	
* 78000600	THERMOPLASTIC PAVEMENT MARKING - LINE 12"	FOOT	85	85	

* SPECIALTY ITEMS

LONCO, INC.
CONSULTING ENGINEERS
1560 WALL ST, SUITE 222
NAPERVILLE, ILLINOIS 60563 PH: (630) 577-9100

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DRAWN - ST, TSC	REVISED -	
CHECKED - MJY, DC	REVISED -	
DATE - 10/16/2009	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES
IL ROUTE 176 (ROCKLAND AVE) OVER US ROUTE 41 (SKOKIE HWY)

SCALE: NONE | SHEET NO. 3 OF 38 SHEETS | STA. 99+20 TO STA. 102+90

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1238	125SB-1-R	LAKE	38	3
	D-91-045-08	CONTRACT NO. 60D57		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

	SUMMARY OF QUANTITIES			URBAN	80% FEDERAL, 20% STATE	
	CODE NO.	ITEM	UNIT	TOTAL	ROADWAY 1000	BRIDGE X281-2A
*	78100100	RAISED REFLECTIVE PAVEMENT MARKER	EACH	12	12	
*	78100105	RAISED REFLECTIVE PAVEMENT MARKER (BRIDGE)	EACH	8		8
*	78200500	BARRIER WALL MARKERS	EACH	56	56	
	78300100	PAVEMENT MARKING REMOVAL	SQ FT	512	512	
	78300200	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	EACH	20	12	8
*	81400115	HANDHOLE TO BE ADJUSTED	EACH	1	1	
	X0322256	TEMPORARY INFORMATION SIGNING	SQ FT	335	335	
	X0325305	STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 INCHES)	SQ FT	315		315
	X0325490	FURNISH AND INSTALL ACCESS DOOR	EACH	1		1
	X0325775	WET REFLECTIVE TEMPORARY TAPE, TYPE III, 4 INCH	FOOT	7998	7998	
	X0325837	WET REFLECTIVE TEMPORARY TAPE, TYPE III, 6 INCH	FOOT	213	213	
	X0325840	WET REFLECTIVE TEMPORARY TAPE, TYPE III, 12 INCH	FOOT	122	122	
	X0325842	WET REFLECTIVE TEMPORARY TAPE, TYPE III, LETTERS AND SYMBOLS	SQ FT	110	110	
△ ▲	XX005656	INLET FILTER CLEANING	EACH	4	4	
	XX006860	CLEANING & PAINTING METAL STRUCTURES	L SUM	1		1
	Z0001900	ASBESTOS BEARING PAD REMOVAL	EACH	72		72
	Z0013798	CONSTRUCTION LAYOUT	L SUM	1	1	
	Z0030240	IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE), TEST LEVEL 2	EACH	2	2	
	Z0030340	IMPACT ATTENUATORS, RELOCATE (NON-REDIRECTIVE), TEST LEVEL 2	EACH	4	4	
	X0326800	MASONRY WATERPROOFING PAINT	SQ YD	138		138

	SUMMARY OF QUANTITIES				80% FEDERAL, 80% STATE	
	CODE NO.	ITEM	UNIT	TOTAL	ROADWAY 1000	BRIDGE X281-2A

* SPECIALTY ITEMS ▲ Nonparticipating

LONCO, INC.
CONSULTING ENGINEERS
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NAPERVILLE, ILLINOIS 60563 PH (630) 577-9100

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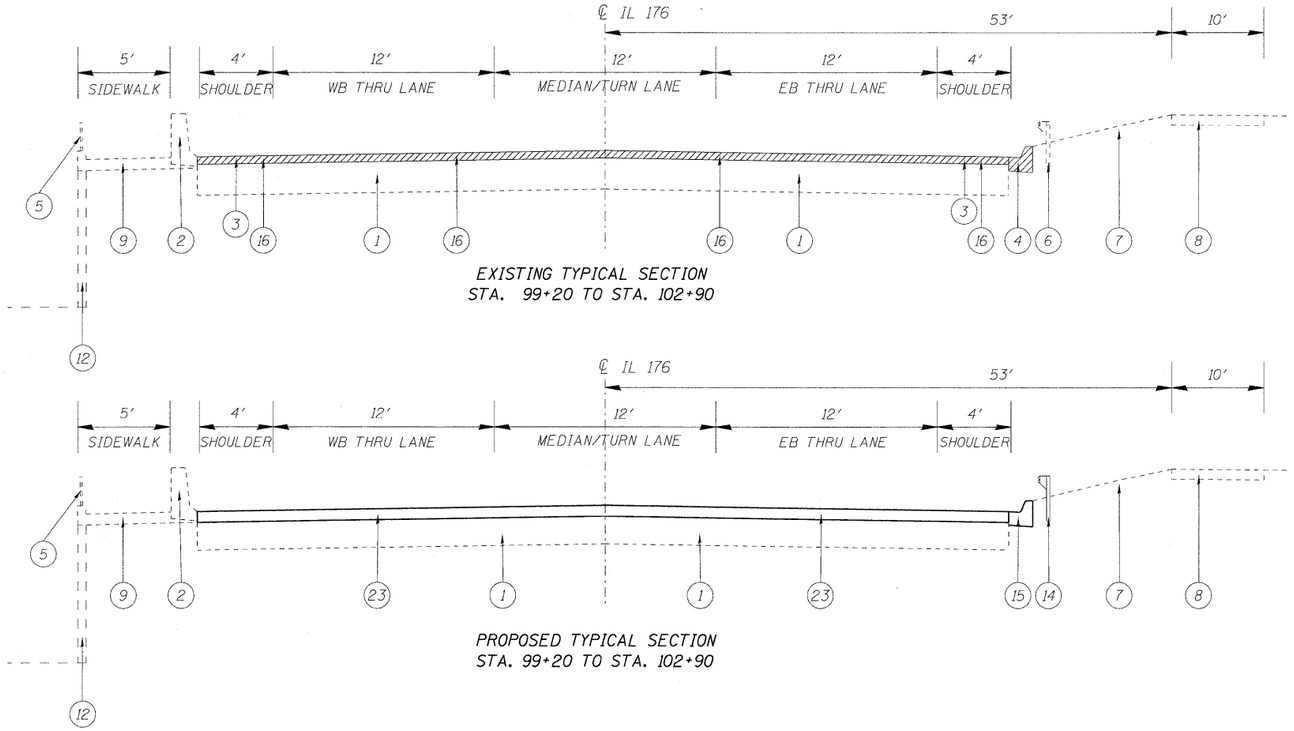
DRAWN - ST, TSC		REVISED -
CHECKED - MJY, DC		REVISED -
DATE - 10/16/2009		REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES
IL ROUTE 176 (ROCKLAND AVE) OVER US ROUTE 41 (SKOKIE HWY)

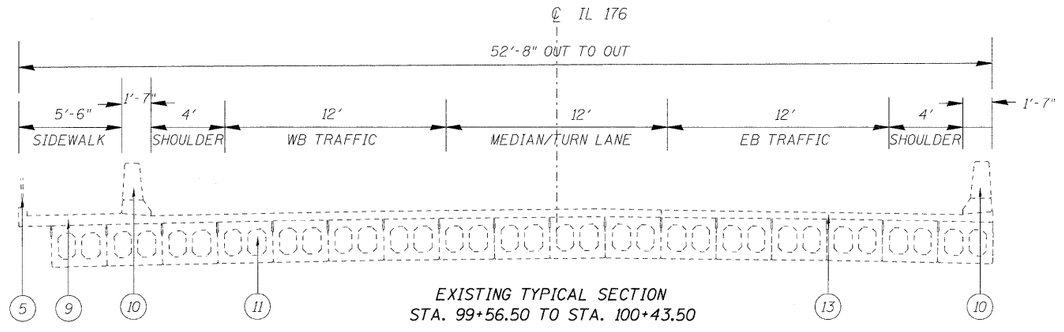
SCALE: NONE | SHEET NO. 4 OF 38 SHEETS | STA. 99+20 TO STA. 102+90

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1238	125SB-1-R	LAKE	38	4
	D-91-045-08	CONTRACT NO. 60D57		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

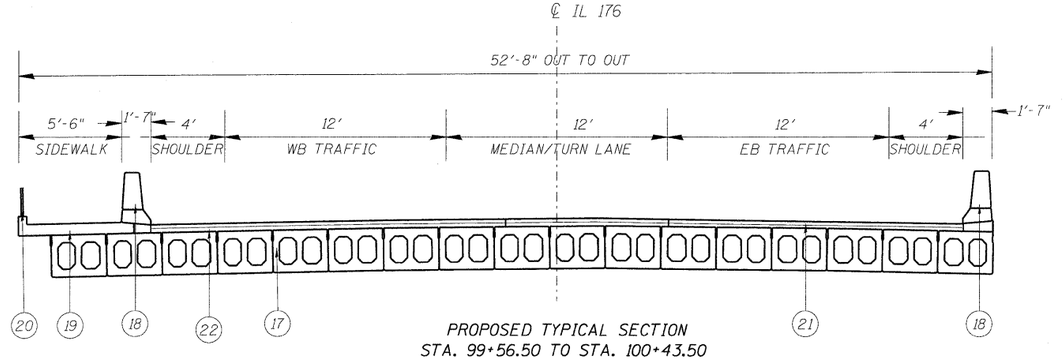


EXISTING TYPICAL SECTION
STA. 99+20 TO STA. 102+90

PROPOSED TYPICAL SECTION
STA. 99+20 TO STA. 102+90



EXISTING TYPICAL SECTION
STA. 99+56.50 TO STA. 100+43.50



PROPOSED TYPICAL SECTION
STA. 99+56.50 TO STA. 100+43.50

LEGEND

1. EXISTING PAVEMENT WITH HMA OVERLAY.
2. EXISTING CONCRETE BARRIER
3. EXISTING HMA SHOULDER
4. EXISTING CONCRETE CURB AND GUTTER TO BE REMOVED
5. EXISTING BICYCLE RAILING
6. EXISTING GUARDRAIL
7. EXISTING GROUND
8. EXISTING BIKE PATH TO REMAIN
9. EXISTING PCC SIDEWALK
10. EXISTING PARAPET WALL
11. EXISTING PCC DECK BEAMS
12. EXISTING RETAINING WALL TO REMAIN
13. EXISTING HMA WEARING SURFACE TO BE REMOVED (2")
14. PROPOSED STEEL PLATE BEAM GUARDRAIL WITH 6' POST
15. PROPOSED COMBINATION CONCRETE CURB AND GUTTER B-6.24
16. PROPOSED HOT-MIX ASPHALT SURFACE REMOVAL, 1 ¾"
17. PROPOSED PRECAST PRESTRESSED CONCRETE DECK BEAMS (17" DEPTH)
18. PROPOSED PARAPET WALL, TYPE F (PAID AS CONCRETE SUPERSTRUCTURE)
19. PROPOSED PCC SIDEWALK (PAID FOR AS CONCRETE SUPERSTRUCTURE)
20. PROPOSED BICYCLE RAILING
21. PROPOSED HOT-MIX ASPHALT COURSE, MIX "D", N70, 2"
22. PROPOSED WATERPROOFING MEMBRANE SYSTEM
23. PROPOSED HOT-MIX ASPHALT COURSE, MIX "D", N70, 1 ¾"

HOT-MIX ASPHALT MIXTURE REQUIREMENTS		
OPERATION	MIXTURE TYPE	DESIGN AIR VOIDS
ROADWAY	HMA SURFACE COURSE, MIX "D", N70 (IL-9.5 mm)	4% @ 70 GYR
	CLASS D PATCH (HMA BINDER IL-19 mm)	4% @ 70 GYR
	HMA REPLACEMENT OVER PATCHES (HMA BINDER IL-19 mm)	4% @ 70 GYR
SHOULDER	HMA SURFACE COURSE, MIX "D", N70 (IL-9.5 mm)	4% @ 70 GYR
BRIDE APPROACH PAVEMENT CONNECTOR FLEXIBLE, 15"	HMA SURFACE COURSE, MIX "D", N70 (IL-9.5 mm)	4% @ 70 GYR
	LEVELING BINDER (MACHINE METHOD), N70	4% @ 70 GYR

NOTES:

THE UNIT WEIGHT USED TO CALCULATE ALL HMA SURFACE COURSE MIXTURES IS 112 LBS/SQ-YD/IN.

THE CONTRACTOR SHALL PATCH FIRST BEFORE MILLING

THE "AC TYPE" FOR POLYMERIZED HMA MIXES SHALL BE "SBS/SBR PG 70 -22" AND FOR NON-POLYMERIZED HMA THE "AC TYPE" SHALL BE "PG 64 -22" UNLESS MODIFIED BY DISTRICT ONE SPECIAL PROVISIONS. FOR "PERCENT OF RAP" SEE DISTRICT ONE SPECIAL PROVISIONS.

LOMCO, INC.
CONSULTING ENGINEERS
1560 WALL ST. SUITE 222
NAPERVILLE, ILLINOIS 60563 PH: (630) 577-9100

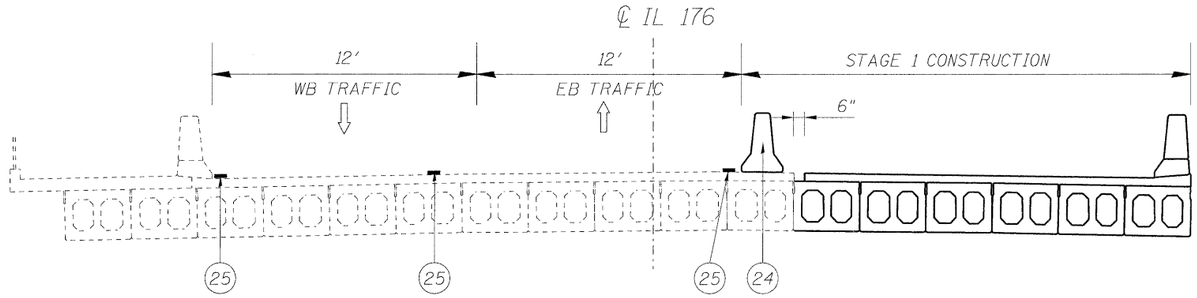
DESIGNED - MJY	REVISED -	
DRAWN - ST	REVISED -	
CHECKED - MJY	REVISED -	
DATE - 10/16/2009	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TYPICAL SECTIONS
IL ROUTE 176 (ROCKLAND AVE) OVER US ROUTE 41 (SKOKIE HWY)

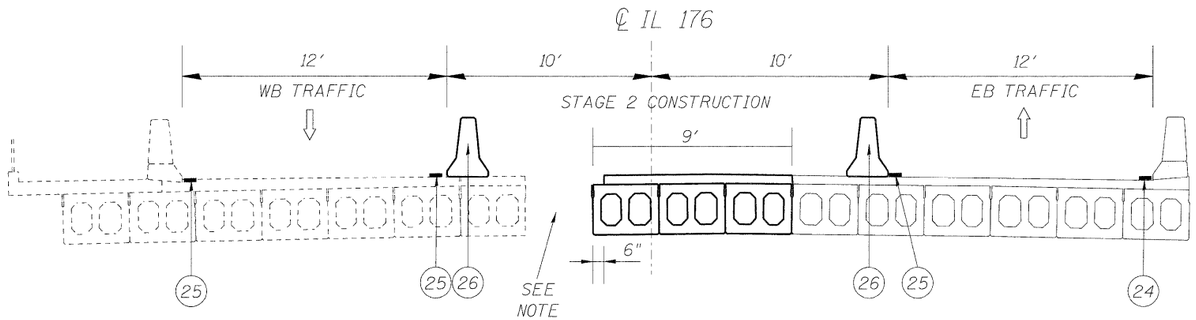
SCALE: NONE | SHEET NO. 5 OF 38 SHEETS | STA. 99+20 TO STA. 102+90

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1238	125SB-1-R	LAKE	38	5
	D-91-045-08	CONTRACT NO. 60D57		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



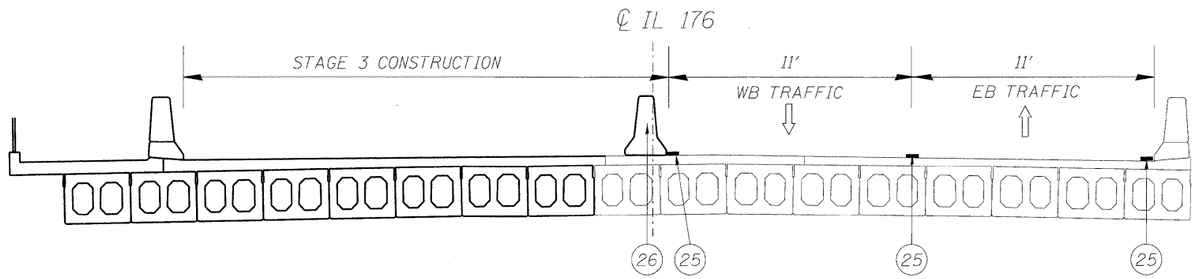
STAGE 1 @ STA. 101+00.01 (LOOKING EAST)

NO SCALE



STAGE 2 @ STA. 101+00.01 (LOOKING EAST)

NO SCALE



STAGE 3 @ STA. 101+00.01 (LOOKING EAST)

NO SCALE

LEGEND

(24) TEMPORARY CONCRETE BARRIER

(25) WET REFLECTIVE TEMPORARY TAPE, TYPE III, 4"

(26) RELOCATE TEMPORARY CONCRETE BARRIER

NOTE

FOR DETAILS OF STAGE OF CONSTRUCTION
SEE PAGE 16 OF 38.

LOMCO, INC.
CONSULTING ENGINEERS
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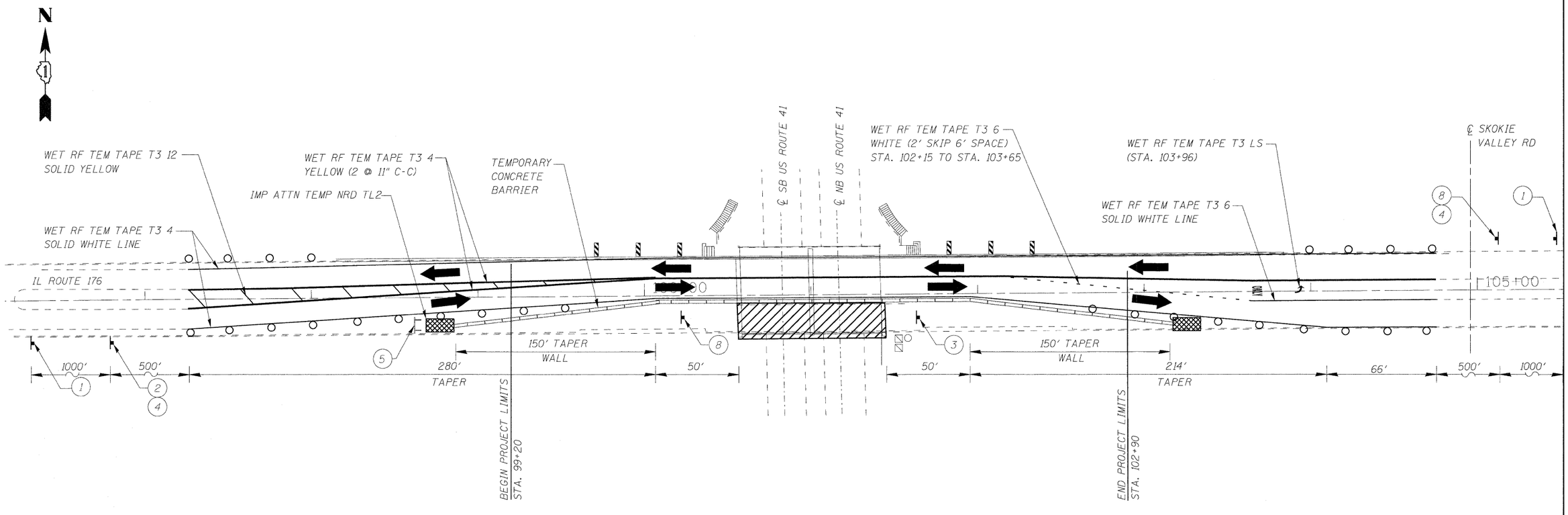
DESIGNED - MJY	REVISED -	
DRAWN - ST, TSC	REVISED -	
CHECKED - MJY, DC	REVISED -	
DATE - 10/16/2009	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STAGING TYPICAL SECTIONS
IL ROUTE 176 (ROCKLAND AVE) OVER US ROUTE 41 (SKOKIE HWY)

SCALE: NONE | SHEET NO. 6 OF 38 SHEETS | STA. 99+20 TO STA. 102+90

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1238	125SB-1-R	LAKE	38	6
	D-91-045-08	CONTRACT NO. 60D57		
FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		



LEGEND

- WORK ZONE
- BARRICADE W/ STEADY BURN LIGHT
- TYPE III BARRICADE WITH FLASHING LIGHTS
- SIGN
- IMPACT ATTENUATORS
- CONCRETE BARRIER
- DOUBLE VERTICAL PANEL

NOTES:

BARRICADE, BARREL AND PANEL SPACING SHALL BE 25' CENTERS IN TAPER SECTIONS AND 50' CENTERS IN TANGENT SECTIONS.

VERTICAL PANELS SHALL BE USED WHEN BARRELS CANNOT BE PLACED ON THE EXISTING PAVEMENT OR PAVED SHOULDER.

ALL SIGNS, BARRICADES, BARRELS AND OTHER TRAFFIC CONTROL DEVICES SHOWN ON THIS SHEET SHALL BE ACCORDING TO SECTION 701 OF THE STANDARD SPECIFICATIONS AND SHALL NOT BE PAID FOR SEPARATELY, BUT SHALL BE PAID FOR AT THE CONTRACT LUMP SUM PRICE FOR "TRAFFIC CONTROL AND PROTECTION, SPECIAL."

STAGE 1

1. INSTALL TRAFFIC CONTROL AND TEMPORARY CONCRETE BARRIER IN ACCORDANCE WITH STAGE 1 MAINTENANCE OF TRAFFIC AND STANDARD 701321.
2. REMOVE SOUTH PORTION (6 DECK BEAMS) OF EXISTING SUPERSTRUCTURE, AND EXISTING APPROACH PAVEMENT.
3. INSTALL NEW BEAMS, HMA WEARING SURFACE AND PARAPET WALLS.
4. CONSTRUCT NEW CONCRETE APPROACH SLABS AND APPROACH PAVEMENT.
5. CONSTRUCT ROADWAY ON SOUTH SIDE OF IL ROUTE 176 IN ACCORDANCE WITH SHEET 11.

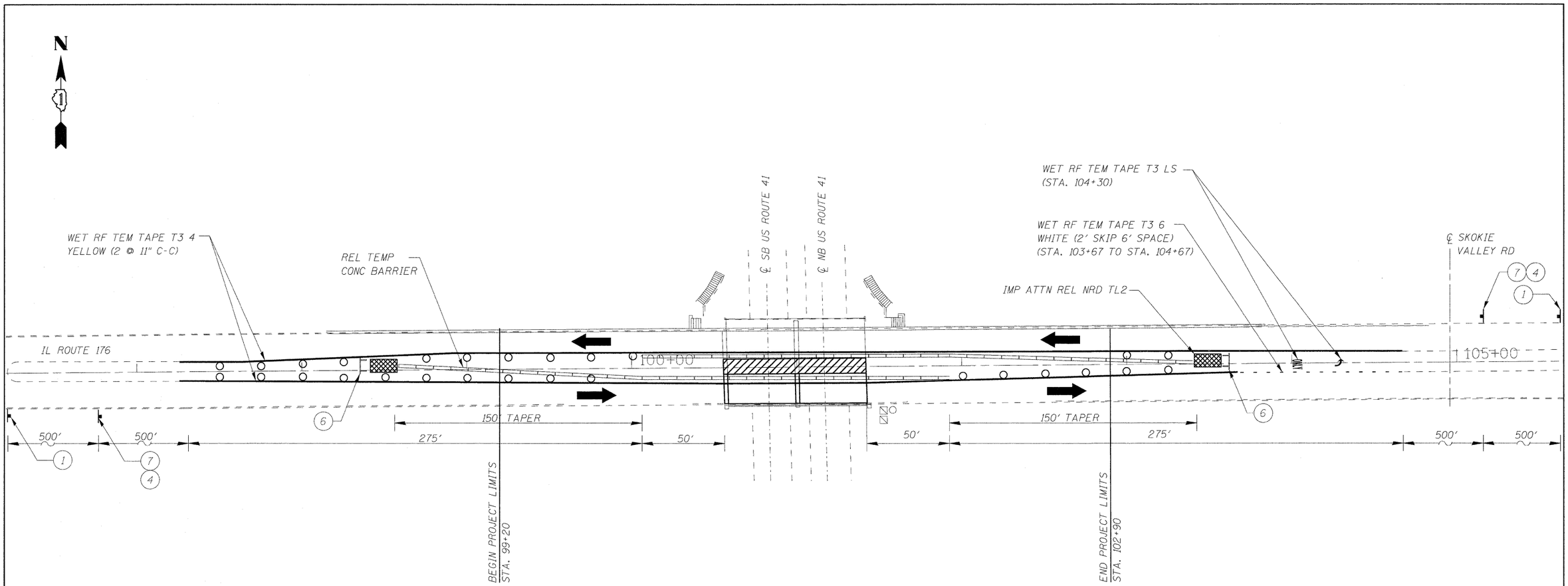
0' 15' 30' 60'
SCALE: 1"= 30'

LONCO, INC. CONSULTING ENGINEERS 1560 WALL ST. SUITE 222 NAPERVILLE, ILLINOIS 60563 PH: (630) 577-9100	DESIGNED - MJY	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
	DRAWN - ST, TSC	REVISED -	
	CHECKED - MJY, DC	REVISED -	
	DATE - 10/16/2009	REVISED -	

CONSTRUCTION STAGING PLAN – STAGE 1
IL ROUTE 176 (ROCKLAND AVE) OVER US ROUTE 41 (SKOKIE HWY)

SCALE: 1" = 30' | SHEET NO. 7 OF 38 SHEETS | STA. 99+20 TO STA. 102+90

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1238	125SB-1-R	LAKE	38	7
	D-91-045-08	CONTRACT NO. 60D57		
FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		



LEGEND

- WORK ZONE
- BARRICADE W/ STEADY BURN LIGHT
- TYPE III BARRICADE WITH FLASHING LIGHTS
- SIGN
- IMPACT ATTENUATORS
- CONCRETE BARRIER
- DOUBLE VERTICAL PANEL

NOTES:

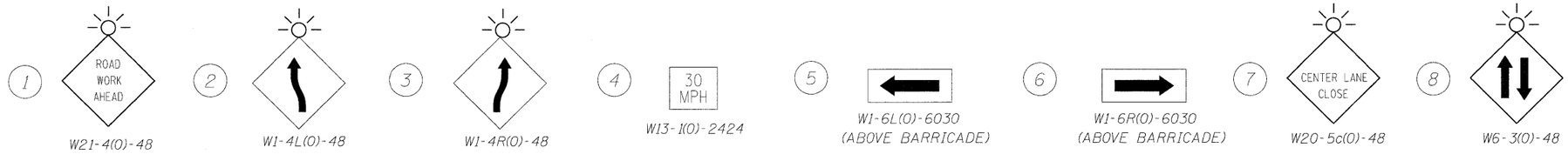
BARRICADE, BARREL AND PANEL SPACING SHALL BE 25' CENTERS IN TAPER SECTIONS AND 50' CENTERS IN TANGENT SECTIONS.

VERTICAL PANELS SHALL BE USED WHEN BARRELS CANNOT BE PLACED ON THE EXISTING PAVEMENT OR PAVED SHOULDER.

ALL SIGNS, BARRICADES, BARRELS AND OTHER TRAFFIC CONTROL DEVICES SHOWN ON THIS SHEET SHALL BE ACCORDING TO SECTION 701 OF THE STANDARD SPECIFICATIONS AND SHALL NOT BE PAID FOR SEPARATELY, BUT SHALL BE PAID FOR AT THE CONTRACT LUMP SUM PRICE FOR "TRAFFIC CONTROL AND PROTECTION, SPECIAL."

STAGE 2

1. INSTALL TRAFFIC CONTROL AND TEMPORARY CONCRETE BARRIER IN ACCORDANCE WITH STAGE 2 MAINTENANCE OF TRAFFIC AND STANDARD 701321.
2. REMOVE MIDDLE PORTION (4 DECK BEAMS) OF EXISTING SUPERSTRUCTURE, AND EXISTING APPROACH PAVEMENT.
3. INSTALL NEW BEAMS AND HMA WEARING SURFACE AND PARAPET WALLS.
4. CONSTRUCT NEW CONCRETE APPROACH SLABS AND APPROACH PAVEMENT.



0' 15' 30' 60'
SCALE: 1"= 30'

LOMCO, INC.
CONSULTING ENGINEERS
1560 WALL ST, SUITE 222
NAPERVILLE, ILLINOIS 60563 PH: (630) 577-9100

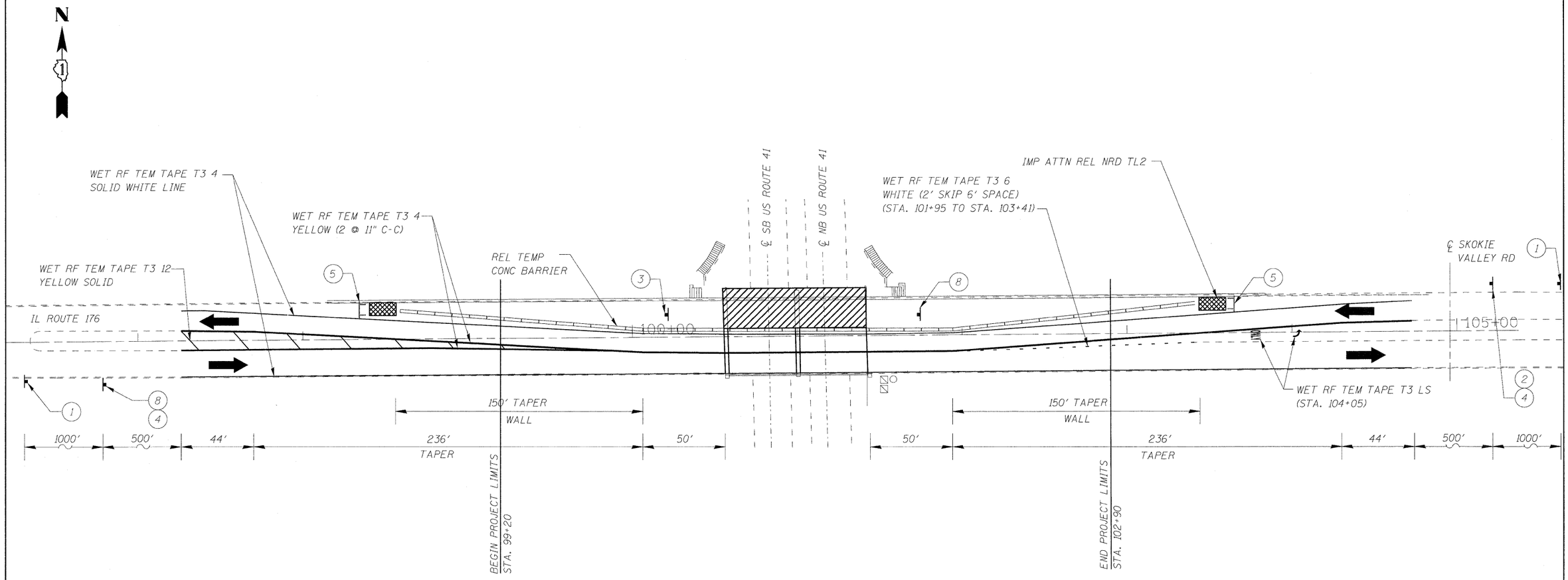
DESIGNED - MJY		REVISED -
DRAWN - ST, TSC		REVISED -
CHECKED - MJY, DC		REVISED -
DATE - 10/16/2009		REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CONSTRUCTION STAGING PLAN – STAGE 2
IL ROUTE 176 (ROCKLAND AVE) OVER US ROUTE 41 (SKOKIE HWY)

SCALE: 1" = 30' | SHEET NO. 8 OF 38 SHEETS | STA. 99+20 TO STA. 102+90

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1238	125SB-1-R	LAKE	38	8
	D-91-045-08	CONTRACT NO. 60D57		
FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		



LEGEND

- WORK ZONE
- BARRICADE W/ STEADY BURN LIGHT
- TYPE III BARRICADE WITH FLASHING LIGHTS
- SIGN
- IMPACT ATTENUATORS
- CONCRETE BARRIER
- DOUBLE VERTICAL PANEL

NOTES:

BARRICADE, BARREL AND PANEL SPACING SHALL BE 25' CENTERS IN TAPER SECTIONS AND 50' CENTERS IN TANGENT SECTIONS.

VERTICAL PANELS SHALL BE USED WHEN BARRELS CANNOT BE PLACED ON THE EXISTING PAVEMENT OR PAVED SHOULDER.

ALL SIGNS, BARRICADES, BARRELS AND OTHER TRAFFIC CONTROL DEVICES SHOWN ON THIS SHEET SHALL BE ACCORDING TO SECTION 701 OF THE STANDARD SPECIFICATIONS AND SHALL NOT BE PAID FOR SEPARATELY, BUT SHALL BE PAID FOR AT THE CONTRACT LUMP SUM PRICE FOR "TRAFFIC CONTROL AND PROTECTION, SPECIAL."

STAGE 3

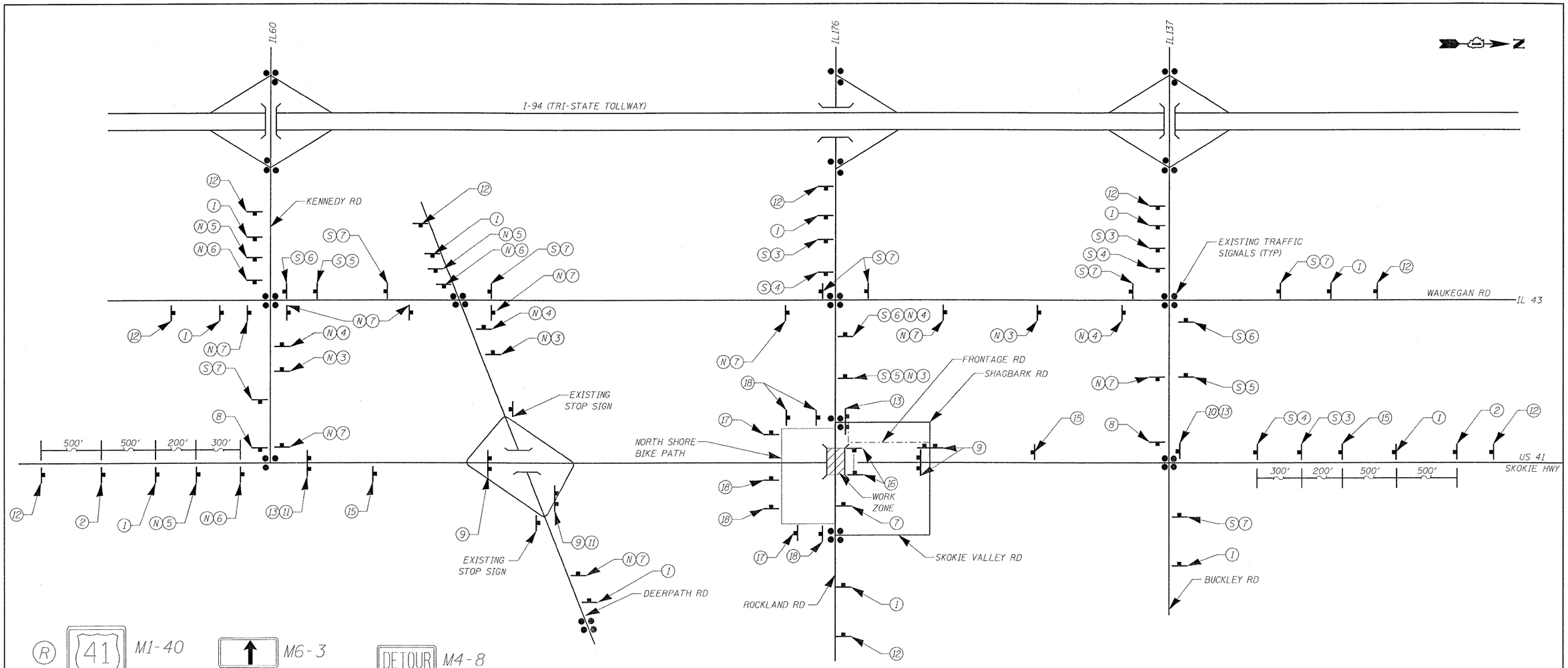
1. INSTALL TRAFFIC CONTROL AND TEMPORARY CONCRETE BARRIER IN ACCORDANCE WITH STAGE 3 MAINTENANCE OF TRAFFIC AND STANDARD 701321.
2. REMOVE NORTH PORTION (8 DECK BEAMS) OF EXISTING SUPERSTRUCTURE AND EXISTING APPROACH PAVEMENT.
3. INSTALL NEW BEAMS AND HMA WEARING SURFACE AND PARAPET WALLS.
4. CONSTRUCT ROADWAY ON NORTH SIDE OF IL ROUTE 176 IN ACCORDANCE WITH SHEET 11.
5. CONSTRUCT NEW CONCRETE APPROACH SLABS AND APPROACH PAVEMENT.

0' 15' 30' 60'
SCALE: 1"= 30'

LONCO, INC.	DESIGNED - MJY	REVISED -	STATE OF ILLINOIS
CONSULTING ENGINEERS	DRAWN - ST, TSC	REVISED -	DEPARTMENT OF TRANSPORTATION
1560 WALL ST, SUITE 222	CHECKED - MJY, DC	REVISED -	CONSTRUCTION STAGING PLAN – STAGE 3
NAPERVILLE, ILLINOIS 60563 PH: (630) 577-9100	DATE - 10/16/2009	REVISED -	IL ROUTE 176 (ROCKLAND AVE) OVER US ROUTE 41 (SKOKIE HWY)

SCALE: 1" = 30' | SHEET NO. 9 OF 38 SHEETS | STA. 99+20 TO STA. 102+90

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1238	125SB-1-R	LAKE	38	9
	D-91-045-08	CONTRACT NO. 60D57		
FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		



R M1-40 | M6-3 | DETOUR M4-8

N NORTH M3-1 | M5-1R(O) | M6-1

S SOUTH M3-3 | M5-1L(O) | M6-1

15 ROAD CLOSED 500 FT W20-03(0)-48

16 SIDEWALK CLOSED R9-9

17 SIDEWALK DETOUR

18 SIDEWALK DETOUR

SIGN

TYPE III BARRICADES (2 OR MORE) W/ STREADY BURN LIGHTS (SIGNS 9, 10, 11, & 13 TO BE MOUNTED ABOVE TYPE III BARRICADE.

1 DETOUR AHEAD W20-2(0)-48

2 ROAD CLOSED AHEAD W20-1103(0)-48

3 DETOUR N/S R

4 DETOUR N/S R

5 DETOUR N/S R

6 DETOUR N/S R

7 DETOUR N/S R

8 END DETOUR M4-8a

9 ROAD CLOSED R11-2

10 DETOUR M4-10R(O)

11 DETOUR M4-10L(O)

12 4' wide; 6" | LR CLOSED AT IL 176 | 5" | 5'

13 ROAD CLOSED TO THRU TRAFFIC R11-4

LONCO, INC. CONSULTING ENGINEERS 1979 N. MILL ST. SUITE 210 NAPERVILLE, ILLINOIS 60563 PH: (630) 577-9100	USER NAME = $USER$	DESIGNED - MJY	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	DETOUR PLAN US ROUTE 41 (SKOKIE HWY)
		DRAWN - ST, TSC	REVISED -		
	PLOT SCALE = $SCALE$	CHECKED - MJY, DC	REVISED -		SCALE: NONE | SHEET NO. 10 OF 38 SHEETS | STA. TO STA.
	PLOT DATE = $DATE$	DATE - 10/16/2009	REVISED -		

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1238	125SB-1-R	LAKE	38	10
	D-91-045-08	CONTRACT NO. 60D57		
FED. ROAD DIST. NO. -	ILLINOIS	FED. AID PROJECT		

N

℄ IL ROUTE 176

BEGIN PROJECT LIMITS
STA. 99+20

COMB C C&G REM & REPL
116 FT

FR & GRATES ADJUST
99+78, 22.31' LT

FR & LIDS ADJUST
99+78, 5.06' LT

HANDHOLE TO BE ADJUSTED
99+69, 20.87' LT

IL ROUTE 176 OVER US ROUTE 41
STA. 101+00

FR & LIDS ADJUST
101+60, 11.93' LT

COMB C C&G REM & REPL
123 FT

FR & GRATES ADJUST
102+27, 21.91' LT

FR & GRATES ADJUST
102+27, 22.61' RT

NOTE:
1 - BENCHMARK #1 - CUT " " IN TOP OF NORTHWEST QUADRANT OF IL 176 & US 41. ASSUMED ELEVATION = 100.00'
2 - BENCHMARK #2 - NORTHEAST CORNER OF CONCRETE BLOCK IN SOUTHEAST QUADRANT OF IL 176 & US 41. BETWEEN IL 176 AND BIKEPATH. ELEVATION = 103.43'

22'-0"

30'-0"

FR & GRATES ADJUST
99+78, 22.11' RT

SPBGR REM
TY A
144 FT

HMA SURF REM BUTT JT
STA. 99+40

BR APPR PVT CON (FLX)
STA. 100+15.37

BRIDGE APPROACH SLAB
STA. 100+25.37

SB US ROUTE 41

SB US ROUTE 41

BRIDGE APPROACH SLAB
STA. 101+97.10

BR APPR PVT CON (FLX)
STA. 102+07.10

SPBGR REM
TY A
138 FT

HMA SURF REM BUTT JT
STA. 102+70

END PROJECT LIMITS
STA. 102+90

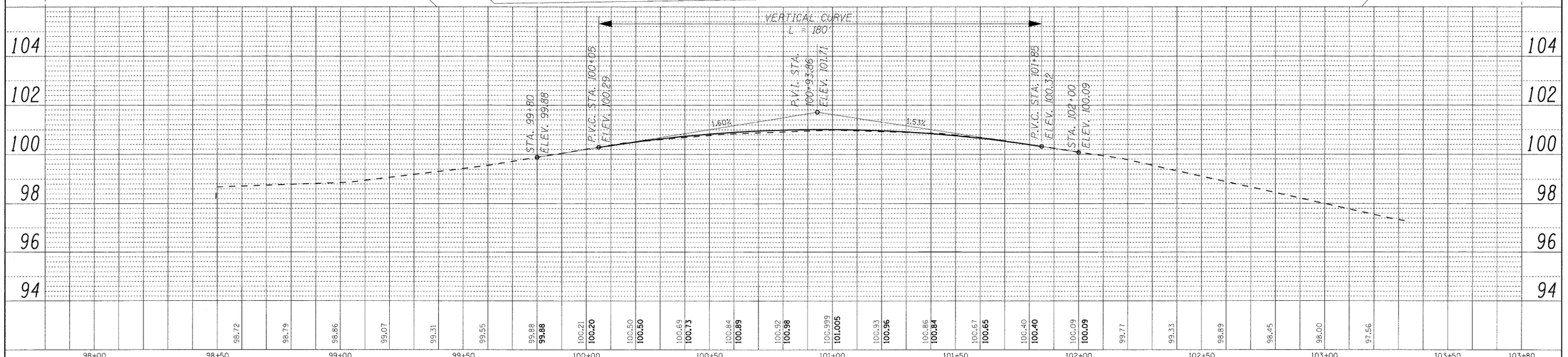
LEGEND

- BR APPR PVT CON (FLX)
- HMA SURF REM BUTT JT
- HOT-MIX ASPHALT SURFACE REMOVAL, 1 3/4 " W/ BITUMINOUS MATERIALS (PRIME COAT), HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N70, 1 3/4 "
- PAVEMENT REM
- APPROACH SLAB REMOVAL 1 @ 44'-6" BY 20'-0"

SCALE: 1"= 20'

PLAN — SURVEYED / DRAWN / ALIGNMENT CHECKED / GRADES CHECKED / BEAM, MOTED / STRUCTURE NOTATIONS CHKD / NOTE BOOK / NO. / BY / DATE

PROFILE — SURVEYED / DRAWN / GRADES CHECKED / BEAM, MOTED / STRUCTURE NOTATIONS CHKD / NOTE BOOK / NO. / BY / DATE



LONCO, INC.
CONSULTING ENGINEERS
1560 WALL ST, SUITE 222
NAPERVILLE, ILLINOIS 60563 PH: (630) 577-9100

DESIGNED - MJY	REVISED -	
DRAWN - ST, TSC	REVISED -	
CHECKED - MJY, DC	REVISED -	
DATE - 10/16/2009	REVISED -	

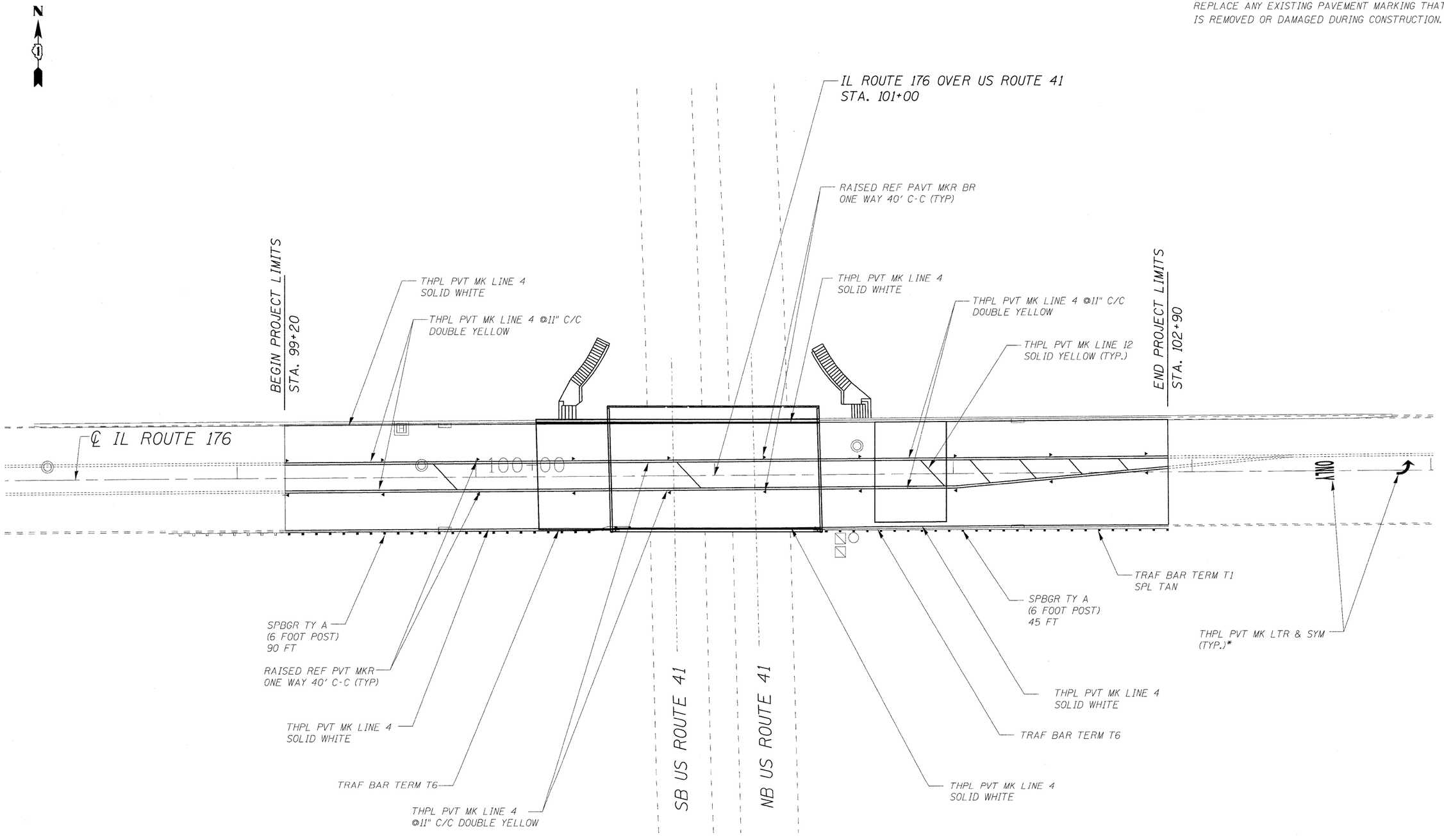
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PLAN AND PROFILE
IL ROUTE 176 (ROCKLAND AVE) OVER US ROUTE 41 (SKOKIE HWY)

SCALE: 1" = 20' | SHEET NO. 11 OF 38 SHEETS | STA. 99+20 TO STA. 102+90

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
138	125SB-1-R	LAKE	38	11
	D-91-045-08	CONTRACT NO. 60D57		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

NOTE:
REPLACE ANY EXISTING PAVEMENT MARKING THAT IS REMOVED OR DAMAGED DURING CONSTRUCTION.



*NOTE:
LOCATION DETERMINED IN THE FIELD

0' 10' 20' 40'
SCALE: 1"= 20'

LONCO, INC.
CONSULTING ENGINEERS
1560 WALL ST. SUITE 222
NAPERVILLE, ILLINOIS 60563 PH: (630) 577-9100

DESIGNED - MJY	REVISED -	
DRAWN - ST, TSC	REVISED -	
CHECKED - MJY, DC	REVISED -	
DATE - 10/16/2009	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKING PLAN
IL ROUTE 176 (ROCKLAND AVE) OVER US ROUTE 41 (SKOKIE HWY)

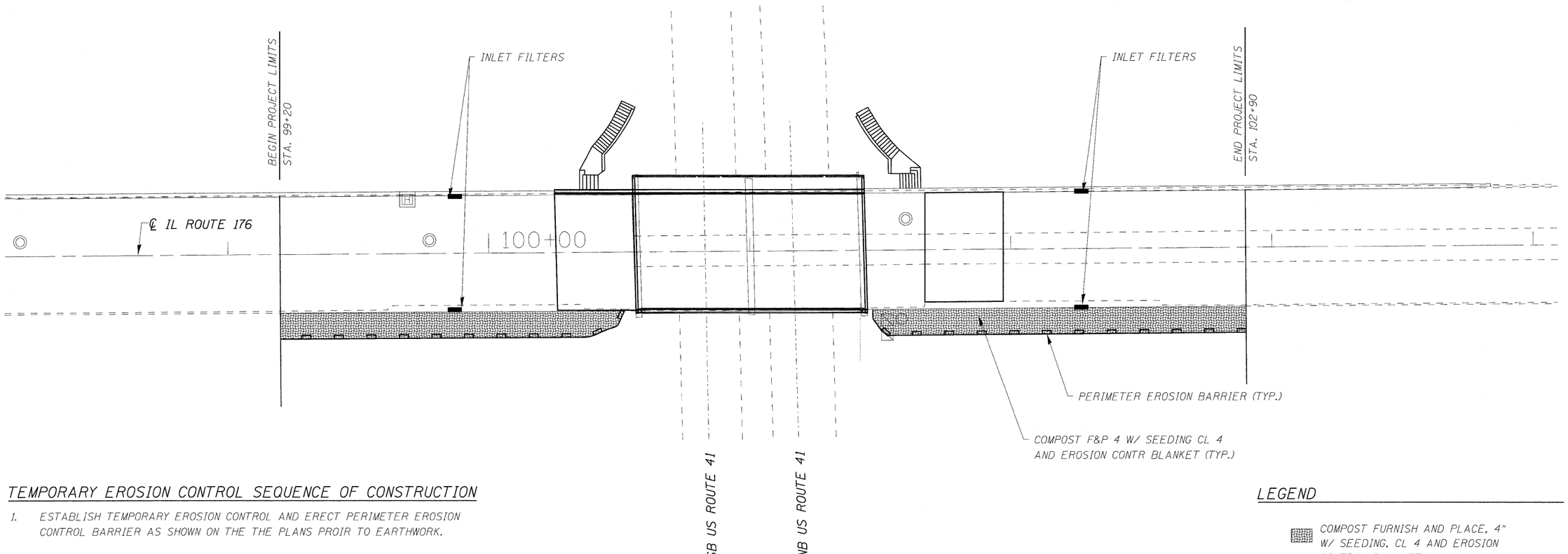
SCALE: 1" = 20' | SHEET NO. 12 OF 38 SHEETS | STA. 99+20 TO STA. 102+90

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1238	125SB-1-R	LAKE	38	12
	D-91-045-08	CONTRACT NO. 60D57		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

N

TEMPORARY EROSION CONTROL NOTES

1. THE CONTRACTOR SHALL INSTALL PERIMETER EROSION BARRIER PRIOR TO STRIPPING OF VEGETATION.
2. THE CONTRACTOR SHALL SURROUND ANY NECESSARY EARTH STOCKPILES WITH PERIMETER EROSION BARRIER.
3. THE CONTRACTOR SHALL MAINTAIN ALL EROSION CONTROL DEVICES AT ALL TIMES. EROSION CONTROL DEVICES SHALL BE INSPECTED EVERY SEVEN CALENDAR DAYS OR WITHIN 24 HOURS AFTER A 13 MM (0.5 INCH) RAINFALL OR SNOWFALL.
4. THE CONTRACTOR SHALL SEED ALL DISTURBED AREAS AS SOON AS PRACTICAL AFTER CONSTRUCTION ACTIVITIES IN THAT AREA HAVE BEEN CONCLUDED. AREAS THAT HAVE STEEP SLOPES OR WILL NOT RECIEVE PERMANENT LANDSCAPING SHALL BE TEMPORARILY SEEDED. ALL FLATTER AREAS OR AREAS WHERE NO FURTHER WORK IS TO OCCUR FOR ONE MONTH OR MORE SHALL BE SEEDED AND EXCELSIOR BLANKET WITHIN SEVEN (7) CALENDAR DAYS.



TEMPORARY EROSION CONTROL SEQUENCE OF CONSTRUCTION

1. ESTABLISH TEMPORARY EROSION CONTROL AND ERECT PERIMETER EROSION CONTROL BARRIER AS SHOWN ON THE THE PLANS PROIR TO EARTHWORK.
2. IMPLEMENT SEDIMENT AND EROSION CONTROL DEVICES FOR STOCKPILE AREAS AS REQUIRED.
3. INSTALL PERMANENT LANDSCAPING IN CONJUNCTION WITH CONSTRUCTION STAGING.
4. CLEAN DRAINAGE FACILITIES AND REMOVE TEMPORARY EROSION DEVICES WITHIN 30 DAYS AFTER FINAL SITE STABILIZATION IS ACHIEVED.

LEGEND

COMPOST FURNISH AND PLACE, 4" W/ SEEDING. CL 4 AND EROSION CONTROL BLANKET

PERIMETER EROSION BARRIER

0' 10' 20' 40'

SCALE: 1"= 20'

IOWCO, INC.
CONSULTING ENGINEERS
1560 WALL ST, SUITE 222
NAPERVILLE, ILLINOIS 60563 PH: (630) 577-9100

USER NAME = $USER$	DESIGNED - MJY	REVISED -
	DRAWN - ST, TSC	REVISED -
PLOT SCALE = $SCALE$	CHECKED - MJY, DC	REVISED -
PLOT DATE = $DATE$	DATE - 10/16/2009	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EROSION CONTROL PLAN
IL ROUTE 176 (ROCKLAND AVE) OVER US ROUTE 41 (SKOKIE HWY)

SCALE: 1" = 20' | SHEET NO. 13 OF 38 SHEETS | STA. 99+20 TO STA. 102+90

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1238	125SB-1-R	LAKE	38	13
	D-91-045-08	CONTRACT NO. 60D57		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

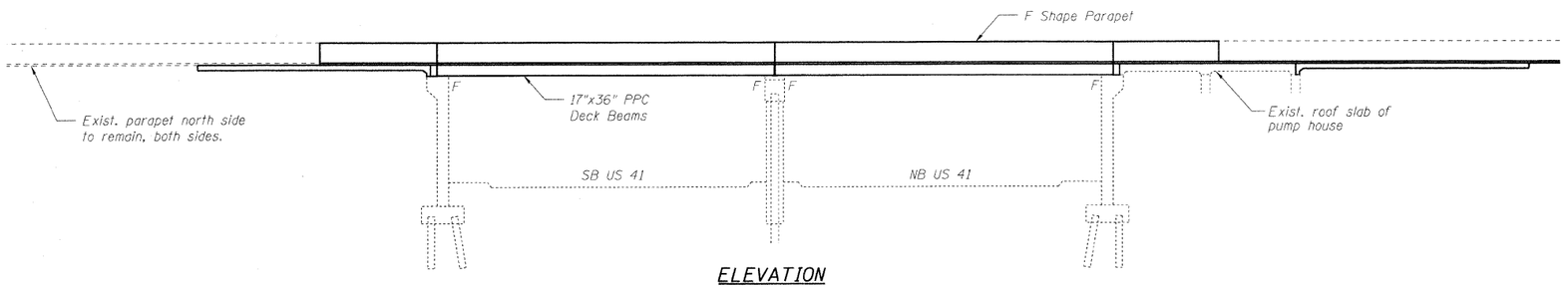
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Benchmark: Benchmark #1 - cut "□" in top of northwest quadrant of IL 176 & US 41. Assumed Elevation = 100.00'

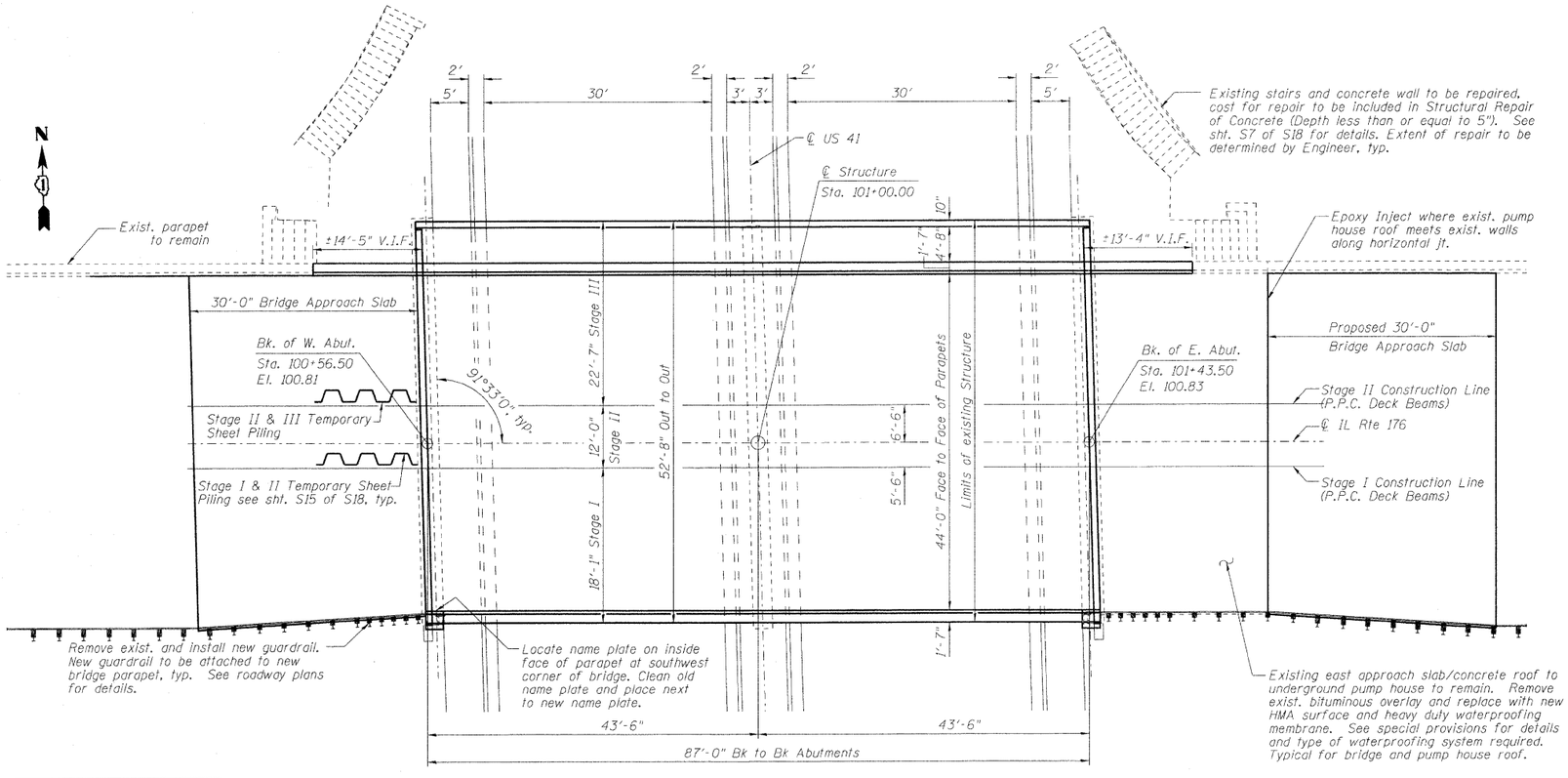
Benchmark #2 - Northeast corner of block in southwest quadrant of IL 176 & US 41 between IL 176 and bikepath. Elevation = 103.43'

Existing Structure: S.N. 049-0131 built in 1976 as a two span 17"x36" PPC Deck Beam bridge with 2" bituminous wearing surface on closed abutments and one pier on spread footings on piles. The structure measures 87'-0" back to back abutments and 52'-8" out to out. Bridge was rehabilitated in 2006 with partial beam replacement.
Traffic is to be maintained utilizing stage construction. One lane for each direction will be provided.

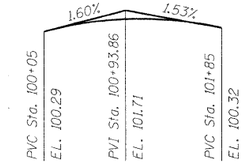
Salvage: None



ELEVATION



PLAN



PROFILE GRADE

LOADING HL-93

Allow 50 psf for future wearing surface

DESIGN SPECIFICATIONS

2007 AASHTO LRFD 4th Edition

DESIGN STRESSES

FIELD UNITS

f'c = 3,500 psi
fy = 60000 psi (Reinforcement)

PRECAST PRESTRESSED UNITS

f'c = 6000 psi
f'ci = 5000 psi
f's = 270,000 psi (1/2" ϕ low lax. strands)
f'si = 201,900 psi (1/2" ϕ low lax. strands)

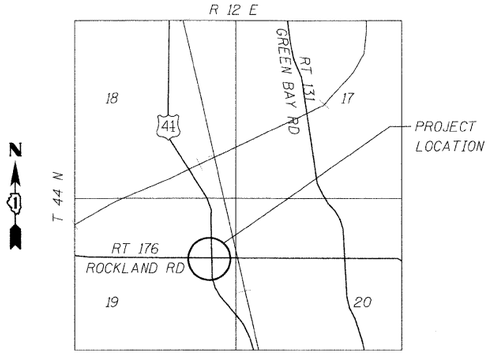
SEISMIC DATA

Seismic Performance Category (SPC) = A
Bedrock acceleration coefficient (A) = .04
Site Coefficient (S) = 1.2

STATION 101+00.00
REBUILT 20__ __ BY
STATE OF ILLINOIS
F.A.U. ROUTE 1238 SEC 125SB-1-R
LOADING HL-93
STRUCTURE NO. 049-0131

NAME PLATE

See Std. 515001



LOCATION SKETCH

DESIGNED -	SLV
CHECKED -	MJM
DRAWN -	SLV
CHECKED -	MJM

LONCO, INC.
CONSULTING ENGINEERS
1560 WALL ST, SUITE 222
NAPERVILLE, ILLINOIS 60563 PH: (630) 577-9100

APPROVED
FOR STRUCTURAL ADEQUACY ONLY

Ralph E Anderson (TJD)
ENGINEER OF BRIDGES AND STRUCTURES

STATE OF ILLINOIS
WILLIAM A. ESS
081-005150
LICENSED STRUCTURAL ENGINEER

Expires 11/30/10

GENERAL PLAN AND ELEVATION
IL RTE 176 OVER US 41
F.A.U. RT. 1238
SECTION 125SB-1-R
LAKE COUNTY
STA. 101+00.00
STRUCTURE NO. 049-0131

SHEET NO. S1 OF S18 SHEETS	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	1238	125SB-1-R	LAKE	38	14
	D-91-045-08		CONTRACT NO. 60D57		
	FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

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.

Reinforcement bars shall conform to the requirements of ASTM A706 Grade 60. See Special Provisions.

The Contractor is advised that the existing PPC Deck Beams are in a deteriorated condition with reduced load carrying capacity. It is the Contractor's responsibility to account for the condition of the beams when developing construction procedures for removal and replacement of the superstructure.

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

Reinforcement Bars designated (E) shall be epoxy coated.

Slip forming of the parapets is not allowed.

The minimum thickness of the bituminous overlay shall be 2" and varies as required to adjust for the profile grade and beam camber.

Repair of the substructure shall be completed prior to placement of the new deck beams.

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

The amount of Structure Excavation behind each abutment that is required to complete this project shall be determined by the Contractor. Backfill material shall consist of Porous Granular Embankment, in accordance with Section 207. Structure Excavation and Porous Granular Embankment will not be measured and paid for separately. Instead, the cost of Structure Excavation and Porous Granular Embankment shall be included with Removal of Existing Superstructures.

The Contractor shall be responsible for maintaining the stability and structural integrity of the existing structure, in accordance with the project specifications. In addition, behind the west abutment the Contractor shall excavate to a depth of 10' before beams are removed in each stage of removal. The use of temporary sheet pile will be needed. See GBSP 32, 63 and sheets S1 & S15 of S18 for additional information.

If the Contractor's procedures for existing beam removal or placement of new beams involves placement of heavy equipment on the existing or new deck beams or existing pump house roof, a detailed procedure shall be submitted to the Engineer for approval. The procedure shall include calculations, sealed by an Illinois Licensed Structural Engineer, verifying the structural adequacy of the beams or roof for the proposed loads. Cost included with Removal of Existing Superstructures.

Protective coat shall not be applied to surfaces to which Waterproofing Membrane System is applied

Steel beams below the fiberglass grating in the pump house shall be cleaned and painted, to be included in Cleaning and Painting Metal Structures. See GBSP 25 for more details. For estimating purposes, the area of steel to be cleaned and painted in the pump house room is approximately 85 sq. ft.

The walls inside the pump house station shall be cleaned and coated with a masonry waterproofing paint to minimize the moisture in the station, to be included in the cost of Masonry Waterproofing paint. See special provisions for details.

The exterior door of the pump station shall be replaced - including door, door jam & all hardware to provide a complete, functional & secure access to the pump house. The cost for all materials, labor & accessories required to remove and replace the door assembly shall be included in Furnish and Install Access Door. See special provisions for details.

INDEX OF SHEETS

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	APPR. SLAB	TOTAL
Approach Slab Removal	Sq. Yd.			105	105
Removal of Existing Superstructures	Each	1			1
Concrete Removal	Cu. Yd.		5		5
Concrete Structures	Cu. Yd.			29	29
Concrete Superstructure	Cu. Yd.	37	5	129	171
Protective Coat	Sq. Yd.	140	10	320	470
P.P.C. Deck Beams (17" Depth)	Sq. Ft.	4433			4433
Reinforcement Bars, Epoxy Coated	Pound	3820	880	34660	39360
Bar Splicers	Each		16	444	460
Bicycle Railing	Foot	85			85
Parapet Railing	Foot	85		46	131
Temporary Sheet Piling	Sq. Ft.	550			550
Name Plates	Each	1			1
Portland Cement Mortar Fairing Course	Foot	1391			1391
Epoxy Crack Injection	Foot		374		374
Structural Repair of Concrete (Depth Equal to or Less Than 5 inches)	Sq. Ft.	80	235		315
Furnish & Install Access Door	Each	1			1
Waterproofing Membrane System (Special)	Sq. Yd.	545			545
Cleaning & Painting Metal Structures	L. Sum	1			1
Asbestos Bearing Pad Removal	Each	72			72
Masonry Waterproofing Paint	Sq. Yd.		138		138

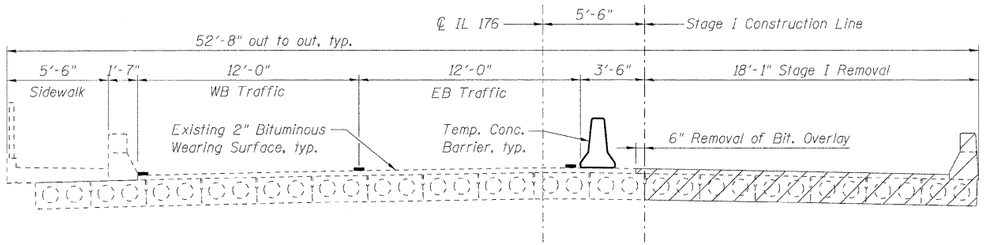
DESIGNED -	SLV
CHECKED -	MJM
DRAWN -	SLV
CHECKED -	MJM

LONCO, INC.
CONSULTING ENGINEERS
1560 WALL ST, SUITE 222
NAPERVILLE, ILLINOIS 60563 PH: (630) 577-9100

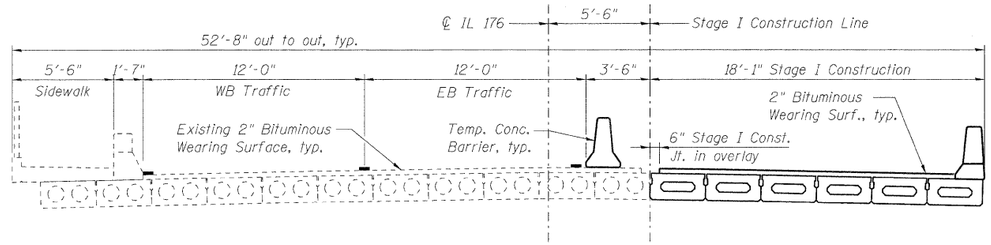
GENERAL DATA
STRUCTURE NO. 049-0131

SHEET NO. S2 OF S18 SHEETS	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	1238	125SB-1-R	LAKE	38	15
	D-91-045-08		CONTRACT NO. 60D57		
	FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		

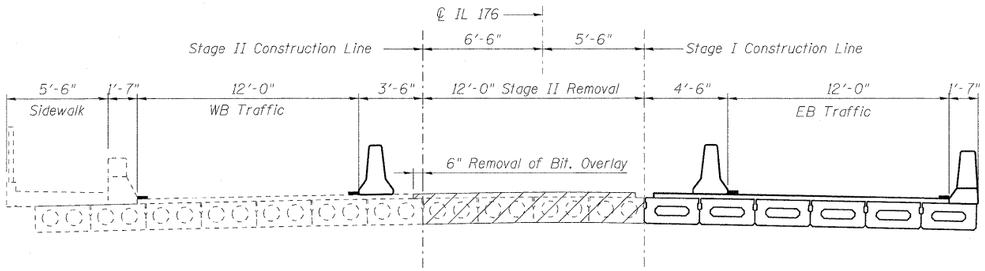
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



STAGE I REMOVAL



STAGE I CONSTRUCTION



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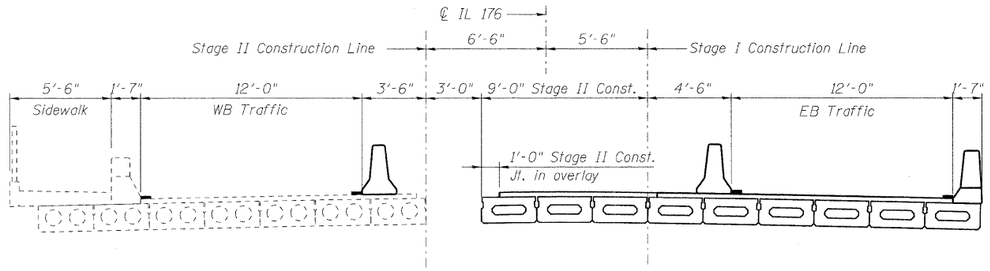
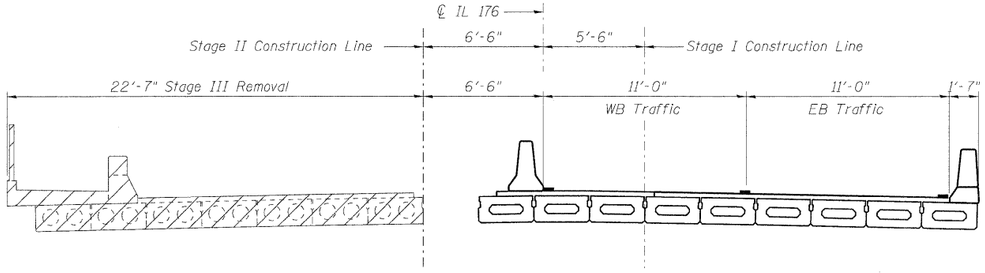


STAGE II CONSTRUCTION



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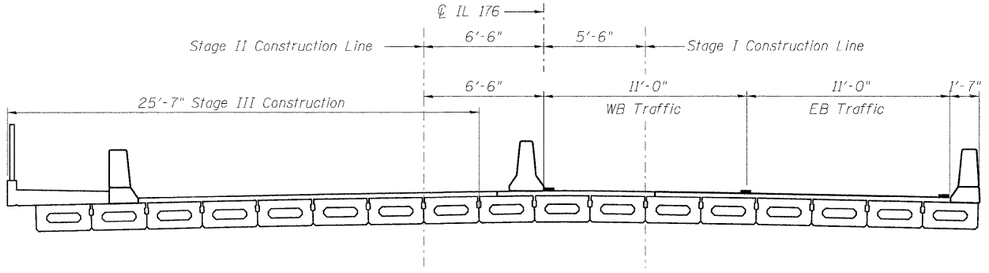
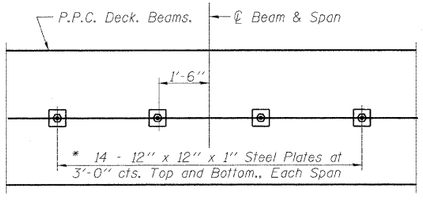
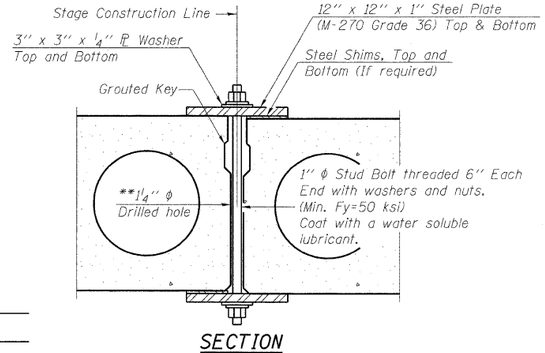


STAGE III CONSTRUCTION

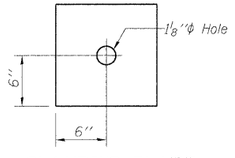


PLAN

*Space plates to miss Temporary Bridge Rail Posts.



SECTION



CLAMPING PLATE

SHEAR KEY CLAMPING DETAILS AT STAGE CONST. JT.

Cost included with Precast Prestressed Concrete Deck Beams.
See Stage Construction Details for traffic lanes.

** As an alternate to the drilled holes, the Contractor may request the Fabricator to cast 2" diameter semi-circular recesses in the sides of each beam adjacent to the stage construction line. These recesses should align to form a hole at the appropriate locations for the clamping device bolts. If the Contractor elects to use this alternate, the details shall be identified on the shop drawings.

NOTES

All Cross Sections looking East.
Hatched area indicates Removal of Existing Superstructures.
Cost of removing exisitng bituminous wearing surface, parapet, and railing are included with Removal of Existing Superstructures.
For quantity of Temporary Concrete Barrier see Roadway Plans.
For Temporary Concrete Barrier details see Sheet S4 of S18.
Shear Key Clamping bolts and plates shall be removed once all beams are in place, before placement of Waterproofing Membrane.
Fill all holes from shear key clamps with non-shrink grout.

DESIGNED -	SLV
CHECKED -	MJM
DRAWN -	SLV
CHECKED -	MJM

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NAPERVILLE, ILLINOIS 60563 PH: (630) 577-9100

STAGE CONSTRUCTION DETAILS
STRUCTURE NO. 049-0131

SHEET NO. S3 OF S18 SHEETS	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	1238	125SB-1-R	LAKE	38	16
	D-91-045-08		CONTRACT NO. 60D57		
	FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		

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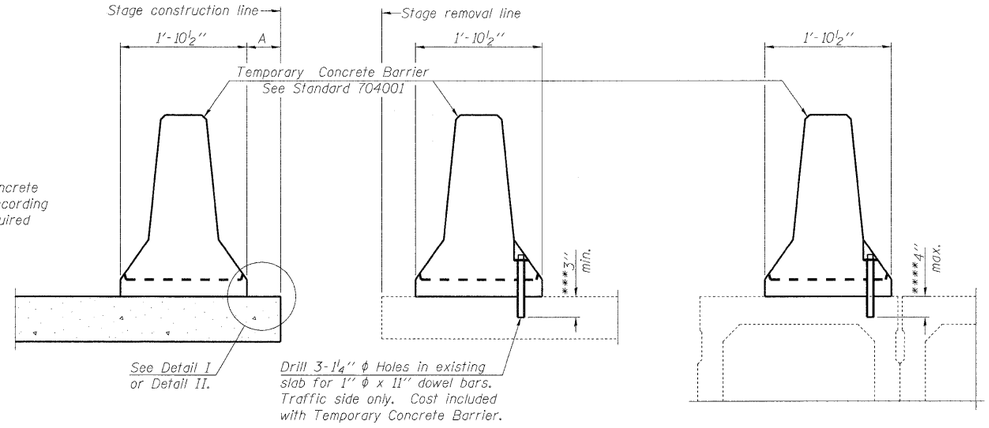
When "A" is 3'-6" or less, the temporary concrete barrier shall be anchored to the new slab according to Detail I or Detail II. No anchorage is required when "A" is greater than 3'-6".



NOTES

Detail I - With Bar Splicer or Couplers:
Connect one (1) 1"x7"x10" steel ℄ 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"x7"x 10" steel ℄ 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.

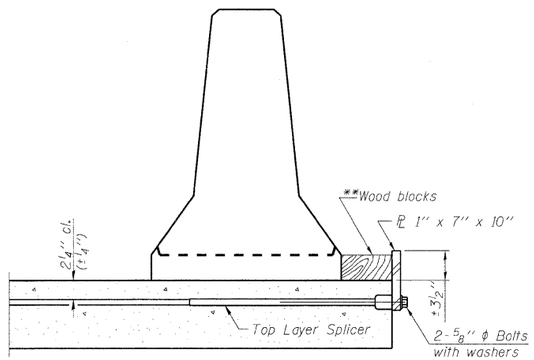
Cost of anchorage is included with Temporary Concrete Barrier.

The 1" x 7" x 10" 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.

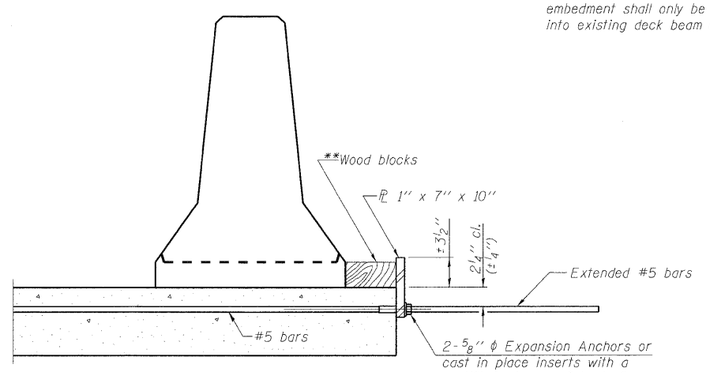
SECTIONS THRU SLAB OR DECK BEAM

*** 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.

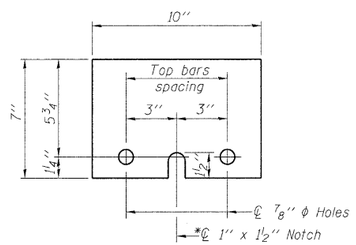


DETAIL I



DETAIL II

**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.



STEEL RETAINER ℄ 1" x 7" x 10"

* Required only with Detail II

TEMPORARY CONCRETE BARRIER
FOR STAGE CONSTRUCTION
STRUCTURE NO. 049-0131

DESIGNED -	SLV	
CHECKED -	MJM	
DRAWN -	SLV	
CHECKED -	MJM	

R-27 10-1-08

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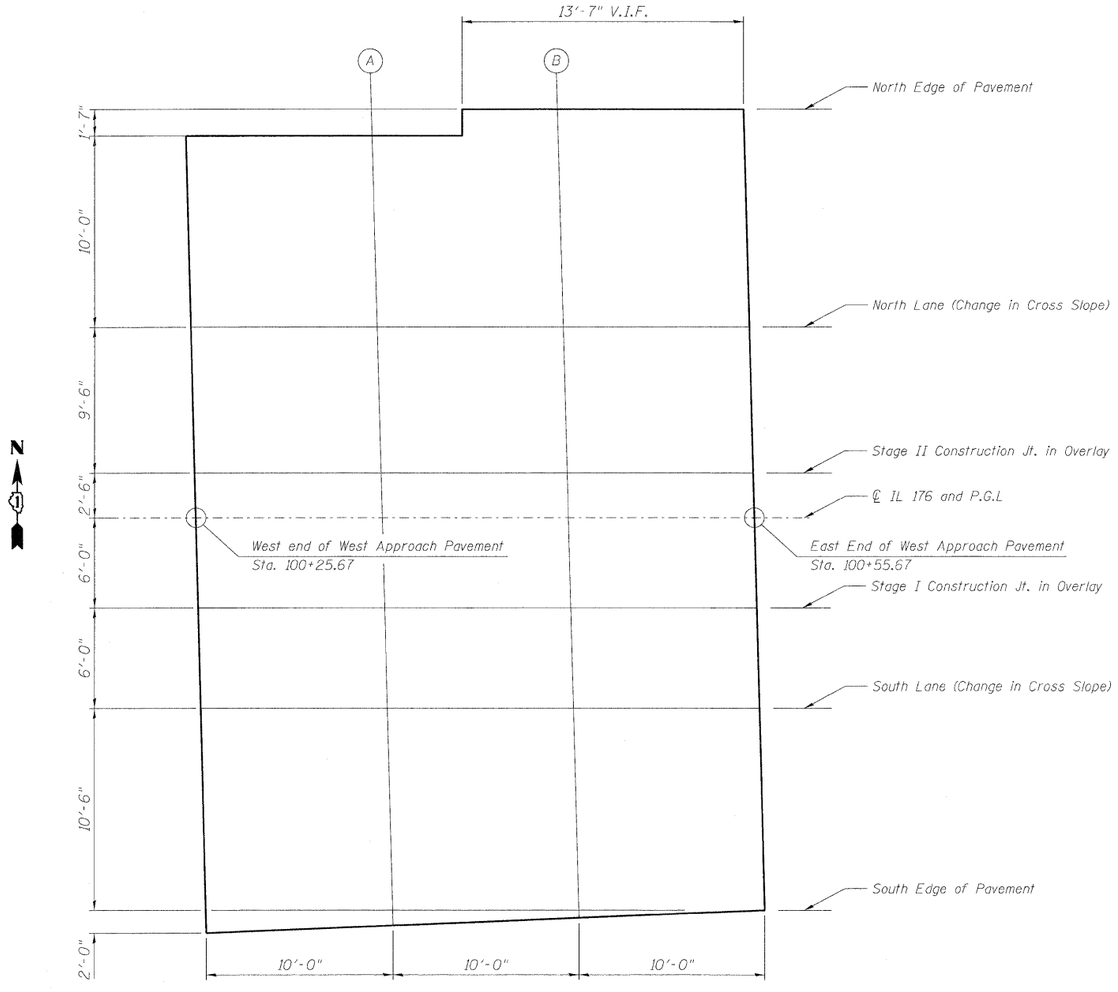
1560 WALL ST. SUITE 222
NAPERVILLE, ILLINOIS 60563 PH: (630) 577-9100

SHEET NO. S4 OF S18 SHEETS	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	1238	125SB-1-R	LAKE	38	17
	D-91-045-08		CONTRACT NO. 60D57		
	FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



PLAN

North Edge of Pavement

Location	Station	Offset	Theoretical Grade Elevations
W. End W. Appr Pvmt	100+25.03	-22.000'	100.16
A	100+35.03	-22.000'	100.25
B	100+45.03	-23.583'	100.30
E. End W. Appr Pvmt	100+55.03	-23.583'	100.38

Stage I Construction Joint in Overlay

Location	Station	Offset	Theoretical Grade Elevations
W. End W. Appr Pvmt	100+25.83	6.000'	100.46
A	100+35.83	6.000'	100.56
B	100+45.83	6.000'	100.64
E. End W. Appr Pvmt	100+55.83	6.000'	100.71

North Lane (Change in Cross Slope)

Location	Station	Offset	Theoretical Grade Elevations
W. End W. Appr Pvmt	100+25.35	-12.000'	100.37
A	100+35.35	-12.000'	100.46
B	100+45.35	-12.000'	100.55
E. End W. Appr Pvmt	100+55.35	-12.000'	100.62

South Lane (Change in Cross Slope)

Location	Station	Offset	Theoretical Grade Elevations
W. End W. Appr Pvmt	100+25.99	12.000'	100.37
A	100+35.99	12.000'	100.46
B	100+45.99	12.000'	100.55
E. End W. Appr Pvmt	100+55.99	12.000'	100.62

Stage II Construction Joint in Overlay

Location	Station	Offset	Theoretical Grade Elevations
W. End W. Appr Pvmt	100+25.60	-2.500'	100.51
A	100+35.60	-2.500'	100.61
B	100+45.60	-2.500'	100.69
E. End W. Appr Pvmt	100+55.60	-2.500'	100.77

South Edge of Pavement

Location	Station	Offset	Theoretical Grade Elevations
W. End W. Appr Pvmt	100+26.28	24.500	100.11
A	100+36.28	23.833	100.21
B	100+46.28	23.167	100.31
E. End W. Appr Pvmt	100+56.28	22.500	100.40

℄ IL 176 and P.G.L.

Location	Station	Offset	Theoretical Grade Elevations
W. End W. Appr Pvmt	100+25.67	0.000'	100.55
A	100+35.67	0.000'	100.65
B	100+45.67	0.000'	100.73
E. End W. Appr Pvmt	100+55.67	0.000'	100.81

TOP OF WEST APPROACH SLAB ELEVATIONS STRUCTURE NO. 049-0131

DESIGNED -	SLV
CHECKED -	MJM
DRAWN -	SLV
CHECKED -	MJM

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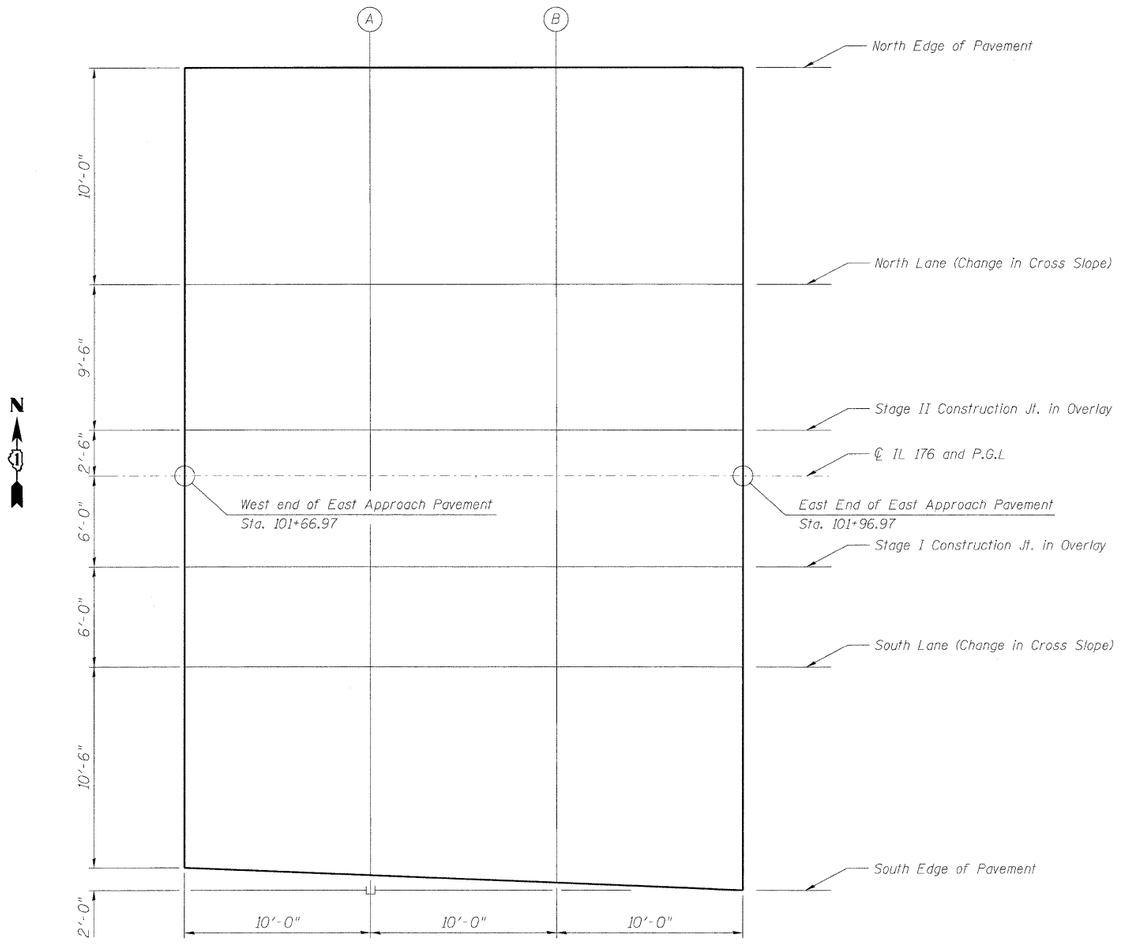
1560 WALL ST. SUITE 222
NAPERVILLE, ILLINOIS 60563 PH: (630) 577-9100

SHEET NO. S5 OF S18 SHEETS	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	1238	125SB-1-R	LAKE	38	18
		D-91-045-08	CONTRACT NO. 60D57		
	FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



PLAN

North Edge of Pavement

Location	Station	Offset	Theoretical Grade Elevations
W. End E. Appr Pvmt	101+66.97	-22.000'	100.18
A	101+76.97	-22.000'	100.05
B	101+86.97	-22.000'	99.90
E. End E. Appr Pvmt	101+96.97	-22.000'	99.74

Stage I Construction Joint in Overlay

Location	Station	Offset	Theoretical Grade Elevations
W. End E. Appr Pvmt	101+66.97	6.000'	100.48
A	101+76.97	6.000'	100.35
B	101+86.97	6.000'	100.20
E. End E. Appr Pvmt	101+96.97	6.000'	100.04

North Lane (Change in Cross Slope)

Location	Station	Offset	Theoretical Grade Elevations
W. End E. Appr Pvmt	101+66.97	-12.000'	100.39
A	101+76.97	-12.000'	100.25
B	101+86.97	-12.000'	100.10
E. End E. Appr Pvmt	101+96.97	-12.000'	99.95

South Lane (Change in Cross Slope)

Location	Station	Offset	Theoretical Grade Elevations
W. End E. Appr Pvmt	101+66.97	12.000'	100.39
A	101+76.97	12.000'	100.25
B	101+86.97	12.000'	100.10
E. End E. Appr Pvmt	101+96.97	12.000'	99.95

Stage II Construction Joint in Overlay

Location	Station	Offset	Theoretical Grade Elevations
W. End E. Appr Pvmt	101+66.97	-2.500'	100.54
A	101+76.97	-2.500'	100.40
B	101+86.97	-2.500'	100.25
E. End E. Appr Pvmt	101+96.97	-2.500'	100.10

South Edge of Pavement

Location	Station	Offset	Theoretical Grade Elevations
W. End E. Appr Pvmt	101+66.97	22.500'	100.17
A	101+76.97	23.167'	100.02
B	101+86.97	23.833'	99.86
E. End E. Appr Pvmt	101+96.97	24.500'	99.69

℄ IL 176 and P.G.L.

Location	Station	Offset	Theoretical Grade Elevations
W. End E. Appr Pvmt	101+66.97	0.000'	100.58
A	101+76.97	0.000'	100.44
B	101+86.97	0.000'	100.29
E. End E. Appr Pvmt	101+96.97	0.000'	100.14

TOP OF EAST APPROACH SLAB ELEVATIONS STRUCTURE NO. 049-0131

DESIGNED -	SLV
CHECKED -	MJM
DRAWN -	SLV
CHECKED -	MJM

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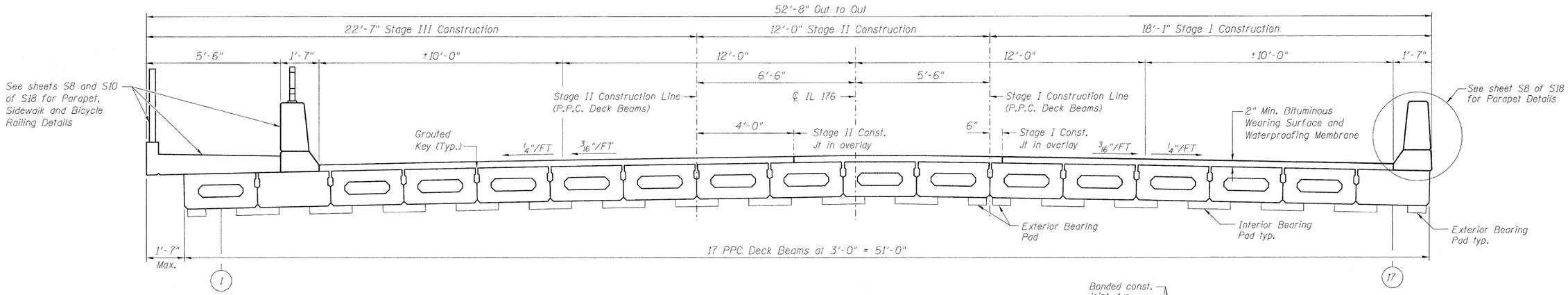
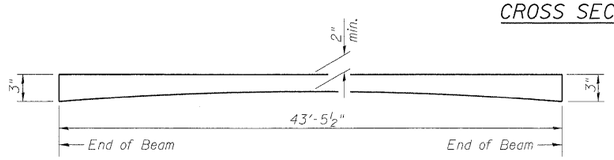
NAPERVILLE, ILLINOIS 60563 PH: (630) 577-9100

SHEET NO. S6 OF S18 SHEETS	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	1238	125SB-1-R	LAKE	38	19
		D-91-045-08	CONTRACT NO. 60D57		
	FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

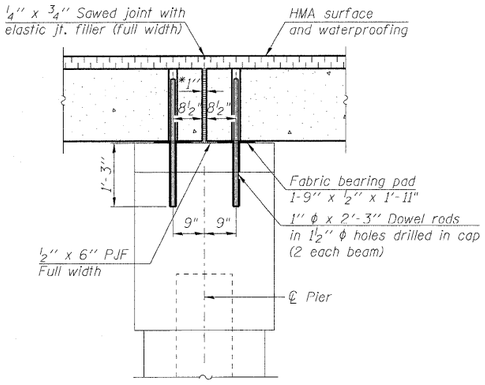


CROSS SECTION



BITUMINOUS WEARING SURFACE PROFILE

Typical for each span.



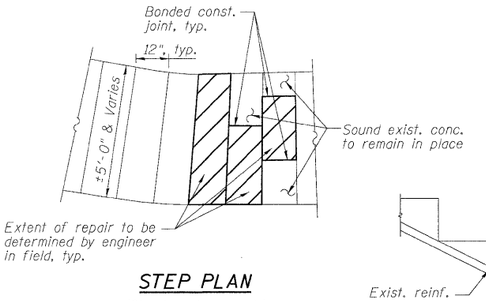
SECTION THRU FIXED PIER

*1" Jt. shall be filled with non-shrink grout. 1" dimension may vary to accommodate tolerance in beam lengths.

Notes:

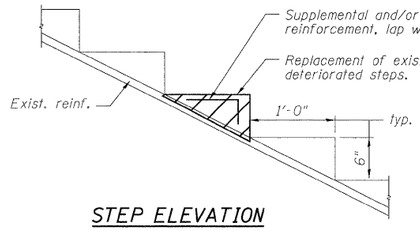
After beams have been erected, holes shall be drilled into substructure and anchor dowels placed. Dowel holes shall be filled with non-shrink grout to top of beam and allowed to cure min. 24 hrs. prior to grouting the shear keys.

All horizontal dimensions are at right angles to beam ends. Hatched area to be poured after beams are in place. See sheet S14 of S18 for bearing pad details.



STEP PLAN

(Showing step repair)

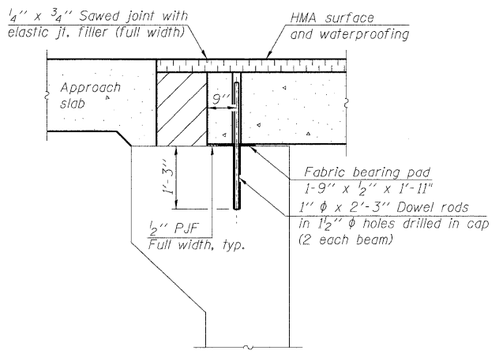


STEP ELEVATION

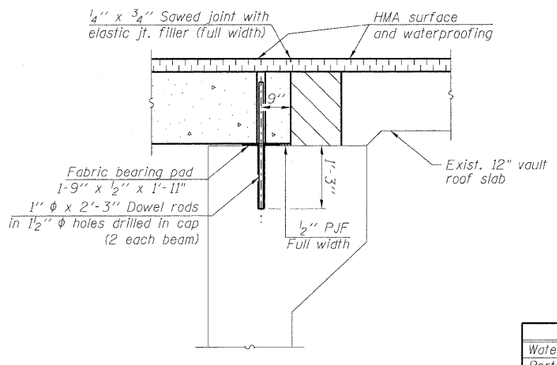
Note:

East side stairs have steps made out of wood. The wood is to be removed and replaced with new concrete steps. Cost for repair to be included in Structural Repair of Concrete (Depth less than or equal to 5").

Required Supplemental reinforcement as determined by the Engineer, shall not be paid for seperately. The cost shall be included in the cost of Structural Repair of Concrete.



W. ABUT.



E. ABUT.

SECTION THRU FIXED ABUTMENT

Notes:

After beams have been erected, holes shall be drilled into substructure and anchor dowels placed. Dowel holes shall be filled with non-shrink grout to top of beam and allowed to cure min. 24 hrs. prior to grouting the shear keys.

All horizontal dimensions are at right angles to beam ends. Hatched area to be poured after beams are in place. See sheet S14 of S18 for bearing pad details.

BILL OF MATERIAL

Item	Unit	Quantity
Waterproofing Membrane System (Special)*	Sq. Yd.	545
Portland Cement Mortar Fairing Course	Foot	1391
Structural Repair of Concrete (Depth less than equal to 5")	Sq. Ft.	80

*Includes surface of deck beam superstructure and vault roof slab.

DESIGNED -	SLV
CHECKED -	MJM
DRAWN -	SLV
CHECKED -	MJM

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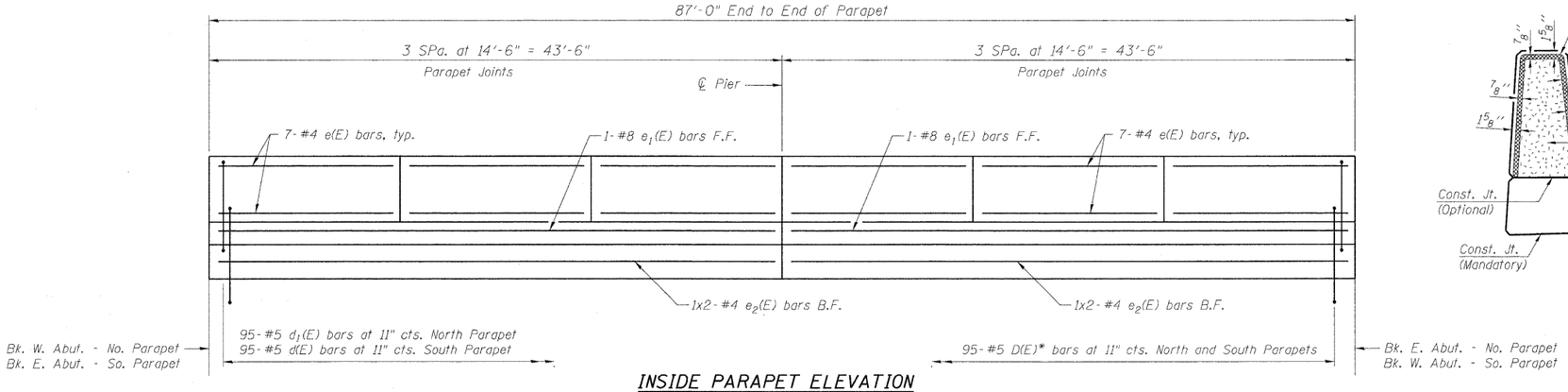
1560 WALL ST. SUITE 222
NAPERVILLE, ILLINOIS 60563 PH: (630) 577-9100

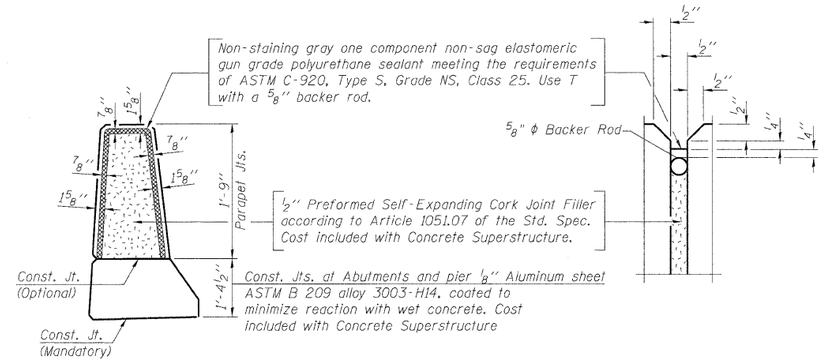
SUPERSTRUCTURE DETAILS
STRUCTURE NO. 049-0131

SHEET NO. S7 OF S18 SHEETS	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	1238	125SB-1-R	LAKE	38	20
	D-91-045-08		CONTRACT NO. 60D57		
	FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



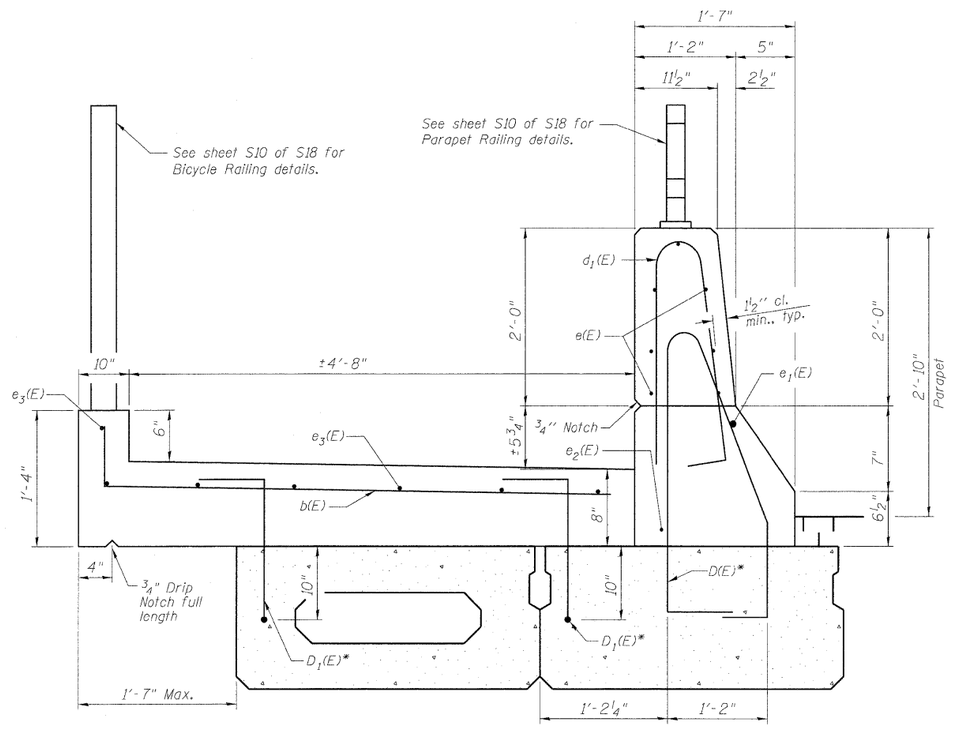
INSIDE PARAPET ELEVATION



PARAPET JOINT DETAILS

NOTES

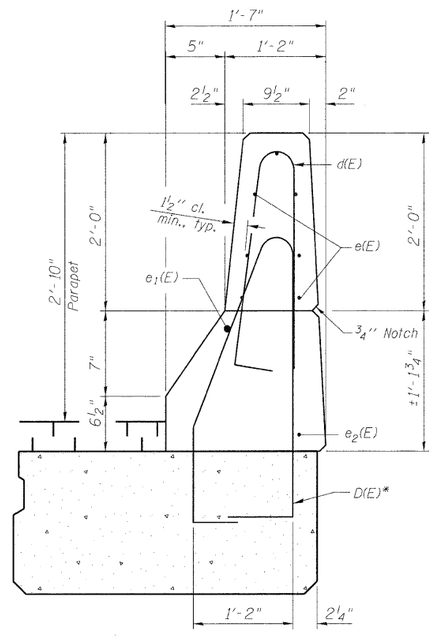
For remainder of Superstructure Details see Sheet S7 of S17.
Bars indicated thus 1x2-#4, etc. indicates 1 line of bars with 2 lengths per line.



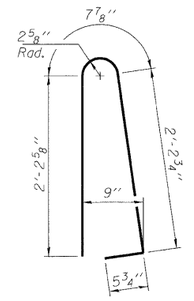
SECTION THRU SIDEWALK & PARAPET (NORTH)

MIN. BAR LAP

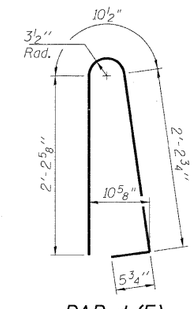
#4 1'-8"



SECTION THRU PARAPET (SOUTH)



BAR d(E)



BAR d1(E)

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
b(E)	88	#5	5'-7"	
d(E)	95	#5	5'-7"	
d1(E)	110	#5	5'-10"	
e(E)	84	#4	14'-3"	
e1(E)	4	#8	43'-2"	
e2(E)	8	#4	22'-5"	
e3(E)	21	#5	30'-3"	
e4(F)	8	#4	13'-0"	
e5(E)	1	#8	13'-0"	
Concrete Superstructure			Cu. Yd.	37
Reinforcement Bars, Epoxy Coated			Pound	3820

DESIGNED -	SLV
CHECKED -	MJM
DRAWN -	SLV
CHECKED -	MJM

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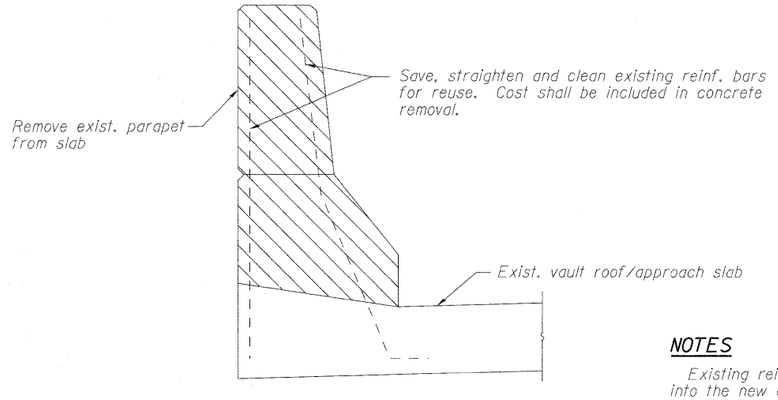
* D(E) and D1(E) bars to be cast-in-place into 17" PPC deck beams. Cost to be included with 17" PPC deck beams. See sheets S13 and S14 of S18 for all PPC deck beam reinforcement bars.

(Sheet 1 of 2)

PARAPET DETAILS
STRUCTURE NO. 049-0131

SHEET NO. S8 OF S18 SHEETS	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	1238	125SB-1-R	LAKE	38	21
	D-91-045-08		CONTRACT NO. 60D57		
	FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



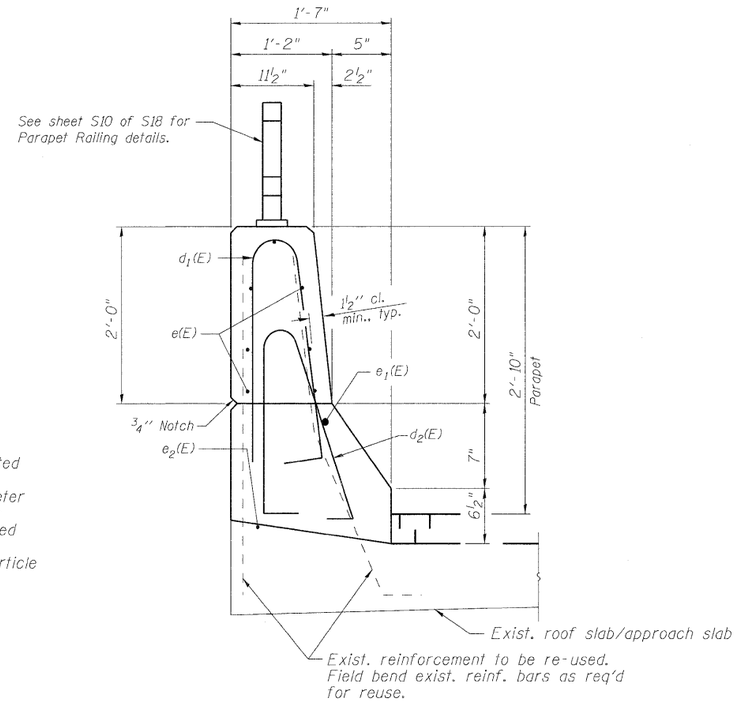
EXISTING NORTH PARAPET EAST OF BRIDGE ON EXISTING VAULT ROOF SLAB

NOTES

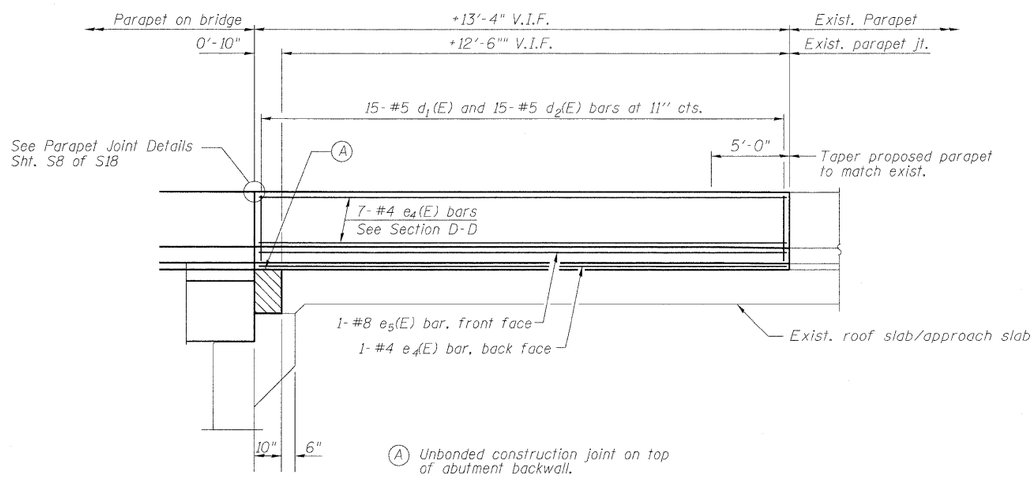
Existing reinforcement shall be cleaned, straightened (if required) and incorporated into the new construction. Cost included with Concrete Removal.

Existing reinforcement bars which have lost 25% or more of their original diameter shall be supplemented by new epoxy coated bars of the same diameter. New bars shall be drilled and epoxy grouted in place adjacent to the original bars, as directed by the Engineer.

Drilling and epoxy grouting of reinforcement bars shall be in accordance with Article 584 of the Standard Specifications.



PROPOSED NORTH PARAPET EAST OF BRIDGE ON EXISTING VAULT ROOF SLAB



ELEVATION PROPOSED NORTH PARAPET EAST OF BRIDGE

DESIGNED -	SLV
CHECKED -	MJM
DRAWN -	SLV
CHECKED -	MJM

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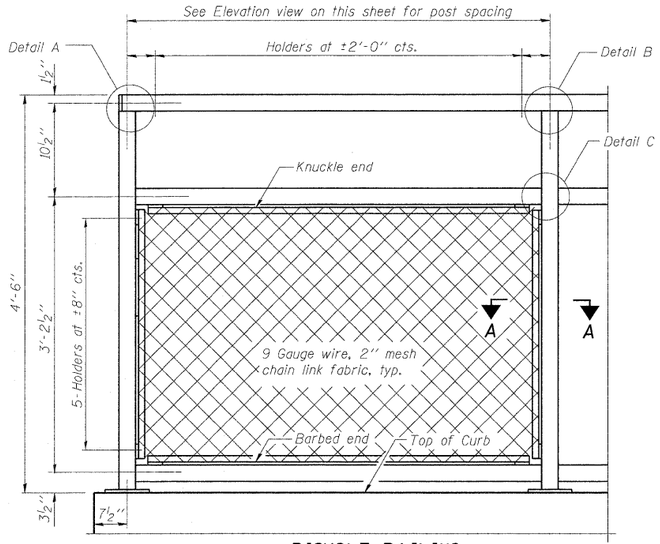
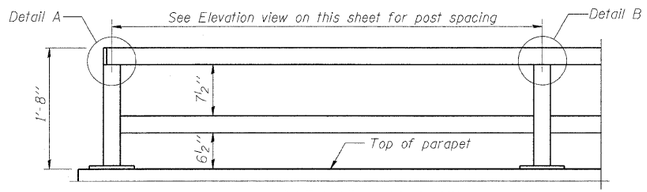
(Sheet 2 of 2)
PARAPET DETAILS
STRUCTURE NO. 049-0131

SHEET NO. S9 OF S18 SHEETS	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	1238	125SB-1-R	LAKE	38	22
	D-91-045-08		CONTRACT NO. 60D57		
	FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		

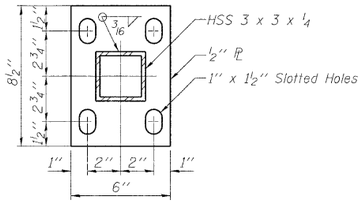
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



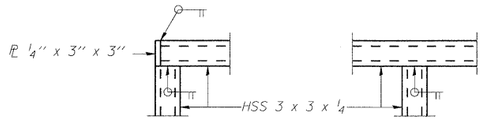
BICYCLE RAILING



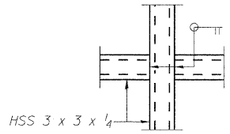
PARAPET RAILING ELEVATION
(Inside Face of Two Element Rail)



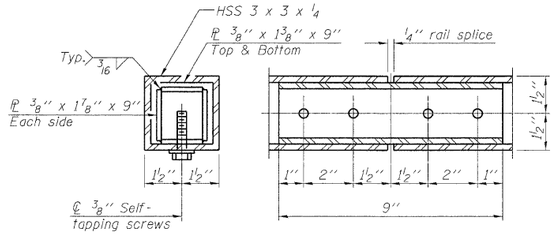
BASE ℄



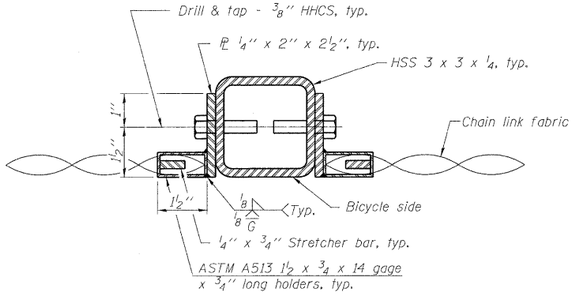
DETAIL A DETAIL B



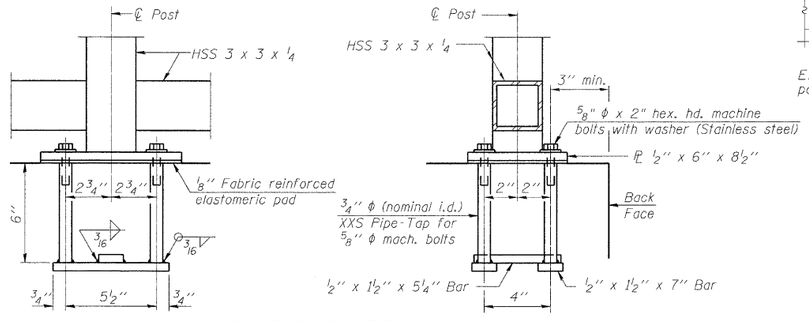
DETAIL C



RAIL SPLICE



SECTION A-A

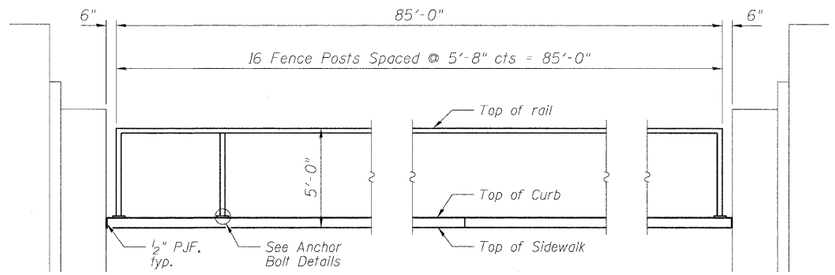


ANCHOR BOLT DETAILS

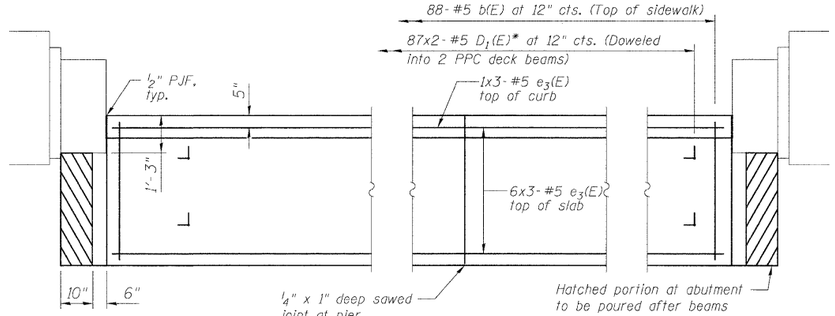
In lieu of the cast-in-place anchor device shown, the Contractor has the option of drilling and setting ⅝" ϕ anchor rods according to Article 509.06 of the Standard Specifications. Embedment shall be according to the manufacturer's specifications.

NOTES

All steel rail elements shall be galvanized according to Article 509.05 of the Standard Specifications.
See sheet S8 of S18 for section thru sidewalk and bill of material for reinforcement bars.

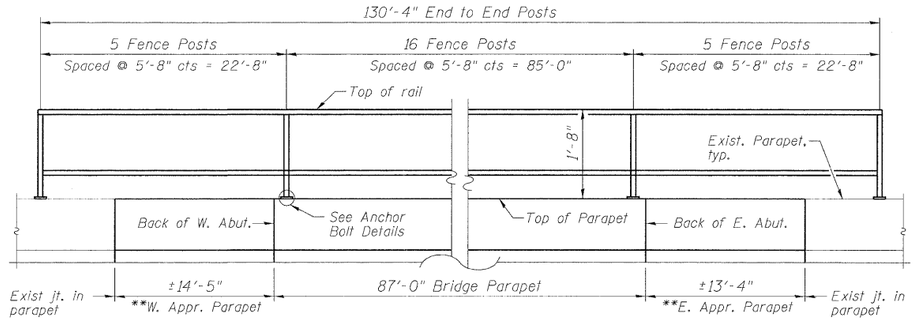


BICYCLE RAILING ELEVATION



SIDEWALK PLAN

* See sht S13 of S18 for $D_1(E)$ dowel details.



PARAPET RAILING ELEVATION

**See sheet S9 & S12 of S18 for east and west approach parapet details respectively.

BILL OF MATERIAL

Item	Unit	Quantity
Bicycle Railing	Foot	85
Parapet Railing	Foot	131

BICYCLE RAILING STRUCTURE NO. 049-0131

SHEET NO. S10 OF S18 SHEETS	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	1238	125SB-1-R	LAKE	38	23
	D-91-045-08		CONTRACT NO. 60D57		
	FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		

DESIGNED -	SLV
CHECKED -	MJM
DRAWN -	SLV
CHECKED -	MJM

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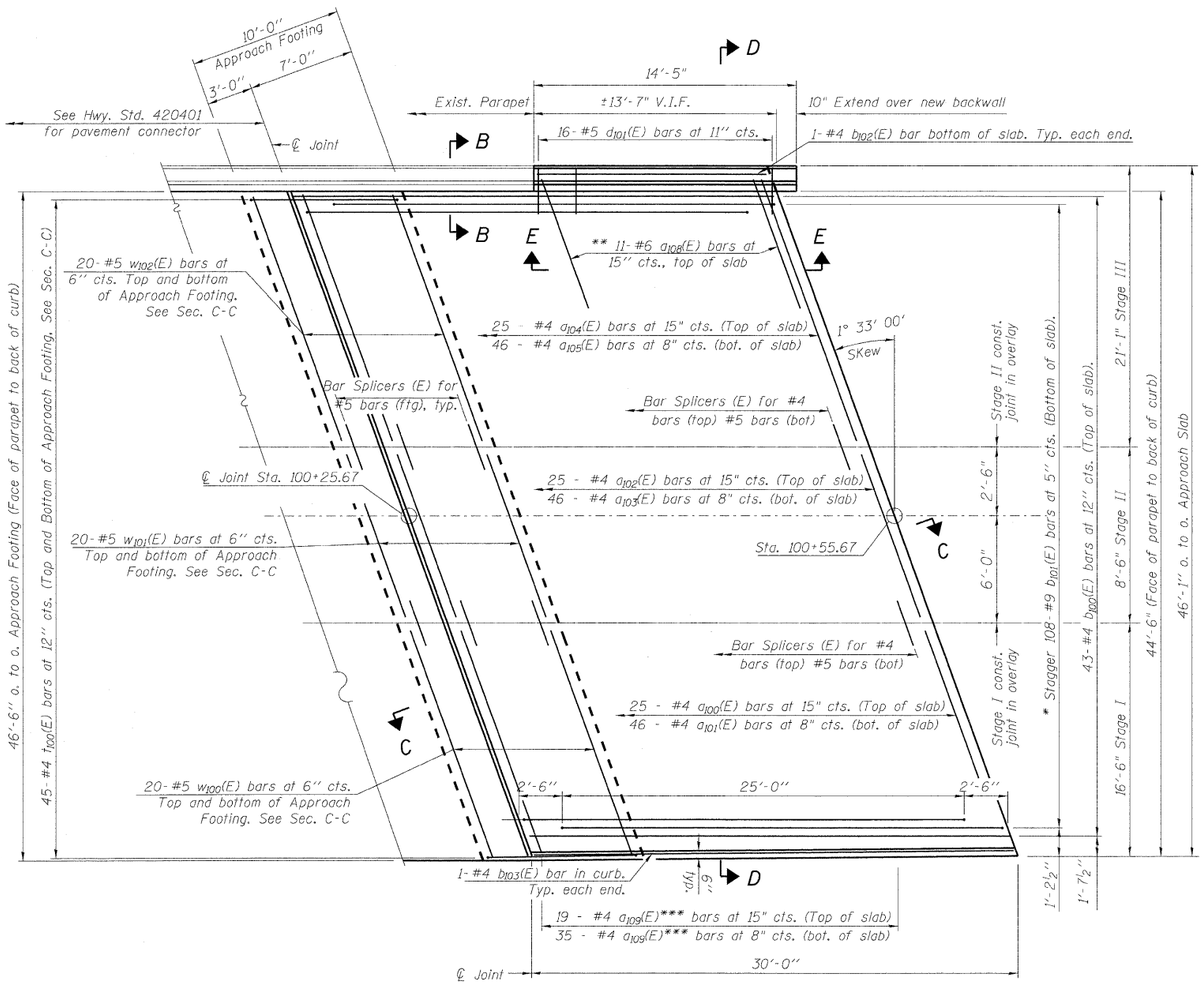
NAPERVILLE, ILLINOIS 60563 PH: (630) 577-9100

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

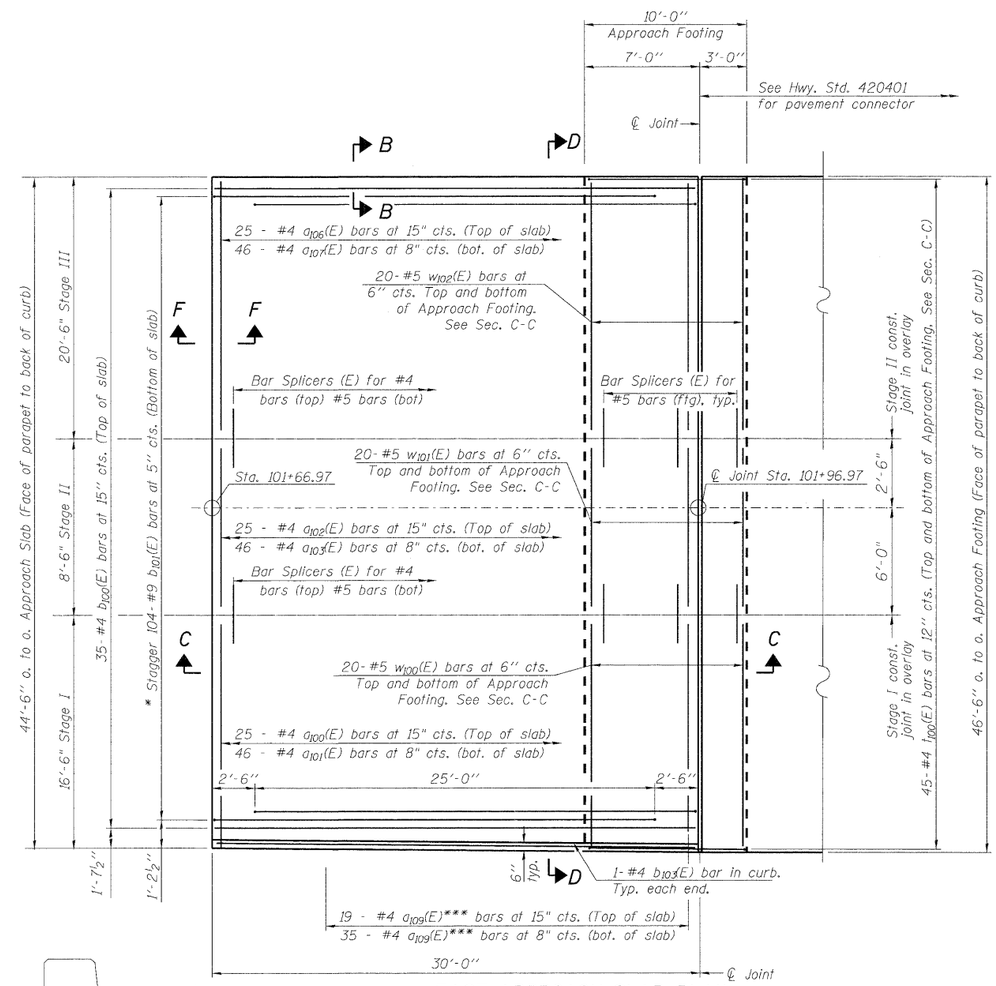
NOTES

See sheet S12 of S18 for Sections C-C, D-D, F-F, View E-E and Bill of Material.
No parapet to be constructed on east approach slab.
All a(E) and w(E) bar spacings measured parallel to ℄ Rdwy.



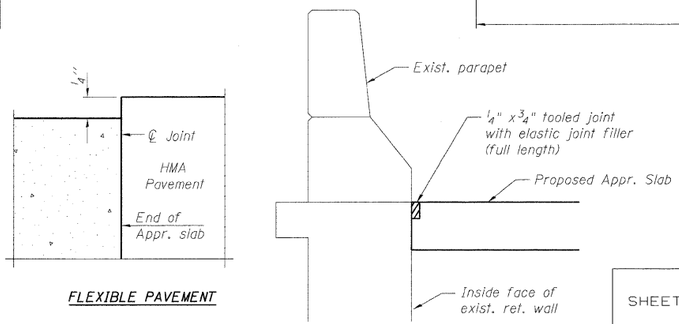
WEST APPROACH SLAB PLAN

* Tilt #9 b_{101}(E) bars as required to maintain clearance.
** Alternate with a_{104}(E) bars, typ. each parapet.
*** Lap a_{109}(E) with a_{100}(E) & a_{101}(E) to fill in voids due to widening of approach slab from 44.5' to 46.5'.



EAST APPROACH SLAB PLAN

* Tilt #9 b_{101}(E) bars as required to maintain clearance.
*** Lap a_{109}(E) with a_{100}(E) & a_{101}(E) to fill in voids due to widening of approach slab from 44.5' to 46.5'.



SECTION B-B

FLEXIBLE PAVEMENT

DETAIL A

MIN BAR LAP

#4 Bar = 1'-8"

DESIGNED -	SLV
CHECKED -	MJM
DRAWN -	SLV
CHECKED -	MJM

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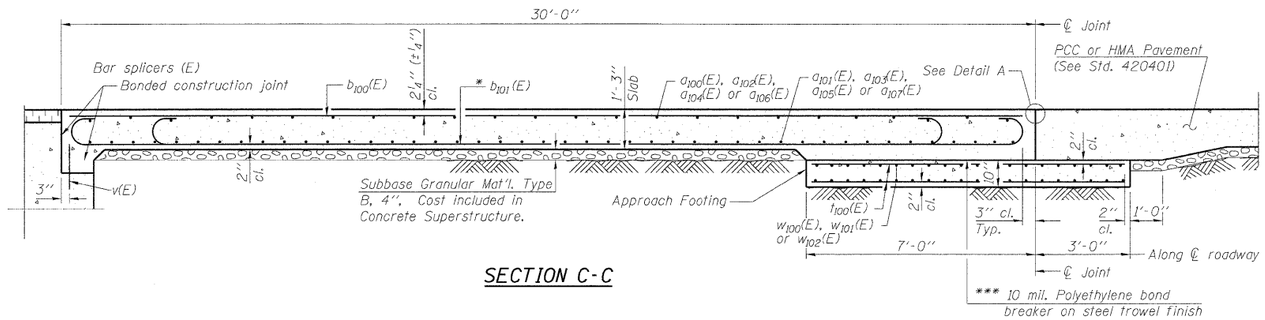
(Sheet 1 of 2)

BRIDGE APPROACH SLAB DETAILS
STRUCTURE NO. 049-0131

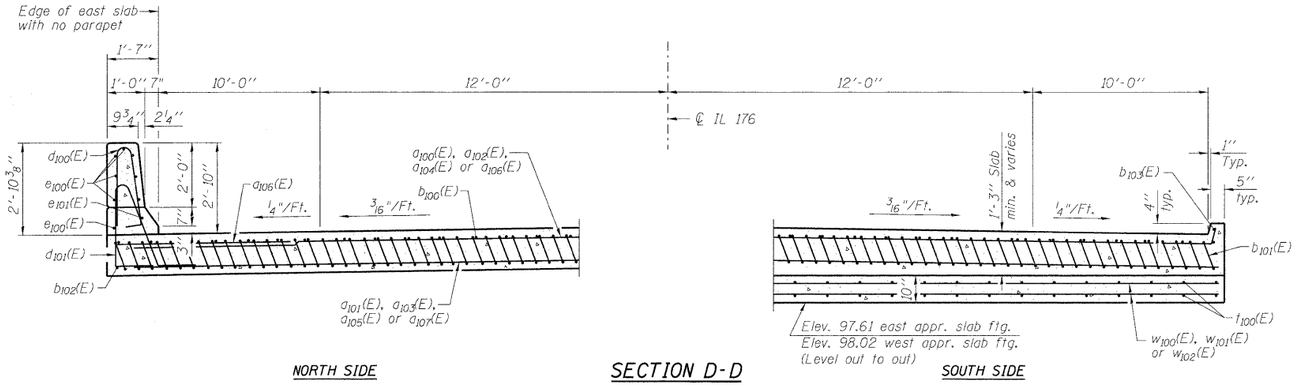
SHEET NO. S11 OF S18 SHEETS	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	1238	125SB-1-R	LAKE	38	24
	D-91-045-08		CONTRACT NO. 60D57		
	FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Notes:
See sheet S11 of S18 for Detail A and View B-B.
Approach slab and parapet concrete shall be paid for as Concrete Superstructure.
Approach footing concrete shall be paid for as Concrete Structures.
Reinforcement shall be paid for as Reinforcement Bars, Epoxy Coated.
For v(E) bar details, see sheet S15 of S18.
The approach footing maximum applied service bearing pressure (Qmax) = 2.0 ksf.
For bar splicer details, see sheet S18 of S18.
Cost of excavation for approach footing included with Concrete Structures.



SECTION C-C



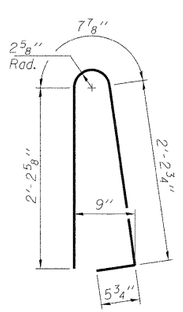
NORTH SIDE
West slab shown.
East slab similar

SECTION D-D
(See Plan for dimensions not shown)

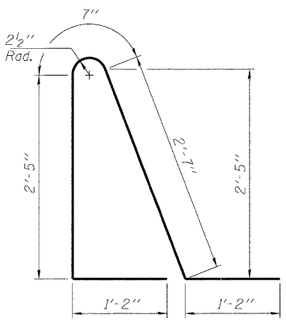
SOUTH SIDE

* Tilt #9 b_1(E) bars as required to maintain clearance.

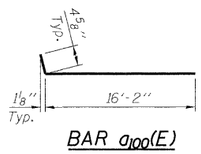
*** Cost included with Concrete Superstructure.



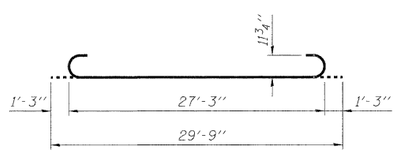
BAR d_{100}(E)



BAR d_{101}(E)



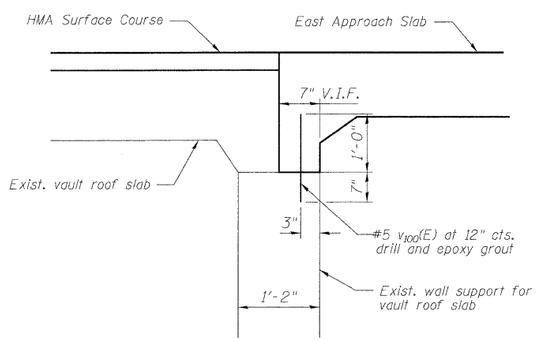
BAR a_{100}(E)



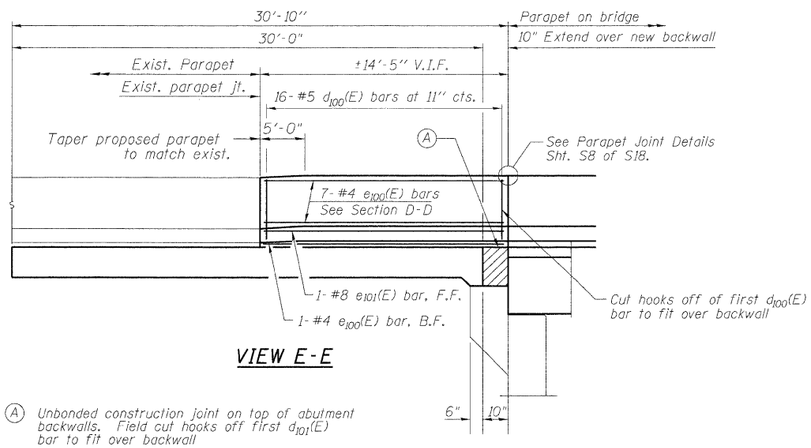
BAR b_{101}(E)

TWO APPROACHES
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a_{100}(E)	50	#4	16'-7"	
a_{101}(E)	92	#5	16'-2"	
a_{102}(E)	50	#4	8'-0"	
a_{103}(E)	92	#5	8'-0"	
a_{104}(E)	25	#4	20'-7"	
a_{105}(E)	46	#5	20'-7"	
a_{106}(E)	25	#4	20'-0"	
a_{107}(E)	46	#5	20'-0"	
a_{108}(E)	11	#6	6'-0"	
a_{109}(E)	108	#4	4'-0"	
b_{100}(E)	78	#4	29'-8"	
b_{101}(E)	212	#9	29'-9"	
b_{102}(E)	1	#4	14'-1"	
b_{103}(E)	2	#4	29'-6"	
d_{100}(E)	16	#5	5'-7"	
d_{101}(E)	16	#5	7'-11"	
e_{100}(E)	8	#4	30'-4"	
e_{101}(E)	1	#8	30'-4"	
t_{100}(E)	180	#4	9'-6"	
v_{100}(E)	45	#5	1'-7"	
w_{100}(E)	80	#5	17'-8"	
w_{101}(E)	80	#5	8'-0"	
w_{102}(E)	80	#5	19'-8"	
Concrete Superstructure		Cu. Yd.	129	
Concrete Structures		Cu. Yd.	29	
Reinforcement Bars, Epoxy Coated		Pound	34660	
Bar Splicers		Each	444	



SECTION F-F



VIEW E-E

(A) Unbonded construction joint on top of abutment backwalls. Field cut hooks off first d_{101}(E) bar to fit over backwall

DESIGNED -	SLV
CHECKED -	MJM
DRAWN -	SLV
CHECKED -	MJM

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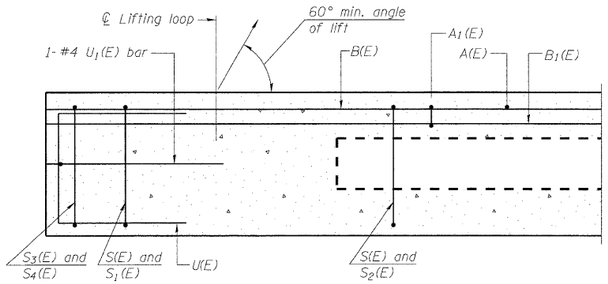
NAPERVILLE, ILLINOIS 60563 PH: (630) 577-9100

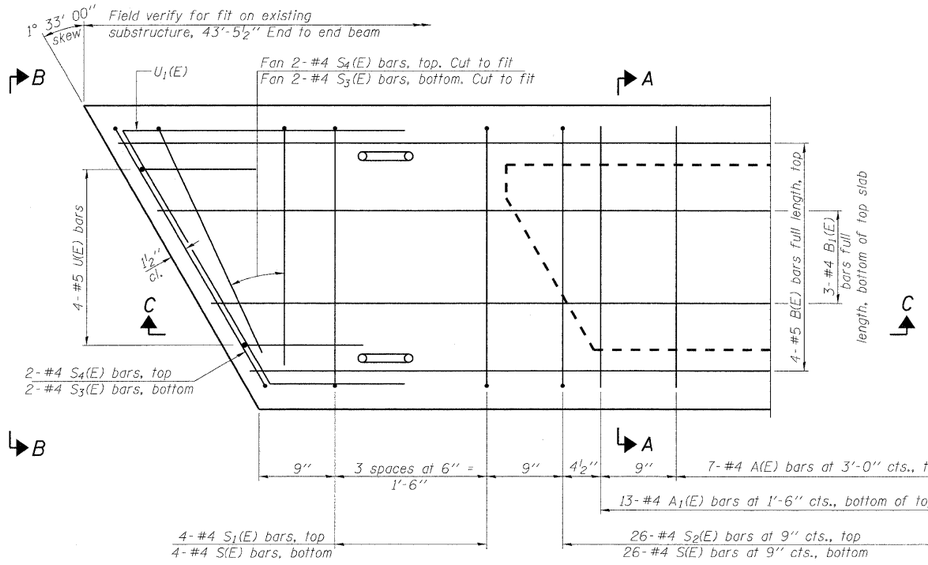
(Sheet 2 of 2)
BRIDGE APPROACH SLAB DETAILS
STRUCTURE NO. 049-0131

SHEET NO. S12 OF S18 SHEETS	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	1238	125SB-1-R	LAKE	38	25
	D-91-045-08		CONTRACT NO. 60D57		
	FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		

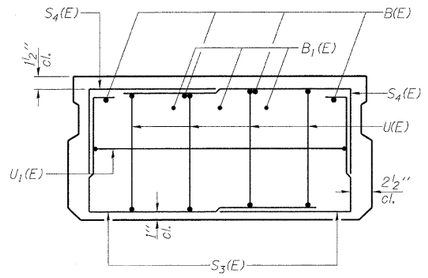
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



SECTION C-C



PLAN VIEW

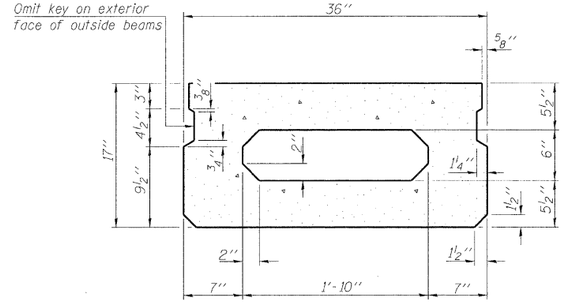


VIEW B-B

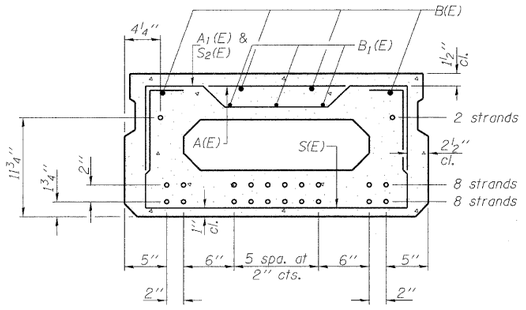
Note: Spacing of S(E), $S_2(E)$, D(E) and $D_1(E)$ bars may be adjusted up to 4" in the immediate area of the transverse tie diaphragms to miss the block outs for the transverse ties.

NOTES

Contractor may use bar splicers instead of cast-in-place dowels D(E) and $D_1(E)$ at no extra cost to the project. If bar splicers are to be used, then they need to be incorporated into the shop drawings for approval.



SECTION A-A
(Showing dimensions)



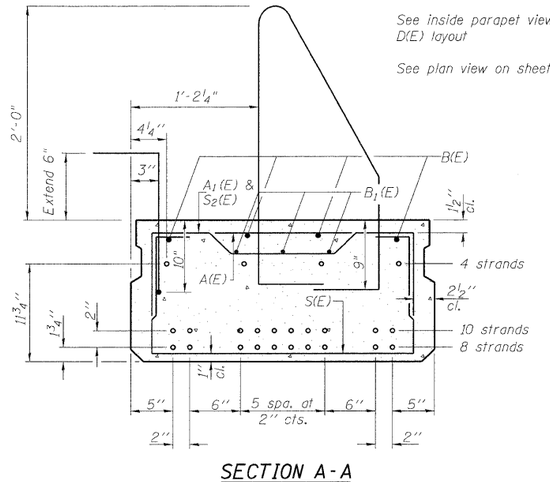
SECTION A-A
(Showing reinforcement and permissible strand locations)

Note: Place the number of strands specified in each row symmetrically about the centerline of beam in the permissible strand locations shown.

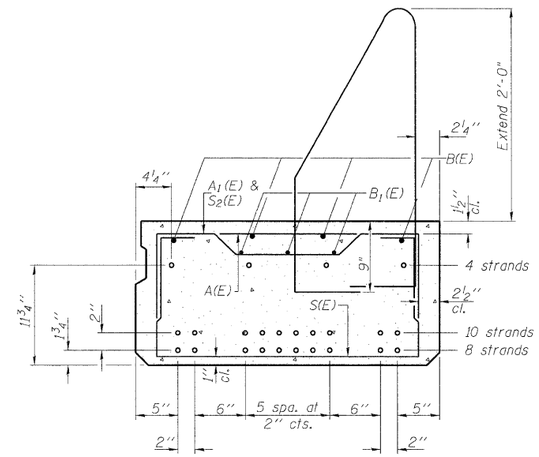
See sheet S8 of S18 for other details regarding beams 1, 2 and 17.

See inside parapet view on sheet S8 of S18 for D(E) layout

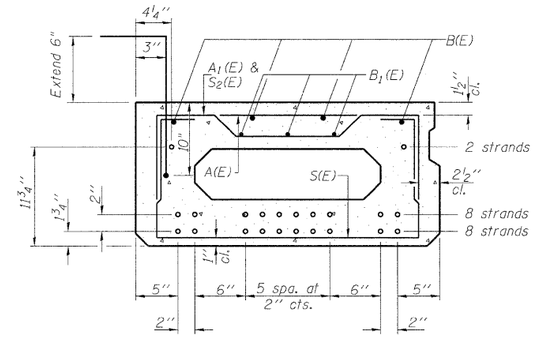
See plan view on sheet S10 of S18 for $D_1(E)$ layout



SECTION A-A
(Showing reinforcement and permissible strand locations)
(Beam 2 only, both spans)



SECTION A-A
(Showing reinforcement and permissible strand locations)
(Beam 17 only, both spans)



SECTION A-A
(Showing reinforcement and permissible strand locations)
(Beam 1 only, both spans)

BAR LIST
ONE BEAM ONLY
(For information only)

Bar	No.	Size	Length	Shape
A(E)	14	#4	2'-7"	—
$A_1(E)$	26	#4	2'-10"	~
B(E)	4	#5	43'-11"	—
$B_1(E)$	3	#4	43'-11"	—
D(E)*	48	#5	8'-0"	◿
$D_1(E)$*	44	#5	3'-0"	⌐
S(E)	60	#4	5'-9"	⊔
$S_1(E)$	8	#4	4'-3"	⊓
$S_2(E)$	52	#4	4'-6"	⊐
$S_3(E)$	8	#4	3'-9"	⊐
$S_4(E)$	8	#4	3'-0"	⊔
U(E)	8	#5	3'-8"	⊏
$U_1(E)$	2	#4	5'-1"	⊂

Note: See sheet S14 of S18 for additional details and Bill of Material.

*See sheet S8 and S14 of S18 for locations of bars to be cast into beams 1, 2 and 17 only, for both spans. Cost incidental to 17" PPC Deck Beams.

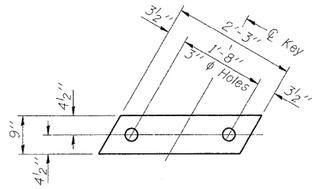
17" x 36" PPC DECK BEAMS
STRUCTURE NO. 049-0131

DESIGNED -	SLV
CHECKED -	MJM
DRAWN -	SLV
CHECKED -	MJM

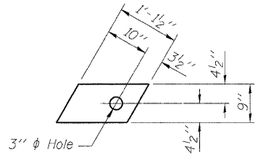
LONCO, INC.
CONSULTING ENGINEERS
1560 WALL ST, SUITE 222
NAPERVILLE, ILLINOIS 60563 PH: (630) 577-9100

SHEET NO. S13 OF S18 SHEETS	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	1238	125SB-1-R	LAKE	38	26
		D-91-045-08	CONTRACT NO. 60D57		
	FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



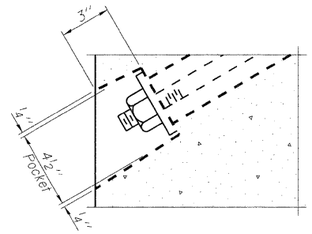
FABRIC BEARING PAD
(Interior)



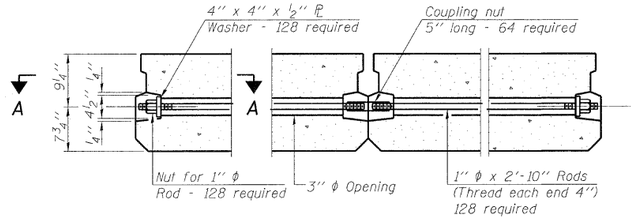
FABRIC BEARING PAD
(Exterior)

FIXED

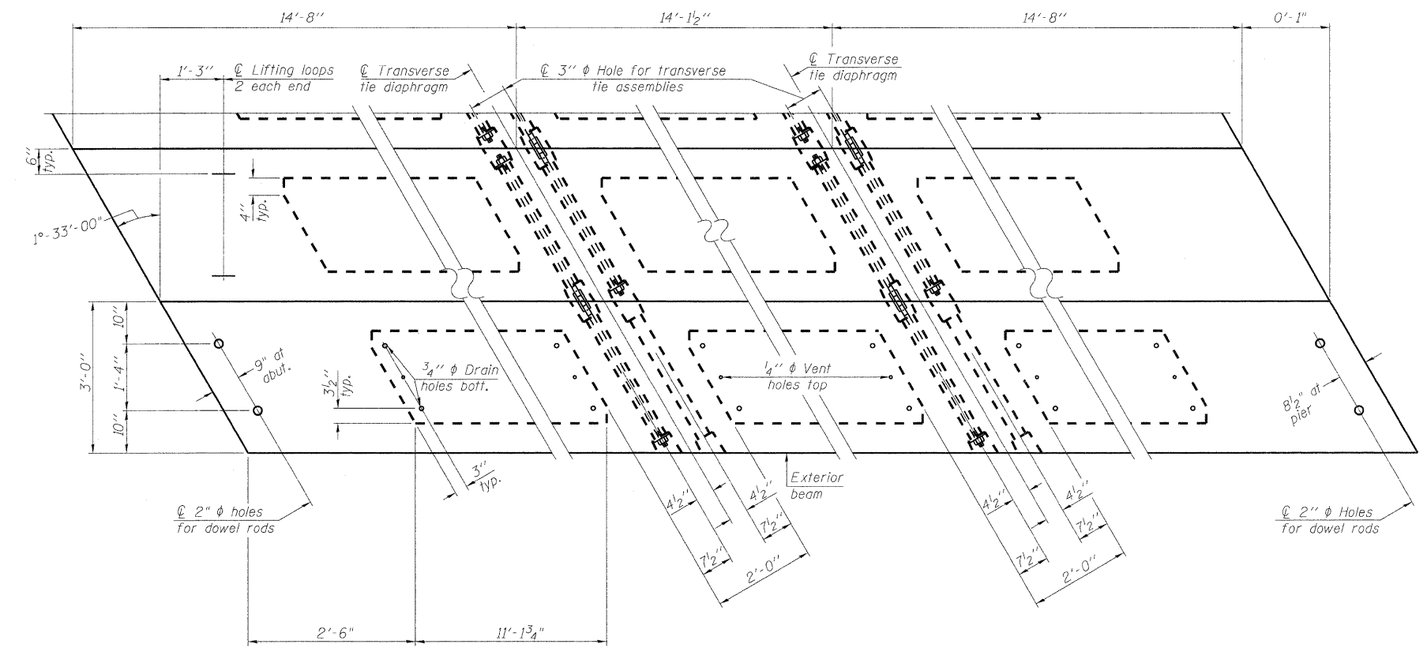
Note: Omit holes when using expansion bearings.



SECTION A-A

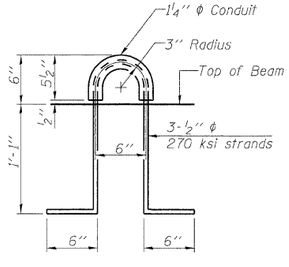


TYPICAL TRANSVERSE TIE ASSEMBLY

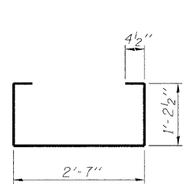


PLAN VIEW

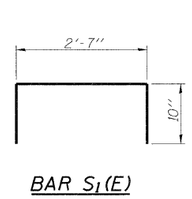
Note: Connect beams in pairs with the transverse tie configuration shown.



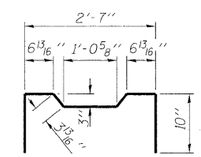
LIFTING LOOP DETAIL



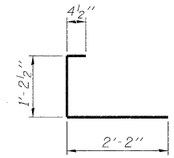
BAR S(E)



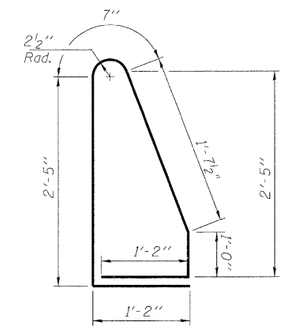
BAR S1(E)



BAR S2(E)

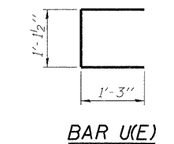


BAR S3(E)

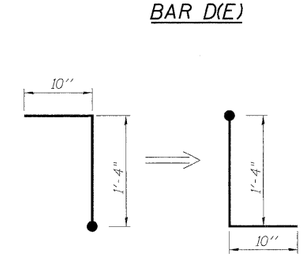


BAR D(E)

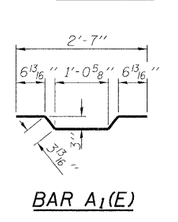
BAR S4(E)



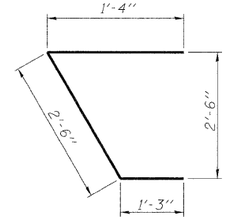
BAR U(E)



BAR D1(E)



BAR A1(E)



BAR U1(E)

NOTES

Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be ½" and the nominal cross-sectional area shall be 0.153 sq. in.

The 1" ϕ rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets on exterior faces of bridge shall be filled with grout after transverse tie assembly is in place.

Reinforcement bars shall conform to ASTM A 706, Grade 60. (See Special Provisions).

Two ⅛" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.

A minimum 2½" ϕ lifting pin shall be used to engage the lifting loops during handling.

Corrosion Inhibitor, per Article 1020.05(b)(12) and 1021.06 of the Standard Specifications, shall be used in the concrete for precast prestressed concrete deck beams.

Compressive strength of prestressed concrete, f'c, shall be 6000 psi.

Compressive strength of prestressed concrete at release, f'ci, shall be 5000 psi.

BILL OF MATERIAL

Precast Prestressed Conc. Deck Bms. (17" depth)	Sq. Ft.	4433

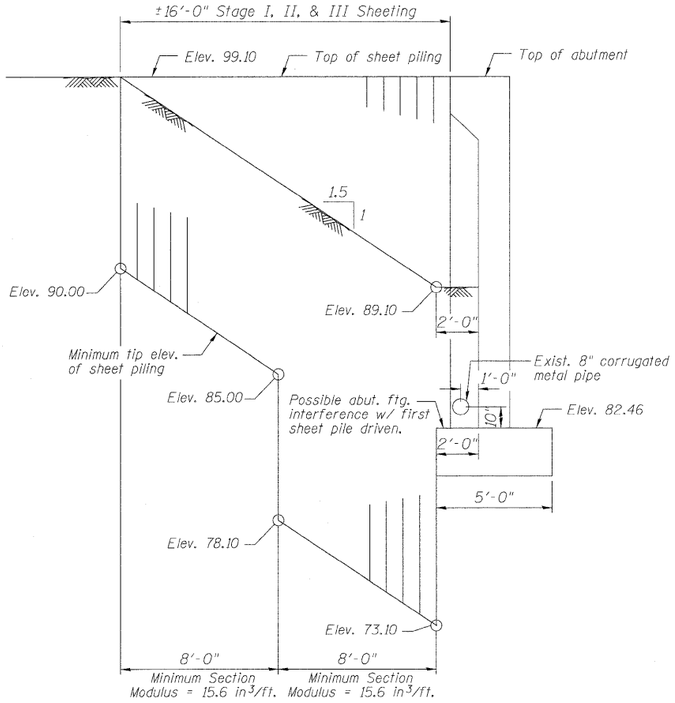
DESIGNED -	SLV
CHECKED -	MJM
DRAWN -	SLV
CHECKED -	MJM

LONCO, INC.
CONSULTING ENGINEERS
1560 WALL ST, SUITE 222
NAPERVILLE, ILLINOIS 60563 PH: (630) 577-9100

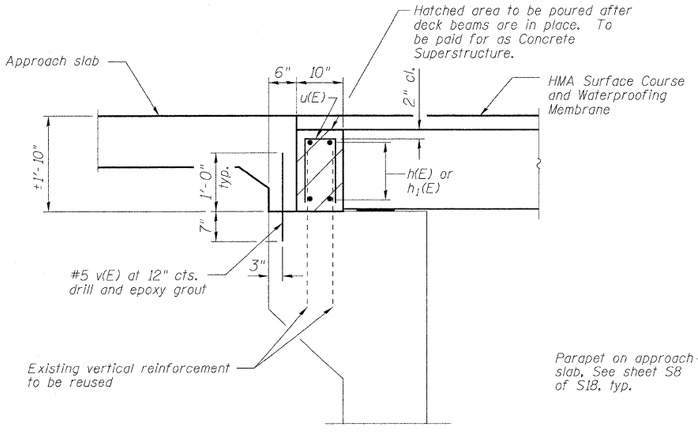
17" x 36" PPC DECK BEAM DETAILS
STRUCTURE NO. 049-0131

SHEET NO. S14 OF S18 SHEETS	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	1238	125SB-1-R	LAKE	38	27
		D-91-045-08	CONTRACT NO. 60D57		
	FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



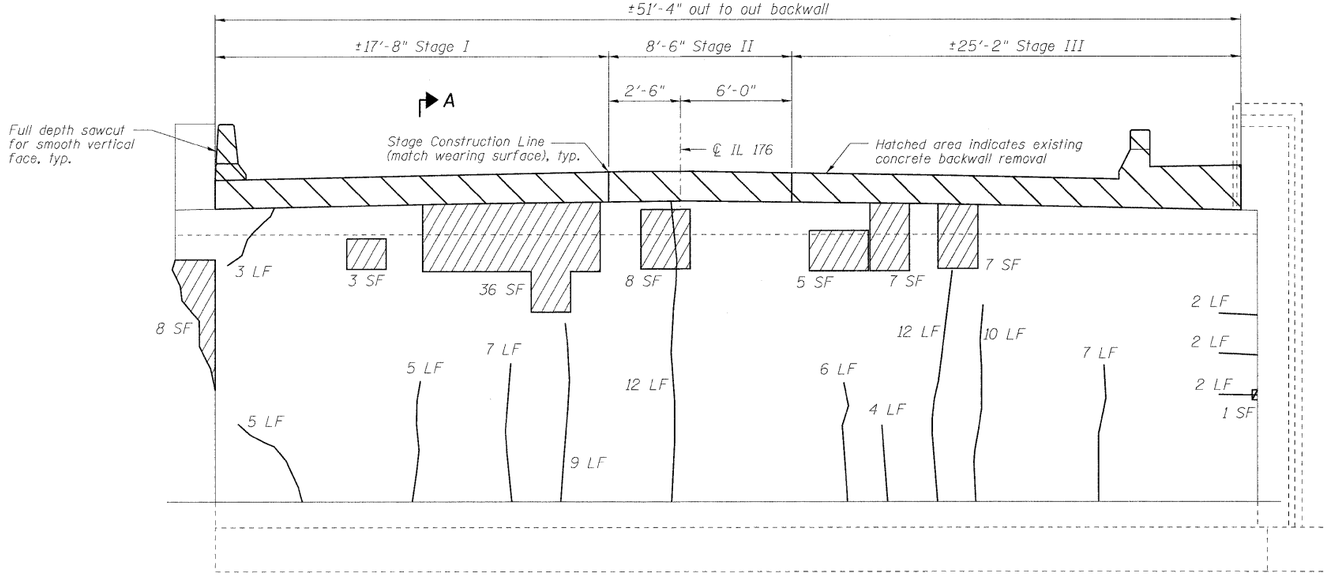
TEMPORARY SHEET PILING DETAILS



SECTION B-B

DESIGNED -	SLV
CHECKED -	MJM
DRAWN -	SLV
CHECKED -	MJM

LONCO, INC.
CONSULTING ENGINEERS
1560 WALL ST. SUITE 222
NAPERVILLE, ILLINOIS 60563 PH: (630) 577-9100



ELEVATION - REMOVAL AND REPAIR
(Looking West)

Epoxy Crack Injection

Formed Concrete Repair Depth < 5"

NOTES

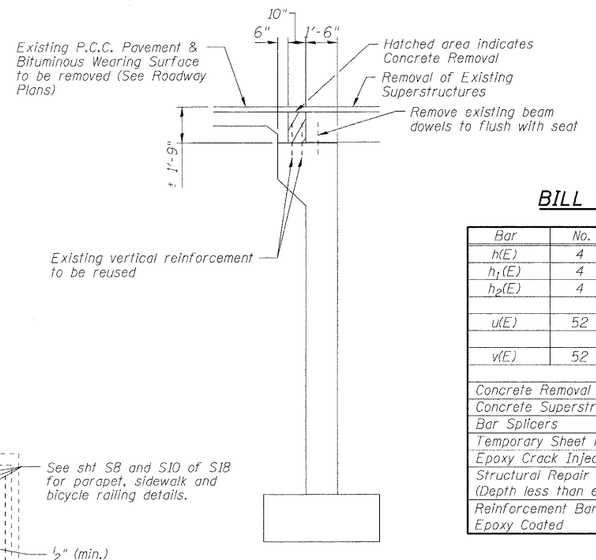
Existing reinforcement shall be cleaned, straightened (if required) and incorporated into the new construction. Cost included with Concrete Removal.

Existing reinforcement bars which have lost 25% or more of their original diameter shall be supplemented by new epoxy coated bars of the same diameter. New bars shall be drilled and epoxy grouted in place adjacent to the original bars, as directed by the Engineer.

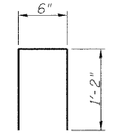
Drilling and epoxy grouting of reinforcement bars shall be in accordance with Article 584 of the Standard Specifications.

For Temporary Sheet Piling: the min. embedment length =16.0' and min. section modulus of Temporary Sheet Piling S = 15.6 in³/ft.

If the Contractor chooses to alter the temporary cantilevered sheet piling design requirements shown on the plans for lesser design requirements, then full design submittals with required seals will be expected by the Contractor for review and approval at not extra cost to the project.



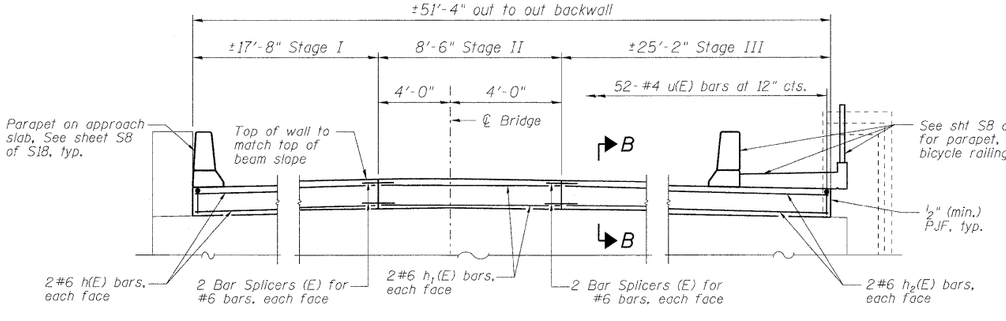
SECTION A-A



BAR u(E)

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	4	#6	17'-2"	
h_1(E)	4	#6	8'-0"	
h_2(E)	4	#6	24'-8"	
u(E)	52	#4	2'-10"	
v(E)	52	#5	1'-7"	
Concrete Removal			Cu. Yd.	2.5
Concrete Superstructure			Cu. Yd.	2.5
Bar Splicers			Each	8
Temporary Sheet Piling			Sq. Ft.	550
Epoxy Crack Injection			Foot	86
Structural Repair of Concrete (Depth less than equal to 5")			Sq. Ft.	75
Reinforcement Bars, Epoxy Coated			Pound	480

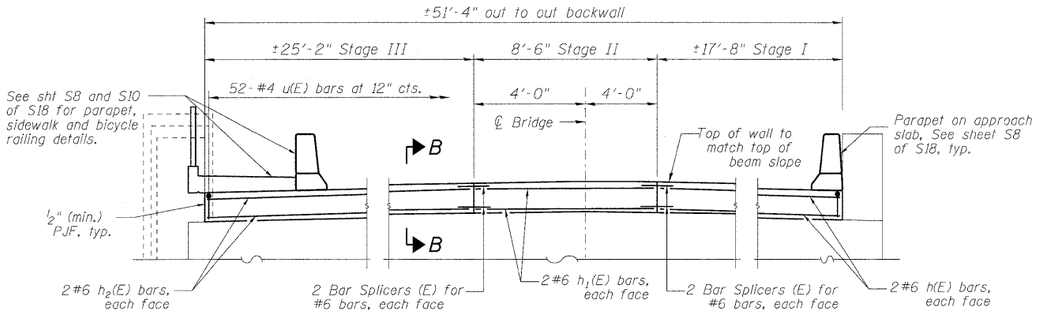


ELEVATION
(Looking West)

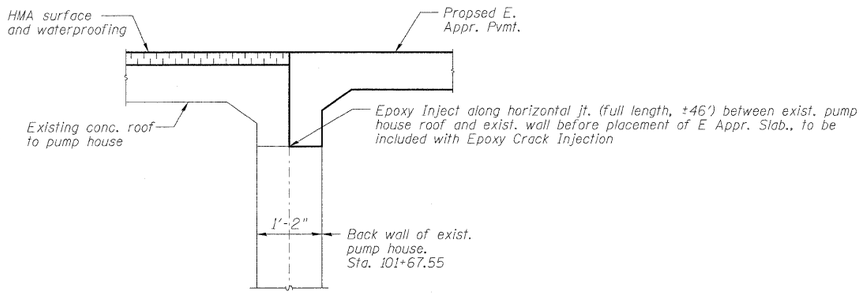
WEST ABUTMENT DETAILS
STRUCTURE NO. 049-0131

SHEET NO. S15 OF S18 SHEETS	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	1238	125SB-1-R	LAKE	38	28
	D-91-045-08		CONTRACT NO. 60D57		
	FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		

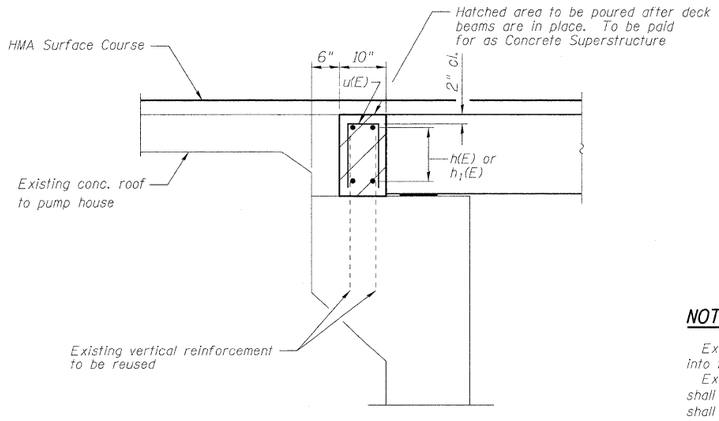
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



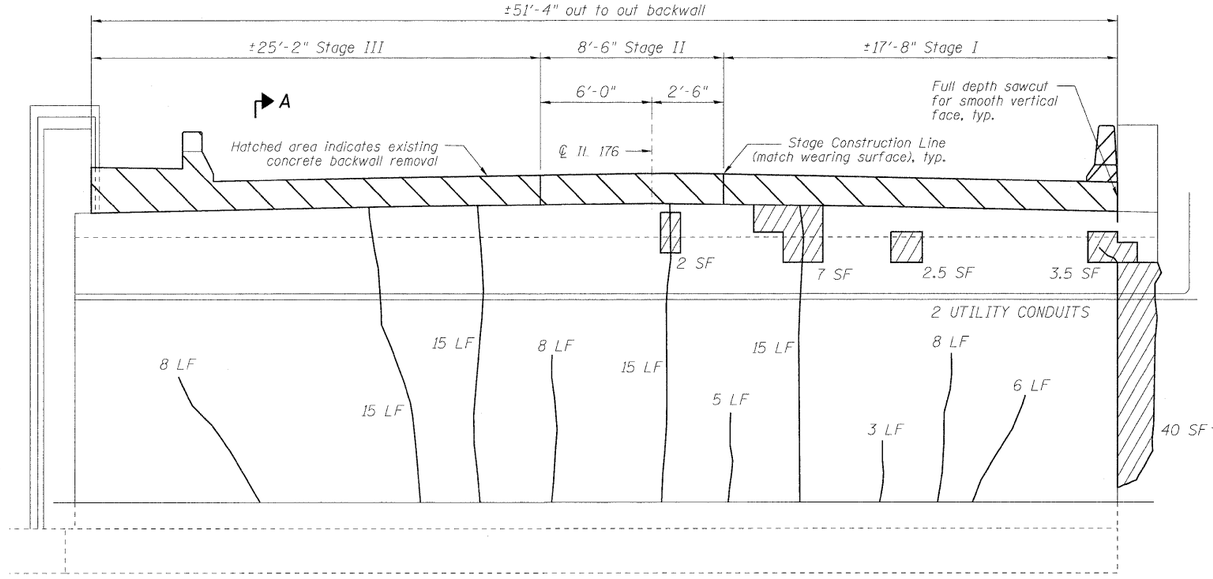
ELEVATION
(Looking East)



SECTION THRU EXIST. PUMP HOUSE ROOF AND WALL
(Looking North)

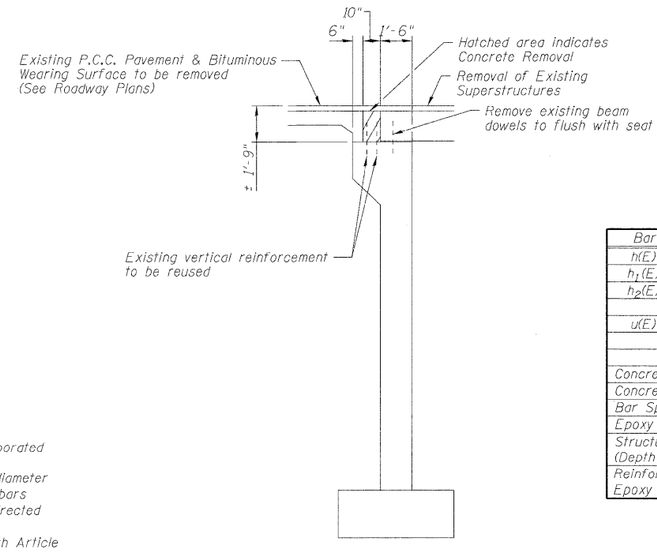


SECTION B-B

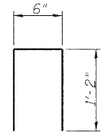


ELEVATION - REMOVAL AND REPAIR
(Looking East)

Epoxy Crack Injection
Formed Concrete Repair Depth < 5"



SECTION A-A



BAR u(E)

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	4	#6	17'-2"	——
h_1(E)	4	#6	8'-0"	——
h_2(E)	4	#6	24'-8"	——
u(E)	52	#4	2'-10"	⊓
Concrete Removal			Cu. Yd.	2.5
Concrete Superstructure			Cu. Yd.	2.5
Bar Splicers			Each	8
Epoxy Crack Injection			Foot	144
Structural Repair of Concrete (Depth less than equal to 5")			Sq. Ft.	55
Reinforcement Bars, Epoxy Coated			Pound	400

NOTES

Existing reinforcement shall be cleaned, straightened (if required) and incorporated into the new construction. Cost included with Concrete Removal.

Existing reinforcement bars which have lost 25% or more of their original diameter shall be supplemented by new epoxy coated bars of the same diameter. New bars shall be drilled and epoxy grouted in place adjacent to the original bars, as directed by the Engineer.

Drilling and epoxy grouting of reinforcement bars shall be in accordance with Article 584 of the Standard Specifications.

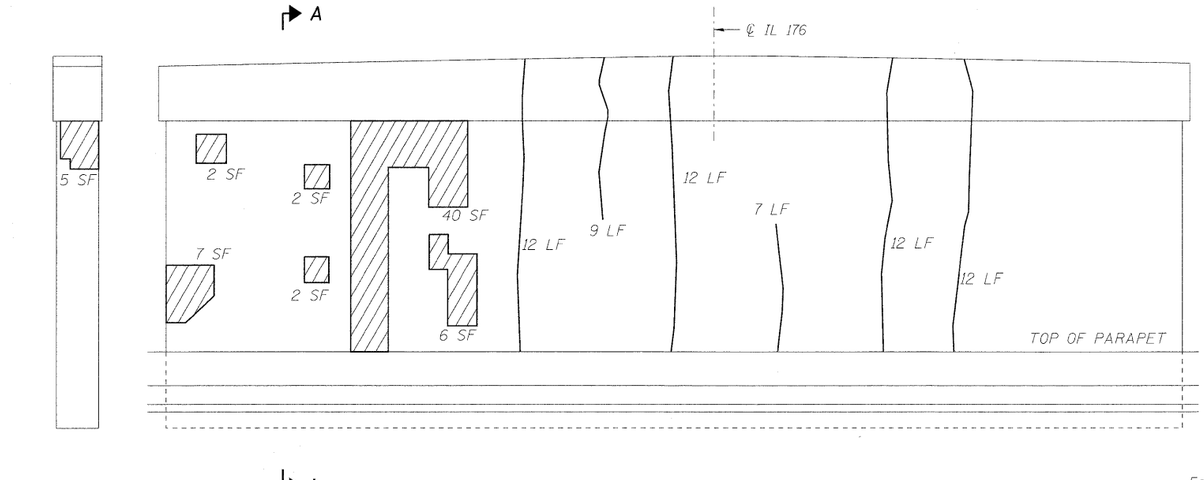
DESIGNED -	SLV
CHECKED -	MJM
DRAWN -	SLV
CHECKED -	MJM

LONCO, INC.
CONSULTING ENGINEERS
1560 WALL ST. SUITE 222
NAPERVILLE, ILLINOIS 60563 PH: (630) 577-9100

EAST ABUTMENT DETAILS
STRUCTURE NO. 049-0131

SHEET NO. S16 OF S18 SHEETS	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	1238	125SB-1-R	LAKE	38	29
	D-91-045-08		CONTRACT NO. 60D57		
	FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		

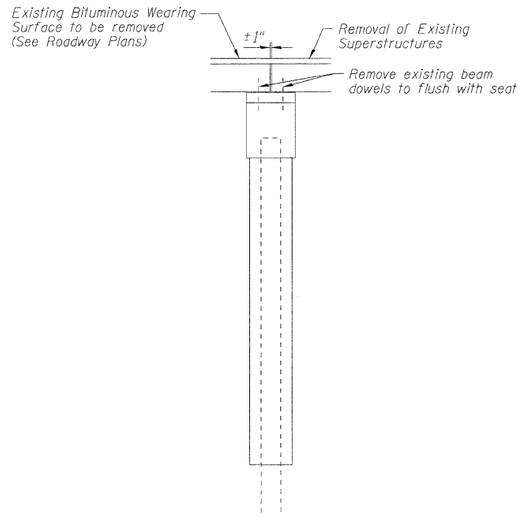
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



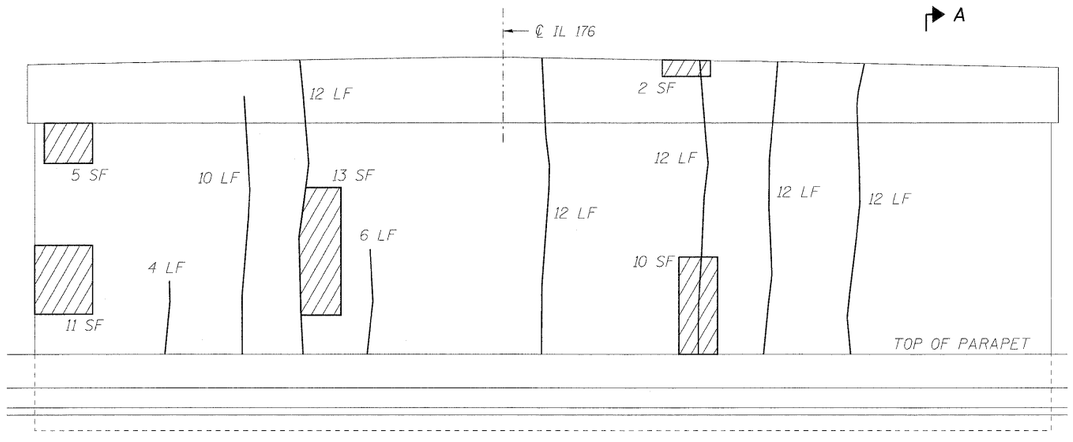
North Face
(Looking South)

ELEVATION - REMOVAL AND REPAIR
West Face
(Looking East)

Epoxy Crack Injection
Formed Concrete Repair Depth < 5"



SECTION A-A



ELEVATION - REMOVAL AND REPAIR
East Face
(Looking West)

Epoxy Crack Injection
Formed Concrete Repair Depth < 5"

NOTES

Drilling and epoxy grouting of reinforcement bars shall be in accordance with Article 584 of the Standard Specifications.
See sht. S7 of S18 for proposed section thru fixed pier.

BILL OF MATERIAL

Epoxy Crack Injection	Foot	144
Structural Repair of Concrete (Depth less than equal to 5")	Sq. Ft.	105

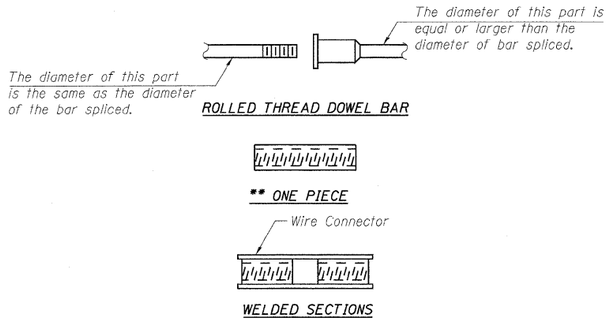
DESIGNED -	SLV
CHECKED -	MJM
DRAWN -	SLV
CHECKED -	MJM

LONCO, INC.
CONSULTING ENGINEERS
1560 WALL ST, SUITE 222
NAPERVILLE, ILLINOIS 60563 PH: (630) 577-9100

PIER DETAILS
STRUCTURE NO. 049-0131

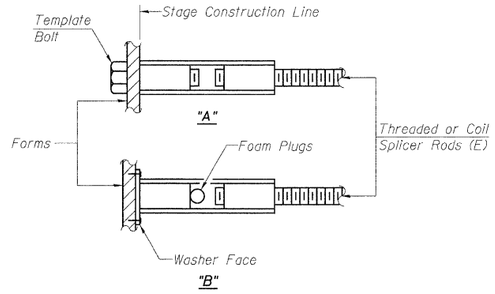
SHEET NO. S17 OF S18 SHEETS	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	1238	125SB-1-R	LAKE	38	30
	D-91-045-08		CONTRACT NO. 60D57		
	FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



BAR SPLICER ASSEMBLY ALTERNATIVES

**Heavy Hex Nuts conforming to ASTM A 563, Grade C, D or DH may be used.



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.

NOTES

Bar splicer assemblies shall be of an approved type and shall develop in tension at least 125 percent of the yield strength of the lapped reinforcement bars.

Splicer rods shall be of minimum 60 ksi yield strength, threaded or coiled full length.

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

Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars.

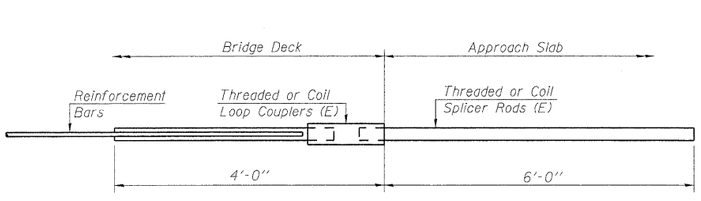
Other systems of similar design may be submitted to the Engineer for approval. Approval shall be based on certified test results from an approved testing laboratory that the proposed bar splicer assembly satisfies the following requirements:

① Minimum Capacity (Tension in kips) = $1.25 \times f_y \times A_t$

② Minimum *Pull-out Strength (Tension in kips) = $0.66 \times f_y \times A_t$

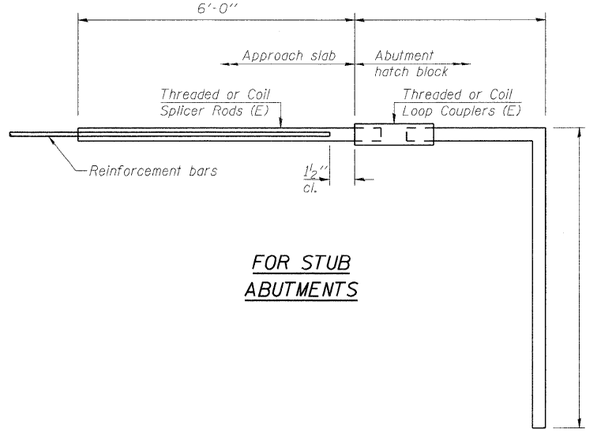
Where f_y = Yield strength of lapped reinforcement bars in ksi.
A_t = Tensile stress area of lapped reinforcement bars.
* = 28 day concrete

BAR SPLICER ASSEMBLIES			
Bar Size to be Spliced	Splicer Rod or Dowel Bar Length	Strength Requirements	
		Min. Capacity kips - tension	Min. Pull-Out Strength kips - tension
#4	1'-8"	14.7	7.9
#5	2'-2"	23.0	12.3
#6	2'-7"	33.1	17.4
#7	3'-5"	45.1	23.8
#8	4'-6"	58.9	31.3
#9	5'-9"	75.0	39.6
#10	7'-3"	95.0	50.3
#11	9'-0"	117.4	61.8



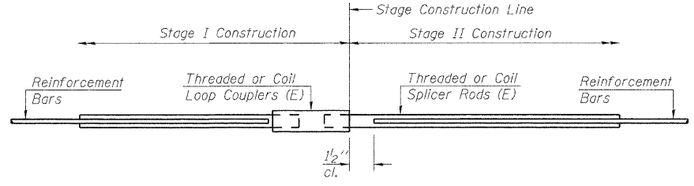
FOR INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

Bar Splicer for #5 bar
Min. Capacity = 23.0 kips - tension
Min. Pull-out Strength = 12.3 kips - tension
No. Required - N/A



FOR STUB ABUTMENTS

Bar Splicer for #5 bar
Min. Capacity = 23.0 kips - tension
Min. Pull-out Strength = 12.3 kips - tension
No. Required = N/A



STANDARD

Bar Size	No. Assemblies Required	Location
#4	100	Top of Approach Slabs
#5	184	Bottom of Approach Slabs
#5	160	Approach Slab Footings
#6	16	Abutment Backwalls

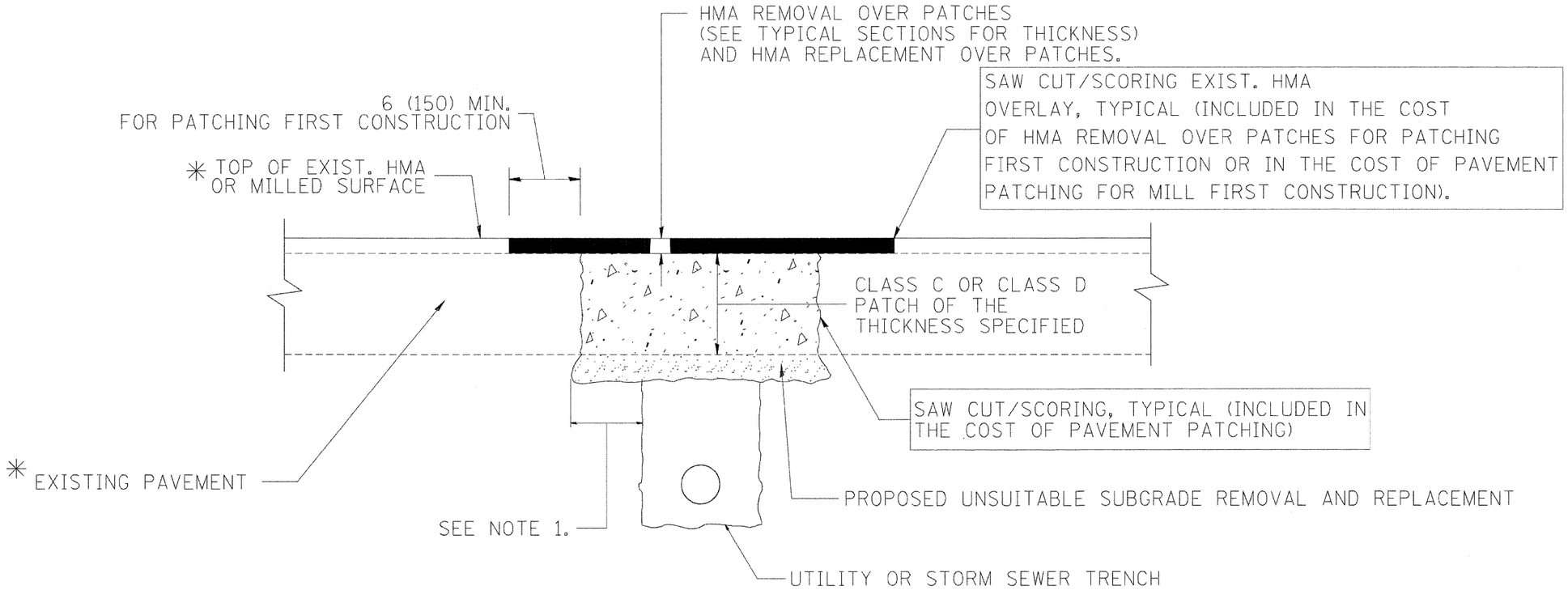
DESIGNED -	SLV
CHECKED -	MJM
DRAWN -	SLV
CHECKED -	MJM

LONCO, INC.
CONSULTING ENGINEERS
1560 WALL ST. SUITE 222
NAPERVILLE, ILLINOIS 60563 PH: (630) 577-9100

BSD-1 10-1-08

BAR SPLICER ASSEMBLY DETAILS
STRUCTURE NO. 049-0131

SHEET NO. S18 OF S18 SHEETS	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	1238	125SB-1-R	LAKE	38	31
	D-91-045-08		CONTRACT NO. 60D57		
	FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		



* SEE TYPICAL SECTIONS FOR THICKNESS AND MATERIALS

NOTES:

1. THE WIDTH OF THE FULL DEPTH PATCH OVER A TRENCH SHALL BE 12 (300) WIDER ON EACH SIDE OF THE TRENCH.
2. FOR METHOD OF MEASUREMENT AND BASIS OF PAYMENT, SEE RECURRING SPECIAL PROVISION "PATCHING WITH HOT-MIX ASPHALT OVERLAY REMOVAL".

SEQUENCE OF CONSTRUCTION (PATCHING FIRST)

1. REMOVE THE EXISTING HMA MATERIAL OVER THE AREA TO BE PATCHED.
2. REMOVE AND REPLACE WITH CLASS C OR D PATCH.
3. REPLACE HMA MATERIAL OVER THE AREA TO BE PATCHED.

SEQUENCE OF CONSTRUCTION (MILLING FIRST)

1. MILL HMA FIRST IF THERE IS AT LEAST $4\frac{1}{2}$ INCHES OR MORE OF HMA MATERIAL ON TOP OF THE EXISTING PAVEMENT OR IF THE PAVEMENT IS FULL DEPTH HMA. A MINIMUM OF 2 INCHES OF HMA MATERIAL SHALL BE IN PLACE AFTER MILLING.
2. REMOVE AND REPLACE WITH FULL DEPTH CLASS D PATCHES TO TOP OF MILLED SURFACE.

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

PAVEMENT PATCHING FOR HMA SURFACED PAVEMENT

REVISIONS	
NAME	DATE
R. SHAH	01/14/95
R. SHAH	03/23/95
R. SHAH	04/24/95
A. HOUSEH	03/15/96
A. ABBAS	03/21/97
A. ABBAS	01/20/98
ART ABBAS	04/27/98
R. BORO	01/01/07
R. BORO	09/04/07
K. ENG	10/27/08

LONCO, INC.
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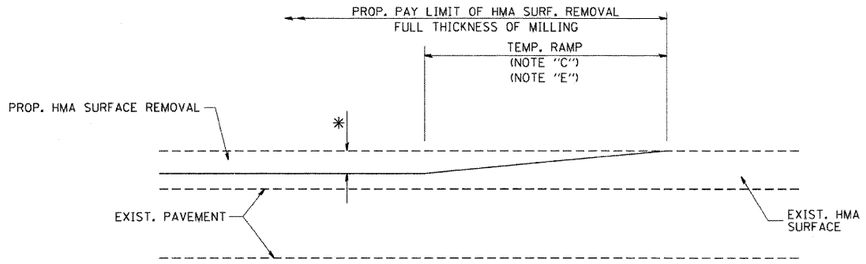
DESIGNED - MJY		
DRAWN - ST, TSC	REVISED -	
CHECKED - MJY, DC	REVISED -	
DATE - 08/20/2009	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DISTRICT ONE DETAIL SHEETS
IL ROUTE 176 (ROCKLAND AVE) OVER US ROUTE 41 (SKOKIE HWY)

SCALE: NONE | SHEET NO. 1 OF 7 SHEETS | STA. 99+20 TO STA. 102+90

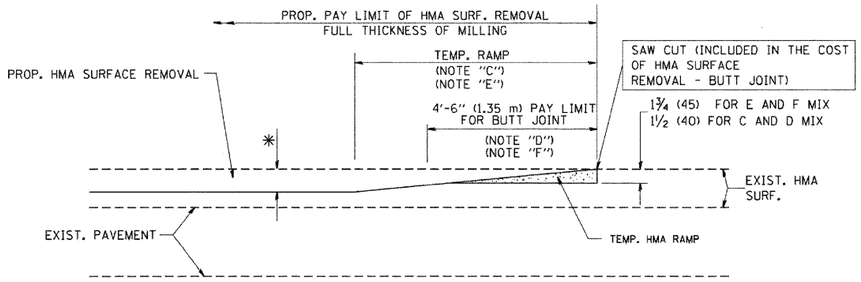
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1238	125SB-1-R	LAKE	38	32
	D-91-045-08	CONTRACT NO. 60D57		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



MILLED TEMPORARY RAMP

(FOR BUTT JOINT AND HMA TAPER SEE DETAIL BELOW)

OPTION 1

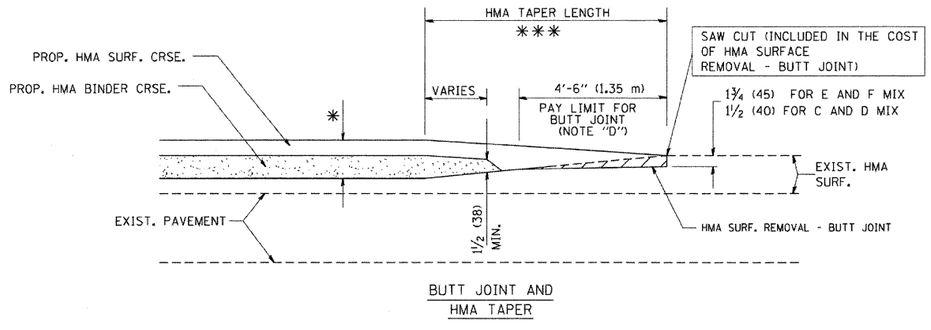


HMA CONSTRUCTED TEMPORARY RAMP

(FOR BUTT JOINT AND HMA TAPER SEE DETAIL BELOW)

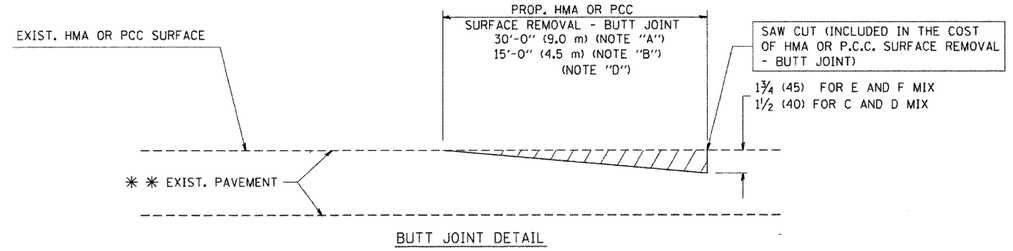
OPTION 2

TYPICAL TEMPORARY RAMP

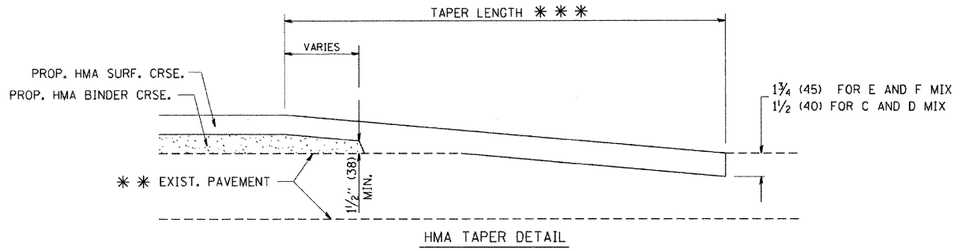


BUTT JOINT AND HMA TAPER

TYPICAL BUTT JOINT AND HMA TAPER FOR MILLING AND RESURFACING



BUTT JOINT DETAIL



HMA TAPER DETAIL

TYPICAL BUTT JOINT AND HMA TAPER FOR RESURFACING ONLY

* * PC CONCRETE, HMA OR HMA RESURFACED PAVEMENT.

NOTES

A: MAINLINE ROADWAYS AND MAJOR SIDE ROADS.

B: MINOR SIDE ROADS.

C: THE TEMP. RAMP SHALL BE CONSTRUCTED IMMEDIATELY UPON REMOVAL OF THE EXISTING HMA SURFACE.

D: THE BUTT JOINT SHALL BE CONSTRUCTED IMMEDIATELY PRIOR TO PLACING THE PROPOSED HMA COURSES.

E: TAPER THE TEMP. RAMP AT A RATE OF 3'-0" (900 mm) PER 1 INCH (25 mm) OF MILLING THICKNESS.

F: INSTALLATION AND REMOVAL OF THE 4'-6" (1.35 m) TEMP. RAMP IS INCLUDED IN COST OF HMA SURFACE REMOVAL - BUTT JOINT

G: SEE ARTICLE 406.08 AND 406.14 OF THE STANDARD SPECIFICATIONS FOR "HMA AND/OR PCC SURFACE REMOVAL, BUTT JOINT".

* SEE TYPICAL SECTIONS FOR MILLING THICKNESS.

* * * 20'-0" (6.1 m) PER 1 (25) RESURFACING (NOTE "A")
10'-0" (3.0 m) PER 1 (25) RESURFACING (NOTE "B")

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

BASIS OF PAYMENT:

THE BUTT JOINT WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE YARD (SQUARE METER) FOR "HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT" OR FOR "PORTLAND CEMENT CONCRETE SURFACE REMOVAL- BUTT JOINT".

REVISIONS	
NAME	DATE
M. DE YONG	6-13-90
M. DE YONG	7-3-90
M. DE YONG	3-27-92
R. SHAH	09/09/94
R. SHAH	10/25/94
A. ABBAS	03/21/97
M. GOMEZ	04/06/01
R. BORO	01/01/07

BUTT JOINT AND HMA TAPER DETAILS

LONCO, INC.
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1560 WALL ST, SUITE 222
NAPERVILLE, ILLINOIS 60563 PH: (630) 577-9100

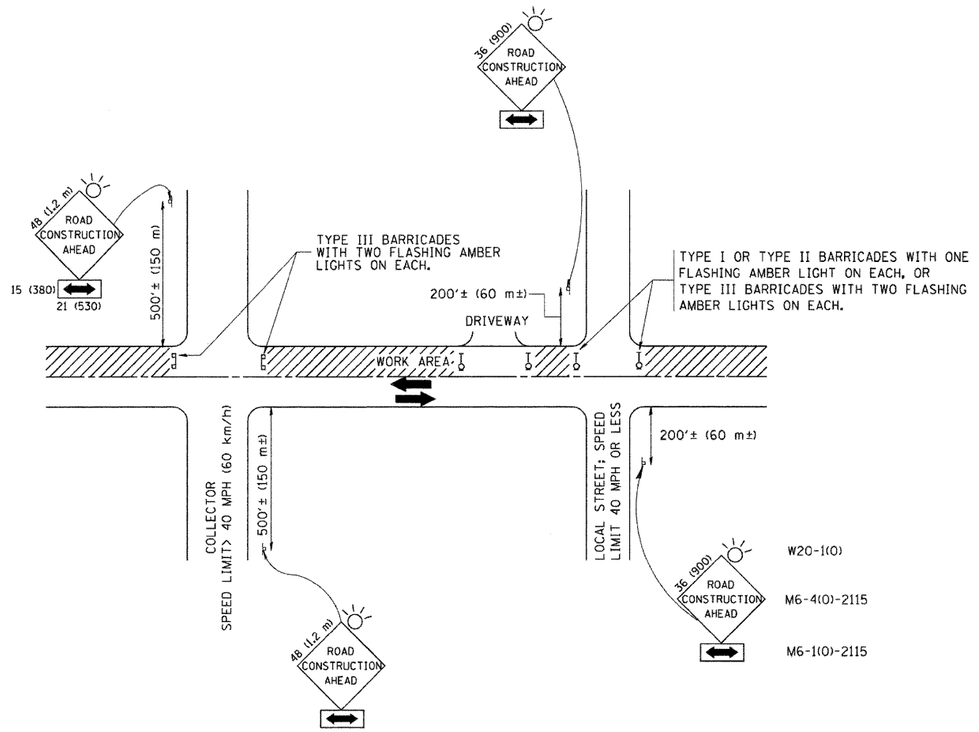
DESIGNED - MJY		
DRAWN - ST, TSC	REVISED -	
CHECKED - MJY, DC	REVISED -	
DATE - 08/20/2009	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DISTRICT ONE DETAIL SHEETS
IL ROUTE 176 (ROCKLAND AVE) OVER US ROUTE 41 (SKOKIE HWY)

SCALE: NONE | SHEET NO. 2 OF 7 SHEETS | STA. 99+20 TO STA. 102+90

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1238	125SB-1-R	LAKE	38	33
	D-91-045-08	CONTRACT NO. 60D57		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



NOTES:

A. FOR NO LANE RESTRICTION ON THE SIDE ROAD OR DRIVEWAYS

1. SIDE ROAD WITH A SPEED LIMIT OF 40 MPH (60 km/h) OR LESS AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:

   a) ONE **ROAD CONSTRUCTION AHEAD** SIGN 36 x 36 (900x900) WITH A FLASHER AND FLAG MOUNTED ON IT APPROXIMATELY 200' (60 m) IN ADVANCE OF THE MAIN ROUTE.

   b) THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE I, TYPE II OR TYPE III BARRICADES, 1/3 OF THE CROSS SECTION OF THE CLOSED PORTION.

2. SIDE ROAD WITH A SPEED LIMIT GREATER THAN 40 MPH (60 km/h) AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:

   a) ONE **ROAD CONSTRUCTION AHEAD** SIGN 48 x 48 (1.2 m x 1.2 m) WITH A FLASHER MOUNTED ON IT APPROXIMATELY 500' (150 m) IN ADVANCE OF THE MAIN ROUTE.

   b) THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE III BARRICADES, 1/2 OF THE CROSS SECTION OF THE CLOSED PORTION.

3. WHEN THE SIDE ROAD LIES BETWEEN THE BEGINNING OF THE MAINLINE SIGNING AND THE WORK ZONE, A SINGLE HEADED ARROW (M6-1) SHALL BE USED IN LIEU OF THE DOUBLE HEADED ARROW (M6-4).

B. FOR A LANE CLOSURE ON A SIDE ROAD OR DRIVEWAY:

USE APPLICABLE PORTIONS OF THE TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES (STD. 701501, STD. 701606 OR THE APPROPRIATE STANDARD). THE SPACING OF SIGNS AND BARRICADES SHALL BE ADJUSTED FOR FIELD CONDITIONS AS DIRECTED BY THE ENGINEER. THE DIRECTIONAL ARROW SHALL BE COVERED OR REMOVED WHEN NO LONGER CONSISTENT WITH THE SIDE ROAD LANE CLOSURE.

C. ADVANCE WARNING SIGNS ARE TO BE OMITTED ON DRIVEWAY UNLESS OTHERWISE NOTED.

D. THE TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS SHALL BE INCIDENTAL TO THE COST OF SPECIFIED TRAFFIC CONTROL STANDARDS OR ITEMS.

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

TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS

REVISIONS	
NAME	DATE
LHA	6/89
T. RAMMACHER	09/08/94
J. OBERLE	10/18/95
A. HOUSEH	03/06/96
A. HOUSEH	10/15/96
T. RAMMACHER	01/06/00

LOMCO, INC.
CONSULTING ENGINEERS
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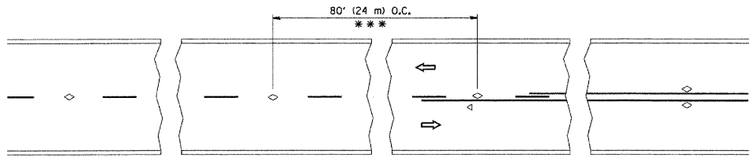
DESIGNED - MJY		
DRAWN - ST	REVISED -	
CHECKED - MJY	REVISED -	
DATE - 07/08/2009	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DISTRICT ONE DETAIL SHEETS
IL ROUTE 176 (ROCKLAND AVE) OVER US ROUTE 41 (SKOKIE HWY)

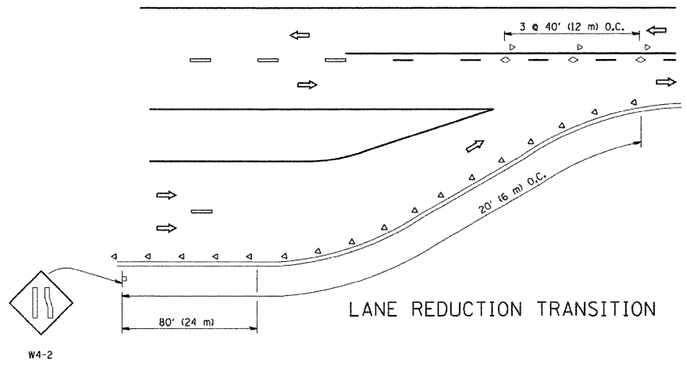
SCALE: NONE | SHEET NO. 3 OF 7 SHEETS | STA. 99+20 TO STA. 102+90

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1238	125SB-1-R	LAKE	38	34
	D-91-045-08	CONTRACT NO. 60D57		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

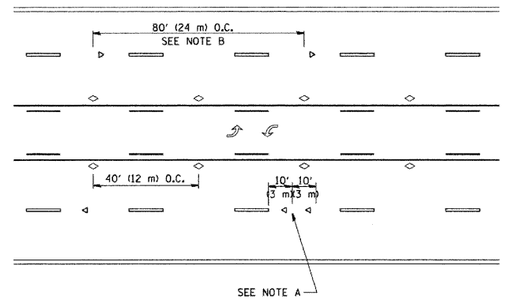


* * * REDUCE TO 40' (12 m) O.C. ON CURVES WITH POSTED OR ADVISORY SPEED 45 M.P.H. (70 km/h) OR LESS.

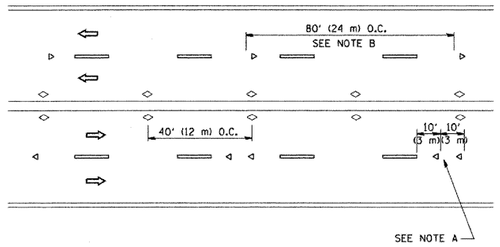
TWO-LANE/TWO-WAY



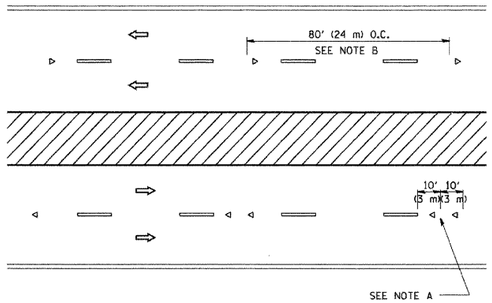
LANE REDUCTION TRANSITION



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

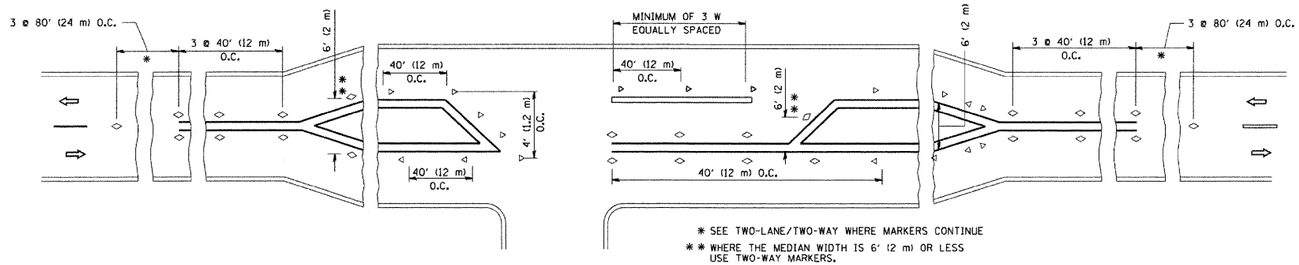
LANE MARKER NOTES

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.

A. USE DOUBLE LANE LINE MARKERS SPACED AS SHOWN.

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

TYPICAL APPLICATIONS RAISED REFLECTIVE PAVEMENT MARKERS (SNOW-PLOW RESISTANT)

REVISIONS	
NAME	DATE
T. RAMMACHER	09-19-94
T. RAMMACHER	03-12-99
T. RAMMACHER	01-06-00

LONCO, INC.
CONSULTING ENGINEERS
1960 WALL ST, SUITE 222
NAPERVILLE, ILLINOIS 60563 PH: (630) 577-9100

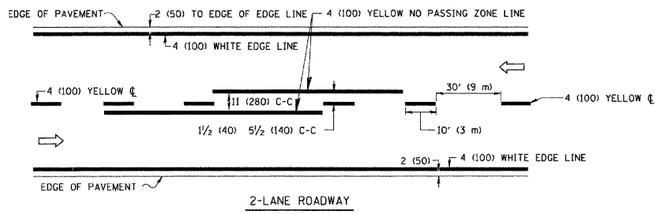
DESIGNED - MJY		
DRAWN - ST, TSC	REVISED -	
CHECKED - MJY, DC	REVISED -	
DATE - 08/20/2009	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

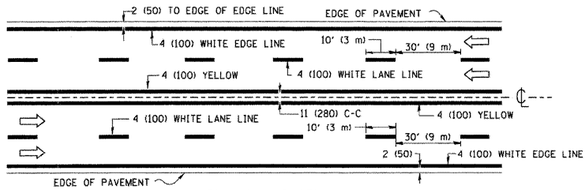
DISTRICT ONE DETAIL SHEETS
IL ROUTE 176 (ROCKLAND AVE) OVER US ROUTE 41 (SKOKIE HWY)

SCALE: NONE | SHEET NO. 4 OF 7 SHEETS | STA. 99+20 TO STA. 102+90

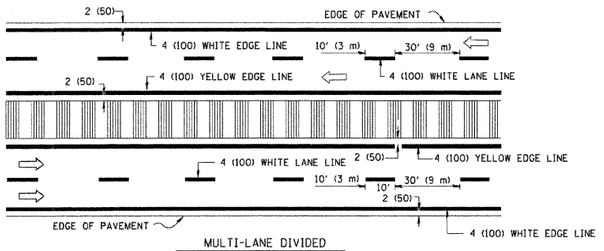
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1238	125SB-1-R	LAKE	38	35
	D-91-045-08	CONTRACT NO. 60D57		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



2-LANE ROADWAY



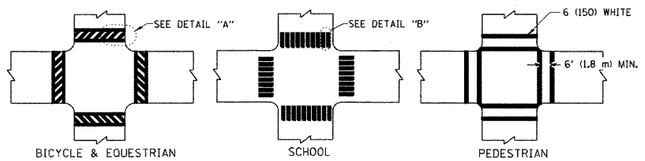
MULTI-LANE UNDIVIDED

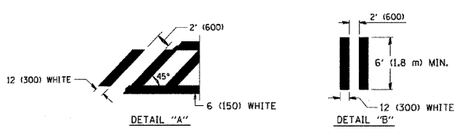


MULTI-LANE DIVIDED
WITH MOUNTABLE MEDIAN

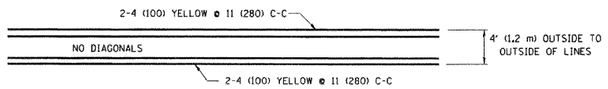
NOTE: MEDIANS WITH BARRIER CURB DO NOT REQUIRE AN EDGE LINE

TYPICAL LANE AND EDGE LINE MARKING

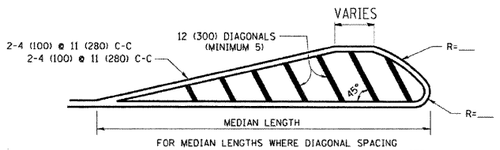




TYPICAL CROSSWALK MARKING



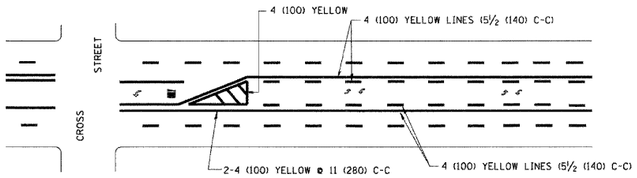
4' (1.2 m) WIDE MEDIANS ONLY



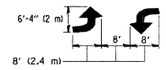
FOR MEDIAN LENGTHS WHERE DIAGONAL SPACING CANNOT BE ATTAINED, USE 5 (FIVE) EQUALLY SPACED DIAGONAL LINES.

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

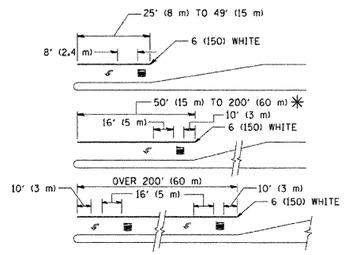


A MINIMUM OF TWO PAIRS OF TURN ARROWS SHALL BE USED. WHITE IN COLOR. ADDITIONAL PAIRS SHALL BE PLACED AT 200' (60 m) TO 300' (90 m) INTERVALS.



MEDIAN WITH TWO-WAY LEFT TURN LANE

TYPICAL PAINTED MEDIAN MARKING

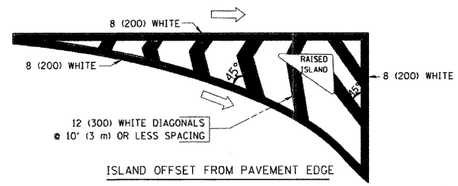


FULL SIZE LETTERS 8' (2.4 m) AND ARROWS SHALL BE USED.
↰ AREA = 15.6 SQ. FT. (1.5 m^2) **ONLY** AREA = 20.8 SQ. FT. (1.9 m^2)

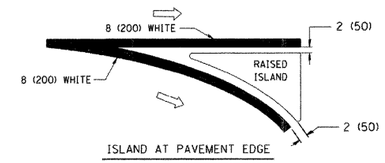
✳ TURN LANES IN EXCESS OF 400' (120 m) IN LENGTH MAY HAVE AN ADDITIONAL SET OF ARROW - "ONLY" INSTALLED MIDWAY BETWEEN THE OTHER TWO SETS OF ARROW - "ONLY".

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 UNDIVEDED 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 OMIT 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) LINE; 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 m^2) EACH "X"=54.0 SQ. FT. (5.0 m^2)
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.

REVISIONS	
NAME	DATE
EVERS	03-19-90
T. RAMMACHER	10-27-94
ALEX HOUSEH	10-09-96
ALEX HOUSEH	10-17-96
T. RAMMACHER	01-06-00

DISTRICT ONE TYPICAL PAVEMENT MARKINGS

LONCO, INC.
CONSULTING ENGINEERS
1560 WALL ST, SUITE 222
NAPERVILLE, ILLINOIS 60563 PH: (630) 577-9100

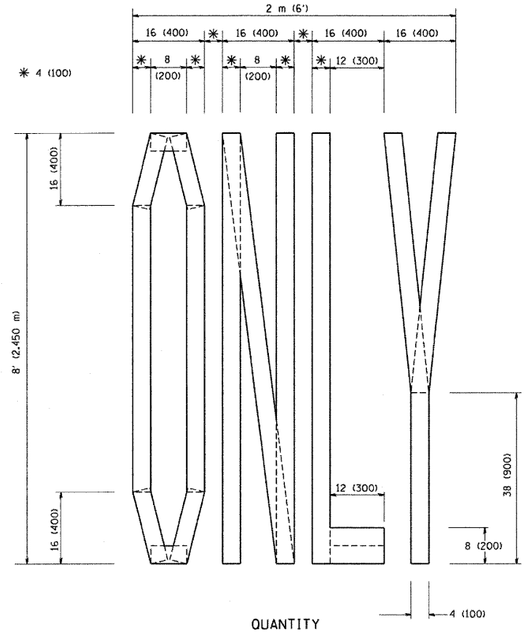
DESIGNED - MJY		
DRAWN - ST	REVISED -	
CHECKED - MJY	REVISED -	
DATE - 07/08/2009	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

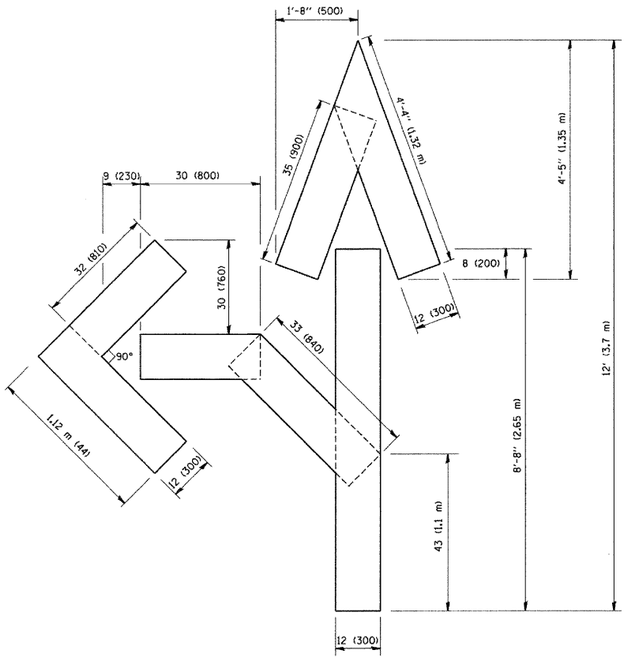
DISTRICT ONE DETAIL SHEETS
IL ROUTE 176 (ROCKLAND AVE) OVER US ROUTE 41 (SKOKIE HWY)

SCALE: NONE | SHEET NO. 5 OF 7 SHEETS | STA. 99+20 TO STA. 102+90

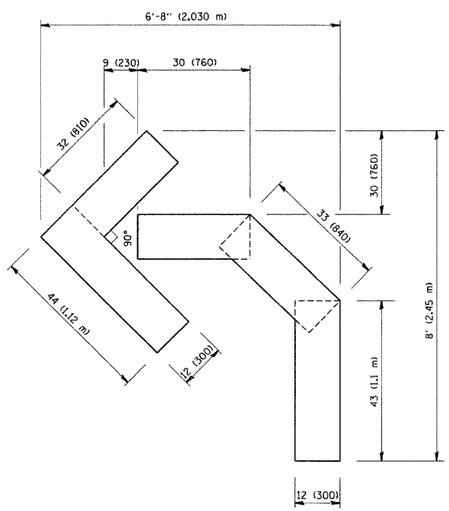
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1238	125SB-1-R	LAKE	38	36
	D-91-045-08	CONTRACT NO. 60D57		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



QUANTITY
4 (100) LINE = 64.1 ft. (19.7 m)
21.1 sq. ft. (1.97 sq. m)



QUANTITY
4 (100) LINE = 82.5 ft. (25.3 m)
27.5 sq. ft. (2.53 sq. m)



QUANTITY
4 (100) LINE = 45.5 ft. (13.9 m)
15.2 sq. ft. (1.39 sq. m)

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

REVISIONS	
NAME	DATE
T. RAMMACHER	09/18/96
J. OBERLE	06/01/96
T. RAMMACHER	06/05/96
T. RAMMACHER	11/04/97
T. RAMMACHER	03/02/98
E. GOMEZ	08/28/00

DISTRICT ONE TYPICAL PAVEMENT MARKINGS

LONCO, INC.
CONSULTING ENGINEERS
1560 MALL ST. SUITE 222
NAPERVILLE, ILLINOIS 60563 PH# (630) 577-9100

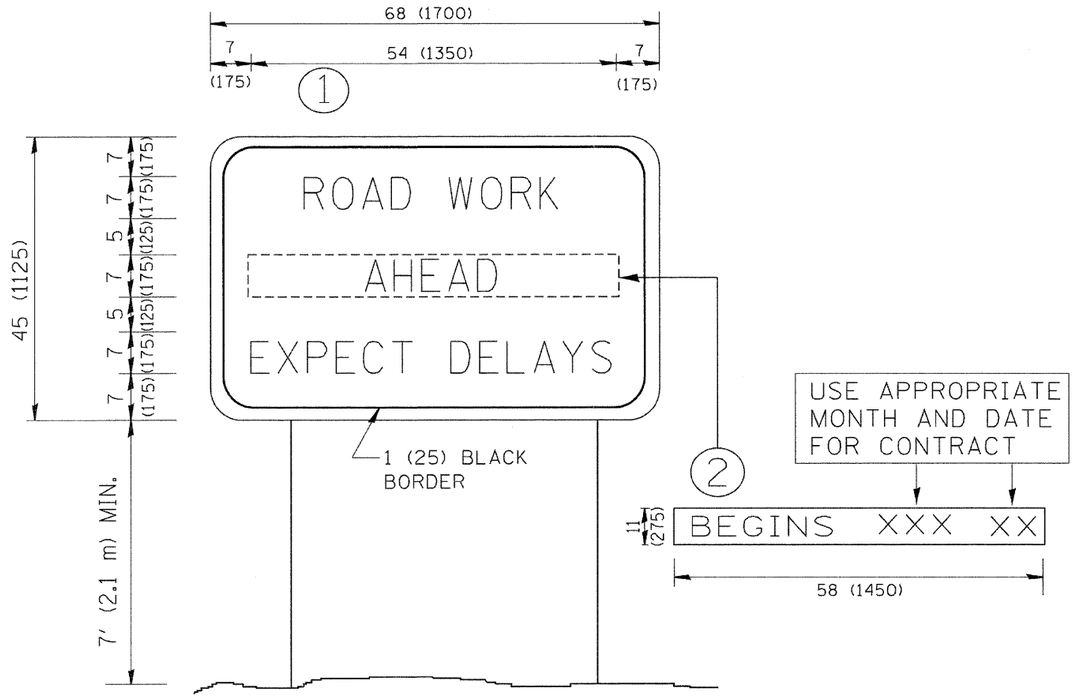
DESIGNED - MJY		
DRAWN - ST, TSC	REVISED -	
CHECKED - MJY, DC	REVISED -	
DATE - 08/20/2009	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DISTRICT ONE DETAIL SHEETS
IL ROUTE 176 (ROCKLAND AVE) OVER US ROUTE 41 (SKOKIE HWY)

SCALE: NONE | SHEET NO. 6 OF 7 SHEETS | STA. 99+20 TO STA. 102+90

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1238	125SB-1-R	LAKE	38	37
	D-91-045-08	CONTRACT NO. 60D57		
FED. ROAD DIST. NO.	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.

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

REVISIONS	
NAME	DATE
R. MIRS	9-15-97
R. MIRS	12-11-97
T. RAMMACHER	2-2-99
C. JUCIUS	1-31-07

ARTERIAL ROAD INFORMATION SIGN

LONCO, INC.
CONSULTING ENGINEERS
1560 WALL ST. SUITE 222
NAPERVILLE, ILLINOIS 60563 PH: (630) 577-9100

DESIGNED - MJY		
DRAWN - ST, TSC	REVISED -	
CHECKED - MJY, DC	REVISED -	
DATE - 08/20/2009	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DISTRICT ONE DETAIL SHEETS
IL ROUTE 176 (ROCKLAND AVE) OVER US ROUTE 41 (SKOKIE HWY)

SCALE: NONE | SHEET NO. 7 OF 7 SHEETS | STA. 99+20 TO STA. 102+90

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1238	125SB-1-R	LAKE	38	38
	D-91-045-08	CONTRACT NO. 60D57		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		