09-22-06 Letting, Item 005

CONTRACT NO. 64940

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
505	115BR-1	WINNEBAGO	36	1

PROJECT ENGINEER
BECKY MARRUFFO

SQUAD LEADER
THOMAS HALLA 815-284-5993

SENIOR SQUAD LEADER
MIKE YUSEF 815-284-5354

JAMES K. CLINARD
CHAMLIN & ASSOCIATES
815.223.3344

INDEX OF SHEETS

HIGHWAY STANDARDS

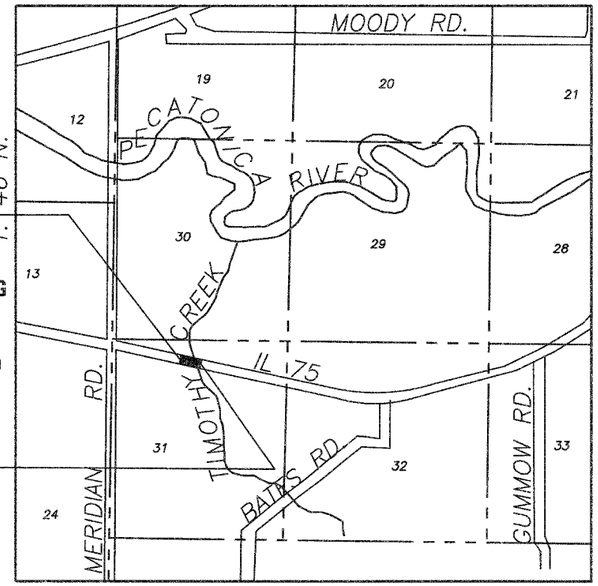
000001-04	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
001001	AREA OF REINFORCEMENT BARS
280001-02	TEMPORARY EROSION CONTROL SYSTEMS
482001	BITUMINOUS SHOULDER ADJACENT TO FLEXIBLE PAVEMENT
515001-02	NAME PLATE FOR BRIDGES
630001-06	STEEL PLATE BEAM GUARDRAIL
630201-03	PCC/BITUMINOUS STABILIZATION AT STEEL PLATE BEAM GUARDRAIL
630301-03	SHOULDER WIDENING FOR TYPE 1 (SPECIAL) GUARDRAIL TERMINALS
635001	DELINEATORS
635006-02	REFLECTOR AND TERMINAL MARKER PLACEMENT
635011-01	REFLECTOR MARKER AND MOUNTING DETAILS
~~667101~~	~~PERMANENT SURVEY MARKERS~~
701006-02	OFF-ROAD OPERATIONS, 2L, 2W 4.5 M (15') TO 600 MM (24") FROM EDGE OF PAVEMENT
701011-01	OFF-ROAD OPERATIONS 2L, 2W, DAY ONLY
701301-02	LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS
701306-01	LANE CLOSURE, 2L, 2W, SLOW MOVING OPERATIONS DAY ONLY, FOR SPEEDS ≥ 45 MPH
701311-02	LANE CLOSURE, 2L, 2W, MOVING OPERATIONS-DAY ONLY
701321-08	LANE CLOSURE, 2L, 2W, BRIDGE REPAIR WITH BARRIER
701326-02	LANE CLOSURE, 2L, 2W, PAVEMENT WIDENING, FOR SPEEDS ≥ 45 MPH
702001-06	TRAFFIC CONTROL DEVICES
704001-02	TEMPORARY CONCRETE BARRIER
720011	METAL POSTS FOR SIGNS, MARKERS AND DELINEATORS
780001-01	TYPICAL PAVEMENT MARKINGS
781001-02	TYPICAL APPLICATIONS RAISED REFLECTIVE PAVEMENT MARKERS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
PLANS FOR PROPOSED
FEDERAL AID HIGHWAY

FAP ROUTE 505 (IL 75)
SECTION 115BR-1
OVER TIMOTHY CREEK
WINNEBAGO COUNTY
PROJECT NO. BRF-0505(018)

C-92-083-06

R. 1 E. 3rd P.M.



NET LENGTH OF SECTION 584 FEET (0.111 MILES)
GROSS LENGTH OF SECTION 584 FEET (0.111 MILES)

-½ 0 ½ 1
SCALE IN MILE

IMPROVEMENT BEGINS STA. 60+06

SECTION 115BR-1 INCLUDES THE REMOVAL OF EXISTING STRUCTURE NO. 101-0114 AND CONSTRUCTION OF THE NEW STRUCTURE 101-0183, A THREE SIDED STRUCTURE OVER TIMOTHY CREEK AT STA 63+23.20

IMPROVEMENT ENDS STA. 65+90

TRAFFIC DATA
HIGHWAY CLASSIFICATION: RURAL MINOR ARTERIAL
2008 ADT = 2700
DESIGN SPEED 55 MPH
POSTED SPEED 55 MPH

0 5' 10' 15' — 1" = 5' CROSS SECTION (VERT.)
0 5' 10' 15' — 1" = 5' CROSS SECTION (HORIZ.)
0 50' 100' — 1" = 40' TRAFFIC CONTROL
0 50' 100' — 1" = 20' PLAN AND PROFILE

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

CONTRACT NO. 64940

D-92-091-03

LOCATION OF SECTION INDICATED THUS: -▬-

6/12/06
date

JAMES K. CLINARD
LICENSED PROFESSIONAL ENGINEER NO. 062-041793
STATE OF ILLINOIS
expires 11-30-2007

signature

PROFESSIONAL DESIGN FIRM LICENSE NO. 184-001717

CHAMLIN & ASSOCIATES
PERU ILLINOIS MORRIS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED June 22 2006
Gregory L. Mountain
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER
August 18, 2006
Mike Kline
ENGINEER OF DESIGN AND ENVIRONMENT
August 18, 2006
Milton R. Sees, P.E.
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

DISTRICT 2 DIXON IL

PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS

ROCKTON TOWNSHIP SECTION 31 WINNEBAGO COUNTY SECTION: 115BR-1 ROUTE: FAP ROUTE 505 (IL 75)

GENERAL NOTES

1. THE REMOVAL OF BITUMINOUS SURFACING NOT ON A RIGID TYPE BASE REMOVED IN CONJUNCTION WITH THE BASE SHALL BE REMOVED AS EARTH EXCAVATION. THE REMOVAL OF BITUMINOUS SURFACING ON A RIGID TYPE BASE REMOVED IN CONJUNCTION WITH THE BASE SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE FOR PAVEMENT REMOVAL OF THE TYPE SPECIFIED.

2. THE FINAL TOP FOUR INCHES OF SOIL IN ANY RIGHT-OF-WAY AREA DISTURBED BY THE CONTRACTOR MUST BE CAPABLE OF SUPPORTING VEGETATION. THE SOIL MUST BE FROM THE A HORIZON (ZERO TO 2' DEEP) OF SOIL PROFILES OF LOCAL SOILS.

3. THE CONTRACTOR SHALL SEED ALL DISTURBED AREAS WITHIN THE PROJECT LIMITS. SEEDING CLASS 2A SALT TOLERANT ROAD MIXTURE SHALL BE USED, EXCEPT IN FRONT OF PROPERTIES WHERE THE GRASS WILL BE MOWED, THEN USE SEEDING, CLASS 1 LAWN MIXTURE. THIS WORK WILL BE INCLUDED IN THE CONTRACT UNIT PRICE PER CUBIC YARD FOR EARTH EXCAVATION.

4. FERTILIZER SHALL BE APPLIED TO ALL DISTURBED AREAS AND INCORPORATED INTO THE SEEDBED PRIOR TO SEEDING OR PLACEMENT OF SOD AT THE RATE SPECIFIED IN SECTIONS 250 AND 252 OF THE STANDARD SPECIFICATIONS. THIS WORK SHALL BE INCLUDED IN THE COST OF EARTH EXCAVATION.

5. MULCH METHOD 2 SHALL BE APPLIED OVER ALL SEEDED AREAS. THIS SHALL BE INCLUDED IN THE COST OF THE EARTH EXCAVATION.

6. PREVIOUSLY PUGMILLED STOCKPILES OF "TYPE A" OLDER THAN 1 MONTH WILL NOT BE APPROVED FOR USE UNTIL A MOISTURE CHECK IS RUN TO VERIFY MOISTURE CONTENT. MATERIAL SHIPPED TO PROJECTS WITHOUT BEING TESTED WILL NOT BE ACCEPTED.

7. THE SUBGRADE ON THIS PROJECT, EXCLUSIVE OF ROCK CUT AREAS IS SCHEDULED TO BE IMPROVED TO A 12" DEPTH ACCORDING TO MECHANISTIC PAVEMENT DESIGN. THE AREAS SCHEDULED TO BE IMPROVED TO A DEPTH GREATER THAN 12" ARE ESTIMATED BASED ON THE ORIGINAL GEOTECHNICAL INVESTIGATION. THE SUBGRADE SHALL BE PROCESSED IN ACCORDANCE WITH ARTICLE 301.03 OF THE STANDARD SPECIFICATIONS BEFORE THE ENGINEER SHALL DETERMINE THE LIMITS AND THE ADDITIONAL THICKNESS OF IMPROVEMENT REQUIRED, IF ANY.

8. EXCEPT FOR THE TOP 3", ALL AGGREGATE BASES AND SUBBASES 12" IN THICKNESS SHALL BE CONSTRUCTED OF AGGREGATE GRADATION CA-2. IF THE SPECIFIED THICKNESS EXCEEDS 12" THE BASES OR SUBBASES SHALL BE CONSTRUCTED OF TOPSIZE 6" BREAKER-RUN CRUSHED STONE WITH 70% TO 90% BY WEIGHT, PASSING THE 4" SIEVE AND 15% TO 40% BY WEIGHT, PASSING THE 2" SIZE SIEVE, EXCEPT FOR THE TOP 3". THE BREAKER-RUN CRUSHED STONE SHALL BE REASONABLY UNIFORMLY GRADED FROM COARSE TO FINE AND BE TAKEN FROM A QUARRY LEDGE CAPABLE OF OF PRODUCING CLASS "D" QUALITY AGGREGATE. THE TOP 3" SHALL BE GRADATION CA-6 OR CA-10 REGARDLESS OF THICKNESS. THE WATER NECESSARY TO ACHIEVE COMPACTION IN ALL BUT THE TOP 3" LAYER MAY BE ADDED AFTER THE SUBBASE OR BASE COURSE IS PLACED ON THE GRADE.

9. THE FOLLOWING MIXTURE REQUIREMENTS ARE APPLICABLE FOR THIS PROJECT:

MIXTURE DESIGN	SURFACE	BINDER	TOP LIFT SHOULDER	BOTTOM LIFTS SHOULDER	BIT. BASE CSE
PG:	PG 64-22	PG 64-22	PG58-22	PG58-22	PG58-22
RAP%: (MAX)	15	25	30	30	50
DESIGN AIR VOIDS	4.2@N50	4.2@N50	3@N50	2@N50	2@N50
MIXTURE COMPOSITION (GRADATION MIXTURE)	IL 9.5 OR 12.5	IL 19.0	IL 9.5 OR 12.5	BAM	BAM
FRICTION AGGREGATE	D	N/A	C	N/A	N/A
20 YEAR ESAL	1.5	1.5	N/A	N/A	N/A

10. ON FULL DEPTH PAVEMENT, SHOULDER WIDTHS OF 6 FT. OR LESS MAYBE PLACED, AT THE CONTRACTOR'S OPTION, SIMULTANEOUSLY WITH THE ADJACENT TRAFFIC LANE FOR BOTH THE BINDER AND SURFACE COURSE, PROVIDED THE CROSS SLOPE OF BOTH THE PAVEMENT AND SHOULDER CAN BE SATISFACTORILY OBTAINED. THE SHOULDER WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE YARD FOR BITUMINOUS SHOULDERS OF THE THICKNESS SPECIFIED ON THE PLANS.

11. INSTALL A "TO ACTUATE SIGNAL" SIGN FOR THE TRAFFIC SIGNAL DETECTOR LOOPS. THE DETAIL OF THIS SIGN IS INCLUDED IN THE PLANS. THIS WORK WILL BE INCLUDED IN THE COST OF TRAFFIC CONTROL AND PROTECTION STANDARD 701321.

12. BITUMINOUS AND AGGREGATE PRIME COAT SHALL BE PLACED IN ACCORDANCE WITH SECTION 406 OF THE STANDARD SPECIFICATIONS. THE COST OF THE PRIME COATS SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE PER TON FOR BITUMINOUS CONCRETE SURFACE COURSE OF THE TYPE SPECIFIED.

13. A NATIONWIDE 404 PERMIT HAS BEEN ISSUED FOR THIS PROJECT AND THE CONDITIONS OF THAT PERMIT MUST BE ADHERED TO.

14. THE NEW NUMBER FOR THIS STRUCTURE WILL BE 101-0183.

15. THE CONTRACTOR SHALL SUBMIT FOUR COPIES OF THE REQUIRED SHOP DRAWINGS FOR REVIEW AND APPROVAL TO THE BUREAU OF BRIDGES AND STRUCTURES, 2300 SOUTH DIRKSEN PARKWAY, SPRINGFIELD, IL 62764. AFTER APPROVAL OF INITIAL SUBMITTAL, THE CONTRACTOR SHALL SUBMIT ONE SET OF SHOP DRAWINGS TO ERIC HARM, ENGINEER OF MATERIALS, 126 EAST ASH STREET, SPRINGFIELD, IL 62706, AND EIGHT (8) SETS OF SHOP DRAWINGS TO BE DISTRIBUTED TO:

    DISTRICT 2 DISTRICT ENGINEER (1)
    FABRICATOR (1)
    CONTRACTOR (2)
    RESIDENT ENGINEER (2)
    DISTRICT 2 BUREAU OF MATERIALS (2)

16. THE REVIEW AND APPROVAL OF TEMPORARY SHEET PILING WILL REQUIRE 4 TO 6 WEEKS. THE CONTRACTOR SHALL SCHEDULE HIS WORK ACCORDINGLY.

17. THE BORING LOGS FOR THIS STRUCTURE INDICATE THAT GROUNDWATER LEVELS MAY ENCROACH ON THE CONSTRUCTION LIMITS OF THIS STRUCTURE. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO CONTROL THE GROUND WATER AND DIVERT THE STREAM FLOW DURING CONSTRUCTION IN ORDER TO KEEP THE CONSTRUCTION AREA FREE OF WATER. THE METHOD OF CONTROLLING THE WATER SHALL BE SUBJECT TO APPROVAL OF THE ENGINEER AND THE COST SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE FOR THREE-SIDED PRECAST CONCRETE STRUCTURES 36' X 11'.

18. CULVERT AND BRIDGE FLOWS MUST BE MAINTAINED THROUGHOUT THE PROJECT. NORMAL FLOW SHALL BE ALLOWED TO PASS AT THE RATE IT ENTERS THE JOBSITE. HIGH FLOWS SHALL BE ALLOWED TO PASS WITHOUT CAUSING DAMAGE TO UPSTREAM PROPERTIES.

19. THE CONTRACTOR SHALL SUPPLY THE RESIDENT ENGINEER WITH THE MANUFACTURER'S INSTALLATION REQUIREMENTS FOR THE TYPE OF STEEL PLATE BEAM GUARDRAIL TERMINAL TYPE 1 SPECIAL (TANGENT) OR STEEL PLATE BEAM GUARDRAIL TERMINAL TYPE 1 SPECIAL (FLARED).

20. ONE 16D GALVANIZED NAIL SHALL BE USED TO TOE NAIL THE WOOD BLOCK OUT TO THE WOOD POST ON ALL TRAFFIC BARRIER TERMINAL TYPE 1 SPECIALS.

21. DELINEATORS SHALL BE INSTALLED AS SHOWN ON STANDARD 635001, EXCEPT THAT THE POST SHALL BE ROTATED 180° AND ONLY METAL-BACKED DELINEATORS SHALL BE PERMITTED.

22. DELINEATORS SHALL BE PLACED AT THE ENDS OF APPROACH GUARDRAIL TERMINAL SECTIONS, AND AT EACH HEADWALL OR END SECTION OF AR CULVERTS. THIS WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE EACH FOR DELINEATORS.

23. PERMANENT SURVEY MARKERS, TYPE II, SHALL BE SET AT INTERVALS OF 1 MILE OR AS DIRECTED BY THE ENGINEER. BRIDGE OR CULVERT PROJECTS SHALL HAVE ONE SURVEY MARKER PLACED NEAR THE STRUCTURE. ESTIMATED: 2 EACH.

24. PERMANENT SURVEY MARKERS, TYPE II SHALL BE CAST-IN-PLACE AS SHOWN ON DISTRICT STANDARD 66.2

25. THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER A DESCRIPTION OF LOCATION, ELEVATION, AND COORDINATES FOR EACH PERMANENT SURVEY MARKER. THE ENGINEER SHALL SUBMIT THIS INFORMATION TO THE SURVEY CREW.

26. WORK ON THIS PROJECT WILL BE IN PROGRESS AT THE SAME TIME AS WORK ON ADJACENT PROJECTS.

    WORK ON THESE PROJECTS SHALL BE SCHEDULED TO KEEP INTERFERENCE BETWEEN ALL THE PROJECTS TO A MINIMUM. THE CONTRACTORS SHALL INFORM EACH OTHER OF PROGRESS OF THE PROJECTS AND GIVE FAIR WARNING TO THE OTHER CONTRACTORS WHEN A PROBLEM MIGHT BE ENCOUNTERED.

27. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING UTILITY PROPERTY DURING CONSTRUCTION OPERATIONS AS OUTLINED IN ARTICLE 107.31 OF THE STANDARD SPECIFICATIONS. A MINIMUM OF 48 HOURS ADVANCE NOTICE IS REQUIRED FOR NON-EMERGENCY WORK. THE JULIE NUMBER IS 800-892-0123. THE FOLLOWING LISTED UTILITIES LOCATED WITHIN THE PROJECT LIMITS OR IMMEDIATELY ADJACENT TO THE PROJECT CONSTRUCTION LIMITS ARE MEMBERS OF JULIE:

COMMONWEALTH EDISON CO.	ELECTRIC
VERIZON	TELEPHONE
NICOR GAS CO.	GAS
CHARTER COMM	COMMUNICATIONS

    FOLLOWING ARE THE KNOWN UTILITIES LOCATED WITHIN THE PROJECT LIMITS OR IMMEDIATELY ADJACENT TO THE PROJECT CONSTRUCTION LIMITS WHICH ARE NOT MEMBERS OF JULIE AND SHOULD BE NOTIFIED INDIVIDUALLY BY THE CONTRACTOR:

IDOT-DISTRICT 2 819 DEPOT AVENUE DIXON, IL 61021	GOVERNMENT (815) 284-5469

28. THE APPLICABLE PORTIONS OF ARTICLE 105.07 OF THE STANDARD SPECIFICATION SHALL APPLY EXCEPT FOR THE FOLLOWING: THE CONTRACTOR SHALL BE RESPONSIBLE TO LOCATE THE VERTICAL DEPTHS OF THE UNDERGROUND UTILITIES WHICH MAY INTERFERE WITH CONSTRUCTION OPERATIONS. THIS WORK WILL NOT BE MEASURED OR PAID FOR SEPARATELY, BUT SHALL BE CONSIDERED AS INCLUDED IN THE UNIT BID PRICE FOR THE ITEM OF CONSTRUCTION INVOLVED.

    PER SB 699 (90 DAY UTILITY RELOCATION LAW), ONCE RIGHT-OF-WAY IS CLEAR TO AWARD THE PROJECT, A NOTICE WILL BE SENT TO THE UTILITY COMPANIES INSTRUCTING THEM TO HAVE THEIR FACILITIES RELOCATED WITHIN 90 DAYS. ESTIMATED DATE RELOCATION COMPLETE = LETTING DATE + 135 DAYS.

29. CADD DATA WILL BE AVAILABLE TO CONTRACTORS AND CONSULTANTS WORKING ON THIS PROJECT. THIS INFORMATION WILL BE PROVIDED UPON REQUEST AS MICROSTATION CADD FILES AND GEOPAK COORDINATE GEOMETRY FILES ONLY. IF DATA IS REQUIRED IN OTHER FORMATS IT WILL BE YOUR RESPONSIBILITY TO MAKE THESE CONVERSIONS. IF ANY DISCREPANCY OR INCONSISTENCY ARISES BETWEEN THE ELECTRONIC DATA AND THE INFORMATION ON THE HARD COPY, THE INFORMATION ON THE HARD COPY SHOULD BE USED. CONTACT THE DISTRICT'S PROJECT ENGINEER TO REQUEST THESE FILES.

30. BACKFILL MATERIAL SHALL BE INSTALLED AS NOTED ON THE PROVISIONS FOR THREE SIDED PRECAST CONCRETE STRUCTURE. THE BACKFILL MATERIAL GRADATION, COMPACTION AND INSTALLATION METHOD SHALL CONFORM TO THE PRE-CAST STRUCTURE MANUFACTURER'S REQUIREMENTS. THIS WORK SHALL BE INCLUDED IN THE CONTRACT PRICE PER METER (FOOT) FOR THREE SIDED PRECAST CONCRETE STRUCTURES OF THE SIZE SPECIFIED, AS INDICATED IN THE PROVISIONS AND PLAN NOTES.

COMMITMENTS

1. THERE ARE TWO JURISDICTIONAL WETLANDS LOCATED WITHIN THE PROJECT AREA, BUT BEYOND THE CONSTRUCTION LIMITS. THESE WILL NOT BE IMPACTED BY PROJECT CONSTRUCTION.

2. THESE WETLANDS ARE SHOWN ON THE PLAN SHEET IN THE DESIGN REPORT AND WILL BE SHOWN ON THE CONTRACT PLANS.

3. APPROXIMATELY FOUR MONTHS PRIOR TO PROJECT LETTING AND PRIOR TO THE SUBMITTAL OF FINAL PLANS BY THE CONSULTANT TO THE DEPARTMENT, AN INSPECTION OF THE EXISTING STRUCTURE SHALL BE CONDUCTED TO EVALUATE WHETHER STAGE CONSTRCUTION REMAINS FEASIBLE BASED ON THE DETERIORATED CONDITION OF THE DECK BEAMS. RECOMMENDATIONS ON STAGING FEASIBILITY AND REPLACEMENT OF DETERIORATED DECK BEAMS SHOULD BE SUBMITTED TO THE DEPARTMENT'S BRIDGE MAINTENANCE ENGINEER FOR REVIEW AND CONCURRENCE. THE BEAM REMOVAL AND REPLACEMENT PLAN SHOULD BE REVISED AS NECESSARY BASED ON THE RESULTS OF THE INSPECTION. IF IT IS DETERMINED THAT STAGE CONSTRUCTION IS NO LONGER FEASIBLE AND ROAD CLOSURE IS NECESSARY, COORDINATION WITH LOCAL AGENCIES SHOULD BE CONDUCTED PER DEPARTMENT POLICIES.

4. ONE MONTH PRIOR TO THE START OF CONSTRUCTION, THE RESIDENT ENGINEER SHALL CONTACT PROPERTY OWNER, MARK SHEDD (815/629-2563), TO ALLOW HIM SUFFICIENT TIME TO REMOVE FENCES CURRENTLY LOCATED ON STATE RIGHT-OF-WAY. MR. SHEDD HAS ALSO REQUESTED A MEEETING WITH THE RESIDENT ENGINEER PRIOR TO THE START OF CONSTRUCTION.

5. THE CONTRACTOR SHALL CONTACT THE ADJACENT PROPERTY OWNERS ONE (1) WEEK PRIOR TO WORK BEGINNING TO ALLOW FOR ARRANGEMENTS WITH THEIR LIVESTOCK. NOTICE SHALL BE DOCUMENTED AND A COPY GIVEN TO THE RESIDENT ENGINEER. CONSIDERATION AND COOPERATION SHALL BE PROVIDED BETWEEN THE CONTRACTOR AND THE ADJACENT PROPERTY OWNERS AS REQUIRED.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

GENERAL NOTES
FAP 505 (IL 75)
SECTION 115BR-1
WINNEBAGO COUNTY

SCALE: VERT. HORIZ.
DATE 11/05

DRAWN BY NOE
CHECKED BY JKC

PLOT DATE = 4/06
FILE NAME = Z09103GNOTES.DGN
PLOT SCALE = NONE
USER NAME = CHAMS

CONTRACT NO. 64940

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
505	115BR-1	WINNEBAGO	35	3
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

	Item No.	Item	Unit	Total QUANTITY	80% FED 20% STATE X028-2A ROADWAY	BRIDGE
	20101000	TEMPORARY FENCE	FOOT	360	360	--
	20200100	EARTH EXCAVATION	CU YD	249	249	--
	20300100	CHANNEL EXCAVATION	CU YD	37	37	--
	28000400	PERIMETER EROSION BARRIER	FOOT	155	155	--
	28100107	STONE RIPRAP, CLASS A4	SQ YD	402	--	402
	31100910	SUB-BASE GRANULAR MATERIAL, TYPE A 12"	SQ YD	584	584	--
	35101400	AGGREGATE BASE COURSE, TYPE B	TON	85	85	--
	35650300	BASE COURSE WIDENING 8"	SQ YD	280	280	--
	40600990	TEMPORARY RAMP	SQ YD	47	47	--
	44000100	PAVEMENT REMOVAL	SQ YD	344	344	--
	48101200	AGGREGATE SHOULDERS, TYPE B	TON	36	36	--
	48202400	BITUMINOUS SHOULDERS SUPERPAVE 6"	SQ YD	227	227	--
	50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1	--	1
	50300225	CONCRETE STRUCTURES	CU YD	74.9	--	74.9
	50800105	REINFORCEMENT BARS	POUND	5900	--	5900
	50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	1280	--	1280
	51201000	FURNISHING METAL PILE SHELLS 12"	FOOT	2003	--	2003
	51202600	DRIVING AND FILLING SHELLS	FOOT	2003	--	2003
	51203200	TEST PILE METAL SHELLS	EACH	1	--	1
	51205200	TEMPORARY SHEET PILING	SQ FT	2046	--	2046
	51500100	NAME PLATES	EACH	1	--	1
*	63000000	STEEL PLATE BEAM GUARD RAIL, TYPE A	FOOT	537.5	537.5	--
*	63000005	STEEL PLATE BEAM GUARD RAIL, TYPE B	FOOT	100	100	--
*	63000025	STEEL PLATE BEAM GUARD RAIL, ATTACHED TO STRUCTURES	FOOT	75	75	--
*	63100167	TRAFFIC BARRIER TERMINAL TYPE 1, SPECIAL (TANGENT)	EACH	4	4	--
	63200310	GUARDRAIL REMOVAL	FOOT	393	393	--
	63500105	DELINEATORS	EACH	4	4	--
	66700305	PERMANENT SURVEY MARKERS, TYPE II	EACH	2	2	--
	67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	4	4	--

	Item No.	Item	Unit	Total QUANTITY	80% FED 20% STATE ROADWAY	BRIDGE
	67100100	MOBILIZATION	L SUM	1	1	--
	70100405	TRAFFIC CONTROL AND PROTECTION, STANDARD 701321	EACH	1	1	--
	70100460	TRAFFIC CONTROL AND PROTECTION, STANDARD 701306	L SUM	1	1	--
	70100500	TRAFFIC CONTROL AND PROTECTION, STANDARD 701326	L SUM	1	1	--
	70103815	TRAFFIC CONTROL SURVEILLANCE	CAL DA	5	5	--
*	70106500	TEMPORARY BRIDGE TRAFFIC SIGNALS	EACH	1	1	--
	70300100	SHORT-TERM PAVEMENT MARKING	FOOT	124	124	--
	70300220	TEMPORARY PAVEMENT MARKING - LINE 4"	FOOT	1993	1993	--
	70300280	TEMPORARY PAVEMENT MARKING - LINE 24"	FOOT	24	24	--
	70301000	WORK ZONE PAVEMENT MARKING REMOVAL	SQ FT	754	754	--
	70400100	TEMPORARY CONCRETE BARRIER	FOOT	475	475	--
	70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	475	475	--
*	78000200	THERMOPLASTIC PAVEMENT MARKING - LINE 4"	FOOT	1250	1250	--
*	78100100	RAISED REFLECTIVE PAVEMENT MARKER	EACH	2	2	--
	78200410	GUARDRAIL MARKERS, TYPE A	EACH	10	10	--
	78201000	TERMINAL MARKER - DIRECT APPLIED	EACH	4	4	--
	78300100	PAVEMENT MARKING REMOVAL	SQ FT	417	417	--
	X0324032	THREE-SIDED PRECAST CONCRETE STRUCTURES 36' X 11'	FOOT	41.9	--	41.9
	X4066414	BITUMINOUS CONCRETE SURFACE COURSE, SUPERPAVE MIX "C", N50	TON	11	11	--
	X4073146	BITUMINOUS CONCRETE PAVEMENT (FULL-DEPTH), SUPERPAVE, 13 1/4"	SQ YD	533	533	--
	Z0002600	BAR SPLICERS	EACH	24	--	24
	Z0013798	CONSTRUCTION LAYOUT	L SUM	1	1	--
	28200200	FILTER FABRIC	SQ YD	402	--	402
†	Z0030250	IMPACT ATTENTUATORS, TEMPORARY (NON-REDIRECTIVE), TEST LEVEL 3	EACH	2	2	--
†	Z0030350	IMPACT ATTENTUATORS, RELOCATE (NON-REDIRECTIVE), TEST LEVEL 3	EACH	2	2	--

* SPECIALTY ITEM

† SFTY-3N

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES
FAP 505 (IL 75)
SECTION 115BR-1
WINNEBAGO COUNTY

SCALE: VERT. HORIZ.

DATE 06/06

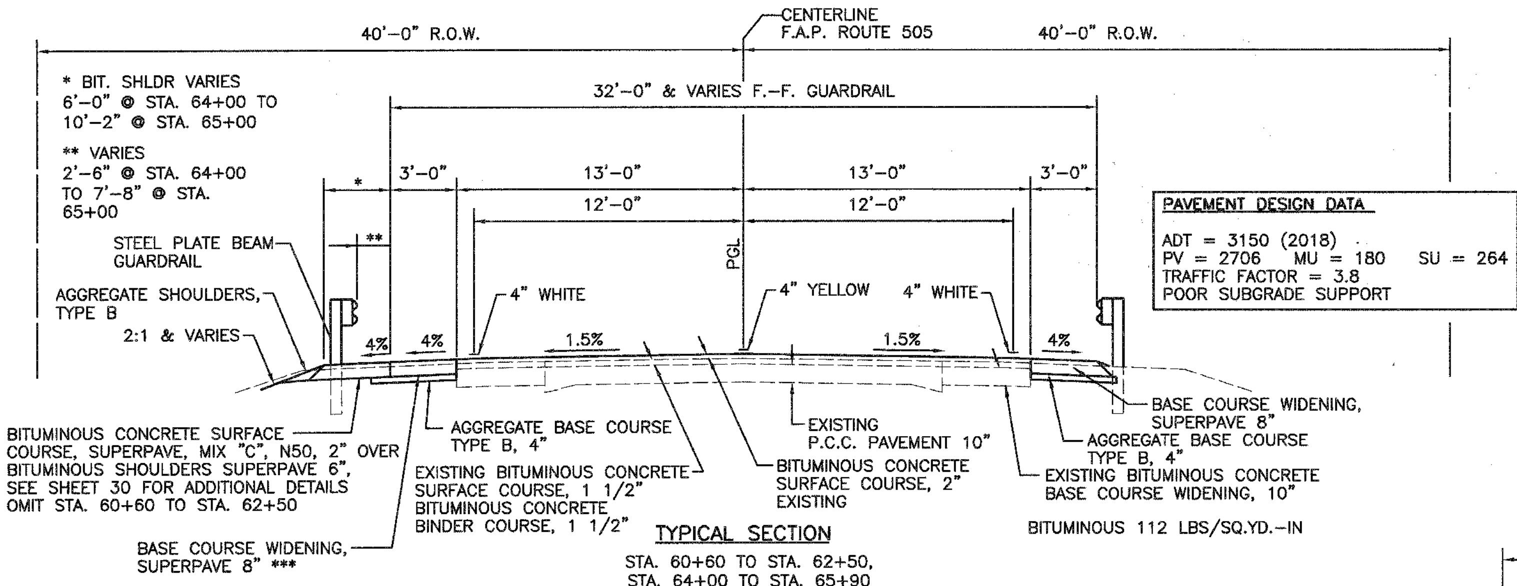
DRAWN BY NV

CHECKED BY JKC

PLOT DATE = 04/26
FILE NAME = Z09103SUMQUANT
PLOT SCALE = NONE
USER NAME = CHAMS

CONTRACT NO. 64940

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
505	115BR-1	WINNEBAGO	35	4
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



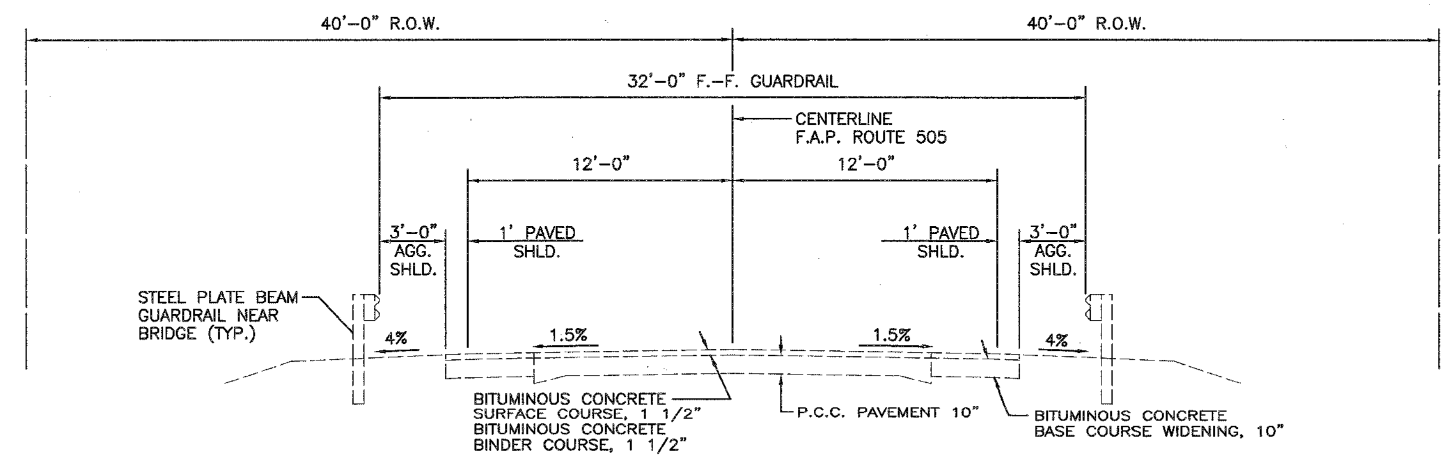
TYPICAL SECTION

STA. 60+60 TO STA. 62+50,
STA. 64+00 TO STA. 65+90

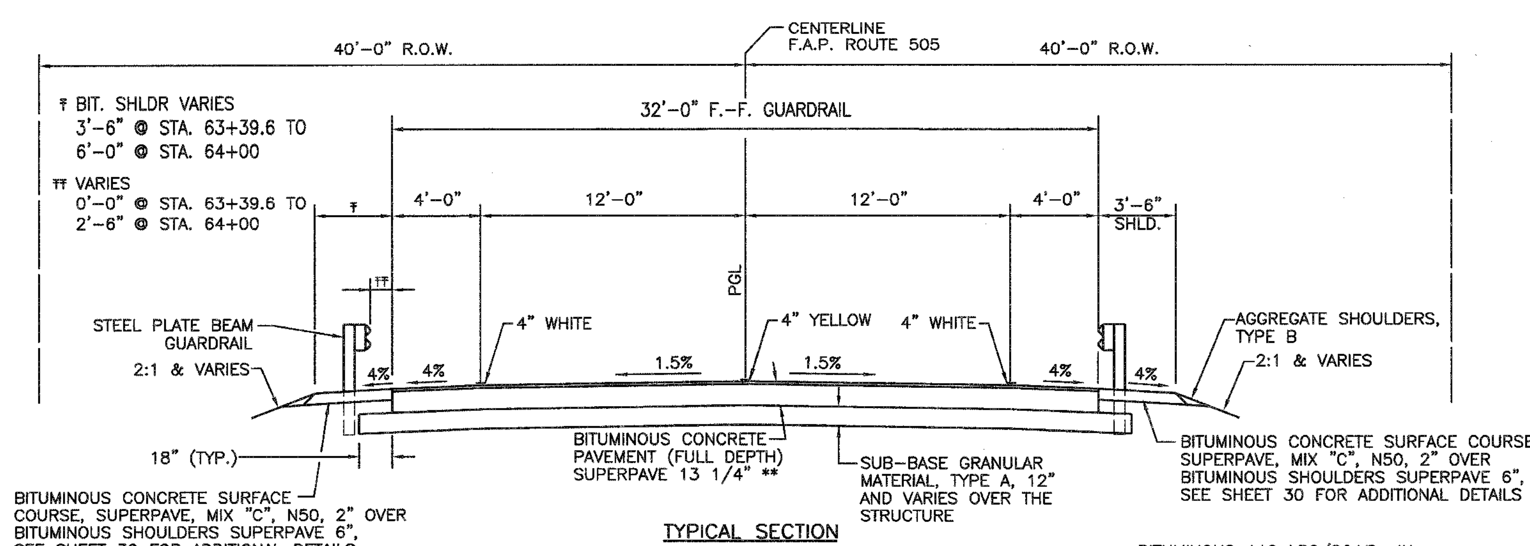
PAVEMENT DESIGN DATA

ADT = 3150 (2018)
PV = 2706 MU = 180 SU = 264
TRAFFIC FACTOR = 3.8
POOR SUBGRADE SUPPORT

*** BASE COURSE WIDENING AND AGGREGATE BASE COURSE ON THIS SIDE SHALL BE FROM STA 60+60 TO STA 62+77.8 AND FROM STA 63+55.8 TO STA 65+90



EXISTING
TYPICAL SECTION



TYPICAL SECTION

STA. 62+50 TO STA. 64+00

** 2" BITUMINOUS CONCRETE SURFACE COURSE, SUPERPAVE, MIX "D", N50
11 1/4" BITUMINOUS CONCRETE BINDER COURSE, SUPERPAVE, IL-19.0, N50

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

TYPICAL SECTIONS
FAP 505 (IL 75)
SECTION 115BR-1
WINNEBAGO COUNTY

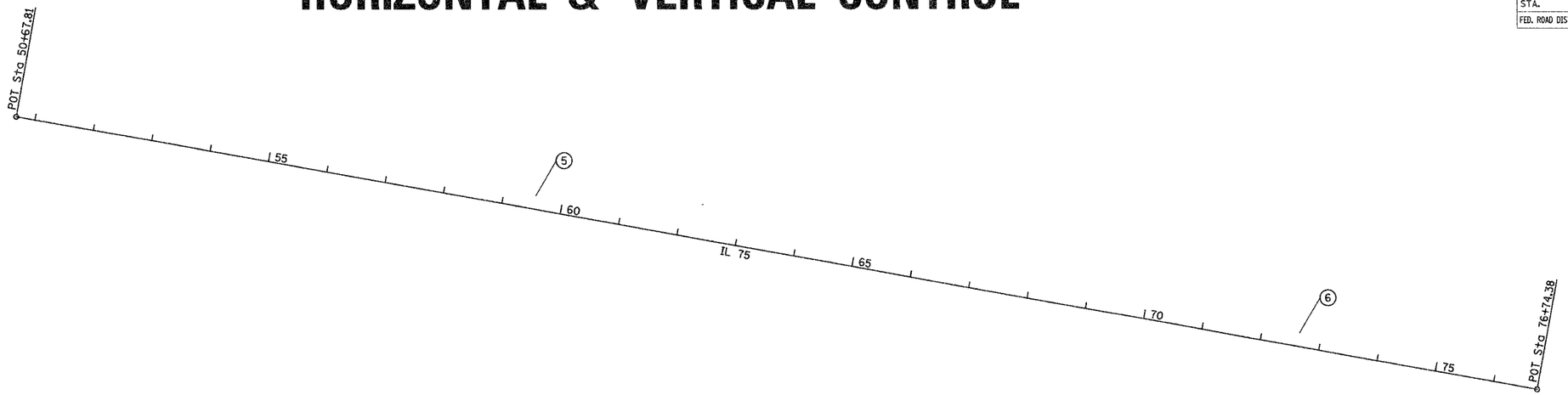
SCALE: VERT. 1" = 800' HORIZ. 1" = 800'
DATE 12/05
DRAWN BY NOE
CHECKED BY JKC

PLOT DATE = 04/06
FILE NAME = Z0?03TYP
PLOT SCALE = 1" = 20'
USER NAME = CHAMS

CONTRACT NO. 64940

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
505	115BR-1	WINNEBAGO	35	5
STA.		TO STA.		
FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		

HORIZONTAL & VERTICAL CONTROL

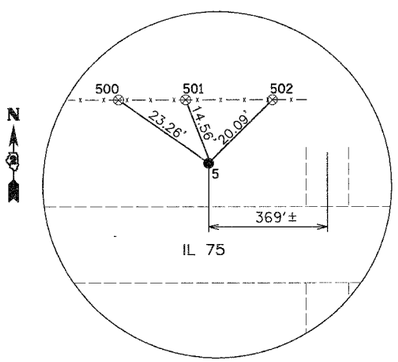


Chain ALIGN75 contains:
21 22

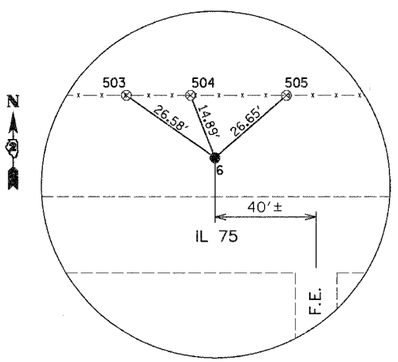
Beginning chain ALIGN75 description

Point 21	N 2,098,949.6100	E 2,564,994.0700	Sta 50+67.810
Course from 21 to 22	S 79° 46' 20.57" E	Dist 2,606.5680	
Point 22	N 2,098,486.7900	E 2,567,559.2200	Sta 76+74.378

Ending chain ALIGN75 description



HORIZONTAL CONTROL
POINT No. 5



HORIZONTAL CONTROL
POINT No. 6

REFERENCE TIES

POINT	CHAIN	STATION	OFFSET	DESCRIPTION
500	ALIGN 75	59+30.92	35.55' LT.	SURVEY NAIL & SQUARE WASHER IN WOOD FENCE POST
501	ALIGN 75	59+46.98	35.26' LT.	SURVEY NAIL & SQUARE WASHER IN WOOD FENCE POST
502	ALIGN 75	59+77.27	35.38' LT.	SURVEY NAIL & SQUARE WASHER IN WOOD FENCE POST
503	ALIGN 75	72+44.78	37.22' LT.	SURVEY NAIL & SQUARE WASHER IN WOOD FENCE POST
504	ALIGN 75	72+61.74	36.78' LT.	SURVEY NAIL & SQUARE WASHER IN WOOD FENCE POST
505	ALIGN 75	72+76.88	36.77' LT.	SURVEY NAIL & SQUARE WASHER IN WOOD FENCE POST

HORIZONTAL CONTROL POINTS

POINT	NORTH	EAST	ELEVATION	CHAIN	STATION	OFFSET	DESCRIPTION
5	2098814.568	2565870.048	731.78	ALIGN 75	59+53.85	22.64' LT.	IRON ROD CAPPED
6	2098582.296	2567158.508	732.06	ALIGN 75	72+63.08	22.84' LT.	IRON ROD CAPPED

BENCH MARKS

POINT	NORTH	EAST	ELEVATION	CHAIN	STATION	OFFSET	DESCRIPTION
406	2098703.950	2566258.260	728.74	ALIGN 75	63+55.53	17.29' RT.	CHISELED SQUARE TOP OF S.E. WING WALL OF BRIDGE
407	2098844.380	2565439.250	733.61	ALIGN 75	55+24.60	24.51' RT.	CHISELED SQUARE EAST HEADWALL 3RD P.E. OF STRURCTURE

FILE NAME = 20N105HVC.DGN
PLOT SCALE = 100
PLOT DATE = 4/06
OPERATOR = CHAMS

CONTRACT NO. 64940

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
505	115BR-1	WINNEBAGO	35	6

STA. __________ TO STA. __________

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

TEMPORARY FENCE *

LOCATION	FOOT
AS DIRECTED BY ENGINEER	360
TOTAL	360

* SEE COMMITMENTS ON SHEET 2 OF 35

PAVEMENT REMOVAL

LOCATION		SQ YD
STA 62+50 TO STA 63+09.94	(STAGE I)	92
STA 63+42.19 TO STA 64+00	(STAGE I)	88
STA 62+50 TO STA 63+02.44	(STAGE II)	72
STA 63+36.35 TO STA 64+00	(STAGE II)	92
TOTAL		344

EARTHWORK QUANTITIES

LOCATION	THEORETICAL		SHORTAGE (-) OR EXCESS (+)	REMARKS
	CUT	FILL		
	CU YD	CU YD	CU YD	
			[(A)0.75]-(B)	
	(A)	(B)	(C)	
IL 75				
STAGE I	121	7	84	--
STAGE II	128	39	57	--
TOTAL	249	46	141	
	PAY ITEM 20200100	FOR INFO ONLY		

PAVEMENT SCHEDULE

LOCATION (STA. TO STA.)	31100910 SUB-BASE GRANULAR MATERIAL, TYPE A 12"	35101400 AGGREGATE BASE COURSE, TYPE B	35650300 BASE COURSE WIDENING, 8"	40600990 TEMPORARY RAMP	48101200 AGGREGATE SHOULDERS, TYPE B	48202400 BITUMINOUS SHOULDERS SUPERPAVE 6"	X4073146 BITUMINOUS CONCRETE PAVEMENT (FULL DEPTH), SUPERPAVE, 13 ¼"	X4066414 BITUMINOUS CONCRETE SURFACE COURSE, SUPERPAVE, MIX "C", N50
	SQ YD	TON	SQ YD	SQ YD	TON	SQ YD	SQ YD	TON
STA 60+60 TO STA 62+77.58 (STAGE 1)		24	80					
STA 63+54 TO STA 65+90 (STAGE 1)		24	77					
STA 60+60 TO STA 62+50 (STAGE 2)		18	59					
STA 64+00 TO STA 65+90 (STAGE 2)		19	64					
STA 62+50 TO STA 64+00 (STAGE 1)	292			22	18	58	250	1
STA 62+50 TO STA 64+00 (STAGE 2)	292			25	18	169	283	10
TOTAL	584	85	280	47	36	227	533	11

CHANNEL EXCAVATION

LOCATION	CU YD
AS DIRECTED BY ENGINEER	37
TOTAL	37

PERIMETER EROSION BARRIER

LOCATION	FOOT
LT, STA 62+50 TO STA 62+80	30
LT, STA 63+50 TO STA 64+75	125
TOTAL	155

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

SCHEDULE OF QUANTTITES
FAP 505 (IL 75)
SECTION 115BR-1
WINNEBAGO COUNTY

SCALE: VERT. HORIZ.
DATE: 12/05
DRAWN BY NOE
CHECKED BY JKC

PLOT DATE = 4/06
FILE NAME = Z09103SCHED
PLOT SCALE = NONE
USER NAME = CHAMS

CONTRACT NO. 64940

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
505	115BR-1	WINNEBAGO	35	7
STA. _____		TO STA. _____		
FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		

STEEL PLATE BEAM GUARD RAIL, TY. A

LOCATION	FOOT
STA 60+56.00 TO STA 62+81.00 (STAGE 1)	225
STA 63+68.50 TO STA 64+81.00 (STAGE 1)	112.5
STA 61+64.50 TO STA 62+77.00 (STAGE 2)	112.5
STA 63+64.50 TO STA 64+52.00 (STAGE 2)	87.5
TOTAL	537.50

STEEL PLATE BEAM GUARD RAIL, TYPE B

LOCATION	FOOT
STA 62+81.00 TO STA 63+06.00 (STAGE 1)	25
STA 63+43.50 TO STA 63+68.50 (STAGE 1)	25
STA 62+77.00 TO STA 63+02.00 (STAGE 2)	25
STA 63+39.50 TO STA 63+64.50 (STAGE 2)	25
TOTAL	100

STEEL PLATE BEAM GUARD RAIL, ATTACHED TO STRUCTURES

LOCATION	FOOT
STA 63+06 TO STA 63+43.5 (STAGE 1)	37.5
STA 63+02 TO STA 63+39.5 (STAGE 2)	37.5
TOTAL	75

TRAFFIC BARRIER TERMINAL TYPE 1 SPECIAL (TANGENT)

LOCATION	EACH
STA 60+56.00	1
STA 61+64.50	1
STA 64+52.00	1
STA 64+81.00	1
TOTAL	4

GUARDRAIL REMOVAL

LOCATION	FOOT
STA 61+91.15 TO STA 62+92.81 (STAGE 1)	102
STA 63+70.54 TO STA 64+66.67 (STAGE 1)	96
STA 61+79.43 TO STA 62+75.89 (STAGE 2)	97
STA 63+53.89 TO STA 64+52.32 (STAGE 2)	98
TOTAL	393

DELINEATORS

LOCATION	EACH
AT EACH TYPE 1 TERMINAL END	4
TOTAL	4

TEMPORARY BRIDGE TRAFFIC SIGNAL

LOCATION	EACH
STA 59+95 RT	.25
STA 60+20 LT	.25
STA 66+27 RT	.25
STA 66+52 LT	.25
TOTAL	1

SHORT-TERM PAVEMENT MARKING

LOCATION	FOOT
STA. 59+55 TO STA. 67+02	76
STA. 60+60 TO STA. 65+90, LT.	24
STA. 60+60 TO STA. 65+90, RT.	24
TOTAL	124

TEMPORARY PAVEMENT MARKING

	70300220 4"	70300280 24"
LOCATION	FOOT	FOOT
STAGE I	1003	24
STAGE II	990	---
TOTAL	1993	24

WORK ZONE PAVEMENT MARKING REMOVAL

LOCATION	SQ FT
SHORT TERM PAVEMENT MARKING	41
TEMPORARY PAVEMENT MARKING	713
TOTAL	754

TEMPORARY CONCRETE BARRIER

LOCATION	FOOT
STA 60+88 TO STA 62+00	112.5
STA 62+00 TO STA 64+50	250
STA 64+50 TO STA 65+62	112.5
TOTAL	475

RELOCATE TEMPORARY CONCRETE BARRIER

LOCATION	FOOT
STA 60+88 TO STA 62+00	112.5
STA 62+00 TO STA 64+50	250
STA 64+50 TO STA 65+62	112.5
TOTAL	475

THERMOPLASTIC PAVEMENT MARKING

	78000200 4" YELLOW	78000200 4" WHITE
LOCATION	FOOT	FOOT
STA 59+55 TO STA 67+02	190	
STA 60+60 TO STA 65+90		1060
TOTAL	1250	

RAISED REFLECTIVE PAVEMENT MARKER

LOCATION	EACH
STA 62+50 TO STA 64+00	2
TOTAL	2

GUARDRAIL MARKER, TYPE A

LOCATION	EACH
LT. STA 61+14.5 TO STA 65+02	4
RT. STA 60+06 TO STA 65+31	6
TOTAL	10

TERMINAL MARKER - DIRECT APPLIED

LOCATION	EACH
STA 60+06.00	1
STA 61+14.50	1
STA 65+02.00	1
STA 65+31.00	1
TOTAL	4

PAVEMENT MARKING REMOVAL

LOCATION	SQ FT
STA. 59+55 TO STA. 67+02	63
STA. 60+60 TO STA. 65+90, LT.	177
STA. 60+60 TO STA. 65+90, RT.	177
TOTAL	417

IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE), TEST LEVEL 3

LOCATION	EACH
STAGE I	2
TOTAL	2

IMPACT ATTENUATORS, RELOCATE (NON-REDIRECTIVE), TEST LEVEL 3

LOCATION	EACH
STAGE II	2
TOTAL	2

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

SCHEDULE OF QUANTITIES
FAP 505 (IL 75)
SECTION 115BR-1
WINNEBAGO COUNTY

SCALE: VERT. HORIZ.
DATE: 12/05

DRAWN BY NOE
CHECKED BY JKC

PLOT DATE = 4/26
FILE NAME = Z0918335CHED
PLOT SCALE = NONE
USER NAME = CHANIS

CONTRACT NO. 64940

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
505	115BR-1	WINNEBAGO	35	8
STA. 61+45.00	TO STA.65+00.00			
FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		

NOTE: LIMITS OF CHANNEL EXCAVATION ARE INTENDED TO MATCH LIMITS OF RIPRAP

MARK & ROSEMARIE SHEDD

WETLANDS

CONSTRUCTION EASEMENT

STEEL PLATE BEAM GUARDRAIL TYPE B, 25 FOOT

STEEL PLATE BEAM GUARDRAIL, ATTACHED TO STRUCTURES 37.5 FOOT

STEEL PLATE BEAM GUARDRAIL TYPE A, 87.5 FOOT AT 1:24 TAPER

TRAFFIC BARRIER TERMINAL TYPE 1 SPECIAL (TANGENT)

STEEL PLATE BEAM GUARDRAIL TYPE A, 112.5 FOOT

STEEL PLATE BEAM GUARDRAIL TYPE A, 225 FOOT

JOSEPHINE SHEDD

EXISTING R.O.W.

CONSTRUCTION LIMITS

GUARDRAIL REMOVAL

TERMINAL JUNCTION (TYP.)

AGG SHLD

BIT

FE BIT

AGG

℄ IL 75

℄ STRUCTURE STA. 63+23.20

10°

BEGIN CONSTRUCTION STA. 61+45.00

END CONSTRUCTION STA. 65+00.00

TELE MKR

FLOW

CREEK TRIBUTARY

GRAPHIC SCALE

-20 0 20 40 60 80 100

FEET

BENCHMARK: CHISELED "□" TOP OF SOUTHEAST WINGWALL OF SN 101-0114. ELEV. = 728.74

LEGEND

- WETLANDS
- RIPRAP CL A4
- BASE COURSE WIDENING 8"
- BITUMINOUS SHOULDERS SUPERPAVE 8"
- PAVEMENT REMOVAL STAGE I
- PAVEMENT REMOVAL STAGE II

2" OVERLAY (EXISTING)

BITUMINOUS PAVEMENT/RECONSTRUCTION

2" OVERLAY (EXISTING)

-0.27%

STA. 62+50.00 ELEV. 731.41

STA. 64+00.00 ELEV. 731.00

▽ D.H.W. 725.60

EL 719.9±

LIMITS OF POROUS GRANULAR EMBANKMENT (INCLUDED IN THE COST FOR THREE-SIDED PRECAST CONCRETE STRUCTURES 36'X11')

LIMITS OF EARTHWORK SEE SCHEDULE OF QUANTITIES

THE CONTRACTOR SHALL REMOVE EXCESS SILT DEPOSITS DOWNSTREAM AND UPSTREAM OF THE STRUCTURE WITHIN R.O.W. AS DIRECTED BY THE ENGINEER. (TRANSITION FROM FULL WIDTH AND DEPTH AT STRUCTURE TO MATCH EXISTING AT R.O.W. LINE.) THIS WILL BE PAID FOR AS CHANNEL EXCAVATION.

•731.27

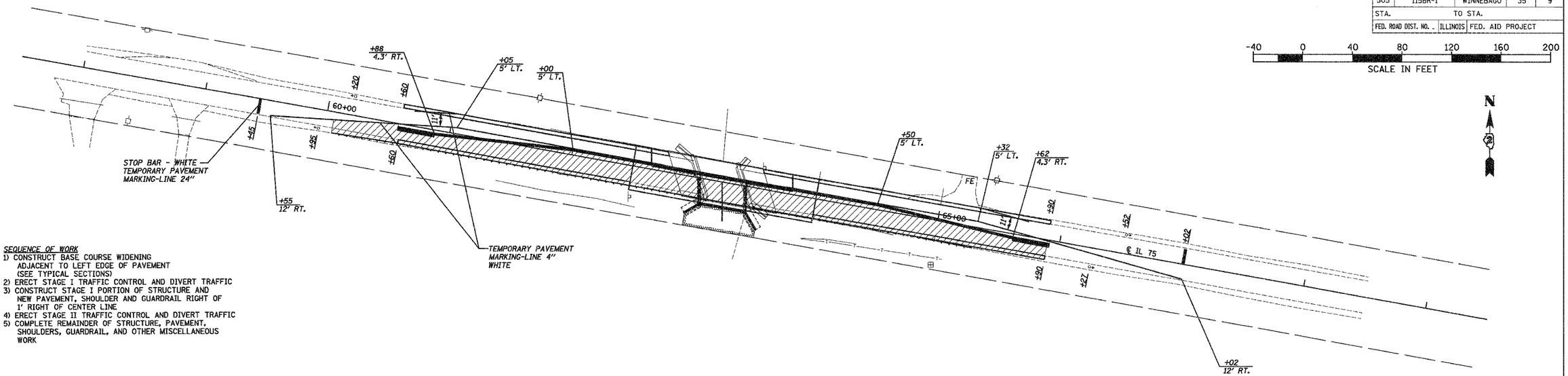
732 730 728 726 724 722 720 718 716

60+00 60+50 61+00 61+50 62+00 62+50 63+00 63+50 64+00 64+50 65+00 65+50 66+00

FAP 505 (IL 75)

CONTRACT NO. 64940

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
505	115BR-1	WINNEBAGO	35	9
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



STAGE I

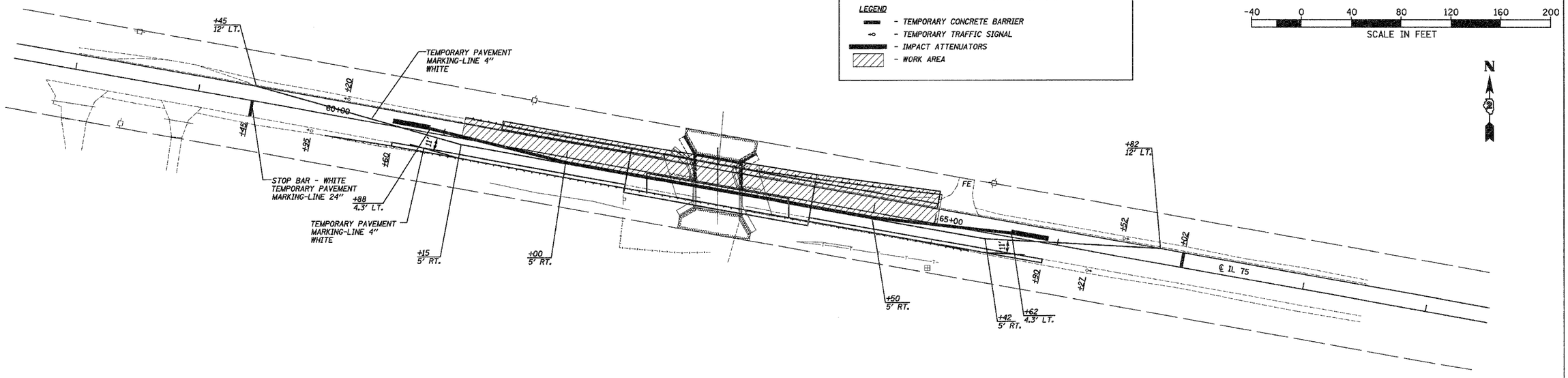
-40 0 40 80 120 160 200
SCALE IN FEET

N

SEQUENCE OF WORK
1) CONSTRUCT BASE COURSE WIDENING ADJACENT TO LEFT EDGE OF PAVEMENT (SEE TYPICAL SECTIONS)
2) ERECT STAGE I TRAFFIC CONTROL AND DIVERT TRAFFIC
3) CONSTRUCT STAGE I PORTION OF STRUCTURE AND NEW PAVEMENT, SHOULDER AND GUARDRAIL RIGHT OF 1' RIGHT OF CENTER LINE
4) ERECT STAGE II TRAFFIC CONTROL AND DIVERT TRAFFIC
5) COMPLETE REMAINDER OF STRUCTURE, PAVEMENT, SHOULDERS, GUARDRAIL, AND OTHER MISCELLANEOUS WORK

NOTES
1. ADVANCE WARNING SIGNS, BARRIER WALL TREATMENT AND PAVEMENT MARKERS SHALL BE IN ACCORDANCE WITH HIGHWAY STANDARD 701321
2. FOR ADDITIONAL DETAILS SEE HIGHWAY STANDARD 701321
3. R10-6A-2430 SIGN AT STOP BAR SHALL BE SUPPLEMENTED WITH "TO ACTUATE SIGNAL" SIGN SEE SHEET 31

LEGEND
- TEMPORARY CONCRETE BARRIER
- TEMPORARY TRAFFIC SIGNAL
- IMPACT ATTENUATORS
- WORK AREA



STAGE II

-40 0 40 80 120 160 200
SCALE IN FEET

N

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL PLAN
FAP 505 (IL 75)
SECTION 115BR-1
WINNEBAGO COUNTY

SCALE: VERT. 1" = 40'
HORIZ. 1" = 40'
DATE 03/06

DRAWN BY NOE
CHECKED BY JKC

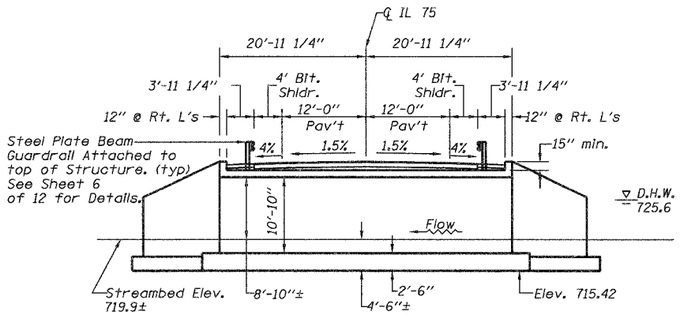
PLOT DATE = 04/06
FILE NAME = Z:\PW\03TRAFFCNTL
PLOT SCALE = 1" = 40'
USER NAME = CHANG

Benchmark: Chiseled "□" top of southeast wingwall of SN 101-0114. Elev. = 728.74

Existing Structure: SN 101-0114 to be removed. Originally built in 1928 as SBI Route 75 Section 115. In 1971, SBI 75, Section 115BR replaced and widened the original superstructure. Single span prestressed concrete box beam with closed abutments on timber piles. 38'-4 3/4" Bk. to Bk. Abutments.

One lane traffic to be maintained using stage construction.

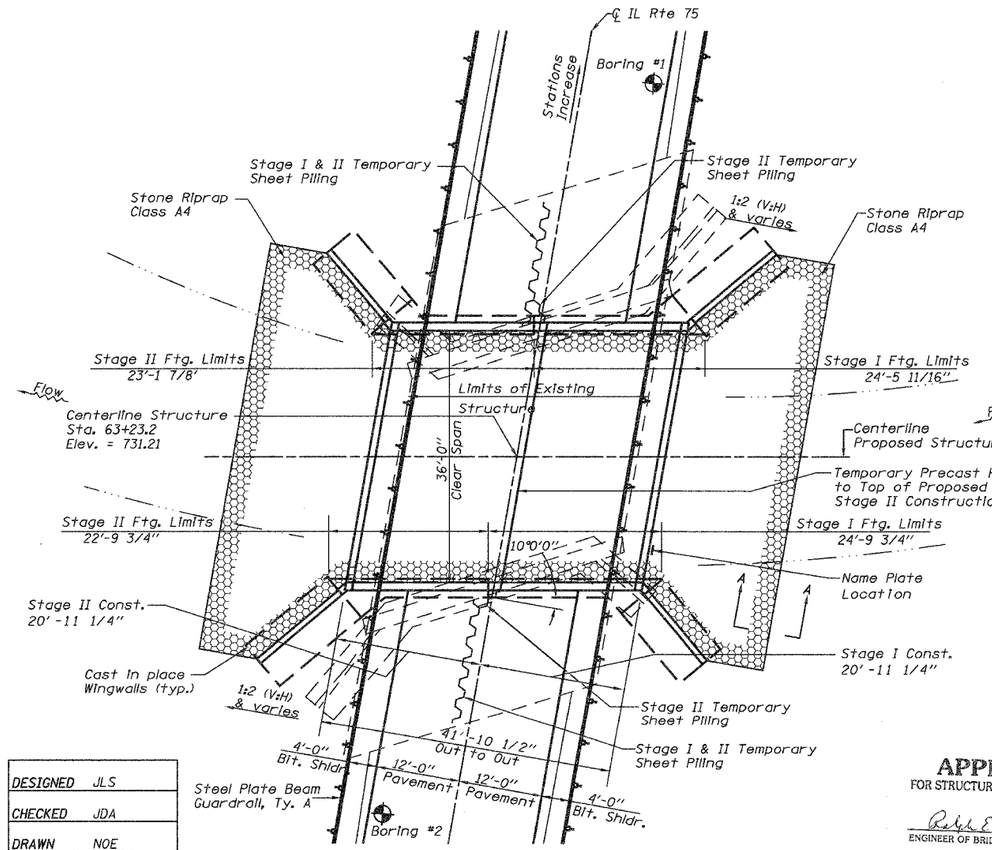
No Salvage.



PROPOSED LONGITUDINAL SECTION

Looking East

(Dimensions are at Rt. L's to Roadway unless noted)



PLAN

DESIGNED	JLS
CHECKED	JDA
DRAWN	NOE
CHECKED	JLS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 505	115 BR-1	WINNEBAGO	35	10
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT=		

SHEET NO. 1 OF 12 SHEETS

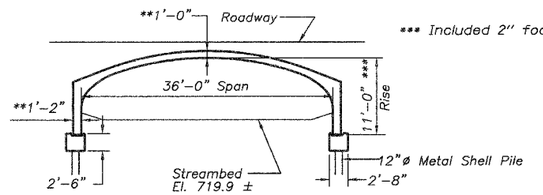
Contract #64940

WATERWAY INFORMATION

Drainage Area= 8.2 Sq. Mi. Low Grade Elev.= 730.3 (Exist./Prop.) @ Sta. 67+00

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft. Exist.	Opening Sq. Ft. Prop.	Nat. H.W.E.	Head - Ft. Exist.	Head - Ft. Prop.	Headwater Elev. Exist.	Headwater Elev. Prop.
	10	918	143	178	725.1	0.8	0.7	725.9	725.8
Design	50	1371	159	193	725.6	1.4	1.2	727.0	726.8
Base	100	1556	162	196	725.7	1.7	1.5	727.4	727.2
Overtopping	-	-	-	-	-	-	-	-	-
Max. Calc.	500	1988	171	205	726.0	2.5	2.1	728.5	728.1

10-Year velocity through existing bridge= 6.4 Fps
10-Year velocity through prop. bridge= 5.2 Fps



*** Included 2" footing socket.

SECTION THRU STRUCTURE

(At Rt. L's to Structure)

** May vary per pre-caster's final design.

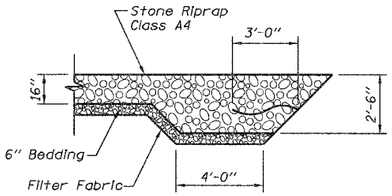
STATION 63+23.20
BUILT 200_ BY
STATE OF ILLINOIS
F.A.P. RT. 505 SEC. 115BR-1
LOADING HS20
STR. NO. 101-0183

NAME PLATE DETAIL

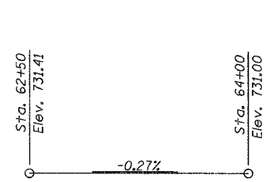
See Std. 515001

APPROVED
FOR STRUCTURAL ADEQUACY ONLY
Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

6-12-2006
date
JORGE L. SANCHEZ
LICENSED STRUCTURAL ENGINEER
NO. 081-000073
STATE OF ILLINOIS
expires 11-30-2006
signature
PROFESSIONAL DESIGN FIRM
LICENSE NO. 184-001717



SECTION A-A



PROFILE GRADE

(Along Centerline Roadway)

DESIGN SPECIFICATIONS

2002 AASHTO

LOADING HS20-44

Allow 50#/sq. ft. for future wearing surface

DESIGN STRESSES

Field Units

f'c = 3,500 psi

fy = 60,000 psi (reinforcement)

Precast Units

f'c = 5,000 psi

fy = 60,000 psi (reinforcement)

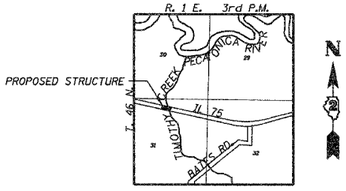
fy = 65,000 psi (welded wire fabric)

SEISMIC DATA

Seismic Performance Category (SPC) = A

Bedrock Acceleration Coefficient (A) = 0.032

Site Coefficient (S) = 1.2



LOCATION SKETCH

CHAMLIN & ASSOCIATES
PERU ILLINOIS MORRIS

GENERAL PLAN
IL RTE 75 OVER
TIMOTHY CREEK
FAP ROUTE 505
SECTION 115BR-1
WINNEBAGO COUNTY
STA. 63+23.20
SN 101-0183

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 505	115 BR-1	WINNEBAGO	35	11
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 2
OF 12 SHEETS

Contract #64940

General Notes

1. Reinforcement bars shall conform to the requirements of AASHTO M31, or M322 Grade 60.
2. The option of using precast footings is not allowed.
3. The option of using precast wingwalls is not allowed.
4. The footing design is based on the following maximum reactions applied at the top of the footing/pedestal wall:

   Exterior footings: 18.9 kip/foot (vertical), 6.8 kip/foot (horizontal).
5. The Contractor shall verify that the selected structure meets these design parameters. If the design parameters are exceeded, a complete footing design with calculations, details and the required seals shall be submitted for review and approval.
6. The contractor shall drive one (1) metal shell test pile in a permanent location at the east structure footing as directed by the Engineer before ordering the remainder of metal shell piles.
7. Layout of slope protection system may be varied in the field to suit ground conditions as directed by the Engineer.
8. Excavation behind existing abutment walls shall be done before removing the existing superstructure. The Contractor shall sawcut the existing abutments at the stage removal line before Stage I removal.
9. Excavation for wingwalls shall be considered included in cost of concrete structures.
10. Soil borings taken at this structure indicate that the ground water elevation may be above the bottom of footing elevation. The Contractor shall be responsible for dewatering the excavation as necessary for removal of the existing foundations and construction of the new work. The Contractor may use either well points or dewatering wells. Ground water level may be affected by Timothy Creek and fluctuations should be expected. Cost included with Three-Sided Precast Concrete Structures.
11. Backfill material shall be installed as noted on the provisions for Three Sided Precast Concrete Structure. The backfill material gradation, compaction and installation method shall conform to the pre-cast structure manufacturer's requirements. This work shall be included in the contract unit price per meter (foot) for Three Sided Precast Concrete Structures of the size specified, as indicated in the provisions and plan notes.

TOTAL BILL OF MATERIALS

ITEM	UNIT	SUPER	SUB	TOTAL
STONE RIPRAP, CLASS A4	SQ YD			402
REMOVAL OF EXISTING STRUCTURES	EACH			1
CONCRETE STRUCTURES	CU YD		74.9	74.9
REINFORCEMENT BARS	POUND		5900	5900
REINFORCEMENT BARS, EPOXY COATED	POUND		1280	1280
FURNISHING METAL PILE SHELLS 12"	FOOT		2003	2003
DRIVING AND FILLING SHELLS	FOOT		2003	2003
TEST PILE METAL SHELLS	EACH		1	1
TEMPORARY SHEET PILING	SQ FT			2046
NAME PLATES	EACH	1		1
THREE-SIDED PRECAST CONCRETE STRUCTURES 36'X11'	FOOT	41.9		41.9
BAR SPLICERS	EACH		24	24
FILTER FABRIC	SQ YD			402

For Quantity of Steel Plate Guardrail, Attached to Structures see roadway plans.

Index of Bridge Plans

DESIGNED	JLS
CHECKED	JDA
DRAWN	NOE
CHECKED	JLS

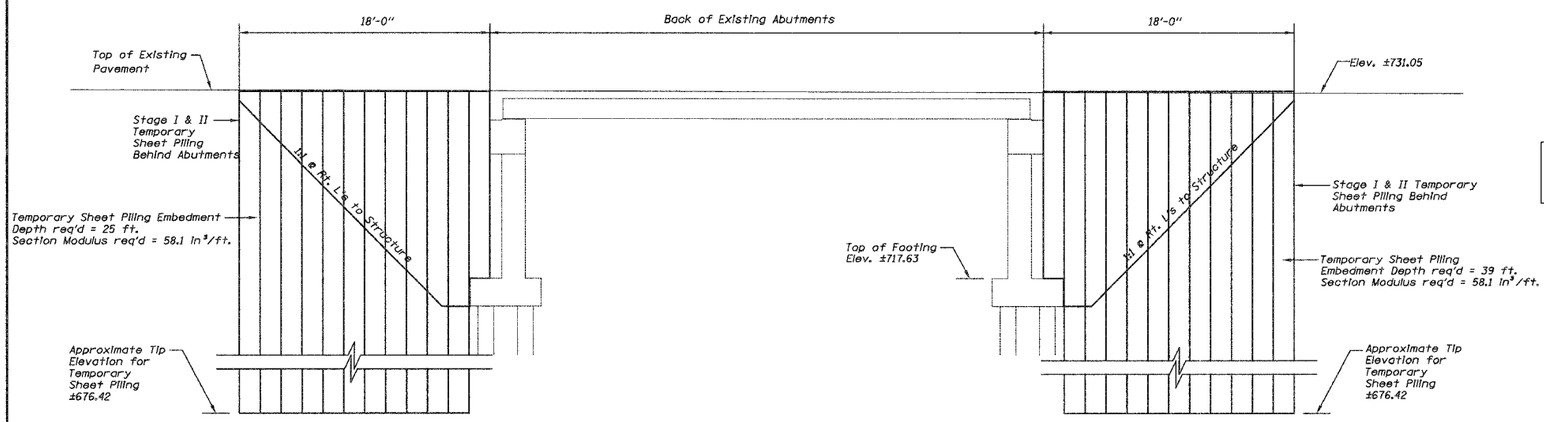
GENERAL NOTES AND BILL OF MATERIALS
IL RTE 75 OVER
TIMOTHY CREEK
FAP ROUTE 505
SECTION 115BR-1
WINNEBAGO COUNTY
STA. 63+23.20
SN 101-0183

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

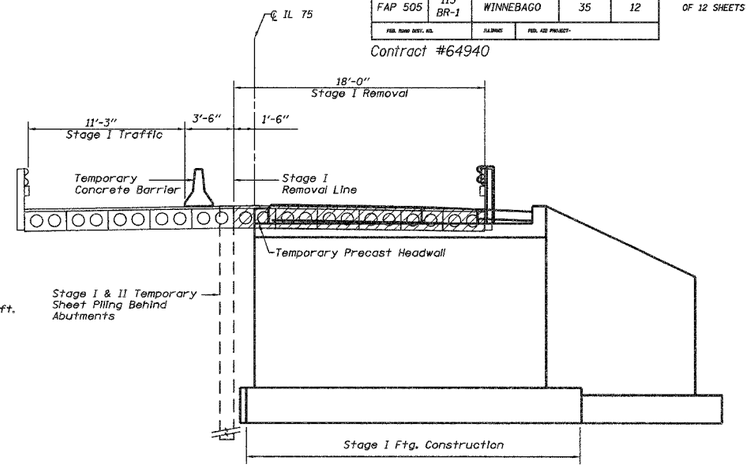
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 505	115 BR-1	WINNEBAGO	35	12
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 3 OF 12 SHEETS

Contract #64940



STAGE I TEMPORARY SHEET PILING
Looking North

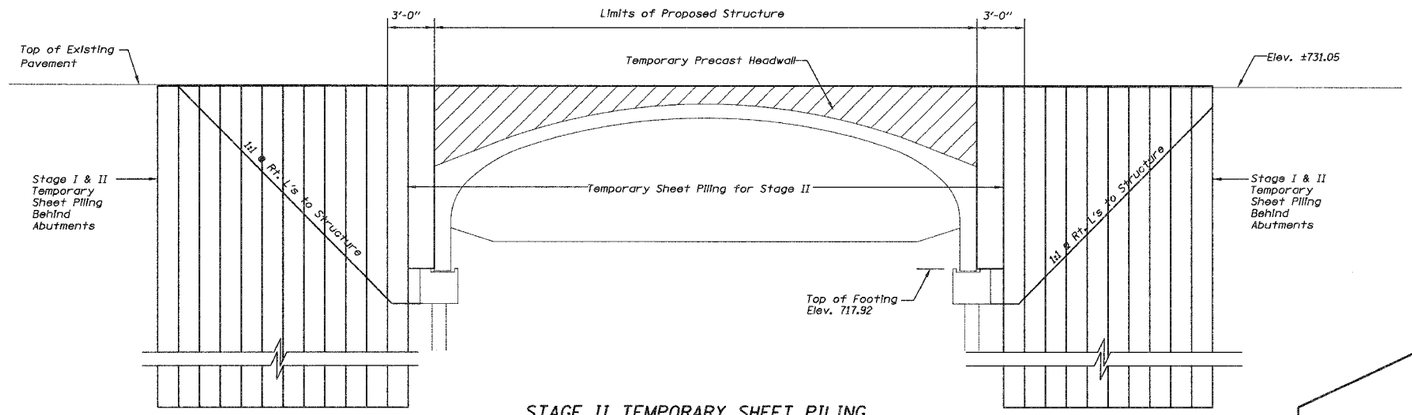


STAGE I
Looking up Station
(Dimensions are at Rt. L's to Roadway unless noted)

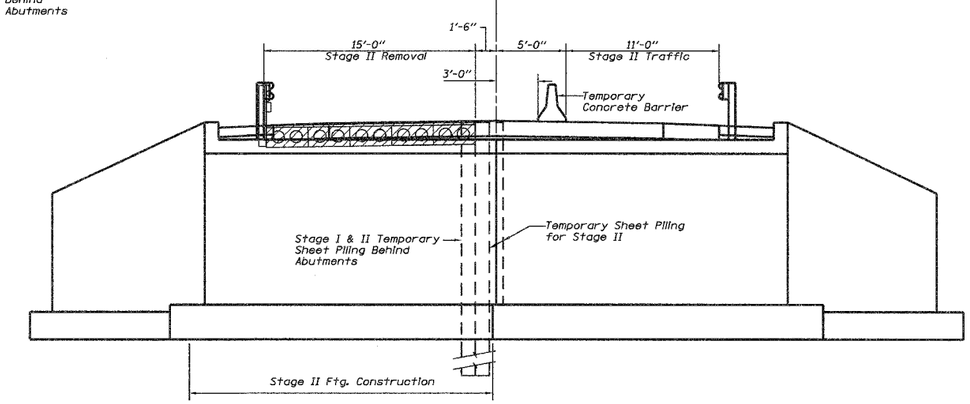
Notes:
Because the existing abutments are restrained top and bottom, excavating the soil behind, or bracing the existing abutments shall be required prior to removing the existing bridge superstructure.

For details of temporary concrete barrier see sheet 9 of 12.

For quantity of temporary concrete barrier see roadway plans.



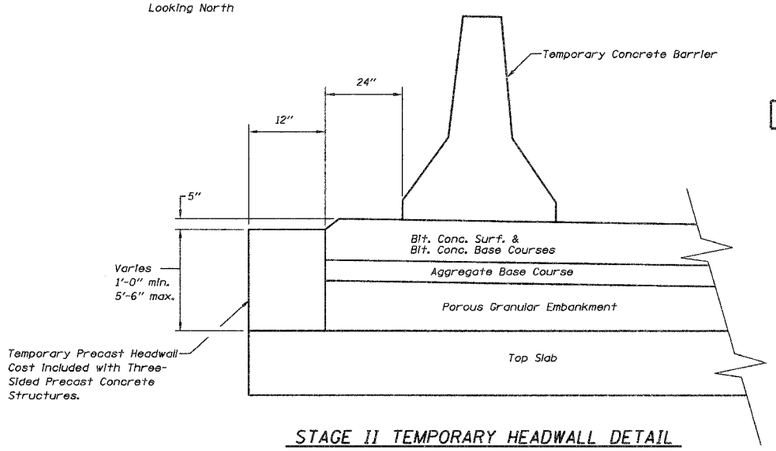
STAGE II TEMPORARY SHEET PILING
Looking North



STAGE II
Looking up Station
(Dimensions are at Rt. L's to Roadway unless noted)

Notes:
If the Contractor chooses to alter the temporary cantilevered sheet piling design requirements shown on the plans, a design submittal including plan details and calculations will be required for review and acceptance by the Engineer.
The contractor shall connect the first sheet to the existing abutment wall to ensure stability of sheets driven to the top of the existing footing. This connection shall be reviewed and accepted by the Engineer and included in the cost for Temporary Sheet Piling.

The Temporary Precast Headwall design and attachment details shall be the responsability of the Precast Producer. Drilling and grouting bars into the precast unit will not be allowed. Cost included with Three-Sided Precast Concrete Structures.



STAGE II TEMPORARY HEADWALL DETAIL

DESIGNED	JLS
CHECKED	JDA
DRAWN	NOE
CHECKED	JLS

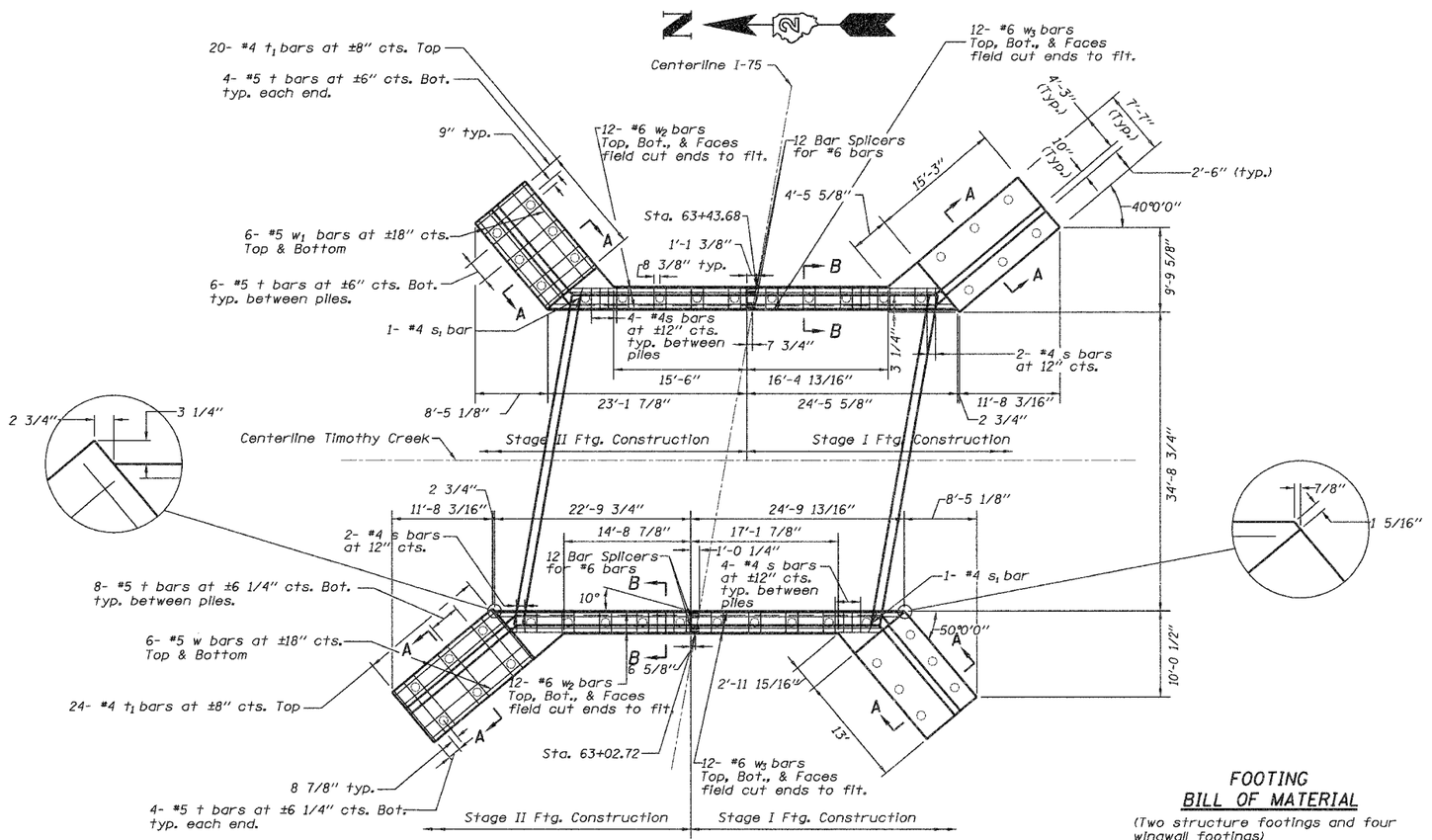
STAGE CONSTRUCTION DETAILS
IL RTE 75 OVER
TIMOTHY CREEK
FAP ROUTE 505
SECTION 115BR-1
WINNEBAGO COUNTY
STA. 63+23.20
SN 101-0183

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 505	115 BR-1	WINNEBAGO	35	13
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

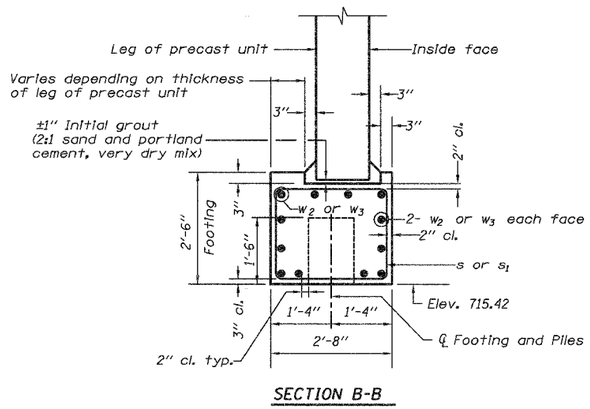
SHEET NO. 4 OF 12 SHEETS

Contract #64940

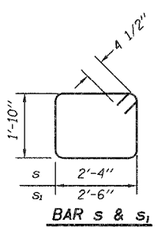
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



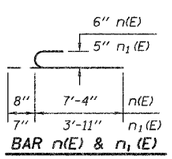
FOOTING PLAN



SECTION B-B



BAR s & s1



BAR n(E) & n1 (E)

Notes:
See sheet 6 of 12 for Corner Details.
See sheet 7 of 12 for Section A-A.
See sheet 7 of 12 for n(E) and n1(E) bar placement and spacing.

FOOTING
BILL OF MATERIAL

(Two structure footings and four wingwall footings)

Bar	No.	Size	Length (m)	Shape
n(E)	78	#6	8'-0"	⊃
n1(E)	74	#5	4'-6"	⊃
s	76	#4	9'-1"	□
s1	2	#4	9'-5"	□
t	88	#5	7'-3"	——
t1	88	#4	7'-3"	——
w	24	#5	15'-0"	——
w1	24	#5	12'-9"	——
w2	24	#6	22'-10"	——
w3	24	#6	24'-6"	——
Concrete Structures		Cu Yd		53.6
Reinforcement Bars, Epoxy Coated		Pound		1280
Reinforcement Bars		Pound		3970
Furnishing Metal Pile Shells 12"		Foot		2003
Driving and Filling Shells		Foot		2003
Test Pile Metal Shells		Each		1
Bar Splicers		Each		24

Reinforcement Bars designated (E) shall be epoxy coated.

Note:
Excavation for Three-Sided Structure and Wingwalls will not be paid for separately but shall be considered included in the cost for Concrete Structures and Three-Sided Precast Concrete Strutures.

WORK THIS SHEET WITH SHEET 7.

DESIGNED	JLS
CHECKED	JDA
DRAWN	NOE
CHECKED	JLS

FOOTING DETAILS
IL RTE 75 OVER
TIMOTHY CREEK
FAP ROUTE 505
SECTION 115BR-1
WINNEBAGO COUNTY
STA. 63+23.20
SN 101-0183

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 505	115 BR-1	WINNEBAGO	35	14
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 5
OF 12 SHEETS

Contract #64940

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

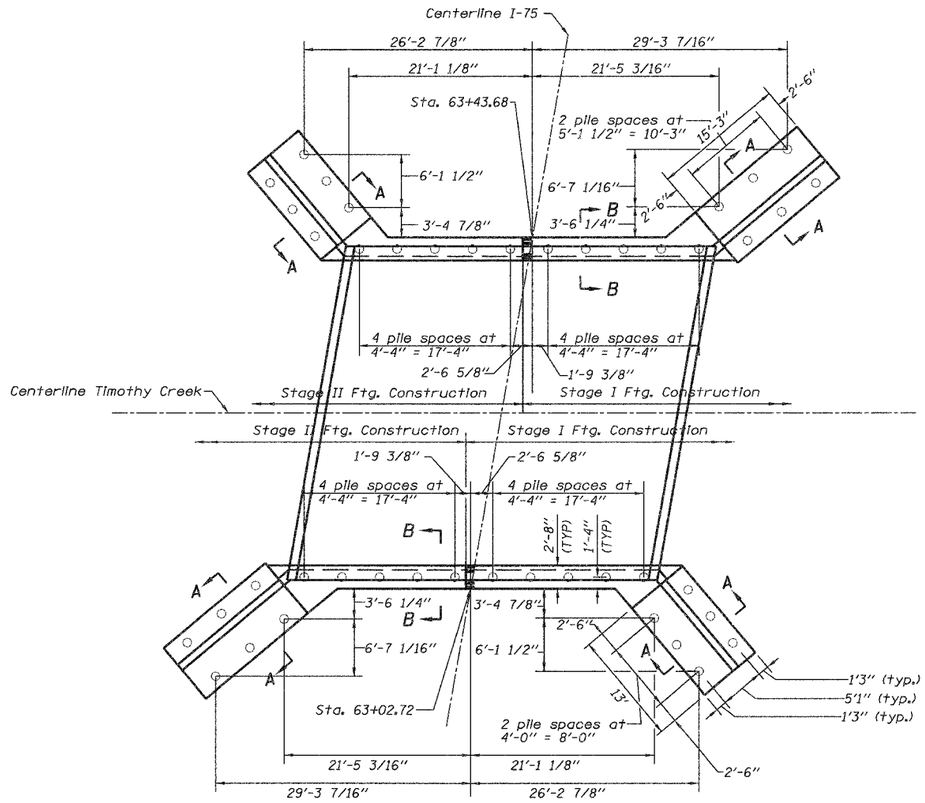
PILE DATA

East Abutment
Type: 12" Ø Metal Shells
Capacity: 43 Ton
Est. Length: 45'
No. Required: 9 Plus 1 Test Pile

West Abutment
Type: 12" Ø Metal Shells
Capacity: 43 Ton
Est. Length: 53'
No. Required: 10

East Wingwalls
Type: 12" Ø Metal Shells
Capacity: 32 Ton
Est. Length: 43'
No. Required: 12

West Wingwalls
Type: 12" Ø Metal Shells
Capacity: 32 Ton
Est. Length: 46'
No. Required: 12



Notes:
See Sheet 4 of 12 for Section B-B.
See Sheet 7 of 12 for Section A-A.

DESIGNED	JLS
CHECKED	JDA
DRAWN	NOE
CHECKED	JLS

PILE LAYOUT
IL RTE 75 OVER
TIMOTHY CREEK
FAP ROUTE 505
SECTION 115BR-1
WINNEBAGO COUNTY
STA. 63+23.20
SN 101-0183

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 505	115 BR-1	WINNEBAGO	35	15
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 6 OF 12 SHEETS

Contract #64940

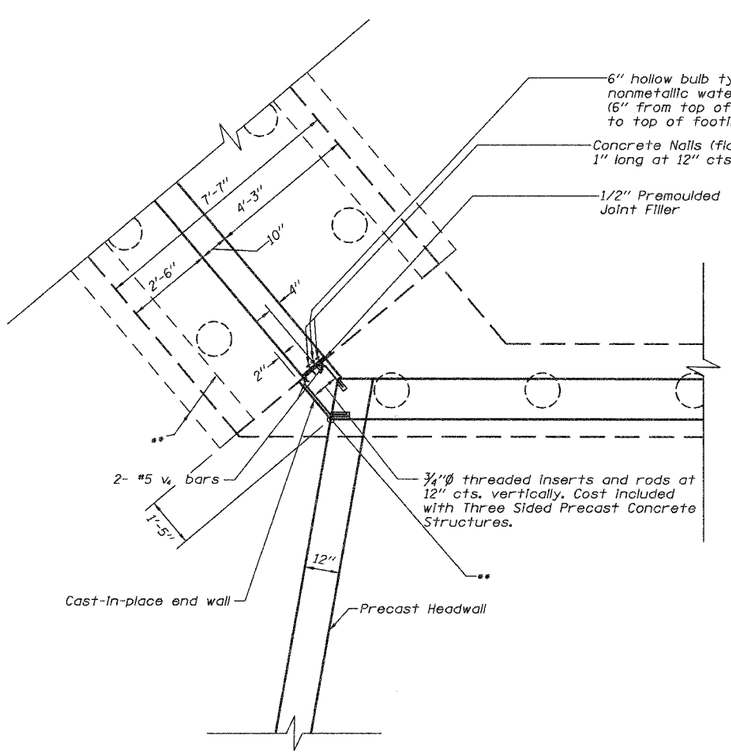
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Notes:
Precast headwall details shall be submitted to the Engineer For Approval.
Cost of Precast Headwalls, PJF, Waterseal, and nails shall be included with cost of Three-Sided Precast Concrete Structures.

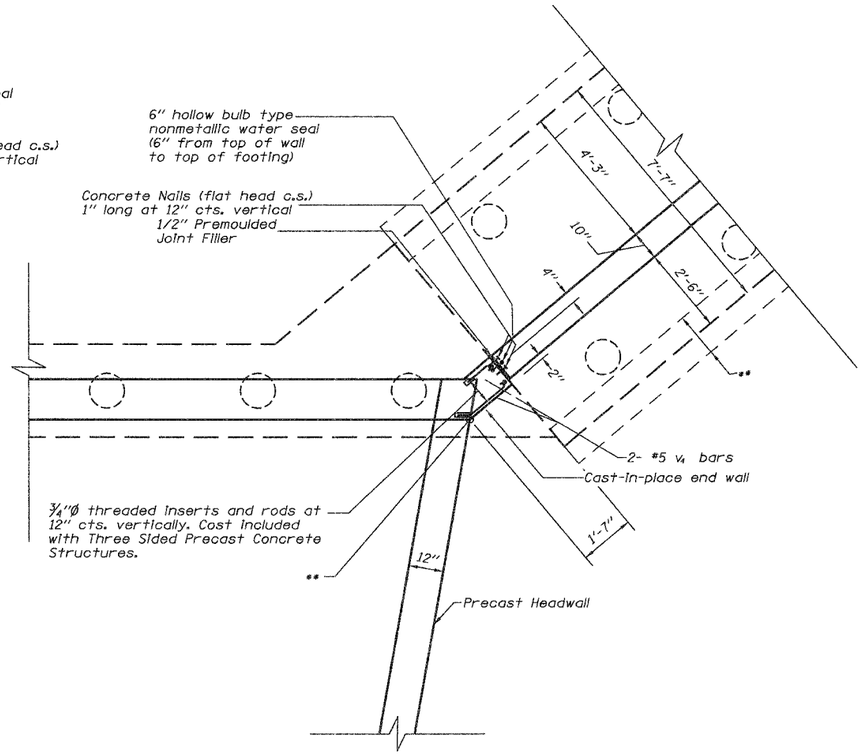
Posts shall be installed plumb by mounting baseplate flush against Top Slab and cutting posts to match slope.

For quantity of Steel Plate Guardrail Attached to Structure see roadway plans.

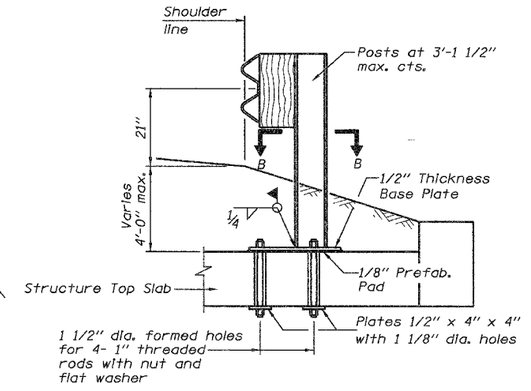
For details of guardrail elements not shown, see Standard 630001.



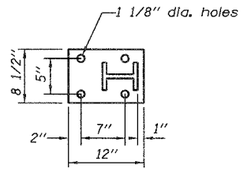
NORTHEAST AND SOUTHWEST CORNER DETAIL



NORTHWEST AND SOUTHEAST CORNER DETAIL



GUARDRAIL ATTACHMENT DETAIL



SECTION B-B

Note:
The contractor shall coordinate placement of guardrail posts for steel plate beam guardrail attached to structures with the precast supplier for the three sided concrete structure. Posts shall be located to provide adequate edge distance for anchor bolts for post base plates near joints in precast concrete segments. Post locations may be adjusted perpendicular to the guardrail by increasing the depth of the wood blockout by up to 6"

** The location of the inside corner of the precast leg may vary due to tolerances in the precast segments. The cast-in-place end walls shall be poured after the precast units and headwall are in place. The wing footings and wingwalls shall be poured after the headwalls and end walls are in place. A slight adjustment in the placement of the wingwall and its footing may be necessary to align the wingwall with the end wall as shown.

DESIGNED	JLS
CHECKED	JDA
DRAWN	NOE
CHECKED	JLS

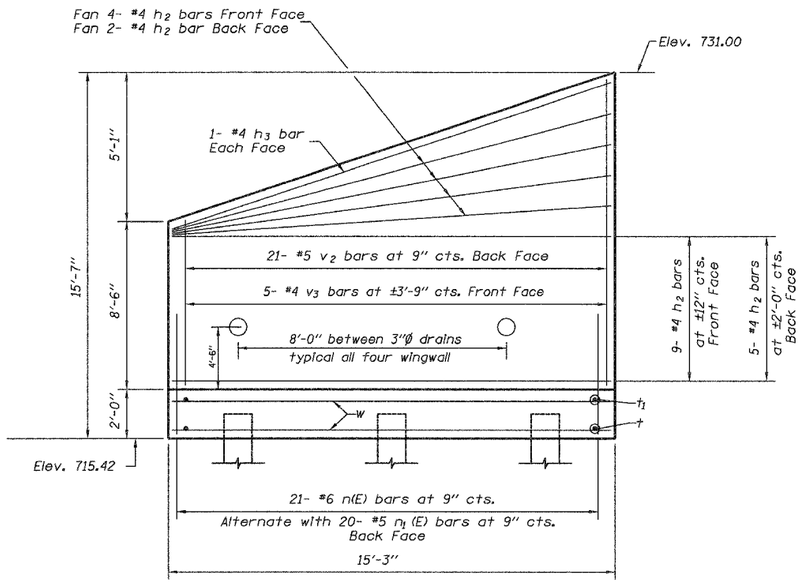
CORNER DETAILS
IL RTE 75 OVER
TIMOTHY CREEK
FAP ROUTE 505
SECTION 115BR-1
WINNEBAGO COUNTY
STA. 63+23.20
SN 101-0183

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

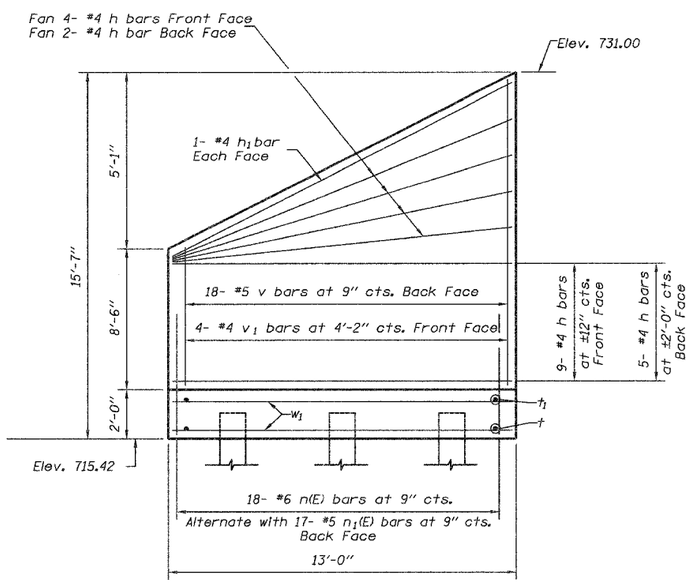
HIGHWAY NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 505	115 BR-1	WINNEBAGO	35	16
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 7 OF 12 SHEETS

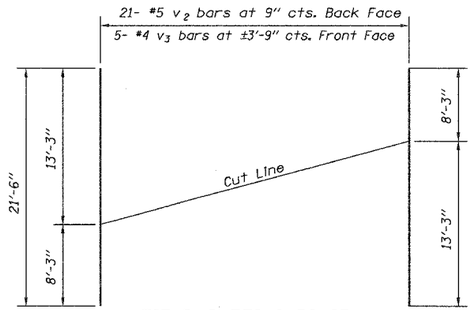
Contract #64940



NORTHWEST AND SOUTHEAST WINGWALL ELEVATION

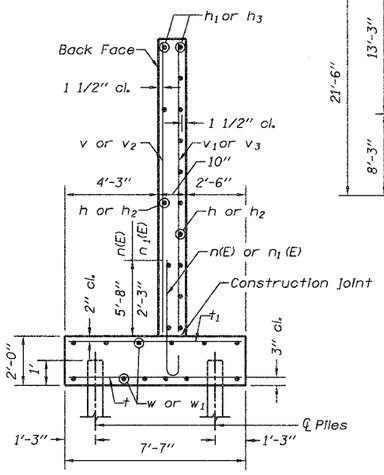


NORTHEAST AND SOUTHWEST WINGWALL ELEVATION

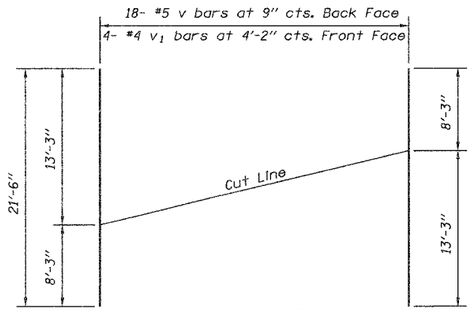


FIELD CUTTING DIAGRAM

Order v_2 and v_3 bars full length. Cut to fit and use remainder in other wingwall.



SECTION A-A



FIELD CUTTING DIAGRAM

Order v and v_1 bars full length. Cut to fit and use remainder in other wingwall.

Notes:

See sheet 4 of 12 for location of Section A-A.

See sheet 6 of 12 for end wall details and location of v_4 bars.

n(E), n_1(E), t, t_1, w and w_1 bars are included in the Bill of material on sheet 4 of 12.

WINGWALL
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h	40	#4	12'-9"	——
h_1	4	#4	13'-8"	——
h_2	40	#4	15'-0"	——
h_3	4	#4	15'-9"	——
				——
v	18	#5	21'-6"	——
v_1	4	#4	21'-6"	——
v_2	21	#5	21'-6"	——
v_3	5	#4	21'-6"	——
v_4	8	#5	12'-11"	——
• Concrete Structures			Cu Yd	21.3
Reinforcement Bars			Pound	1930

Reinforcement Bars designated (E) shall be epoxy coated.

• Includes Concrete Structures for end walls. Concrete Structures for Wingwall footings not included.

DESIGNED	JLS
CHECKED	JDA
DRAWN	NOE
CHECKED	JLS

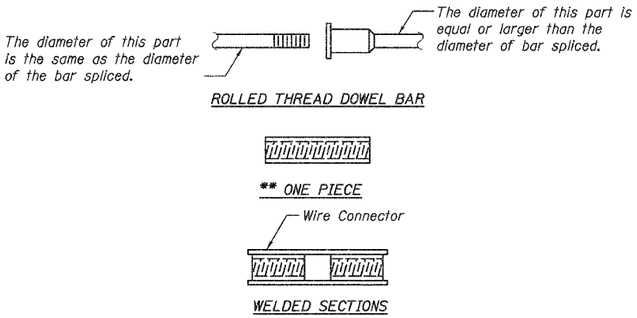
WINGWALL DETAILS
IL RTE 75 OVER
TIMOTHY CREEK
FAP ROUTE 505
SECTION 115BR-1
WINNEBAGO COUNTY
STA. 63+23.20
SN 101-0183

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 505	115 BR-1	WINNEBAGO	35	17
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT-	

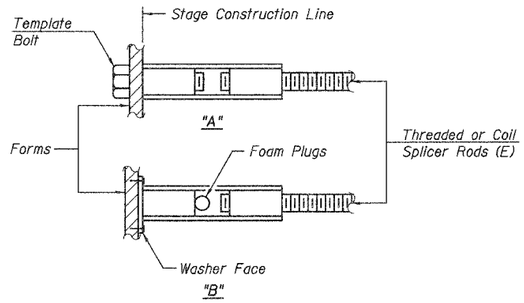
SHEET NO. 8
OF 12 SHEETS

Contract #64940



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:

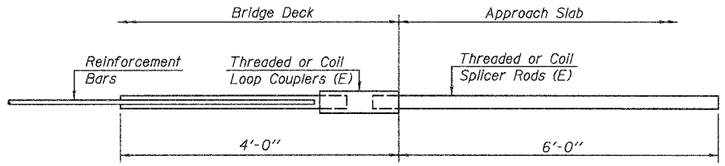
① Minimum Capacity (Tension in kips) = $1.25 \times fy \times A_t$

② Minimum *Pull-out Strength (Tension in kips) = $1.25 \times fs_{allow} \times A_t$

Where fy = Yield strength of lapped reinforcement bars in ksi.
fs_{allow} = Allowable tensile stress in lapped reinforcement bars in ksi (Service Load)
A_t = Tensile stress area of lapped reinforcement bars.
* = 28 day concrete

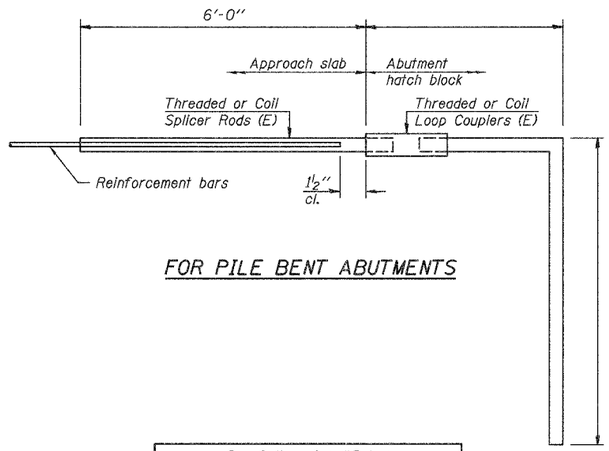
BAR SPLICER ASSEMBLIES			
Bar Size to be Spliced	Splicer Rod or Dowel Bar Length	Strength Requirements	
		Min. Capacity kips - tension	Min. Pull-Out Strength kips - tension
#4	1'-8"	14.7	5.9
#5	2'-0"	23.0	9.2
#6	2'-7"	33.1	13.3
#7	3'-5"	45.1	18.0
#8	4'-6"	58.9	23.6
#9	5'-9"	75.0	30.0
#10	7'-3"	95.0	38.0
#11	9'-0"	117.4	46.8

Bar splicer assemblies shall be according to Section 508 of the Standard Specifications, except as noted. The furnishing and installation of bar splicer assemblies will be measured and paid for at the contract unit price each for "BAR SPLICERS."



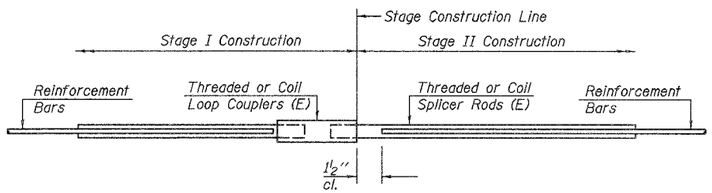
FOR INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

Bar Splicer for #5 bar
Min. Capacity = 23.0 kips - tension
Min. Pull-out Strength = 9.2 kips - tension
No. Required =



FOR PILE BENT ABUTMENTS

Bar Splicer for #5 bar
Min. Capacity = 23.0 kips - tension
Min. Pull-out Strength = 9.2 kips - tension
No. Required =



STANDARD

Bar Size	No. Assemblies Required	Location
#6	24	Footing

DESIGNED	JLS
CHECKED	JDA
DRAWN	NOE
CHECKED	JLS

BSD-1

10-22-04

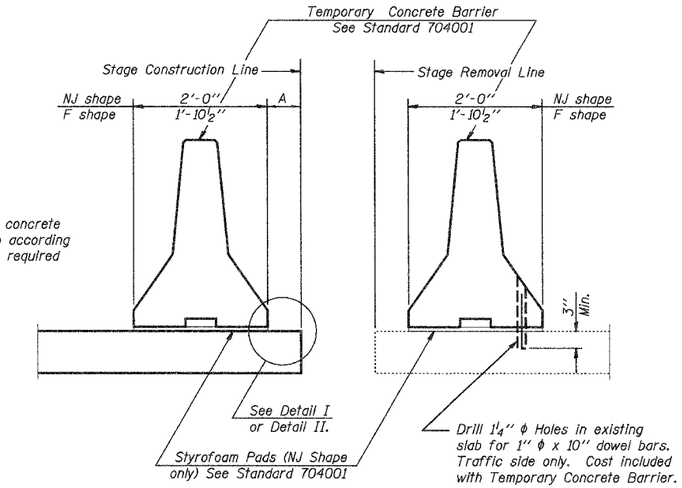
BAR SPLICER ASSEMBLY DETAILS
IL RTE 75 OVER
TIMOTHY CREEK
FAP ROUTE 505
SECTION 115BR-1
WINNEBAGO COUNTY
STA. 63+23.20
SN 101-0183

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 505	115 BR-1	WINNEBAGO	35	18
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT=		

SHEET NO. 9
OF 12 SHEETS

Contract #64940



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".

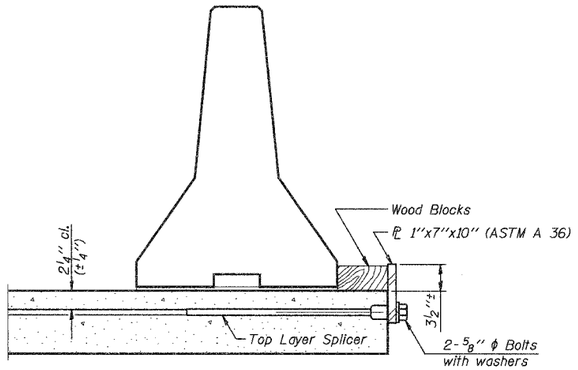
SECTIONS THRU SLAB

NOTES

Detail I - With Bar Splicer or Couplers:
Connect one (1) 1"x7"x10" steel ℙ to the top layer of couplers with 2-⅝" ϕ bolts screwed to coupler at approximate ℄ of each barrier panel.

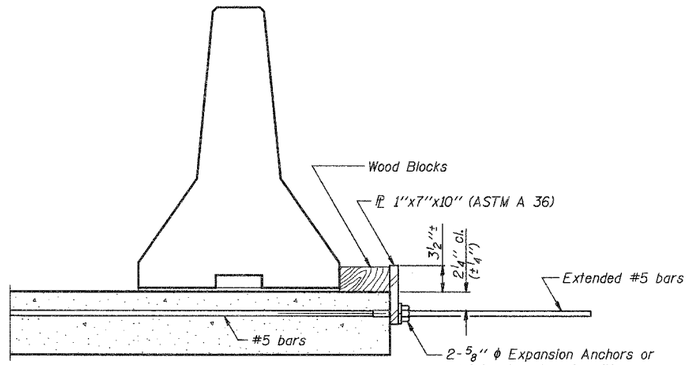
Detail II - With Extended Reinforcement Bars:
Connect one (1) 1"x7"x10" steel ℙ to the concrete slab with 2-⅝" ϕ Expansion Anchors or cast in place inserts spaced between the top layer of reinforcement at approximate ℄ of each barrier panel.

Cost of anchorage is included with Temporary Concrete Barrier.



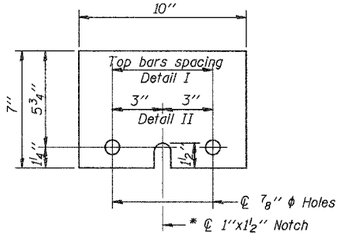
DETAIL I

The 1"x7"x10" Plate shall not be removed until Stage II Construction forms and reinforcement bars are in place.



DETAIL II

The 1"x7"x10" 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.



ℙ 1"x7"x10"

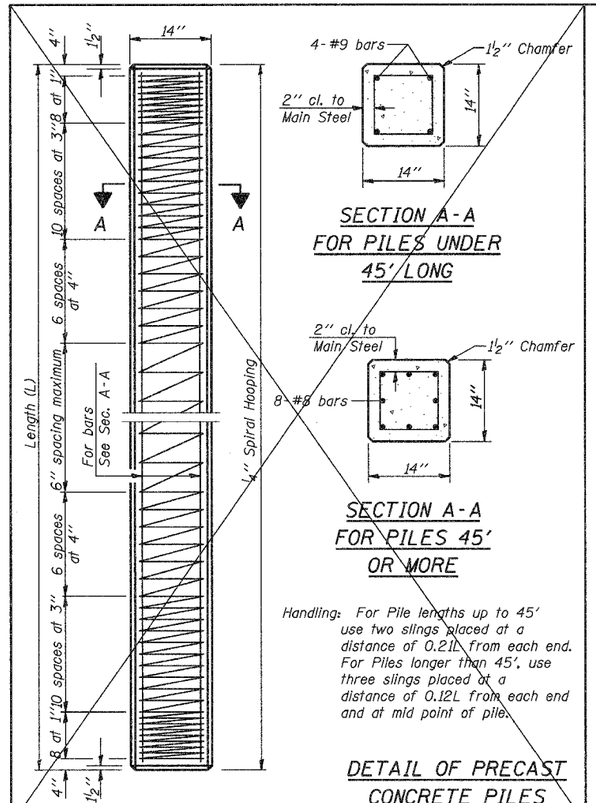
* Required only with Detail II

DESIGNED	JLS
CHECKED	JDA
DRAWN	NOE
CHECKED	JLS

R-27

10-22-04

TEMPORARY CONCRETE BARRIER DETAILS
IL RTE 75 OVER
TIMOTHY CREEK
FAP ROUTE 505
SECTION 115BR-1
WINNEBAGO COUNTY
STA. 63+23.20
SN 101-0183

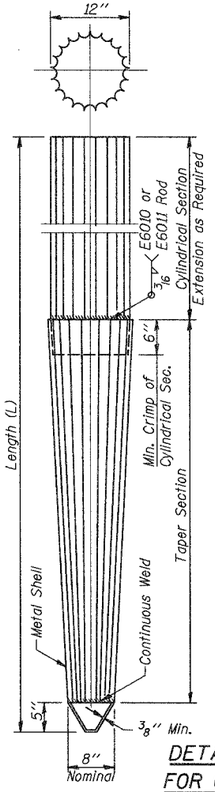


SECTION A-A
FOR PILES UNDER 45' LONG

SECTION A-A
FOR PILES 45' OR MORE

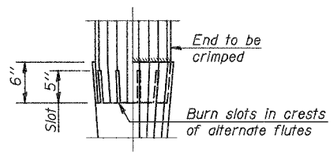
Handling: For Pile lengths up to 45' use two slings placed at a distance of 0.21L from each end. For Piles longer than 45', use three slings placed at a distance of 0.12L from each end and at mid point of pile.

DETAIL OF PRECAST CONCRETE PILES



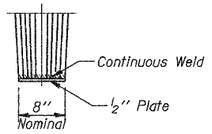
DETAIL OF TAPERED METAL SHELLS
FOR CAST IN PLACE CONCRETE PILES

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



FIELD CRIMP DETAIL

Note:
6" Crimp shall either be supplied on the cylindrical section or made in the field as detailed.

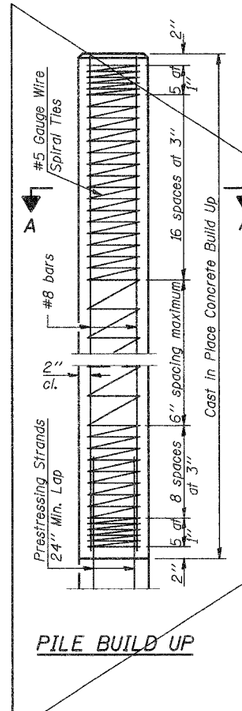


OPTIONAL FLAT END

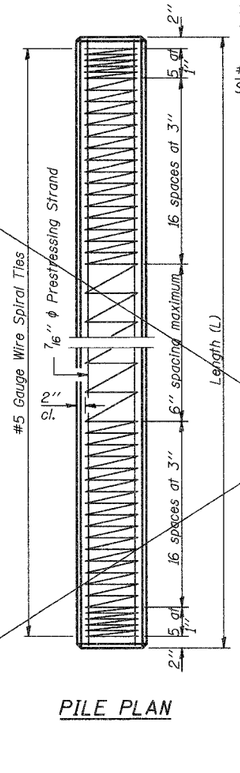
ALLOWABLE TAPER SECTIONS

10' Length-Taper 1" in 2'-6"
17' Length-Taper 1" in 4'-0"
25' Length-Taper 1" in 7'-0"
30' Length-Taper 1" in 7'-0"

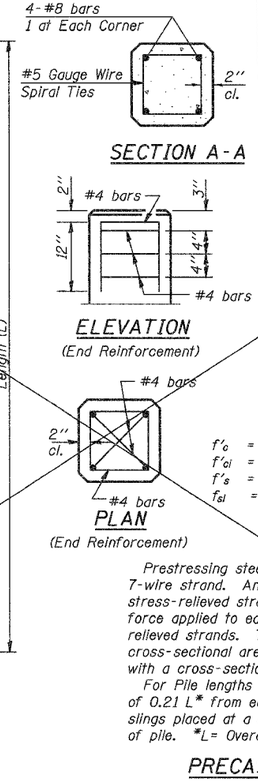
Note:
The thickness of the shell shall be 0.1495 inches with a tolerance of 5%. The shell shall be according to Article 1006.05(a) of the Standard Specification except that minimum yield strength for the steel after cold working shall be 50,000 p.s.i.



PILE BUILD UP



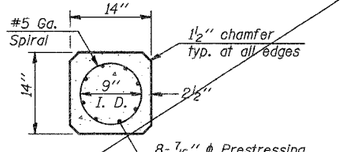
PILE PLAN



SECTION A-A

ELEVATION
(End Reinforcement)

PLAN
(End Reinforcement)



SECTION THRU PILE

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 505	115 BR-1	WINNEBAGO	35	19
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 10 OF 12 SHEETS

Contract #64940

DESIGN STRESSES

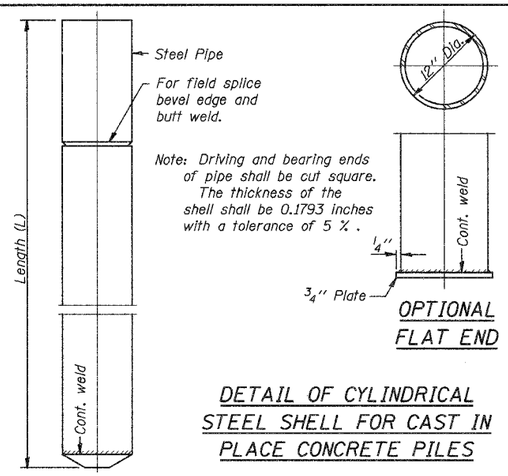
f'_c = 5,000 p.s.i.
f'_{ci} = 4,000 p.s.i.
f'_s = 270,000 p.s.i. (31,000 lbs.-7/16" ϕ or 41,300 lbs.-½" ϕ)
f_{si} = 189,000 p.s.i. (21,700 lbs.-7/16" ϕ or 28,900 lbs.-½" ϕ)

NOTES

Prestressing steel shall be uncoated high strength, stress-relieved 7-wire strand. An equal substitution of low-relaxation strands for the stress-relieved strands will be permitted, provided the initial prestressing force applied to each strand is the same as that shown for stress-relieved strands. The nominal diameter shall be 7/16" and the nominal cross-sectional area shall be 0.115 in² or the equivalent 6-½" ϕ strands with a cross-sectional area of 0.153 in² may be used.

For Pile lengths up to 65', use two slings placed at a distance of 0.21 L* from each end. For Piles longer than 65', use three slings placed at a distance of 0.12 L* from each end and at midpoint of pile. *L= Overall length of pile to be handled.

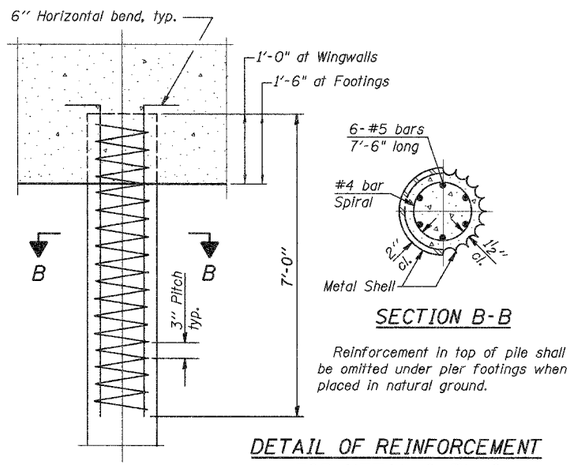
PRECAST PRESTRESSED CONCRETE PILE



Note: Driving and bearing ends of pipe shall be cut square. The thickness of the shell shall be 0.1793 inches with a tolerance of 5 %.

OPTIONAL FLAT END

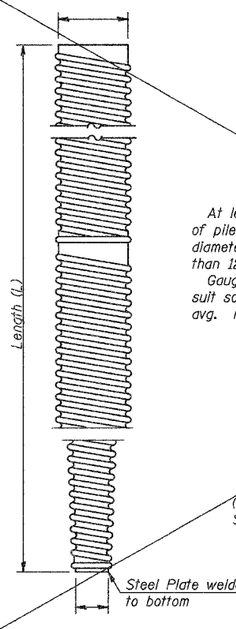
DETAIL OF CYLINDRICAL STEEL SHELL FOR CAST IN PLACE CONCRETE PILES



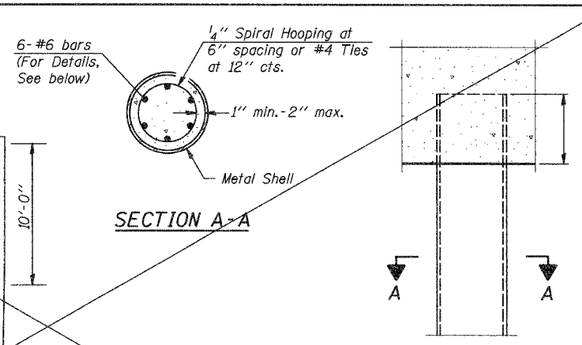
SECTION B-B

Reinforcement in top of pile shall be omitted under pier footings when placed in natural ground.

DETAIL OF REINFORCEMENT FOR METAL SHELLS



PILE REINFORCEMENT



SECTION A-A

DETAIL OF MANDREL DRIVEN STRAIGHT OR STEP-TAPER PILES FOR CAST IN PLACE CONCRETE PILES

DESIGNED	JLS
CHECKED	JDA
DRAWN	NOE
CHECKED	JLS

X-3

10-22-04

CONCRETE PILE DETAILS
IL RTE 75 OVER
TIMOTHY CREEK
FAP ROUTE 505
SECTION 115BR-1
WINNEBAGO COUNTY
STA. 63+23.20
SN 101-0183

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 505	115 BR-1	WINNEBAGO	35	20
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 11 OF 12 SHEETS

Contract #64940

Illinois Department of Transportation
Division of Highways
IDOT

SOIL BORING LOG

Page 1 of 2

Date 1/16/04

ROUTE IL 75 DESCRIPTION P92-091-03 IL 75 over Timothy Creek, 1/2 mile east of Meridian Road LOGGED BY C. Jenkins

SECTION LOCATION Rockton Twp. - NW, SEC. 31, TWP. 46N, RNG. 1E

COUNTY Winnebago DRILLING METHOD Hollow Stem Auger HAMMER TYPE C-45

STRUCT. NO.
Station 70+94

BORING NO. B-1
Station 71+50
Offset 10.00ft Rt CL
Ground Surface Elev. 99.2 ft

Surface Water Elev. 89.0 ft
Stream Bed Elev. 88.5 ft

Groundwater Elev.:
First Encounter 89.2 ft ▼
Upon Completion Wash ft
After ___ Hrs. ___ ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Asphalt			
MEDIUM dirty brown SAND with some GRAVEL			
96.70			
LOOSE tan fine to medium grained SAND	4 3 4		
94.70			
-5			
STIFF gray SILTY LOAM	4 3 6	1.2 P	17
92.20			
LOOSE tan fine grained SAND	2 2 4		
90.20			
▼-10			
Same as above	2 3 4		
87.70			
VERY LOOSE tan medium grained SAND	0 0 1		
85.20			
-15			
VERY LOOSE tan fine grained SAND	0 0 1		
82.70			
Begin Wash VERY LOOSE tan fine to medium grained SAND	1 1 1		
80.20			
-20			

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Wash VERY LOOSE tan fine grained SAND	0 1 1		
77.70			
Wash LOOSE tan fine SAND	0 2 3		
75.20			
-25			
Wash Same as above	1 3 5		
72.70			
Wash MEDIUM tan fine SAND	3 4 7		
70.20			
-30			
Wash MEDIUM tan fine to medium grained SAND	3 5 7		
67.70			
Wash MEDIUM tan medium grained SAND	1 6 10		
65.20			
-35			
Wash MEDIUM tan fine grained SAND	2 4 8		
62.70			
Wash MEDIUM tan fine SAND	3 5 6		
60.20			
-40			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
IDOT

SOIL BORING LOG

Page 2 of 2

Date 1/16/04

ROUTE IL 75 DESCRIPTION P92-091-03 IL 75 over Timothy Creek, 1/2 mile east of Meridian Road LOGGED BY C. Jenkins

SECTION LOCATION Rockton Twp. - NW, SEC. 31, TWP. 46N, RNG. 1E

COUNTY Winnebago DRILLING METHOD Hollow Stem Auger HAMMER TYPE C-45

STRUCT. NO.
Station 70+94

BORING NO. B-1
Station 71+50
Offset 10.00ft Rt CL
Ground Surface Elev. 99.2 ft

Surface Water Elev. 89.0 ft
Stream Bed Elev. 88.5 ft

Groundwater Elev.:
First Encounter 89.2 ft ▼
Upon Completion Wash ft
After ___ Hrs. ___ ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Wash VERY LOOSE tan fine SAND	0 1 2		
57.70			
Wash MEDIUM tan fine SAND	1 4 7		
55.20			
-45			
Wash Same as above	2 4 9		
52.70			
Wash Same as above	4 7 11		
50.20			
-50			
Wash MEDIUM tan fine SAND	4 10 15		
47.70			
Wash DENSE tan fine grained SAND	5 10 26		
45.20			
-55			
Wash Same as above	13 17 27		
42.70			
Wash DENSE tan SANDY GRAVEL	7 18 25		
40.20			
-60			

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Wash MEDIUM tan fine SAND	2 3 7		
37.70			
Wash MEDIUM tan fine SAND	1 3 8		
35.20			
-65			
Wash MEDIUM tan fine SAND	3 8 15		
32.70			
*Pulled out on 1/10/04; went back down on 1/20/04			
31.70			
Wash VERY DENSE tan SANDY GRAVEL	14 25 29		
30.20			
-70			
Wash MEDIUM tan coarse grained SAND with some GRAVEL	6 10 20		
27.70			
End of Boring			
-75			
-80			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)

DESIGNED	JLS
CHECKED	JDA
DRAWN	NOE
CHECKED	JLS

SOIL BORINGS
IL RTE 75 OVER
TIMOTHY CREEK
FAP ROUTE 505
SECTION 115BR-1
WINNEBAGO COUNTY
STA. 63+23.20
SN 101-0183

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 505	115 BR-1	WINNEBAGO	35	21
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 12 OF 12 SHEETS

Contract #64940

Illinois Department of Transportation
Division of Highways
IDOT

SOIL BORING LOG

Page 1 of 2

Date 1/21/04

ROUTE IL 75 DESCRIPTION P92-091-03 IL 75 over Timothy Creek, 1/2 mile east of Meridian Road LOGGED BY C. Jenkins

SECTION LOCATION Rockton Twp. - NW, SEC. 31, TWP. 46N, RNG. 1E

COUNTY Winnebago DRILLING METHOD Hollow Stem Auger HAMMER TYPE C-45

STRUCT. NO.
Station 70+94

BORING NO. B-2
Station 70+40
Offset 10.00ft Lt CL
Ground Surface Elev. 99.8 ft

Surface Water Elev. 89.0 ft
Stream Bed Elev. 88.5 ft

Groundwater Elev.:
First Encounter 87.8 ft ▼
Upon Completion Wash ft
After ____ Hrs. ____ ft

	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Asphalt				
STIFF tan/gray SANDY LOAM			1.2 P	15
	97.80			
MEDIUM tan/gray SILTY LOAM		2 2 3	0.7 P	20
	96.30			
STIFF black SILTY LOAM	-5	2 2 4	1.2 P	26
	93.80			
MEDIUM gray SANDY LOAM		2 2 2	0.7 P	14
	91.30			
MEDIUM gray/black SILTY LOAM	-10	2 2 2	0.7 P	24
	88.30			
LOOSE tan fine SAND	▼	2 2 3		
	86.30			
Same as above	-15	1 2 2		
	83.80			
Same as above		1 2 3		
	81.30			
Same as above	-20			

	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Same as above (continued)		2 3 4		
	78.80			
Begin Wash LOOSE tan fine SAND		2 3 5		
	76.30			
Wash Same as above	-25	2 3 6		
	73.80			
Wash MEDIUM tan fine SAND with some GRAVEL		4 8 8		
	71.30			
Wash MEDIUM orange fine SAND with some GRAVEL	-30	4 6 10		
	68.80			
	66.30			
Wash MEDIUM tan fine SAND	-35	5 10 11		
	63.80			
	61.30			
	-40			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
IDOT

SOIL BORING LOG

Page 2 of 2

Date 1/21/04

ROUTE IL 75 DESCRIPTION P92-091-03 IL 75 over Timothy Creek, 1/2 mile east of Meridian Road LOGGED BY C. Jenkins

SECTION LOCATION Rockton Twp. - NW, SEC. 31, TWP. 46N, RNG. 1E

COUNTY Winnebago DRILLING METHOD Hollow Stem Auger HAMMER TYPE C-45

STRUCT. NO.
Station 70+94

BORING NO. B-2
Station 70+40
Offset 10.00ft Lt CL
Ground Surface Elev. 99.8 ft

Surface Water Elev. 89.0 ft
Stream Bed Elev. 88.5 ft

Groundwater Elev.:
First Encounter 87.8 ft ▼
Upon Completion Wash ft
After ____ Hrs. ____ ft

	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Wash MEDIUM gray/tan fine SAND (continued)		3 6 9		
	58.80			
	56.30			
Wash LOOSE tan fine SAND	-45	1 2 5		
	53.80			
	51.30			
Wash LOOSE tan fine SAND	-50	1 2 3		
	48.80			
	46.30			
Wash MEDIUM tan fine SAND	-55	2 5 7		
	43.80			
	41.30			
	-60			

	DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Wash MEDIUM tan fine SAND with some GRAVEL (continued)		6 13 18		
	38.80			
	36.30			
Wash MEDIUM tan fine SAND	-65	8 11 14		
	33.80			
	31.30			
Wash MEDIUM tan SANDY GRAVEL	-70	5 11 16		
	28.80			
	26.30			
Wash VERY DENSE tan well-cemented SANDY GRAVEL	-75	18 34 36		
	23.80			
End of Boring				
	-80			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)

DESIGNED	JLS
CHECKED	JDA
DRAWN	NOE
CHECKED	JLS

SOIL BORINGS
IL RTE 75 OVER
TIMOTHY CREEK
FAP ROUTE 505
SECTION 115BR-1
WINNEBAGO COUNTY
STA. 63+23.20
SN 101-0183

9K-D

FED. ROAD DIST. NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
SBI 75	115BR	WINNEBAGO	8	1

FED. ROAD DIV. NO. 4 | ILLINOIS | PROJECT

P-92-010-70 (201)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PLANS FOR PROPOSED STATE BOND ISSUE HIGHWAY

SCALES
- PLAN 1 INCH 100 FT.
- PROFILE HOR. 1 INCH 100 FT.
- PROFILE VERT. 1 INCH 10 FT.
- CROSS-SECTIONS 1 INCH 5 FT.

SBI ROUTE 75
SEC. 115 BR
WINNEBAGO COUNTY

C-92-047-71

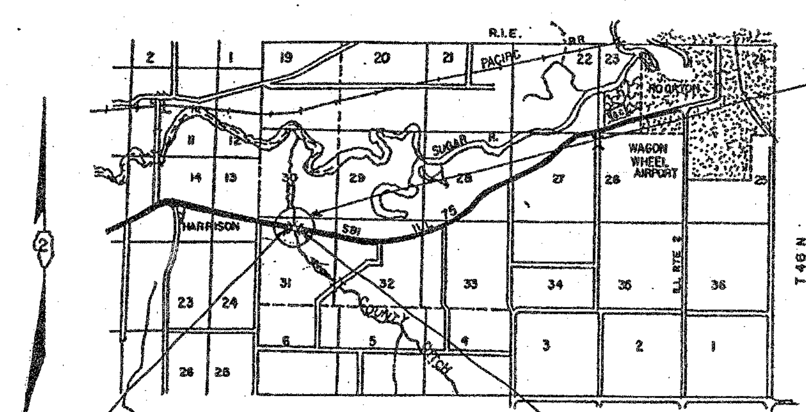
FOR INFORMATION ONLY

INDEX OF SHEETS

1. COVER SHEET & INDEX OF SHEETS
2. SUMMARY OF QUANTITIES, GENERAL NOTES, SCHEDULE OF QUANTITIES & TYPICAL SECTION
3. GENERAL PLAN & ELVATION
4. APPROACH DETAILS
5. SUPER STRUCTURE
6. TYPE W STEEL RAILING
7. WEST ABUTMENT
8. EAST ABUTMENT

STANDARDS

- 2113-1 NAME PLATE
- 2115-3 PAVEMENT FABRIC
- 2230-7 STEEL PLATE BEAM GUARD RAIL
- 2231-3 APPLICATION OF STEEL PLATE BEAM GUARD RAIL
- 2239-5 WIDENING & SHOULDERS
- 2298-3 APPLICATION OF TRAFFIC CONTROL DEVICES
- 2299-4 DESIGN OF TRAFFIC CONTROL DEVICES
- 2300 FLAGMAN TRAFFIC CONTROL SIGN
- 2302-2 APPLICATION OF TRAFFIC CONTROL DEVICES
- 2303-3 " " " " " "
- 2305-2 " " " " " "
- 2306-3 " " " " " "
- 2307-3 " " " " " "
- 2309-2 " " " " " "



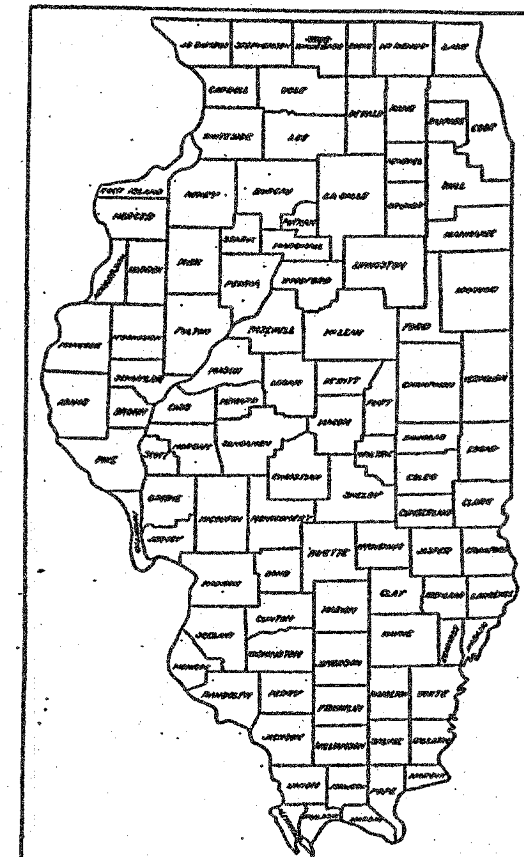
LAYOUT
1 INCH = 1 MILE

SECTION 115BR
BEGINS STA. 69+76.5

SECTION 115BR
ENDS STA. 72+11.5

SECTION 115BR
INCLUDES Reconstruction of the Superstructure and Portions of the Substructure of the Bridge Carrying SBI Route 75 (ILL.75) Over the County Ditch Flowing North to the Sugar River; Spans 1 @ 38'-4¾" at Station 70+94 and all Other Work Necessary to Complete the Section.

GROSS LENGTH OF SECTION = 235.0 Lin.Ft. = 0.045 Miles
NET LENGTH OF SECTION = 235.0 Lin.Ft. = 0.045 Miles



LOCATION OF SECTION INDICATED THUS:—

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUBMITTED May 8 1971
D. E. Suwinski
DISTRICT ENGINEER

EXAMINED April 3 1973
[signature]
ENGINEER OF PLANS AND CONTRACTS

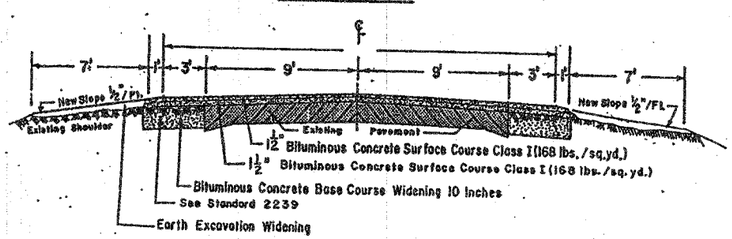
PASSED April 3 1973
W. Baumann
ENGINEER OF DESIGN

APPROVED April 3 1973
Roger F. [signature]
ACTING CHIEF TRANSPORTATION ENGINEER

TYPICAL SECTIONS

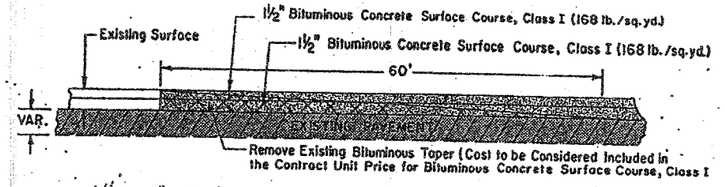
NO SCALE

MAIN LINE



NOTE: The thickness of Bituminous Mixture shown on the plans is the nominal thickness. Deviations from the nominal thickness will be permitted when such deviations occur due to irregularities in the existing base or surface on which the Bituminous Mixture is placed.

BUTT JOINT



GENERAL NOTES

ENTIRE SECTION INSPECTED AND APPROVED AS TO POLICY.
DATE MAY 5 1977
DISTRICT ENGINEER D. E. Swimark

THE CONTRACTOR SHALL ERECT THE BARRICADES CONFORMING TO STANDARDS 2298 & 2299

AT THE LOCATIONS WHERE EXCAVATION QUANTITIES ON THE PLANS ARE INDICATED AS HAVING BEEN ESTIMATED, THE ENGINEER WILL OBTAIN ORIGINAL AND FINAL CROSS SECTIONS TO DETERMINE PAY QUANTITIES.

WHERE SECTION OR SUBSECTION MONUMENTS ARE ENCOUNTERED, THE ENGINEER SHALL BE NOTIFIED BEFORE SUCH MONUMENTS ARE REMOVED. THE CONTRACTOR SHALL PROTECT AND CAREFULLY PRESERVE ALL PROPERTY MARKS AND MONUMENTS UNTIL THE OWNER, AN AUTHORIZED SURVEYOR OR AGENT HAS WITNESSED OR OTHERWISE REFERENCED THEIR LOCATION.

THE CONTRACTOR SHALL REMOVE ALL DELINEATORS AND GUARD RAIL WHICH ARE NOT TO BE LEFT IN PLACE. UNUSABLE MATERIAL SHALL BE DISPOSED OF BY THE CONTRACTOR AT HIS EXPENSE. SALVAGEABLE MATERIAL SHALL BE STORED ON THE STATES RIGHT OF WAY AND SHALL BECOME THE PROPERTY OF THE DIVISION OF HIGHWAYS OF THE STATE OF ILLINOIS.

SUMMARY OF QUANTITIES

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
SBI 75	115BR	WINNEBAGO	8	2
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT		

CONSTRUCTION TYPE CODE X080

CODE NO.	ITEM	UNIT	QUANTITY
201001	TREE REMOVAL (6 TO 15 INCH DIAMETER)	IN DIA	50
202004 *	EARTH EXCAVATION (WIDENING)	CU YD	8
306007	BITUMINOUS CONCRETE BASE COURSE WIDENING 8 INCH	SQ YD	35
406008 *	BITUMINOUS CONCRETE SURFACE COURSE CLASS I	TON	88
408005	PORTLAND CEMENT CONCRETE PAVEMENT 10 INCH	SQ YD	33
408013	PAVEMENT FABRIC	SQ YD	33
501015	REMOVAL OF EXISTING SUPERSTRUCTURE	EACH	1
501022	CONCRETE REMOVAL	CU YD	10.4
501026	EXPANSION BOLTS 3/4 INCH	EACH	104.
504003	CLASS X CONCRETE	CU YD	16.6
505001 *	PRECAST CONCRETE BRIDGE SLAB	SQ FT	299
505004 *	PRECAST PRESTRESSED CONCRETE DECK BEAMS (17" DEPTH)	SQ FT	1261
508012	STEEL RAILING, TYPE #	LIN FT	138
512001	REINFORCEMENT BARS	POUND	2120
620026	PAVEMENT REMOVAL AND PORTLAND CEMENT CONCRETE REPLACEMENT TYPE 2 10 INCH	SQ YD	9.
628001 *	STEEL PLATE BEAM GUARD RAIL, SINGLE RAIL	LIN FT	300
628015	TEMPORARY GUARD RAIL	LIN FT	39
633002	WOOD GUARD RAIL REMOVAL	LIN FT	160
646002	ENGINEER'S FIELD OFFICE, TYPE B	EACH	1
X628021 *	TERMINAL SECTION SINGLE RAIL	EACH	4
Z10178 *	COAL TAR INTERLAYER PROTECTIVE COAT	SQ YD	158
XZ1014 *	TRAFFIC CONTROL & PROTECTION STANDARD 2309	EACH	1

* SEE SPECIAL PROVISIONS

SCHEDULE OF QUANTITIES

TREE REMOVAL (6-15 INCH DIAMETER)			
ENTIRE SECTION		50	IN DIA
EARTH EXCAVATION (WIDENING)			
ENTIRE SECTION		8	CU YDS
BITUMINOUS CONCRETE BASE COURSE WIDENING 8"			
ENTIRE SECTION		35	SQ YDS
BITUMINOUS CONCRETE SURFACE COURSE, CLASS I			
BRIDGE DECK		16	
MAINLINE		72	
	TOTAL	88	TONS
STEEL PLATE BEAM GUARD RAIL, SINGLE RAIL			
ENTIRE SECTION (4 AT 75')		300	LIN FT
WOOD GUARD RAIL REMOVAL			
ENTIRE SECTION (4 AT 40')		160	LIN FT
ENGINEER'S FIELD OFFICE, TYPE B			
ENTIRE SECTION		1	EACH
TERMINAL SECTION, SINGLE RAIL			
ENTIRE SECTION (1 @ each end = 4)		4	EACH
TRAFFIC CONTROL & PROTECTION STANDARD 2309			
ENTIRE SECTION		1	EACH

DISTRICT NO. 8 DIXON

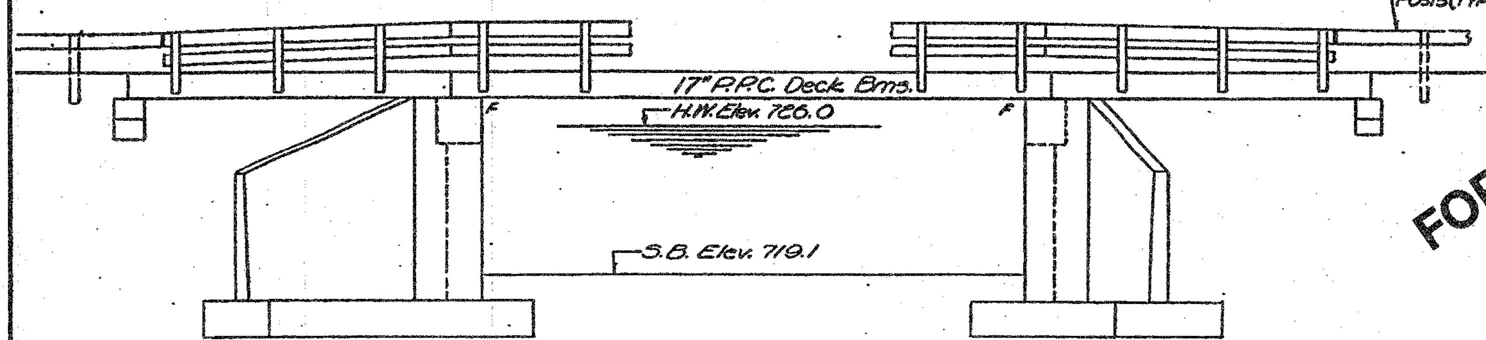
B.M. ° Chiseled on the East wingwall of Sta. [illegible] Elev. [illegible]
Exist Structure: Built as SBI Rte. 75 Sec. 113 Sta. 70+94
in 1928; Superstr. is R.C. Deck Girder, Substr. is R.C. Closed Abutments. Superstr. to be removed by Bridge Contractor. No Salvage.
Traffic to be maintained by using stage construction.

STATE OF ILLINOIS
[redacted]

S.B.I. 75 F.A.	113BR	WINNEBAGO	8	3

SHEET NO. 1
[illegible] SHEETS

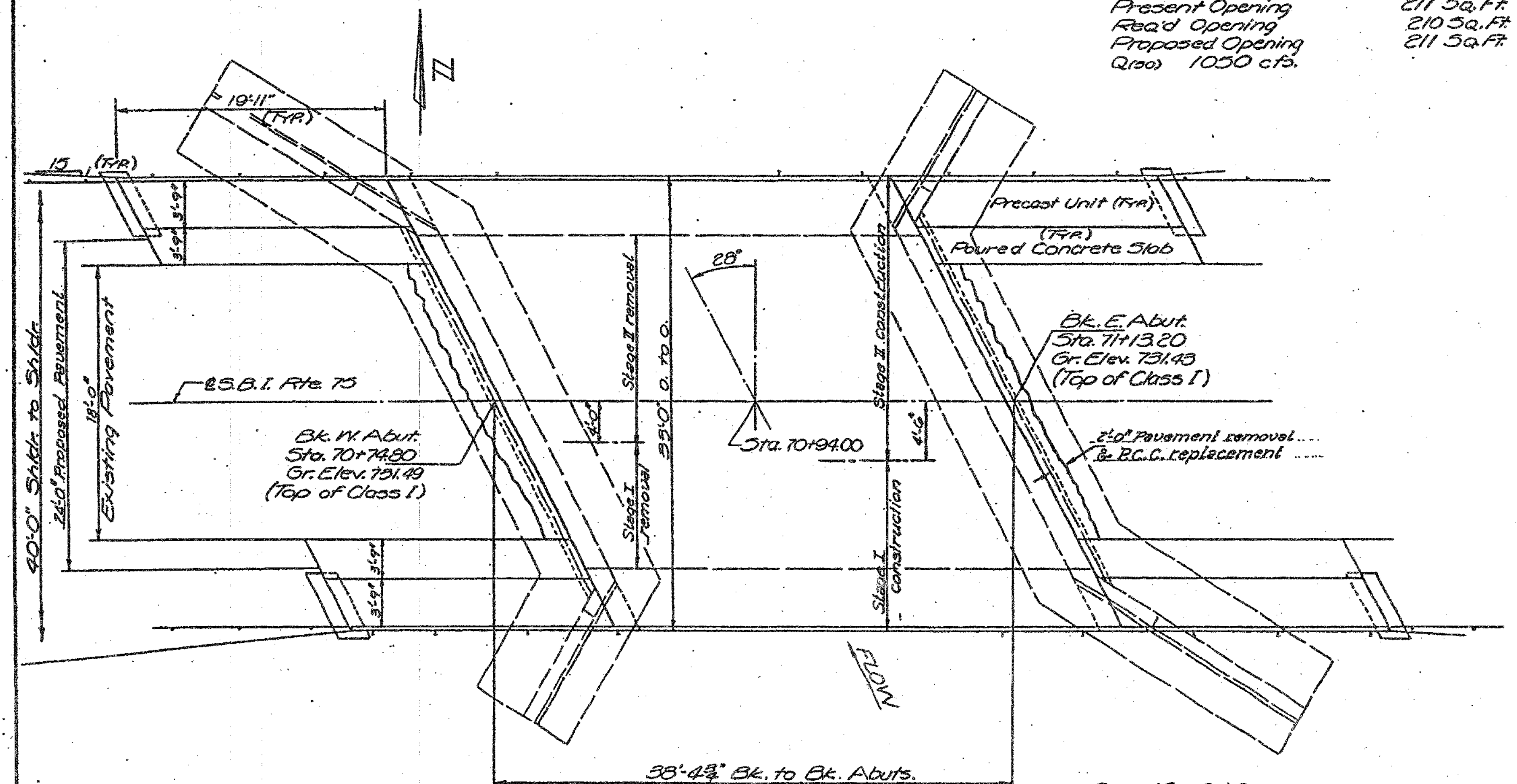
[redacted]



ELEVATION

WATERWAY INFORMATION

Drainage Area	5750 Acres
Character	level, rolling, sand, clay, cultivated
Present Opening	211 Sq. Ft.
Req'd Opening	210 Sq. Ft.
Proposed Opening	211 Sq. Ft.
Q(50)	1050 cfs.



PLAN

GENERAL NOTES

All reinforcement bars shall be lapped 24 diameters unless otherwise shown.

It shall be the responsibility of the Contractor to verify all dimensions & conditions existing in the field prior to construction & ordering of materials.

An alternate strand pattern using Extra High Strength prestressing strand (270 k.s.i.) is permitted.

Expansion bolts shall consist of self-drilling expansion shields & 3/4" ϕ hooked bolts. Hooked bolts shall extend a minimum of 12" into new concrete except as otherwise shown.

Shoulder transition to wingwall shall be shaped with broken concrete - cost incidental.

Limits of coal tar interlayer protective coat shall be from 2' back of abutments & out to out of deck.

BILL OF MATERIAL

ITEM	UNIT	SUB.	SUPER.	TOTAL
Portland Cement Concrete Pavement (10")	Sq. yds.			33
Pavement Fabric	Sq. yds.			33
Concrete Removal	Cu. yds.	10.4		10.4
Expansion Bolts (3/4" ϕ)	Each	56	48	104
Class X Concrete	Cu. yds.	14.8	1.8	16.6
Precast Concrete Bridge Slab	Sq. ft.			299
Precast Prestressed Concrete Deck Beams (17")	Sq. ft.			1,201
Steel Railing, Type W	Lin. ft.		138	138
Reinforcement bars	Lbs.	2,120		2,120
Pavement Removal & P.C.C. Replacement, Type 2 (10")	Sq. yds.			9
Removal of Existing Superstructures	Each			1
Coal Tar Interlayer Protective Coat	Sq. yds.			138
Bituminous Concrete Surface Course	Tons			10
Temporary Guardrail	Lin. ft.		39	39

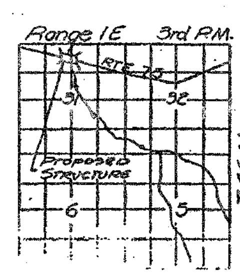
DESIGN STRESSES

FIELD UNITS
fc = 1000 psi. (Sub.)
fs = 20000 psi. (Reinf.)
Vc = 75 psi. (Footing)
n = 10

PRECAST PRESTRESSED UNITS
f'c = 5000 psi.
f'ci = 4000 psi.
f's = 248000 psi.
fsi = 173600 psi.

DESIGNED Gene McCormick
CHECKED Muhittin Ozturk J.M.

April 27 1971
EXAMINED [signature]
ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES
PASSED W.E. Baumann
ENGINEER OF DESIGN



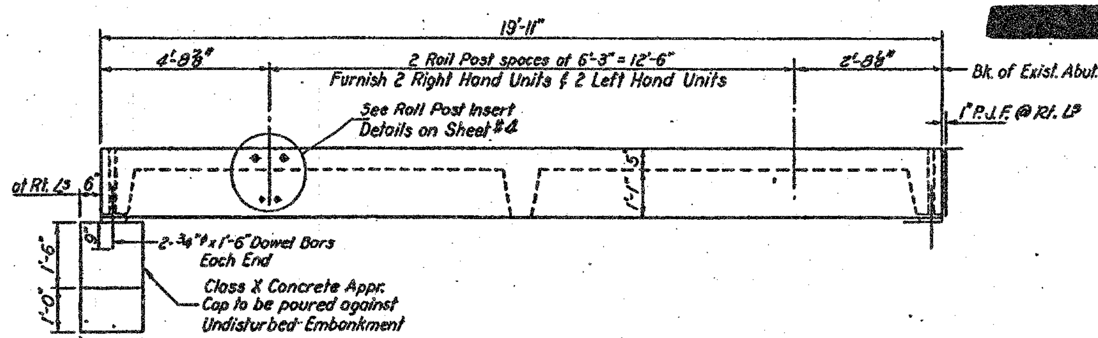
GENERAL PLAN & ELEVATION

4

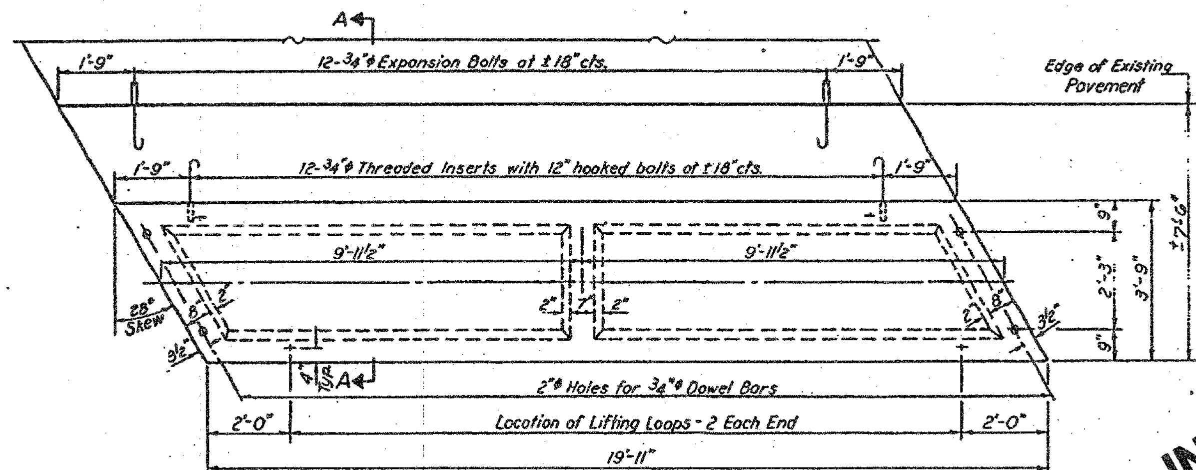
STATE OF ILLINOIS
[redacted]

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A. 73	115BR	WINNEBAGO	8	4

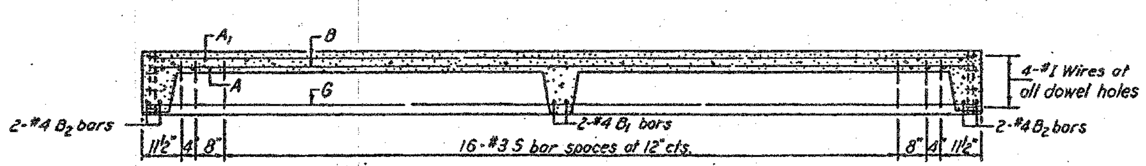
SHEET NO. 2
6 SHEETS



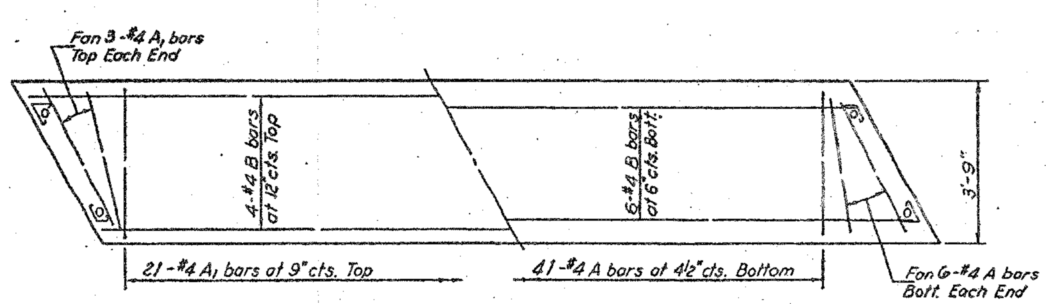
ELEVATION



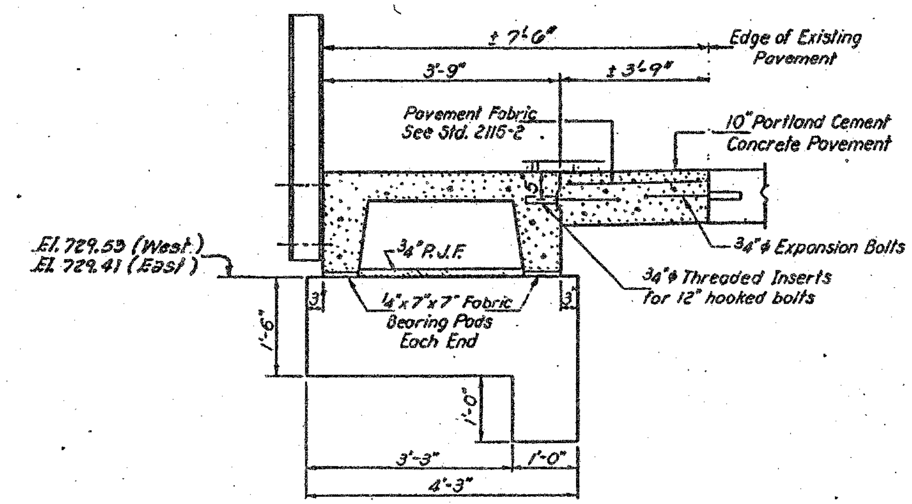
PARTIAL PLAN OF APPROACH



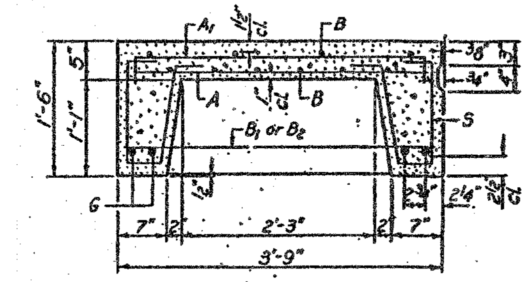
LONGITUDINAL SECTION



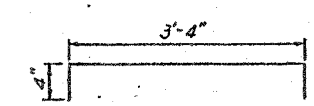
SLAB REINFORCEMENT



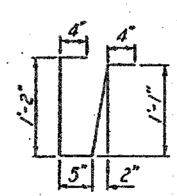
SECTION A-A



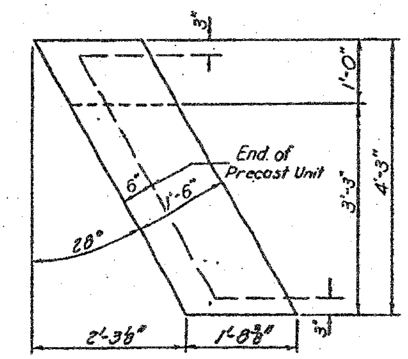
SECTION THRU PRECAST UNIT



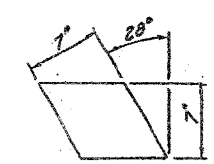
BAR A_1



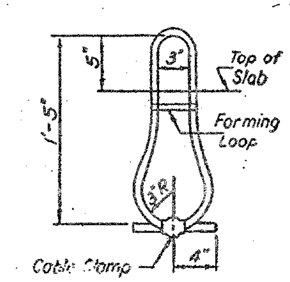
BAR S



PLAN - APPR. CAP



FABRIC BRG. PAD



LIFTING LOOP DETAIL

BAR LIST - ONE UNIT

*Reinforcement to be cast into slab

Bar	No	Size	Length	Shape
A	53	#4	3'-3"	—
A_1	27	#4	4'-0"	⊓
B	10	#4	19'-6"	—
B_1	2	#4	3'-6"	—
B_2	4	#4	4'-0"	—
G	4	#10	19'-6"	—
S	42	#3	3'-4"	⊔

NOTES

Unless otherwise approved by the Engineer, lifting loops shall be ½"φ, 6x19 class wire rope with fiber core and shall have a minimum ultimate strength of 18,700 lbs. Loops shall be burned off after slab has been erected.

Holes shall be drilled and anchor dowels grouted in place.

Cost of reinforcement and accessories cast into the slab unit, bearing pads, furnishing, drilling for, placing and grouting anchor dowels and ¾"φ hooked bolts is included in Unit bid price for "Precast Concrete Bridge Slab."

The Precast Concrete Bridge Slab shall be erected and aligned with the exterior face of the exterior Deck Beam after Deck Beams are in final position.

BILL OF MATERIAL

Item	Unit	Quantity
Precast Concrete Bridge Slab	Sq. Ft.	299
Portland Cement Concrete Pavement (10")	Sq. Yds.	33
Pavement Fabric	Sq. Yds.	33
Expansion Bolts ¾"φ	Each	48
Class X Concrete	Cu. Yds.	1.8

STRESSES

f'_c = 4,500 psi.
f_c = 1,800 psi.
f_s = [illegible] psi
n = 8

DESIGNED Gene McCormick
CHECKED [illegible] J.M.
DRAWN J. L. Armstrong

April 27, 1971
EXAMINED [illegible]
PASSED W. E. Baumann
ENGINEER OF DESIGN
APPROVED [illegible]

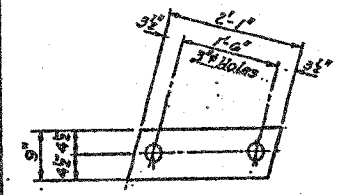
APPROACH DETAILS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
75	115BR	WINNEBAGO	8	5

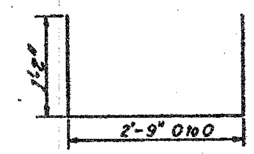
SHEET NO. 3
6 SHEETS

[redacted]

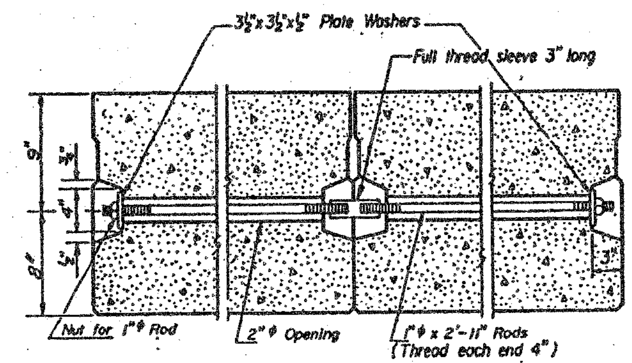
FOR INFORMATION ONLY



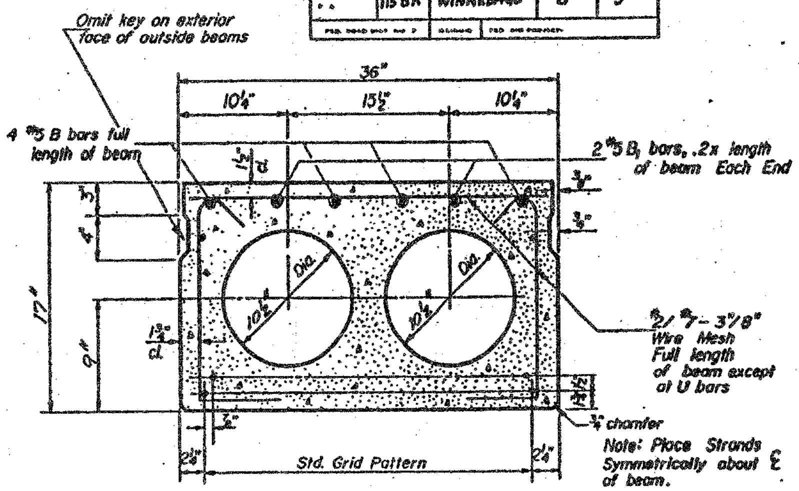
FABRIC BEARING PAD



U BAR

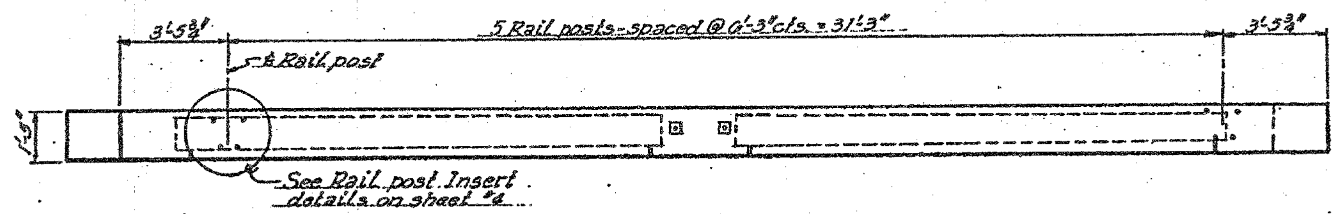


TYPICAL TRANSVERSE TIE ASSEMBLY

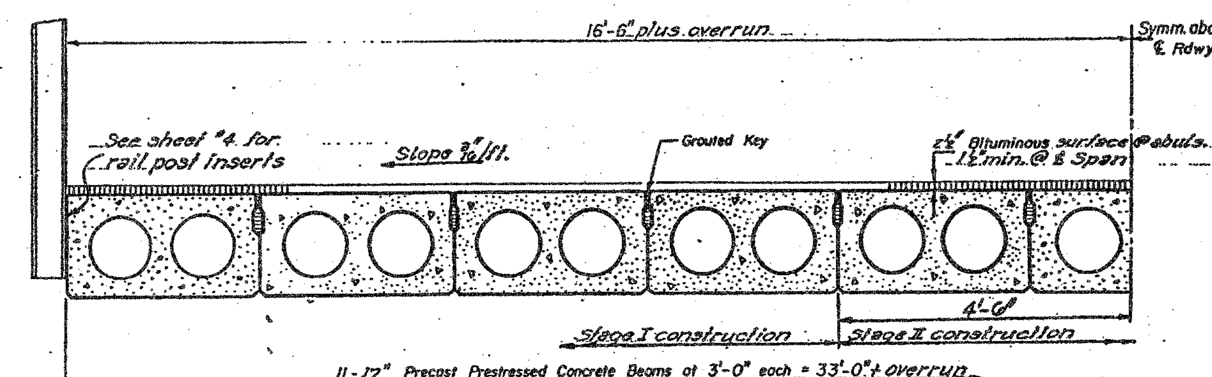


TYPICAL SECTION

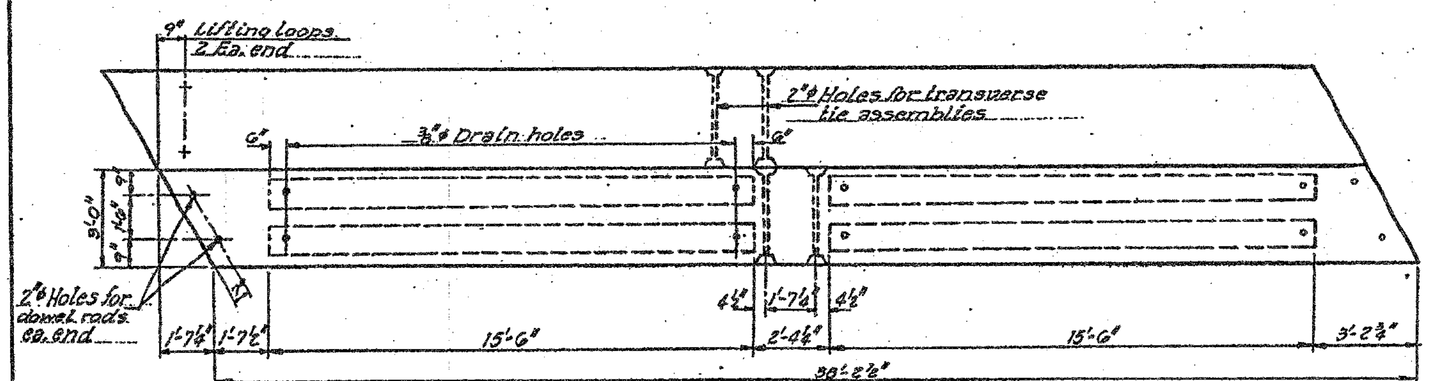
18-7/16"φ Strands Each Strand Stressed to 18,900 lbs.
14-Strands 1¾" up 2-Strands 3½" up... 2-Strands 12" up



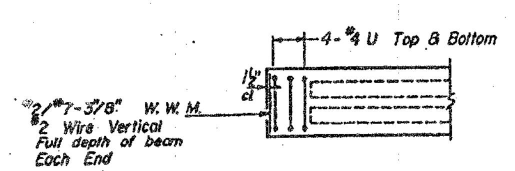
ELEVATION



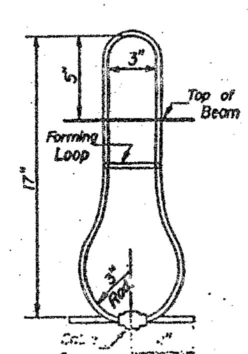
HALF CROSS SECTION
(Looking West)

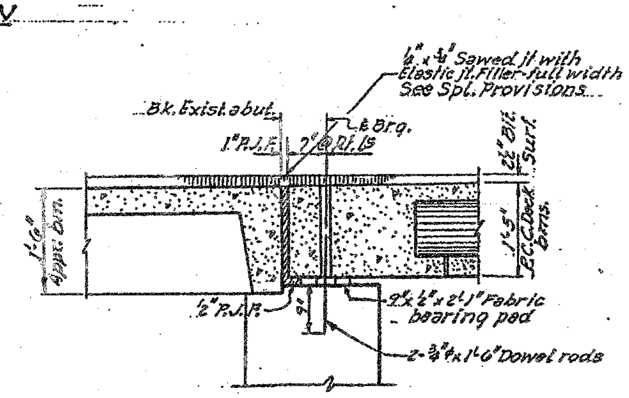


PARTIAL PLAN



END PLAN





GENERAL NOTES

Prestressing steel shall be non-galvanized high strength, stress-relieved 7-wire strand. The nominal diameter shall be 7/16" and the nominal cross-sectional area shall be 0.109 sq. in..

Lifting loops shall be ½"φ diameter, 6x19 class wire rope with fiber core and shall have a minimum ultimate tensile strength of 18,700 lbs.

The 1"φ rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets that receive transverse tie bar on outside beam shall be filled with grout after transverse tie assembly is in place.

Longitudinal shear keys shall be packed with a very dry mix of 2:1 sand and P.C. mortar.

After fabrication the transverse tie assemblies (tie rods, nuts, washers and sleeves) shall be hot-dipped galvanized in accordance with A.S.T.M. Designation: A153.

Cost of reinforcement and accessories cast into the beam, of bearing pads, of armor angles, and of grouting longitudinal shear keys is included in unit price bid for "Precast Prestressed Concrete Deck Beams."

After beams have been erected, holes for dowel anchors shall be drilled into the [illegible] & the anchor dowels grouted in place.

BILL OF MATERIAL

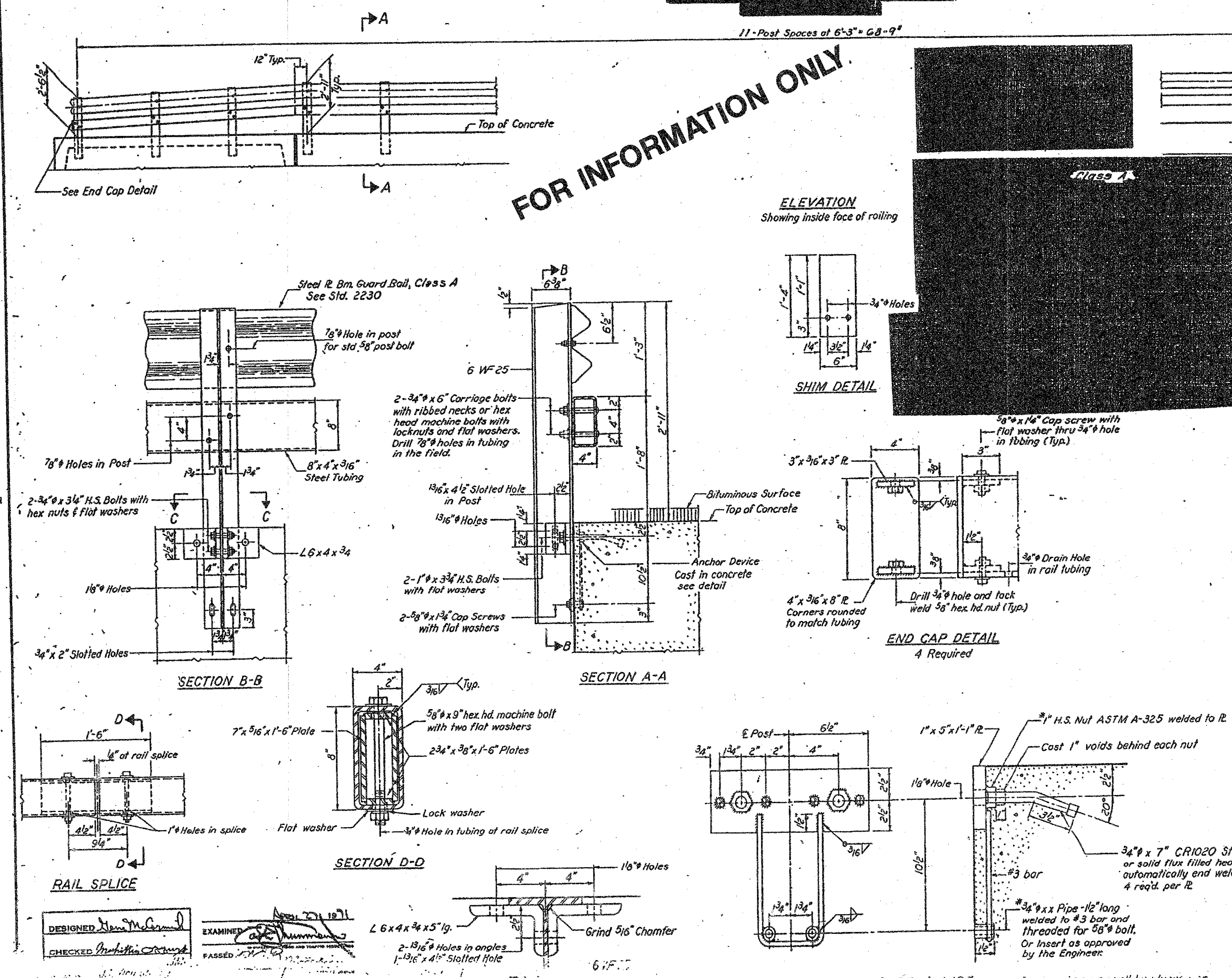
Precast Prestressed Concrete Deck Beams (17")	Sq. Ft.	1,261
Removal of Existing Superstructure	Each	1

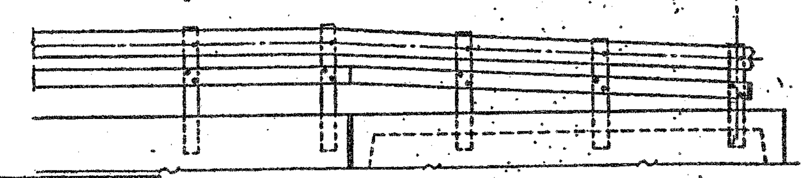
DESIGNED [signature]
CHECKED [signature]
EXAMINED [signature] APRIL 20 1971
PASSED

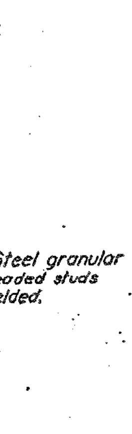
SUPERSTRUCTURE
SEC. 115BR

					SHEET NO. 4
F.A. 75	115BR	WINNEBAGO	8	6	6 SHEETS

STATE OF ILLINOIS







NOTES

Hollow structural steel tubing shall conform to the requirements of ASTM designation A-501 "Hot Formed Welded and Seamless Carbon Steel Structural Tubing."

All other steel shapes and plates shall conform to the requirements of ASTM designation A-441 or A-36.

Bolts, cap screws, and nuts shall conform to the requirement of ASTM designation A-307 except for high strength bolts, nuts and washers noted which shall conform to ASTM. designation A-325.

All bolts, nuts, cap screws, washers and lock washers shall be galvanized in accordance with ASTM designation A-153.

All posts, railing, rail splices, anchor devices and angles shall be galvanized after shop fabrication in accordance with ASTM designation A-123 and A-385. Galvanized rail shall not be painted.

Railing shall be in accordance with Section 508 of the Standard Specifications, except as noted, and shall be paid for at the contract unit price per lineal foot for STEEL RAILING, TYPE W.

All field drilled holes shall be coated with an approved zinc rich paint before erection.

The lower portion of the post flange in contact with concrete shall receive two coats of asphalt paint conforming to Section 714.08 Type B or place 1/8" fabric bearing pad between the post and concrete.

The 3/4"ϕ high strength bolts used to connect the 6x4x3/4 angles to the post shall be tightened in accordance with Article 710.11 of the Standard Specifications. The 1"ϕ high strength bolts connecting the angles to the concrete beam shall be tightened to a snug fit and given an additional 1/8 turn.

For multi-span bridges, sufficient 1/4"x6"x1'-4" galvanized steel shims shall be provided to align rail between adjacent spans. Cost incidental to Steel Railing.

BILL OF MATERIAL

Item	Unit	Quantity
STEEL RAILING, TYPE W	Lin. Ft.	138

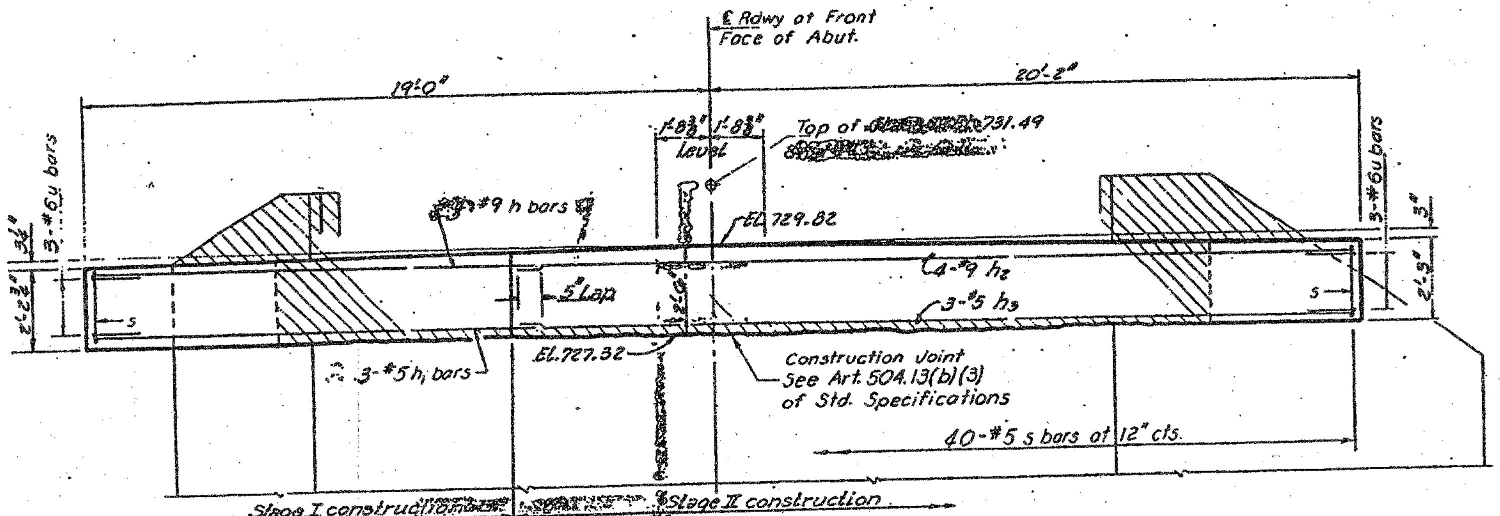
TYPE W
STEEL RAILING
S.B.I. RT. 75 SEC. 115BR
WINNEBAGO COUNTY

DESIGNED
CHECKED
EXAMINED
PASSED

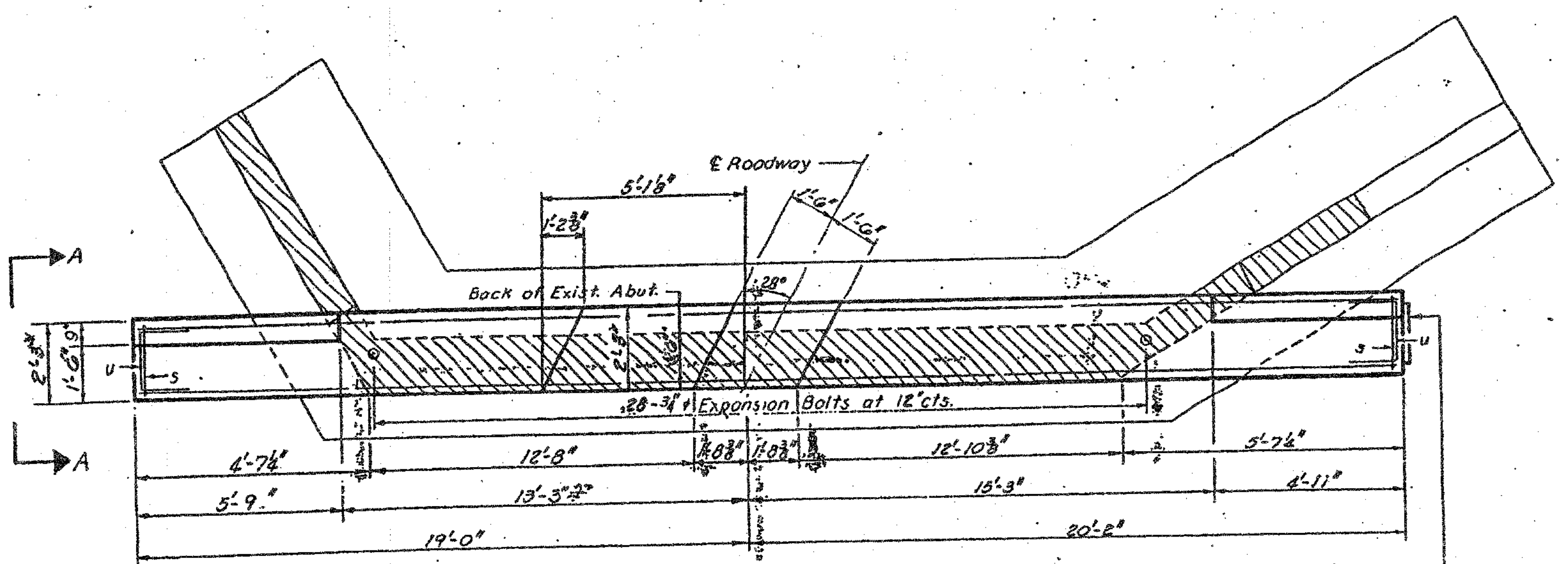
STATE OF ILLINOIS
[redacted]

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.S. 75	115BR	WINNEBAGO	8	7

SHEET NO. 5
6 SHEETS



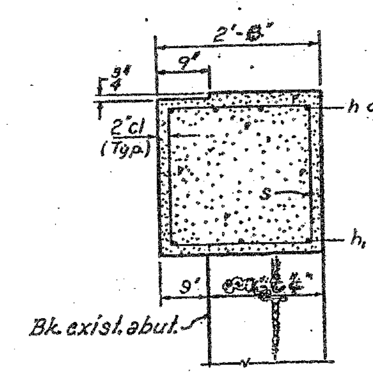
ELEVATION



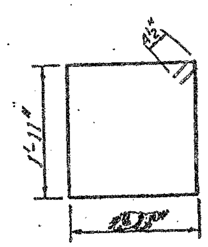
PLAN

Place existing Name Plate at this location Cost Incidental

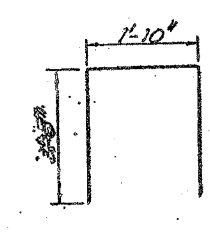
FOR INFORMATION ONLY



VIEW A-A



BAR s



BAR u

Notes.
Hatched area indicates Concrete Removal. Reinforcement extending into removed area shall be cleaned and incorporated into the new construction.
Expansion Bolts shall be anchored in sound concrete.
All edges shall have standard 3/4 chamfers

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h	4	#9	14'-3"	—
h_1	3	#5	14'-3"	—
h_2	4	#9	23'-9"	—
h_3	3	#5	23'-9"	—
s	40	#5	8'-5"	☐
u	6	#6	7'-10"	⊏
Class X Concrete			Cu. Yds.	7.4
Reinforcement Bars			Lbs.	1060
Expansion Bolts			Each.	28
Concrete Removal			Cu. Yds.	4.9

DESIGNED
CHECKED
EXAMINED April 27, 1971
PASSED

WEST ABUTMENT
S.B.I. RT. 75 SEC. 115 BR.
WINNEBAGO COUNTY
STA. N 70

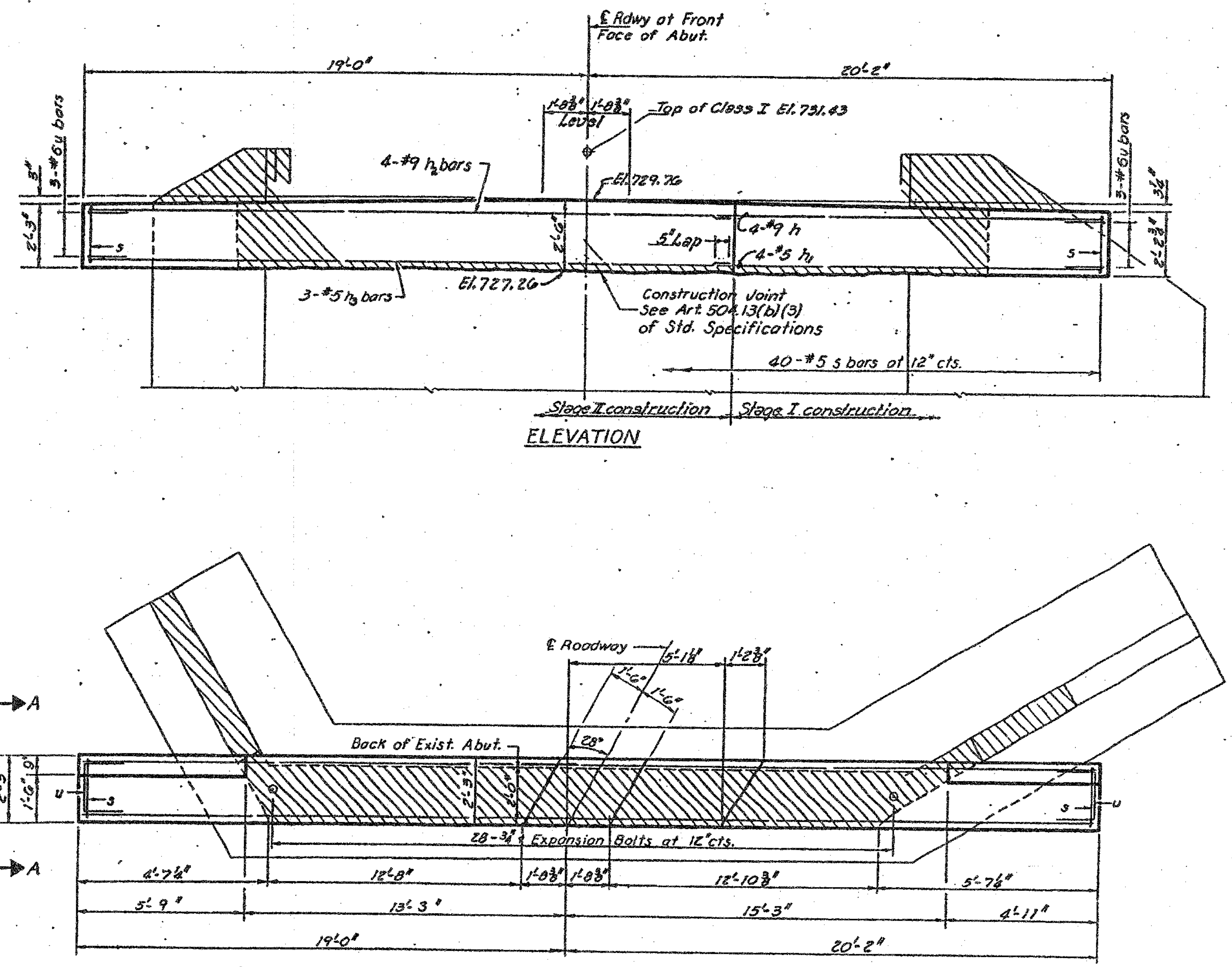
STATE OF ILLINOIS

[redacted]

F.A. 75	115BR	WINNEBAGO	8	8

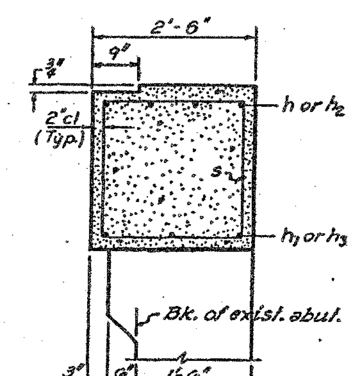
SHEET NO. 6

6 SHEETS

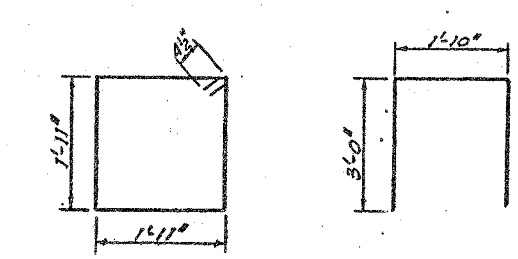


ELEVATION

PLAN



VIEW A-A



Notes:
Hatched area indicates Concrete Removal. Reinforcement extending into removed area shall be cleaned and incorporated into the new construction.
Expansion Bolts shall be anchored in sound concrete.
All edges shall have standard 3/4 chamfers

BILL OF MATERIAL

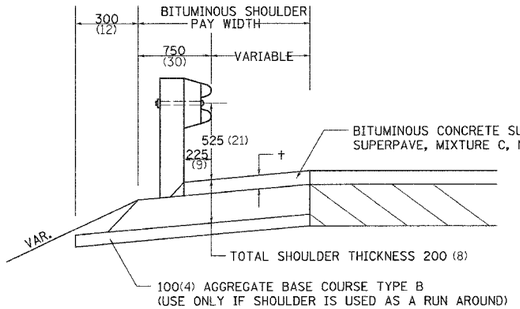
Bar	No.	Size	Length	Shape
h	4	#9	14'-3"	——
h_1	3	#5	14'-3"	——
h_2	4	#9	23'-9"	——
h_3	3	#5	23'-9"	——
s	40	#5	8'-5"	▭
u	6	#6	7'-10"	⊏
Class X Concrete			Cu. Yds.	7.4
Reinforcement Bars			Lbs.	1,060
Expansion Bolts			Each.	28
Concrete Removal			Cu. Yds.	5.5

DESIGNED
CHECKED
EXAMINED April 27 1971
PASSED

EAST ABUTMENT

...OUNTY

DETAIL OF BITUMINOUS SHOULDER AT GUARD RAIL



† = SEE TYPICAL SECTIONS FOR THICKNESS

GENERAL NOTES

THE TOP LIFT SHALL NOT BE PLACED BEHIND THE GUARDRAIL POSTS. WHEN PLACING THE TOP LIFT THE RAIL MUST BE REMOVED FROM THE POSTS. THE POST SHALL NOT BE REMOVED.

THE HEIGHT OF THE GUARD RAIL SHALL BE SET **525** (21) FROM THE FINISHED SURFACE.

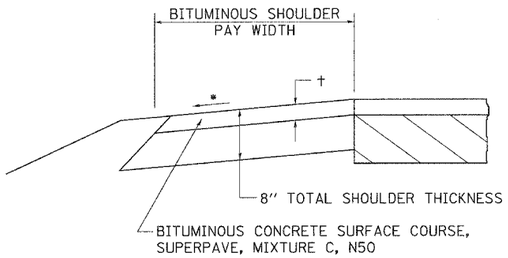
THE BITUMINOUS SHOULDER SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTION 482 EXCEPT THE TOP LIFT SHALL BE BITUMINOUS CONCRETE SURFACE COURSE, SUPERPAVE, MIXTURE C, N50. THE WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER TON FOR BITUMINOUS CONCRETE SURFACE COURSE, SUPERPAVE, MIXTURE C, N50, AND SQUARE METER (SQUARE YARD) FOR BITUMINOUS SHOULDERS SUPERPAVE OF THE THICKNESS SPECIFIED. THE REMOVAL & REINSTALLATION OF THE GUARDRAIL WILL BE INCLUDED IN THE COST OF THE BITUMINOUS CONCRETE SURFACE COURSE, SUPERPAVE, MIXTURE C, N50.

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

DETAIL OF BITUMINOUS SHOULDER AT GUARD RAIL **23.4**

REVISED 1-17-02

BITUMINOUS SHOULDER



† = SEE TYPICAL SECTIONS FOR THICKNESS

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

GENERAL NOTES

THE BITUMINOUS SHOULDER SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTION 482 EXCEPT THE TOP LIFT SHALL BE BITUMINOUS CONCRETE SURFACE COURSE, SUPERPAVE, MIXTURE C, N50. THE WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER TON FOR BITUMINOUS CONCRETE SURFACE COURSE, SUPERPAVE, MIXTURE C, N50, AND SQUARE YARD FOR BITUMINOUS SHOULDERS SUPERPAVE OF THE THICKNESS SPECIFIED.

USE BITUMINOUS CONCRETE SURFACE COURSE, SUPERPAVE, MIXTURE C, N50, WHEN RESURFACING EXISTING BITUMINOUS SHOULDERS. THE THICKNESS IS SHOWN ON THE TYPICAL SECTIONS. THIS WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER TON FOR BITUMINOUS CONCRETE SURFACE COURSE, SUPERPAVE, MIXTURE C, N50.

REMOVAL OF MATERIAL FOR PLACEMENT OF THE BITUMINOUS SHOULDER TO BE PAID FOR IN UNITS FOR EXCAVATING AND GRADING EXISTING SHOULDERS OR IN CUBIC YARDS FOR EARTH EXCAVATION OR EARTH EXCAVATION WIDENING.

* 4% WHEN MAINLINE IS ON TANGENT. FOR CROSS SLOPE ON SUPERELEVATION SECTION, SEE HIGHWAY STANDARD 482001 OR 482006.

BITUMINOUS SHOULDER **23.4a**

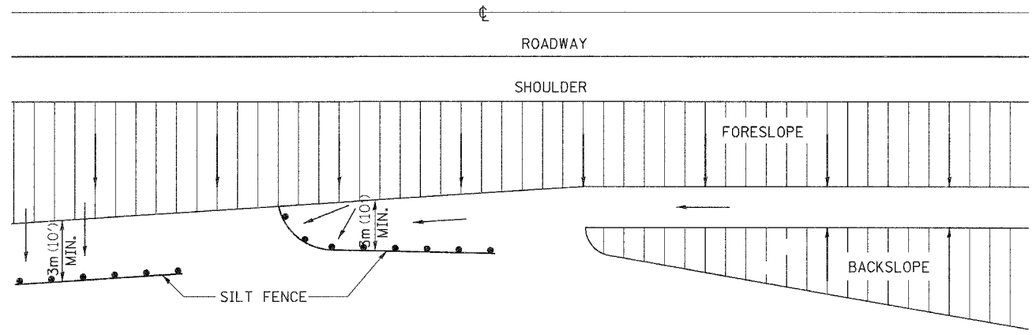
REVISED 5-30-03

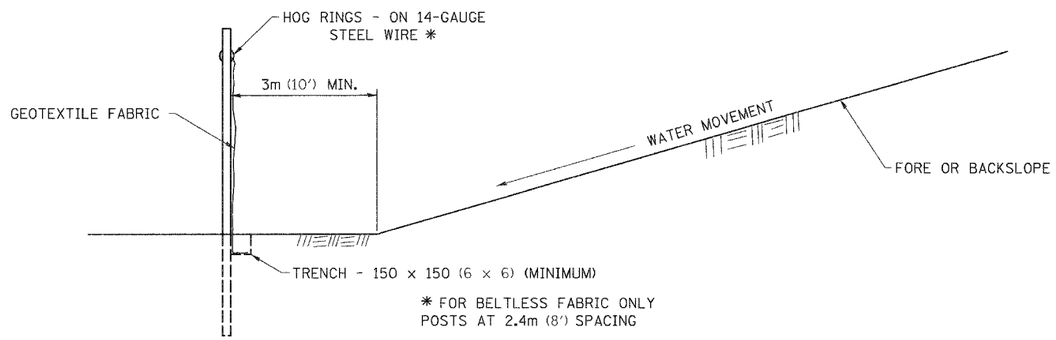
PLOT DATE = 04/06
FILE NAME = Z:\PW\635PL
PLOT SCALE = NTS
REFERENCE = NA

CONTRACT NO. 64940

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
505	115BR-1	WINNEBAGO	35	30
STA.	TO STA.			
FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		

EROSION CONTROL DETAILS FOR SILT FENCE





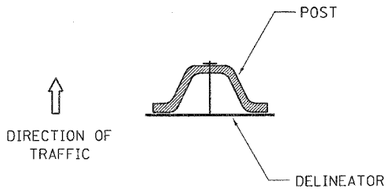
DETAILS OF SILT FENCE

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

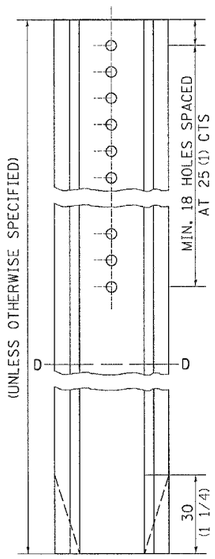
EROSION CONTROL DETAILS FOR SILT FENCE **29.2**

REVISED 10-22-01

DELINEATOR AND POST ORIENTATION



SECTION D-D



DELINEATORS SHALL BE INSTALLED ACCORDING TO STANDARD 635001 EXCEPT THAT THE POST SHALL BE ROTATED 180° . THE POST WILL HAVE THE WIDE SIDE FACING TRAFFIC AND THE DELINEATOR ATTACHECD AS SHOWN ABOVE.

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

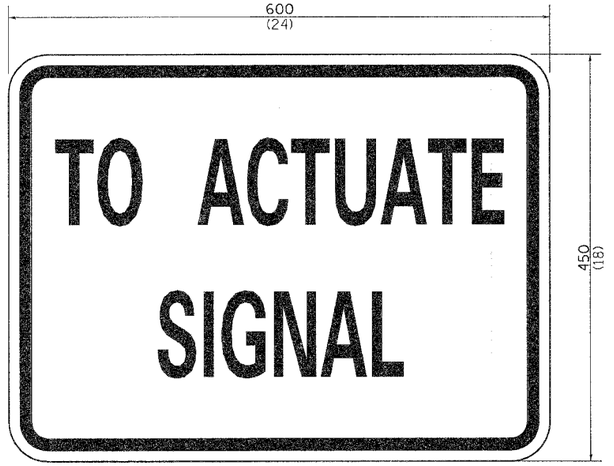
DELINEATOR AND POST ORIENTATION 37.4

REVISED 1-31-00

STOP LINE SIGN FOR TEMPORARY SIGNALS

CONTRACT NO. 64940

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
505	115BR-1	WINNEBAGO	35	31
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



SIZE: 600(24) x 450(18)

100(4) CAPITAL LETTERS - BLACK

13(1/2) BORDER - BLACK

WHITE REFLECTIVE - TYPE B ENGINEERING GRADE SHEETING

GENERAL NOTE:

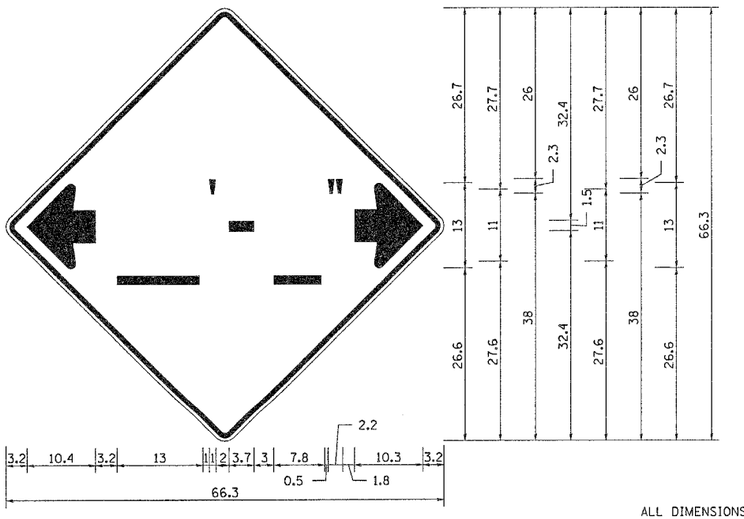
THIS SIGN SHALL BE INSTALLED AT THE STOP LINE AS DIRECTED BY ENGINEER.

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

STOP LINE SIGN FOR TEMPORARY SIGNALS 99.4

REVISED 8-7-90

INFORMATIONAL WARNING SIGN (FOR NARROW TRAVEL LANES)



NOTES
W12-2 - Horizontal Clearance Sign 48.0" across sides, 1.9" Radius, 0.8" Border, 0.5" Indent, Black on Orange; Standard Arrow Custom 10.4" X 8.1" 180° Black 11 Inch D Series Lettering; Standard Arrow Custom 10.4" X 8.1" 0°

All work to furnish and install these signs shall be included in the cost of the Traffic Control Standards and shall not be paid for separately.

ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED.

INFORMATIONAL WARNING SIGN (FOR NARROW TRAVEL LANES) 39.4

REVISED 6-29-05

PLOT DATE = 04/06
FILE NAME = Z091835PL
PLOT SCALE = NTS
REFERENCE = NA

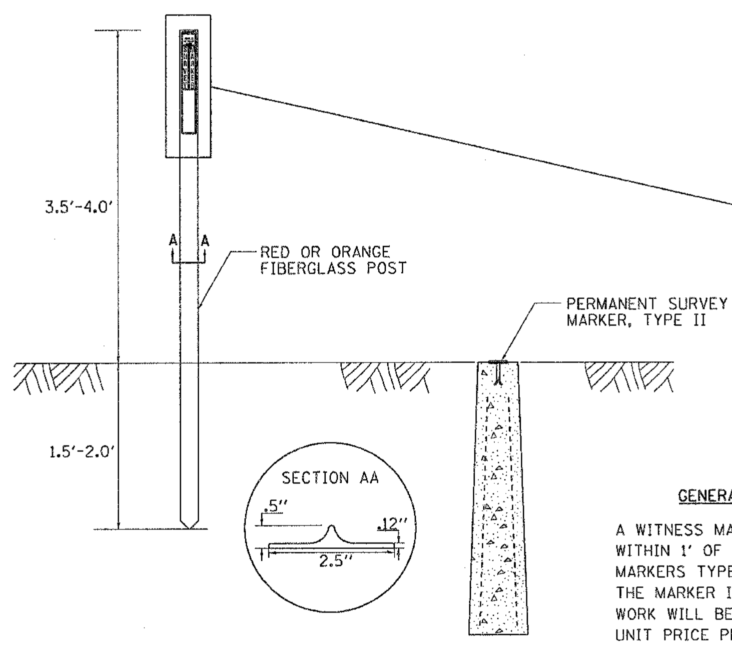
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
505	115BR-1	WINNEBAGO	35	31A

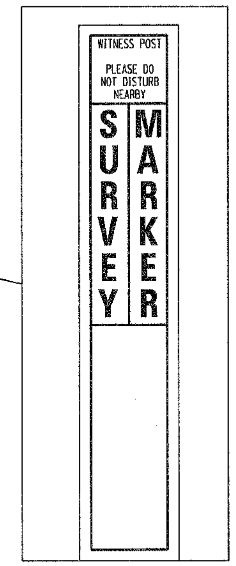
CONTRACT NO. 64940

STA. TO STA.

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

WITNESS MARKER FOR PERMANENT SURVEY MARKERS, TYPE II

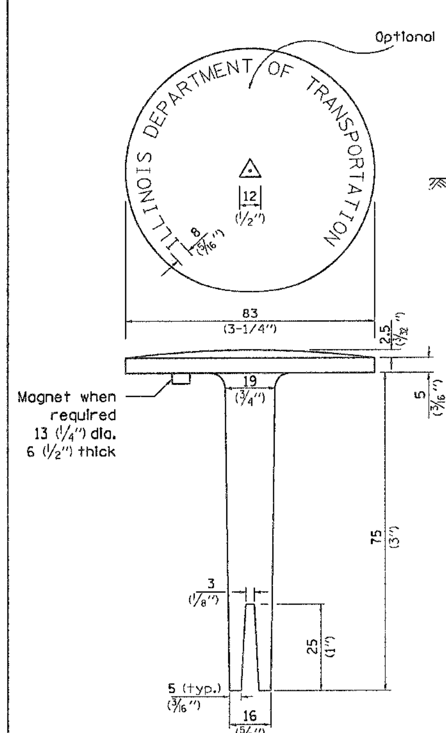




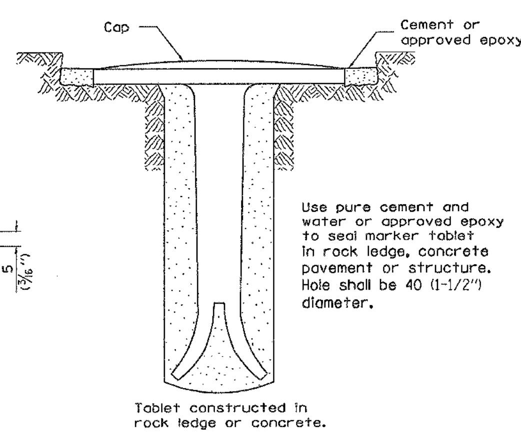
GENERAL NOTES

A WITNESS MARKER SHALL BE INSTALLED WITHIN 1' OF ALL PERMANENT SURVEY MARKERS TYPE II EXCEPT IN AREAS WHERE THE MARKER IS IN THE SIDEWALK. THIS WORK WILL BE INCLUDED TO THE CONTRACT UNIT PRICE PER EACH FOR PERMANENT SURVEY MARKERS, TYPE II.

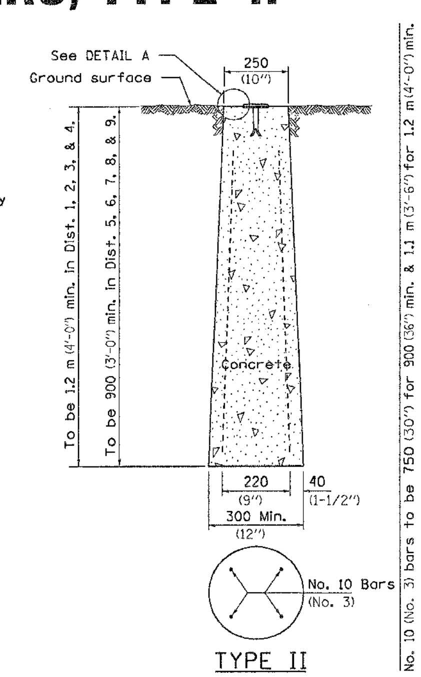
PERMANENT SURVEY MARKERS, TYPE II



BRASS OR ALUMINUM TABLET

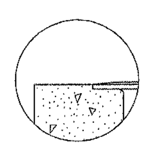


TYPE II



TYPE II

CAST-IN-PLACE MARKER



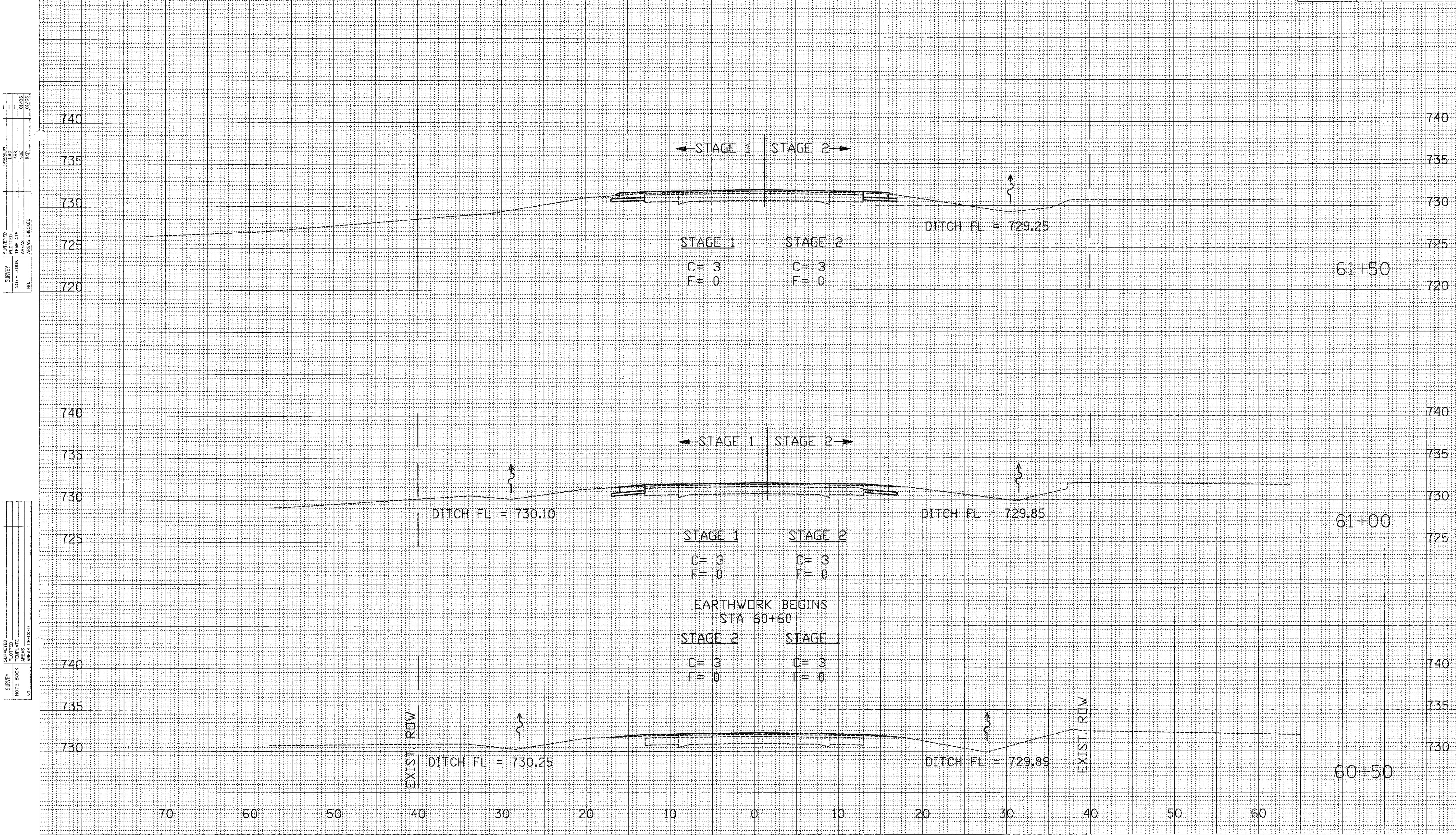
DETAIL A

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

PLOT DATE = Wed Jun 28 07:27:21 2006
FILE NAME = C:\projects\Hello\Z09123SPL.dgn
PLOT SCALE = 50.0000 ' / IN.
REFERENCE = #REF#

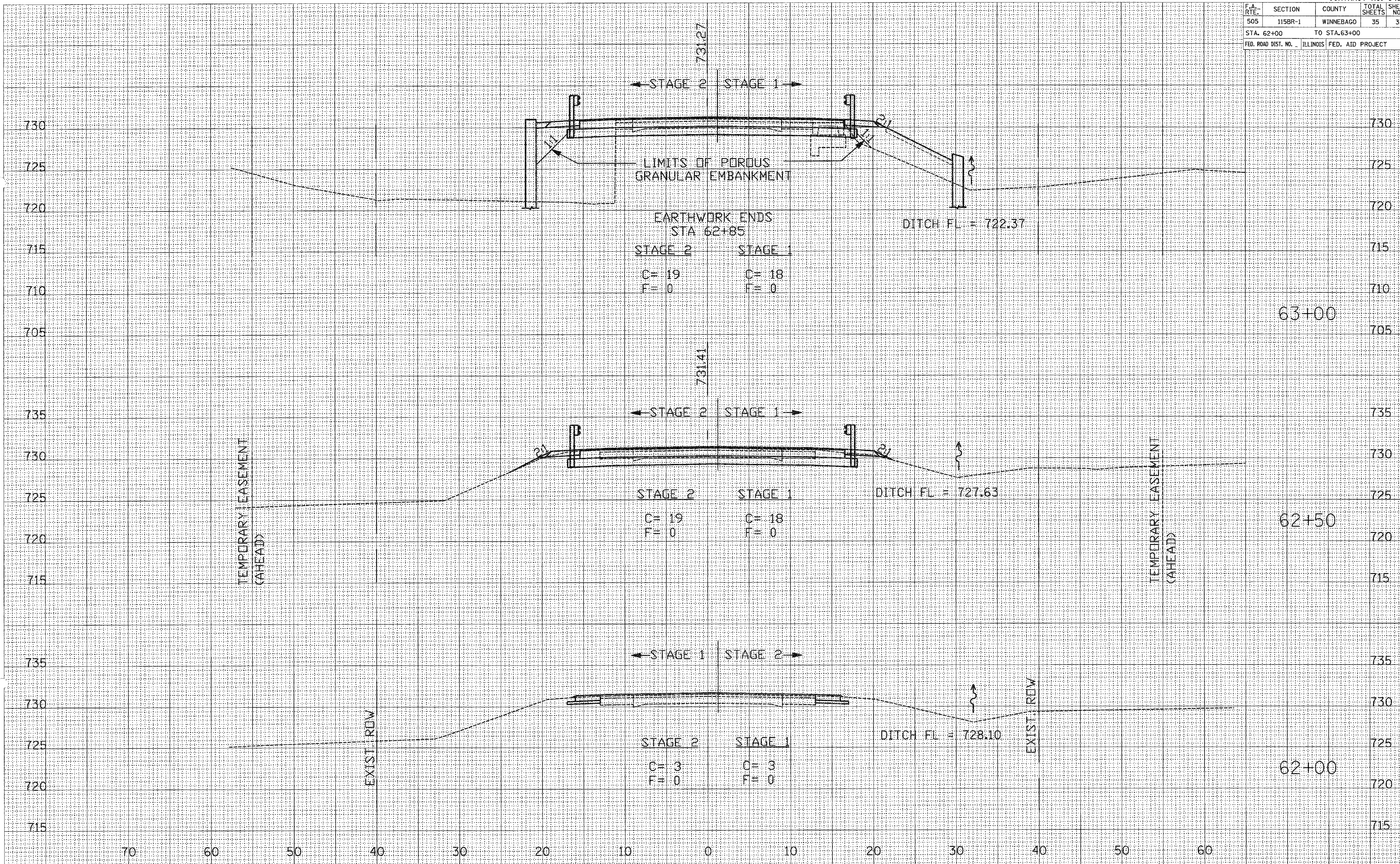
CONTRACT NO. 64940

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
505	115BR-1	WINNEBAGO	35	32
STA. 60+50	TO STA.61+50			
FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		



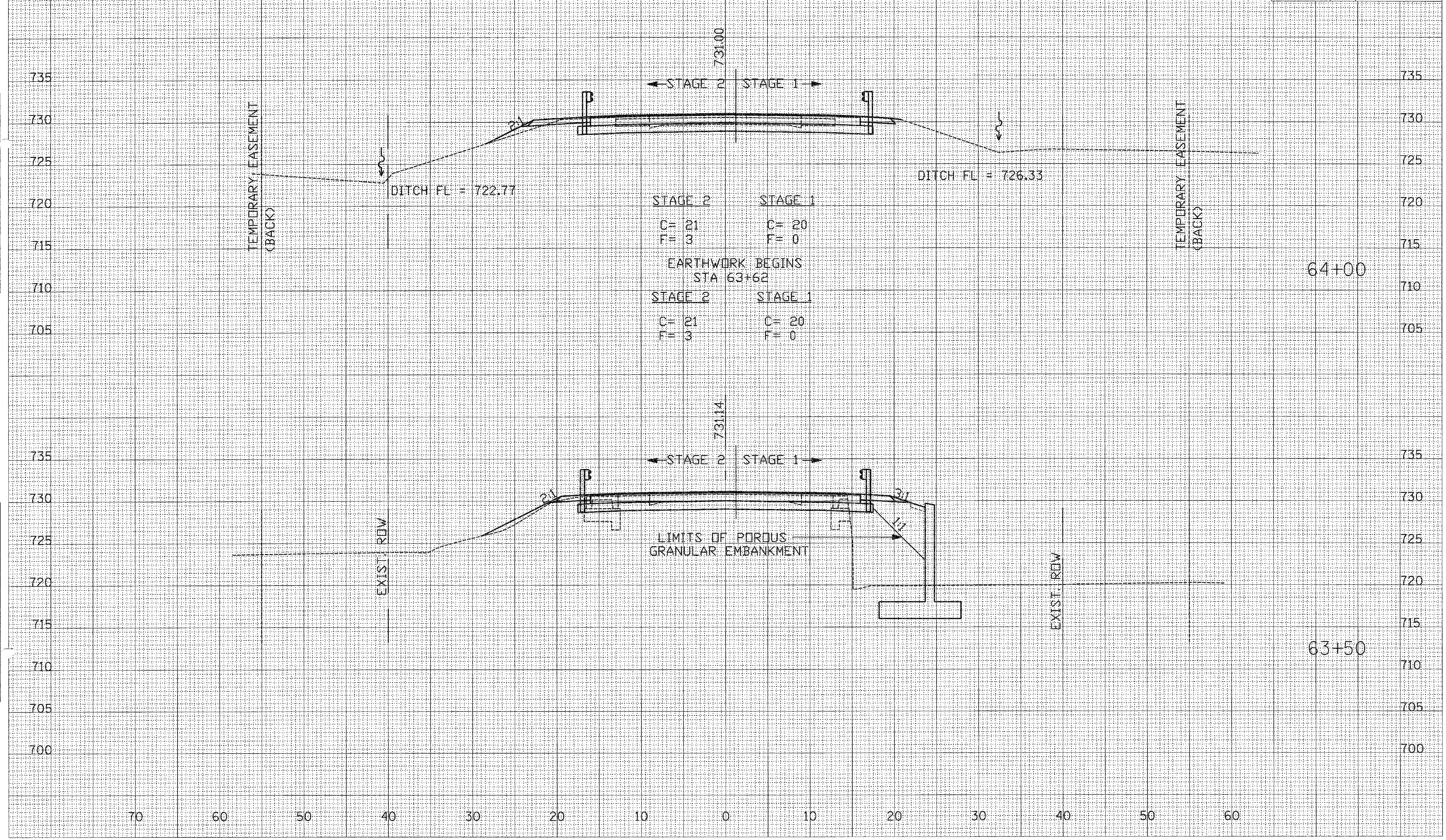
CONTRACT NO. 64940

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
505	115BR-1	WINNEBAGO	35	33
STA. 62+00	TO STA.63+00			
FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		



CONTRACT NO. 64940

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
505	115BR-1	WINNEBAGO	35	34
STA. 63+50	TO STA.64+00			
FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		



CONTRACT NO. 64940

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
505	115BR-1	WINNEBAGO	35	35
STA. 64+50	TO STA.65+50			
FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT