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- STANDARD 000001-06 STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
- STANDARD 280001-05 TEMPORARY EROSION CONTROL SYSTEMS
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- STANDARD 701901-01 TRAFFIC CONTROL DEVICES
- STANDARD BLR-21-8 TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION ON RURAL LOCAL HIGHWAYS

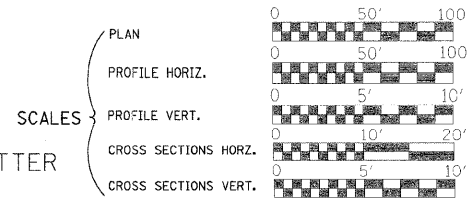
ROADWAY CLASSIFICATION: MINOR ARTERIAL (URBAN)
 2030 ADT = 8600
 DESIGN SPEED: 40 MPH
 DESIGN GUIDELINES: SUBURBAN
 VARIANCES GRANTED:
 COMMITMENTS: NONE

JOINT UTILITY LOCATING INFORMATION FOR EXCAVATORS
 J.U.L.I.E. TELEPHONE NO. TOLL FREE 1-800-892-0123



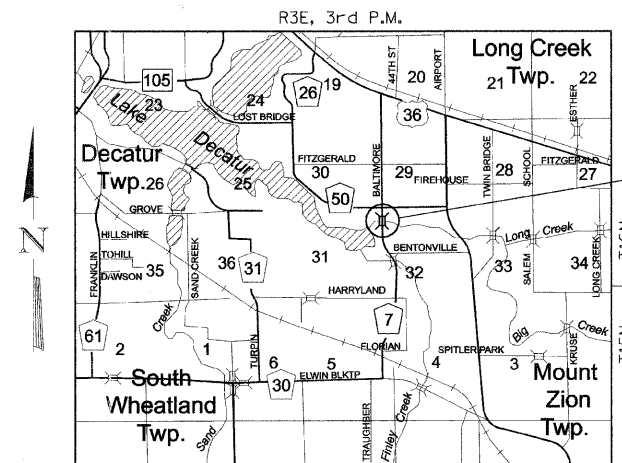
345 EAST ASH AVENUE, SUITE B
 DECATUR, ILLINOIS 62526
 PH. 217-875-4800

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS
**PLANS FOR PROPOSED
 LOCAL AGENCY IMPROVEMENT**



HIGHWAY BRIDGE PROGRAM
 F.A.U. 7449, C.H. 7
 (BALTIMORE AVE.) OVER BIG CREEK
 SECTION 05-00204-00-BR
 MACON COUNTY
 CONTRACT NO. 95658
 PROJ. #BRS-0115(067)

C-97-064-11



PROJECT LOCATION
 IMPROVEMENT BEGINS
 STA. 12+33.78
 IMPROVEMENT ENDS
 STA. 23+17.15

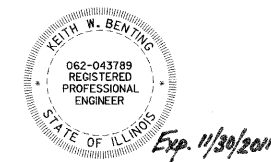
EXIST. STR. NO. 058-6007
 PROP. STR. NO. 058-6024

IMPROVEMENT CONSISTS OF THE REMOVAL OF A THREE SPAN CONCRETE DECK BEAM BRIDGE ON PILE BENT ABUTMENTS AND PIERS WITH CONCRETE SLOPE WALLS, 0-0 DECK = 28'-0", BK.-BK. ABUTMENTS = 117'-6" AND THE CONSTRUCTION OF A THREE SPAN PRECAST PRESTRESSED CONCRETE DECK BEAM BRIDGE ON CONCRETE SPILL THRU ABUTMENTS AND CONCRETE PILE BENT PIERS. TOTAL LENGTH = 150'-11", WIDTH = 48'-0" O.-O. DECK AND NECESSARY APPROACH ROADWAY WORK.

LAYOUT

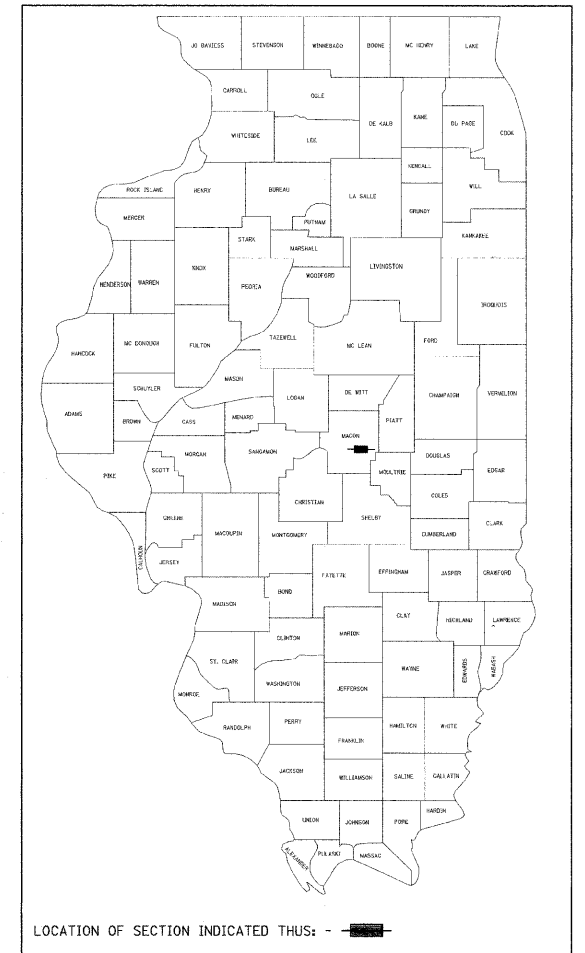
APPROXIMATE SCALE scale miles

TOTAL AND NET LENGTH OF IMPROVEMENT 1083.37 FEET = 0.205 MILES



Keith W. Besting
 ILLINOIS PROFESSIONAL NO. 43789

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
C.H. 7	05-00204-00-BR	MACON	21	1
FED. ROAD DIST. NO.	ILLINOIS PROJECT:			



APPROVED APRIL 13 2011
Chris A. S. COUNTY ENGINEER

PASSED 4-20 2011
Maureen L. ... DISTRICT SEVEN ENGINEER OF LOCAL ROADS & STREETS

RELEASING FOR BID BASED ON LIMITED REVIEW 4-20 2011
Roger L. ... DEPUTY DIRECTOR OF HIGHWAYS, REGION FOUR ENGINEER

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

4/13/2011
 DATE

SUMMARY OF QUANTITIES

ITEM	UNIT	QUANTITY
20100500	TREE REMOVAL, ACRES	0.75
20200100	EARTH EXCAVATION	531
20300100	CHANNEL EXCAVATION	408
20400800	FURNISHED EXCAVATION	6018
25000200	SEEDING, CLASS 2	0.8
25000400	NITROGEN FERTILIZER NUTRIENT	72
25000500	PHOSPHORUS FERTILIZER NUTRIENT	72
25000600	POTASSIUM FERTILIZER NUTRIENT	72
25100115	MULCH, METHOD 2	1.6
28000200	EARTH EXCAVATION FOR EROSION CONTROL	1
28000250	TEMPORARY EROSION CONTROL SEEDING	80
28000315	AGGREGATE DITCH CHECKS	2
28000400	PERIMETER EROSION BARRIER	2333
28100107	STONE RIPRAP, CLASS A4	480
28200200	FILTER FABRIC	46
30200650	PROCESSING MODIFIED SOIL, 12"	2729
30201700	PORTLAND CEMENT	116
40600100	BITUMINOUS MATERIALS (PRIME COAT)	355
40603080	HOT-MIX ASPHALT BINDER COURSE, IL 19.0, N50	865
40603310	HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N50	281
48101200	AGGREGATE SHOULDERS, TYPE B	227
48203029	HOT-MIX ASPHALT SHOULDERS, 8"	1828
50100100	REMOVAL OF EXISTING STRUCTURES	1
50104650	SLOPE WALL REMOVAL	561
50200100	STRUCTURE EXCAVATION	103.5
50300225	CONCRETE STRUCTURES	199.6
50300255	CONCRETE SUPERSTRUCTURE	34.6
50300260	BRIDGE DECK GROOVING	728
50300280	CONCRETE ENCASEMENT	12.0
50300300	PROTECTIVE COAT	984
50400405	PRECAST PRESTRESSED CONCRETE DECK BEAMS (21" DEPTH)	7140
50800205	REINFORCEMENT BARS, EPOXY COATED	32120
50901750	PARAPET RAILING	149
51201400	FURNISHING STEEL PILES HP10X42	368
51201610	FURNISHING STEEL PILES HP12X63	655
51202305	DRIVING PILES	1023
51203400	TEST PILE STEEL HP10X42	1
51203610	TEST PILE STEEL HP12X63	1
51500100	NAME PLATES	1
58300100	PORTLAND CEMENT MORTAR FAIRING COURSE	2234
59300100	CONTROLLED LOW-STRENGTH MATERIAL	196.5
60600605	CONCRETE CURB, TYPE B	60
63100070	TRAFFIC BARRIER TERMINAL, TYPE 5	2
63100085	TRAFFIC BARRIER TERMINAL, TYPE 6	2
63100167	TRAFFIC BARRIER TERMINAL TYPE 1 (SPECIAL) TANGENT	4
67100100	MOBILIZATION	1
78201000	TERMINAL MARKER - DIRECT APPLIED	4
X5020501	UNDERWATER STRUCTURE EXCAVATION PROTECTION - LOCATION 1	1
X5020502	UNDERWATER STRUCTURE EXCAVATION PROTECTION - LOCATION 2	1
X5030305	CONCRETE WEARING SURFACE, 5"	794
X5091725	BICYCLE RAILING, SPECIAL	169

SEE SPECIAL PROVISIONS
 Δ SPECIALTY ITEMS

GENERAL NOTES

REMOVAL OF EXISTING PAVEMENT MATERIAL SHALL BE INCLUDED IN EARTH EXCAVATION.
 THE AREA TO BE SEEDED SHALL CONSIST OF ALL DISTURBED EARTH SURFACES WITHIN THE RIGHT-OF-WAY AS DIRECTED BY THE ENGINEER.
 ALL TREES WITHIN THE RIGHT-OF-WAY THAT INTERFERE WITH CONSTRUCTION SHALL BE REMOVED ONLY AT THE DIRECTION OF THE ENGINEER.
 WHERE MAILBOX RELOCATIONS ARE REQUIRED, ALL LABOR AND MATERIALS SHALL BE CONSIDERED AS INCLUDED IN THE UNIT BID PRICES OF THE CONTRACT, AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.
 LAYOUT OF EROSION CONTROL ITEMS MAY BE VARIED IN THE FIELD TO SUIT GROUND CONDITIONS AS DIRECTED BY THE ENGINEER.
 IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE ACTUAL LOCATION OF ALL UNDERGROUND UTILITY FACILITIES. HE SHALL ALSO OBTAIN FROM THE RESPECTIVE UTILITY COMPANIES DETAILED INFORMATION RELATIVE TO THE LOCATION OF THEIR FACILITIES AND THE WORKING SCHEDULES OF THE UTILITY COMPANIES FOR THEIR MARKING OF THE EXACT LOCATION.

APPLICATION RATES

GRANULAR MATERIALS	2.05	TONS/CU. YD.
STONE RIPRAP	1.50	TONS/CU. YD.
BITUMINOUS MATERIALS PRIME COAT	0.10	GALS./S.Y. (ON SOIL, PRIOR TO BINDER)
BITUMINOUS MATERIALS PRIME COAT	0.03	GALS./S.Y. (ON BINDER, PRIOR TO SURFACE)
HOT-MIX ASPHALT	112	LBS./S.Y./INCH THICKNESS
FERTILIZER NUTRIENTS	90	LBS./ACRE
MULCH METHOD 2	2	TONS/ACRE
PORTLAND CEMENT	85	LBS./S.Y.

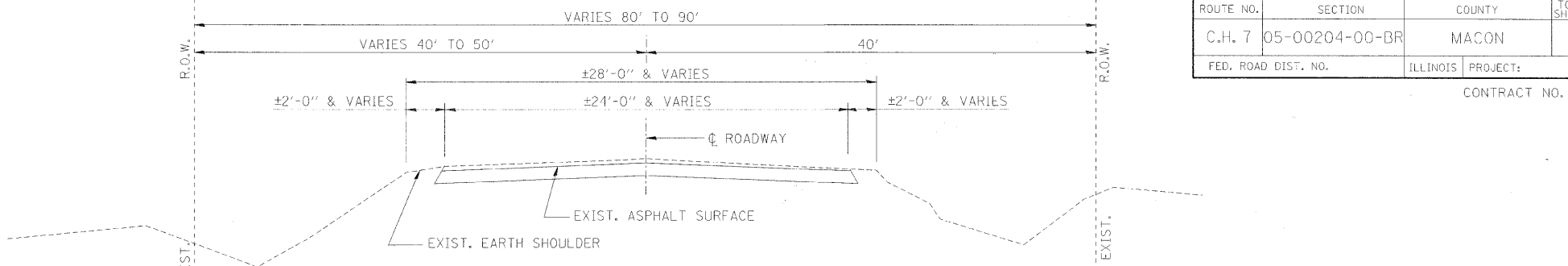
BITUMINOUS MIXTURE REQUIREMENTS

LOCATION	CH 7	CH 7
MIX USE	BINDER	SURFACE
AC/PG	PG 64-22	PG 64-22
RAP %	***	***
DESIGN VOIDS	4.0 @ N=70	4.0 @ N=70
MIXTURE COMPOSITION (GRAD. MIXTURE)	IL-19.0	IL-9.5
FRICTION	N/A	MIX C

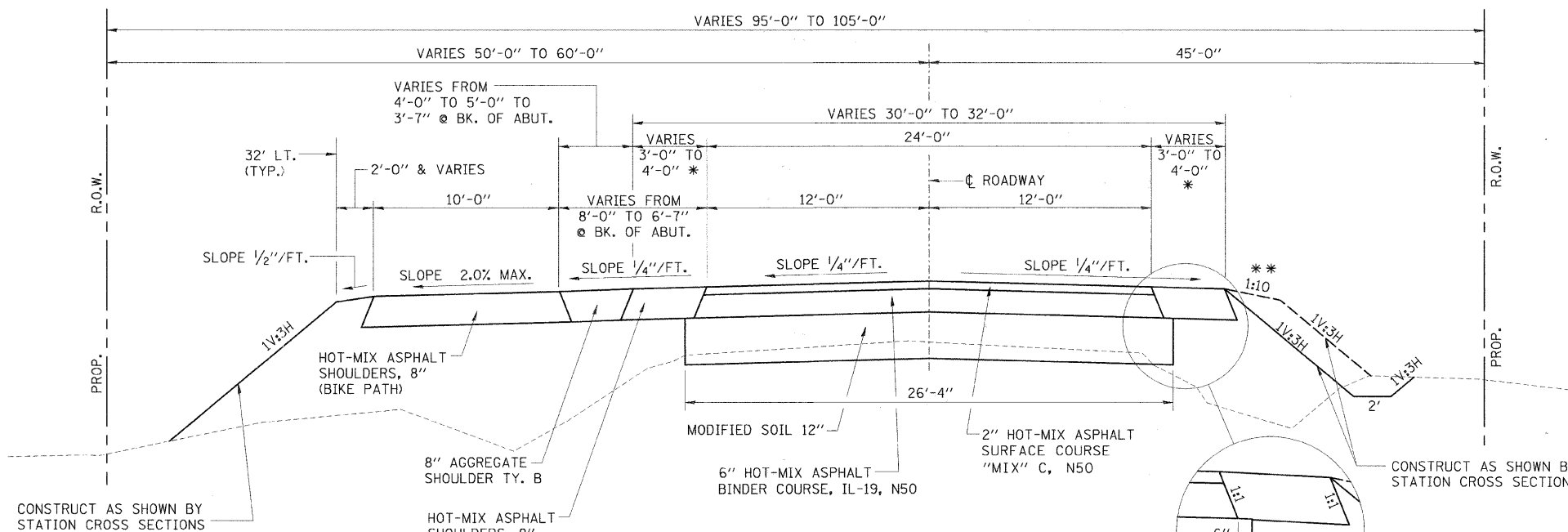
*** TO BE DETERMINED BY CONTRACTOR (SEE SPECIAL PROVISION)

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
C.H. 7	05-00204-00-BR	MACON	21	2
FED. ROAD DIST. NO.	ILLINOIS PROJECT:			

CONTRACT NO. 95658



EXISTING TYPICAL CROSS SECTION - C.H. 7



PROPOSED TYPICAL CROSS SECTION - C.H. 7

STA. 12+83.78 TO STA. 16+24.54
 STA. 17+75.46 TO STA. 22+67.15
 (TRANSITION TO MATCH EXISTING ROADWAY)
 STA. 12+33.78 TO STA. 12+83.78
 STA. 22+67.15 TO STA. 23+17.15

* 3'-0" PAVED SHOULDER WIDTH: RT. STA. 15+04.40 TO RT. STA. 16+24.54
 RT. STA. 17+75.46 TO RT. STA. 18+67.13
 LT. STA. 15+32.87 TO LT. STA. 16+24.54
 LT. STA. 17+75.46 TO LT. STA. 18+95.60

* 4'-0" PAVED SHOULDER WIDTH: RT. STA. 12+33.78 TO RT. STA. 15+04.40
 RT. STA. 18+67.13 TO RT. STA. 23+17.15
 LT. STA. 12+33.78 TO LT. STA. 15+26.87
 LT. STA. 19+01.60 TO LT. STA. 23+17.15

(6:1 SHOULDER TAPER LT. STA. 15+26.87 TO LT. STA. 15+32.87 & LT. STA. 18+95.60 TO LT. STA. 19+01.60
 SHOULDER OFFSET CHANGE ONLY RT. STA. 15+04.40 AND RT. STA. 18+67.13)

** SHOULDER WIDENING FOR TYPE 1 (SPECIAL) GUARDRAIL TERMINALS, CONSTRUCT IN ACCORDANCE WITH STD. 630301. SEE SHEET 4 OF 20 FOR INFORMATION. RT. SIDE ONLY.

ROADWAY QUANTITY SCHEDULE

LOCATION	PROCESS MOD SOIL 12 (SQ YD)	PORTLAND CEMENT (TON)	BITUMINOUS MATERIALS (PRIME COAT) (GAL)	HMA BC IL-19.0 N50 (TON)	HMA SC "C" N50 (TON)	HMA SHOULDERS 8 (SQ YD)	AGGREGATE SHLDS B (TON)
M.L. STA. 12+33.78 TO STA. 16+24.54	1144	48.6	149	363	118	313	67
M.L. STA. 17+75.46 TO STA. 23+17.15	1585	67.3	206	502	163	458	97
BIKE PATH (SOUTH OF BRIDGE)						407	
BIKE PATH (NORTH OF BRIDGE)						602	
PARK ENTRANCE						48	63
TOTALS	2729	116	355	865	281	1828	227

SUM. OF QTY'S, GEN. NOTES & TYP. SECTIONS

Date	Designed DCS	C.H. 7 (BALTIMORE AVE.) OVER BIG CREEK SECTION 05-00204-00-BR MACON COUNTY STA. 17+00.00 PROP. STR. NO. 058-6024
Revisions	Drawn BKN	
	Checked KWB	
	Approved KWB	

Prepared by: **URS** 345 East Ash Avenue Decatur, IL 62526 URS Job No. 36431685

BENCHMARK:

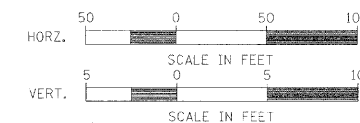
TOP OF SURVEY POINT NO. 3 (IRON PIN)
 STA. 14+54.4, 193.3' LT. (SEE TIC POINTS)
 ELEV. 615.87

EXISTING STRUCTURE NO. 058-6007

THREE SPAN CONCRETE DECK BEAM BRIDGE ON PILE BENT
 ABUTMENTS AND PIERS.
 117'-6" BK.-BK. ABUTMENTS
 28'-0" O.-O. DECK

CITY OF DECATUR
 (CANNON PARK)

SURVEY CONTROL POINT NO. 3
 N99819.15, E99818.89
 ELEV. 615.87

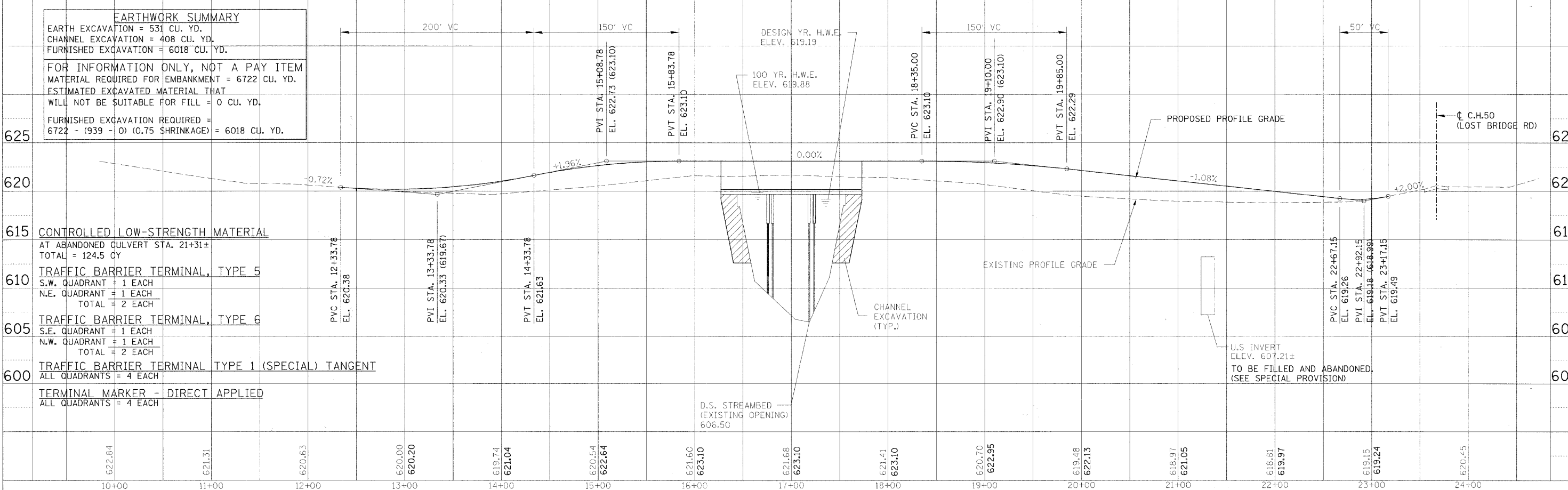
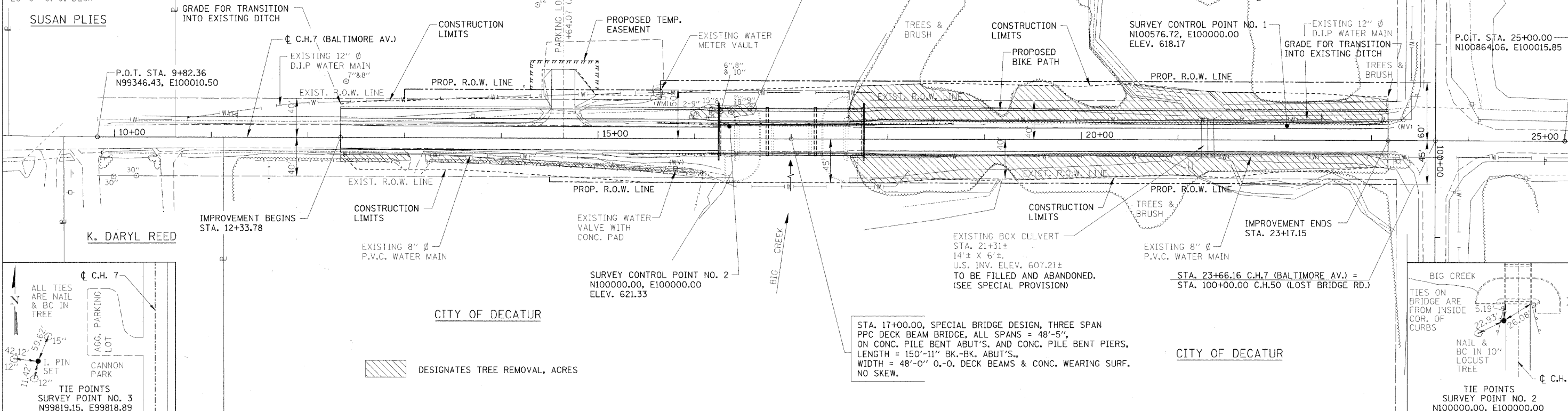


RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
C.H. 7	05-00204-00-BR	MACON	21	3
STA. 12+33.78		TO STA. 23+17.15		
FED. ROAD DIST. NO.		ILLINOIS PROJECT:		

CONTRACT NO. 95658

DATE	BY	REVISION

DATE	BY	REVISION



EARTHWORK SUMMARY

EARTH EXCAVATION = 531 CU. YD.
 CHANNEL EXCAVATION = 408 CU. YD.
 FURNISHED EXCAVATION = 6018 CU. YD.

FOR INFORMATION ONLY, NOT A PAY ITEM
 MATERIAL REQUIRED FOR EMBANKMENT = 6722 CU. YD.
 ESTIMATED EXCAVATED MATERIAL THAT
 WILL NOT BE SUITABLE FOR FILL = 0 CU. YD.

FURNISHED EXCAVATION REQUIRED =
 6722 - (939 - 0) (0.75 SHRINKAGE) = 6018 CU. YD.

CONTROLLED LOW-STRENGTH MATERIAL
 AT ABANDONED CULVERT STA. 21+31±
 TOTAL = 124.5 CY

TRAFFIC BARRIER TERMINAL, TYPE 5
 S.W. QUADRANT = 1 EACH
 N.E. QUADRANT = 1 EACH
 TOTAL = 2 EACH

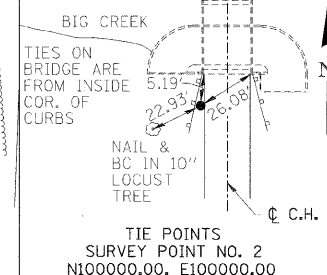
TRAFFIC BARRIER TERMINAL, TYPE 6
 S.E. QUADRANT = 1 EACH
 N.W. QUADRANT = 1 EACH
 TOTAL = 2 EACH

TRAFFIC BARRIER TERMINAL TYPE 1 (SPECIAL) TANGENT
 ALL QUADRANTS = 4 EACH

TERMINAL MARKER - DIRECT APPLIED
 ALL QUADRANTS = 4 EACH

STA. 17+00.00, SPECIAL BRIDGE DESIGN, THREE SPAN
 PPC DECK BEAM BRIDGE, ALL SPANS = 48'-5",
 ON CONC. PILE BENT ABUT'S. AND CONC. PILE BENT PIERS,
 LENGTH = 150'-11" BK.-BK. ABUT'S.,
 WIDTH = 48'-0" O.-O. DECK BEAMS & CONC. WEARING SURF.
 NO SKEW.

CITY OF DECATUR

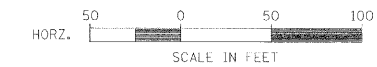


TIE POINTS
 SURVEY POINT NO. 2
 N100000.00, E100000.00

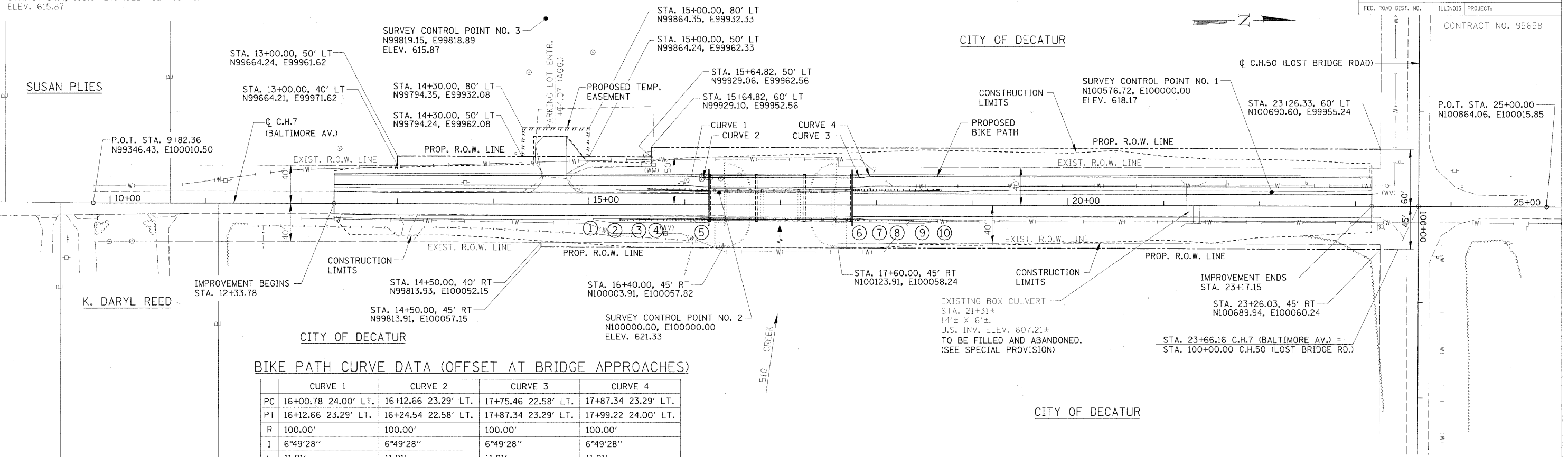
BENCHMARK:

TOP OF SURVEY POINT NO. 3 (IRON PIN)
 STA. 14+54.4, 193.3' LT. (SEE TIE POINTS)
 ELEV. 615.87

CITY OF DECATUR
 (CANNON PARK)



ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
C.H. 7	05-00204-00-BR	MACON	21	4
STA. 12+33.78		TO STA. 23+17.15		
FED. ROAD DIST. NO.		ILLINOIS PROJECT:		



BIKE PATH CURVE DATA (OFFSET AT BRIDGE APPROACHES)

	CURVE 1	CURVE 2	CURVE 3	CURVE 4
PC	16+00.78 24.00' LT.	16+12.66 23.29' LT.	17+75.46 22.58' LT.	17+87.34 23.29' LT.
PT	16+12.66 23.29' LT.	16+24.54 22.58' LT.	17+87.34 23.29' LT.	17+99.22 24.00' LT.
R	100.00'	100.00'	100.00'	100.00'
I	6°49'28"	6°49'28"	6°49'28"	6°49'28"
L	11.91'	11.91'	11.91'	11.91'
D	57°17'45"	57°17'45"	57°17'45"	57°17'45"
T	5.96'	5.96'	5.96'	5.96'
E	0.18'	0.18'	0.18'	0.18'

SHOULDER WIDENING FOR GUARDRAIL TERMINALS

- ① STA. 15+04.40, 16' RT.
- ② STA. 15+22.40, 19' RT.
- ③ STA. 15+57.40, 19' RT.
- ④ STA. 15+60.40, 18.5' RT.
- ⑤ STA. 16+24.54, 18.5' RT.
- ⑥ STA. 17+75.46, 18.5' RT.
- ⑦ STA. 18+11.13, 18.5' RT.
- ⑧ STA. 18+14.13, 19' RT.
- ⑨ STA. 18+49.13, 19' RT.
- ⑩ STA. 18+67.13, 16' RT.

PROPOSED STRUCTURE LAYOUT

SOUTH ABUTMENT

BK. OF S. ABUT. STA. 16+24.54, 7.50' LT.
 N99988.63, E100005.27

☐ S. ABUT. STA. 16+25.83, 7.50' LT.
 N99989.93, E100005.27

FRONT FACE OF S. ABUT. STA. 16+27.12, 7.50' LT.
 N99991.22, E100005.27

NORTH ABUTMENT

BK. OF N. ABUT. STA. 17+75.46, 7.50' LT.
 N100139.55, E100005.80

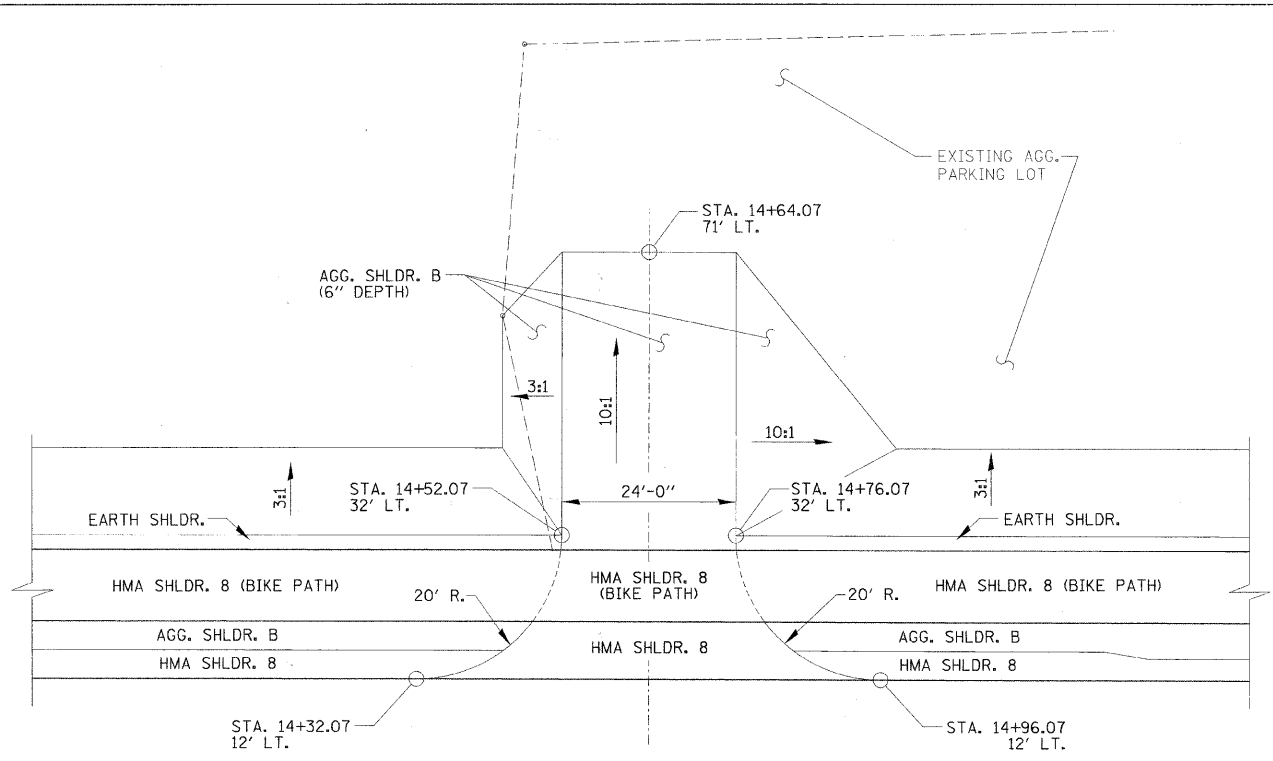
☐ N. ABUT. STA. 17+74.17, 7.50' LT.
 N100138.26, E100005.79

FRONT FACE OF N. ABUT. STA. 17+72.88, 7.50' LT.
 N100136.97, E100005.79

NOTE: ALL COORDINATES ABOVE ARE GIVEN AT ☐ OF STRUCTURE. SEE SHEET 3 OF 20 FOR ☐ ROADWAY COORDINATES.

DATE	
BY	
PLAN	
NO.	

DATE	
BY	
PROFILE	
NO.	

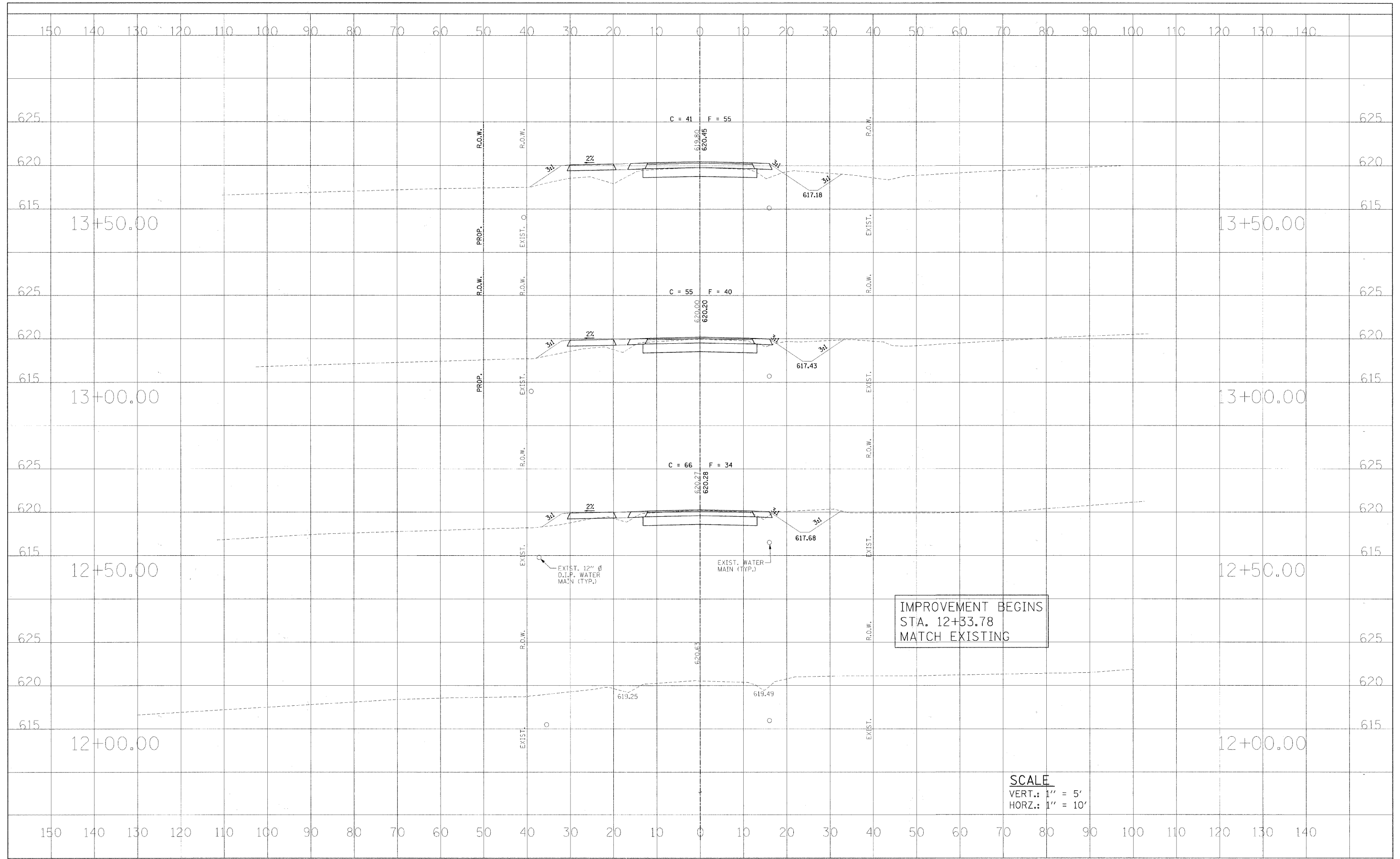


CANNON PARK ENTRANCE DETAIL

HORIZONTAL LAYOUT

FINAL SURVEY	DATE
SURVEYED	BY
NOTE BOOK	
TEMPLATE	
AREAS	
CHECKED	
NO.	

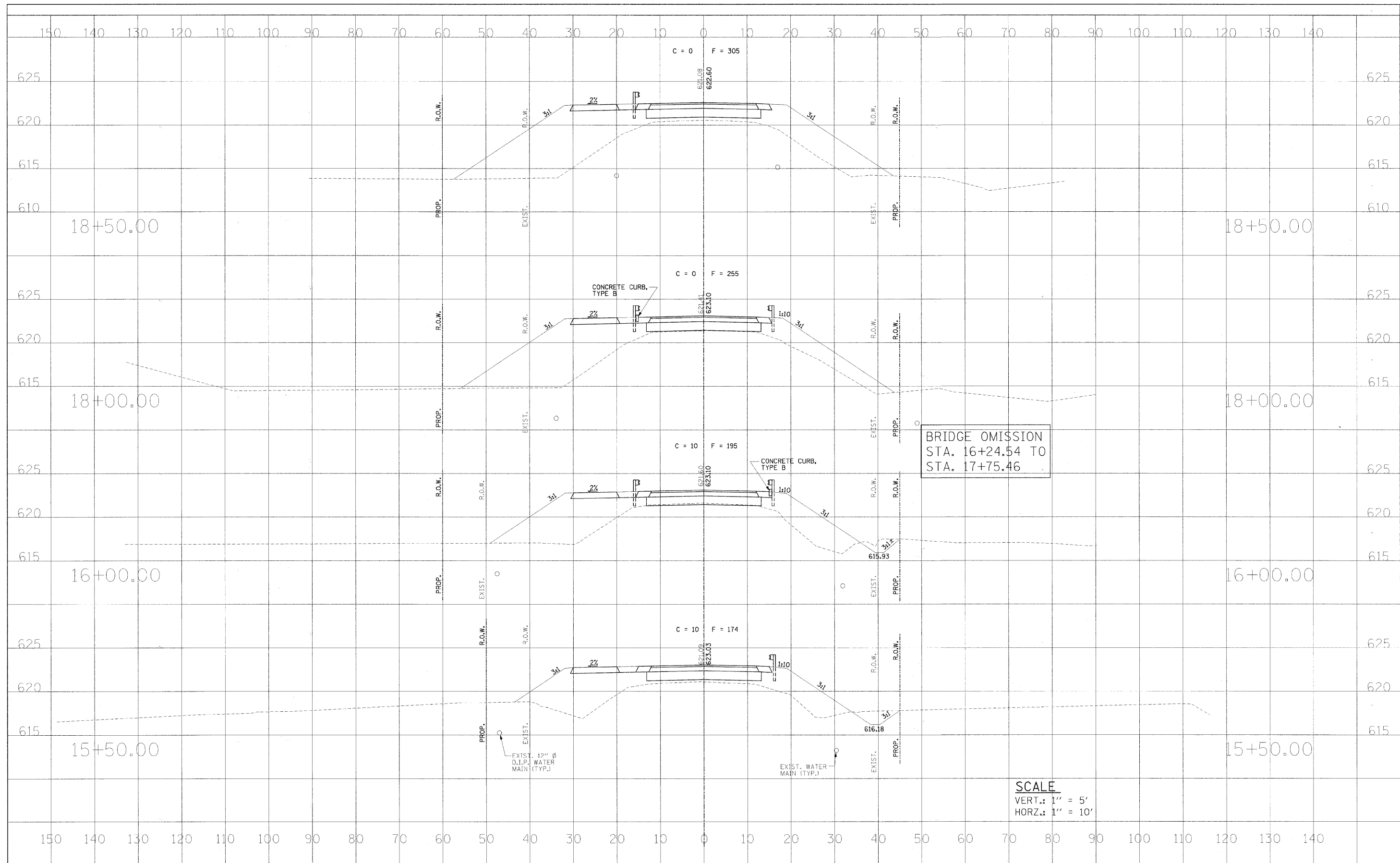
ORIGINAL SURVEY	DATE
SURVEYED	BY
NOTE BOOK	
TEMPLATE	
AREAS	
CHECKED	
NO.	



FILE NAME	USER NAME = #USER#	DESIGNED - DCS	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	CROSS SECTIONS	RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
#FILE#	PLOT SCALE = #SCALE#	DRAWN - BKN	REVISED -			C.H. 7	05-00204-00-BR	MACON	21	5	
	PLOT DATE = #DATE#	CHECKED - KWB	REVISED -			CONTRACT NO. 95658					
		DATE -	REVISED -			FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT:					

DATE	
BY	
FINAL SURVEY	
SURVEYED	
NOTE BOOK	
TEMPLATE	
AREAS	
CHECKED	
NO.	

DATE	
BY	
ORIGINAL SURVEY	
SURVEYED	
NOTE BOOK	
TEMPLATE	
AREAS	
CHECKED	
NO.	



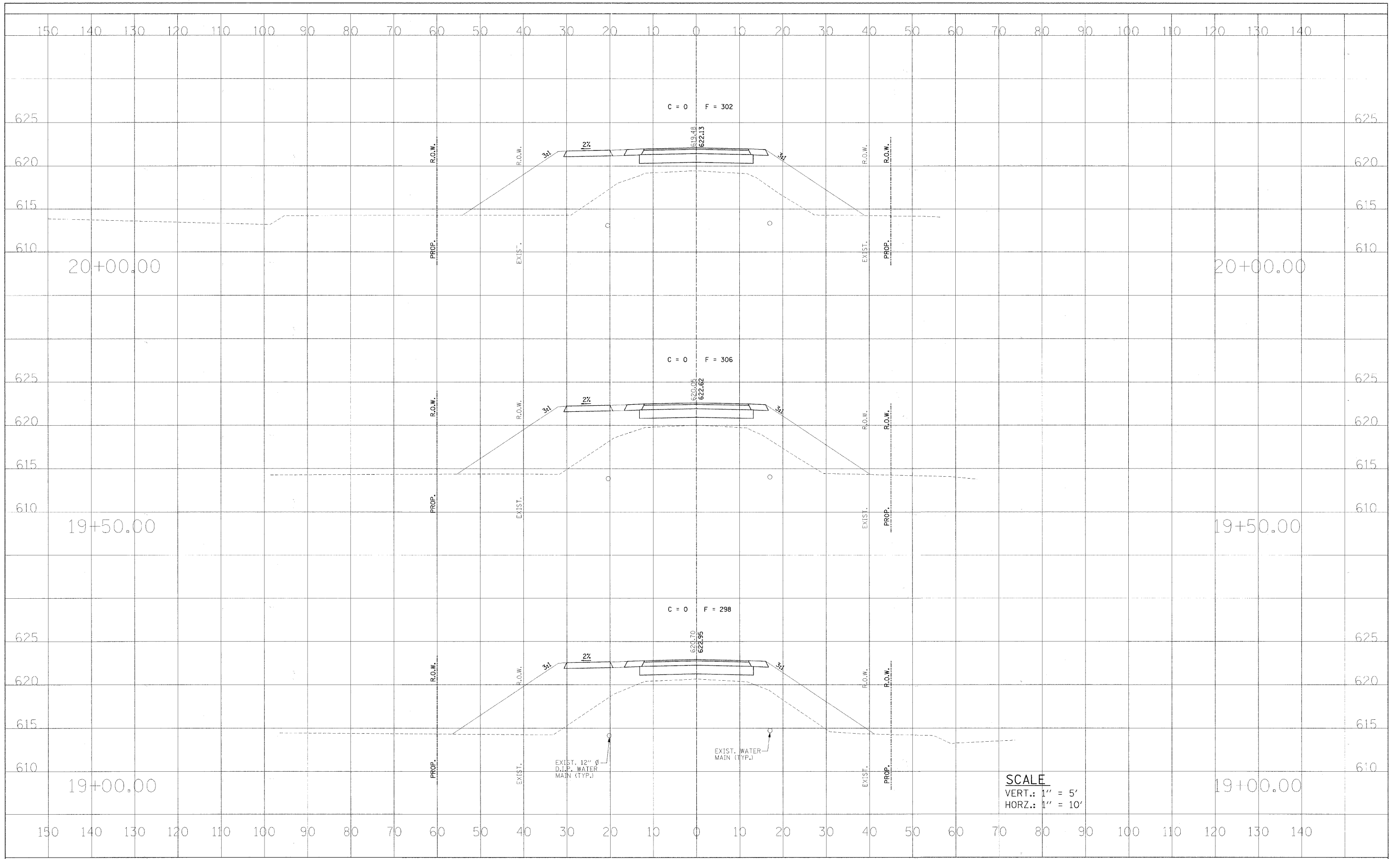
SCALE
 VERT.: 1" = 5'
 HORZ.: 1" = 10'

FILE NAME =	USER NAME = #USER#	DESIGNED - DCS	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	CROSS SECTIONS	RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
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	PLOT DATE = #DATE#	CHECKED - KWB	REVISED -			CONTRACT NO. 95658					
		DATE	REVISED -			FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT:					

SCALE: AS SHOWN SHEET NO. 3 OF 6 SHEETS STA. 15+50.00 TO STA. 18+50.00

DATE	BY
SURVEYED	PROJ. FILED
NOTE BOOK	TEMP. PLATE
NO.	AREAS CHECKED

DATE	BY
SURVEYED	PROJ. FILED
NOTE BOOK	TEMP. PLATE
NO.	AREAS CHECKED

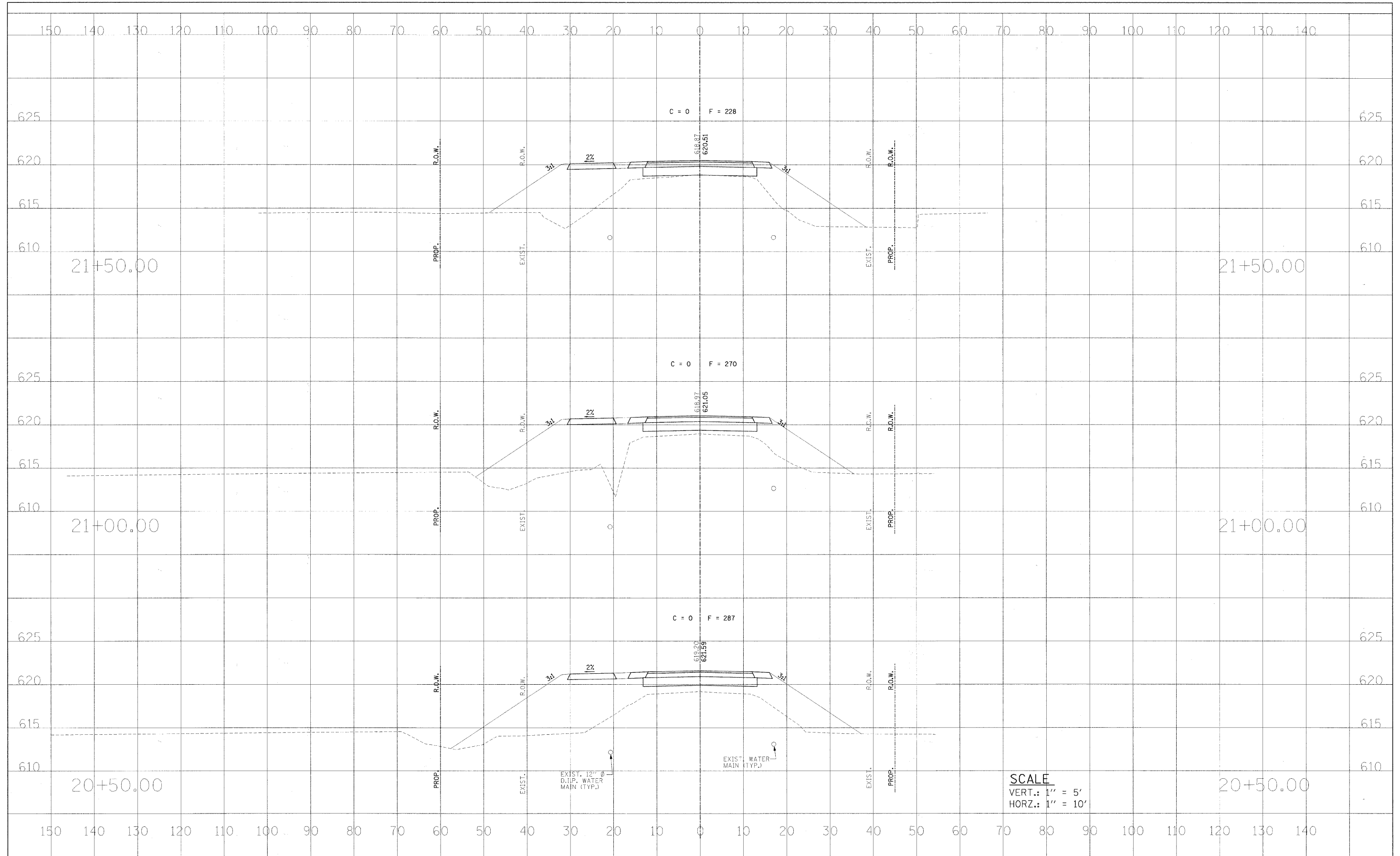


FILE NAME =	USER NAME = #USER#	DESIGNED - DCS	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	CROSS SECTIONS	RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
#FILE#	PLOT SCALE = #SCALE#	DRAWN - BKN	REVISED -			C.H. 7	05-00204-00-BR	MACON	21	8	
	PLOT DATE = #DATE#	CHECKED - KWB	REVISED -			CONTRACT NO. 95658					
		DATE -	REVISED -			FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT:					

SCALE: AS SHOWN SHEET NO. 4 OF 6 SHEETS STA. 19+00.00 TO STA. 20+00.00

FINAL	DATE
SURVEY	BY
NOTE BOOK	
TEMPLATE	
AREAS CHECKED	
NO.	

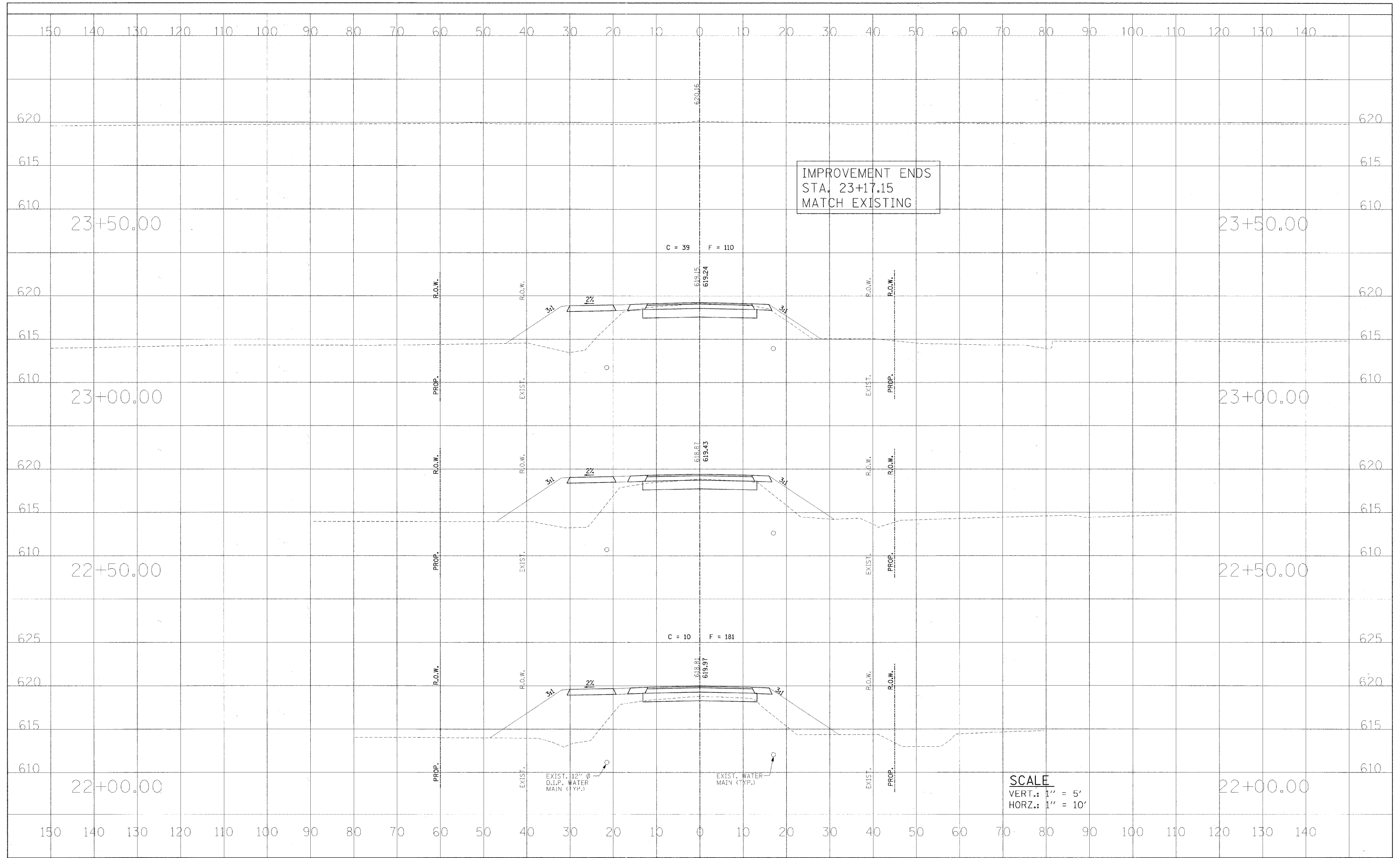
ORIGINAL	DATE
SURVEY	BY
NOTE BOOK	
TEMPLATE	
AREAS CHECKED	
NO.	



FILE NAME =	USER NAME = #USER#	DESIGNED - DCS	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	CROSS SECTIONS	RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
#FILE#	PLOT SCALE = #SCALE#	DRAWN - BKN	REVISED -			C.H. 7	05-00204-00-BR	MACON	21	9	
	PLOT DATE = #DATE#	CHECKED - KWB	REVISED -			CONTRACT NO. 95658					
		DATE -	REVISED -			FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT:					

FINAL	SURVEY	DATE
SURVEYED	BY	
NOTE BOOK		
TEMPLATE		
AREAS		
CHECKED		
NO.		

ORIGINAL	SURVEY	DATE
SURVEYED	BY	
NOTE BOOK		
TEMPLATE		
AREAS		
CHECKED		
NO.		

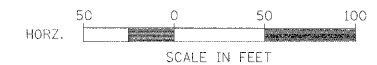


SCALE
 VERT.: 1" = 5'
 HORZ.: 1" = 10'

FILE NAME =	USER NAME = #USER#	DESIGNED - DCS	REVISED - ---	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	CROSS SECTIONS	RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
#FILEL#		DRAWN - BKN	REVISED - ---			C.H. 7	05-00204-00-BR	MACON	21	10
PLOT SCALE = #SCALE#		CHECKED - KWB	REVISED - ---			CONTRACT NO. 95658				
PLOT DATE = #DATE#		DATE -	REVISED - ---			FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT:				

CITY OF DECATUR
(CANNON PARK)

CITY OF DECATUR

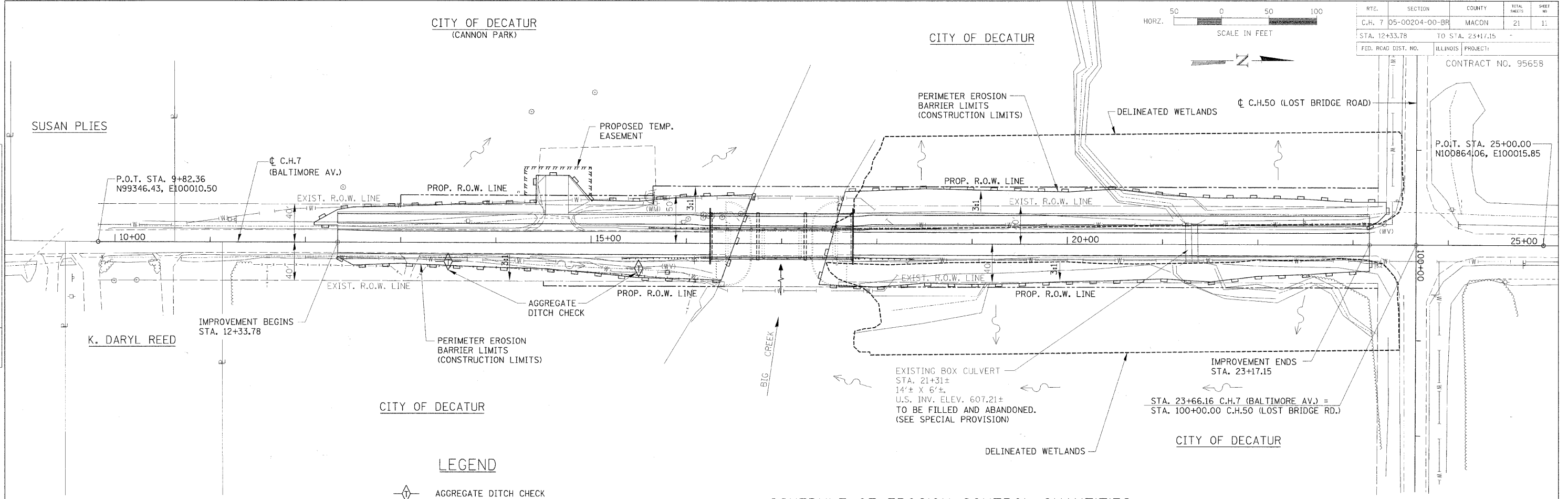


RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
C.H. 7	05-00204-00-BR	MACON	21	11
STA. 12+33.78		TO STA. 23+17.15		
FED. ROAD DIST. NO.		ILLINOIS PROJECT:		

CONTRACT NO. 95658

PLAN	DATE	BY
SURVEYED		
ALIGNMENT CHECKED		
RT. OF WAY CHECKED		
ADD FILE NAME		

PROFILE	DATE	BY
SURVEYED		
GRADES CHECKED		
CON. NOTES		
NOTATIONS CTRD		



LEGEND

- AGGREGATE DITCH CHECK
- PERIMETER EROSION BARRIER
- DRAINAGE PATTERN

NOTES

ALL ITEMS SHALL BE CONSTRUCTED AS SHOWN ON STANDARD 280001 AND AS DIRECTED BY THE ENGINEER. MAINTENANCE AND CLEANING OF THE EROSION CONTROL ITEMS SHALL BE INCLUDED IN THE RESPECTIVE EROSION CONTROL PAY ITEM.

CONSTRUCTION VEHICLES SHALL ENTER AND EXIT THE CONSTRUCTION SITE FROM C.H. 7 (BALTIMORE AVE.).

STORM WATER POLLUTION PREVENTION PLAN

- DESCRIPTION OF INTENDED SEQUENCE FOR MAJOR CONSTRUCTION ACTIVITIES:**
- REMOVAL OF EXISTING STRUCTURE.
 - EXCAVATION WILL BE COMPLETED ALONG THE ENTIRE LENGTH OF THE JOB TO REMOVE THE EXISTING ROADWAY AND GRADE THE PROPOSED DITCHES.
 - NECESSARY EMBANKMENT WILL BE PLACED ALONG THE ENTIRE LENGTH OF THE JOB FOR THE PROPOSED ROADWAY.
 - PLACEMENT, MAINTENANCE, REMOVAL AND PROPER CLEAN-UP OF TEMPORARY EROSION CONTROL ITEMS, SUCH AS PERIMETER EROSION BARRIER, AGGREGATE DITCH CHECKS, TEMPORARY SEEDING AND OTHER MISCELLANEOUS EROSION CONTROL MEASURES.
 - CONSTRUCT NEW BRIDGE SUBSTRUCTURE UNITS.
 - PLACEMENT OF PERMANENT EROSION CONTROL ITEMS, INCLUDING RIPRAP AND SEEDING.
 - CONSTRUCT NEW BRIDGE SUPERSTRUCTURE AND APPROACH ROADWAY.
 - FINAL GRADING AND OTHER MISCELLANEOUS ITEMS.

SCHEDULE OF EROSION CONTROL QUANTITIES

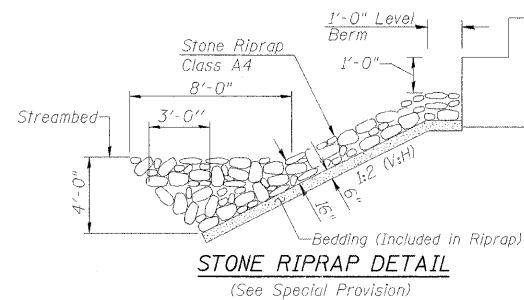
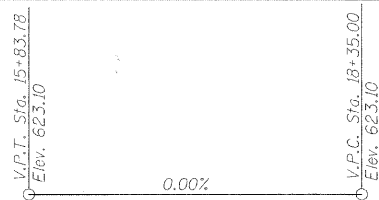
- SEEDING, CLASS 2**
AREA INSIDE OF CONSTRUCTION LIMITS, LESS ROADWAY.
TOTAL = 0.8 ACRES
- NITROGEN FERTILIZER NUTRIENT**
TOTAL = 72 POUNDS
- PHOSPHORUS FERTILIZER NUTRIENT**
TOTAL = 72 POUNDS
- POTASSIUM FERTILIZER NUTRIENT**
TOTAL = 72 POUNDS
- MULCH, METHOD 2**
TOTAL = 1.6 ACRES
- EARTH EXCAVATION FOR EROSION CONTROL**
TOTAL = 1 CU. YD.
- TEMPORARY EROSION CONTROL SEEDING**
100 LBS/ACRE X 0.8 ACRES = 80 POUNDS
- AGGREGATE DITCH CHECKS**
STA. 13+50, RT. = 1 TON
STA. 15+50, RT. = 1 TON
TOTAL = 2 TON
- PERIMETER EROSION BARRIER**
TO BE CONSTRUCTED ALONG EACH STREAM BANK FROM EAST CONST. LIMITS TO WEST CONST. LIMITS & ALONG LT. & RT. EMBANKMENT FULL LENGTH OF PROJECT. LAYOUT MAY VARY, AS DIRECTED BY THE ENGINEER.
TOTAL = 2333 FOOT
- STONE RIPRAP, CLASS A4**
PLACED AS SHOWN ON GENERAL PLAN AND ELEVATION, SHEET 12 OF 20.
TOTAL = 480 SQ. YD.
- FILTER FABRIC**
PLACED AS SHOWN ON STD. 280001.
TOTAL = 46 SQ. YD.

STORM WATER POLLUTION PREVENTION AND EROSION CONTROL PLAN

BENCHMARK:
Top of Survey Point No. 3 (Iron Pin)
Sta. 14+54.4, 193.3' Lt.
Elev. = 615.87

EXISTING STRUCTURE (SN 058-6007):

Three Span Concrete Deck Beam Bridge on Pile Bent Abutments and Piers.
28'-0" O.-O. Deck, 117'-6" Bk.-Bk. Abutments.



BIG CREEK BRIDGE
BUILT 20L BY
MACON COUNTY
SECTION 05-00204-00-BR
STA. 17+00.00
STR. NO. 058-6024 LOADING HL-93

NAME PLATE
(See Std. 515001)

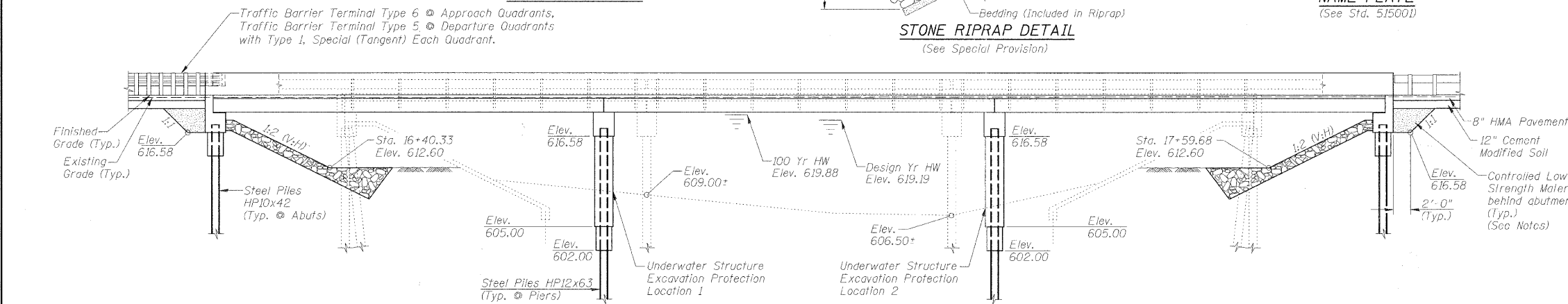
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
C.H. 7	05-00204-00-BR	MACON	21	12
FED. ROAD DIST. NO.		ILLINOIS PROJECT:	CONTRACT NO. 95658	

GENERAL NOTES

- Layout of Riprap Slopes may be varied in the field to suit ground conditions, as directed by the Engineer.
- See Proposal for Boring Data.
- Reinforcement Bars shall conform to the requirements of ASTM A 706, Grade 60. See Special Provisions.
- The Contractor shall drive one Steel Test Pile to 110% of the Nominal Required Bearing in a permanent location at the South Abutment and at Pier 2, as directed by the Engineer before ordering the remainder of piles.
- Footings for bicycle railing at each end of bridge are to be set in same location as Controlled Low-Strength Material for abutment backfill. See Note on Sheet 17 of 21.

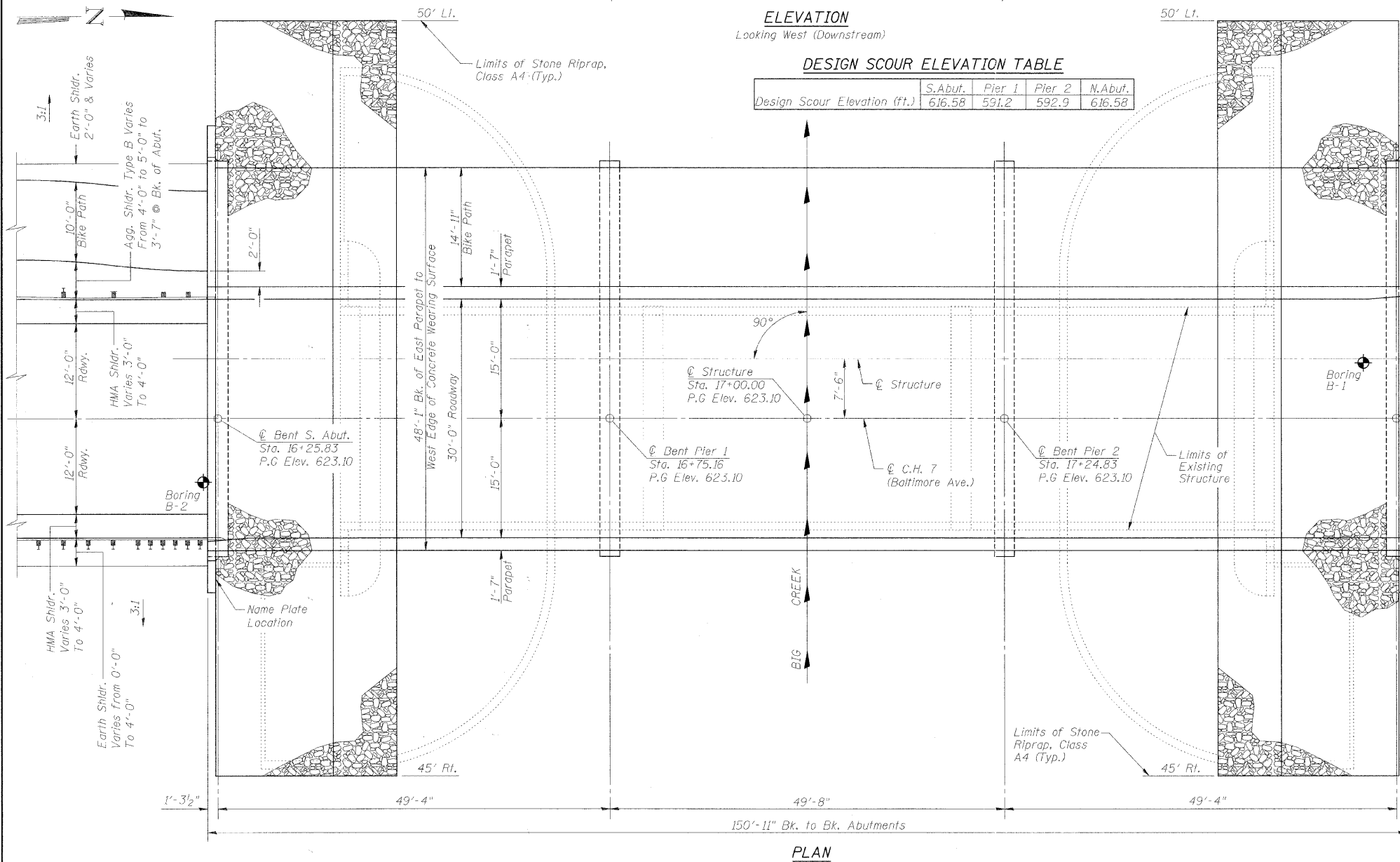
BILL OF MATERIAL

ITEM	UNIT	SUPFR	SUB	TOTAL
Channel Excavation	Cu. Yd.		408	408
Stone Riprap, Class A4	Sq. Yd.		480	480
Removal of Existing Structures	Each		1	1
Slope Wall Removal	Sq. Yd.		561	561
Structure Excavation	Cu. Yd.		103.5	103.5
Concrete Structures	Cu. Yd.		199.6	199.6
Concrete Superstructure	Cu. Yd.	34.6		34.6
Bridge Deck Grooving	Sq. Yd.	728		728
Concrete Encasement	Cu. Yd.		12.0	12.0
Protective Coat	Sq. Yd.	984		984
P.P.C Deck Beams (21" Depth)	Sq. Ft.	7140		7140
Reinforcement Bars, Epoxy Coated	Pound	18160	13960	32120
Bicycle Railing, Special	Foot	169		169
Parapet Railing	Foot	149		149
Furnishing Steel Piles HP10x42	Foot		368	368
Furnishing Steel Piles HP12x63	Foot		655	655
Driving Piles	Foot		1023	1023
Test Pile Steel HP10x42	Each		1	1
Test Pile Steel HP12x63	Each		1	1
Name Plates	Each		1	1
Portland Cement Mortar Fairing Course	Foot	2234		2234
Underwater Structure Excavation Protection - Location 1	Each		1	1
Underwater Structure Excavation Protection - Location 2	Each		1	1
Concrete Wearing Surface, 5"	Sq. Yd.	794		794
Controlled Low-Strength Material	Cu. Yd.		72.0	72.0



DESIGN SCOUR ELEVATION TABLE

Design Scour Elevation (ft.)	S.Abut.	Pier 1	Pier 2	N.Abut.
	616.58	591.2	592.9	616.58



DESIGN SPECIFICATIONS

2007 AASHTO LRFD with 2008 Interims
LOADING HL-93
Allowed 50#/sq. ft. for future wearing surface.

DESIGN STRESSES

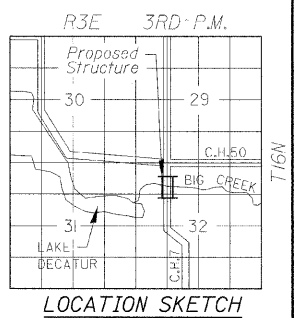
FIELD UNITS
f'c = 3,500 p.s.i.
f'y = 60,000 p.s.i.
n = 9

PPC UNITS
f'ci = 5,000 p.s.i.
f'c = 6,000 p.s.i.
f's = 270,000 p.s.i.
f'si = 201,960 p.s.i.

CONCRETE WEARING SURFACE
f'ci = 5,000 p.s.i.

SEISMIC DATA

Seismic Performance Zone (SPZ) = 2
Design Spectral Acceleration at 1.0 sec. (S_{D1}) = 0.156g
Design Spectral Acceleration at 0.2 sec. (S_{D5}) = 0.288g
Soil Site Class = D



WATERWAY INFORMATION

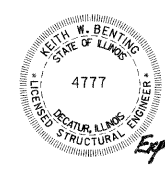
Drainage Area = 51.4 Sq. Mi. Existing Low Grade Elev. 618.81 @ Sta. 22+00.00
Proposed Low Grade Elev. 619.12 @ Sta. 22+79.84

Flood Yr.	Freq.	0 C.F.S.	Opening Sq. Ft. Exist.	Prop.	Nat. H.W.E.	Head-Ft. Exist.	Prop.	Headwater El. Exist.	Prop.
Design	30	7,298	1,007	1,230	619.19	1.60	1.40	620.79	620.59
Base	100	9,517	1,007	1,234	619.88	1.85	1.80	621.73	621.68
Overtopping Max. Calc.	500	12,650	1,007	1,234	620.71	1.74	2.09	622.45	622.80

Low Beam Elev. (Prop.) = 620.19

* Over-the-Road Flow Occurs

EXISTING	PROPOSED
30 Yr.: 281 Sq. Ft. over roadway	30 Yr.: 0 Sq. Ft. over roadway
100 Yr.: 821 Sq. Ft. over roadway	100 Yr.: 298 Sq. Ft. over roadway
500 Yr.: 2,267 Sq. Ft. over roadway	500 Yr.: 834 Sq. Ft. over roadway



DATE: April 13, 2011
Keith W. Benting
ILL. STRUCTURAL NO. 4777

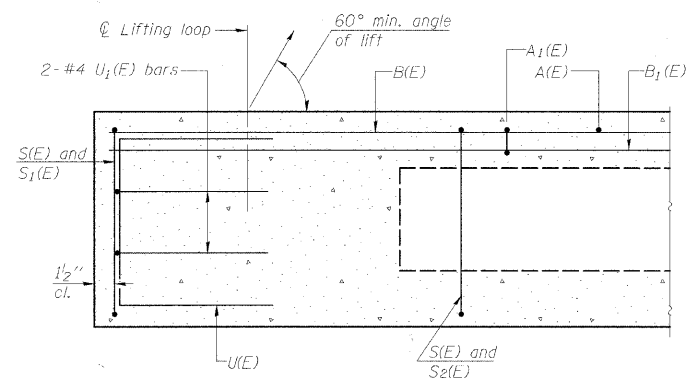
"I CERTIFY THAT TO THE BEST OF MY KNOWLEDGE, INFORMATION AND BELIEF, THIS BRIDGE DESIGN IS STRUCTURALLY ADEQUATE FOR THE DESIGN LOADING SHOWN ON THE PLANS. THE DESIGN IS AN ECONOMICAL ONE FOR THE STYLE OF STRUCTURE AND COMPLIES WITH REQUIREMENTS OF THE CURRENT AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES."

GENERAL PLAN AND ELEVATION

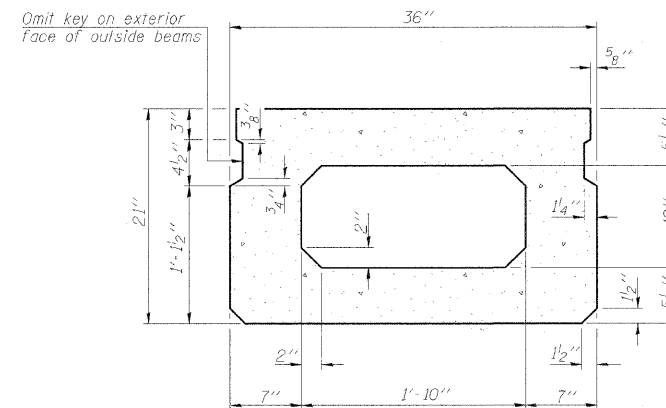
Date	Designed DCS	C.H. 7 (BALTIMORE AVE.) OVER BIG CREEK SECTION 05-00204-00-BR MACON COUNTY STA. 17+00.00 PROP. STR. NO. 058-6024	Sheet No.
Revisions	Drawn BKN		1
	Checked KWB		
	Approved KWB		
Prepared by: URS	345 East Ash Avenue Decatur, IL 62526		of 10 URS Job No. 36431685

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
C.H. 7	05-00204-00-BR	MACON	21	13
FED. ROAD DIST. NO.		ILLINOIS PROJECT:		

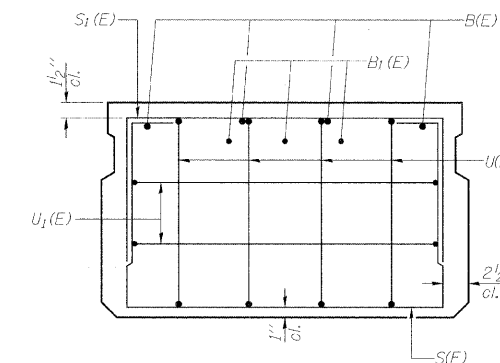
CONTRACT NO. 95658



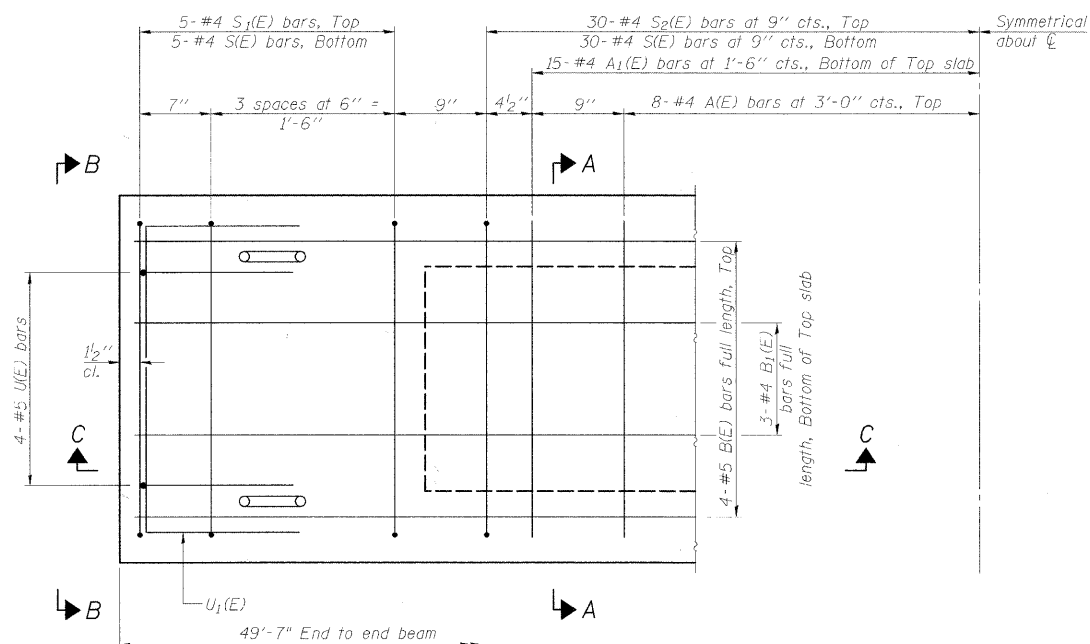
SECTION C-C



SECTION A-A
(Showing dimensions)

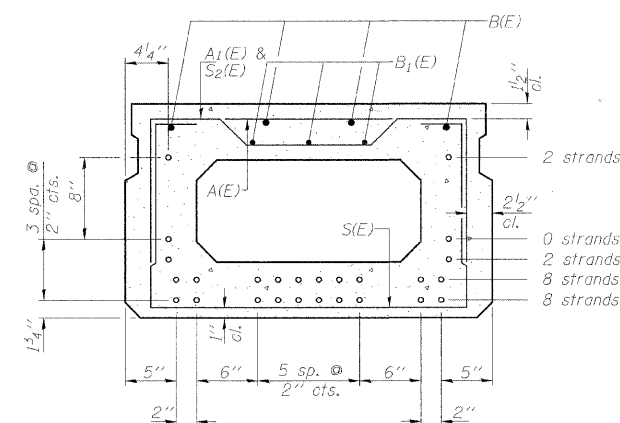


VIEW B-B



PLAN VIEW

Note: Spacing of S(E) and S2(E) bars may be adjusted up to 4" in the immediate area of the transverse tie diaphragms to miss the block outs for the transverse ties.



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

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

BAR LIST
ONE BEAM ONLY
(For information only)

Bar	No.	Size	Length	Shape
A(E)	15	#4	2'-7"	—
A1(E)	30	#4	2'-10"	~
B(E)	4	#5	49'-2"	—
B1(E)	3	#4	49'-2"	—
S(E)	70	#4	6'-5"	□
S1(E)	10	#4	4'-11"	□
S2(E)	60	#4	5'-2"	□
U(E)	8	#5	4'-0"	□
U1(E)	4	#4	5'-0"	□

Note: See sheet 3 of 10 for additional details and Bill of Material.

MINIMUM BAR LAP

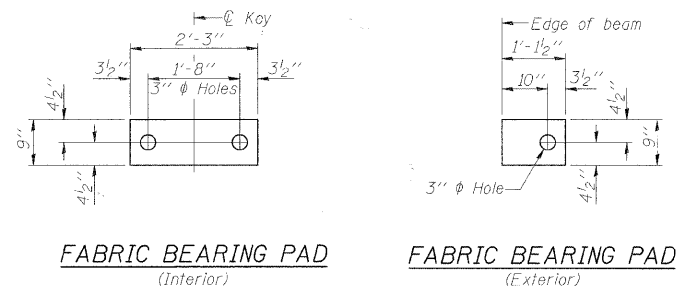
#4 bar = 2'-0"
#5 bar = 2'-6"

21" x 36" PPC DECK BEAM
STRUCTURE NO. 058-6024

Date		Designed DCS		C.H. 7 (BALTIMORE AVE.) OVER BIG CREEK SECTION 05-00204-00-BR MACON COUNTY STA. 17+00.00 PROP. STR. NO. 058-6024	Sheet No. 2 of 10
Revisions		Drawn BKN			
		Checked KWB			
		Approved KWB			
Prepared by:		URS 345 East Ash Avenue Decatur, IL 62526		URS Job No. 36431685	

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
C.H. 7	05-00204-00-BR	MACON	21	14
FED. ROAD DIST. NO.		ILLINOIS PROJECT:		

CONTRACT NO. 95658

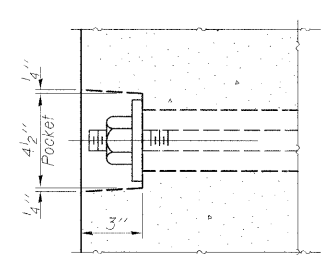


FABRIC BEARING PAD
(Interior)

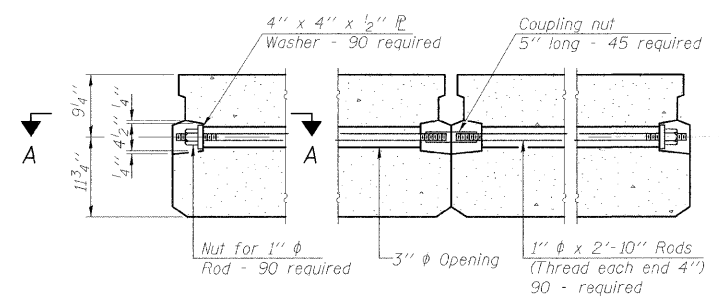
FABRIC BEARING PAD
(Exterior)

FIXED

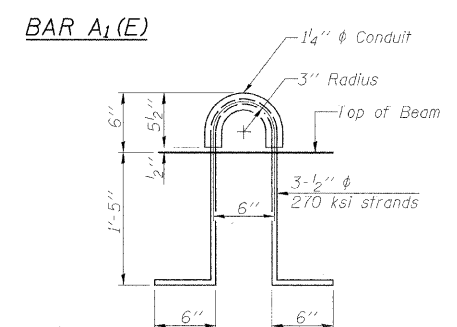
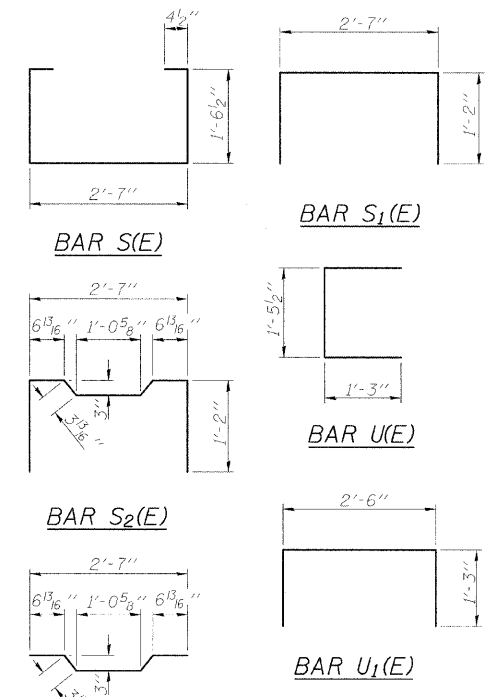
Notes:
All bearing pads shall be 1" thick.
Omit holes when using expansion bearings.
Expansion bearing pad shall be bonded to the substructure.



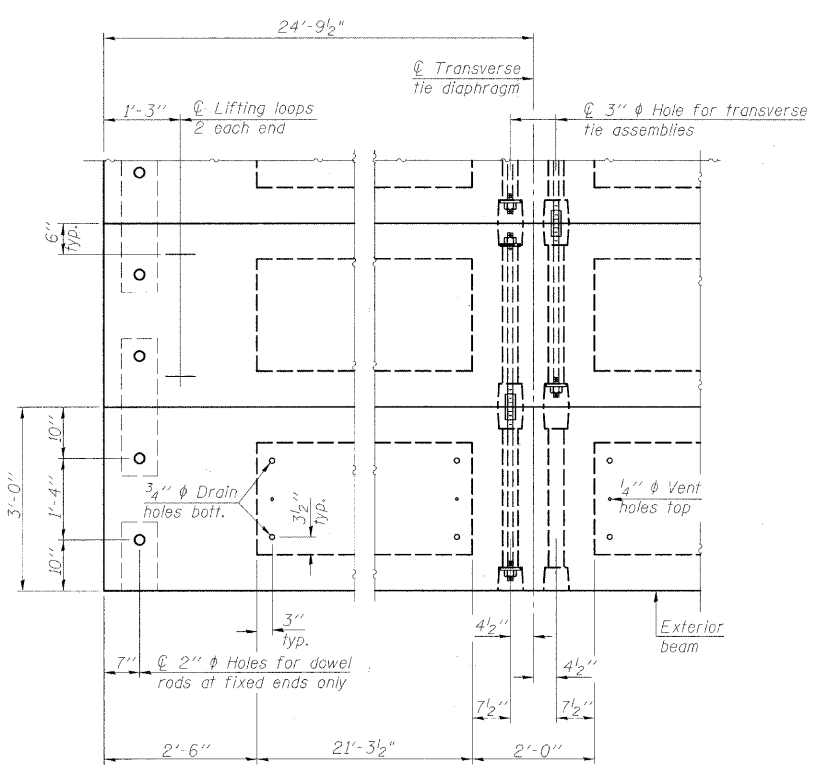
SECTION A-A



TYPICAL TRANSVERSE TIE ASSEMBLY



LIFTING LOOP DETAIL



PLAN VIEW

BILL OF MATERIAL

Precast Prestressed Conc. Deck Bms. (21" depth)	Sq. Ft. 7140
---	--------------

NOTES

Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be 1/2" and the nominal cross-sectional area shall be 0.153 sq. in.
The 1" rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets on exterior faces of bridge shall be filled with grout after transverse tie assembly is in place.
Reinforcement bars shall conform to ASTM A 706, Grade 60. (See Special Provisions).
Two 1/8" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.
A minimum 2 1/2" lifting pin shall be used to engage the lifting loops during handling.
Corrosion Inhibitor, per Article 1020.05(b)(12) and 1021.06 of the Standard Specifications, shall be used in the concrete for precast prestressed concrete deck beams.
Compressive strength of prestressed concrete, f'c, shall be 6000 psi.
Compressive strength of prestressed concrete at release, f'ci, shall be 5000 psi.

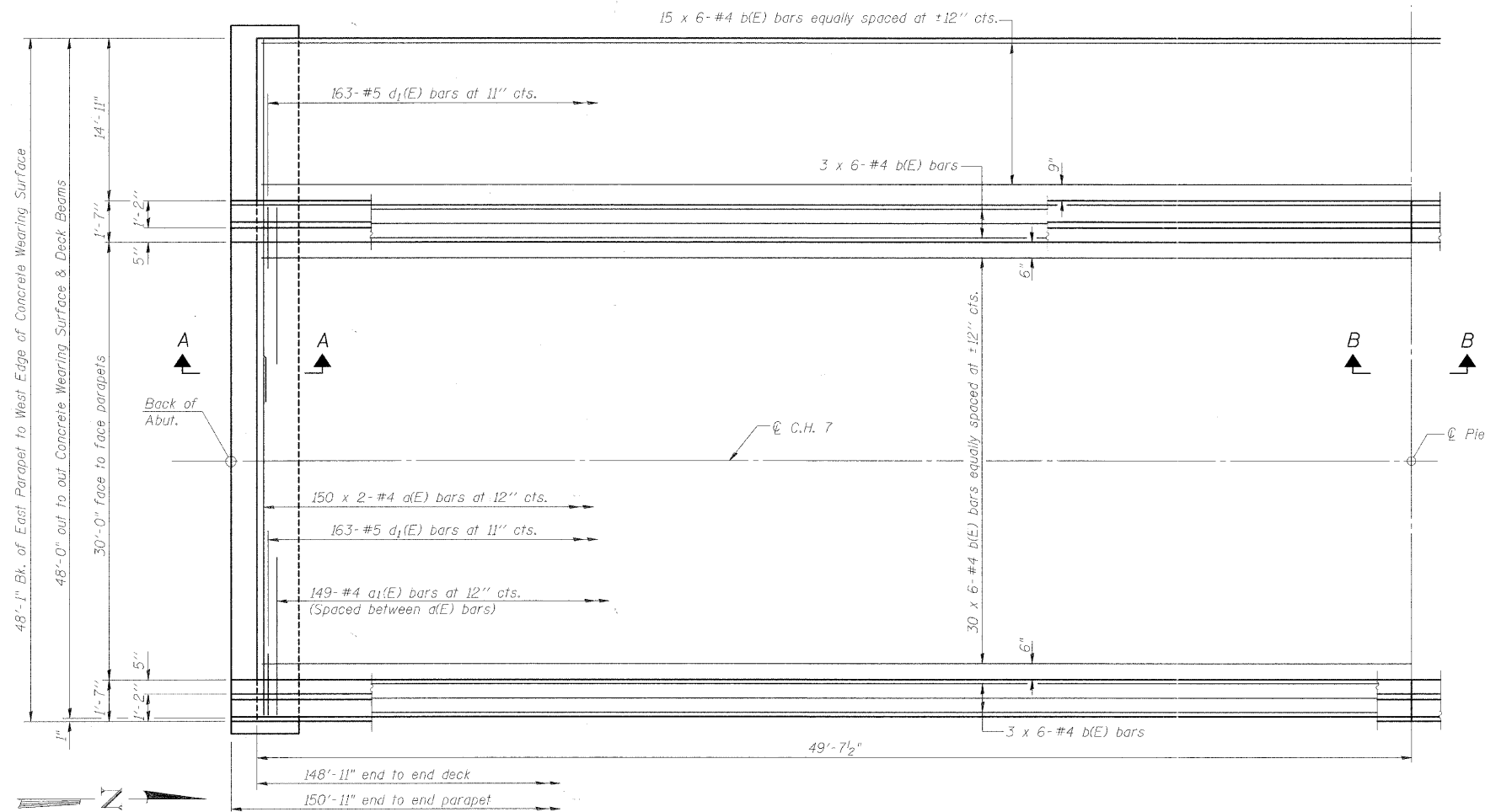
Note: Connect beams in pairs with the transverse tie configuration shown.

**21" X 36" PPC DECK BEAM DETAILS
STRUCTURE NO. 058-6024**

21" x 36" PPC DECK BEAM DETAILS			
Date	Designed DCS	C.H. 7 (BALTIMORE AVE.) OVER BIG CREEK SECTION 05-00204-00-BR MACON COUNTY STA. 17+00.00 PROP. STR. NO. 058-6024	Sheet No.
Revisions	Drawn BKN		3
	Checked KWB		of 10
	Approved KWB		URS Job No.
Prepared by:	URS 345 East Ash Avenue Decatur, IL 62526		36431685

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
C.H. 7	05-00204-00-BR	MACON	21	15
FED. ROAD DIST. NO.	ILLINOIS PROJECT:			

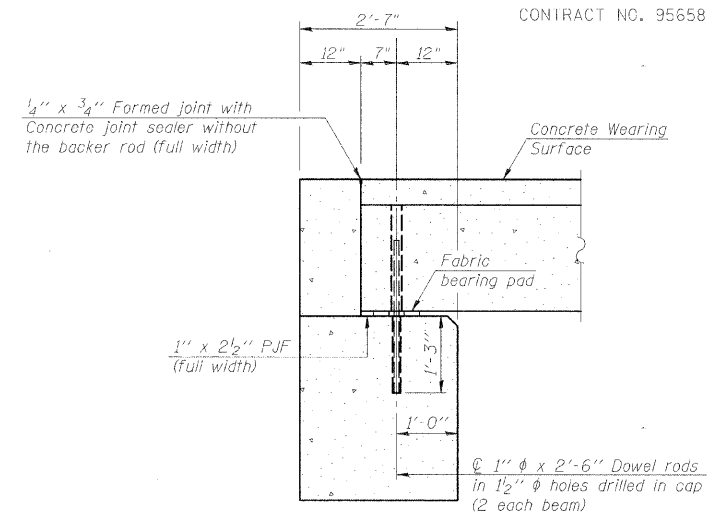
CONTRACT NO. 95658



PLAN

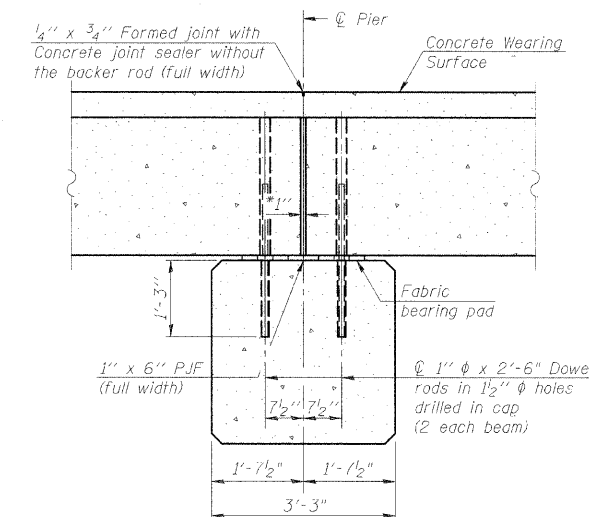
NOTES
 See sheet 5 of 10 for Superstructure Details, Parapet Reinforcement and Bill of Material.
 Bars indicated thus 20 x 2-#4 etc. indicates 20 lines of bars with 2 lengths per line.

MINIMUM BAR LAP
 #4 bar = 2'-7"



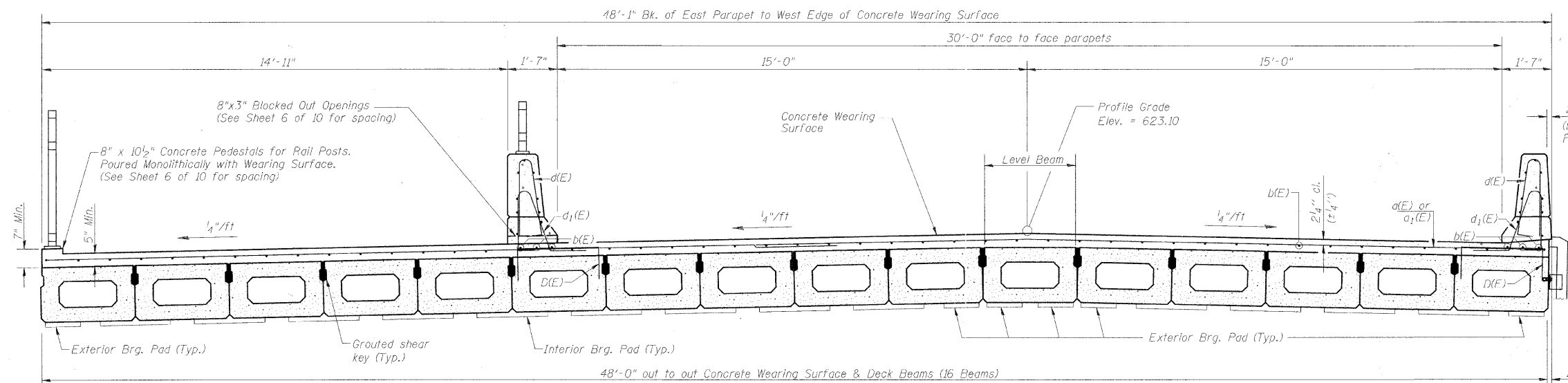
SECTION A-A
 (Dimensions are at Rt. L's)

Notes:
 All concrete wearing surfaces shall be placed prior to casting the backwall.
 See sheet 3 of 10 for fabric bearing pad details.



SECTION B-B
 (Dimensions are at Rt. L's)

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

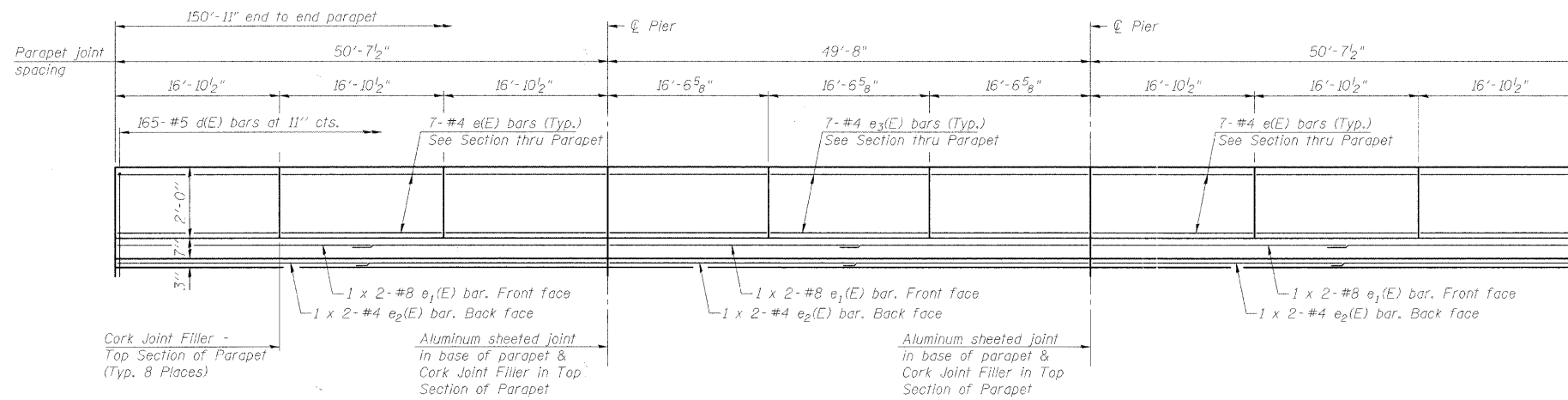


CROSS SECTION
 (Looking North)

SUPERSTRUCTURE
 STRUCTURE NO. 058-6024

Date		Designed DCS		C.H. 7 (BALTIMORE AVE.) OVER BIG CREEK SECTION 05-00204-00-BR MACON COUNTY STA. 17+00.00 PROP. STR. NO. 058-6024	Sheet No.
Revisions		Drawn BKN			4
		Checked KWB			
		Approved KWB			
Prepared by:		URS		345 East Ash Avenue Decatur, IL 62526	of 10 URS Job No. 36431685

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
C.H. 7	05-00204-00-BR	MACON	21	16
FED. ROAD DIST. NO.	ILLINOIS PROJECT:		CONTRACT NO. 95658	



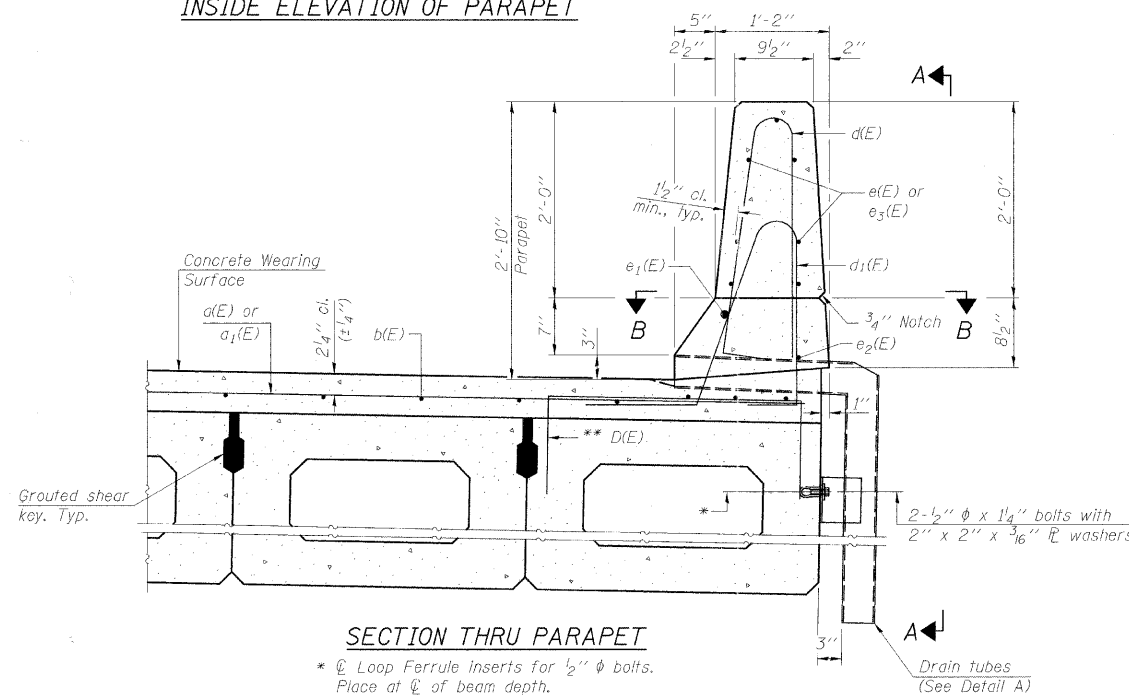
NOTES

Bars indicated thus 1 x 2-#4 etc. indicates 1 line of bars with 2 lengths per line.
Space Reinforcement Bars in Parapets to miss 8" x 3" Blocked Out openings and Drain Tubes.

MINIMUM BAR LAP

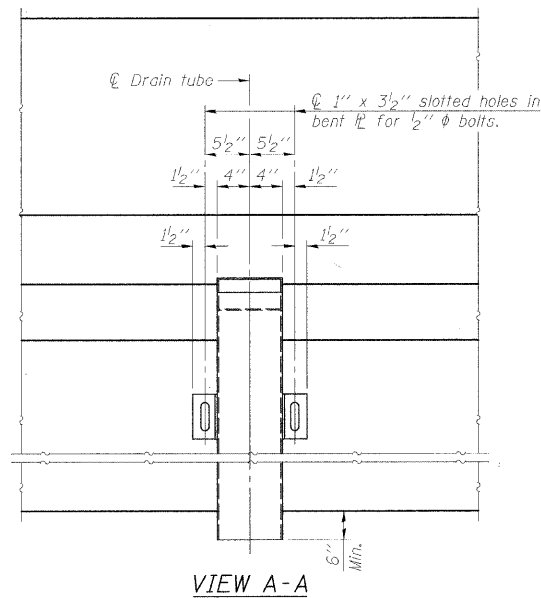
#4 bar = 2'-0"
#8 bar = 5'-2"

INSIDE ELEVATION OF PARAPET



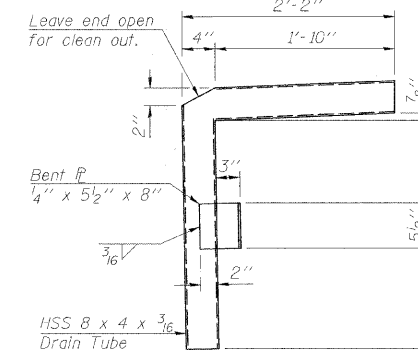
SECTION THRU PARAPET

* Loop Ferrule inserts for 1/2" ϕ bolts. Place at ϕ of beam depth.
** Place #4 D(E) bars at 9" cts. in East fascia beam and in beam under West Parapet. D(E) bar included in cost of beam.

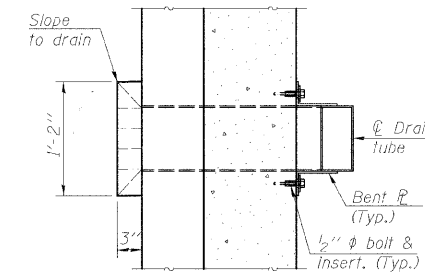


VIEW A-A

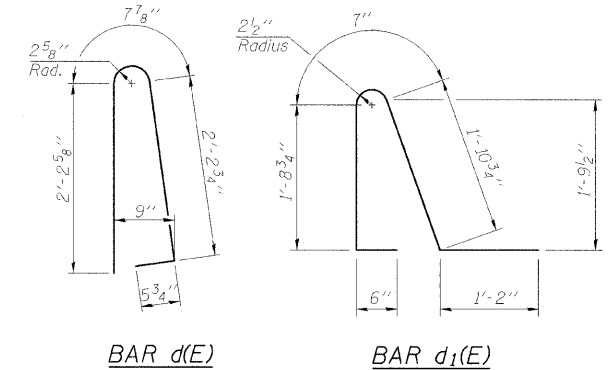
Note:
All drain tubes and accessories shall be galvanized according to AASHTO M111 or M232, (as applicable).
The cost of the drain tube assemblies and everything necessary for their installation is included with Concrete Superstructure.



DETAIL A



SECTION B-B

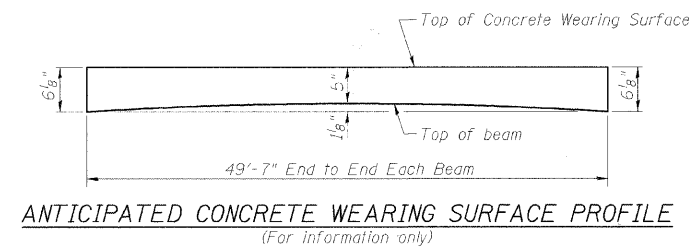


BAR d(E)

BAR d1(E)

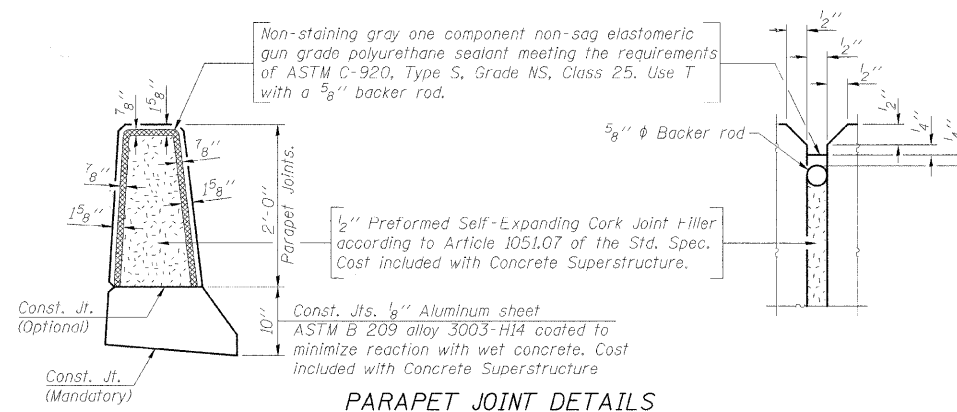
SUPERSTRUCTURE BILL OF MATERIAL

Bar	No.	Size	Length	Shape
d(E)	300	#4	25'-2"	—
a1(E)	298	#4	6'-0"	—
b(E)	306	#4	26'-11"	—
d(E)	330	#5	5'-7"	—
d1(E)	326	#5	5'-11"	—
e(E)	84	#4	16'-6"	—
e1(E)	12	#8	27'-9"	—
e2(E)	12	#4	26'-2"	—
e3(E)	42	#4	16'-2"	—
Reinforcement Bars, Epoxy Coated		Pound	18,160	
Concrete Superstructure		Cu. Yd.	34.6	
Concrete Wearing Surface, 5"		Sq. Yd.	794	



ANTICIPATED CONCRETE WEARING SURFACE PROFILE
(For information only)

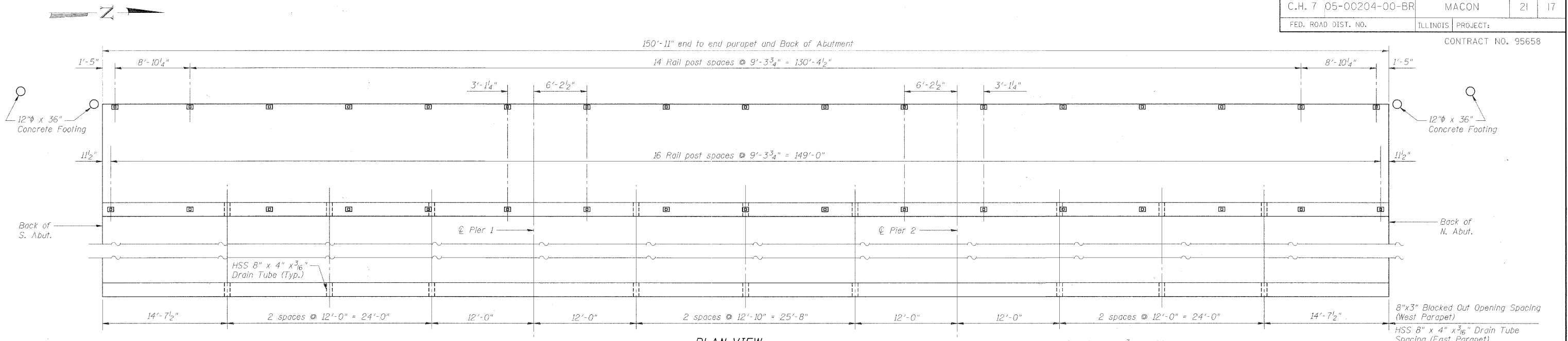
SUPERSTRUCTURE DETAILS
STRUCTURE NO. 058-6024



PARAPET JOINT DETAILS

SUPERSTRUCTURE DETAILS

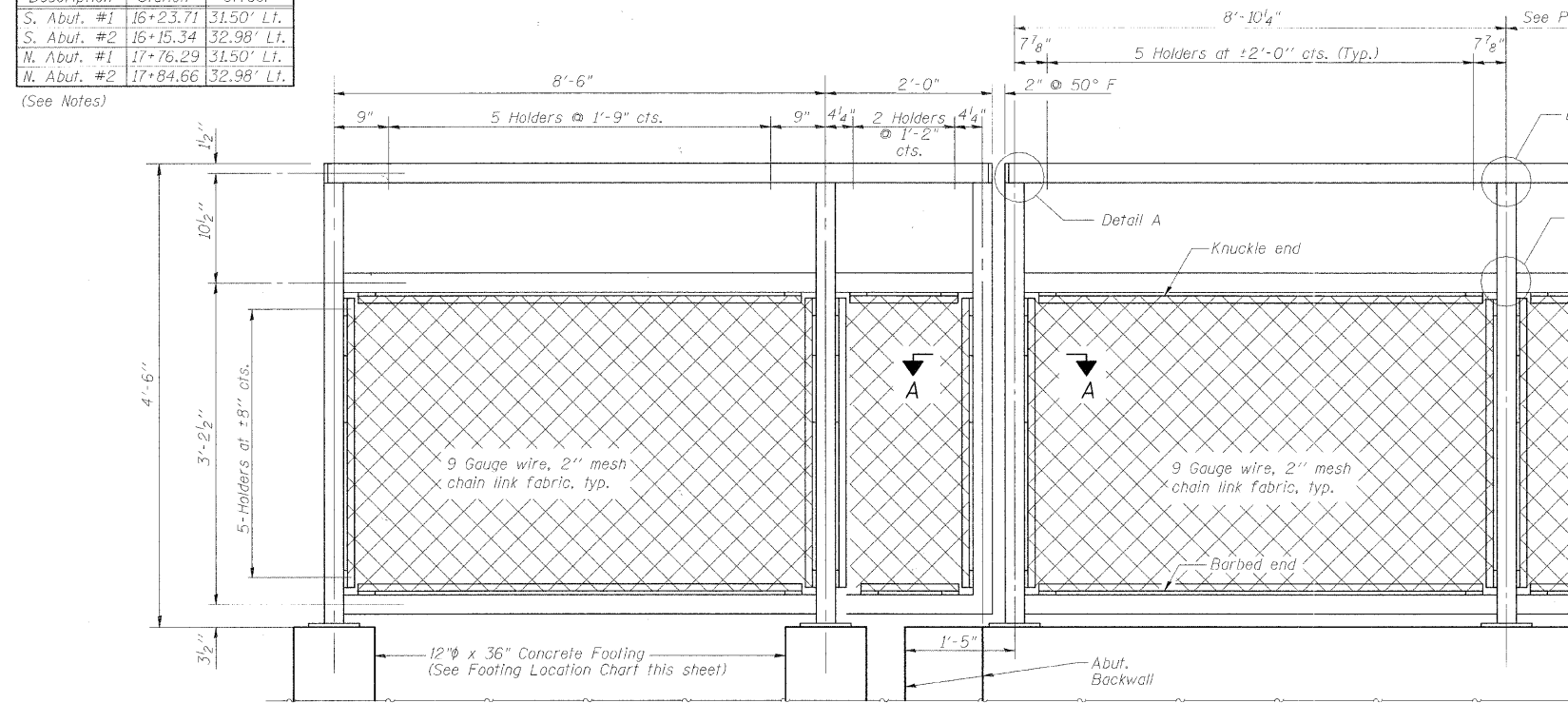
Date	Designed DCS	C.H. 7 (BALTIMORE AVE.) OVER BIG CREEK SECTION 05-00204-00-BR MACON COUNTY STA. 17+00.00 PROP. STR. NO. 058-6024	Sheet No.
Revisions	Drawn BKN		5
	Checked KWB		
	Approved KWB		
Prepared by:	URS 345 East Ash Avenue Decatur, IL 62526		of 10 URS Job No. 36431685



FOOTING LOCATION

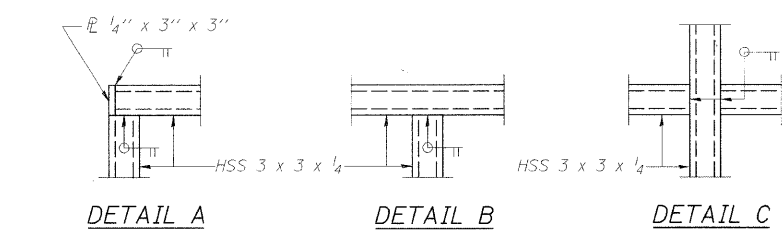
Description	Station	Offset
S. Abut. #1	16+23.71	31.50' Lt.
S. Abut. #2	16+15.34	32.98' Lt.
N. Abut. #1	17+76.29	31.50' Lt.
N. Abut. #2	17+84.66	32.98' Lt.

(See Notes)

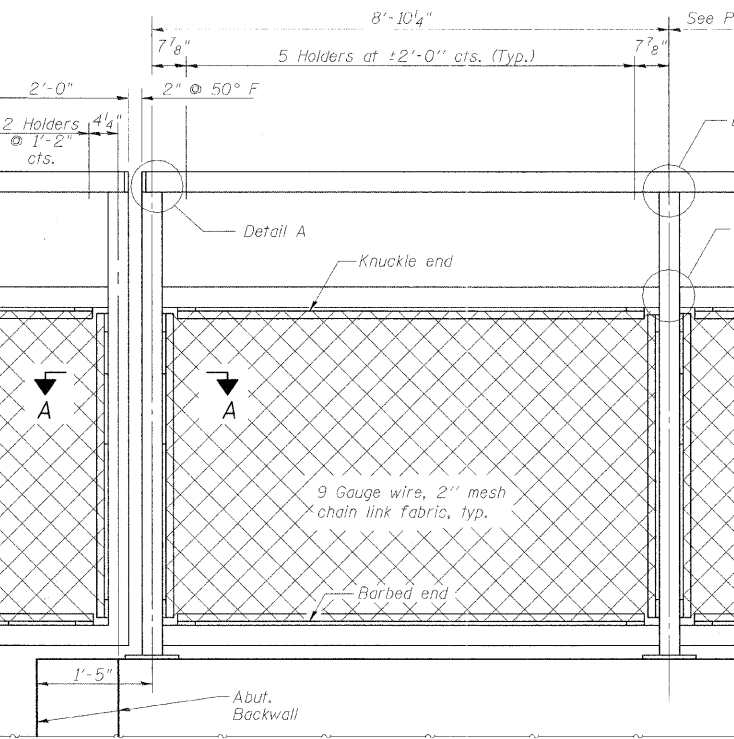


BICYCLE RAILING ELEVATION

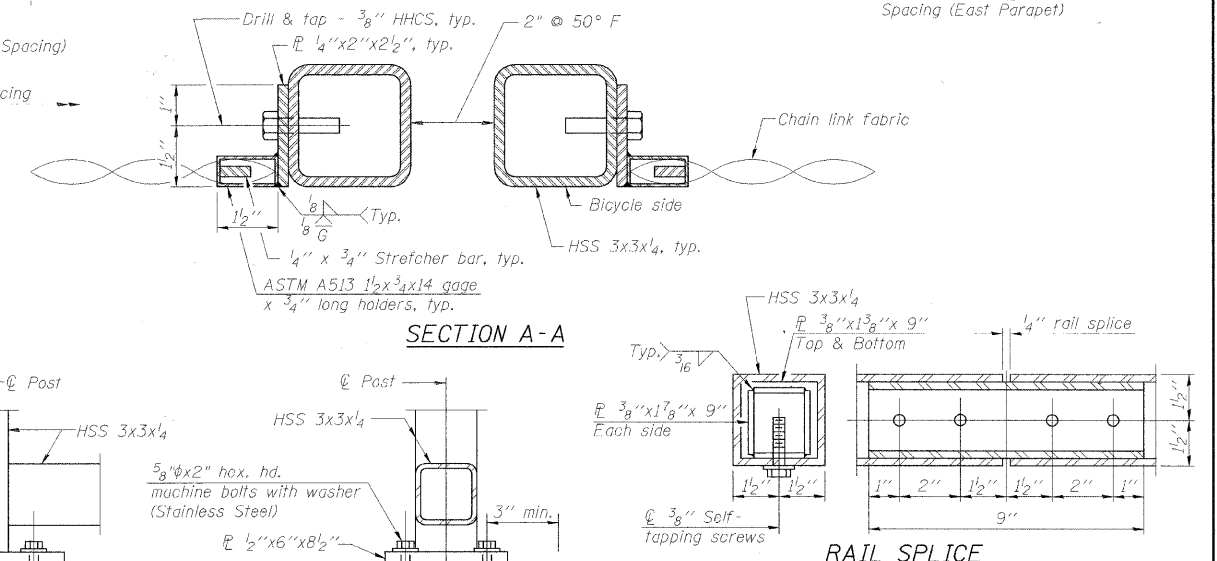
(South End shown, North End opposite hand)



PLAN VIEW
(Showing Rail Post Spacing for Bicycle and Parapet Railing, 8x3 Blocked Out Opening Spacing & Drain Tube Spacing)



PARAPET RAILING ELEVATION



ANCHOR BOLT DETAILS

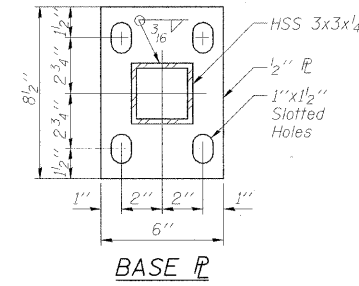
The Contractor shall drill and set 3/8" diameter anchor rods according to Article 509.06 of the Standard Specifications. Embedment shall be according to the manufacturer's specifications and shall not exceed 5".

NOTES
Footings labeled #1 are located in the area occupied by Controlled Low-Strength Material for abutment backfill. Contractor to make provisions, if CLSM cannot be penetrated for footing construction, to ensure that area is blocked out before CLSM is applied.
The chain link fabric shall be black vinyl coated and conform to the requirements of Article 1006.27(a)(1)d of the Standard Specifications.

All posts, railing, splices, anchor devices and bent plates shall be painted using one of the two following paint systems:
1. Inorganic Zinc-rich/Waterborne Acrylic for shop and field applications.
2. Organic Zinc-rich/Epoxy/Urethane for full shop application.

Finish paint color shall be Ni-Black.

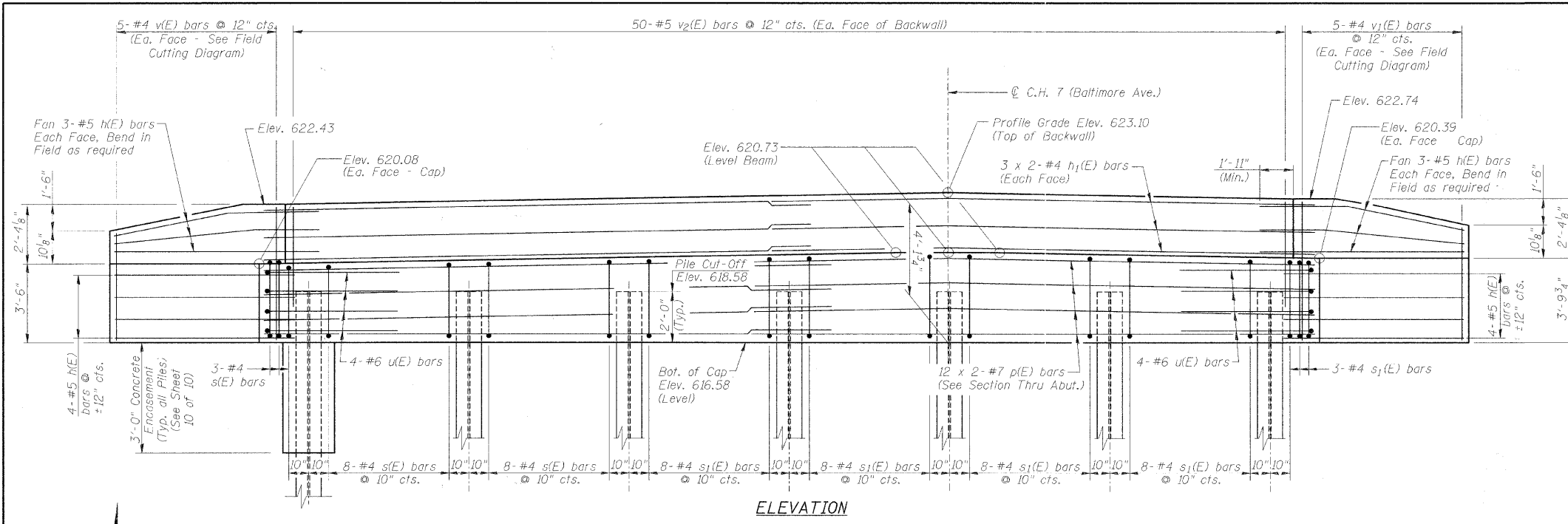
BICYCLE RAILING STRUCTURE NO. 058-6024



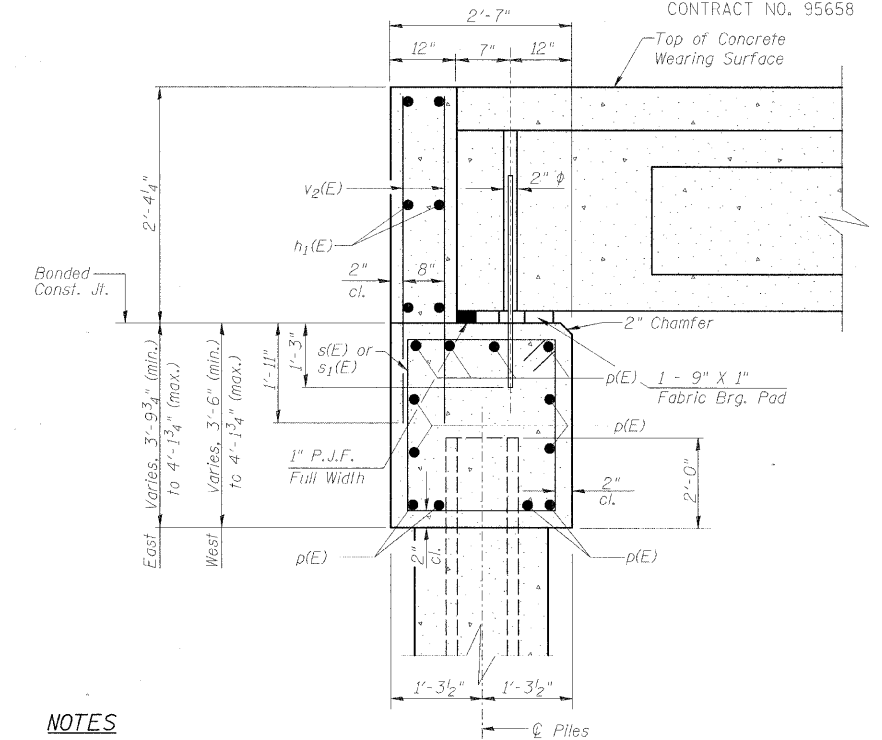
BILL OF MATERIAL

Item	Unit	Quantity
Bicycle Railing, Special	Foot	169
Parapet Railing	Foot	149

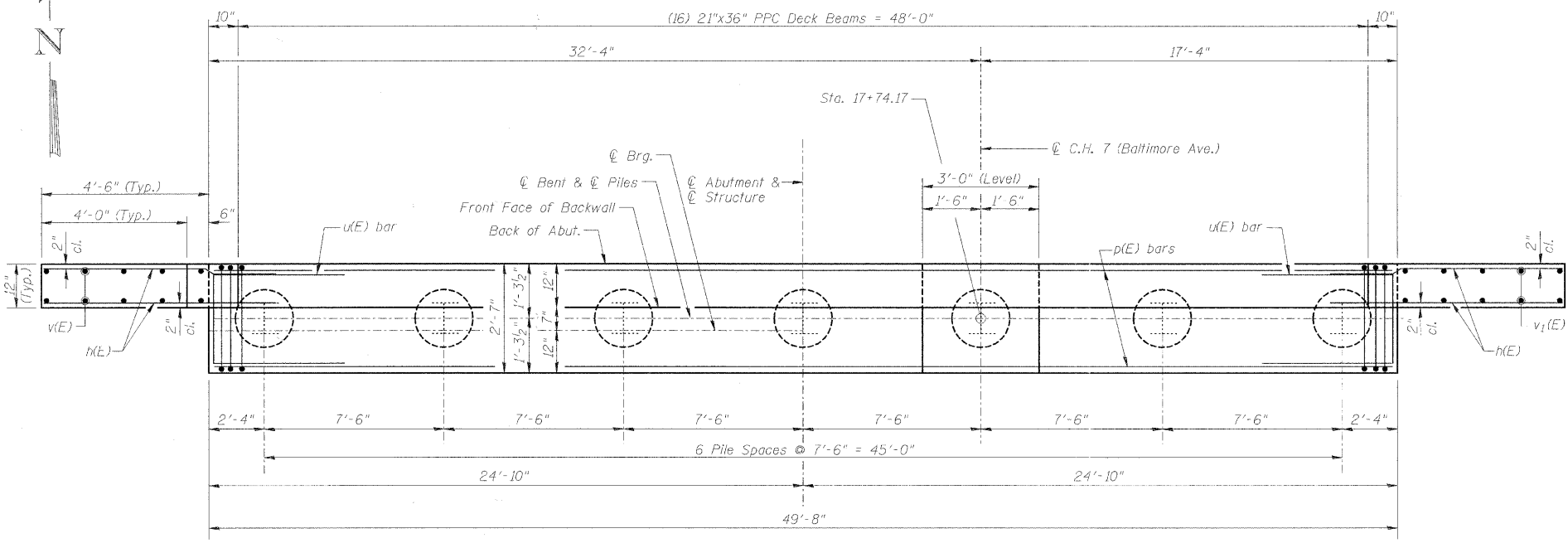
BICYCLE & PARAPET RAILING		Sheet No.
Designed DCS	C.H. 7 (BALTIMORE AVE.) OVER BIG CREEK	6
Drawn BKN	SECTION 05-00204-00-BR	
Checked KWB	MACON COUNTY	of 10
Approved KWB	STA. 17+00.00	URS Job No.
Prepared by: URS	PROP. STR. NO. 058-6024	36431685
345 East Ash Avenue		
Decatur, IL 62526		



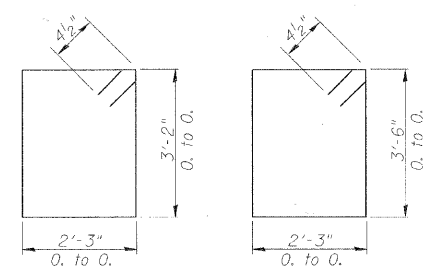
ELEVATION



SECTION THRU ABUT.

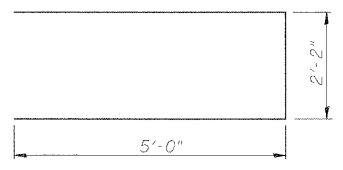


PLAN

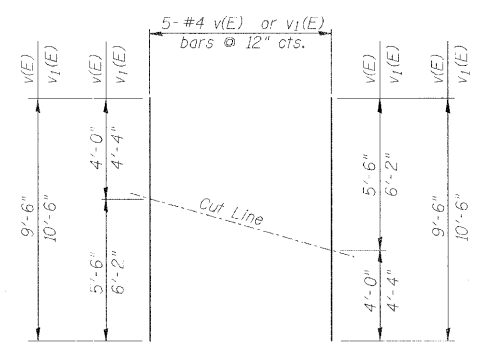


BAR s(E)

BAR s1(E)



BAR u(E)



FIELD CUTTING DIAGRAM

Order bars full length. Cut to fit as shown and use remainder of bars in other face.

NOTES

- The Backwall and the portion of the Wingwalls above the bonded construction joint shall be cast against the in-place beam.
- 1" dia. x 2'-6" dowel rods in 1 1/2" dia. holes drilled in cap (2 ea. beam). Dowel rods to be grouted after beams are in place and allowed to cure (min. 24 hrs.) prior to grouting the shear keys. The grout shall be an approved non-shrink grout.
- Reinforcement bars designated (E) shall be epoxy coated.
- Reinforcement bars shall conform to the requirements of A.S.T.M. A706 Grade 60. See Special Provisions.
- Space reinforcement in cap to miss dowel rods.
- Bars indicated thus 3 x 2-#4 etc. indicates 3 lines of bars with 2 lengths per line.
- The Contractor shall drive test piles to 110 Percent of the Nominal Required Bearing indicated in the Pile Data information before ordering the remainder of the piles.

DESIGN STRESSES

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

MIN. BAR LAP

#4 Bar = 2'-0"
 #7 bar = 3'-11"

PILE DATA

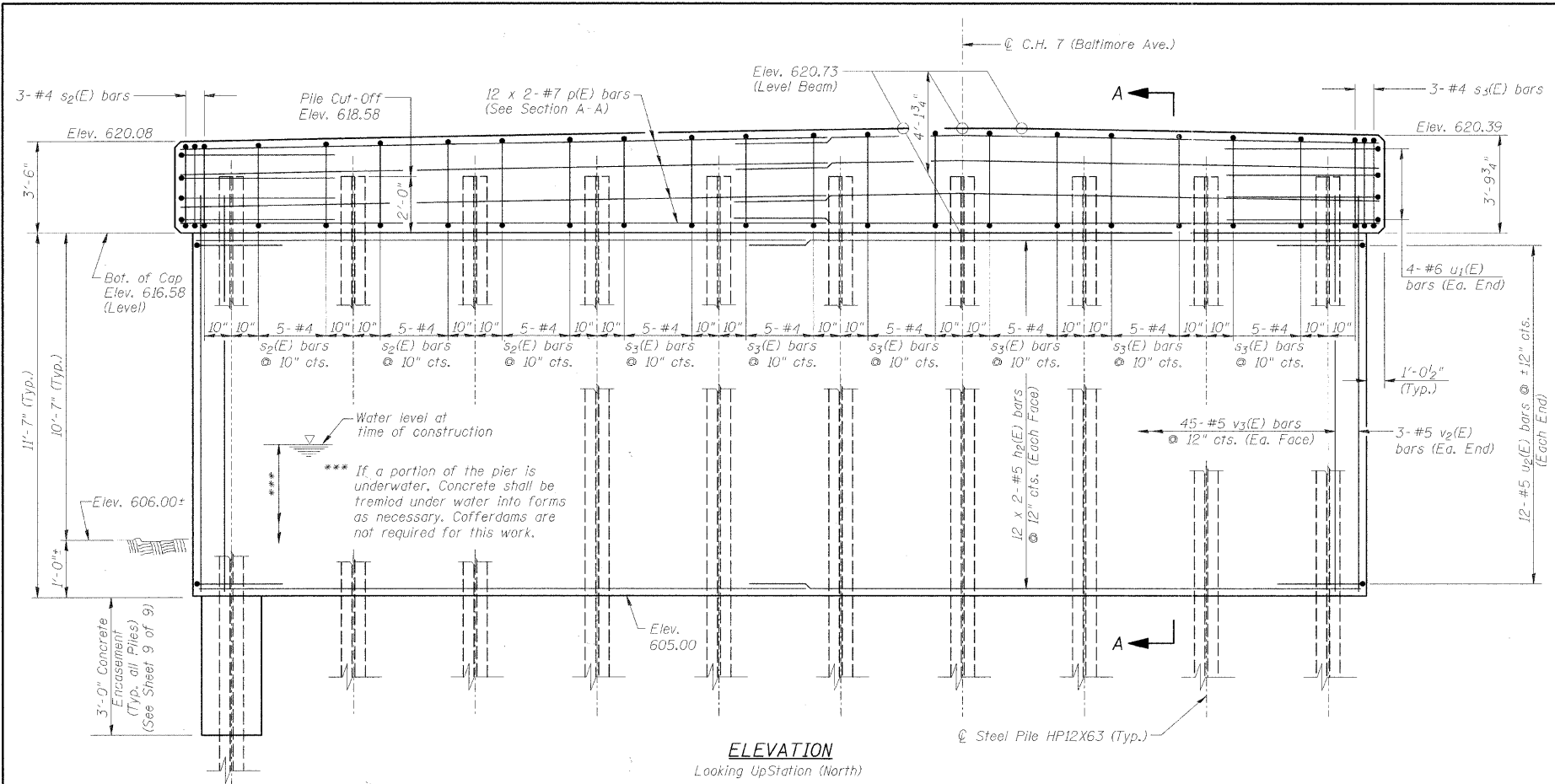
Type & Size: HP10x42
 Nominal Required Bearing: 335 Kips
 Factored Resistance Available: 184 Kips (Refusal)
 Est. Length: 26'-0"
 No. Required: 7

BILL OF MATERIAL

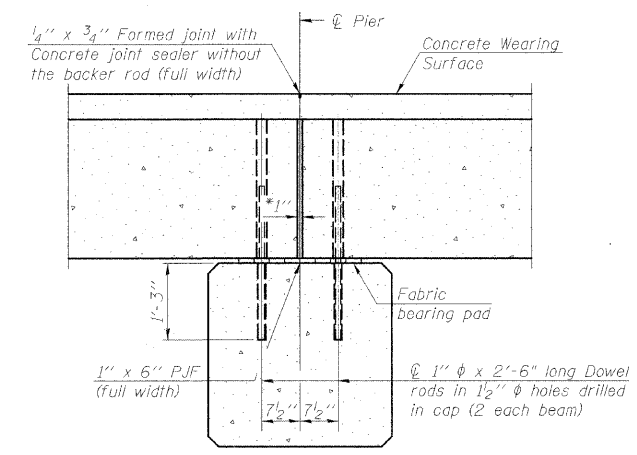
Bar	No.	Size	Length	Shape
h(E)	28	#5	6'-6"	—
h1(E)	12	#4	25'-9"	—
p(E)	24	#7	26'-8"	—
s(E)	19	#4	11'-7"	□
s1(E)	35	#4	12'-3"	□
u(E)	8	#6	12'-2"	□
v(E)	5	#4	9'-6"	—
v1(E)	5	#4	10'-6"	—
v2(E)	100	#5	4'-2"	—
Concrete Structures			Cu. Yd.	24.5
Concrete Encasement			Cu. Yd.	2.5
Reinforcement Bars, Epoxy Coated			Pound	2790
Furnishing Steel Piles HP10x42			Foot	182
Driving Piles			Foot	182

NORTH ABUTMENT

Date	Designed DCS	C.H. 7 (BALTIMORE AVE.) OVER BIG CREEK SECTION 05-00204-00-BR MACON COUNTY STA. 17+00.00 PROP. STR. NO. 058-6024	Sheet No.
Revisions	Drawn BKN		8
	Checked KWB		
	Approved KWB		
Prepared by:	URS	345 East Ash Avenue Decatur, IL 62526	URS Job No. 36431685



ELEVATION
Looking Up Station (North)



SECTION THRU PIER

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

NOTES

- 1" dia. x 2'-6" dowel rods in 1/2" dia. holes drilled in cap (2 ea. beam). Dowel rods to be grouted after beams are in place and allowed to cure (min. 24 hrs.) prior to grouting the shear keys. The grout shall be an approved non-shrink grout.
- Reinforcement bars designated (E) shall be epoxy coated.
- Reinforcement bars shall conform to the requirements of A.S.T.M. A706 Grade 60. See Special Provisions.
- Space reinforcement in cap to miss dowel rods.
- Bars indicated thus 12 x 2-#7 etc. indicates 12 lines of bars with 2 lengths per line.
- The Contractor shall drive test piles to 110 Percent of the Nominal Required Bearing indicated in the Pile Data information before ordering the remainder of the piles.

DESIGN STRESSES

$f'_c = 3,500 \text{ psi}$
 $f_y = 60,000 \text{ psi}$

MIN. BAR LAP

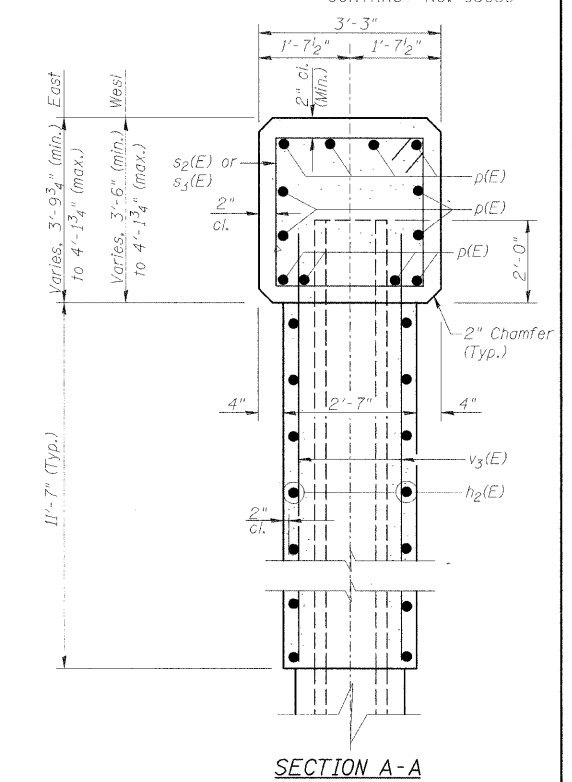
#5 Bar = 2'-6"
#7 bar = 3'-11"

PILE DATA - PIER 1

Type & Size: HP12x63
Nominal Required Bearing: 497 Kips
Factored Resistance Available: 174 Kips (Refusal)
Est. Length: 34'-0"
No. Required: 10

PILE DATA - PIER 2

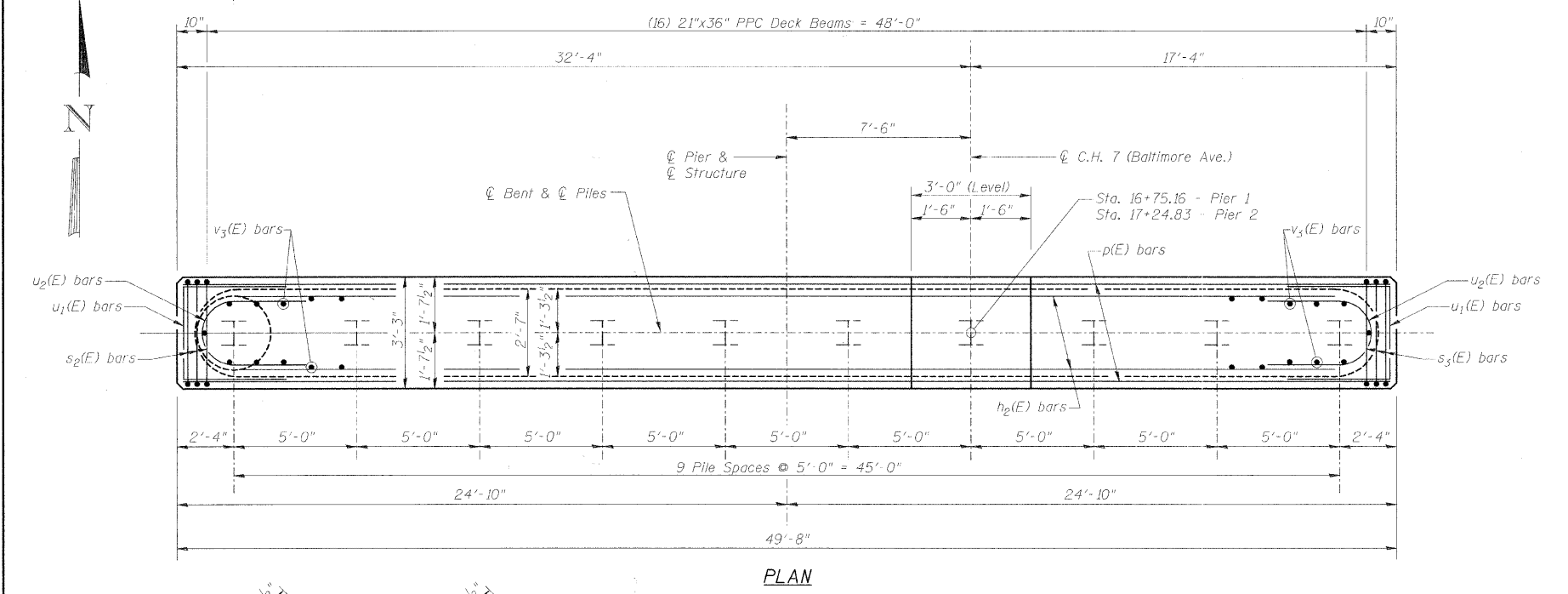
Type & Size: HP12x63
Nominal Required Bearing: 497 Kips
Factored Resistance Available: 201 Kips (Refusal)
Est. Length: 35'-0"
No. Required: 9 Plus 1 Permanent Test Pile



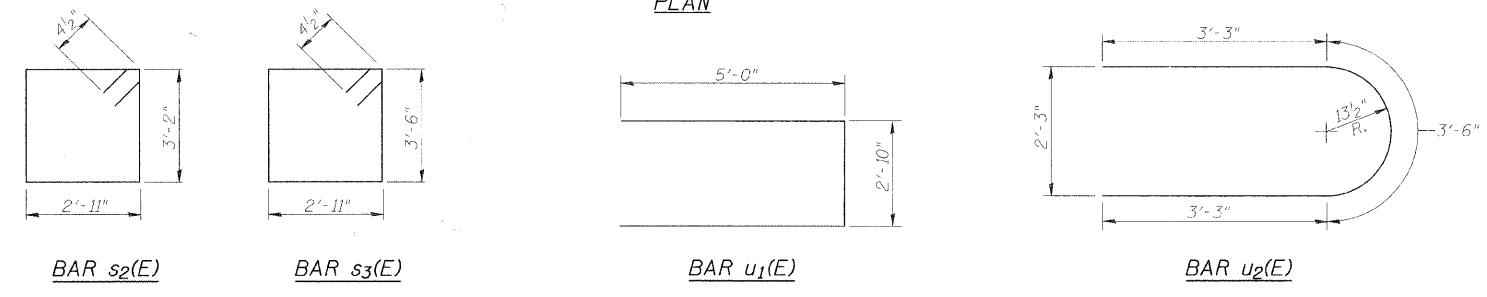
SECTION A-A

**BILL OF MATERIAL
PIER 1 AND PIER 2**

Bar	No.	Size	Length	Shape
h ₂ (E)	96	#5	23'-9"	—
p(E)	48	#7	26'-8"	—
s ₂ (E)	36	#4	12'-11"	□
s ₃ (E)	66	#4	13'-7"	□
u ₁ (E)	16	#6	12'-10"	—
u ₂ (E)	48	#5	10'-0"	U
v ₃ (E)	192	#4	12'-11"	—
Concrete Structures		Cu. Yd.	150.6	
Concrete Encasement		Cu. Yd.	7.0	
Reinforcement Bars, Epoxy Coated		Pound	8380	
Furnishing Steel Piles HP12x63		Foot	655	
Driving Steel Piles		Foot	655	
Test Pile Steel HP12x63		Each	1	
Underwater Structure Excavation Protection - Location 1		Each	1	
Underwater Structure Excavation Protection - Location 2		Each	1	

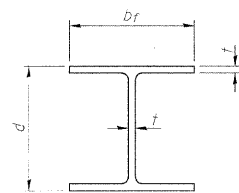


PLAN



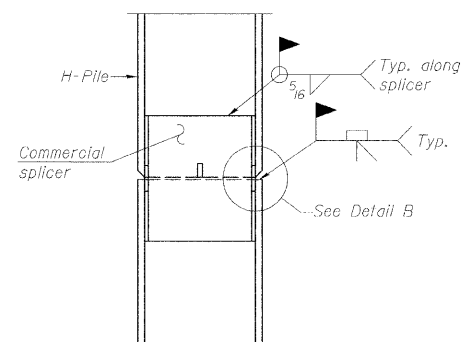
PIER 1 & PIER 2

Date	Designed DCS	C.H. 7 (BALTIMORE AVE.) OVER BIG CREEK SECTION 05-00204-00-BR MACON COUNTY STA. 17+00.00 PROP. STR. NO. 058-6024	Sheet No.
Revisions	Drawn BKN		9
	Checked KWB		of 10
	Approved KWB		URS Job No. 36431685
Prepared by: URS		345 East Ash Avenue Decatur, IL 62526	

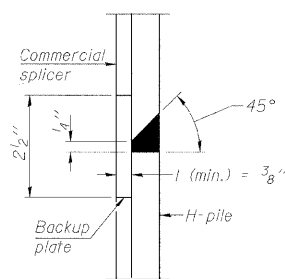


STEEL PILE TABLE

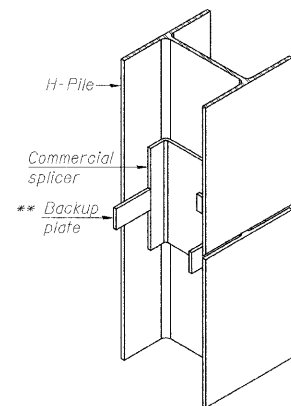
Designation	Depth d	Flange width bf	Web and Flange thickness t	Encasement diameter A
HP 14x117	14 1/4"	14 7/8"	13/16"	30"
x102	14"	14 3/4"	11/16"	30"
x89	13 7/8"	14 3/4"	5/8"	30"
x73	13 5/8"	14 5/8"	1/2"	30"
HP 12x84	12 1/4"	12 1/4"	11/16"	24"
x74	12 1/8"	12 1/4"	5/8"	24"
x63	12"	12 1/8"	1/2"	24"
x53	11 3/4"	12"	7/16"	24"
HP 10x57	10"	10 1/4"	9/16"	24"
x42	9 3/4"	10 1/8"	7/16"	24"
HP 8x36	8"	8 1/8"	7/16"	18"



ELEVATION

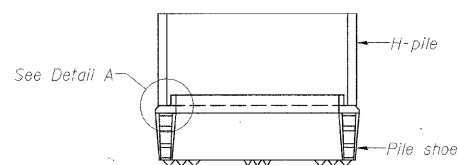


DETAIL "B"

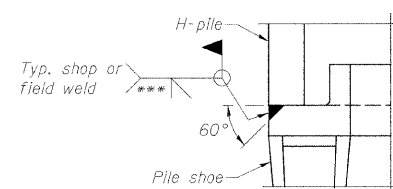


ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE

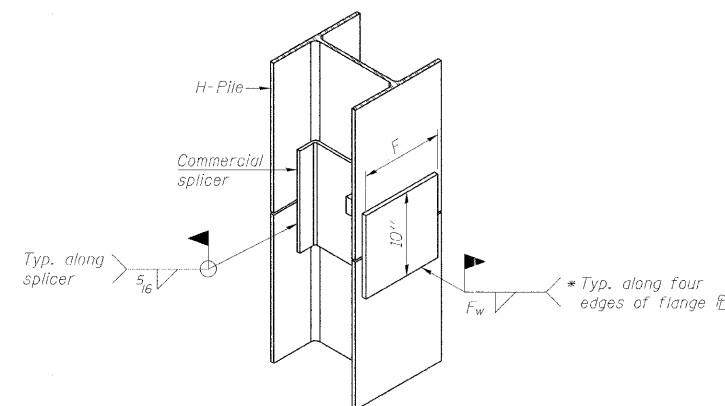


ELEVATION



DETAIL A

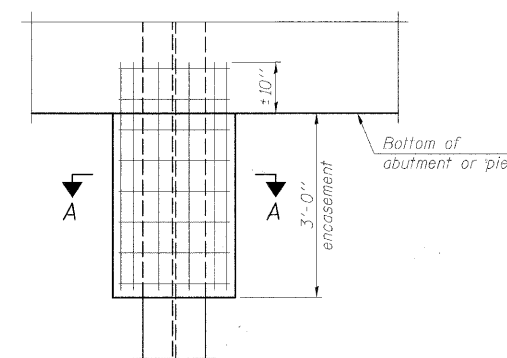
H-PILE SHOE ATTACHMENT



ISOMETRIC VIEW

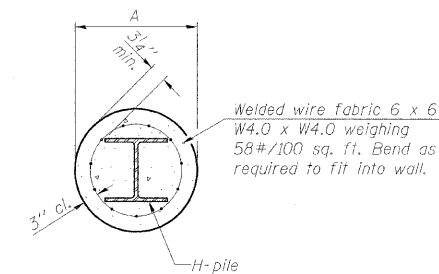
WELDED COMMERCIAL SPLICE ALTERNATE

- * Interrupt welds 1/4" from end of web and/or each flange.
- ** Remove portions of backup plates that extend outside the flanges.
- *** Weld size per pile shoe manufacturer (5/16" min.).



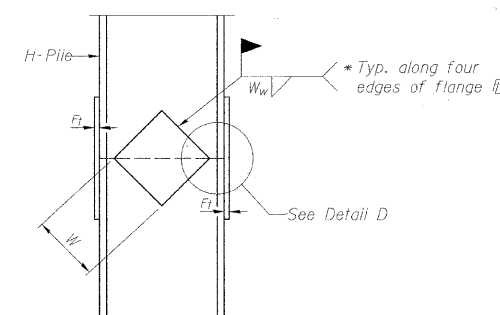
ELEVATION

PILE ENCASEMENT



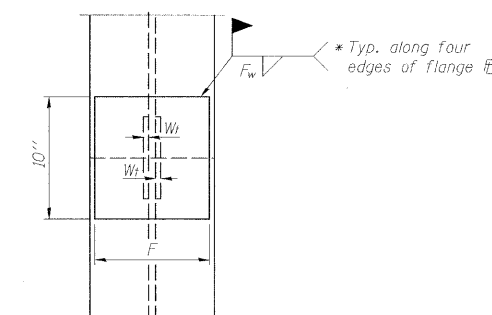
SECTION A-A

Note:
Forms for encasement may be omitted when soil conditions permit.



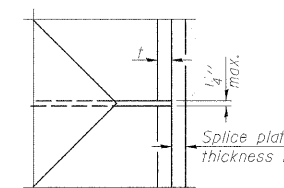
ELEVATION

WELDED PLATE FIELD SPLICE



END VIEW

Designation	F	F _t	F _w	W	W _t	W _w
HP 14x117	12 1/2"	1"	7/8"	7 3/4"	5/8"	1/2"
x102	12 1/2"	7/8"	3/4"	7 3/4"	5/8"	1/2"
x89	12 1/2"	3/4"	1/16"	7 3/4"	5/8"	1/2"
x73	12 1/2"	5/8"	9/16"	7 5/4"	5/8"	1/2"
HP 12x84	10"	7/8"	1/16"	6 1/2"	5/8"	1/2"
x74	10"	7/8"	1/16"	6 1/2"	5/8"	1/2"
x63	10"	5/8"	1/2"	6 1/2"	1/2"	3/8"
x53	10"	5/8"	1/2"	6 1/2"	1/2"	3/8"
HP 10x57	8"	3/4"	9/16"	5 1/4"	1/2"	3/8"
x42	8"	5/8"	9/16"	5 1/4"	1/2"	3/8"
HP 8x36	7"	5/8"	7/16"	4 1/4"	1/2"	3/8"



DETAIL D

Note:
The steel H-piles shall be according to AASHTO M270 Grade 50.

HP PILE DETAILS
STRUCTURE NO. 058-6024

HP PILE DETAILS				Sheet No.
Date	Designed DCS	C.H. 7 (BALTIMORE AVE.) OVER BIG CREEK		10
Revisions	Drawn BKN	SECTION 05-00204-00-BR		
	Checked KWB	MACON COUNTY		
	Approved KWB	STA. 17+00.00		
		PROP. STR. NO. 058-6024		
Prepared by: URS 345 East Ash Avenue Decatur, IL 62526				of 10 URS Job No. 36431685