04-24-2015 LETTING ITEM 189

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3719	12-00239-00-BR	LAKE	88	1
	ILLINOIS	CONTRACT NO. 61A57		

88+3 (91)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PLANS FOR PROPOSED FEDERAL AID HIGHWAY

GRAND AVENUE / MATHON DRIVE, FAU 3719 (PERSHING ROAD)
PERSHING ROAD TO AMSTUTZ EXPRESSWAY (IL 137)
CLAYTON STREET TO NORTH OF MATHON DRIVE
BRIDGE RECONSTRUCTION, ROADWAY RECONSTRUCTION
SECTION 12-00239-00-BR
PROJECT NO. M-BHM-9003(952)
CITY OF WAUKEGAN
LAKE COUNTY
C-91-234-12

FOR INDEX OF SHEETS, SEE SHEET NO. 2

FOR INDEX OF HIGHWAY STANDARDS, SEE SHEET NO. 2

J.U.L.I.E. DESIGN STAGE REQUEST
DIG. No. A3201172

Call Before You Dig
JULIE ILLINOIS ONE-CALL SYSTEM

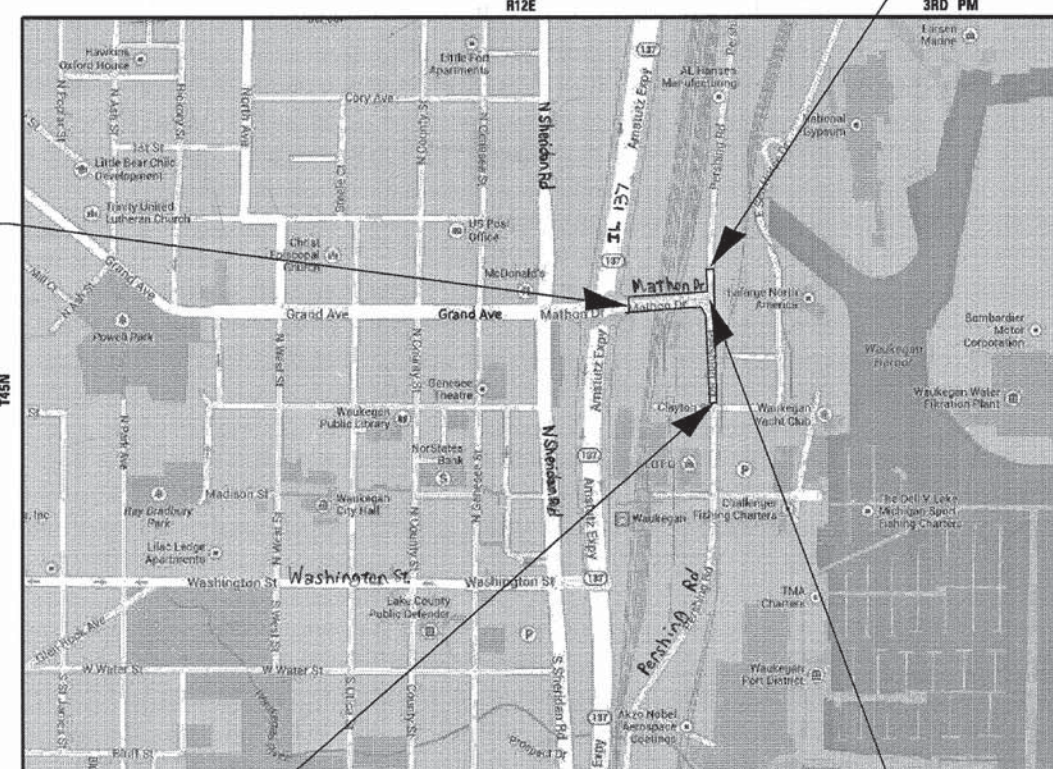
CONTACT JULIE AT 811 OR 800-892-0123
WITH THE FOLLOWING:
COUNTY = LAKE
CITY-TWNSHP. = CITY OF WAUKEGAN
SEC. & 1/4 SEC. NO. = SEC 21, T 45N R 12E
48 HOURS (2 working days) BEFORE YOU DIG

TRAFFIC DATA

PERSHING ROAD
POSTED SPEED - 30 MPH
DESIGN SPEED - 35 MPH
2011 ADT - 2,900
2040 ADT - 3,800
URBAN COLLECTOR

MATHON DRIVE
POSTED SPEED - 30 MPH
DESIGN SPEED - 35 MPH
2011 ADT - 2,600
2040 ADT - 3,400
LOCAL ROAD

LOCATION MAP



PERSHING ROAD IMPROVEMENT BEGINS
STA 55+25

MATHON DRIVE IMPROVEMENTS END
STA 5+13

PERSHING ROAD IMPROVEMENTS END
STA 64+37

MATHON DRIVE IMPROVEMENT BEGINS
STA 0+38.30

SECTION 21, T45N, R12E, OF THE THIRD PRINCIPAL MERIDIAN
WAUKEGAN TOWNSHIP

GROSS LENGTH = 1,387 FT. = 0.26 MILE
NET LENGTH = 1,387 FT. = 0.26 MILE

LOCATION OF SECTION INDICATED THUS: -

100' 200' 300' — 1" = 100'
10' 20' 30' — 1" = 10'
50' 100' — 1" = 50'
50' 100' — 1" = 40'
50' 100' — 1" = 30'
50' 100' — 1" = 20'

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

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

GARY S. WALL 062-048406 LICENSED PROFESSIONAL ENGINEER OF STATE OF ILLINOIS 5/8/14
PROJECT ENGINEER
LICENSE EXPIRES 11-30-2015

ROBERT W. LENZINI 62-041763 LICENSED PROFESSIONAL ENGINEER OF STATE OF ILLINOIS
PROJECT MANAGER
LICENSE EXPIRES 11-30-2015

DANIEL J. SCHUG 62-062227 LICENSED PROFESSIONAL ENGINEER OF STATE OF ILLINOIS 5/8/14
PROJECT ENGINEER
LICENSE EXPIRES 11-30-2015

BRANDON L. BUZZELL 081-006358 LICENSED STRUCTURAL ENGINEER OF STATE OF ILLINOIS 5/8/14
PROJECT ENGINEER
LICENSE EXPIRES 11-30-2014

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

APPROVED MAY 8, 2014
CITY OF WAUKEGAN, REPRESENTATIVE

PASSED MAY 22, 2014
CHRISTOPHER HOLT
DISTRICT 1 ENGINEER OF LOCAL ROADS AND STREETS

RELEASING FOR BID BASED ON LIMITED REVIEW May 27, 2014
DEPUTY DIRECTOR OF HIGHWAYS, REGION 1 ENGINEER

BAXTER & WOODMAN
Consulting Engineers

PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS

FEDERAL AID PROGRAM ENGINEER: FAWAD AQUEEL, P.E. 847-705-4021 SCHAUMBURG, IL

CONTRACT NO. 61A57

B&W PROJECT NO.: 110511 DATE: 5-8-14

GENERAL NOTES

1. ALL CONSTRUCTION SHALL BE DONE IN ACCORDANCE WITH THE DETAILS IN THE PLANS, THE SPECIAL PROVISIONS INCLUDED IN THE CONTRACT DOCUMENTS, AND THE LATEST EDITION OF THE FOLLOWING STATE OF ILLINOIS SPECIFICATIONS: "THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" (REFERRED TO AS THE "STANDARD SPECIFICATIONS"), THE "SUPPLEMENTAL SPECIFICATIONS AND RECURRING SPECIAL PROVISIONS", THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS", THE "MANUAL OF TEST PROCEDURES FOR MATERIALS" AND THE "STANDARD SPECIFICATIONS FOR WATER AND SEWER MAIN CONSTRUCTION IN ILLINOIS".
2. PRIVATE UTILITIES SHOWN ON THE PLANS ARE APPROXIMATE AND THE DEPARTMENT DOES NOT GUARANTEE THEIR ACCURACY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL UNDERGROUND OR SURFACE UTILITIES, INCLUDING SPRINKLER SYSTEMS, EVEN THOUGH THEY MAY NOT BE SHOWN ON THE PLANS. THE CONTRACTOR SHALL ALSO VERIFY THE DEPTHS OF THE EXISTING UTILITIES IF NECESSARY TO VERIFY THAT GRADE CONFLICTS WILL NOT OCCUR WITH ANY PROPOSED UTILITIES PRIOR TO CONSTRUCTION AND ORDERING ANY MATERIALS. ANY RELOCATION OR LOWERING OF UTILITIES SHALL BE COORDINATED BY THE CONTRACTOR. THE COST OF THIS EXPLORATION SHALL BE INCLUDED IN THE COST OF THE PROPOSED UTILITY CONSTRUCTION.
3. THE CONTRACTOR SHALL NOTIFY THE CITY PUBLIC WORKS ADMINISTRATOR AT LEAST 48 HOURS IN ADVANCE OF BEGINNING WORK TO OBTAIN CITY UTILITY LOCATIONS.
4. THE ENGINEER WILL FURNISH A RESIDENT PROJECT REPRESENTATIVE (RPR) TO ASSIST THE ENGINEER IN PROVIDING JOB-SITE OBSERVATION OF THE CONTRACTOR'S WORK. THE RPR WILL PROVIDE BASE LINES, BENCHMARKS AND REFERENCE POINTS, ASSIST THE CONTRACTOR WITH INTERPRETATION OF THE PLANS AND SPECIFICATIONS, OBSERVE IN GENERAL IF THE CONTRACTOR'S WORK IS IN CONFORMITY WITH THE CONTRACT DOCUMENTS, AND MONITOR THE CONTRACTOR'S PROGRESS AS RELATED TO THE DATE OF COMPLETION. THE LIMITATIONS ON AUTHORITY AND RESPONSIBILITY OF THE ENGINEER SHALL ALSO APPLY TO THE ENGINEER'S CONSULTANTS, RESIDENT PROJECT REPRESENTATIVE AND ASSISTANTS.
5. THE CONTRACTOR MAY OBTAIN MUNICIPAL WATER IN BULK, AT NO CHARGE, AS LONG AS THERE IS NOT A "WATERING BAN" IN EFFECT. THE INDISCRIMINATE USE OF FIRE HYDRANTS IS STRICTLY PROHIBITED. WATER FOR CONSTRUCTION SHALL BE METERED OR OTHERWISE ACCOUNTED FOR AND A DAILY LOG MAINTAINED. THE CONTRACTOR SHALL PROVIDE THE WATER TRUCK AND DRIVER REQUIRED TO OBTAIN AND TRANSPORT THIS WATER. THE CITY RESERVES THE RIGHT TO RESTRICT OR REFUSE THE USE OF CITY WATER IF DEEMED NECESSARY.
6. THE CONTRACTOR SHALL CONTACT THE LOCAL AGENCY MATERIAL INSPECTOR AT LEAST 48 HOURS PRIOR TO ANY CONCRETE OR HOT-MIX ASPHALT MATERIAL DELIVERIES.
7. DETECTABLE WARNINGS SHALL BE CONSTRUCTED WITH THE INSTALLATION OF A CAST-IN-PLACE EAST JORDAN OR NEENAH DETECTABLE WARNING. PANELS SHALL BE CAST IRON AND COMPLY WITH ADA REQUIREMENTS. THE DOMES LOCATED ON THE PANEL SHALL PARALLEL THE PAVEMENT CROSS WALK WITH THE CLOSEST EDGE LOCATED AT THE BACK OF CURB. THE PANEL COLOR SHALL BE RED. INSTALLATION SHALL OCCUR IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS.
8. THE COST OF MAKING SEWER CONNECTIONS TO EXISTING DRAINAGE STRUCTURES OR PIPE SHALL BE INCLUDED IN THE COST OF THE NEW SEWER OR STRUCTURE. ANY ADDITIONAL STORM SEWER PIPE REQUIRED TO MAKE THE CONNECTION SHALL BE OF THE SAME SIZE AND MATERIAL TYPE AS THE EXISTING STORM SEWER AND SHALL BE INCLUDED IN THE COST OF THE SEWER OR STRUCTURE.
9. IF ANY STORM SEWER LATERALS ARE FOUND DURING CONSTRUCTION AND ARE NOT IDENTIFIED ON THE PLANS, THEY SHALL BE CONNECTED TO THE PROPOSED STORM SEWER SYSTEM AND INCLUDED IN THE COST OF THE STORM SEWER CONSTRUCTION.
10. STORM STRUCTURE OFFSET LOCATIONS ARE TO THE EDGE OF PAVEMENT IF THE STRUCTURE IS IN THE CURB LINE OR TO THE CENTER OF STRUCTURE IF THE STRUCTURE IS NOT IN THE CURBLINE.
11. IN ALL TRENCHES CROSSING DRIVEWAYS, SIDEWALKS, AND ALL PROPOSED AND EXISTING ROADWAYS, THE MATERIAL FOR THE TOP 12 INCHES SHALL BE CA-6 CRUSHED GRAVEL OR CRUSHED STONE AND BE INCLUDED IN THE PAY ITEM FOR TRENCH BACKFILL.
12. FRAME ELEVATIONS GIVEN ON THE PLANS ARE ONLY TO ASSIST THE CONTRACTOR IN DETERMINING THE APPROXIMATE OVERALL HEIGHT OF THE STRUCTURE. FRAMES ON ALL NEW STRUCTURES SHALL BE ADJUSTED TO THE FINAL ELEVATION OF THE AREA IN WHICH THEY ARE LOCATED AS PART OF COST OF THE STRUCTURE.
13. A PORTABLE BATHROOM(S) SHALL BE PLACED ON THE JOB SITE(S) AND RELOCATED WHEN NECESSARY SO IT IS ACCESSIBLE TO WORKERS. IF WORK IS OCCURRING AT SEVERAL LOCATIONS, ONE PORTABLE BATHROOM SHALL BE PLACED AT EACH LOCATION WITHIN A REASONABLE DISTANCE FROM THE WORK AS DETERMINED BY THE ENGINEER. THIS SHALL BE INCLUDED IN THE PAY ITEM FOR MOBILIZATION.
14. FOR STEEL BARS CERTIFICATION, PLEASE CONTACT IDOT BUREAU OF MATERIALS AT (847) 705-4337.
15. ALL STRUCTURAL STEEL, REBAR AND DECORATIVE FENCING INCORPORATED IN THE WORK SHALL BE DOMESTICALLY MANUFACTURED OR PRODUCED AND FABRICATED.
16. ALL AGGREGATE USED ON THIS PROJECT SHALL BE CRUSHED MATERIAL.
17. COMED OVERHEAD TRANSMISSION LINES EXIST OVER THE MATHON AVENUE BRIDGE. THE CONTRACTOR SHALL COORDINATE ALL CONSTRUCTION ACTIVITIES WITH COMED.
18. FRAMES AND GRATES OR LIDS THAT ARE REMOVED AS PART OF ADJUSTMENTS OR REMOVALS SHALL BE DELIVERED TO THE CITY PUBLIC WORKS FACILITY.
19. IT IS THE CONTRACTOR'S RESPONSIBLY TO COORDINATE WITH THE UNION PACIFIC RAILROAD AND OR CANADIAN NATIONAL RAILROAD WHENEVER CONSTRUCTION ACTIVITY IS WITHIN 25 FEET OF THE RAILROAD RIGHT-OF-WAY. THE CONTRACTOR SHALL RETAIN FLAGMEN EMPLOYED AND DESIGNATED BY THE UNION PACIFIC RAILROAD TO MONITOR ON-COMING TRAIN TRAFFIC, AND ADVISE CONTRACTOR PERSONNEL WHEN ACTIVITY ON OR NEAR THE RAILROAD RIGHT-OF-WAY MAY PROCEED. THIS ITEM WILL BE PAID FOR ACCORDING TO ARTICLE 107.12 AND WILL BE REIMBURSED ACCORDING TO ARTICLE 109.05.
20. THE CONTRACTOR SHALL CONTACT THE DISTRICT ONE TRAFFIC CONTROL SUPERVISOR AT 847-705-4470 A MINIMUM OF 72 HOURS IN ADVANCE OF BEGINNING WORK.
21. ALL SIGNS, CONCRETE POLES AND STEEL POSTS THAT ARE REMOVED SHALL BE DELIVERED TO TOM HAGGERTY OF THE CITY PUBLIC WORKS FACILITY.
22. THE ILLINOIS DEPARTMENT OF TRANSPORTATION IS NOT THE OWNER OF RECORD FOR THIS BRIDGE. THOSE SEEKING HISTORIC AS-BUILT OR OTHER RECORD PLANS AND DOCUMENTS MUST CONTACT THE OWNER OF RECORD TO MAKE ARRANGEMENTS FOR ACCESS TO THIS INFORMATION.

RAILROAD GENERAL NOTES

1. WITHIN THESE NOTES, THE UNION PACIFIC RAILROAD SHALL BE REFERRED TO AS THE "RAILROAD".
2. A CONTRACTOR'S RIGHT-OF-ENTRY PERMIT IS REQUIRED BEFORE ANY WORK CAN COMMENCE ON RAILROAD PROPERTY. THE COST TO OBTAIN THIS PERMIT SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT.
3. NO DISRUPTIONS OF RAILROAD OPERATIONS WILL BE PERMITTED.
4. ALL WORK WITHIN 25 FEET OF THE NEAREST TRACK WILL REQUIRE A RAILROAD FLAGMAN. TO SCHEDULE A FLAGMAN FOR WORK ON A COMMUTER LINE, CALL CANDICE MILLER AT (312) 496-4738, A MINIMUM 72 HOURS IN ADVANCE OF START OF WORK. TO SCHEDULE A FLAGMAN FOR WORK ON FREIGHT LINES, CALL DARYL CLARK AT (708) 649-5273, A MINIMUM OF 72 HOURS IN ADVANCE OF START OF WORK.
5. WORK WINDOWS WITHIN THE 25 FOOT ZONE ARE ONLY AVAILABLE FROM 9:00 AM - 3:00 PM,
6. MONDAY THROUGH FRIDAY. NIGHT WORK WINDOWS ARE AVAILABLE FROM 8:00 PM - 4:00 AM. PLEASE PROVIDE AT LEAST 72 HOURS OF ADDITIONAL NOTICE WHEN REQUESTING TO WORK AT NIGHT TO ENSURE APPROPRIATE FLAGGING COVERAGE. EXTENDED WORK WINDOWS MAY BE AVAILABLE ON THE WEEKENDS. NOT WITHSTANDING THE FORGOING, DUE TO INTERSTATE FREIGHT TRAIN AND COMMUTER PASSENGER TRAIN OPERATIONS AND SCHEDULES ALL WORK WINDOWS WITHIN THE TIMES LISTED ABOVE ARE SUBJECT TO ON SITE UNILATERAL ADJUSTMENT OR DENIAL FROM THE RAILROAD'S LOCAL FIELD MANAGER AND/OR CORRIDOR MANAGER. THIS MAY RESULT IN DENIAL OR ADJUSTMENT OF ACCESS FOR ANY AND ALL CONTRACTORS, SUBCONTRACTORS AND MATERIAL MEN DURING WORK WINDOWS.
7. NO UN-USED WORK EQUIPMENT WILL BE ALLOWED TO REMAIN ON THE RAILROAD'S COMMUTER PLATFORM IF PRESENT.
8. RAILROAD UTILITIES ARE NOT INCLUDED UNDER JULIE. CALL CANDICE MILLER AT (312) 496-4738 FOR LOCATES.
9. FIBER OPTICS MAY BE PRESENT IN THIS AREA. CALL (800) 336-9193 TO COORDINATE ANY REQUIRED PROTECTION OR RELOCATION, PRIOR TO CONSTRUCTION.
10. RAILROAD REVIEW AND APPROVAL OF SHORING, DEMOLITION, ERECTION, AND FALSEWORK IS REQUIRED.
11. ERECTION OVER THE RAILROAD'S RIGHT-OF-WAY SHALL BE DESIGNED TO CAUSE NO INTERRUPTIONS TO RAILROAD'S OPERATIONS. ERECTION OVER THE RAILROAD'S TRACK SHALL BE DEVELOPED SUCH THAT IT ENABLES THE TRACKS(S) TO REMAIN OPEN TO TRAIN TRAFFIC PER RAILROAD'S REQUIREMENTS.
12. MINIMUM CONSTRUCTION CLEARANCE ENVELOPE OF 21 FEET VERTICAL ABOVE THE PLANE OF TOP-OF-RAIL AND 12 FEET HORIZONTAL AT RIGHT ANGLE FROM CENTERLINE OF TRACK SHALL BE MAINTAINED AT ALL TIME DURING CONSTRUCTION.
13. FALSEWORK CLEARANCE SHALL COMPLY WITH THE RAILROAD'S MINIMUM CONSTRUCTION CLEARANCE ENVELOPE.
14. FOR RAILROAD COORDINATION PLEASE REFER TO THE RAILROAD MINIMUM REQUIREMENTS AS PART OF SPECIAL PROVISIONS.
15. THE CONTRACTOR MUST SUBMIT A PROPOSED METHOD OF EROSION AND SETTLEMENT CONTROL AND HAVE THE METHOD APPROVED BY THE RAILROAD.
16. THE PROPOSED GRADE SEPARATION PROJECT SHALL NOT CHANGE THE QUANTITY AND/OR CHARACTERISTICS OF THE FLOW IN THE RAILROAD DITCHES AND/OR DRAINAGE STRUCTURES.
17. THE ELEVATION OF THE EXISTING TOP-OF-RAIL PROFILE SHALL BE VERIFIED BEFORE BEGINNING CONSTRUCTION. ALL DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE RAILROAD PRIOR TO CONSTRUCTION

HIGHWAY STANDARDS

000001-06	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
001001-02	AREAS OF REINFORCEMENT BARS
280001-07	TEMPORARY EROSION CONTROL SYSTEMS
420001-08	PAVEMENT JOINTS
420101-05	24' (7.2 m) JOINTED PCC PAVEMENT
420111-03	PCC PAVEMENT ROUNDOUTS
420401-11	BRIDGE APPROACH PAVEMENT CONNECTOR
420601-05	24' (7.2 m) PCC PAVEMENT
421001-02	BAR REINFORCEMENT FOR CRC PAVEMENT
424001-08	PERPENDICULAR CURB RAMPS FOR SIDEWALKS
424006-02	DIAGONAL CURB RAMPS FOR SIDEWALKS
424011-02	CORNER PARALLEL CURB RAMPS FOR SIDEWALKS
424031-01	MEDIAN PEDESTRIAN CROSSINGS
515001-03	NAME PLATE FOR BRIDGES
601101-01	CONCRETE HEADWALL FOR PIPE DRAIN
602001-02	CATCH BASIN TYPE A
602301-04	INLET - TYPE A
602401-03	MANHOLE TYPE A
602406-06	MANHOLE TYPE A 6' (1.8 m) DIAMETER
602601-03	PRECAST REINFORCED CONCRETE FLAT SLAB TOP
602701-02	MANHOLE STEPS
604001-04	FRAME AND LIDS TYPE 1
604051-04	FRAME AND GRATE TYPE 11
604091-03	FRAME AND GRATE TYPE 24
606001-06	CONCRETE CURB TYPE B AND COMBINATION CONCRETE CURB AND GUTTER
630001-10	STEEL PLATE BEAM GUARDRAIL
630301-06	SHOULDER WIDENING FOR TYPE 1 (SPECIAL) GUARDRAIL TERMINALS
631011-09	TRAFFIC BARRIER TERMINAL, TYPE 2
631026-06	TRAFFIC BARRIER TERMINAL, TYPE 5
631031-13	TRAFFIC BARRIER TERMINAL, TYPE 6
635001-01	DELINEATORS
635006-03	REFLECTOR AND TERMINAL MARKER PLACEMENT
635011-02	REFLECTOR MARKER AND MOUNTING DETAILS
664001-02	CHAIN LINK FENCE
701006-05	OFF-RD OPERATIONS, 2L, 2W, 15' (4.5 m) TO 24" (600 mm) FROM PAVEMENT EDGE
701101-04	OFF-RD OPERATIONS, MULTILANE, 15' (4.5 m) TO 24" (600 mm) FROM PAVEMENT EDGE
701456-03	PARTIAL EXIT RAMP CLOSURE FREEWAY/EXPRESSWAY
701501-06	URBAN LANE CLOSURE, 2L, 2W, UNDIVIDED
701601-09	URBAN LANE CLOSURE, MULTILANE, 1W OR 2W WITH NONTRAVERSABLE MEDIAN
701701-09	URBAN LANE CLOSURE, MULTILANE INTERSECTION
701801-05	SIDEWALK, CORNER OR CROSSWALK CLOSURE
701901-04	TRAFFIC CONTROL DEVICES
720001-01	SIGN PANEL MOUNTING DETAILS
720006-04	SIGN PANEL ERECTION DETAILS
728001-01	TELESCOPING STEEL SIGN SUPPORT
780001-05	TYPICAL PAVEMENT MARKINGS
814001-03	HANDHOLES

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8 -9	TYPICAL SECTIONS
10	SUGGESTED MAINTENANCE OF TRAFFIC GENERAL NOTES
11	SUGGESTED MAINTENANCE OF TRAFFIC DETOUR ROUTE
12	GEOMETRIC PLAN AND PROFILE: MATHON DRIVE
13 -14	GEOMETRIC PLAN AND PROFILE: PERSHING ROAD
15	EROSION CONTROL PLAN
16	DRAINAGE AND UTILITY MATHON DRIVE
17 -18	DRAINAGE AND UTILITY PERSHING ROAD
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85 -88	CROSS SECTIONS PERSHING ROAD

BENCHMARKS

DATUM IS NAV 88

BM#2 "X" ON CONCRETE ISLAND WITH STOP SIGN AT SOUTHWEST CORNER OF GRAND AVENUE AND PERSHING ROAD.
ELEV = 617.85

BM#3 "X" ON CONCRETE ISLAND (LOCATED ON THE SOUTH SIDE OF GRAND AVENUE DIRECTLY OVER THE CENTER OF AMSTUTZ EXPRESSWAY.
ELEV = 629.59

BM#4 CHISEL SQUARE ON TOP OF SOUTHWEST BRIDGE ABUTMENT ON THE SOUTH SIDE OF GRAND AVENUE OVER RAILROAD YARD JUST EAST OF AMSTUTZ EXPRESSWAY.
ELEV = 628.05

BM#6 CHISEL SQUARE ON NORTHEAST BRIDGE ABUTMENT NORTH SIDE OF GRAND AVENUE OVER RAILROAD AT NORTHWEST CORNER OF PERSHING ROAD.
ELEV = 619.68

BM #8 SOUTH OF THE NORTHEAST BOLTS AT BASE OF COM-ED TOWER AT BASE OF SLOPE ON WEST SIDE OF PERSING ROAD APPROX. 450' NORTH OF GRAND AVENUE.
ELEV = 597.44

BM#10 RAILROAD SPIKE IN POWER POLE WITH LIGHT AT SOUTHWEST CORNER OF PERSHING ROAD AND CLAYTON STREET
ELEV = 589.01

BM#1015 ACM MONUMENT WK 107 AT SOUTHEAST CORNER OF GRAND AVENUE AND SHERIDAN ROAD IN BRICK SIDEWALK WITH ENCLOSURE.
ELEV = 633.75

BAXTER & WOODMAN Consulting Engineers		
DESIGNED - DJS	REVISED -5-8-14 PER IDOT REVIEW	
DRAWN - UKB	REVISED -7-14-14	
CHECKED - RWL	REVISED -	
DATE - 03/14/14	FILE - 110511_PH2_SHT-GenNotes.dgn	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES, INDEX TO SHEETS, BENCHMARKS, AND HIGHWAY STANDARDS

SCALE: NONE | STA. | TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3719	12-00239-00-BR	LAKE	88	2

CONTRACT NO. 61A57

FED. ROAD DIST. NO. 1 | ILLINOIS | FED. AID PROJECT M-BHM-9003(952)

SUMMARY OF QUANTITIES

CODE NUMBER	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION TYPE CODE ROADWAY 0004 STU	ROADWAY 0004 STP-BR	BRIDGE 0011 STP-BR
20101100	TREE TRUNK PROTECTION	EACH	4	1	3	-
20101200	TREE ROOT PRUNING	EACH	1	1	-	-
20101300	TREE PRUNING (1 TO 10 INCH DIAMETER)	EACH	1	1	-	-
20101400	NITROGEN FERTILIZER NUTRIENT	POUND	4	4	-	-
20101600	POTASSIUM FERTILIZER NUTRIENT	POUND	4	4	-	-
20200100	EARTH EXCAVATION	CU YD	1,389	1,302	87	-
20201200	REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL	CU YD	527	421	106	-
20800150	TRENCH BACKFILL	CU YD	179	132	47	-
21001000	GEOTECHNICAL FABRIC FOR GROUND STABILIZATION	SQ YD	3,804	3,011	793	-
21101615	TOPSOIL FURNISH AND PLACE, 4"	SQ YD	3,800	3,350	450	-
25000312	SEEDING, CLASS 4A	ACRE	0.80	0.70	0.10	-
25100115	MULCH, METHOD 2	ACRE	0.80	0.70	0.10	-
25100635	HEAVY DUTY EROSION CONTROL BLANKET	SQ YD	2,916	2,466	450	-
25200110	SODDING, SALT TOLERAN[illegible]	SQ YD	250	250	-	-
25200200	SUPPLEMENTAL WA[illegible]ERING	UNIT	47	41	6	-
28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	80	70	10	-
28000400	PERIMETER EROSION BARRIER	FOOT	2,155	1,930	225	-
28000510	INLET FILTERS	EACH	17	11	6	-
30300001	AGGREGATE SUBGRADE IMPROVEMENT	CU YD	318	251	67	-
30300112	AGGREGATE SUBGRADE IMPROVEMENT 12"	SQ YD	3,804	3,011	793	-
35101600	AGGREGATE BASE COURSE, TYPE B 4"	SQ YD	940	884	56	-
42000211	PORTLAND CEMENT CONCRETE PAVEMENT 7 1/2" (JOINTED)	SQ YD	3,325	2,559	766	-
42001300	PROTECTIVE COAT	SQ YD	4,832	3,977	855	-
42400200	PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH	SQ FT	8,450	7,950	500	-
42400800	DETECTABLE WARNINGS	SQ FT	138	74	64	-
44000100	PAVEMENT REMOVAL	SQ YD	3,847	2,720	1,127	-
44000500	COMBINATION CURB AND GUTTER REMOVAL	FOOT	1,965	1,865	100	-
44000600	SIDEWALK REMOVAL	SQ FT	5,075	4,475	600	-
44003100	MEDIAN REMOVAL	SQ FT	871	-	871	-
50101500	REMOVAL OF EXISTING SUPERSTRUCTURES	EACH	1	-	-	1

* INDICATES SPECIALITY ITEM

SUMMARY OF QUANTITIES

CODE NUMBER	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION TYPE CODE ROADWAY 0004 STU	CONSTRUCTION TYPE CODE ROADWAY 0004 STP-BR	CONSTRUCTION TYPE CODE BRIDGE 0011 STP-BR
50102400	CONCRETE REMOVAL	CU YD	135.1	-	-	135.1
50157300	PROTECTIVE SHIELD	SQ YD	1,185	-	-	1,185
50200100	STRUCTURE EXCAVATION	CU YD	218	-	-	218
50300225	CONCRETE STRUCTURES	CU YD	295.5	-	-	295.5
50300255	CONCRETE SUPERSTRUCTURE	CU YD	966.2	-	-	966.2
50300260	BRIDGE DECK GROOVING	SQ YD	2,630	-	-	2,630
50300285	FORM LINER TEXTURED SURFACE	SQ FT	4,590	-	-	4,590
50300300	PROTECTIVE COAT	SQ YD	3,624	-	-	3,624
50500105	FURNISHING AND ERECTING STRUCTURAL STEEL	L SUM	1	-	-	1
50500505	STUD SHEAR CONNECTORS	EACH	11,955	-	-	11,955
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	262,830	-	-	262,830
50800515	BAR SPLICERS	EACH	1,328	-	-	1,328
51500100	NAME PLATES	EACH	1	-	-	1
52000110	PREFORMED JOINT STRIP SEAL	FOOT	202	-	-	202
52100010	ELASTOMERIC BEARING ASSEMBLY, TYPE I	EACH	24	-	-	24

* INDICATES SPECIALITY ITEM

CODE NUMBER	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION TYPE CODE ROADWAY 0004 STU	CONSTRUCTION TYPE CODE ROADWAY 0004 STP-BR	CONSTRUCTION TYPE CODE BRIDGE 0011 STP-BR
52100020	ELASTOMERIC BEARING ASSEMBLY, TYPE II	EACH	24	-	-	24
52100520	ANCHOR BOLTS, 1"	EACH	48	-	-	48
52100530	ANCHOR BOLTS, 1 1/4"	EACH	24	-	-	24
52100540	ANCHOR BOLTS, 1 1/2"	EACH	24	-	-	24
52100560	ANCHOR BOLTS, 2"	EACH	24	-	-	24
550A0340	STORM SEWERS, CLASS A, TYPE 2 12"	FOOT	216	150	66	-
55100500	STORM SEWER REMOVAL 12"	FOOT	123	56	67	-
★ 56400100	FIRE HYDRANTS TO BE MOVED	EACH	1	1	-	-
59000200	EPOXY CRACK INJECTION	FOOT	80	-	-	80
59100100	GEOCOMPOSITE WALL DRAIN	SQ YD	90	-	-	90
60100060	CONCRETE HEADWALLS FOR PIPE DRAINS	EACH	4	-	-	4
60201105	CATCH BASINS, TYPE A, 4'-DIAMETER, TYPE 11 FRAME AND GRATE	EACH	6	6	-	-
60218400	MANHOLES, TYPE A, 4'-DIAMETER, TYPE 1 FRAME, CLOSED LID	EACH	1	1	-	-
60219300	MANHOLES, TYPE A, 4'-DIAMETER, TYPE 11 FRAME AND GRATE	EACH	2	2	-	-
60223800	MANHOLES, TYPE A, 6'-DIAMETER, TYPE 1 FRAME, CLOSED LID	EACH	2	2	-	-

* INDICATES SPECIALITY ITEM

BAXTER & WOODMAN Consulting Engineers	DESIGNED - DJS	REVISED 5-8-14 PER IDOT REVIEW	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SUMMARY OF QUANTITIES
	DRAWN - UKB	REVISED 5-16-14 PER IDOT REVIEW		
	CHECKED - RWL	REVISED		
	DATE - 03/14/14	FILE - 110511_PH2_SHT-SQ1.dgn		SCALE: NONE STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3719	12-00239-00-BR	LAKE	88	4
		CONTRACT NO. 61A57		

FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT M-BHM-9003(952)

SUMMARY OF QUANTITIES

	CODE NUMBER	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION TYPE CODE ROADWAY 0004 STU	CONSTRUCTION TYPE CODE ROADWAY 0004 STP-BR	CONSTRUCTION TYPE CODE BRIDGE 0011 STP-BR
	60236800	INLETS, TYPE A, TYPE 11 FRAME AND GRATE	EACH	5	5	-	-
	60237470	INLETS, TYPE A, TYPE 24 FRAME AND GRATE	EACH	2	-	2	-
	60250200	CATCH BASINS TO BE ADJUSTED	EACH	2	2	-	-
	60255500	MANHOLES TO BE ADJUSTED	EACH	2	2	-	-
	60266600	VALVE BOXES TO BE ADJUSTED	EACH	1	1	-	-
	60500040	REMOVING MANHOLES	EACH	1	1	-	-
	60500060	REMOVING INLETS	EACH	5	3	2	-
	60603800	COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.12	FOOT	1,932	1,865	67	-
	60605000	COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.24	FOOT	40	-	40.0	-
*	63000003	STEEL PLATE BEAM GUARDRAIL, TYPE A, 9 FOOT POSTS	FOOT	825	763	63	-
*	63100070	TRAFFIC BARRIER TERMINAL, TYPE 5	EACH	1	-	1	-
*	63100085	TRAFFIC BARRIER TERMINAL, TYPE 6	EACH	2	-	2	-
*	63100167	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	EACH	1	1	-	-
★	63200310	GUARDRAIL REMOVAL	FOOT	1,280	1,159	121	-
*	63301210	REMOVE AND REERECT STEEL PLATE BEAM GUARDRAIL, TYPE A	FOOT	25	25	-	-

* INDICATES SPECIALITY ITEM

	CODE NUMBER	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION TYPE CODE ROADWAY 0004 STU	CONSTRUCTION TYPE CODE ROADWAY 0004 STP-BR	CONSTRUCTION TYPE CODE BRIDGE 0011 STP-BR
	66300105	CALCIUM CHLORIDE APPLIED	TON	3	2	1	-
★	66900200	NON-SPECIAL WASTE DISPOSAL	CU YD	400	400	-	-
★	66900450	SPECIAL WASTE PLANS AND REPORTS	L SUM	1	1	-	-
*	66900530	SOIL DISPOSAL ANALYSIS	EACH	2	2	-	-
	67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	14	3	1	10
	67100100	MOBILIZATION	L SUM	1	0.17	0.05	0.78
	72000100	SIGN PANEL - TYPE 1	SQ FT	78	56	22	-
	72400100	REMOVE SIGN PANEL ASSEMBLY - TYPE A	EACH	8	5	3	-
	72400310	REMOVE SIGN PANEL - TYPE 1	SQ FT	18	18	-	-
	72800100	TELESCOPING STEEL SIGN SUPPORT	FOOT	192	144	48	-
*	78005100	EPOXY PAVEMENT MARKING - LETTERS AND SYMBOLS	SQ FT	148	-	148	-
*	78005110	EPOXY PAVEMENT MARKING - LINE 4"	FOOT	3,744	1,580	2,164	-
*	78005130	EPOXY PAVEMENT MARKING - LINE 6"	FOOT	363	-	363	-
*	78005150	EPOXY PAVEMENT MARKING - LINE 12"	FOOT	357	-	357	-
*	78005180	EPOXY PAVEMENT MARKING - LINE 24"	FOOT	63	31	32	-

* INDICATES SPECIALITY ITEM

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BAXTER & WOODMAN Consulting Engineers

DESIGNED - DJS		REVISED	-5-8-14 PER IDOT REVIEW
DRAWN - UKB		REVISED	-5-16-14 PER IDOT REVIEW
CHECKED - RWL		REVISED	-7-14-14
DATE - 03/14/14		FILE -	110511_PH2_SHT-SQ1.dgn

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SCALE: | STA. | TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3719	12-00239-00-BR	LAKE	88	5
		CONTRACT NO. 61A57		

FED. ROAD DIST. NO. 1 | ILLINOIS | FED. AID PROJECT M-BHM-9003(952)

SUMMARY OF QUANTITIES

	CODE NUMBER	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION TYPE CODE ROADWAY 0004 STU	CONSTRUCTION TYPE CODE ROADWAY 0004 STP-BR	BRIDGE 0011 STP-BR
*	78200410	GUARDRAIL MARKERS, TYPE A	EACH	20	18	2	-
*	78201000	TERMINAL MARKER - DIRECT APPLIED	EACH	1	1	-	-
	80400100	ELECTRIC SERVICE INSTALLATION	EACH	1	1	-	-
	80400200	ELECTRIC UTILITY SERVICE CONNECTION	L SUM	1	1	-	-
*	81028200	UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.	FOOT	290	290	-	-
	81028220	UNDERGROUND CONDUIT, GALVANIZED STEEL, 3" DIA.	FOOT	600	600	-	-
*	81100320	CONDUIT ATTACHED TO STRUCTURE, 1" DIA., PVC COATED GALVANIZED STEEL	FOOT	150	-	-	150
*	81200230	CONDUIT EMBEDDED IN STRUCTURE, 2" DIA., PVC	FOOT	802	-	-	802
*	81300220	JUNCTION BOX, STAINLESS STEEL, ATTACHED TO STRUCTURE, 6" X 6" X 4"	EACH	3	-	-	3
*	81300530	JUNCTION BOX, STAINLESS STEEL, ATTACHED TO STRUCTURE, 12" X 10" X 6"	EACH	4	-	-	4
*	81300550	JUNCTION BOX, STAINLESS STEEL, ATTACHED TO STRUCTURE, 12" X 12" X 6"	EACH	4	-	-	4
*	81400730	HANDHOLE, COMPOSITE CONCRETE	EACH	1	1	-	-
	81603100	UNIT DUCT, 600V, 4-1C NO.8, 1/C NO.6 GROUND, (XLP-TYPE USE), 1 1/4" DIA. POLYETHYLENE	FOOT	2,165	851	1,314	-
*	81702130	ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 1/C NO. 6	FOOT	1,305	387	918	-
*	81702150	ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 1/C NO. 2	FOOT	680	272	408	-

* INDICATES SPECIALITY ITEM

	CODE NUMBER	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION TYPE CODE ROADWAY 0004 STU	CONSTRUCTION TYPE CODE ROADWAY 0004 STP-BR	BRIDGE 0011 STP-BR
	82500350	LIGHTING CONTROLLER, BASE MOUNTED, 240VOLT, 100AMP	EACH	1	1	-	-
*	83600300	LIGHT POLE FOUNDATION, 30" DIAMETER	FOOT	130	130	-	-
*	84200500	REMOVAL OF LIGHTING UNIT, SALVAGE	EACH	11	8	3	-
*	84200804	REMOVAL OF POLE FOUNDATION	EACH	8	8	-	-
*	84500110	REMOVAL OF LIGHTING CONTROLLER	EACH	1	1	-	-
*	84500120	REMOVAL OF ELECTRIC SERVICE INSTALLATION	EACH	1	1	-	-
*	84500130	REMOVAL OF LIGHTING CONTROLLER FOUNDATION	EACH	1	1	-	-
*	89502380	REMOVE EXISTING HANDHOLE	EACH	2	1	1	-
	XZ127902	RETAINING WALL, SPECIAL	SQ FT	120	120	-	-
	X0322924	RETAINING WALL REMOVAL	SQ FT	120	120	-	-
	X0326671	CONCRETE SURFACE COLOR TREATMENT	SQ FT	4,050	-	-	4,050
	X5030301	CONCRETE WEARING SURFACE (VARIABLE DEPTH)	SQ YD	134	-	-	134
	X5030305	CONCRETE WEARING SURFACE, 5"	SQ YD	353	-	-	353
	X5040100	PRECAST BRIDGE APPROACH SLAB	SQ FT	3,933	-	-	3,933
	X5091755	PARAPET RAILING, SPECIAL	FOOT	811	-	-	811

* INDICATES SPECIALITY ITEM

BAXTER & WOODMAN

DESIGNED	DJS	REVISED	5-8-14 PER IDOT REVIEW
DRAWN	UKB	REVISED	5-16-14 PER IDOT REVIEW
CHECKED	RWL	REVISED	
DATE	03/14/14	FILE	110511_PH2_SHT-SQ1.dgn

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SCALE: STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3719	12-00239-00-BR	LAKE	88	6

CONTRACT NO. 61A57

FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT M-BHM-9003(952)

SUMMARY OF QUANTITIES

	CODE NUMBER	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION TYPE CODE ROADWAY 0004 STU	ROADWAY 0004 STP-BR	BRIDGE 0011 STP-BR
	X5860110	GRANULAR BACKFILL FOR STRUCTURES	CU YD	132	-	-	132
	X7010216	TRAFFIC CONTROL AND PROTECTION, (SPECIAL)	L SUM	1	0.17	0.05	0.78
	X7240200	REMOVE SIGN PANEL ASSEMBLY - TYPE B (SPECIAL)	EACH	1	1.00	-	-
*	X8211000	UNDERPASS LUMINAIRE (SPECIAL)	EACH	8	-	-	8
	XX006653	FENCE (SPECIAL)	FOOT	400	400	-	-
*	XX008367	DECORATIVE LIGHTING UNIT, TYPE "D1"	EACH	6	6	-	-
*	XX008368	DECORATIVE LIGHTING UNIT, TYPE "D2"	EACH	6	-	6	-
*	XX008369	DECORATIVE LIGHTING UNIT, TYPE "D3"	EACH	4	4	-	-
	Z0007510	ENGINEERED BARRIER	SQ YD	120	120		-
	Z0012754	STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 INCHES)	SQ FT	350	-		350
	Z0012755	STRUCTURAL REPAIR OF CONCRETE (DE[illegible] GREATER THAN 5 INCHES)	SQ FT	50	-		50
	Z001379[illegible]	CONSTRUCTION LAYOUT	L SUM	1	0.17	0.05	0.78
	Z00[illegible]002	DRAINAGE SCUPPERS, DS-11	EACH	6	-		6
	Z0018800	DRAINAGE SYSTEM	L SUM	1	-		1
	Z0026407	TEMPORARY SHEET PILING	SQ FT	634	-		634

* INDICATES SPECIALITY ITEM

	CODE NUMBER	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION TYPE CODE ROADWAY 0004 STU	ROADWAY 0004 STP-BR	BRIDGE 0011 STP-BR
	Z0030850	TEMPORARY INFORMATION SIGNING	SQ FT	104	52	52	-
*	Z0033028	MAINTENANCE OF LIGHTING SYSTEM	CAL MO	11	11	-	-
	Z0046304	PIPE UNDERDRAINS FOR STRUCTURES 4"	FOOT	220	-	-	220
	Z0048665	RAILROAD PROTECTIVE LIABILITY INSURANCE	L SUM	1	-	1	-
	Z0056608	STORM SEWER (WATER MAIN REQUIREMENTS) 12 INCH	FOOT	77	77	-	-
	Z0065700	SLOPE WALL REPAIR	SQ YD	100	-	-	100
	Z0073410	TEMPORARY SUPPORT SYSTEM, LOCATION 1	EACH	1	-	-	1
	Z0073420	TEMPORARY SUPPORT SYSTEM, LOCATION 2	EACH	1	-	-	1
$	Z0076600	TRAINEES	HOUR	1,000	1,000	-	-
$	Z0076604	TRAINEES TRAINING PROGRAM GRADUATE	HOUR	1,000	1,000	-	-

* INDICATES SPECIALITY ITEM
$ INDICATES CONSTRUCTION CODE 0042 TRAINEES

EARTHWORK

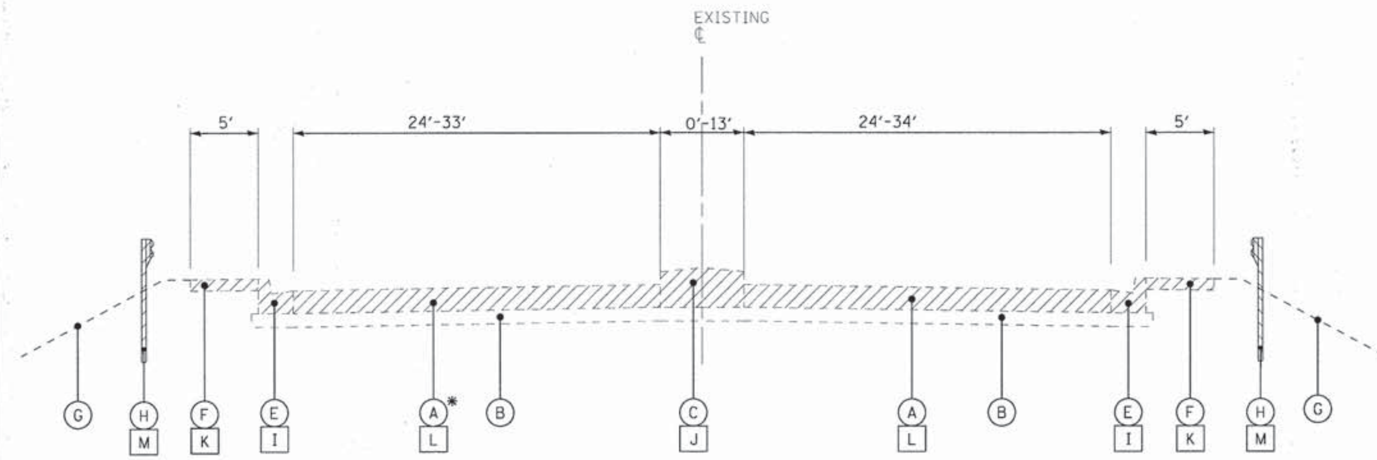
LOCATION	UNDERCUT (CU YD)	UNSUITABLE EXCAVATION (TOPSOIL) (CU YD)	REMOVAL & DISPOSAL OF UNSUITABLE MATERIAL (CU YD)	EARTH EXCAVATION (CU YD)	UTILITY EXCAVATION (CU YD)	EXCESS STRUCTURE EXCAVATION (CU YD)	TOTAL SUITABLE EXCAVATION (CU YD)	EXCAVATION TO BE USED IN EMBANKMENT (15% SHRINKAGE) (CU YD)	EMBANKMENT (CU YD)	EARTHWORK BALANCE WASTE (+ OR SHORTAGE (-) (CU YD)
PERSHING RD	251	170	421	1,302	-	-	1,302	1,107	102	1,005
MATHON DR	67	39	106	87	-	218	305	260	2	258
TOTAL	318	209	527	1,389	-	218	1,607	1,367	104	1,263

BAXTER & WOODMAN

DESIGNED - DJS	REVISED - [illegible] IDOT REVIEW	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SUMMARY OF QUANTITIES
DRAWN - JKB	REVISED - [illegible] IDOT REVIEW		SCALE: STA. TO STA.
CHECKED - PWL	REVISED - [illegible]		
DATE - 03/14/14	FILE - 1105[illegible]SHT-SQ1.dgn		

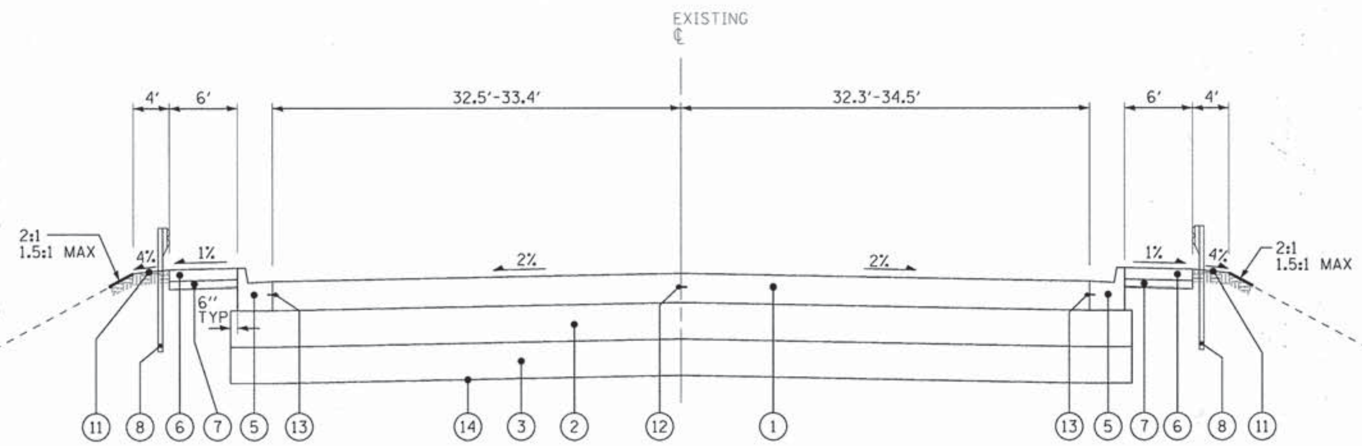
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3719	12-000[illegible]	[illegible]	88	7

CONTRACT NO. 61457



EXISTING TYPICAL SECTION
MATHON DRIVE

STA 0+50 TO STA 0+84
STA 4+74 TO STA 5+13



PROPOSED TYPICAL SECTION
MATHON DRIVE

STA 0+50 TO STA 0+84
STA 4+74 TO STA 5+13

SEE STRUCTURAL DRAWINGS

EXISTING TYPICAL SECTION
MATHON DRIVE

STA 0+84 TO STA 4+74

SEE STRUCTURAL DRAWINGS

PROPOSED TYPICAL SECTION
MATHON DRIVE

STA 0+84 TO STA 4+74

NOTE 1
AGGREGATE SUBGRADE IMPROVEMENT (ASI) HAS BEEN PROVIDED FOR USE AT THE LOCATIONS INDICATED FOR SOILS THAT TEND TO BE UNSUITABLE OR UNSTABLE. THE ACTUAL NEED FOR REMOVAL AND REPLACEMENT WITH ASI WILL BE DETERMINED IN THE FIELD AT THE TIME OF CONSTRUCTION BY THE ENGINEER. ALL POTENTIALLY UNSTABLE SOILS SHOULD BE TESTED WITH A STATIC CONE PENETROMETER AND TREATED IN ACCORDANCE WITH ARTICLE 301.03 AND THE UNDERCUT GUIDELINES IN THE IDOT SUBGRADE STABILITY MANUAL. IF UNSTABLE AND/OR UNSUITABLE MATERIAL IS ENCOUNTERED, THE SOIL SHALL BE REMOVED AND REPLACED WITH ASI OR EMBANKMENT AS DETERMINED BY THE ENGINEER. IF UNSTABLE AND/OR UNSUITABLE MATERIAL IS NOT ENCOUNTERED, THEN THE QUANTITY SHALL BE DEDUCTED AND NO ADDITIONAL COMPENSATION WILL BE DUE THE CONTRACTOR. A QUANTITY OF REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL SHALL ALSO BE DEDUCTED WITH NO ADDITIONAL COMPENSATION DUE THE CONTRACTOR.

EXISTING LEGEND

(A)	CONCRETE PAVEMENT REINFORCED, 12.5'
(AA)	CONCRETE PAVEMENT, REINFORCED, 7.5" - 8.5"
(B)	AGGREGATE BASE COURSE, 4"±
(C)	CONCRETE MEDIAN
(D)	CONCRETE CURB AND GUTTER, TYPE B-6.12
(E)	CONCRETE CURB AND GUTTER, TYPE B-6.24
(F)	PCC SIDEWALK
(G)	GROUND SURFACE
(H)	GUARDRAIL
[I]	COMBINATION CURB AND GUTTER REMOVAL
[J]	MEDIAN REMOVAL
[K]	SIDEWALK REMOVAL
[L]	PAVEMENT REMOVAL
[M]	GUARDRAIL REMOVAL
(hatched)	ITEMS TO BE REMOVED

PROPOSED LEGEND

(1)	PCC PAVEMENT - 7.5" (JOINTED) (TRANSVERSE JOINTS SPACED EVERY 12.5')
(2)	AGGREGATE SUBGRADE IMPROVEMENT - 12"
(3)	AGGREGATE SUBGRADE IMPROVEMENT (SEE NOTE 1)
(4)	COMBINATION CONCRETE CURB AND GUTTER TYPE B-6.12
(5)	COMBINATION CONCRETE CURB AND GUTTER TYPE B-6.24
(6)	PCC SIDEWALK, 5"
(7)	AGGREGATE BASE COURSE, TYPE B - 4"
(8)	STEEL PLATE BEAM GUARDRAIL, TYPE A, 9 FOOT POSTS
(9)	FENCE (SPECIAL)
(10)	TOPSOIL FURNISH AND PLACE - 4" SODDING, SALT TOLERANT FERTILIZER
(11)	TOPSOIL FURNISH AND PLACE - 4" SEEDING CLASS 4A HEAVY DUTY EROSION CONTROL BLANKET
(12)	CONSTRUCTION JOINT WITH TIE BARS (INCLUDED IN THE COST OF THE PROPOSED PAVEMENT)
(13)	TIE BARS (INCLUDED IN THE COST OF THE PROPOSED CURB AND GUTTER
(14)	GEOTECHNICAL FABRIC FOR GROUND STABILIZATION

BAXTER & WOODMAN Consulting Engineers

DESIGNED - DJS	REVISED - 5-8-14 PER IDOT REVIEW	
DRAWN - UKB	REVISED -	
CHECKED - RWL	REVISED -	
DATE - 03/14/14	FILE - 110511_PH2_SHT-TypSec.dgn	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

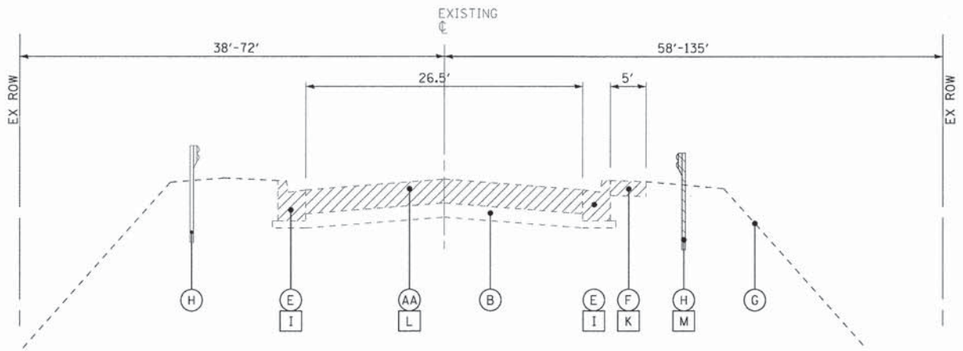
TYPICAL SECTIONS

SCALE: NONE | STA. | TO STA.

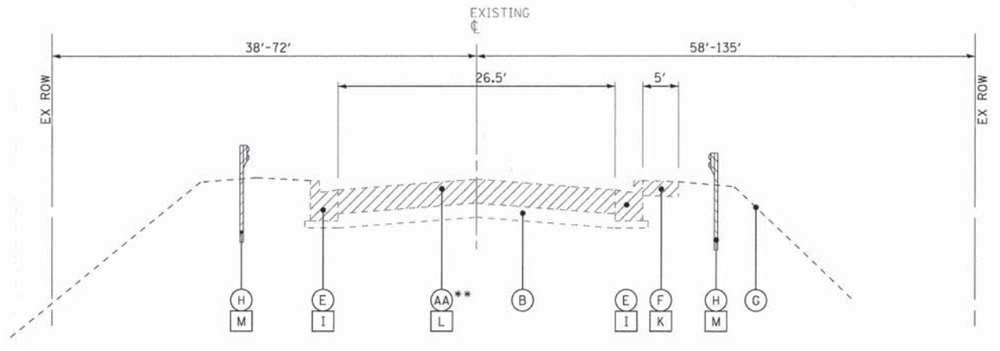
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3719	12-00239-00-BR	LAKE	88	8

CONTRACT NO. 61A57

FED. ROAD DIST. NO. 1 | ILLINOIS | FED. AID PROJECT M-BHM-9003(952)

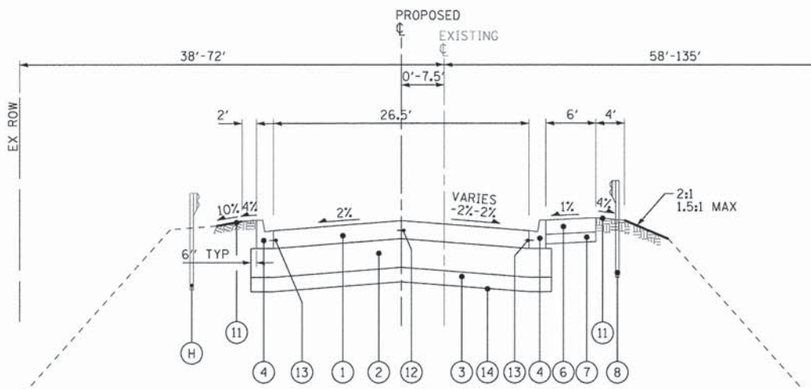


EXISTING TYPICAL SECTION
PERSHING ROAD
STA 55+25 TO STA 57+50

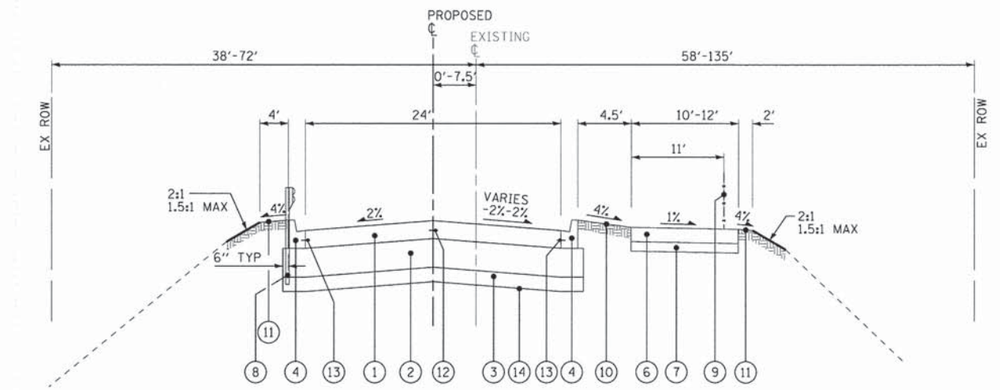


EXISTING TYPICAL SECTION
PERSHING ROAD
STA 57+50 TO STA 64+37

**HMA OVERLAY
STA 62+37 TO STA 64+37



PROPOSED TYPICAL SECTION
PERSHING ROAD
STA 55+25 TO STA 57+50



PROPOSED TYPICAL SECTION
PERSHING ROAD
STA 57+50 TO STA 64+37

NOTE 1
AGGREGATE SUBGRADE IMPROVEMENT (ASI) HAS BEEN PROVIDED FOR USE AT THE LOCATIONS INDICATED FOR SOILS THAT TEND TO BE UNSUITABLE OR UNSTABLE. THE ACTUAL NEED FOR REMOVAL AND REPLACEMENT WITH ASI WILL BE DETERMINED IN THE FIELD AT THE TIME OF CONSTRUCTION BY THE ENGINEER. ALL POTENTIALLY UNSTABLE SOILS SHOULD BE TESTED WITH A STATIC CONE PENETROMETER AND TREATED IN ACCORDANCE WITH ARTICLE 301.03 AND THE UNDERCUT GUIDELINES IN THE IDOT SUBGRADE STABILITY MANUAL. IF UNSTABLE AND/OR UNSUITABLE MATERIAL IS ENCOUNTERED, THE SOIL SHALL BE REMOVED AND REPLACED WITH ASI OR EMBANKMENT AS DETERMINED BY THE ENGINEER. IF UNSTABLE AND/OR UNSUITABLE MATERIAL IS NOT ENCOUNTERED, THEN THE QUANTITY SHALL BE DEDUCTED AND NO ADDITIONAL COMPENSATION WILL BE DUE THE CONTRACTOR. A QUANTITY OF REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL SHALL ALSO BE DEDUCTED WITH NO ADDITIONAL COMPENSATION DUE THE CONTRACTOR.

EXISTING LEGEND

A	CONCRETE PAVEMENT REINFORCED, 12.5'
AA	CONCRETE PAVEMENT, REINFORCED, 7.5" - 8.5"
B	AGGREGATE BASE COURSE, 4"±
C	CONCRETE MEDIAN
D	CONCRETE CURB AND GUTTER, TYPE B-6.12
E	CONCRETE CURB AND GUTTER, TYPE B-6.24
F	PCC SIDEWALK
G	GROUND SURFACE
H	GUARDRAIL
I	COMBINATION CURB AND GUTTER REMOVAL
J	MEDIAN REMOVAL
K	SIDEWALK REMOVAL
L	PAVEMENT REMOVAL
M	GUARDRAIL REMOVAL
▨	ITEMS TO BE REMOVED

PROPOSED LEGEND

1	PCC PAVEMENT - 7.5" (JOINTED) (TRANSVERSE JOINTS SPACED EVERY 12.5')
2	AGGREGATE SUBGRADE IMPROVEMENT - 12"
3	AGGREGATE SUBGRADE IMPROVEMENT (SEE NOTE 1)
4	COMBINATION CONCRETE CURB AND GUTTER TYPE B-6.12
5	COMBINATION CONCRETE CURB AND GUTTER TYPE B-6.24
6	PCC SIDEWALK, 5"
7	AGGREGATE BASE COURSE, TYPE B - 4"
8	STEEL PLATE BEAM GUARDRAIL, TYPE A, 9 FOOT POSTS
9	FENCE (SPECIAL)
10	TOPSOIL FURNISH AND PLACE - 4" SODDING, SALT TOLERANT FERTILIZER
11	TOPSOIL FURNISH AND PLACE - 4" SEEDING CLASS 4A HEAVY DUTY EROSION CONTROL BLANKET
12	CONSTRUCTION JOINT WITH TIE BARS (INCLUDED IN THE COST OF THE PROPOSED PAVEMENT)
13	TIE BARS (INCLUDED IN THE COST OF THE PROPOSED CURB AND GUTTER
14	GEOTECHNICAL FABRIC FOR GROUND STABILIZATION

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BAXTER & WOODMAN Consulting Engineers

DESIGNED	DJS	REVISED	-5-8-14 PER IDOT REVIEW
DRAWN	UKB	REVISED	-
CHECKED	RWL	REVISED	-
DATE	03/14/14	FILE	110511_PH2_SHT-TypSec.dgn

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCALE: NONE | STA. | TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3719	12-00239-00-BR	LAKE	88	9
		CONTRACT NO. 61A57		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT M-BHM-9003(952)		

SUGGESTED MAINTENANCE OF TRAFFIC NOTES:

1. THE CONTRACTOR SHALL SUBMIT A PREPLANNED SEQUENCE OF WORK AT THE PRECONSTRUCTION CONFERENCE FOR REVIEW AND APPROVAL. WORK SHALL BE SCHEDULED TO MINIMIZE INCONVENIENCE TO RESIDENTS AND BUSINESSES AND TO MAINTAIN A REASONABLE LEVEL OF CONSTRUCTION EFFICIENCY. THE ENGINEER RESERVES THE RIGHT TO RESTRICT WORK ON ANY ROADWAY SEGMENT IF CONSTRUCTION OPERATIONS ON A PREVIOUS SEGMENT ARE UNACCEPTABLE; TRAFFIC CONTROL OPERATIONS BECOME UNACCEPTABLE; OR AN EROSION CONTROL DEFICIENCY EXISTS.
2. THE ENGINEER SHALL BE NOTIFIED 48 HOURS IN ADVANCE OF ANY CHANGES TO CONSTRUCTION STAGING. ALL CHANGES TO CONSTRUCTION STAGING MUST BE APPROVED BY THE ENGINEER PRIOR TO IMPLEMENTATION.
3. PROVIDE 72 HOUR ADVANCED NOTIFICATION TO THE ENGINEER, CITY, POLICE AND FIRE PRIOR TO ROAD CLOSURE.
4. COORDINATE ALL IMPROVEMENTS WITH THE UNION PACIFIC RAILROAD AND METRA RAIL.
5. CLOSE NORTHBOUND RIGHT TURN LANE AND SOUTHBOUND LEFT TURN LANE ON IL ROUTE 137 EXIT RAMPS USING HIGHWAY STANDARDS 701456 and 701701.

THE FOLLOWING IS A SUGGESTED STAGING SEQUENCE:

1. ESTABLISH DETOUR ROUTE AND OTHER TRAFFIC CONTROL ITEMS.
2. ESTABLISH EROSION CONTROL MEASURES.
3. DEMOLISH AND RECONSTRUCT BRIDGE (SEE BRIDGE PLANS FOR SPECIFIC STAGING).
4. CONSTRUCT STORM SEWER.
5. REMOVE EXISTING PAVEMENT, CURB AND SIDEWALK AND GUARDRAIL.
6. CONSTRUCT AGGREGATE SUBGRADE IMPROVEMENTS AND CURB AND GUTTER.
7. CONSTRUCT CONCRETE PAVEMENT.
8. CONSTRUCT SIDEWALK AND BIKE PATH.
9. COMPLETE PARKWAY RESTORATION.
10. INSTALL REQUIRED PAVEMENT MARKINGS.
11. REOPEN ROADWAY.
12. COMPLETE PUNCH LIST ITEMS.
13. REMOVE TEMPORARY EROSION CONTROL ITEMS ONCE SEED ESTABLISHES.

ARTERIAL ROAD INFORMATION SIGN
FOR ROADS TO BE FULLY CLOSED
AND DETOURED

SHALL BE PAID FOR AS TEMPORARY INFORMATION SIGNING.
ONE SIGN ASSEMBLY EQUALS 27.3 SQ. FT.

"HIGHWAY C" FONT

(1) OVERLAY PANEL (1) TO CONTAIN STARTING DATE OF FULL CLOSURE AND DETOUR IMPLEMENTATION. (i.e. "FROM APR 2")

(2) OVERLAY PANEL (2) TO CONTAIN ENDING MONTH OF FULL CLOSURE & DETOUR (i.e. "THRU JULY") OMIT THE DATE ON PANEL (2) ; MONTH ONLY.

ERECT SIGN ASSEMBLY (POST-MOUNTED WITH PANELS (1) AND (2) IN PLACE ON ROAD TO BE CLOSED IN EACH DIRECTION NEAR POINT OF CLOSURE OR WITHIN SECTION TO BE FULLY CLOSED TWO (2) WEEKS PRIOR TO START DATE OF FULL CLOSURE. REMOVEL ASSEMBLY AFTER CLOSURE.

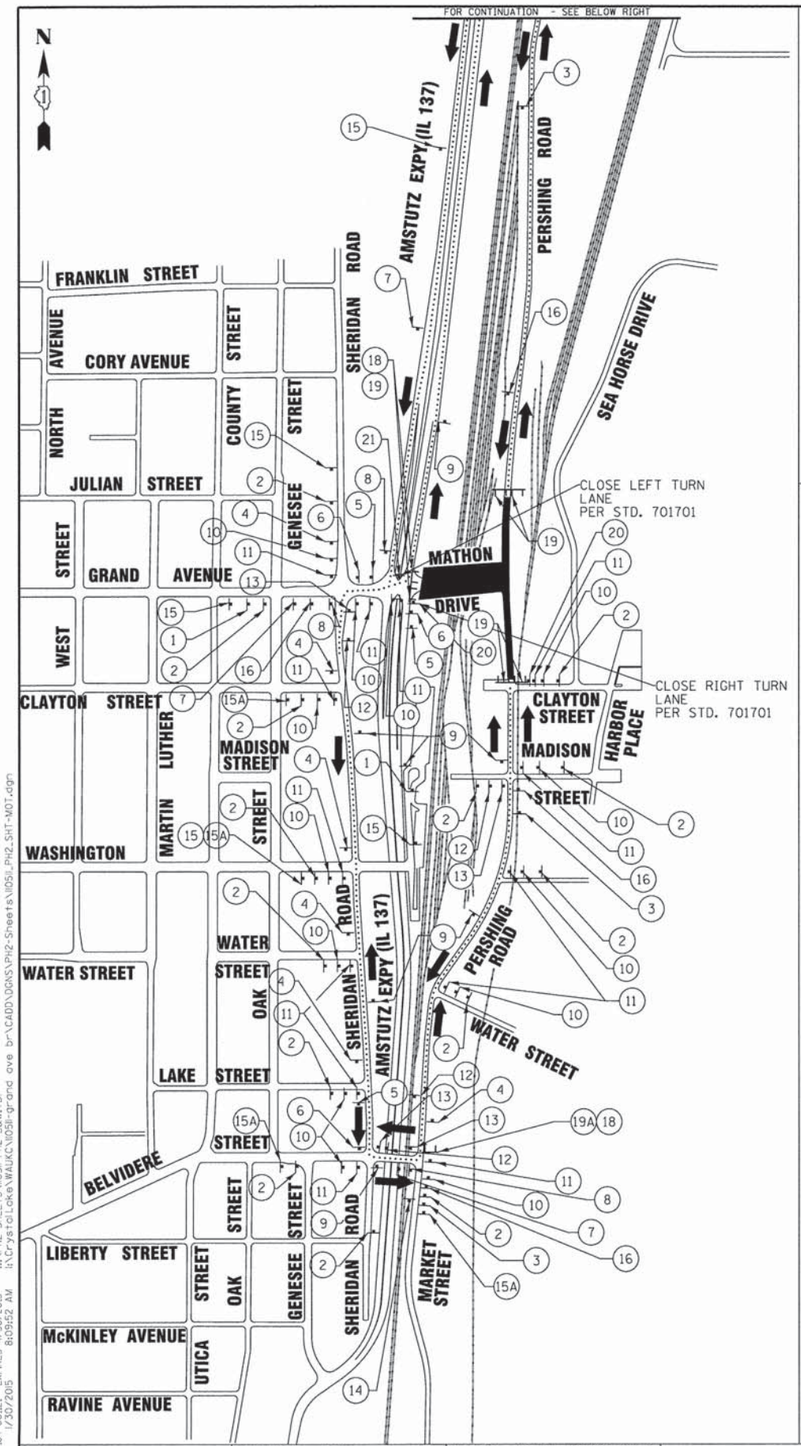
TEMPORARY INFORMATION SIGN DETAIL

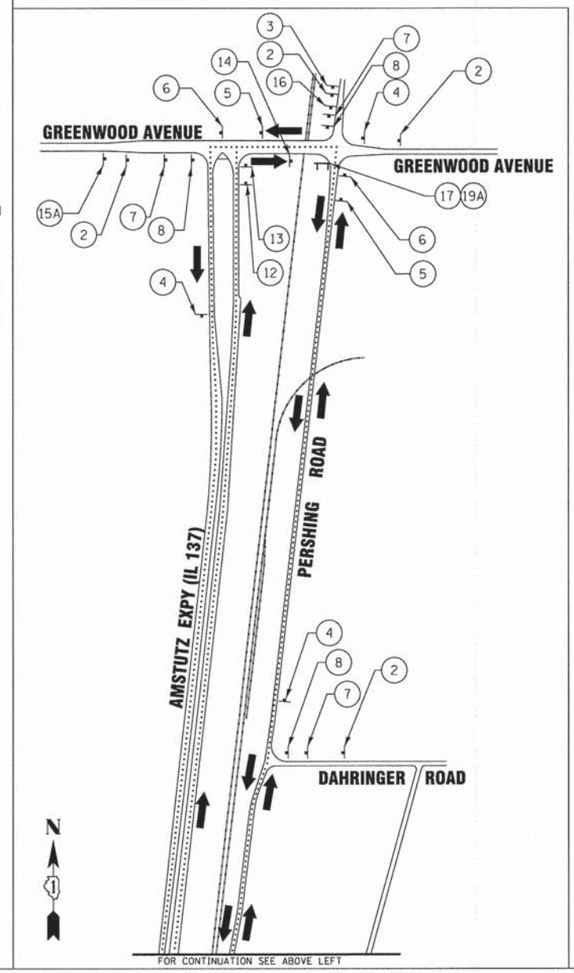
BAXTER & WOODMAN Consulting Engineers	DESIGNED - DJS	REVISED -5-8-14 PER IDOT REVIEW	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
	DRAWN - UKB	REVISED -	
	CHECKED - RWL	REVISED -	
	DATE - 03/14/14	FILE - 110511_PH2_SHT-MOT-GNTES.dgn	

SUGGESTED MAINTENANCE OF TRAFFIC GENERAL NOTES

SCALE: NONE | STA. | TO STA.

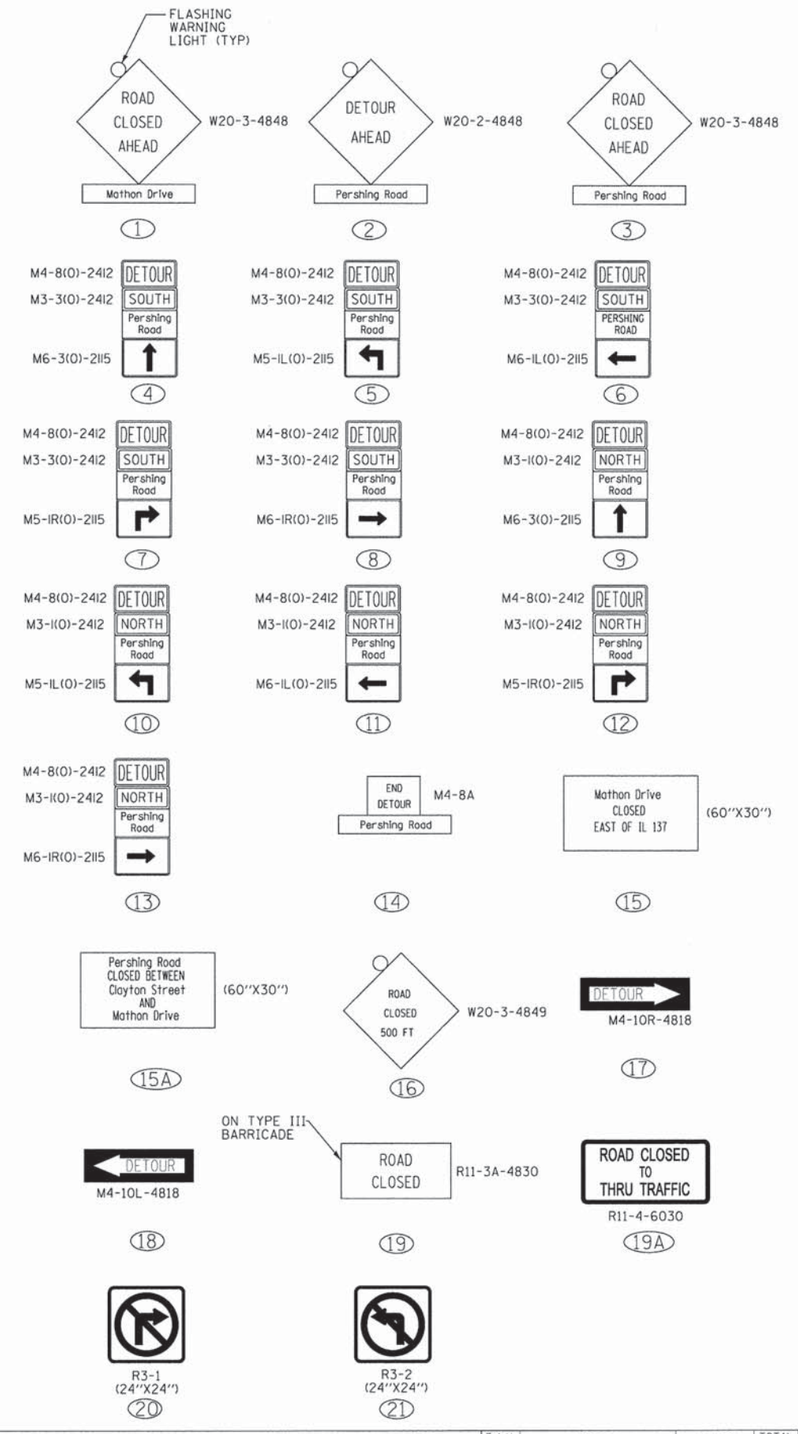
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3719	12-00239-00-BR	LAKE	88	10
		CONTRACT NO. 61A57		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT M-BHM-9003(952)		





LEGEND

- DIRECTION OF TRAFFIC
- DETOUR ROUTE
- SIGN
- TYPE III BARRICADE
- WORK AREA/ROAD CLOSURE



BAXTER & WOODMAN Consulting Engineers

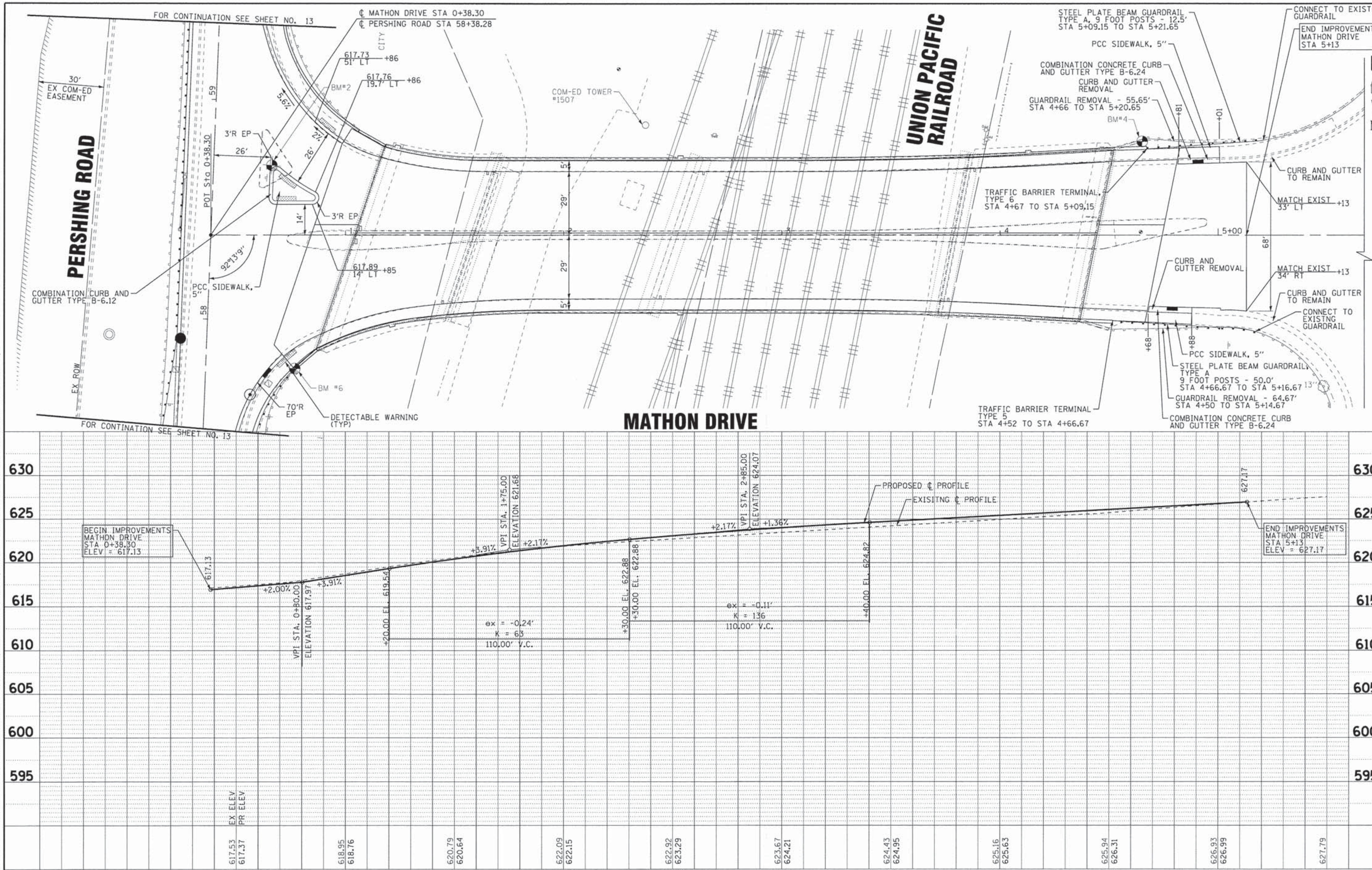
DESIGNED	- JDW	REVISED	-5-8-14 PER IDOT REVIEW
DRAWN	- UKB	REVISED	-5-16-14 PER IDOT REVIEW
CHECKED	- RWL	REVISED	-
DATE	- 03/14/14	FILE	- 110511_PH2_SHT-MOT.dgn

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUGGESTED MAINTENANCE OF TRAFFIC
DETOUR ROUTE

SCALE: 1"=400' STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3719	12-00239-00-BR	LAKE	88	11
		CONTRACT NO. 61A57		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT M-BHM-9003(952)		



FOR CONTINUATION SEE SHEET NO. 13
℄ MATHON DRIVE STA 0+38.30
℄ PERSHING ROAD STA 58+38.28
617.73
51' LT
+86
617.76
19.7' LT
+86
CITY
BM#2
30'
EX COM-ED EASEMENT
59
POT Sta 0+38.30
3'R EP
26'
26'
22'
14'
3'R EP
92°13'9"
PCC SIDEWALK, 5"
58
617.89
14' LT
+85
PERSHING ROAD
COMBINATION CURB AND GUTTER TYPE B-6.12
EX ROW
BM #6
70'R EP
DETECTABLE WARNING (TYP)
FOR CONTINATION SEE SHEET NO. 13
COM-ED TOWER #1507
5'
29'
29'
5'
UNION PACIFIC RAILROAD
MATHON DRIVE
STEEL PLATE BEAM GUARDRAIL TYPE A, 9 FOOT POSTS - 12.5' STA 5+09.15 TO STA 5+21.65
PCC SIDEWALK, 5"
COMBINATION CONCRETE CURB AND GUTTER TYPE B-6.24
CURB AND GUTTER REMOVAL
GUARDRAIL REMOVAL - 55.65' STA 4+66 TO STA 5+20.65
BM#4
+81
+01
CONNECT TO EXISTNG GUARDRAIL
END IMPROVEMENTS MATHON DRIVE STA 5+13
N
CURB AND GUTTER TO REMAIN
TRAFFIC BARRIER TERMINAL, TYPE 6 STA 4+67 TO STA 5+09.15
MATCH EXIST 33' LT +13
5+00
68'
CURB AND GUTTER REMOVAL
MATCH EXIST 34' RT +13
CURB AND GUTTER TO REMAIN
CONNECT TO EXISTNG GUARDRAIL
+68
+88
PCC SIDEWALK, 5"
STEEL PLATE BEAM GUARDRAIL TYPE A 9 FOOT POSTS - 50.0' STA 4+66.67 TO STA 5+16.67
GUARDRAIL REMOVAL - 64.67' STA 4+50 TO STA 5+14.67
13"
TRAFFIC BARRIER TERMINAL TYPE 5 STA 4+52 TO STA 4+66.67
COMBINATION CONCRETE CURB AND GUTTER TYPE B-6.24
630
625
620
615
610
605
600
595
BEGIN IMPROVEMENTS MATHON DRIVE STA 0+38.30 ELEV = 617.13
617.13
+2.00%
+3.91%
VPI STA. 0+80.00 ELEVATION 617.97
+20.00 EL. 619.54
+3.91%
VPI STA. 1+75.00 ELEVATION 621.68
+2.17%
ex = -0.24'
K = 63
110.00' V.C.
+30.00 EL. 622.88
+30.00 EL. 622.88
+2.17%
VPI STA. 2+85.00 ELEVATION 624.07
+1.36%
ex = -0.11'
K = 136
110.00' V.C.
+40.00 EL. 624.82
PROPOSED ℄ PROFILE
EXISITNG ℄ PROFILE
627.17
END IMPROVEMENTS MATHON DRIVE STA 5+13 ELEV = 627.17
EX ELEV
PR ELEV
617.53 617.37
618.95 618.76
620.79 620.64
622.09 622.15
622.92 623.29
623.67 624.21
624.43 624.95
625.16 625.63
625.94 626.31
626.93 626.99
627.79
0+50
1+00
1+50
2+00
2+50
3+00
3+50
4+00
4+50
5+00
5+50

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DRAWN - UKB	REVISED -5-16-14 PER IDOT REVIEW
CHECKED - RWL	REVISED -
DATE - 03-14-14	FILE - 110511_PH2_SHT-BRIDGE-PP1.dgn

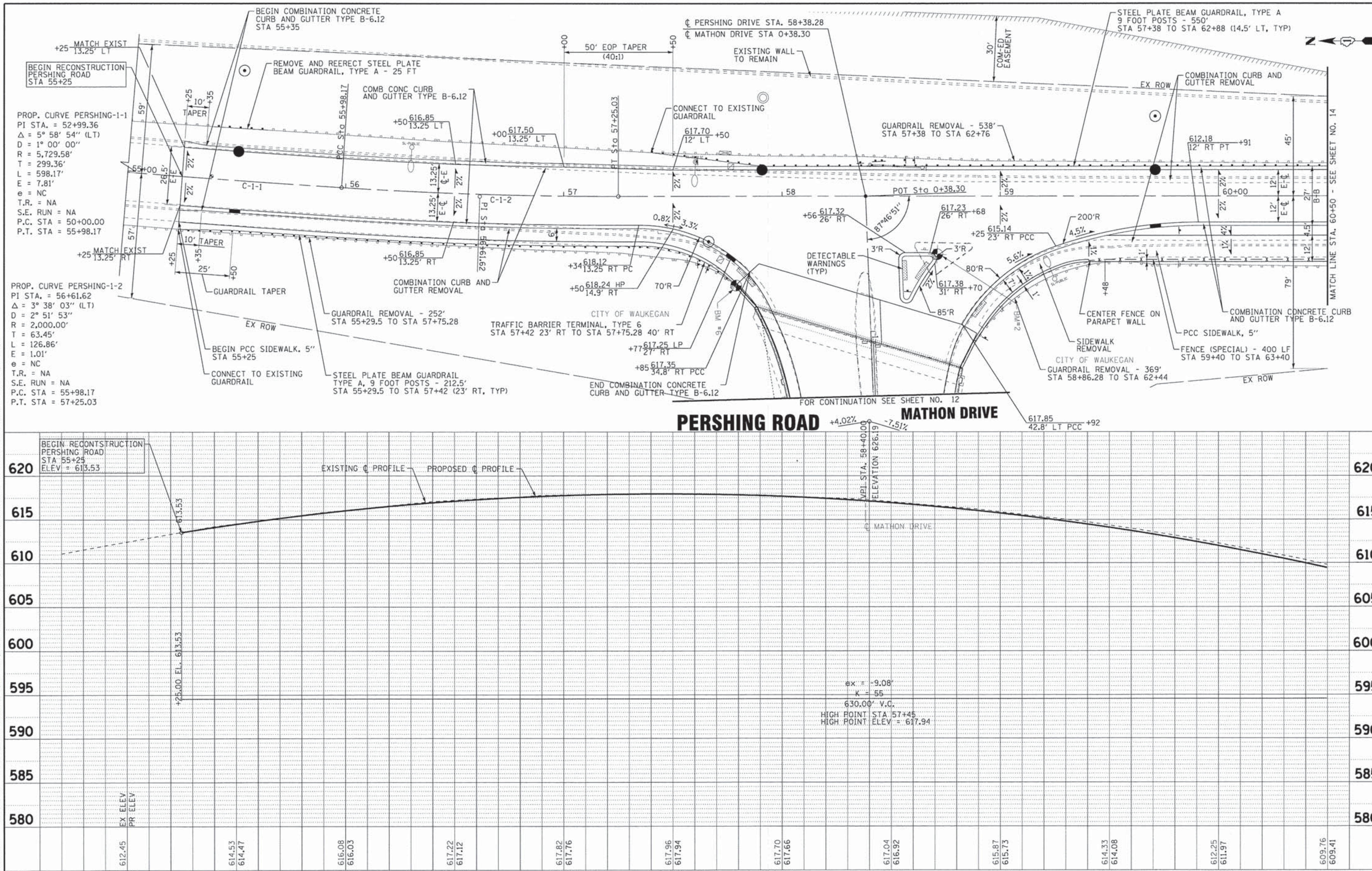
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORATION

GEOMETRIC PLAN AND PROFILE
MATHON DRIVE

SCALE: H: 1"=20' V: 1"=5' | STA. 0+38 TO STA. 5+50

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3719	12-00239-00-BR	LAKE	88	12
		CONTRACT NO. 61A57		

FED. ROAD DIST. NO. 1 | ILLINOIS | FED. AID PROJECT M-8HM-9003(952)


BEGIN COMBINATION CONCRETE CURB AND GUTTER TYPE B-6.12 STA 55+35
+25 MATCH EXIST 13.25' LT
BEGIN RECONSTRUCTION PERSHING ROAD STA 55+25
REMOVE AND REERECT STEEL PLATE BEAM GUARDRAIL, TYPE A - 25 FT
COMB CONC CURB AND GUTTER TYPE B-6.12
PCC Sta 55+98.17
50' EOP TAPER (40:1)
PT Sta 57+25.03
℄ PERSHING DRIVE STA. 58+38.28
℄ MATHON DRIVE STA 0+38.30
EXISTING WALL TO REMAIN
30' COM-ED EASEMENT
STEEL PLATE BEAM GUARDRAIL, TYPE A 9 FOOT POSTS - 550' STA 57+38 TO STA 62+88 (14.5' LT, TYP)
EX ROW
COMBINATION CURB AND GUTTER REMOVAL
PROP. CURVE PERSHING-1-1
PI STA. = 52+99.36
Δ = 5° 58' 54" (LT)
D = 1° 00' 00"
R = 5,729.58'
T = 299.36'
L = 598.17'
E = 7.81'
e = NC
T.R. = NA
S.E. RUN = NA
P.C. STA = 50+00.00
P.T. STA = 55+98.17
10' TAPER
+50 616.85 13.25' LT
+00 617.50 13.25' LT
CONNECT TO EXISTING GUARDRAIL
617.70 12' LT +50
GUARDRAIL REMOVAL - 538' STA 57+38 TO STA 62+76
612.18 12' RT PT +91
C-1-1
C-1-2
PI Sta 56+61.62
POT Sta 0+38.30
60+00
MATCH LINE STA. 60+50 - SEE SHEET NO. 14
+25 MATCH EXIST 13.25' RT
10' TAPER
+50 616.85 13.25' RT
+34 618.12 13.25' RT PC
+50 618.24 HP 14.9' RT
+56 617.32 26' RT
87°46'51"
617.23 26' RT +68
+25 615.14 23' RT PCC
200'R
DETECTABLE WARNINGS (TYP)
617.38 31' RT +70
80'R
85'R
70'R
GUARDRAIL TAPER
PROP. CURVE PERSHING-1-2
PI STA. = 56+61.62
Δ = 3° 38' 03" (LT)
D = 2° 51' 53"
R = 2,000.00'
T = 63.45'
L = 126.86'
E = 1.01'
e = NC
T.R. = NA
S.E. RUN = NA
P.C. STA = 55+98.17
P.T. STA = 57+25.03
COMBINATION CURB AND GUTTER REMOVAL
GUARDRAIL REMOVAL - 252' STA 55+29.5 TO STA 57+75.28
TRAFFIC BARRIER TERMINAL, TYPE 6 STA 57+42 23' RT TO STA 57+75.28 40' RT
CITY OF WAUKEGAN
BEGIN PCC SIDEWALK, 5" STA 55+25
CONNECT TO EXISTING GUARDRAIL
STEEL PLATE BEAM GUARDRAIL TYPE A, 9 FOOT POSTS - 212.5' STA 55+29.5 TO STA 57+42 (23' RT, TYP)
+77 617.25 LP 27' RT
+85 617.35 34.8' RT PCC
END COMBINATION CONCRETE CURB AND GUTTER TYPE B-6.12
CENTER FENCE ON PARAPET WALL
SIDEWALK REMOVAL
CITY OF WAUKEGAN
GUARDRAIL REMOVAL - 369' STA 58+86.28 TO STA 62+44
PCC SIDEWALK, 5"
FENCE (SPECIAL) - 400 LF STA 59+40 TO STA 63+40
COMBINATION CONCRETE CURB AND GUTTER TYPE B-6.12
EX ROW
FOR CONTINUATION SEE SHEET NO. 12
PERSHING ROAD
MATHON DRIVE
617.85 42.8' LT PCC +92
+4.02%
-7.51%
BEGIN RECONSTRUCTION PERSHING ROAD STA 55+25 ELEV = 613.53
EXISTING ℄ PROFILE
PROPOSED ℄ PROFILE
VPI STA. 58+40.00 ELEVATION 626.19
℄ MATHON DRIVE
+25.00 EL. 613.53
ex = -9.08'
K = 55
630.00' V.C.
HIGH POINT STA 57+45
HIGH POINT ELEV = 617.94
620
615
610
605
600
595
590
585
580
EX ELEV
PR ELEV
612.45
614.53 614.47
616.08 616.03
617.22 617.12
617.82 617.76
617.96 617.94
617.70 617.66
617.04 616.92
615.87 615.73
614.33 614.08
612.25 611.97
609.76 609.41
55+00
55+50
56+00
56+50
57+00
57+50
58+00
58+50
59+00
59+50
60+00
60+50

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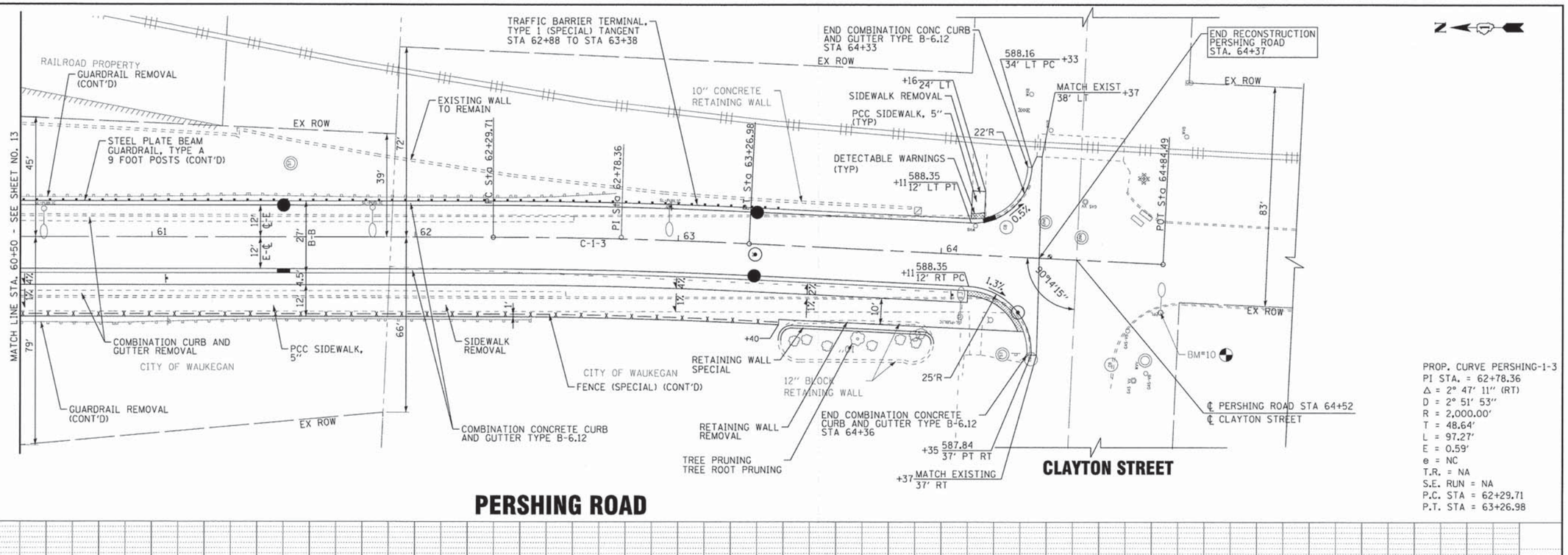
DESIGNED - DJS	REVISED -5-8-14 PER IDOT REVIEW	
DRAWN - UKB	REVISED -5-16-14 PER IDOT REVIEW	
CHECKED - RWL	REVISED -	
DATE - 03-14-14	FILE - 110511_PH2_SHT-Pershing_PP.dgn	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORATION

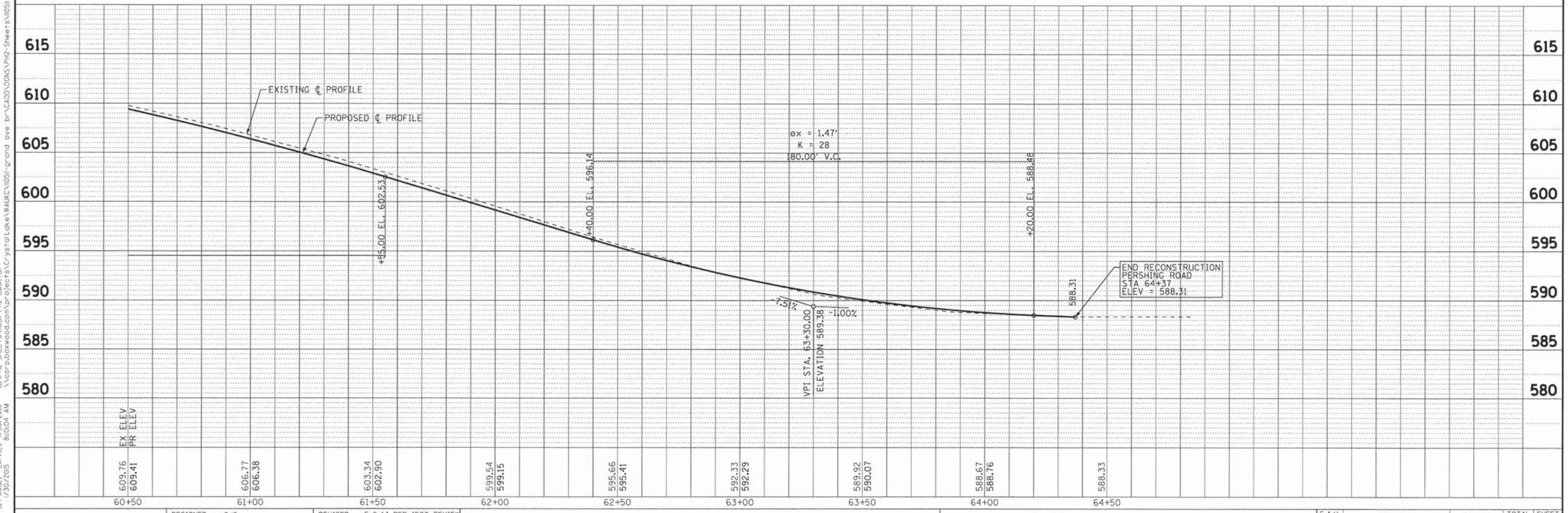
GEOMETRIC PLAN AND PROFILE
PERSHING ROAD

SCALE: H: 1"=20' V: 1"=5' | STA.55+00 TO STA.60+50

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3719	12-00239-00-BR	LAKE	88	13
		CONTRACT NO. 61A57		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT M-BHM-9003(952)		



PROP. CURVE PERSHING-1-3
PI STA. = 62+78.36
Δ = 2° 47' 11" (RT)
D = 2° 51' 53"
R = 2,000.00'
T = 48.64'
L = 97.27'
E = 0.59'
e = NC
T.R. = NA
S.E. RUN = NA
P.C. STA = 62+29.71
P.T. STA = 63+26.98



DESIGNED	- DJS	REVISED	-5-8-14 PER IDOT REVIEW
DRAWN	- UKB	REVISED	-5-16-14 PER IDOT REVIEW
CHECKED	- RWL	REVISED	-
DATE	- 03-14-14	FILE	- 110511_PH2_SHT-Pershing_PP2.dgn

BAXTER & WOODMAN Consulting Engineers

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORATION

GEOMETRIC PLAN AND PROFILE
PERSHING ROAD

SCALE: H: 1"=20' V: 1"=5' | STA.60+50 | TO STA.64+50

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3719	12-00239-00-BR	LAKE	88	14
		CONTRACT NO. 61A57		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT M-BHM-9003(952)		

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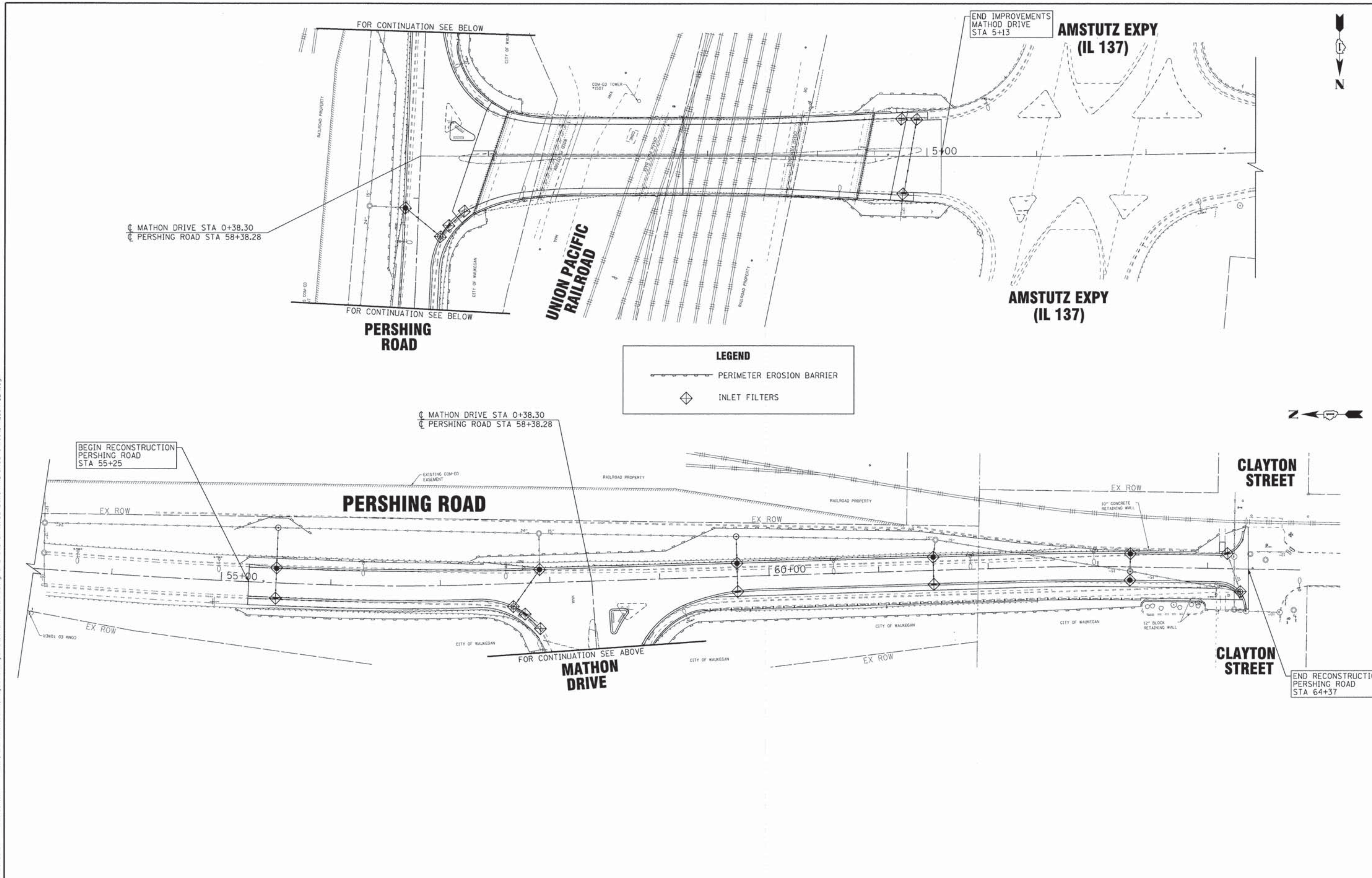


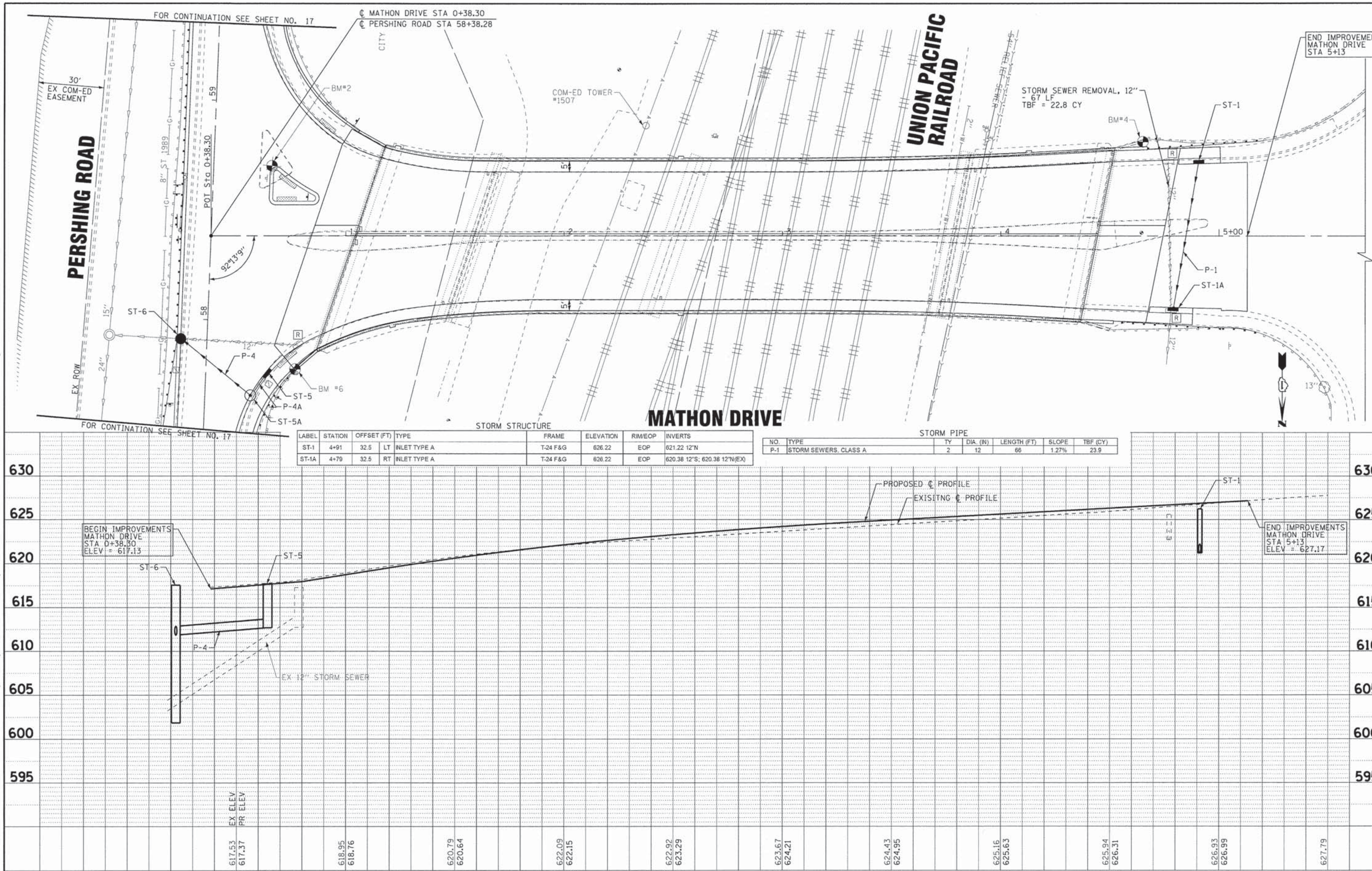
BAXTER & WOODMAN Consulting Engineers	DESIGNED - JDM	REVISED -5-8-14 PER IDOT REVIEW	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
	DRAWN - UKB	REVISED -5-16-14 PER IDOT REVIEW	
	CHECKED - RWL	REVISED -	
	DATE - 03/14/14	FILE - 110511_PH2_SHT_ER1.dgn	

EROSION CONTROL PLAN

SCALE: 1"=40' | STA. | TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3719	12-00239-00-BR	LAKE	88	15
		CONTRACT NO. 61A57		

FED. ROAD DIST. NO. 1 | ILLINOIS | FED. AID PROJECT M-BHM-9003(952)



STORM STRUCTURE

LABEL	STATION	OFFSET (FT)		TYPE	FRAME	ELEVATION	RIM/EOP	INVERTS
ST-1	4+91	32.5	LT	INLET TYPE A	T-24 F&G	626.22	EOP	621.22 12"N
ST-1A	4+79	32.5	RT	INLET TYPE A	T-24 F&G	626.22	EOP	620.38 12"S; 620.38 12"N(EX)

STORM PIPE

NO.	TYPE	TY	DIA. (IN)	LENGTH (FT)	SLOPE	TBF (CY)
P-1	STORM SEWERS, CLASS A	2	12	66	1.27%	23.9

DESIGNED - AMM	REVISED -5-8-14 PER IDOT REVIEW	
DRAWN - UKB	REVISED -5-16-14 PER IDOT REVIEW	
CHECKED - RWL	REVISED -	
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORATION

DRAINAGE AND UTILITY
MATHON DRIVE

SCALE: H: 1"=20' V: 1"=5' | STA. 0+38 | TO STA. 5+50

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3719	12-00239-00-BR	LAKE	88	16

CONTRACT NO. 61A57

FED. ROAD DIST. NO. 1 | ILLINOIS | FED. AID PROJECT M-BHM-9003(952)

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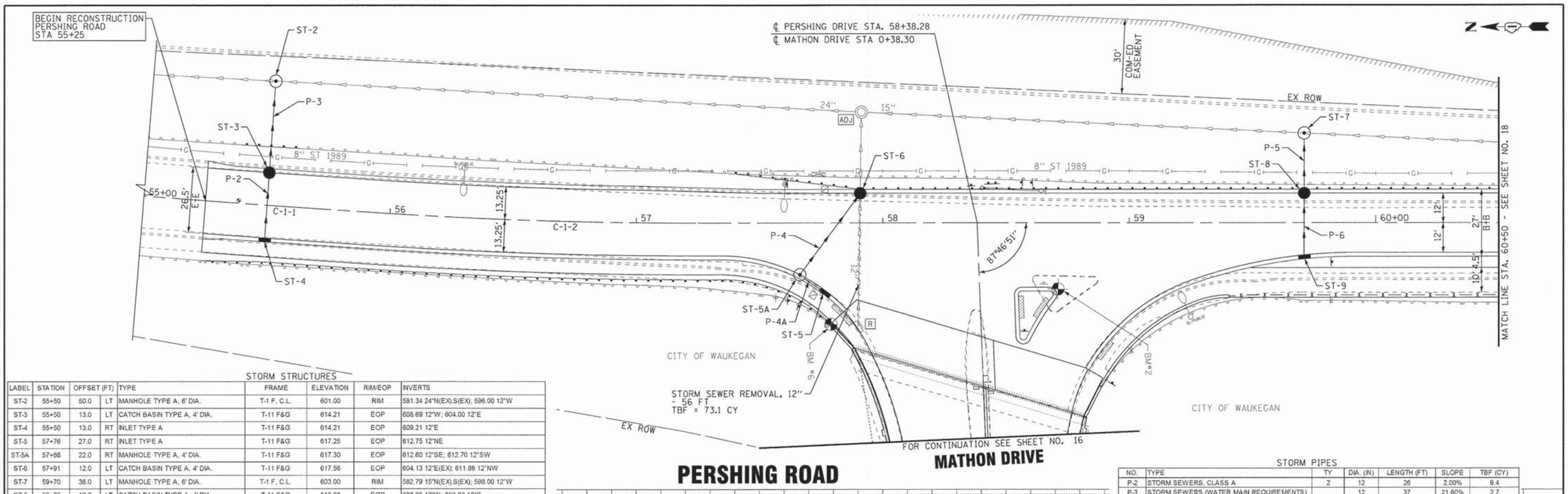
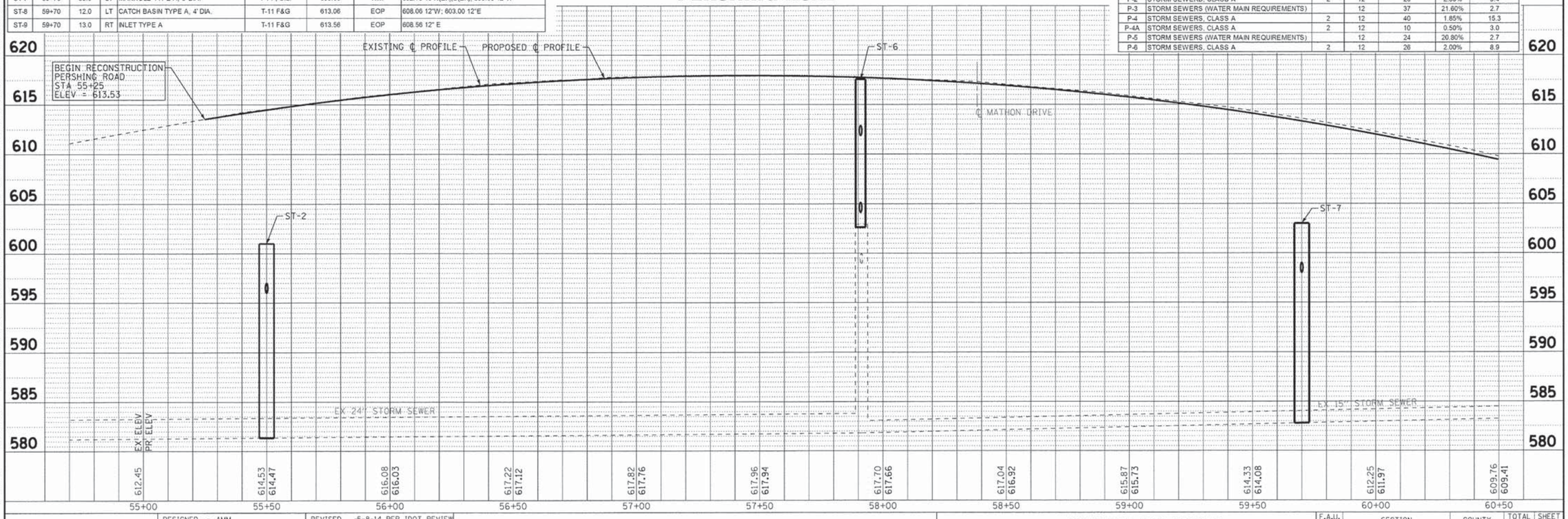


STORM STRUCTURES

LABEL	STATION	OFFSET (FT)		TYPE	FRAME	ELEVATION	RIM/EOP	INVERTS
ST-2	55+50	50.0	LT	MANHOLE TYPE A, 6' DIA.	T-1 F, C.L.	601.00	RIM	581.34 24"N(EX),S(EX); 586.00 12"W
ST-3	55+50	13.0	LT	CATCH BASIN TYPE A, 4' DIA.	T-11 F&G	614.21	EOP	608.69 12"W; 604.00 12"E
ST-4	55+50	13.0	RT	INLET TYPE A	T-11 F&G	614.21	EOP	609.21 12"E
ST-5	57+76	27.0	RT	INLET TYPE A	T-11 F&G	617.25	EOP	612.75 12"NE
ST-5A	57+66	22.0	RT	MANHOLE TYPE A, 4' DIA.	T-11 F&G	617.30	EOP	612.60 12"SE; 612.70 12"SW
ST-6	57+91	12.0	LT	CATCH BASIN TYPE A, 4' DIA.	T-11 F&G	617.56	EOP	604.13 12"E(EX); 611.86 12"NW
ST-7	59+70	36.0	LT	MANHOLE TYPE A, 6' DIA.	T-1 F, C.L.	603.00	RIM	582.79 15"N(EX),S(EX); 598.00 12"W
ST-8	59+70	12.0	LT	CATCH BASIN TYPE A, 4' DIA.	T-11 F&G	613.06	EOP	608.06 12"W; 603.00 12"E
ST-9	59+70	13.0	RT	INLET TYPE A	T-11 F&G	613.56	EOP	608.56 12" E

STORM PIPES

NO.	TYPE	TY	DIA. (IN)	LENGTH (FT)	SLOPE	TBF (CY)
P-2	STORM SEWERS, CLASS A	2	12	26	2.00%	9.4
P-3	STORM SEWERS (WATER MAIN REQUIREMENTS)		12	37	21.60%	2.7
P-4	STORM SEWERS, CLASS A	2	12	40	1.85%	15.3
P-4A	STORM SEWERS, CLASS A	2	12	10	0.50%	3.0
P-5	STORM SEWERS (WATER MAIN REQUIREMENTS)		12	24	20.80%	2.7
P-6	STORM SEWERS, CLASS A	2	12	26	2.00%	8.9



DESIGNED	- AMM	REVISED	-5-8-14 PER IDOT REVIEW
DRAWN	- UKB	REVISED	-5-16-14 PER IDOT REVIEW
CHECKED	- RWL	REVISED	-
DATE	- 03-14-14	FILE	- 110511_PH2_SHT-Pershing_DUI.dgn

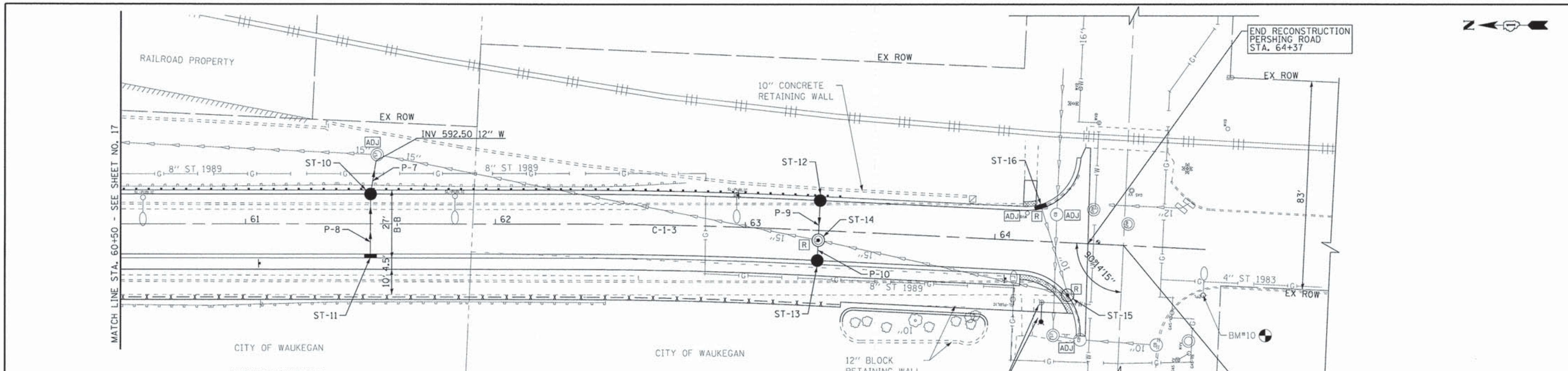
BAXTER & WOODMAN Consulting Engineers

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORATION

DRAINAGE AND UTILITY
PERSHING ROAD

SCALE: H: 1"=20' V: 1"=5' | STA.55+00 | TO STA.60+50

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3719	12-00239-00-BR	LAKE	88	17
		CONTRACT NO. 61A57		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT M-BHM-9003(952)		



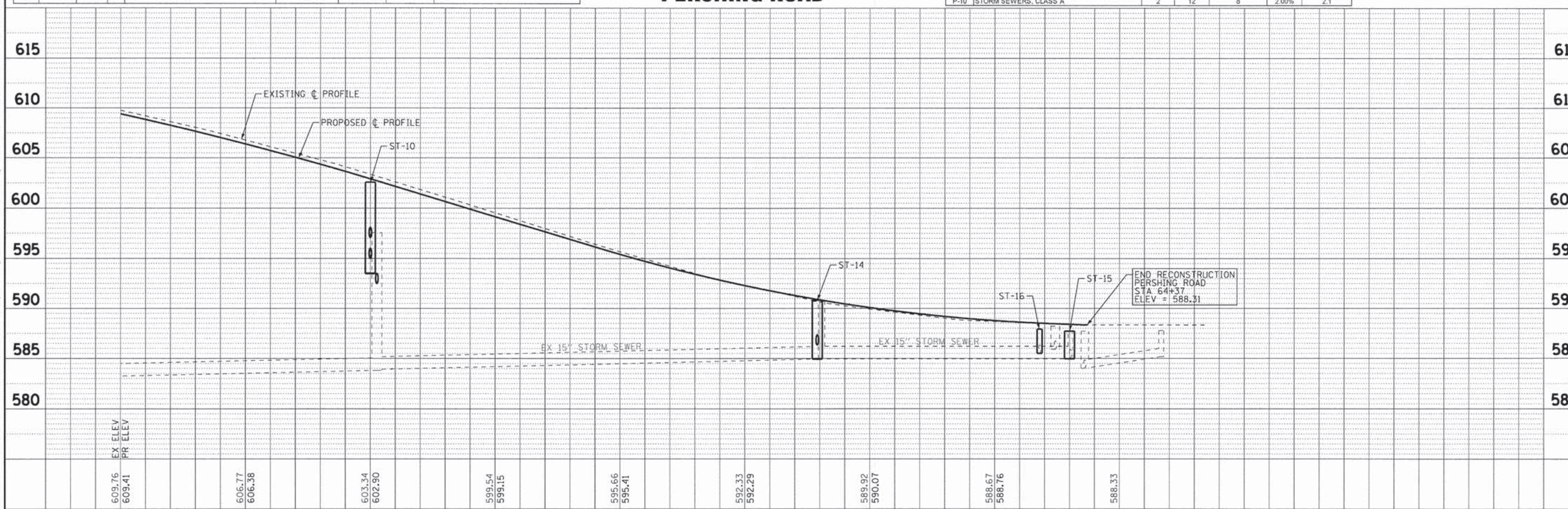
STORM STRUCTURES

LABEL	STATION	OFFSET (FT)		TYPE	FRAME	ELEVATION	RIM/EOP	INVERTS
ST-10	61+50	12.0	LT	CATCH BASIN TYPE A, 4' DIA.	T-11 F&G	602.56	EOP	597.08 12"W; 595.00 12"E
ST-11	61+50	12.0	RT	INLET TYPE A	T-11 F&G	602.56	EOP	597.56 12"E
ST-12	63+29	12.0	LT	CATCH BASIN TYPE A, 4' DIA.	T-11 F&G	590.66	EOP	586.50 12"W
ST-13	63+29	12.0	RT	CATCH BASIN TYPE A, 4' DIA.	T-11 F&G	590.66	EOP	586.50 12"E
ST-14	63+29	4.0	RT	MANHOLE TYPE A, 4' DIA.	T-1 F, C.L.	590.82	RIM	586.34 12"W,E; 584.95 15"NE(EX),SW(EX)
ST-15	64+30	20.5	RT	MANHOLE TYPE A, 4' DIA.	T-11 F&G	587.70	EOP	584.95 15"NE(EX); 585.05 10" NE(EX)
ST-16	64+18	13.0	LT	INLET TYPE A	T-11 F&G	587.90	EOP	585.50 10"SW

STORM PIPES

NO.	TYPE	TY	DIA. (IN)	LENGTH (FT)	SLOPE	TBF (CY)
P-7	STORM SEWERS (WATER MAIN REQUIREMENTS)		12	16	15.60%	1.9
P-8	STORM SEWERS, CLASS A	2	12	24	2.00%	8.7
P-9	STORM SEWERS, CLASS A	2	12	16	1.00%	4.1
P-10	STORM SEWERS, CLASS A	2	12	8	2.00%	2.1

PERSHING ROAD



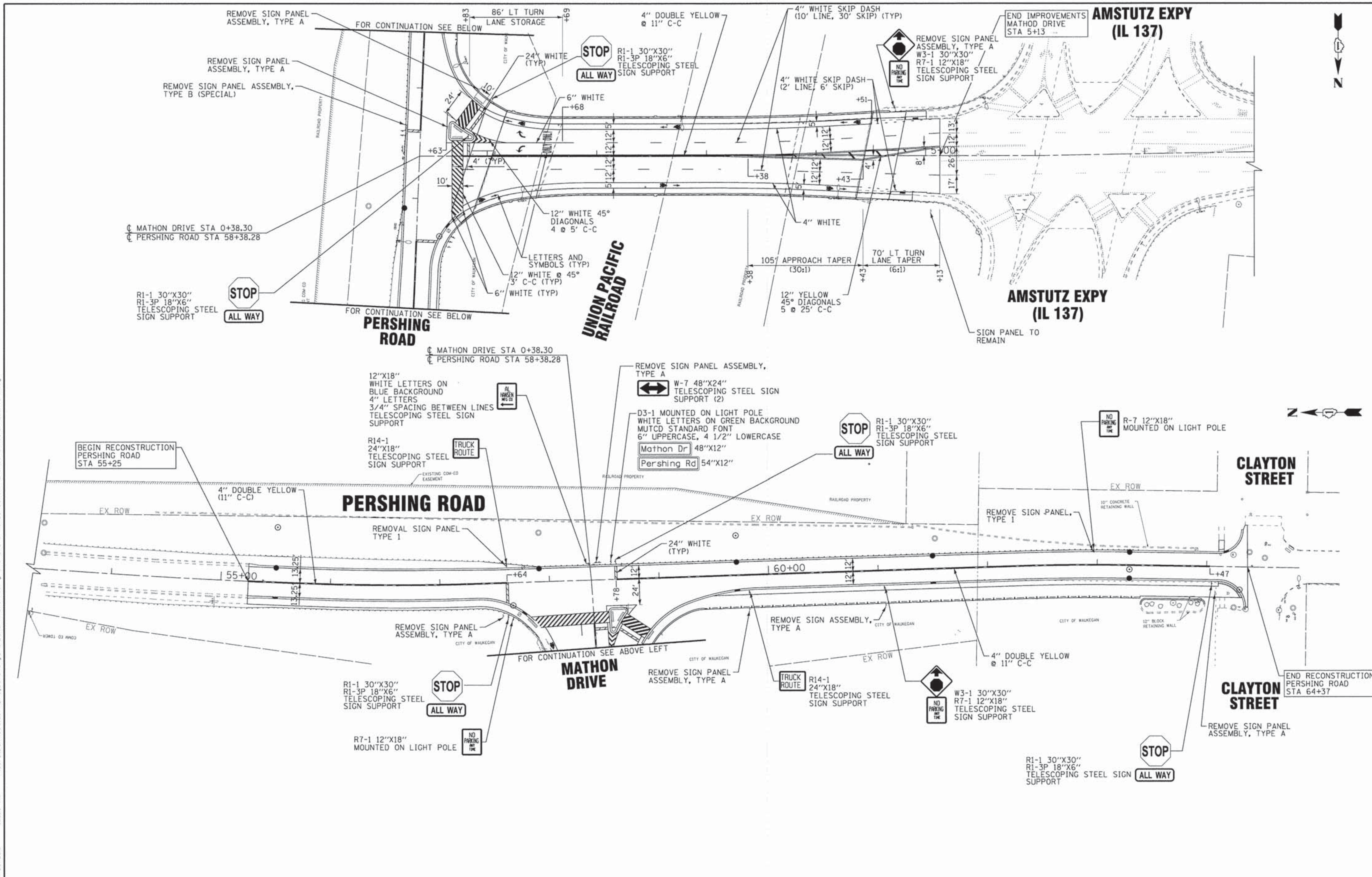
BAXTER & WOODMAN Consulting Engineers	DESIGNED - AMM	REVISED -5-8-14 PER IDOT REVIEW	STATE OF ILLINOIS DEPARTMENT OF TRANSPORATION
	DRAWN - UKB	REVISED -5-16-14 PER IDOT REVIEW	
	CHECKED - RWL	REVISED -	
	DATE - 03-14-14	FILE - 110511_PH2_SHT-Pershing_DU2.dgn	

DRAINAGE AND UTILITY
PERSHING ROAD

SCALE: H: 1"=20' V: 1"=5' | STA.60+50 TO STA.64+50

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3719	12-00239-00-BR	LAKE	88	18
		CONTRACT NO. 61A57		

FED. ROAD DIST. NO. 1 | ILLINOIS | FED. AID PROJECT M-BHM-9003(952)



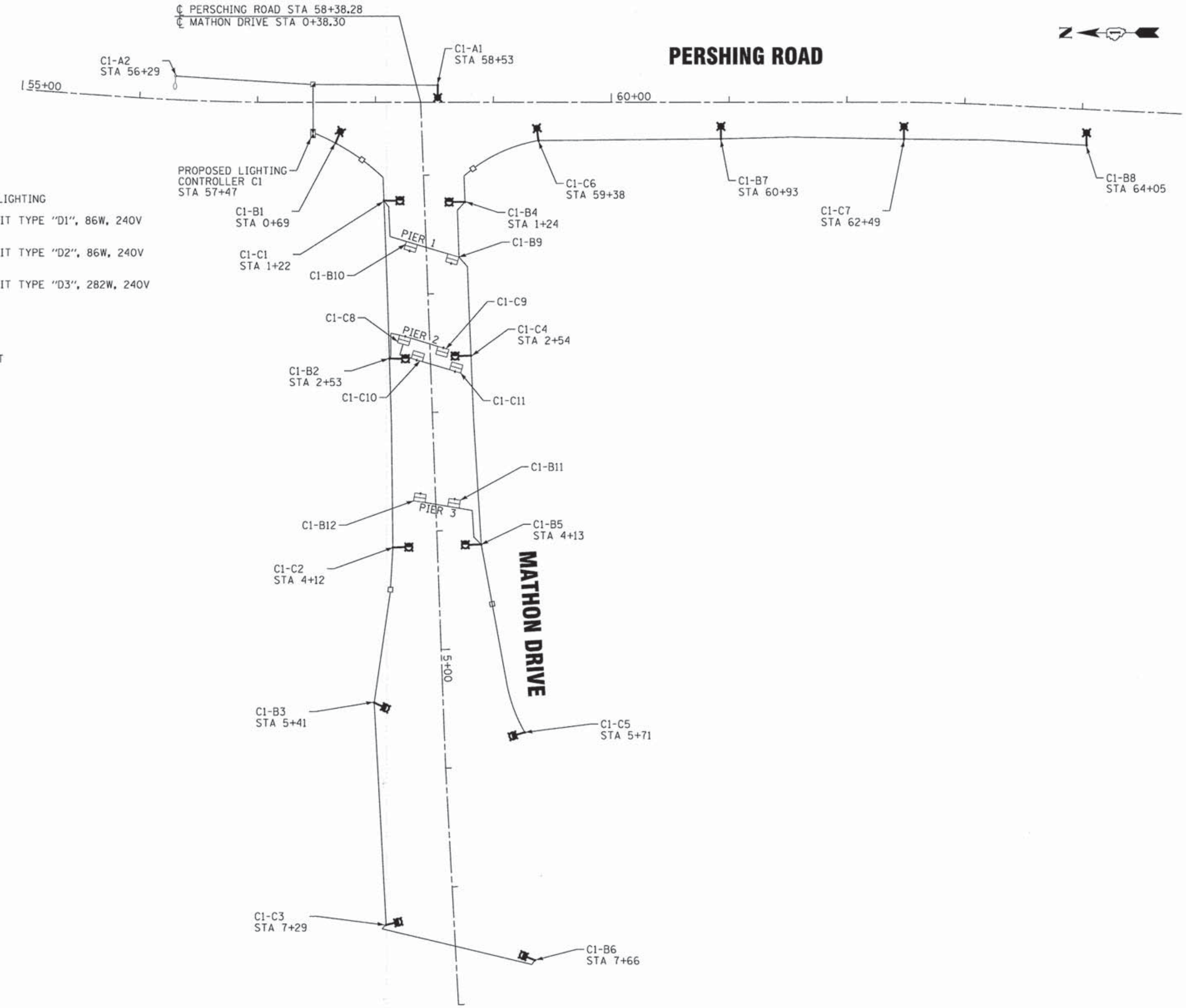
BAXTER & WOODMAN Consulting Engineers	DESIGNED - JDM	REVISED -5-8-14 PER IDOT REVIEW	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	PAVEMENT MARKING AND SIGNING PLAN	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	DRAWN - UKB	REVISED -5-16-14 PER IDOT REVIEW			3719	12-00239-00-BR	LAKE	88	19
	CHECKED - RWL	REVISED -					CONTRACT NO. 61A57		
	DATE - 03/14/14	FILE - 110511_PH2_SHT_PM1.dgn		SCALE: 1"=40' STA. TO STA.	FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT M-BHM-9003(952)		

GENERAL NOTES

1. THE EXACT LOCATIONS OF ALL UTILITIES SHALL BE VERIFIED BY THE CONTRACTOR BEFORE THE INSTALLATION OF ANY COMPONENTS OF THE LIGHTING SYSTEM. FOR THE LOCATIONS OF THE UTILITIES, CALL JULIE TOLL FREE AT 1-800-892-0123. IT IS THE CONTRACTOR'S RESPONSIBILITY TO LOCATE EXISTING TRAFFIC SIGNAL CABLES AND CONDUITS.
2. EXISTING STREET LIGHTING UNITS (NOTED IN PLANS) TO REMAIN IN OPERATION ARE TO BE MAINTAINED BY THE CONTRACTOR UNTIL NEW STREET LIGHTS ARE OPERATIONAL AND ACCEPTED BY THE CITY.
3. ANY DAMAGE TO EXISTING CONDUITS, CONDUCTORS, AND EQUIPMENT TO REMAIN SHALL BE REPAIRED AND/OR REPLACED AT NO COST TO THE DEPARTMENT.
4. ANY TURF AND/OR SOIL DISTURBED THAT CANNOT REMAIN OR BE RE-USED SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR AND INCLUDED IN THE COST OF THE ASSOCIATED PAY ITEM.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE ESTABLISHMENT OF FINISHED GRADE. THE ENGINEER MAY ASSIST THE CONTRACTOR, AS APPLICABLE, BUT THE RESPONSIBILITY FOR COORDINATING THE FINISHED GRADE ELEVATION WITH THE TOP OF FOUNDATION AND THE LIGHT SHALL REMAIN WITH THE CONTRACTOR.
6. ALL DISTURBED AREAS SHALL BE RESTORED TO THE SATISFACTION OF THE ENGINEER AND INCLUDED IN THE COST OF THE ASSOCIATED PAY ITEM.
7. THE CONTRACTOR SHALL MAKE SPECIAL NOTE OF THE REQUIREMENTS FOR BURIED WARNING TAPE, SPECIFIED AS PART OF "UNDERGROUND RACEWAYS". THE INSTALLATION OF THE TAPE SHALL BE INSPECTED AND APPROVED BY THE ENGINEER PRIOR TO BACKFILLING.
8. THE CONTRACTOR SHALL MAKE SPECIAL NOTE OF THE REQUIREMENTS FOR WIRE MARKERS AND SHALL TAG ALL WIRE ACCORDINGLY.
9. THE CONTRACTOR SHALL MAKE SPECIAL NOTE OF THE REQUIREMENTS FOR GROUNDING. GROUNDING CONNECTIONS AT THE FOUNDATION SHALL BE EXOTHERMICALLY WELDED, AS SPECIFIED, AND SHALL BE INSPECTED AND APPROVED BY THE ENGINEER PRIOR TO BACKFILLING. EQUIPMENT GROUND CONDUCTORS SHALL BE SPLICED AND/OR BONDED AT EACH LIGHT POLE OR OTHER PIECE OF EQUIPMENT.
10. CONDUIT AND UNIT DUCT MUST BE POSITIONED IN THE FIELD TO AVOID CONFLICT WITH TREES, BUSHES, DRAINS, OTHER UTILITIES, AND LANDSCAPING.
11. NO UNDERGROUND SPLICES OR SPLICES IN HANDHOLES WILL BE PERMITTED. ELECTRIC HANDHOLES SHALL BE USED FOR THE PURPOSE OF PULLING CABLES ONLY.
12. LIGHTING UNIT SETBACK SHALL BE AS CALLED OUT ON DRAWINGS.
13. NO POLES SHALL BE ERECTED UNTIL THE RESPECTIVE FOUNDATIONS HAVE CURED, AS APPROVED BY THE ENGINEER.
14. ALL CONDUITS UNDER PROPOSED ROADWAYS AND DRIVEWAYS IN TRENCHES SHALL BE INSTALLED BEFORE PAVEMENT IS PLACED. CONDUIT LENGTHS ARE APPROXIMATE. THE CONTRACTOR SHALL VERIFY THE ACTUAL LENGTH REQUIREMENTS IN THE FIELD.
15. ALL ELECTRICAL DEVICES AND MATERIALS SHALL BE U/L LISTED WHERE APPLICABLE.

LEGEND

- SERVICE PEDESTAL
- PROPOSED UNDERDECK LIGHTING
- PROPOSED LIGHTING UNIT TYPE "D1", 86W, 240V LED TYPE III, 30' MH
- PROPOSED LIGHTING UNIT TYPE "D2", 86W, 240V LED TYPE III, 25' MH
- PROPOSED LIGHTING UNIT TYPE "D3", 282W, 240V LED TYPE III, 35' MH
- PROPOSED CONTROLLER
- PROPOSED HANDHOLE
- EXISTING STREET LIGHT



SUMMARY OF QUANTITIES			
ITEM NO.	DESCRIPTION	UNIT	QUANTITY
80400100	ELECTRIC SERVICE INSTALLATION	EACH	1
80400200	ELECTRIC UTILITY SERVICE CONNECTION	L SUM	1
81028200	UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.	FOOT	290
81028220	UNDERGROUND CONDUIT, GALVANIZED STEEL, 3" DIA.	FOOT	600
81100320	CONDUIT ATTACHED TO STRUCTURE, 1" DIA., PVC COATED GALVANIZED STEEL	FOOT	150
81200230	CONDUIT EMBEDDED IN STRUCTURE, 2" DIA., PVC	FOOT	802
81300220	JUNCTION BOX, STAINLESS STEEL, ATTACHED TO STRUCTURE, 6" X 6" X 4"	EACH	3
81300530	JUNCTION BOX, STAINLESS STEEL, ATTACHED TO STRUCTURE, 12" X 10" X 6"	EACH	4
81300550	JUNCTION BOX, STAINLESS STEEL, ATTACHED TO STRUCTURE, 12" X 12" X 6"	EACH	4
81400730	HANDHOLE, COMPOSITE CONCRETE	EACH	1
81603100	UNIT DUCT, 600V, 4-1C NO.6, 1/C NO.6 GROUND, (XLP-TYPE USE), 1 1/4" DIA. POLYETHYLENE	FOOT	2165
81702130	ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 1/C NO. 6	FOOT	1305
81702150	ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 1/C NO. 2	FOOT	680
82500350	LIGHTING CONTROLLER, BASE MOUNTED, 240VOLT, 100AMP	EACH	1
83600300	LIGHT POLE FOUNDATION, 30" DIAMETER	FOOT	130
84200500	REMOVAL OF LIGHTING UNIT, SALVAGE	EACH	11
84200804	REMOVAL OF POLE FOUNDATION	EACH	8
84500110	REMOVAL OF LIGHTING CONTROLLER	EACH	1
84500120	REMOVAL OF ELECTRIC SERVICE INSTALLATIOIN	EACH	1
84500130	REMOVAL OF LIGHTING CONTROLLER FOUNDATION	EACH	1
89502380	REMOVE EXISTING HANDHOLE	EACH	2
X8211000	UNDERPASS LUMINAIRE (SPECIAL)	EACH	8
XX008367	DECORATIVE LIGHTING UNIT, TYPE "D1"	EACH	6
XX008368	DECORATIVE LIGHTING UNIT, TYPE "D2"	EACH	6
XX008369	DECORATIVE LIGHTING UNIT, TYPE "D3"	EACH	4
Z0033028	MAINTENANCE OF LIGHTING SYSTEM	CAL MO	11

BAXTER & WOODMAN Consulting Engineers

DESIGNED - MWH	REVISED -7-14-14	
DRAWN - UKB	REVISED -5-16-14 PER IDOT REVIEW	
CHECKED - RWL	REVISED -5-30-14 PER IDOT REVIEW	
DATE - 03/14/14	FILE - 110511_PH2_SHT-SL-Diagram.dgn	

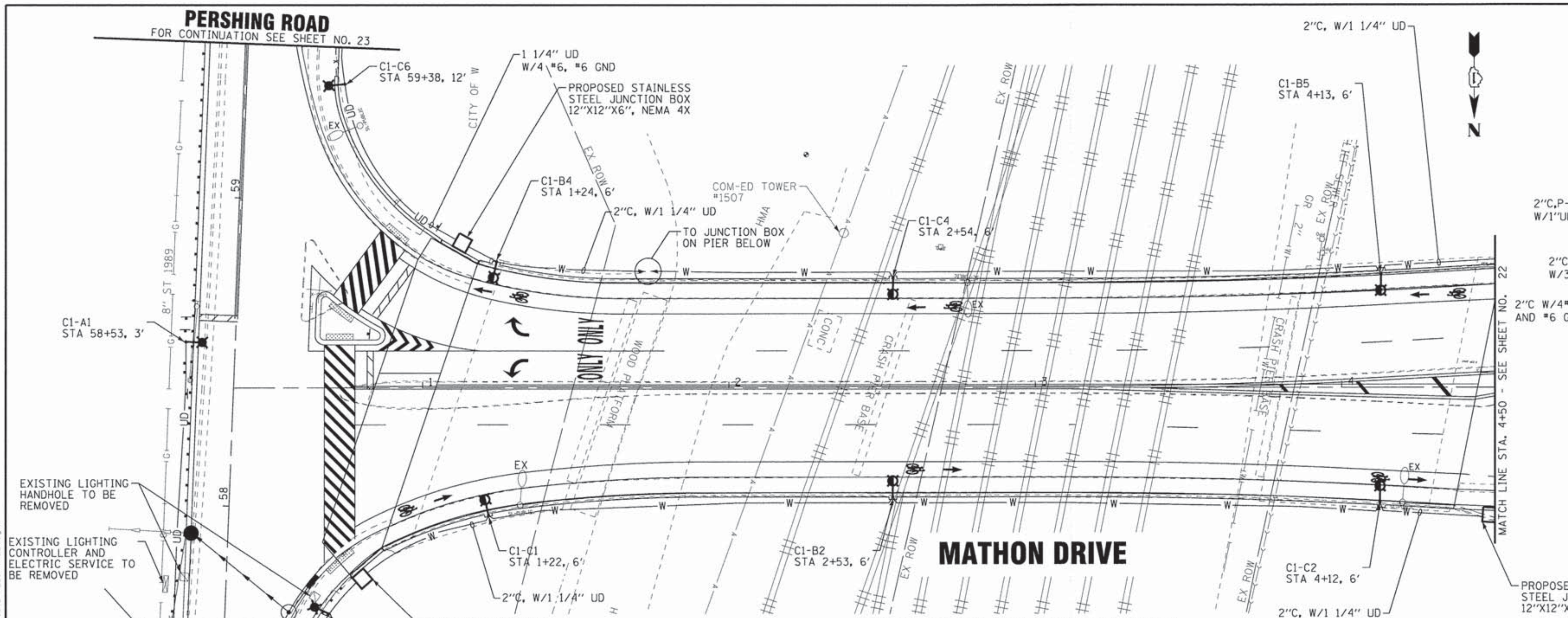
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

LIGHTING GENERAL NOTES, QUANTITIES AND ONE-LINE DIAGRAM

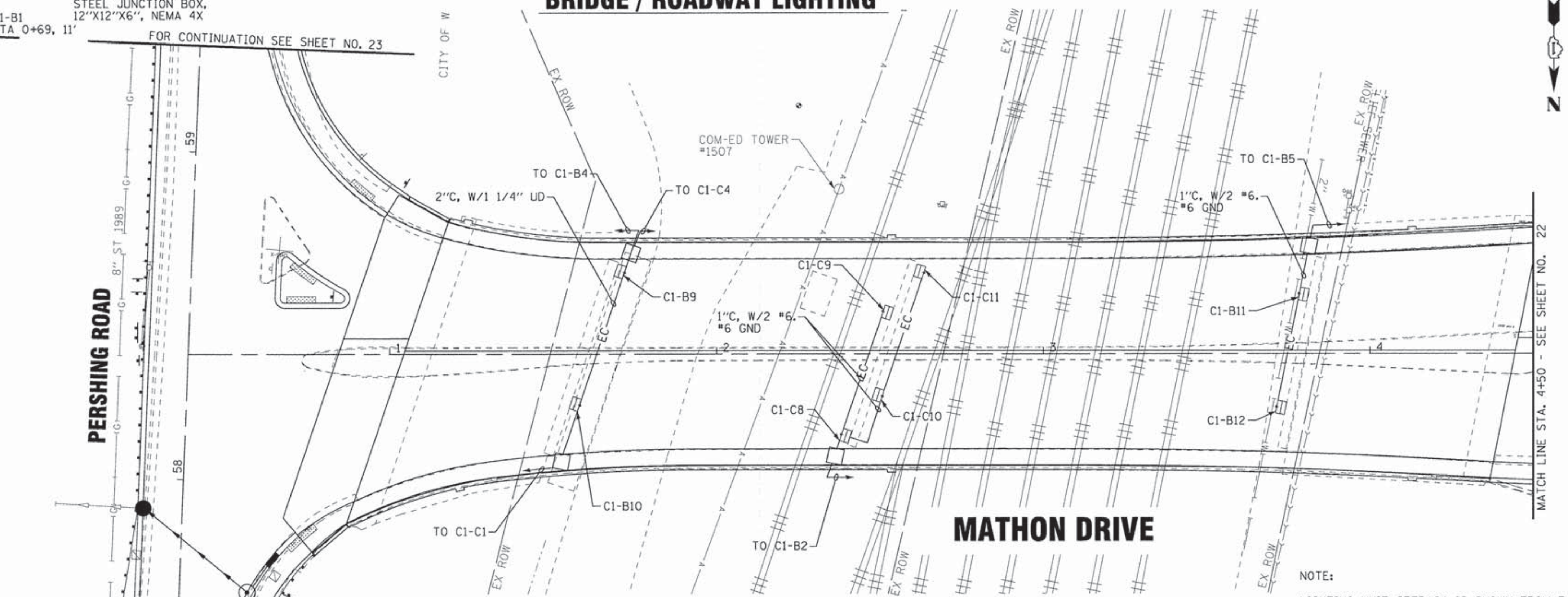
SCALE: 1"=50' | STA. | TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3719	12-00239-00-BR	LAKE	88	20
		CONTRACT NO. 61A57		

FED. ROAD DIST. NO. 1 | ILLINOIS | FED. AID PROJECT M-BHM-9003(952)



BRIDGE / ROADWAY LIGHTING



UNDERDECK LIGHTING

LEGEND

- EXISTING COM ED POWER POLE
- PROPOSED JUNCTION BOX
- EXISTING LIGHTING CONTROLLER TO BE REMOVED
- PROPOSED LIGHTING CONTROLLER "C1", 120/240V, 1Ø, 100 A
- EXISTING HANDHOLE
- PROPOSED HANDHOLE
- —U— 2" RGS CONDUIT, BURIED, WIRES AS NOTED
- —UD— 1 1/4" DUCT 4#6 & 1#6 GROUND OR AS NOTED
- 2"C,P-8' W/1"UD —PC— 2" RGS CONDUIT, PUSHED/BORED 8' LONG WITH 1" UNIT DUCT OR AS NOTED
- 2"C W/3#2 —EC— 2" PVC COATED RGS CONDUIT, EXPOSED/ATTACHED TO BRIDGE, WITH 3#2 OR AS NOTED
- 2"C W/4#6 AND #6 GND —W— 2" PVC CONDUIT, CONCEALED IN PARAPET WALL, W/4#6 AND #6 GROUND OR AS NOTED
- PROPOSED UNDERDECK LIGHTING, 175W, 120V, METAL HALIDE
- PROPOSED LIGHTING UNIT TYPE "D1", 86W, 240V, LED TYPE III, 30' M.H.
- PROPOSED LIGHTING UNIT TYPE "D2", 86W, 240V, LED TYPE III, 25' M.H.
- PROPOSED LIGHTING UNIT TYPE "D3", 282W, 240V, LED TYPE III, 35' M.H.
- EXISTING STREET LIGHT
- EX EXISTING STREET LIGHT TO BE REMOVED

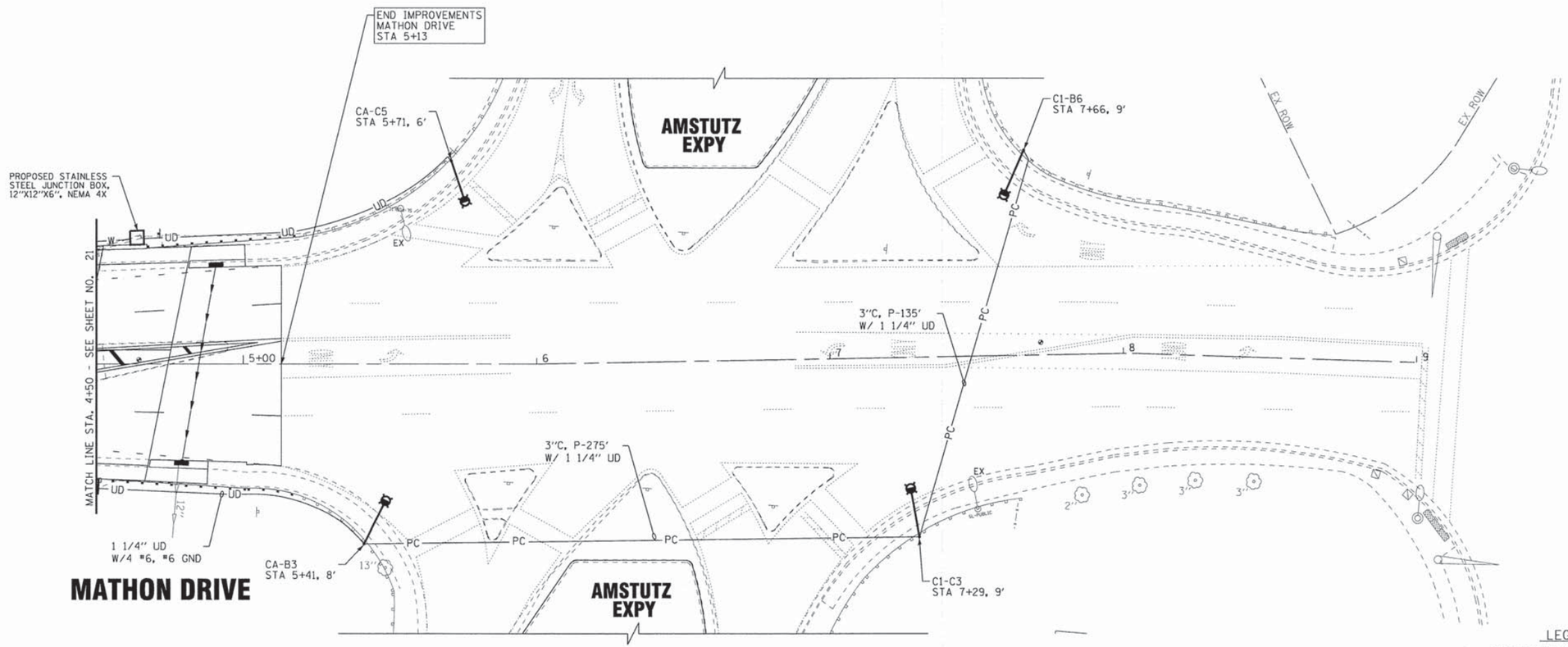
NOTE:

LIGHTING UNIT SETBACK IS SHOWN FROM FACE OF CURB TO CENTER OF POLE.

BAXTER & WOODMAN Consulting Engineers	DESIGNED - MWH	REVISED -7-14-14	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
	DRAWN - UKB	REVISED -5-16-14 PER IDOT REVIEW	
	CHECKED - RWL	REVISED 5-30-14 PER IDOT REVIEW	
	DATE - 03/14/14	FILE - 110511_PH2_SHT-SL1.dgn	

LIGHTING PLAN MATHON DRIVE		
SCALE: 1"=20'	STA.0+38.30	TO STA.4+50

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3719	12-00239-00-BR	LAKE	88	21
		CONTRACT NO. 61A57		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT M-BHM-9003(952)		



NOTE:

LIGHTING UNIT SETBACK IS SHOWN FROM FACE OF CURB TO CENTER OF POLE.

LEGEND

- EXISTING COM ED POWER POLE
- PROPOSED JUNCTION BOX
- EXISTING LIGHTING CONTROLLER TO BE REMOVED
- PROPOSED LIGHTING CONTROLLER "C1", 120/240V, 1Ø, 100 A
- EXISTING HANDHOLE
- PROPOSED HANDHOLE
- —U— 2" RGS CONDUIT, BURIED, WIRES AS NOTED
- —UD— 1 1/4" DUCT 4#6 & 1#6 GROUND OR AS NOTED
- 2"C,P-8' W/1"UD —PC— 2" RGS CONDUIT, PUSHED/BORED 8' LONG WITH 1" UNIT DUCT OR AS NOTED
- —EC— 2" PVC COATED RGS CONDUIT, EXPOSED/ATTACHED TO BRIDGE, WITH 3#2 OR AS NOTED
- 2"C W/3#2 —W— 2" PVC CONDUIT, CONCEALED IN PARAPET WALL, W/4#6 AND #6 GROUND OR AS NOTED
- 2"C W/4#6 AND #6 GND PROPOSED UNDERDECK LIGHTING, 175W, 120V, METAL HALIDE
- PROPOSED LIGHTING UNIT TYPE "D1", 86W, 240V, LED TYPE III, 30' M.H.
- PROPOSED LIGHTING UNIT TYPE "D2", 86W, 240V, LED TYPE III, 25' M.H.
- PROPOSED LIGHTING UNIT TYPE "D3", 282W, 240V, LED TYPE III, 35' M.H.
- EXISTING STREET LIGHT
- EX EXISTING STREET LIGHT TO BE REMOVED

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BAXTER & WOODMAN Consulting Engineers

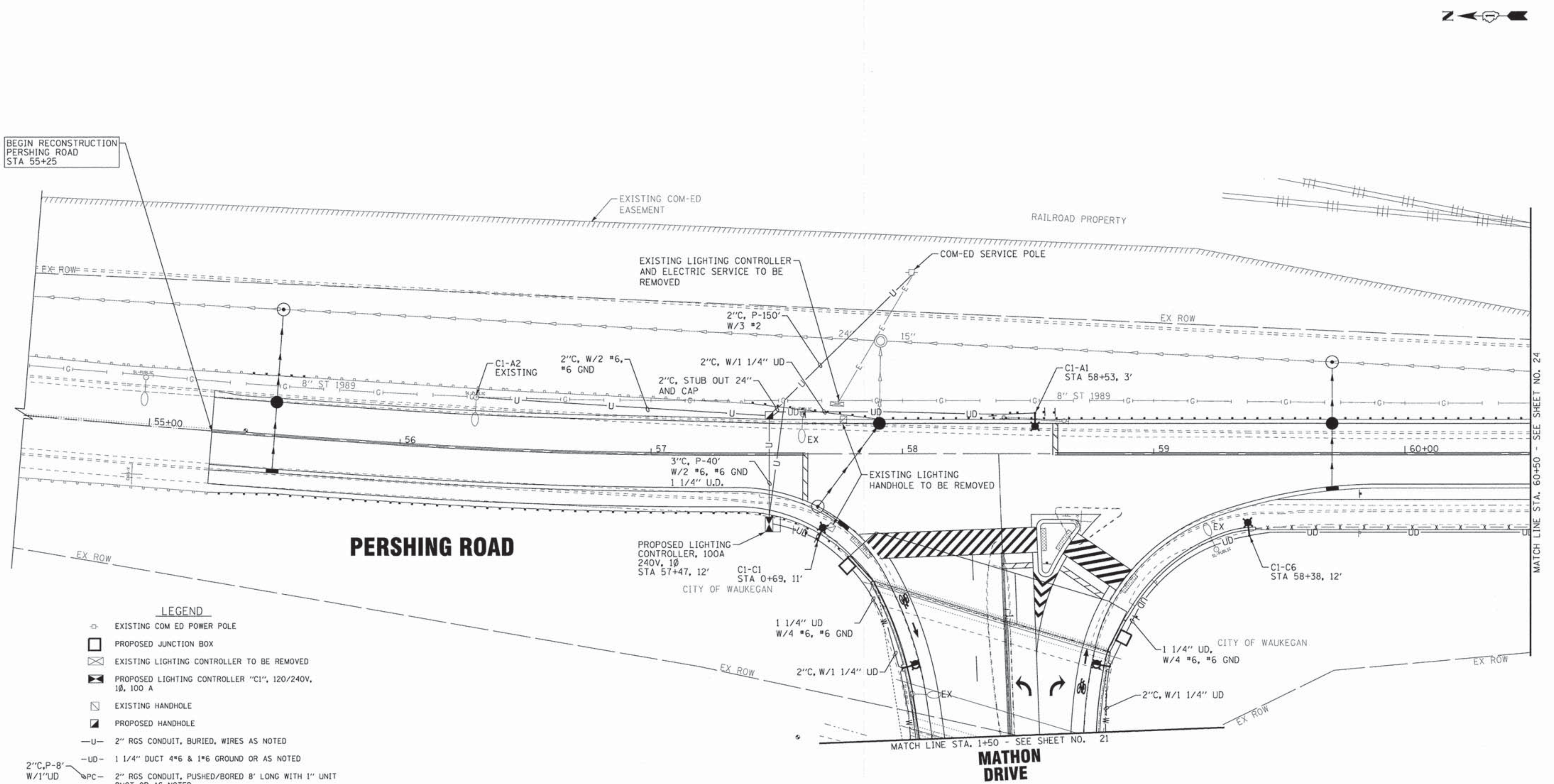
DESIGNED	MWH	REVISED	-7-14-14
DRAWN	UKB	REVISED	-5-16-14 PER IDOT REVIEW
CHECKED	RWL	REVISED	-5-30-14 PER IDOT REVIEW
DATE	03/14/14	FILE	110511_PH2_SHT-SL2.dgn

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

LIGHTING PLAN
MATHON DRIVE

SCALE: 1"=20' STA. 4+50 TO STA. 9+00

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3719	12-00239-00-BR	LAKE	88	22
		CONTRACT NO. 61A57		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT M-BHM-9003(952)		



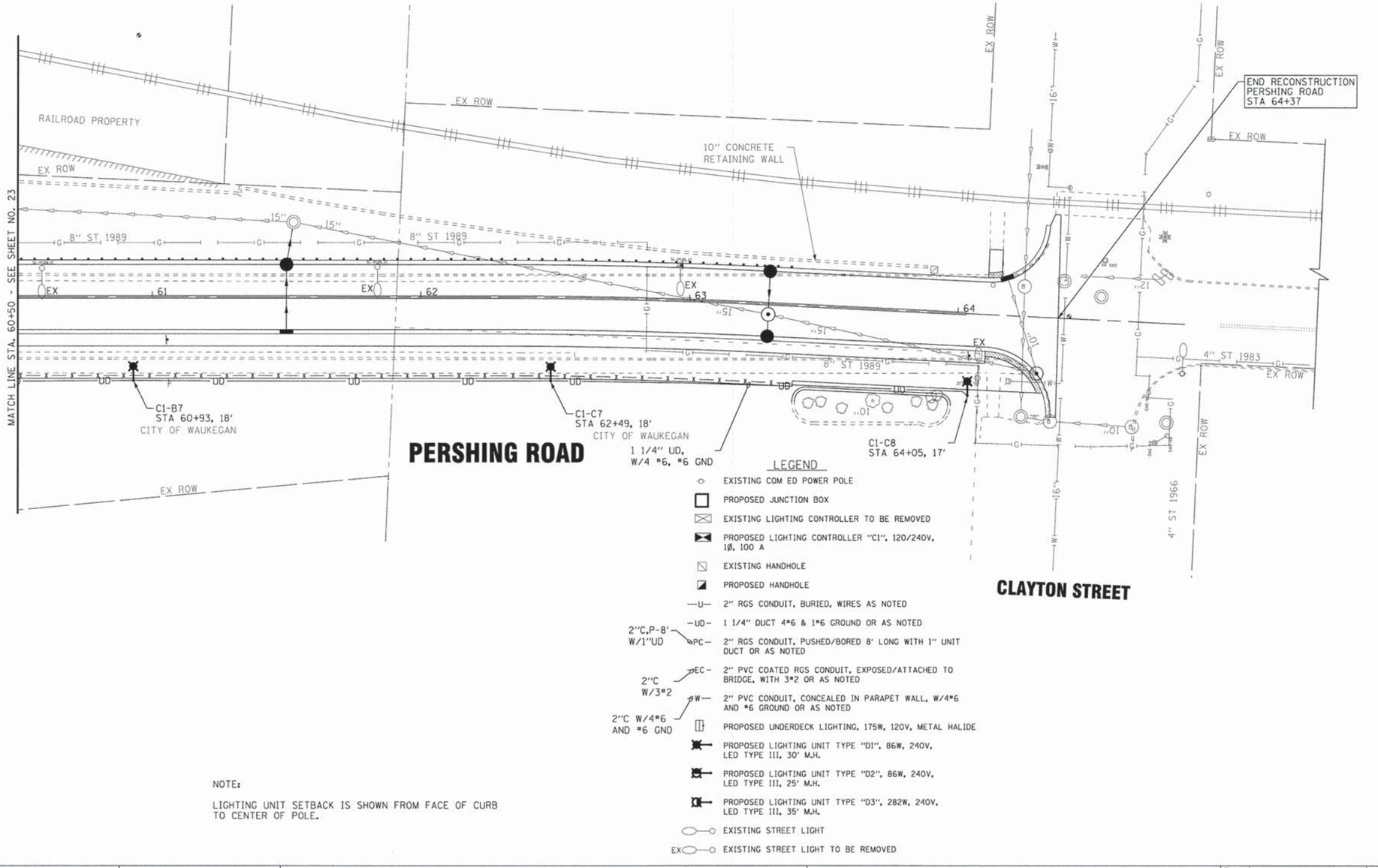
LEGEND

- EXISTING COM ED POWER POLE
- PROPOSED JUNCTION BOX
- EXISTING LIGHTING CONTROLLER TO BE REMOVED
- PROPOSED LIGHTING CONTROLLER "C1", 120/240V, 1Ø, 100 A
- EXISTING HANDHOLE
- PROPOSED HANDHOLE
- —U— 2" RGS CONDUIT, BURIED, WIRES AS NOTED
- —UD— 1 1/4" DUCT 4#6 & 1#6 GROUND OR AS NOTED
- 2"C,P-8' W/1"UD —PC— 2" RGS CONDUIT, PUSHED/BORED 8' LONG WITH 1" UNIT DUCT OR AS NOTED
- 2"C W/3#2 —EC— 2" PVC COATED RGS CONDUIT, EXPOSED/ATTACHED TO BRIDGE, WITH 3#2 OR AS NOTED
- 2"C W/4#6 AND #6 GND —W— 2" PVC CONDUIT, CONCEALED IN PARAPET WALL, W/4#6 AND #6 GROUND OR AS NOTED
- PROPOSED UNDERDECK LIGHTING, 175W, 120V, METAL HALIDE
- PROPOSED LIGHTING UNIT TYPE "D1", 86W, 240V, LED TYPE III, 30' M.H.
- PROPOSED LIGHTING UNIT TYPE "D2", 86W, 240V, LED TYPE III, 25' M.H.
- PROPOSED LIGHTING UNIT TYPE "D3", 282W, 240V, LED TYPE III, 35' M.H.
- EXISTING STREET LIGHT
- EX EXISTING STREET LIGHT TO BE REMOVED

NOTE:

LIGHTING UNIT SETBACK IS SHOWN FROM FACE OF CURB TO CENTER OF POLE.

BAXTER & WOODMAN Consulting Engineers	DESIGNED - MWH	REVISED - 7-14-14	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	LIGHTING PLAN PERSHING ROAD	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	DRAWN - UKB	REVISED - 5-16-14 PER IDOT REVIEW			3719	12-00239-00-BR	LAKE	88	23
	CHECKED - RWL	REVISED - 5-30-14 PER IDOT REVIEW			CONTRACT NO. 61A57				
	DATE - 03/14/14	FILE - 110511.PH2_SHT-SL3.dgn		SCALE: 1"=20' STA. 54+50 TO STA. 60+50	FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT M-BHM-9003(952)				



LEGEND

- EXISTING COM ED POWER POLE
- PROPOSED JUNCTION BOX
- EXISTING LIGHTING CONTROLLER TO BE REMOVED
- PROPOSED LIGHTING CONTROLLER "C1", 120/240V, 1Ø, 100 A
- EXISTING HANDHOLE
- PROPOSED HANDHOLE
- —U— 2" RGS CONDUIT, BURIED, WIRES AS NOTED
- —UD— 1 1/4" DUCT 4#6 & 1#6 GROUND OR AS NOTED
- 2"C,P-8' W/1"UD —PC— 2" RGS CONDUIT, PUSHED/BORED 8' LONG WITH 1" UNIT DUCT OR AS NOTED
- —EC— 2" PVC COATED RGS CONDUIT, EXPOSED/ATTACHED TO BRIDGE, WITH 3#2 OR AS NOTED (2"C W/3#2)
- —W— 2" PVC CONDUIT, CONCEALED IN PARAPET WALL, W/4#6 AND #6 GROUND OR AS NOTED (2"C W/4#6 AND #6 GND)
- PROPOSED UNDERDECK LIGHTING, 175W, 120V, METAL HALIDE
- PROPOSED LIGHTING UNIT TYPE "D1", 86W, 240V, LED TYPE III, 30' M.H.
- PROPOSED LIGHTING UNIT TYPE "D2", 86W, 240V, LED TYPE III, 25' M.H.
- PROPOSED LIGHTING UNIT TYPE "D3", 282W, 240V, LED TYPE III, 35' M.H.
- EXISTING STREET LIGHT
- EX EXISTING STREET LIGHT TO BE REMOVED

NOTE:

LIGHTING UNIT SETBACK IS SHOWN FROM FACE OF CURB TO CENTER OF POLE.

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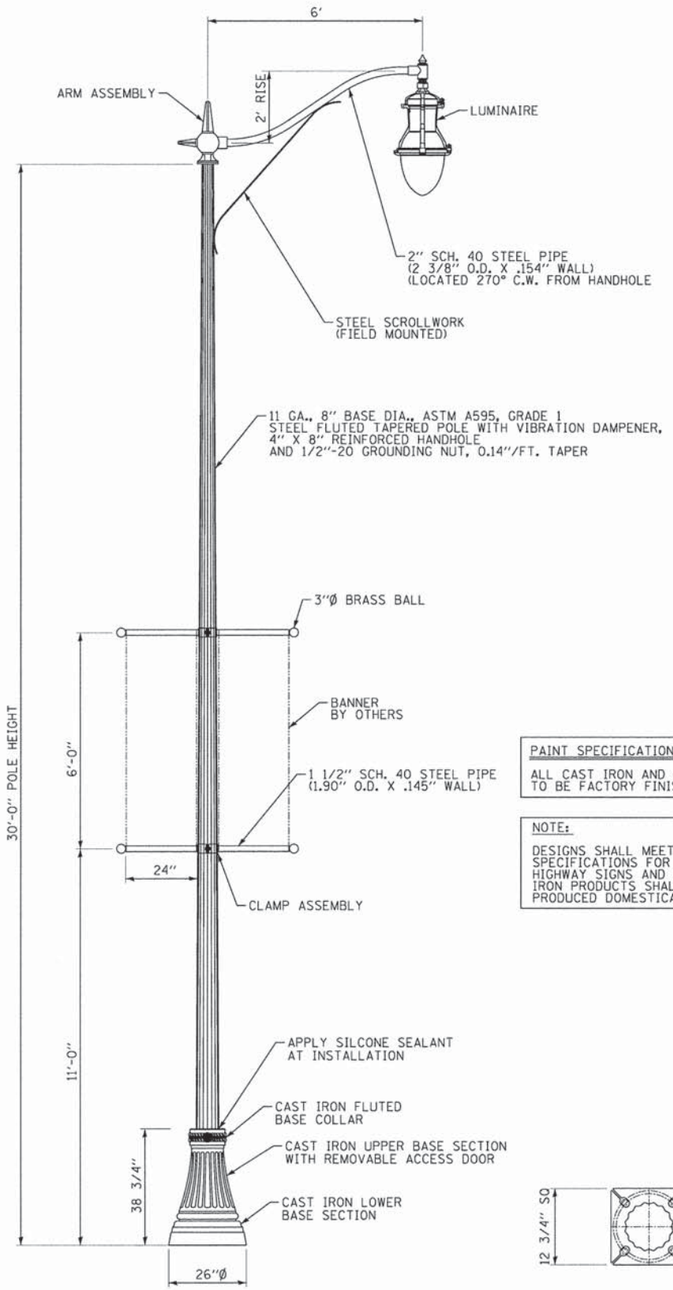
BAXTER & WOODMAN Consulting Engineers	DESIGNED - MWH	REVISED -7-14-14	
	DRAWN - UKB	REVISED -5-16-14 PER IDOT REVIEW	
	CHECKED - RWL	REVISED -5-30-14 PER IDOT REVIEW	
	DATE - 03/14/14	FILE - 110511_PH2_SHT-SL4.dgn	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

LIGHTING PLAN
PERSHING ROAD

SCALE: 1"=20' | STA. 60+50 | TO STA. 64+50

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3719	12-00239-00-BR	LAKE	88	24
		CONTRACT NO. 61A57		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT M-BHM-9003(952)		



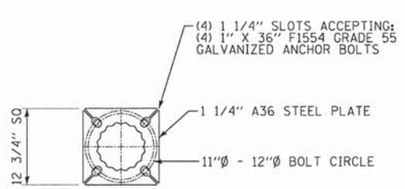
LIGHTING UNIT, TYPE "D1"

PAINT SPECIFICATION

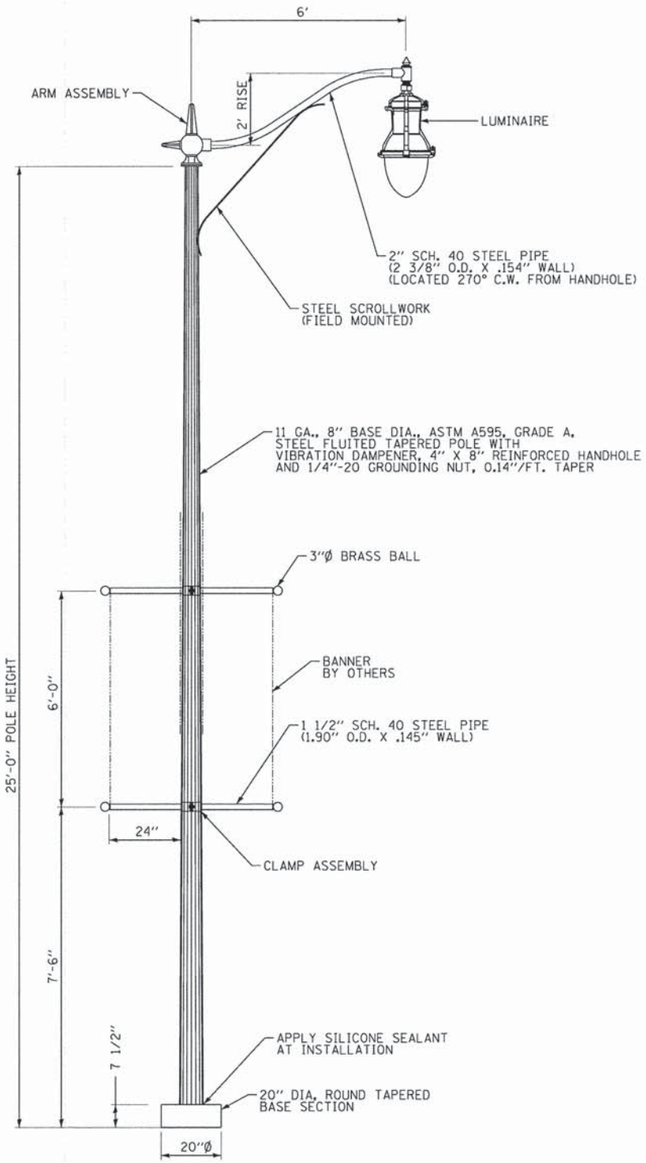
ALL CAST IRON AND STEEL LIGHT POLE PARTS ARE TO BE FACTORY FINISH PAINTED "GLOSS BLACK".

NOTE:

DESIGNS SHALL MEET CURRENT AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS AND LUMINAIRES. ALL STEEL AND IRON PRODUCTS SHALL BE MANUFACTURED AND PRODUCED DOMESTICALLY.



BASE PLATE DETAIL



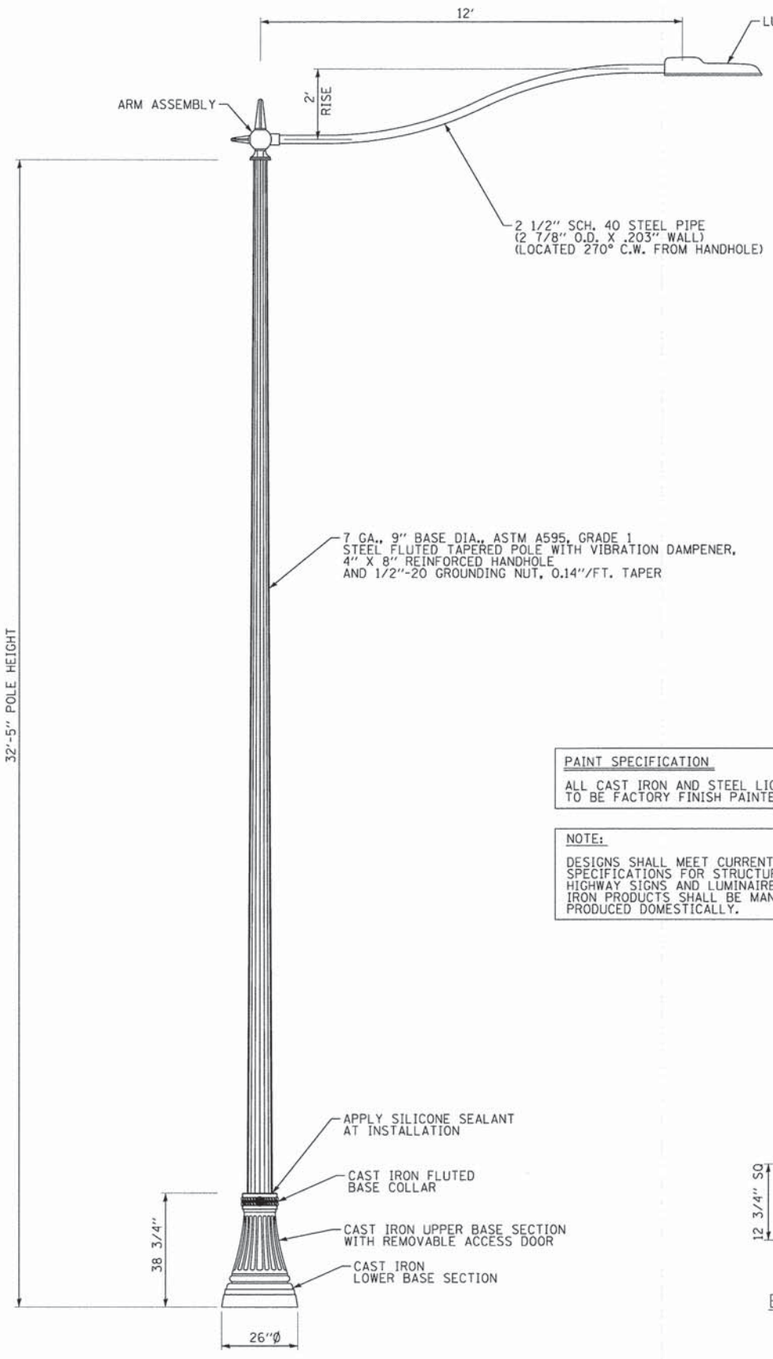
LIGHTING UNIT, TYPE "D2"
(BRIDGE/PARAPET ONLY)

BAXTER & WOODMAN Consulting Engineers	DESIGNED - MWH	REVISED -5-8-14 PER IDOT REVIEW	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
	DRAWN - UKB	REVISED -5-30-14 PER IDOT REVIEW	
	CHECKED - RWL	REVISED -	
	DATE - 03/14/14	FILE - 110511_PH2_SHT-SL-lightpole-Dets.dgn	

LIGHTING DETAILS

SCALE: NONE | STA. | TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3719	12-00239-00-BR	LAKE	88	25
		CONTRACT NO. 61A57		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT M-BHM-9003(952)		



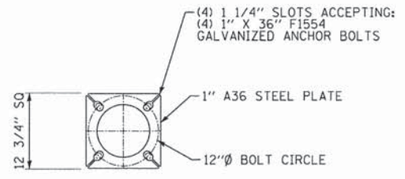
LIGHTING UNIT, TYPE "D3"

PAINT SPECIFICATION

ALL CAST IRON AND STEEL LIGHT POLE PARTS ARE TO BE FACTORY FINISH PAINTED "GLOSS BLACK".

NOTE:

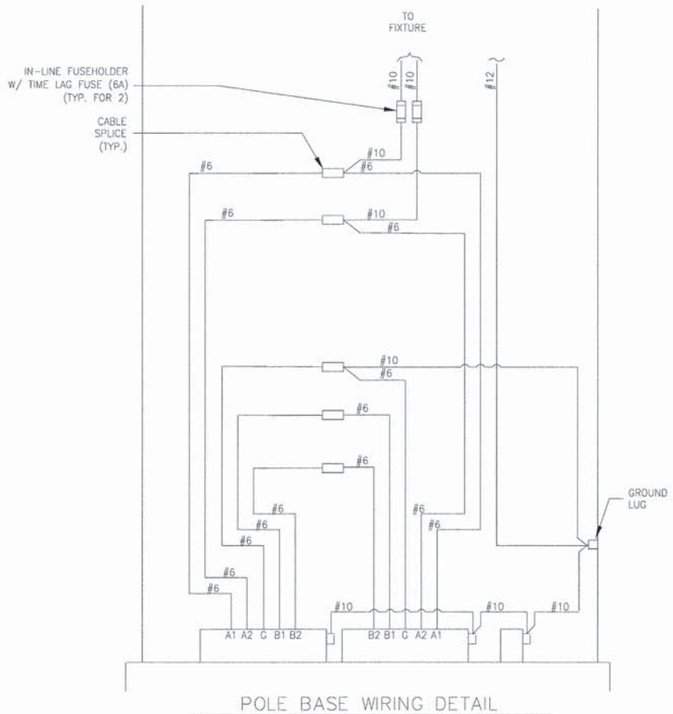
DESIGNS SHALL MEET CURRENT AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS AND LUMINAIRES. ALL STEEL AND IRON PRODUCTS SHALL BE MANUFACTURED AND PRODUCED DOMESTICALLY.



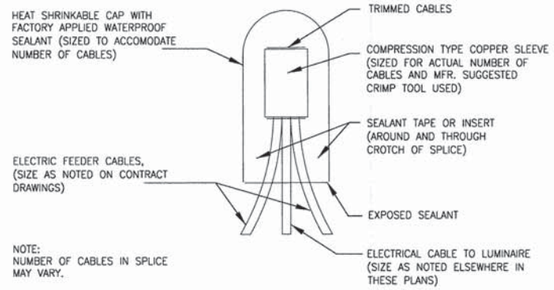
BASE PLATE DETAIL

BAXTER & WOODMAN Consulting Engineers	DESIGNED - MWH	REVISED -7-14-14	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	LIGHTING DETAILS	
	DRAWN - UKB	REVISED -			
	CHECKED - RWL	REVISED -			
	DATE - 03/14/14	FILE - 110511_PH2_SHT-SL-lightpole-Dets.dgn		SCALE: NONE	STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3719	12-00239-00-BR	LAKE	88	25A
		CONTRACT NO. 61A57		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT M-BHM-9003(952)		



POLE BASE WIRING DETAIL

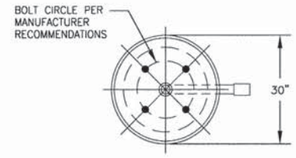


SPLICING ELECTRICAL CABLES BASIC MATERIALS AND METHODS

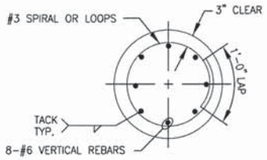
NO SCALE

NOTES:

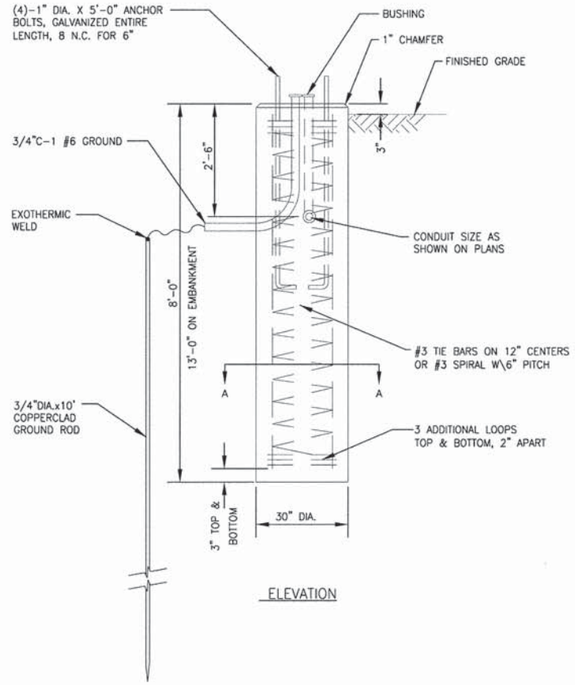
1. THE ANCHOR RODS AND RACEWAYS SHALL BE PROPERLY CENTERED AND SECURED IN PLACE BEFORE THE CONCRETE IS PLACED.
2. CONCRETE SHALL BE 3500 PSI AT 14 DAYS (CLASS SI).
3. THE HOLE FOR THE FOUNDATION SHALL BE MADE WITH AN AUGER OF THE SAME DIAMETER AS THE FOUNDATION. IF SOIL CONDITIONS REQUIRE THE USE OF A LINER TO FORM THE HOLE, THE LINER SHALL BE WITHDRAWN AS THE CONCRETE IS DEPOSITED.
4. THE TOP OF THE FOUNDATION SHALL BE CONSTRUCTED LEVEL. A LINER OR FORM SHALL BE USED TO PRODUCE A UNIFORM SMOOTH SIDE TO THE TOP OF THE FOUNDATION. FOUNDATION TOP SHALL BE CHAMFERED 1 INCH.
5. CABLE TRENCHES AND FOUNDATIONS SHALL BE BACKFILLED AND COMPACTED, AND CONCRETE CURED ACCORDING TO APPLICABLE STANDARDS BEFORE LIGHT POLES MAY BE INSTALLED.
6. THE ANCHOR ROD SHALL BE A HOOK ROD TYPE. COLD BENDING OF THE ANCHOR ROD WILL NOT BE ALLOWED. THE ANCHOR ROD SHALL BE THREADED A MINIMUM OF 6 INCHES WITH A MINIMUM OF 3" OF THREADED ANCHOR ROD EMBEDDED IN THE FOUNDATION AND PROJECT A MINIMUM OF 2 3/4" ABOVE THE TOP OF THE FOUNDATION. IF BREAKAWAY COUPLINGS ARE SPECIFIED THE CONTRACTOR SHALL CAREFULLY COORDINATE THE ANCHOR ROD PROJECTION WITH THE INSTALLATION REQUIREMENTS OF THE BREAKAWAY COUPLINGS.
7. RACEWAYS SHALL PROJECT 1" ABOVE THE TOP OF THE FOUNDATION.



TOP VIEW



SECTION A-A



ELEVATION

FOUNDATION, LIGHTING UNIT TYPE "D1" & "D3"

NO SCALE

NOTE:

MINIMUM DEPTH OF FOUNDATIONS INSTALLED ON EMBANKMENTS SHALL BE INCREASED BY (2) TWO TIMES THE FOUNDATION DIAMETER AS NOTED.

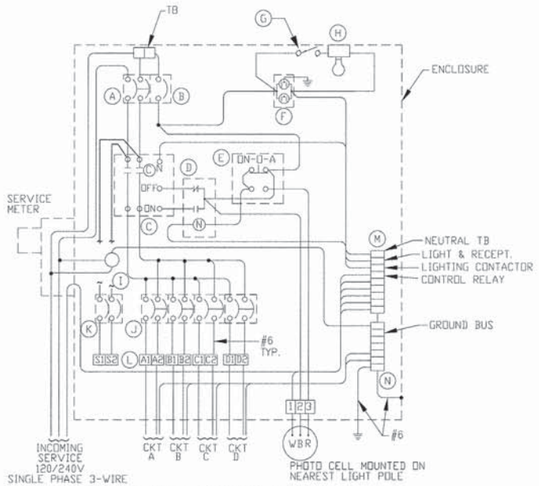
BAXTER & WOODMAN Consulting Engineers	DESIGNED - MWH	REVISED -5-8-14 PER IDOT REVIEW	
	DRAWN - UKB	REVISED -5-30-14 PER IDOT REVIEW	
	CHECKED - RWL	REVISED -7-14-14	
	DATE - 03/14/14	FILE - 110511_PH2_SHT-SL5-Fndation-Dets.dgn	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

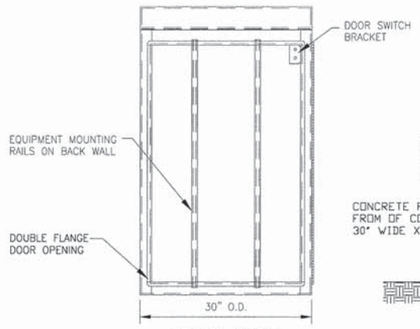
LIGHTING DETAILS

SCALE: NONE | STA. | TO STA.

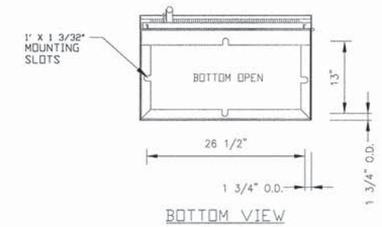
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3719	12-00239-00-BR	LAKE	88	26
		CONTRACT NO. 61A57		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT M-BHM-9003(952)		



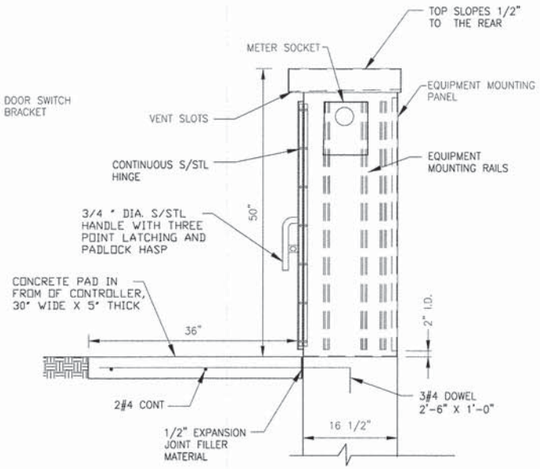
LIGHTING CONTROLLER Nº1
WIRING DIAGRAM



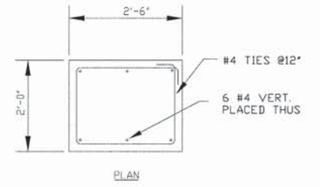
FRONT VIEW
DOOR REMOVED



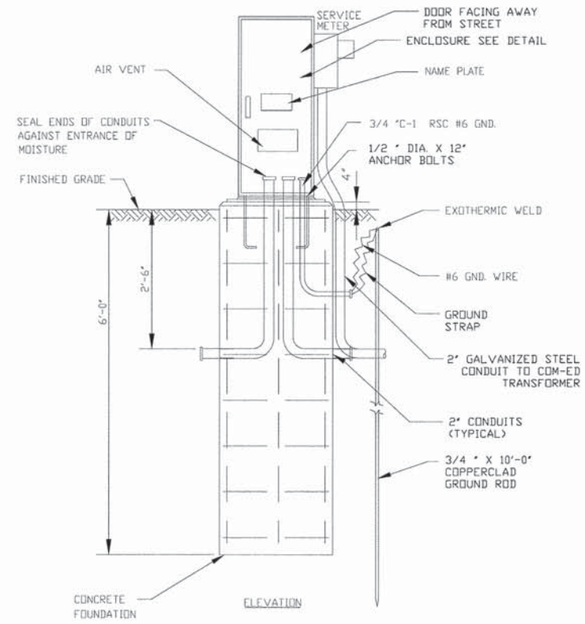
BOTTOM VIEW
MOUNTING PATTERN



RIGHT SIDE VIEW



PLAN



ELEVATION

LIGHTING CONTROLLER AND FOUNDATION DETAIL
NO SCALE

NOTE:

INSTALL (2) SPARE 2" CONDUITS STUBBED OUT AND CAPPED 18" BEYOND FOUNDATION.

ITEM	QTY.	DESCRIPTION
A	1	MAIN CIRCUIT BREAKER, MOLDED CASE, THERMAL MAGNETIC, 2-POLE, 240 V. SINGLE-PHASE, 100 A., BOLT-ON TYPE,TRIP INTERUPTING RATING OF 22,000 RMS SYMMETICAL AMPERES AT 240 V.
B	1	CONTROL CIRCUIT BREAKER, MOLDED CASE, THERMAL MAGNETIC, SINGLE-POLE, 120 V. SINGLE PHASE 20 A. BOLT-ON TYPE, TRIP INTERUPTING RATING OF 14,000 RMS SYMMETICAL AMPERES AT 120 V.
C	1	LIGHTING CONTACTOR MECHANICALLY HELD, CUTLER HAMMER A202K3B*M 100 A. 2-POLE, 600 V. WITH 120 COIL
D	1	CONTROL RELAY CUTLER HAMMER D3PR2 RATED 12 A. AT 120 VAC
E	1	ON-OFF- AUTO 3-POSITION SELECTOR SWITCH GE CR104P HEAVY DUTY SWITCH, RATED FOR 10 A. AT 600 VAC.
F	1	GFCI RECEPTACLE, 120 V., 20 A. SPEC. GRADE, NEMA CONFIG. 5-20R
G	1	SPDT MOMENTARY NORMALLY OPEN, NORMALLY CLOSED PUSHBUTTON SWITCH CUTLER HAMMER 84F1063 RATED 15 A. AT 120 V.
H	1	60 WATT LIGHT FIXTURE, VAPOR TIGHT, WITH GLOBE, GUARD AND MOUNTING BOX.
I	1	SECONDARY SURGE ARRESTER SQUARE D SDSA1175, 175 VAC PHASE-TO-GROUND MAXIMUM
J	4	BRANCH CIRCUIT BREAKER, MOLDED CASE, THERMAL MAGNETIC, 2-POLE, 240 V. SINGLE-PHASE, 30A. TRIP INTERRUPTING RATING 10,000 RMS SYMMETRICAL AMPERES AT 240 V.
K	2	BRANCH CIRCUIT BREAKER, MOLDED CASE, THERMAL MAGNETIC, 1-POLE, 120 V. SINGLE-PHASE, 20A. TRIP INTERRUPTING RATING 10,000 RMS SYMMETRICAL AMPERES.
L	1	TERMINAL BLOCK RATED 600 V., 85 A.
M	1	COPPER NEUTRAL BUS
N	1	COPPER GROUND BUS

NOTES:

1. CABINET SHALL BE FABRICATED FROM 0.125-INCH SHEET ALUMINUM #3003H14, FORMED AND ARC WELDED ASSEMBLY WITH NEMA 3R RATING.
2. ALL SCREWS AND HARDWARE SHALL BE PLATED, GALVINIZED, OR MADE OF BRASS, ALUMINUM OR STAINLESS STEEL.
3. NAME PLATE SHALL HAVE ENGRAVED 0.75-INCH HIGH LETTERS FILLED IN BLACK: "STREET LIGHTING".
4. CABINET SHALL BE PRIMED AND PAINTED AS SPECIFIED.
5. ELECTRIC UTILITY METER BOX SHALL BE MOUNTED ON THE SIDE OF CONTROL CABINET AS SHOWN ON THE PANEL LAYOUT DIAGRAM.
6. THE COMPLETED CONTROLLER SHALL BE U.L. LISTED AS AN INDUSTRIAL CONTROL PANEL UNDER UL508.
7. METAL MOUNTING PANEL SHALL BE #10 GAUGE GALVINIZED SHEET STEEL FLANGED BACK 0.75-INCHES I.D. ON 4 SIDES.
8. CIRCUIT BREAKERS AND CONTACTORS AND OTHER COMPONENTS SHALL BE MOUNTED ON 0.125-INCH THICK GLASTIC INSULATION BACK PANEL.
9. ALL DEVICES SHALL BE FRONT REMOVABLE.
10. BUS BAR SHALL HAVE 22 LUG TERMINALS SIZED TO ACCOMODATE REQUIRED WIRE SIZES. NEUTRAL BUS SHALL BE PAINTED WHITE. GROUND BUS SHALL BE PAINTED GREEN.
11. ALL LUGS SHALL BE COPPER SCREWS AND CONNNECTORS, SPRING HELD.
12. ALL WIRING TERMINATIONS SHALL BE RATED NOT LESS THAN 75 DEGREE CENTIGRADE.
13. ALL CONTROL WIRING SHALL BE 600V MACHINE TOOL WIRE TYPE MTW.
14. ALL POWER WIRING SHALL BE 600V TYPE RHH/RHW.
15. A LAMINATED COPY OF THE CIRCUIT SCHEMATIC DIAGRAM SHALL BE ATTACHED TO THE INSIDE OF THE CONTROLLER.
16. ALL 120 VOLT SYSTEM AND ALL CONTROL WIRING SHALL BE #12 AWG STRANDED UNLESS OTHERWISE INDICATED.
17. ALL WIRING SHALL BE NEATLY DRESSED AND SUPPORTED.

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BAXTER & WOODMAN Consulting Engineers	DESIGNED - MWH	REVISED -5-8-14 PER IDOT REVIEW	
	DRAWN - UKB	REVISED -5-16-14 PER IDOT REVIEW	
	CHECKED - RWL	REVISED -7-14-14	
	DATE - 03/14/14	FILE - 110511_PH2_SHT-SL-Controller-Dets.dgn	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

LIGHTING DETAILS

SCALE: NONE | STA. | TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3719	12-00239-00-BR	LAKE	88	27
		CONTRACT NO. 61A57		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT M-BHM-9003(952)		

CONDUIT EXPANSION DEFLECTION COUPLING NOTES

1. THE CONTRACTOR SHALL INSTALL A CONDUIT EXPANSION/DEFLECTION COUPLING AT THE JOINTS IN THE CONCRETE PARAPET ON THE BRIDGE CAPABLE OF ACCEPTING THE LONGITUDINAL MOVEMENT. ALL METALIC PARTS OF THE COUPLING SHALL BE MADE OF STAINLESS STEEL OR AS APPROVED BY THE ENGINEER. ANY NON-STAINLESS METAL SHALL BE HOT DIP GALVANIZED AND COATED TO PREVENT REACTION WITH THE CONCRETE. THE COST OF THE COUPLING SHALL BE PART OF AND INCIDENTAL TO THE CONDUIT SYSTEM.

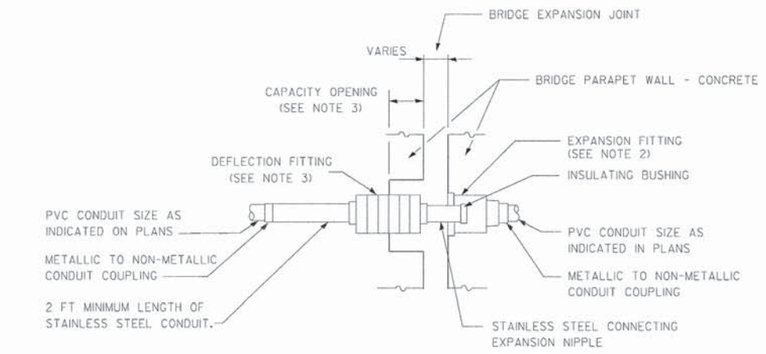
2. THE BARREL IN THE EXPANSION FITTING SHALL BE FULLY EMBEDDED IN THE CONCRETE ON ONE SIDE OF THE EXPANSION JOINT. ONE HALF THE LENGTH OF THE DEFLECTION FITTING SHALL BE EMBEDDED IN THE CONCRETE ON THE OTHER SIDE OF THE COUPLING.

3. A CAVITY OPENING 3" LARGER IN DIAMETER THAN THE DEFLECTION FITTING SHALL BE PROVIDED IN THE CONCRETE TO ENSURE PROPER PERFORMANCE OF THE COUPLING.

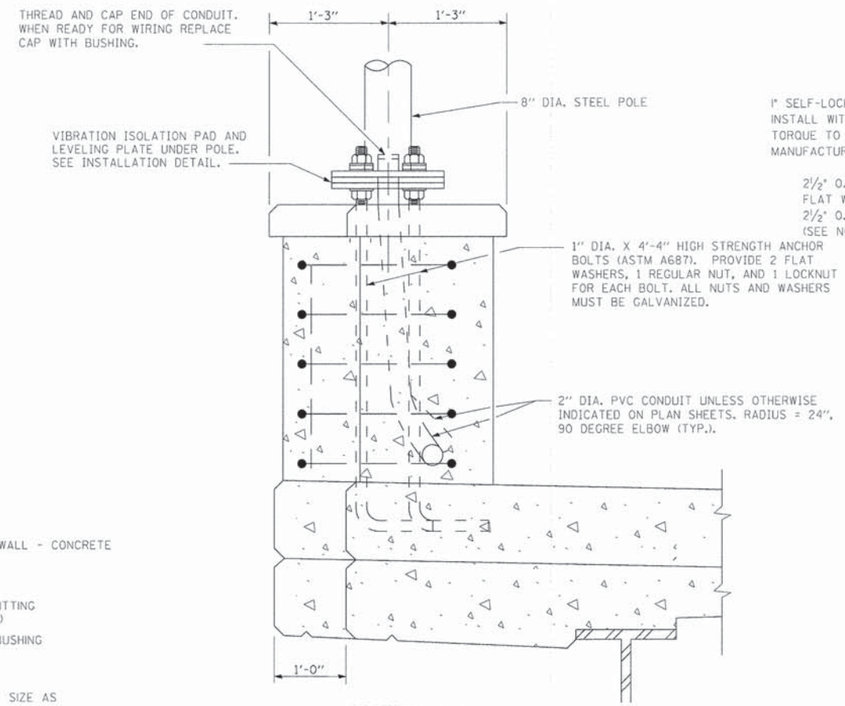
4. CAREFUL ATTENTION TO JOINT MOVEMENT OVER A RANGE OF TEMPERATURES SHALL BE COORDINATED WITH THE SELECTION AND INSTALLATION OF THE COUPLING TO ENSURE THE RANGE OF MOVEMENT OF THE COUPLING IS NOT EXCEEDED AT TEMPERATURE EXTREMES.

5. ALL MANUFACTURER'S INSTALLATION INSTRUCTIONS SHALL BE CAREFULLY FOLLOWED TO ENSURE OPTIMUM PERFORMANCE OF THE EXPANSION/DEFLECTION COUPLING.

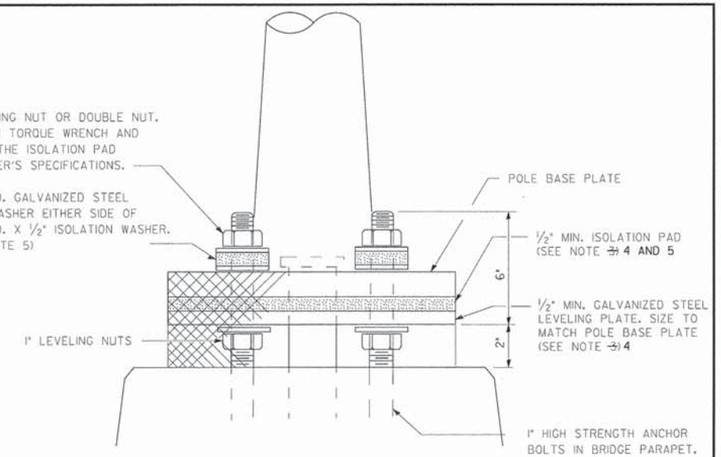
6. THE CONTRACTOR SHALL INSTALL COUPLINGS AT ALL BRIDGE EXPANSION JOINTS AND SHALL BE RESPONSIBLE TO DETERMINE THE PROPER NUMBER OF COUPLINGS REQUIRED.



CONDUIT EXPANSION/
DEFLECTION COUPLING DETAIL



SECTION A-A



POLE MOUNTED ON BRIDGE PARAPET
(INSTALLATION DETAIL)

PARAPET MOUNTED LIGHT POLE NOTES

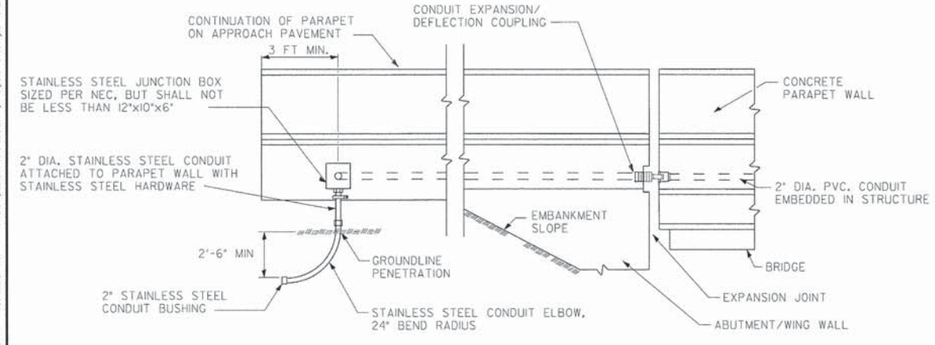
1. THE OUTLINE OF THE POLE LEVELING PLATE AND VIBRATION ISOLATION PAD SHALL MATCH THAT OF THE POLE BASE PLATE.

2. THE COST OF ANCHOR BOLTS, AND FOUNDATION IS INCLUDED WITH CONCRETE SUPERSTRUCTURE. SEE BRIDGE PLANS.

3. ANCHOR BOLTS SHALL BE THREADED A MINIMUM OF 6 INCHES WITH A MINIMUM OF 3" OF THREADED ANCHOR BOLTS EMBEDDED IN THE FOUNDATION AND PROJECT A MINIMUM OF 2 3/4" ABOVE THE TOP OF THE FOUNDATION.

4. THE VIBRATION ISOLATION PAD AND LEVELING PLATE SHALL MATCH THE FOOTPRINT OF THE POLE BASE PLATE.

5. THICKNESS OF ISOLATION PAD AND WASHERS SHALL BE ACCORDING TO THE ISOLATION PAD MANUFACTURER'S RECOMMENDATIONS BASED UPON POLE HEIGHT AND LOADING.



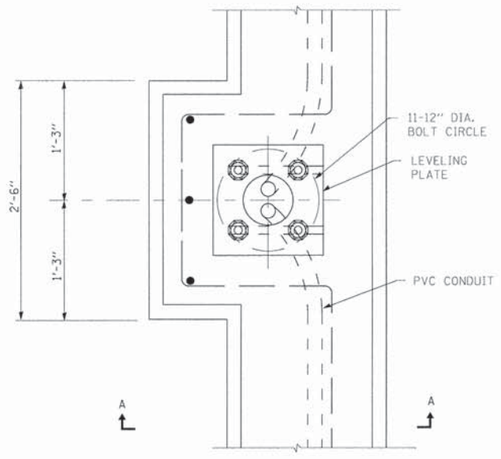
CONDUIT AT PARAPET DETAIL

CONDUIT AT PARAPET NOTES

1. STAINLESS STEEL CONDUIT, COUPLINGS, AND ELBOWS SHALL BE ACCORDING TO SECTION 810 OF THE STANDARD SPECIFICATIONS, AS APPLICABLE, SHALL BE TYPE 304 OR TYPE 316, AND SHALL BE MANUFACTURED ACCORDING TO UL STANDARD 6A AND ANSI STANDARD C 80.1.

2. CONDUIT FITTINGS SHALL BE THE THREADED TYPE, SHALL BE TYPE 304 OR TYPE 316 STAINLESS STEEL, AND SHALL BE MANUFACTURED ACCORDING TO UL STANDARD 514B.

3. ALL STAINLESS STEEL AND LIQUID TIGHT FLEXIBLE NON-METALLIC CONDUIT, INCLUDING ALL FITTINGS, BUSHINGS, COUPLINGS, AND ELBOWS SHALL BE INCLUDED IN THE COST OF THE "JUNCTION BOX, STAINLESS STEEL, ATTACHED TO STRUCTURE, 12" X 12" X 6" " PAY ITEM.



PLAN

LIGHT POLE MOUNTED
ON CONCRETE PARAPET

DESIGNED	- MWH	REVISED	-5-8-14 PER IDOT REVIEW
DRAWN	- UKB	REVISED	-5-16-14 PER IDOT REVIEW
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DATE	- 03/14/14	FILE	- 110511_PH2_SHT-SL-Controller-Dets.dgn

BAXTER & WOODMAN Consulting Engineers

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

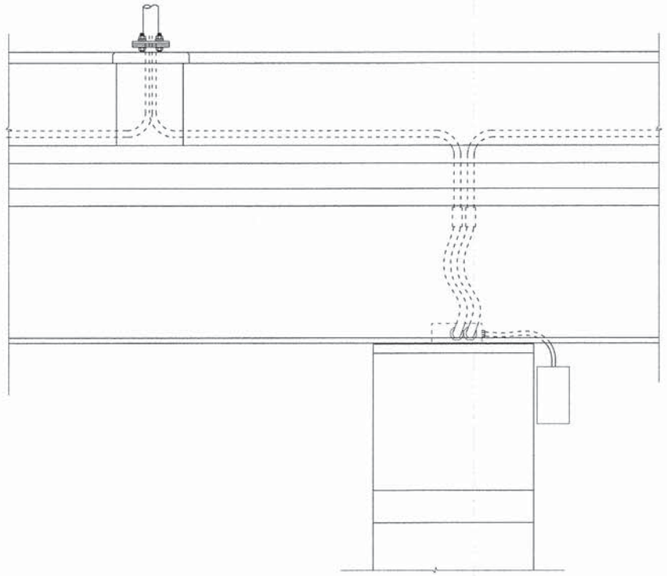
LIGHTING DETAILS

SCALE: NONE STA. TO STA.

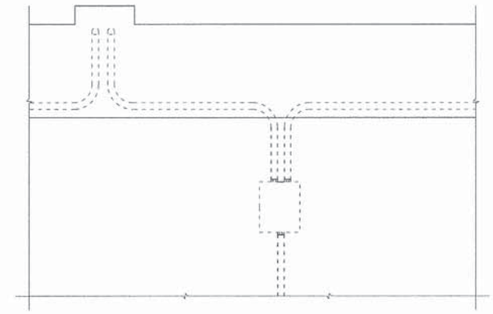
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3719	12-00239-00-BR	LAKE	88	28
		CONTRACT NO. 61A57		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT M-BHM-9003(952)		

UNDERPASS LIGHTING NOTES:

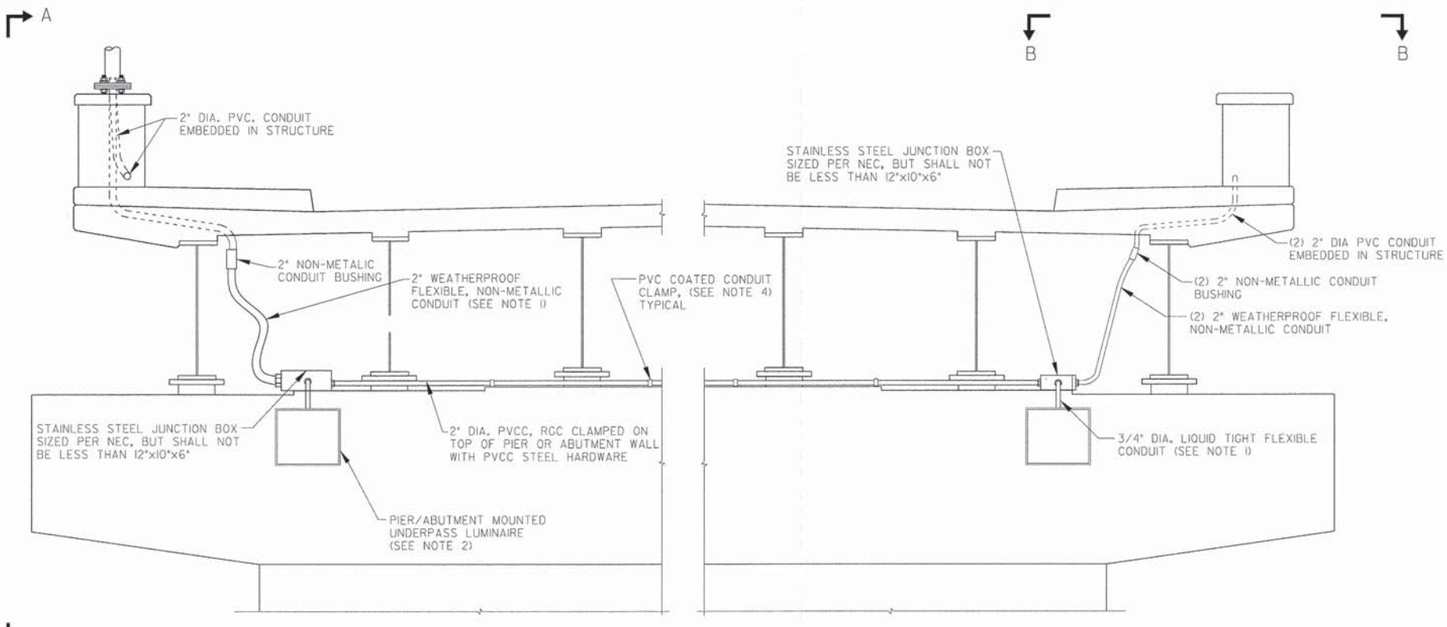
1. LIQUID TIGHT FLEXIBLE METAL CONDUIT, MAXIMUM LENGTH 6'-0", TYPICAL FOR EACH INSTANCE AS SHOWN. PROVIDE PVC COATED RIGID GALVANIZED STEEL CONDUIT AS REQUIRED NOT TO EXCEED 6'-0" OF FLEXIBLE LIQUID TIGHT METAL CONDUIT. LIQUID TIGHT FLEXIBLE METAL CONDUIT WILL BE INCLUDED IN THE COST OF THE CONDUIT ATTACHED TO STRUCTURE, OF THE CORRESPONDING DIA., GALVANIZED STEEL, PVC COATED PAY ITEM EXCEPT THAT THE COST OF THE 3/4 " DIA. RIGID STEEL CONDUIT AND 3/4 " DIA. FLEXIBLE CONDUIT SHALL BE INCLUDED IN THE LUMINAIRE INSTALLATION.
2. UNDERPASS LUMINAIRE MOUNTED TO FACE OF PIER OR ABUTMENT WALL. MOUNTING HEIGHT OF 1" BELOW THE TOP OF PIER OR ABUTMENT WALL TYPICAL FOR ALL PIER/ABUTMENT MOUNTED UNDERPASS LUMINAIRES UNLESS OTHERWISE NOTED.
3. EXPANSION ANCHOR, POWDER ACTUATED FASTENERS WILL NOT BE ALLOWED. EXPANSION ANCHOR MUST BE SIZED IN ACCORDANCE WITH MANUFACTURERS REQUIREMENTS.
4. SECURE THE CONDUIT WITH PVC COATED CONDUIT CLAMPS OR CONDUIT BEAM CLAMPS AS SHOWN AT 5'-0" INTERVALS FOR LATERALS AND WITHIN 2'-0" MAXIMUM FROM ANY JUNCTION BOX, FLEXIBLE CONDUIT, OR CHANGE IN DIRECTION. ALL PVC COATED CONDUIT CLAMPS OR BEAM CLAMPS SHALL BE INCLUDED WITH THE COST OF THE "CONDUIT ATTACHED TO STRUCTURE, OF THE CORRESPONDING DIA., GALVANIZED STEEL, PVC COATED" PAY ITEM.
5. ALL CONDUIT ATTACHED TO STRUCTURE SHALL BE PVC COATED RIGID STEEL CONDUIT (PVCC RGC) TYPICAL.



SIDEVIEW A-A



TOP VIEW B-B



UNDERPASS LIGHTING DETAIL PIER 1

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BAXTER & WOODMAN Consulting Engineers

DESIGNED - MWH	REVISED -5-8-14 PER IDOT REVIEW	
DRAWN - UKB	REVISED -5-16-14 PER IDOT REVIEW	
CHECKED - RWL	REVISED -7-14-14	
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

LIGHTING DETAILS

SCALE: NONE STA. TO STA.

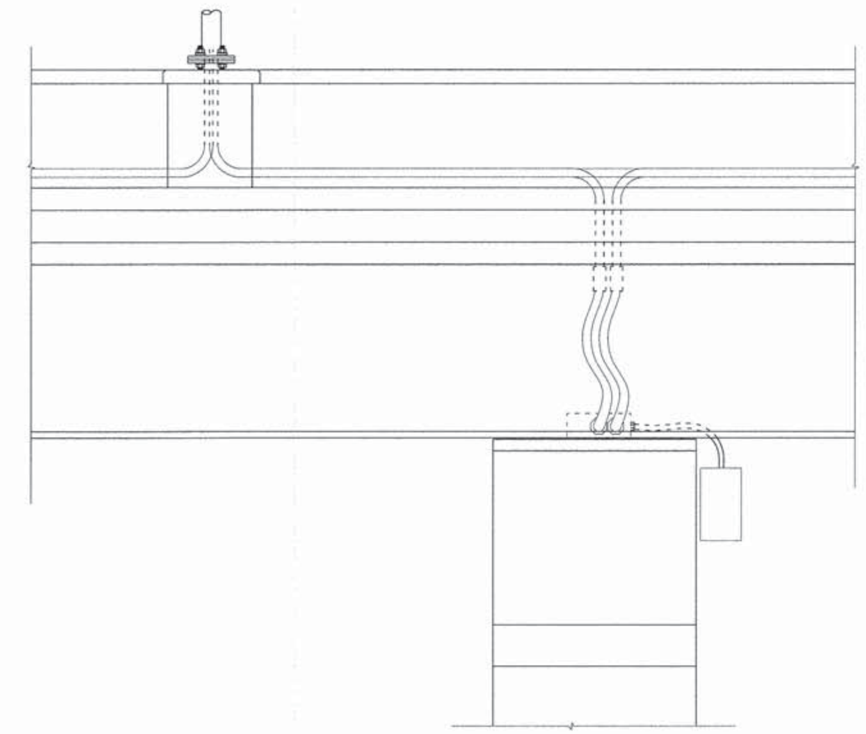
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3719	12-00239-00-BR	LAKE	88	29

CONTRACT NO. 61A57

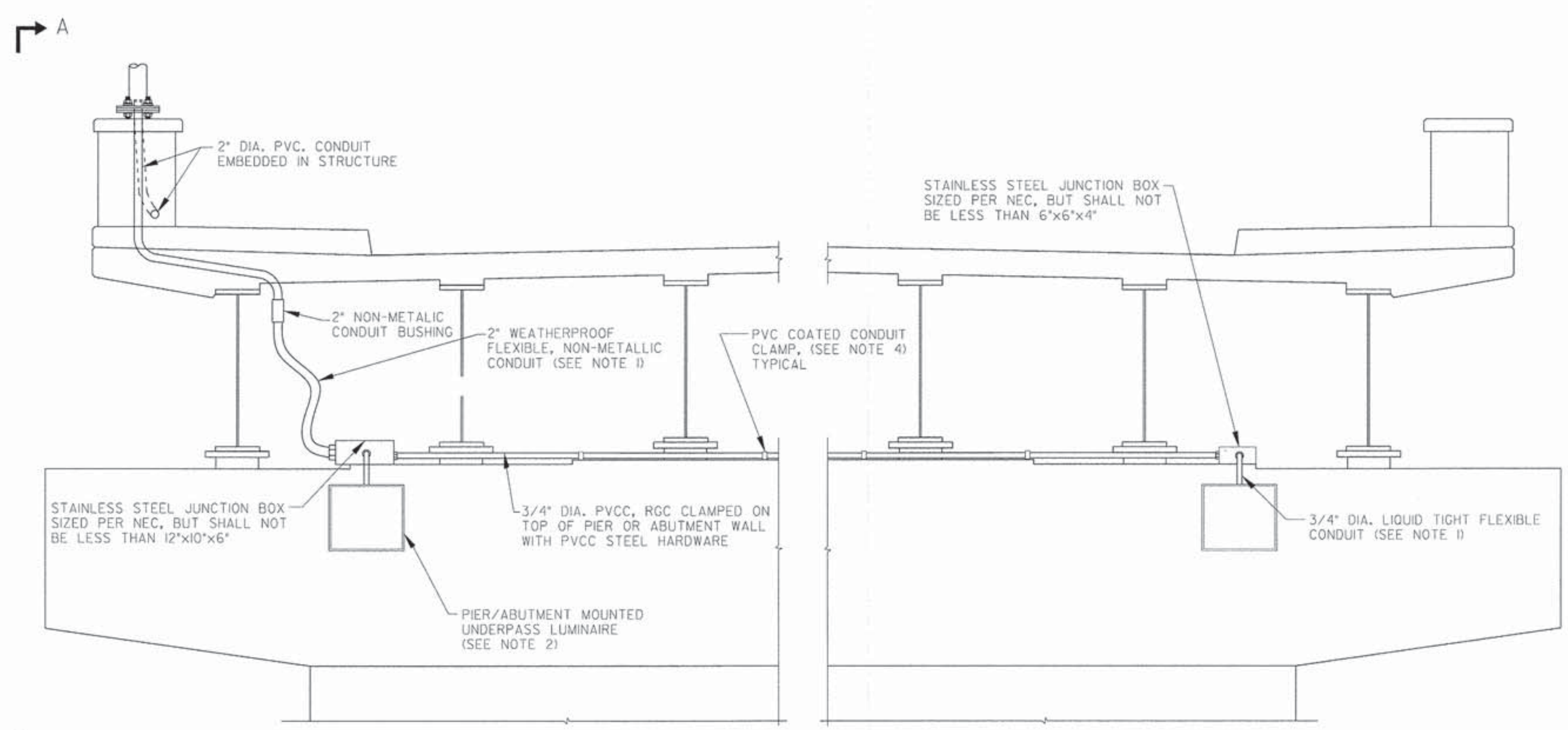
FED. ROAD DIST. NO. 1 | ILLINOIS | FED. AID PROJECT M-BHM-9003(952)

UNDERPASS LIGHTING NOTES:

1. LIQUID TIGHT FLEXIBLE METAL CONDUIT, MAXIMUM LENGTH 6'-0", TYPICAL FOR EACH INSTANCE AS SHOWN. PROVIDE PVC COATED RIGID GALVANIZED STEEL CONDUIT AS REQUIRED NOT TO EXCEED 6'-0" OF FLEXIBLE LIQUID TIGHT METAL CONDUIT. LIQUID TIGHT FLEXIBLE METAL CONDUIT WILL BE INCLUDED IN THE COST OF THE CONDUIT ATTACHED TO STRUCTURE, OF THE CORRESPONDING DIA., GALVANIZED STEEL, PVC COATED PAY ITEM EXCEPT THAT THE COST OF THE 3/4 " DIA. RIGID STEEL CONDUIT AND 3/4 " DIA. FLEXIBLE CONDUIT SHALL BE INCLUDED IN THE LUMINAIRE INSTALLATION.
2. UNDERPASS LUMINAIRE MOUNTED TO FACE OF PIER OR ABUTMENT WALL. MOUNTING HEIGHT OF 1" BELOW THE TOP OF PIER OR ABUTMENT WALL TYPICAL FOR ALL PIER/ABUTMENT MOUNTED UNDERPASS LUMINAIRES UNLESS OTHERWISE NOTED.
3. EXPANSION ANCHOR, POWDER ACTUATED FASTENERS WILL NOT BE ALLOWED. EXPANSION ANCHOR MUST BE SIZED IN ACCORDANCE WITH MANUFACTURERS REQUIREMENTS.
4. SECURE THE CONDUIT WITH PVC COATED CONDUIT CLAMPS OR CONDUIT BEAM CLAMPS AS SHOWN AT 5'-0" INTERVALS FOR LATERALS AND WITHIN 2'-0" MAXIMUM FROM ANY JUNCTION BOX, FLEXIBLE CONDUIT, OR CHANGE IN DIRECTION. ALL PVC COATED CONDUIT CLAMPS OR BEAM CLAMPS SHALL BE INCLUDED WITH THE COST OF THE "CONDUIT ATTACHED TO STRUCTURE, OF THE CORRESPONDING DIA., GALVANIZED STEEL, PVC COATED" PAY ITEM.
5. ALL CONDUIT ATTACHED TO STRUCTURE SHALL BE PVC COATED RIGID STEEL CONDUIT (PVCC RGC) TYPICAL.



SIDEVIEW A-A



UNDERPASS LIGHTING DETAIL PIER 2 AND 3

BAXTER & WOODMAN Consulting Engineers	DESIGNED -	REVISED -5-8-14 PER IDOT REVIEW	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
	DRAWN - UKB	REVISED -5-16-14 PER IDOT REVIEW	
	CHECKED - RWL	REVISED -7-14-14	
	DATE - 03/14/14	FILE - 110511_PH2_SHT-SL-Controller-Dets.dgn	

LIGHTING DETAILS

SCALE:NONE | STA. | TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3719	12-00239-00-BR	LAKE	88	29A
		CONTRACT NO. 61A57		

FED. ROAD DIST. NO. 1 | ILLINOIS | FED. AID PROJECT M-BHM-9003(952)

Benchmark: Chiseled square on Northeast wingwall of existing structure. Elevation 619.68

Existing Structure: S.N. 049-2050 is a four-span structure, built in 1968 under Section 9-VB, F.A. Route 42. 342'-2¼" back to back of abutments, out to out width 70' and varies. 60" web plate girders with variable spacing supporting a non-composite 7" slab. End spans are simply supported, and spans 2-3 continuous. Multi-column piers supported by spread footings on concrete piles. Stub abutments supported by concrete piles.

Existing superstructure to be removed and replaced with a 4-span continuous superstructure with similar geometry. Abutments to be converted to semi-integral configuration. Pier caps to be replaced at piers 1 and 3, plus various repairs to all substructure units. Traffic to be detoured during construction. 2-stage construction provided to provide a staging area and improved access.

Salvage: The existing light poles and associated hardware shall be salvaged and delivered to the City of Waukegan. Delivery location to be coordinated with City staff. Cost included with Removal Of Existing Superstructures.

UNION PACIFIC RAILROAD
RE-BUILT 2015 BY
CITY OF WAUKEGAN
SEC. 12-00239-00-BR
STA. 3+55.21
STR. NO. 049-2050 LOADING HL-93

NAME PLATE

See Std. 515001

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

DESIGN STRESSES

FIELD UNITS

f'c = 3,500 psi
fy = 60,000 psi (Reinforcement)
fy = 50,000 psi (M270 Grade 50W)

PRECAST UNITS

f'c = 6,000 psi (Precast Approach Slab)
fy = 60,000 psi (Reinforcement)

EXISTING CONSTRUCTION

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

DESIGN SPECIFICATIONS

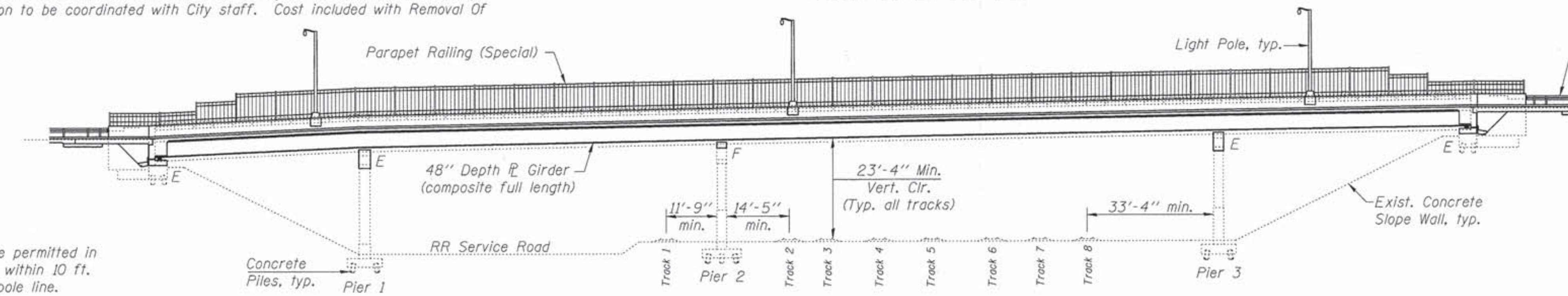
2012 AASHTO LRFD Bridge Design Specifications, 6th Edition

LOADING HL-93

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

SEISMIC DATA

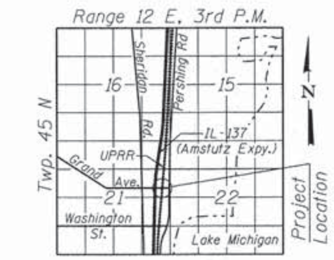
Seismic Performance Zone (SPZ) = 1
Design Spectral Acceleration at 1.0 sec. (S_{D1}) = 0.079g
Design Spectral Acceleration at 0.2 sec. (S_{DS}) = 0.125g
Soil Site Class = D



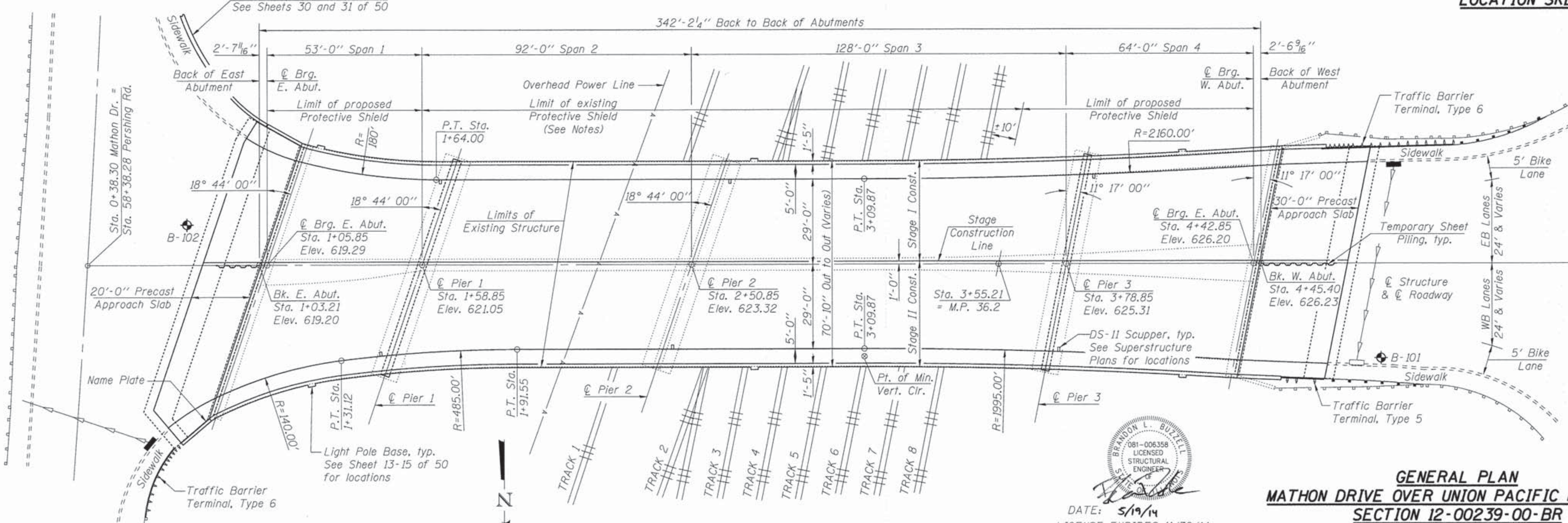
NOTE:
No freefall deck drains will be permitted in the spans over the tracks or within 10 ft. of cross arms of a railroad pole line.

ELEVATION

Looking South



LOCATION SKETCH



PLAN

Span lengths given along ℄ Structure

BRANDON L. BIZZELL
081-006358
LICENSED STRUCTURAL ENGINEER OF ILLINOIS

DATE: 5/19/14
LICENSE EXPIRES 11/30/14

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 the requirements of the current AASHTO LRFD Bridge Design Specifications.

GENERAL PLAN
MATHON DRIVE OVER UNION PACIFIC RAILROAD
SECTION 12-00239-00-BR
LAKE COUNTY
STATION 3+55.21
STRUCTURE NO. 049-2050

BAXTER & WOODMAN Consulting Engineers	USER NAME = 611blb	DESIGNED - BLB	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	GENERAL PLAN STRUCTURE NO. 049-2050
		CHECKED - AS	REVISED -		
	PLOT SCALE =	DRAWN - BLB	REVISED -		
	PLOT DATE = 5/16/2014	CHECKED - AS	REVISED -		SHEET NO. 1 OF 50 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3719	12-00239-00-BR	LAKE	88	30
		CONTRACT NO. 61A57		
		ILLINOIS FED. AID PROJECT	M-BHM-9003(952)	

GENERAL NOTES

Fasteners shall be ASTM A325 Type 1, mechanically galvanized bolts (in painted areas and ASTM A325 Type 3 in unpainted areas). Bolts $\frac{3}{4}$ in. ϕ, holes $\frac{15}{16}$ in. ϕ, unless otherwise noted.

Calculated weight of Structural Steel = 923,680 lbs. (AASHTO M 270 Grade 50W).

All structural steel shall be AASHTO M 270 Grade 50W except as noted.

No field welding is permitted except as specified in the contract documents.

Reinforcement bars designated (E) shall be epoxy coated.

If the Contractor elects to use cantilever forming brackets on the exterior beams or girders, the brackets shall be placed at the same locations as required for the hardwood blocks in Article 503.06(b) of the Standard Specifications. If additional cantilever forming brackets are required, hardwood blocking shall be wedged between the exterior and first interior beam at each of these additional bracket locations.

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

Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of $\frac{1}{8}$ inch (0.01 ft.). Adjustment shall be made either by grinding the surface or by shimming the bearings.

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

Structural steel shall only be painted for a distance equal to the depth of embedment into the concrete cap plus 3 inches. Painted areas shall be primed in the shop with a Department approved zinc rich primer. Field painting will not be required.

See Roadway General Notes and Special Provisions for additional requirements by Union Pacific.

Protective Shield was installed in 2013 throughout all of Span 2, and Span 3 over the UPRR tracks. This protective shield can be assumed to be in acceptable condition for use during superstructure removal. Existing protective shield shall become the property of the Contractor after removal.

The overhead power lines crossing Span 2 will remain active and will require a minimum construction clearance to avoid arcing. As of the printing of these contract documents, ComEd is expected to raise these lines prior to construction to increase the allowable work zone height under the wires to approximately 30 feet above the bridge deck. The Contractor shall verify available vertical clearances and safe distances with ComEd prior to beginning work.

Copies of record drawings for the existing bridge are available upon request. Contact Baxter & Woodman at (815) 459-1260 and allow up to two business days.

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Removal Of Existing Superstructures	Each	1		1
Concrete Removal	Cu Yd		135.1	135.1
Protective Shield	Sq Yd	1185		1185
Structure Excavation	Cu Yd		218	218
Concrete Structures	Cu Yd		295.5	295.5
Concrete Superstructure	Cu Yd	966.2		966.2
Bridge Deck Grooving	Sq Yd	2630		2630
Form Liner Textured Surface	Sq Ft	4590		4590
Protective Coat	Sq Yd	3624		3624
Furnishing And Erecting Structural Steel	L Sum	1		1
Stud Shear Connectors	Each	11955		11955
Reinforcement Bars, Epoxy Coated	Pound	223670	39160	262830
Bar Splicers	Each	1196	132	1328
Name Plates	Each	1		1
Preformed Joint Strip Seal	Foot	202		202
Elastomeric Bearing Assembly, Type I	Each	24		24
Elastomeric Bearing Assembly, Type II	Each	24		24
Anchor Bolts, 1"	Each		48	48
Anchor Bolts, $1\frac{1}{4}$"	Each		24	24
Anchor Bolts, $1\frac{1}{2}$"	Each		24	24
Anchor Bolts, 2"	Each		24	24
Epoxy Crack Injection	Foot		80	80
Geocomposite Wall Drain	Sq Yd		90	90
Drainage System	L Sum	1		1
Concrete Surface Color Treatment	Sq Ft	4050		4050
Concrete Wearing Surface, 5"	Sq Yd	353		353
Concrete Wearing Surface (Variable Depth)	Sq Yd	134		134
Precast Bridge Approach Slab	Sq Ft	3933		3933
Parapet Railing, Special	Foot	811		811
Granular Backfill For Structures	Cu Yd		132	132
Structural Repair Of Concrete (Depth Equal To Or Less Than 5 Inches)	Sq Ft		350	350
Structural Repair Of Concrete (Depth Greater Than 5 Inches)	Sq Ft		50	50
Drainage Scuppers, DS-11	Each	6		6
Temporary Sheet Piling	Sq Ft		634	634
Pipe Underdrains For Structures 4"	Foot		220	220
Slope Wall Repair	Sq Yd		100	100
Temporary Support System, Location 1	Each		1	1
Temporary Support System, Location 2	Each		1	1

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5. Top of Deck Elevations
6. Top of Deck Elevations
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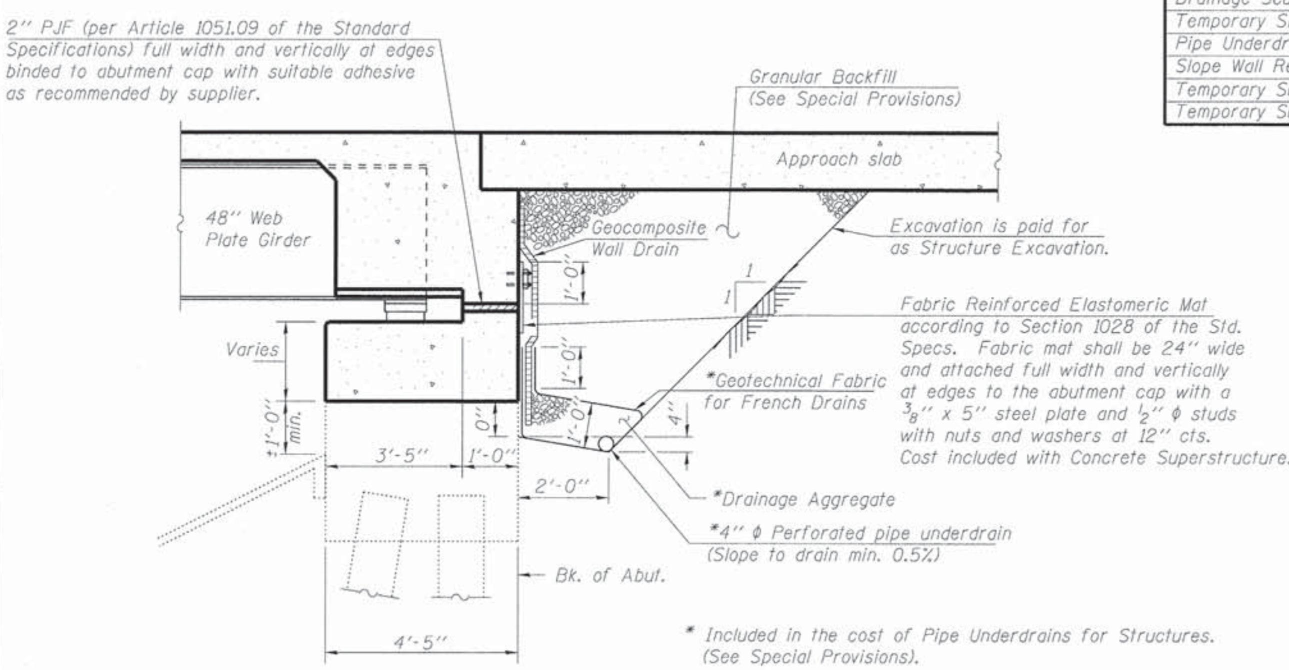
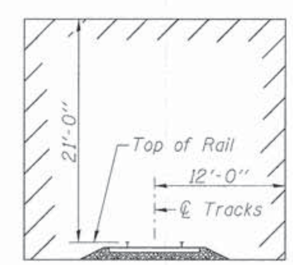
46. Pier Repairs
47. Abutment and Slope Wall Repairs
48. Bar Splicer Assembly & Mechanical Splicer Details
49. Boring Logs
50. Boring Logs



SECTION THRU SEMI-INTEGRAL ABUTMENT

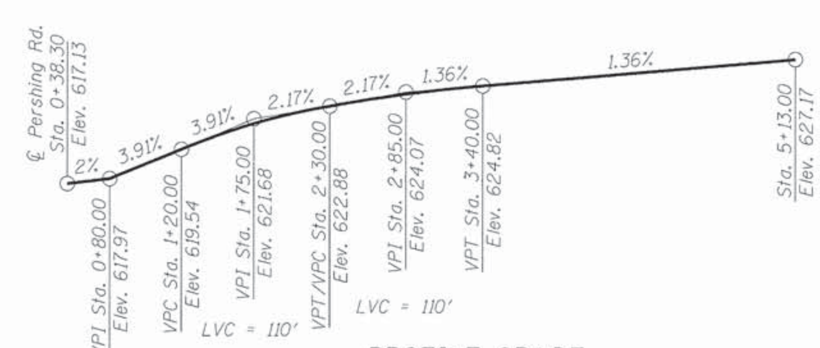
(Horiz. dim. @ Rt. L's)

All drainage system components shall extend to the inside face of the existing wingwalls. 4" perforated pipe drains shall be extended through field-cored holes in the wingwalls and until intersecting the side slopes. The pipes shall drain into concrete headwalls. (See Article 601.05 of the Standard Specifications and Highway Standard 601101).



MINIMUM CONSTRUCTION CLEARANCE ENVELOPE

From BNSF/UPRR Guidelines
Dimensions perpendicular to tracks



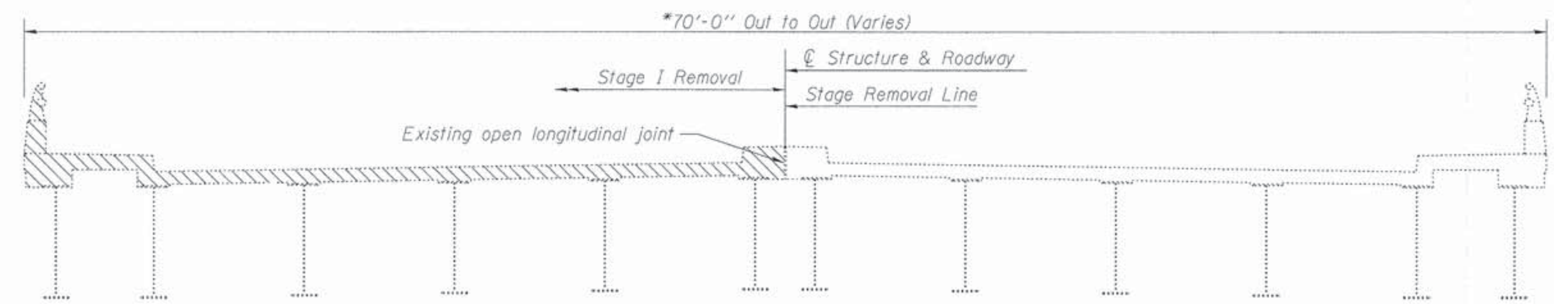
PROFILE GRADE

BAXTER & WOODMAN Consulting Engineers	USER NAME = 231ukb	DESIGNED - BLB	REVISED - 7/11/2014 BLB	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	GENERAL DATA STRUCTURE NO. 049-2050	F.A.U. RTE. 3719	SECTION 12-00239-00-BR	COUNTY LAKE	TOTAL SHEETS 88	SHEET NO. 31
		CHECKED - DCD	REVISED -					CONTRACT NO. 61A57		
	PLOT SCALE =	DRAWN - BLB	REVISED -							
	PLOT DATE = 1/28/2015	CHECKED - DCD	REVISED -		SHEET NO. 2 OF 50 SHEETS		ILLINOIS FED. AID PROJECT	M-BHM-9003(952)		

NOTES:

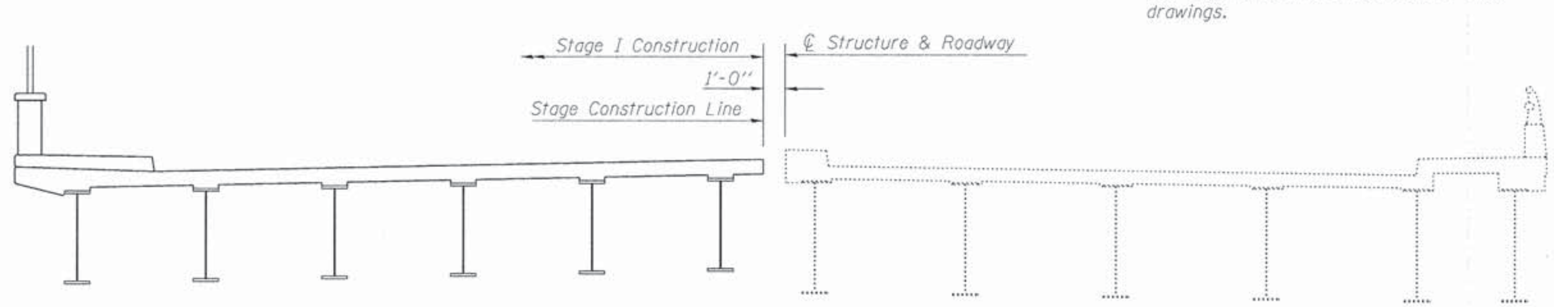
Traffic is to be detoured and the structure closed during construction. Staging details are provided to facilitate construction over the rail yard with minimal impact to track operations. Any alternate construction sequence or revised geometry proposed by the Contractor shall be submitted to the Engineer for approval prior to beginning removal operations.

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.

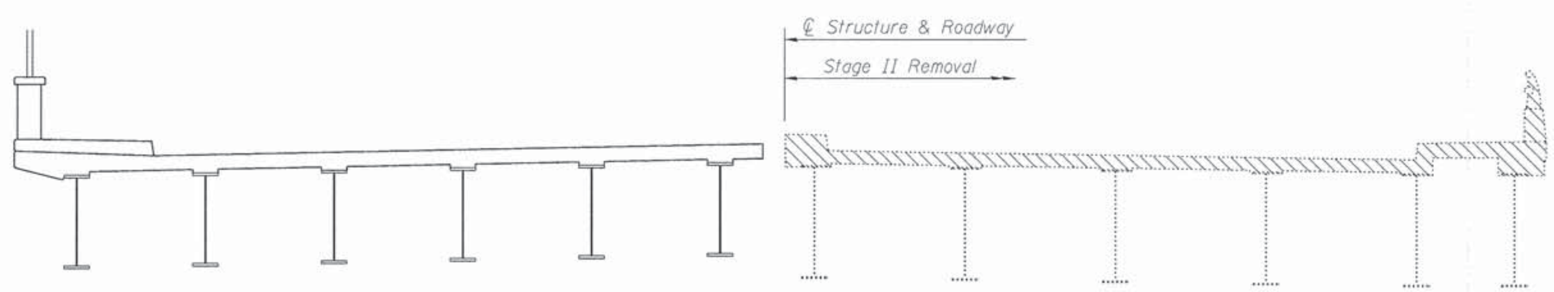


STAGE I REMOVAL

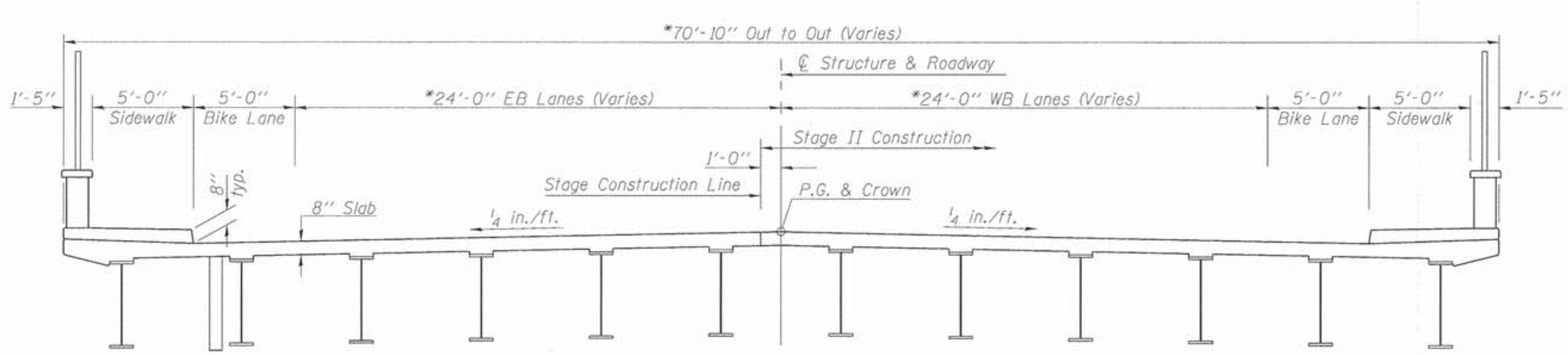
* Deck width and girder spacing varies. See Superstructure and Structural Steel drawings.



STAGE I CONSTRUCTION



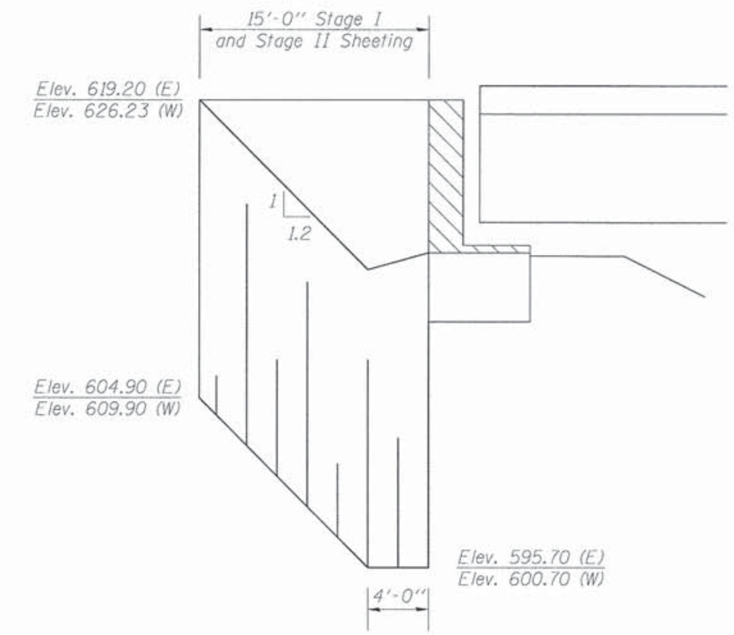
STAGE II REMOVAL



STAGE II CONSTRUCTION

All sections looking west

All dimensions perpendicular to ℄ Structure

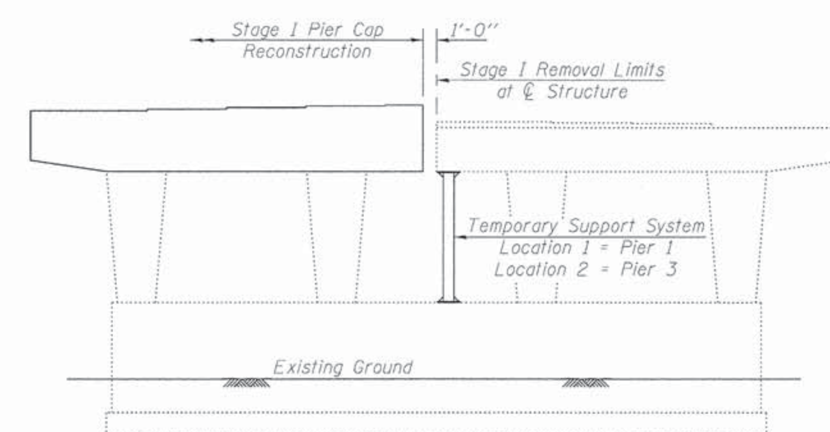


TEMPORARY SHEET PILING

Required Minimum Section Modulus = 14.0 in.^{3}/ft.

(E) = East Abutment

(W) = West Abutment



PIER CAP RECONSTRUCTION

Piers 1 and 3 - Looking West

BAXTER & WOODMAN Consulting Engineers

USER NAME = 231ukb	DESIGNED - BLB	REVISED -
	CHECKED - DCD	REVISED -
PLOT SCALE =	DRAWN - BLB	REVISED -
PLOT DATE = 1/28/2015	CHECKED - DCD	REVISED -

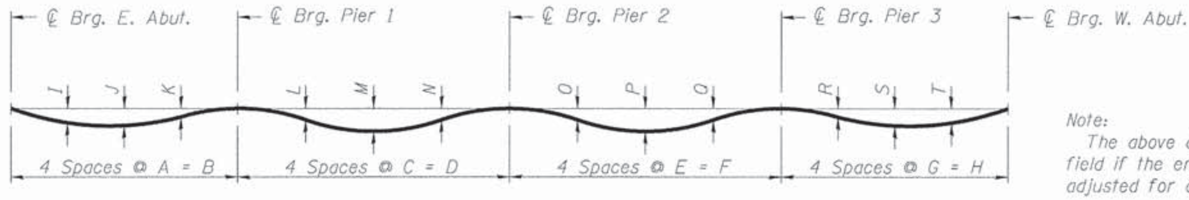
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STAGE CONSTRUCTION DETAILS
STRUCTURE NO. 049-2050

SHEET NO. 3 OF 50 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3719	12-00239-00-BR	LAKE	88	32
		CONTRACT NO. 61A57		

ILLINOIS FED. AID PROJECT M-BHM-9003(952)

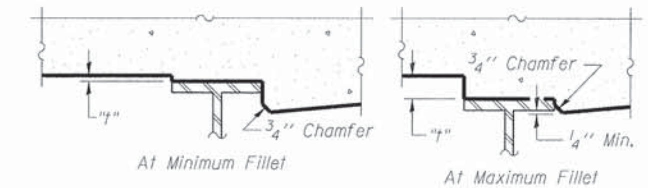


Note:
The above deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections as shown below.

DEAD LOAD DEFLECTION DIAGRAM

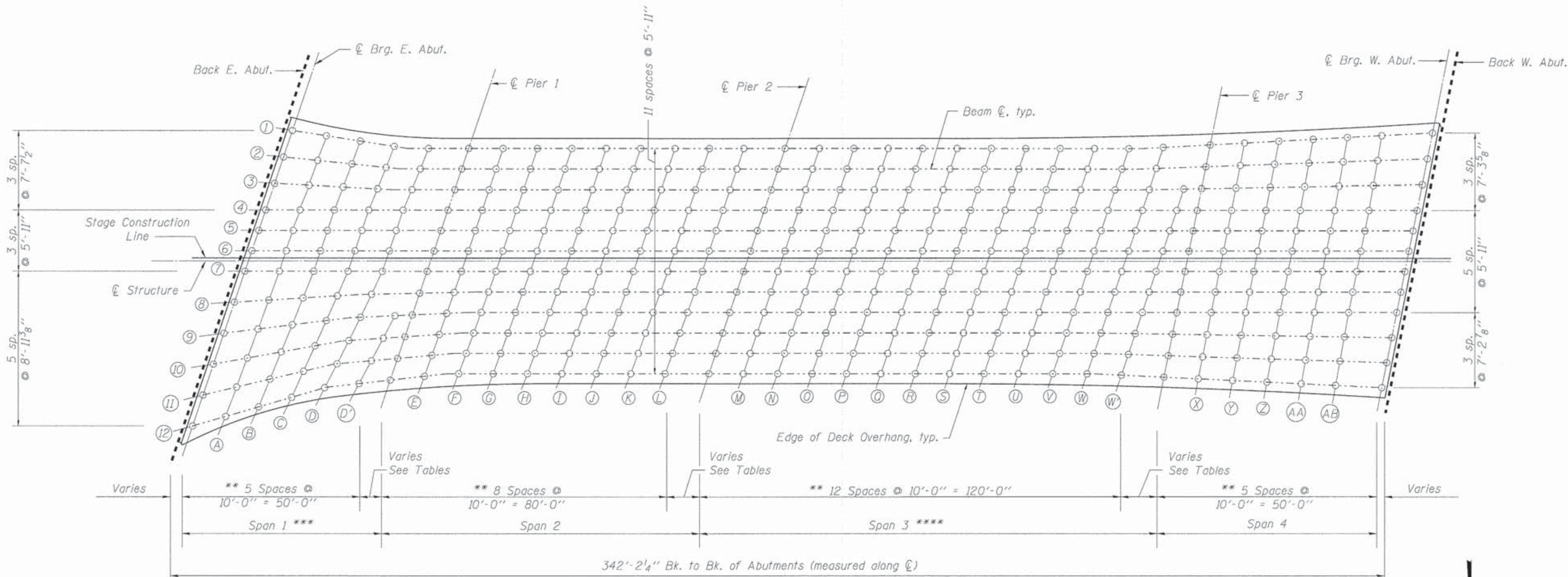
(Includes weight of concrete only.)

Girder	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
1	12'-11"	51'-7 7/8"	23'-0"	92'-0"	30'-11 1/8"	123'-8 3/8"	16'-2 3/8"	64'-9 1/2"	1/8"	1/8"	0"	1/8"	1/4"	0"	7/8"	1 1/2"	1"	-1/8"	-1/8"	0"
2	12'-11 3/4"	51'-11"	23'-0"	92'-0"	31'-1 3/8"	124'-5 1/4"	16'-1 1/2"	64'-6 1/8"	1/8"	1/8"	0"	1/8"	1/8"	0"	1"	1 5/8"	1"	-1/8"	-1/8"	0"
3	13'-1 3/8"	52'-5 5/8"	23'-0"	92'-0"	31'-3 1/2"	125'-2 1/8"	16'-0 3/4"	64'-2 7/8"	1/8"	1/8"	0"	1/8"	1/8"	0"	1"	1 5/8"	1"	-1/8"	-1/8"	0"
4	13'-3"	53'-0"	23'-0"	92'-0"	31'-5 7/8"	125'-11 1/4"	16'-0"	64'-0"	1/8"	1/8"	0"	1/8"	1/8"	0"	7/8"	1 1/2"	7/8"	-1/8"	-1/8"	0"
5	13'-3"	53'-0"	23'-0"	92'-0"	31'-8 1/4"	126'-9 1/8"	16'-0"	64'-0"	0"	1/8"	0"	1/8"	1/8"	0"	7/8"	1 1/2"	7/8"	-1/8"	-1/8"	0"
6	13'-3"	53'-0"	23'-0"	92'-0"	31'-10 3/4"	127'-7 1/8"	16'-0"	64'-0"	0"	1/8"	0"	1/8"	1/8"	0"	7/8"	1 1/2"	1"	-1/8"	-1/8"	0"
7	13'-3"	53'-0"	23'-0"	92'-0"	32'-1 1/4"	128'-4 7/8"	16'-0"	64'-0"	1/8"	1/8"	0"	1/8"	1/8"	0"	1"	1 5/8"	1"	-1/8"	-1/8'	0"
8	13'-5 7/8"	53'-11 5/8"	23'-0 3/8"	92'-1 1/2"	32'-3 3/4"	129'-2 7/8"	16'-0"	64'-0"	1/8"	1/8"	0"	1/8"	1/8"	-1/8"	1"	1 5/8"	1"	-1/8"	-1/8"	0"
9	13'-9 1/4"	55'-1 1/8"	23'-0 3/4"	92'-3 1/4"	32'-6 1/8"	130'-0 3/4"	16'-0"	64'-0"	1/8"	1/8"	0"	1/8"	1/8"	-1/8"	1"	1 5/8"	1"	-1/8"	-1/8"	0"
10	14'-1"	56'-4 1/8"	23'-1 1/4"	92'-5"	32'-8 1/2"	130'-10"	15'-11 3/8"	63'-9 3/4"	1/8"	1/8"	1/8"	1/8"	1/8"	-1/8"	1 1/4"	2"	1 1/4"	-1/8"	-1/8"	0"
11	14'-5 1/8"	57'-8 1/2"	23'-1 3/4"	92'-6 7/8"	32'-10 3/4"	131'-7 1/4"	15'-10 7/8"	63'-7 1/2"	1/8"	1/4"	1/8"	1/8"	0"	-1/8"	1 1/4"	2 1/8"	1 1/4"	-1/8"	-1/8"	0"
12	14'-9 5/8"	59'-2 1/4"	23'-2 1/4"	92'-8 7/8"	33'-1 1/8"	132'-4 1/2"	15'-10 3/8"	63'-5 5/8"	1/8"	1/4"	1/8"	1/8"	0"	-1/8"	1 1/4"	2 1/8"	1 3/8"	-1/4"	-1/8"	-1/8"



To determine "t": After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at intervals shown below. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" shown on the following sheets, minus slab thickness, equals the fillet heights "t" above top flange of beams.

FILLET HEIGHTS



** Spacing given along ℄ of girder

*** Girders 1-8 have 4 spaces @ 10' = 40'

**** Girders 1-2 have 11 spaces @ 10' = 110'

BAXTER & WOODMAN Consulting Engineers	USER NAME = 231ukb	DESIGNED - ABW	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TOP OF DECK ELEVATIONS STRUCTURE NO. 049-2050	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		CHECKED - DCD	REVISED -			3719	12-00239-00-BR	LAKE	88	33
	PLOT SCALE =	DRAWN - ABW	REVISED -					CONTRACT NO. 61A57		
	PLOT DATE = 1/28/2015	CHECKED - DCD	REVISED -		SHEET NO. 4 OF 50 SHEETS		ILLINOIS FED. AID PROJECT	M-BHM-9003(952)		

GIRDER 1

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back E. Abut.	1+16.11	-38.04	618.59	618.59
℄ Brg. E. Abut.	1+18.62	-37.66	618.70	618.70
A	1+28.51	-36.14	619.10	619.11
B	1+38.39	-34.62	619.50	619.51
C	1+48.27	-33.10	619.88	619.89
D	1+58.23	-32.54	620.23	620.23
℄ Brg. Pier 1	1+69.89	-32.54	620.61	620.61
E	1+79.89	-32.54	620.91	620.91
F	1+89.89	-32.54	621.20	621.21
G	1+99.89	-32.54	621.47	621.49
H	2+09.89	-32.54	621.73	621.74
I	2+19.89	-32.54	621.97	621.98
J	2+29.89	-32.54	622.19	622.20
K	2+39.89	-32.54	622.41	622.41
L	2+49.89	-32.54	622.62	622.61
℄ Brg. Pier 2	2+61.89	-32.54	622.85	622.85
M	2+71.89	-32.54	623.04	623.06
N	2+81.89	-32.54	623.23	623.27
O	2+91.89	-32.54	623.40	623.48
P	3+01.89	-32.54	623.57	623.67
Q	3+11.89	-32.54	623.73	623.85
R	3+21.89	-32.54	623.88	624.01
S	3+31.89	-32.54	624.03	624.15
T	3+41.89	-32.54	624.17	624.28
U	3+51.89	-32.54	624.31	624.40
V	3+61.89	-32.54	624.44	624.50
W	3+71.88	-32.89	624.57	624.60
℄ Brg. Pier 3	3+85.56	-33.63	624.74	624.74
X	3+95.55	-34.17	624.87	624.86
Y	4+05.53	-34.72	624.99	624.98
Z	4+15.52	-35.26	625.12	625.11
AA	4+25.50	-35.80	625.24	625.24
AB	4+35.49	-36.34	625.37	625.37
℄ Brg. W. Abut.	4+50.26	-37.14	625.55	625.55
Back W. Abut.	4+52.84	-37.28	625.58	625.58

GIRDER 2

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back E. Abut.	1+13.48	-30.30	618.65	618.65
℄ Brg. E. Abut.	1+16.04	-30.04	618.76	618.75
A	1+25.99	-29.04	619.16	619.16
B	1+35.93	-28.04	619.56	619.56
C	1+45.88	-27.04	619.93	619.93
D	1+55.86	-26.63	620.28	620.28
℄ Brg. Pier 1	1+67.88	-26.63	620.67	620.67
E	1+77.88	-26.63	620.97	620.98
F	1+87.88	-26.63	621.26	621.28
G	1+97.88	-26.63	621.54	621.56
H	2+07.88	-26.63	621.80	621.82
I	2+17.88	-26.63	622.04	622.06
J	2+27.88	-26.63	622.27	622.28
K	2+37.88	-26.63	622.49	622.49
L	2+47.88	-26.63	622.70	622.69
℄ Brg. Pier 2	2+59.88	-26.63	622.94	622.94
M	2+69.88	-26.63	623.13	623.15
N	2+79.88	-26.63	623.31	623.36
O	2+89.88	-26.63	623.49	623.57
P	2+99.88	-26.63	623.66	623.76
Q	3+09.88	-26.63	623.82	623.94
R	3+19.88	-26.63	623.97	624.11
S	3+29.88	-26.63	624.12	624.25
T	3+39.88	-26.63	624.26	624.38
U	3+49.88	-26.63	624.40	624.49
V	3+59.88	-26.63	624.54	624.60
W	3+69.88	-26.84	624.67	624.70
℄ Brg. Pier 3	3+84.31	-27.36	624.86	624.86
X	3+94.30	-27.72	624.98	624.98
Y	4+04.30	-28.08	625.11	625.10
Z	4+14.29	-28.44	625.24	625.24
AA	4+24.28	-28.80	625.37	625.37
AB	4+34.28	-29.16	625.50	625.50
℄ Brg. W. Abut.	4+48.77	-29.68	625.68	625.68
Back W. Abut.	4+51.34	-29.78	625.72	625.72

GIRDER 3

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back E. Abut.	1+10.85	-22.54	618.71	618.71
℄ Brg. E. Abut.	1+13.45	-22.41	618.81	618.81
A	1+23.44	-21.92	619.21	619.21
B	1+33.43	-21.43	619.59	619.60
C	1+43.41	-20.93	619.97	619.97
D	1+53.41	-20.71	620.32	620.32
℄ Brg. Pier 1	1+65.87	-20.71	620.73	620.73
E	1+75.87	-20.71	621.04	621.04
F	1+85.87	-20.71	621.33	621.34
G	1+95.87	-20.71	621.61	621.62
H	2+05.87	-20.71	621.87	621.89
I	2+15.87	-20.71	622.12	622.13
J	2+25.87	-20.71	622.35	622.35
K	2+35.87	-20.71	622.57	622.57
L	2+45.87	-20.71	622.78	622.77
℄ Brg. Pier 2	2+57.87	-20.71	623.02	623.02
M	2+67.87	-20.71	623.21	623.23
N	2+77.87	-20.71	623.40	623.45
O	2+87.87	-20.71	623.58	623.66
P	2+97.87	-20.71	623.75	623.86
Q	3+07.87	-20.71	623.91	624.04
R	3+17.87	-20.71	624.07	624.20
S	3+27.87	-20.71	624.22	624.35
T	3+37.87	-20.71	624.36	624.48
U	3+47.87	-20.71	624.50	624.60
V	3+57.87	-20.71	624.64	624.70
W	3+67.87	-20.80	624.77	624.80
W'	3+77.87	-20.98	624.90	624.91
℄ Brg. Pier 3	3+83.05	-21.07	624.97	624.97
X	3+93.05	-21.26	625.10	625.09
Y	4+03.05	-21.44	625.23	625.22
Z	4+13.05	-21.62	625.37	625.36
AA	4+23.05	-21.80	625.50	625.50
AB	4+33.05	-21.98	625.63	625.63
℄ Brg. W. Abut.	4+47.29	-22.24	625.82	625.82
Back W. Abut.	4+49.85	-22.29	625.85	625.85

GIRDER 4

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back E. Abut.	1+08.23	-14.79	618.77	618.77
℄ Brg. E. Abut.	1+10.87	-14.79	618.87	618.87
A	1+20.87	-14.79	619.26	619.26
B	1+30.87	-14.79	619.64	619.64
C	1+40.87	-14.79	620.00	620.01
D	1+50.87	-14.79	620.35	620.35
℄ Brg. Pier 1	1+63.87	-14.79	620.78	620.78
E	1+73.87	-14.79	621.10	621.10
F	1+83.87	-14.79	621.40	621.40
G	1+93.87	-14.79	621.68	621.69
H	2+03.87	-14.79	621.94	621.96
I	2+13.87	-14.79	622.19	622.20
J	2+23.87	-14.79	622.43	622.43
K	2+33.87	-14.79	622.65	622.65
L	2+43.87	-14.79	622.86	622.85
℄ Brg. Pier 2	2+55.87	-14.79	623.11	623.11
M	2+65.87	-14.79	623.30	623.32
N	2+75.87	-14.79	623.49	623.53
O	2+85.87	-14.79	623.67	623.73
P	2+95.87	-14.79	623.84	623.93
Q	3+05.87	-14.79	624.00	624.11
R	3+15.87	-14.79	624.16	624.28
S	3+25.87	-14.79	624.31	624.43
T	3+35.87	-14.79	624.45	624.56
U	3+45.87	-14.79	624.60	624.68
V	3+55.87	-14.79	624.73	624.79
W	3+65.87	-14.79	624.87	624.90
W'	3+75.87	-14.79	625.00	625.01
℄ Brg. Pier 3	3+81.80	-14.79	625.08	625.08
X	3+91.80	-14.79	625.22	625.21
Y	4+01.80	-14.79	625.36	625.35
Z	4+11.80	-14.79	625.49	625.48
AA	4+21.80	-14.79	625.63	625.62
AB	4+31.80	-14.79	625.76	625.76
℄ Brg. W. Abut.	4+45.80	-14.79	625.95	625.95
Back W. Abut.	4+48.35	-14.79	625.99	625.99

GIRDER 5

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back E. Abut.	1+06.22	-8.88	618.81	618.81
℄ Brg. E. Abut.	1+08.86	-8.88	618.92	618.92
A	1+18.86	-8.88	619.31	619.31
B	1+28.86	-8.88	619.68	619.69
C	1+38.86	-8.88	620.05	620.06
D	1+48.86	-8.88	620.41	620.41
℄ Brg. Pier 1	1+61.86	-8.88	620.84	620.84
E	1+71.86	-8.88	621.16	621.16
F	1+81.86	-8.88	621.46	621.47
G	1+91.86	-8.88	621.75	621.76
H	2+01.86	-8.88	622.02	622.03
I	2+11.86	-8.88	622.27	622.28
J	2+21.86	-8.88	622.51	622.51
K	2+31.86	-8.88	622.73	622.73
L	2+41.86	-8.88	622.94	622.94
℄ Brg. Pier 2	2+53.86	-8.88	623.19	623.19
M	2+63.86	-8.88	623.38	623.40
N	2+73.86	-8.88	623.57	623.61
O	2+83.86	-8.88	623.75	623.82
P	2+93.86	-8.88	623.93	624.02
Q	3+03.86	-8.88	624.09	624.21
R	3+13.86	-8.88	624.25	624.38
S	3+23.86	-8.88	624.40	624.53
T	3+33.86	-8.88	624.55	624.66
U	3+43.86	-8.88	624.69	624.78
V	3+53.86	-8.88	624.83	624.89
W	3+63.86	-8.88	624.96	625.00
W'	3+73.86	-8.88	625.10	625.11
℄ Brg. Pier 3	3+80.62	-8.88	625.19	625.19
X	3+90.62	-8.88	625.33	625.32
Y	4+00.62	-8.88	625.46	625.45
Z	4+10.62	-8.88	625.60	625.59
AA	4+20.62	-8.88	625.74	625.73
AB	4+30.62	-8.88	625.87	625.87
℄ Brg. W. Abut.	4+44.62	-8.88	626.06	626.06
Back W. Abut.	4+47.17	-8.88	626.10	626.10

GIRDER 6

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back E. Abut.	1+04.21	-2.96	618.86	618.86
℄ Brg. E. Abut.	1+06.85	-2.96	618.96	618.96
A	1+16.85	-2.96	619.35	619.36
B	1+26.85	-2.96	619.73	619.74
C	1+36.85	-2.96	620.10	620.11
D	1+46.85	-2.96	620.46	620.46
℄ Brg. Pier 1	1+59.85	-2.96	620.90	620.90
E	1+69.85	-2.96	621.22	621.22
F	1+79.85	-2.96	621.52	621.53
G	1+89.85	-2.96	621.81	621.83
H	1+99.85	-2.96	622.09	622.10
I	2+09.85	-2.96	622.34	622.35
J	2+19.85	-2.96	622.58	622.59
K	2+29.85	-2.96	622.81	622.80
L	2+39.85	-2.96	623.03	623.02
℄ Brg. Pier 2	2+51.85	-2.96	623.27	623.27
M	2+61.85	-2.96	623.47	623.49
N	2+71.85	-2.96	623.66	623.70
O	2+81.85	-2.96	623.84	623.91
P	2+91.85	-2.96	624.02	624.11
Q	3+01.85	-2.96	624.18	624.30
R	3+11.85	-2.96	624.34	624.47
S	3+21.85	-2.96	624.50	624.62
T	3+31.85	-2.96	624.64	624.76
U	3+41.85	-2.96	624.79	624.88
V	3+51.85	-2.96	624.92	624.99
W	3+61.85	-2.96	625.06	625.10
W'	3+71.85	-2.96	625.20	625.21
℄ Brg. Pier 3	3+79.44	-2.96	625.30	625.30
X	3+89.44	-2.96	625.43	625.42
Y	3+99.44	-2.96	625.57	625.56
Z	4+09.44	-2.96	625.71	625.70
AA	4+19.44	-2.96	625.84	625.84
AB	4+29.44	-2.96	625.98	625.98
℄ Brg. W. Abut.	4+43.44	-2.96	626.17	626.17
Back W. Abut.	4+45.99	-2.96	626.20	626.20

STAGE CONSTRUCTION LINE

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back E. Abut.	1+03.55	-1.00	618.87	618.87
℄ Brg. E. Abut.	1+06.19	-1.00	618.98	618.98
A	1+16.19	-1.00	619.37	619.37
B	1+26.19	-1.00	619.75	619.75
C	1+36.19	-1.00	620.12	620.13
D	1+46.19	-1.00	620.48	620.48
℄ Brg. Pier 1	1+59.19	-1.00	620.92	620.92
E	1+69.19	-1.00	621.24	621.24
F	1+79.19	-1.00	621.55	621.55
G	1+89.19	-1.00	621.84	621.85
H	1+99.19	-1.00	622.11	622.12
I	2+09.19	-1.00	622.37	622.38
J	2+19.19	-1.00	622.61	622.61
K	2+29.19	-1.00	622.84	622.83
L	2+39.19	-1.00	623.05	623.04
℄ Brg. Pier 2	2+51.19	-1.00	623.30	623.30
M	2+61.19	-1.00	623.50	623.51
N	2+71.19	-1.00	623.69	623.73
O	2+81.19	-1.00	623.87	623.94
P	2+91.19	-1.00	624.05	624.14
Q	3+01.19	-1.00	624.21	624.33
R	3+11.19	-1.00	624.37	624.50
S	3+21.19	-1.00	624.53	624.65
T	3+31.19	-1.00	624.67	624.79
U	3+41.19	-1.00	624.82	624.91
V	3+51.19	-1.00	624.95	625.02
W	3+61.19	-1.00	625.09	625.13
W'	3+71.19	-1.00	625.23	625.24
℄ Brg. Pier 3	3+79.05	-1.00	625.33	625.33
X	3+89.05	-1.00	625.47	625.46
Y	3+99.05	-1.00	625.61	625.59
Z	4+09.05	-1.00	625.74	625.73
AA	4+19.05	-1.00	625.88	625.87
AB	4+29.05	-1.00	626.01	626.01
℄ Brg. W. Abut.	4+43.05	-1.00	626.20	626.20
Back W. Abut.	4+45.60	-1.00	626.24	626.24

℄ ROADWAY, CROWN & P.G.

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back E. Abut.	1+03.21	0.00	618.88	618.88
℄ Brg. E. Abut.	1+05.85	0.00	618.98	618.98
A	1+15.85	0.00	619.37	619.38
B	1+25.85	0.00	619.76	619.76
C	1+35.85	0.00	620.13	620.14
D	1+45.85	0.00	620.49	620.49
℄ Brg. Pier 1	1+58.85	0.00	620.93	620.93
E	1+68.85	0.00	621.25	621.25
F	1+78.85	0.00	621.56	621.56
G	1+88.85	0.00	621.85	621.86
H	1+98.85	0.00	622.12	622.13
I	2+08.85	0.00	622.38	622.39
J	2+18.85	0.00	622.62	622.62
K	2+28.85	0.00	622.85	622.84
L	2+38.85	0.00	623.07	623.06
℄ Brg. Pier 2	2+50.85	0.00	623.31	623.31
M	2+60.85	0.00	623.51	623.53
N	2+70.85	0.00	623.70	623.75
O	2+80.85	0.00	623.88	623.96
P	2+90.85	0.00	624.06	624.16
Q	3+00.85	0.00	624.23	624.35
R	3+10.85	0.00	624.39	624.52
S	3+20.85	0.00	624.54	624.67
T	3+30.85	0.00	624.69	624.81
U	3+40.85	0.00	624.84	624.93
V	3+50.85	0.00	624.97	625.04
W	3+60.85	0.00	625.11	625.15
W'	3+70.85	0.00	625.24	625.26
℄ Brg. Pier 3	3+78.85	0.00	625.35	625.35
X	3+88.85	0.00	625.49	625.48
Y	3+98.85	0.00	625.62	625.61
Z	4+08.85	0.00	625.76	625.75
AA	4+18.85	0.00	625.90	625.89
AB	4+28.85	0.00	626.03	626.03
℄ Brg. W. Abut.	4+42.85	0.00	626.22	626.22
Back W. Abut.	4+45.40	0.00	626.26	626.26

GIRDER 7

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back E. Abut.	1+02.21	2.96	618.78	618.78
℄ Brg. E. Abut.	1+04.85	2.96	618.88	618.88
A	1+14.85	2.96	619.27	619.28
B	1+24.85	2.96	619.66	619.66
C	1+34.85	2.96	620.03	620.04
D	1+44.85	2.96	620.39	620.39
℄ Brg. Pier 1	1+57.85	2.96	620.83	620.83
E	1+67.85	2.96	621.16	621.16
F	1+77.85	2.96	621.46	621.47
G	1+87.85	2.96	621.76	621.77
H	1+97.85	2.96	622.03	622.04
I	2+07.85	2.96	622.29	622.30
J	2+17.85	2.96	622.54	622.54
K	2+27.85	2.96	622.76	622.76
L	2+37.85	2.96	622.98	622.97
℄ Brg. Pier 2	2+49.85	2.96	623.23	623.23
M	2+59.85	2.96	623.43	623.45
N	2+69.85	2.96	623.62	623.66
O	2+79.85	2.96	623.81	623.88
P	2+89.85	2.96	623.98	624.08
Q	2+99.85	2.96	624.15	624.27
R	3+09.85	2.96	624.31	624.44
S	3+19.85	2.96	624.47	624.60
T	3+29.85	2.96	624.61	624.73
U	3+39.85	2.96	624.75	624.85
V	3+49.85	2.96	624.90	624.97
W	3+59.85	2.96	625.03	625.07
W'	3+69.85	2.96	625.17	625.18
℄ Brg. Pier 3	3+78.26	2.96	625.28	625.28
X	3+88.26	2.96	625.42	625.41
Y	3+98.26	2.96	625.55	625.54
Z	4+08.26	2.96	625.69	625.68
AA	4+18.26	2.96	625.83	625.82
AB	4+28.26	2.96	625.96	625.96
℄ Brg. W. Abut.	4+42.26	2.96	626.15	626.15
Back W. Abut.	4+44.81	2.96	626.19	626.19

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BAXTER & WOODMAN Consulting Engineers	USER NAME = 231ukb	DESIGNED - ABW	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TOP OF DECK ELEVATIONS STRUCTURE NO. 049-2050
		CHECKED - DCD	REVISED -		
	PLOT SCALE =	DRAWN - ABW	REVISED -		
	PLOT DATE = 1/28/2015	CHECKED - DCD	REVISED -		SHEET NO. 7 OF 50 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3719	12-00239-00-BR	LAKE	88	36
		CONTRACT NO. 61A57		
	ILLINOIS FED. AID PROJECT M-BHM-9003(952)			

GIRDER 8

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back E. Abut.	0+99.12	12.07	618.47	618.47
℄ Brg. E. Abut.	1+01.82	11.90	618.58	618.58
A	1+11.80	11.27	618.98	618.99
B	1+21.78	10.65	619.38	619.39
C	1+31.76	10.03	619.77	619.78
D	1+41.72	9.57	620.14	620.15
℄ Brg. Pier 1	1+55.71	9.25	620.63	620.63
E	1+65.71	9.02	620.96	620.97
F	1+75.71	8.88	621.28	621.28
G	1+85.71	8.88	621.57	621.58
H	1+95.71	8.88	621.85	621.86
I	2+05.71	8.88	622.11	622.12
J	2+15.71	8.88	622.36	622.36
K	2+25.71	8.88	622.59	622.59
L	2+35.71	8.88	622.81	622.81
℄ Brg. Pier 2	2+47.84	8.88	623.07	623.07
M	2+57.84	8.88	623.27	623.28
N	2+67.84	8.88	623.46	623.50
O	2+77.84	8.88	623.65	623.72
P	2+87.84	8.88	623.82	623.93
Q	2+97.84	8.88	623.99	624.12
R	3+07.84	8.88	624.16	624.29
S	3+17.84	8.88	624.31	624.45
T	3+27.84	8.88	624.46	624.59
U	3+37.84	8.88	624.60	624.71
V	3+47.84	8.88	624.75	624.82
W	3+57.84	8.88	624.88	624.93
W'	3+67.84	8.88	625.02	625.03
℄ Brg. Pier 3	3+77.08	8.88	625.14	625.14
X	3+87.08	8.88	625.28	625.27
Y	3+97.08	8.88	625.41	625.40
Z	4+07.08	8.88	625.55	625.54
AA	4+17.08	8.88	625.69	625.68
AB	4+27.08	8.88	625.82	625.82
℄ Brg. W. Abut.	4+41.08	8.88	626.01	626.01
Back W. Abut.	4+43.63	8.88	626.05	626.05

GIRDER 9

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back E. Abut.	0+96.03	21.19	618.16	618.16
℄ Brg. E. Abut.	0+98.78	20.85	618.27	618.27
A	1+08.71	19.63	618.69	618.69
B	1+18.63	18.42	619.10	619.11
C	1+28.56	17.20	619.50	619.51
D	1+38.50	16.23	619.89	619.89
D'	1+48.52	15.77	620.25	620.25
℄ Brg. Pier 1	1+53.58	15.53	620.43	620.43
E	1+63.57	15.08	620.77	620.77
F	1+73.56	14.79	621.09	621.09
G	1+83.56	14.79	621.39	621.40
H	1+93.56	14.79	621.67	621.68
I	2+03.56	14.79	621.94	621.94
J	2+13.56	14.79	622.19	622.19
K	2+23.56	14.79	622.42	622.42
L	2+33.56	14.79	622.65	622.64
℄ Brg. Pier 2	2+45.83	14.79	622.90	622.90
M	2+55.83	14.79	623.10	623.12
N	2+65.83	14.79	623.30	623.34
O	2+75.83	14.79	623.49	623.56
P	2+85.83	14.79	623.67	623.77
Q	2+95.83	14.79	623.84	623.96
R	3+05.83	14.79	624.00	624.14
S	3+15.83	14.79	624.16	624.30
T	3+25.83	14.79	624.31	624.44
U	3+35.83	14.79	624.45	624.56
V	3+45.83	14.79	624.59	624.67
W	3+55.83	14.79	624.73	624.78
W'	3+65.83	14.79	624.87	624.89
℄ Brg. Pier 3	3+75.90	14.79	625.00	625.00
X	3+85.90	14.79	625.14	625.13
Y	3+95.90	14.79	625.28	625.26
Z	4+05.90	14.79	625.41	625.40
AA	4+15.90	14.79	625.55	625.54
AB	4+25.90	14.79	625.68	625.68
℄ Brg. W. Abut.	4+39.90	14.79	625.87	625.87
Back W. Abut.	4+42.45	14.79	625.91	625.91

GIRDER 10

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back E. Abut.	0+92.93	30.30	617.85	617.85
℄ Brg. E. Abut.	0+95.75	29.79	617.97	617.97
A	1+05.59	28.02	618.39	618.40
B	1+15.43	26.25	618.81	618.83
C	1+25.27	24.49	619.22	619.24
D	1+35.14	22.94	619.63	619.63
D'	1+45.12	22.26	620.00	620.00
℄ Brg. Pier 1	1+51.45	21.83	620.23	620.23
E	1+61.42	21.15	620.57	620.57
F	1+71.41	20.71	620.90	620.91
G	1+81.41	20.71	621.20	621.21
H	1+91.41	20.71	621.49	621.50
I	2+01.41	20.71	621.76	621.76
J	2+11.41	20.71	622.01	622.01
K	2+21.41	20.71	622.25	622.24
L	2+31.41	20.71	622.48	622.46
℄ Brg. Pier 2	2+43.83	20.71	622.74	622.74
M	2+53.83	20.71	622.94	622.96
N	2+63.83	20.71	623.14	623.19
O	2+73.83	20.71	623.33	623.42
P	2+83.83	20.71	623.51	623.63
Q	2+93.83	20.71	623.68	623.83
R	3+03.83	20.71	623.85	624.01
S	3+13.83	20.71	624.01	624.17
T	3+23.83	20.71	624.16	624.31
U	3+33.83	20.71	624.30	624.43
V	3+43.83	20.71	624.44	624.54
W	3+53.83	20.71	624.58	624.64
W'	3+63.83	20.85	624.71	624.74
℄ Brg. Pier 3	3+74.66	21.03	624.86	624.86
X	3+84.65	21.18	624.99	624.98
Y	3+94.65	21.34	625.12	625.11
Z	4+04.65	21.50	625.25	625.24
AA	4+14.65	21.66	625.39	625.38
AB	4+24.65	21.82	625.52	625.52
℄ Brg. W. Abut.	4+38.45	22.03	625.70	625.70
Back W. Abut.	4+41.00	22.07	625.74	625.74

BAXTER & WOODMAN Consulting Engineers	USER NAME = 231ukb	DESIGNED - ABW	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
		CHECKED - DCD	REVISED -	
	PLOT SCALE =	DRAWN - ABW	REVISED -	
	PLOT DATE = 1/28/2015	CHECKED - DCD	REVISED -	

TOP OF DECK ELEVATIONS
STRUCTURE NO. 049-2050

SHEET NO. 8 OF 50 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3719	12-00239-00-BR	LAKE	88	37
		CONTRACT NO. 61A57		
	ILLINOIS FED. AID PROJECT	M-BHM-9003(952)		

GIRDER 11

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back E. Abut.	0+89.85	39.40	617.54	617.54
℄ Brg. E. Abut.	0+92.72	38.73	617.66	617.66
A	1+02.45	36.44	618.09	618.10
B	1+12.19	34.16	618.52	618.54
C	1+21.92	31.87	618.94	618.96
D	1+31.74	29.70	619.36	619.37
D'	1+41.67	28.81	619.74	619.74
℄ Brg. Pier 1	1+49.32	28.12	620.02	620.02
E	1+59.27	27.22	620.38	620.38
F	1+69.27	26.63	620.71	620.71
G	1+79.27	26.63	621.01	621.02
H	1+89.27	26.63	621.30	621.31
I	1+99.27	26.63	621.58	621.58
J	2+09.27	26.63	621.83	621.83
K	2+19.27	26.63	622.08	622.07
L	2+29.27	26.63	622.30	622.29
℄ Brg. Pier 2	2+41.82	26.63	622.57	622.57
M	2+51.82	26.63	622.78	622.80
N	2+61.82	26.63	622.97	623.03
O	2+71.82	26.63	623.16	623.26
P	2+81.82	26.63	623.35	623.48
Q	2+91.82	26.63	623.52	623.68
R	3+01.82	26.63	623.69	623.86
S	3+11.82	26.63	623.85	624.02
T	3+21.82	26.63	624.00	624.16
U	3+31.82	26.63	624.15	624.29
V	3+41.82	26.63	624.29	624.40
W	3+51.82	26.63	624.43	624.49
W'	3+61.81	26.89	624.56	624.59
℄ Brg. Pier 3	3+73.41	27.26	624.71	624.71
X	3+83.41	27.57	624.84	624.83
Y	3+93.40	27.89	624.97	624.95
Z	4+03.40	28.21	625.10	625.08
AA	4+13.39	28.52	625.23	625.22
AB	4+23.39	28.84	625.36	625.35
℄ Brg. W. Abut.	4+37.01	29.27	625.53	625.53
Back W. Abut.	4+39.54	29.35	625.57	625.57

GIRDER 12

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back E. Abut.	0+86.76	48.51	617.23	617.23
℄ Brg. E. Abut.	0+89.68	47.67	617.36	617.36
A	0+99.29	44.91	617.79	617.80
B	1+08.90	42.14	618.23	618.24
C	1+18.51	39.38	618.66	618.68
D	1+28.12	36.61	619.08	619.09
D'	1+38.21	35.40	619.47	619.48
℄ Brg. Pier 1	1+47.18	34.40	619.82	619.82
E	1+57.12	33.29	620.18	620.18
F	1+67.08	32.54	620.52	620.52
G	1+77.08	32.54	620.83	620.83
H	1+87.08	32.54	621.12	621.13
I	1+97.08	32.54	621.40	621.40
J	2+07.08	32.54	621.66	621.65
K	2+17.08	32.54	621.90	621.89
L	2+27.08	32.54	622.13	622.12
℄ Brg. Pier 2	2+39.81	32.54	622.41	622.41
M	2+49.81	32.54	622.61	622.64
N	2+59.81	32.54	622.81	622.87
O	2+69.81	32.54	623.00	623.10
P	2+79.81	32.54	623.19	623.32
Q	2+89.81	32.54	623.36	623.52
R	2+99.81	32.54	623.53	623.71
S	3+09.81	32.54	623.70	623.87
T	3+19.81	32.54	623.85	624.01
U	3+29.81	32.54	624.00	624.14
V	3+39.81	32.54	624.14	624.24
W	3+49.81	32.54	624.28	624.35
W'	3+59.81	32.90	624.41	624.44
℄ Brg. Pier 3	3+72.17	33.49	624.56	624.56
X	3+82.16	33.96	624.69	624.68
Y	3+92.15	34.44	624.82	624.80
Z	4+02.13	34.92	624.94	624.93
AA	4+12.12	35.39	625.07	625.06
AB	4+22.11	35.87	625.19	625.19
℄ Brg. W. Abut.	4+35.57	36.51	625.36	625.36
Back W. Abut.	4+38.09	36.63	625.39	625.39

BAXTER & WOODMAN Consulting Engineers

USER NAME = 231ukb	DESIGNED - ABW	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TOP OF DECK ELEVATIONS STRUCTURE NO. 049-2050
	CHECKED - DCD	REVISED -		
PLOT SCALE =	DRAWN - ABW	REVISED -		
PLOT DATE = 1/28/2015	CHECKED - DCD	REVISED -		SHEET NO. 9 OF 50 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3719	12-00239-00-BR	LAKE	88	38
		CONTRACT NO. 61A57		
	ILLINOIS	FED. AID PROJECT	M-BHM-9003(952)	

EDGE OF SOUTH SIDEWALK

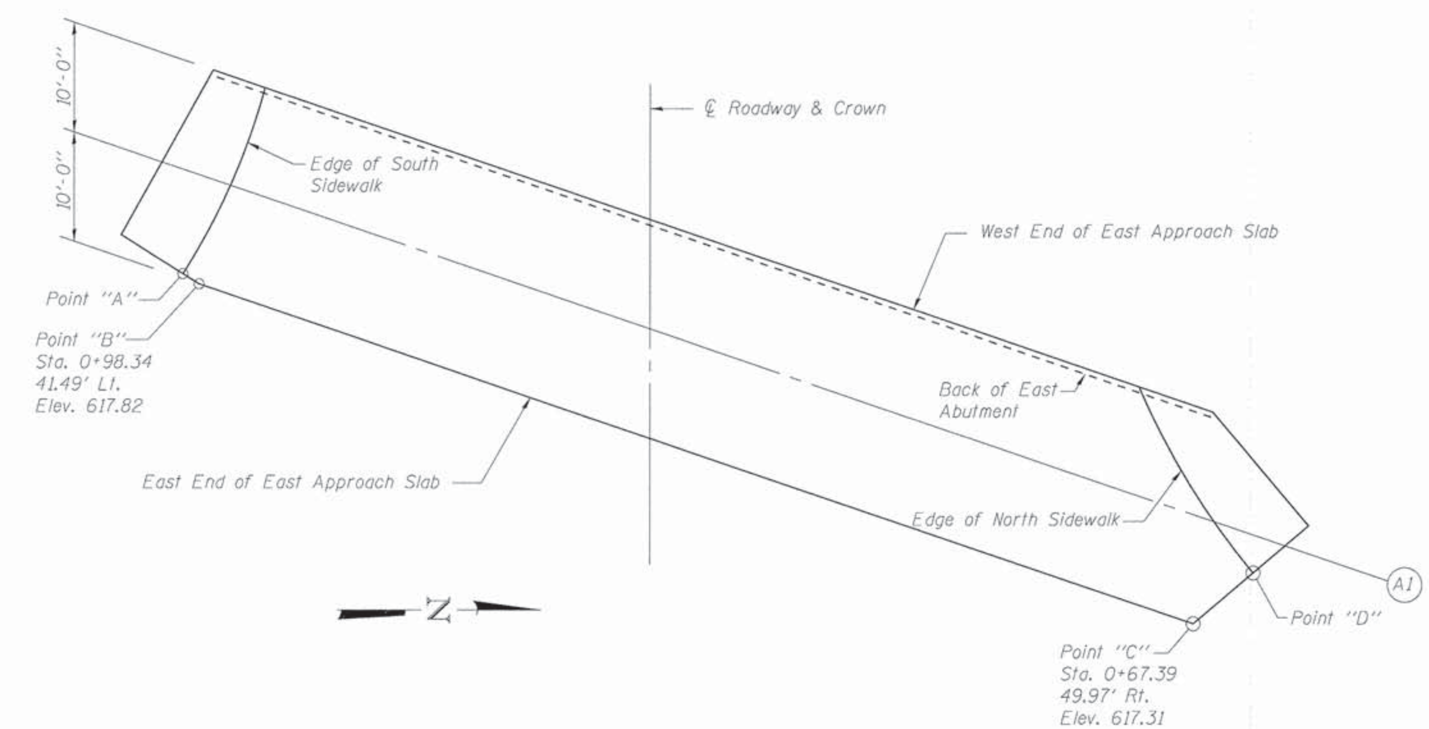
Location	Station	Offset	Theoretical Grade Elevations
Point "A"	0+99.09	-42.68	617.83
A1	1+07.32	-38.48	618.24
W. End E. Approach	1+16.28	-35.44	618.65

℄ ROADWAY & CROWN

Location	Station	Offset	Theoretical Grade Elevations
E. End E. Approach	0+84.27	0.00	618.14
A1	0+94.27	0.00	618.53
W. End E. Approach	1+04.27	0.00	618.92

EDGE OF NORTH SIDEWALK

Location	Station	Offset	Theoretical Grade Elevations
Point "D"	0+71.70	55.14	617.29
A1	0+76.84	51.39	617.32
W. End E. Approach	0+89.02	44.95	617.38



PLAN

NOTE:
Elevations given are at the top of the proposed concrete wearing surface.

BAXTER & WOODMAN Consulting Engineers	USER NAME = 231ukb	DESIGNED - BLB	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TOP OF EAST APPROACH SLAB ELEVATIONS STRUCTURE NO. 049-2050	F.A.U. RTE. 3719	SECTION 12-00239-00-BR
		CHECKED - DCD	REVISED -			COUNTY LAKE	TOTAL SHEETS 88 / SHEET NO. 39
	PLOT SCALE =	DRAWN - BLB	REVISED -			CONTRACT NO. 61A57	
	PLOT DATE = 1/28/2015	CHECKED - DCD	REVISED -		SHEET NO. 10 OF 50 SHEETS	ILLINOIS FED. AID PROJECT	M-BHM-9003(952)

EDGE OF SOUTH SIDEWALK

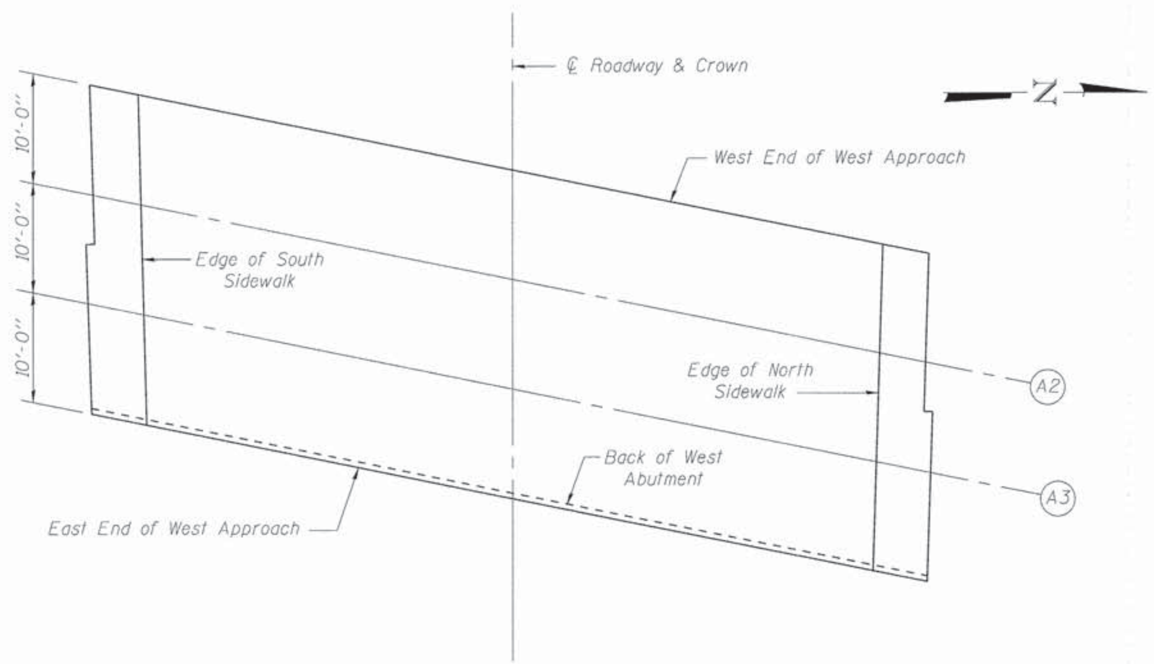
Location	Station	Offset	Theoretical Grade Elevations
E. End W. Approach	4+51.09	-33.64	625.66
A2	4+61.15	-33.93	625.76
A3	4+71.21	-34.21	625.89
W. End W. Approach	4+81.26	-34.50	626.02

℄ ROADWAY & CROWN

Location	Station	Offset	Theoretical Grade Elevations
E. End W. Approach	4+44.38	0.00	626.24
A2	4+54.38	0.00	626.38
A3	4+64.38	0.00	625.51
W. End W. Approach	4+74.38	0.00	626.65

EDGE OF NORTH SIDEWALK

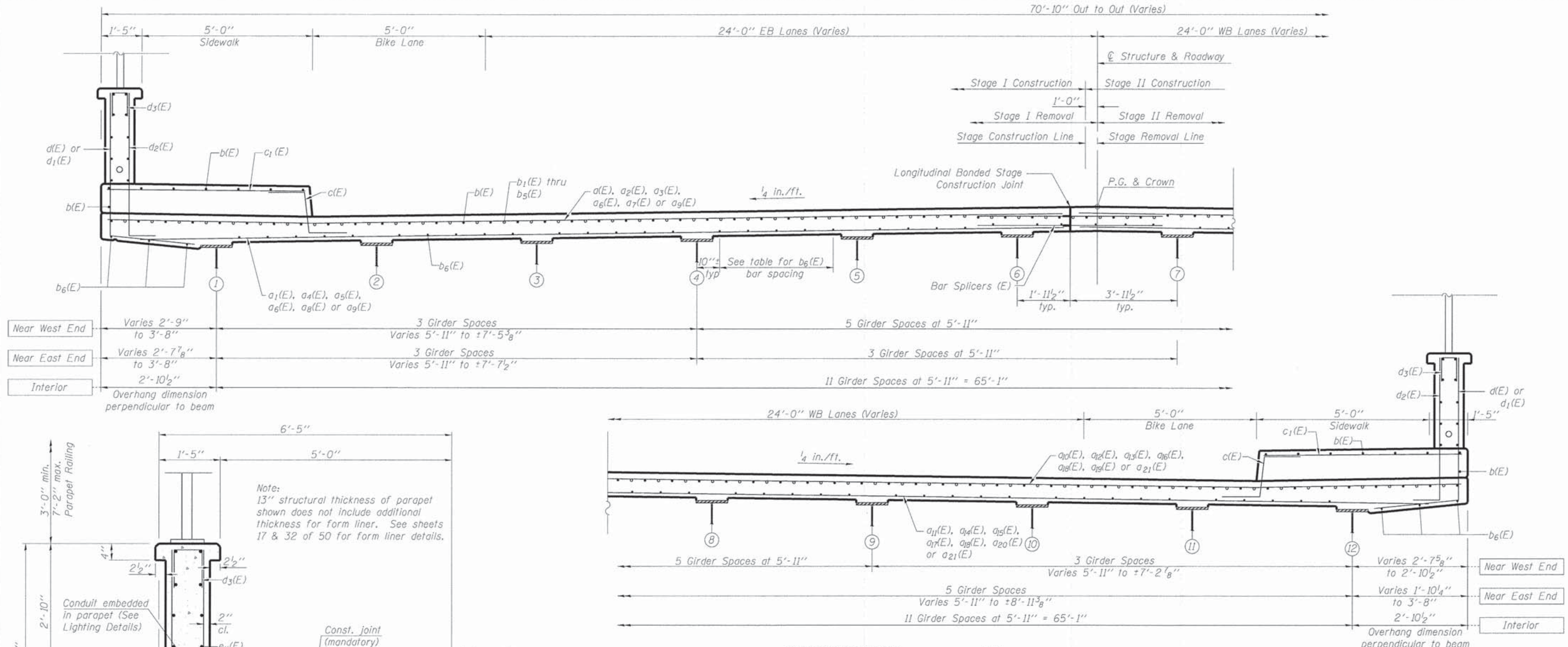
Location	Station	Offset	Theoretical Grade Elevations
E. End W. Approach	4+37.78	33.10	625.46
A2	4+47.70	33.51	625.59
A3	4+57.61	33.91	625.71
W. End W. Approach	4+67.53	34.31	625.84



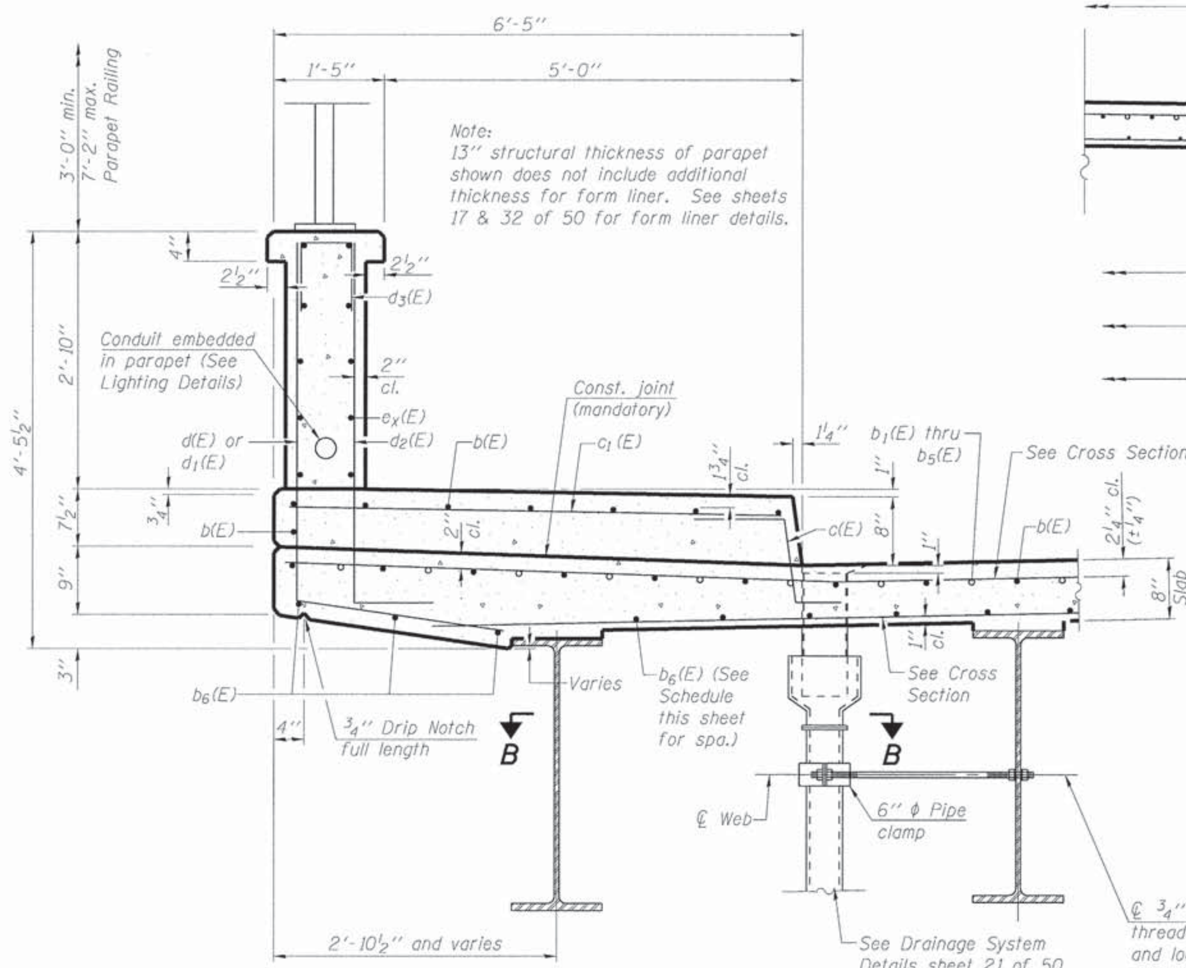
PLAN

NOTE:
Elevations given are at the top of the proposed concrete wearing surface.

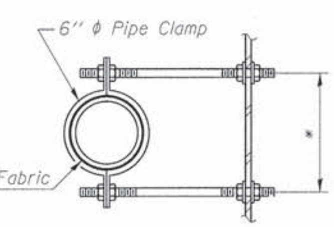
BAXTER & WOODMAN Consulting Engineers	USER NAME = 231ukb	DESIGNED - BLB	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TOP OF WEST APPROACH SLAB ELEVATIONS STRUCTURE NO. 049-2050	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		CHECKED - DCD	REVISED -			3719	12-00239-00-BR	LAKE	88	40
	PLOT SCALE =	DRAWN - BLB	REVISED -					CONTRACT NO. 61A57		
	PLOT DATE = 1/28/2015	CHECKED - DCD	REVISED -		SHEET NO. 11 OF 50 SHEETS		ILLINOIS FED. AID PROJECT M-BHM-9003(952)			



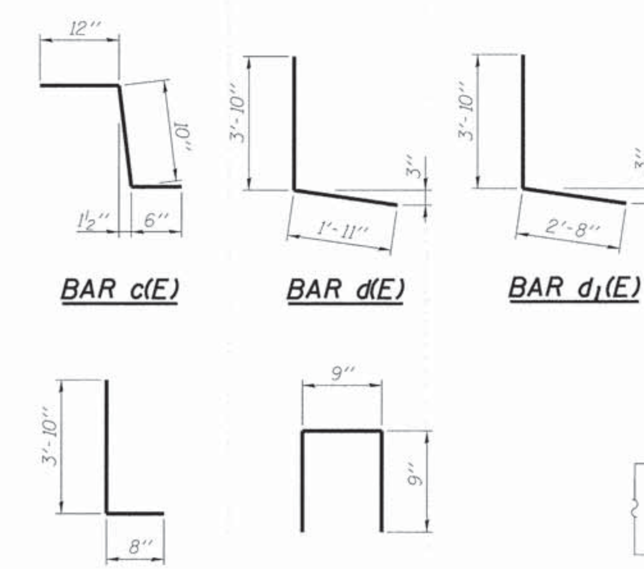
CROSS SECTION
(Looking West)
All dimensions perpendicular to ℄ Structure except where noted



SECTION THRU SIDEWALK



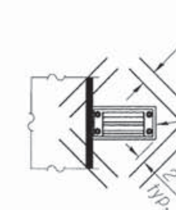
SECTION B-B
*Dimension as required by Pipe Clamp



BAR c(E) BAR d(E) BAR d1(E) BAR d2(E) BAR d3(E)

Bottom Bar b_6(E) Schedule Between Beams	
Beam Spaces	Reinforcement
Beams 1 thru 4	7x2 @ 12" cts.max. 5x9 @ 14" cts. 6x3 @ 13" cts.max.
Beams 4 thru 7	5x14 @ 14" cts.
Beams 7 thru 9	8x3 @ 12" cts.max. 5x11 @ 14" cts.
Beams 9 thru 12	8x3 @ 12" cts.max. 5x8 @ 14" cts. 6x3 @ 13" cts.max.

Bars are listed from East to West.
7x2 @ 12" cts. max. indicates lines of bars with 2 lengths per line with 12" max. spacing.

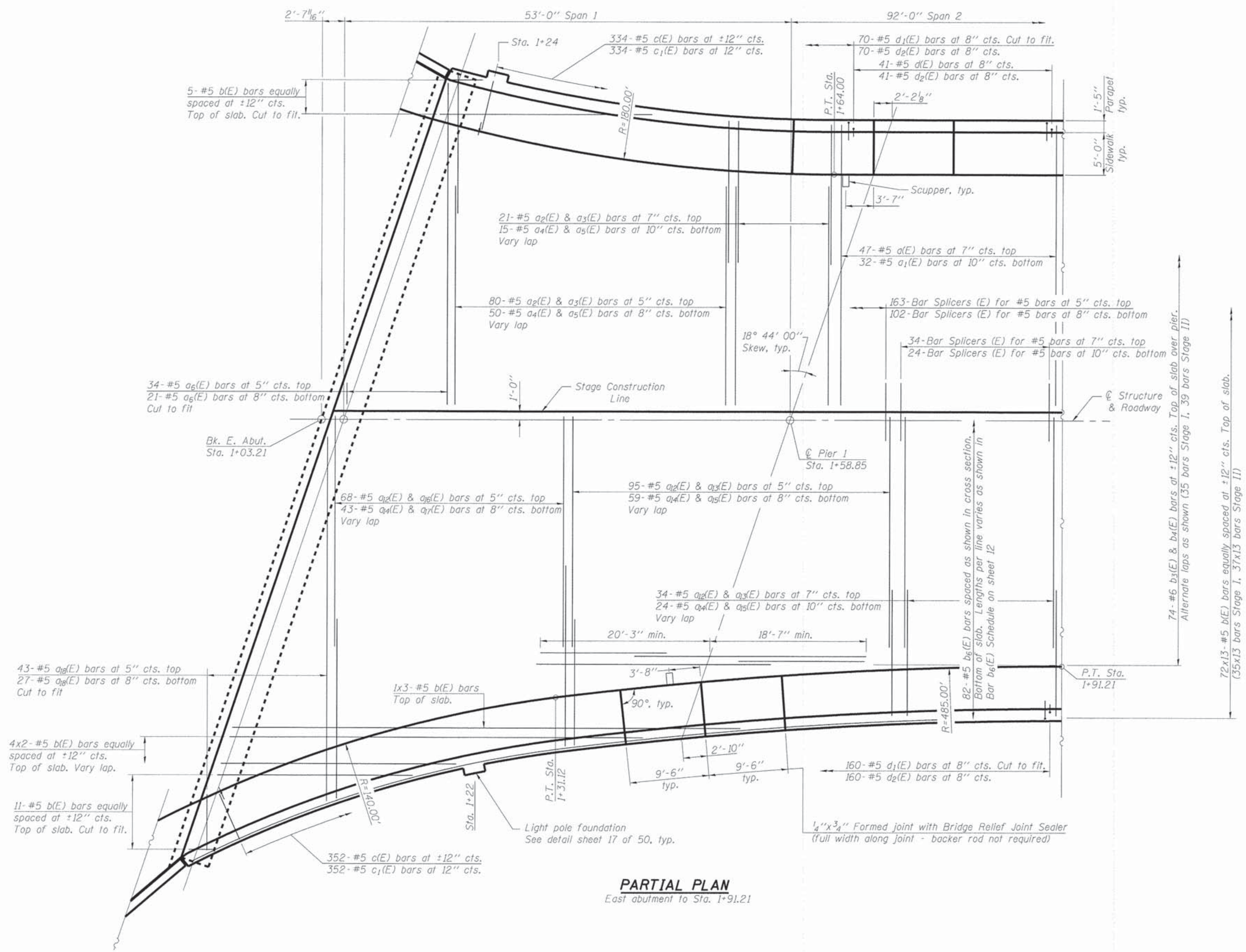


Note:
Cut longitudinal reinforcement to clear drainage scuppers.

SCUPPER PLAN

BAXTER & WOODMAN Consulting Engineers	USER NAME = 231ukb	DESIGNED - AS	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SUPERSTRUCTURE STRUCTURE NO. 049-2050
		CHECKED - DCD	REVISED -		
	PLOT SCALE =	DRAWN - AS	REVISED -		
	PLOT DATE = 1/28/2015	CHECKED - DCD	REVISED -		SHEET NO. 12 OF 50 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3719	12-00239-00-BR	LAKE	88	41
		CONTRACT NO. 61A57		
	ILLINOIS FED. AID PROJECT	M-BHM-9003(952)		



PARTIAL PLAN

East abutment to Sta. 1+91.21

MINIMUM BAR LAP

#5 bar = 3'-3"
#6 bar = 3'-10"

BAXTER & WOODMAN Consulting Engineers	USER NAME = 23lukb	DESIGNED - AS	REVISED -
		CHECKED - DCD	REVISED -
	PLOT SCALE =	DRAWN - AS	REVISED -
	PLOT DATE = 1/28/2015	CHECKED - DCD	REVISED -

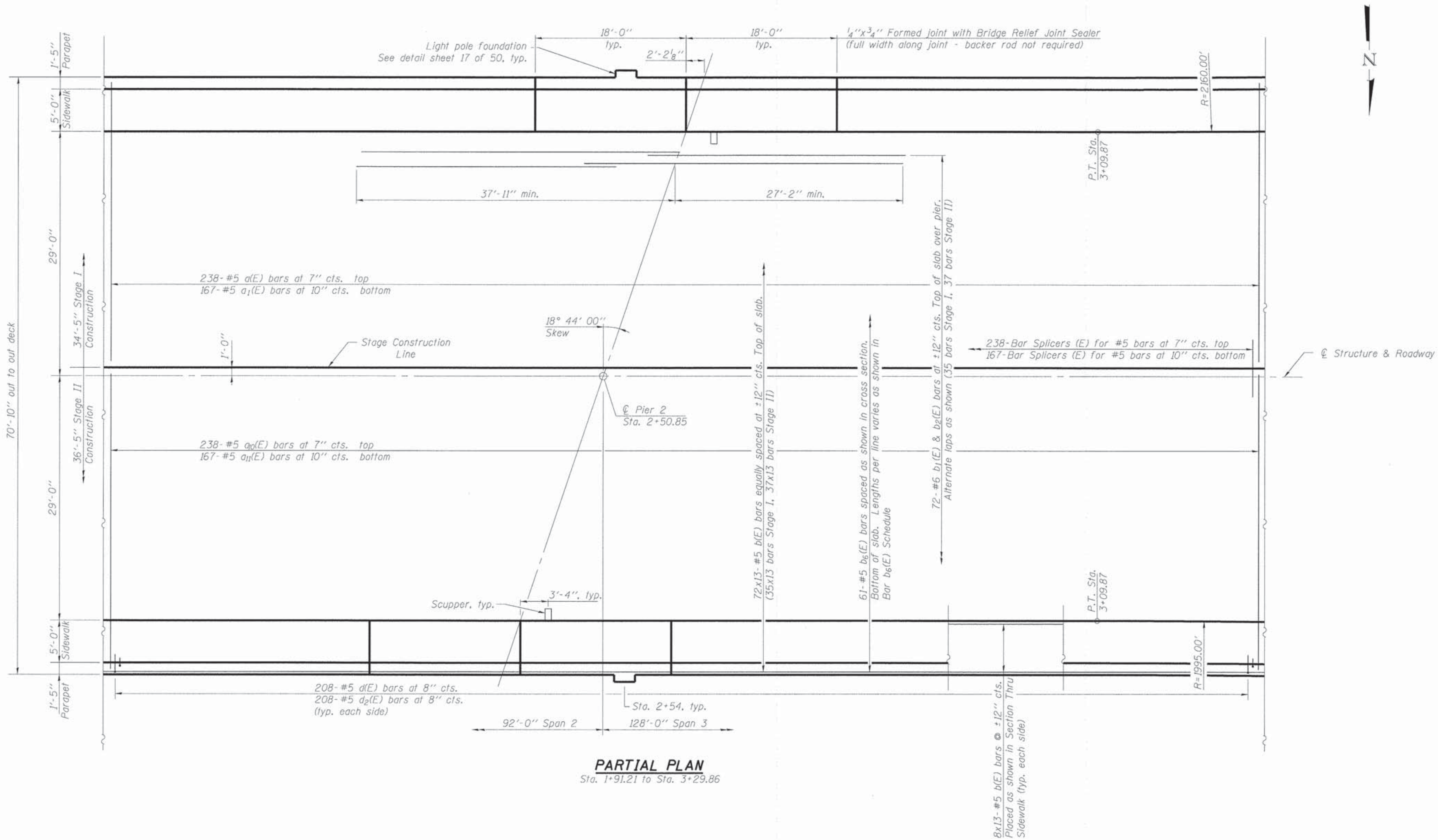
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE PLAN I
STRUCTURE NO. 049-2050

SHEET NO. 13 OF 50 SHEETS

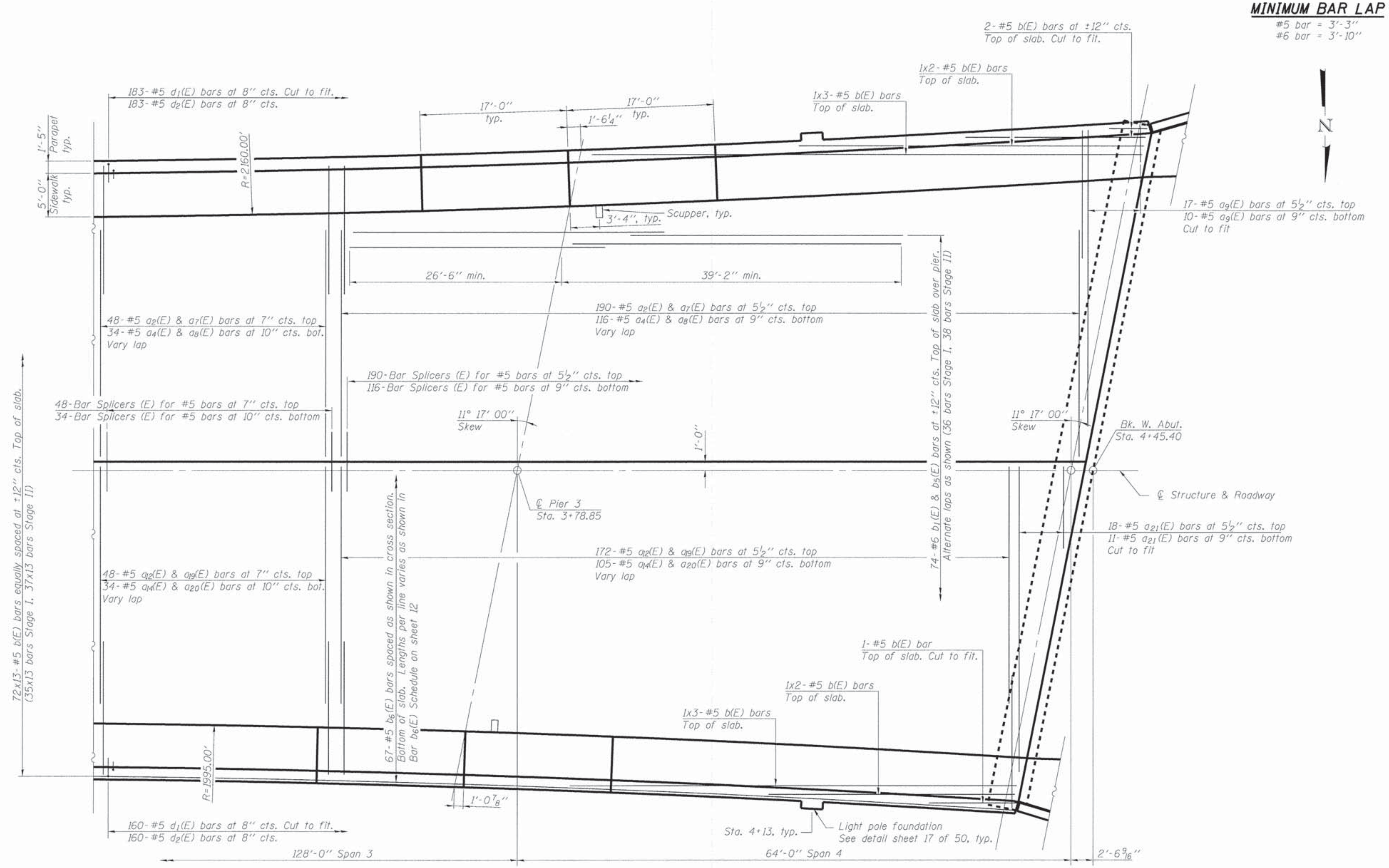
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3719	12-00239-00-BR	LAKE	88	42
		CONTRACT NO. 61A57		
	ILLINOIS FED. AID PROJECT	M-BHM-9003(952)		

MINIMUM BAR LAP
#5 bar = 3'-3''
#6 bar = 3'-10''



PARTIAL PLAN
Sta. 1+91.21 to Sta. 3+29.86

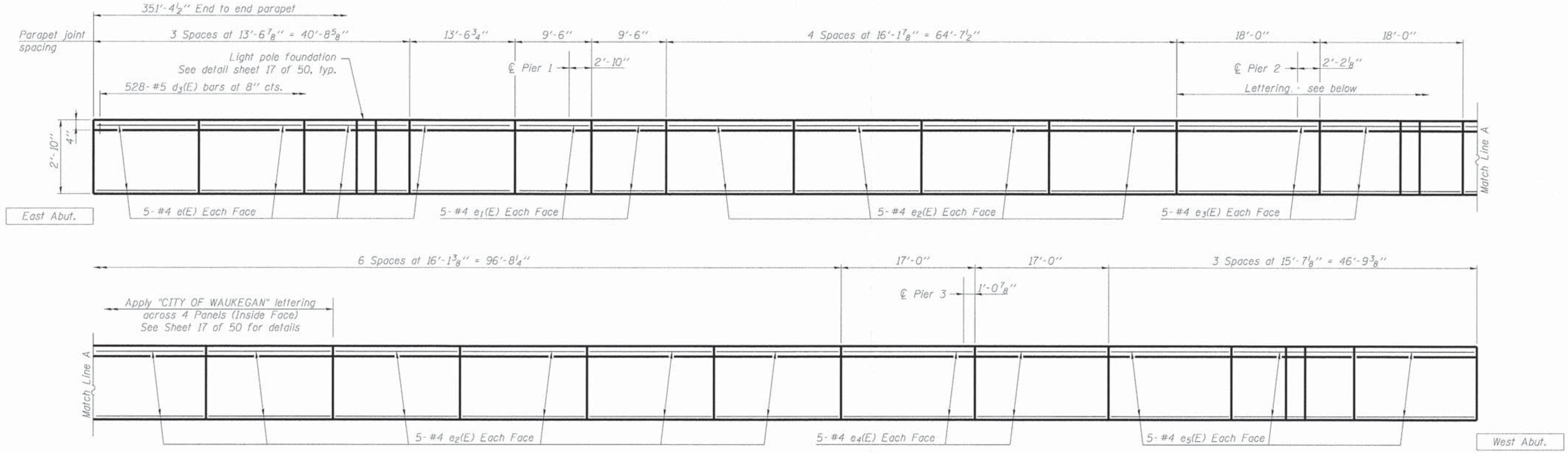
BAXTER & WOODMAN Consulting Engineers	USER NAME = 231ukb	DESIGNED - AS	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SUPERSTRUCTURE PLAN II STRUCTURE NO. 049-2050	F.A.U. RTE. 3719	SECTION 12-00239-00-BR	COUNTY LAKE	TOTAL SHEETS 88	SHEET NO. 43
		CHECKED - DCD	REVISED -					CONTRACT NO. 61A57		
	PLOT SCALE =	DRAWN - AS	REVISED -							
	PLOT DATE = 1/28/2015	CHECKED - DCD	REVISED -		SHEET NO. 14 OF 50 SHEETS		ILLINOIS FED. AID PROJECT M-BHM-9003(952)			



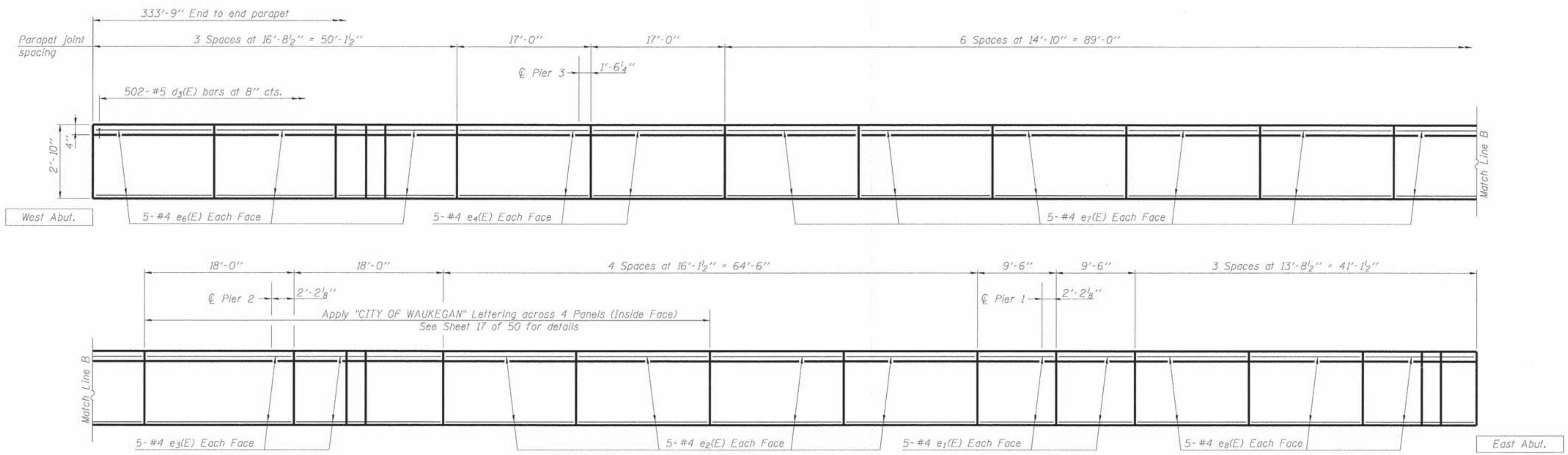
PARTIAL PLAN

Sta. 3+29.86 to West Abutment

BAXTER & WOODMAN Consulting Engineers	USER NAME = 231ukb	DESIGNED - AS	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SUPERSTRUCTURE PLAN III STRUCTURE NO. 049-2050	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		CHECKED - DCD	REVISED -			3719	12-00239-00-BR	LAKE	88	44
	PLOT SCALE =	DRAWN - AS	REVISED -					CONTRACT NO. 61A57		
	PLOT DATE = 1/28/2015	CHECKED - DCD	REVISED -		SHEET NO. 15 OF 50 SHEETS		ILLINOIS FED. AID PROJECT	M-BHM-9003(952)		



OUTSIDE ELEVATION OF NORTH PARAPET

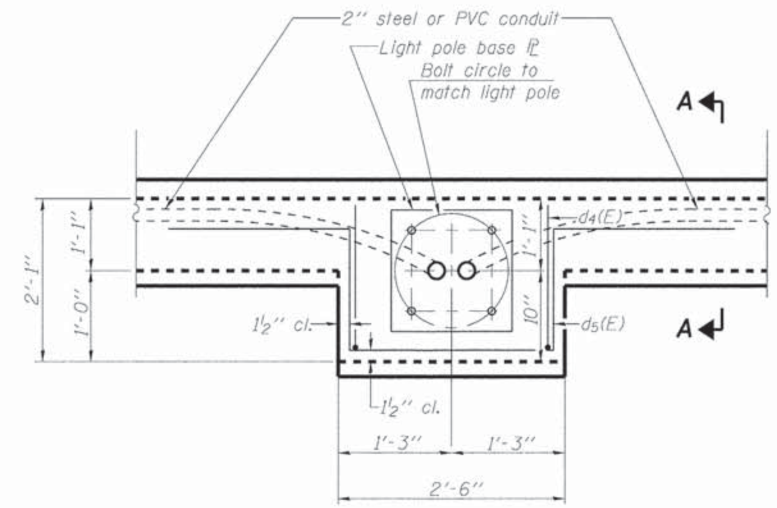


OUTSIDE ELEVATION OF SOUTH PARAPET

MINIMUM BAR LAP

(Parapet)
#4 bar = 2'-0"

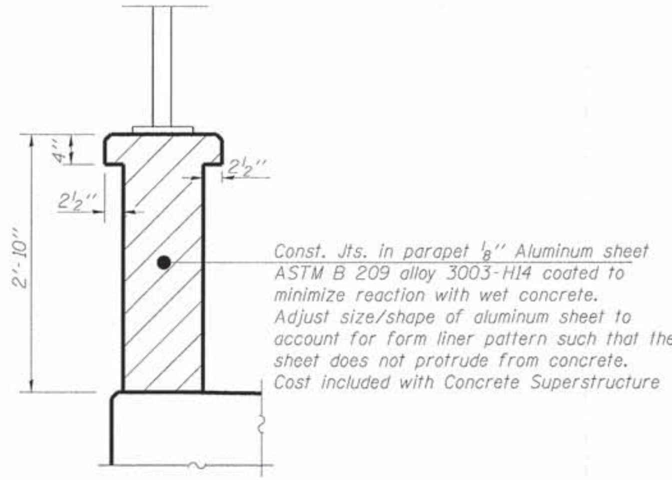
BAXTER & WOODMAN Consulting Engineers	USER NAME = 23lukb	DESIGNED - AS	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SUPERSTRUCTURE DETAILS I STRUCTURE NO. 049-2050	F.A.U. RTE. 3719	SECTION 12-00239-00-BR	COUNTY LAKE	TOTAL SHEETS 88 / SHEET NO. 45
		CHECKED - BLB	REVISED -					CONTRACT NO. 61A57	
	PLOT SCALE =	DRAWN - AS	REVISED -						
	PLOT DATE = 1/28/2015	CHECKED - BLB	REVISED -		SHEET NO. 16 OF 50 SHEETS		ILLINOIS FED. AID PROJECT	M-BHM-9003(952)	



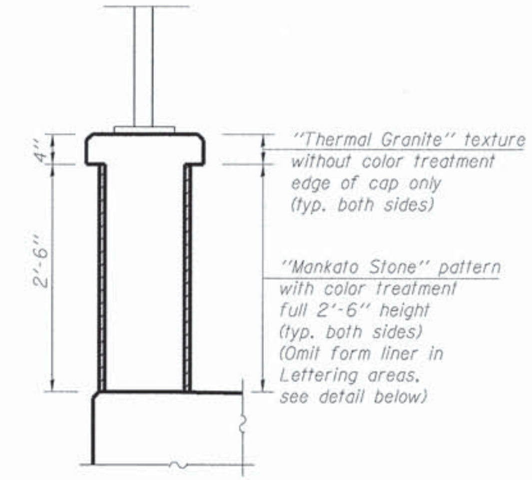
LIGHT POLE FOUNDATION PLAN

Note:
Cost of anchor rods is included with Concrete Superstructure. See Lighting Details for additional information.

Bars indicated thus 72x13- #5 etc. indicates 72 lines of bars with 13 lengths per line.

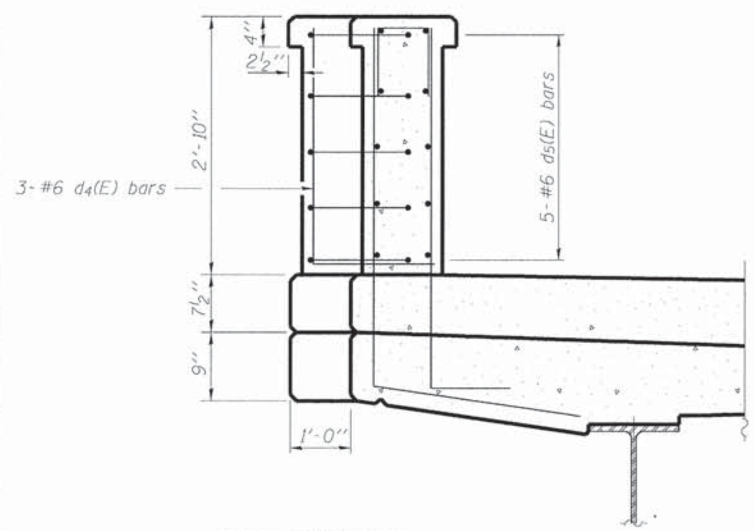


PARAPET JOINT DETAILS

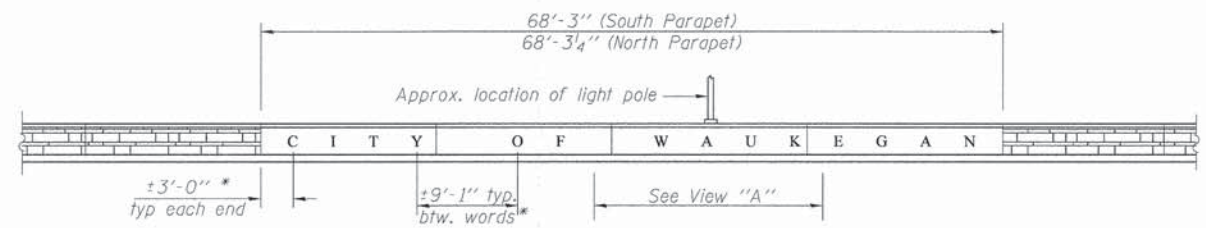


FORM LINER DETAILS

Form liner pattern, texture and color treatment shall also be continuous around the perimeter of each light pole base.



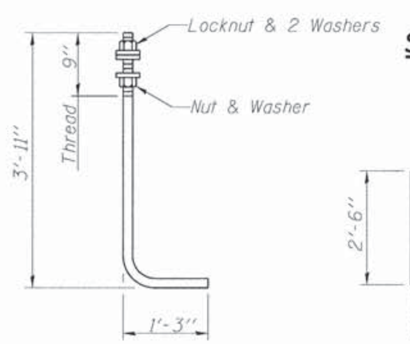
SECTION A-A



PARAPET LETTERING DETAILS
INSIDE ELEVATION VIEW

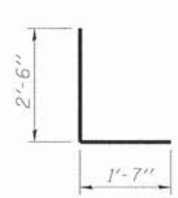
See Parapet Elevations on previous sheet for relative locations.
Parapet Railing not shown for clarity.

* Lettering shall be laid out to avoid joints in parapet

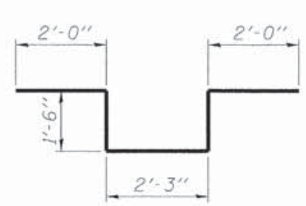


ANCHOR ROD

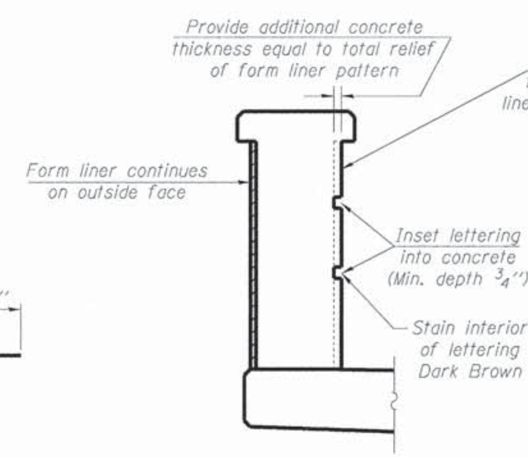
Diameter as specified for light poles.
(ASTM F 1554 Grade 105)



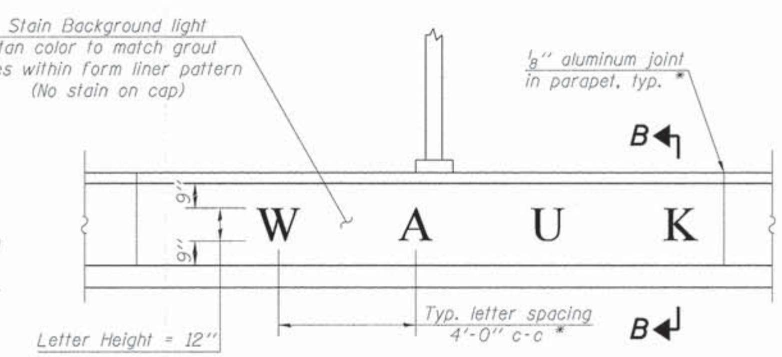
BAR d4(E)



BAR d5(E)



SECTION B-B



VIEW "A"

Lettering and background on inside face of parapets will be paid for as Form Liner Textured Surface and Concrete Surface Color Treatment. See Special Provisions and Sheet 32 of 50.

SUPERSTRUCTURE BILL OF MATERIAL

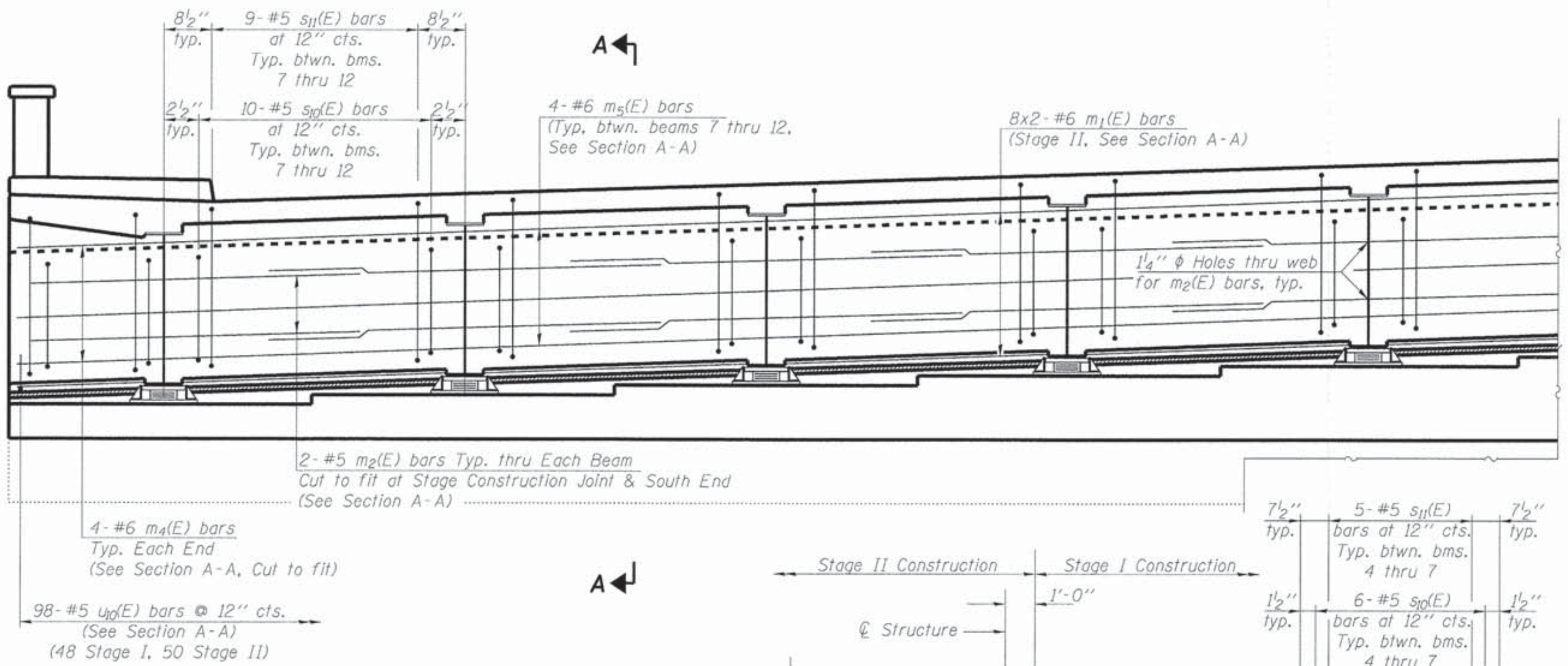
Bar	No.	Size	Length	Shape
a(E)	285	#5	34'-1"	—
a_1(E)	199	#5	33'-9"	—
a_2(E)	339	#5	26'-5"	—
a_3(E)	101	#5	16'-10"	—
a_4(E)	215	#5	15'-3"	—
a_5(E)	65	#5	27'-8"	—
a_6(E)	55	#5	38'-11"	—
a_7(E)	238	#5	15'-1"	—
a_8(E)	150	#5	25'-11"	—
a_9(E)	27	#5	36'-6"	—
a_{10} (E)	238	#5	36'-1"	—
a_{11} (E)	167	#5	35'-9"	—
a_{12} (E)	417	#5	27'-7"	—
a_{13} (E)	129	#5	15'-3"	—
a_{14} (E)	265	#5	12'-5"	—
a_{15} (E)	83	#5	30'-1"	—
a_{16} (E)	68	#5	21'-8"	—
a_{17} (E)	43	#5	36'-5"	—
a_{18} (E)	70	#5	44'-6"	—
a_{19} (E)	220	#5	15'-8"	—
a_{20}(E)	139	#5	30'-7"	—
a_{21}(E)	29	#5	37'-7"	—
a_{22}(E)	48	#5	1'-6"	—
b(E)	1183	#5	30'-0"	—
b_1(E)	146	#6	38'-0"	—
b_2(E)	72	#6	30'-11"	—
b_3(E)	74	#6	27'-10"	—
b_4(E)	74	#6	14'-10"	—
b_5(E)	74	#6	31'-6"	—
b_6(E)	929	#5	28'-1"	—
c(E)	686	#5	2'-4"	⅂
c_1(E)	686	#5	6'-0"	—
d(E)	457	#5	5'-9"	L
d_1(E)	573	#5	6'-6"	L
d_2(E)	1030	#5	4'-6"	L
d_3(E)	1030	#5	2'-3"	⊓
d_4(E)	18	#6	4'-1"	L
d_5(E)	30	#6	9'-3"	⅂⅃
e(E)	40	#4	13'-2"	—
e_1(E)	40	#4	9'-2"	—
e_2(E)	140	#4	15'-9"	—
e_3(E)	40	#4	17'-8"	—
e_4(E)	40	#4	16'-8"	—
e_5(E)	30	#4	15'-3"	—
e_6(E)	30	#4	16'-4"	—
e_7(E)	60	#4	14'-6"	—
e_8(E)	30	#4	13'-4"	—
m(E)	16	#6	22'-11"	—
m_1 (E)	16	#6	29'-5"	—
m_2 (E)	24	#5	12'-4"	—
m_3 (E)	12	#6	7'-8"	—
m_4 (E)	20	#6	5'-11"	—
m_5 (E)	20	#6	9'-0"	—
m_6 (E)	8	#6	38'-9"	—
m_7 (E)	8	#6	40'-6"	—
m_8 (E)	24	#5	10'-5"	—
m_9 (E)	12	#6	7'-3"	—
m_{10} (E)	28	#6	5'-9"	—
m_{11} (E)	12	#6	7'-0"	—
s_{10} (E)	98	#5	10'-1"	⊐
s_{11} (E)	87	#5	12'-7"	▯
s_{12} (E)	84	#5	9'-11"	⊐
s_{13} (E)	73	#5	12'-4"	▯
u_{10} (E)	178	#5	2'-9"	⊔
Reinforcement Bars, Epoxy Coated			Pound	212,860
Concrete Superstructure			Cu. Yds.	946.0
Bar Splicers			Each	1,144

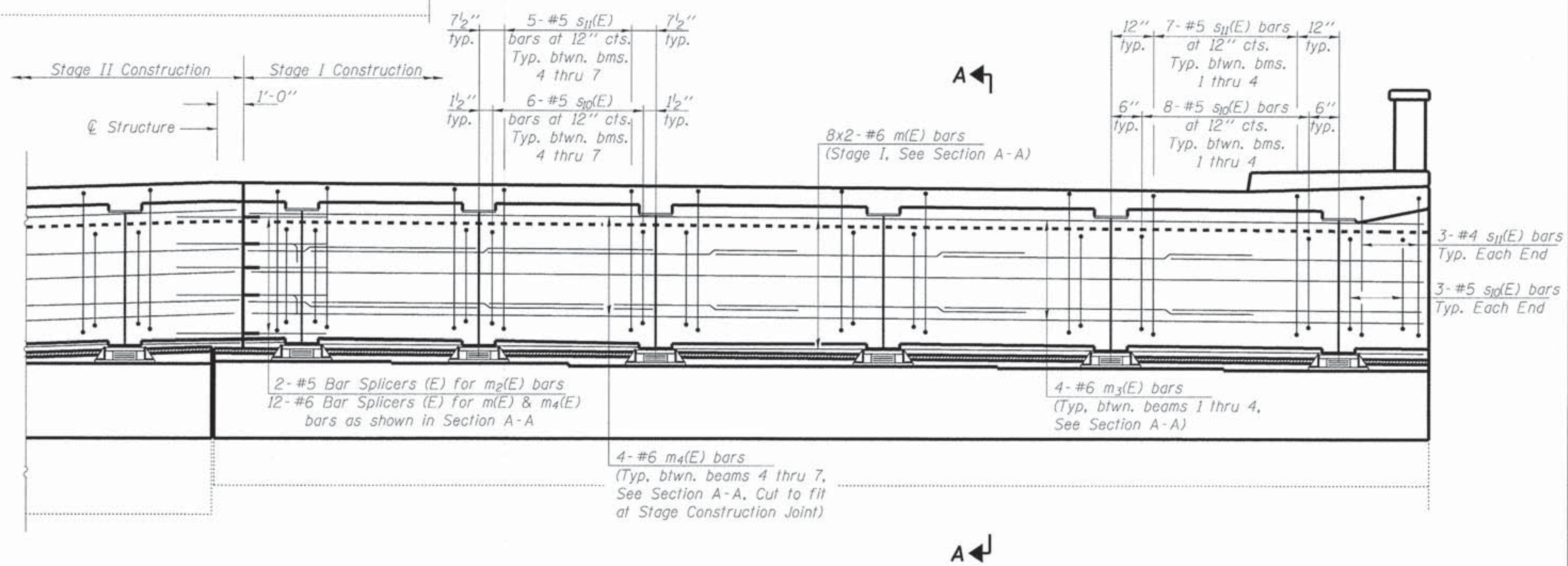
BAXTER & WOODMAN Consulting Engineers	USER NAME = 231ukb	DESIGNED - AS	REVISED -
		CHECKED - BLB	REVISED -
	PLOT SCALE =	DRAWN - AS	REVISED -
	PLOT DATE = 1/28/2015	CHECKED - BLB	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE DETAILS II
STRUCTURE NO. 049-2050

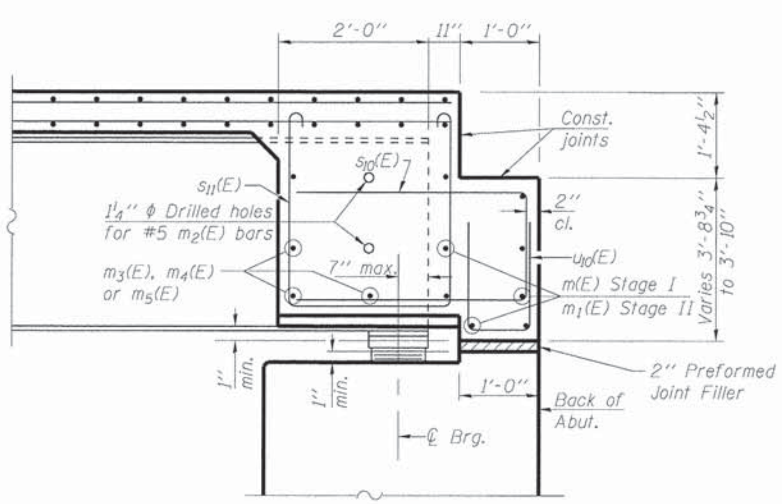
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3719	12-00239-00-BR	LAKE	88	46
		CONTRACT NO. 61A57		
		ILLINOIS FED. AID PROJECT	M-BHM-9003(952)	





DIAPHRAGM ELEVATION AT EAST ABUTMENT

Looking East



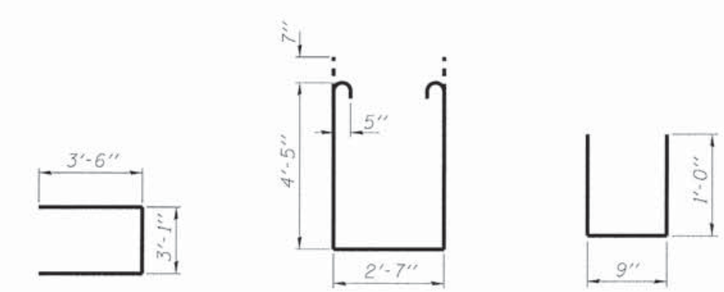
SECTION A-A

(Horiz. dim. @ Rt. L's)

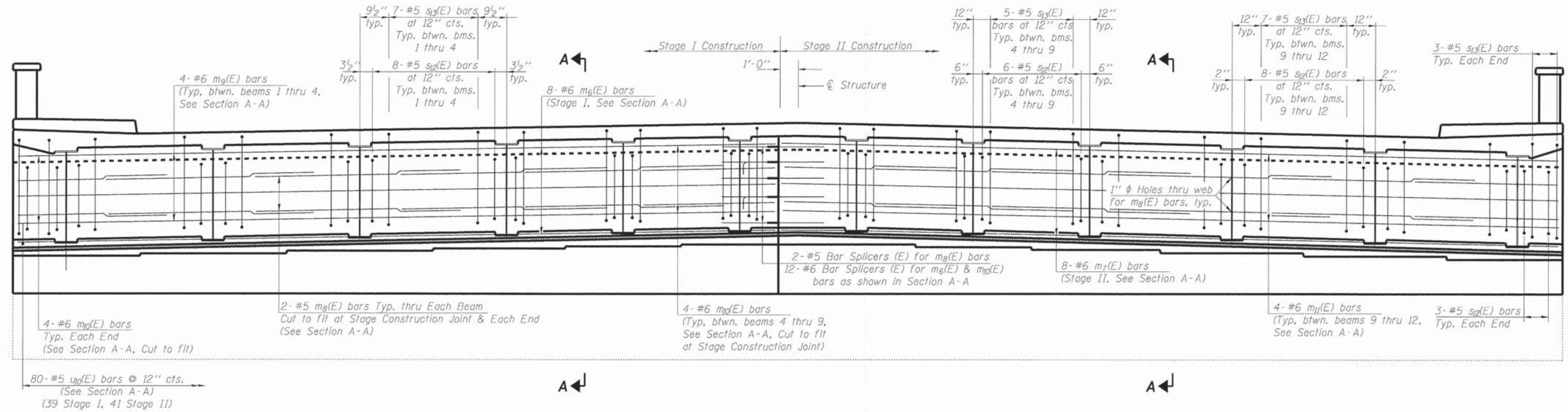
Notes:
Reinforcement bars in diaphragm are billed with superstructure on sheet 17 of 50.
Concrete in diaphragm is included with Concrete Superstructure on sheet 17 of 50.
The s_{10}(E) and s_{11}(E) bars shall be placed parallel to the beams. Spacing for these bars shall be at right angles to the beams.
Cost of 2″ PJF included with Concrete Superstructure.

MIN. BAR LAP

#5 bar = 2′-10″
#6 bar = 3′-4″

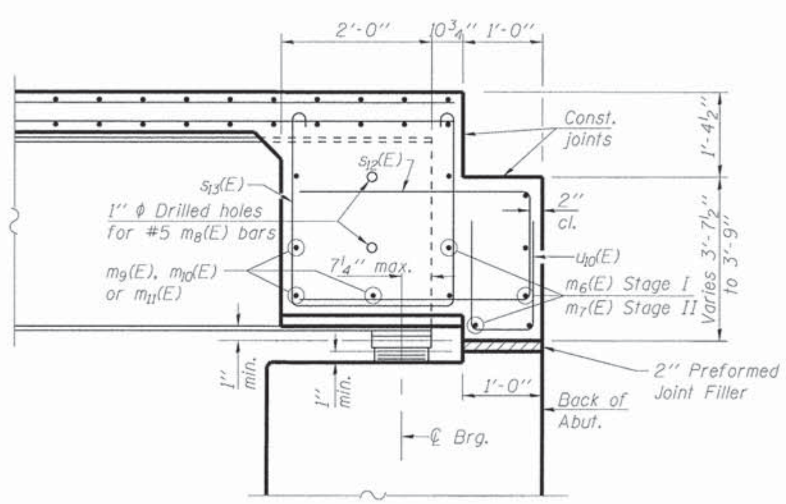


BAXTER & WOODMAN Consulting Engineers	USER NAME = 231ukb	DESIGNED - AS	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	EAST ABUTMENT DIAPHRAGM DETAILS STRUCTURE NO. 049-2050	F.A.U. RTE. 3719 / SECTION 12-00239-00-BR / COUNTY LAKE / TOTAL SHEETS 88 / SHEET NO. 47
		CHECKED - DCD	REVISED -			CONTRACT NO. 61A57
	PLOT SCALE =	DRAWN - AS	REVISED -			
	PLOT DATE = 1/28/2015	CHECKED - DCD	REVISED -		SHEET NO. 18 OF 50 SHEETS	ILLINOIS FED. AID PROJECT M-BHM-9003(952)



DIAPHRAGM ELEVATION AT WEST ABUTMENT

Looking West



SECTION A-A

(Horiz. dim. @ Rt. L's)

Notes:

Reinforcement bars in diaphragm are billed with superstructure on sheet 17 of 50.

Concrete in diaphragm is included with Concrete Superstructure on sheet 17 of 50.

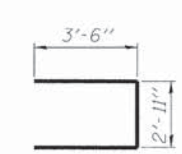
For detail of bar u_{10}(E) see sheet 18 of 50.

The s_{12}(E) and s_{13}(E) bars shall be placed parallel to the beams. Spacing for these bars shall be at right angles to the beams.

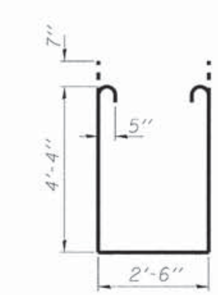
Cost of 2" PJF included with Concrete Superstructure.

MIN. BAR LAP

#5 bar = 2'-10"
#6 bar = 3'-4"

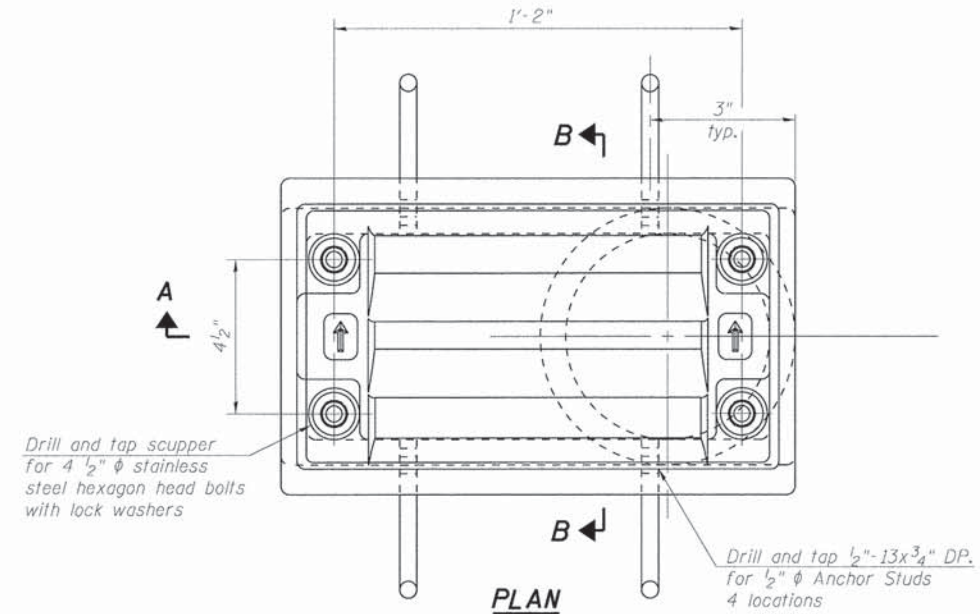


BAR s_{12}(E)

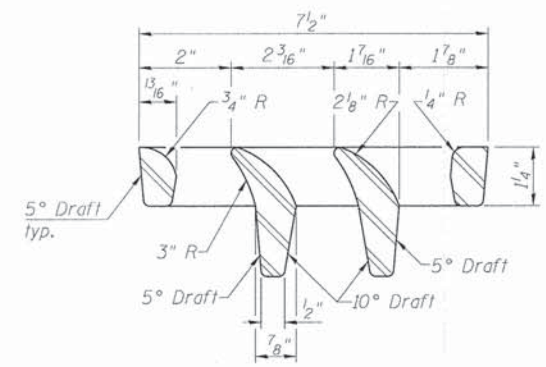


BAR s_{13}(E)

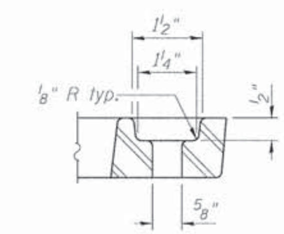
BAXTER & WOODMAN Consulting Engineers	USER NAME = 231ukb	DESIGNED - AS	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	WEST ABUTMENT DIAPHRAGM DETAILS STRUCTURE NO. 049-2050	F.A.U. RTE. 3719; SECTION 12-00239-00-BR; COUNTY LAKE; TOTAL SHEETS 88; SHEET NO. 48
		CHECKED - DCD	REVISED -			CONTRACT NO. 61A57
	PLOT SCALE =	DRAWN - AS	REVISED -			
	PLOT DATE = 1/28/2015	CHECKED - DCD	REVISED -		SHEET NO. 19 OF 50 SHEETS	ILLINOIS FED. AID PROJECT M-BHM-9003(952)



PLAN



VANE GRATE DETAIL



BOLT HOLE DETAIL

Notes:

All cast iron parts shall be gray iron conforming to the requirements of AASHTO M 105, Class 35B.

Bolts, anchor studs, washers and nuts shall conform to the requirements of ASTM A 307 and shall be galvanized according to AASHTO M 232.

Downspouts located on the exterior side of a painted steel fascia beam shall be painted with the finish coat specified for the exterior side of the fascia beam.

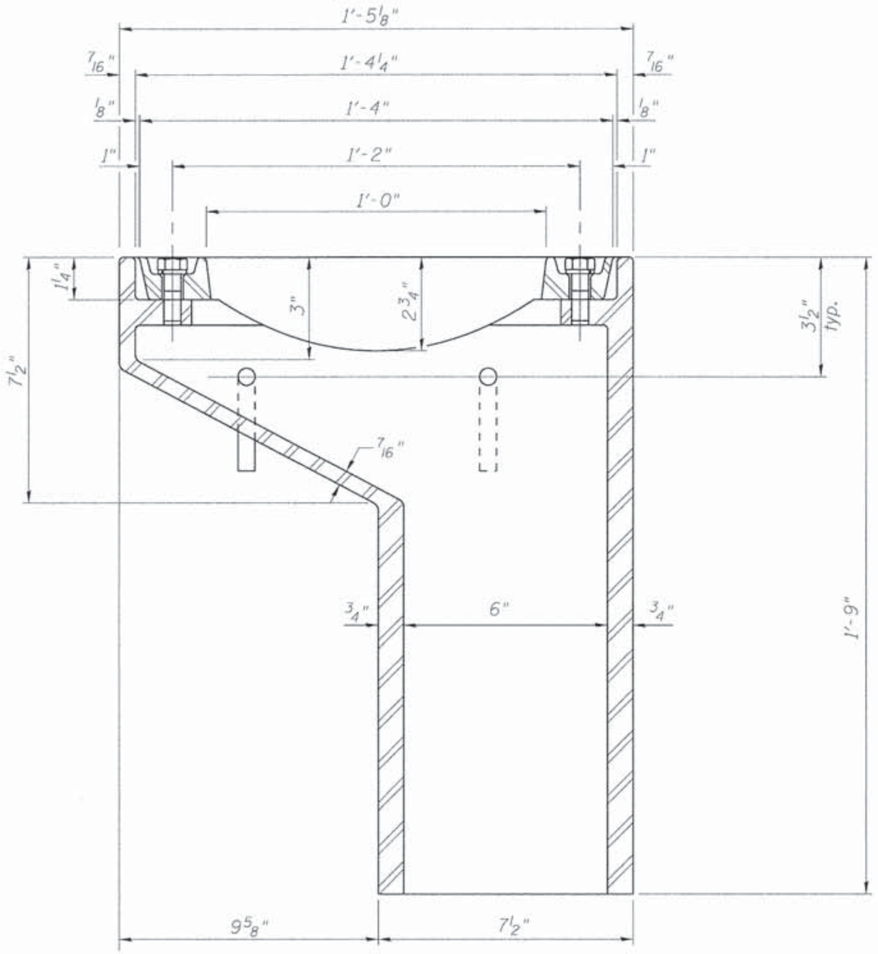
As an alternate, bolts, anchor studs, washers and nuts may be stainless steel according to Article 1006.29(d) of the Standard Specifications.

Structural steel weldments of equal sections and of the same configuration may be substituted for the cast iron scupper frame. Fillet or full penetration welds shall be used for the weldments. Details shall be submitted to the Engineer for approval. Structural steel weldments shall not be substituted for the cast iron scupper grate. Structural steel frames and downspouts shall be galvanized according to AASHTO M111.

The Contractor shall take appropriate measures to assure that Protective Coat is not applied to the scupper.

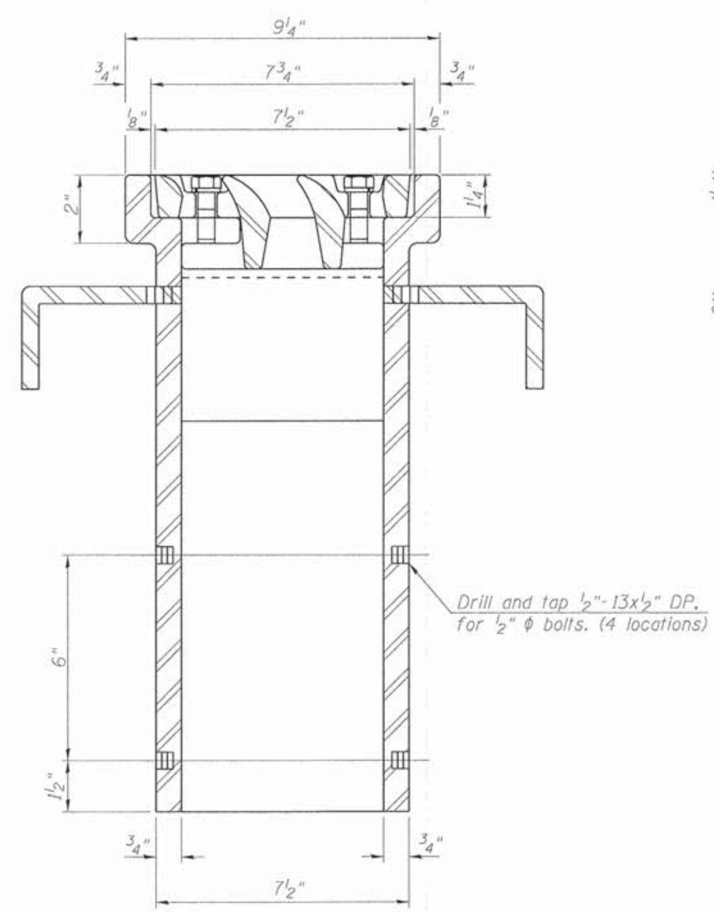
Cost of the Grate, Frame, Downspout, Anchor Studs, Bolts, Washers and Nuts including complete installation of the scupper shall be paid for at the contract unit price each for Drainage Scupper, DS-11.

Alternate fiberglass downspout conforming to ASTM D 2996 with a short-time rupture strength hoop tensile stress of 30,000 psi min. may be used in lieu of the cast iron or steel equivalent.

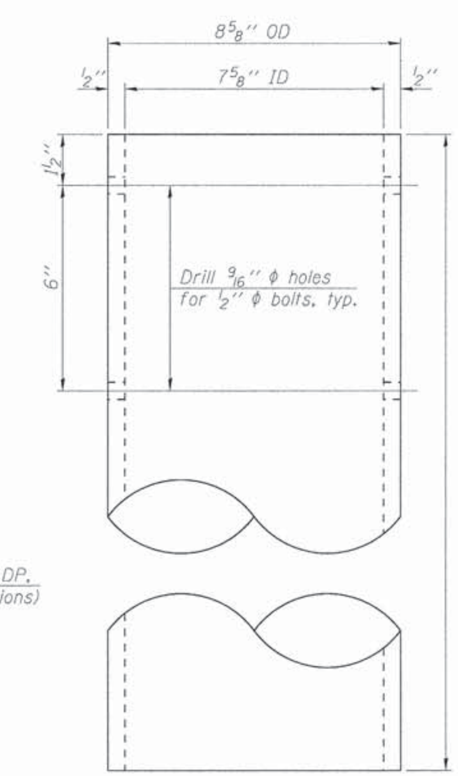


SECTION A-A

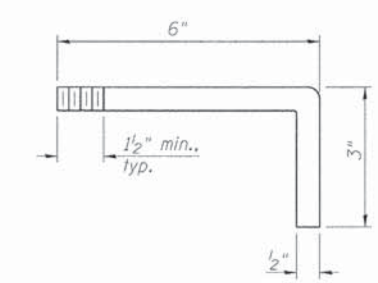
See sheet 12 of 50 for scupper location relative to sidewalk.



SECTION B-B



DOWNSPOUT



ANCHOR STUD DETAIL

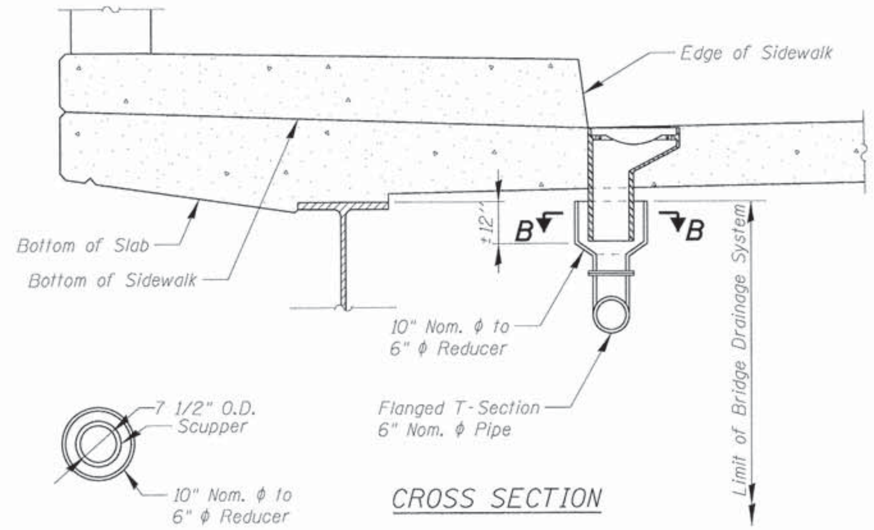
BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Drainage Scupper, DS-11	Each	6

DS-11 7-1-10

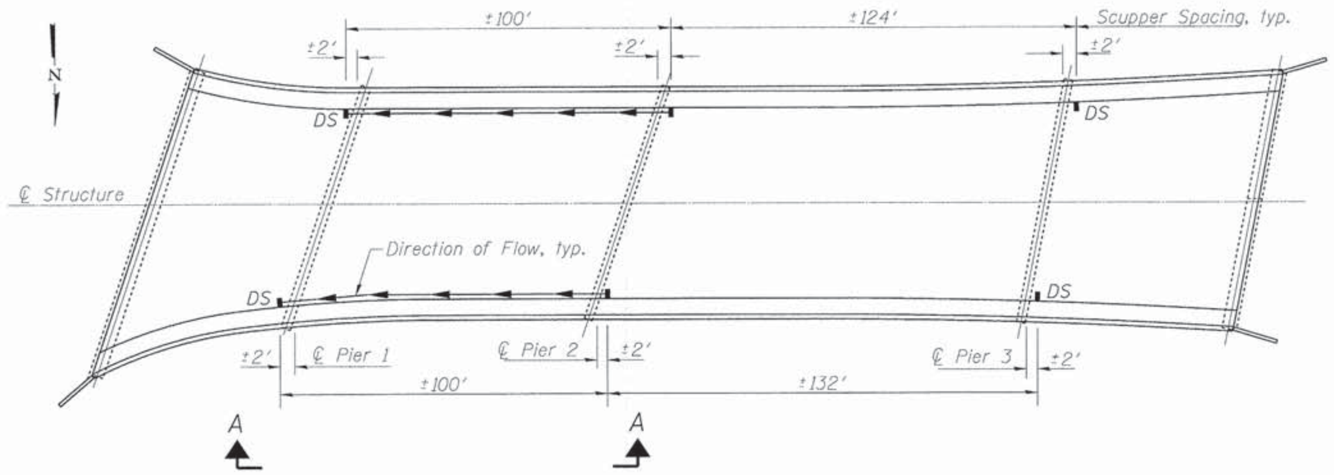
BAXTER & WOODMAN Consulting Engineers	USER NAME = 231ukb	DESIGNED - BLB	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	DRAINAGE SCUPPER, DS-11 STRUCTURE NO. 049-2050
		CHECKED - AS	REVISED -		
	PLOT SCALE =	DRAWN - BLB	REVISED -		
	PLOT DATE = 1/28/2015	CHECKED - AS	REVISED -		SHEET NO. 20 OF 50 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3719	12-00239-00-BR	LAKE	88	49
		CONTRACT NO. 61A57		
	ILLINOIS FED. AID PROJECT	M-BHM-9003(952)		



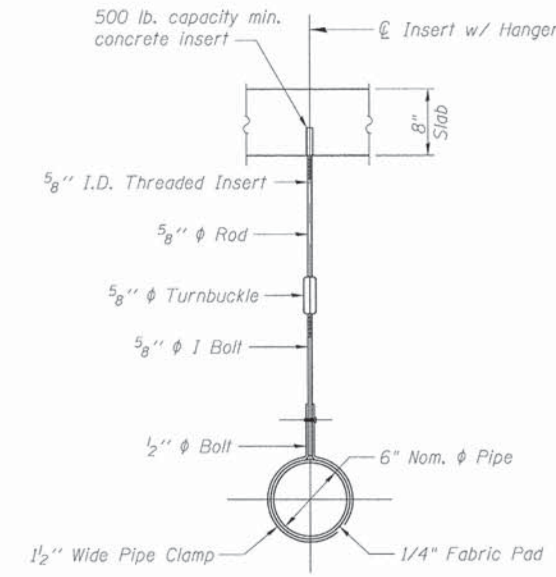
SECTION B-B

CROSS SECTION



PLAN

DS = Downspout location
▮ = Type DS-11 Scupper

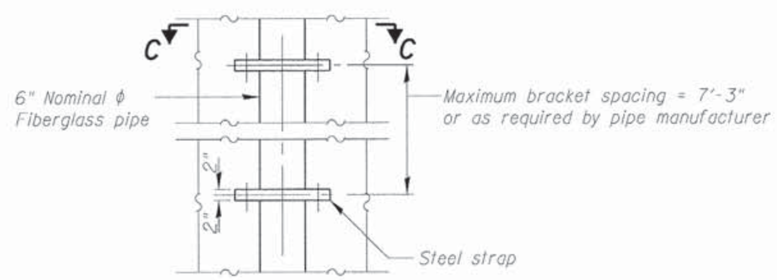


HANGER DETAIL

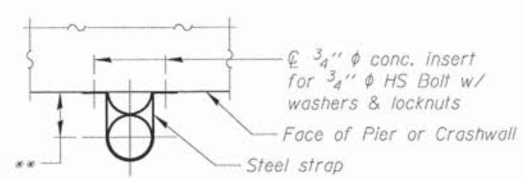
Note: Bottom of pipe clamp shall not extend below bottom of steel beam.

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Drainage System	L Sum	1



ELEVATION



SECTION C-C

PIPE BRACKET DETAIL

**Use 1 - 3/16" x 4" galv. steel strap and 1 - 4" wide galv. steel fill plate if dimension is less than 6"; otherwise, use 2 - 3/16" x 4" galv. steel straps as shown. Dimension shall not exceed 1'-0"

Notes:

Details and dimensions shown are provided for bidding purposes, and shall be subject to change according to pipe manufacturer's requirements. See Special Provisions.

The Contractor shall submit shop drawings to the Engineer for review and approval prior to beginning installation.

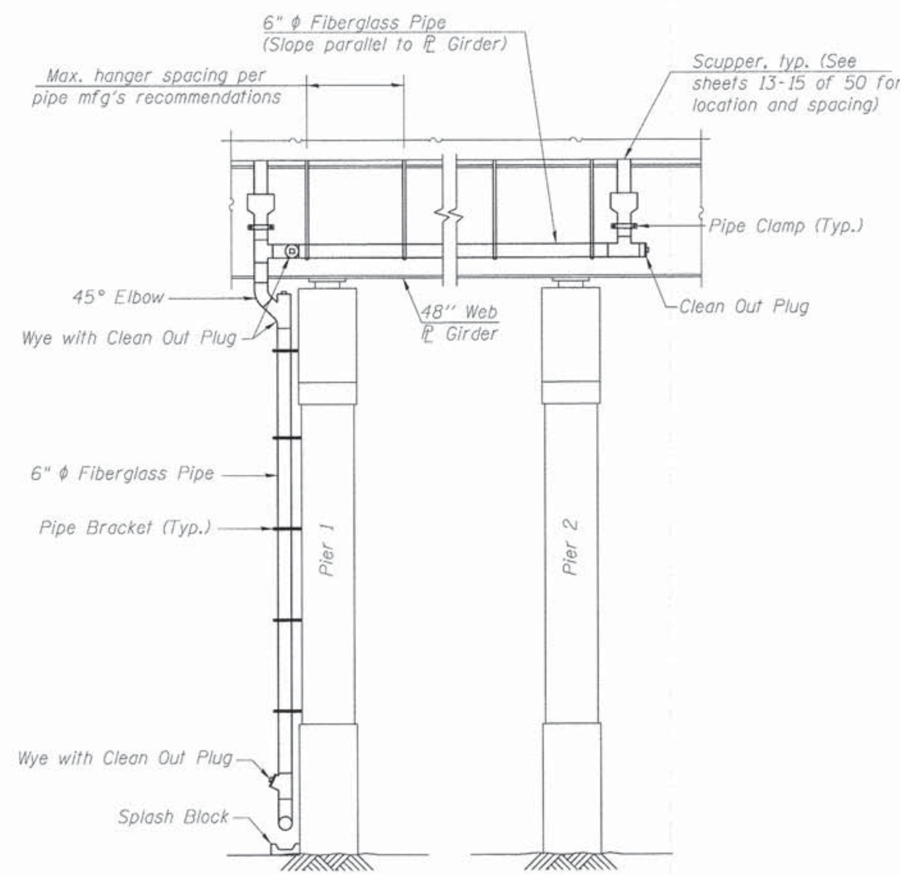
The exterior surfaces of the furnished fiberglass pipe shall be coated or pigmented by the manufacturer with a color that matches the color of concrete.

Space concrete inserts in slab to miss reinforcement.

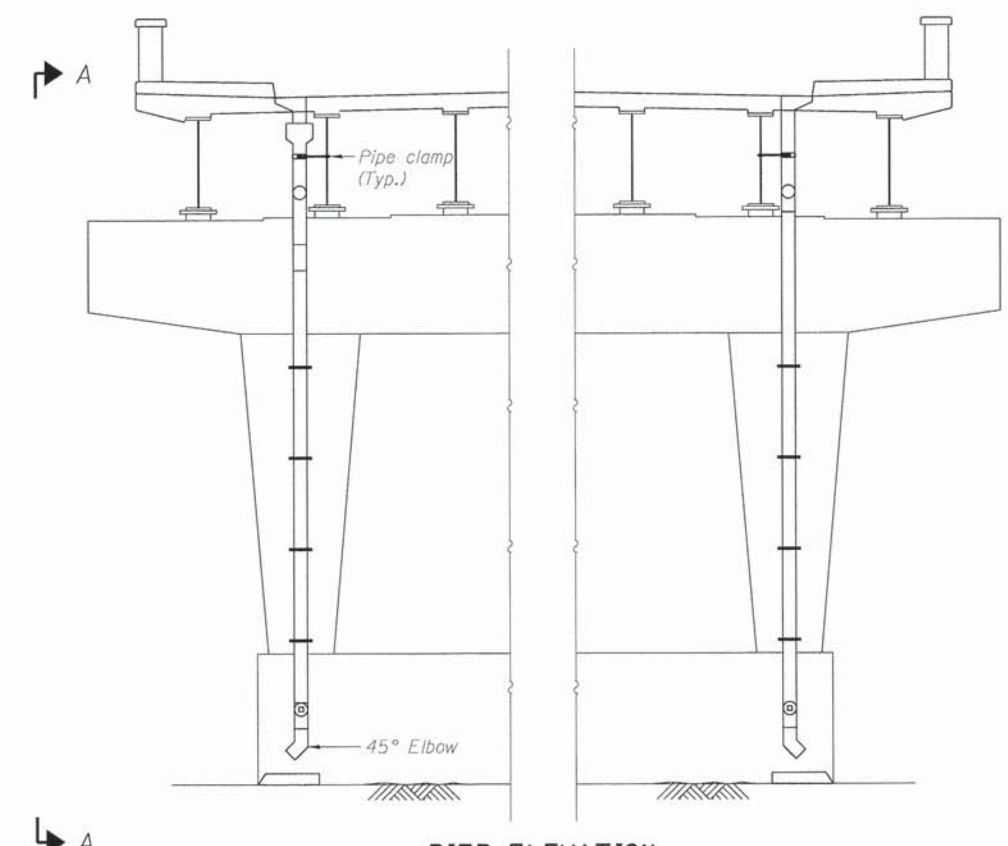
Drains and Bridge Drainage System shall be located clear of all cross frames.

For details of pipe clamp connection to girder, see Sheet 12 of 50.

See Sheet 20 of 50 for Scupper details.



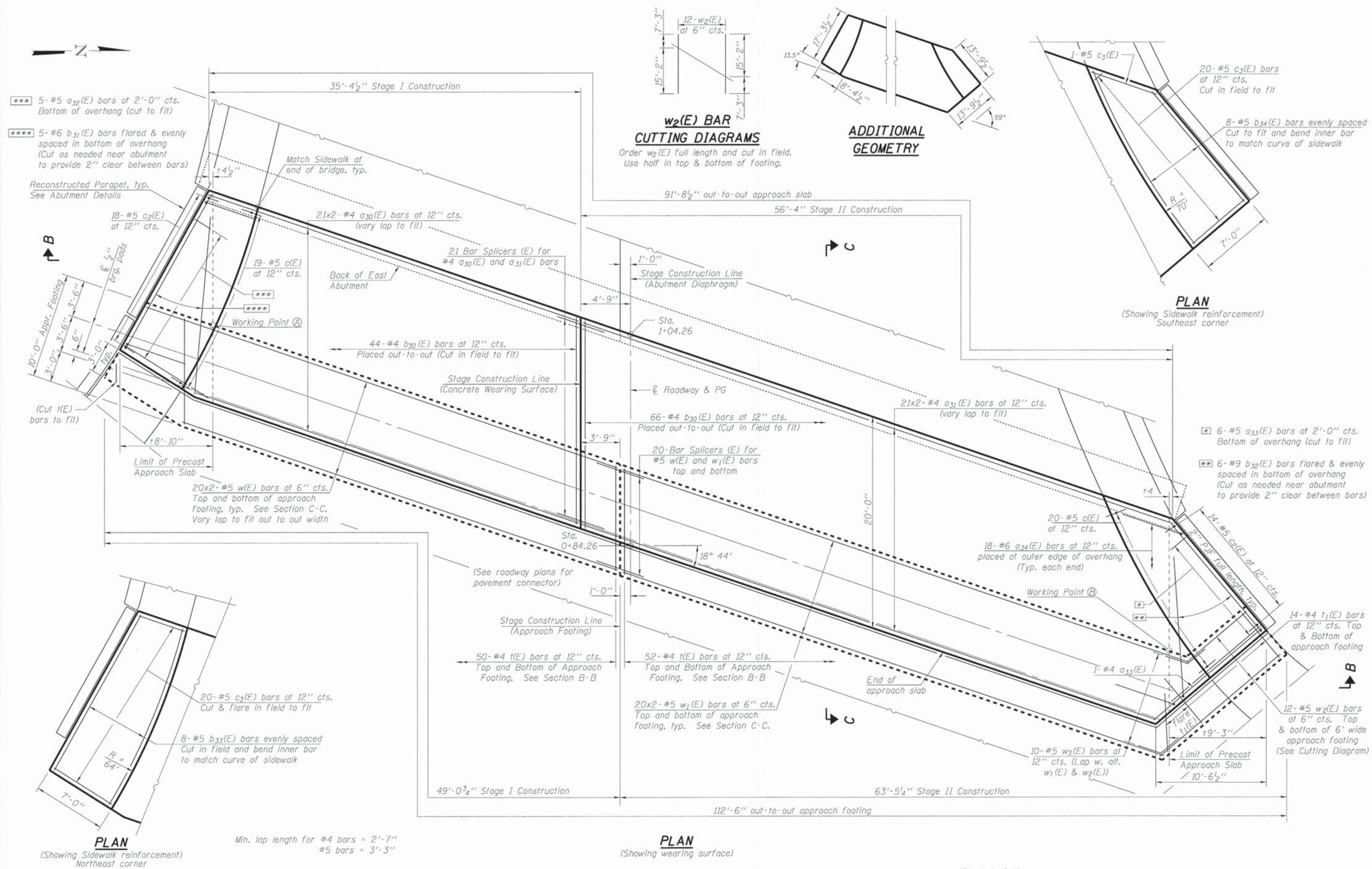
VIEW A-A



PIER ELEVATION

BAXTER & WOODMAN Consulting Engineers	USER NAME = 23Iukb	DESIGNED - AMM	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	DRAINAGE SYSTEM DETAILS STRUCTURE NO. 049-2050
		CHECKED - BLB	REVISED -		
	PLOT SCALE =	DRAWN - BLB	REVISED -		
	PLOT DATE = 1/28/2015	CHECKED - DCD	REVISED -		SHEET NO. 21 OF 50 SHEETS

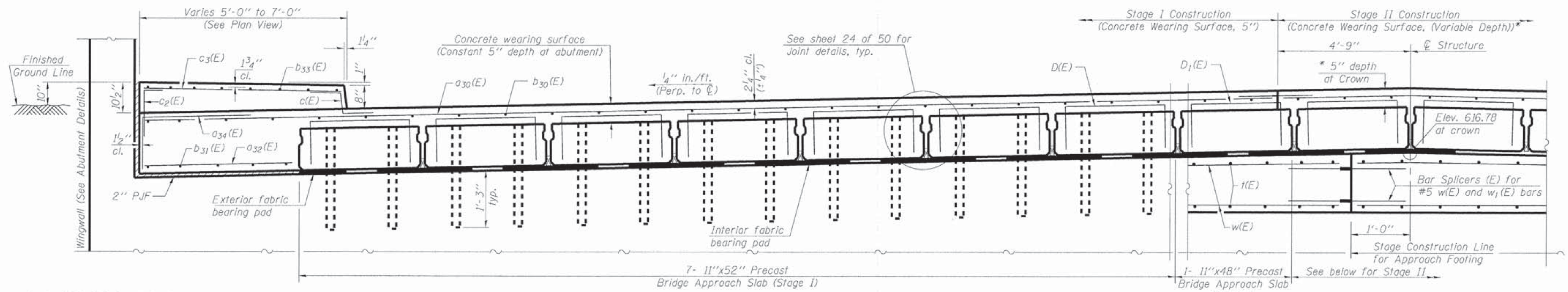
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3719	12-00239-00-BR	LAKE	88	50
		CONTRACT NO. 61A57		
		ILLINOIS FED. AID PROJECT	M-BHM-9003(952)	



Z
*** 5-#5 a32(E) bars at 2'-0" cts. Bottom of overhang (cut to fit)
**** 5-#6 b31(E) bars flared & evenly spaced in bottom of overhang (Cut as needed near abutment to provide 2" clear between bars)
35'-4½" Stage I Construction
12-w2(E) at 6" cts.
7'-3"
15'-2"
15'-2"
7'-3"
w2(E) BAR CUTTING DIAGRAMS
Order w2(E) full length and cut in field. Use half in top & bottom of footing.
13.5°
17'-3½"
8'-4½"
13'-9½"
13'-9½"
59°
ADDITIONAL GEOMETRY
1-#5 c3(E)
20-#5 c3(E) bars at 12" cts. Cut in field to fit
8-#5 b34(E) bars evenly spaced Cut to fit and bend inner bar to match curve of sidewalk
R = 70'
7'-0"
PLAN
(Showing Sidewalk reinforcement) Southeast corner
±4½"
Match Sidewalk at end of bridge, typ.
Reconstructed Parapet, typ. See Abutment Details
18-#5 c2(E) at 12" cts.
91'-8½" out-to-out approach slab
56'-4" Stage II Construction
21x2-#4 a30(E) bars at 12" cts. (vary lap to fit)
21 Bar Splicers (E) for #4 a30(E) and a31(E) bars
B
C
℄ ½" brg. pads
19-#5 c(E) at 12" cts.
Back of East Abutment
1'-0"
Stage Construction Line (Abutment Diaphragm)
4'-9"
Sta. 1+04.26
10'-0" Appr. Footing
3'-6"
3'-6"
3'-0"
6"
3'-0" typ.
Working Point Ⓐ
44-#4 b30(E) bars at 12" cts. Placed out-to-out (Cut in field to fit)
Stage Construction Line (Concrete Wearing Surface)
℄ Roadway & PG
(Cut t(E) bars to fit)
66-#4 b30(E) bars at 12" cts. Placed out-to-out (Cut in field to fit)
21x2-#4 a31(E) bars at 12" cts. (vary lap to fit)
±8'-10"
3'-9"
Limit of Precast Approach Slab
20-Bar Splicers (E) for #5 w(E) and w1(E) bars top and bottom
6-#5 a33(E) bars at 2'-0" cts. Bottom of overhang (cut to fit)
6-#9 b32(E) bars flared & evenly spaced in bottom of overhang (Cut as needed near abutment to provide 2" clear between bars)
20x2-#5 w(E) bars at 6" cts. Top and bottom of approach footing, typ. See Section C-C. Vary lap to fit out to out width
±4
20'-0"
20-#5 c(E) at 12" cts.
14-#5 c2(E) at 12" cts.
2" PJF full length, typ.
Sta. 0+84.26
18° 44'
18-#6 a34(E) bars at 12" cts. placed at outer edge of overhang (Typ. each end)
(See roadway plans for pavement connector)
1'-0"
Working Point Ⓑ
Stage Construction Line (Approach Footing)
14-#4 t1(E) bars at 12" cts. Top & Bottom of approach footing
50-#4 t(E) bars at 12" cts. Top and Bottom of Approach Footing. See Section B-B
52-#4 t(E) bars at 12" cts. Top and Bottom of Approach Footing. See Section B-B
End of approach slab
1-#4 a33(E)
20-#5 c3(E) bars at 12" cts. Cut & flare in field to fit
20x2-#5 w1(E) bars at 6" cts. Top and bottom of approach footing, typ. See Section C-C.
12-#5 w2(E) bars at 6" cts. Top & bottom of 6' wide approach footing (See Cutting Diagram)
flare t1(E)
±9'-3"
8-#5 b33(E) bars evenly spaced Cut in field and bend inner bar to match curve of sidewalk
R = 64'
10-#5 w3(E) bars at 12" cts. (Lap w. alt. w1(E) & w2(E))
Limit of Precast Approach Slab
10'-6½"
7'-0"
49'-0¾" Stage I Construction
63'-5¼" Stage II Construction
112'-6" out-to-out approach footing
PLAN
(Showing Sidewalk reinforcement) Northeast corner
Min. lap length for #4 bars = 2'-7"
#5 bars = 3'-3"
PLAN
(Showing wearing surface)

(Sheet 1 of 4)

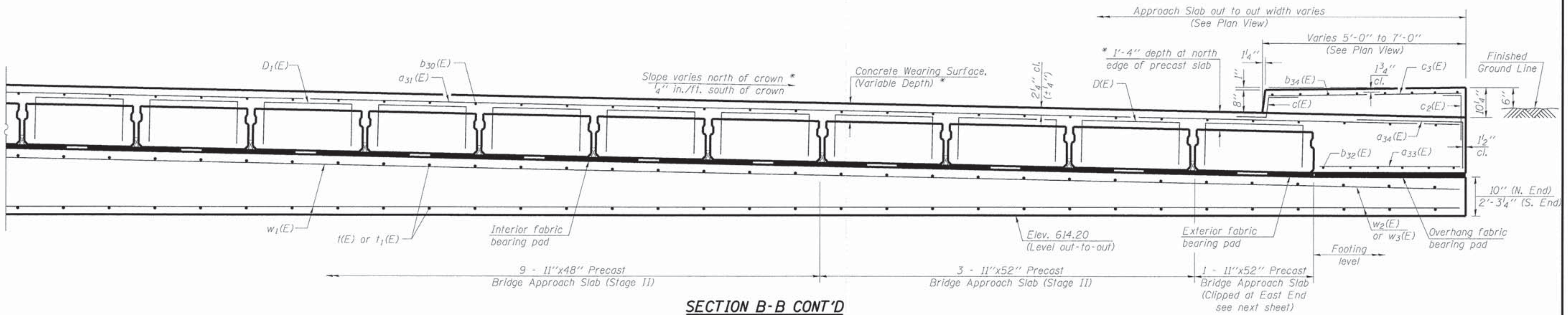
BAXTER & WOODMAN Consulting Engineers	USER NAME = 231ukb	DESIGNED - BLB	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	EAST APPROACH SLAB DETAILS STRUCTURE NO. 049-2050	F.A.U. RTE. 3719 — SECTION 12-00239-00-BR — COUNTY LAKE — TOTAL SHEETS 88 — SHEET NO. 51
		CHECKED - DCD	REVISED -			CONTRACT NO. 61A57
	PLOT SCALE =	DRAWN - BLB	REVISED -			
	PLOT DATE = 1/28/2015	CHECKED - DCD	REVISED -		SHEET NO. 22 OF 50 SHEETS	ILLINOIS FED. AID PROJECT M-BHM-9003(952)



Cost of 2" PJF included with Concrete Superstructure.

SECTION B-B

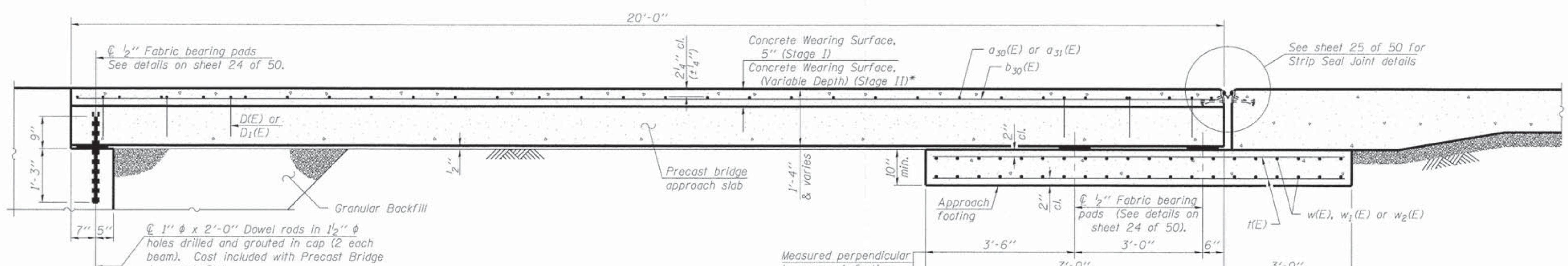
NEAR ABUTMENT



SECTION B-B CONT'D

AT APPROACH FOOTING

* Wearing Surface thickness varies 5" to 1'-4" north of crown.
See Top of East Approach Slab Elevations.



SECTION C-C

(Sheet 2 of 4)

BAXTER & WOODMAN Consulting Engineers	USER NAME = 231ukb	DESIGNED - BLB	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	EAST APPROACH SLAB DETAILS STRUCTURE NO. 049-2050		
		CHECKED - DCD	REVISED -				
	PLOT SCALE =	DRAWN - BLB	REVISED -				
	PLOT DATE = 1/28/2015	CHECKED - DCD	REVISED -		SHEET NO. 23 OF 50 SHEETS		

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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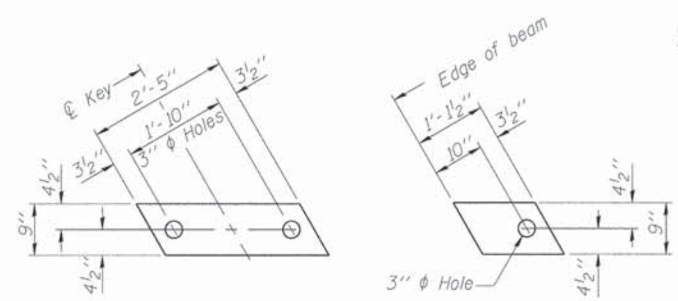
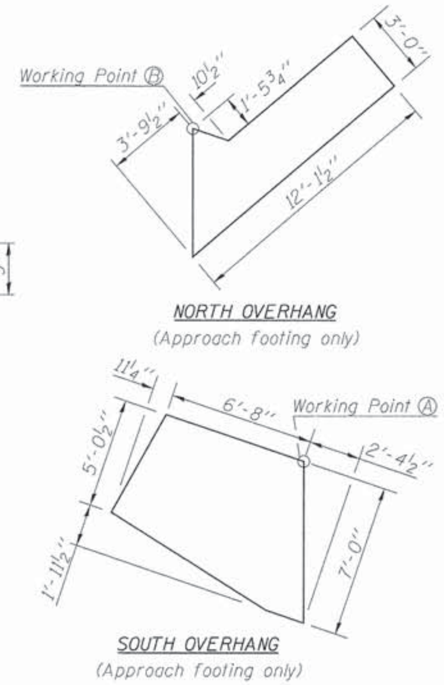
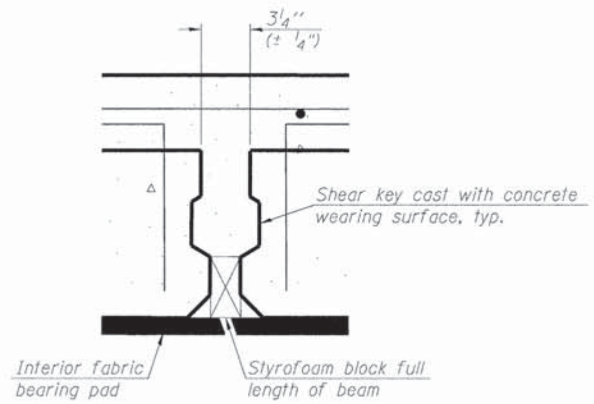
		CONTRACT NO. 61A57		
		ILLINOIS FED. AID PROJECT	M-BHM-9003(952)	



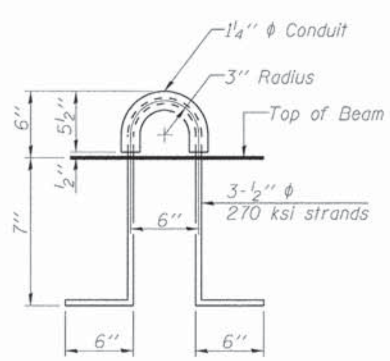
FABRIC BEARING PAD

Notes:
All bearing pads shall be ½" thick.
Omit holes for fabric bearing pads at approach slab footing end of beams.
Expansion bearing pad shall be bonded to the approach slab footing.
Overhang bearing pads may be supplied in multiple pieces and/or cut to fit.

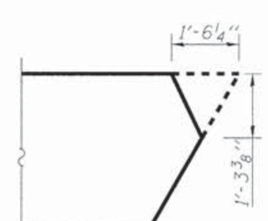




SECTION THRU SHEAR KEY JOINT

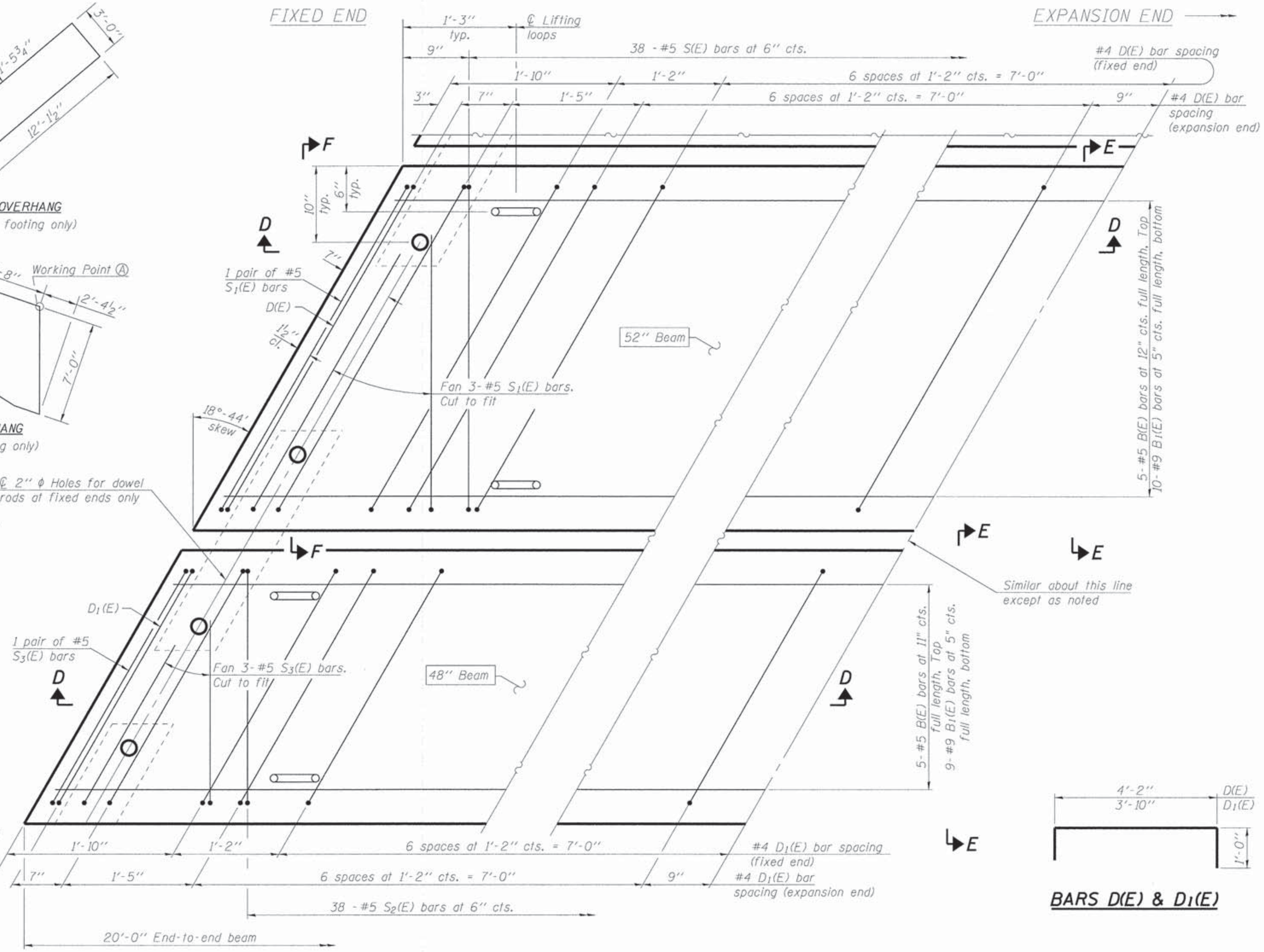


LIFTING LOOP DETAIL



CLIP DETAIL FOR 11" X 52" PRECAST APPROACH SLAB AT NORTHEAST CORNER

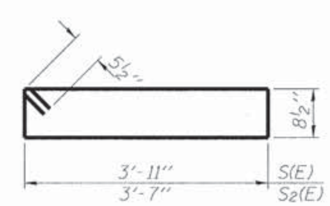
Fabricator shall make any adjustments to reinforcement necessary to maintain minimum clear covers



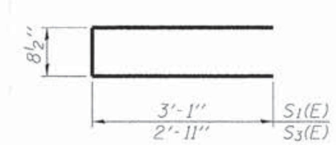
HALF PLAN VIEW

(showing precast bridge approach beams)

BARS D(E) & D_1(E)



BARS S(E) & S_2(E)



BARS S_1(E) & S_3(E)

BAR LIST EACH 52" BEAM

(For information only)

Bar	No.	Size	Length	Shape
B(E)	5	#5	19'-8"	straight
B_1(E)	10	#9	19'-8"	straight
D(E)	17	#4	6'-2"	⊓
S(E)	38	#5	10'-2"	closed
S_1(E)	10	#5	6'-11"	⊏

BAR LIST EACH 48" BEAM

(For information only)

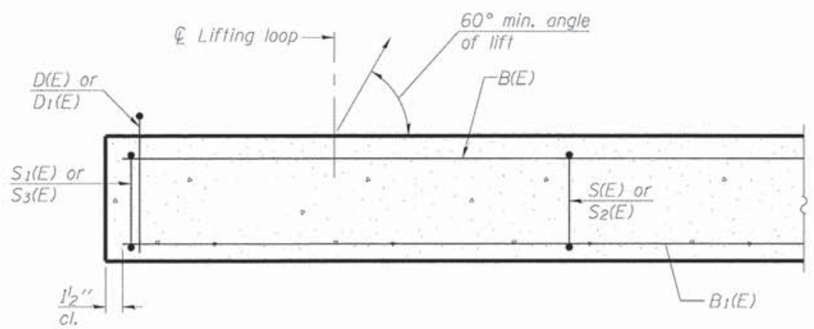
Bar	No.	Size	Length	Shape
B(E)	5	#5	19'-8"	straight
B_1(E)	9	#9	19'-8"	straight
D_1(E)	17	#4	5'-10"	⊓
S_2(E)	38	#5	9'-6"	closed
S_3(E)	10	#5	6'-7"	⊏

Note: Bar dimensions for East approach slab may differ from West approach slab bars with the same designation.

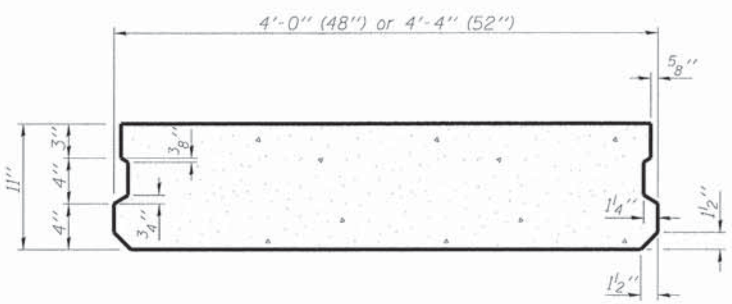
(Sheet 3 of 4)

BAXTER & WOODMAN Consulting Engineers	USER NAME = 23lukb	DESIGNED - BLB	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	EAST APPROACH SLAB DETAILS STRUCTURE NO. 049-2050
		CHECKED - DCD	REVISED -		
	PLOT SCALE =	DRAWN - BLB	REVISED -		
	PLOT DATE = 1/28/2015	CHECKED - DCD	REVISED -		SHEET NO. 24 OF 50 SHEETS

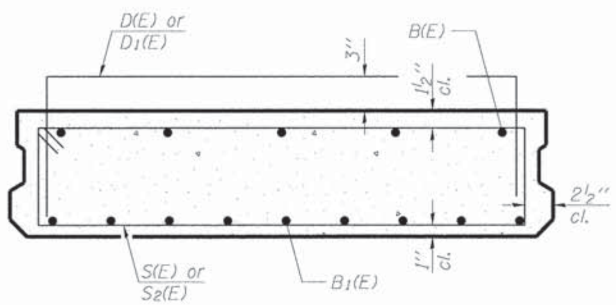
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3719	12-00239-00-BR	LAKE	88	53
		CONTRACT NO. 61A57		
		ILLINOIS FED. AID PROJECT	M-BHM-9003(952)	



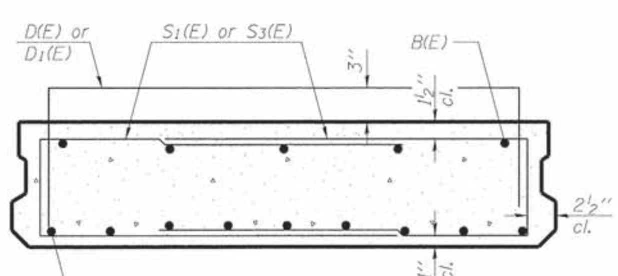
SECTION D-D



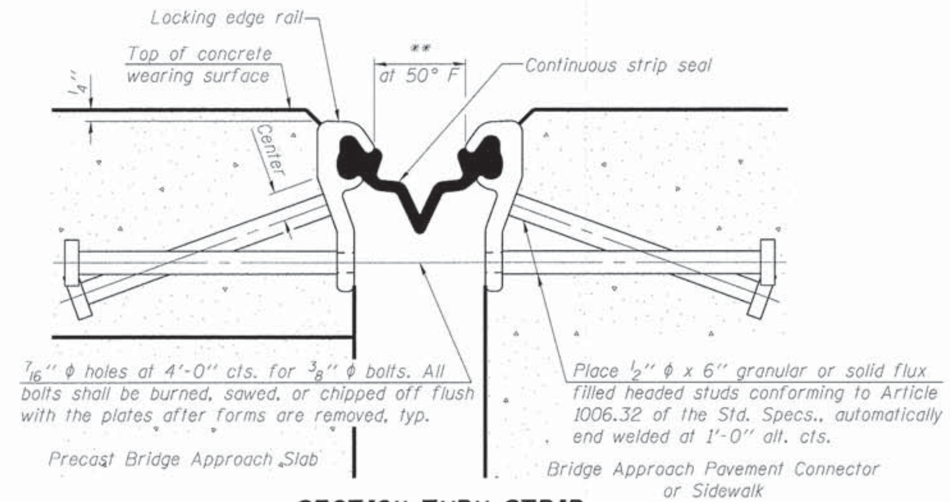
SECTION E-E
(Showing dimensions)



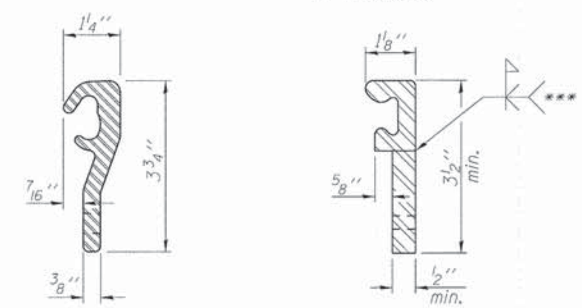
SECTION E-E
(Showing reinforcement)



VIEW F-F
(Showing reinforcement)



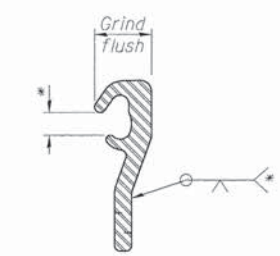
SECTION THRU STRIP SEAL JOINT
(at rt. angles)



ROLLED (EXTRUDED) RAIL

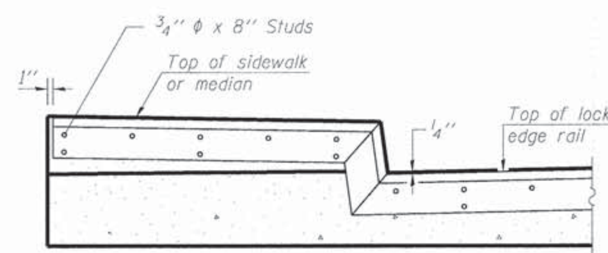
WELDED RAIL

LOCKING EDGE RAIL

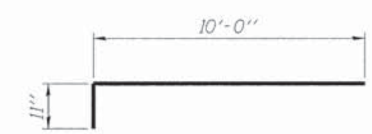


LOCKING EDGE RAIL SPLICE
Rolled rail shown, welded rail similar.

* Omit weld at seal opening.
** The minimum dimension shall be 1½" for installation purposes.
*** Back gouge not required if complete joint penetration is verified by mock-up.

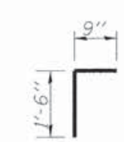


TYPICAL END TREATMENT AT SIDEWALK

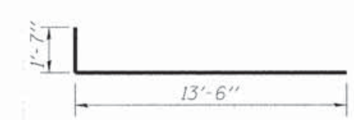


BAR a_{34}(E)

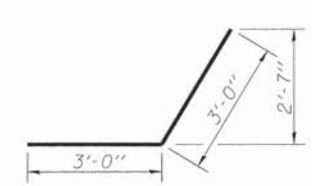
BAR c(E)



BAR c_2(E)



BAR b_{32}(E)



BAR w_3(E)

(Sheet 4 of 4)

Notes:

The precast bridge approach slab shall be according to Section 504 of the Standard Specifications and shall be paid for at the contract unit price per square foot for Precast Bridge Approach Slab.

Cast-in-place substitution of Precast Bridge Approach Slab is not allowed.

Sidewalk concrete shall be paid for as Concrete Superstructure.

Sidewalk and wearing surface reinforcement shall be paid for as Reinforcement Bars, Epoxy Coated.

Approach footing concrete shall be paid for as Concrete Structures.

Cost of excavation for approach footing is included with Concrete Structures.

The top surface of precast bridge approach slabs shall be roughened to a depth of 1/4" according to the IDOT "Manual for Fabrication of Precast Prestressed Concrete Products."

After precast bridge approach slab has been erected, holes shall be drilled into abutment and anchor dowels placed. Dowel holes shall be filled with non-shrink grout to top of precast slab and allowed to cure fully prior to grouting the longitudinal shear keys.

Two 1/8" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location. Cost included with Precast Bridge Approach Slab.

A minimum 2 1/2" ϕ lifting pins shall be used to engage the lifting loops during handling.

Compressive strength of precast concrete, f'c shall be 6,000 psi.

Any concrete poured monolithically with the wearing surface, such as overhangs, will not be paid for separately, but will be included in the cost of Concrete Wearing Surface.

The strip seal shall be made continuous and shall have a minimum thickness of 1/4". The configuration of the strip seal shall match the configuration of the Locking Edge Rails.

The height and thickness of the Locking Edge Rails shown are minimum dimensions. The actual configuration of the Locking Edge Rails and matching strip seal may vary from manufacturer to manufacturer. Flanged edge rails will not be allowed.

The inside of the Locking Edge Rail groove shall be free of weld residue.

Locking Edge Rails may be spliced at slope discontinuities and stage construction joints.

The manufacturer's recommended installation methods shall be followed.

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

Maximum space between rail segments at stage lines shall be 3/16", sealed with a suitable sealant

EAST APPROACH BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a_{30}(E)	42	#4	24'-5"	straight
a_{31}(E)	42	#4	35'-8"	straight
a_{32}(E)	5	#5	8'-8"	straight
a_{33}(E)	7	#5	11'-3"	straight
a_{34}(E)	36	#6	10'-11"	bent
b_{30}(E)	110	#4	19'-8"	straight
b_{31}(E)	5	#5	16'-10"	straight
b_{32}(E)	6	#9	15'-1"	bent
b_{33}(E)	8	#5	18'-4"	straight
b_{34}(E)	8	#5	19'-7"	straight
c(E)	39	#5	2'-4"	bent
c_2(E)	32	#5	2'-3"	bent
c_3(E)	41	#5	6'-8"	straight
t(E)	204	#4	10'-2"	straight
t_1(E)	28	#4	5'-8"	straight
w(E)	80	#5	27'-5"	straight
w_1(E)	80	#5	28'-9"	straight
w_2(E)	12	#5	22'-5"	straight
w_3(E)	10	#5	6'-0"	bent
Concrete Superstructure			Cu. Yd.	6.2
Concrete Structures			Cu. Yd.	81.6
Reinforcement Bars, Epoxy Coated			Pound	11420
Bar Splicers			Each	61
Precast Bridge Approach Slab			Sq. Ft.	1753
Concrete Wearing Surface, 5"			Sq. Yd.	88
Concrete Wearing Surface (Variable Depth)			Sq. Yd.	134
Preformed Joint Strip Seal			Foot	120

BAXTER & WOODMAN Consulting Engineers	USER NAME = 231ukb	DESIGNED - BLB	REVISED -
		CHECKED - DCD	REVISED -
	PLOT SCALE =	DRAWN - BLB	REVISED -
	PLOT DATE = 1/28/2015	CHECKED - DCD	REVISED -

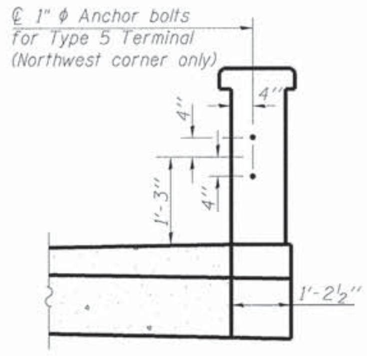
STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

EAST APPROACH SLAB DETAILS STRUCTURE NO. 049-2050

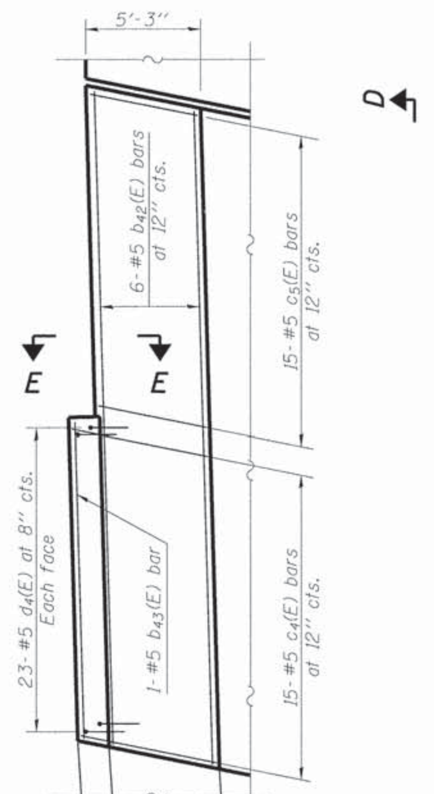
SHEET NO. 25 OF 50 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3719	12-00239-00-BR	LAKE	88	54
		CONTRACT NO. 61A57		

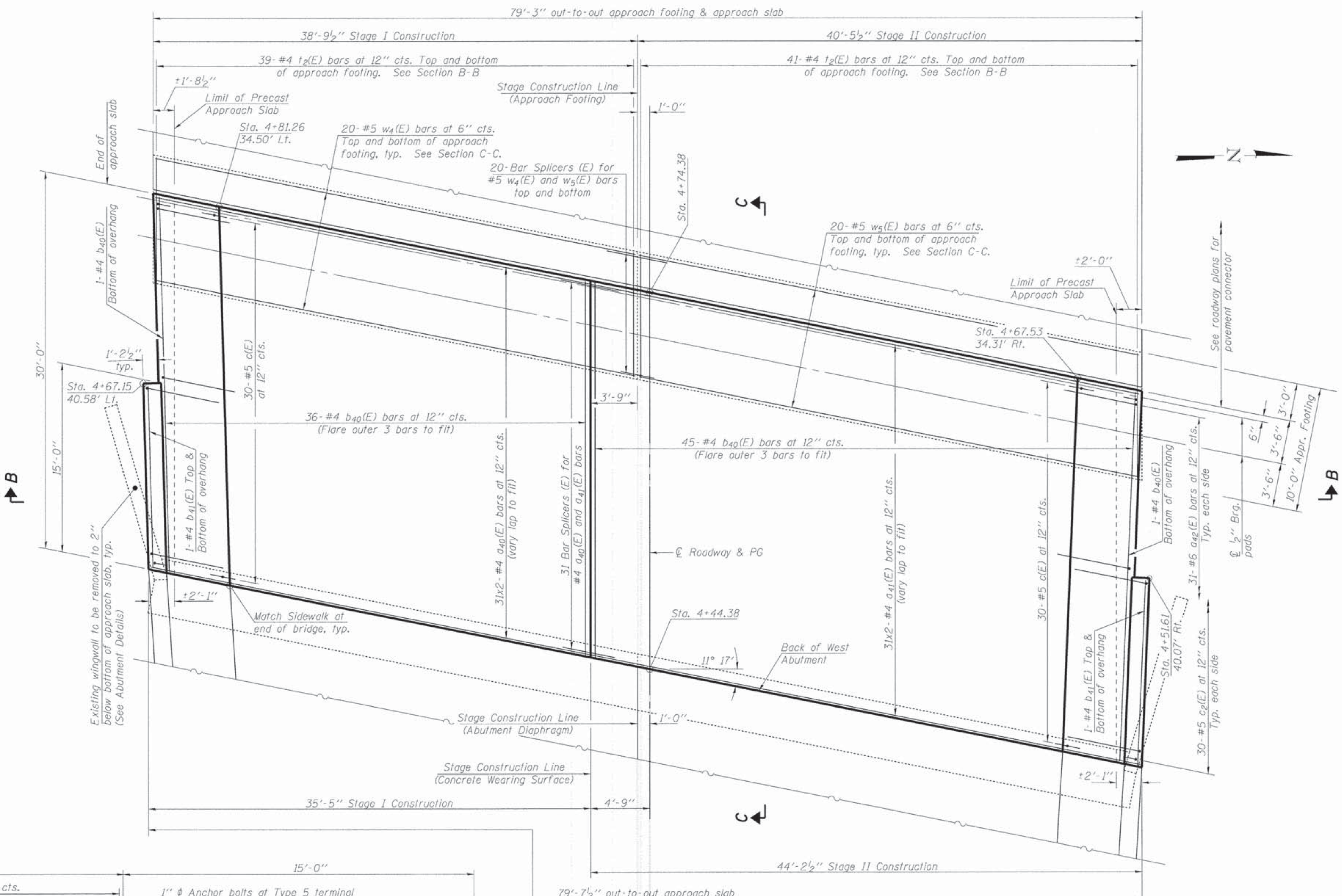
ILLINOIS FED. AID PROJECT M-BHM-9003(952)



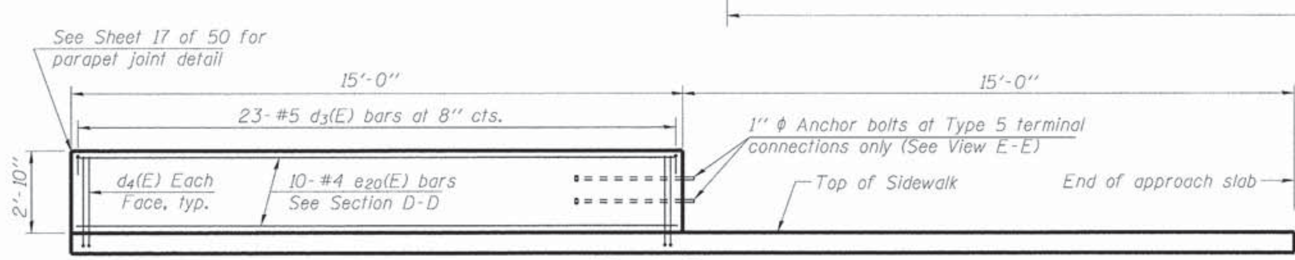
VIEW E-E



PLAN
(Showing Sidewalk reinforcement)
Southwest corner shown
Northwest corner similar



PLAN
(Showing wearing surface)



VIEW D-D

Form Liner pattern on southwest wingwall shall be blocked out for Type 6 Terminal end shoe attachment.

Min. lap length for #4 bars = 2'-7"

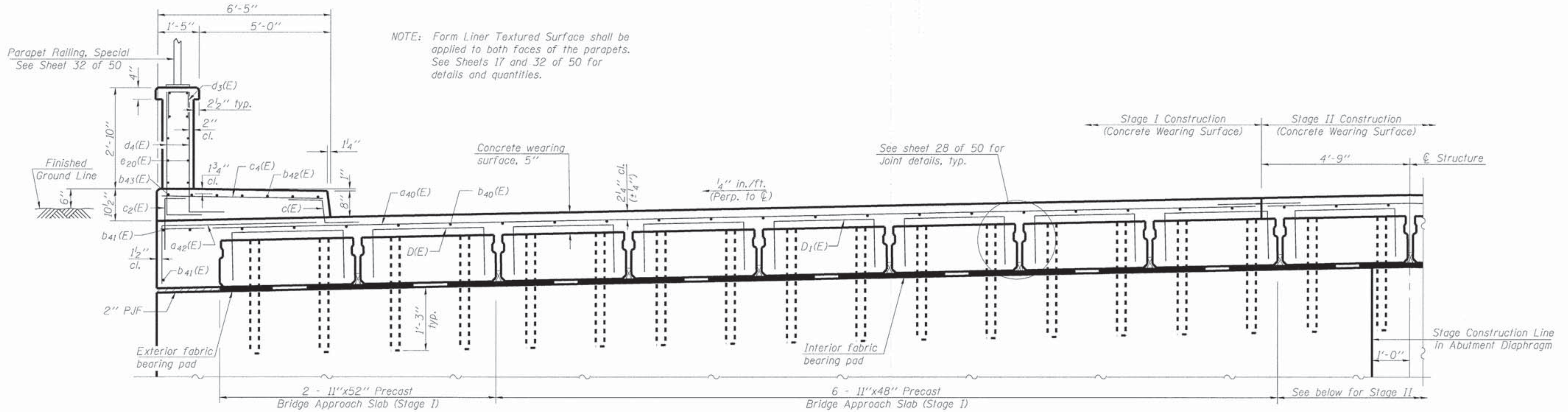
See Lighting Details for conduit embedded in parapet and attached to structure.

(Sheet 1 of 4)

BAXTER & WOODMAN Consulting Engineers	USER NAME = 231ukb	DESIGNED - BLB	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	WEST APPROACH SLAB DETAILS STRUCTURE NO. 049-2050
		CHECKED - DCD	REVISED -		
	PLOT SCALE =	DRAWN - BLB	REVISED -		
	PLOT DATE = 1/28/2015	CHECKED - DCD	REVISED -		SHEET NO. 26 OF 50 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3719	12-00239-00-BR	LAKE	88	55
		CONTRACT NO. 61A57		
	ILLINOIS FED. AID PROJECT M-BHM-9003(952)			

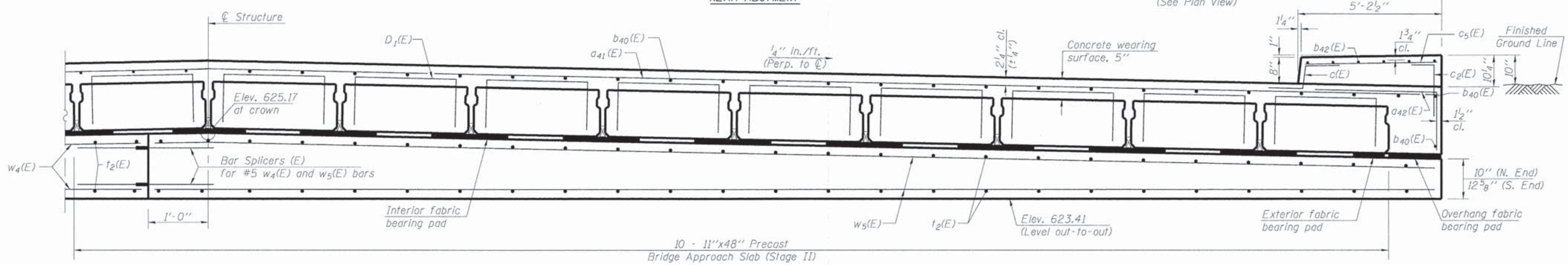
NOTE: Form Liner Textured Surface shall be applied to both faces of the parapets. See Sheets 17 and 32 of 50 for details and quantities.



Cost of 2" PJF included with Concrete Superstructure.

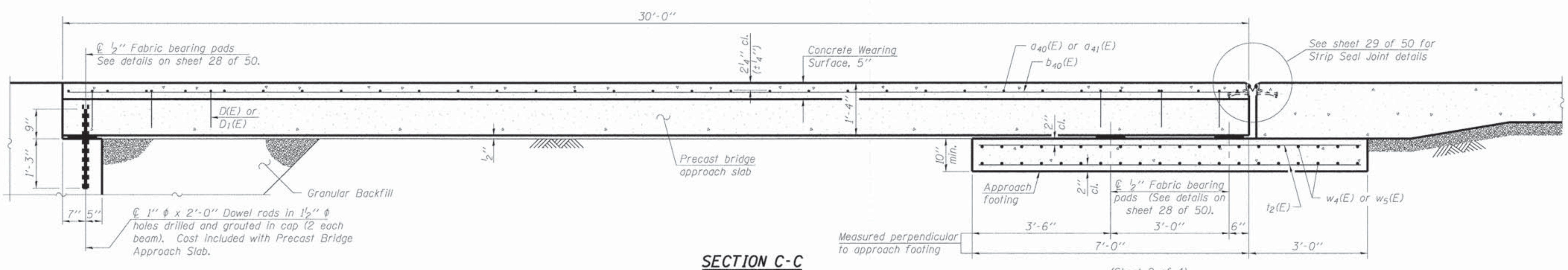
SECTION B-B

NEAR ABUTMENT



SECTION B-B CONT'D

AT APPROACH FOOTING



SECTION C-C

(Sheet 2 of 4)

BAXTER & WOODMAN Consulting Engineers	USER NAME = 231ukb	DESIGNED - BLB	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	WEST APPROACH SLAB DETAILS STRUCTURE NO. 049-2050	F.A.U. RTE. 3719	SECTION 12-00239-00-BR	COUNTY LAKE	TOTAL SHEETS 88	SHEET NO. 56
		CHECKED - DCD	REVISED -					CONTRACT NO. 61A57		
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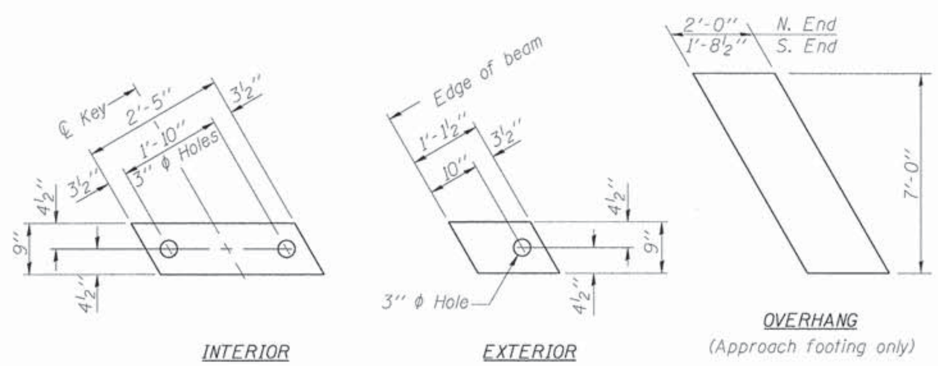
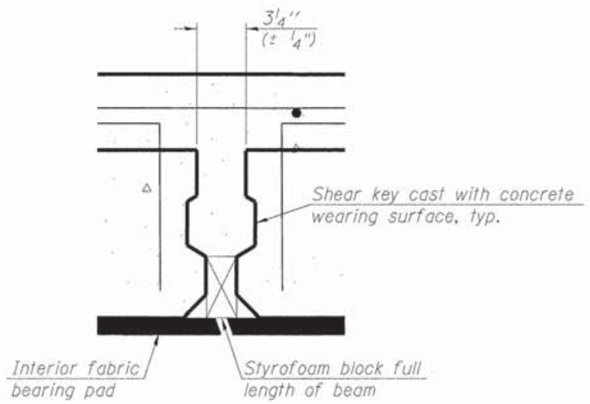
	PLOT DATE = 1/28/2015	CHECKED - DCD	REVISED -		SHEET NO. 27 OF 50 SHEETS		ILLINOIS FED. AID PROJECT	M-8HM-9003(952)		

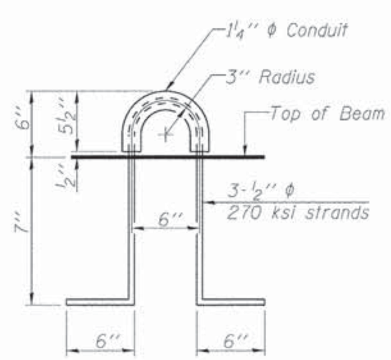


FABRIC BEARING PAD

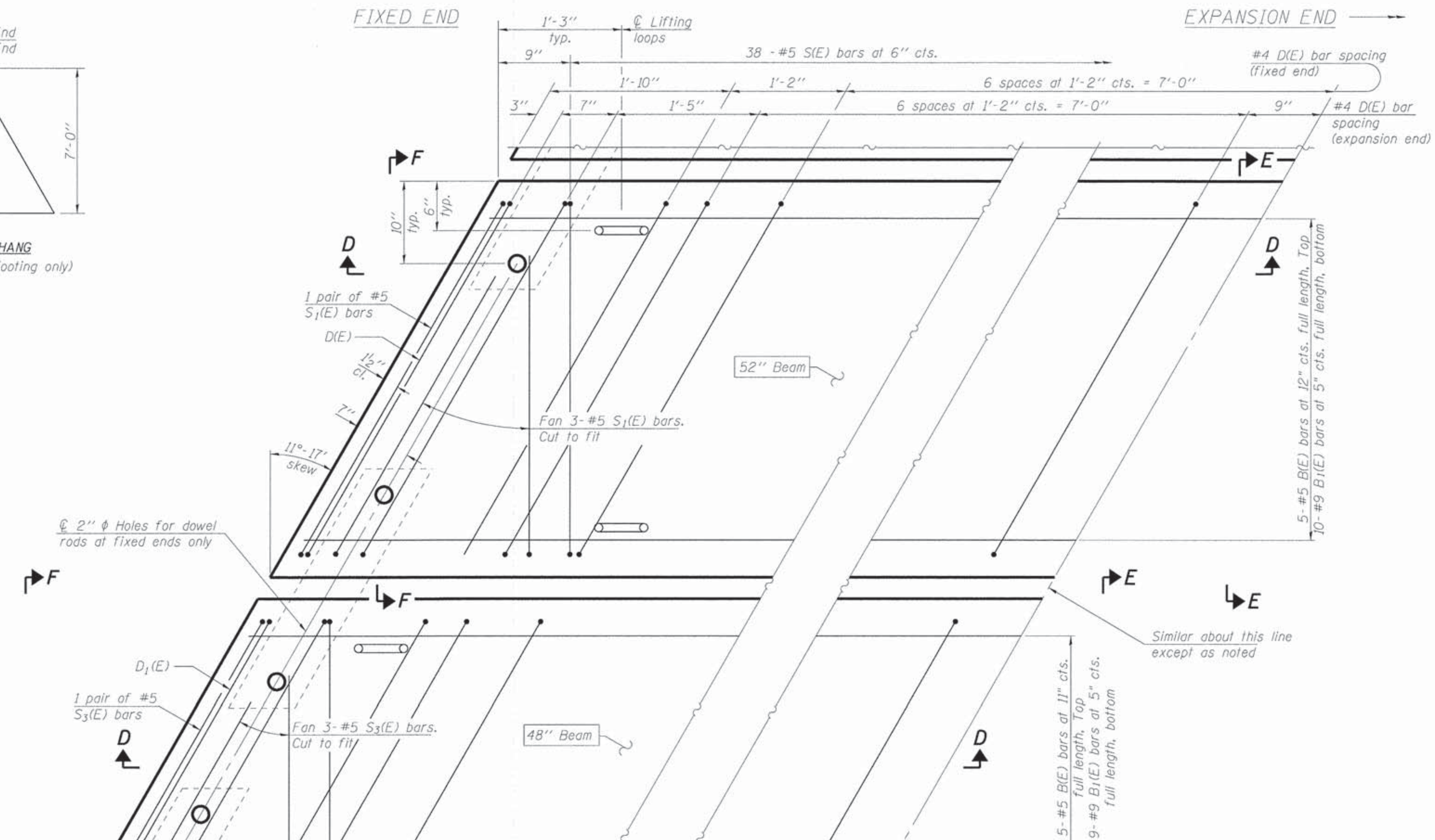
Notes:
All bearing pads shall be ½" thick.
Omit holes for fabric bearing pads at approach slab footing end of beams.
Expansion bearing pad shall be bonded to the approach slab footing.
Overhang bearing pads may be supplied in multiple pieces.



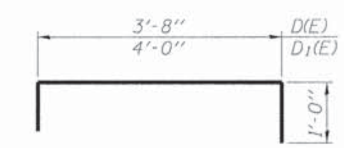
SECTION THRU SHEAR KEY JOINT



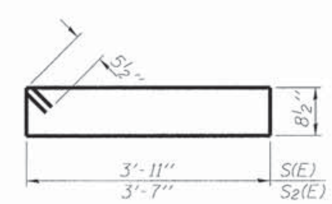
LIFTING LOOP DETAIL



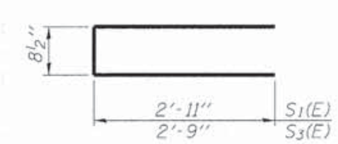
PLAN VIEW
(showing precast bridge approach beams)



BARS D(E) & D_1(E)



BARS S(E) & S_2(E)



BARS S_1(E) & S_3(E)

BAR LIST EACH 52" BEAM
(For information only)

Bar	No.	Size	Length	Shape
B(E)	5	#5	29'-8"	—
B_1(E)	10	#9	29'-8"	—
D(E)	22	#4	5'-8"	⊓
S(E)	58	#5	9'-6"	▭
S_1(E)	10	#5	6'-3"	⊏

BAR LIST EACH 48" BEAM
(For information only)

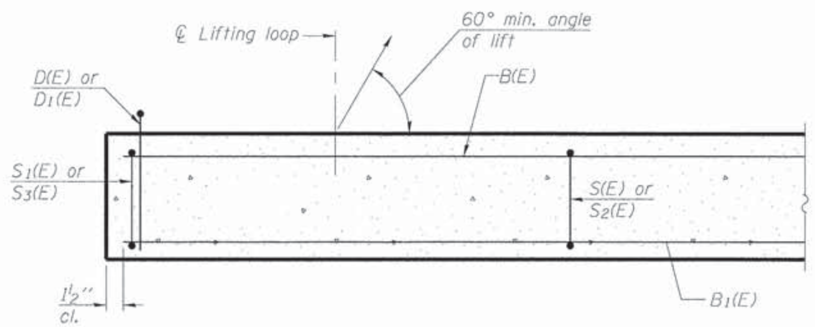
Bar	No.	Size	Length	Shape
B(E)	5	#5	29'-8"	—
B_1(E)	9	#9	29'-8"	—
D_1(E)	22	#4	6'-0"	⊓
S_2(E)	58	#5	10'-2"	▭
S_3(E)	10	#5	6'-7"	⊏

Note: Bar dimensions for West approach slab may differ from East approach slab bars with the same designation.

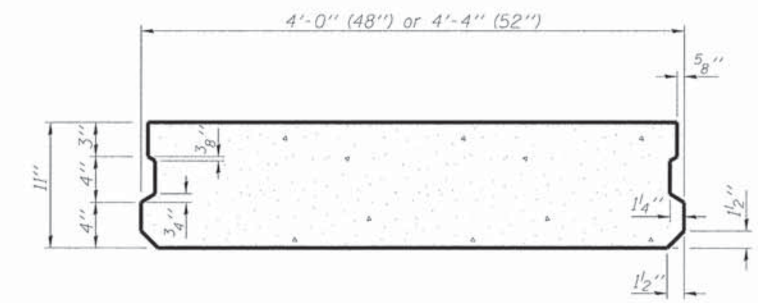
(Sheet 3 of 4)

BAXTER & WOODMAN Consulting Engineers	USER NAME = 231ukb	DESIGNED - BLB	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	WEST APPROACH SLAB DETAILS STRUCTURE NO. 049-2050
		CHECKED - DCD	REVISED -		
	PLOT SCALE =	DRAWN - BLB	REVISED -		
	PLOT DATE = 1/28/2015	CHECKED - DCD	REVISED -		SHEET NO. 28 OF 50 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3719	12-00239-00-BR	LAKE	88	57
		CONTRACT NO. 61A57		
		ILLINOIS FED. AID PROJECT M-BHM-9003(952)		

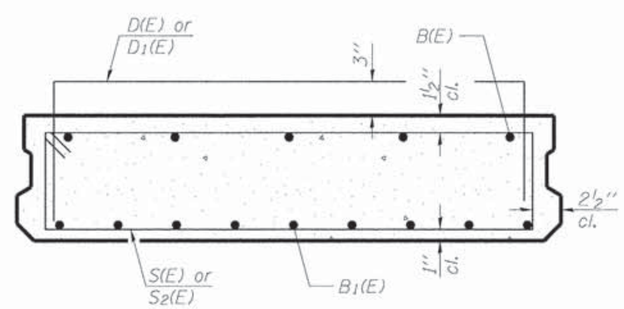


SECTION D-D



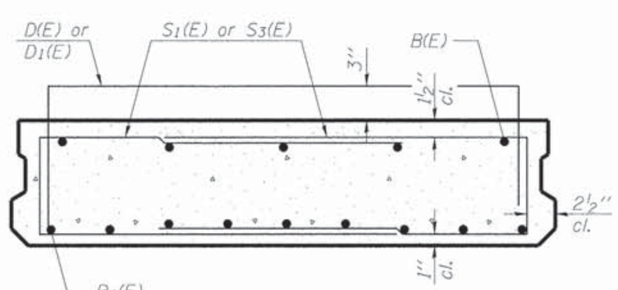
SECTION E-E

(Showing dimensions)



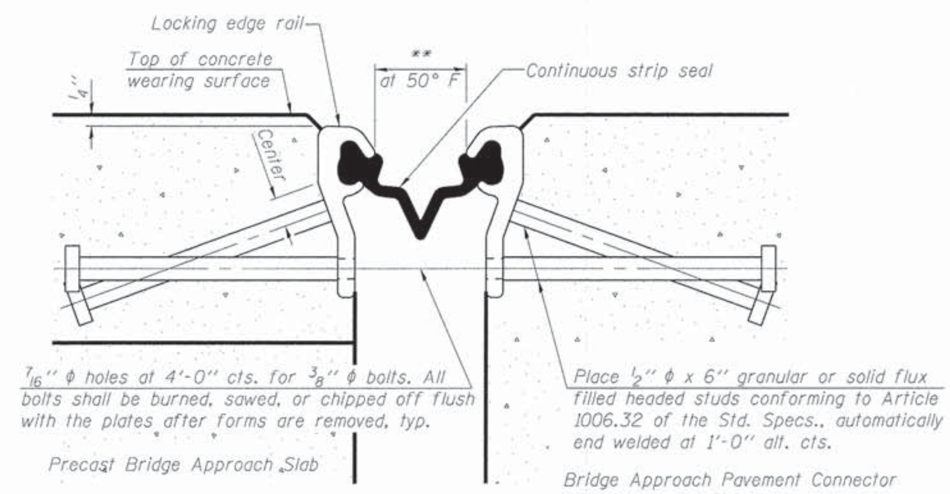
SECTION E-E

(Showing reinforcement)



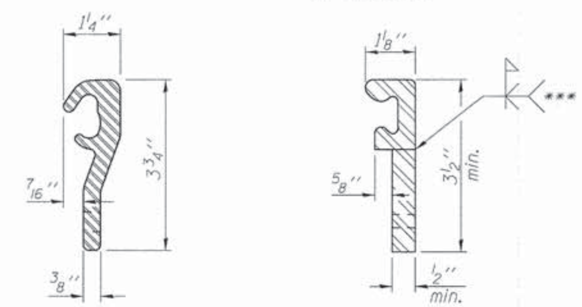
VIEW F-F

(Showing reinforcement)



SECTION THRU STRIP SEAL JOINT

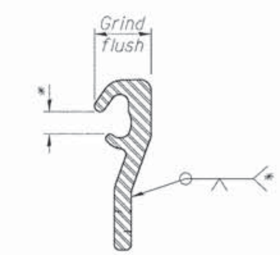
(at rt. angles)



ROLLED (EXTRUDED) RAIL

WELDED RAIL

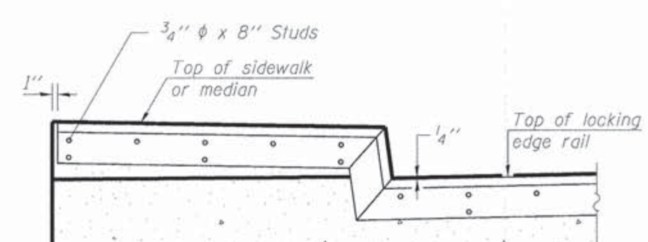
LOCKING EDGE RAIL



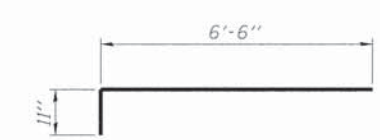
LOCKING EDGE RAIL SPLICE

Rolled rail shown, welded rail similar.

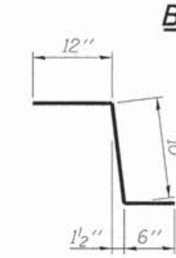
* Omit weld at seal opening.
** The minimum dimension shall be 1½" for installation purposes.
*** Back gouge not required if complete joint penetration is verified by mock-up.



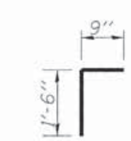
TYPICAL END TREATMENT AT SIDEWALK



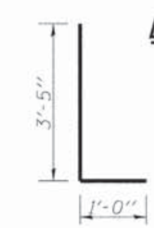
BAR a_{42}(E)



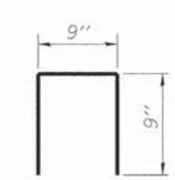
BAR c(E)



BAR c_2(E)



BAR d_4(E)



BAR d_3(E)

Notes:

The precast bridge approach slab shall be according to Section 504 of the Standard Specifications and shall be paid for at the contract unit price per square foot for Precast Bridge Approach Slab.

Cast-in-place substitution of Precast Bridge Approach Slab is not allowed.

Parapet & sidewalk concrete shall be paid for as Concrete Superstructure.

Parapet, sidewalk and wearing surface reinforcement shall be paid for as Reinforcement Bars, Epoxy Coated.

Approach footing concrete shall be paid for as Concrete Structures.

Cost of excavation for approach footing shall be included with Concrete Structures.

The top surface of precast bridge approach slabs shall be roughened to a depth of 1/4" according to the IDOT "Manual for Fabrication of Precast Prestressed Concrete Products."

After precast bridge approach slab has been erected, holes shall be drilled into abutment and anchor dowels placed. Dowel holes shall be filled with non-shrink grout to top of precast slab and allowed to cure fully prior to grouting the longitudinal shear keys.

Two 1/8" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location. Cost included with Precast Bridge Approach Slab.

A minimum 2 1/2" ϕ lifting pins shall be used to engage the lifting loops during handling.

Compressive strength of precast concrete, f'c shall be 6,000 psi.

Any concrete poured monolithically with the wearing surface, such as overhangs, will not be paid for separately, but will be included in the cost of Concrete Wearing Surface, 5".

The strip seal shall be made continuous and shall have a minimum thickness of 1/4". The configuration of the strip seal shall match the configuration of the Locking Edge Rails.

The height and thickness of the Locking Edge Rails shown are minimum dimensions. The actual configuration of the Locking Edge Rails and matching strip seal may vary from manufacturer to manufacturer. Flanged edge rails will not be allowed.

The inside of the Locking Edge Rail groove shall be free of weld residue.

Locking Edge Rails may be spliced at slope discontinuities and stage construction joints.

The manufacturer's recommended installation methods shall be followed.

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

Maximum space between rail segments at stage lines shall be 3/16", sealed with a suitable sealant

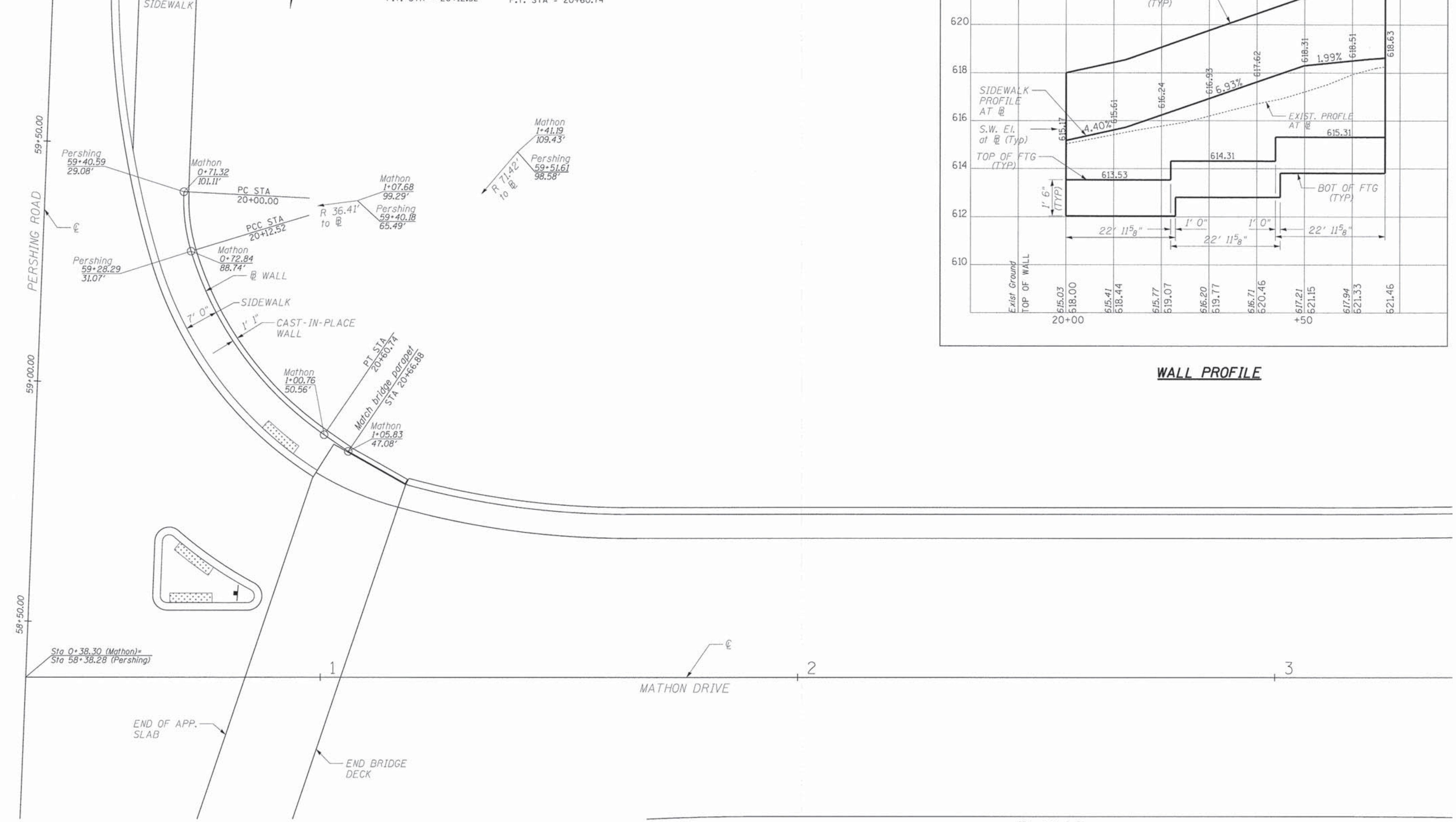
WEST APPROACH BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a_{40}(E)	62	#4	19'-1"	straight
a_{41}(E)	62	#4	23'-7"	straight
a_{42}(E)	62	#6	7'-5"	bent
b_{40}(E)	83	#4	29'-8"	straight
b_{41}(E)	4	#4	14'-8"	straight
b_{42}(E)	12	#5	29'-8"	straight
b_{43}(E)	2	#5	14'-8"	straight
c(E)	60	#5	2'-4"	bent
c_2(E)	60	#5	2'-3"	bent
c_4(E)	30	#5	6'-0"	straight
c_5(E)	30	#5	4'-9"	straight
d_3(E)	46	#5	2'-3"	bent
d_4(E)	92	#5	4'-5"	bent
e_{20}(E)	20	#4	14'-8"	straight
t_1(E)	160	#4	9'-10"	straight
w_4(E)	40	#5	39'-3"	straight
w_5(E)	40	#5	40'-11"	straight
Concrete Superstructure			Cu. Yd.	14.0
Concrete Structures			Cu. Yd.	40.5
Reinforcement Bars, Epoxy Coated			Pound	10280
Bar Splicers			Each	71
Precast Bridge Approach Slab			Sq. Ft.	2180
Concrete Wearing Surface, 5"			Sq. Yd.	265
Preformed Joint Strip Seal			Foot	82

(Sheet 4 of 4)

℗ Wall

PROP. CURVE WALL-1	PROP. CURVE WALL-2
PI STA. = 20+06.32	PI STA. = 20+37.59
Δ = 19° 42′ 32″ (LT)	Δ = 38° 40′ 42″ (LT)
D = 157° 22′ 03″	D = 80° 13′ 25″
R = 36.41′	R = 71.42′
T = 6.32′	T = 25.07′
L = 12.52′	L = 48.21′
E = 0.55′	E = 4.27′
P.C. STA = 20+00.00	P.C. STA = 20+12.52
P.T. STA = 20+12.52	P.T. STA = 20+60.74



WALL PROFILE

(Sheet 1 of 2)

BAXTER & WOODMAN Consulting Engineers	USER NAME = 231ukb	DESIGNED - DCD	REVISED -
		CHECKED - BLB	REVISED -
	PLOT SCALE =	DRAWN - DCD	REVISED -
	PLOT DATE = 1/28/2015	CHECKED - BLB	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PARAPET EXTENSION LAYOUT
STRUCTURE NO. 049-2050

SHEET NO. 30 OF 50 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3719	12-00239-00-BR	LAKE	88	59
		CONTRACT NO. 61A57		
		ILLINOIS FED. AID PROJECT	M-BHM-9003(952)	

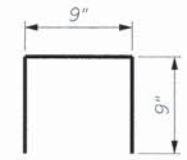
BAR n(E)

** Cut to fit in field
2" vert. clear

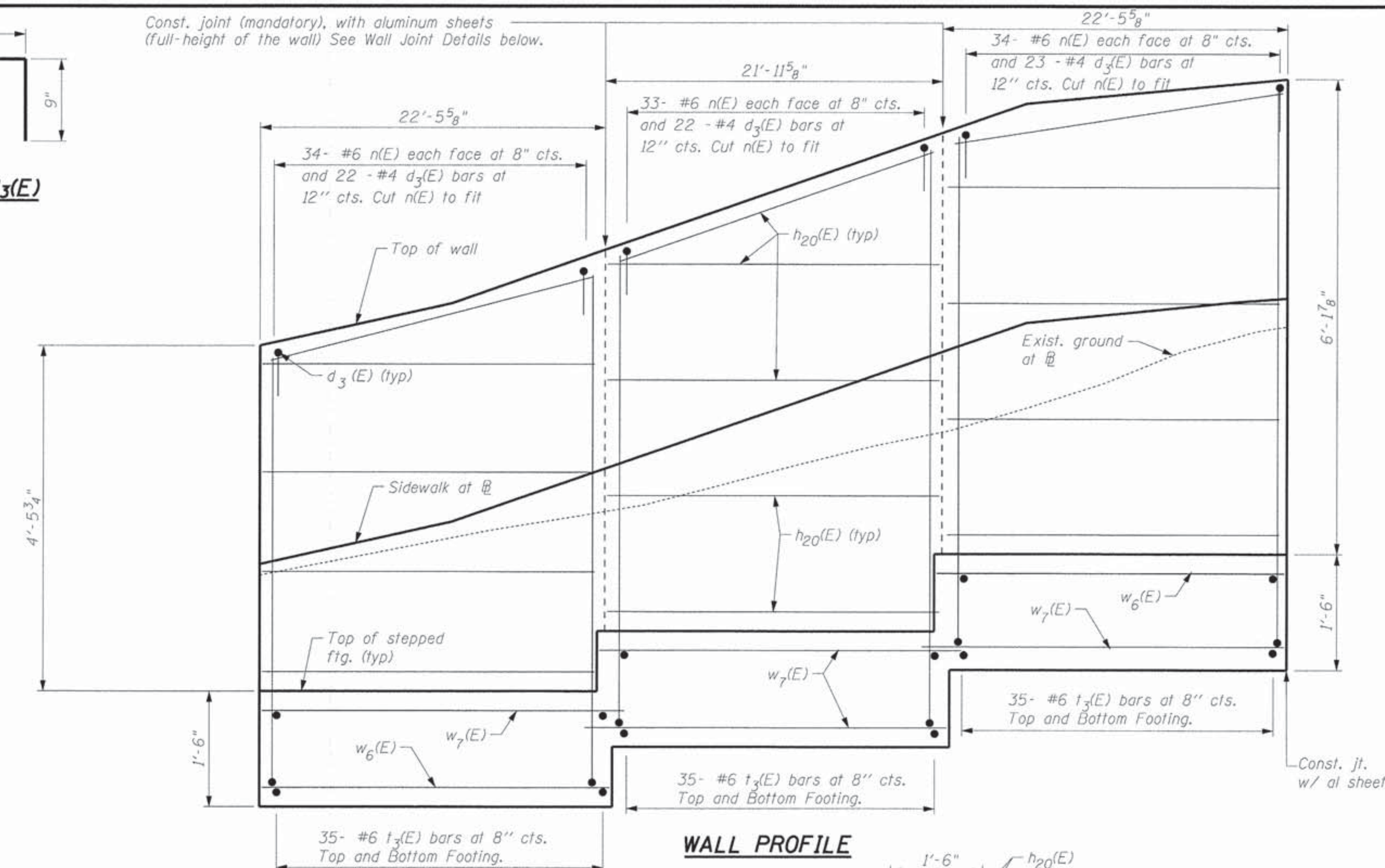
* Block out footing to avoid light pole foundation or relocate light pole clear of footing (if approved by the Engineer)

PARAPET EXTENSION
BILL OF MATERIALS

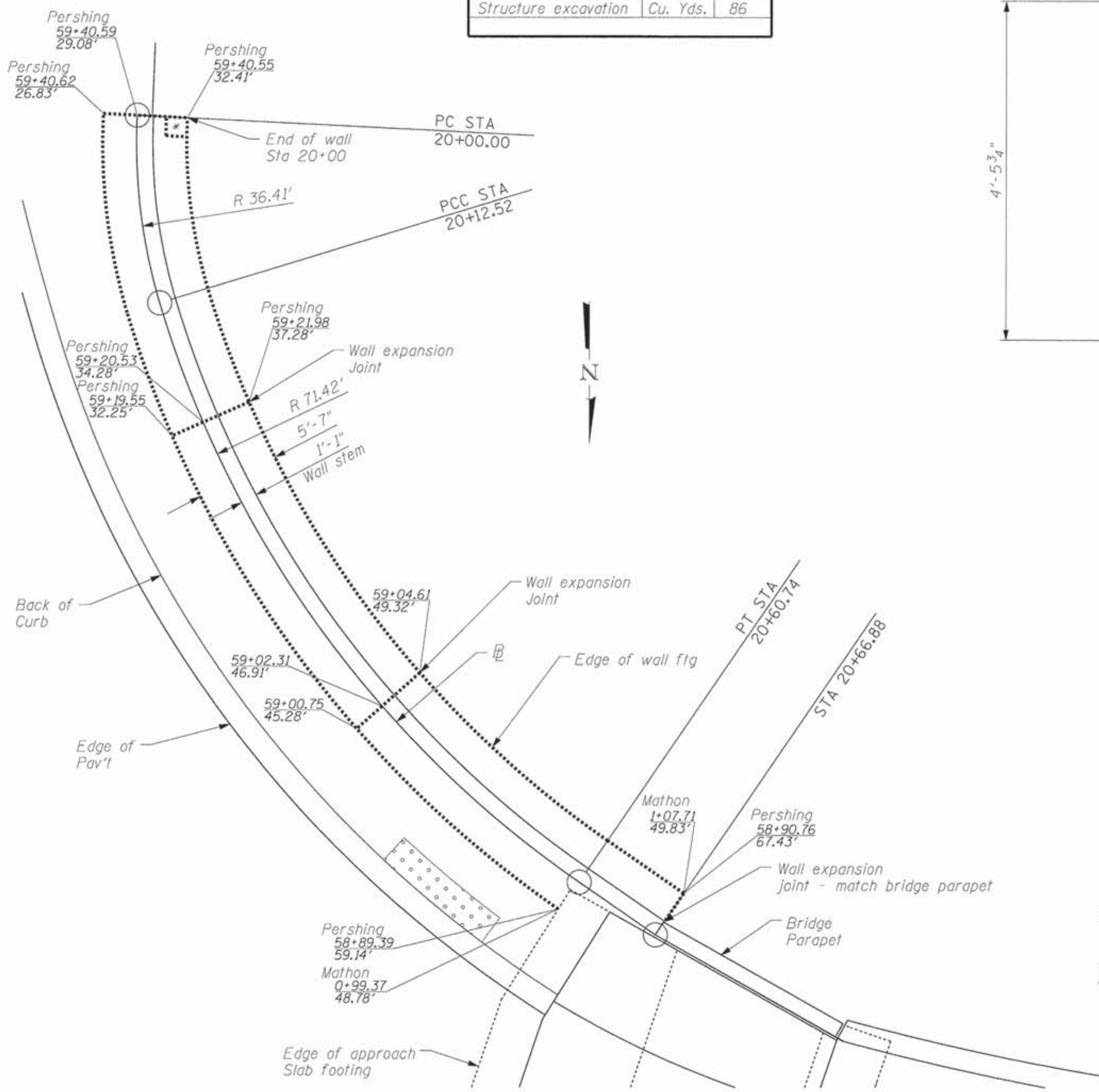
Bar	No.	Size	Length	Shape
$d_3(E)$	67	#4	2'-3"	⊓
$h_{20}(E)$	30	#4	21'-7"	—
n(E)	202	#6	8'-5"	⌐
$t_3(E)$	210	#6	5'-3"	—
$w_6(E)$	10	#4	22'-7"	—
$w_7(E)$	20	#4	23'-7"	—
Reinforcement Bars, Epoxy Coated		Pound	5210	
Concrete Structures		Cu. Yds.	38.1	
Structure excavation		Cu. Yds.	86	



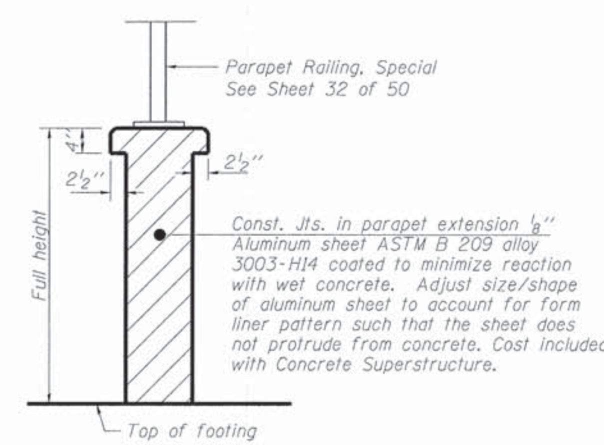
BAR $d_3(E)$



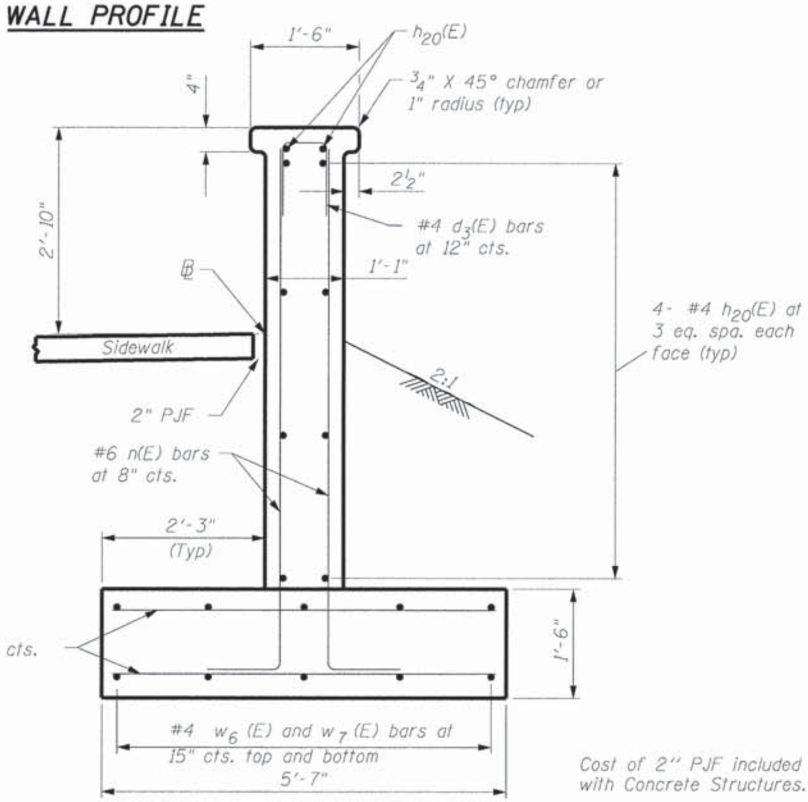
WALL PROFILE



PLAN



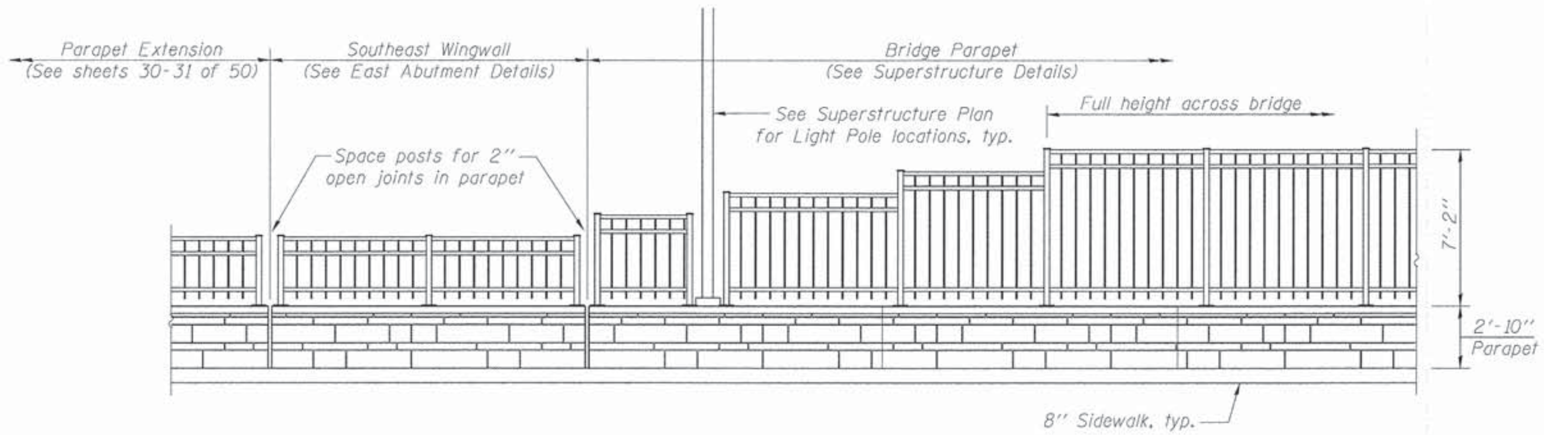
WALL JOINT DETAILS



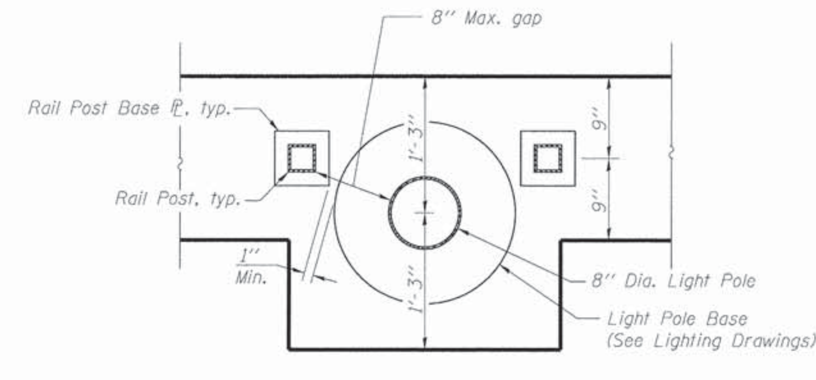
Cost of 2" PJF included with Concrete Structures.

(Sheet 2 of 2) WALL SECTION

BAXTER & WOODMAN Consulting Engineers	USER NAME = 231ukb	DESIGNED - DCD	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	PARAPET EXTENSION DETAILS STRUCTURE NO. 049-2050	F.A.U. RTE. 3719	SECTION 12-00239-00-BR	COUNTY LAKE; TOTAL SHEETS 88; SHEET NO. 60
		CHECKED - BLB	REVISED -					CONTRACT NO. 61A57
	PLOT SCALE =	DRAWN - DCD	REVISED -					
	PLOT DATE = 1/28/2015	CHECKED - BLB	REVISED -		SHEET NO. 31 OF 50 SHEETS			ILLINOIS FED. AID PROJECT M-BHM-9003(952)

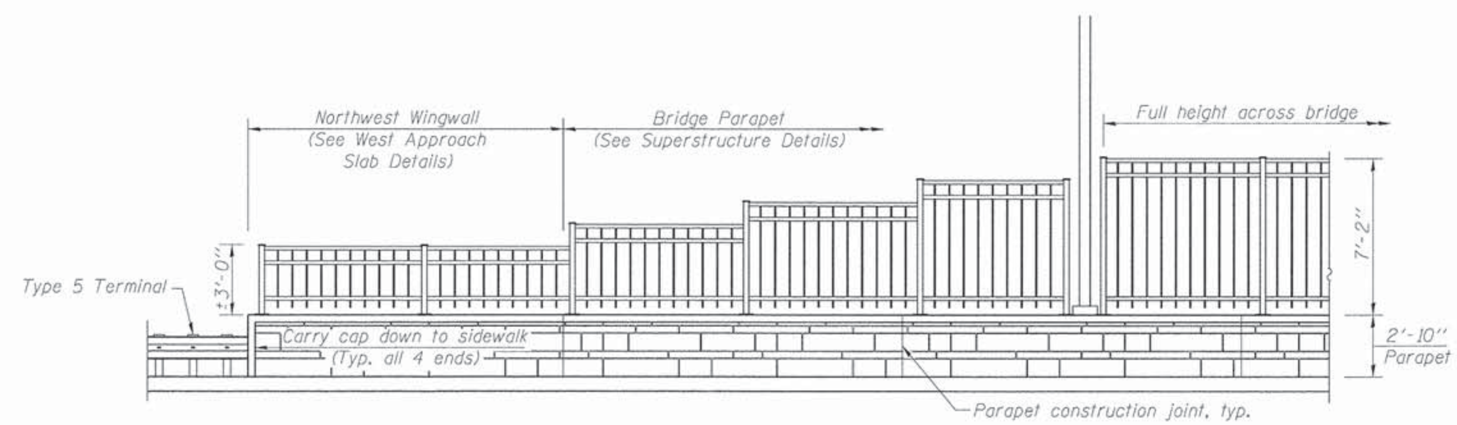


INSIDE ELEVATION AT SOUTHEAST CORNER

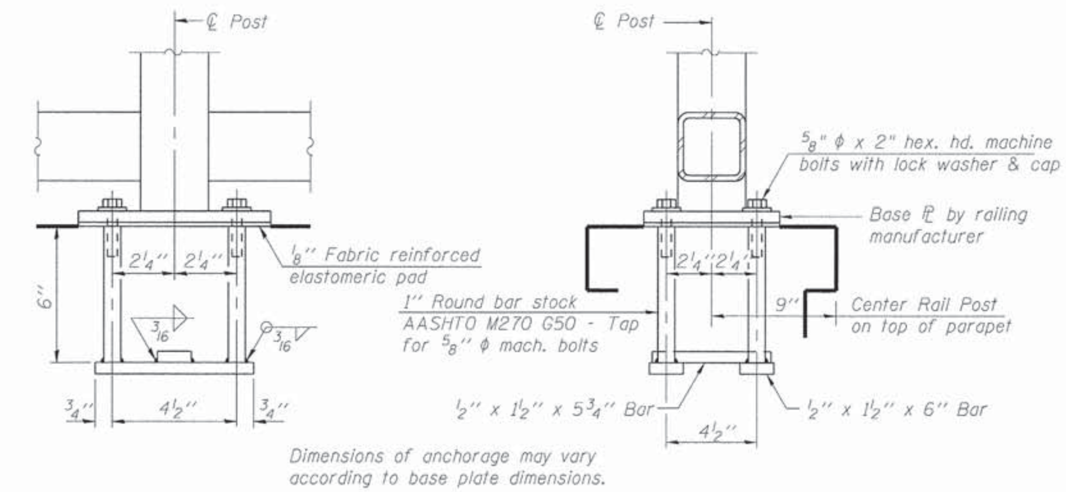


PLAN VIEW AT LIGHT POLE BASE

Railing manufacturer shall furnish any extensions necessary to maintain a minimum 8″ gap between rail posts and light poles. (Typ. 6 locations)

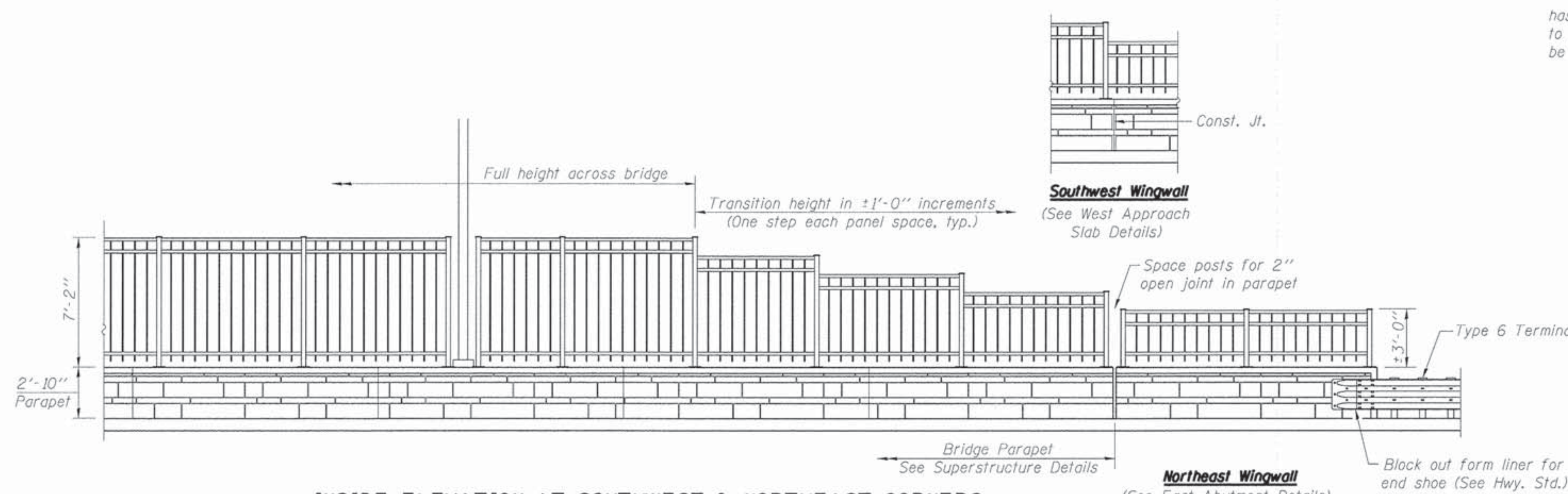


INSIDE ELEVATION AT NORTHWEST CORNER



RAIL POST ANCHOR DETAILS

In lieu of the cast-in-place anchor device shown, the Contractor has the option of drilling and setting 5/8″ ϕ anchor rods according to Article 509.06 of the Standard Specifications. Embedment shall be according to the manufacturer's specifications.



INSIDE ELEVATION AT SOUTHWEST & NORTHEAST CORNERS

Distance to first light pole may vary slightly from what is shown

NOTES:

Color of all railing elements shall be matte black.

Rail sizes, member spacing or configuration may vary according to manufacturer's requirements.

Railings shall comply with the geometric requirements of the latest AASHTO LRFD Bridge Design Specifications, and shall be designed for the pedestrian live loading specified by AASHTO, except loads in the transverse and vertical directions need not be applied simultaneously.

Contractor shall install black plastic caps to cover each exposed nut (4 per post). Cost included with Parapet Railing, Special.

Contractor shall submit a proposed post layout for approval along with shop drawings for the railing. Posts shall be spaced to avoid parapet joints and light poles, while maintaining as uniform a spacing as possible. Maximum post spacing = 8′-0″.

Post anchorage hardware shall be Stainless Steel in accordance with Article 1006.31.

See Superstructure Details sheets for additional Form Liner details.

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Parapet Railing, Special	Foot	811
Form Liner Textured Surface	Sq Ft	4590*
Concrete Surface Color Treatment	Sq Ft	4050

* Includes 4050 Sq Ft of Form Liner pattern below cap and 540 Sq Ft of Granite Texture along edges of cap

BAXTER & WOODMAN Consulting Engineers	USER NAME = 23lukb	DESIGNED - DCD	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	RAILING AND FORM LINER DETAILS STRUCTURE NO. 049-2050	F.A.U. RTE. 3719	SECTION 12-00239-00-BR	COUNTY LAKE
		CHECKED - BLB	REVISED -					TOTAL SHEETS 88 / SHEET NO. 61
	PLOT SCALE =	DRAWN - DCD	REVISED -					CONTRACT NO. 61A57
	PLOT DATE = 1/28/2015	CHECKED - BLB	REVISED -		SHEET NO. 32 OF 50 SHEETS		ILLINOIS FED. AID PROJECT	M-BHM-9003(952)

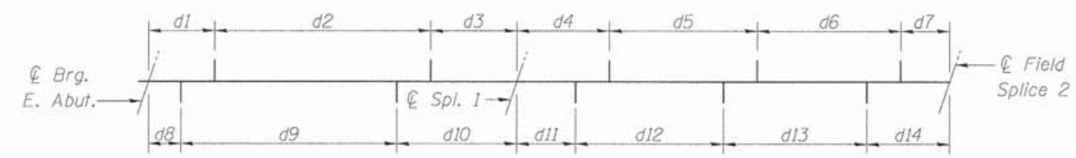
CROSS FRAME SPACING - EAST END

Note: All dimensions have been rounded to the nearest 1/8".

GIRDER #	d1	d2	d3	d4	d5	d6	d7	d8	d9	d10	d11	d12	d13	d14
1	-	-	-	-	-	-	-	3'-3 3/8"	25'-0 3/8"	5'-4 7/8"	4'-11 1/8"	12'-0"	12'-0"	5'-0"
2	5'-1 1/8"	25'-0"	3'-11 7/8"	6'-11 1/4"	12'-0"	12'-0"	3'-0"	3'-3 7/8"	25'-0"	5'-9 1/8"	4'-11 1/8"	12'-0"	12'-0"	5'-0"
3	5'-1 5/8"	25'-0 3/8"	4'-4 3/8'	6'-11 1/4"	12'-0"	12'-0"	3'-0"	3'-4 3/8"	25'-0 3/8"	6'-1 5/8"	4'-11 1/8"	12'-0"	12'-0"	5'-0"
4	5'-11 3/8"	25'-0"	4'-1 1/2"	6'-11 1/4"	12'-0"	12'-0"	3'-0"	3'-5"	25'-0"	6'-7 3/4"	4'-11 1/8"	12'-0"	12'-0"	5'-0"
5	5'-5 1/8"	25'-0"	4'-7 3/4"	6'-11 1/4"	12'-0"	12'-0"	3'-0"	3'-5"	25'-0"	6'-7 3/4"	4'-11 1/8"	12'-0"	12'-0"	5'-0"
6	5'-5 1/8"	25'-0"	4'-7 3/4"	6'-11 1/4"	12'-0"	12'-0"	3'-0"	3'-5"	25'-0"	6'-7 3/4"	4'-11 1/8"	12'-0"	12'-0"	5'-0"
7	5'-5 1/8"	25'-0"	4'-7 3/4"	6'-11 1/4"	12'-0"	12'-0"	3'-0"	3'-5"	25'-0"	6'-7 3/4"	4'-11 1/8"	12'-0"	12'-0"	5'-0"
8	6'-5 1/2"	25'-0 5/8"	4'-4 5/8"	7'-2 1/2"	12'-0"	12'-0"	3'-0"	3'-6"	25'-0 1/2"	7'-4 1/4"	2'-10 3/8"	14'-0"	12'-0"	5'-4"
9	7'-7"	25'-0"	4'-3 1/4"	5'-5 3/8"	14'-0"	12'-0"	3'-0 3/4"	3'-7 1/8"	25'-0"	8'-3 1/4"	3'-0 1/4"	14'-0"	12'-0"	5'-5 3/4"
10	7'-8 3/8"	25'-0 1/2"	5'-2 1/2"	5'-7 1/4"	14'-0"	12'-0"	3'-2 1/2"	3'-8 3/8"	25'-0 3/8"	9'-2 1/2"	3'-0 5/8"	14'-0"	12'-0"	5'-9 1/8"
11	8'-8 1/4"	25'-0"	5'-5 3/8"	5'-11"	14'-0"	12'-0"	3'-2 3/4"	3'-9 3/4"	25'-0"	10'3 7/8"	3'-2 3/4"	14'-0"	12'-0"	5'-11"
12	8'-9 7/8"	25'-0 3/8"	6'-7"	6'-1 1/8"	14'-0"	12'-0"	3'-4 5/8"	-	-	-	-	-	-	-

CROSS FRAME SPACING - WEST END

GIRDER #	d15	d16	d17	d18	d19	d20	d21	d22	d23	d24	d25	d26
1	-	-	-	-	-	-	4'-6 1/8"	15'-0"	20'-0"	20'-0"	20'-0"	5'-6 1/4"
2	5'-10 3/4"	15'-0"	20'-0"	20'-0"	20'-0"	3'-9 1/4"	4'-5"	15'-0"	20'-0"	20'-0"	20'-0"	5'-3"
3	5'-9 3/4"	15'-0"	20'-0"	20'-0"	20'-0"	3'-5 7/8"	4'-4 7/8"	15'-0"	20'-0"	20'-0"	20'-0"	4'-10 3/4"
4	5'-7 1/8"	15'-0"	20'-0"	20'-0"	20'-0"	3'-4 7/8"	4'-4 7/8"	15'-0"	20'-0"	20'-0"	20'-0"	4'-7 1/8"
5	5'-7 1/8"	15'-0"	20'-0"	20'-0"	20'-0"	3'-4 7/8"	4'-4 7/8"	15'-0"	20'-0"	20'-0"	20'-0"	4'-7 1/8"
6	5'-7 1/8"	15'-0"	20'-0"	20'-0"	20'-0"	3'-4 7/8"	4'-4 7/8"	15'-0"	20'-0"	20'-0"	20'-0"	4'-7 1/8"
7	5'-7 1/8"	15'-0"	20'-0"	20'-0"	20'-0"	3'-4 7/8"	4'-4 7/8"	15'-0"	20'-0"	20'-0"	20'-0"	4'-7 1/8"
8	5'-7 1/8"	15'-0"	20'-0"	20'-0"	20'-0"	3'-4 7/8"	4'-4 7/8"	15'-0"	20'-0"	20'-0"	20'-0"	4'-7 1/8"
9	5'-7 1/8"	15'-0"	20'-0"	20'-0"	20'-0"	3'-4 7/8"	4'-4 7/8"	15'-0"	20'-0"	20'-0"	20'-0"	4'-7 1/8"
10	5'-7 1/8"	15'-0"	20'-0"	20'-0"	20'-0"	3'-1 3/4"	4'-5"	15'-0"	20'-0"	20'-0"	20'-0"	4'-3 7/8"
11	5'-4 7/8"	15'-0"	20'-0"	20'-0"	20'-0"	3'-1 1/4"	4'-4 3/8"	15'-0"	20'-0"	20'-0"	20'-0"	4'-1 7/8"
12	5'-4 1/4"	15'-0"	20'-0"	20'-0"	20'-0"	2'-11 1/4"	-	-	-	-	-	-



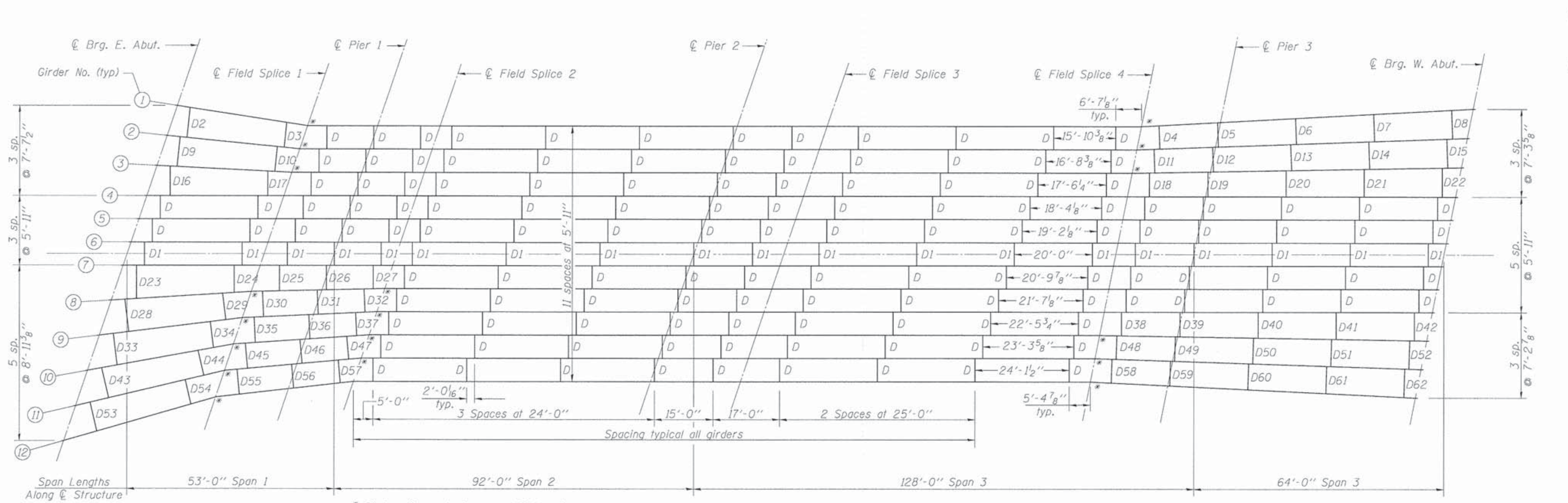
SCHEMATIC PLAN VIEW

Shown straight for clarity
Bearing stiffeners not shown

Bearing Stiffeners not shown.
Refer to Typical Girder Elevation for locations.

SCHEMATIC PLAN VIEW

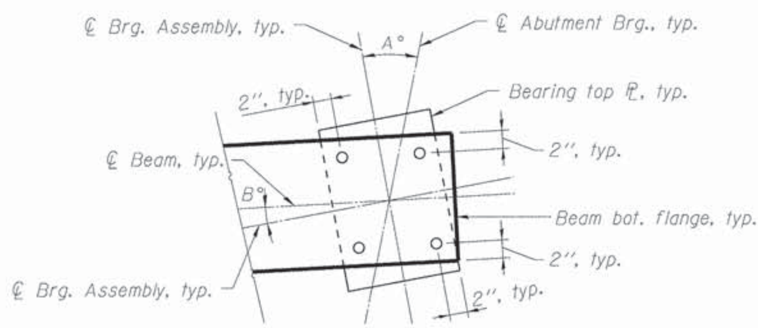
Shown straight for clarity
Bearing stiffeners not shown



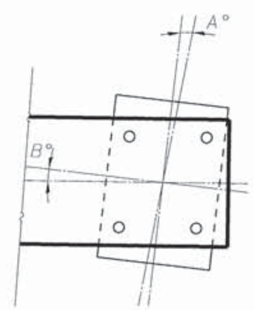
* Girder alignment changes at field splice
See Table 3 Sheet 36 of 50 for angles

FRAMING PLAN

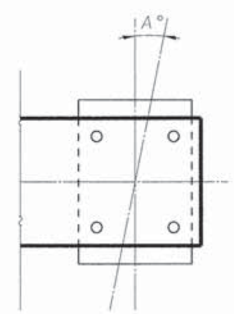
BAXTER & WOODMAN Consulting Engineers	USER NAME = 23lukb	DESIGNED - BLB	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	FRAMING PLAN STRUCTURE NO. 049-2050	F.A.U. RTE. 3719	SECTION 12-00239-00-BR	COUNTY LAKE	TOTAL SHEETS 88	SHEET NO. 62
	PLOT SCALE =	CHECKED - AS	REVISED -					CONTRACT NO. 61A57		
	PLOT DATE = 1/28/2015	DRAWN - BLB	REVISED -		SHEET NO. 33 OF 50 SHEETS	ILLINOIS FED. AID PROJECT	M-BHM-9003(952)			
		CHECKED - AS	REVISED -							



WEST ABUTMENT: BEAMS 1-3



EAST ABUTMENT: BEAMS 1-3
WEST ABUTMENT: BEAMS 10-12



EAST ABUTMENT: BEAMS 4-12
WEST ABUTMENT: BEAMS 4-9

BEARING ORIENTATION ANGLES				
	East Abutment		West Abutment	
Girder	A	B	A	B
1	2.837°	7.171°	21.833°	7.452°
2	6.174°	6.817°	19.814°	6.457°
3	9.469°	6.434°	17.743°	5.419°
4-7	18.733°	0°	11.283°	0°
8	22.308°	0°	11.283°	0°
9	25.708°	0°	11.283°	0°
10	28.925°	0°	4.585°	5.792°
11	31.954°	0°	2.347°	7.120°
12	34.796°	0°	0.102°	8.449°

BEARING ORIENTATION AT ABUTMENT DETAIL

INTERIOR GIRDER MOMENT TABLE (GIRDER 11)								
		0.4 Sp. 1	Pier 1	0.5 Sp. 2	Pier 2	0.5 Sp. 3	Pier 3	0.7 Sp. 4
I_s	(in^4)	17086	25836	17086	34940	25836	34940	17086
$I_c(n)$	(in^4)	43147	-	40979	-	54435	-	41957
$I_c(3n)$	(in^4)	32190	-	30156	-	40416	-	31046
$I_c(cr)$	(in^4)	-	30859	-	40224	-	40224	-
S_s	(in^3)	690	1023	690	1357	1023	1357	690
$S_c(n)$	(in^3)	983	-	968	-	1325	-	975
$S_c(3n)$	(in^3)	896	-	876	-	1212	-	885
$S_c(cr)$	(in^3)	-	1375	-	1719	-	1719	-
DC1	(k/')	0.984	0.984	0.848	0.874	0.874	0.906	0.906
M_{DC1}	('k)	232	403	128	1157	757	1111	52
DC2	(k/')	0.469	0.469	0.469	0.469	0.469	0.469	0.469
M_{DC2}	('k)	107	201	86	618	413	586	28
DW	(k/')	0.292	0.292	0.246	0.246	0.246	0.264	0.264
M_{DW}	('k)	67	126	45	325	217	308	16
M_{LL+IM}	('k)	749	899	777	1275	1144	1282	685
M_u (Strength I)	('k)	1835	2518	1694	4938	3790	4830	1322
$\phi_f M_n$	('k)	5135	4545	5104	5885	6564	5888	5211
f_s DC1	(ksi)	4.03	4.73	2.23	10.23	8.88	9.82	0.90
f_s DC2	(ksi)	1.43	1.75	1.18	4.31	4.09	4.09	0.38
f_s DW	(ksi)	0.90	1.10	0.62	2.27	2.15	2.15	0.22
f_s (LL+IM)	(ksi)	9.14	7.85	9.63	8.90	10.36	8.95	8.43
f_s (Service II)	(ksi)	18.24	17.79	16.55	28.38	28.59	27.70	12.46
$0.95R_hF_{yf}$	(ksi)	47.5	47.5	47.5	47.5	47.5	47.5	47.5
f_s (Total)(Strength I)	(ksi)	24.17	23.49	22.05	37.16	37.57	36.28	16.68
$\phi_f F_n$	(ksi)	50.0	50.0	50.0	50.0	50.0	50.0	50.0
V_f	(k)	26.5	27.3	27.3	26.8	30.2	30.2	29.3

INTERIOR GIRDER REACTION TABLE (GIRDER 11)						
		E. Abut.	Pier 1	Pier 2	Pier 3	W. Abut.
R_{DC1}	(k)	21.4	66.5	105.2	103.4	11.4
R_{DC2}	(k)	10.0	34.6	57.1	54.6	5.9
R_{DW}	(k)	6.3	19.5	30.0	29.4	3.3
R_{LL+IM}	(k)	81.9	163.1	182.7	181.1	73.9
R_{Total}	(k)	119.6	283.7	375.0	368.5	94.5

I_s, S_s: Non-composite moment of inertia and section modulus of the steel section used for computing f_s (Total-Strength I, and Service II) due to non-composite dead loads (in.^{4} and in.^{3}).

$I_c(n)$, $S_c(n)$: Composite moment of inertia and section modulus of the steel and deck based upon the modular ratio, "n", used for computing f_s (Total-Strength I, and Service II) in uncracked sections due to short-term composite live loads (in.^{4} and in.^{3}).

$I_c(3n)$, $S_c(3n)$: Composite moment of inertia and section modulus of the steel and deck based upon 3 times the modular ratio, "3n", used for computing f_s (Total-Strength I, and Service II) in uncracked sections, due to long-term composite (superimposed) dead loads (in.^{4} and in.^{3}).

$I_c(cr)$, $S_c(cr)$: Composite moment of inertia and section modulus of the steel and longitudinal deck reinforcement, used for computing f_s (Total-Strength I and Service II) in cracked sections, due to both short-term composite live loads and long-term composite (superimposed) dead loads (in.^{4} and in.^{3}).

DC1: Un-factored non-composite dead load (kips/ft.).

M_{DC1}: Un-factored moment due to non-composite dead load (kip-ft.).

DC2: Un-factored long-term composite (superimposed excluding future wearing surface) dead load (kips/ft.).

M_{DC2}: Un-factored moment due to long-term composite (superimposed excluding future wearing surface) dead load (kip-ft.).

DW: Un-factored long-term composite (superimposed future wearing surface only) dead load (kips/ft.).

M_{DW}: Un-factored moment due to long-term composite (superimposed future wearing surface only) dead load (kip-ft.).

M_{LL+IM}: Un-factored live load moment plus dynamic load allowance (impact) (kip-ft.).

M_u (Strength I): Factored design moment (kip-ft.).
$1.25\,(M_{DC1} + M_{DC2}) + 1.5\,M_{DW} + 1.75\,M_{LL+IM}$

$\phi_f M_n$: Compact composite positive moment capacity computed according to Article 6.10.7.1 or non-slender negative moment capacity according to Article A6.1.1 or A6.1.2 (kip-ft).

f_s DC1: Un-factored stress at edge of flange for controlling steel flange due to vertical non-composite dead loads as calculated below (ksi).
M_{DC1} / S_{nc}

f_s DC2: Un-factored stress at edge of flange for controlling steel flange due to vertical composite dead loads as calculated below (ksi).
$M_{DC2} / S_c(3n)$ or $M_{DC2} / S_c(cr)$ as applicable.

f_s DW: Un-factored stress at edge of flange for controlling steel flange due to vertical composite future wearing surface loads as calculated below (ksi).
$M_{DW} / S_c(3n)$ or $M_{DW} / S_c(cr)$ as applicable.

f_s (LL+IM): Un-factored stress at edge of flange for controlling steel flange due to vertical composite live load plus impact loads as calculated below (ksi).
$M_{LL+IM} / S_c(n)$ or $M_{DW} / S_c(cr)$ as applicable.

f_s (Service II): Sum of stresses as computed below (ksi).
$f_{sDC1} + f_{sDC2} + f_{sDW} + 1.3\,f_s(LL+IM)$

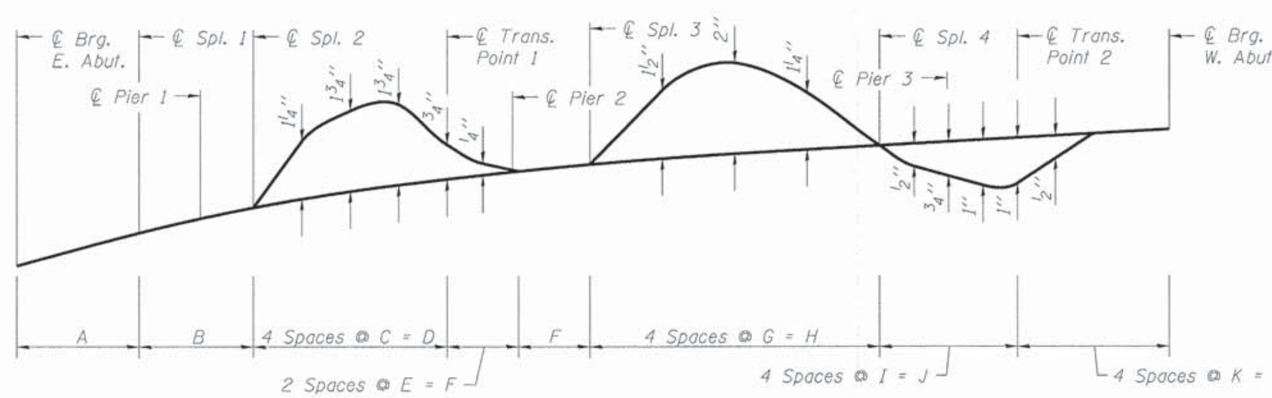
$0.95R_hF_yf$: Composite stress capacity for Service II loading according to Article 6.10.4.2 (ksi).

f_s (Total)(Strength I): Sum of stresses as computed below on non-compact section (ksi).
$1.25\,(f_{sDC1} + f_{sDC2}) + 1.5\,f_{sDW} + 1.75\,f_s(LL+IM)$

$\phi_f F_n$: Non-Compact composite positive or negative stress capacity for Strength I loading according to Article 6.10.7 or 6.10.8 (ksi).

V_f: Maximum factored shear range in span computed according to Article 6.10.10.

Note:
M_{LL} and R_{LL} include the effects of centrifugal force and superelevation.



Girder	A	B	C	D	E	F	G	H	I	J	K	L
1	33'-8 5/8"	33'-11 1/4"	14'-0"	56'-0"	10'-9"	21'-6"	20'-1 3/8"	80'-5 1/2"	10'-1 1/2"	40'-6"	11'-1 5/8"	44'-6 1/2"
2	34'-1"	33'-11 1/4"	14'-0"	56'-0"	10'-9"	21'-6"	20'-3 7/8"	81'-3 3/8"	10'-1"	40'-3 3/4"	11'-1"	44'-4 1/4"
3	34'-6 3/8"	33'-11 1/4"	14'-0"	56'-0"	10'-9"	21'-6"	20'-6 1/4"	82'-1 1/4"	10'-0 1/2"	40'-1 7/8"	11'-0 1/2"	44'-2"
4	35'-0 3/4"	33'-11 1/4"	14'-0"	56'-0"	10'-9"	21'-6"	20'-8 3/4"	82'-11 1/4"	10'-0"	40'-0"	11'-0"	44'-0"
5	35'-0 3/4"	33'-11 1/4"	14'-0"	56'-0"	10'-9"	21'-6"	20'-11 1/4"	83'-9 1/8"	10'-0"	40'-0"	11'-0"	44'-0"
6	35'-0 3/4"	33'-11 1/4"	14'-0"	56'-0"	10'-9"	21'-6"	21'-1 3/4"	84'-7"	10'-0"	40'-0"	11'-0"	44'-0"
7	35'-0 3/4"	33'-11 1/4"	14'-0"	56'-0"	10'-9"	21'-6"	21'-4 1/4"	85'-5"	10'-0"	40'-0"	11'-0"	44'-0"
8	35'-10 3/4"	34'-2 1/2"	14'-0"	56'-0"	10'-9"	21'-6"	21'-6 3/4"	86'-2 7/8"	10'-0"	40'-0"	11'-0"	44'-0"
9	36'-10 1/4"	34'-6"	14'-0"	56'-0"	10'-9"	21'-6"	21'-9 1/4"	87'-0 3/4"	10'-0"	40'-0"	11'-0"	44'-0"
10	37'-11 3/8"	34'-9 3/4"	14'-0"	56'-0"	10'-9"	21'-6"	21'-11 3/4"	87'-10 3/4"	9'-11 5/8"	39'-10 1/2"	10'-11 5/8"	43'-10 3/8"
11	39'-1 5/8"	35'-1 3/4"	14'-0"	56'-0"	10'-9"	21'-6"	22'-2 1/8"	88'-8 5/8"	9'-11 1/4"	39'-9 1/4"	10'-11 1/4"	43'-9"
12	40'-5 1/4"	35'-8"	14'-0"	56'-0"	10'-9"	21'-6"	22'-4 5/8"	89'-6 1/2"	9'-11"	39'-8"	10'-10 7/8"	43'-7 5/8"

CAMBER DIAGRAM

Note: All dimensions have been rounded to the nearest 1/8".

TABLE 1

GIRDER #	Span Lengths Along Girder (℄ Brg./℄ Brg.)				Girder Segment Lengths - See Girder Elevation Below for Point Locations									
	Span 1	Span 2	Span 3	Span 4	A	B	C	D	E	F	G	H	I	J
1	51'-7 7/8"	92'-0"	123'-8 1/2"	64'-9 1/2"	33'-8 5/8"	17'-11 1/4"	16'-0"	56'-0"	20'-0"	23'-0"	80'-5 1/2"	20'-3"	20'-0"	44'-9 1/2"
2	52'-0 1/8"	92'-0"	124'-5 1/4"	64'-6 1/8"	34'-1"	17'-11 1/4"	16'-0"	56'-0"	20'-0"	23'-0"	81'-3 3/8"	20'-1 7/8"	20'-0"	44'-6 1/8"
3	52'-5 5/8"	92'-0"	125'-2 1/4"	64'-2 7/8"	34'-6 3/8"	17'-11 1/4"	16'-0"	56'-0"	20'-0"	23'-0"	82'-1 1/4"	20'-0 7/8"	20'-0"	44'-2 7/8"
4	53'-0"	92'-0"	125'-11 1/4"	64'-0"	35'-0 3/4"	17'-11 1/4"	16'-0"	56'-0"	20'-0"	23'-0"	82'-11 1/4"	20'-0"	20'-0"	44'-0"
5	53'-0"	92'-0"	126'-9 1/8"	64'-0"	35'-0 3/4"	17'-11 1/4"	16'-0"	56'-0"	20'-0"	23'-0"	83'-9 1/8"	20'-0"	20'-0"	44'-0"
6	53'-0"	92'-0"	127'-7"	64'-0"	35'-0 3/4"	17'-11 1/4"	16'-0"	56'-0"	20'-0"	23'-0"	84'-7"	20'-0"	20'-0"	44'-0"
7	53'-0"	92'-0"	128'-5"	64'-0"	35'-0 3/4"	17'-11 1/4"	16'-0"	56'-0"	20'-0"	23'-0"	85'-5"	20'-0"	20'-0"	44'-0"
8	53'-11 3/4"	92'-1 5/8"	129'-2 7/8"	64'-0"	35'-10 3/4"	18'-1"	16'-1 5/8"	56'-0"	20'-0"	23'-0"	86'-2 7/8"	20'-0"	20'-0"	44'-0"
9	55'-1 1/8"	92'-3 1/4"	130'-0 3/4"	64'-0"	36'-10 1/4"	18'-2 7/8"	16'-3 1/4"	56'-0"	20'-0"	23'-0"	87'-0 3/4"	20'-0"	20'-0"	44'-0"
10	56'-4 1/8"	92'-5"	130'-10"	63'-9 3/4"	37'-11 3/8"	18'-4 3/4"	16'-5"	56'-0"	20'-0"	23'-0"	87'-10 3/4"	19'-11 1/4"	20'-0"	43'-9 3/4"
11	57'-8 5/8"	92'-6 7/8"	131'-7 1/4"	63'-7 5/8"	39'-1 5/8"	18'-6 7/8"	16'-6 7/8"	56'-0"	20'-0"	23'-0"	88'-8 5/8"	19'-10 5/8"	20'-0"	43'-7 5/8"
12	59'-2 3/8"	92'-8 7/8"	132'-4 1/2"	63'-5 5/8"	40'-5 1/4"	18'-9 1/8"	16'-8 7/8"	56'-0"	20'-0"	23'-0"	89'-6 1/2"	19'-10"	20'-0"	43'-5 5/8"

TOP OF WEB ELEVATIONS

For Fabrication Only

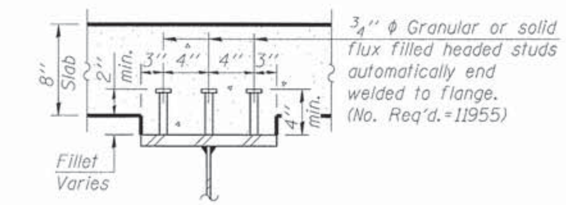
Girder	℄ Brg. E. Abut.	℄ Field Splice 1	℄ Brg. Pier 1	℄ Field Splice 2	℄ Brg. Pier 2	℄ Field Splice 3	℄ Field Splice 4	℄ Brg. Pier 3	℄ Brg. W. Abut.
1	617.85	619.12	619.69	620.20	621.88	622.42	623.62	623.87	624.70
2	617.90	619.17	619.75	620.27	621.98	622.51	623.72	623.99	624.83
3	617.96	619.23	619.81	620.33	622.05	622.60	623.83	624.10	624.97
4	618.02	619.29	619.87	620.38	622.13	622.67	623.93	624.21	625.10
5	618.07	619.34	619.93	620.45	622.20	622.76	624.05	624.32	625.21
6	618.10	619.39	619.98	620.51	622.28	622.85	624.16	624.43	625.32
7	618.03	619.32	619.92	620.45	622.24	622.81	624.13	624.40	625.25
8	617.73	619.11	619.72	620.27	622.07	622.65	624.00	624.28	625.16
9	617.42	618.88	619.51	620.08	621.90	622.49	623.90	624.14	625.02
10	617.12	618.66	619.31	619.90	621.76	622.34	623.73	624.00	624.85
11	616.81	618.44	619.11	619.70	621.59	622.19	623.59	623.85	624.68
12	616.51	618.22	618.90	619.51	621.42	622.03	623.46	623.71	624.51

Note: All dimensions have been rounded to the nearest 1/8".

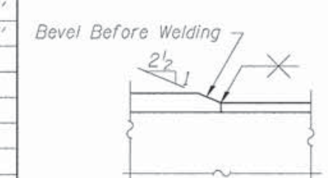
TABLE 2 - STUD SHEAR CONNECTOR SPACING

GIRDER #	STUD 1	STUD 2	K	L	STUD 3	STUD 4	M	N	STUD 5	STUD 6	O	STUD 7
1	29 @ 8 1/2" = 20'-6 1/2"	18 @ 7" = 10'-6"	2'-8 1/4"	2'-2 1/8"	27 @ 7" = 15'-9"	15 @ 11" = 13'-9"	2'-3"	3'-0 3/4"	25 @ 11" = 22'-11"	25 @ 14" = 29'-2"	2'-2 1/4"	16 @ 14" = 18'-8"
2	30 @ 8 1/2" = 21'-3"	19 @ 6 1/2" = 10'-3 1/2"	2'-6 5/8"	2'-2 5/8"	29 @ 6 1/2" = 15'-8 1/2"	15 @ 11" = 13'-9"	2'-3"	3'-0 3/4"	25 @ 11" = 22'-11"	25 @ 14" = 29'-2"	2'-2 1/4"	16 @ 14" = 18'-8"
3	30 @ 8 1/2" = 21'-3"	19 @ 6 1/2" = 10'-3 1/2"	2'-11 7/8"	2'-2 3/4"	29 @ 6 1/2" = 15'-8 1/2"	15 @ 11" = 13'-9"	2'-3"	3'-0 3/4"	25 @ 11" = 22'-11"	25 @ 14" = 29'-2"	2'-2 1/4"	16 @ 14" = 18'-8"
4	33 @ 8" = 22'-0"	18 @ 7" = 10'-6"	2'-6 3/4"	2'-2 1/4"	27 @ 7" = 15'-9"	15 @ 11" = 13'-9"	2'-3"	3'-0 3/4"	25 @ 11" = 22'-11"	25 @ 14" = 29'-2"	2'-2 1/4"	16 @ 14" = 18'-8"
5	33 @ 8" = 22'-0"	18 @ 7" = 10'-6"	2'-6 3/4"	2'-2 1/4"	27 @ 7" = 15'-9"	15 @ 11" = 13'-9"	2'-3"	3'-0 3/4"	25 @ 11" = 22'-11"	25 @ 14" = 29'-2"	2'-2 1/4"	16 @ 14" = 18'-8"
6	33 @ 8" = 22'-0"	18 @ 7" = 10'-6"	2'-6 3/4"	2'-2 1/4"	27 @ 7" = 15'-9"	15 @ 11" = 13'-9"	2'-3"	3'-0 3/4"	25 @ 11" = 22'-11"	25 @ 14" = 29'-2"	2'-2 1/4"	16 @ 14" = 18'-8"
7	33 @ 8" = 22'-0"	18 @ 7" = 10'-6"	2'-6 3/4"	2'-2 1/4"	27 @ 7" = 15'-9"	15 @ 11" = 13'-9"	2'-3"	3'-0 3/4"	25 @ 11" = 22'-11"	25 @ 14" = 29'-2"	2'-2 1/4"	16 @ 14" = 18'-8"
8	34 @ 8" = 22'-8"	22 @ 6" = 11'-0"	2'-1 7/8"	2'-7 5/8"	31 @ 6" = 15'-6"	15 @ 11" = 13'-9"	2'-4 5/8"	3'-0 3/4"	25 @ 11" = 22'-11"	25 @ 14" = 29'-2"	2'-2 1/4"	16 @ 14" = 18'-8"
9	35 @ 8" = 23'-4"	22 @ 6" = 11'-0"	2'-6 1/4"	2'-8 7/8"	31 @ 6" = 15'-6"	15 @ 11" = 13'-9"	2'-6 1/4"	3'-0 3/4"	25 @ 11" = 22'-11"	25 @ 14" = 29'-2"	2'-2 1/4"	16 @ 14" = 18'-8"
10	35 @ 8" = 23'-4"	23 @ 6 1/2" = 12'-5 1/2"	2'-1 7/8"	2'-1 3/4"	30 @ 6 1/2" = 16'-3"	15 @ 11" = 13'-9"	2'-8"	3'-0 3/4"	25 @ 11" = 22'-11"	25 @ 14" = 29'-2"	2'-2 1/4"	16 @ 14" = 18'-8"
11	36 @ 8" = 24'-0"	23 @ 6 1/2" = 12'-5 1/2"	2'-8 1/8"	2'-4"	30 @ 6 1/2" = 16'-3"	15 @ 11" = 13'-9"	2'-9 7/8"	3'-0 3/4"	25 @ 11" = 22'-11"	25 @ 14" = 29'-2"	2'-2 1/4"	16 @ 14" = 18'-8"
12	33 @ 9" = 24'-9"	23 @ 6 1/2" = 12'-5 1/2"	3'-2 3/4"	2'-6 1/8"	30 @ 6 1/2" = 16'-3"	15 @ 11" = 13'-9"	2'-11 7/8"	3'-0 3/4"	25 @ 11" = 22'-11"	25 @ 14" = 29'-2"	2'-2 1/4"	16 @ 14" = 18'-8"

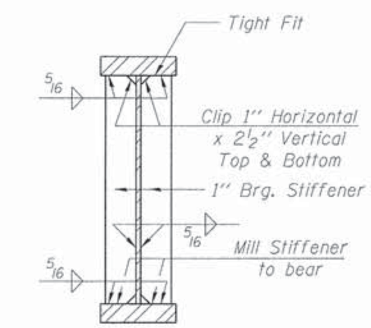
GIRDER #	STUD 8	P	Q	STUD 9	R	S	STUD 10	STUD 11	T	STUD 12	STUD 13
1	15 @ 16" = 20'-0"	3'-0"	3'-8"	55 @ 16" = 73'-4"	3'-5 1/2"	4'-3"	12 @ 16" = 16'-0"	23 @ 10" = 19'-2"	2'-3 1/2"	24 @ 10" = 20'-0"	28 @ 10" = 23'-4"
2	15 @ 16" = 20'-0"	3'-0"	3'-8"	55 @ 16" = 73'-4"	4'-3 3/8"	4'-1 7/8"	12 @ 16" = 16'-0"	23 @ 10" = 19'-2"	1'-11 5/8"	24 @ 10" = 20'-0"	33 @ 8 1/2" = 23'-4 1/2"
3	15 @ 16" = 20'-0"	3'-0"	3'-8"	56 @ 16" = 74'-8"	3'-9 3/8"	4'-0 7/8"	12 @ 16" = 16'-0"	23 @ 10" = 19'-2"	1'-8 3/8"	24 @ 10" = 20'-0"	33 @ 8 1/2" = 23'-4 1/2"
4	15 @ 16" = 20'-0"	3'-0"	3'-8"	57 @ 16" = 76'-0"	3'-3 1/4"	4'-0"	12 @ 16" = 16'-0"	23 @ 10" = 19'-2"	1'-10 1/2"	24 @ 10" = 20'-0"	29 @ 9 1/2" = 22'-11 1/2"
5	15 @ 16" = 20'-0"	3'-0"	3'-8"	57 @ 16" = 76'-0"	4'-1 1/8"	4'-0"	12 @ 16" = 16'-0"	23 @ 10" = 19'-2"	1'-10 1/2"	24 @ 10" = 20'-0"	29 @ 9 1/2" = 22'-11 1/2"
6	15 @ 16" = 20'-0"	3'-0"	3'-8"	58 @ 16" = 77'-4"	3'-7"	4'-0"	12 @ 16" = 16'-0"	23 @ 10" = 19'-2"	1'-10 1/2"	24 @ 10" = 20'-0"	29 @ 9 1/2" = 22'-11 1/2"
7	15 @ 16" = 20'-0"	3'-0"	3'-8"	59 @ 16" = 78'-8"	3'-1"	4'-0"	12 @ 16" = 16'-0"	23 @ 10" = 19'-2"	1'-10 1/2"	24 @ 10" = 20'-0"	29 @ 9 1/2" = 22'-11 1/2"
8	15 @ 16" = 20'-0"	3'-0"	3'-8"	59 @ 16" = 78'-8"	3'-10 7/8"	4'-0"	12 @ 16" = 16'-0"	23 @ 10" = 19'-2"	1'-10 1/2"	24 @ 10" = 20'-0"	29 @ 9 1/2" = 22'-11 1/2"
9	15 @ 16" = 20'-0"	3'-0"	3'-8"	60 @ 16" = 80'-0"	3'-4 3/4"	4'-0"	12 @ 16" = 16'-0"	23 @ 10" = 19'-2"	1'-10 1/2"	24 @ 10" = 20'-0"	29 @ 9 1/2" = 22'-11 1/2"
10	15 @ 16" = 20'-0"	3'-0"	3'-8"	60 @ 16" = 80'-0"	4'-2 3/4"	3'-11 1/4"	12 @ 16" = 16'-0"	23 @ 10" = 19'-2"	1'-11 3/4"	24 @ 10" = 20'-0"	32 @ 8 1/2" = 22'-8"
11	15 @ 16" = 20'-0"	3'-0"	3'-8"	61 @ 16" = 81'-4"	3'-8 7/8"	3'-10 5/8"	12 @ 16" = 16'-0"	23 @ 10" = 19'-2"	2'-6 1/8"	24 @ 10" = 20'-0"	31 @ 8 1/2" = 21'-11 1/2"
12	15 @ 16" = 20'-0"	3'-0"	3'-8"	61 @ 16" = 81'-4"	4'-2 7/8"	4'-1 1/4"	12 @ 16" = 16'-0"	23 @ 10" = 19'-2"	2'-4 1/8"	24 @ 10" = 20'-0"	31 @ 8 1/2" = 21'-11 1/2"



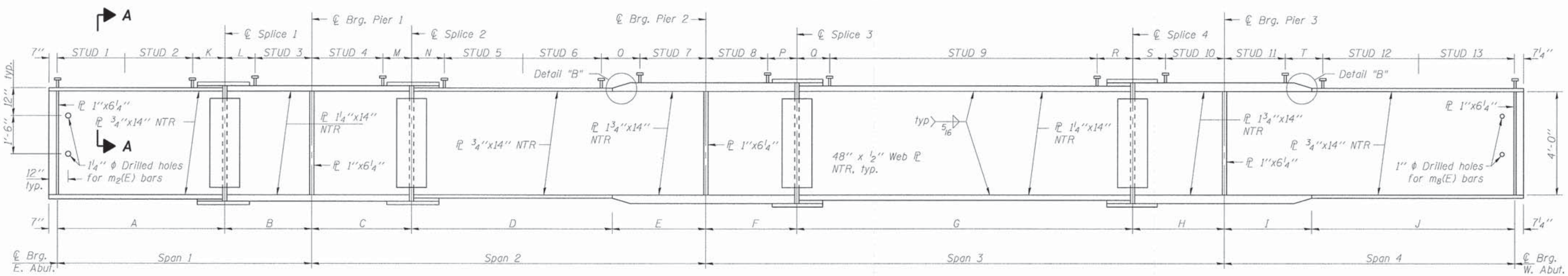
SECTION A-A



DETAIL "B"



BEARING STIFFENER DETAIL

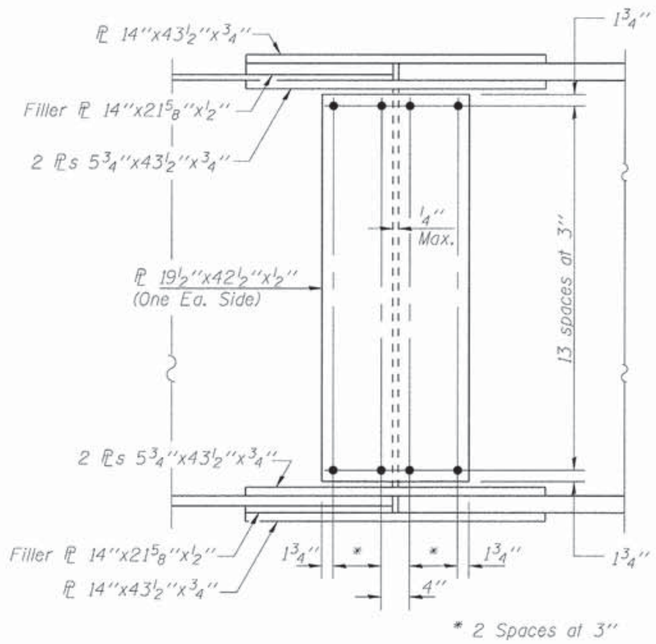


Load carrying components designated "NTR" shall conform to the Impact Testing Requirement, Zone 2.

TYPICAL GIRDER ELEVATION
(LOOKING SOUTH)

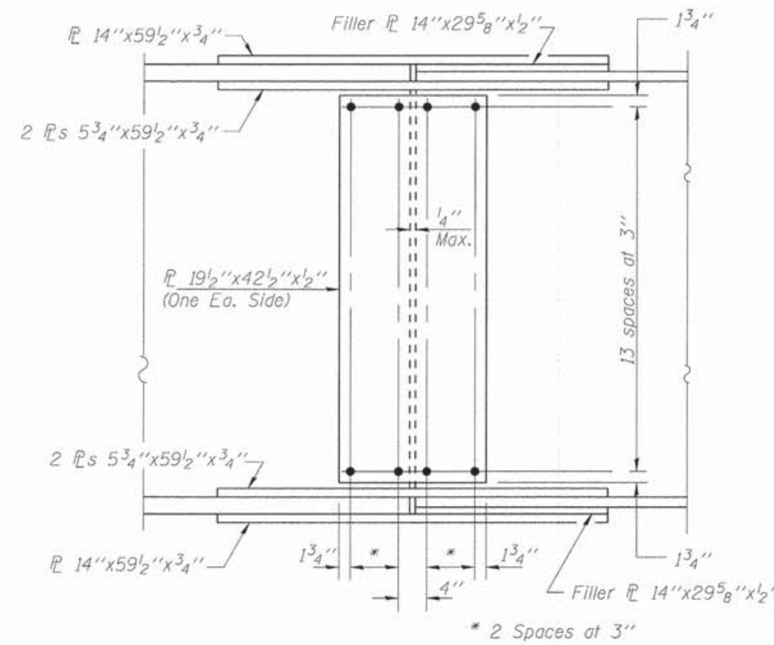
BAXTER & WOODMAN Consulting Engineers	USER NAME = 231ukb	DESIGNED - BLB	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	PLATE GIRDER DETAILS STRUCTURE NO. 049-2050	
		CHECKED - AS	REVISED -			
	PLOT SCALE =	DRAWN - BLB	REVISED -			
	PLOT DATE = 1/28/2015	CHECKED - AS	REVISED -		SHEET NO. 35 OF 50 SHEETS	

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3719	12-00239-00-BR	LAKE	88	64
		CONTRACT NO. 61A57		
		ILLINOIS FED. AID PROJECT	M-BHM-9003(952)	

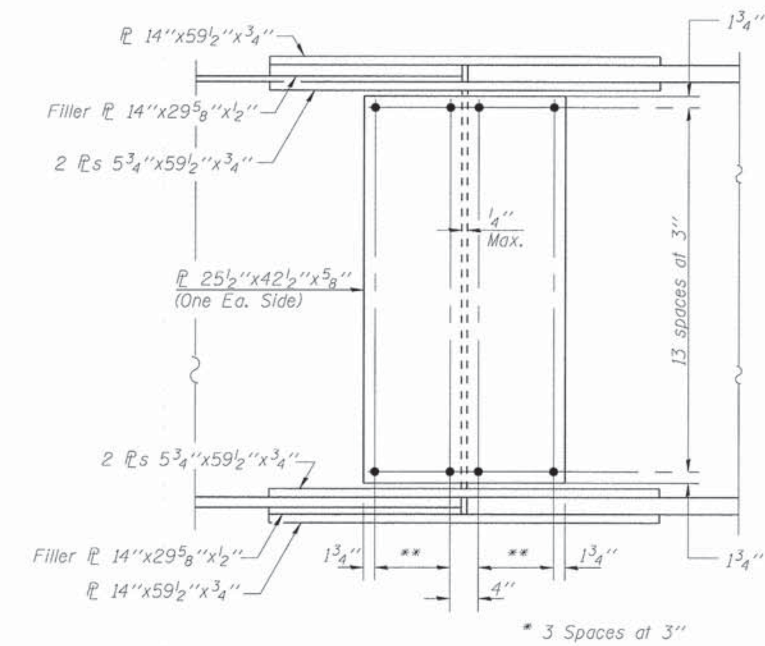


FIELD SPLICE DETAIL
SPLICE 1 AND 2

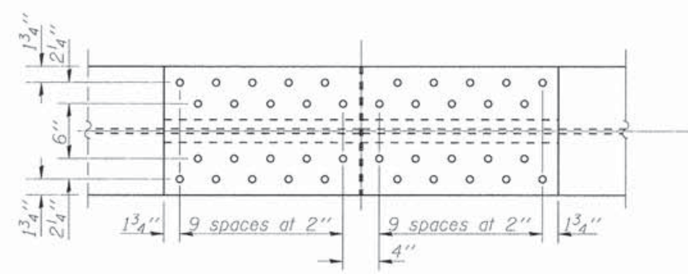
Splice 1 shown
Splice 2 similar but mirrored



FIELD SPLICE DETAIL
SPLICE 3



FIELD SPLICE DETAIL
SPLICE 4



STRAIGHT FLANGE SPLICE
SPLICE 1 AND 2

TABLE 3
ANGLED FIELD SPLICE DIMENSIONS

SPLICE 1

GIRDER #	AA	BB	CC	DD	EE	FF	ϕ
1	1'-10 1/2"	1'-10 1/4"	3 3/8"	1'-9 1/2"	1'-9 1/4"	3 1/4"	8.73°
2	1'-10 1/4"	1'-10 1/8"	2 1/4"	1'-9 1/2"	1'-9 1/2"	2 1/8"	5.74°
3	1'-10"	1'-10"	1 1/8"	1'-9 5/8"	1'-9 5/8"	1 1/8"	2.83°
8	1'-10"	1'-9 7/8"	7/8"	1'-9 5/8"	1'-9 5/8"	7/8"	2.25°
9	1'-10 1/8"	1'-10 1/8"	1 5/8"	1'-9 5/8"	1'-9 1/2"	1 5/8"	4.35°
10	1'-10 1/4"	1'-10 1/8"	2 1/2"	1'-9 1/2"	1'-9 3/8"	2 3/8"	6.29°
11	1'-10 1/2"	1'-10 1/4"	3 1/8"	1'-9 1/2"	1'-9 1/4"	3 "	8.07°
12	1'-10 5/8"	1'-10 1/4"	3 3/4"	1'-9 3/8"	1'-9 1/8"	3 5/8"	9.68°

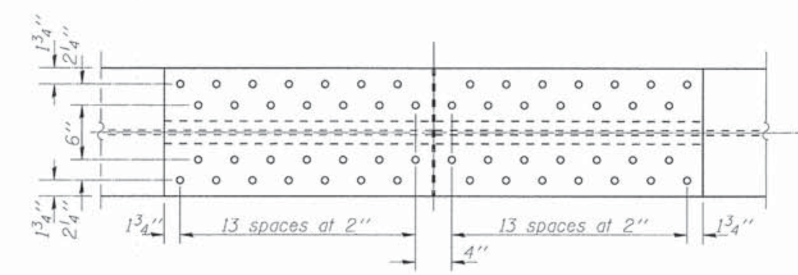
SPLICE 2

GIRDER #	AA	BB	CC	DD	EE	FF	ϕ
8	1'-9 7/8"	1'-9 7/8"	1/2"	1'-9 3/4"	1'-9 3/4"	1/2"	1.32°
9	1'-10"	1'-10"	1"	1'-9 5/8"	1'-9 5/8"	1"	2.62°
10	1'-10"	1'-10 "	1 1/2"	1'-9 5/8"	1'-9 5/8"	1 1/2"	3.90°
11	1'-10 1/4"	1'-10 1/8"	2"	1'-9 5/8"	1'-9 1/2"	1 7/8"	5.15°
12	1'-10 1/4"	1'-10 1/8"	2 1/2"	1'-9 3/8"	1'-9 3/8"	2 3/8"	6.38°

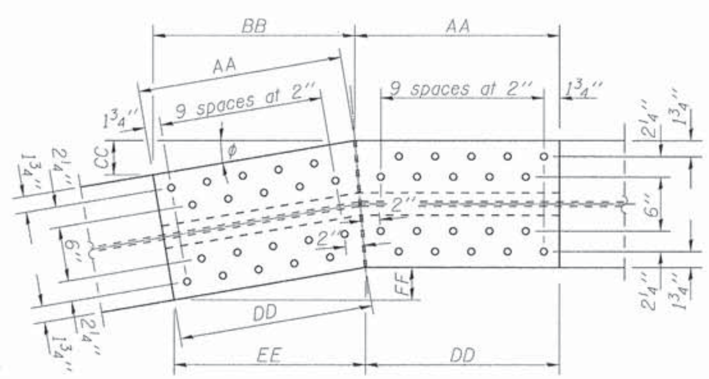
SPLICE 4

GIRDER #	AA	BB	CC	DD	EE	FF	ϕ
1	2'-6"	2'-6"	1 5/8"	2'-5 5/8"	2'-5 5/8"	1 5/8"	3.10°
2	2'-5 7/8"	2'-5 7/8"	1 1/8"	2'-5 5/8"	2'-5 5/8"	1 1/8"	2.07°
3	2'-5 7/8"	2'-5 7/8"	1/2"	2'-5 3/4"	2'-5 3/4"	1/2"	1.04°
10	2'-5 7/8"	2'-5 7/8"	1/2"	2'-5 3/4"	2'-5 3/4"	1/2"	0.90°
11	2'-5 7/8"	2'-5 7/8"	1"	2'-5 5/8"	2'-5 5/8"	1"	1.81°
12	2'-6"	2'-6"	1 3/8"	2'-5 5/8"	2'-5 5/8"	1 3/8"	2.73°

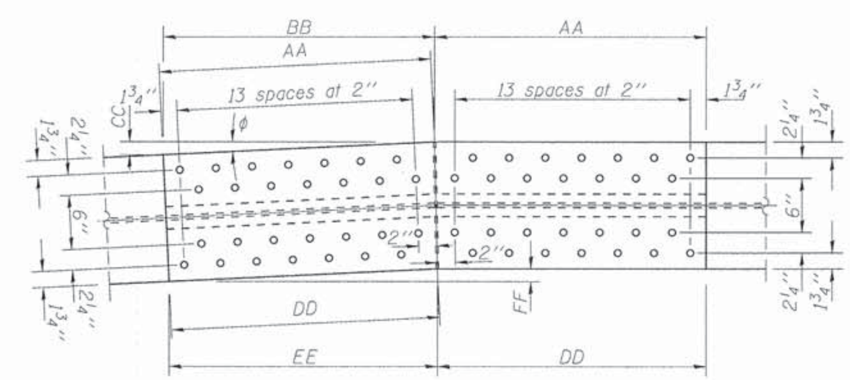
NOTES:
All splices are symmetrical about ℄ splice except for fills.
All dimensions have been rounded to the nearest 1/8".
H.S. Bolts shall be 7/8" ASTM A325 (Type 3).
Web splice plate dimensions apply to non-angled field splices. Fabricator shall make any necessary adjustments to splice plate dimensions, bolt spacing or web length to account for bent plates.



STRAIGHT FLANGE SPLICE
SPLICE 3 AND 4



ANGLED FLANGE SPLICE
SPLICE 1 AND 2



ANGLED FLANGE SPLICE
SPLICE 4

BAXTER & WOODMAN Consulting Engineers	USER NAME = 23ukb	DESIGNED - BLB	REVISED -
		CHECKED - AS	REVISED -
	PLOT SCALE =	DRAWN - BLB	REVISED -
	PLOT DATE = 1/28/2015	CHECKED - AS	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FIELD SPLICE DETAILS
STRUCTURE NO. 049-2050

SHEET NO. 36 OF 50 SHEETS

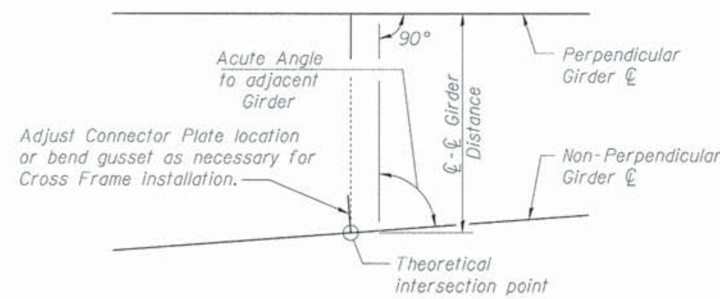
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3719	12-00239-00-BR	LAKE	88	65
		CONTRACT NO. 61A57		

ILLINOIS | FED. AID PROJECT M-BHM-9003(952)

TABLE 4
CROSS FRAME DIMENSIONS

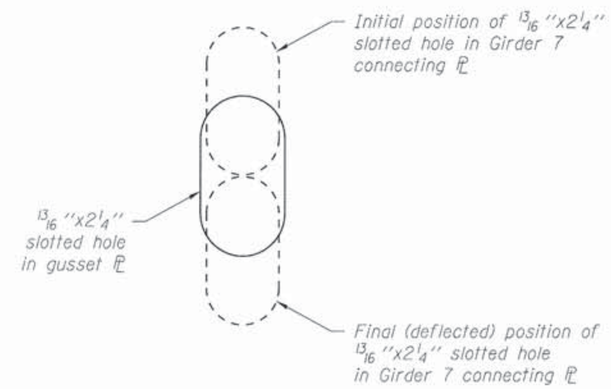
Cross Frame #	Perp. to Girder #	Adjacent Non-perp. Girder #	Acute Angle to adjacent Girder	Distance ℄-℄ Girders
D	℄	N/A	90°	5.92′
D1	℄	N/A	90°	5.92′
D2	2	1	87.02°	7.67′
D3	2	1	87.02°	6.37′
D4	2	1	88.98°	5.95′
D5	2	1	88.98°	6.22′
D6	2	1	88.98°	6.58′
D7	2	1	88.98°	6.93′
D8	2	1	88.98°	7.29′
D9	2	3	87.09°	7.58′
D10	2	3	87.09°	6.31′
D11	2	3	88.97°	5.98′
D12	2	3	88.97°	6.25′
D13	2	3	88.97°	6.60′
D14	2	3	88.97°	6.97′
D15	2	3	88.97°	7.32′
D16	4	3	87.17°	7.46′
D17	4	3	87.17°	6.22′
D18	4	3	88.96°	6.00′
D19	4	3	88.96°	6.27′
D20	4	3	88.96°	6.64′
D21	4	3	88.96°	7.00′
D22	4	3	88.96°	7.36′
D23	7	8	86.43°	8.54′
D24	7	8	86.43°	6.98′
D25	7	8	88.68°	6.54′
D26	7	8	88.68°	6.26′
D27	7	8	88.68°	5.99′
D28	9	8	86.60°	8.30′
D29	9	8	86.60°	6.81′
D30	9	8	88.70°	6.53′
D31	9	8	88.70°	6.21′
D32	9	8	88.70°	5.94′
D33	9	10	86.78°	8.07′
D34	9	10	86.78°	6.68′
D35	9	10	88.72°	6.47′
D36	9	10	88.72°	6.16′
D37	9	10	88.72°	5.89′
D38	9	10	89.09°	6.00′
D39	9	10	89.09°	6.24′
D40	9	10	89.09°	6.56′
D41	9	10	89.09°	6.88′
D42	9	10	89.09°	7.19′
D43	11	10	86.97°	7.81′
D44	11	10	86.97°	6.49′
D45	11	10	88.75°	6.41′
D46	11	10	88.75°	6.10′
D47	11	10	88.75°	5.84′
D48	11	10	89.09°	6.02′
D49	11	10	89.09°	6.26′
D50	11	10	89.09°	6.57′
D51	11	10	89.09°	6.90′
D52	11	10	89.09°	7.21′
D53	11	12	87.16°	7.57′
D54	11	12	87.16°	6.33′
D55	11	12	88.77°	6.34′
D56	11	12	88.77°	6.04′
D57	11	12	88.77°	5.78′
D58	11	12	89.08°	6.04′
D59	11	12	89.08°	6.28′
D60	11	12	89.08°	6.59′
D61	11	12	89.08°	6.92′
D62	11	12	89.08°	7.24′

Note: All dimensions have been rounded to the nearest $\frac{1}{8}$''.

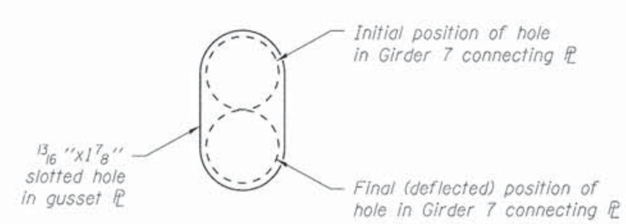


CROSS FRAME TABLE SCHEMATIC

NOTE:
Diaphragm locations given for non-perpendicular girders (1, 3, 8, 10, 12) are at the theoretical intersection point of a perpendicular line from the adjacent girder. Fabricator shall be responsible for making any adjustments or offsets necessary to account for the angled connection.



SPAN 3



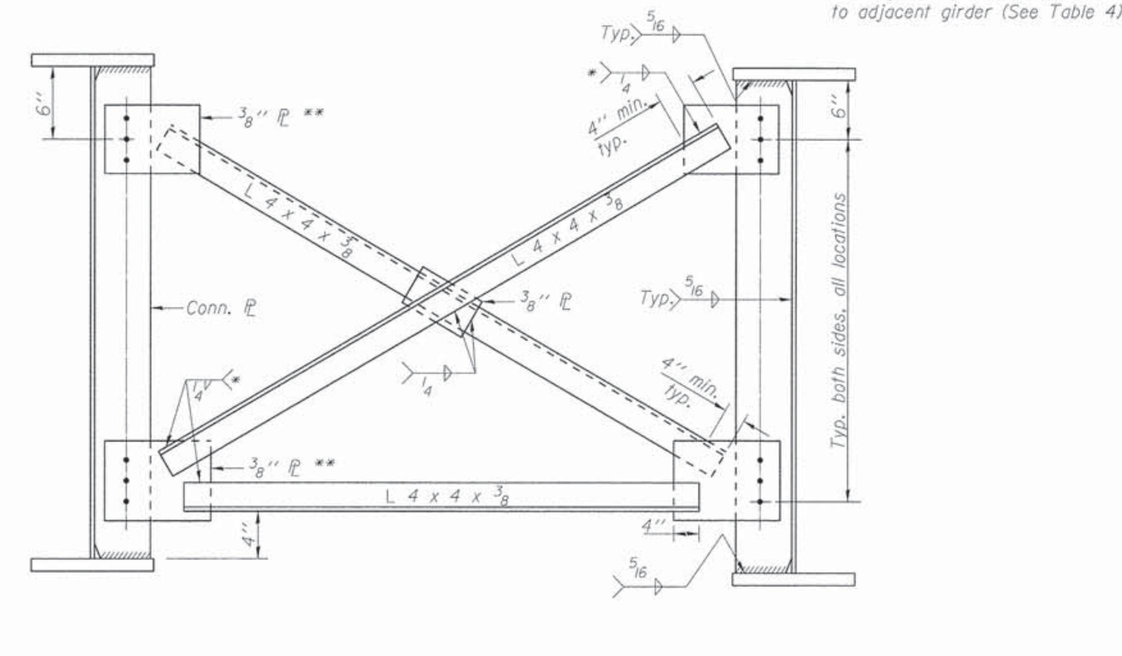
SPANS 1, 2 & 4

Note: Bolts in slotted holes shall be finger tight until Stage II pour is complete.

*** SLOTTED HOLE ORIENTATION DETAIL

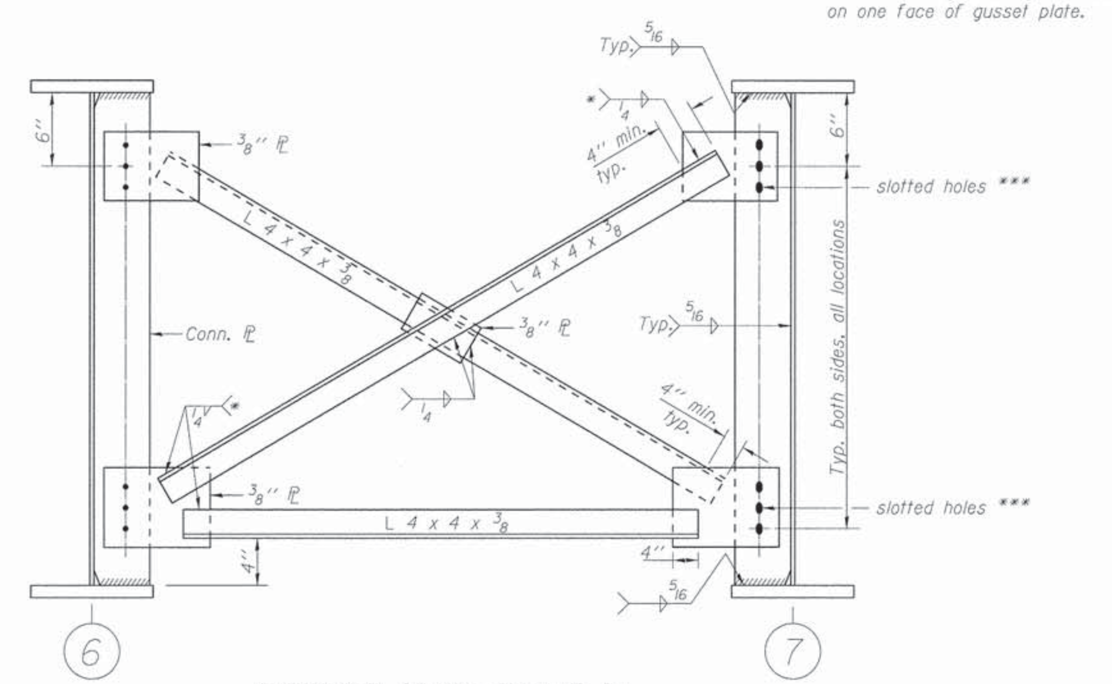
* Fillet weld angles along 3 sides on one face of gusset plate.

** Bend gusset plates perpendicular to adjacent girder (See Table 4)



TYPICAL INTERIOR CROSS FRAME

* Fillet weld angles along 3 sides on one face of gusset plate.



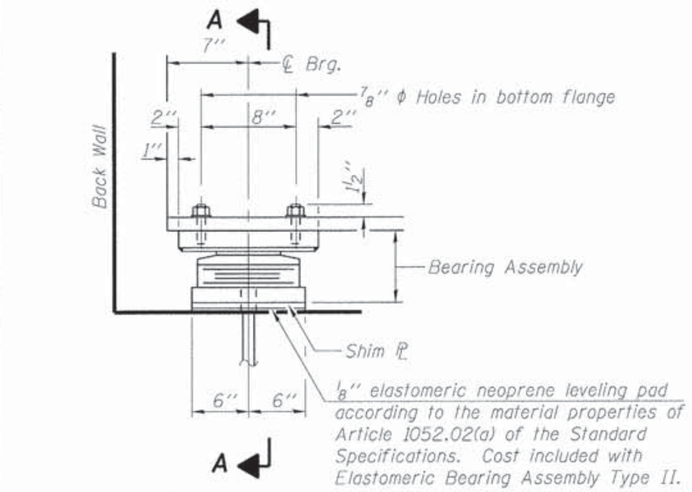
INTERIOR CROSS FRAME D1 AT STAGE CONSTRUCTION JOINT

All cross frames or diaphragms between beams or girders shall be installed with erection pins and bolts in accordance with the erection plan approved by the Engineer. Individual cross frames or diaphragms at supports may be temporarily disconnected to install bearing anchor rods.

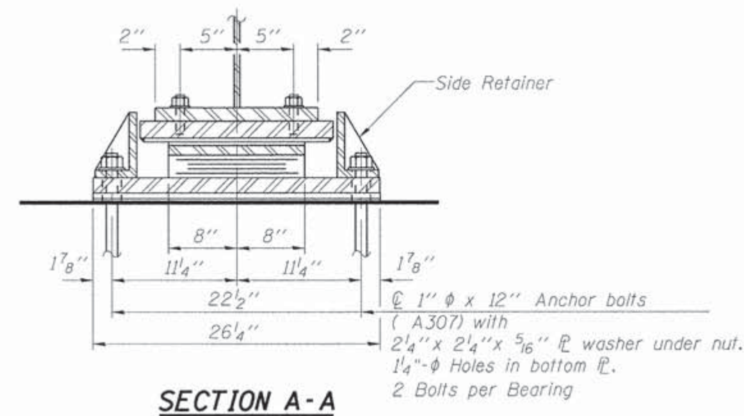
BAXTER & WOODMAN Consulting Engineers	USER NAME = 231ukb	DESIGNED - BLB	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
		CHECKED - AS	REVISED -	
	PLOT SCALE =	DRAWN - BLB	REVISED -	
	PLOT DATE = 1/28/2015	CHECKED - AS	REVISED -	

CROSS FRAME DETAILS
STRUCTURE NO. 049-2050
SHEET NO. 37 OF 50 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3719	12-00239-00-BR	LAKE	88	66
		CONTRACT NO. 61A57		
		ILLINOIS FED. AID PROJECT M-8HM-9003(952)		



ELEVATION AT ABUT.

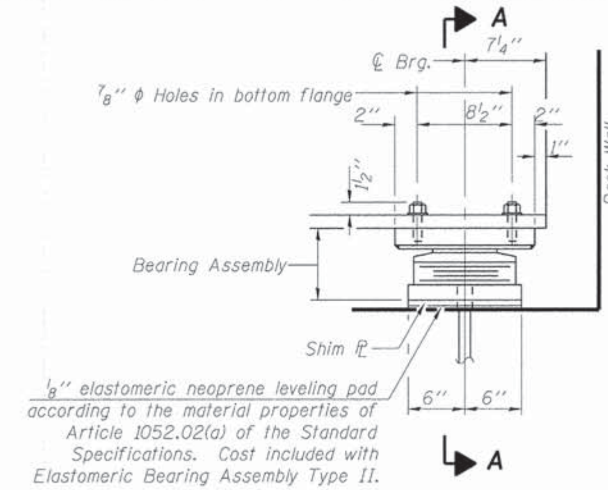


SECTION A-A

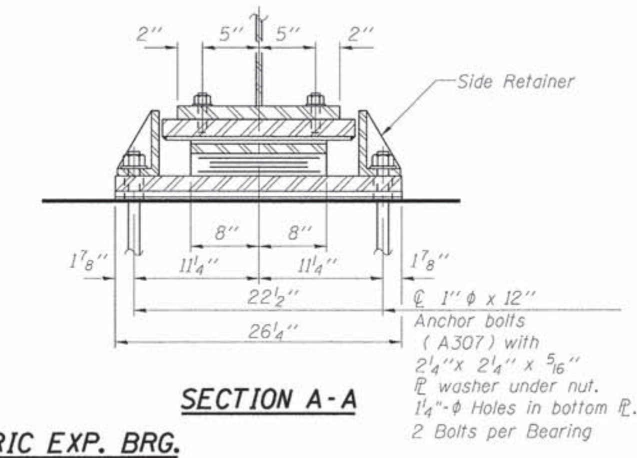
TYPE II ELASTOMERIC EXP. BRG. AT EAST ABUTMENT

Abutment	East			West
Beam No.	1	4	5	6
Shim Height (in.)	1/8	3/4	1/4	1/4

SHIM TABLE

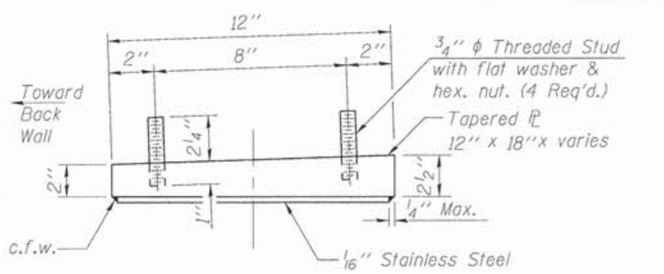


ELEVATION AT ABUT.

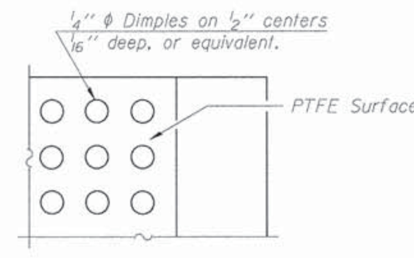


SECTION A-A

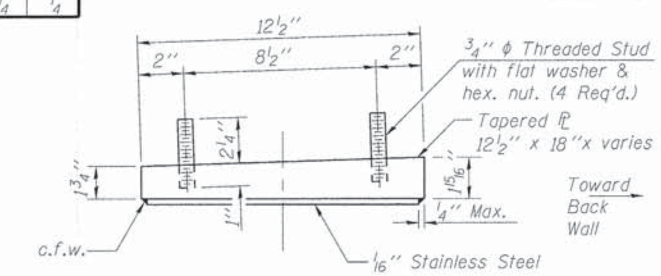
TYPE II ELASTOMERIC EXP. BRG. AT WEST ABUTMENT



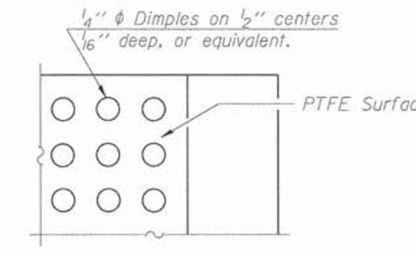
TOP BEARING ASSEMBLY - EAST ABUT



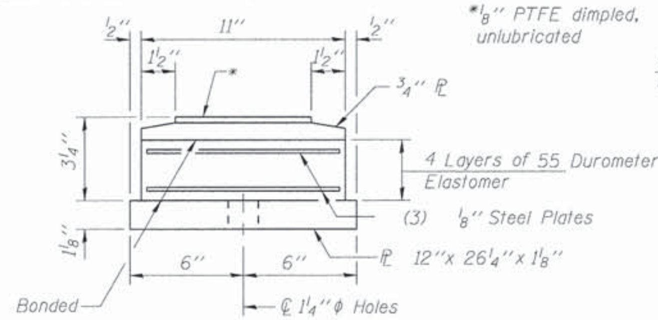
PLAN-PTFE SURFACE



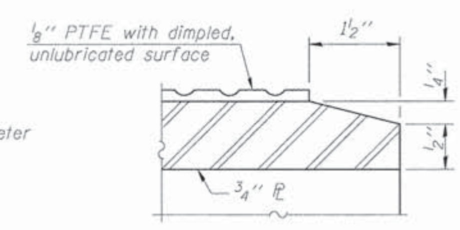
TOP BEARING ASSEMBLY - WEST ABUT



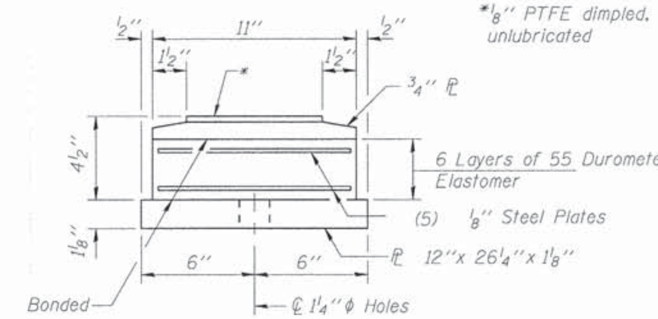
PLAN-PTFE SURFACE



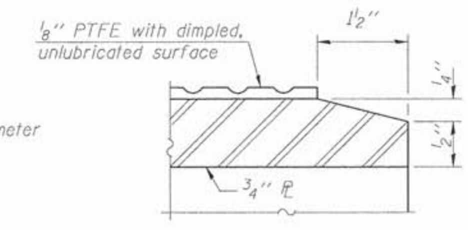
BOTTOM BEARING ASSEMBLY - EAST ABUT



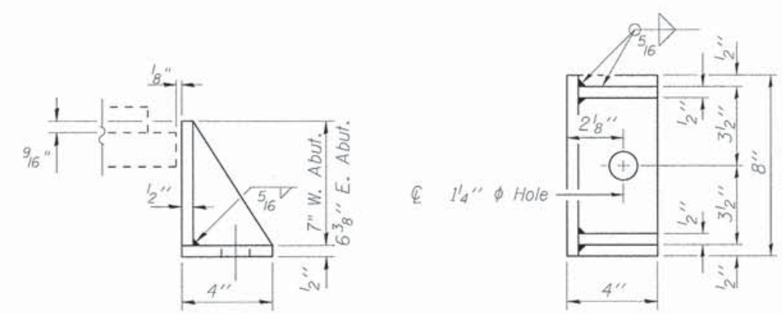
SECTION THRU PTFE



BOTTOM BEARING ASSEMBLY - WEST ABUT

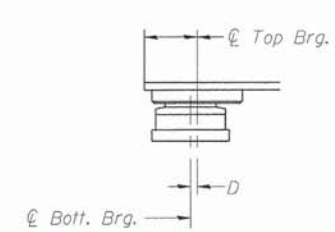


SECTION THRU PTFE

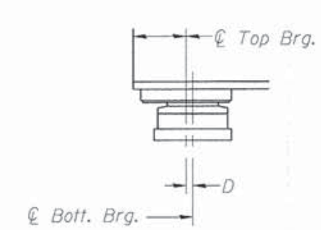


SIDE RETAINER AT EAST AND WEST ABUTMENTS

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



BELOW 50°F.
(Move bott. brg. away from fixed brg.)



ABOVE 50°F.
(Move bott. brg. toward fixed brg.)

SETTING ANCHOR BOLTS AT EXP. BRG.

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

Notes:

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

Anchor bolts at fixed bearings may be either cast in place or installed in holes drilled after the supported member is in place.

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

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

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

The structural steel plates of the Bearing Assembly shall conform to the requirements of AASHTO M 270 Grade 50W.

Two 1/8 in. adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown on bearing details.

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

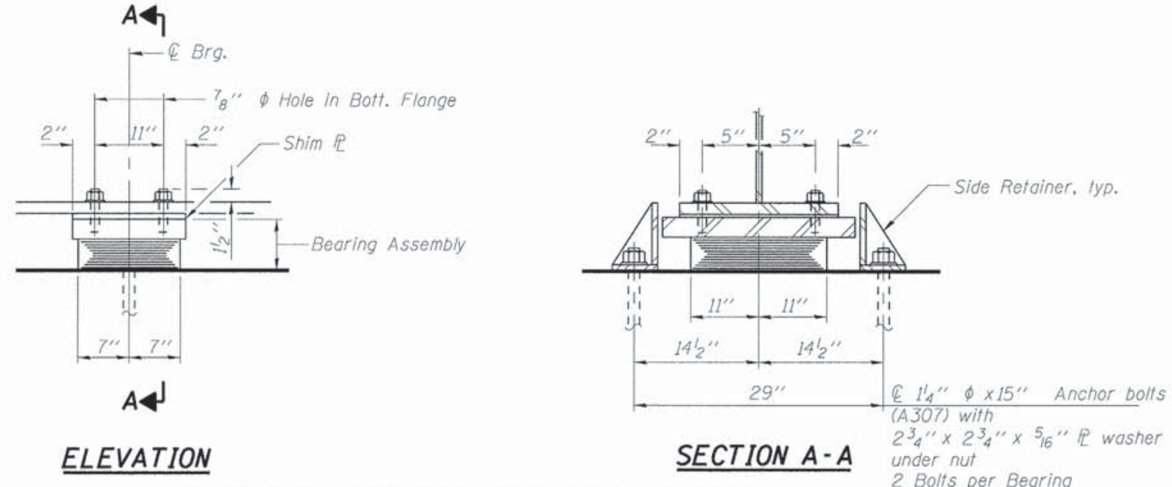
Bonding of 1/8″ PTFE sheet during vulcanizing process will be permitted provided the process and method of adjusting assembly height is approved by the Engineer.

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly Type II	Each	24
Anchor Bolts, 1″	Each	48

BAXTER & WOODMAN Consulting Engineers	USER NAME = 231ukb	DESIGNED - ABW	REVISED 7/11/2014 BLB	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BEARING DETAILS AT ABUTMENTS STRUCTURE NO. 049-2050
		CHECKED - DCD	REVISED -		
	PLOT SCALE =	DRAWN - ABW	REVISED -		
	PLOT DATE = 1/28/2015	CHECKED - DCD	REVISED -		SHEET NO. 38 OF 50 SHEETS

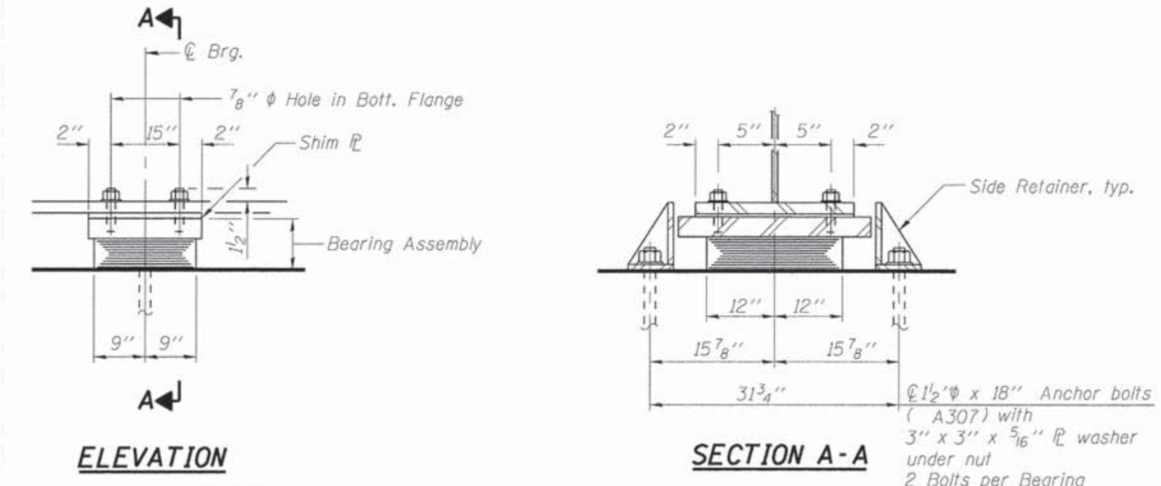
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3719	12-00239-00-BR	LAKE	88	67
		CONTRACT NO. 61A57		
		ILLINOIS FED. AID PROJECT	M-BHM-9003(952)	



ELEVATION

SECTION A-A

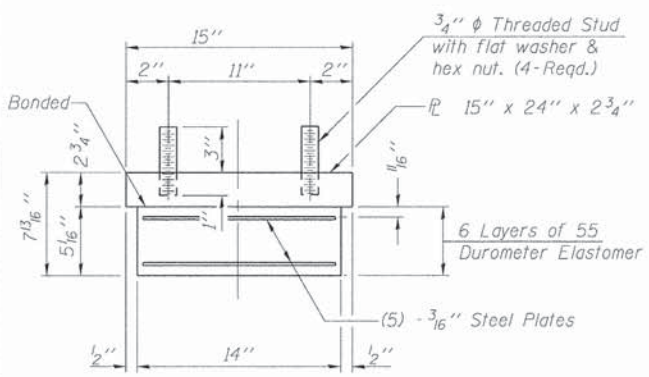
TYPE I ELASTOMERIC EXP. BRG. AT PIER 1



ELEVATION

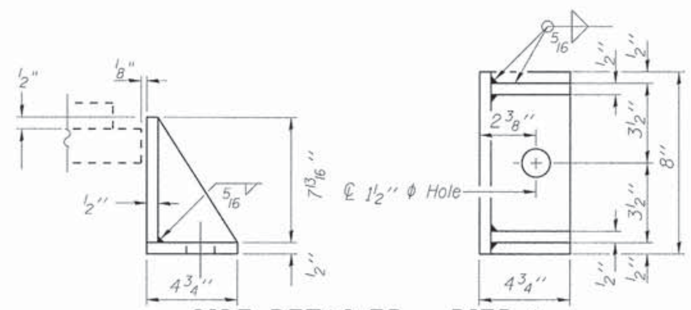
SECTION A-A

TYPE I ELASTOMERIC EXP. BRG. AT PIER 3



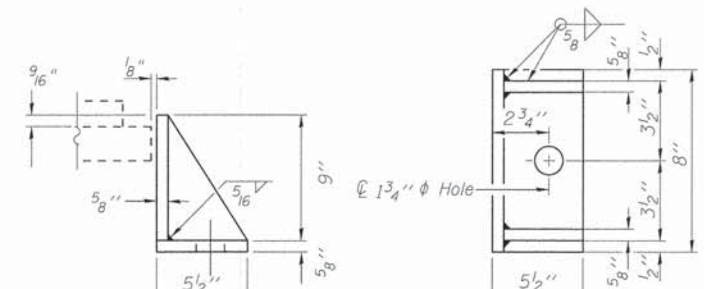
BEARING ASSEMBLY AT PIER 1

Note:
Shim plates shall not be placed under Bearing Assembly.



SIDE RETAINER - PIER 1

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

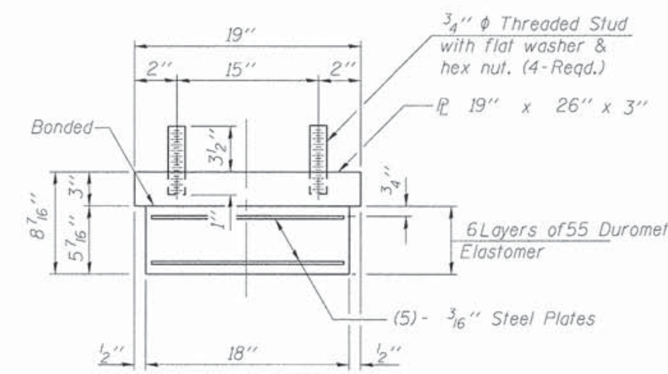


SIDE RETAINER - PIER 3

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

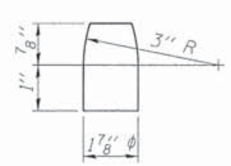
Pier	1	3
Beam No.	2	6
Shim Height (in.)	1/8	1/4

SHIM TABLE

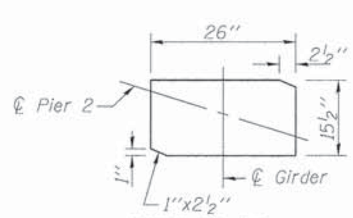


BEARING ASSEMBLY AT PIER 3

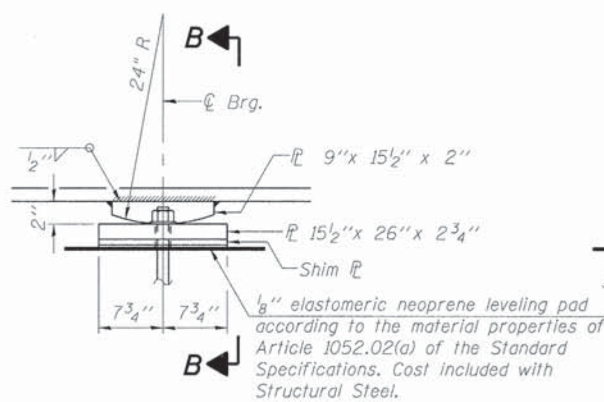
Note:
Shim plates shall not be placed under Bearing Assembly.



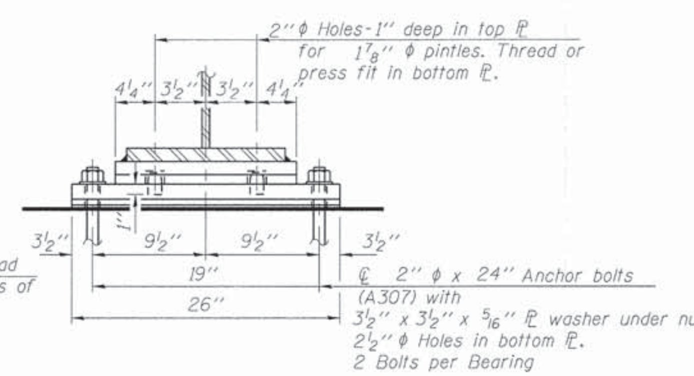
PINTLE



BOTTOM ℙ PLAN



ELEVATION AT PIER



SECTION B-B

FIXED BEARING AT PIER 2

Notes:

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

Anchor bolts at fixed bearings may be either cast in place or installed in holes drilled after the supported member is in place.

Anchor bolts for side retainers may be cast in place or installed in holes drilled before or after members are in place.

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

Side retainers and other steel members required for the elastomeric bearing assembly shall be included in the cost of Elastomeric Bearing Assembly, Type I.

The structural steel plates of the Bearing Assembly shall conform to the requirements of AASHTO M 270 Grade 50W.

Two 1/8 in. adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown on bearing details.

Cost of fixed bearings shall be included with Furnish & Erect Structural Steel.

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly Type I	Each	24
Anchor Bolts, 1¼"	Each	24
Anchor Bolts, 1½"	Each	24
Anchor Bolts, 2"	Each	24

BAXTER & WOODMAN Consulting Engineers	USER NAME = 231ukb	DESIGNED - ABW	REVISED 7/11/2014 BLB
		CHECKED - DCD	REVISED -
	PLOT SCALE =	DRAWN - ABW	REVISED -
	PLOT DATE = 1/28/2015	CHECKED - DCD	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

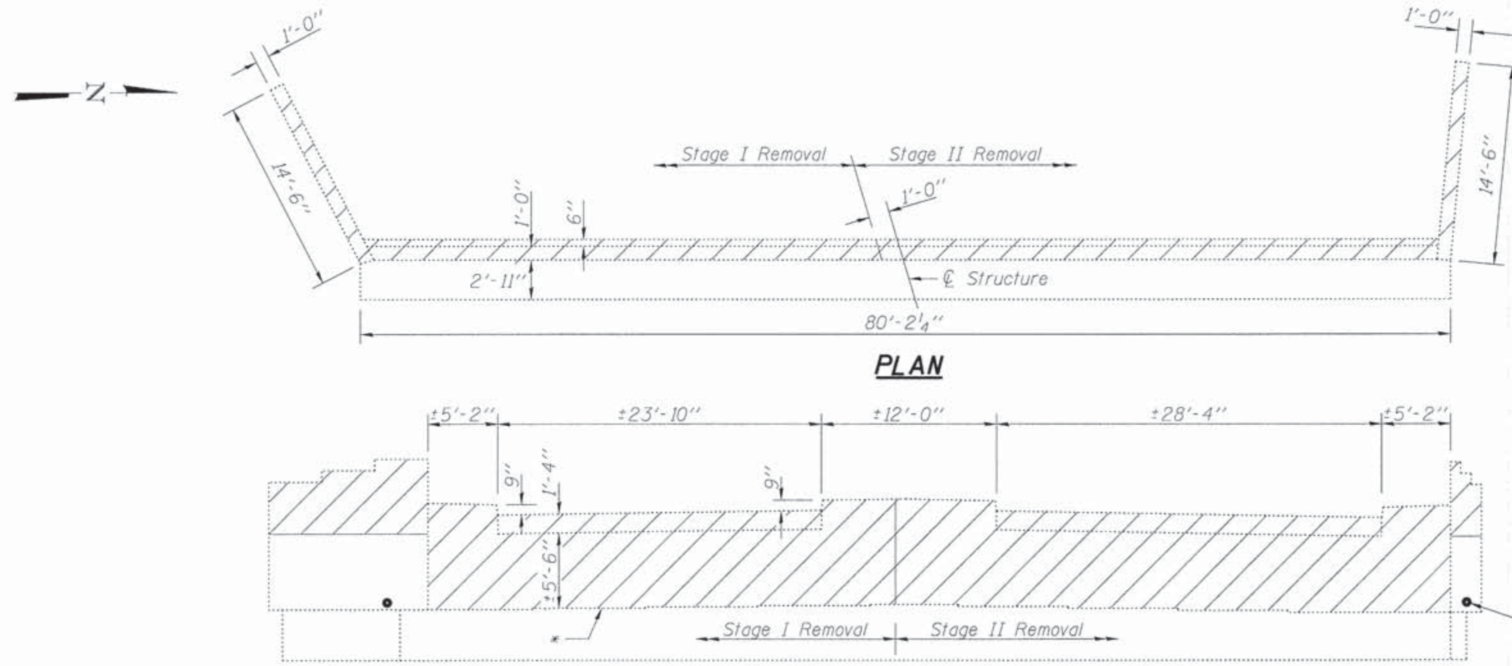
BEARING DETAILS AT PIERS
STRUCTURE NO. 049-2050

SHEET NO. 39 OF 50 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3719	12-00239-00-BR	LAKE	88	68

CONTRACT NO. 61A57

ILLINOIS FED. AID PROJECT M-BHM-9003(952)



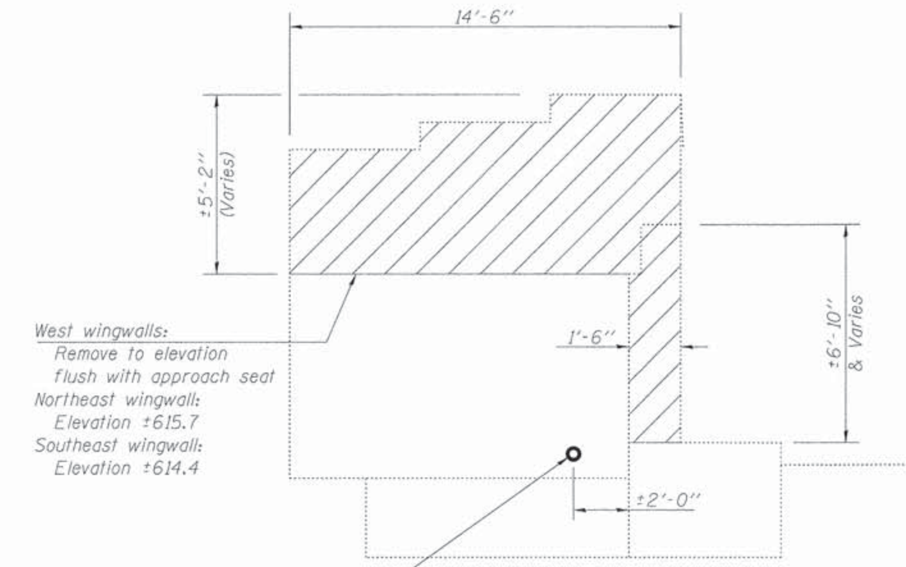
PLAN

ELEVATION

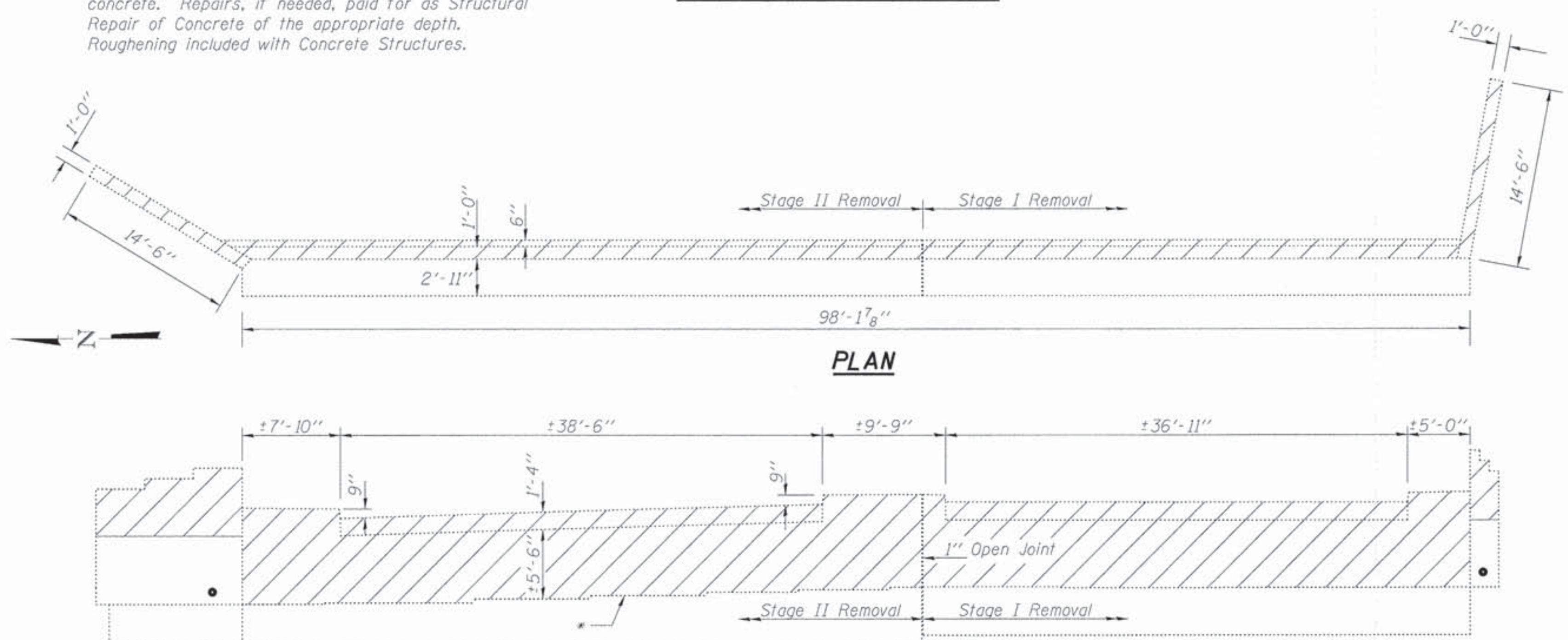
WEST ABUTMENT REMOVAL

* Roughen existing seat, and repair unsound concrete as determined by the Engineer prior to placing new concrete. Repairs, if needed, paid for as Structural Repair of Concrete of the appropriate depth. Roughening included with Concrete Structures.

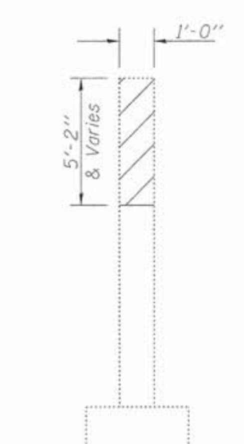
Core 5" dia. holes in existing wingwalls at outlet location for 4" Pipe Underdrains (typ. 4 corners). Locations to be determined during concrete removal operations. Cost of excavation, drilling and backfilling included with Pipe Underdrains for Structures. See Sheet 2 of 50 for additional information.



ABUTMENT CROSS SECTION AND WINGWALL REMOVAL



PLAN



TYPICAL WINGWALL REMOVAL CROSS SECTION

ELEVATION

EAST ABUTMENT REMOVAL

Note that the stage removal and stage construction lines at the east abutment vary from elsewhere in the structure.

The contractor may remove additional portions of the existing back wall to facilitate construction of the Stage I superstructure. These revised removal limits must be approved by the Engineer prior to beginning removal operations and shall be accounted for in the installation of Temporary Sheet Piling.

NOTES

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

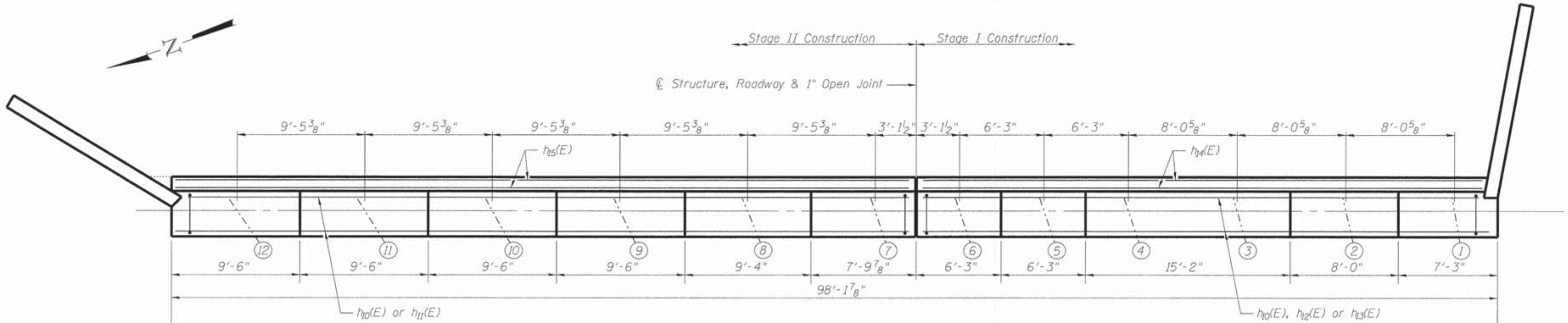
Hatched areas indicate Concrete Removal.

See Sheets 41 and 42 of 50 for Concrete Removal quantities for Abutments.

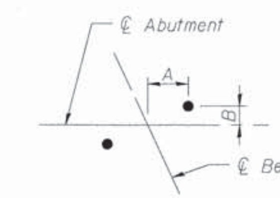
See Pier Details for additional Concrete Removal areas.

BAXTER & WOODMAN Consulting Engineers	USER NAME = 231ukb	DESIGNED - AS	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	REMOVAL DETAILS STRUCTURE NO. 049-2050	F.A.U. RTE. 3719; SECTION 12-00239-00-BR; COUNTY LAKE; TOTAL SHEETS 88; SHEET NO. 69
		CHECKED - BLB	REVISED -			CONTRACT NO. 61A57
	PLOT SCALE =	DRAWN - AS	REVISED -			
	PLOT DATE = 1/28/2015	CHECKED - BLB	REVISED -		SHEET NO. 40 OF 50 SHEETS	ILLINOIS FED. AID PROJECT M-BHM-9003(952)

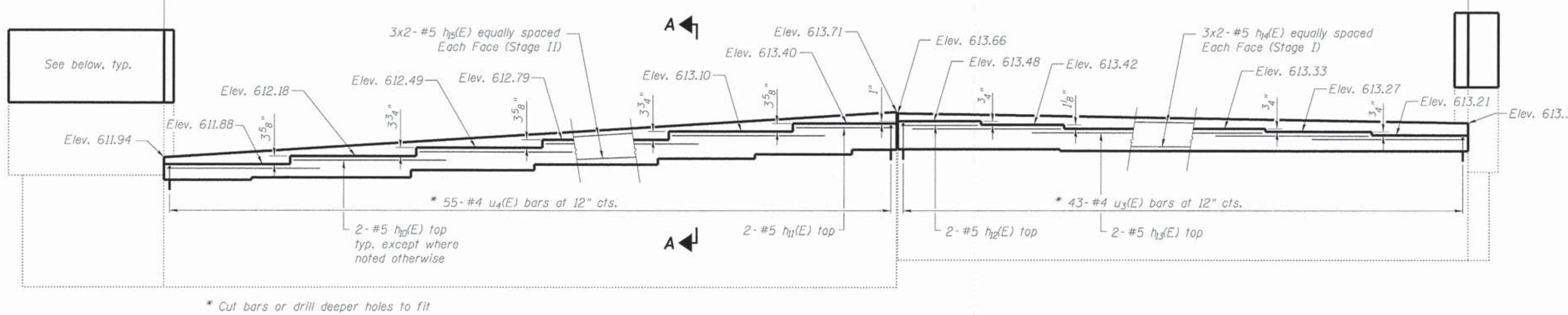
Beam	A	B
1	11¼″	½″
2	11⅛″	1¼″
3	11⅛″	1⅞″
4-7	10⅝″	3⅝″
8	10⅜″	4¼″
9	10⅛″	4⅞″
10	9⅞″	5½″
11	9½″	6″
12	9¼″	6⅜″



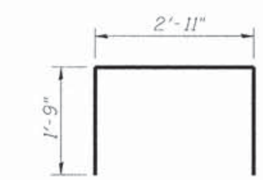
EAST ABUTMENT PLAN



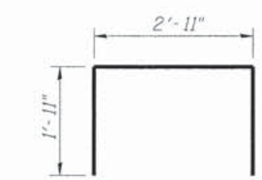
ANCHOR BOLT LAYOUT



* Cut bars or drill deeper holes to fit



BAR u_3(E)



BAR u_4(E)

EAST ABUTMENT ELEVATION

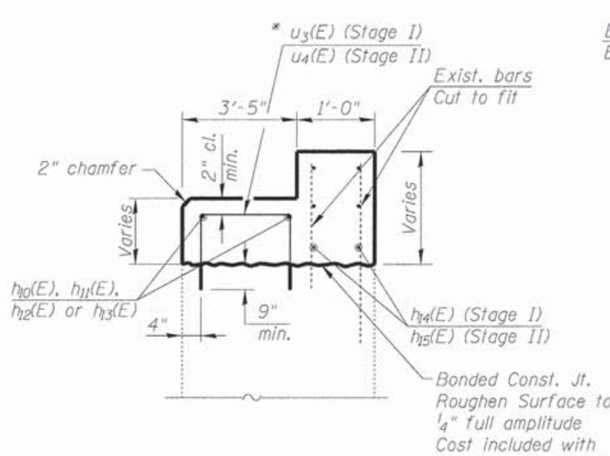
Note that the stage removal and stage construction lines at the east abutment vary from elsewhere in the structure.

MINIMUM BAR LAP

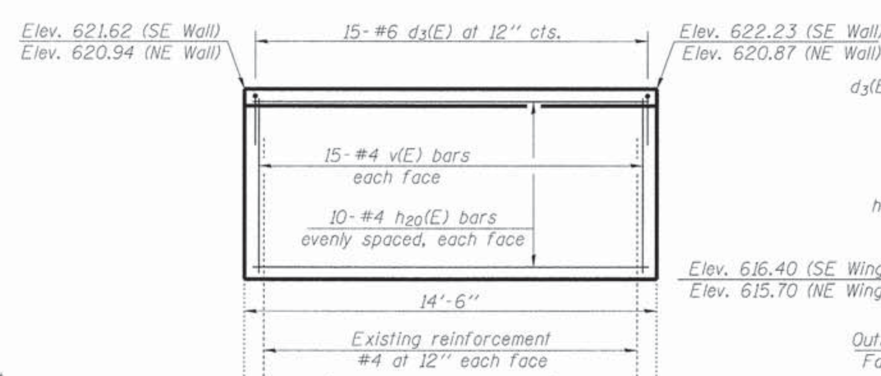
#5 bar = 3'-8"

EAST ABUTMENT BILL OF MATERIAL

Bar	No.	Size	Length	Shape
d_3(E)	30	#6	2'-3"	⊓
h_{10}(E)	16	#5	11'-6"	———
h_{11}(E)	2	#5	7'-5"	———
h_{12}(E)	2	#5	5'-11"	———
h_{13}(E)	2	#5	17'-2"	———
h_{14}(E)	12	#5	23'-2"	———
h_{15}(E)	12	#5	29'-3"	———
h_{20}(E)	40	#4	14'-2"	———
u_3(E)	55	#4	6'-5"	⊓
u_4(E)	43	#4	6'-9"	⊓
v(E)	60	#4	4'-11"	———
Structure Excavation			Cu. Yd.	75
Concrete Removal			Cu. Yd.	42.1
Concrete Structures			Cu. Yd.	26.7
Reinforcement Bars, Epoxy Coated			Pound	2020

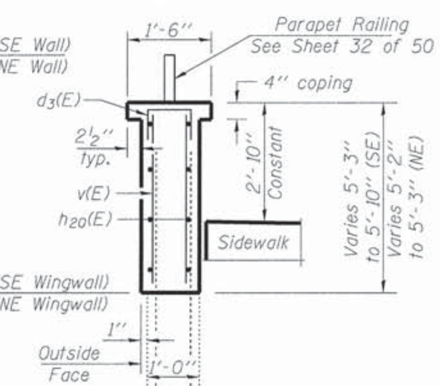


SECTION A-A



WINGWALL ELEVATION (INSIDE FACE)

Form Liner pattern on northeast wingwall shall be blocked out for Type 6 Terminal end shoe attachment.



WINGWALL SECTION

NOTES

All construction joints between new and existing concrete shall be Bonded Construction Joints.

Space reinforcement in cap to miss anchor bolts.

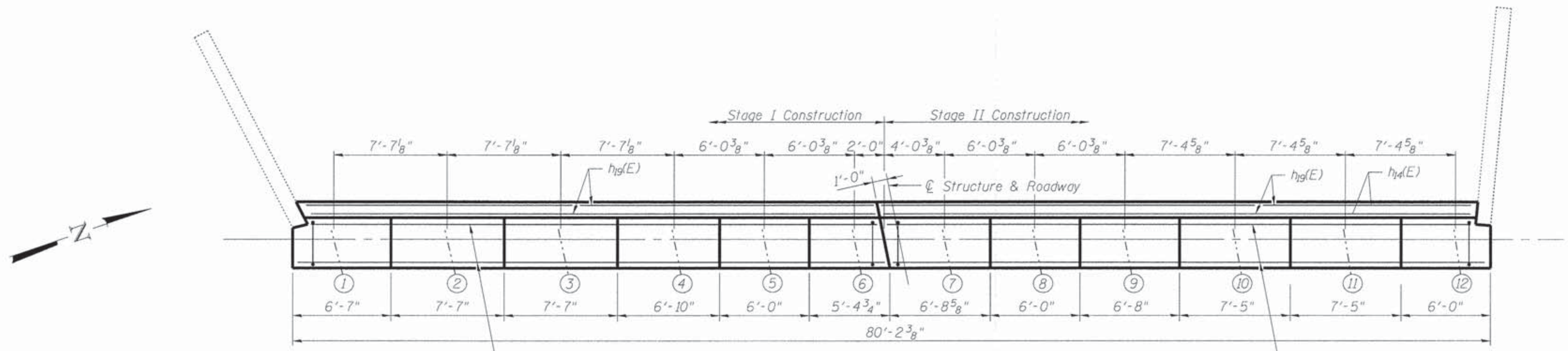
Existing reinforcement shall be cleaned and incorporated into the new construction. Cost included with Concrete Removal.

See Sheets 17 & 32 of 50 for Form Liner Textured Surface.

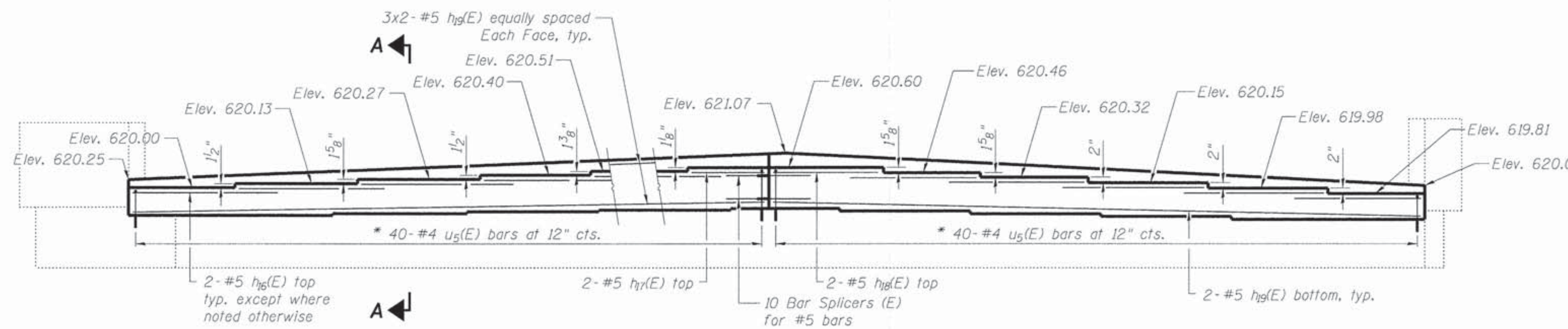
See Sheet 32 of 50 for Parapet Railing details.

BAXTER & WOODMAN Consulting Engineers	USER NAME = 231ukb	DESIGNED - AS	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	EAST ABUTMENT STRUCTURE NO. 049-2050
		CHECKED - BLB	REVISED -		
	PLOT SCALE =	DRAWN - AS	REVISED -		
	PLOT DATE = 1/28/2015	CHECKED - BLB	REVISED -		SHEET NO. 41 OF 50 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3719	12-00239-00-BR	LAKE	88	70
		CONTRACT NO. 61A57		
	ILLINOIS FED. AID PROJECT	M-BHM-9003(952)		



WEST ABUTMENT PLAN

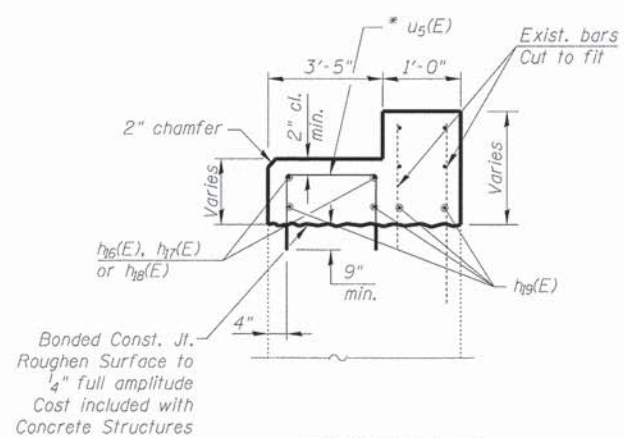


WEST ABUTMENT ELEVATION

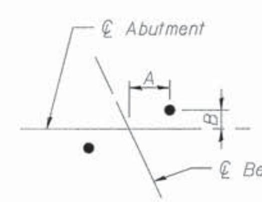
* Cut bars or drill deeper holes to fit

MINIMUM BAR LAP

#5 bar = 3'-8"

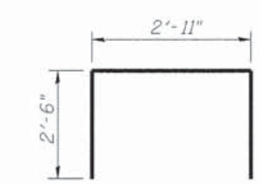


SECTION A-A



ANCHOR BOLT LAYOUT

Beam	A	B
1	10 1/2"	4 1/8"
2	10 5/8"	3 3/4"
3	10 3/4"	3 3/8"
4-9	11"	2 1/4"
10	11 1/4"	7/8"
11	11 1/4"	1/2"
12	11 1/4"	0"



BAR $u_5(E)$

NOTES

All construction joints between new and existing concrete shall be Bonded Construction Joints.

Space reinforcement in cap to miss anchor bolts.

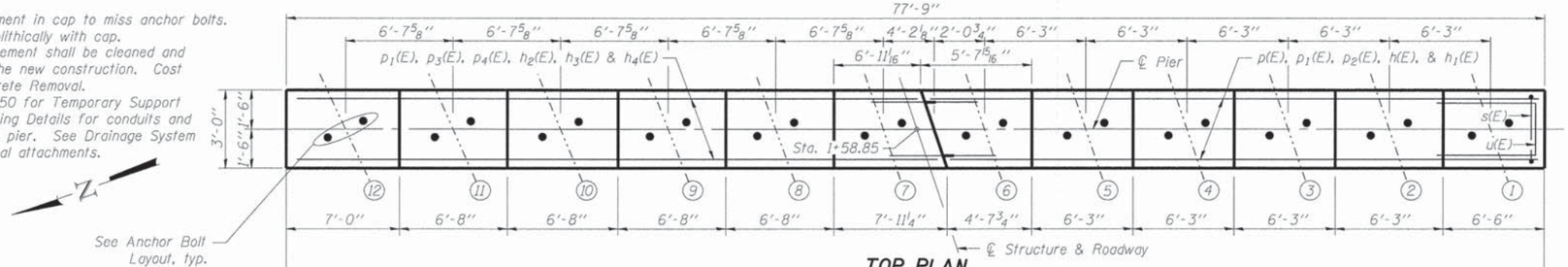
Existing reinforcement shall be cleaned and incorporated into the new construction. Cost included with Concrete Removal.

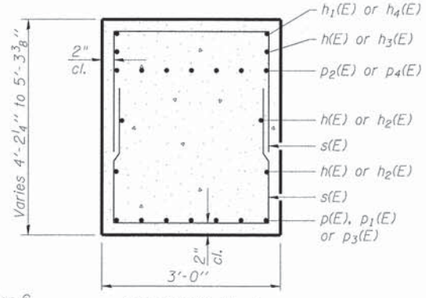
See Lighting Details for conduit attached to structure and embedded in parapet.

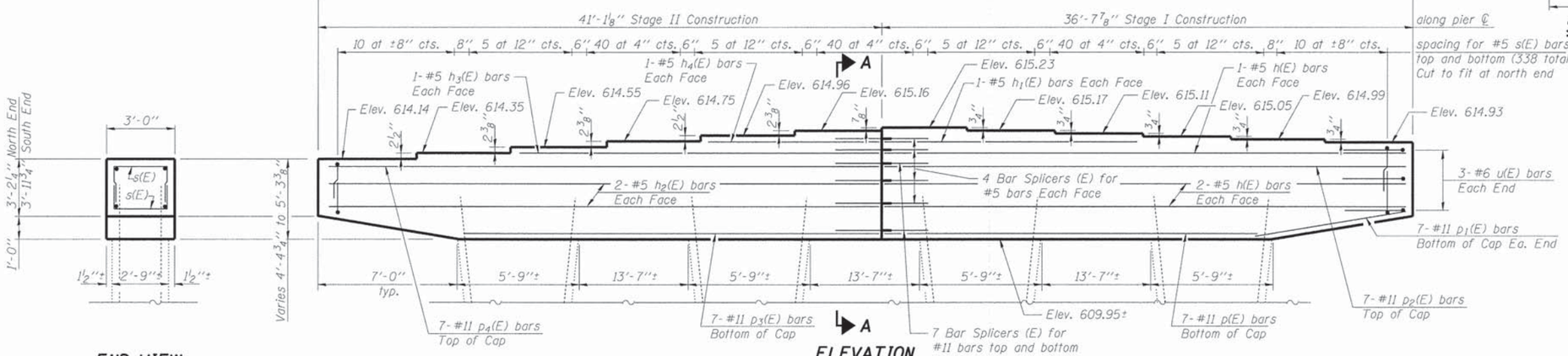
WEST ABUTMENT BILL OF MATERIAL

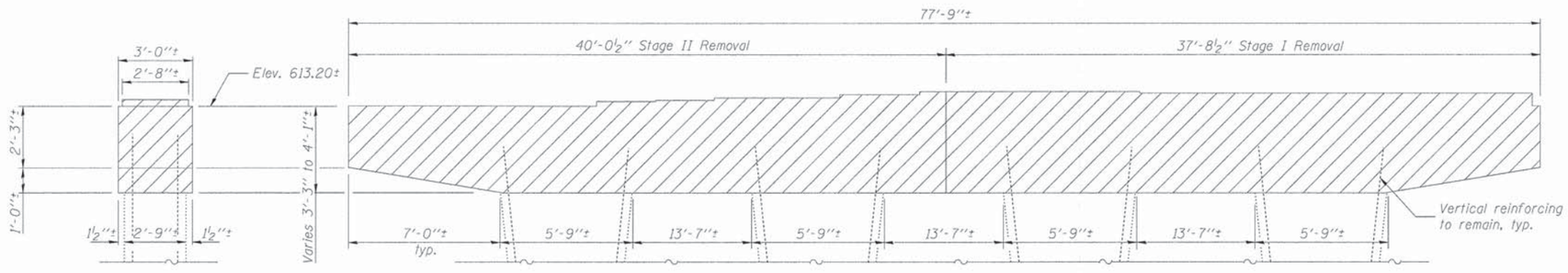
Bar	No.	Size	Length	Shape
$h_{16}(E)$	20	#5	9'-7"	——
$h_{17}(E)$	2	#5	4'-8"	——
$h_{18}(E)$	2	#5	6'-9"	——
$h_{19}(E)$	32	#5	22'-0"	——
$u_5(E)$	80	#4	7'-11"	⊓
Structure Excavation			Cu. Yd.	57
Concrete Removal			Cu. Yd.	35.2
Concrete Structures			Cu. Yd.	24.1
Bar Splicers			Each	10
Reinforcement Bars, Epoxy Coated			Pound	1,390

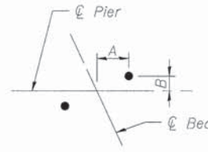
BAXTER & WOODMAN Consulting Engineers	USER NAME = 231ukb	DESIGNED - AS	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	WEST ABUTMENT STRUCTURE NO. 049-2050	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		CHECKED - BLB	REVISED -			3719	12-00239-00-BR	LAKE	88	71
	PLOT SCALE =	DRAWN - AS	REVISED -			CONTRACT NO. 61A57				
	PLOT DATE = 1/28/2015	CHECKED - BLB	REVISED -		SHEET NO. 42 OF 50 SHEETS	ILLINOIS FED. AID PROJECT M-BHM-9003(952)				

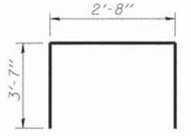


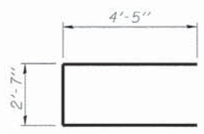












Notes:

Space reinforcement in cap to miss anchor bolts.

Pour steps monolithically with cap.

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

See Sheet 3 of 50 for Temporary Support System. See Lighting Details for conduits and lighting attached to pier. See Drainage System Details for additional attachments.

TOP PLAN

SECTION A-A

END VIEW

ELEVATION

(Looking East)

LEGEND

▨ - Concrete Removal

END VIEW - REMOVAL

ELEVATION - REMOVAL

(Looking East)

ANCHOR BOLT LAYOUT

Beam	A	B
1-7	1'-1¾"	4⅝"
8	1'-1⅝"	5"
9	1'-1½"	5¼"
10	1'-1⅜"	5⅝"
11	1'-1¼"	5⅞"
12	1'-1⅛"	6⅛"

BAR s(E)

BAR u(E)

PIER 1
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	6	#5	35'-9"	—
h1(E)	2	#5	16'-9"	—
h2(E)	4	#5	40'-5"	—
h3(E)	2	#5	26'-9"	—
h4(E)	2	#5	13'-3"	—
p(E)	7	#11	28'-9"	—
p1(E)	14	#11	7'-0"	—
p2(E)	7	#11	35'-9"	—
p3(E)	7	#11	33'-5"	—
p4(E)	7	#11	40'-5"	—
s(E)	338	#5	9'-10"	⊓
u(E)	6	#6	11'-5"	⊏
Concrete Removal			Cu. Yd.	31.9
Concrete Structures			Cu. Yd.	38.6
Bar Splicers			Each	22
Reinforcement Bars, Epoxy Coated			Pound	8,670

...\plotdrv\pdf-BW_Default.plt
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BAXTER & WOODMAN
Consulting Engineers

USER NAME = 23lukb	DESIGNED - AS	REVISED -
	CHECKED - DCD	REVISED -
PLOT SCALE =	DRAWN - AS	REVISED -
PLOT DATE = 1/28/2015	CHECKED - DCD	REVISED -

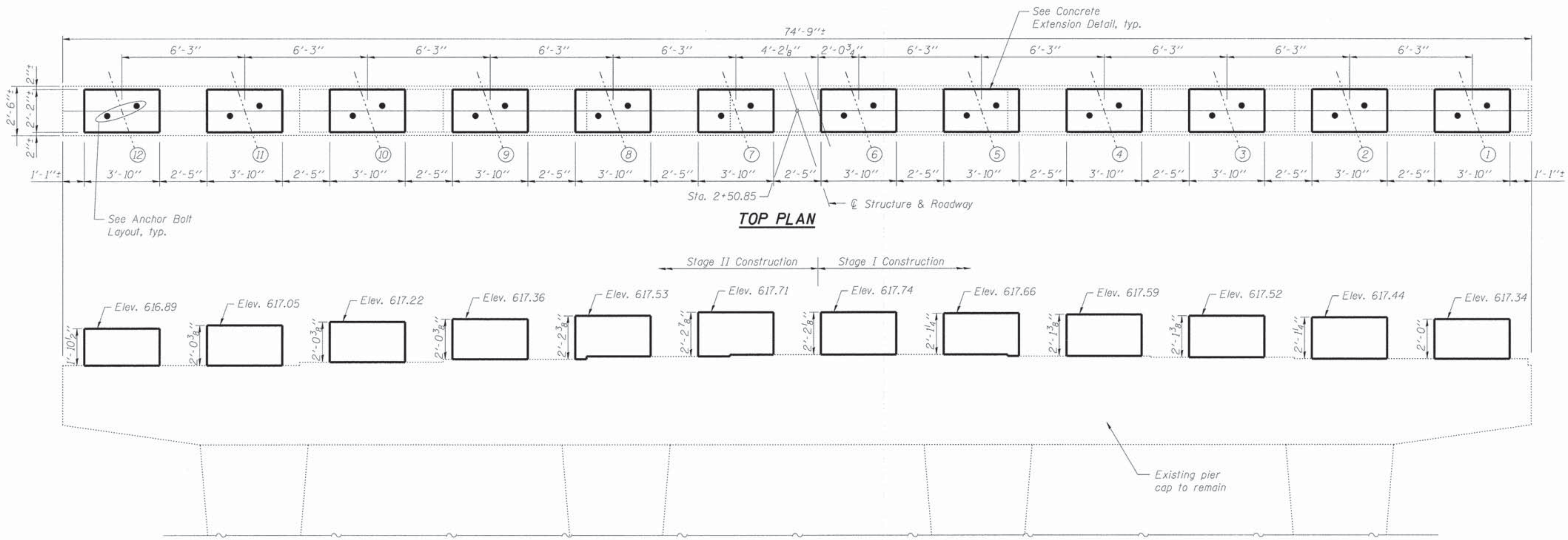
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIER 1
STRUCTURE NO. 049-2050
SHEET NO. 43 OF 50 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3719	12-00239-00-BR	LAKE	88	72

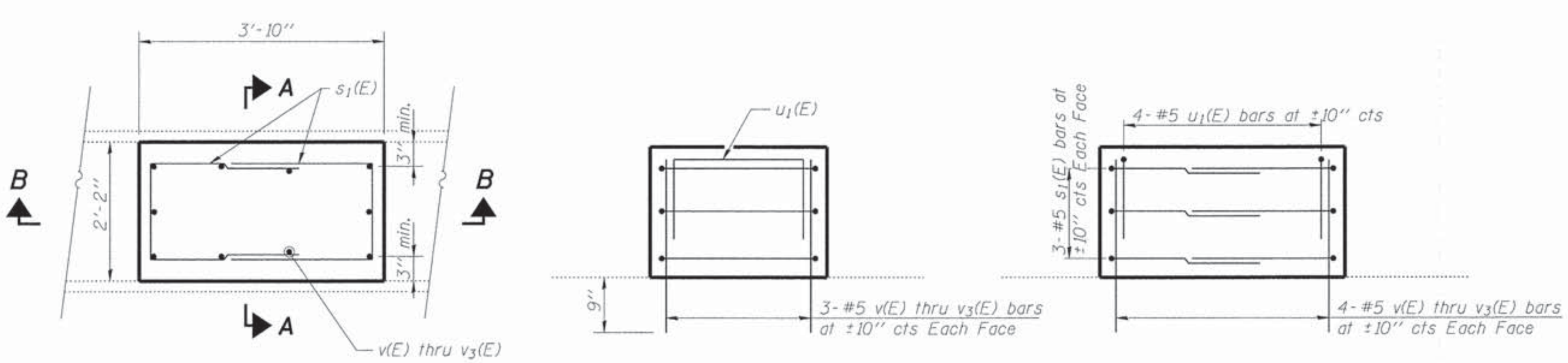
CONTRACT NO. 61A57

ILLINOIS FED. AID PROJECT M-BHM-9003(952)



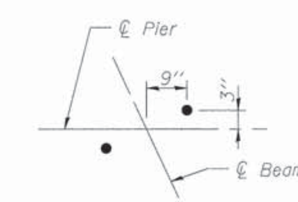
See Lighting Details for conduits and lighting attached to pier.

ELEVATION
(Looking East)

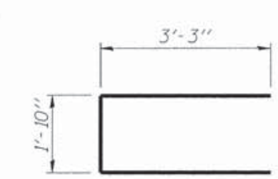


CONCRETE EXTENSION DETAIL

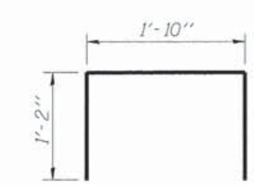
Beam	Vertical Bar
1, 8-11	$v(E)$
2-5, 7	$v_1(E)$
6	$v_2(E)$
12	$v_3(E)$



ANCHOR BOLT LAYOUT



BAR $s_1(E)$



BAR $u_1(E)$

PIER 2
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
$s_1(E)$	72	#5	8'-4"	
$u_1(E)$	48	#5	4'-2"	
$v(E)$	50	#5	2'-7"	
$v_1(E)$	50	#5	2'-8"	
$v_2(E)$	10	#5	2'-9"	
$v_3(E)$	10	#5	2'-5"	
Concrete Structures			Cu. Yd.	7.0
Reinforcement Bars, Epoxy Coated			Pound	1,170

Epoxy grout #5 $v(E)$ thru $v_3(E)$ bars into ¾" ϕ x 9" drilled holes. See Section 584 of the Std. Specifications.

BAXTER & WOODMAN Consulting Engineers

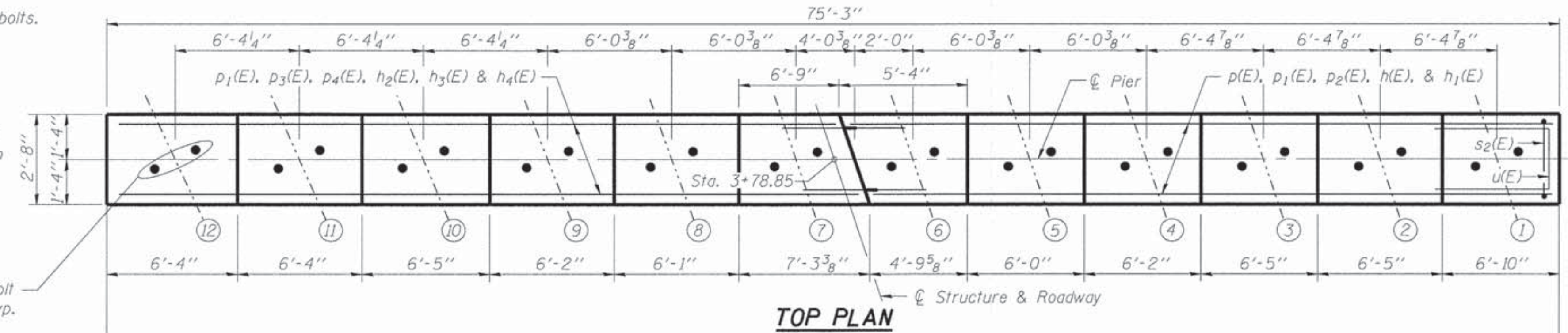
USER NAME = 23lukb	DESIGNED - AS	REVISED -	
	CHECKED - DCD	REVISED -	
PLOT SCALE =	DRAWN - AS	REVISED -	
PLOT DATE = 1/28/2015	CHECKED - DCD	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

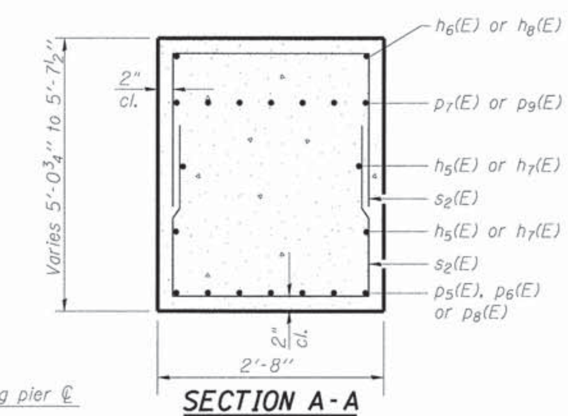
PIER 2
STRUCTURE NO. 049-2050
SHEET NO. 44 OF 50 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3719	12-00239-00-BR	LAKE	88	73
		CONTRACT NO. 61A57		
		ILLINOIS FED. AID PROJECT	M-BHM-9003(952)	

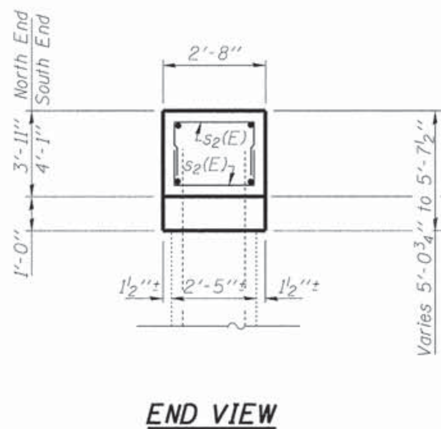
Notes:
Space reinforcement in cap to miss anchor bolts.
Pour steps monolithically with cap.
Existing reinforcement shall be cleaned and incorporated into the new construction. Cost included with Concrete Removal.
See Sheet 3 of 50 for Temporary Support System. See Lighting Details for conduits and lighting attached to pier. See Drainage System Details for additional attachments.



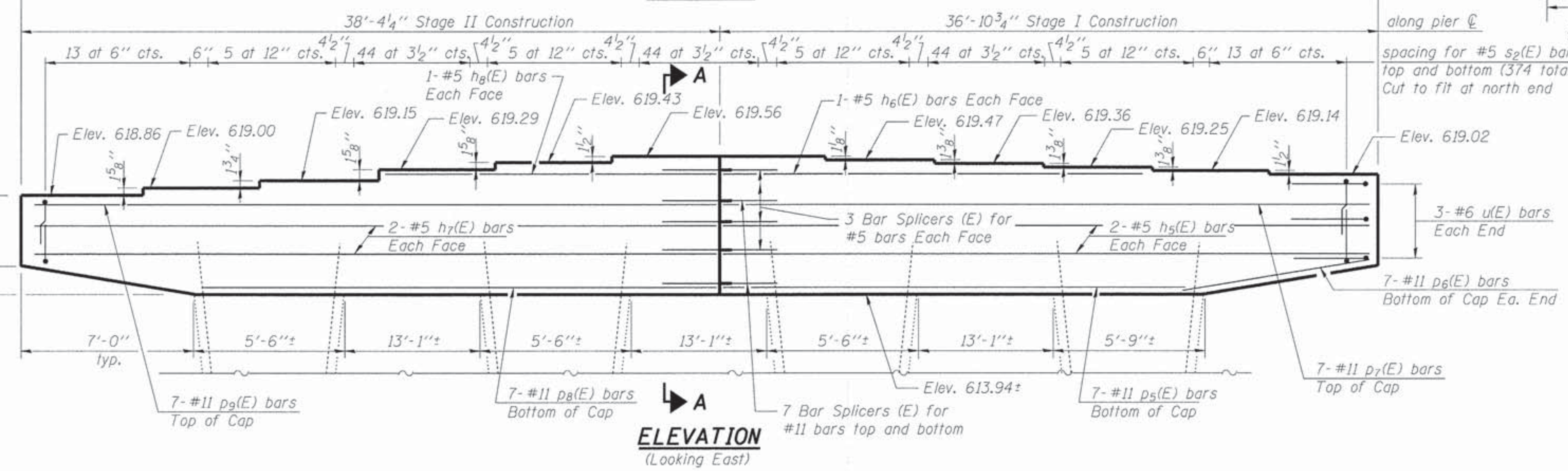
TOP PLAN



SECTION A-A



END VIEW



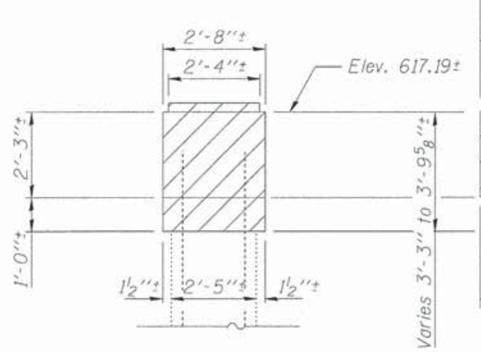
ELEVATION
(Looking East)

LEGEND

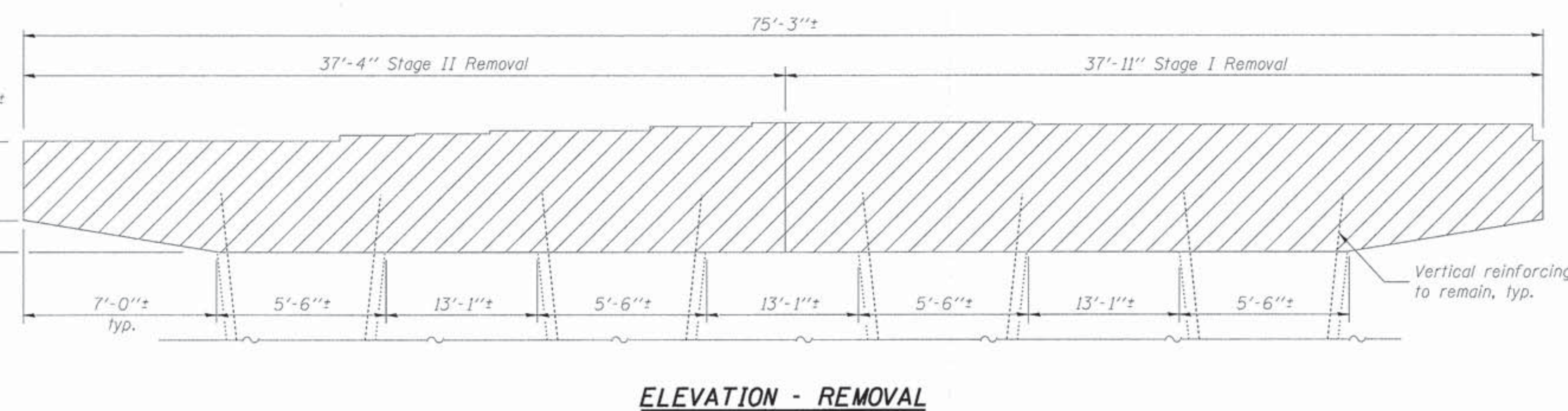
- Concrete Removal

PIER 3 BILL OF MATERIAL

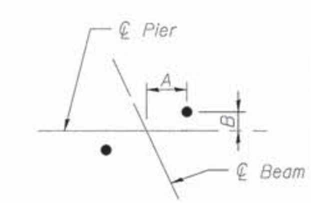
Bar	No.	Size	Length	Shape
$h_5(E)$	4	#5	36'-3"	——
$h_6(E)$	2	#5	23'-0"	——
$h_7(E)$	4	#5	37'-9"	——
$h_8(E)$	2	#5	18'-8"	——
$p_5(E)$	7	#11	29'-3"	——
$p_6(E)$	14	#11	7'-0"	——
$p_7(E)$	7	#11	36'-3"	——
$p_8(E)$	7	#11	30'-9"	——
$p_9(E)$	7	#11	37'-9"	——
$s_2(E)$	374	#5	9'-10"	⊓
$u_2(E)$	6	#6	11'-1"	⊏
Concrete Removal			Cu. Yd.	25.9
Concrete Structures			Cu. Yd.	38.9
Bar Splicers			Each	20
Reinforcement Bars, Epoxy Coated			Pound	9,810



END VIEW - REMOVAL

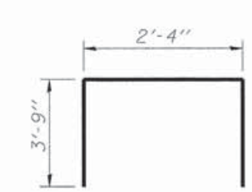


ELEVATION - REMOVAL
(Looking East)

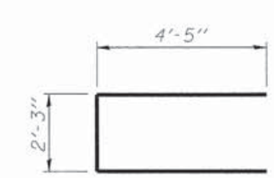


ANCHOR BOLT LAYOUT

Beam	A	B
1	1'-2"	3⅝"
2	1'-2⅛"	3⅜"
3	1'-2⅛"	3⅛"
4-9	1'-2¼"	2⅞"
10	1'-2¼"	2⅝"
11	1'-2¼"	2⅜"
12	1'-2⅜"	2⅛"



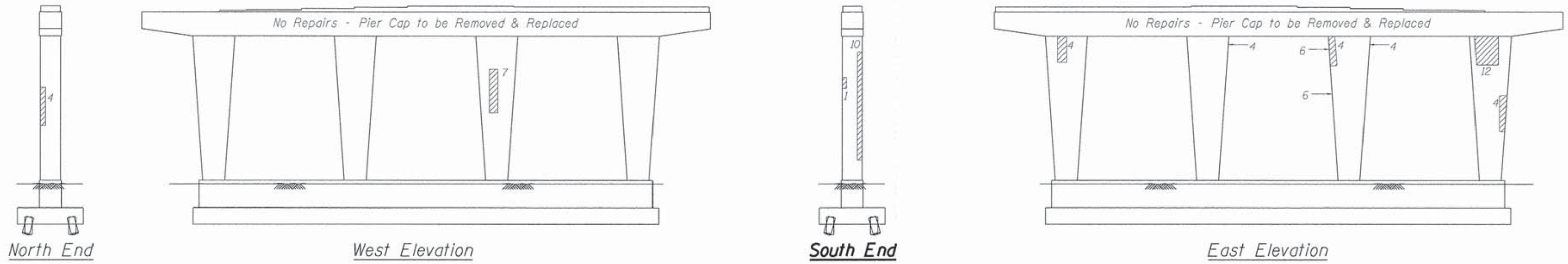
BAR $s_2(E)$



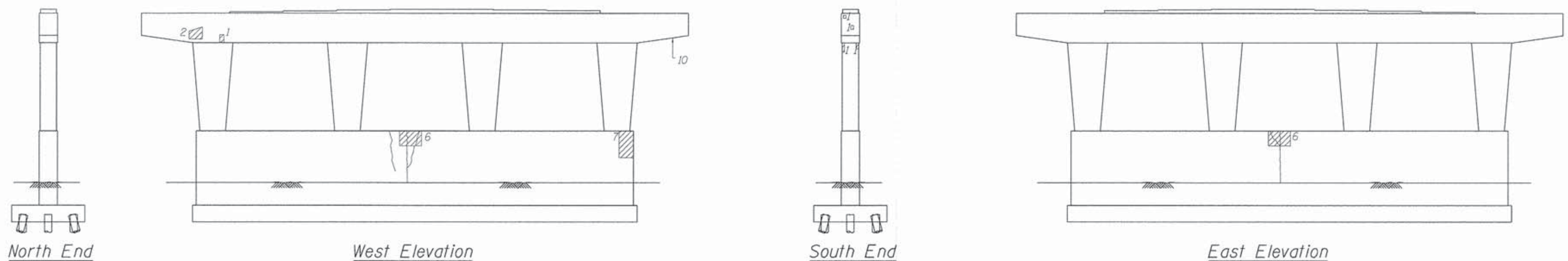
BAR $u_2(E)$

BAXTER & WOODMAN Consulting Engineers	USER NAME = 23lukb	DESIGNED - AS	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	PIER 3 STRUCTURE NO. 049-2050
		CHECKED - DCD	REVISED -		
	PLOT SCALE =	DRAWN - AS	REVISED -		
	PLOT DATE = 1/28/2015	CHECKED - DCD	REVISED -		SHEET NO. 45 OF 50 SHEETS

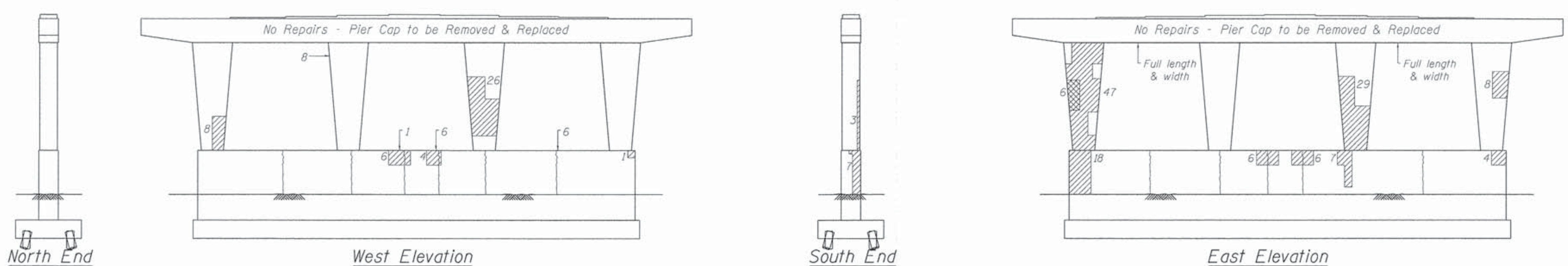
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3719	12-00239-00-BR	LAKE	88	74
		CONTRACT NO. 61A57		
		ILLINOIS FED. AID PROJECT	M-BHM-9003(952)	



PIER 1



PIER 2



PIER 3

Note:
Repair quantities shown are estimated from a condition survey performed in 2012. Quantities have been increased nominally to allow for additional deterioration. Actual repair areas to be determined by the Contractor and confirmed by the Engineer.

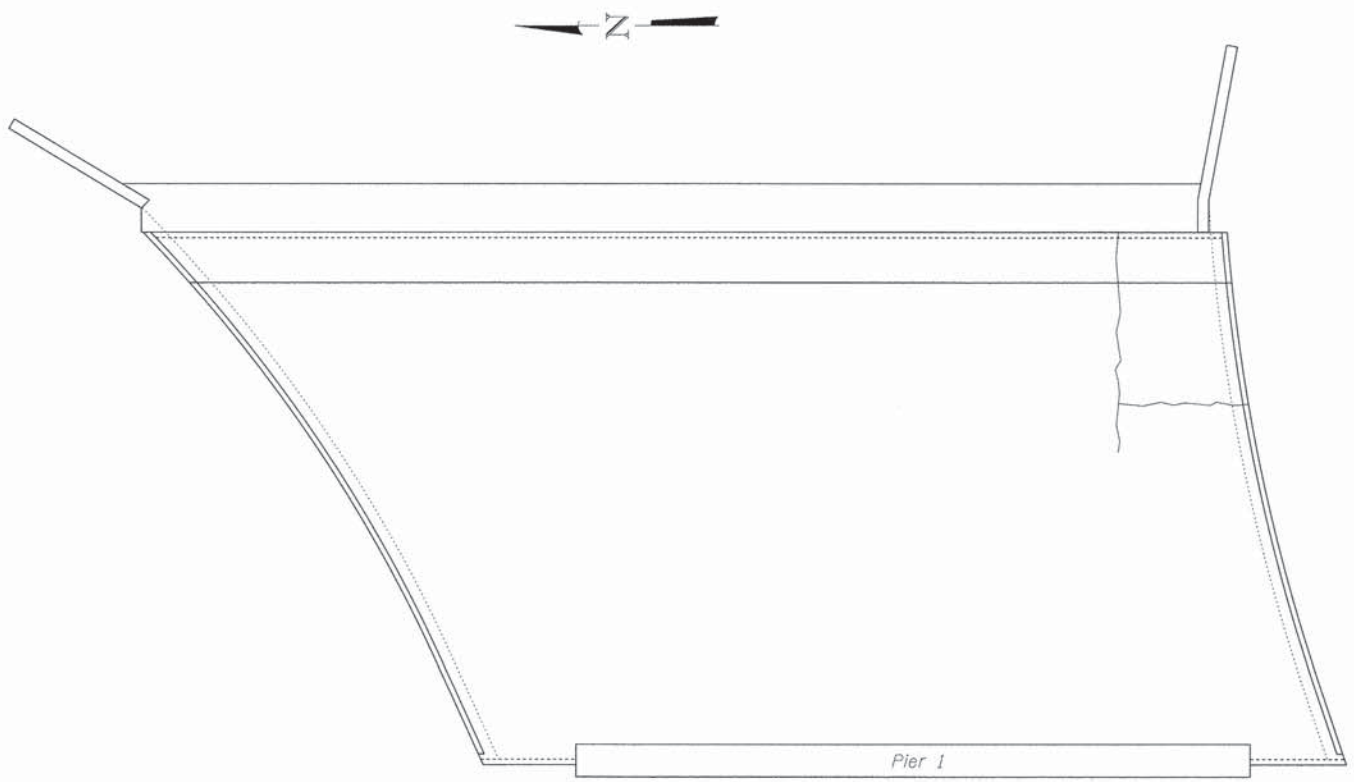
BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Structural Repair of Concrete (Depth Equal To Or Less Than 5 Inches)	Sq Ft	350
Structural Repair of Concrete (Depth Greater Than 5 Inches)	Sq Ft	50
Epoxy Crack Injection	Foot	60

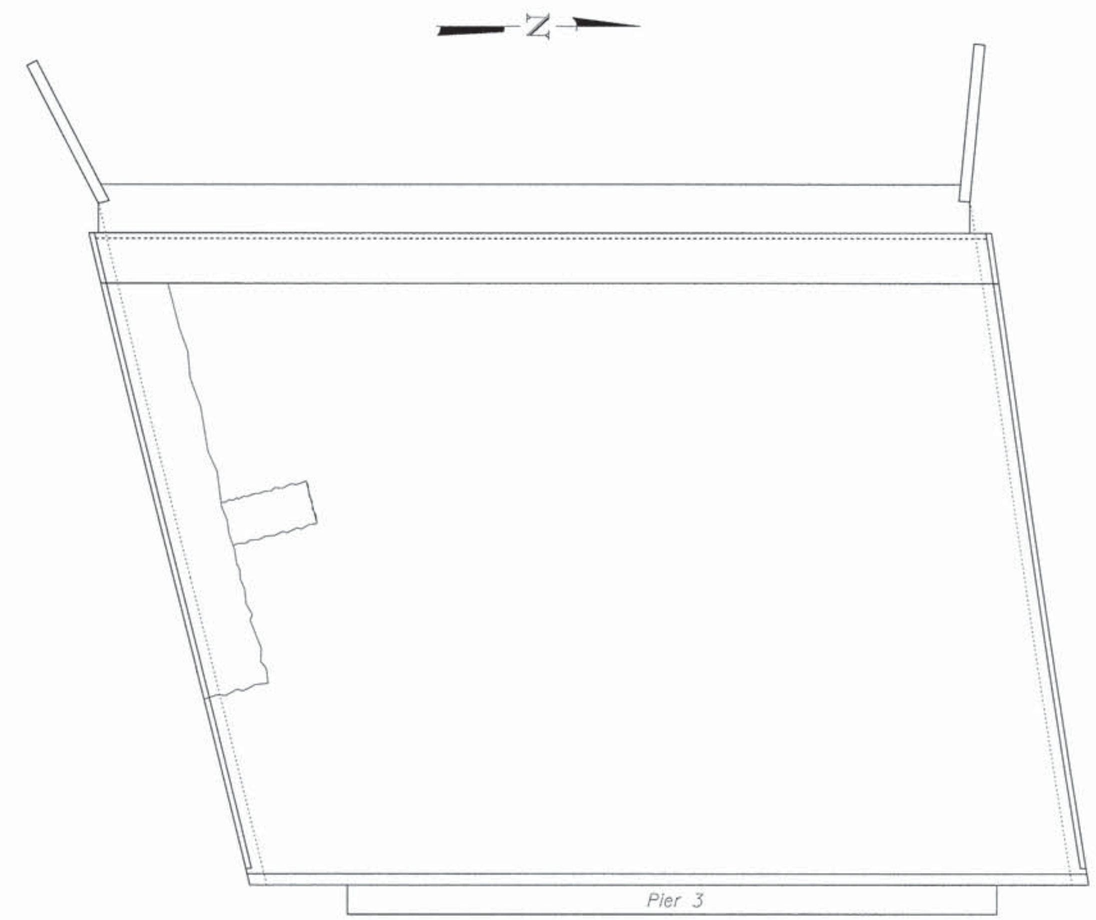
BAXTER & WOODMAN Consulting Engineers	USER NAME = 231ukb	DESIGNED - BLB	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
		CHECKED - DCD	REVISED -	
	PLOT SCALE =	DRAWN - BLB	REVISED -	
	PLOT DATE = 1/28/2015	CHECKED - DCD	REVISED -	

PIER REPAIRS
STRUCTURE NO. 049-2050
SHEET NO. 46 OF 50 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3719	12-00239-00-BR	LAKE	88	75
		CONTRACT NO. 61A57		
		ILLINOIS FED. AID PROJECT	M-BHM-9003(952)	



East Slopewall



West Slopewall

BILL OF MATERIAL

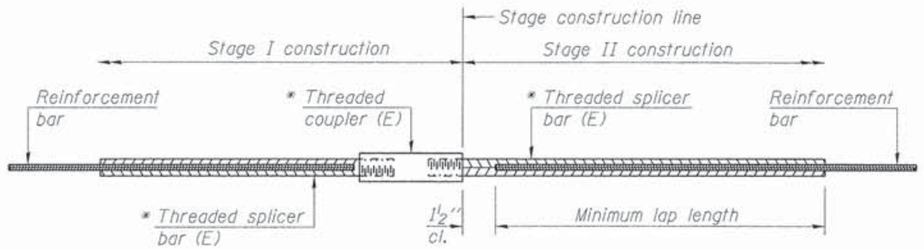
ITEM	UNIT	QUANTITY
Epoxy Crack Injection	Foot	20
Slope Wall Repair	Sq Yd	100

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

Note:
Repair quantities shown are estimated from a condition survey performed in 2012. Quantities have been increased nominally to allow for additional deterioration. Actual repair areas to be determined by the Contractor and confirmed by the Engineer.

BAXTER & WOODMAN Consulting Engineers	USER NAME = 23lukb	DESIGNED - BLB	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	ABUTMENT AND SLOPE WALL REPAIRS STRUCTURE NO. 049-2050
		CHECKED - DCD	REVISED -		
	PLOT SCALE =	DRAWN - BLB	REVISED -		
	PLOT DATE = 1/28/2015	CHECKED - DCD	REVISED -		SHEET NO. 47 OF 50 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3719	12-00239-00-BR	LAKE	88	76
		CONTRACT NO. 61A57		
	ILLINOIS FED. AID PROJECT M-BHM-9003(952)			



STANDARD BAR SPLICER ASSEMBLY

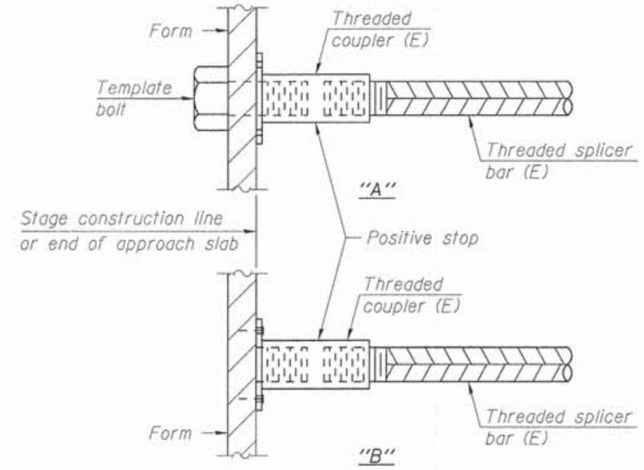
Minimum Lap Lengths						
Bar size to be spliced	Table 1	Table 2	Table 3	Table 4	Table 5	Table 6
3, 4	1'-5"	1'-11"	2'-1"	2'-4"	2'-7"	2'-11"
5	1'-9"	2'-5"	2'-7"	2'-11"	3'-3"	3'-8"
6	2'-1"	2'-11"	3'-1"	3'-6"	3'-10"	4'-5"
7	2'-9"	3'-10"	4'-2"	4'-8"	5'-2"	5'-10"
8	3'-8"	5'-1"	5'-5"	6'-2"	6'-9"	7'-8"
9	4'-7"	6'-5"	6'-10"	7'-9"	8'-7"	9'-8"
11					13'-4"	15'-1"

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

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

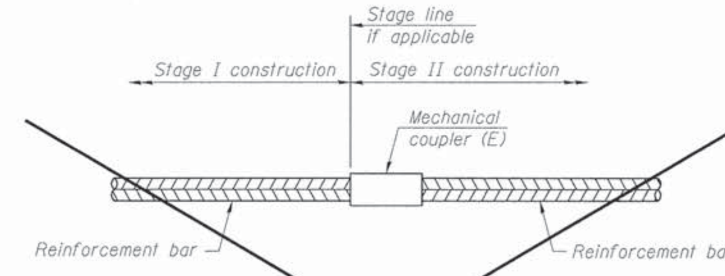
* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Table for minimum lap length
Deck	#5	1116	5
Diaphragms	#5	4	6
Diaphragms	#6	24	6
Pier Caps	#5	14	5
Pier Caps (Top)	#11	14	6
Pier Caps (Bottom)	#11	14	5
W. Abutment	#5	10	5
Conc. Wearing Surf.	#4	52	5
Approach Footing	#4	80	5



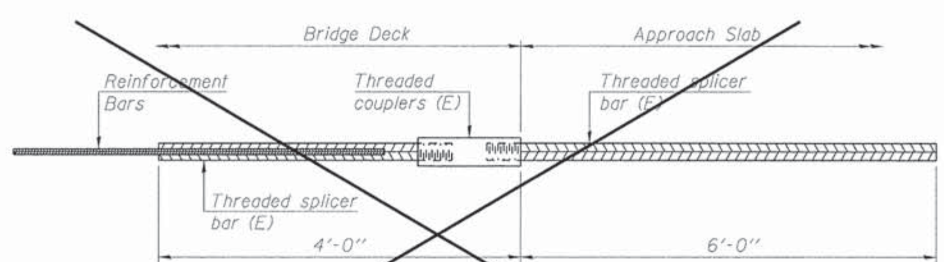
INSTALLATION AND SETTING METHODS

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



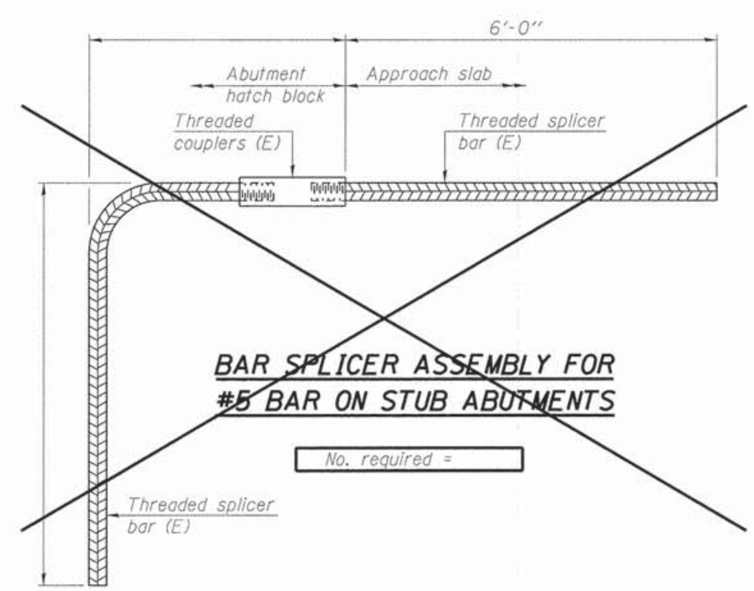
STANDARD MECHANICAL SPLICER

Location	Bar size	No. assemblies required



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

No. required =



BAR SPLICER ASSEMBLY FOR #5 BAR ON STUB ABUTMENTS

No. required =

NOTES

Splicer bars shall be deformed with threaded ends and have a minimum 60 ksi yield strength.
All reinforcement shall be lapped and tied to the splicer bars.
Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars. See Section 508 of the Standard Specifications.
See approved list of bar splicer assemblies and mechanical splicers for alternatives.

BSD-1 1-27-12

SOIL AND MATERIAL CONSULTANTS, INC.

BORING LOG 102

File No. 21332

Client: Baxter & Woodman, Inc. — Sheet 1 of 2

Project: Grand Ave./Mathon Dr. over the UPRR — Date 2/6/14

Section 12-00239-00-BR

Location: Waukegan, IL — Drilled By AC/DB

Equipment: [x] CME 45B [ ] H.A. [ ] Other — Logged By DA

Comments: Mathon Drive
Sta. 0+75, 12' Lt. of CL

Elev., ft. 618.0' Description	Depth, ft.	S	T	R	B	N	Pen.	W	Uw	Qu
(see core log)	0									
Brown sand & gravel		1			42			4.4		
Brown fine sand, trace silt & clay damp, dense-Fill (frozen to 2.5')		2	SS	18"	20 15	37		3.7		
Brown fine sand, damp, medium dense Fill	5	3	SS	18"	5 6 8	14		4.1		
		4	SS	18"	5 6 8	14		4.5		
	10	5	SS	18"	5 6 7	13		4.1		
		6	SS	18"	6 7 9	16		4.0		
	15	7	SS	18"	8 9 11	20		3.7		
Dark brown-black fine sand, damp		8	J					5.6		
Brown fine sand, damp, medium dense	20	9	SS	18"	11 13 14	27		5.1		

Water Level —	depth, ft.	elev., ft.
- while drilling:	dry	
- after drilling:	dry	
- hrs. after drilling:		

S - sample T - type: J(Jar), SS(split-spoon), ST(shelby tube) R - recovery length, in.
B - Standard Penetration Test (SPT), blows/ 6" interval. W - water content, %.
N - SPT, blows/ foot to drive 2" O.D. split-spoon sampler with 140 lb. hammer falling 30".
Pen. - pocket penetrometer reading, tons/ sq. ft. Uw - dry unit weight of soil, lbs./ cu.ft.
Qu - unconfined compressive strength, tons./ sq. ft.

F-111b

SOIL AND MATERIAL CONSULTANTS, INC.

BORING LOG 102

File No. 21332

Client: Baxter & Woodman, Inc. — Sheet 2 of 2

Project: Grand Ave./Mathon Dr. over the UPRR — Date 2/6/14

Section 12-00239-00-BR

Location: Waukegan, IL — Drilled By AC/DB

Equipment: [x] CME 45B [ ] H.A. [ ] Other — Logged By

Comments:

Elev., ft. Description	Depth, ft.	S	T	R	B	N	Pen.	W	Uw	Qu
Brown fine sand, damp, medium dense	20									
	25	10	SS	18"	6 7 7	14		7.0		
	30	11	SS	18"	6 7 6	13		5.4		
End of Boring										
	35									
	40									

Water Level —	depth, ft.	elev., ft.
- while drilling:	dry	
- after drilling:	dry	
- hrs. after drilling:		

S - sample T - type: J(Jar), SS(split-spoon), ST(shelby tube) R - recovery length, in.
B - Standard Penetration Test (SPT), blows/ 6" interval. W - water content, %
N - SPT, blows/ foot to drive 2" O.D. split-spoon sampler with 140 lb. hammer falling 30".
Pen. - pocket penetrometer reading, tons/ sq. ft. Uw - dry unit weight of soil, lbs./ cu.ft.
Qu - unconfined compressive strength, tons./ sq. ft.

F-111b

SOIL AND MATERIAL CONSULTANTS, INC.

BORING LOG 101

File No. 21332

Client: Baxter & Woodman, Inc. — Sheet 1 of 2

Project: Grand Ave./Mathon Dr. over the UPRR — Date 2/6/14

Location: Section 12-00239-00-BR Waukegan, IL — Drilled By AC/DB

Equipment: [x] CME 45B [ ] H.A. [ ] Other — Logged By DA

Comments: Mathon Drive
Sta. 5+05, 40' Rt. of CL

Elev., ft. 627.0' Description	Depth, ft. 0	S	T	R	B	N	Pen.	W	Uw	Qu
(see core log)										
Brown fine sand, trace medium-coarse sand & gravel, damp, very loose to medium dense - Fill		1	SS	10"	2 2 2	4		3.3		
	5	2	SS	16"	1 2 3	5		1.4		
		3	SS	18"	3 5 5	10		2.1		
	10	4	SS	18"	3 5 6	11		2.4		
		5	SS	18"	4 5 5	10		3.2		
	15	6	SS	18"	7 8 8	16		3.4		
Dark brown-black fine sand, damp										
Brown fine sand, damp, medium dense	20	7	SS	18"	9 10 13	22		3.5		

Water Level — depth, ft. / elev., ft.
- while drilling: dry
- after drilling: dry
- hrs. after drilling:

S - sample T - type: J(Jar), SS(split-spoon), ST(shelby tube) R - recovery length, in.
B - Standard Penetration Test (SPT), blows/ 6" interval. W - water content, %.
N - SPT, blows/ foot to drive 2" O.D. split-spoon sampler with 140 lb. hammer falling 30".
Pen. - pocket penetrometer reading, tons/ sq. ft.. Uw - dry unit weight of soil, lbs./ cu.ft.
Qu - unconfined compressive strength, tons./ sq. ft..

F-111b

SOIL AND MATERIAL CONSULTANTS, INC.

BORING LOG 101

File No. 21332

Client: Baxter & Woodman, Inc. — Sheet 2 of 2

Project: Grand Ave./Mathon Dr. over the UPRR — Date 2/6/14

Location: Section 12-00239-00-BR Waukegan, IL — Drilled By AC/DB

Equipment: [x] CME 45B [ ] H.A. [ ] Other — Logged By DA

Comments:

Elev., ft. Description	Depth, ft. 20	S	T	R	B	N	Pen.	W	Uw	Qu
Brown fine sand, damp, medium dense Fill	25	8	SS	18"	11 12 13	25		7.6		
Brown silt, some sand, trace clay, damp, medium dense - Fill	30	9	SS	18"	9 10 11	21		12.4		
End of Boring										
	35									
	40									

Water Level — depth, ft. / elev., ft.
- while drilling: dry
- after drilling: dry
- hrs. after drilling:

S - sample T - type: J(Jar), SS(split-spoon), ST(shelby tube) R - recovery length, in.
B - Standard Penetration Test (SPT), blows/ 6" interval. W - water content, %.
N - SPT, blows/ foot to drive 2" O.D. split-spoon sampler with 140 lb. hammer falling 30".
Pen. - pocket penetrometer reading, tons/ sq. ft.. Uw - dry unit weight of soil, lbs./ cu.ft.
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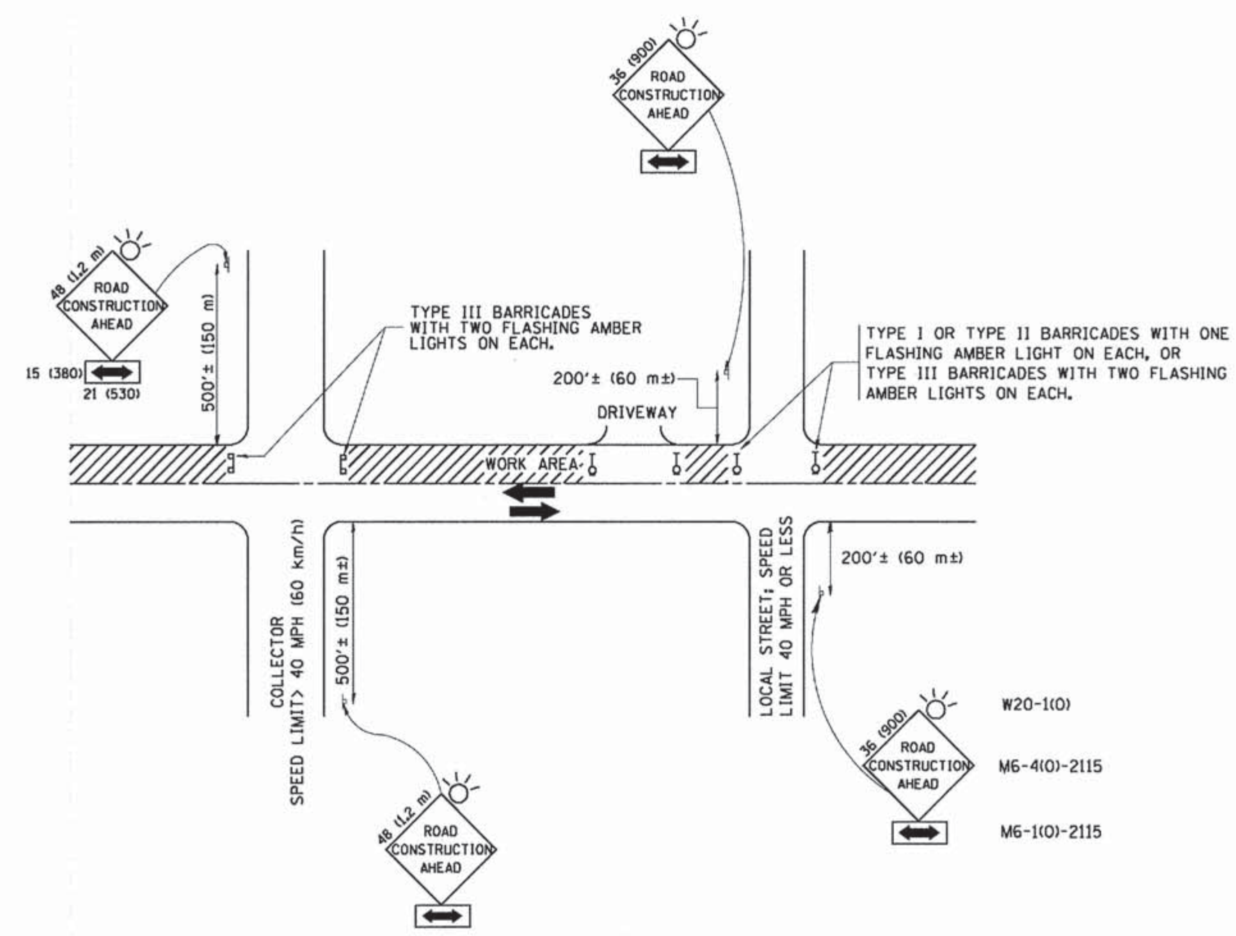
F-111b



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

NOTES:

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

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

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

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

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

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

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

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

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

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

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

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

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

FILE NAME = W:\diststd\22x34\tc10.dgn	USER NAME = gaglianobt	DESIGNED - LHA	REVISED - J. OBERLE 10-18-95
		DRAWN -	REVISED - A. HOUSEH 03-06-96
	PLOT SCALE = 50.000 ' / IN.	CHECKED -	REVISED - A. HOUSEH 10-15-96
	PLOT DATE = 1/4/2000	DATE - 06-89	REVISED -T. RAMMACHER 01-06-00

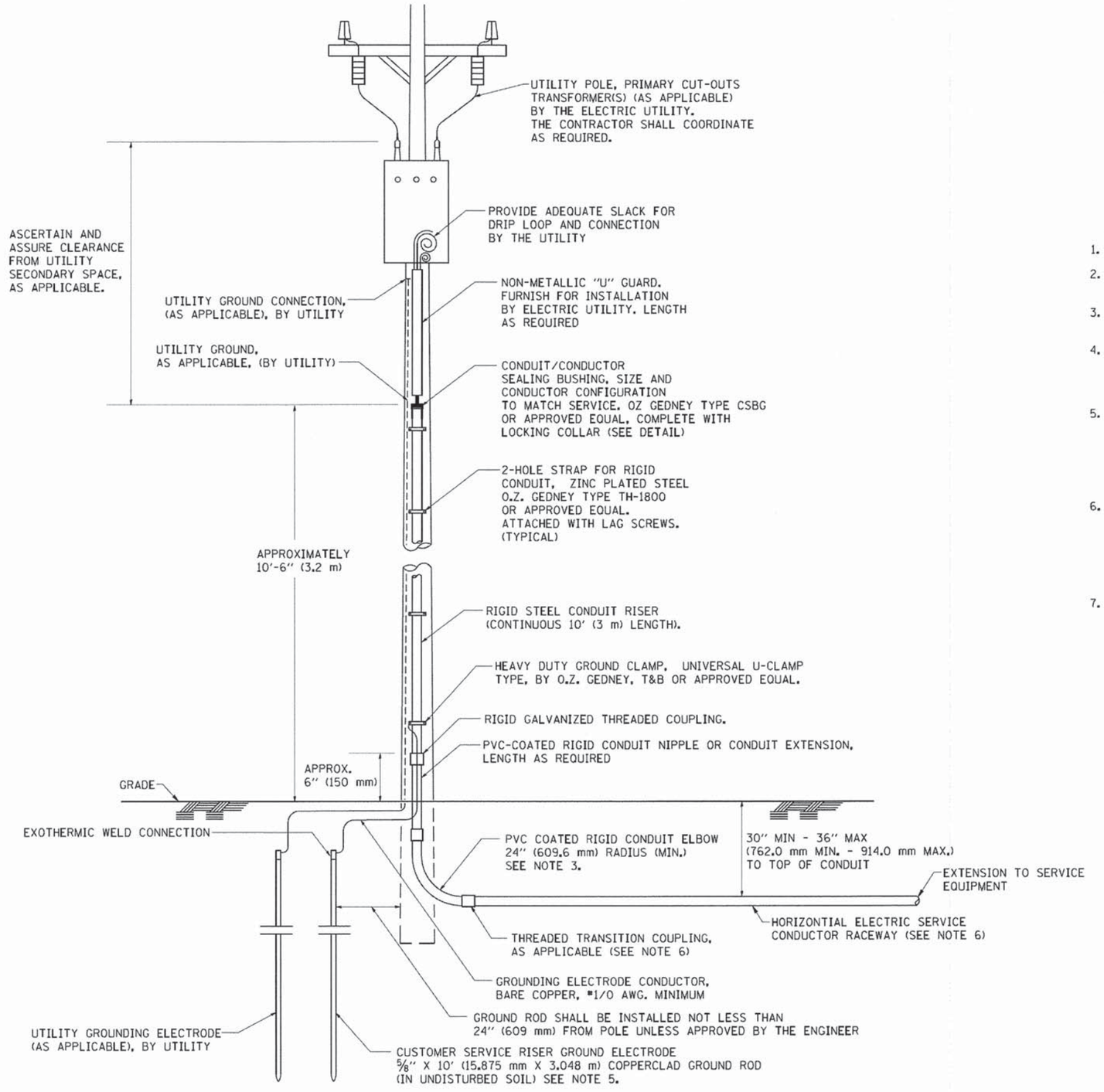
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

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

SCALE: NONE | SHEET NO. 1 OF 1 SHEETS | STA. | TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3719	12-00239-00-BR	LAKE	88	80
	TC-10	CONTRACT NO. 61A57		

FED. ROAD DIST. NO. 1 | ILLINOIS | FED. AID PROJECT M-BHM-9003(952)

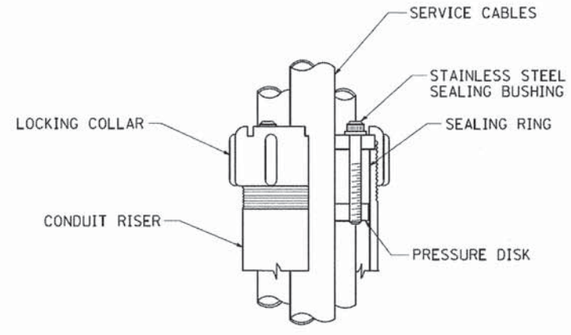


APPLICATION

THIS DETAIL APPLIES FOR LOW VOLTAGE ELECTRIC SERVICE (660 V OR LESS) FROM AN OVERHEAD UTILITY SUPPLY TO SEPERATLY-MOUNTED SERVICE EQUIPMENT.

NOTES

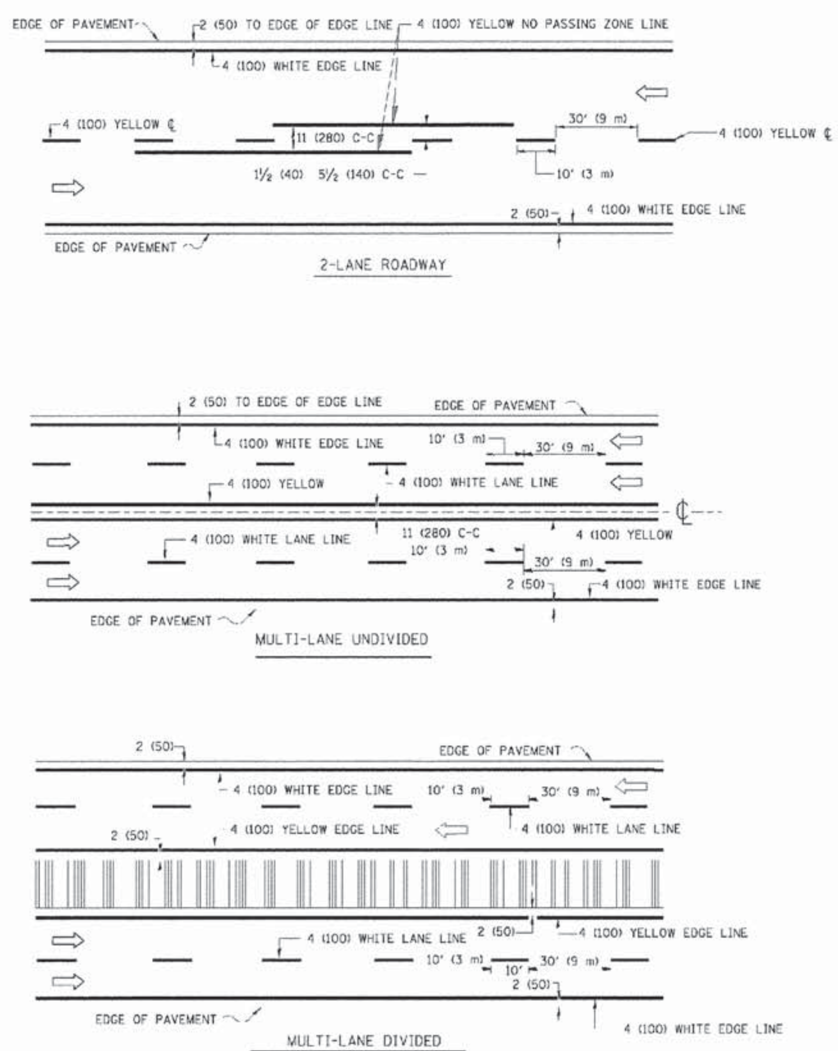
1. SERVICE VOLTAGE SHALL BE AS INDICATED ELSEWHERE IN THE DRAWINGS.
2. UNLESS OTHERWISE INDICATED, ITEMS AND WORK SHALL BE INCLUDED AND PAID AS PART OF THE ELECTRIC UTILITY SERVICE INSTALLATION PAY ITEM.
3. CONDUIT AND CONNECTOR DIAMETER SHALL MATCH THE DIAMETER OF THE SERVICE CONDUCTOR RACEWAY AS INDICATED ON THE PLANS.
4. PVC COATED RACEWAYS AND ACCESSORIES SHALL BE CAREFULLY INSTALLED WITH MFR RECOMMENDED TOOLS AND PROCEDURES TO AVOID DAMAGE. ANY DAMAGE SHALL BE REPAIRED WITH COMPATIBLE PVC TOUCH-UP MATERIAL TO THE SATISFACTION OF THE ENGINEER OR THE DAMAGED MATERIAL SHALL BE REPLACED AT NO ADDITIONAL COST.
5. THE CONTRACTOR SHALL OBTAIN INSPECTION AND APPROVAL BY THE ENGINEER OF SERVICE RISER GROUND ELECTRODE, RISER ELBOW, NIPPLE AND CONNECTION TO SERVICE CONDUCTOR RACEWAY EXTENSION BEFORE BACKFILL AND SHALL ALSO OBTAIN INSPECTION OF SERVICE RISER AND SEALING BUSHING BEFORE UTILITY "U" GUARD INSTALLATION AND SERVICE CONNECTION.
6. THE HORIZONTAL ELECTRIC SERVICE CONDUCTOR RACEWAY SHALL BE AS INDICATED AND SHALL BE MEASURED SEPARATELY FOR PAYMENT. WHEN THE RACEWAY IS PVC-COATED RIGID GALVANIZED STEEL, THE COUPLING SHALL BE THE SAME. WHEN THE RACEWAY IS PVC CONDUIT (IN CONCRETE), THE COUPLING SHALL BE A METALIC TO NON METALIC ADAPTER. WHEN THE RACEWAY IS ENCASED IN CONCRETE, THE CONCRETE SHALL EXTEND TO COVER THE COUPLING.
7. PLANS AND DETAILS INDICATE THE GENERAL NATURE AND REQUIREMENTS. THEY DO NOT SHOW EVERY ACCESSORY AND ATTACHMENT, AND THEY DO NOT RELIEVE THE CONTRACTOR OF THE REQUIREMENTS OF THE SPECIFICATIONS AND SPECIAL PROVISIONS TO ASCERTAIN UTILITY REQUIREMENTS AND TO COORDINATE ACCORDINGLY, FURNISHING ALL ITEMS AND WORK NOT PROVIDED BY THE UTILITY, BUT NECESSARY FOR A COMPLETE SERVICE INSTALLATION IS REQUIRED AND SHALL BE INCLUDED IN THE ELECTRIC UTILITY SERVICE INSTALLATION PAY ITEM.



SEALING BUSHING DETAIL

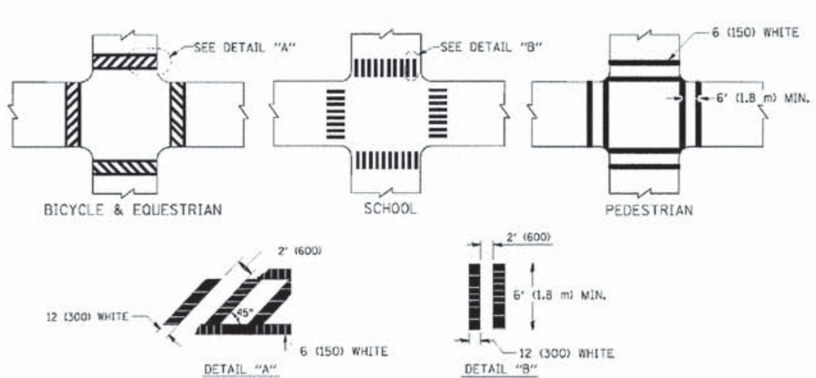
FILE NAME = W:\diststd\22x34\be220.dgn	USER NAME = gaglianobt	DESIGNED -	REVISED - 03-03-06	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	ELECTRIC SERVICE INSTALLATION AERIAL, REMOTE DISCONNECT		
		DRAWN -	REVISED -				
	PLOT SCALE = 50.0000 '/ IN.	CHECKED - MEA	REVISED -		SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA. TO STA.
	PLOT DATE = 1/4/2008	DATE -	REVISED -				

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3719	12-00239-00-BR	LAKE	88	80A
	BE-220	CONTRACT NO. 61A57		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT M-BHM-9003(952)		

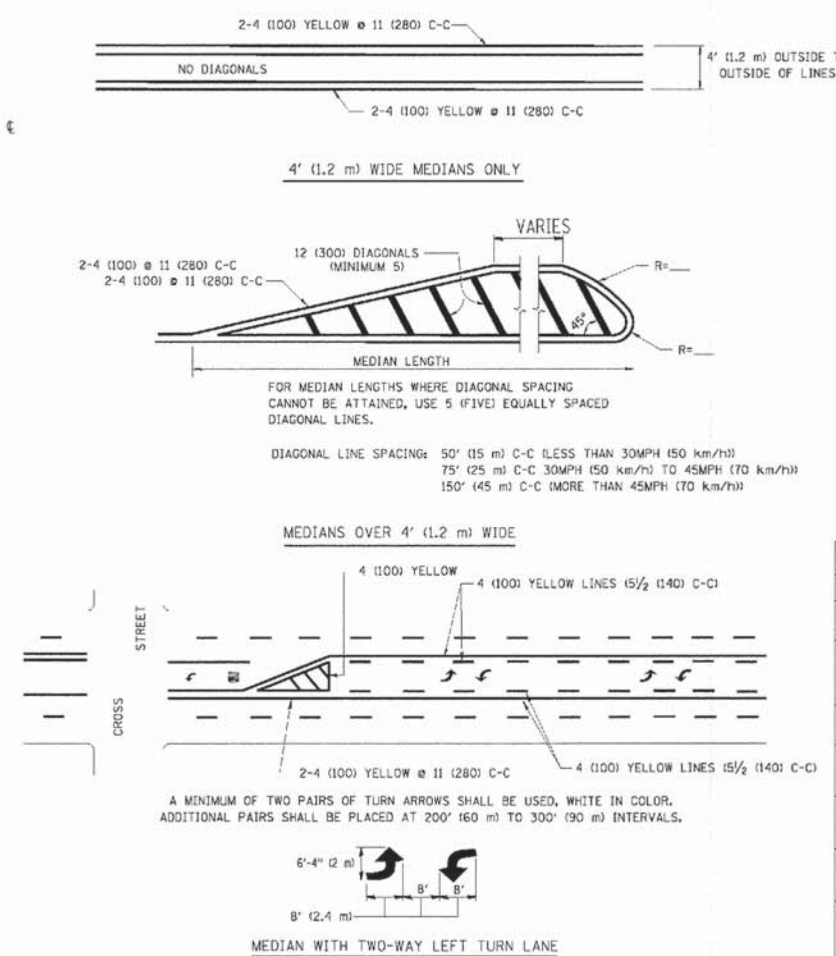


NOTE: MEDIANS WITH BARRIER CURB DO NOT REQUIRE AN EDGE LINE

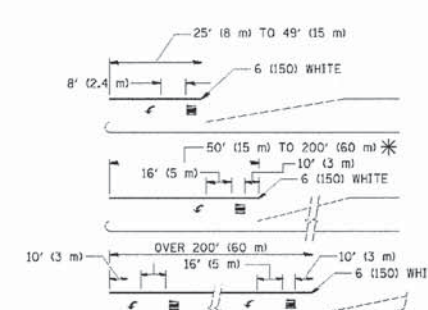
TYPICAL LANE AND EDGE LINE MARKING



TYPICAL CROSSWALK MARKING



TYPICAL PAINTED MEDIAN MARKING

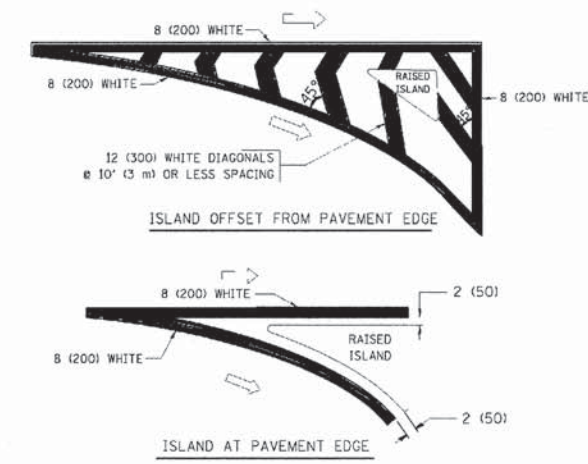


FULL SIZE LETTERS 8' (2.4 m) AND ARROWS SHALL BE USED.
↰ AREA = 15.6 SQ. FT. (1.5 m²) ONLY AREA = 20.8 SQ. FT. (1.9 m²)

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

TYPICAL LEFT (OR RIGHT) TURN LANE

TYPICAL TURN LANE MARKING



TYPICAL ISLAND MARKING

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

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

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

DESIGNED EVERS	REVISED T. RAMMACHER 10-27-94		
DRAWN -	REVISED -C. JUCIUS 09-09-09		
CHECKED	REVISED		
DATE - 03-19-90	REVISED -		

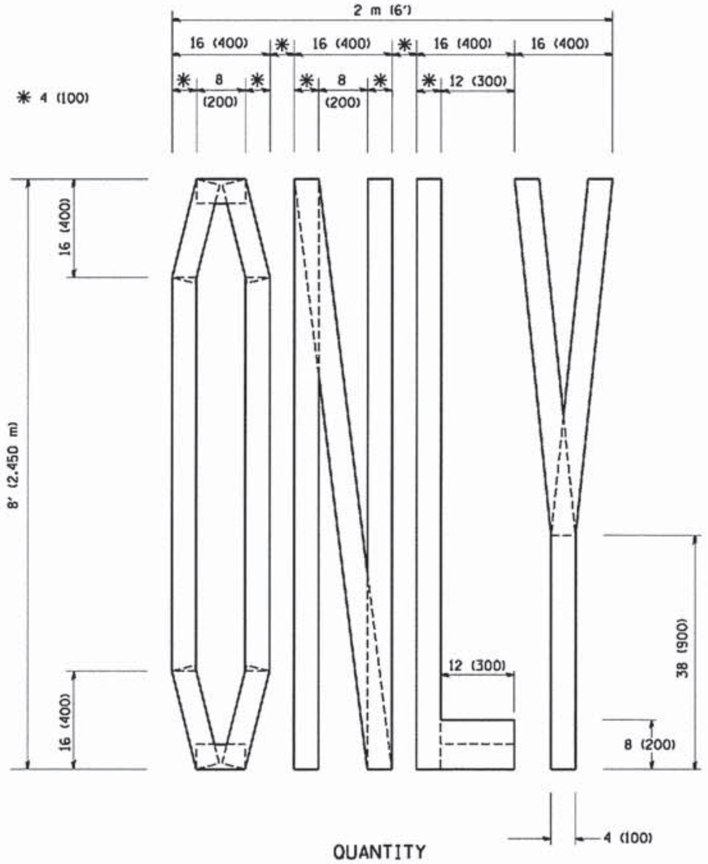
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DISTRICT ONE
TYPICAL PAVEMENT MARKINGS

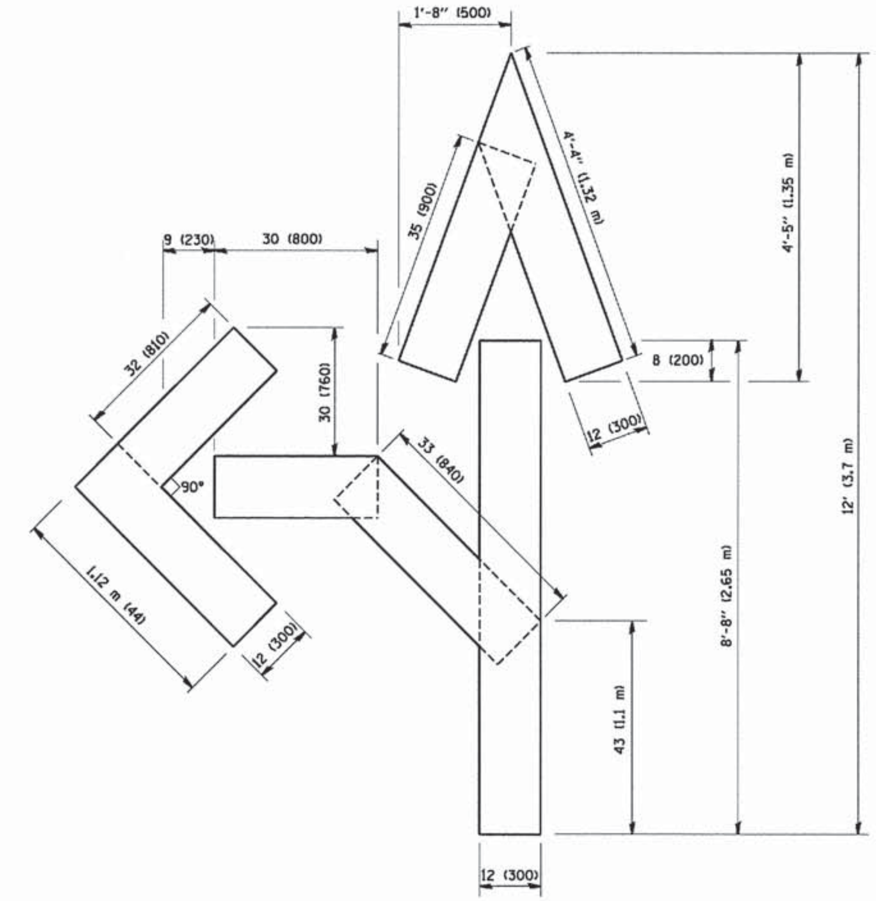
SCALE: NONE | SHEET NO. 1 OF 1 SHEETS | STA. | TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3719	12-00239-00-BR	LAKE	88	81
	TC-13	CONTRACT NO. 61A57		

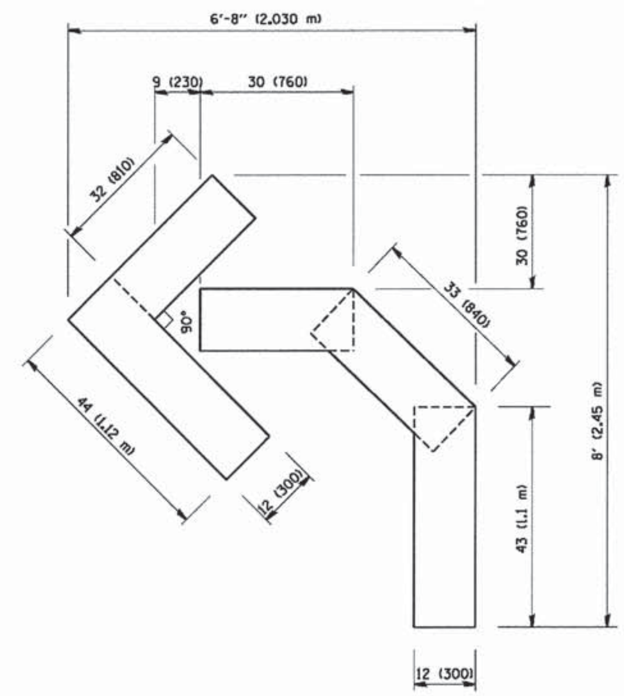
FED. ROAD DIST. NO. 1 | ILLINOIS | FED. AID PROJECT M-BHM-9003(952)



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



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



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

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

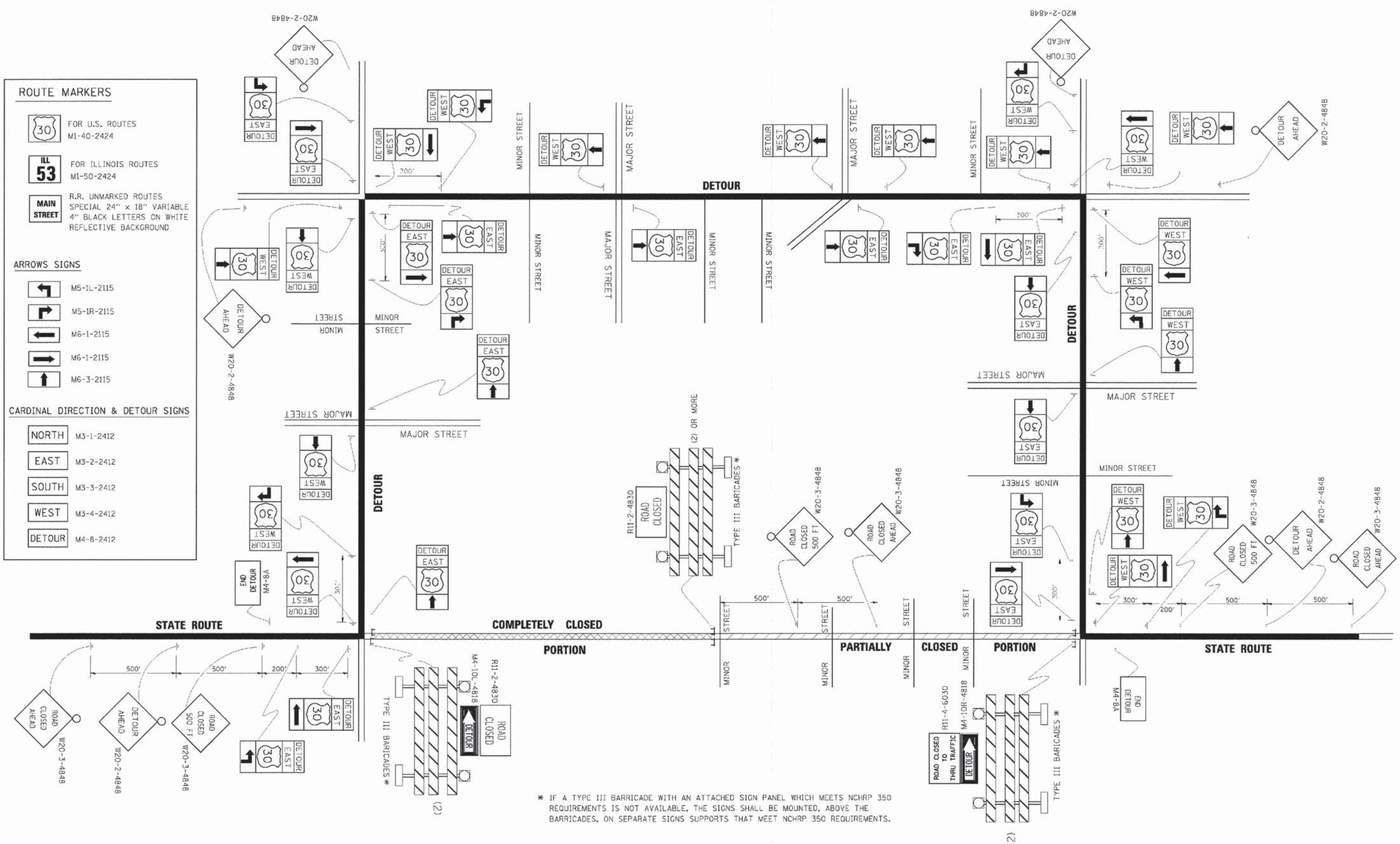
...\plotdrv\pdf-BW_Default.plt
...\PH2-SHEETS\11051-PH2-B&W.tbl
\\corp.baxwood.com\projects\CrystalLake\WAUKC\11051-grand ave br\CADD\DGNS\PH2-Sheets\11051_PH2_SHT-DIDETAILS - TC.dgn

FILE NAME = W:\diststd\22x34\tc16.dgn	USER NAME = gaglianobt	DESIGNED -	REVISED - T. RAMMACHER 06-05-96	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
		DRAWN -	REVISED - T. RAMMACHER 11-04-97	
	PLOT SCALE = 50.0000 ' / IN.	CHECKED -	REVISED - T. RAMMACHER 03-02-98	
	PLOT DATE = 1/4/2008	DATE - 09-18-94	REVISED - E. GOMEZ 08-28-00	

PAVEMENT MARKING LETTERS AND SYMBOLS FOR TRAFFIC STAGING

SCALE: NONE | SHEET NO. 1 OF 1 SHEETS | STA. | TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3719	12-00239-00-BR	LAKE	88	82
	TC-16	CONTRACT NO. 61A57		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT M-BHM-9003(952)		



* IF A TYPE III BARRICADE WITH AN ATTACHED SIGN PANEL WHICH MEETS NCHRP 350 REQUIREMENTS IS NOT AVAILABLE, THE SIGNS SHALL BE MOUNTED, ABOVE THE BARRICADES, ON SEPARATE SIGNS SUPPORTS THAT MEET NCHRP 350 REQUIREMENTS.

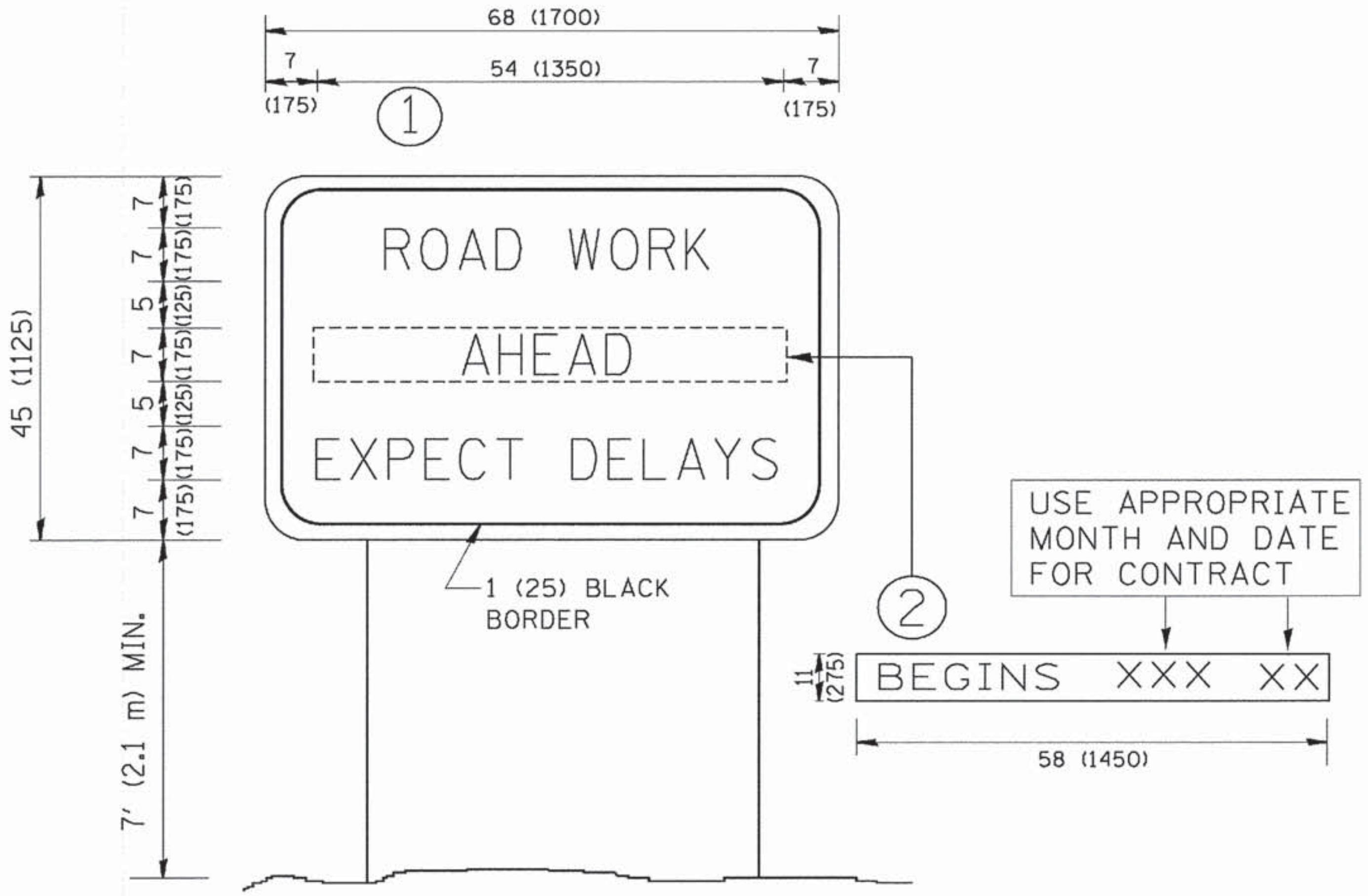
FILE NAME = c:\pw_work\PWIDOT\DRIV4\DSGN\d2108315\tc21.dgn	USER NAME =	DESIGNED	REVISED 10-18-02	**STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION**
	PLOT SCALE =	DRAWN -	REVISED - R. BORO 09-14-09	
	PLOT DATE = 9/14/2009	CHECKED	REVISED	
		DATE -	REVISED -	

DETOUR SIGNING FOR CLOSING STATE HIGHWAYS

SCALE: NONE | SHEET NO. 1 OF 1 SHEETS | STA. | TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3719	12-00239-00-BR	LAKE	88	83
	TC-21	CONTRACT NO. 61A57		

FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT M-BHM-9003(952)



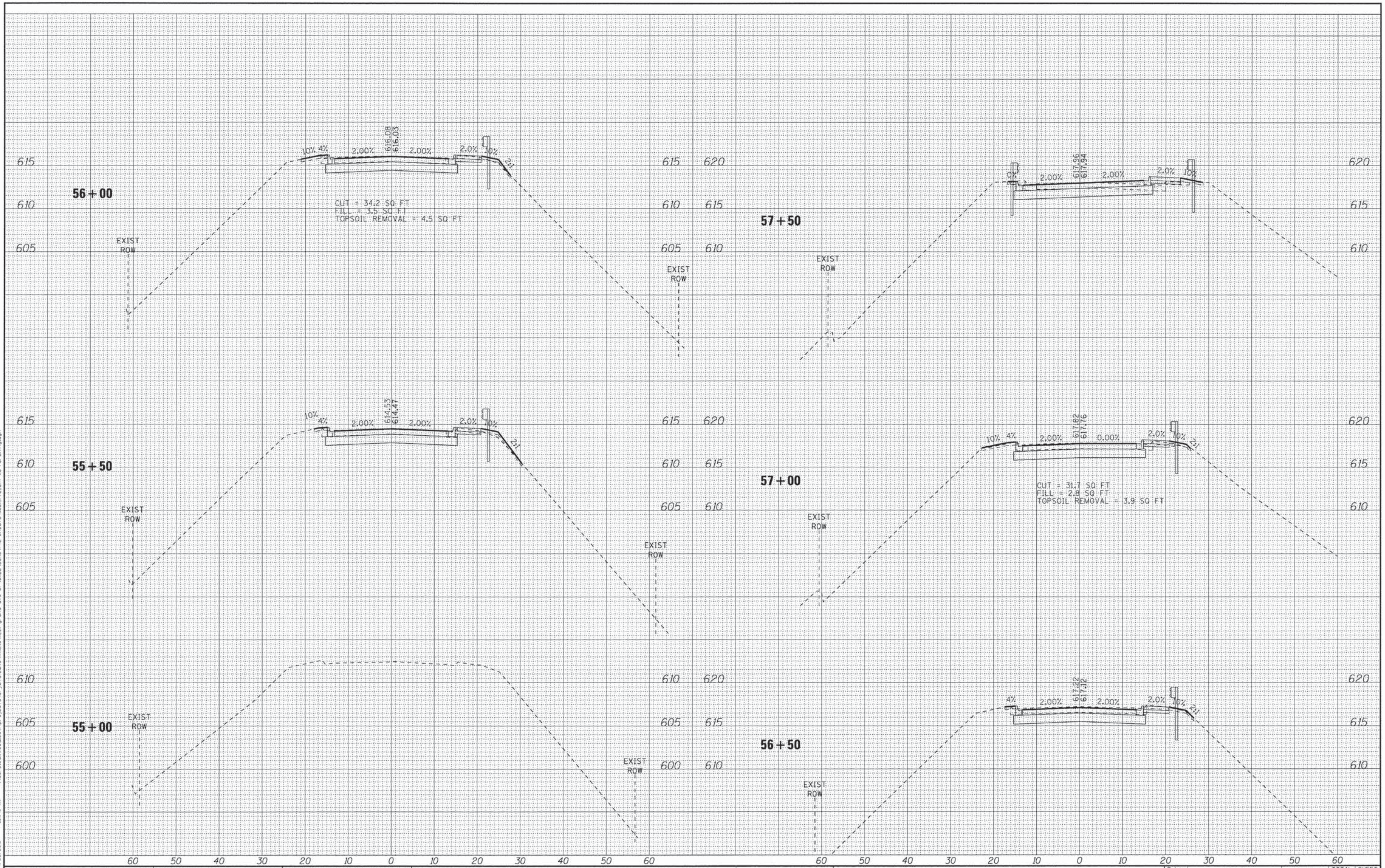
NOTES:

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

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

FILE NAME = W:\diststd\22x34\tc22.dgn	USER NAME = gaglianobt	DESIGNED -	REVISED - R. MIRS 09-15-97	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	ARTERIAL ROAD INFORMATION SIGN
		DRAWN -	REVISED - R. MIRS 12-11-97		
	PLOT SCALE = 50.000 ' / IN.	CHECKED -	REVISED - T. RAMMACHER 02-02-99		
	PLOT DATE = 1/4/2008	DATE -	REVISED - C. JUCIUS 01-31-07		SCALE: NONE · SHEET NO. 1 OF 1 SHEETS · STA. · TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3719	12-00239-00-BR	LAKE	88	84
	TC-22	CONTRACT NO. 61A57		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT M-BHM-9003(952)		



BAXTER & WOODMAN Consulting Engineers	DESIGNED - DJS	REVISED -5-8-14 PER IDOT REVIEW	
	DRAWN - UKB	REVISED -	
	CHECKED - RWL	REVISED -	
	DATE - 03-14-14	REVISED -	

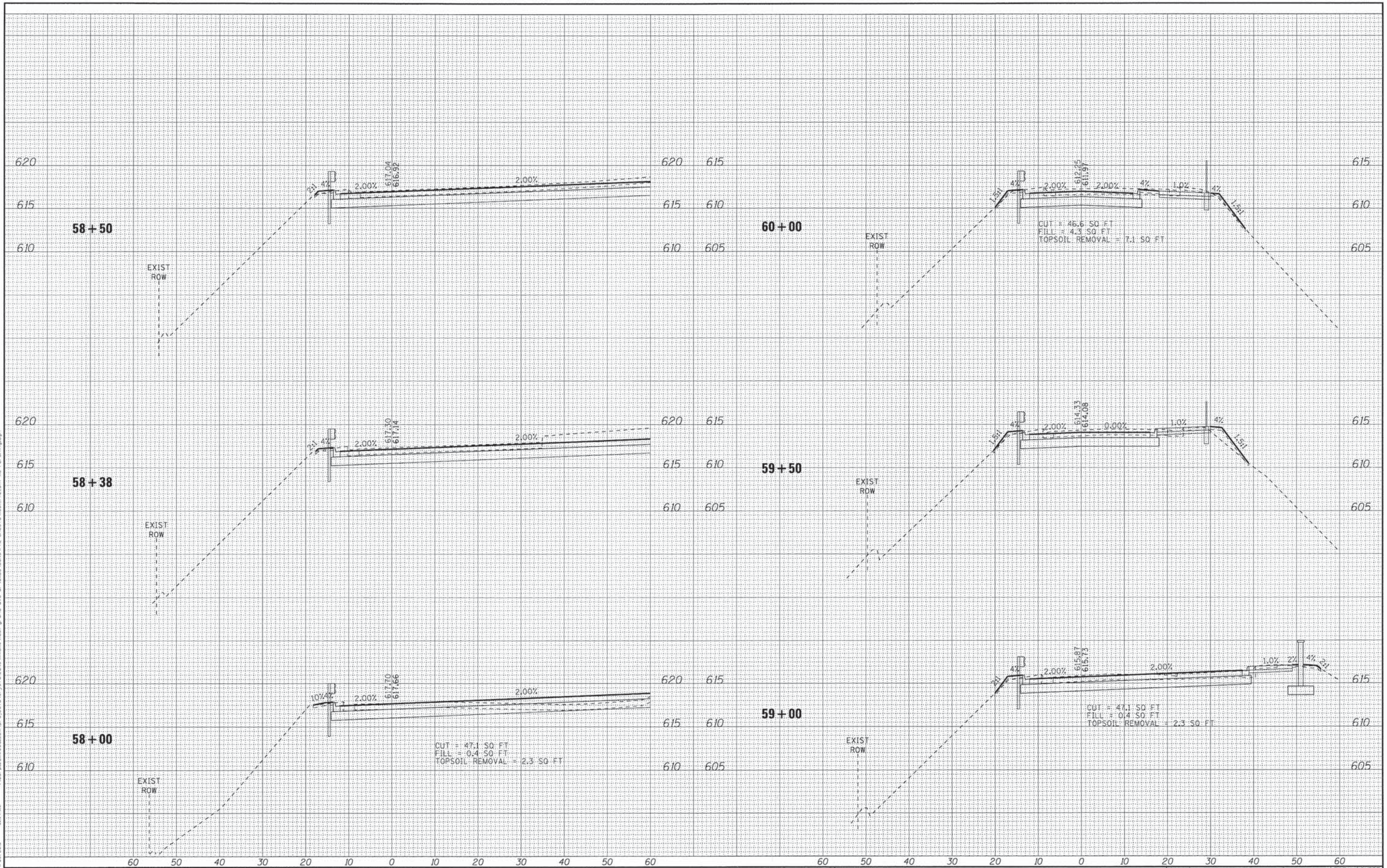
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
PERSHING ROAD

SCALE: H: 1"=10' V: 1"=5' | STA. 55+00 TO STA. 57+50

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3719	12-00239-00-BR	LAKE	88	85
		CONTRACT NO. 61A57		

FED. ROAD DIST. NO. 1 | ILLINOIS | FED. AID PROJECT M-BHM-9003(952)



BAXTER & WOODMAN Consulting Engineers	DESIGNED - DJS	REVISED -5-8-14 PER IDOT REVIEW
	DRAWN - UKB	REVISED -
	CHECKED - RWL	REVISED -
	DATE - 03-14-14	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

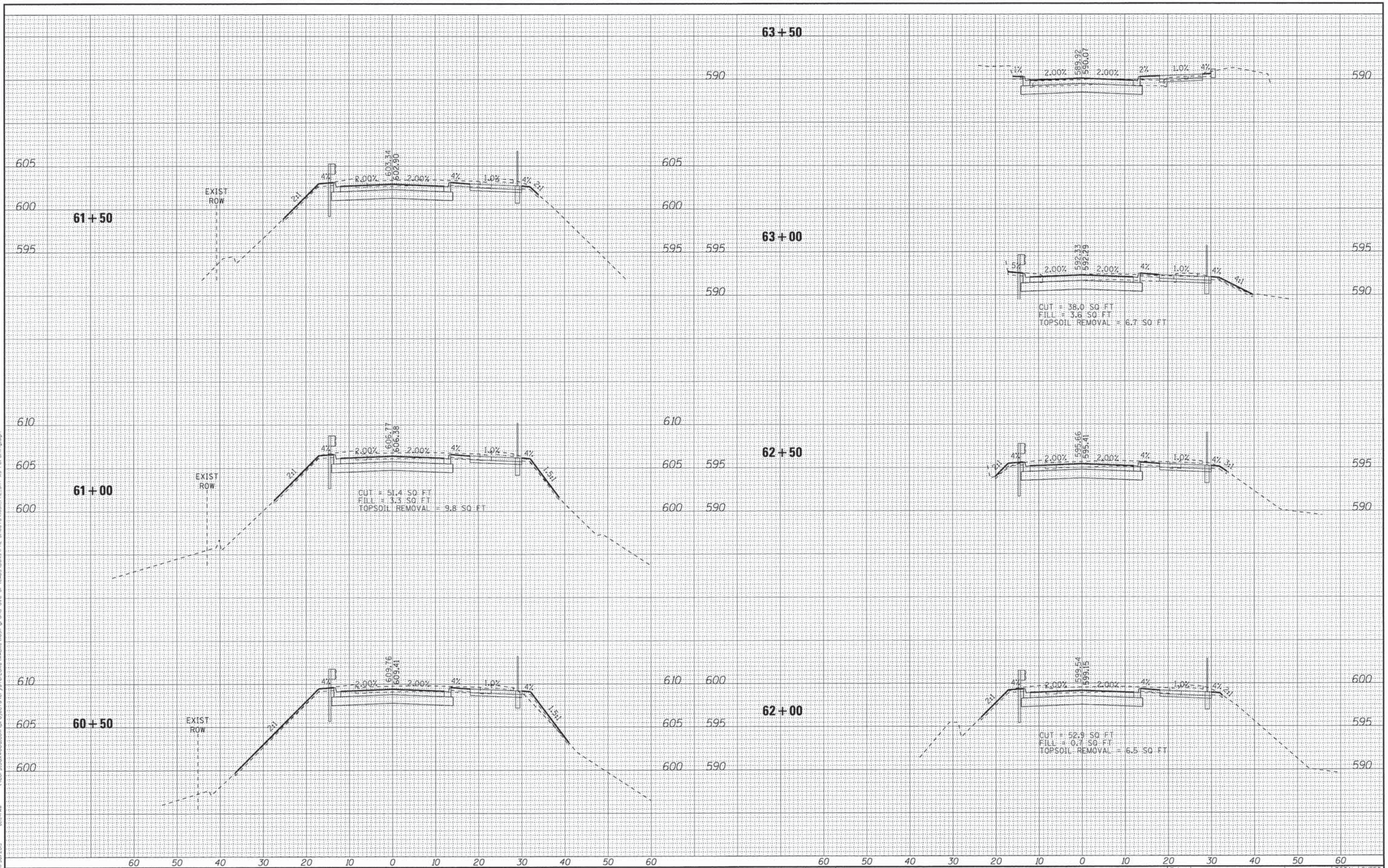
CROSS SECTIONS
PERSHING ROAD

SCALE: H: 1"=10' V: 1"=5' STA. 58+00 TO STA. 60+00

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3719	12-00239-00-BR	LAKE	88	86

CONTRACT NO. 61A57

FED. ROAD DIST. NO. 1 | ILLINOIS | FED. AID PROJECT M-BHM-9003(952)



DESIGNED - DJS	REVISED -5-8-14 PER IDOT REVIEW	
DRAWN - UKB	REVISED -	
CHECKED - RWL	REVISED -	
DATE - 03-14-14	REVISED -	

BAXTER & WOODMAN Consulting Engineers

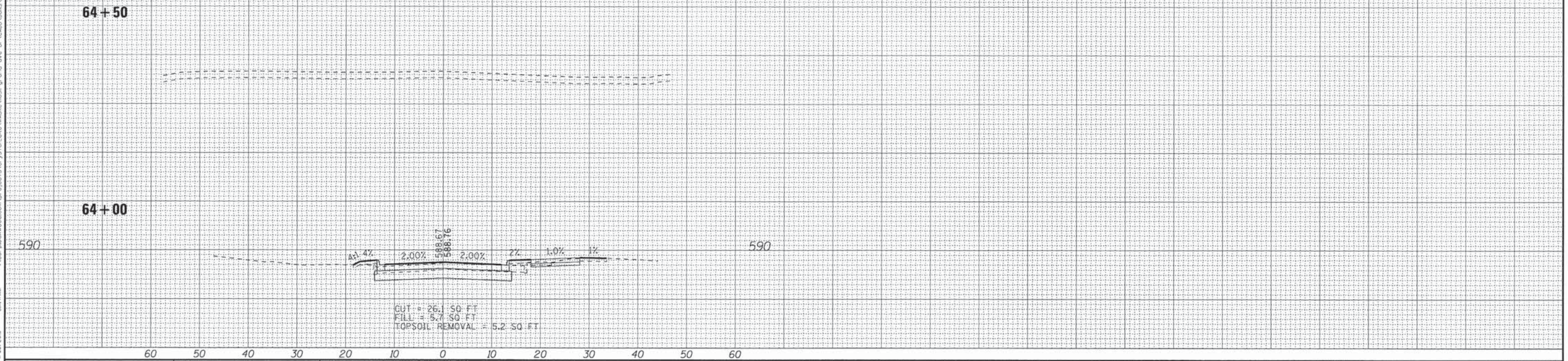
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
PERSHING ROAD

SCALE: H: 1"=10' V: 1"=5' | STA. 60+50 TO STA. 63+50

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3719	12-00239-00-BR	LAKE	88	87
		CONTRACT NO. 61A57		

FED. ROAD DIST. NO. | ILLINOIS | FED. AID PROJECT M-BHM-9003(952)



BAXTER & WOODMAN Consulting Engineers

DESIGNED - DJS	REVISED -5-8-14 PER IDOT REVIEW	
DRAWN - UKB	REVISED -	
CHECKED - RWL	REVISED -	
DATE - 03-14-14	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
PERSHING ROAD

SCALE: H: 1"=10' V: 1"=5' | STA. 64+00 TO STA. 64+50

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3719	12-00239-00-BR	LAKE	88	88
		CONTRACT NO. 61A57		

FED. ROAD DIST. NO. 1 | ILLINOIS | FED. AID PROJECT M-BHM-9003(952)