ELECTRICAL SYMBOLS FOR PROPOSED WORK

PROPOSED LIGHTING UNIT
40' M.H., 12' MA, LED LUMINAIRE, 240V
ALUMINUM POLE

C
PROPOSED COMBINATION LIGHTING UNIT
40' M.H., 12' MA, LED LUMINAIRE, 240V
MOUNTED ON TRAFFIC SIGNAL POLE

LED
UNDERPASS LUMINAIRE:
LED, TYPE AS SHOWN ON PLANS (PRIMARY DISTRIBUTION PATTERN DIRECTION AS INDICATED BY ARROW)

M
MANHOLE

H
ELECTRIC HANDHOLE: TYPE AS INDICATED

TYPE E1: PRECAST CONCRETE, 21.5"x21.5"x30", IDOT STANDARD 814001

TYPE E2: PRECAST CONCRETE-HEAVY DUTY, 22"x22"x30", IDOT STANDARD 814001

TYPE C1: COMMUNICATIONS VAULT, 49⅝"x32⅛"x57"

TYPE S1: PRECAST CONCRETE-HEAVY DUTY, 22"x22"x36"

TYPE S2: PRECAST CONCRETE-HEAVY DUTY SPECIAL, 30"x30"x36"

H H
DOUBLE HANDHOLE

J
JUNCTION BOX: TYPE AND SIZE AS INDICATED ON PLANS

P
PULL BOX: TYPE AND SIZE AS INDICATED ON PLANS

T
TELEPHONE CONNECTION

PAD MOUNTED ELECTRIC UTILITY TRANSFORMER

ELECTRIC UTILITY POLE

GROUND ROD

MAIN SERVICE FUSED DISCONNECT SWITCH
(RATING AS INDICATED)

PC
PHOTOCELL

4
LIGHTED SIGN STRUCTURE-CANTILEVER TYPE
(NUMBER OF FLUORESCENT FIXTURES AS INDICATED - TYP.)

6
LIGHTED SIGN STRUCTURE-TRUSS TYPE

6
LIGHTED SIGN STRUCTURE-BRIDGE MOUNT TYPE

DYNAMIC MESSAGE SIGN

FBS
FLASHING BEACON SIGN

C
CLOSED CIRCUIT TELEVISION CAMERA

M
MICROWAVE DETECTOR

OR
DETECTOR LOOP

PROPOSED LIGHTING CONTROLLER CABINET
100A, 120/240V, 1-PH, 3 WIRE
CITY MAINTAINED

A
AERIAL CABLE

FLEXIBLE CONDUIT

RACEWAY EMBEDDED IN STRUCTURE

EXPOSED CONDUIT

L
RACEWAY OR DIRECT BURIAL CABLE
UNDERGROUND WITHOUT ENCASEMENT

RIGID GALVANIZED STEEL CONDUIT
SLEEVE, INSTALLED BELOW PAVEMENT

UNDERGROUND REINFORCED CONCRETE ENCASED
CONDUIT DUCTBANK, UNLESS NOTED OTHERWISE.
(NUMBER, TYPE, AND SIZE OF DUCTS AS SHOWN)

CONDUIT TURNED DOWN

CONDUIT TURNED UP

GENERAL ELECTRICAL CALLOUTS

CONTROLLER DESIGNATION
CIRCUIT DESIGNATION
LIGHTING UNIT NUMBER
WA3
STA. 1700+00, 65' RT

CKTS. C&D: 3#2, 1#4 GND,
1 1/4" UD

4" RGC CONDUIT SLEEVE
BELOW PAVEMENT

NUMBER OF LUMINAIRES
CONTROLLER DESIGNATION
SIGN STRUCTURE NUMBER
6
W1

HANDHOLE NUMBER
TYPE DESIGNATION
HHXX
TYPE E1

PROPOSED CITY CONTROLLER
STA. 1528+10, 160LT

JB, SS, 18"x18"x8" ATS

CONDUIT-SPARE
CONDUIT WITH CABLE OR UNITDUCT
DUCTBANK LENGTH
150LF

ABBREVIATIONS

ABBREVIATION	DESCRIPTION
AC	ALTERNATING CURRENT
A/C	AERIAL CABLE
A.D.A.	AMERICANS WITH DISABILITIES ACT
AFG	ABOVE FINISHED GRADE
A/R	AERIAL CABLE TO BE REMOVED
ATS	ATTACHED TO STRUCTURE
℄	BASELINE
BOE	IDOT BUREAU OF ELECTRICITY
CB	CIRCUIT BREAKER
CKT	CIRCUIT
℄	CENTERLINE
CLC	COMBINATION LIGHTING CONTROLLER
CM	CENTIMETER
CNC	COILABLE NONMETALLIC CONDUIT
CP	CONTROL PANEL
CT	CURRENT TRANSFORMER
DA	DAVIT ARM
DC	DIRECT CURRENT
DIA	DIAMETER
DP	DISTRIBUTION PANEL
E	EXISTING UNIT TO REMAIN
ECA	ELECTRIC CABLE ASSEMBLY
EM	EXISTING UNIT TO BE MODIFIED (e.g. NEW LUMINAIRE, BALLAST OR MAST ARM)
EOP	EDGE OF PAVEMENT
ER	EXISTING RELOCATED UNIT IN PROPOSED LOCATION
ET	EXISTING TEMPORARY UNIT TO REMAIN
ETR	EXISTING TEMPORARY RELOCATED UNIT
FT	FEET OR FOOT
FND BW	FOUNDATION BARRIER WALL
FND BW OS	FOUNDATION BARRIER WALL OFFSET
FND CON	FOUNDATION CONCRETE
FND CON OS	FOUNDATION CONCRETE OFFSET
FND MET	FOUNDATION METAL
FND PW	FOUNDATION PARAPET WALL
FU	FUSE
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GND	GROUND
HID	HIGH INTENSITY DISCHARGE
HPS	HIGH PRESSURE SODIUM
IDOT	ILLINOIS DEPARTMENT OF TRANSPORTATION
JB	JUNCTION BOX
KVA	KILOVOLT-AMPERE
KW	KILOWATTS
LT	LEFT
LTFMC	LIQUIDTIGHT FLEXIBLE METAL CONDUIT
LTG	LIGHTING
M	METER
MA	MAST ARM
MM	MILLIMETER
MTG HT	MOUNTING HEIGHT
MW	MESSENGER WIRE
NO. #	NUMBER
P	PROPOSED
PB	PUSH BUTTON
PH, ∅	PHASE
PNL	PANEL
PVC	POLYVINYL CHLORIDE
PVCC RGC	PVC COATED RIGID GALVANIZED STEEL CONDUIT
PT	POTENTIAL TRANSFORMER
R	EXISTING UNIT TO BE REMOVED (OWNER SALVAGED U.N.O.)
RR	EXISTING UNIT TO BE REMOVED AND RELOCATED
RECP	RECEPTACLE
RGC	RIGID GALVANIZED STEEL CONDUIT
RT	RIGHT
SEL SW	SELECTOR SWITCH
SPARE	SPARE
SPACE	SPACE
SS	STAINLESS STEEL
STA	STATION
STRUCT	STRUCTURE
T	TEMPORARY LIGHTING UNIT
TMP	TEMPORARY
TR	TEMPORARY UNIT TO BE REMOVED, SALVAGE EQUIPMENT AS SPECIFIED
TRR	TEMPORARY UNIT TO BE REMOVED AND RELOCATED
TUR	TEMPORARY UNIT ON UTILITY POLE TO BE REMOVED
TYP.	TYPICAL
UD	UNIT DUCT
UG	UNDERGROUND
U.N.O.	UNLESS NOTED OTHERWISE
WP	WOOD POLE
XFMR	TRANSFORMER

GENERAL NOTES:

1. THE CONTRACTOR SHALL VERIFY ALL OF THE INFORMATION SHOWN ON THE CONTRACT DRAWINGS, WHICH WOULD AFFECT THE WORK UNDER THIS CONTRACT.
2. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ASCERTAIN EXISTING FIELD CONDITIONS BEFORE BIDDING ON THIS PROJECT, SPECIFICALLY AS THEY RELATE TO LUMP SUM ITEMS AND UNIT PRICE ITEMS.
3. ALL NEW CONDUIT, UNIT DUCTS, DIRECT BURIAL CABLE, AND APPURTENANCES ARE INDICATED DIAGRAMMATICALLY ON THE DRAWINGS. THE ACTUAL LOCATIONS IN THE FIELD SHALL MEET WITH APPROVAL OF THE ENGINEER.
4. THE ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE IDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND ASSOCIATED SUPPLEMENTAL CONDITIONS.
5. THE SCALE SHOWN ON PLAN DRAWINGS APPLIES ONLY TO THE FULL SIZE PLANS AND NOT TO REDUCED SIZE PLANS.
6. THE CONTRACTOR SHALL FURNISH AND INSTALL LUMINAIRES IN ACCORDANCE WITH THE SUPPLIER'S RECOMMENDATIONS AND IN ACCORDANCE WITH THE SPECIFICATIONS. THE COST OF THIS WORK AND MATERIAL SHALL BE INCLUDED IN THE APPLICABLE LUMINAIRE PAY ITEM. SEPARATE PAYMENT WILL NOT BE MADE.
7. ALL LUMINAIRES SHALL BE ORIENTED WITH THE OPTICS PERPENDICULAR TO THE ROADWAY UNLESS OTHERWISE INDICATED OR DIRECTED BY THE ENGINEER. THIS WORK SHALL BE CONSIDERED INCLUDED IN THE APPLICABLE LUMINAIRE PAY ITEMS. SEPARATE PAYMENT WILL NOT BE MADE.
8. ALL LIGHTING EQUIPMENT REMOVED AS PART OF THIS CONTRACT SHALL REMAIN THE PROPERTY OF THE STATE AND SHALL BE DELIVERED TO THE STATE MAINTENANCE FACILITY.
9. CONDUITS AND UNIT DUCTS SHALL BE INSTALLED AT A MINIMUM 760 MM (30 INCHES) DEPTH BELOW GRADE AND POSITIONED IN THE FIELD TO AVOID CONFLICT WITH ROADWAY UNDER DRAINS AND OTHER EXISTING AND PROPOSED UTILITIES. THE CONTRACTOR SHALL INCREASE DEPTH OF UNIT DUCT AND CONDUIT AS REQUIRED AT NO ADDITIONAL COST TO THE STATE/CITY. THE CONTRACTOR SHALL COORDINATE RACEWAY DEPTH WITH THE ELECTRICAL DETAILS AND THE ENGINEER.
10. WHERE THE CONTRACTOR'S EXCAVATION MEETS AN OBSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE ENGINEER FOR DIRECTION IN WRITING PRIOR TO EXCAVATION. THE CONTRACTOR SHALL RESTORE ANY DAMAGE TO EXISTING SYSTEMS OR UTILITIES AND REMOVE EXISTING OBSTRUCTIONS AND FOUNDATIONS TO THE SATISFACTION OF THE ENGINEER. THIS WORK SHALL BE CONSIDERED INCIDENTAL TO THE APPROPRIATE PAY ITEM.
11. WHEREVER THE TEMPORARY AERIAL CABLE IS REQUIRED TO CROSS AN EXISTING AND/OR PROPOSED ROADWAY, THE CONTRACTOR SHALL MAINTAIN A MINIMUM OF 6 METER (20 FEET) OF VERTICAL CLEARANCE OVER THE ROADWAY AT ALL TIMES.
12. THE POLES SHALL BE KEPT OUT OF DITCH AREA AND PLACED CLOSER TO THE ROADWAY, IF NEEDED, TO GET OUT OF FLOW LINE.

RL-01

AECOM
345 EAST ASH AVENUE, SUITE B
DECATUR, IL 62526-2161
PHONE: (217) 875-4800 FAX: (217) 875-3577

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PLOT DATE = 6/12/2020	DATE - 6/12/2020	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROPOSED LIGHTING PLAN
ELECTRICAL SYMBOLS AND ABBREVIATIONS

SCALE: N.T.S | SHEET 1 OF 12 SHEETS | STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	09-00933-01-BR	MACON	572	363
		CONTRACT NO. XXXX(XXX)		
	ILLINOIS	FED. AID PROJECT		

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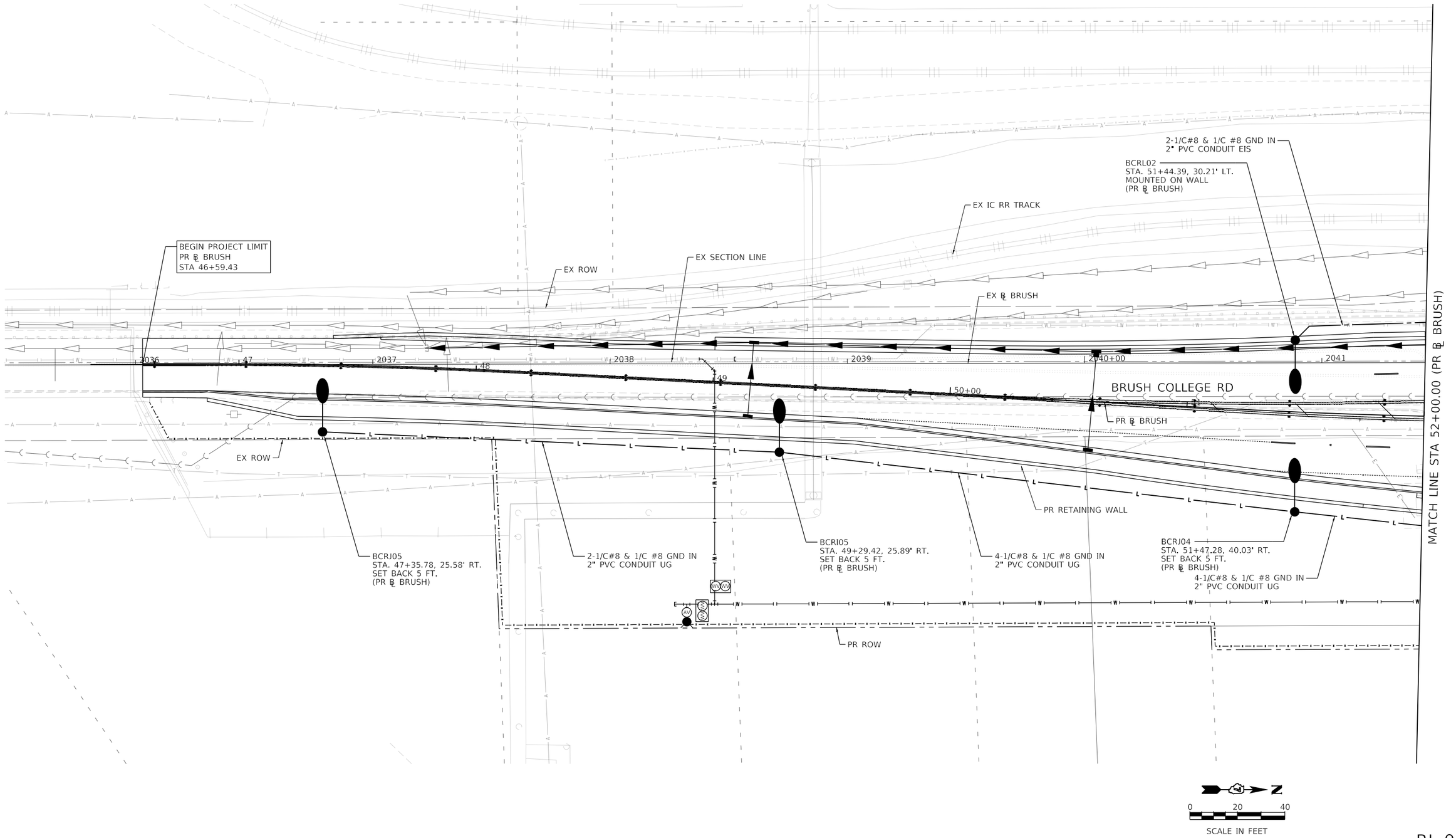

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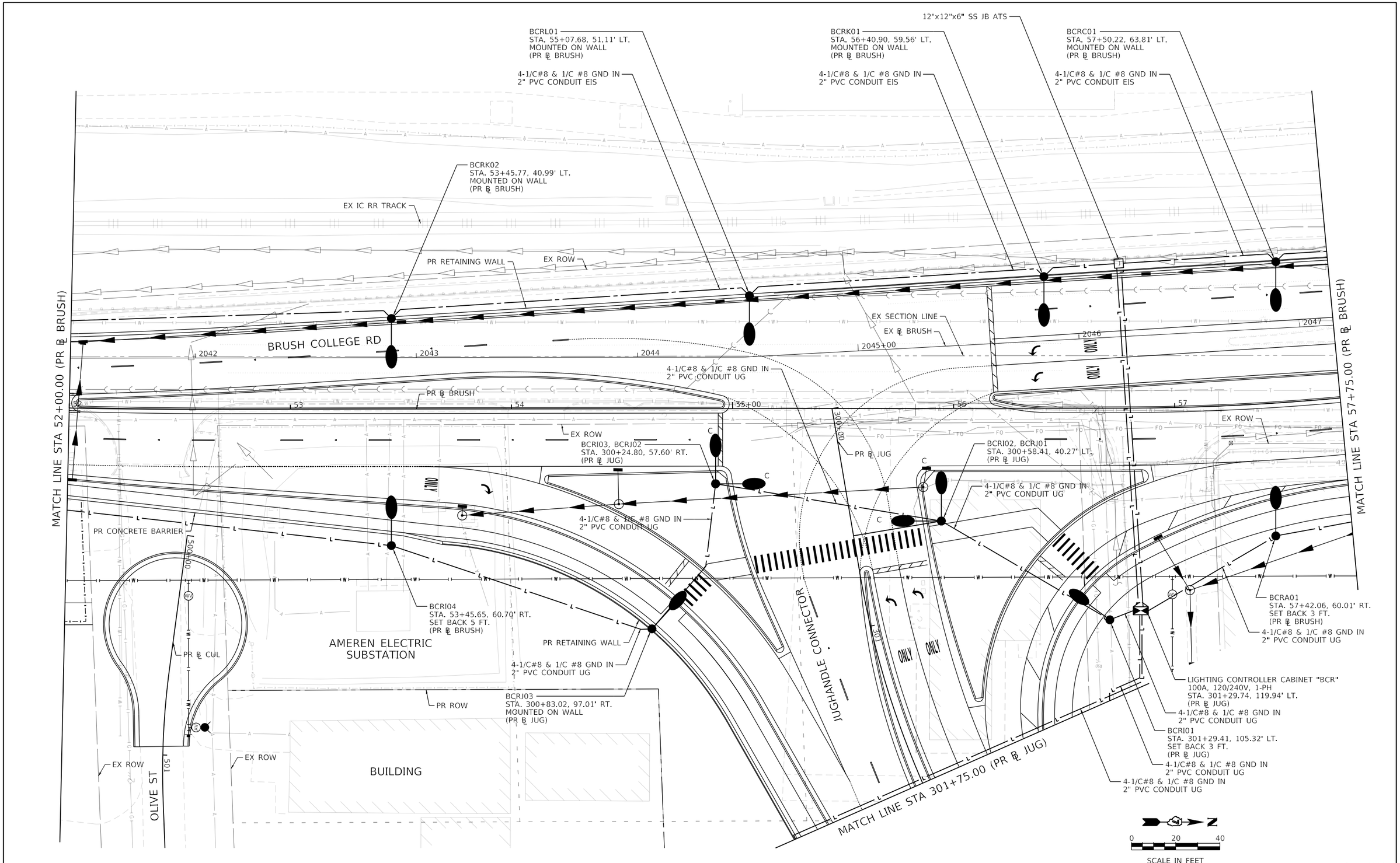
PLOT DATE = 6/12/2020	DATE - 6/12/2020	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BRUSH COLLEGE ROAD
PROPOSED LIGHTING PLAN

SCALE: 1"=20' | SHEET 2 OF 12 SHEETS | STA. 46+59.43 TO STA. 52+00.00

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	09-00933-01-BR	MACON	572	364
		CONTRACT NO. XXXX(XXX)		
		ILLINOIS	FED. AID PROJECT	



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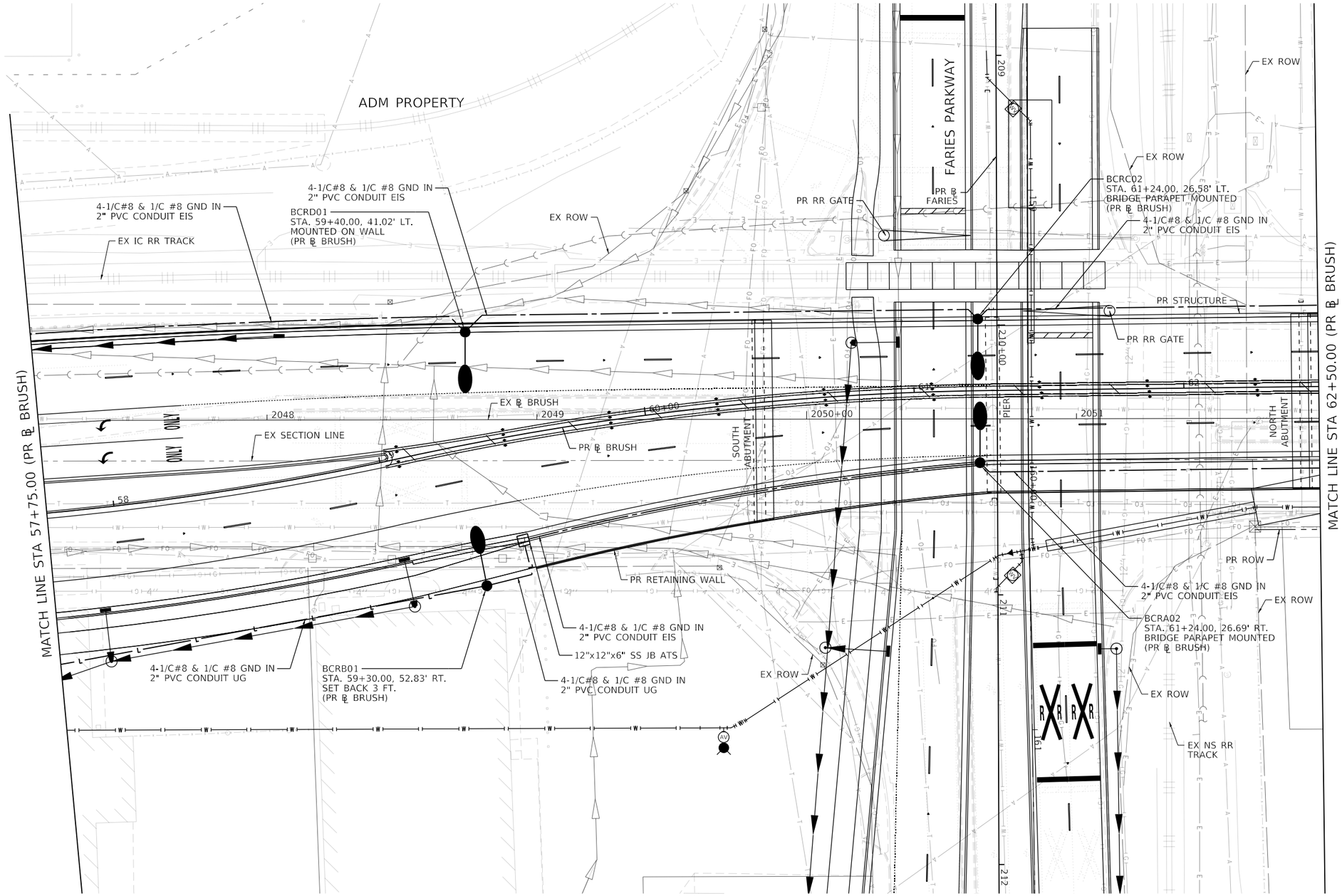
	DRAWN - CAM	REVISED -	
PLOT SCALE = 40.0000 ' / in.	CHECKED - WDS	REVISED -	
PLOT DATE = 6/12/2020	DATE - 6/12/2020	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BRUSH COLLEGE ROAD
PROPOSED LIGHTING PLAN

SCALE: 1"=20' | SHEET 3 OF 12 SHEETS | STA. 52+00.00 TO STA. 57+75.00

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	09-00933-01-BR	MACON	572	365
		CONTRACT NO. XXXX(XXX)		
	ILLINOIS	FED. AID PROJECT		


ADM PROPERTY
FARIES PARKWAY
EX ROW
EX ROW
BCRC02
STA. 61+24.00, 26.58' LT.
BRIDGE PARAPET MOUNTED
(PR ℄ BRUSH)
4-1/C#8 & 1/C #8 GND IN
2" PVC CONDUIT EIS
PR ℄
FARIES
PR RR GATE
4-1/C#8 & 1/C #8 GND IN
2" PVC CONDUIT EIS
BCRD01
STA. 59+40.00, 41.02' LT.
MOUNTED ON WALL
(PR ℄ BRUSH)
EX ROW
EX IC RR TRACK
PR STRUCTURE
PR RR GATE
EX ℄ BRUSH
EX SECTION LINE
PR ℄ BRUSH
SOUTH ABUTMENT
PIER
NORTH ABUTMENT
ONLY
ONLY
MATCH LINE STA 57+75.00 (PR ℄ BRUSH)
MATCH LINE STA 62+50.00 (PR ℄ BRUSH)
PR RETAINING WALL
PR ROW
4-1/C#8 & 1/C #8 GND IN
2" PVC CONDUIT EIS
EX ROW
BCRA02
STA. 61+24.00, 26.69' RT.
BRIDGE PARAPET MOUNTED
(PR ℄ BRUSH)
4-1/C#8 & 1/C #8 GND IN
2" PVC CONDUIT EIS
12"x12"x6" SS JB ATS
4-1/C#8 & 1/C #8 GND IN
2" PVC CONDUIT UG
4-1/C#8 & 1/C #8 GND IN
2" PVC CONDUIT UG
BCRB01
STA. 59+30.00, 52.83' RT.
SET BACK 3 FT.
(PR ℄ BRUSH)
EX ROW
EX ROW
EX NS RR
TRACK
2048
2049
2050+00
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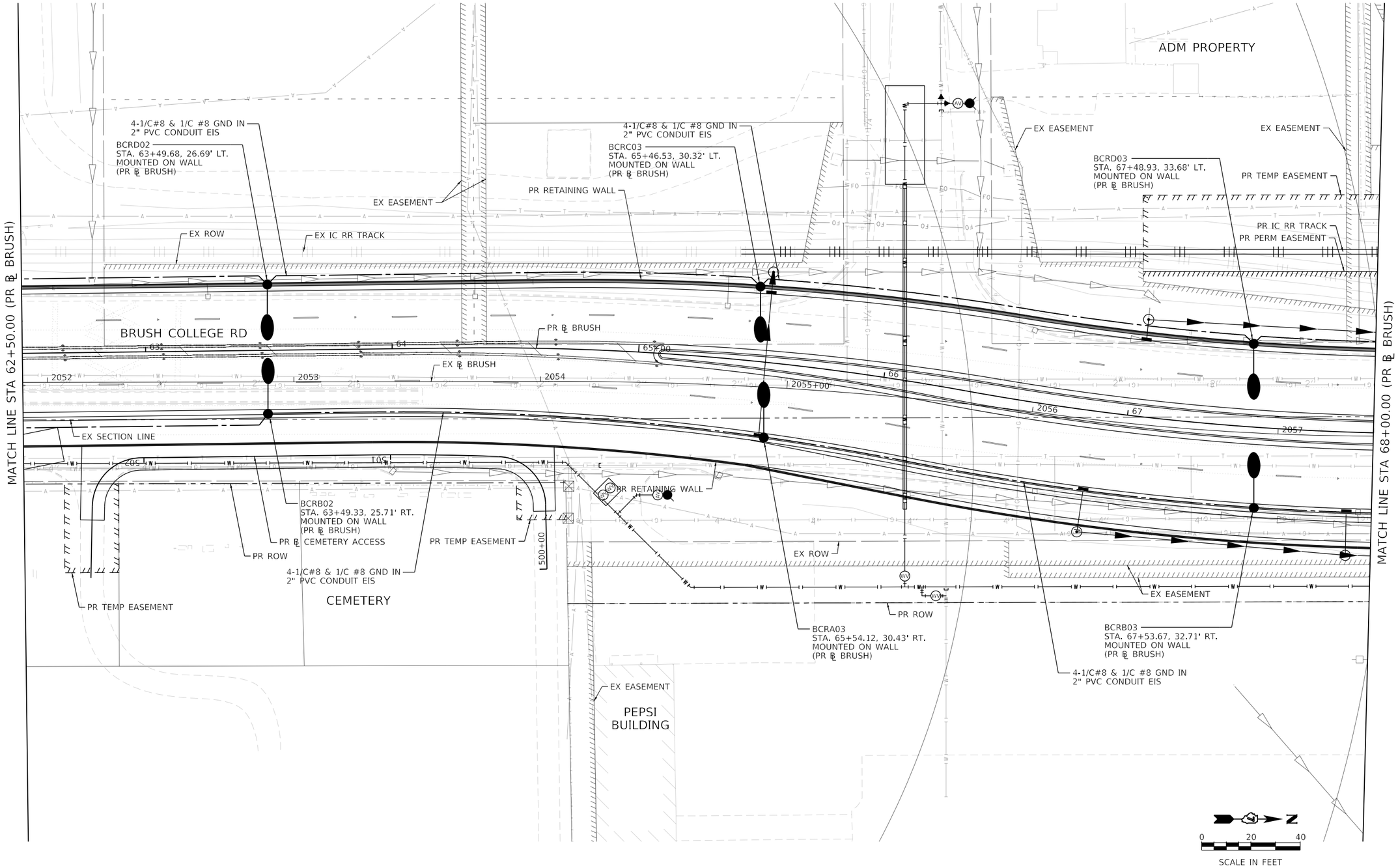

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AECOM
345 EAST ASH AVENUE, SUITE B
DECATUR, IL 62526-5161
PHONE: (217) 875-4830 FAX: (217) 875-3577

USER NAME = myersc	DESIGNED - MAE	REVISED -	
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PLOT DATE = 6/12/2020	DATE - 6/12/2020	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

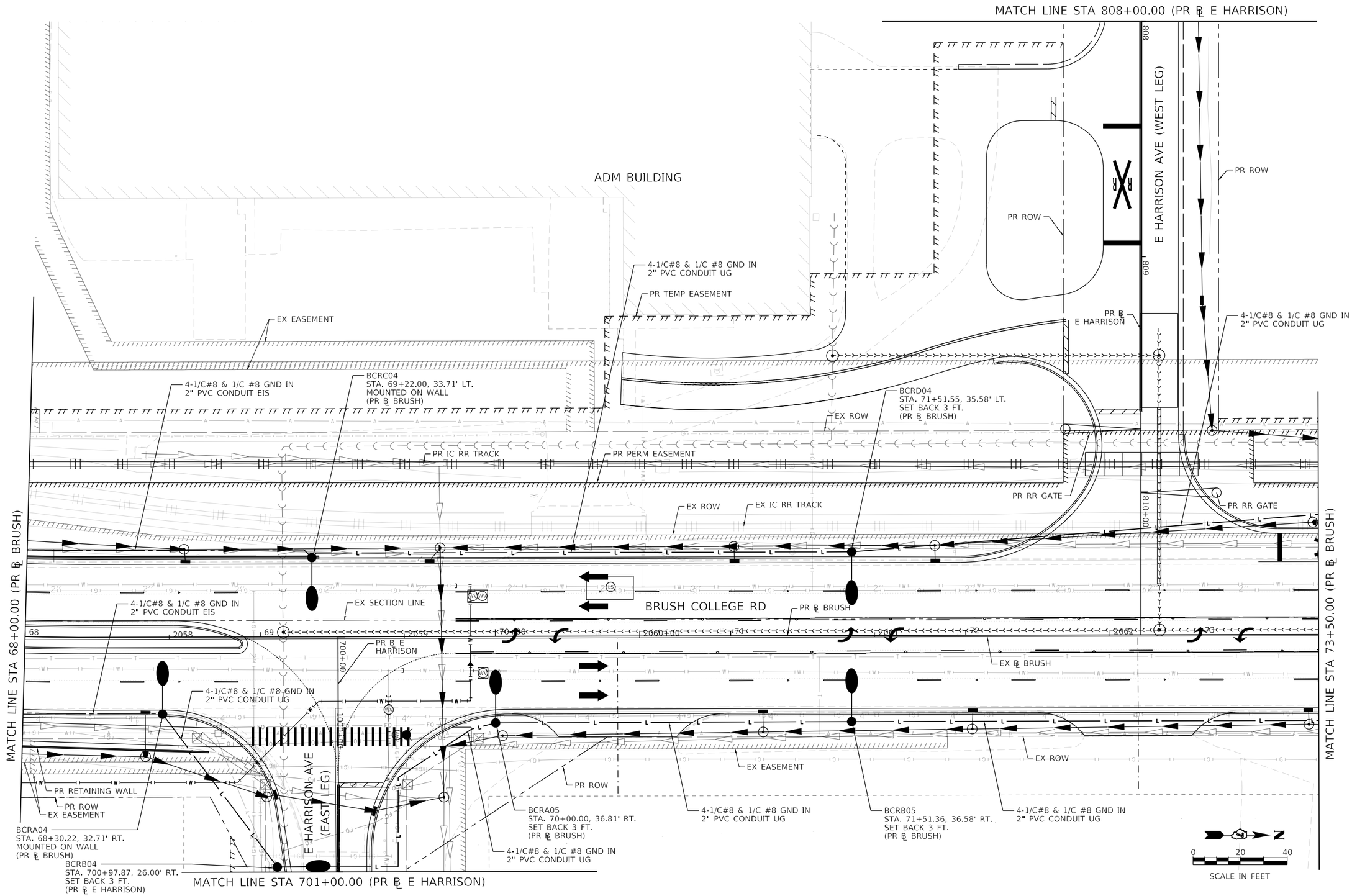
BRUSH COLLEGE ROAD
PROPOSED LIGHTING PLAN

SCALE: 1"=20' | SHEET 5 OF 12 SHEETS | STA. 62+50.00 TO STA. 68+00.00

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	09-00933-01-BR	MACON	572	367

CONTRACT NO. XXXX(XXX)

ILLINOIS | FED. AID PROJECT



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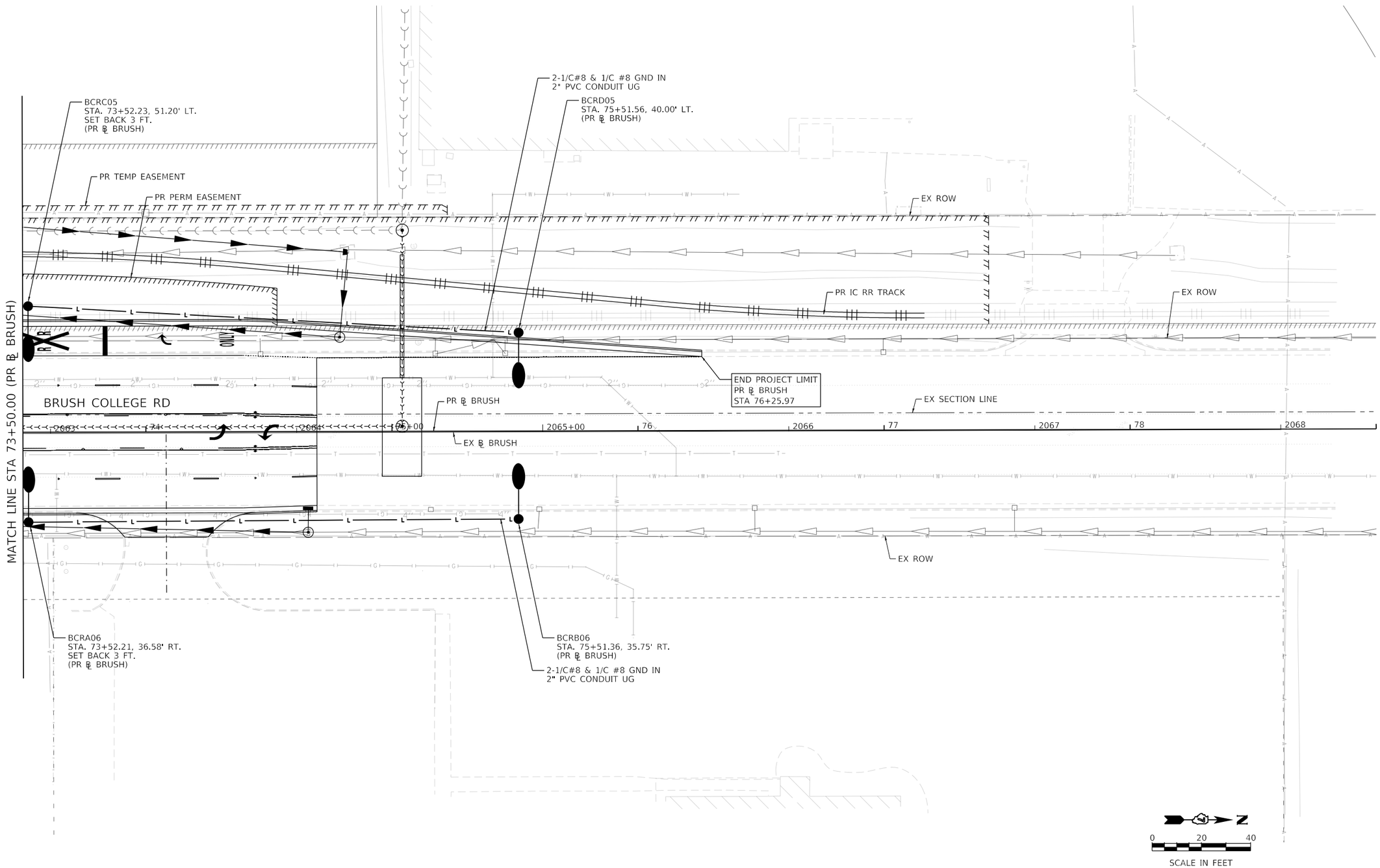
PLOT DATE = 6/12/2020	DATE - 6/12/2020	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BRUSH COLLEGE ROAD
PROPOSED LIGHTING PLAN

SCALE: 1"=20' | SHEET 6 OF 12 SHEETS | STA. 68+00.00 TO STA. 73+50.00

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	09-00933-01-BR	MACON	572	368
		CONTRACT NO. XXXX(XXX)		
	ILLINOIS	FED. AID PROJECT		



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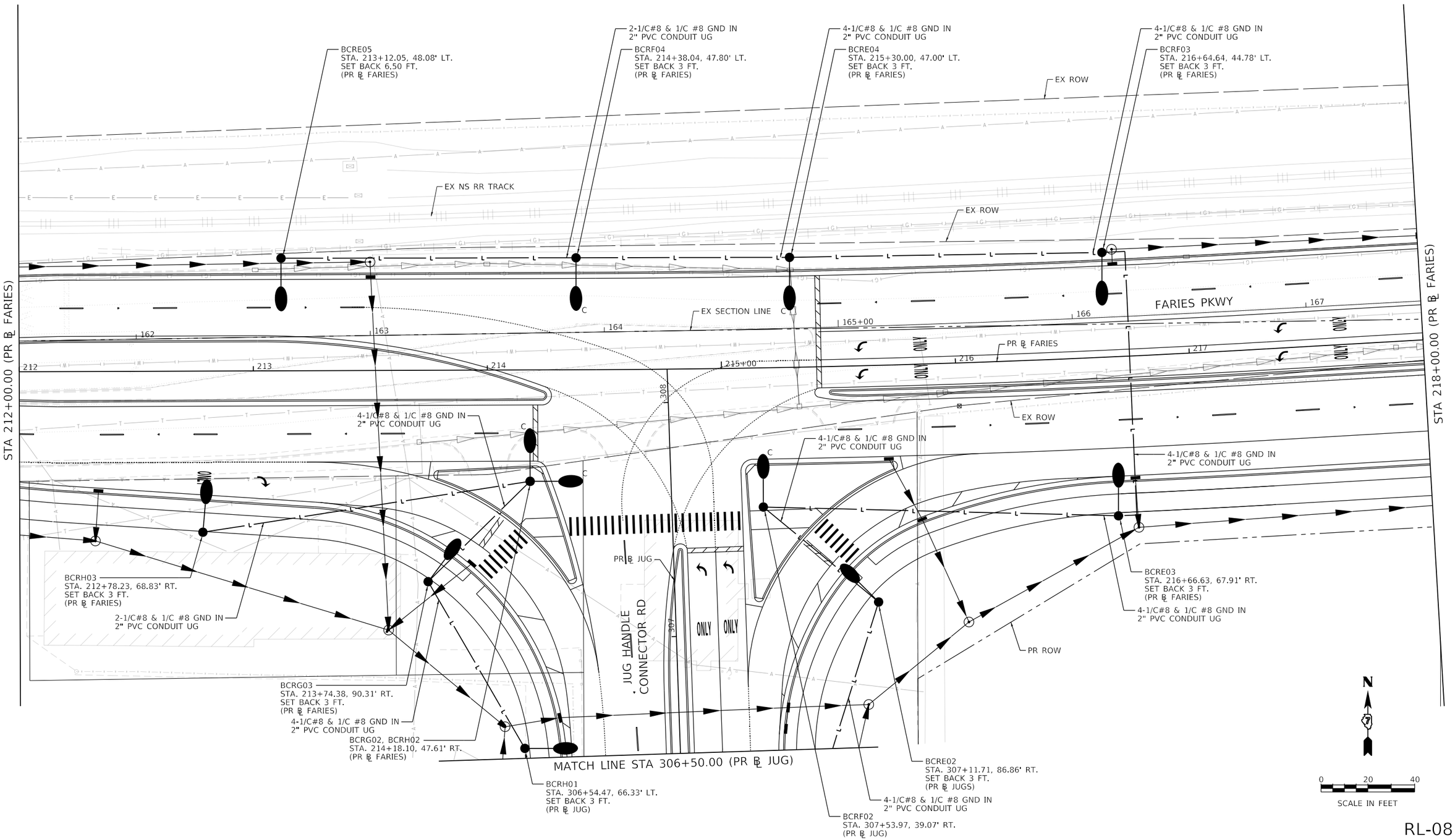
PLOT DATE = 6/12/2020	DATE - 6/12/2020	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BRUSH COLLEGE ROAD
PROPOSED LIGHTING PLAN

SCALE: 1"=20' | SHEET 7 OF 12 SHEETS | STA. 73+50.00 TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	09-00933-01-BR	MACON	572	369
		CONTRACT NO. XXXX(XXX)		
	ILLINOIS	FED. AID PROJECT		



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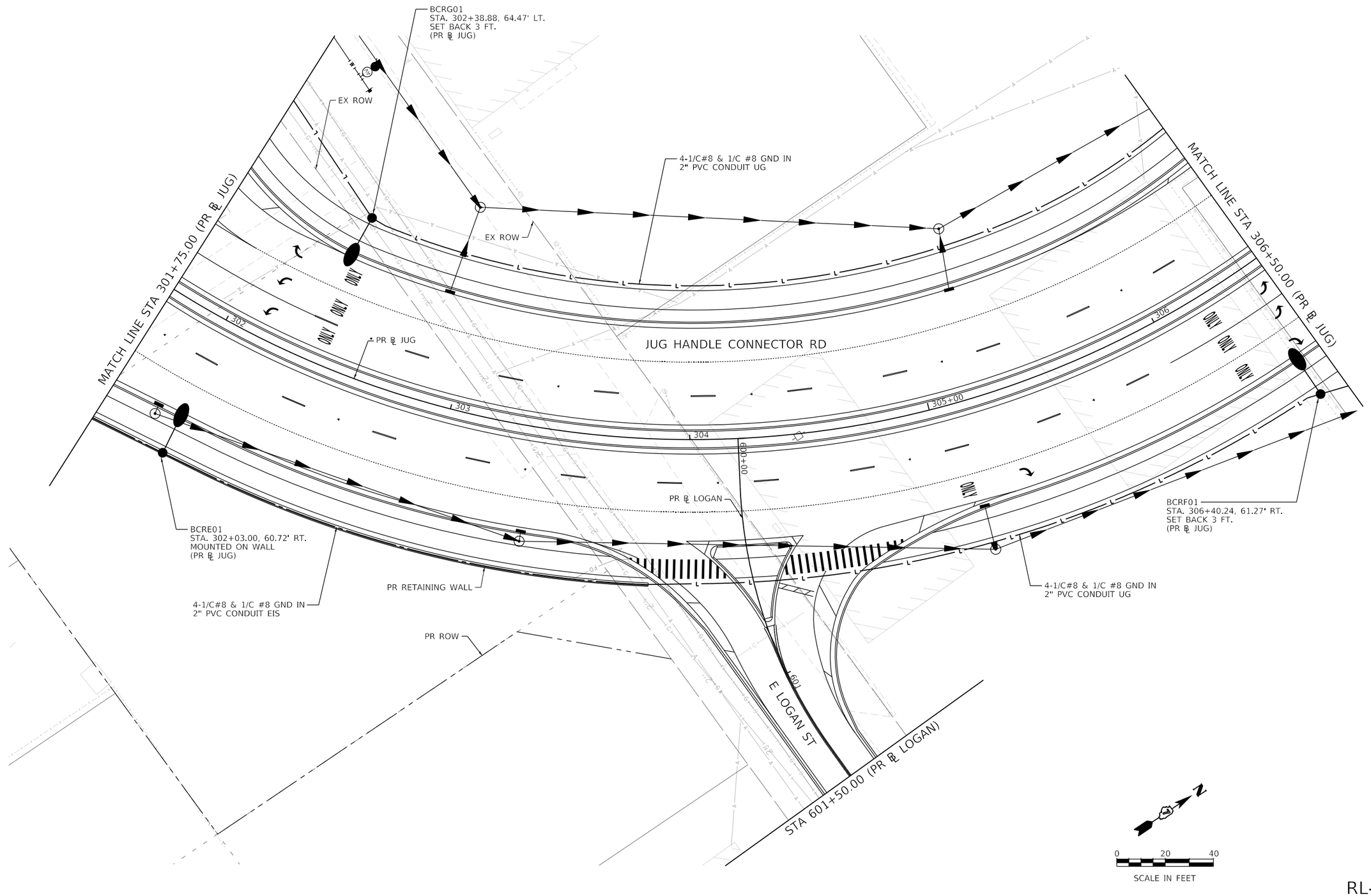
	DRAWN - CAM	REVISED -	
PLOT SCALE = 40.0000 ' / in.	CHECKED - WDS	REVISED -	
PLOT DATE = 6/12/2020	DATE - 6/12/2020	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FARIES PARKWAY
PROPOSED LIGHTING PLAN

SCALE: 1"=20' | SHEET 8 OF 12 SHEETS | STA. 212+00.00 TO STA. 218+00.00

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	09-00933-01-BR	MACON	572	370
		CONTRACT NO. XXXX(XXX)		
		ILLINOIS	FED. AID PROJECT	



RL-09

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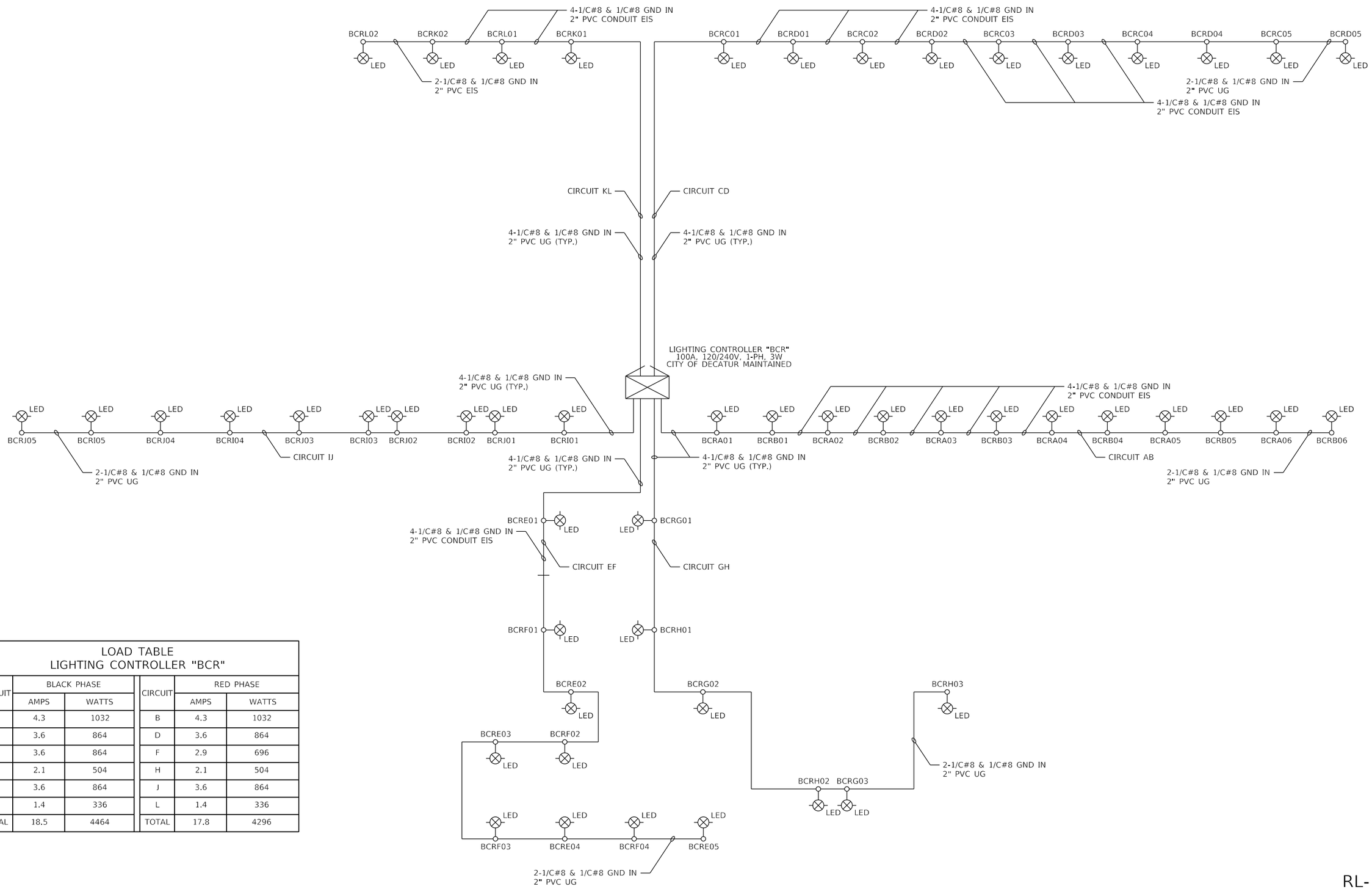
	DRAWN - CAM	REVISED -	
PLOT SCALE = 40.0000 ' / in.	CHECKED - WDS	REVISED -	
PLOT DATE = 6/12/2020	DATE - 6/12/2020	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

JUG HANDLE CONNECTOR ROAD
PROPOSED LIGHTING PLAN

SCALE: 1"=20' | SHEET 9 OF 12 SHEETS | STA. 301+75.00 TO STA. 306+50.00

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	09-00933-01-BR	MACON	572	371
		CONTRACT NO. XXXX(XXX)		
	ILLINOIS	FED. AID PROJECT		



LOAD TABLE
LIGHTING CONTROLLER "BCR"

CIRCUIT	BLACK PHASE		CIRCUIT	RED PHASE	
	AMPS	WATTS		AMPS	WATTS
A	4.3	1032	B	4.3	1032
C	3.6	864	D	3.6	864
E	3.6	864	F	2.9	696
G	2.1	504	H	2.1	504
I	3.6	864	J	3.6	864
K	1.4	336	L	1.4	336
TOTAL	18.5	4464	TOTAL	17.8	4296

RL-10

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AECOM
345 EAST ASH AVENUE SUITE B
DECATUR, IL 62526-6161
PHONE: (217) 875-4800 FAX: (217) 875-3577

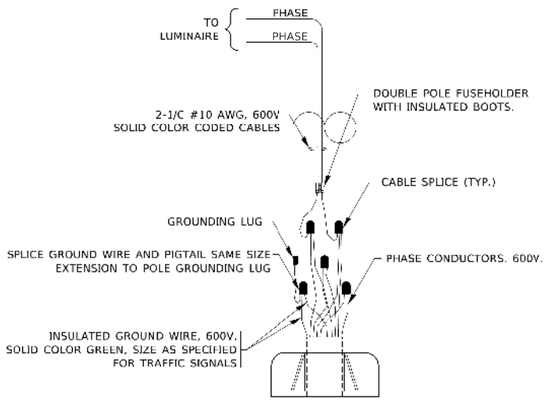
USER NAME = myersc	DESIGNED - MAE	REVISED -	
	DRAWN - CAM	REVISED -	
PLOT SCALE = 40.0000 ' / in.	CHECKED - WDS	REVISED -	
PLOT DATE = 6/12/2020	DATE - 6/12/2020	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROPOSED LIGHTING PLAN
LIGHTING CONTROLLER WIRING DIAGRAM

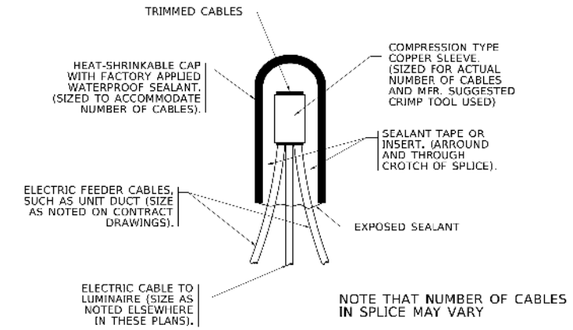
SCALE: N.T.S | SHEET 10 OF 12 SHEETS | STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	09-00933-01-BR	MACON	572	372
		CONTRACT NO. XXXX(XXX)		
	ILLINOIS	FED. AID PROJECT		



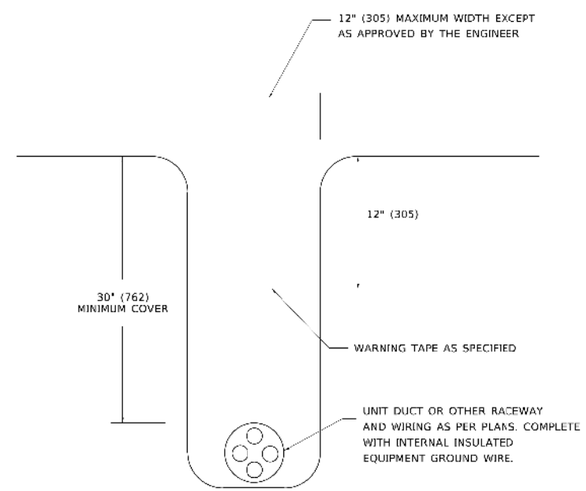
COMBINATION POLE WIRING DETAIL

(NOT TO SCALE)



TYPICAL SPLICE DETAIL

N.T.S.



TYPICAL WIRING IN TRENCH DETAIL

N.T.S.

RL-11

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AECOM
345 EAST ASH AVENUE, SUITE B
DECATUR, IL 62526-6161
PHONE: (217) 875-4800 FAX: (217) 875-3577

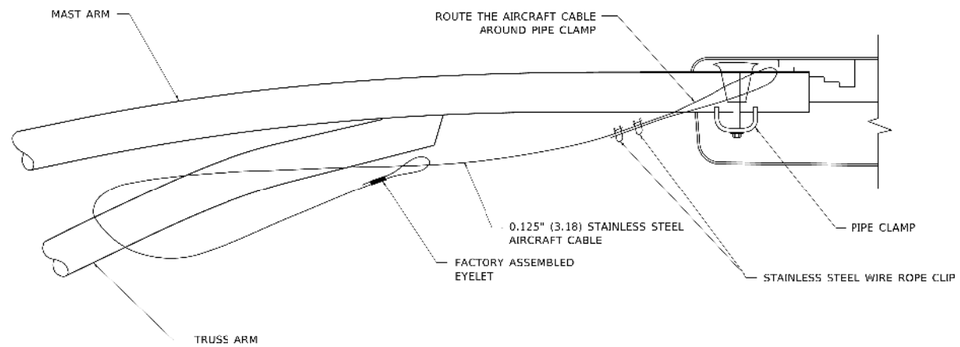
USER NAME = myersc	DESIGNED - MAE	REVISED -	
	DRAWN - CAM	REVISED -	
PLOT SCALE = 40.0000 ' / in.	CHECKED - WDS	REVISED -	
PLOT DATE = 6/12/2020	DATE - 6/12/2020	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

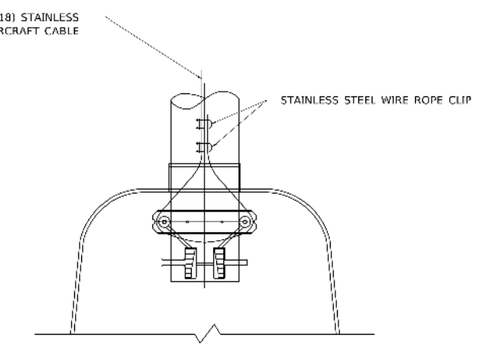
ELECTRICAL DETAILS

SCALE: N.T.S | SHEET 11 OF 12 SHEETS | STA. TO STA.

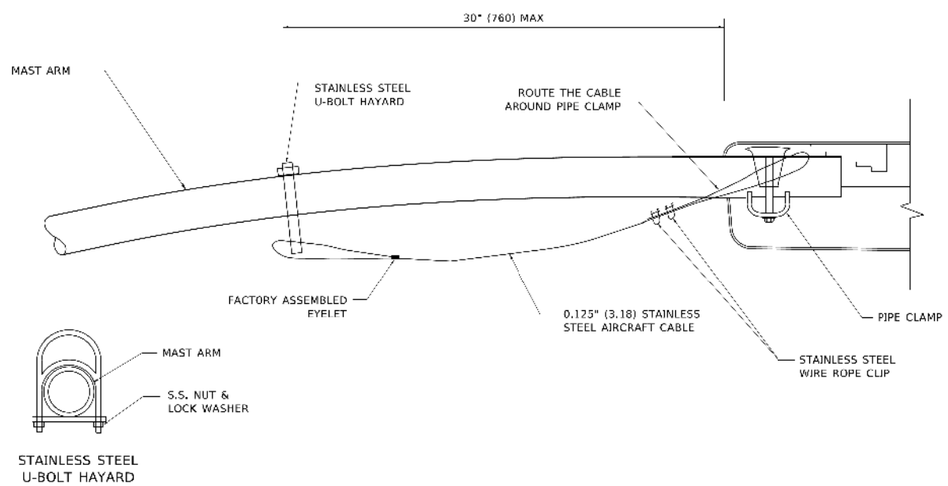
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	09-00933-01-BR	MACON	572	373
		CONTRACT NO. XXXX(XXX)		
	ILLINOIS	FED. AID PROJECT		



SIDE VIEW (TRUSS ARM)
N.T.S.



BOTTOM VIEW
N.T.S.



SIDE VIEW (SINGLE MEMBER OR DAVIT ARM)
N.T.S.

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETERS (INCHES) UNLESS OTHERWISE SHOWN.
2. CONTRACTOR SHALL ADJUST THE WIRE CLIP TO ELIMINATE ANY SLACK FROM THE WIRE ROPE.
3. THE 0.125" (3.18) STAINLESS STEEL AIRCRAFT CABLE SHALL REMAIN VISIBLE FROM THE GROUND LEVEL.
4. THE BREAKING STRENGTH OF THE CABLE SHALL BE 1700 LBS. MIN.

RL-12

MODEL: Default
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AECOM
345 EAST ASH AVENUE, SUITE B
DECATUR, IL 62526-5161
PHONE: (217) 875-4800 FAX: (217) 875-3377

USER NAME = myersc	DESIGNED - MAE	REVISED -	
	DRAWN - CAM	REVISED -	
PLOT SCALE = 40.0000 ' / in.	CHECKED - WDS	REVISED -	
PLOT DATE = 6/12/2020	DATE - 6/12/2020	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ELECTRICAL DETAILS

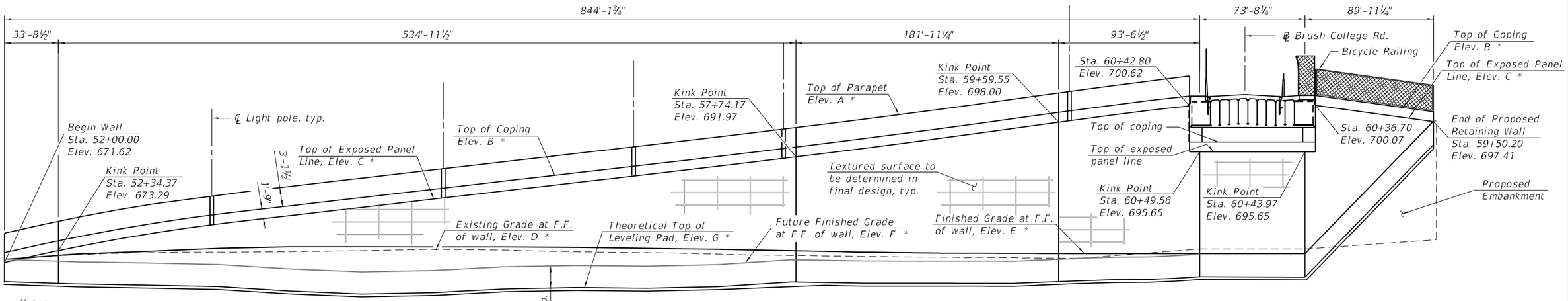
SCALE: N.T.S | SHEET 12 OF 12 SHEETS | STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	09-00933-01-BR	MACON	572	374
		CONTRACT NO. XXXX(XXX)		
	ILLINOIS	FED. AID PROJECT		

Benchmark: "M" in Mueller on fire hydrant at Southeast corner of Cerro Gordo St. and Brush College Rd. – Elev. 652.58.

Existing Structure: None

Traffic Control: The existing Brush College Road shall be closed and traffic will be detoured during construction.



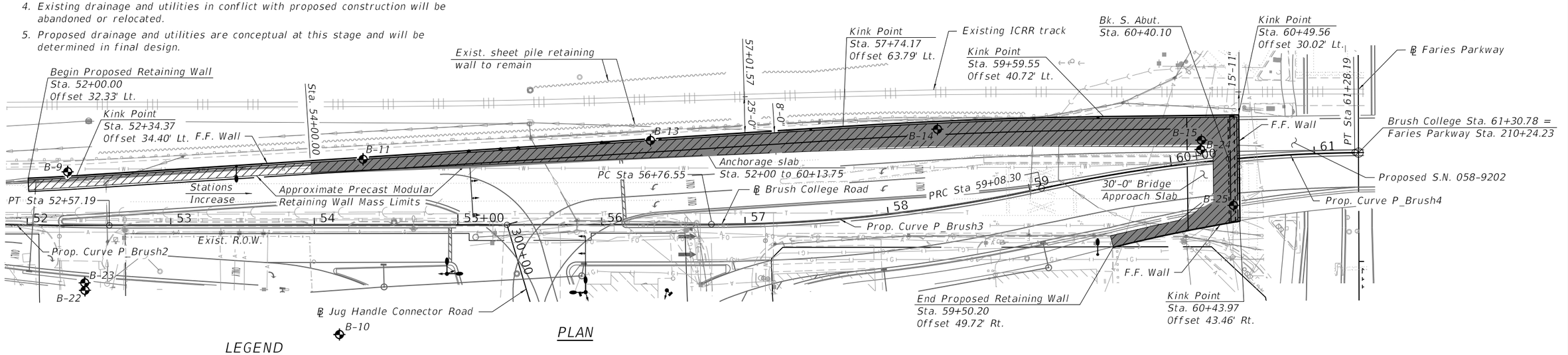
UNFOLDED ELEVATION

(Projected View – F.F. of Wall)

* For Elevations, see Wall Elevations Table on sheet 2 of 3.

Notes:

1. Wall offsets are measured from ℄ Brush College Road to front face of precast modular units. Horizontal dimensions are measured along F.F. of wall units.
2. F.F. denotes Front Face.
3. B.F. denotes Back Face.
4. Existing drainage and utilities in conflict with proposed construction will be abandoned or relocated.
5. Proposed drainage and utilities are conceptual at this stage and will be determined in final design.



PLAN

LEGEND

Soil Boring Location	Proposed above ground Lighting
Existing Aerial	Proposed above ground Inlet
Existing Electric	Proposed traffic signal
Existing Fiber Optic	Approximate Precast Modular Retaining Wall Mass Limits
Existing Gas	Approximate Limits of Lightweight Concrete Cellular Fill
Existing Sanitary Sewer	
Existing Storm Sewer	
Existing underground Telephone	
Existing Water	

HIGHWAY CLASSIFICATION

F.A.U. Rte. 7448 – Brush College Road
Functional Class: Urban Minor Arterial
ADT: 13,900 (2010), 18,950 (2035)
ADTT: 1,029 (2010), 1,402 (2035)
DHV: 1,900 (2035)
Design Speed: 40 m.p.h.
Posted Speed: 35 m.p.h.
Two-Way Traffic
Directional Distribution: 50:50

DESIGN SPECIFICATIONS

2017 AASHTO LRFD Bridge
Design Specifications, 8th Edition

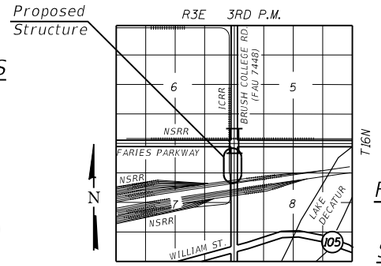
DESIGN STRESSES

FIELD UNITS

f'c = 3,500 psi
fy = 60,000 psi (Reinforcement)

PRECAST UNITS

f'c = 4,500 psi (Precast Panels)



LOCATION SKETCH

GENERAL PLAN & ELEVATION
BRUSH COLLEGE ROAD
F.A.U. 7448 – SECTION 09-00933-01-BR
MACON COUNTY
STA. 52+00.00 LT TO STA. 59+50.20 RT
STRUCTURE NO. 058-W003

LAST SAVED DATE S:\ASTSAVEDDATES

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design firm no. 184001036

whks engineers • planners • land surveyors

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PLOT DATE = 6/17/2020	CHECKED - SDS	REVISED	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN AND ELEVATION
STRUCTURE NO. 058-W003

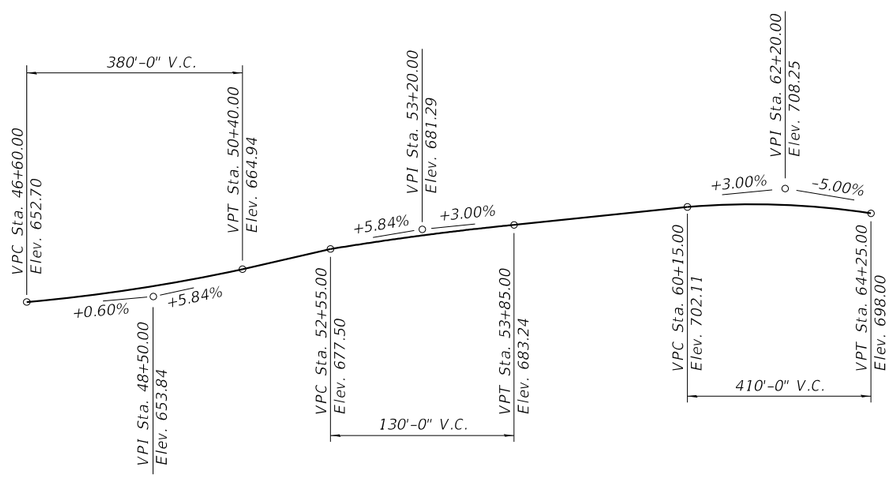
SHEET NO. 1 OF 3 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
7448	09-00933-01-BR	MACON	572	375
		CONTRACT NO. 6WGY(165)		
		ILLINOIS FED. AID PROJECT		

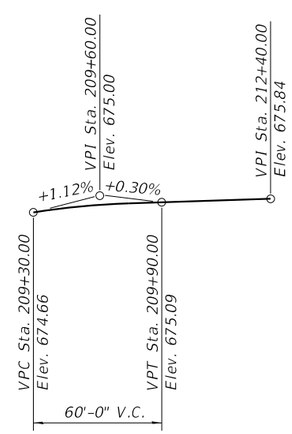
Elevation A – Top of Parapet
Elevation B – Top of Coping
Elevation C – Top of Exposed Panel Line
Elevation D – Existing Grade at F.F. of wall
Elevation E – Finished Grade at F.F. of wall
Elevation F – Future Finished Grade at F.F. of wall
Elevation G – Theoretical Top of Leveling Pad
Elevation H – Toe of Parapet

WALL ELEVATIONS

Station	Offset	Elevation A	Elevation B	Elevation C	Elevation D	Elevation E	Elevation F	Elevation G	Elevation H
52+00.00	32.33' Lt.	676.49	673.37	671.62	672.90	672.90	672.90	668.90	673.24
52+34.37	34.40' Lt.	678.16	675.04	673.29	673.52	673.87	673.09	669.09	674.91
52+50.00	35.38' Lt.	678.92	675.80	674.05	673.72	674.32	673.18	669.18	675.67
53+00.00	38.52' Lt.	681.35	678.23	676.48	674.10	674.53	672.56	668.56	678.10
53+50.00	41.66' Lt.	683.74	680.62	678.87	674.21	674.67	672.24	668.24	680.49
54+00.00	44.80' Lt.	685.79	682.67	680.92	674.30	674.86	671.21	667.21	682.54
54+50.00	47.95' Lt.	687.43	684.31	682.56	674.48	675.06	670.36	666.36	684.18
55+00.00	51.09' Lt.	688.87	685.75	684.00	674.69	675.32	670.39	666.39	685.62
55+50.00	54.23' Lt.	690.31	687.19	685.44	674.58	675.29	671.19	667.19	687.06
56+00.00	57.37' Lt.	691.75	688.63	686.88	674.28	674.99	671.25	667.25	688.50
56+50.00	60.51' Lt.	693.18	690.06	688.31	674.10	674.71	671.26	667.26	689.93
57+00.00	63.32' Lt.	694.63	691.51	689.76	673.84	674.44	671.60	667.60	691.38
57+50.00	64.17' Lt.	696.11	692.99	691.24	673.63	674.27	672.30	668.30	692.86
57+74.17	63.79' Lt.	696.84	693.72	691.97	673.53	674.19	672.52	668.52	693.59
58+00.00	62.74' Lt.	697.64	694.52	692.77	673.44	674.10	672.74	668.74	694.39
58+50.00	58.56' Lt.	699.22	696.10	694.35	673.31	673.76	672.36	668.36	695.97
59+00.00	51.47' Lt.	700.86	697.74	695.99	673.23	673.79	671.96	667.96	697.61
59+50.00	42.31' Lt.	702.55	699.43	697.68	673.07	673.42	673.29	669.29	699.30
59+59.55	40.72' Lt.	702.87	699.75	698.00	673.10	673.44	–	669.44	699.62
60+00.00	34.93' Lt.	704.20	701.08	699.33	673.32	673.70	–	669.70	700.95
60+42.80	30.55' Lt.	705.49	702.37	700.62	673.70	674.38	–	670.38	702.24
60+49.56	30.02' Lt.	–	697.40	695.65	674.26	674.26	–	670.26	–
60+43.97	43.46' Rt.	–	697.40	695.65	673.92	673.92	–	669.92	–
60+36.70	43.95' Rt.	–	701.82	700.07	673.70	681.47	–	677.47	–
60+25.00	44.73' Rt.	–	701.49	699.74	673.52	683.92	–	679.92	–
60+00.00	46.40' Rt.	–	700.72	698.97	673.22	689.14	–	685.14	–
59+75.00	48.07' Rt.	–	699.93	698.18	673.31	694.36	–	690.36	–
59+50.20	49.72 Rt.	–	699.16	697.41	675.64	699.52	–	695.52	–



PROFILE GRADE
(Along ℄ Brush College Road)



PROFILE GRADE
(Along ℄ Faries Parkway)

PROP. CURVE P_BRUSH2
BRUSH COLLEGE RD.

PI STA. = 51+91.51
Δ = 3° 00' 41" (LT)
D = 2° 17' 31"
R = 2,500.00'
T = 65.72'
L = 131.40
E = 0.86'
e = NC
T.R. = N/A
S.E. RUN = N/A
P.C. STA. = 51+25.79
P.T. STA. = 52+57.19

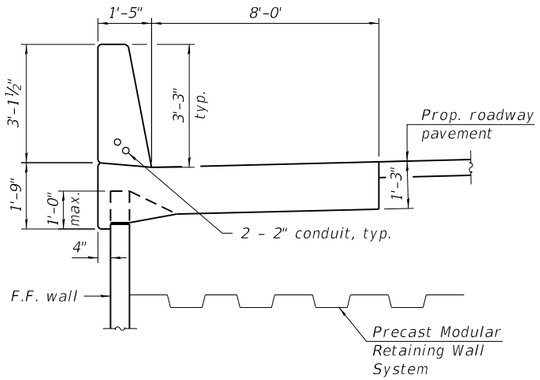
PROP. CURVE P_BRUSH3
BRUSH COLLEGE RD.

PI STA. = 57+92.87
Δ = 12° 17' 41" (LT)
D = 5° 18' 19"
R = 1,080.00'
T = 116.32'
L = 231.75'
E = 6.25'
e = NC
T.R. = N/A
S.E. RUN = N/A
P.C. STA. = 56+76.55
P.T. STA. = 59+08.30

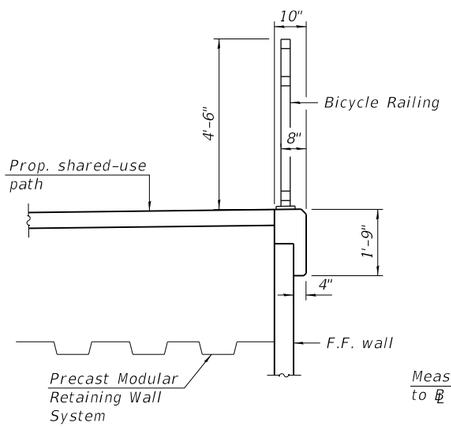
PROP. CURVE P_BRUSH4
BRUSH COLLEGE RD.

PI STA. = 60+18.63
Δ = 11° 39' 57" (RT)
D = 5° 18' 19"
R = 1,080.00'
T = 110.33'
L = 219.89'
E = 5.62'
e = NC
T.R. = N/A
S.E. RUN = N/A
P.C. STA. = 59+08.30
P.T. STA. = 61+28.19

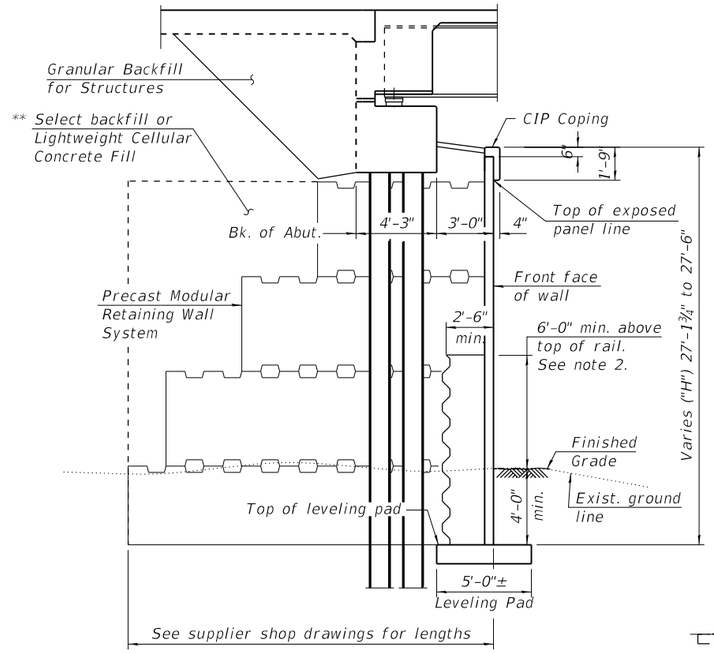
GENERAL DETAILS
BRUSH COLLEGE ROAD
F.A.U. 7448 - SECTION 09-00933-01-BR
MACON COUNTY
STA. 52+00.00 LT TO STA. 59+50.20 RT
STRUCTURE NO. 058-W003



ANCHORAGE SLAB DETAIL

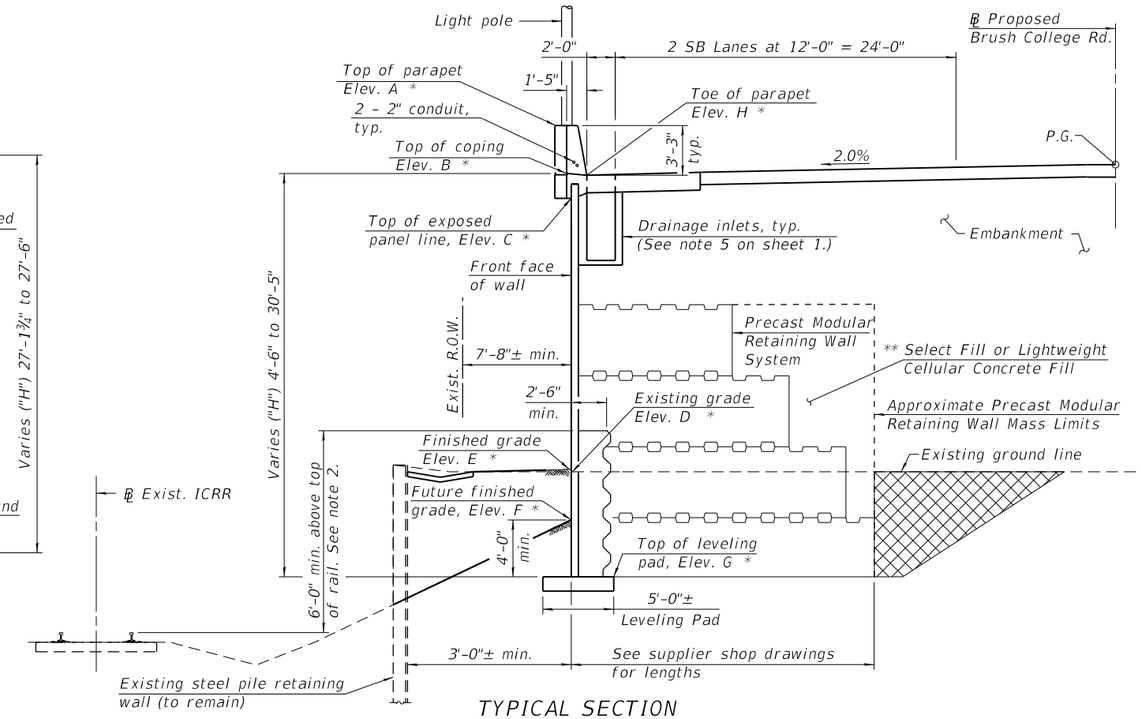


BICYCLE RAILING DETAIL



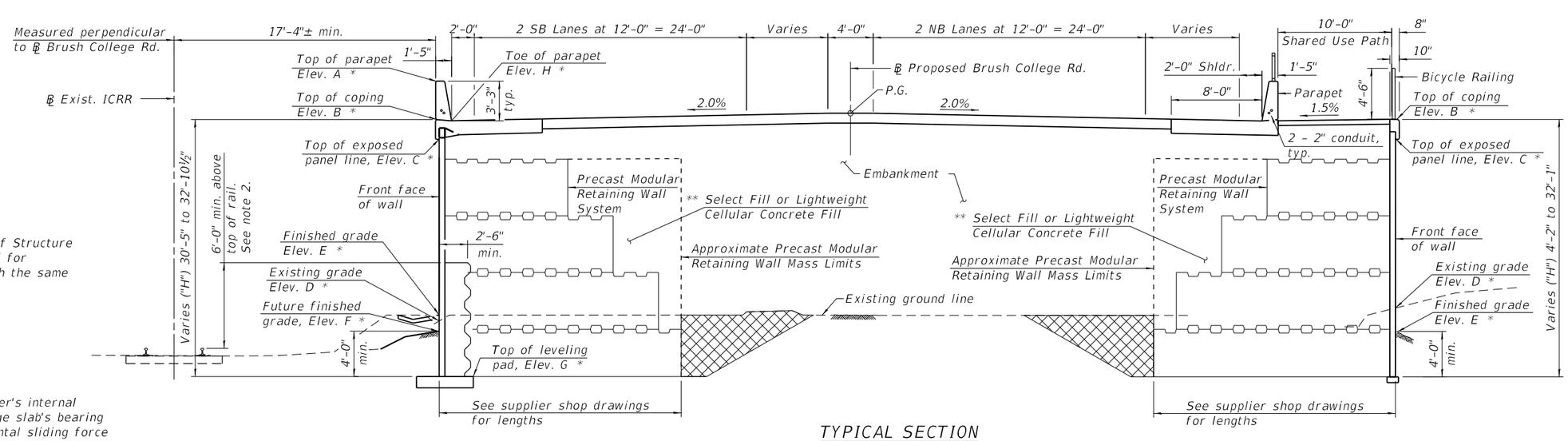
END VIEW MSE WALL AT ABUTMENT

Looking West



TYPICAL SECTION

Looking North
(Sta. 52+00.00 to Sta. 59+50.20)



TYPICAL SECTION

Looking North
(Sta. 59+50.20 to Sta. 60+49.56)

LEGEND

Over excavation beyond the limits of Structure Excavation. This area not measured for payment. Area to be back-filled with the same material as used for Select Fill.

Note:

1. The Precast Modular Retaining Wall supplier's internal stability design shall account for anchorage slab's bearing pressure surcharge of 1.0 ksf and horizontal sliding force of 0.67 kips/ft. of wall.
2. Retaining wall shall be Crashworthy a min. of 6'-0" above top of rail for wall within 25' of the ℄ existing rail.

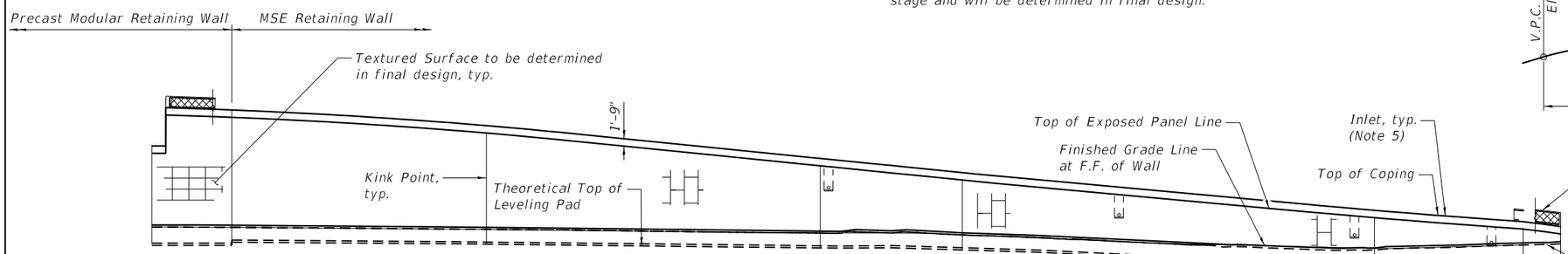
* For Elevations, see Wall Elevations Table on sheet 2 of 3.

** Limits of Select Fill and Lightweight Cellular Concrete Fill will be determined in final design.

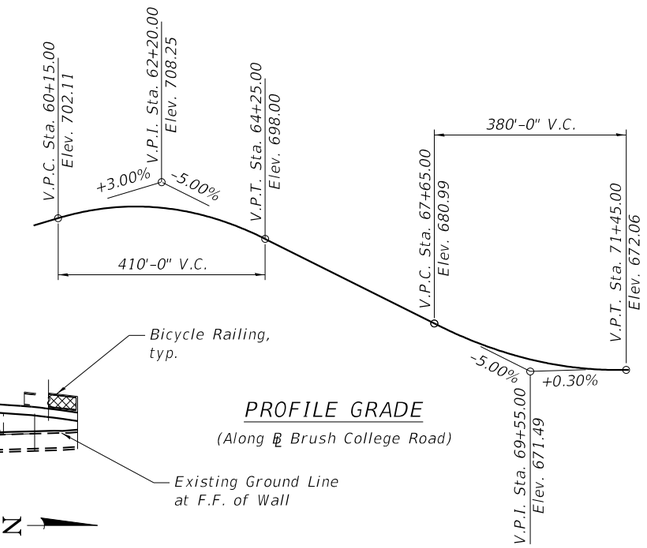
TYPICAL SECTION
BRUSH COLLEGE ROAD
F.A.U. 7448 - SECTION 09-00933-01-BR
MACON COUNTY
STA. 52+00.00 LT TO STA. 59+50.20 RT
STRUCTURE NO. 058-W003

Benchmark: "M" in Mueller on fire hydrant at Southeast corner of Cerro Gordo St. and Brush College Rd. – Elev. 652.58
Existing Structure: None. New MSE wall to be constructed to support the north abutment and approach roadway to proposed SN 058-9202.
Road to be closed during construction and traffic to be detoured.

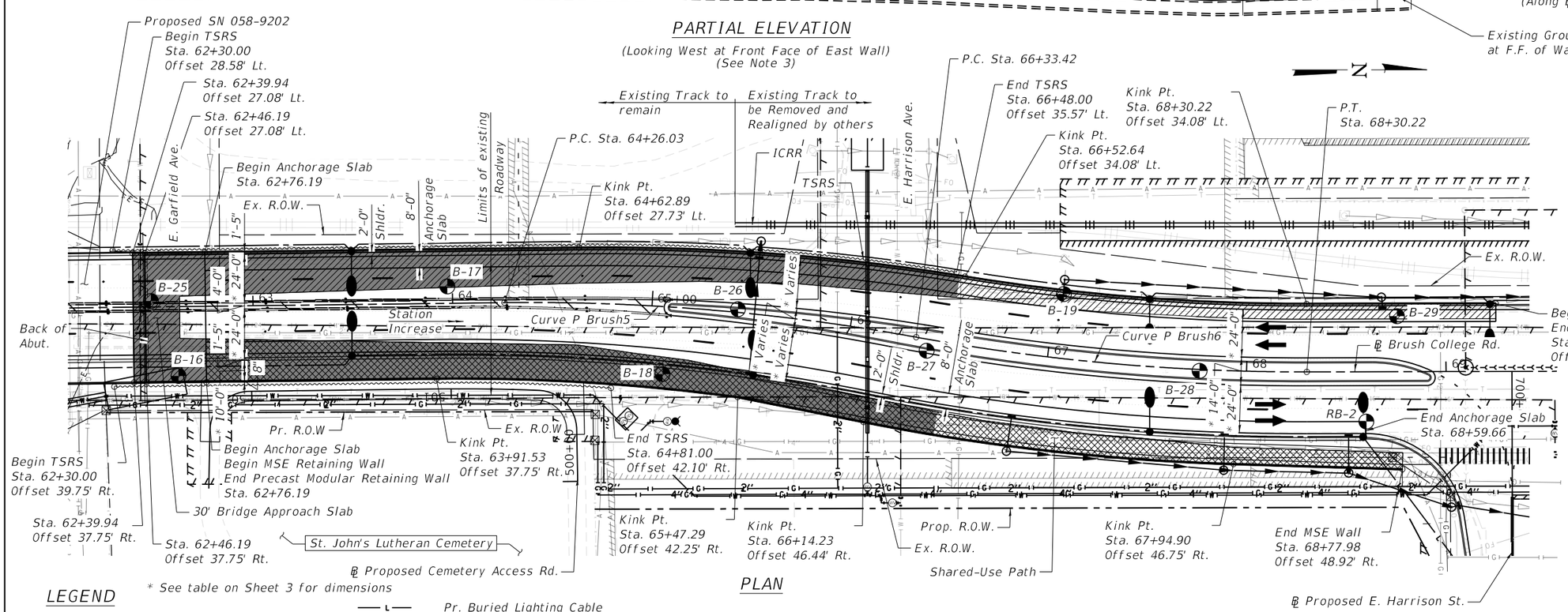
Notes:
1. Wall offsets are measured from ℄ Brush College Rd. to the front face of precast panels.
2. F.F. denotes front face.
3. See Sheet 2 for unfolded elevation view and wall details.
4. Existing drainage and utilities in conflict with proposed construction will be abandoned or relocated.
5. Proposed drainage and utilities are conceptual at this stage and will be determined in final design.



PARTIAL ELEVATION
(Looking West at Front Face of East Wall)
(See Note 3)



PROFILE GRADE
(Along ℄ Brush College Road)



* See table on Sheet 3 for dimensions

PLAN

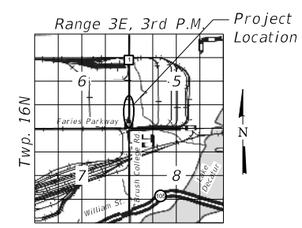
DESIGN SPECIFICATIONS

2017 AASHTO LRFD Bridge Design Specifications, 8th Edition

DESIGN STRESSES

FIELD UNITS
f'c = 3,500 psi
fy = 60,000 psi (Reinforcement)

PRECAST UNITS
f'c = 4,500 psi



LOCATION SKETCH

LEGEND

- Ex. Gas Line
- Ex. Water Line
- Ex. Underground Telephone Line
- Ex. Aerial Line
- Ex. Storm Sewer
- Ex. Sanitary Sewer
- Ex. Easement
- Ex. RR Track
- Ex. Underground Fiber Optic Line
- Approximate Precast Modular Retaining Wall Mass Limits
- Approximate Limits of Reinforced Soil Mass
- Approximate Limits of Lightweight Concrete Cellular Fill
- Pr. Buried Lighting Cable
- Pr. Gas Line
- Pr. Water Line
- Pr. Temporary Easement
- Pr. Underground Sanitary Sewer
- Pr. Storm Sewer
- Pr. RR Track
- Pr. Above Ground Lighting
- Pr. Drainage Inlet
- Soil Boring Location
- Temporary Soil Retention System (TSRS)
- Water Line Removal

PROP. CURVE P_BRUSH-5

P.I. Sta. = 65+30.05
Δ = 11°00'08" (RT)
D = 5°18'19"
R = 1,080.00'
T = 104.01'
L = 207.39'
E = 5.00'
e = NC (40 mph)
T.R. = N/A
S.E. Run = N/A
P.C. Sta. = 64+26.03
P.T. Sta. = 66+33.42

PROP. CURVE P_BRUSH-6

P.I. Sta. = 67+32.09
Δ = 10°26'27" (LT)
D = 5°18'19"
R = 1,080.00'
T = 98.67'
L = 196.80'
E = 4.50'
e = NC (40 mph)
T.R. = N/A
S.E. Run = N/A
P.C. Sta. = 66+33.42
P.T. Sta. = 68+30.22

HIGHWAY CLASSIFICATION

F.A.U. Rte. 7448 - Brush College Road
Functional Class; Urban Minor Arterial
ADT: 13,900 (2010); 18,950 (2035)
ADTT: 1,029 (2010); 1402 (2035)
DHV: 1,900 (2035)
Design Speed: 40 m.p.h.
Posted Speed: 35 m.p.h.
Two-Way Traffic
Directional Distribution: 50:50

GENERAL PLAN & ELEVATION
BRUSH COLLEGE ROAD
F.A.U. 7448 - SECTION 09-00933-01-BR
MACON COUNTY
STA. 62+39.94 TO STA. 69+25.00
STRUCTURE NO. 058-W004

FILE NAME 68083202_North Wall_GPE_RW4-01.dgn

QUIGG ENGINEERING INC

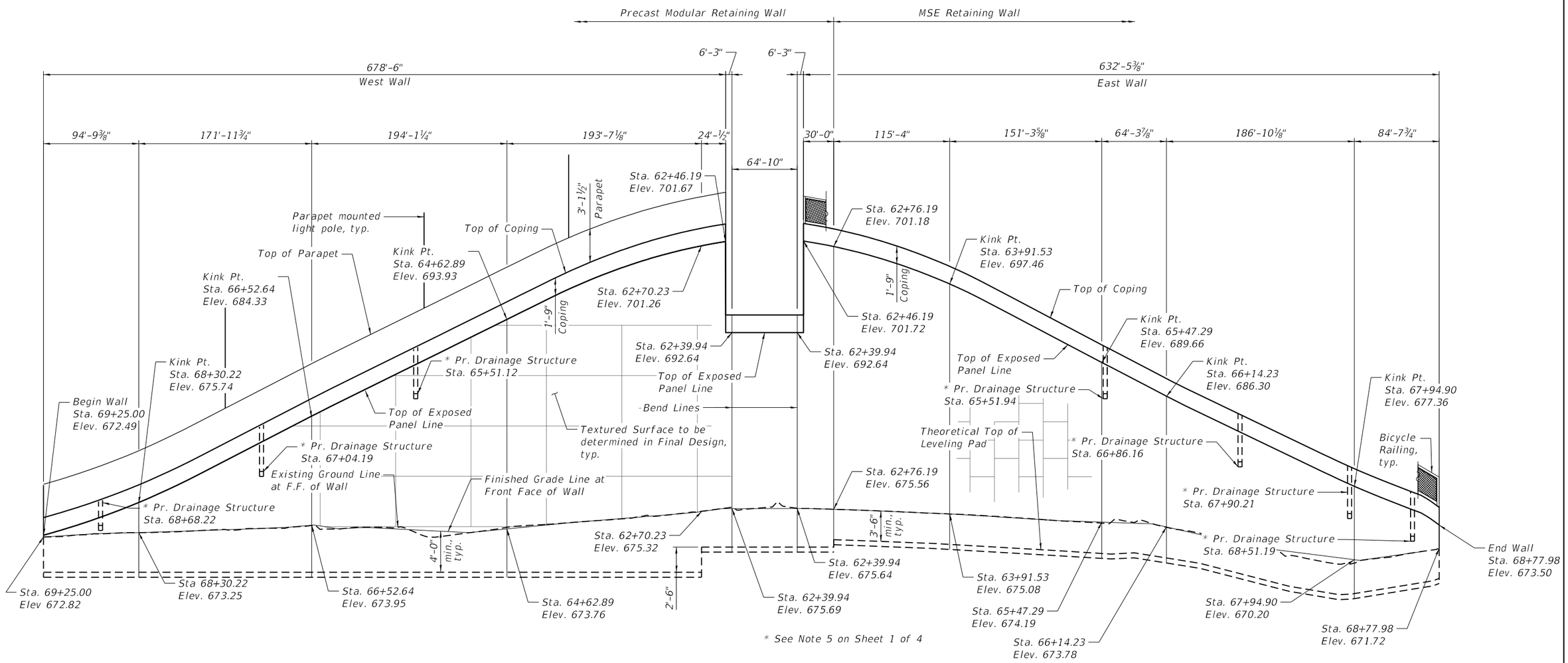
USER NAME = lcriscione	DESIGNED - KWB	REVISED -	
	CHECKED - MDC	REVISED -	
PLOT SCALE = 60:0.0003 ':' / in.	DRAWN - LMC	REVISED -	
PLOT DATE = 6/18/2020	CHECKED - MDC	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN & ELEVATION
STRUCTURE NO. 058-W004

SCALE: | SHEET 1 OF 4 SHEETS | STA. 62+39.94 TO STA. 69+25.00

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
7448	09-00933-01-BR	MACON	572	378
		CONTRACT NO. 6WGY(165)		
		ILLINOIS FED. AID PROJECT		



UNFOLDED ELEVATION

(Looking at Front Face of Wall)

RETAINING WALL ELEVATION
BRUSH COLLEGE ROAD
F.A.U. 7448 - SECTION 09-00933-01-BR
MACON COUNTY
STA. 62+39.94 TO STA. 69+25.00
STRUCTURE NO. 058-W004

FILE NAME 68803282_North Wall_DevelopedElev_RW4-03.dgn

QUIGG ENGINEERING INC

USER NAME = lcriscione	DESIGNED - KWB	REVISED -	
	CHECKED - MDC	REVISED -	
PLOT SCALE = 0:2.0000 ':' / in.	DRAWN - LMC	REVISED -	
PLOT DATE = 6/18/2020	CHECKED - MDC	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

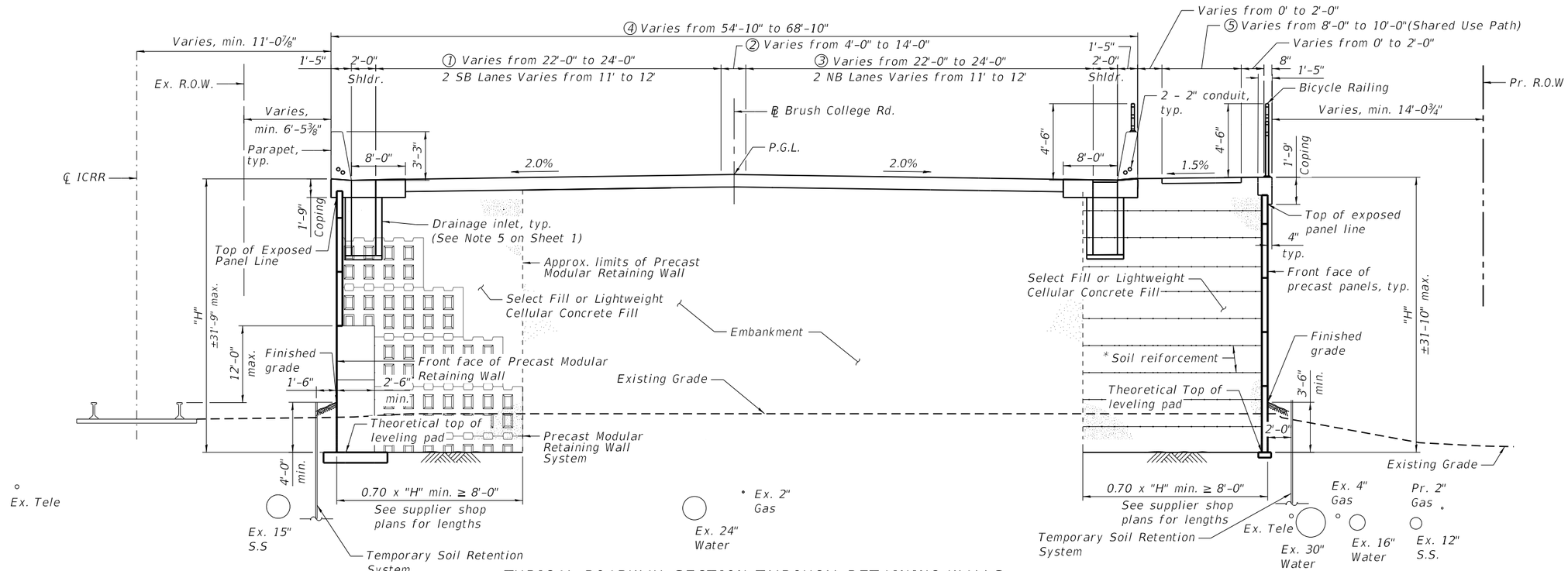
DEVELOPED ELEVATION
STRUCTURE NO. 058-W004

SCALE: | SHEET 2 OF 4 SHEETS | STA. 62+39.94 TO STA. 69+25.00

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
7448	09-00933-01-BR	MACON	572	379

CONTRACT NO. 6WGY(165)

ILLINOIS FED. AID PROJECT



TYPICAL ROADWAY SECTION THROUGH RETAINING WALLS

(Looking North)

ROADWAY DIMENSION TABLE

Station	①	②	③	④	⑤	
62+39.94	22'-0"	4'-0"	22'-0"	54'-10"	10'-0"	
63+91.53	22'-0"	4'-0"	22'-0"	54'-10"	10'-0"	
64+01.10	22'-0"	4'-0"	22'-0½"	54'-10½"	10'-0"	
64+52.58	22'-0"	5'-2¾"	22'-6¼"	56'-7"	10'-0"	
65+47.31	22'-11¼"	9'-9⅜"	23'-4½"	62'-11⅜"	10'-0"	
66+14.24	23'-7¾"	13'-0⅝"	23'-11¾"	67'-6⅛"	8'-0"	
66+20.54	23'-8⅞"	13'-4¼"	24'-0"	67-11⅛"	8'-0"	
66+52.64	24'-0"	14'-0"	24'-0"	68'-10"	8'-0"	
68+59.66	24'-0"	14'-0"	24'-0"	68'-10"	8'-0"	(Note 2)
68+77.98	31'-0"	12'-4⅝"	41'-7"	83'-8"	8'-0"	

*The wall supplier's interval stability design shall account for the anchorage slab's bearing pressure surcharge of 1.0 ksf and horizontal sliding force of 0.67 kips/ft. of wall.

Notes:
1. See Notes 4 and 5 on Sheet 1 for information regarding existing and proposed utilities.
2. See Sheet 4 of 4 for section through east wall beyond station 68+59.66
3. Limits of Select Fill and Cellular Concrete Fill will be determined in final design.

TYPICAL SECTION AND DETAILS
BRUSH COLLEGE ROAD
F.A.U. 7448 - SECTION 09-00933-01-BR
MACON COUNTY
STA. 62+39.94 TO STA. 69+25.00
STRUCTURE NO. 058-W004

FILE NAME 68083202.North Wall.Typical.Sections.RW4-04.dgn

QUIGG ENGINEERING INC

USER NAME = lcriscione	DESIGNED - KWB	REVISED -	
	CHECKED - MDC	REVISED -	
PLOT SCALE = 0:2.0000 ':' / in.	DRAWN - LMC	REVISED -	
PLOT DATE = 6/18/2020	CHECKED - MDC	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

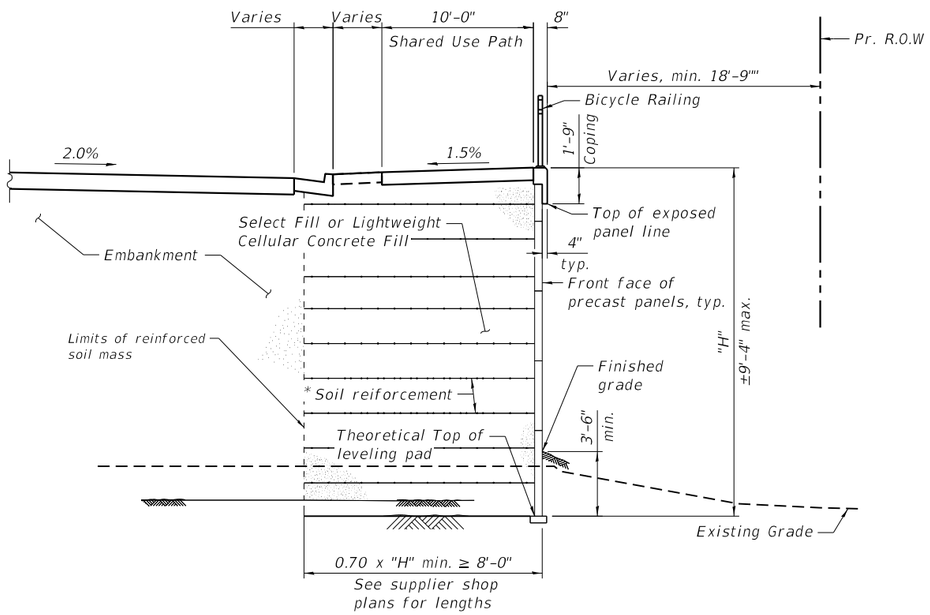
TYPICAL SECTION
STRUCTURE NO. 058-W004

SCALE: | SHEET 3 OF 4 SHEETS | STA. 62+39.94 TO STA. 69+25.00

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
7448	09-00933-01-BR	MACON	572	380

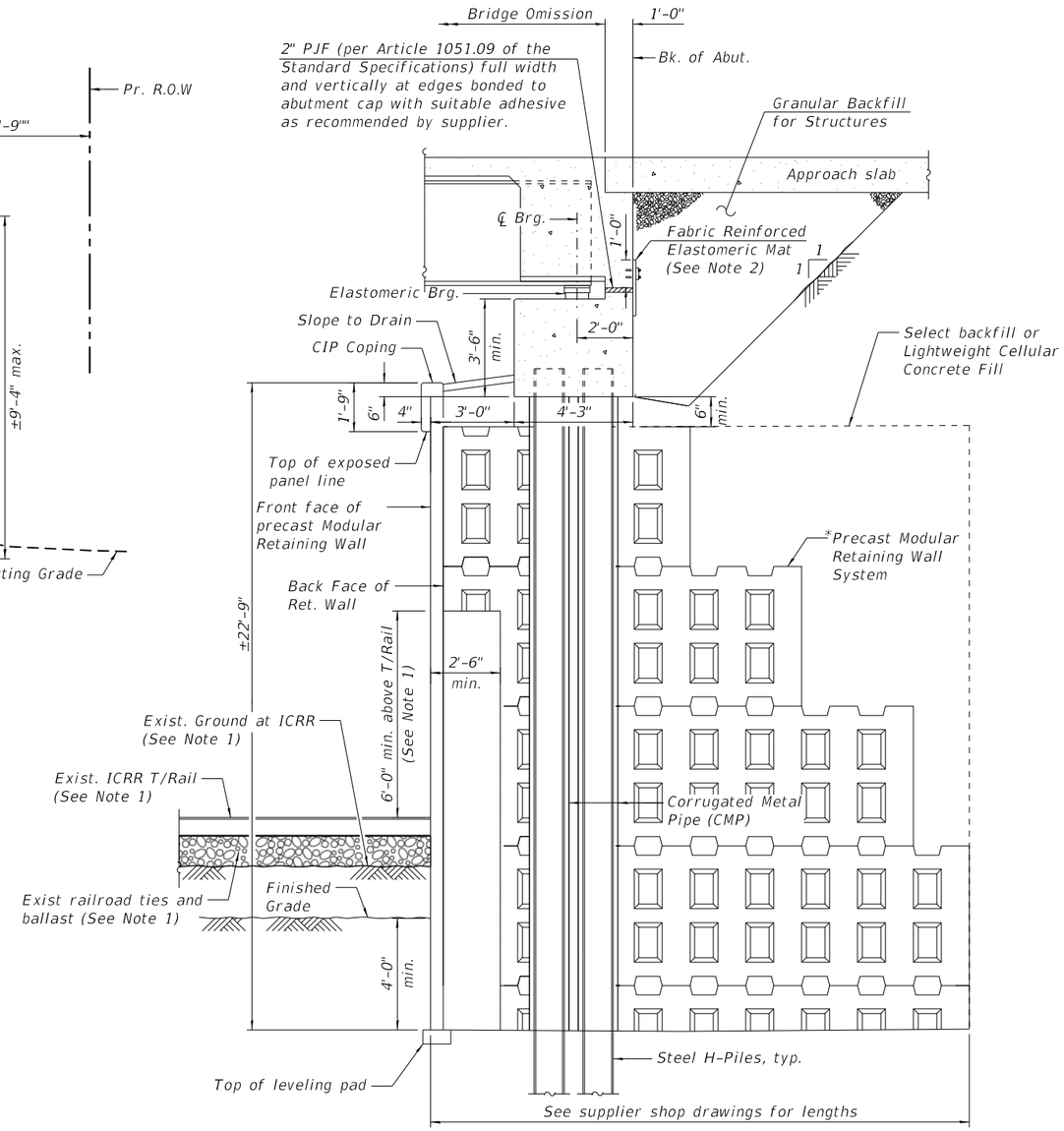
CONTRACT NO. 6WGY(165)

ILLINOIS FED. AID PROJECT



SECTION THROUGH EAST MSE WALL

(From Sta. 68+59.66 to Sta. 68+77.98)



SECTION THRU SEMI-INTEGRAL ABUTMENT

(Horiz. dim. @ Rt. ∠'s)

* The Precast Modular Wall supplier's internal stability design shall account for the anchorage slab's bearing pressure surcharge of 1.0 ksf and horizontal sliding force of 0.67 kips/ft. of wall.

NOTES

1. Section thru abutment showing IC railroad running parallel to the bridge beyond the west side of the structure. Crashworthy retaining walls shall extend 6'-0" above top of rail for wall within 25' of the ℄ existing rail.
2. Fabric Reinforced Elastomeric Mat according to Section 1028 of the Standard Specifications. Fabric mat shall be 24" wide and attached full width and vertically at edges to the abutment cap with a ⅜" x 5" steel plate and ½" Ø studs with nuts and washers at 12" cts. Cost included with Concrete Superstructure.
3. Limits of Select Fill and Lightweight Cellular Concrete Fill to be determined in final design.

SECTION THRU ABUTMENT
BRUSH COLLEGE ROAD
F.A.U. 7448 - SECTION 09-00933-01
MACON COUNTY
STA. 62+39.94 TO STA. 69+25.00
STRUCTURE NO. 058-W004

FILE NAME 68B03202_North Wall_SectionAbutment_RW4-05.dgn

QUIGG ENGINEERING INC

USER NAME = lcriscione	DESIGNED - KWB	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
	CHECKED - MDC	REVISED -	
PLOT SCALE = 0:2.0000 ':' / in.	DRAWN - LMC	REVISED -	
PLOT DATE = 6/18/2020	CHECKED - MDC	REVISED -	

TYPICAL SECTIONS
STRUCTURE NO. 058-W004

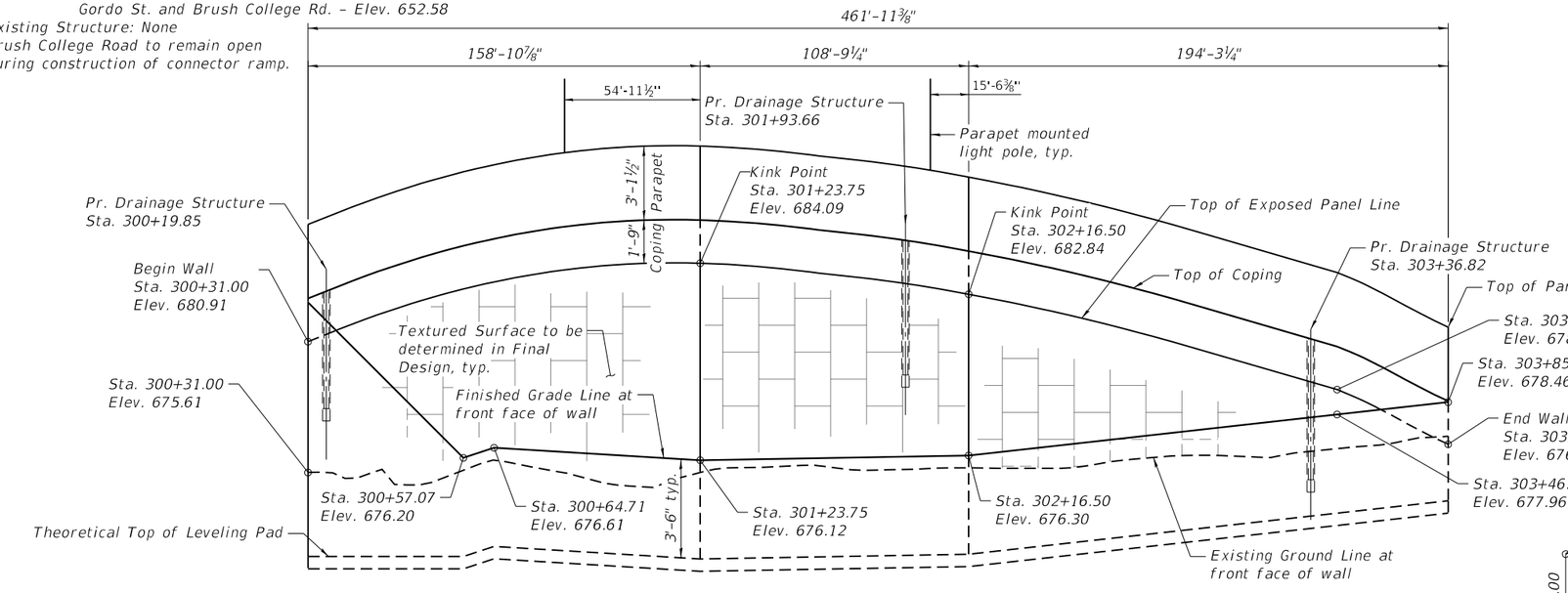
SCALE: | SHEET 4 OF 4 SHEETS | STA. 62+39.94 TO STA. 69+25.00

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
7448	09-00933-01-BR	MACON	572	381

CONTRACT NO. 6WGY(165)

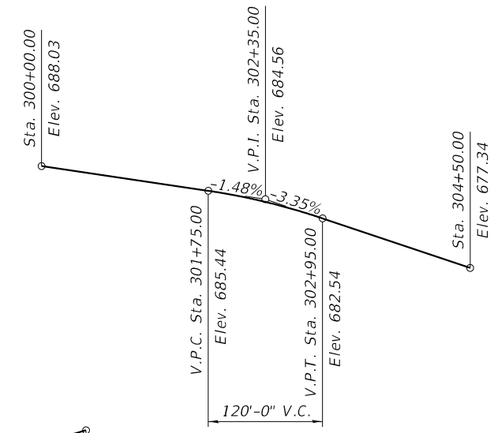
ILLINOIS FED. AID PROJECT

Benchmark: "M" in Mueller on fire hydrant at Southeast corner of Cerro Gordo St. and Brush College Rd. – Elev. 652.58
Existing Structure: None
Brush College Road to remain open during construction of connector ramp.



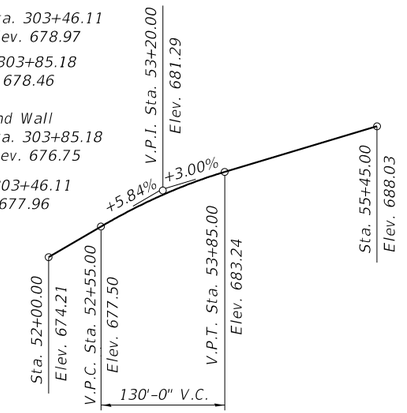
WALL ELEVATION

(Looking NoRt.h at Front Face of Wall)



PROFILE GRADE

(Along ℄ Jug Handle Connector Road)



PROFILE GRADE

(Along ℄ Brush College Road)

DESIGN SPECIFICATIONS

2017 AASHTO LRFD Bridge Design Specifications, 8th Edition

DESIGN STRESSES

FIELD UNITS

f'c = 3,500 psi
fy = 60,000 psi (Reinforcement)

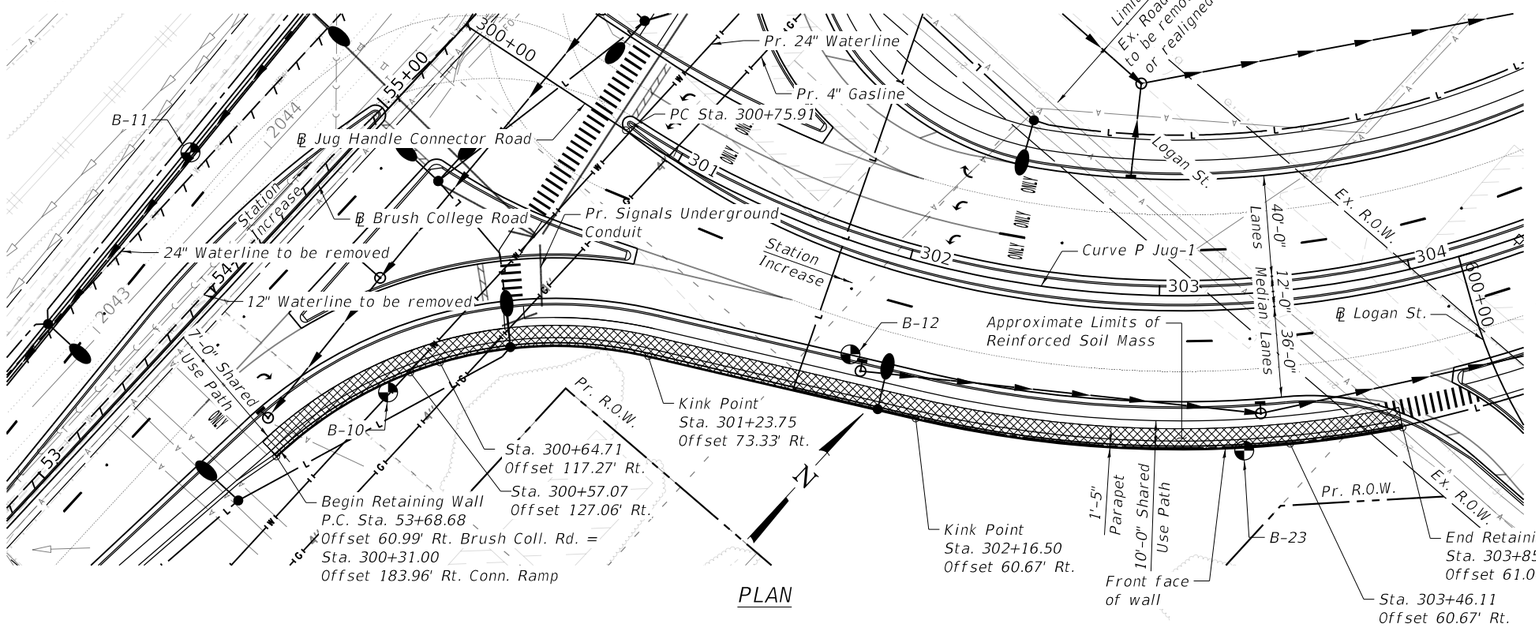
PRECAST UNITS

f'c = 4,500 psi (Precast Panels)

LEGEND

- Ex. Gas Line
- Ex. Water Line
- Ex. Underground Telephone Line
- Ex. Aerial Line
- Ex. Storm Sewer
- Ex. Sanitary Sewer
- Ex. Easement
- Ex. RR Track
- Pr. Gas Line
- Pr. Water Line
- Pr. Temporary Easement
- PR. Buried Lighting Cable
- Pr. Storm Sewer
- Pr. Above Ground Lighting
- Approximate Limits of Reinforced Soil Mass

Notes:
1. Wall offsets are measured from ℄ Brush College Rd. or ℄ Jug Handle Connector Rd to the front face of precast panels.
2. Existing drainage and utilities in conflict with proposed construction will be abandoned or relocated.
3. Proposed drainage and utilities are conceptual at this stage and will be determined in final design.



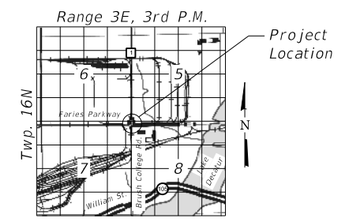
PLAN

PROP. CURVE P JUG-1

P.I. Sta. = 304+26.10
Δ = 82° 24' 11" (LT)
D = 14° 19' 26"
R = 400.00'
T = 350.19'
L = 575.28'
E = 131.63'
e = NC (30 MPH)
T.R. = N/A
S.E. Run = N/A
P.C. Sta. = 300+75.91
P.T. Sta. = 306+51.19

HIGHWAY CLASSIFICATION

F.A.U. Rte. 7448 – Brush College Road
Functional Class: Urban Minor Arterial
ADT:13,900 (2010); 18,950 (2035)
ADTT: 1,029 (2010); 1,402 (2035)
DHV: 1,900 (2035)
Design Speed: 40 m.p.h.
Posted Speed: 35 m.p.h.
Two-Way Traffic
Directional Distribution: 50:50



LOCATION SKETCH

GENERAL PLAN & ELEVATION
JUG HANDLE CONNECTOR ROAD
F.A.U. 7448 – SECTION 09-00933-01-BR
MACON COUNTY
STA. 300+31.00 TO STA. 303+85.18
STRUCTURE NO. 058-W006

FILE NAME 68683202_Jughandle_GPE_RWG-01.dgn

QUIGG ENGINEERING INC

USER NAME = lcriscione	DESIGNED - KWB	REVISED -	
	CHECKED - MDC	REVISED -	
PLOT SCALE = 60.000 ' / in.	DRAWN - LMC	REVISED -	
PLOT DATE = 6/12/2020	CHECKED - MDC	REVISED -	

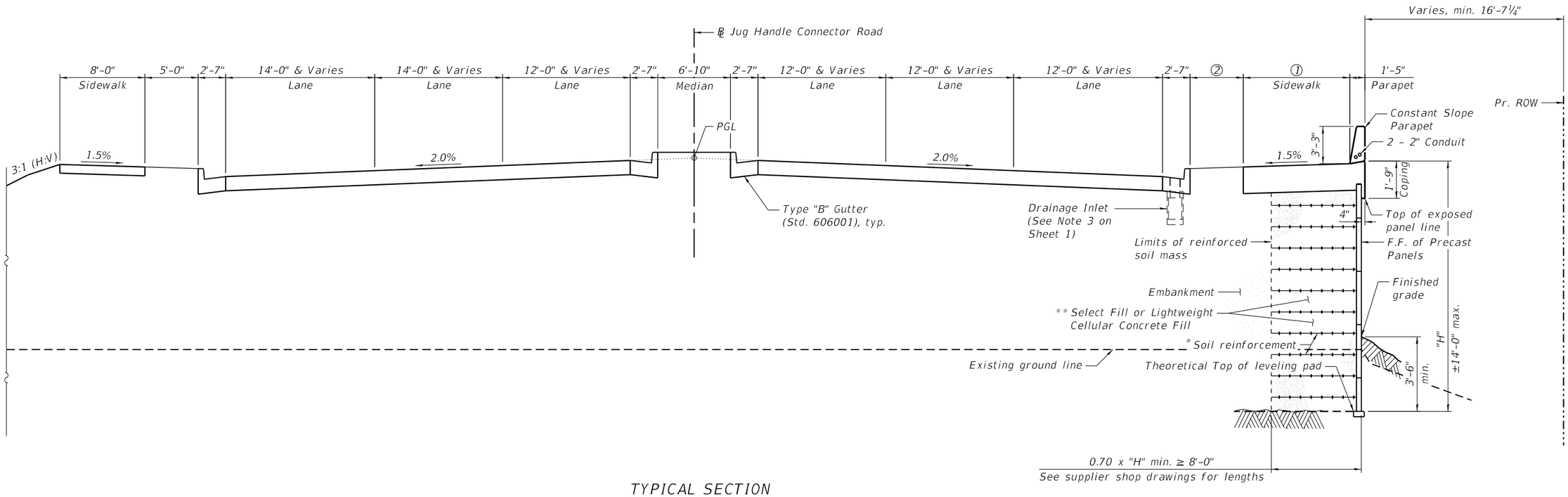
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN & ELEVATION
STRUCTURE NO. 058-W006

SCALE: | SHEET 1 OF 2 SHEETS | STA. 300+31.00 TO STA. 303+85.18

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
7448	09-00933-01-BR	MACON	572	382

CONTRACT NO. 6WCY(165)
ILLINOIS FED. AID PROJECT



TYPICAL SECTION

(Looking East)

ROADWAY DIMENSION TABLE

Start Station	End Station	①	②
300+31.00	300+77.02	7'-0"	8'-0"
300+77.02	301+61.89	10'-0"	5'-0"
303+46.11	303+71.08	10'-0"	Varies
303+71.08	303+85.18	Varies	0"

* The MSE Wall supplier's interval stability design shall account for the anchorage slab's bearing pressure surcharge of 1.0 ksf and horizontal sliding force of 0.67 kips/ft. of wall.

** Limits of Select Fill and Lightweight Cellular Concrete Fill will be determined in final design.

TYPICAL SECTION
JUG HANDLE CONNECTOR RAMP
F.A.U. 7448 - SECTION 09-00933-01-BR
MACON COUNTY
STA. 300+31.00 TO STA. 303+85.18
STRUCTURE NO. 058-W006

FILE NAME 68603282_Jughandle_Typical Sections_RW6-03.dgn

QUIGG ENGINEERING INC

USER NAME = lcriscione	DESIGNED - KWB	REVISED -
	CHECKED - MDC	REVISED -
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PLOT DATE = 6/12/2020	CHECKED - MDC	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TYPICAL SECTION
STRUCTURE NO. 058-W006

SCALE: | SHEET 2 OF 2 SHEETS | STA. 300+31.00 TO STA. 303+85.18

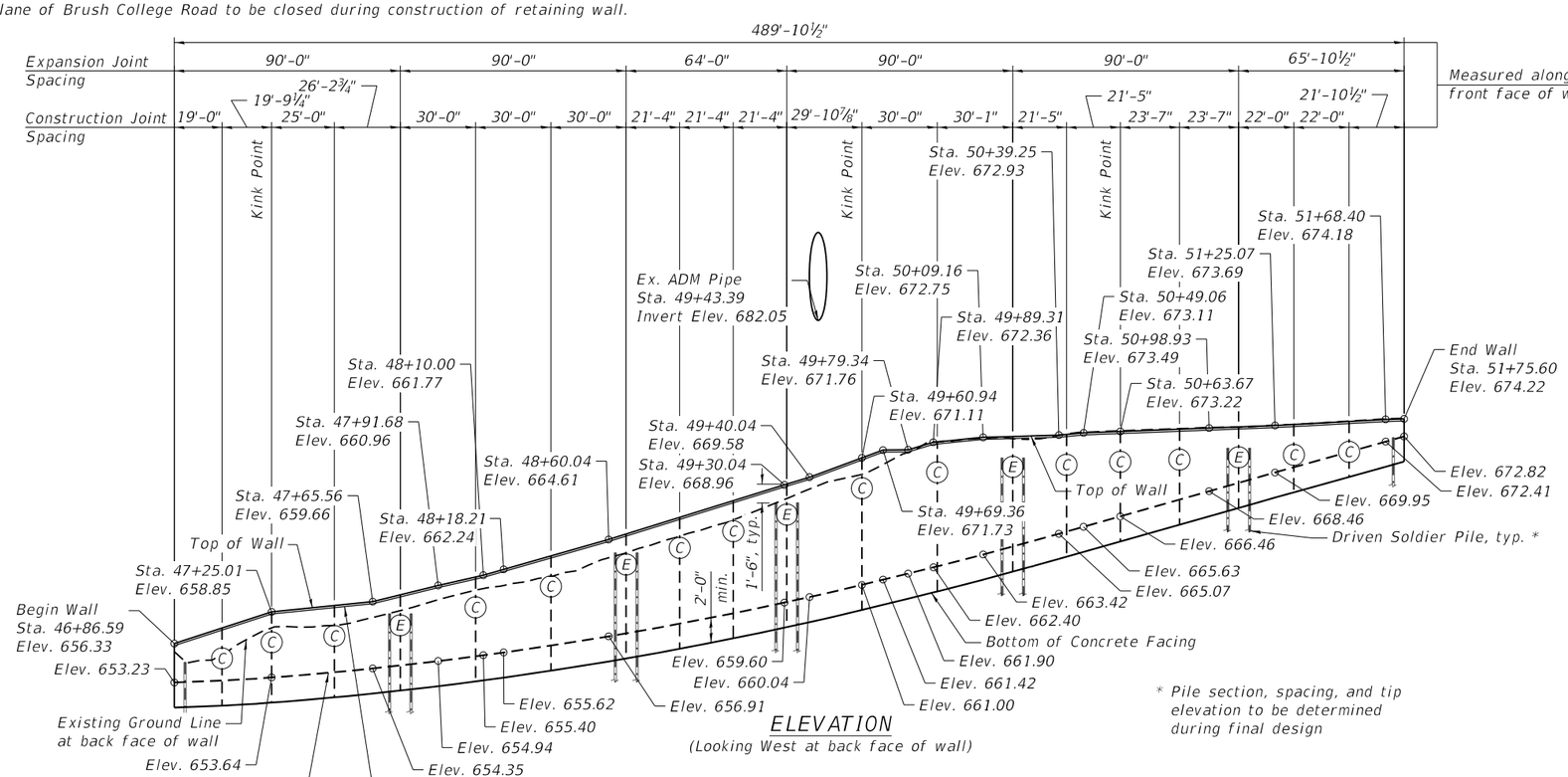
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
7448	09-00933-01-BR	MACON	572	383

CONTRACT NO. 6WGY(165)

ILLINOIS FED. AID PROJECT

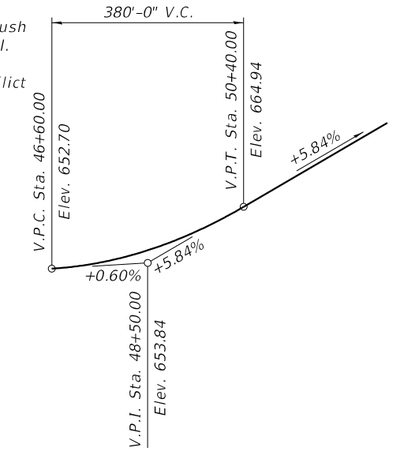
Benchmark: "M" in Mueller on fire hydrant at Southeast corner of Cerro Gordo St. and Brush College Rd. – Elev. 652.58
Existing Structure: None
New soldier pile retaining wall to be constructed to support existing embankment.
NB lane of Brush College Road to be closed during construction of retaining wall.

Notes:
1. Wall offsets are measured from ℄ Brush College Road to the front face of wall.
2. See Sheet 2 for wall details.
3. Existing drainage and utilities in conflict with proposed construction will be abandoned or relocated.
4. Proposed drainage and utilities are conceptual at this stage and will be determined in final design.



ELEVATION
(Looking West at back face of wall)

* Pile section, spacing, and tip elevation to be determined during final design



PROFILE GRADE
(Along ℄ Brush College Road)

LEGEND

- Ex. Gas Line
- Ex. Water Line
- Ex. Underground Telephone Line
- Ex. Aerial Line
- Ex. Storm Sewer
- Ex. Sanitary Sewer
- Ex. Easement
- Ex. RR Track
- Ex. Underground Transmission Line
- Abandoned Underground Fiber Optic Line
- Ex. Fence
- Ex. Vegetation Line
- Property Line
- Ex. Guardrail
- Ex. Manhole
- Ex. Inlet
- Water Line Removal
- Pr. Gas Line
- Pr. Buried Lighting Cable
- Pr. Water Line
- Pr. Temporary Easement
- Pr. Underground Sanitary Sewer
- Pr. Storm Sewer
- Pr. Above Ground Lighting
- Soil Boring Location
- Pr. Inlet
- Construction, Expansion Joints

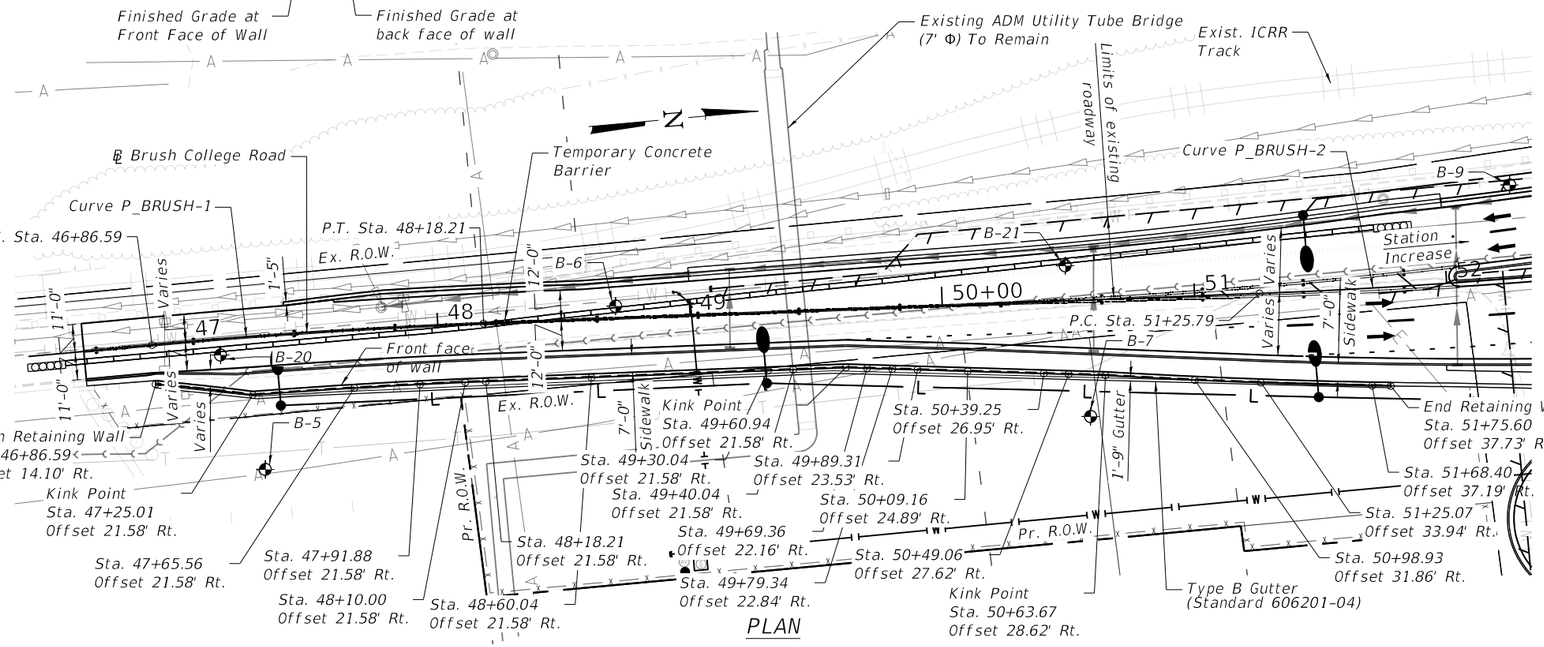
DESIGN SPECIFICATIONS

2017 AASHTO LRFD Bridge Design Specifications, 8th Edition

DESIGN STRESSES

FIELD UNITS

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



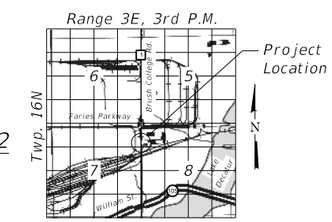
PLAN

CURVE P_BRUSH-1

P.I. Sta. = 47+52.41
Δ = 3° 00' 59" (RT)
D = 2° 17' 31"
R = 2,500.00'
T = 65.82'
L = 131.62'
E = 0.87'
e = NC (40 MPH)
T.R. = N/A
S.E. Run = N/A
P.C. Sta. = 46+86.59
P.T. Sta. = 48+18.21

CURVE P_BRUSH-2

P.I. Sta. = 51+91.51
Δ = 3° 00' 41" (LT)
D = 2° 17' 31"
R = 2,500.00'
T = 65.72'
L = 131.40'
E = 0.86'
e = NC (40 MPH)
T.R. = N/A
S.E. Run = N/A
P.C. Sta. = 51+25.79
P.T. Sta. = 52+57.19



LOCATION SKETCH

HIGHWAY CLASSIFICATION

F.A.U. Rte. 7448 – Brush College Road
Functional Class: Urban Minor Arterial
ADT:13,900 (2010); 18,950 (2035)
ADTT: 1,029 (2010); 1,402 (2035)
DHV: 1,900 (2035)
Design Speed: 40 m.p.h.
Posted Speed: 35 m.p.h.
Two-Way Traffic
Directional Distribution: 50:50

GENERAL PLAN & ELEVATION
BRUSH COLLEGE ROAD
F.A.U. 7448 – SECTION 09-00933-01-BR
MACON COUNTY
STA. 46+86.60 TO STA. 51+75.69
STRUCTURE NO. 058-W007

FILE NAME 60683202.Cus Wall_GPE_RW7-01.dgn

QUIGG ENGINEERING INC

USER NAME = lcrisione	DESIGNED - KWB	REVISED -	
	CHECKED - MDC	REVISED -	
PLOT SCALE = 0.1667 ' / in.	DRAWN - LMC	REVISED -	
PLOT DATE = 6/12/2020	CHECKED - MDC	REVISED -	

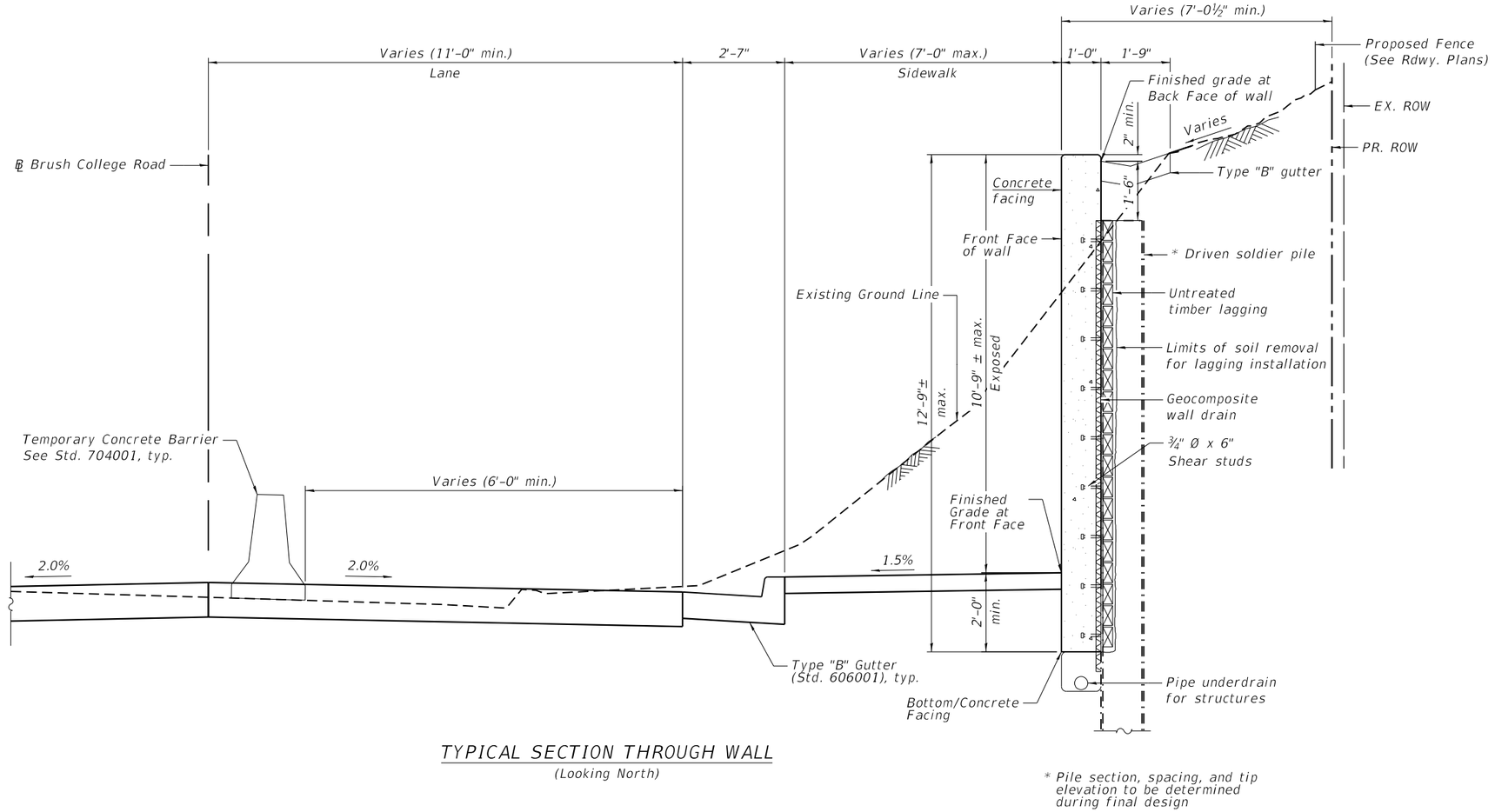
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN & ELEVATION
STRUCTURE NO. 058-W007

SCALE: | SHEET 1 OF 2 SHEETS | STA. 46+86.60 TO STA. 51+75.69

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
7448	09-00933-01-BR	MACON	572	384

CONTRACT NO. 6WGY(165)
ILLINOIS FED. AID PROJECT



TYPICAL SECTION THROUGH WALL

(Looking North)

* Pile section, spacing, and tip elevation to be determined during final design

TYPICAL SECTION
BRUSH COLLEGE ROAD
F.A.U. 7448 - SECTION 09-00933-01-BR
MACON COUNTY
STA. 46+86.60 TO STA. 51+75.69
STRUCTURE NO. 058-W007

FILE NAME 68083202_CutWall_Typical Sections_RW7-04.dgn

QUIGG ENGINEERING INC

USER NAME = lcriscione	DESIGNED - KWB	REVISED -	
	CHECKED - MDC	REVISED -	
PLOT SCALE = 0:2.0000 ':' / in.	DRAWN - LMC	REVISED -	
PLOT DATE = 6/12/2020	CHECKED - MDC	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TYPICAL SECTIONS
STRUCTURE NO. 058-W007

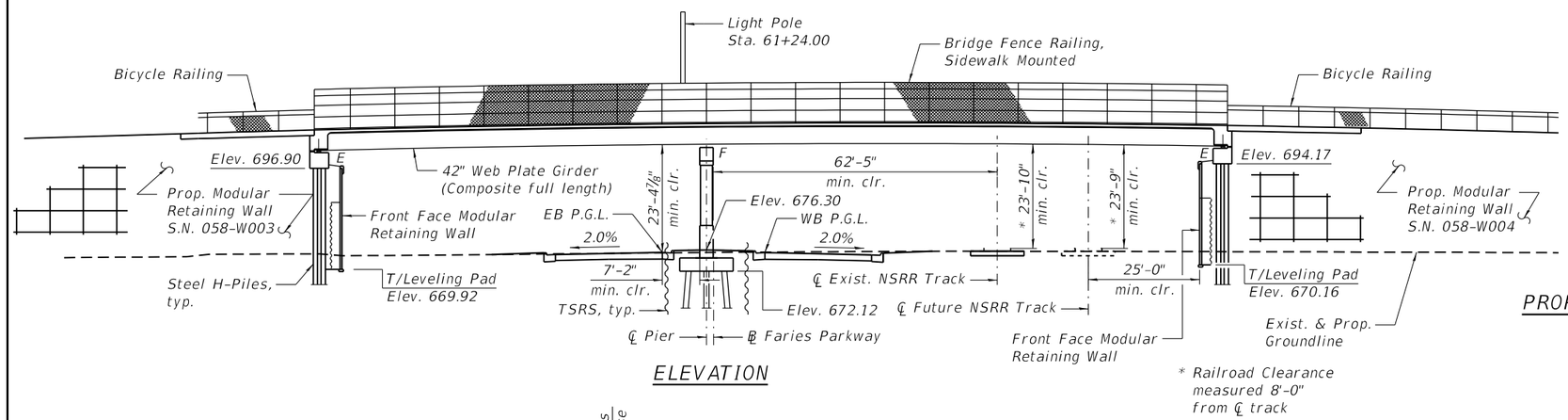
SCALE: | SHEET 2 OF 2 SHEETS | STA. 46+86.60 TO STA. 51+75.69

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
7448	09-00933-01-BR	MACON	572	385
		CONTRACT NO. 6WGY(165)		
		ILLINOIS FED. AID PROJECT		

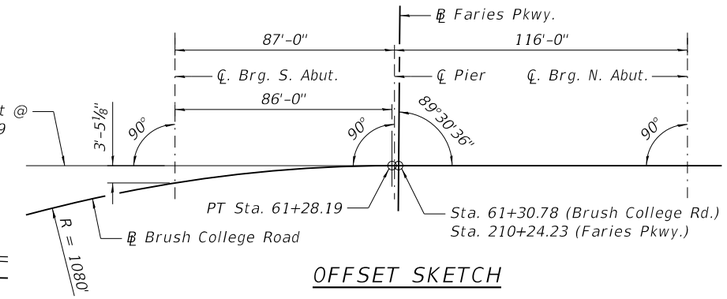
Bench Mark: "M" in Mueller on fire hydrant at Southeast corner of Cerro Gordo St. and Brush College Road. Elev. 652.58

Existing Structure: None.

Brush College Road to be closed and traffic to be detoured.
Faries Parkway traffic to be mainted utilizing staged construction.



ELEVATION



OFFSET SKETCH

PROP. CURVE P_BRUSH4

P.I. Sta. = 60+18.63
Δ = 11° 39' 57" (RT)
D = 5° 18' 19"
R = 1,080.00'
T =110.33'
L = 219.89'
E = 5.62'
e = NC
T.R. = N/A
S.E. Run = N/A
P.C. Sta. = 59+08.30
P.T. Sta. = 61+28.19

DESIGN SPECIFICATIONS

2017 AASHTO LRFD Bridge Design Specifications, 8th Edition

LOADING HL-93

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

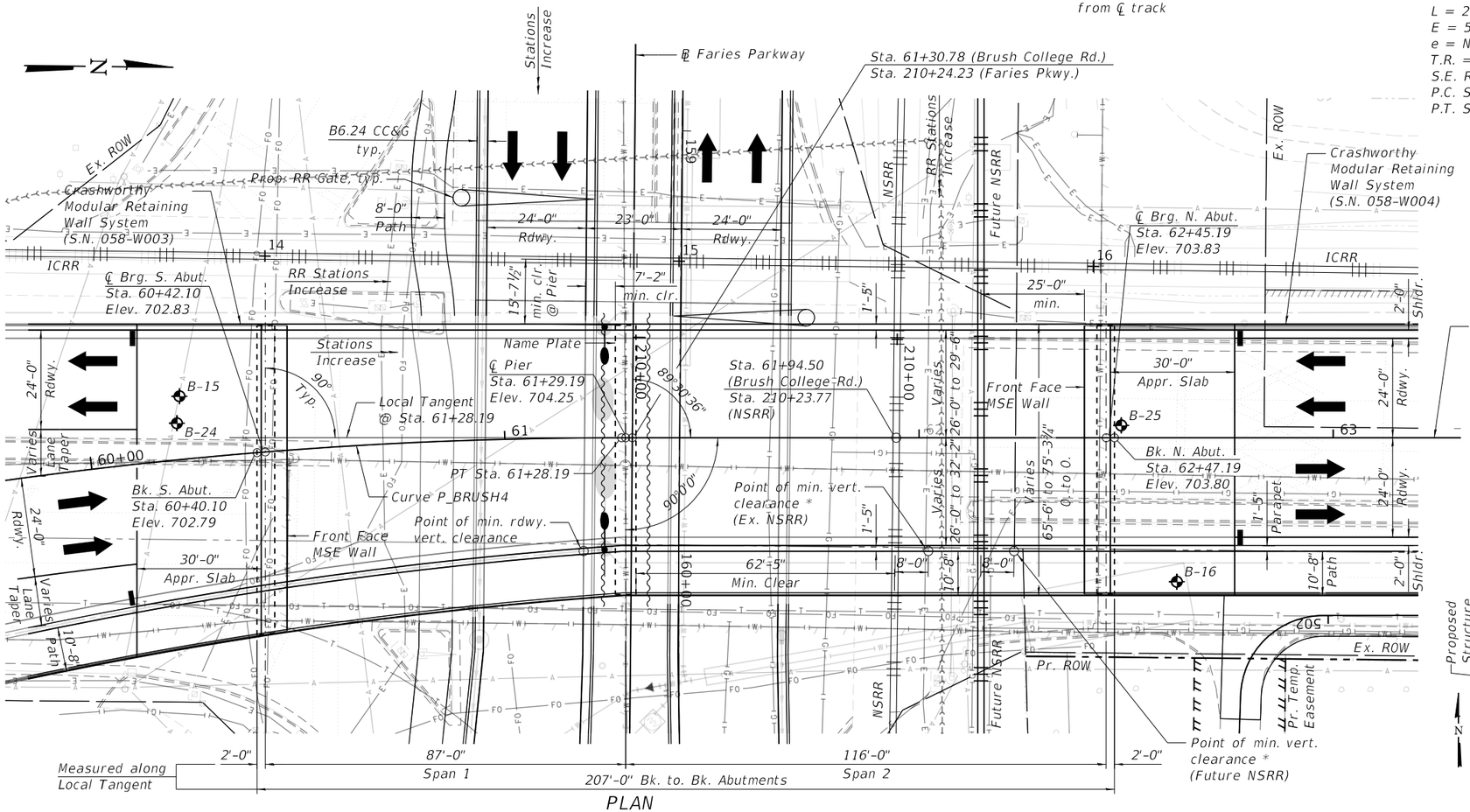
DESIGN STRESSES

FIELD UNITS

f'c = 3,500 psi
f'c = 4,000 psi (Superstructure & Appr. Slab)
fy = 60,000 psi (Reinforcement)
fy = 50,000 psi (M270 Grade 50)

SEISMIC DATA

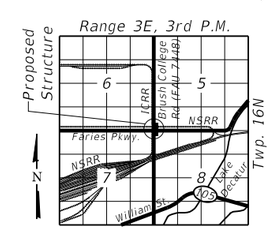
Seismic Performance Zone (SPZ) = 2
Design Spectral Acceleration at 1.0 sec. (SD1) = 0.153g
Design Spectral Acceleration at 0.2 sec. (SDS) = 0.277g
Soil Site Class = D



PLAN

LEGEND

- Ex. ROW
- Ex. RR Track
- Ex. Gas Line
- Ex. Water Line
- Ex. Underground Telephone Line
- Ex. Underground Fiber Optic
- Ex. Aerial LIne
- Ex. Electric
- Ex. Storm Sewer
- Ex. Sanitary Sewer
- Pr. ROW
- Pr. Temp. Easement
- Future RR Track
- Pr. Gas Line
- Pr. Water Line
- Pr. Underground Sanitary Sewer
- Pr. Storm Sewer
- Pr. Above Ground Lighting
- Pr. Drainage Inlet
- Soil Boring
- Temporary Soil Retention System (TSRS)



LOCATION SKETCH

GENERAL PLAN & ELEVATION
BRUSH COLLEGE ROAD
OVER FARIES PARKWAY
F.A.U. 7448 SECTION 09-00933-01-BR
MACON COUNTY
STA. 61+29.19
STRUCTURE NO. 058-9202

MODEL: Sheet
FILE NAME: pw:\\aecom-na-pw.bentley.com:AECOM_DS16_NA\Documents\60603202-Brush College\900-CAD GIS\910_CAD\03_SHEETS\01_AECOM\Structural\60603202_S-01_GPE.dgn

AECOM

USER NAME = elif.ulger	DESIGNED - MCC	REVISED -	
	CHECKED - DD	REVISED -	
PLOT SCALE = N.T.S.	DRAWN - MCC	REVISED -	
PLOT DATE = 6/19/2020	CHECKED - DD	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN AND ELEVATION
STRUCTURE NO. 058-9202

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
7448	09-00933-01-BR	MACON	572	386
		CONTRACT NO. XXXX(XXX)		
		ILLINOIS FED. AID PROJECT		

GENERAL NOTES

1. Fasteners shall be ASTM A325 Type 1, mechanically galvanized bolts (in painted areas and ASTM A325 Type 3 in unpainted areas). Bolts –in. Ø, holes –in. Ø, unless otherwise noted.

2. Calculated weight of Structural Steel
   M270 Grade 50 = xxx,xxx lbs.
   M270 Grade 36 = xxx,xxx lbs.

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

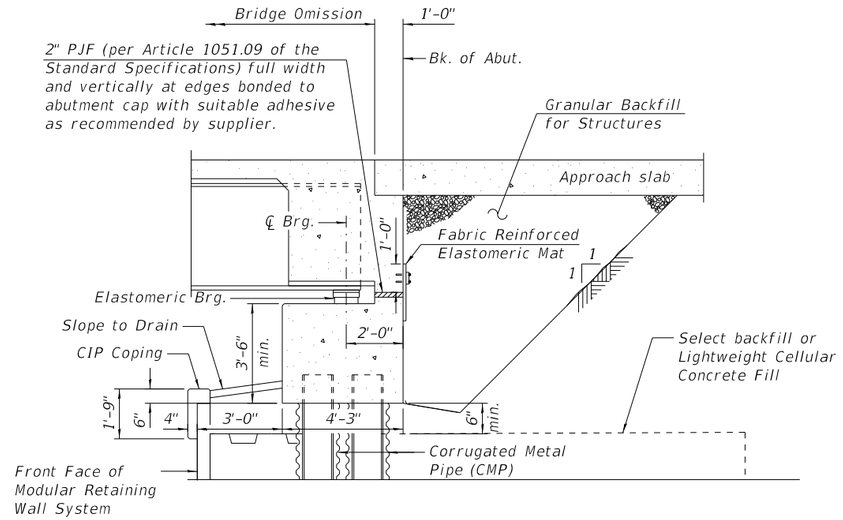
4. Reinforcement bars designated (E) shall be epoxy coated.

5. 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.

6. Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of ⅛ inch (0.01 ft.). Adjustment shall be made either by grinding the surface or by shimming the bearings.

7. Concrete Sealer shall be applied to the designated areas of the pier.

8. The Inorganic Zinc Rich Primer / Acrylic / Acrylic Paint System shall be used for shop and field painting of new structural steel except where otherwise noted. The color of the final finish coat for all interior steel surfaces shall be gray, Munsell No. 5B 7/1. The color of the final finish coat for the exterior and bottom flange of the fascia beams shall be –.



SECTION THRU SEMI-INTEGRAL ABUTMENT

(Horiz. dim. @ Rt. ∠'s)

Note:
* Fabric Reinforced Elastomeric Mat according to Section 1028 of the Standard Specifications. Fabric mat shall be 24" wide and attached full width and vertically at edges to the abutment cap with a ⅜" x 5" steel plate and ½" Ø studs with nuts and washers at 12" cts. Cost included with Concrete Superstructure.

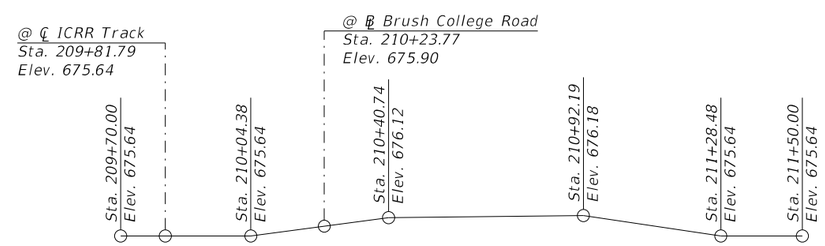
TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL

STATION 61+29.19
BUILT 20__ BY
CITY OF DECATUR
F.A.U. 7448 SEC. 09-00933-01-BR
LOADING HL-93
STRUCTURE NO. 058-9202

NAME PLATE

See Std. 515001



TOP OF RAIL - NSRR Track

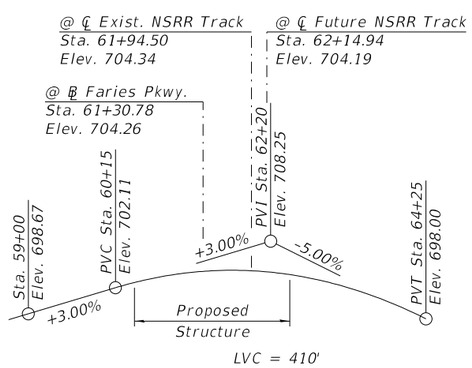
(Looking North)

Showing existing track. Future NSRR track profile assumed to match existing NSRR track profile and elevations.

INDEX OF SHEETS

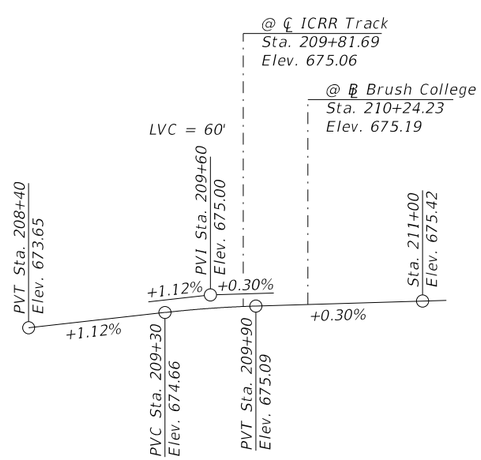
S-01 General Plan and Elevation
S-02 General Data
S-03 Substructure Layout
* S-04 Top of Slab Elevations I
* S-05 Top of Slab Elevations II
* S-06 Top of Slab Elevations III
* S-07 Top of Approach Slab Elevations I
* S-08 Top of Approach Slab Elevations II
S-09 Superstructure
S-10 Superstructure Details I
S-11 Superstructure Details II
S-12 Superstructure Details III
* S-13 Concrete Parapet Slipform Option
* S-14 Diaphragm Details
S-15 Bridge Approach Slab Details I
S-16 Bridge Approach Slab Details II
S-17 Bridge Fence Railing, Parapet Mounted
S-18 Bicycle Railing
S-19 Bridge Fence Railing, Sidewalk Mounted
S-20 Framing Plan and Girder Elevation
* S-21 Framing Details
* S-22 Girder Moment & Reaction Tables
* S-23 Girder Camber Details
* S-24 Girder Splice Details
* S-25 Bearing Details
* S-26 South Abutment Details
* S-27 North Abutment Details
S-28 Pier Details
* S-29 HP Pile Details
* S-30 Soil Boring Logs I
* S-31 Soil Boring Logs II
* S-32 Soil Boring Logs III

* Sheet to be provided in future submittal.



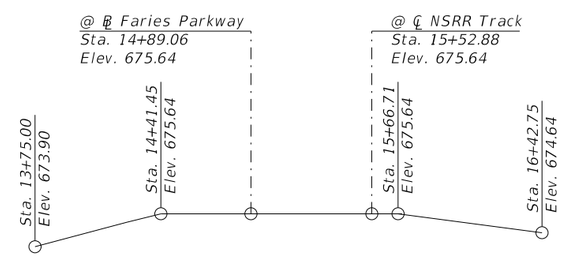
PROFILE GRADE - BRUSH COLLEGE ROAD

(Along ℄ Proposed Roadway)



PROFILE GRADE - FARIES PARKWAY

(Along ℄ Proposed Roadway)



TOP OF RAIL - ICRR Track

(Looking West)