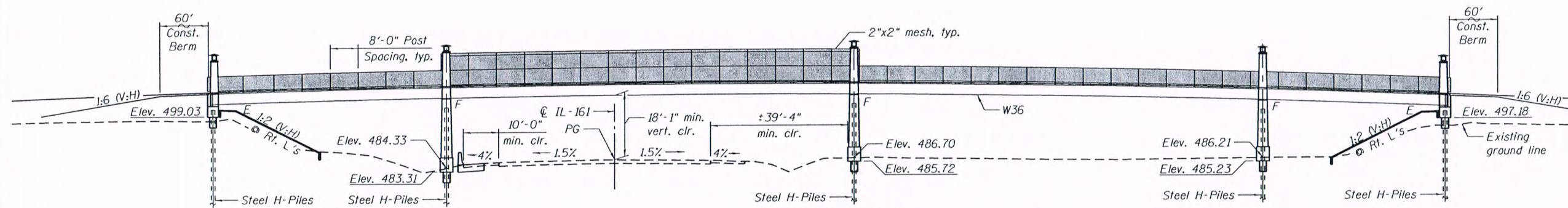


Benchmarks:
 BM #619: Chiseled "x" on signal controller box in S.E. corner of intersection approx. 13' west of the guardrail terminal. Elev. 484.05.
 BM #732: Cross cut on mast arm foundation in N.E. corner of intersection. Elev. 485.65.

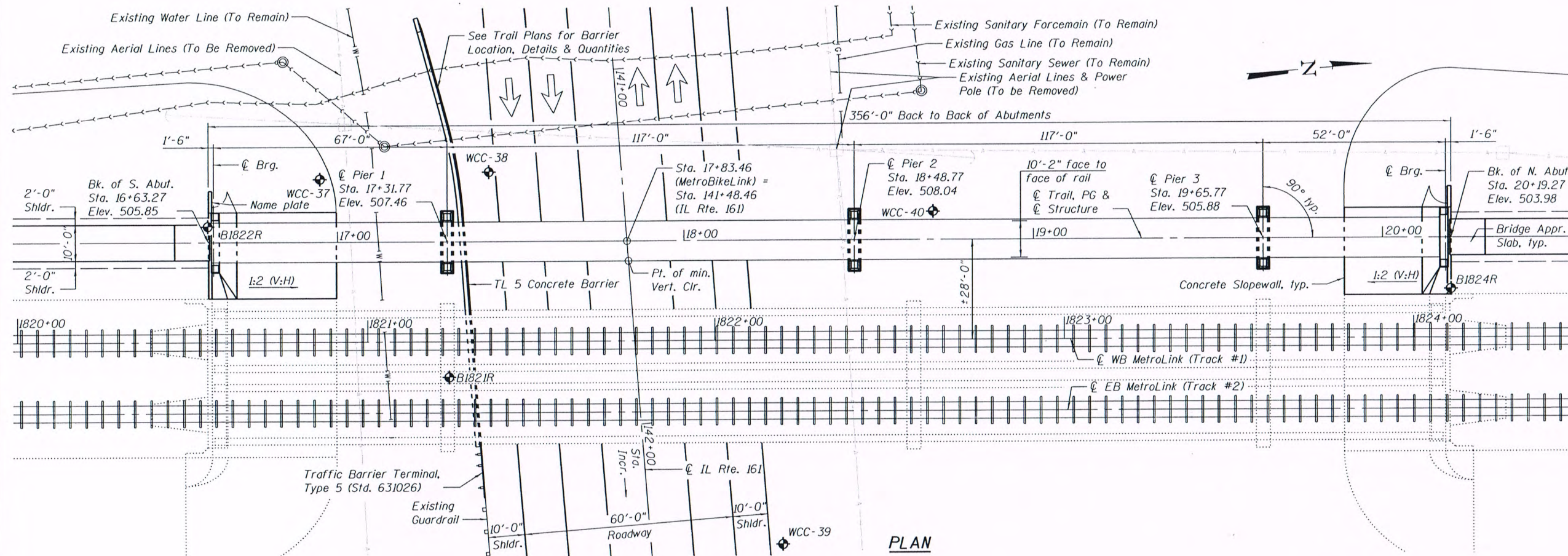
Existing Structure: None.

INDEX OF SHEETS

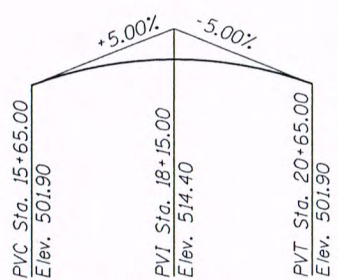
1. General Plan and Elevation
2. General Data
3. Superstructure Details
4. Bridge Approach Slab Details
5. Railing Details
6. Framing Plan and Elevation
7. Structural Steel Details
8. Bearing Details
9. Abutment Details
10. Pier Details
11. Pile Details
12. Architectural Elevations
- 13-20. Boring Logs



ELEVATION

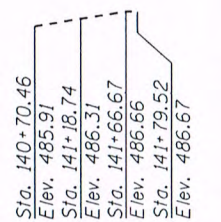


PLAN

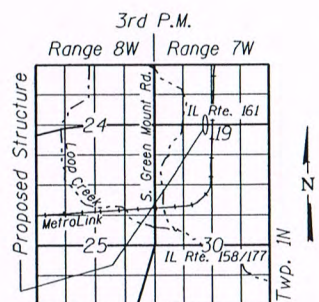


LVC = 500.00'

PROFILE GRADE
(along IL MetroBikeLink)



PROFILE GRADE
Surveyed IL-161

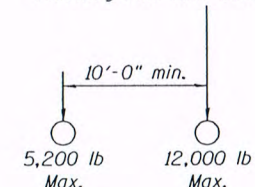


LOCATION SKETCH

LOADING

Pedestrian Live Load according to Art. 3.1 of the Guide Specifications
 All Members = 90#/sq. ft.

Metro Maintenance Vehicle Loading:
 17,200 lb gross vehicle with the following axle load configuration:



DESIGN SPECIFICATIONS

2009 LRFD Guide Specifications for the Design of Pedestrian Bridges

2012 AASHTO LRFD Bridge Design Specifications

SEISMIC DATA

Seismic Performance Zone (SPZ) = 2
 Design Spectral Acceleration at 1.0 sec. (S_{D1}) = 0.26g
 Design Spectral Acceleration at 0.2 sec. (S_{D5}) = 0.58g
 Soil Site Class = D

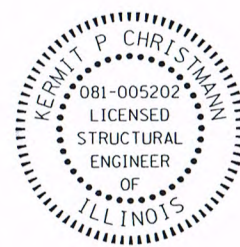
DESIGN STRESSES

FIELD UNITS

Concrete f'_c = 3,500 psi
 Reinforcement f_y = 60,000 psi
 Structural Steel
 M 270 Gr. 50 f_y = 50,000 psi
 M 270 Gr. 50W f_y = 50,000 psi
 M 270 Gr. 36 f_y = 36,000 psi
 ASTM A 500 Gr. B f_y = 46,000 psi
 Timber Deck - No. 1 Southern Pine
 f_b = 1,650 psi
 E = 1,700,000 psi

STATION 18+41.27
 BUILT 2011 BY
 STATE OF ILLINOIS
 SEC. 11-00005-00-BR
 LOADING PEDESTRIAN
 STRUCTURE NO. 082-7003

NAME PLATE
 See Std. 515001



Kermit P. Christmann
 EXPIRES 11/30/2014

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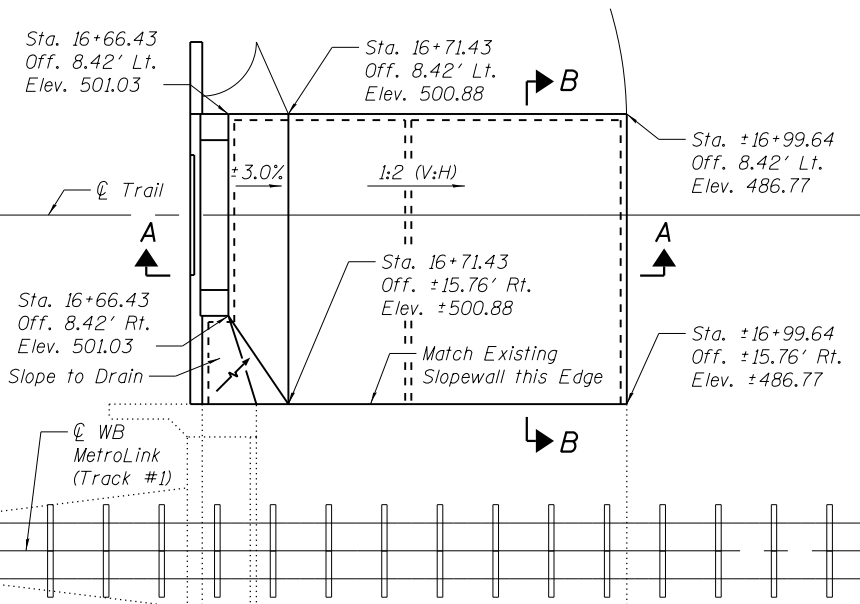
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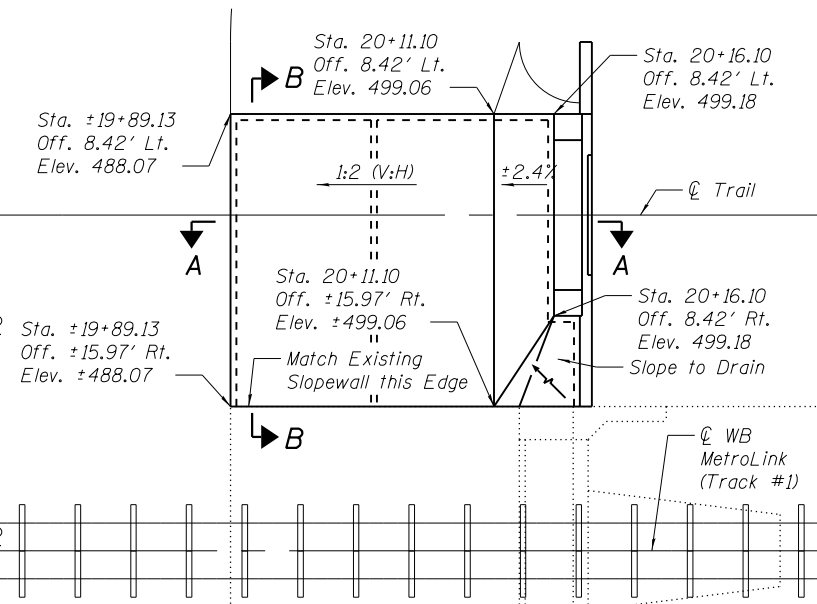
GENERAL PLAN
STRUCTURE B34.48 (SN 082-7003)
 SHEET NO. 1 OF 20 SHEETS

GENERAL PLAN & ELEVATION
METROBIKELINK OVER
IL-161 (F.A.P. RTE. 805)
ST. CLAIR COUNTY
STA. 18+41.27
STRUCTURE B34.48 (082-7003)

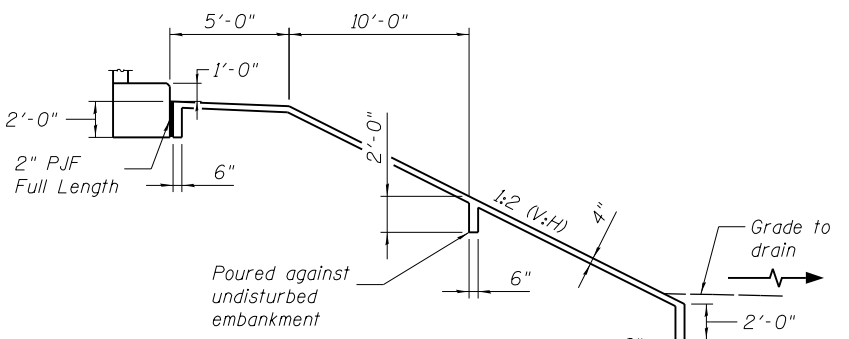
MetroBikeLink over IL-161 at SWIC	COUNTY	TOTAL SHEETS	SHEET NO.
	ST. CLAIR	127	51
	CONTRACT NO.		
ILLINOIS FED. AID PROJECT			



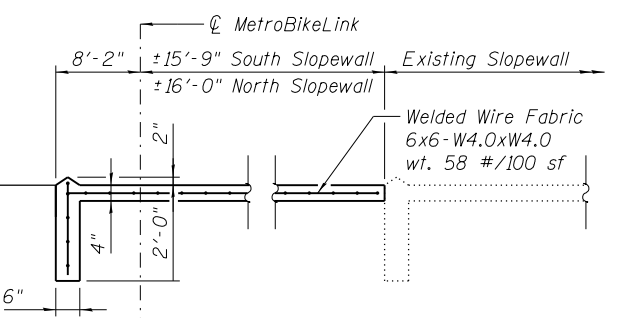
PLAN AT SOUTH SLOPEWALL



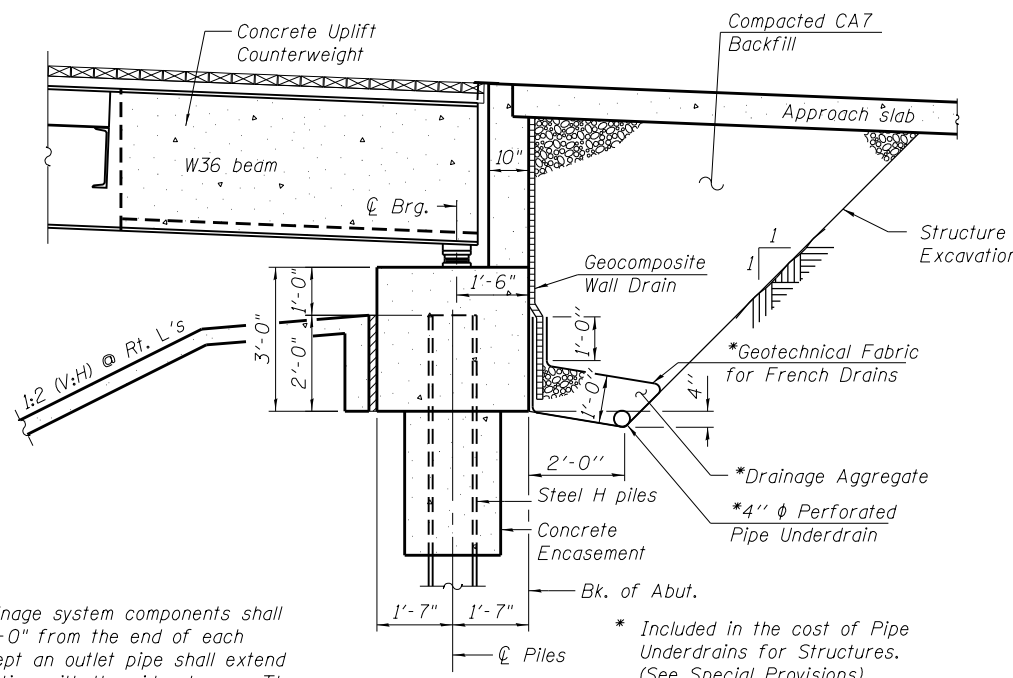
PLAN AT NORTH SLOPEWALL



SECTION A-A



SECTION B-B



SECTION THRU ABUTMENT
(Horiz. dim. @ Rt. L's)

Note:
All drainage system components shall extend to 2'-0" from the end of each wingwall except an outlet pipe shall extend until intersecting with the side slopes. The pipes shall drain into concrete headwalls. (See Article 601.05 of the Standard Specifications and Highway Standard 601101).

GENERAL NOTES

Fasteners shall be as shown in Schedule of Bolts. Bolts in standard size holes, unless otherwise noted.
 Calculated Weight of Structural Steel:
 AASHTO M270 Grade 50 = 114,720
 AASHTO M270 Grade 50W = 140
 AASHTO M270 Grade 36 = 14,940
 ASTM A 500 Grade B = 370
 No Field welding is permitted except as specified in the contract documents. Reinforcement bars designated (E) shall be epoxy coated.
 Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of 1/8 in. (0.01 ft). Adjustment shall be made either by grinding the surface or by shimming the bearings.
 The Organic Zinc Rich Primer / Epoxy / Urethane Paint System shall be used for painting of new structural steel except where otherwise noted. The entire system shall be shop applied, with the exception of masked off connection surfaces, field installed fasteners and damaged areas touched up in the field. The color of the final finish coat for all structural steel surfaces shall be SWIC Blue (See Sheet 12).
 The embankment configuration shown shall be the minimum that must be placed and compacted prior to construction of the abutments.
 Slope wall shall be reinforced with welded wire fabric, 6 in. x 6 in. - W4.0 x W4.0, weighing 58 lbs. per 100 sq. ft.
 Utility relocation by others.

SCHEDULE OF BOLTS

DESCRIPTION	DIAM.	BOLT TYPE	SHEET REF.
Abutment Bearing Bolt	3/4"	AASHTO M164 Type 1	8
Abutment Bearing Bolt	5/8"	AASHTO M164 Type 1 (ASTM A325)	8
Pier Anchor Bolt - Outside Girder	1 1/4"	ASTM F1554 Gr. 105	8
Pier Anchor Bolt - Inside Girder	5/8"	ASTM F1554 Gr. 36	8
Girder Splices	7/8"	AASHTO M164 Type 1	6
Channel End Connection	3/4"	AASHTO M253 Type 1	7
WT End Connection	3/4"	AASHTO M253 Type 1	7
Stringer End Connection	1/2"	ASTM A307 Gr. 36	7
Nailer Carriage Bolts	3/8"	Stainless Steel	3
Rail Post Stubs	3/4"	AASHTO M164 Type 1	5

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Structure Excavation	Cu. Yd.	-	138	138
Concrete Structures	Cu. Yd.	-	166.8	166.8
Treated Timber	F.B.M.	14,130	-	14,130
Concrete Encasement	Cu. Yd.	-	6.4	6.4
Furnishing and Erecting Structural Steel	L. Sum	1	-	1
Reinforcement Bars, Epoxy Coated	Pound	530	13,360	13,890
Slopedwall 4 Inch	Sq. Yd.	-	182	182
Furnishing Steel Piles HP 12x53	Foot	-	1,044	1,044
Driving Piles	Foot	-	1,044	1,044
Test Pile Steel HP 12x53	Each	-	5	5
Pile Shoes	Each	-	18	18
Name Plates	Each	-	1	1
Elastomeric Bearing Assembly, Type III	Each	-	4	4
Anchor Bolts, 1/2"	Each	-	40	40
Anchor Bolts, 5/8"	Each	-	6	6
Anchor Bolts, 1 1/4"	Each	-	6	6
Geocomposite Wall Drain	Sq. Yd.	-	41	41
Pipe Underdrain for Structures, 4"	Foot	-	75	75
Compacted CA7 Backfill	Cu. Yd.	-	66	66
Bridge Fence Railing, Special	Foot	714	-	714
Form Liner Textured Surface, Special	Sq. Ft.	-	2,716	2,716
Anti-Graffiti Protection System	Sq. Ft.	-	6,176	6,176
Cap Blocks	Each	-	10	10

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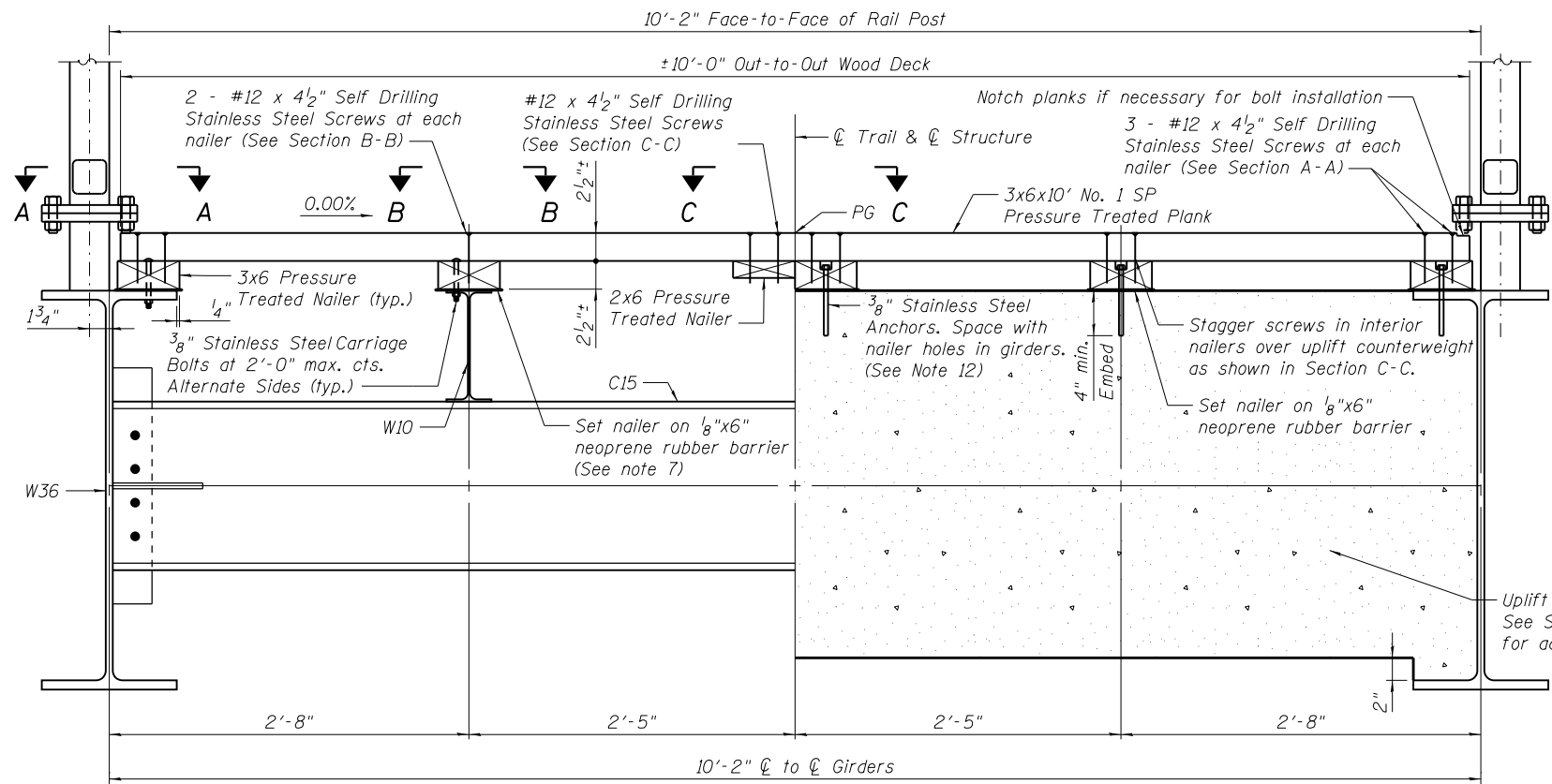
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St. Clair County Transit District

Bi-State Development Agency

GENERAL DATA
STRUCTURE B34.48 (SN 082-7003)
SHEET NO. 2 OF 20 SHEETS

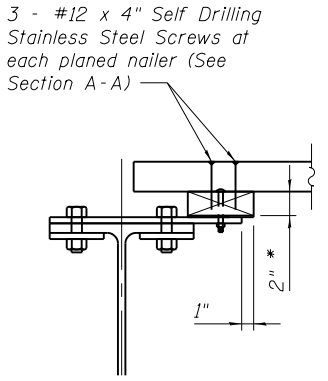
MetroBikeLink over IL-161 at SWIC
COUNTY: ST. CLAIR
TOTAL SHEETS: 127
SHEET NO.: 52
CONTRACT NO.
ILLINOIS FED. AID PROJECT



SECTION THRU DECK

Showing Steel Framing

Showing Uplift Counterweight

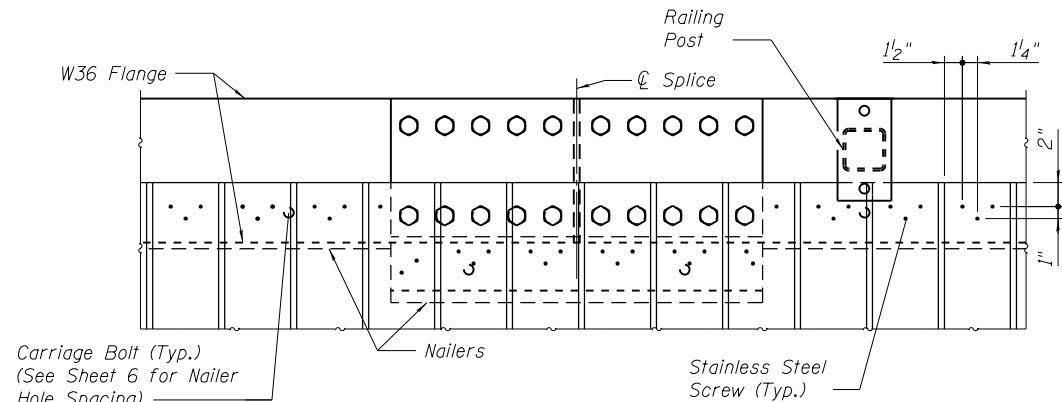


SECTION THRU SPLICE

* Plane nailers at splice to a thickness of ±2".

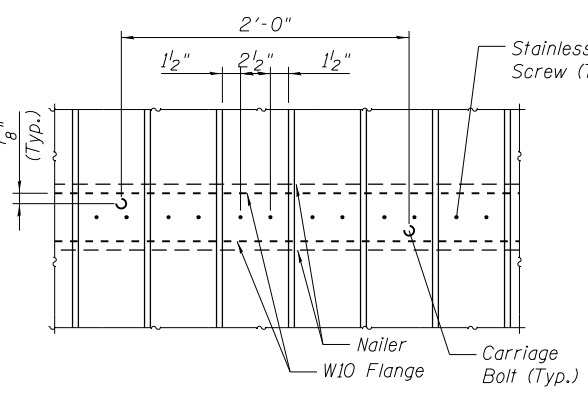
NOTES:

1. Carriage bolts, screws and anchors shall be Stainless Steel. Cost for carriage bolts, screws and anchors shall be included in Treated Timber.
2. Treated Timber construction shall be in accordance with Section 507 of the Standard Specification except as modified by these plans.
3. Nailers shall be installed in lengths such that each piece is fastened with a minimum of 2 carriage bolts.
4. The maximum moisture content of Treated Timber shall be 20% at the time of installation.
5. Pressure treatment shall be Micronized Copper Azole with a minimum retention of 0.23 pcf.
6. Submit pressure treatment specifications prior to ordering timber. Pressure treatment specifications shall include type of treatment and retention level.
7. Pressure treated lumber shall not contact any metal except stainless steel fasteners. Material and labor cost for rubber barrier shall be included in Treated Timber.
8. The neoprene rubber barrier shall meet the material requirements of section 1052.02 (a) of the Standard Specifications.
9. Screws shall be driven such that boards are tightly clamped. Where screw threads in the top board push the boards apart screws shall be backed out and re-driven until the boards are tightly clamped. If re-driving does not tightly clamp boards other methods such as pre-drilling top boards shall be used.
10. The minimum width of any deck plank shall be 3". Planks shall be ripped on a table saw or by a circular saw with a guide to produce a straight and clean edge. Free hand ripping with a circular saw will not be permitted.
11. Deck vertical offset defects can occur within a plank or between adjacent planks due to shake, cupping, vertical bowing, twisting or a combination of these (See offset defect examples). Planks with vertical offset defects exceeding 1/2" shall be removed and replaced at the Contractor's expense. Vertical offset defects due to cup, vertical bowing, twisting or a combination of these that are 12" or less from the face of the rail will not have to be remediated. The warranty period for the timber deck remediation shall be 2 years.
12. Anchors that fasten nailers to concrete counterweights shall be Type 304 or 316 Stainless and the anchor or the nut shall be removable for future redecking. The anchor specifications shall be submitted to the Engineer for approval. The top of the nailer shall be counterbored 3/4". Anchor shall be installed according to the manufacturers specifications.



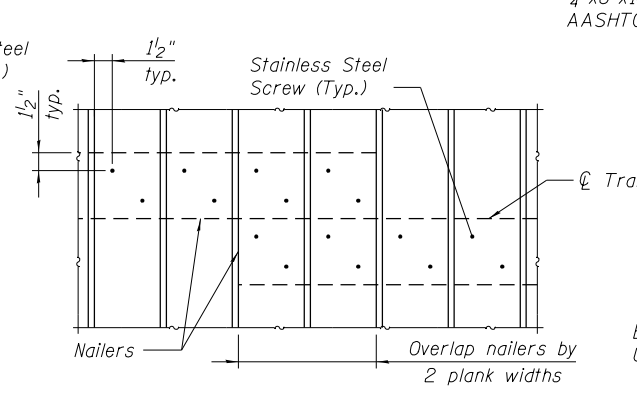
SECTION A-A

Fastener Pattern at W36 Girder



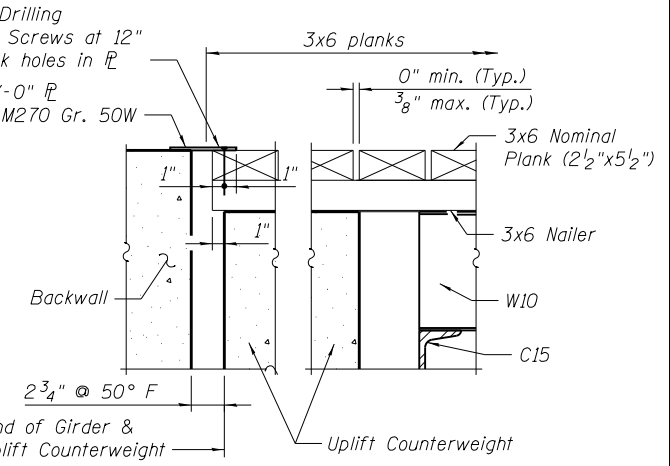
SECTION B-B

Fastener Pattern at W10 Stringers

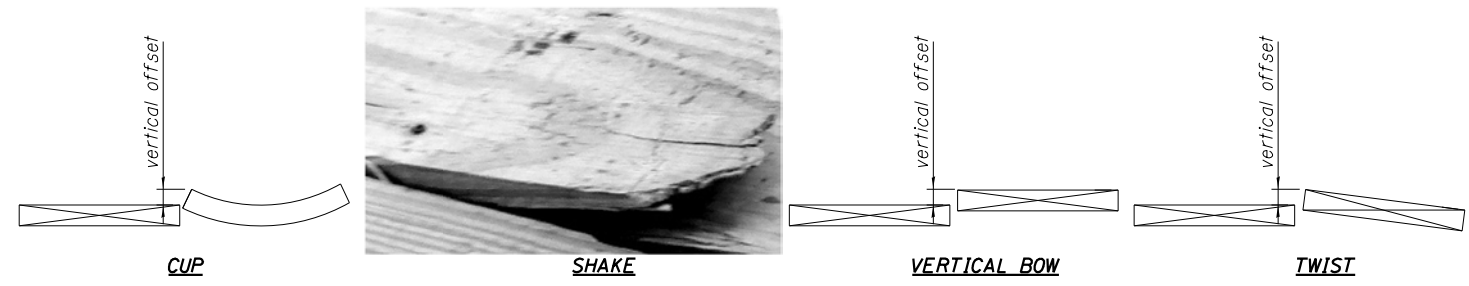


SECTION C-C

Fastener Pattern at Center Nailer



SECTION THRU DECK AT ABUTMENTS



OFFSET DEFECT EXAMPLES

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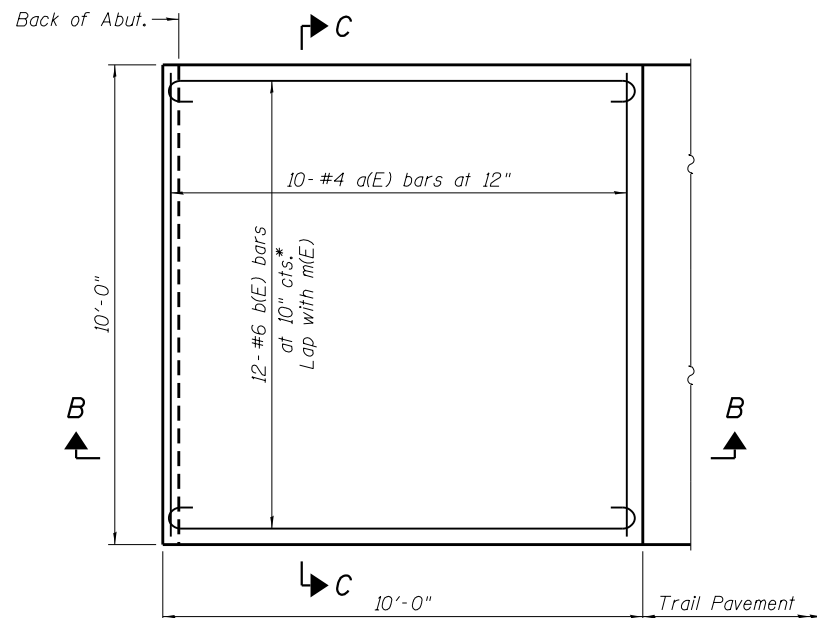
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St. Clair County Transit District

Bi-State Development Agency

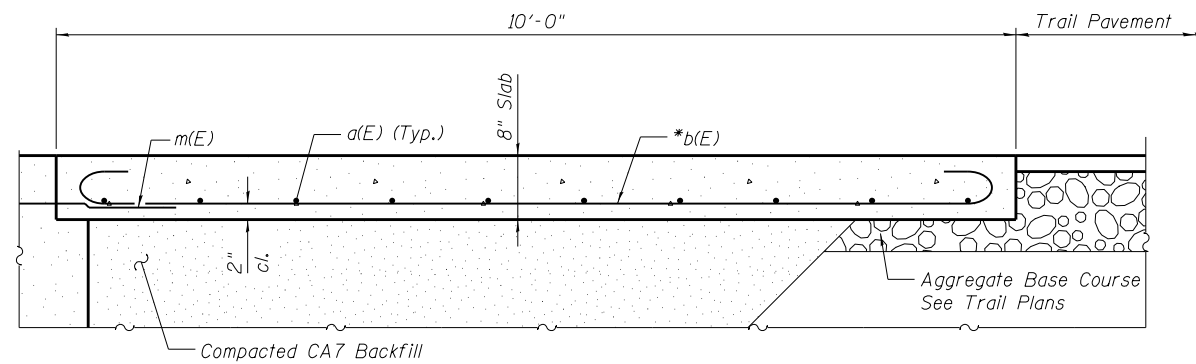
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STRUCTURE B34.48 (SN 082-7003)
 SHEET NO. 3 OF 20 SHEETS

MetroBikeLink over IL-161 at SWIC
 COUNTY TOTAL SHEETS SHEET NO.
 ST. CLAIR 127 53
 CONTRACT NO.
 ILLINOIS FED. AID PROJECT

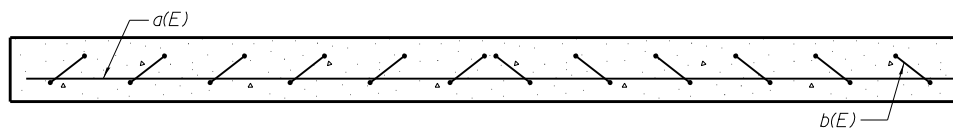


PLAN

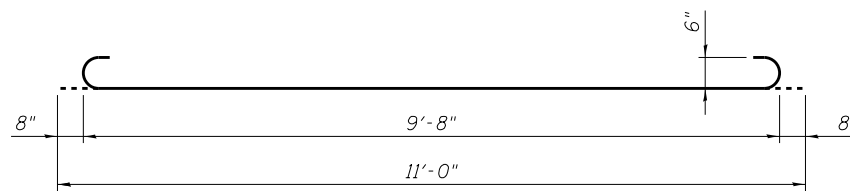
(N. Appr. Slab Shown; South Similar)
 * Tilt #6 b(E) bars as required to maintain clearance.



SECTION B-B



SECTION C-C



BAR b(E)

**BILL OF MATERIAL
(2 APPROACHES)**

Bar	No.	Size	Length	Shape
a(E)	20	#4	9'-8"	—
b(E)	24	#6	11'-0"	⌋
Concrete Structures			Cu. Yd.	4.9
Reinforcement Bars, Epoxy Coated			Pound	530

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**THOUVENOT,
WADE &
MOERCHEN, INC.**



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St Clair
 County
 Transit
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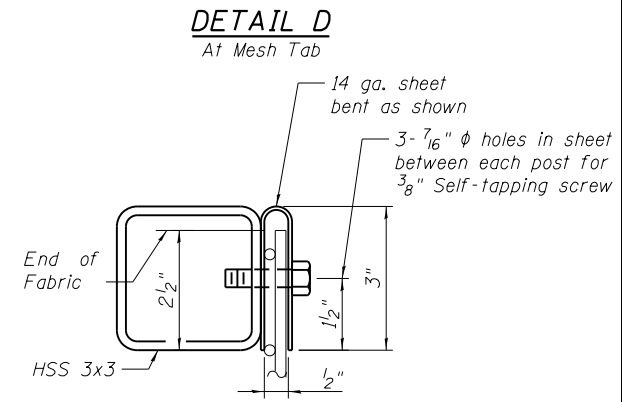
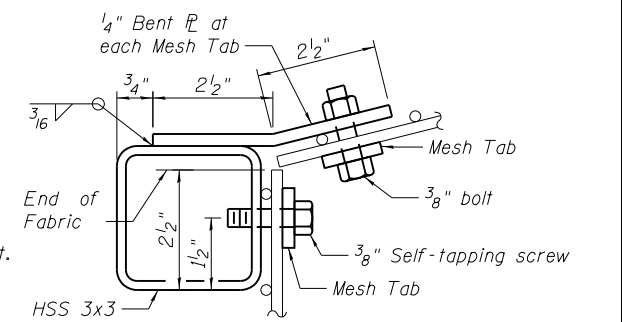
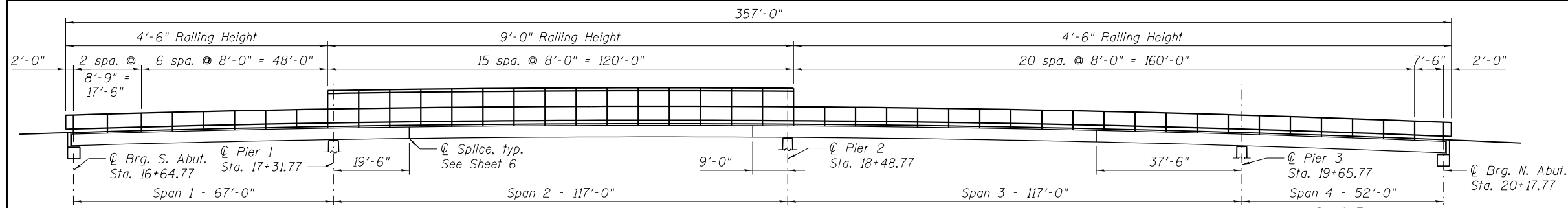
**BRIDGE APPROACH SLAB DETAILS
 STRUCTURE B34.48 (SN 082-7003)**

SHEET NO. 4 OF 20 SHEETS

MetroBikeLink
 over IL-161 at SWIC

COUNTY	TOTAL SHEETS	SHEET NO.
ST. CLAIR	127	54
CONTRACT NO.		

ILLINOIS FED. AID PROJECT



Materials:
 HSS ASTM A 500 Gr. B (fy=46,000 psi)
 Plate & Bars AASHTO M 270 Gr. 36 (fy=36,000 psi)
 Welded Wire Fabric AASHTO M55 (fy=65,000 psi)
 14 gage Bent Sheet ASTM A 1008 or A 1011, Any Grade

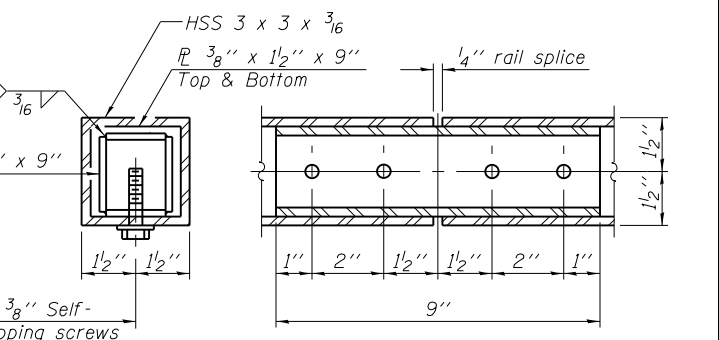
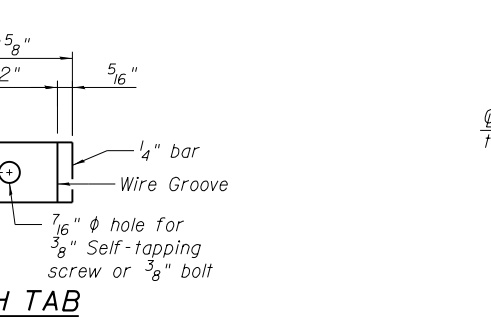
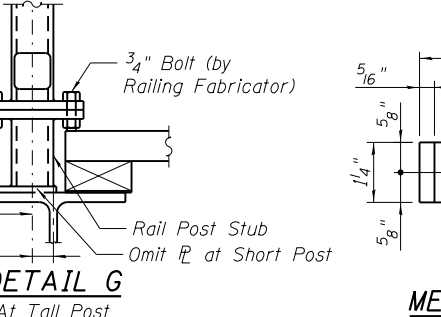
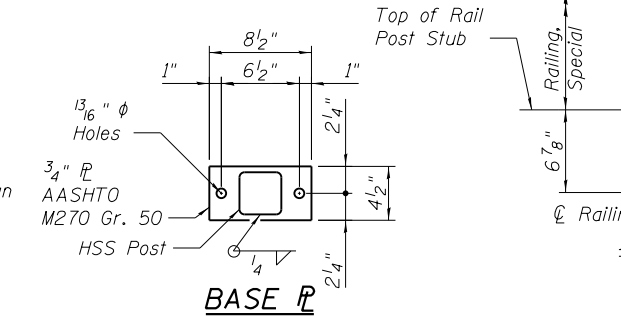
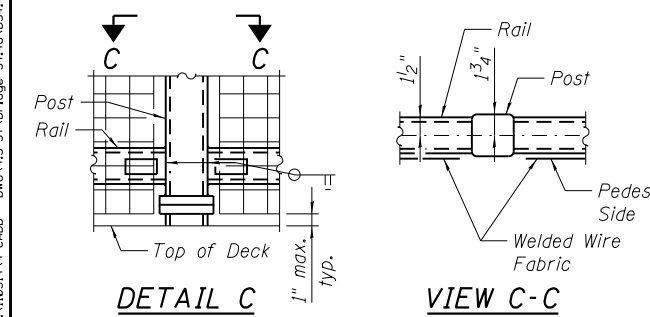
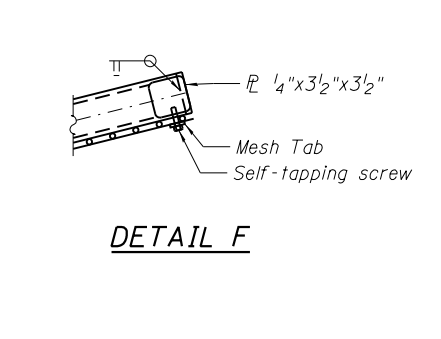
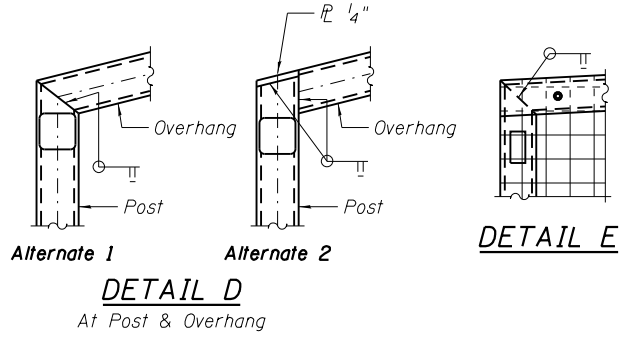
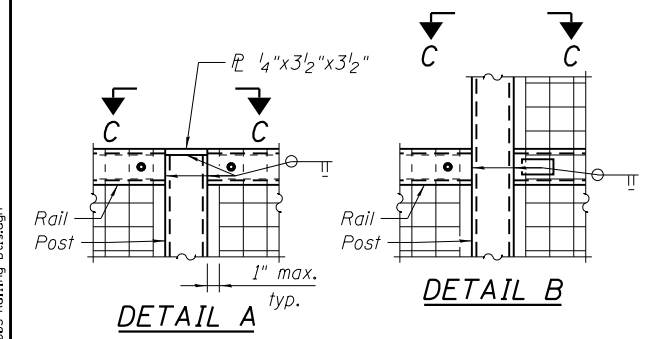
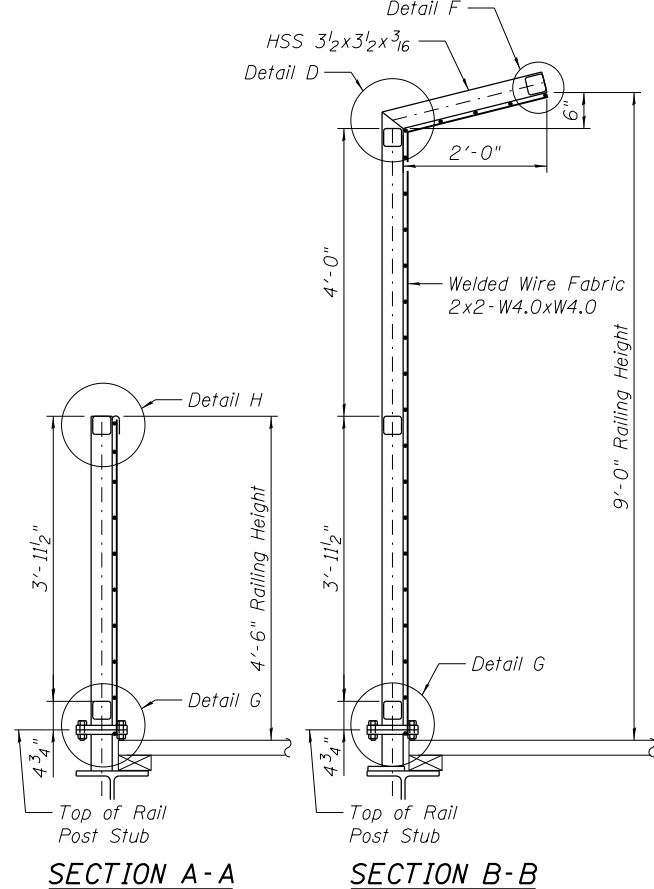
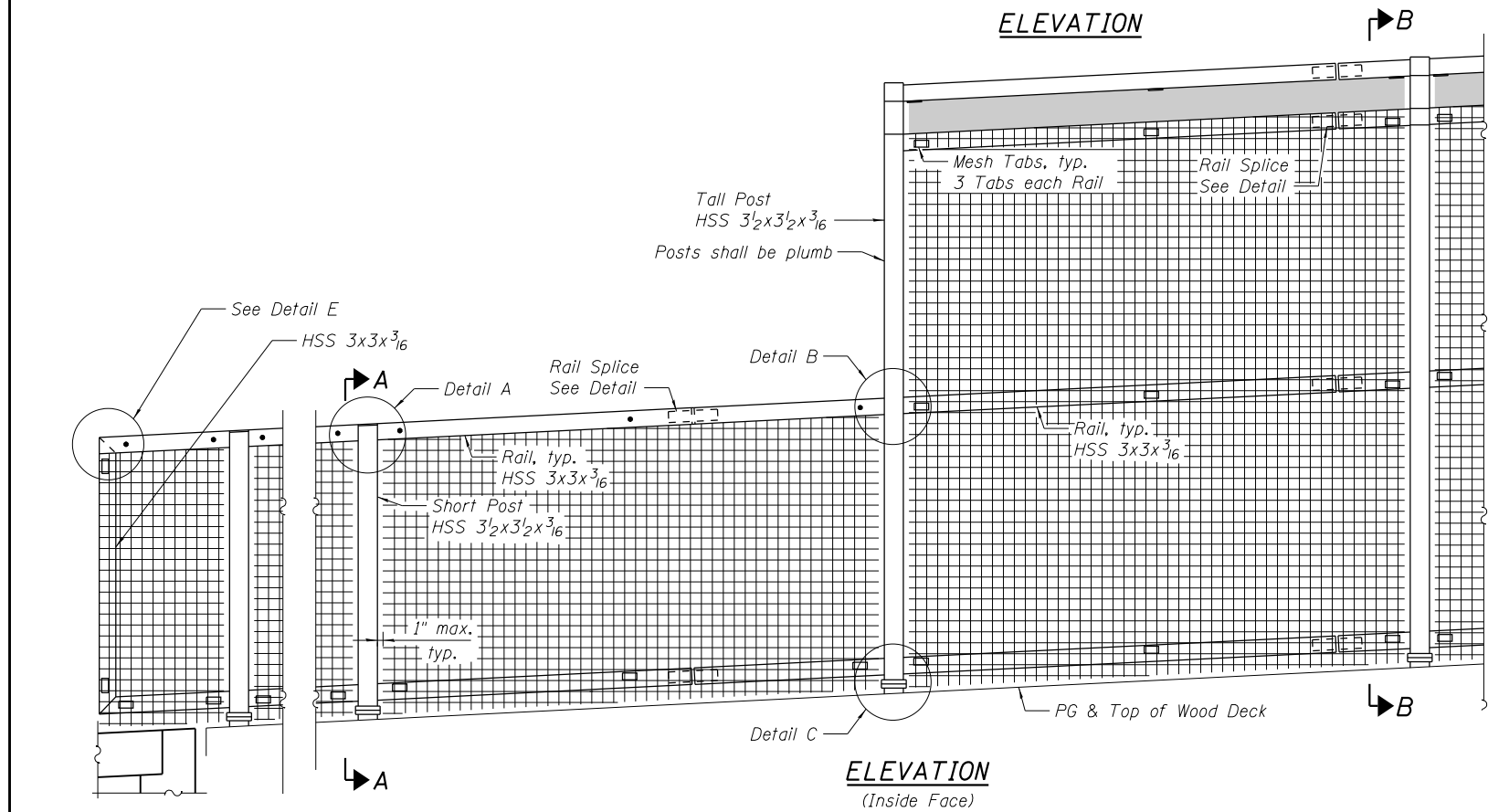
Finish: All elements of the railing shall be galvanized and powder coated. See the special provision for surface preparation and powder coating requirements.

Color: The finish color of all elements shall be black.

Vent holes for galvanizing shall be provided as required. No vent holes with axes perpendicular to the centerline of the bridge will be permitted in the posts.

Self-tapping screws and 3/8" fence bolts to be hot-dipped galvanized.

See the special provision for other information not presented on the drawings.



Item	Unit	Quantity
Bridge Fence Railing, Special	Foot	714

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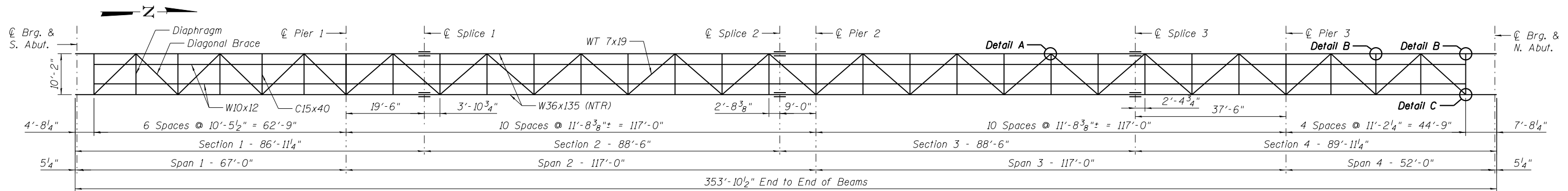
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St. Clair County Transit District

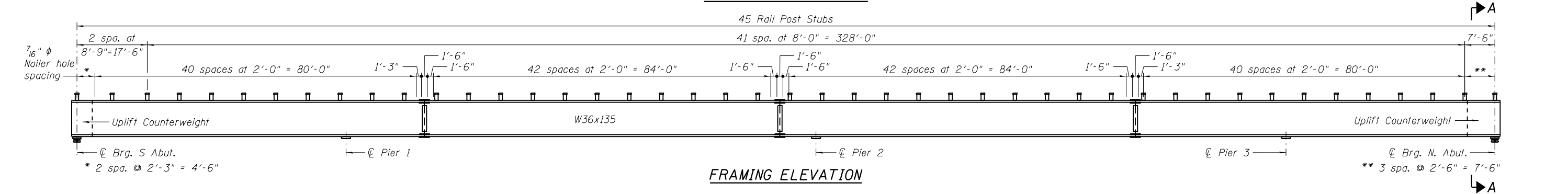
Bi-State Development Agency

RAILING
STRUCTURE B34.48 (SN 082-7003)
 SHEET NO. 5 OF 20 SHEETS

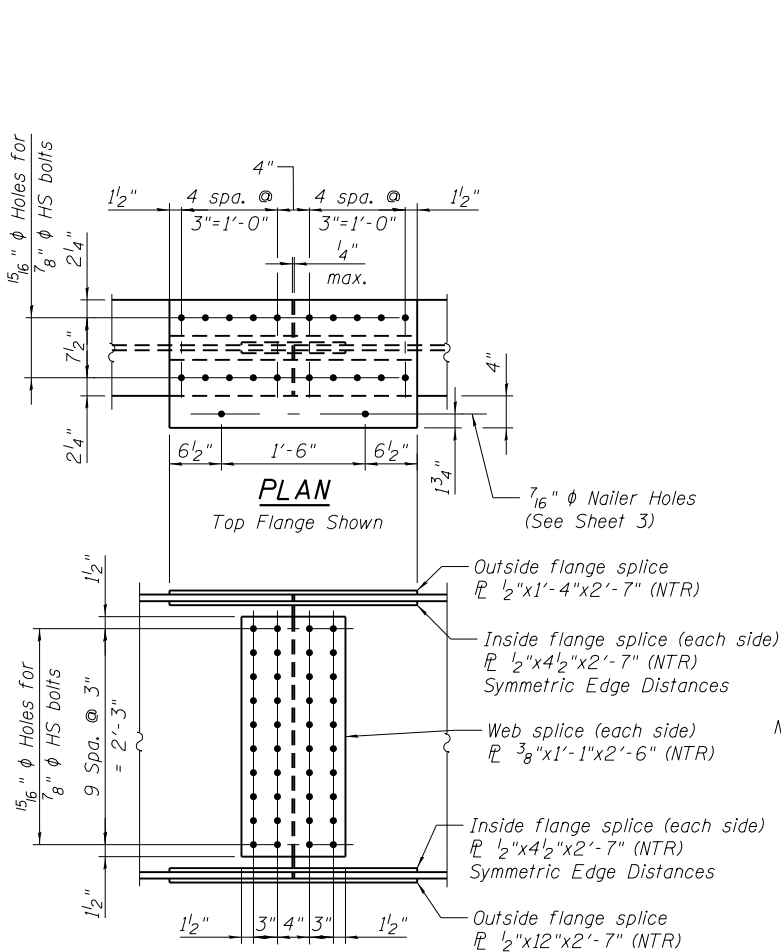
MetroBikeLink
 over IL-161 at SWIC
 COUNTY TOTAL SHEETS SHEET NO.
 ST. CLAIR 127 55
 CONTRACT NO.
 ILLINOIS FED. AID PROJECT



STEEL FRAMING PLAN

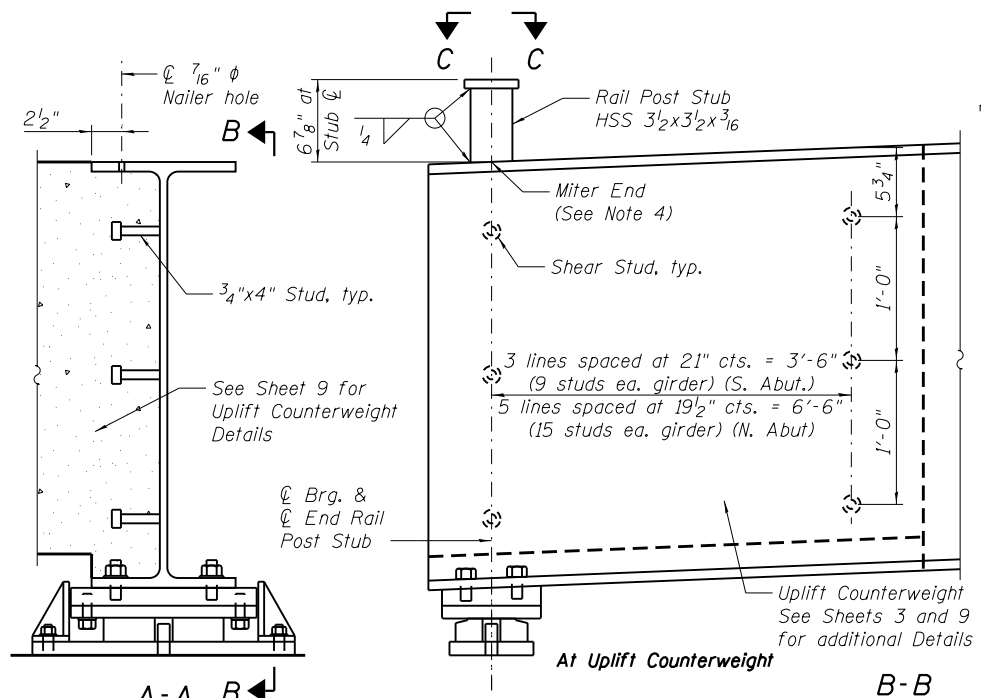


FRAMING ELEVATION



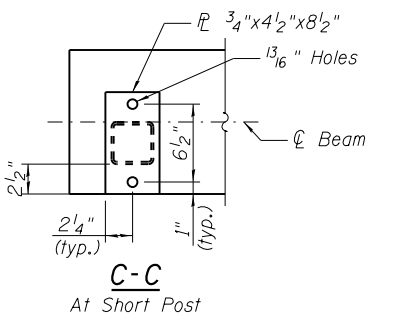
SPLICE DETAIL
(6 Required)

Splice Plates shall be AASHTO M270 Grade 50.

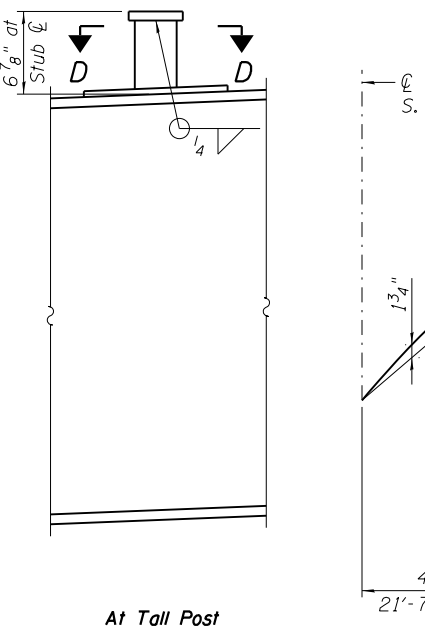


A-A

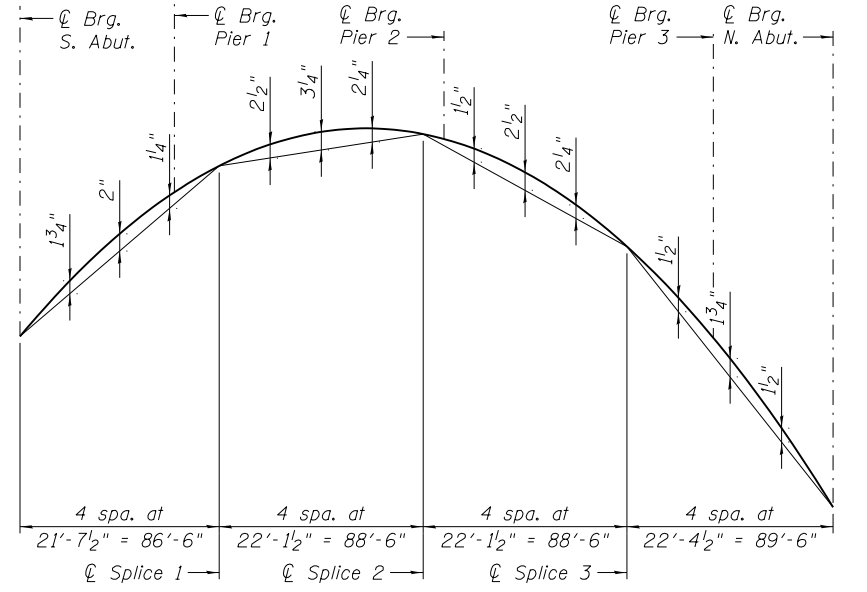
B-B



C-C



D-D



CAMBER

- NOTES:**
1. See Sheet 7 for Details A thru C.
 2. See Schedule of Bolts on Sheet 2 for bolt sizes.
 3. Load carrying components designated "NTR" shall conform to the Impact Testing Requirement, Zone 2.
 4. Rail Post Stubs shall be plumb in the erected position.
 5. Slotted holes in WT connections will not be permitted.
 6. Hot rolled structural steel W and WT shapes and splice plates shall be AASHTO M270 Grade 50.
 7. Hot rolled C shapes, angles, plates and bars shall be AASHTO M270 Grade 36.
 8. HSS shall be ASTM A 500, Grade B.
 9. See Sheet 7 for Girder Moment and Reaction Tables.

FILE NAME = P:\110514\4-CADD - DMG\4.3-STA\B34.48-B34.48-006-Framing Plan.dgn

THOUVENOT, WADE & MOERCHEN, INC.



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PLOT DATE = 6/19/2013

DESIGNED - MJJ
CHECKED - DJH
DRAWN - MJJ
CHECKED - DJH

REVISED
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REVISED



St Clair County Transit District



Bi-State Development Agency

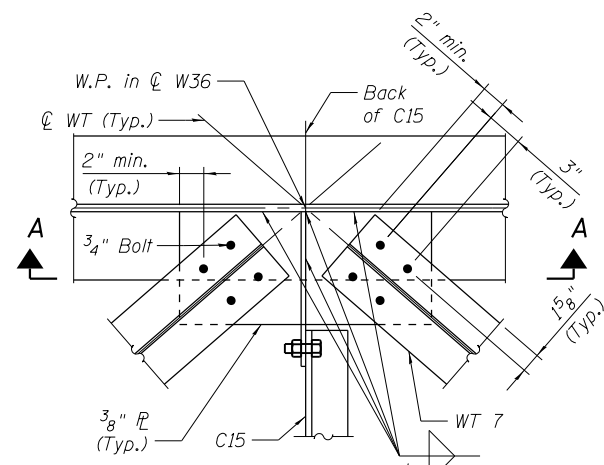
FRAMING PLAN
STRUCTURE B34.48 (SN 082-7003)

SHEET NO. 6 OF 20 SHEETS

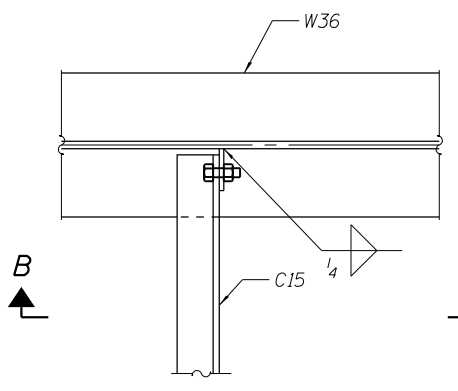
MetroBikeLink
over IL-161 at SWIC

COUNTY	TOTAL SHEETS	SHEET NO.
ST. CLAIR	127	56
CONTRACT NO.		

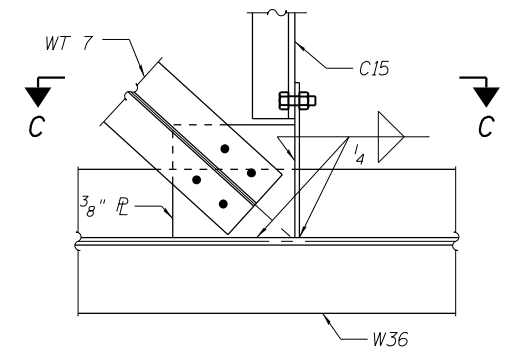
ILLINOIS FED. AID PROJECT



DETAIL A

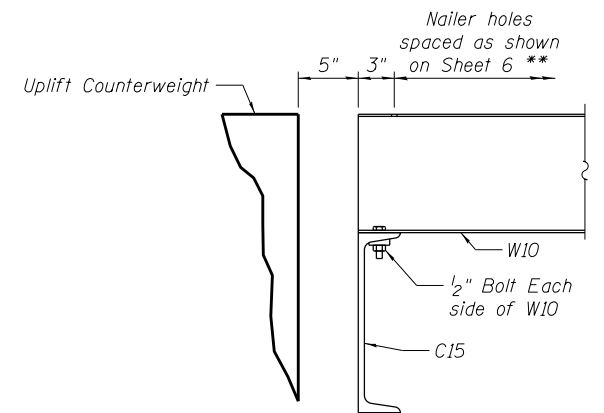


DETAIL B

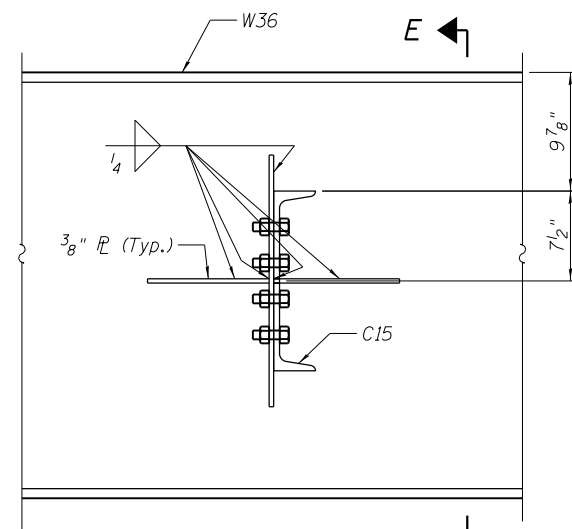


DETAIL C (shown)

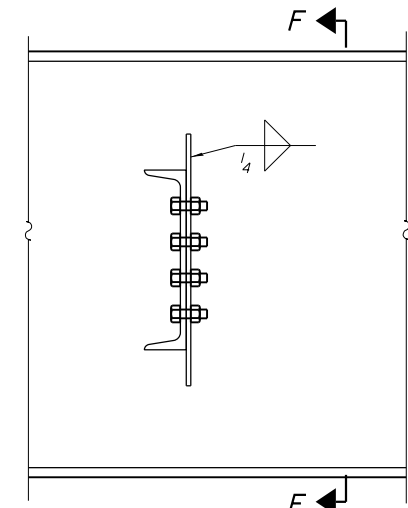
See DETAIL A for information not shown



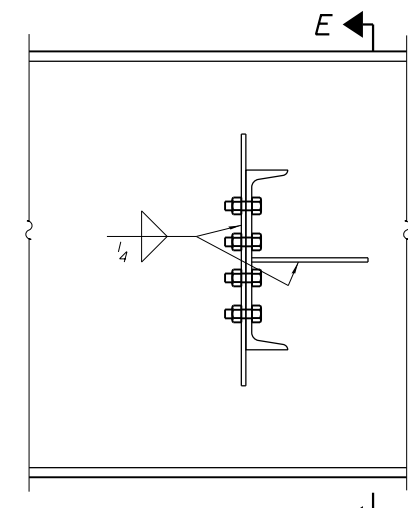
AT UPLIFT COUNTERWEIGHT



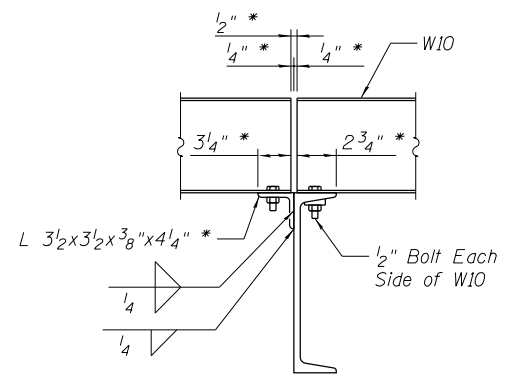
SECTION A-A



SECTION B-B



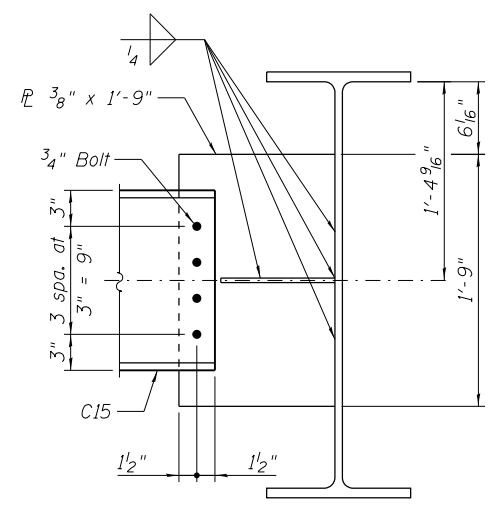
SECTION C-C



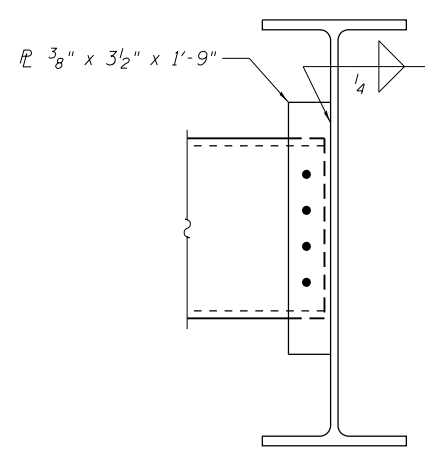
AT ALL OTHER DIAPHRAGM LOCATIONS

Note: Tapered washers required at flanges of C15 channels.

- * 3/2 x 3 1/2 Angle may be Eliminated Where W10 is Continuous Over Support Channel. Lengths of Individual Pieces of W10 Shall be Determined by the Contractor.
- ** See Section thru Deck at Abutments & Section B-B on Sheet 3 for nailer bolt holes.



SECTION E-E



SECTION F-F

See Section E-E for Information not Shown

GIRDER MOMENT TABLE								
		0.4 Sp. 1	Pier 1	0.5 Sp. 2	Pier 2	0.5 Sp. 3	Pier 3	0.6 Sp. 4
I_s	(in ⁴)	7,800	7,800	7,800	7,800	7,800	7,800	7,800
S_s	(in ³)	439	439	439	439	439	439	439
DC1	(k/')	0.273	0.300	0.300	0.300	0.273	0.273	0.273
M _{DC1}	(k)	49	269	196	365	168	233	26
DC2	(k/')	-	-	-	-	-	-	-
DW	(k/')	-	-	-	-	-	-	-
M _L *	(k)	241	495	423	617	414	490	169
M _u (Strength I)	(k)	483	1202	985	1535	934	1149	328
$\phi_r M_n$	(k)	1851	1851	1851	1851	1851	1851	1851
f_s DC1	(ksi)	1.35	7.36	5.37	9.97	4.60	6.38	0.71
f_s (L)*	(ksi)	6.57	13.52	11.55	16.86	11.31	13.39	4.62
f_s (Service II)	(ksi)	9.90	24.94	20.39	31.88	19.30	23.78	6.71
0.80R _n F _{yf}	(ksi)	40.00	40.00	40.00	40.00	40.00	40.00	40.00
f_s (Total)(Strength I)	(ksi)	13.19	32.87	26.93	41.96	25.54	31.40	8.97

* Governed by Pedestrian Live Load

GIRDER REACTION TABLE						
		S. Abut.	Pier 1	Pier 2	Pier 3	N. Abut.
R _{DC1}	(k)	14.12	30.15	35.46	27.42	17.09
R _{DC2}	(k)	-	-	-	-	-
R _{DW}	(k)	-	-	-	-	-
R _L *	(k)	15.00	50.68	57.95	49.41	12.80
R _{Total}	(k)	29.12	80.83	93.41	76.82	29.89

- 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 (in⁴ and in³).
- 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.).
- DW: Un-factored long-term composite (superimposed future wearing surface only) dead load (kips/ft.).
- M_L: Un-factored live load moment (kip-ft.).
- M_u (Strength I): Factored design moment (kip-ft.).
- 1.25 (M_{DC1} + M_{DC2}) + 1.5 M_{DW} + 1.75 M_L
- $\phi_r M_n$: Compact non-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 (L): Un-factored stress at edge of flange for controlling steel flange due to vertical live loads as calculated below (ksi).
- M_L / S_s
- f_s (Service II): Sum of stresses as computed below (ksi).
- f_{sDC1} + 1.3 f_{sL}
- 0.80R_nF_{yf}: 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} + 1.75 f_{sL}

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THOUVENOT, WADE & MOERCHEN, INC.

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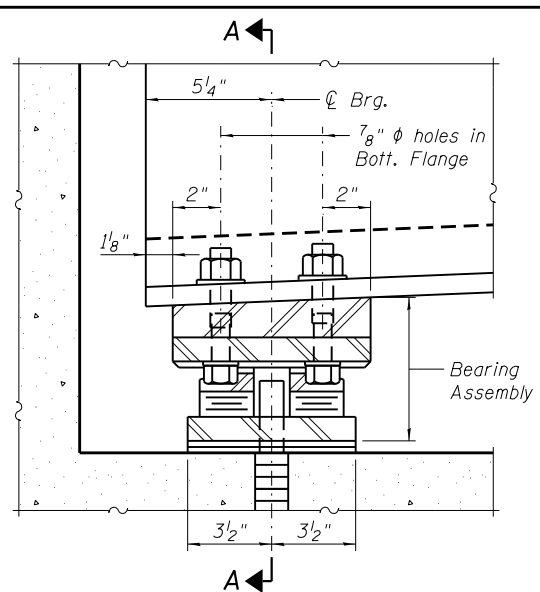
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St Clair County Transit District

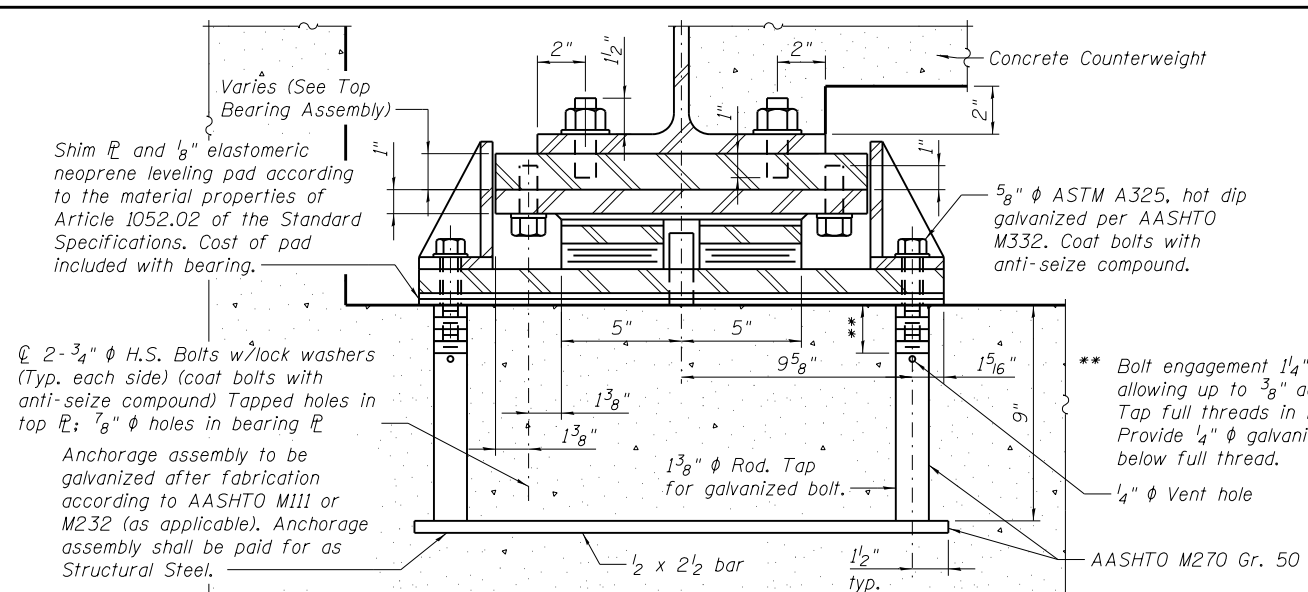
Bi-State Development Agency

STRUCTURAL STEEL DETAILS
STRUCTURE B34.48 (SN 082-7003)
 SHEET NO. 7 OF 20 SHEETS

MetroBikeLink
 over IL-161 at SWIC
 COUNTY TOTAL SHEETS SHEET NO.
 ST. CLAIR 127 57
 CONTRACT NO.
 ILLINOIS FED. AID PROJECT

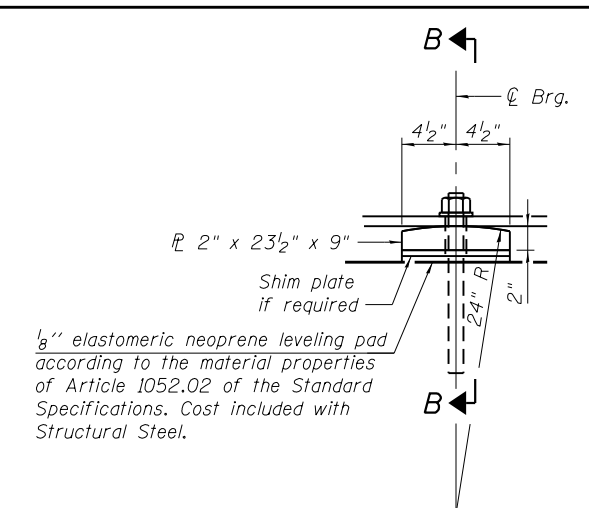


ELEVATION AT ABUT.

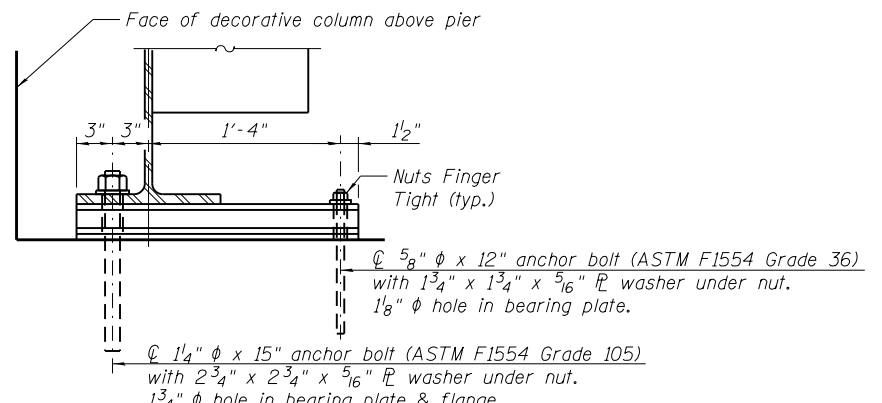


SECTION A-A

TYPE III ELASTOMERIC EXP. BRG.

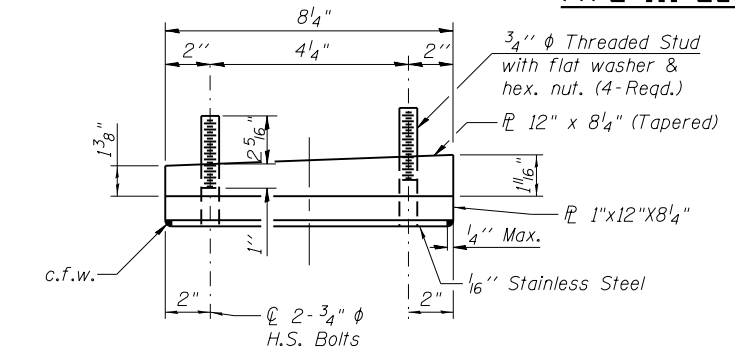


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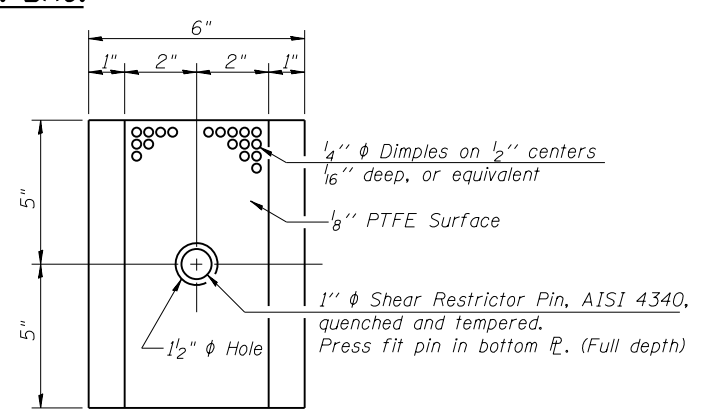


SECTION B-B

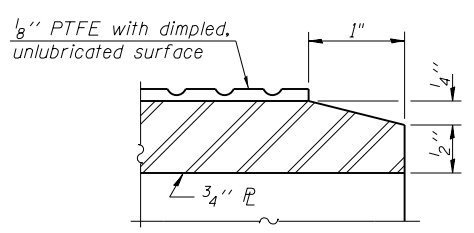
FIXED BEARING



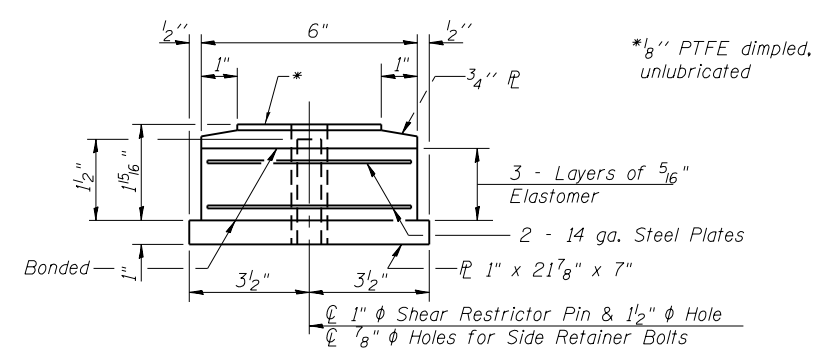
TOP BEARING ASSEMBLY



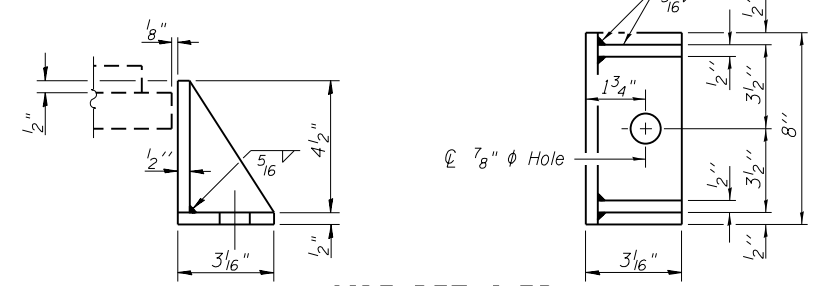
PLAN-PTFE ELASTOMERIC BRG.



SECTION THRU PTFE

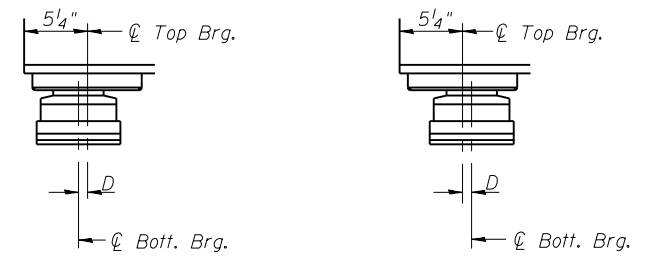


BOTTOM BEARING ASSEMBLY



SIDE RETAINER

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



SETTING ANCHOR BOLTS AT EXP. 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.
 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 III.
 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.
 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.

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly, Type III	Each	4
Anchor Bolts, 5/8"	Each	6
Anchor Bolts, 1/4"	Each	6

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THOUVENOT, WADE & MOERCHEN, INC.
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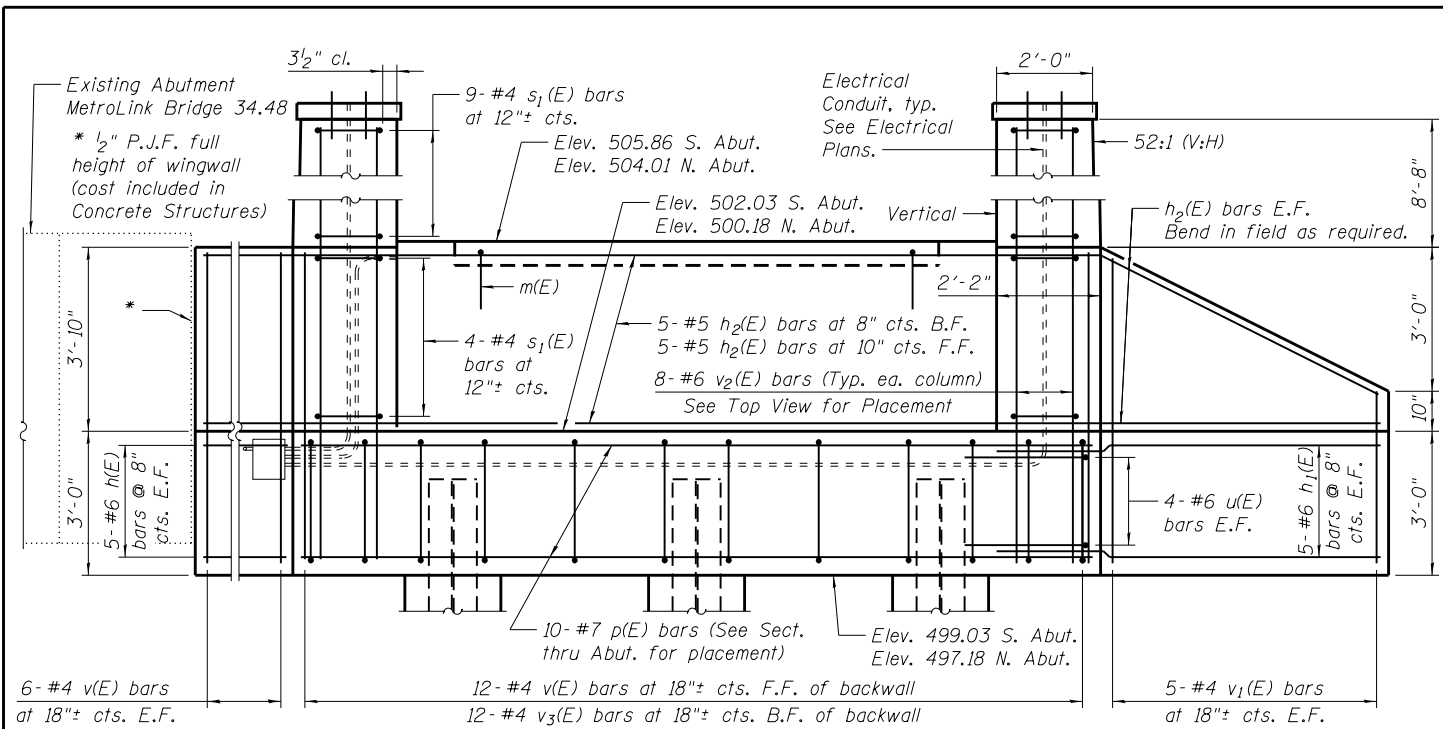
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St Clair County Transit District

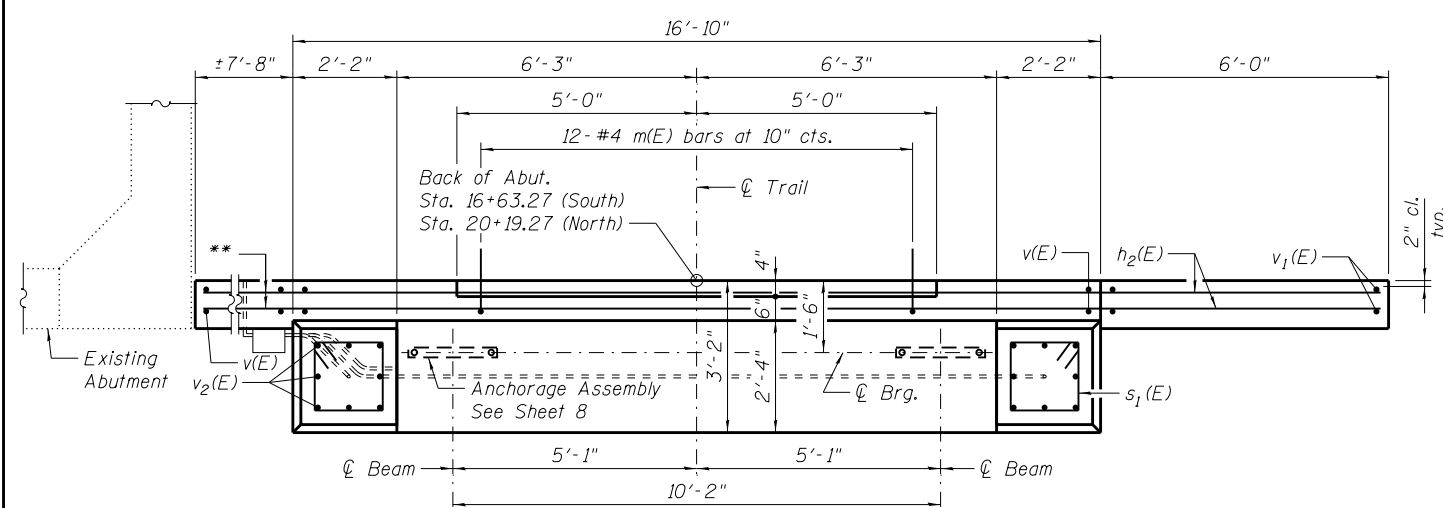
Bi-State Development Agency

BEARING DETAILS
STRUCTURE B34.48 (SN 082-7003)
 SHEET NO. 8 OF 20 SHEETS

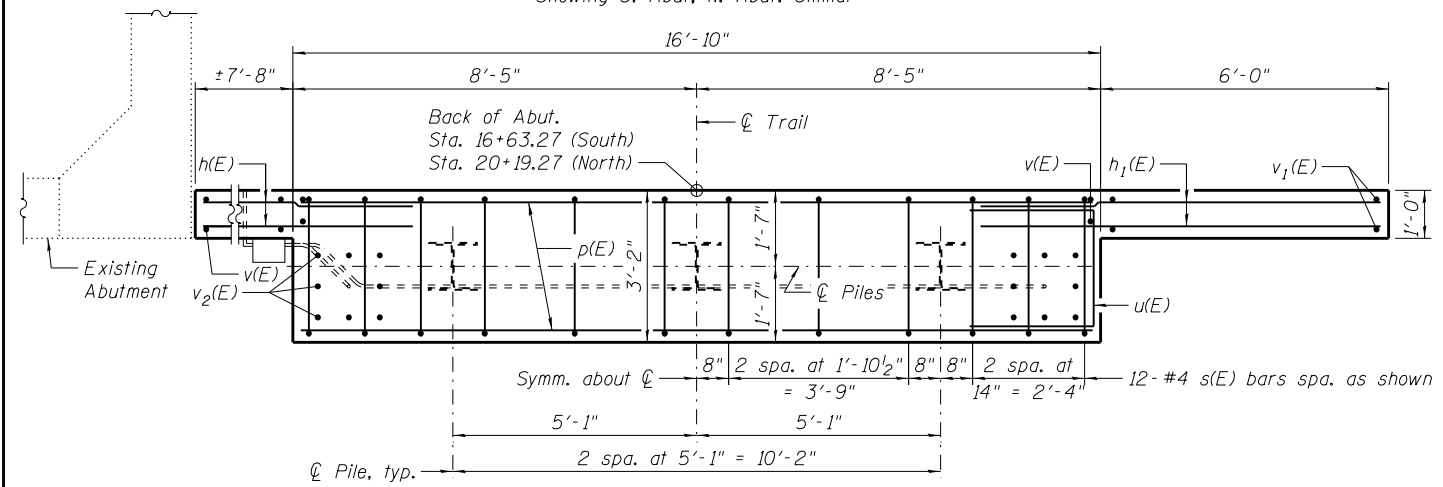
MetroBikeLink
 over IL-161 at SWIC
 COUNTY TOTAL SHEETS SHEET NO.
 ST. CLAIR 127 58
 CONTRACT NO.
 ILLINOIS FED. AID PROJECT



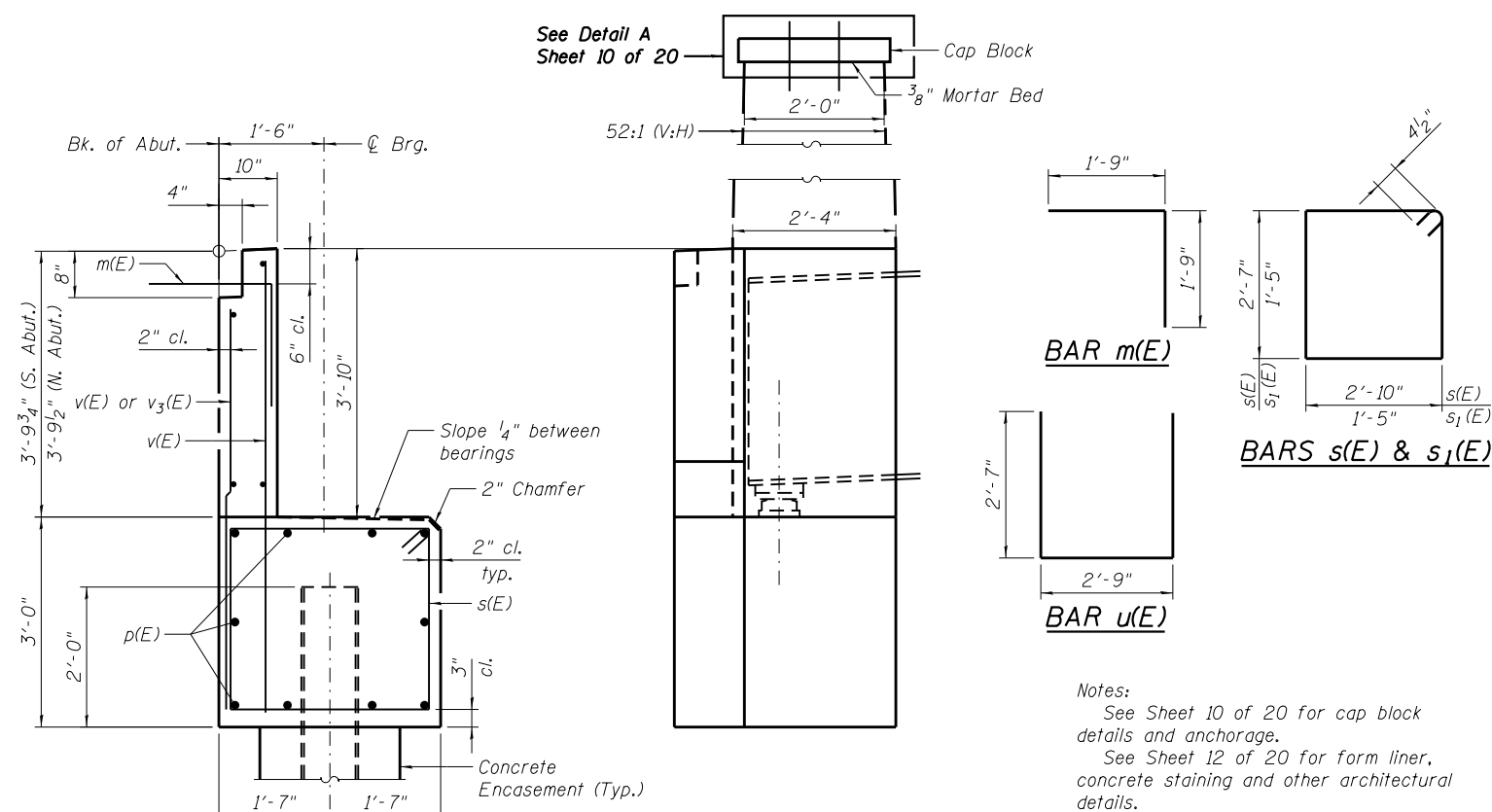
ELEVATION
Showing S. Abut., Looking South



TOP VIEW
Showing S. Abut.; N. Abut. Similar



PLAN-PILE CAP
Showing S. Abut.; N. Abut. Similar



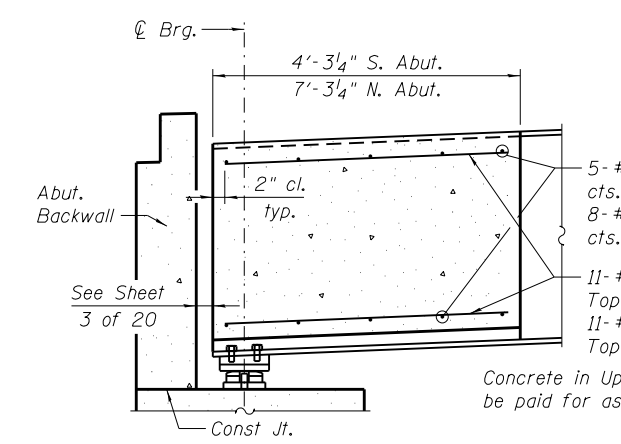
SEC. THRU ABUT.

END ELEVATION

Notes:
See Sheet 10 of 20 for cap block details and anchorage.
See Sheet 12 of 20 for form liner, concrete staining and other architectural details.

BILL OF MATERIAL (2 ABUT.)

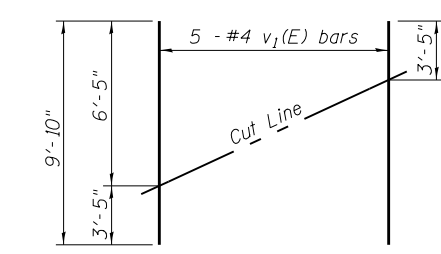
Bar	No.	Size	Length	Shape
h(E)	20	#6	10'-1"	—
h1(E)	20	#6	8'-5"	—
h2(E)	20	#5	30'-2"	—
m(E)	24	#4	3'-7"	┌
m1(E)	26	#5	9'-10"	—
m2(E)	22	#5	3'-11"	—
m3(E)	22	#5	6'-11"	—
p(E)	20	#7	16'-6"	—
s(E)	24	#4	11'-7"	□
s1(E)	52	#4	6'-5"	□
u(E)	16	#6	7'-11"	┌
v(E)	48	#4	6'-5"	—
v1(E)	10	#4	9'-10"	—
v2(E)	32	#6	15'-1"	—
v3(E)	24	#4	5'-9"	—
Structure Excavation		Cu. Yd.	120	
Concrete Structures		Cu. Yd.	42.4	
Concrete Encasement		Cu. Yd.	2.2	
Reinforcement Bars, Epoxy Coated		Pound	4,120	
Furnishing Steel Piles, HP 12x53		Foot	306	
Driving Piles		Foot	306	
Test Pile Steel, HP 12x53		Each	2	
Pile Shoes		Each	6	
Anchor Bolts, 1/2"		Each	16	
Cap Blocks		Each	4	



SECTION THRU UPLIFT COUNTERWEIGHT

PILE DATA

Type: HP 12x53
Nominal Required Bearing: 419 kips
Factored Resistance Available: 230 kips
Est. Length: 76 ft. - S. Abutment
77 ft. - N. Abutment
No. Production Piles: 2 at each Abutment
No. Test Piles: 1 at each Abutment
See Sheet 11 for Pile Details

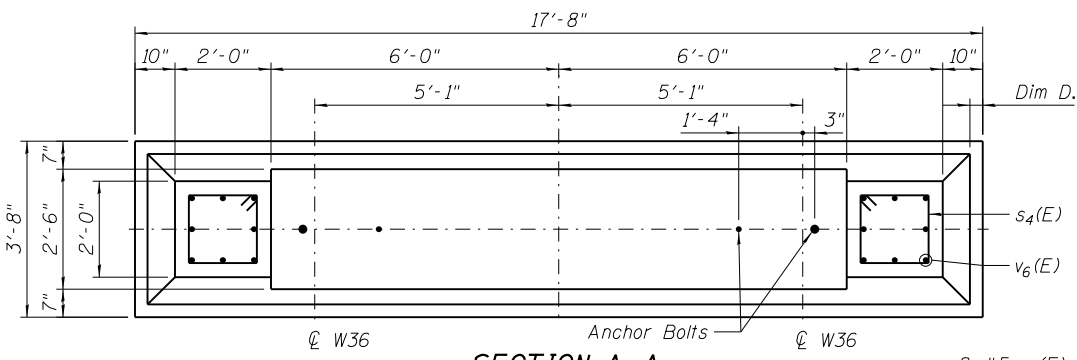


v1(E) BAR FIELD CUTTING DIAGRAM
Order v1(E) bars full length. Cut as shown and use remainder of bars in opposite face.

** If it is necessary to cut these bars in the field, the bars shall be cut and epoxy coating shall be repaired according to Article 508.04 of the 2012 Standard Specifications.

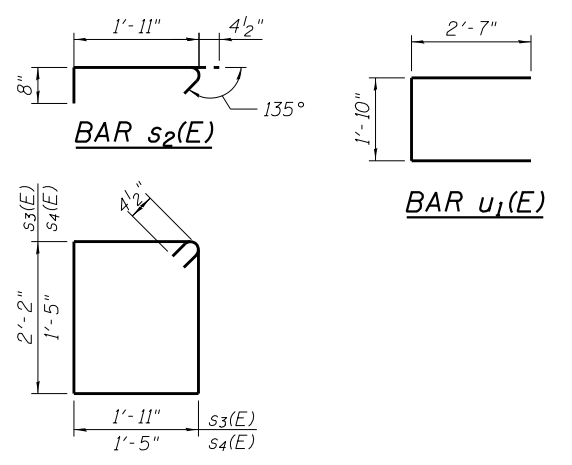
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THOUVENOT, WADE & MOERCHEN, INC. SWANSEA • WATERLOO • EDWARDSVILLE • ST. LOUIS • ST. CHARLES	USER NAME = jlandeck PLOT SCALE = 0:2.0000 '1" = 1/8" PLOT DATE = 6/19/2013	DESIGNED - MJJ CHECKED - ALN/DJH DRAWN - MJJ CHECKED - ALN	REVISED REVISED REVISED REVISED	St Clair County Transit District Bi-State Development Agency	ABUTMENT DETAILS STRUCTURE B34.48 (SN 082-7003) SHEET NO. 9 OF 20 SHEETS	MetroBikeLink over IL-161 at SWIC COUNTY TOTAL SHEETS: ST. CLAIR 127, 59 CONTRACT NO. ILLINOIS FED. AID PROJECT
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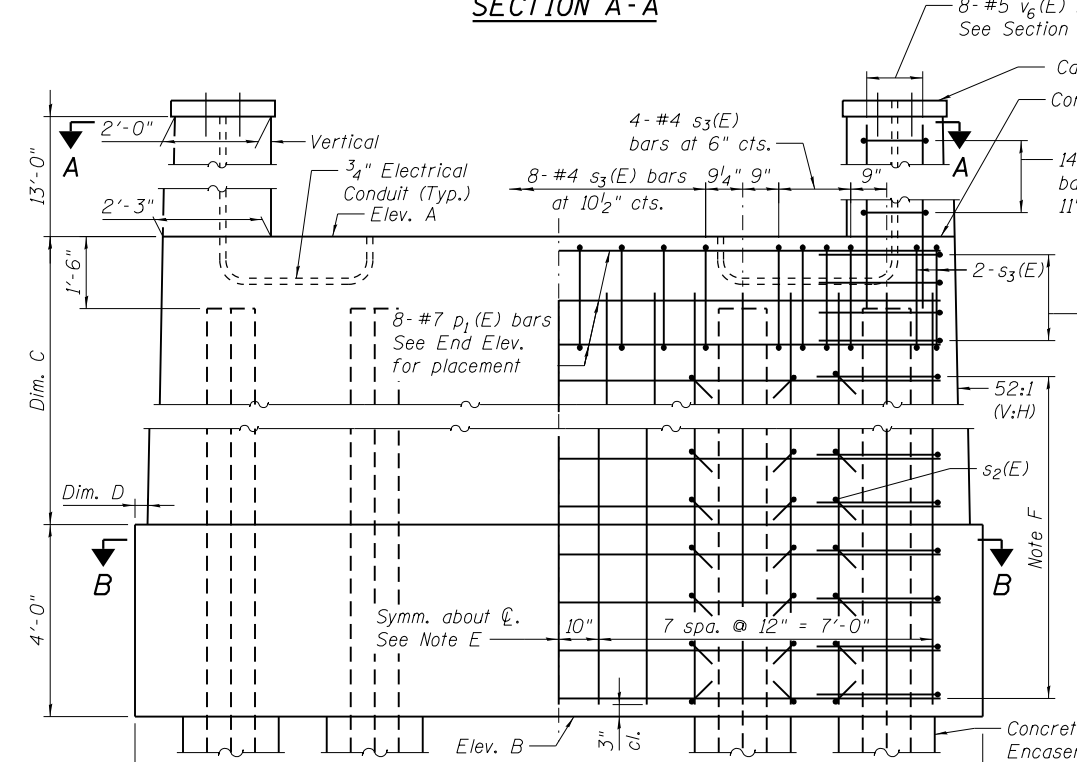


SECTION A-A

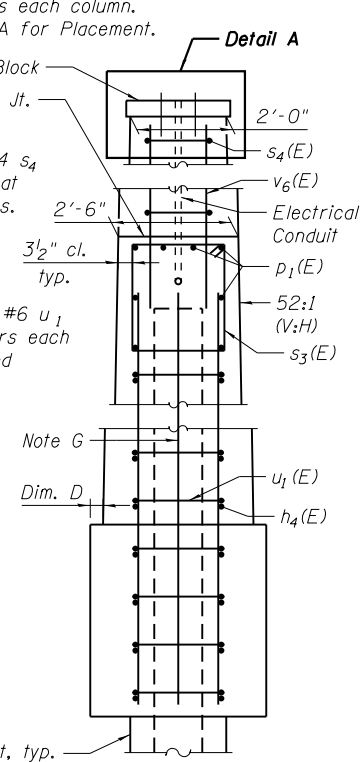
	Pier 1	Pier 2	Pier 3
Elev. A	503.89	504.47	502.31
Elev. B	483.31	485.72	485.23
Dim. C	16'-7"	14'-9"	13'-1"
Dim. D	3 ³ / ₁₆ "	3 ⁵ / ₈ "	4"
Note E	17- #6 v ₃ (E) bars spa. as shown E.F.	17- #6 v ₄ (E) bars spa. as shown E.F.	17- #6 v ₅ (E) bars spa. as shown E.F.
Note F	18- #6 h ₄ (E) bars at 12" cts. E.F. 18- #6 u ₁ (E) bars at 12" cts. ea. End	16- #6 h ₄ (E) bars at 12" cts. E.F. 16- #6 u ₁ (E) bars at 12" cts. ea. End	15- #6 h ₄ (E) bars at 12" cts. E.F. 15- #6 u ₁ (E) bars at 12" cts. ea. End
Note G	1- #4 v ₃ (E) bar ea. End	1- #4 v ₄ (E) bar ea. End	1- #4 v ₅ (E) bar ea. End



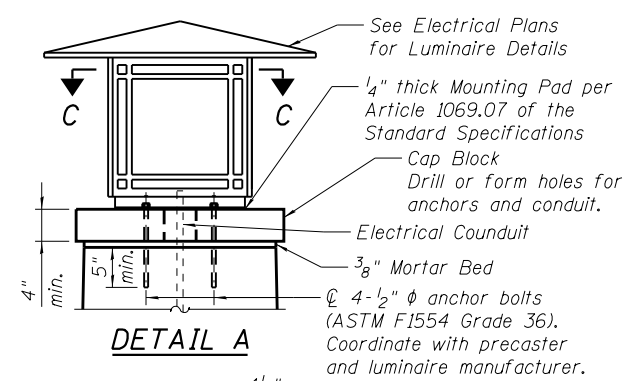
BARS s₃(E) & s₄(E)



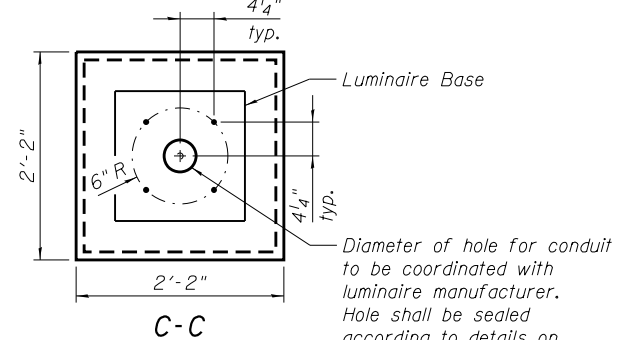
ELEVATION



END ELEVATION



DETAIL A



C-C

Notes:
See Sheet 12 of 20 for form liner, concrete staining and other architectural details.

BILL OF MATERIAL (3 PIERS)

Bar	No.	Size	Length	Shape
h ₄ (E)	98	#6	15'-11"	—
p ₁ (E)	24	#7	15'-11"	—
s ₂ (E)	294	#4	3'-0"	⌋
s ₃ (E)	60	#4	8'-11"	⌋
s ₄ (E)	84	#4	6'-5"	⌋
u ₁ (E)	122	#6	7'-0"	⌋
v ₃ (E)	36	#6	19'-1"	—
v ₄ (E)	36	#6	17'-3"	—
v ₅ (E)	36	#6	15'-7"	—
v ₆ (E)	48	#5	14'-4"	—
Structure Excavation		Cu. Yd.	18	
Concrete Structures		Cu. Yd.	119.5	
Concrete Encasement		Cu. Yd.	4.2	
Reinforcement Bars, Epoxy Coated		Pound	9,240	
Furnishing Steel Piles, HP 12x53		Foot	738	
Driving Piles		Foot	738	
Test Pile, Steel HP 12x53		Each	3	
Pile Shoes		Each	12	
Anchor Bolts, 1/2"		Each	24	
Cap Blocks		Each	6	

Anchor Bolt 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 luminaires may be either cast in place or installed in holes drilled after the luminaire is in place.
Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.

PILE DATA

Type: HP 12x53
Nominal Required Bearing: 419 kips
Factored Resistance Available: 230 kips
Est. Length: 74 ft. - Pier 1
91 ft. - Pier 2
81 ft. - Pier 3
Min. Tip Elevations: 445 - All Piers
No. Production Piles: 3 at each Pier
No. Test Piles: 1 at each Pier
See Sheet 11 for Pile Details

FILE NAME = P:\110514\4-CADD - DWG\4.3-ST\B-bridge_34-48\B34-48-010-Per-Dtl.dgn

THOUVENOT, WADE & MOERCHEN, INC.
SWANSEA • WATERLOO • EDWARDSVILLE • ST. LOUIS • ST. CHARLES

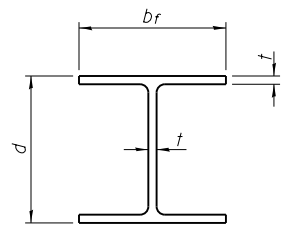
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S&T St Clair County Transit District

Metro Bi-State Development Agency

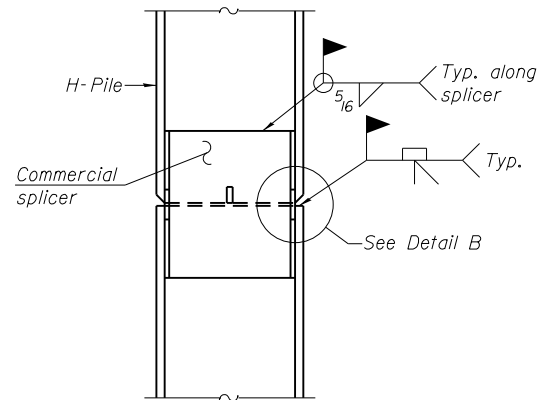
PIER DETAILS
STRUCTURE B34.48 (SN 082-7003)
SHEET NO. 10 OF 20 SHEETS

MetroBikeLink
over IL-161 at SWIC
COUNTY: ST. CLAIR
TOTAL SHEETS: 127
SHEET NO.: 60
CONTRACT NO.
ILLINOIS FED. AID PROJECT

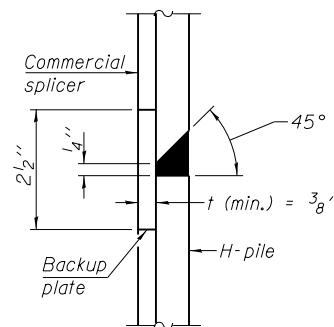


STEEL PILE TABLE

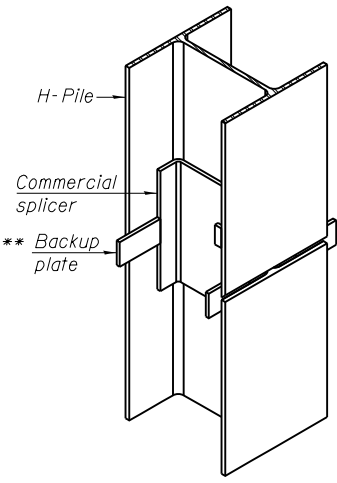
Designation	Depth d	Flange width br	Web and Flange thickness t	Encasement diameter A
HP 14x117	14 1/4"	14 7/8"	13/16"	30"
x102	14"	14 3/4"	1/16"	30"
x89	13 7/8"	14 3/4"	5/8"	30"
x73	13 5/8"	14 5/8"	1/2"	30"
HP 12x84	12 1/4"	12 1/4"	1/16"	24"
x74	12 1/8"	12 1/4"	5/8"	24"
x63	12"	12 1/8"	1/2"	24"
x53	11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



ELEVATION

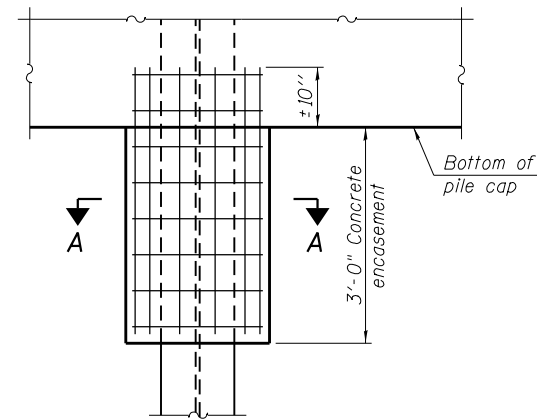


DETAIL "B"



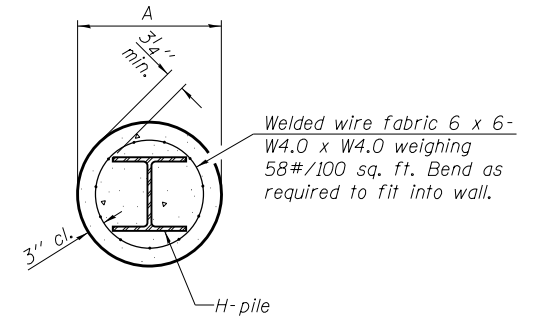
ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE



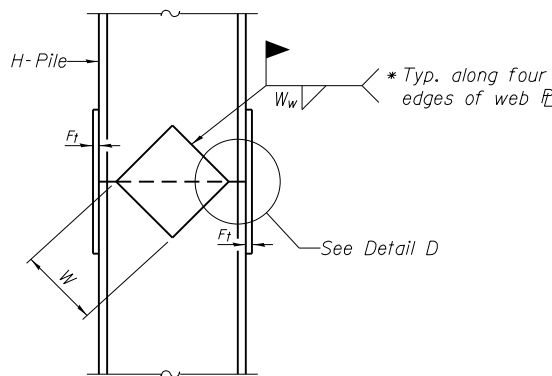
ELEVATION

PILE ENCASEMENT

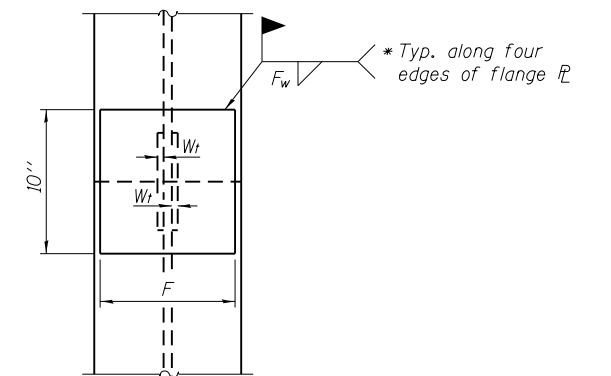


SECTION A-A

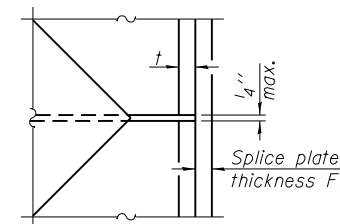
Note:
Forms for encasement may be omitted when soil conditions permit.



ELEVATION



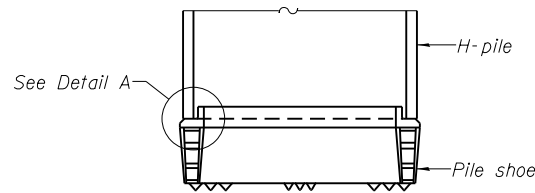
END VIEW



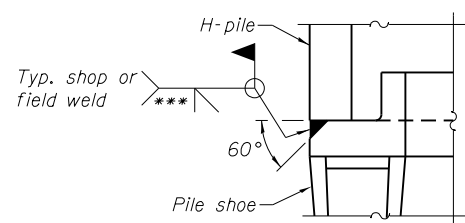
DETAIL D

WELDED PLATE FIELD SPLICE

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

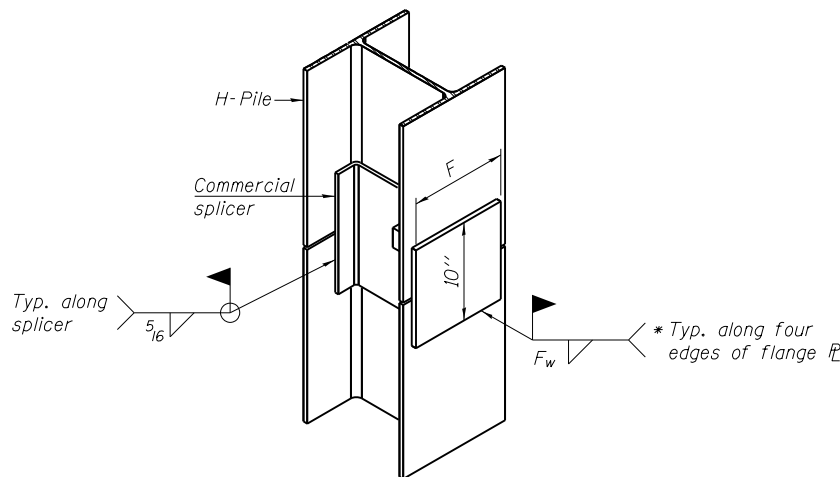


ELEVATION



DETAIL A

H-PILE SHOE ATTACHMENT



ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE ALTERNATE

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

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

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F-HP 1-27-12

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Bi-State Development Agency

HP PILE DETAILS
STRUCTURE B34.48 (SN 082-7003)

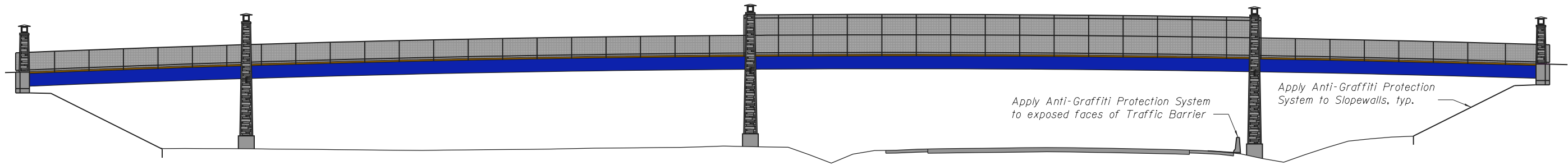
SHEET NO. 11 OF 20 SHEETS

MetroBikeLink
over IL-161 at SWIC

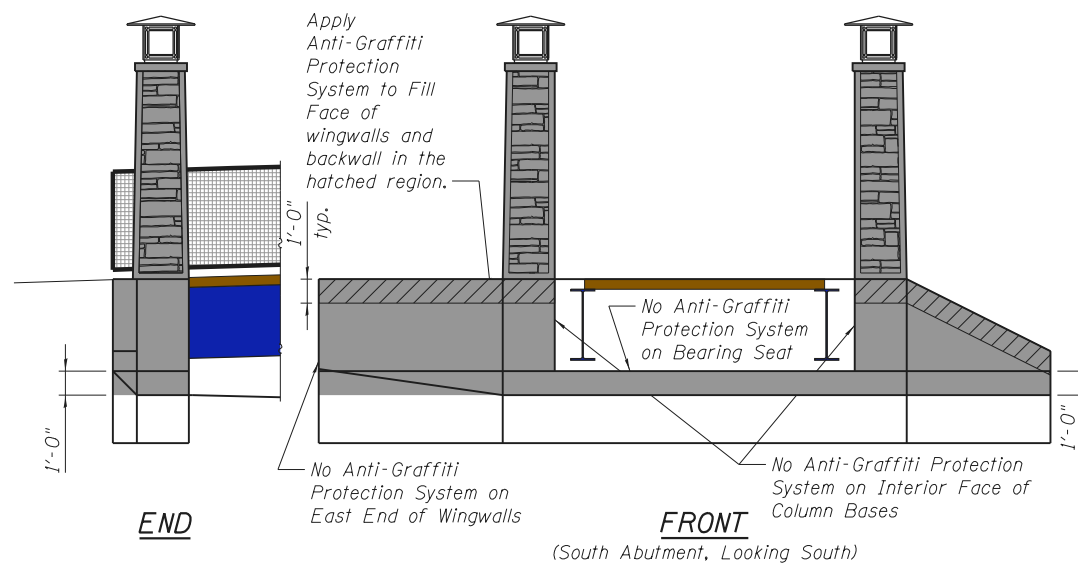
COUNTY	TOTAL SHEETS	SHEET NO.
ST. CLAIR	127	61

CONTRACT NO.

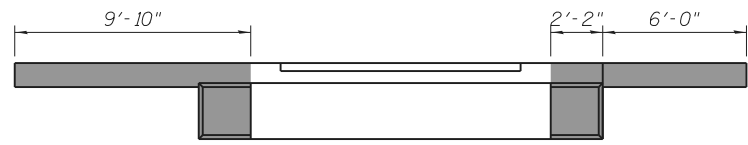
ILLINOIS FED. AID PROJECT



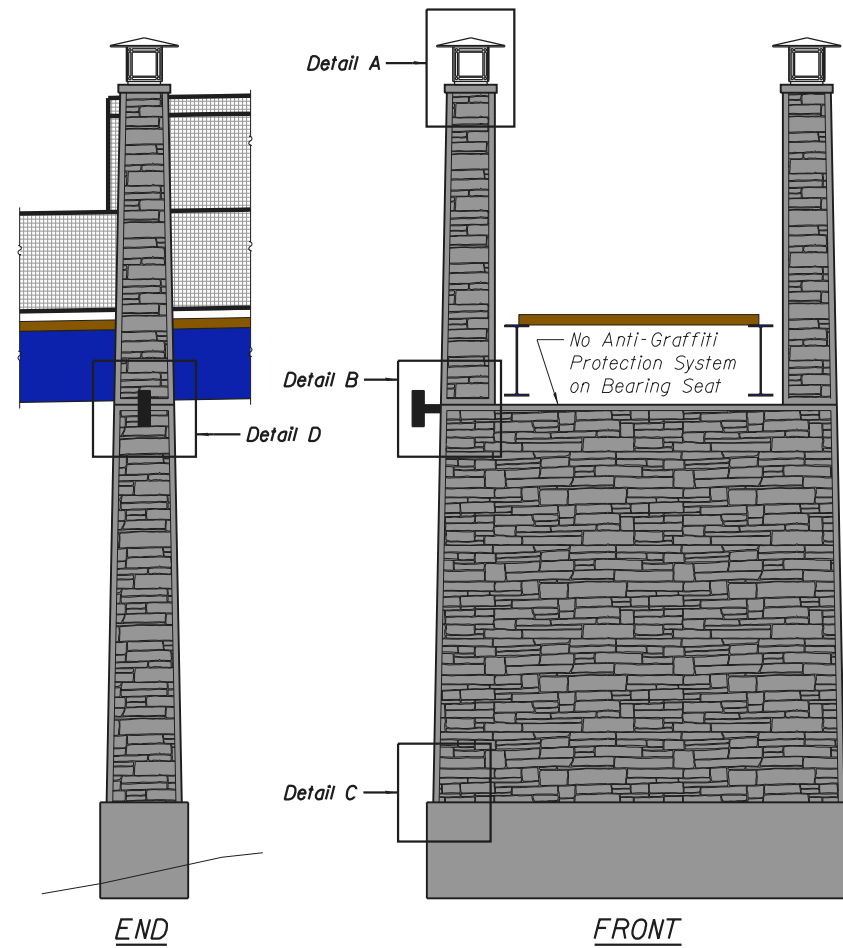
ARCHITECTURAL ELEVATION
(Looking East)



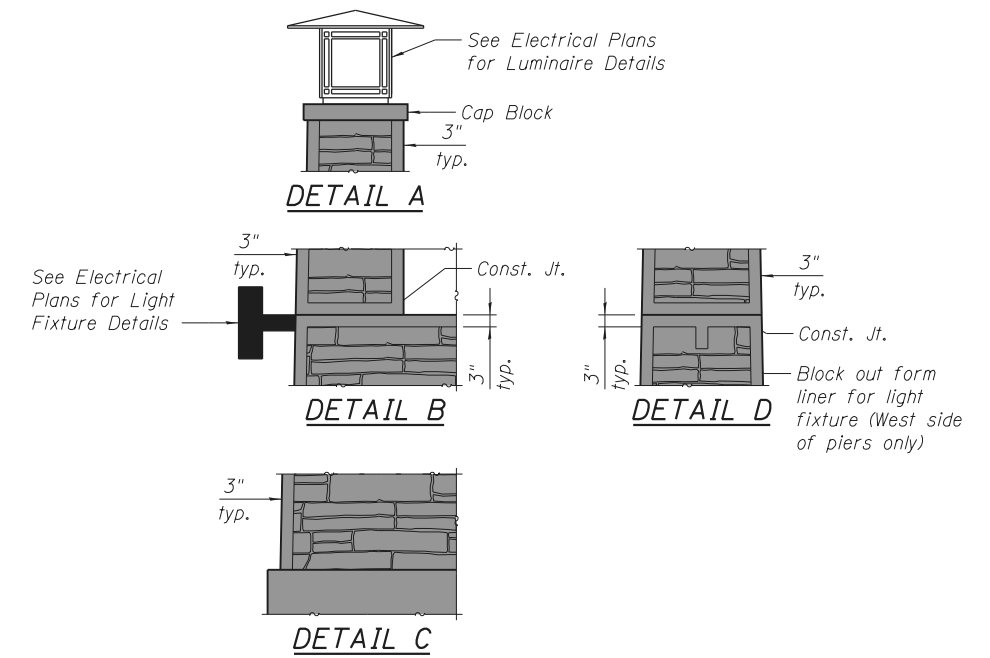
ABUTMENT ELEVATIONS
Staining Concrete in Shaded Areas



ABUTMENT PLAN
Anti-Graffiti Protection System in Shaded Areas



PIER ELEVATIONS
(Pier 1, Looking North)
Anti-Graffiti Protection System in Shaded Areas



BILL OF MATERIAL

Item	Unit	Total
Form Liner Textured Surface	Sq. Ft.	2,716
Anti-Graffiti Protection System	Sq. Ft.	6,176

Notes:
Specified Colors shall match the following:
Grey Federal Color Standard 595: 36373, 36473
SWIC Blue Pantone PMS-286
When different items have the same specified color, the finished color of each item shall match to the satisfaction of the Owner. Color samples and mockups shall be provided as described in the special provisions.

FILE NAME = P:\110514\4-CADD - DWG\4.3-ST\B\B34.48-012-Architectural Elevations.dgn

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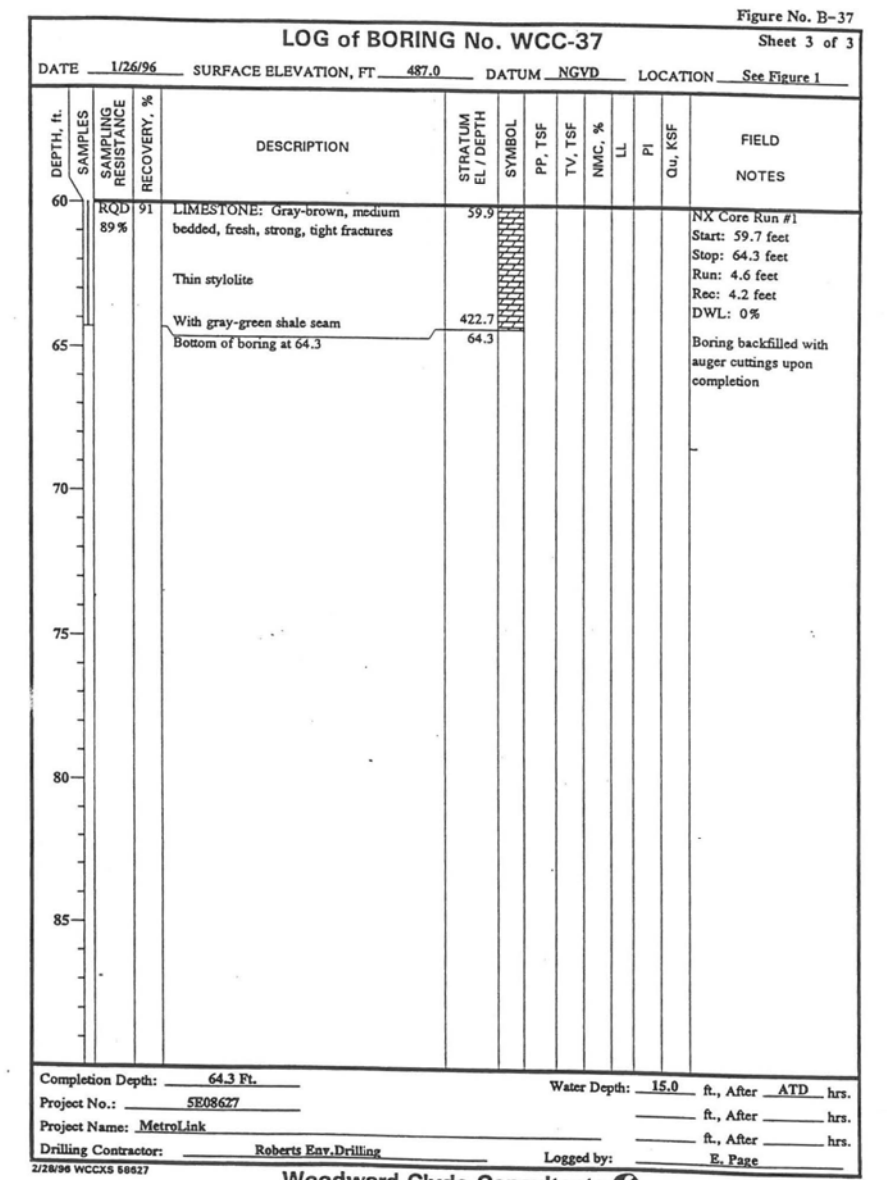
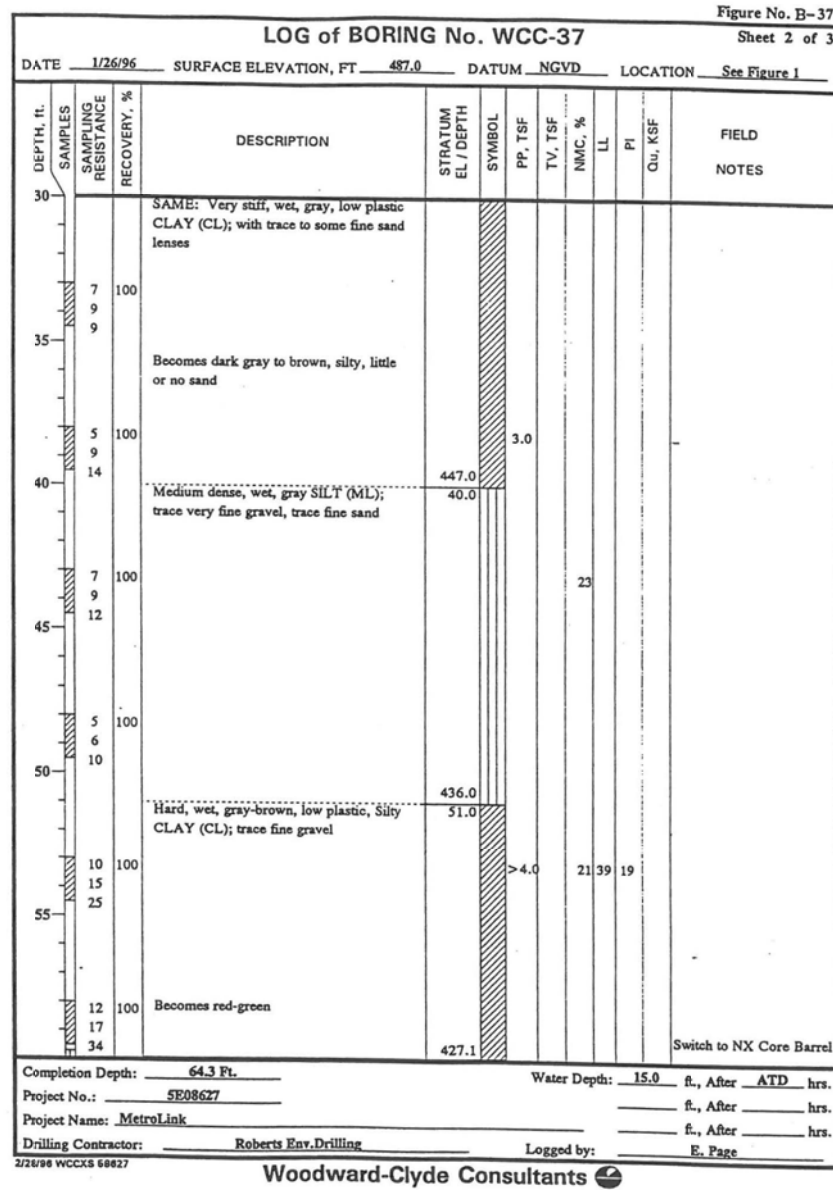
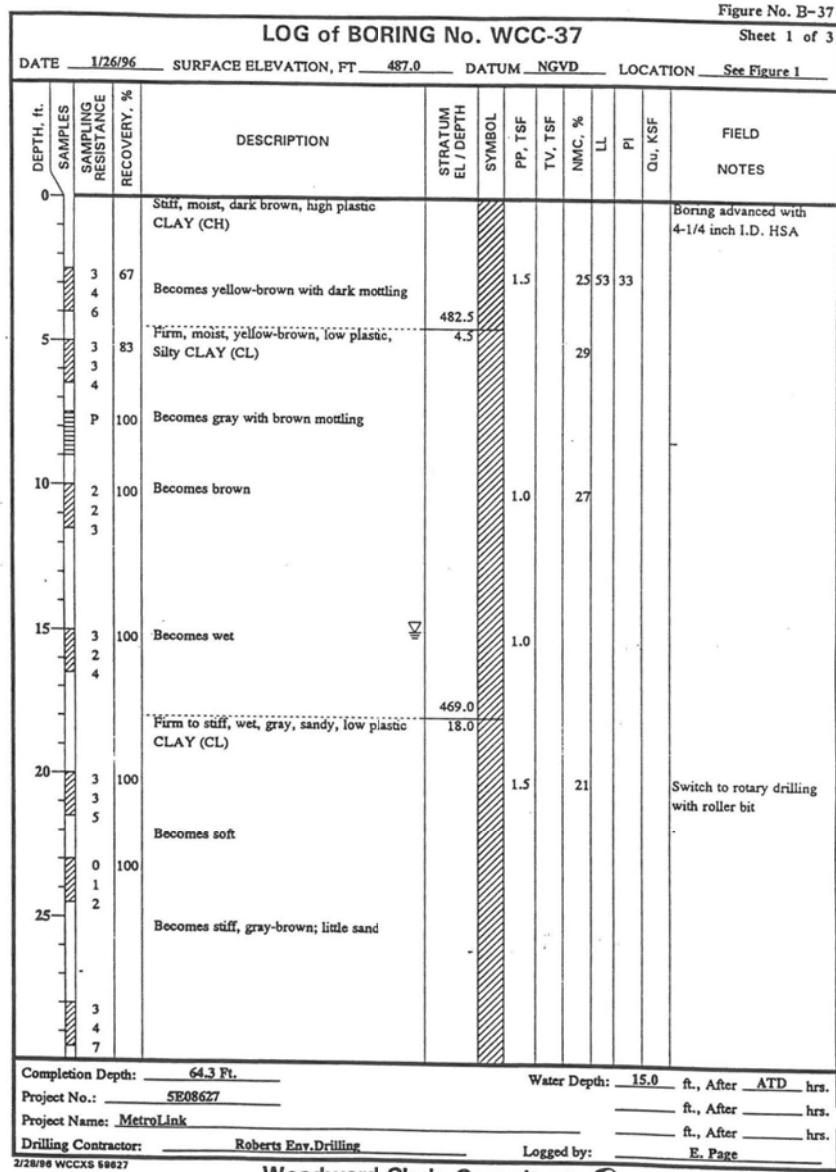
ARCHITECTURAL DETAILS
STRUCTURE B34.48 (SN 082-7003)

SHEET NO. 12 OF 20 SHEETS

MetroBikeLink
over IL-161 at SWIC

COUNTY	TOTAL SHEETS	SHEET NO.
ST. CLAIR	127	62
CONTRACT NO.		

ILLINOIS FED. AID PROJECT



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St Clair County Transit District



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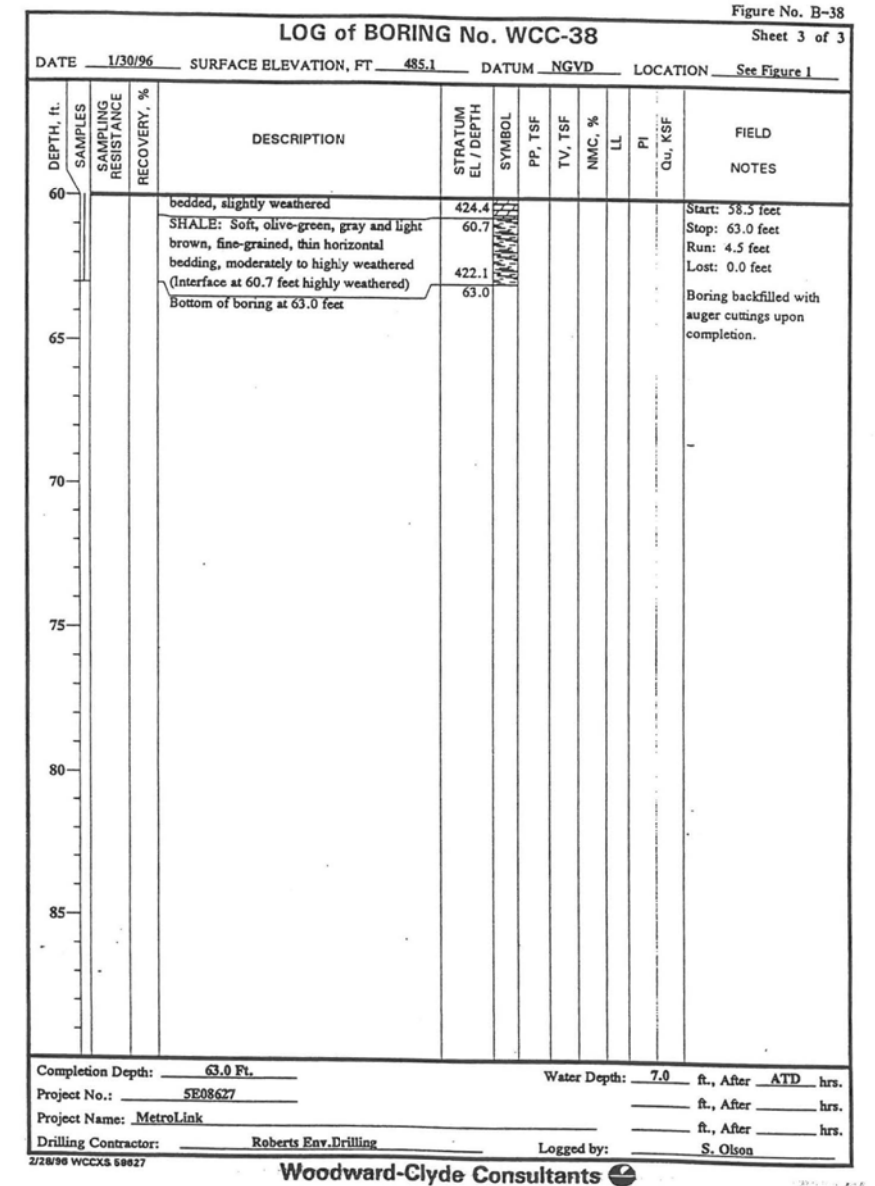
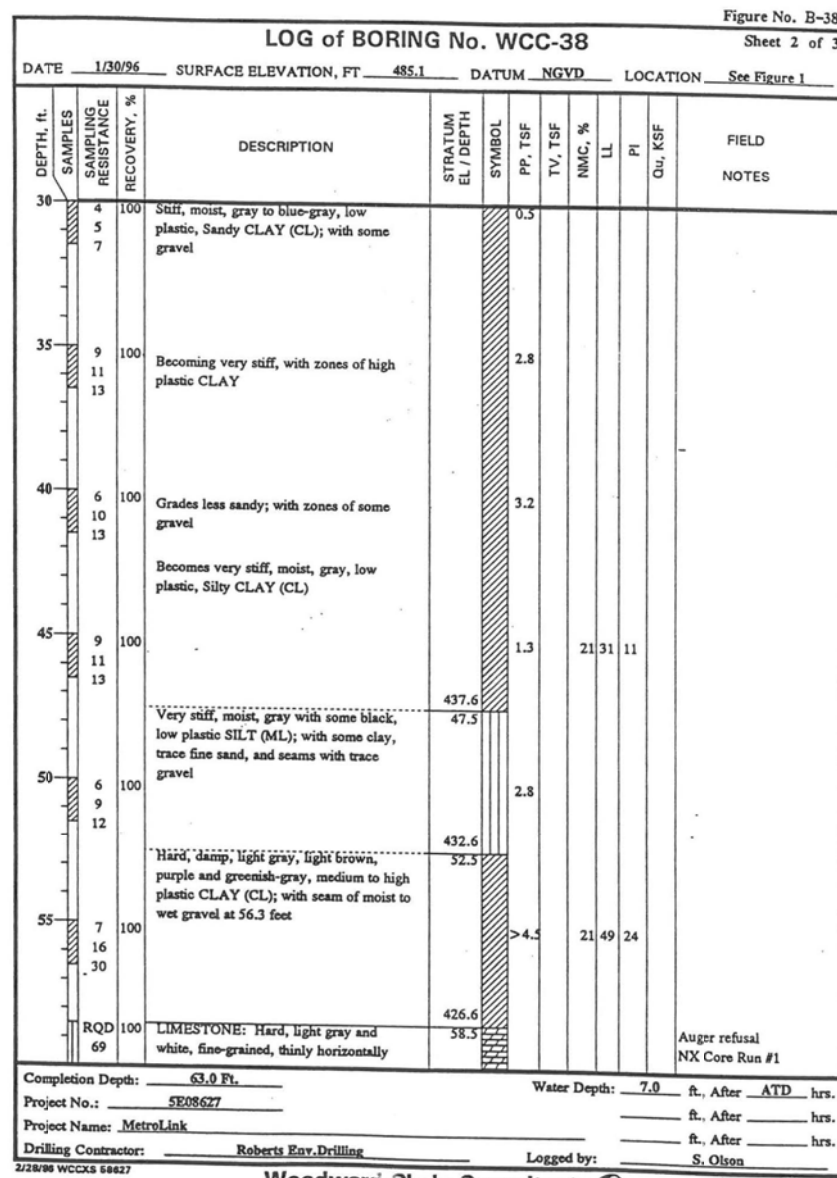
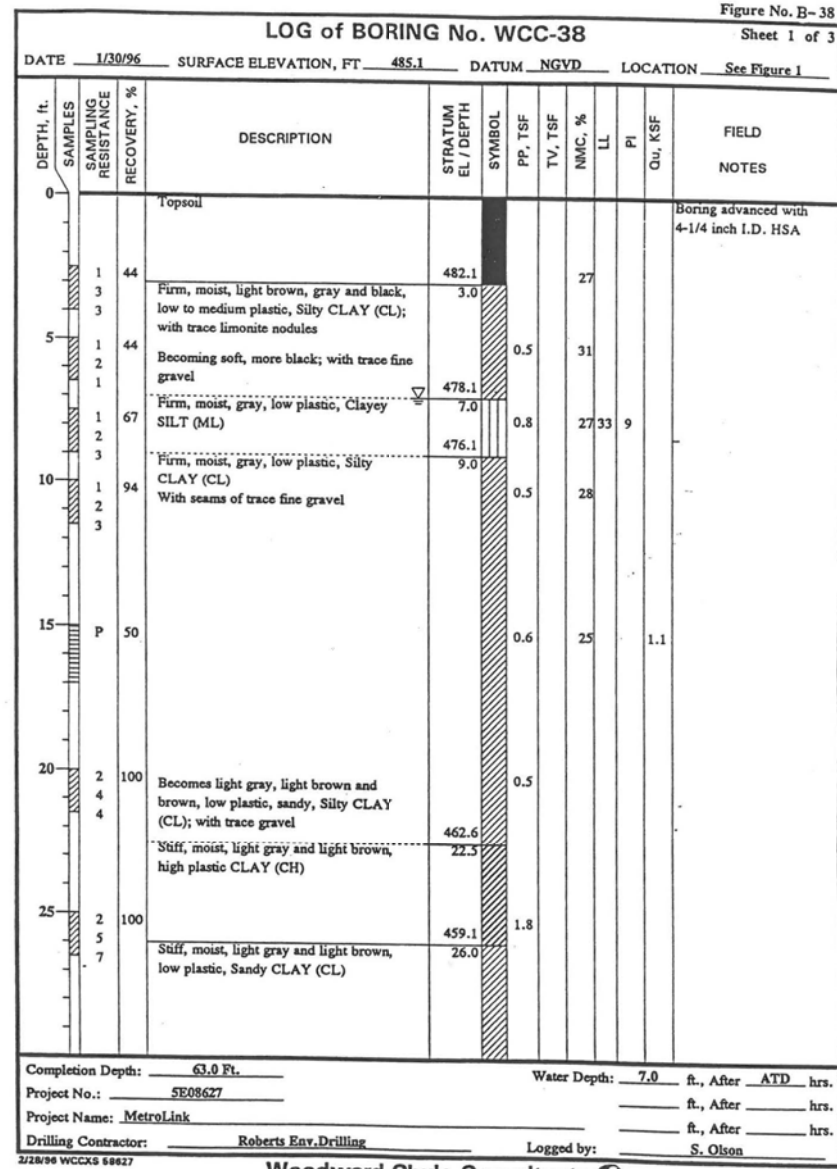
BORING LOGS
STRUCTURE B34.48 (SN 082-7003)

SHEET NO. 13 OF 20 SHEETS

MetroBikeLink
over IL-161 at SWIC

COUNTY	TOTAL SHEETS	SHEET NO.
ST. CLAIR	127	63
CONTRACT NO.		

ILLINOIS FED. AID PROJECT



FILE NAME = P:\110514\1-CADD - DWG\4.3-STABridge 34-48\B34-48-014-Boring_Logs.dgn

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St Clair County Transit District



Bi-State Development Agency

BORING LOGS
STRUCTURE B34.48 (SN 082-7003)

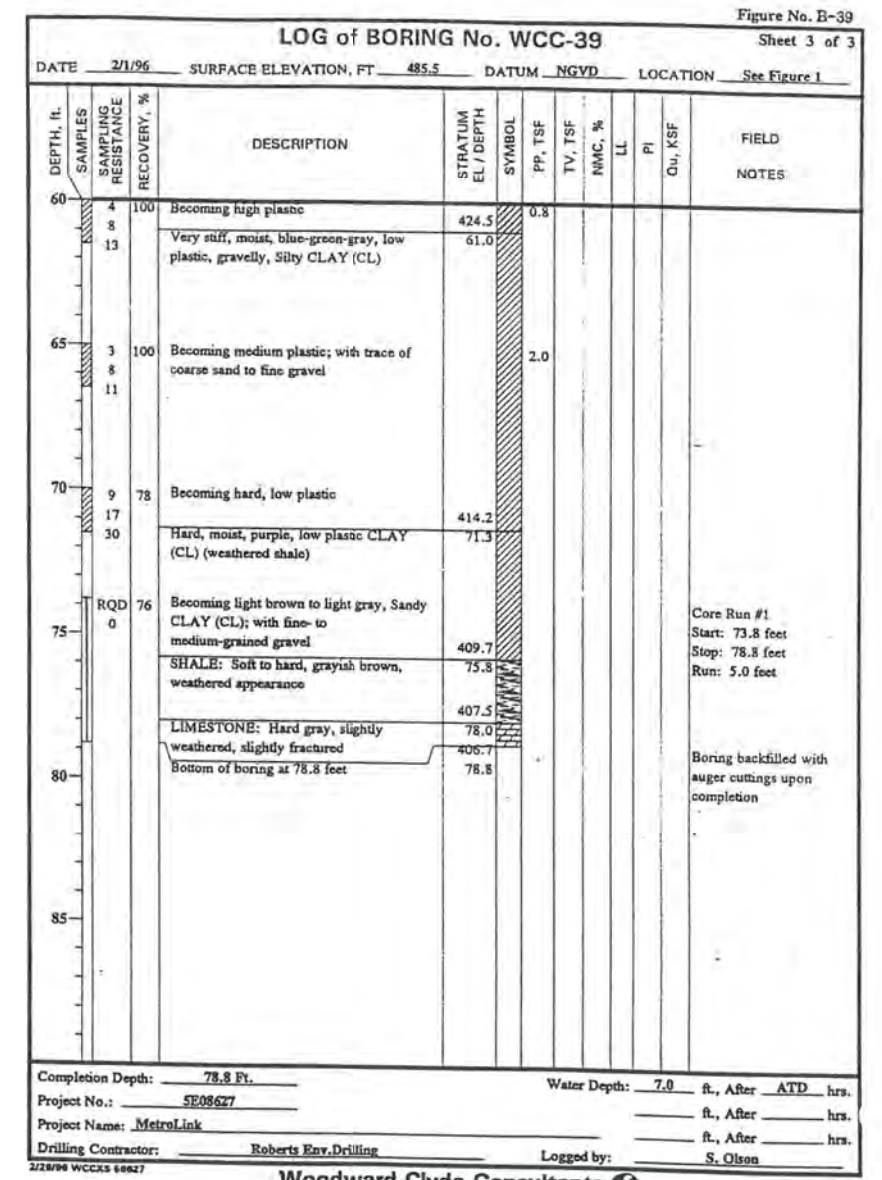
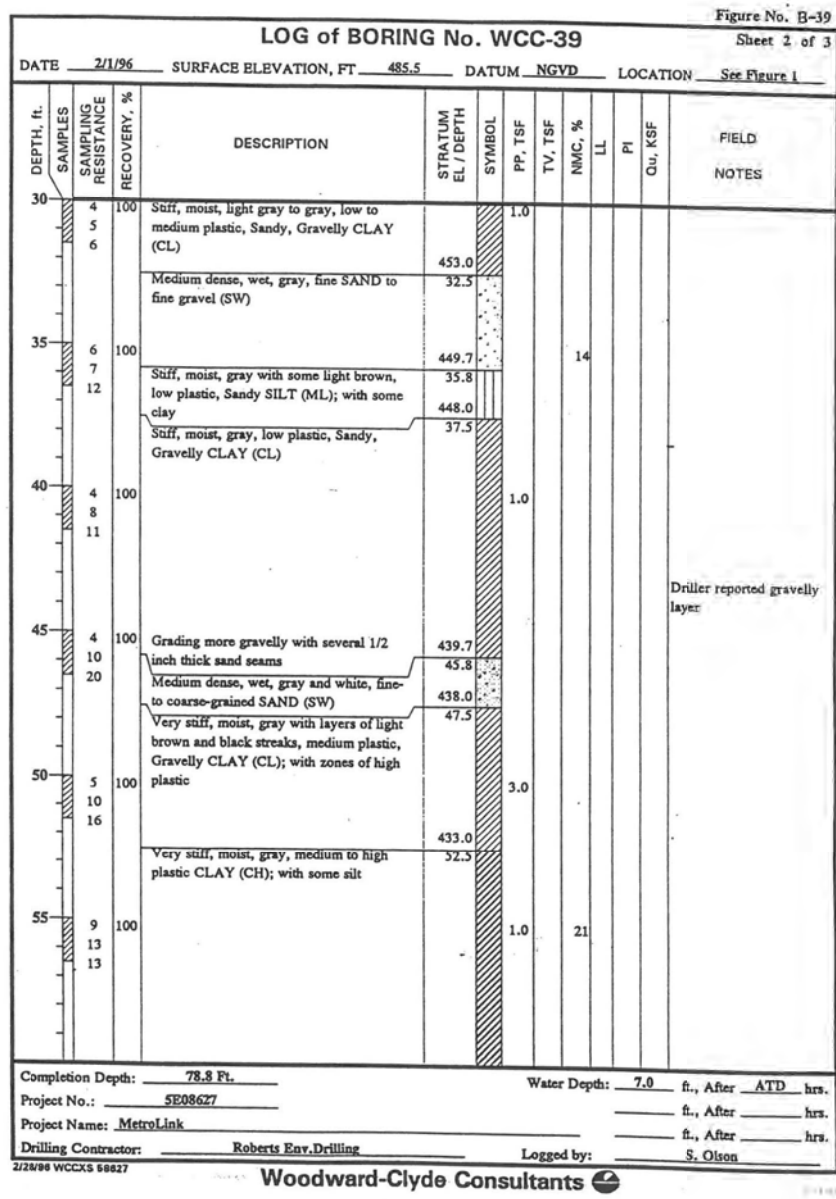
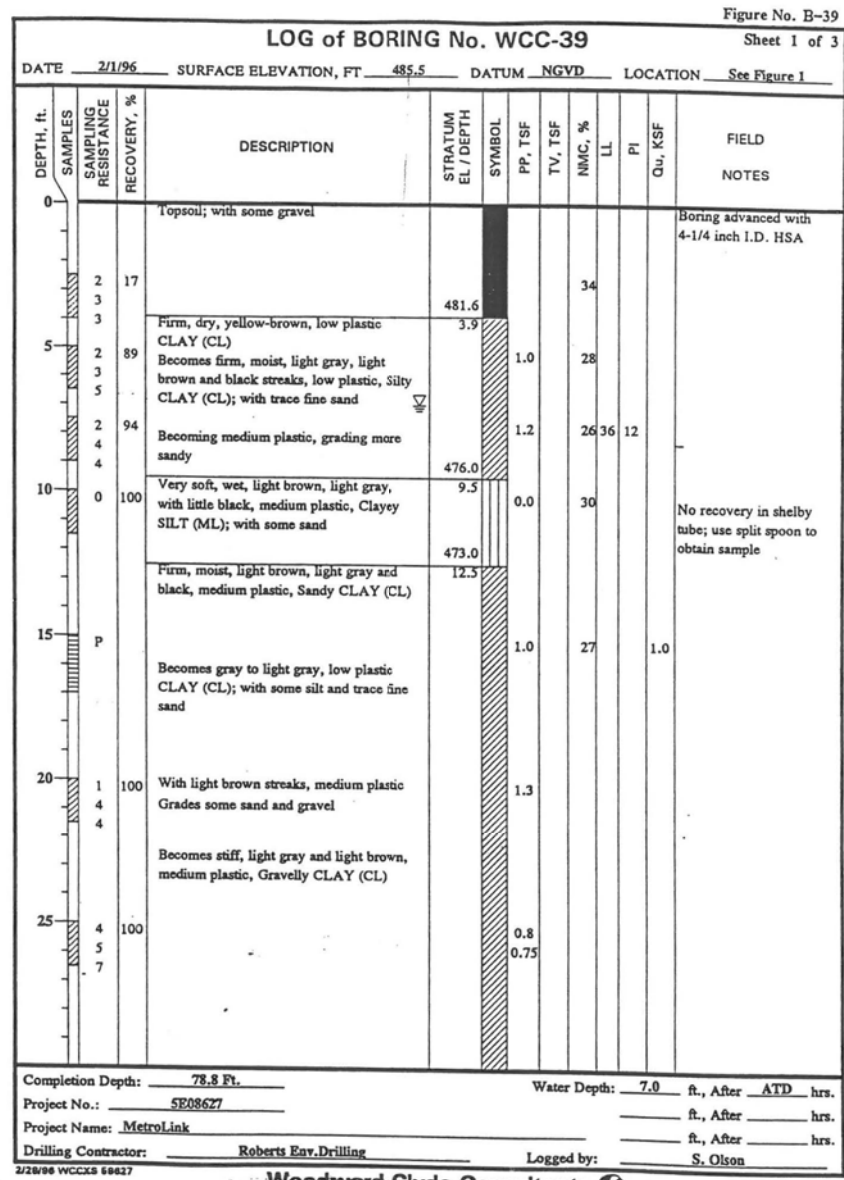
SHEET NO. 14 OF 20 SHEETS

MetroBikeLink
over IL-161 at SWIC

COUNTY	TOTAL SHEETS	SHEET NO.
ST. CLAIR	127	64
CONTRACT NO.		

ILLINOIS FED. AID PROJECT

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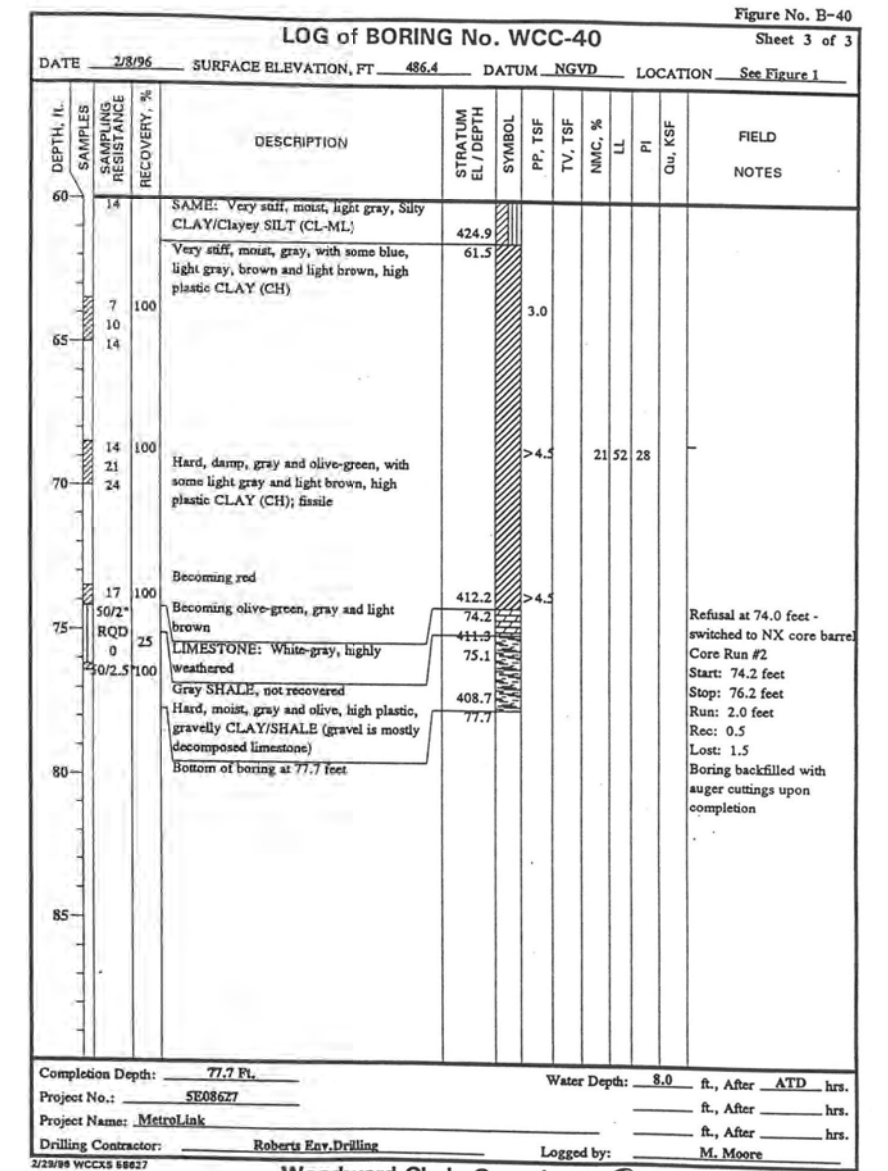
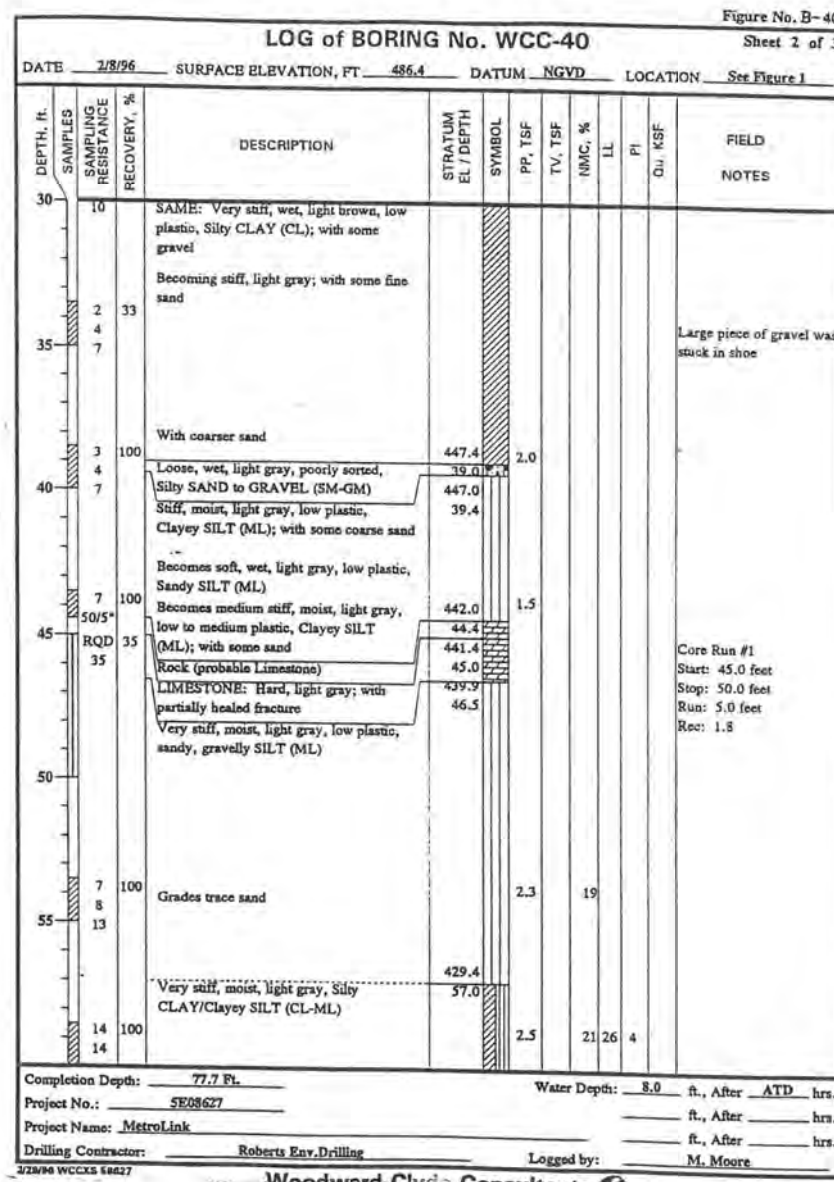
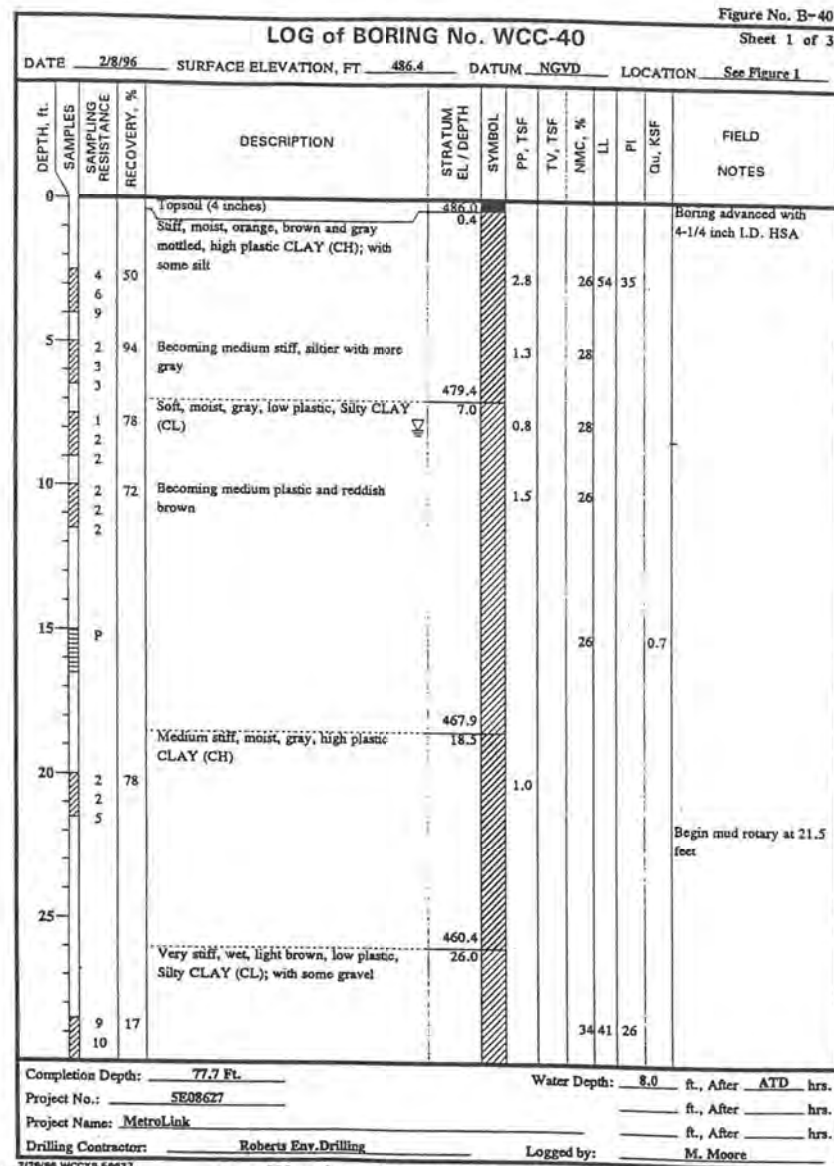
BORING LOGS
STRUCTURE B34.48 (SN 082-7003)

SHEET NO. 15 OF 20 SHEETS

MetroBikeLink
over IL-161 at SWIC

COUNTY	TOTAL SHEETS	SHEET NO.
ST. CLAIR	127	65
CONTRACT NO.		

ILLINOIS FED. AID PROJECT



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BORING LOGS
STRUCTURE B34.48 (SN 082-7003)

SHEET NO. 16 OF 20 SHEETS

MetroBikeLink
over IL-161 at SWIC

COUNTY	TOTAL SHEETS	SHEET NO.
ST. CLAIR	127	66
CONTRACT NO.		

ILLINOIS FED. AID PROJECT

LOG of BORING No. B1821R Sheet 1 of 3

DATE 11/18/98 SURFACE ELEVATION, FT 485.9 DATUM NGVD LOCATION See Figure PP-2

DEPTH, ft.	SAMPLES SAMPLING RESISTANCE RECOVERY, %	DESCRIPTION	STRATUM EL / DEPTH	SYMBOL	PP, TSF	FIELD Qu, KSF	NMC, %	LL	PI	Qu, KSF	NOTES
0		Firm, moist, dark brown, low plasticity, Silty CLAY (CL); with organics									Boring advanced with 4" CFA
2	67				0.8		26				
2	2		482.4								
3	3	Loose, moist, brown SAND (SP)	3.5				21				
2	100										
2	2		480.4								
5	2	Soft, wet, gray, low plasticity, Silty CLAY (CL)	5.5								
1	72				0.3		31	29	11		
1	1										
1	1										
1	94	Becomes firm, brownish-gray			1.3		28				Switch to mud rotary at 8.0 feet
1	2										
2	3										
1	89				0.0		29				
1	1										
2	2										
15	P				0.8	0.4	23	36	16		Consolidation test performed on Shelby tube sample.
1	100				1.0		26				
1	2										
3	3	Becomes gray									
1	100				0.8		26				
1	2										
2	2	Becomes gray									
1	100	Grades some fine sand			0.3						
1	1										
2	2										
1	100				1.0	0.6	20				UU test = 1.7 tsf
1	P										

Completion Depth: 68.5 Ft. Water Depth: 4.5 ft., After ATD hrs.

Project No.: 235E08627B.00 _____ ft., After _____ hrs.

Project Name: MetroLink _____ ft., After _____ hrs.

Drilling Contractor: Woodward-Clyde Logged by: Chuck Munroe

Woodward-Clyde Consultants

LOG of BORING No. B1821R Sheet 2 of 3

DATE 11/16/98 SURFACE ELEVATION, FT 485.9 DATUM NGVD LOCATION See Figure PP-2

DEPTH, ft.	SAMPLES SAMPLING RESISTANCE RECOVERY, %	DESCRIPTION	STRATUM EL / DEPTH	SYMBOL	PP, TSF	FIELD Qu, KSF	NMC, %	LL	PI	Qu, KSF	NOTES
25		SAME: Firm, wet, gray, low plasticity, Silty CLAY (CL); with some fine sand									
4	100	Grades trace gravel			1.3						
4	4										
5	5										
2	100				1.3		22				
3	3										
4	4										
30											
2	100				0.5						
2	2										
3	3										
5	83				3.5						
5	10		450.4								
10	10	Very stiff, moist, gray, low plasticity SILT (ML)	35.3								
10	10		449.4								
2	100	Soft, moist, gray, low plasticity CLAY (CL); with trace sand	36.5		1.3		19				
5	5										
7	7										
40	P				2.5	1.4	17	31	16		Consolidation test performed on Shelby tube sample.
6	100				3.3						
7	7										
10	10	Becomes dark gray									
3	100				2.8		35				
5	5										
6	6										
45											
3	89	Becomes firm to stiff, moist, gray, low plasticity, Silty CLAY (CL)			3.8						
5	5										
5	5										
2	100				1.0						

Completion Depth: 68.5 Ft. Water Depth: 4.5 ft., After ATD hrs.

Project No.: 235E08627B.00 _____ ft., After _____ hrs.

Project Name: MetroLink _____ ft., After _____ hrs.

Drilling Contractor: Woodward-Clyde Logged by: Chuck Munroe

Woodward-Clyde Consultants

LOG of BORING No. B1821R Sheet 3 of 3

DATE 11/16/98 SURFACE ELEVATION, FT 485.9 DATUM NGVD LOCATION See Figure PP-2

DEPTH, ft.	SAMPLES SAMPLING RESISTANCE RECOVERY, %	DESCRIPTION	STRATUM EL / DEPTH	SYMBOL	PP, TSF	FIELD Qu, KSF	NMC, %	LL	PI	Qu, KSF	NOTES
50	3	SAME: Firm, moist, gray, low plasticity, Silty CLAY (CL)									
3	3										
3	100				1.8		23				
3	3										
5	5										
6	6										
55											
60/6"	33	With limestone fragments	427.4								
RQD	78	LIMESTONE: Gray, fine grained, thin bedded, fresh, strong, hard, with probable clay seams	58.5								Bedrock at 58.5 feet Core Run #1 Start: 58.5 feet Stop: 68.5 feet Run: 10 feet Recovery: 7 feet 9 inches Lost: 2 feet 3 inches DWR 100% RQD 61"/120" = 51
51	51	Becomes unweathered									
60											
65		Becomes slightly weathered	422.4								
65		SHALE: Gray, fine grained, thinly bedded, highly weathered, moderately hard, with probable clay seams	63.5								
65		Becomes black, weathered									
65			417.4								
70		Bottom of boring at 68.5 feet	68.3								

Completion Depth: 68.5 Ft. Water Depth: 4.5 ft., After ATD hrs.




Project No.: 235E08627B.00 _____ ft., After _____ hrs.

Project Name: MetroLink _____ ft., After _____ hrs.

Drilling Contractor: Woodward-Clyde Logged by: Chuck Munroe

Woodward-Clyde Consultants

FILE NAME = P:\110514\1-CADD - DWG\4.3-ST\Boring_34-48\B34-48-017-Boring_Log.dgn

THOUVENOT, WADE & MOERCHEN, INC.  SWANSEA • WATERLOO • EDWARDSVILLE • ST. LOUIS • ST. CHARLES	USER NAME = <u>jlandeck</u> PLOT SCALE = <u>0:2.0000 '1' / 1"</u> PLOT DATE = <u>6/19/2013</u>	DESIGNED - MJJ CHECKED - ALN DRAWN - MJJ CHECKED - ALN	REVISED REVISED REVISED REVISED	 St Clair County Transit District  Bi-State Development Agency	BORING LOGS STRUCTURE B34.48 (SN 082-7003) SHEET NO. 17 OF 20 SHEETS	MetroBikeLink over IL-161 at SWIC COUNTY TOTAL SHEETS SHEET NO. ST. CLAIR 127 67 CONTRACT NO.	ILLINOIS FED. AID PROJECT
	Woodward-Clyde Consultants						

LOG of BORING No. B1822R Sheet 1 of 3

DATE 1/30/97 SURFACE ELEVATION, FT. 487.5 DATUM NGVD LOCATION See Figure PP-70

DEPTH, ft.	SAMPLES SAMPLING RESISTANCE RECOVERY, %	DESCRIPTION	STRATUM EL / DEPTH	SYMBOL	PP, TSF	FIELD Qu, KSF	NMC, %	LL	PI	Qu, KSF	NOTES
0		Topsoil	486.5								Boring advanced with 4-1/4 inch I.D. HSA
P 100		Stiff, moist, brown, olive-gray and orange mottled, high plasticity, Silty CLAY (CH)	484.0		2.1						
4	67	Stiff, orange, light brown, olive-gray mottled, low to medium plasticity, Clayey SILT (ML)	475.5		1.0						
6	78	Becomes firm, wet, orange, light brown and olive-gray, low plasticity, Clayey SILT									
10	P 100	Becomes light brownish-gray									
15	100	Very stiff, moist, light brown, medium plasticity, Silty CLAY (CL)	475.5								
20	100	Becomes stiff, wet, greenish-gray, low plasticity, Silty CLAY									
3	100										
4	100										
5	100										
3	100										

Completion Depth: 70.0 Ft. Water Depth: 9.0 ft., After ATD hrs.
 Project No.: 5E08627A _____ ft., After _____ hrs.
 Project Name: MetroLink _____ ft., After _____ hrs.
 Drilling Contractor: Harris Drilling Logged by: S. Laususe

Woodward-Clyde Consultants

LOG of BORING No. B1822R Sheet 2 of 3

DATE 1/30/97 SURFACE ELEVATION, FT. 487.5 DATUM NGVD LOCATION See Figure PP-70

DEPTH, ft.	SAMPLES SAMPLING RESISTANCE RECOVERY, %	DESCRIPTION	STRATUM EL / DEPTH	SYMBOL	PP, TSF	FIELD Qu, KSF	NMC, %	LL	PI	Qu, KSF	NOTES
25	4	Becomes yellowish-brown									
30	P 83	Same: Stiff, wet, yellowish-brown, Silty CLAY (CL)			1.7						
35	5	Becomes very stiff, moist to wet, greenish-gray, low plasticity CLAY; with trace silt and sand									
40	6										
45	5	Becomes very stiff, wet, brownish-gray, medium plasticity CLAY; with trace silt									
47.0	11	Very stiff, wet, green, blue and gray, high plasticity CLAY (CH); with trace silt	440.5								

Completion Depth: 70.0 Ft. Water Depth: 9.0 ft., After ATD hrs.
 Project No.: 5E08627A _____ ft., After _____ hrs.
 Project Name: MetroLink _____ ft., After _____ hrs.
 Drilling Contractor: Harris Drilling Logged by: S. Laususe

Woodward-Clyde Consultants

LOG of BORING No. B1822R Sheet 3 of 3

DATE 1/30/97 SURFACE ELEVATION, FT. 487.5 DATUM NGVD LOCATION See Figure PP-70

DEPTH, ft.	SAMPLES SAMPLING RESISTANCE RECOVERY, %	DESCRIPTION	STRATUM EL / DEPTH	SYMBOL	PP, TSF	FIELD Qu, KSF	NMC, %	LL	PI	Qu, KSF	NOTES
50	14										
55	6	Becomes very stiff, wet, medium to high plasticity, yellowish-brown, Sandy, Gravelly CLAY									
60	4	Becomes very stiff, wet, maroon and brown, high plasticity, Shaley CLAY									
65	15	LIMESTONE: Light gray, thinly bedded, highly weathered, strong, fine grained, moderately hard, very close spaced fractures with clay infilling	63.5								Driller reported possible weathered zone starting at 62.0 feet Auger refusal at 63.5 feet Core Run #1 Start: 63.5 feet Stop: 67.5 feet DWR: 80%
70	60	SHALE: Bluish, greenish-gray to dark gray, thinly bedded, moderately weathered, weak, low hardness, closely spaced fractures	420.0								Core Run #2 Start: 67.5 feet Stop: 70.0 feet DWR: 50%
70.0		Bottom of boring at 70.0 feet	417.5								Boring backfilled with cuttings upon completion

Completion Depth: 70.0 Ft. Water Depth: 9.0 ft., After ATD hrs.
 Project No.: 5E08627A _____ ft., After _____ hrs.
 Project Name: MetroLink _____ ft., After _____ hrs.
 Drilling Contractor: Harris Drilling Logged by: S. Laususe

Woodward-Clyde Consultants

FILE NAME = P:\110514\1-CADD - DWG\4.3-STAB\B34.48-018-Boring_Log.dgn

THOUVENOT, WADE & MOERCHEN, INC.
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USER NAME = <u>jlandeck</u>	DESIGNED - <u>MJJ</u>	REVISED
PLOT SCALE = <u>0:2.0000 '1' / 1"</u>	CHECKED - <u>ALN</u>	REVISED
PLOT DATE = <u>6/19/2013</u>	DRAWN - <u>MJJ</u>	REVISED
	CHECKED - <u>ALN</u>	REVISED



St Clair County Transit District



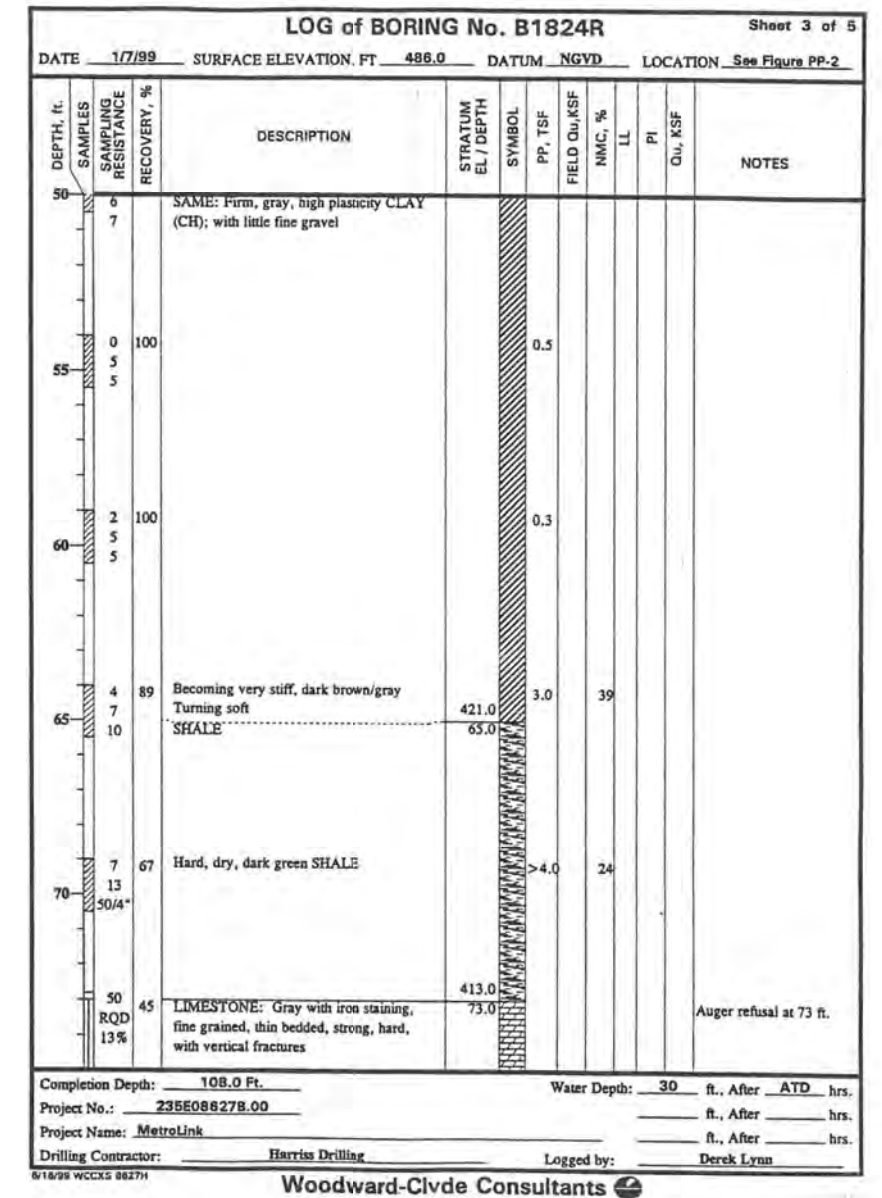
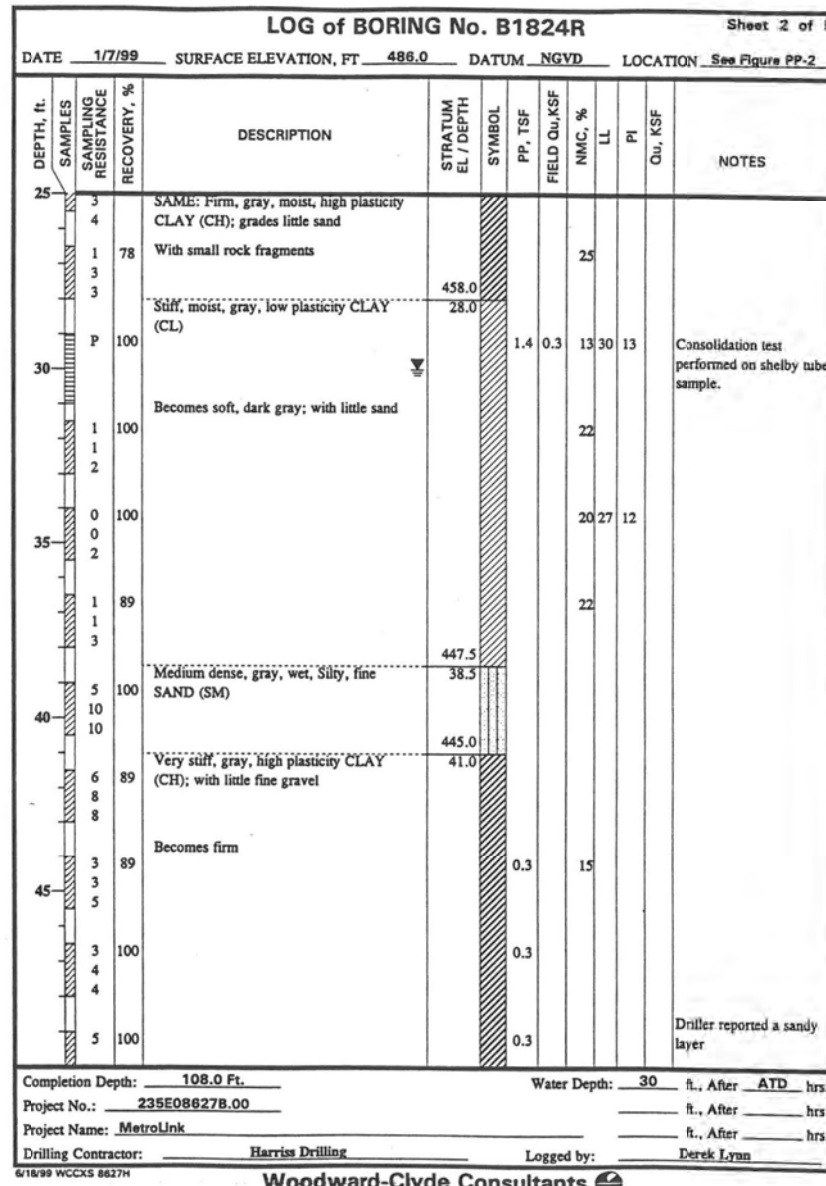
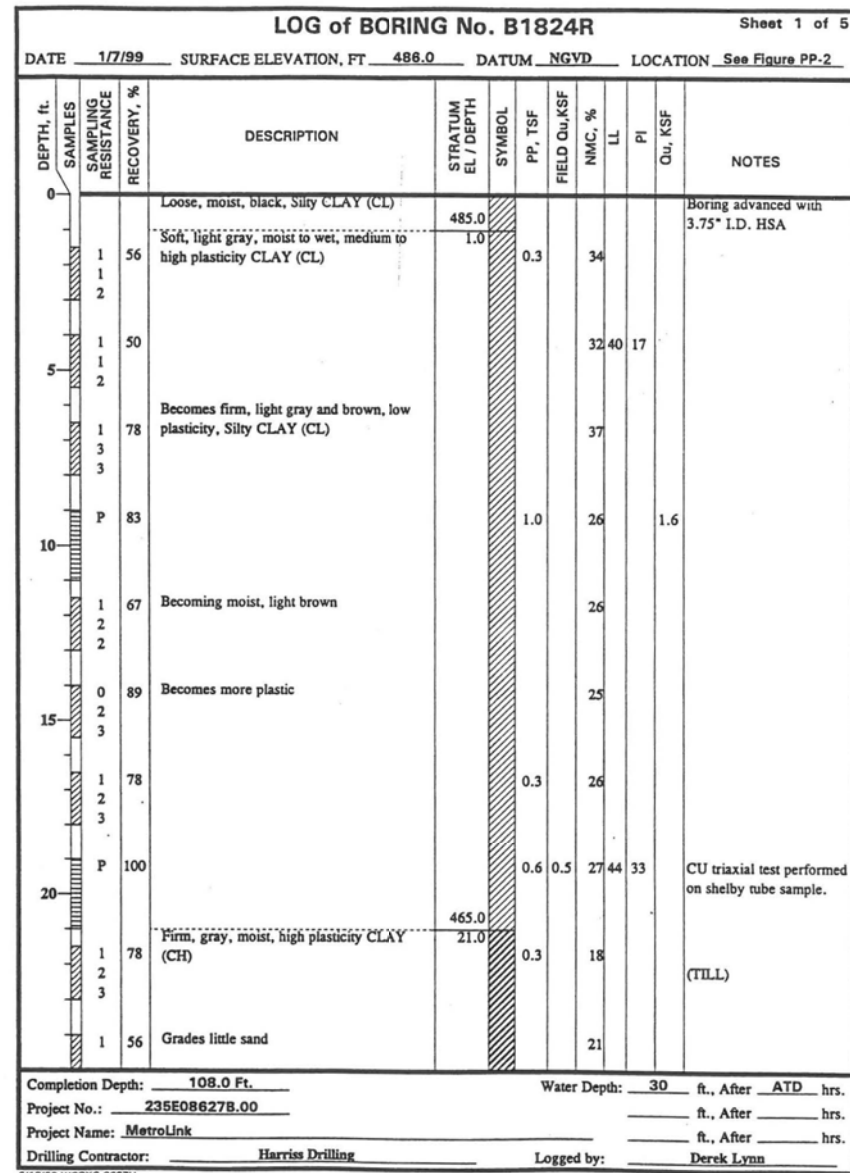
Bi-State Development Agency

BORING LOGS
STRUCTURE B34.48 (SN 082-7003)
 SHEET NO. 18 OF 20 SHEETS

MetroBikeLink
 over IL-161 at SWIC

COUNTY	TOTAL SHEETS	SHEET NO.
ST. CLAIR	127	68
CONTRACT NO.		

ILLINOIS FED. AID PROJECT



FILE NAME = P:\110514\1-CADD - DWG\4.3-STABridge_34.48\B34.48-019-Boring_Logs.dgn

THOUVENOT, WADE & MOERCHEN, INC.
 SWANSEA • WATERLOO • EDWARDSVILLE • ST. LOUIS • ST. CHARLES



USER NAME = jlandeck	DESIGNED - MJJ	REVISED
PLOT SCALE = 0:2.0000 '1' / 1"	CHECKED - ALN	REVISED
PLOT DATE = 6/19/2013	DRAWN - MJJ	REVISED
	CHECKED - ALN	REVISED



St Clair County Transit District



Bi-State Development Agency

BORING LOGS
STRUCTURE B34.48 (SN 082-7003)

SHEET NO. 19 OF 20 SHEETS

MetroBikeLink
 over IL-161 at SWIC

COUNTY	TOTAL SHEETS	SHEET NO.
ST. CLAIR	127	69
CONTRACT NO.		

ILLINOIS FED. AID PROJECT

FILE NAME = P:\110514\1-CADD - DMG\4.3-STAB\Bridg 34.48\B34.48-020-Boring_Logs.dgn

LOG of BORING No. B1824R Sheet 4 of 5

DATE 1/7/99 SURFACE ELEVATION, FT 486.0 DATUM NGVD LOCATION See Figure PP-2

DEPTH, ft.	SAMPLES	SAMPLING RESISTANCE	RECOVERY, %	DESCRIPTION	STRATUM EL / DEPTH	SYMBOL	PP, TSF	FIELD Qu, KSF	NMC, %	LL	PI	Qu, KSF	NOTES
75				LIMESTONE: Gray, fine grained, thin bedded, moderately weathered, strong, hard, fractured									Core Run #1 Start: 73 feet Stop: 83 feet Run 10 feet Recovery 4 feet 6 inches Lost 5 feet 6 inches Shale encountered from 77.5-83 ft.
				Shale seam									
													Core Run #2 Start: 83 feet Stop: 93 feet Run 10 feet Recovery 10 feet Lost 0
				Becomes slightly weathered									
	RQD		75%										Core Run #3 Start: 93 feet Stop: 99 feet Run 6 feet Recovery 6 feet
90				COAL	396.0								
				LIMESTONE: Gray, fine grained, thin bedded, fresh, hard	90.0 395.5 90.5								
	RQD		100%										
				VOID	387.0 99.0								

Completion Depth: 108.0 Ft. Water Depth: 30 ft., After ATD hrs.

Project No.: 235E08627B.00 _____ ft., After _____ hrs.

Project Name: MetroLink _____ ft., After _____ hrs.

Drilling Contractor: Harris Drilling Logged by: Derek Lynn

Woodward-Clyde Consultants

LOG of BORING No. B1824R Sheet 5 of 5

DATE 1/7/99 SURFACE ELEVATION, FT 486.0 DATUM NGVD LOCATION See Figure PP-2

DEPTH, ft.	SAMPLES	SAMPLING RESISTANCE	RECOVERY, %	DESCRIPTION	STRATUM EL / DEPTH	SYMBOL	PP, TSF	FIELD Qu, KSF	NMC, %	LL	PI	Qu, KSF	NOTES
100				SAME: VOID									Core Run #4 Start: 104 feet Stop: 108 feet Run: 4 feet
				Soft Material	382.0 104.0								
				Soft SHALE, highly weathered	380.0 106.0					22			
				LIMESTONE	378.0								
				Bottom of boring at 108 feet	108.0								

Completion Depth: 108.0 Ft. Water Depth: 30 ft., After ATD hrs.

Project No.: 235E08627B.00 _____ ft., After _____ hrs.

Project Name: MetroLink _____ ft., After _____ hrs.

Drilling Contractor: Harris Drilling Logged by: Derek Lynn

Woodward-Clyde Consultants