Bench Mark: Set "X" on northwest corner of handhole along east edge of SB I-90/94 20 feet north of Madison Street. Elev. 596.13.

Existing Structure: Existing Retaining Wall 23. Constructed in 1957 under F.A.I. Route 90/94, Section 0202.6-1P. Cast-in-place concrete retaining wall on metal shell piles and spread footing that measures 178'-10 1/8" from Madison Street SE Wingwall south to Monroe Street. Maximum height from top of wall to bottom of footing measures 18'-1". The existing retaining wall is to be removed and replaced.

Traffic on Madison NB Exit Ramp will be detoured during construction.

No Salvage.

Notes:

1.) Wall offsets are measured from the ℄ of Madison NB Exit Ramp to the front face of the precast panels.
2.) F.F. denotes Front Face.
3.) B.F. denotes Back Face.
4.) Proposed drainage information shown is conceptual and will be determined during final design.
5.) Construction and expansion joints are only located in the parapet and anchorage slab.

SCOPE OF WORK:

1) Construct Wall 30 and TSRS.
2) Excavate and remove Existing Wall 23.
3) Construct MSE wall.
4) Construct Anchorage Slab and pavement.

WALL DEFLECTION CRITERIA

At any location, max. total lateral deflection at the top of the TSRS shall not exceed 1.0 inch or 1% exposed height of the wall, whichever is minimum.

CURVE DATA

(Madison NB Exit Ramp)
Prop. Curve P-MAD-NX-3
P.I. Sta. = 8547+10.96
Δ = 7° 10' 23" (LT)
D = 2° 29' 48"
R = 2,295.00'
T = 143.85'
L = 287.32'
E = 4.50'
e = NA
T.R. = NA
S.E. Run = NA
P.C. Sta. = 8545+67.11
P.T. Sta. = 8548+54.43

CURVE DATA

(NB C-D Road)
Prop. Curve P-NCD-NX-7
P.I. Sta. = 6351+11.87
Δ = 3° 51' 44" (LT)
D = 2° 30' 07"
R = 2,290.00'
T = 77.21'
L = 154.36'
E = 1.30'
e = NA
T.R. = NA
S.E. Run = NA
P.C. Sta. = 6350+34.66
P.T. Sta. = 6351+89.02

HIGHWAY CLASSIFICATION

Madison NB Exit Ramp
Functional Class: Interstate
ADT: 5,200 (2012); 6,000 (2040)
ADTT: 94 (2012); 108 (2040)
DHV: 540 (2040)
Design Speed: 20 m.p.h.
Posted Speed: 20 m.p.h.
One-Way Traffic
Directional Distribution: 100%

NB C-D Road
Functional Class: Interstate
ADT: NA (2012); 17,000 (2040)
ADTT: NA (2012); 440 (2040)
DHV: 1,680 (2040)
Design Speed: 30 m.p.h.
Posted Speed: 30 m.p.h.
One-Way Traffic
Directional Distribution: 100%

DESIGN SPECIFICATIONS

2017 AASHTO LRFD Bridge Design Specifications 8th Edition

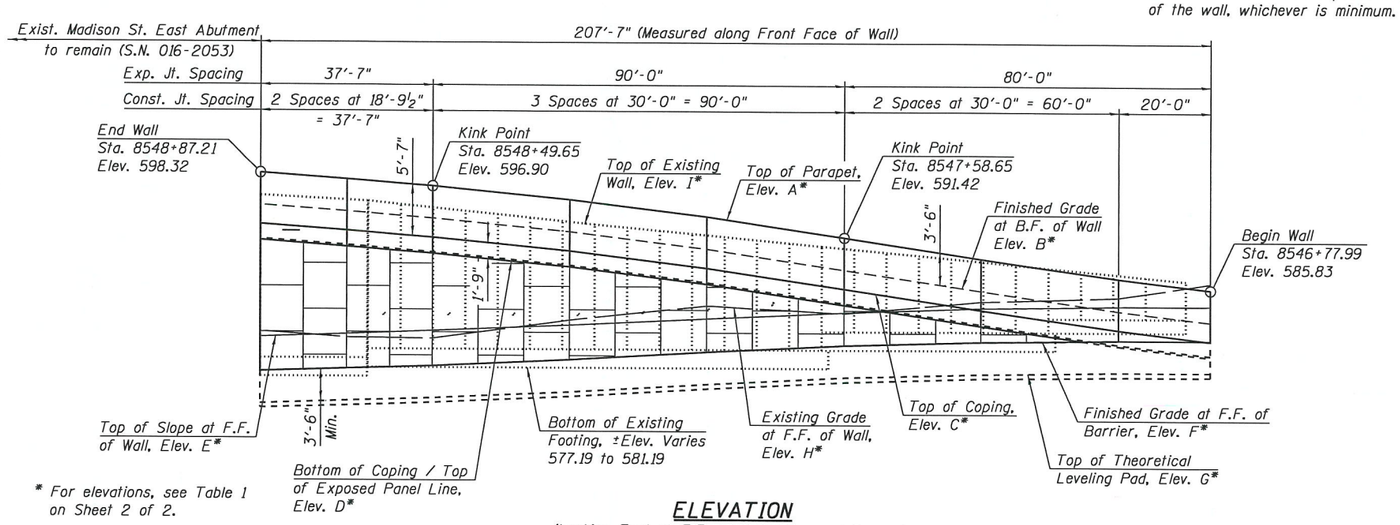
DESIGN STRESSES

FIELD UNITS

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

PRECAST UNITS

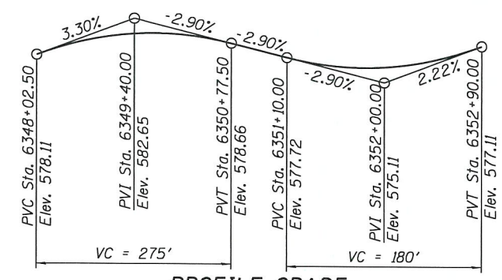
f'c = 4,500 psi



* For elevations, see Table 1 on Sheet 2 of 2.

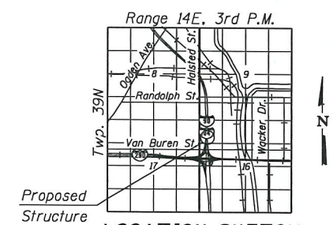
ELEVATION

(Looking East at F.F. of Wall, Proposed Concrete Barrier along NB C-D Road not shown for clarity)

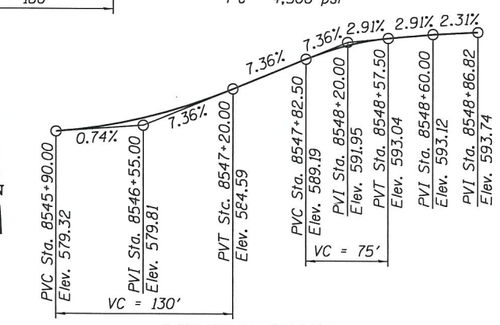


PROFILE GRADE

(℄ NB C-D Road)

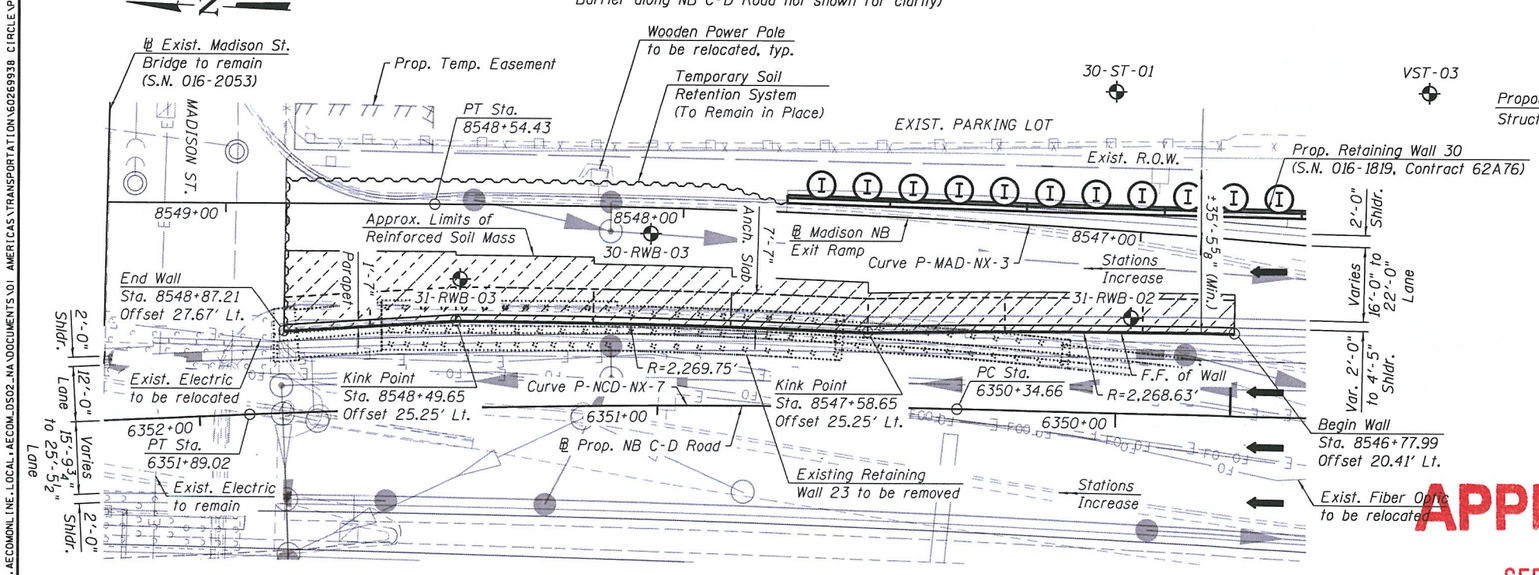


LOCATION SKETCH



PROFILE GRADE

(℄ Madison NB Exit Ramp)



PLAN

LEGEND:

Combined Sewer		Soil Boring	
Electric	E	Existing Catch Basin	
Ex. Storm Sewer		Proposed Catch Basin	
Prop. Storm Sewer		Existing Manhole	
Ex. Water	W	Proposed Manhole	
Ex. Fiber Optic	FO	Proposed Inlet	
Limits of Soil Reinforcement			

APPROVED
SEP 19 2019
AS A BASIS FOR PREPARATION OF DETAILED PLANS

GENERAL PLAN AND ELEVATION
RETAINING WALL 31 ALONG MADISON NB EXIT RAMP
F.A.I. RTE. 90/94 (KENNEDY EXPRESSWAY)
SECTION 2015-019R
COOK COUNTY
STATION 8546+77.99 TO STATION 8548+87.21
STRUCTURE NO. 016-1820

TranSystems

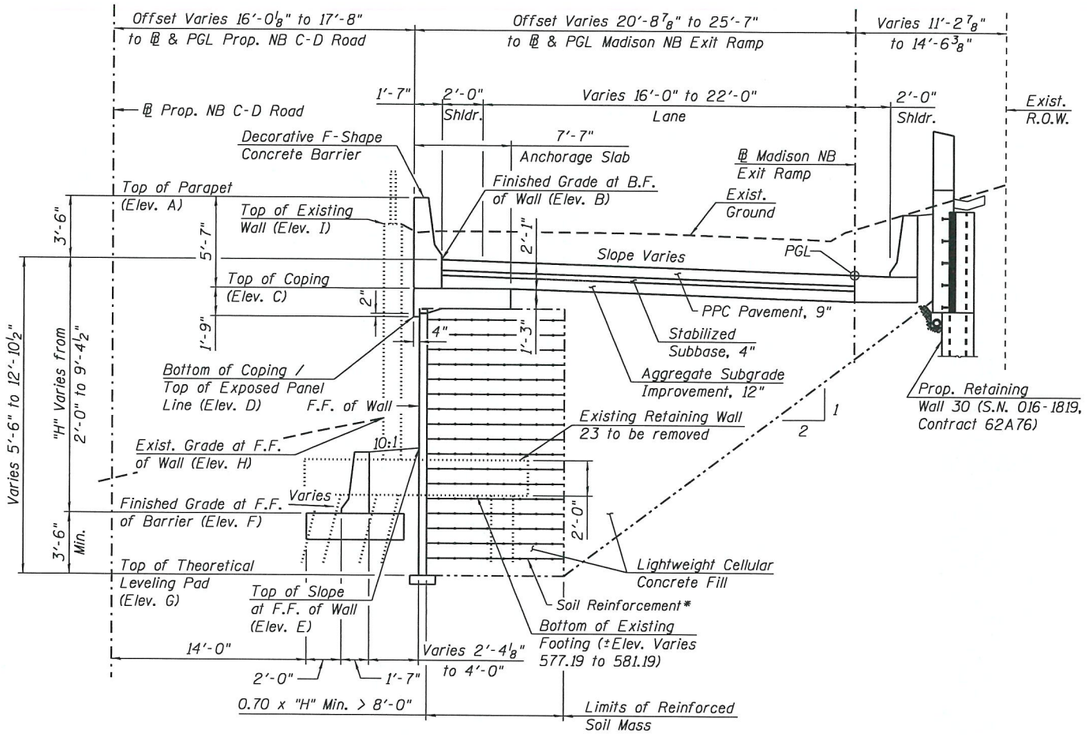
USER NAME = tjallen	DESIGNED - JNP	REVISED -	
	CHECKED - WJC/MDS	REVISED -	
PLOT SCALE = 32.0000 '/ in.	DRAWN - JNP	REVISED -	
PLOT DATE = 9/12/2019	CHECKED - WJC/MDS	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SHEET NO. 1 OF 2 SHEETS

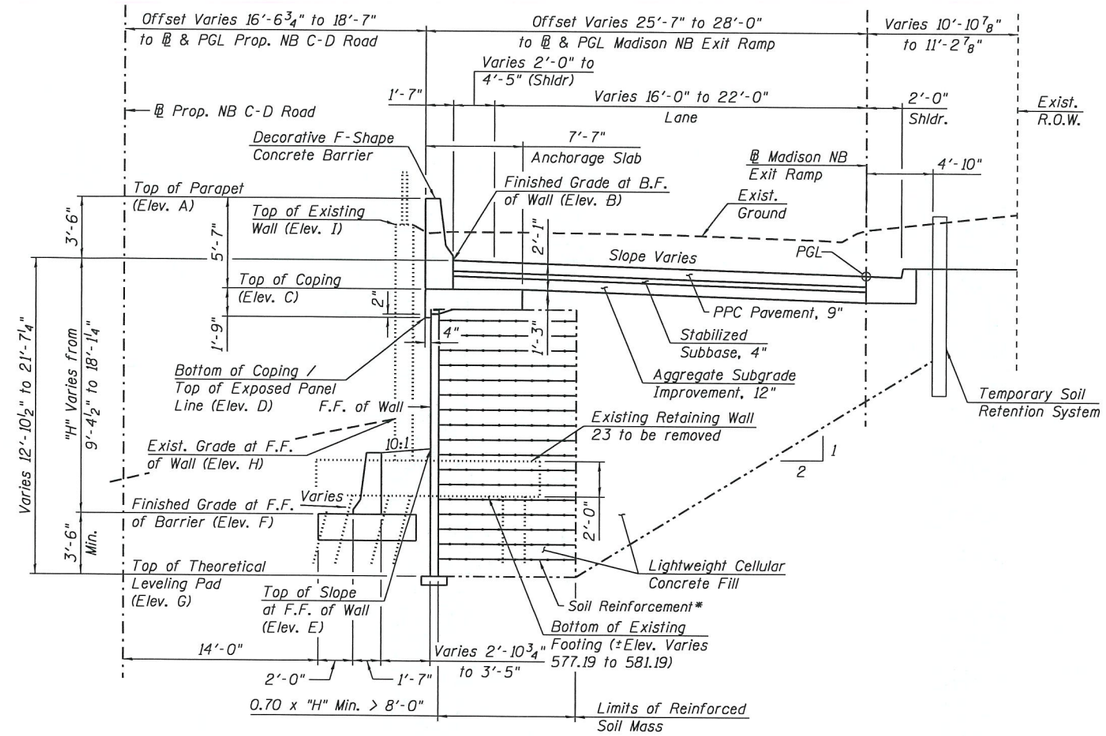
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2015-019R	COOK	2	1
		CONTRACT NO. 62A76		
		ILLINOIS FED. AID PROJECT		

10:15:48 AMPW:\\AECOM-NA-AWS1.AECOMONLINE.LOCAL:AECOM_DS02_NA\DOCUMENTS\01 AMERICAS\TRANSPORTATION\60269938 CIRCLE\PHASE_II\000_CAD\008_STRUCTURAL\STRUCTURE_016-1820\TSL\SHEETS\016 1820-62A76-SHT-TSL-001.DGN



CROSS SECTION

(Looking Upstation, Sta. 8546+77.99 to Sta. 8547+77.43)



CROSS SECTION

(Looking Upstation, Sta. 8547+77.43 to Sta. 8548+87.21)

* The M.S.E. 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 0.83 kips/ft of wall.

APPROVED

SEP 19 2019

AS A BASIS FOR PREPARATION OF DETAILED PLANS

TABLE 1 - WALL ELEVATIONS

Station	Offset	Elevation A	Elevation B	Elevation C	Elevation D	Elevation E	Elevation F	Elevation G	Elevation H	Elevation I
8546+77.99	20.41' Lt.	585.83	582.33	580.25	578.50	584.07	580.33	576.83	586.53	-
8546+98.14	21.62' Lt.	587.01	583.51	581.43	579.68	584.03	580.30	576.80	585.00	585.73
8547+28.38	23.43' Lt.	589.15	585.65	583.57	581.82	583.76	580.10	576.60	584.48	586.44
8547+58.65	25.25' Lt.	591.42	587.92	585.83	584.08	583.27	579.69	576.19	583.17	590.33
8547+88.98	25.25' Lt.	593.64	590.14	588.05	586.30	582.56	578.89	575.39	583.95	591.67
8548+19.32	25.25' Lt.	595.48	591.98	589.90	588.15	581.78	578.03	574.53	582.36	592.73
8548+49.65	25.25' Lt.	596.90	593.40	591.32	589.57	581.17	577.33	573.83	580.31	593.72
8548+68.45	26.46' Lt.	597.65	594.15	592.06	590.31	580.79	577.01	573.51	580.40	594.16
8548+87.21	27.67' Lt.	598.32	594.82	592.74	590.99	580.45	576.72	573.22	581.08	594.69

Elevation A - Top of Parapet
Elevation B - Finished Grade at B.F. of Wall
Elevation C - Top of Coping
Elevation D - Bottom of Coping / Top of Exposed Panel Line
Elevation E - Top of Slope at F.F. of Wall
Elevation F - Finished Grade at F.F. of Barrier
Elevation G - Top of Theoretical Leveling Pad
Elevation H - Existing Grade at F.F. of Wall
Elevation I - Top of Existing Wall

LEGEND:

B.F. - denotes Back Face.
F.F. - denotes Front Face.

CROSS SECTION AND DETAILS
RETAINING WALL 31 ALONG MADISON NB EXIT RAMP
F.A.I. RTE. 90/94 (KENNEDY EXPRESSWAY)
SECTION 2015-019R
COOK COUNTY
STATION 8546+77.99 TO STATION 8548+87.21
STRUCTURE NO. 016-1820

TranSystems

USER NAME = tjellen	DESIGNED - JNP	REVISED -	
	CHECKED - WJC/MDS	REVISED -	
PLOT SCALE = 0.17 '/ in.	DRAWN - JNP	REVISED -	
PLOT DATE = 9/12/2019	CHECKED - WJC/MDS	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SHEET NO. 2 OF 2 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2015-019R	COOK	2	2
		CONTRACT NO. 62A76		
	ILLINOIS	FED. AID PROJECT		

10:17:12 AMPW: \\AECOM-NA-AWS1-AECOMONLINE.LOCAL+AECOM_DS02_NA\DOCUMENTS\01 AMERICAS\TRANSPORTATION\60269938 CIRCLE\PHASE_II\000_CAD\008_STRUCTURAL\STRUCTURE_016-1820\TSL\SHEETS\016 1820-62A76-SHT-TSL-002.DGN