



Wisconsin Department of Transportation

February 5, 2018

Division of Transportation Systems Development

Bureau of Project Development
4802 Sheboygan Avenue, Rm 601
P O Box 7916
Madison, WI 53707-7916

Telephone: (608) 266-1631
Facsimile (FAX): (608) 266-8459

NOTICE TO ALL CONTRACTORS:

Proposal #12: 2984-06-76
West Brown Street
Bridge Over CP RR (B-40-0925)
Loc Str
Milwaukee County

Letting of February 13, 2018

This is Addendum No. 01, which provides for the following:

Plan Sheets

Revised Plan Sheets	
Plan Sheet	Plan Sheet Title (brief description of changes to sheet)
60	N. E. Retaining Wall General Plan and Elevation(Note " See Special Provision for Aesthetic Treatment to Wall" from the General Notes has been removed)
64	N. W. Retaining Wall General Plan and Elevation(Note " See Special Provision for Aesthetic Treatment to Wall" from the General Notes has been removed)
68	S.W. Retaining Wall General Plan and Elevation(Note " See Special Provision for Aesthetic Treatment to Wall" from the General Notes has been removed)
72	S. E. Retaining Wall General Plan and Elevation(Note " See Special Provision for Aesthetic Treatment to Wall" from the General Notes has been removed)

Plan Sheets

The following 8½ x 11-inch sheets are attached and made part of the plans for this proposal:
Revised: 60, 64, 68, and 72.

The responsibility for notifying potential subcontractors and suppliers of these changes remains with the prime contractor.

Sincerely,

Mike Coleman

Proposal Development Specialist
Proposal Management Section

END OF ADDENDUM

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.
 ALL STATIONS AND ALL ELEVATIONS ARE IN FEET.
 ALL ELEVATIONS ARE REFERRED TO CITY OF MILWAUKEE DATUM.
 CITY OF MILWAUKEE DATUM = 360.60 (10/29/93)
 DIMENSIONS AND STATIONS ARE MEASURED IN RELATION TO THE CENTERLINE OF THE EXISTING RAILROAD TRACKS UNLESS OTHERWISE NOTED.
 ALL DIMENSIONS ALONG THE FRONT FACE OF WALL UNLESS OTHERWISE NOTED.
 THE FIRST DIGIT OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.
 THE BAR SIZE SHALL BE 2" CLEAR COVER UNLESS SHOWN OTHERWISE.
 REINFORCEMENT SHALL HAVE 2" CLEAR COVER UNLESS SHOWN OTHERWISE.
 THESE PLANS ARE FOR A PRECAST CONCRETE PANEL MECHANICALLY STABILIZED EARTH (MSE) RETAINING WALL.
 THE CONTRACTOR MUST CORRODATE THE CONSTRUCTION OF WALLS R-40-673, R-40-925, R-40-676, AND BRIDGE B-40-925.
 THE CONTRACTOR SHALL PROVIDE COMPLETE DESIGN PLANS, INCLUDING SOIL PROFILES, SOIL TESTS, AND RETAINING WALL DESIGN. THE CONTRACTOR SHALL PROVIDE TECHNICAL ASSISTANCE TO THE CONTRACTOR DURING CONSTRUCTION. THE COST OF TECHNICAL ASSISTANCE SHALL BE INCLUDED IN THE BID ITEM.
 "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH" IS TO BE EPDM COATED.
 BEVEL ALL EXPOSED EDGES OF CONCRETE 1" UNLESS NOTED OTHERWISE.
 QUANTITY FOR THE ITEM "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH" IS BASED ON A WALL HEIGHT MEASURED FROM THE TOP OF THE LEVELING PAD TO THE TOP OF WALL AS SHOWN IN THE PLANS.
 PLANS, ELEVATIONS AND DETAILS SHOWN ON THESE DRAWINGS ARE INTENDED TO INDICATE WALL LOCATIONS, LENGTHS, HEIGHTS, AND DETAILS COMMON TO THE WALL SYSTEM SELECTED. THE CONTRACTOR SHALL VERIFY THE EXISTING CONDITIONS AND DETAILS SHALL CONFORM TO THE REQUIRED ALIGNMENTS AND DETAILS.
 THE MAXIMUM VALUE OF THE ANGLE OF INTERNAL FRICTION OF SOILS SHALL BE ASSUMED TO BE 30° WITHOUT CERTIFIED TEST VALUES.
 PLACE BACKFILL IN SPECIFIED LAYER THICKNESSES STARTING AT BACK FACE OF WALL AND BURNING AWAY FROM WALL.
 UTILITY LOCATIONS SHOWN ARE APPROXIMATE. THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO EXCAVATING DAMAGE TO EXISTING UTILITIES SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE.
 THE RETAINING WALL IS TO BE DESIGNED USING THE ELEVATIONS GIVEN ON THIS SHEET.

THE LENGTHS PROVIDED IN THE TABLE ARE THE MINIMUM REQUIRED LENGTHS FOR THE WALL SYSTEM SPECIAL PROVISIONS OR EXTERNAL AND OVERALL STABILITY AT THE DESIGNATED LOCATIONS. THESE DESIGNATED LOCATIONS REPRESENT TYPICAL AND CRITICAL WALL LOCATIONS. BUT THE CONTRACTOR SHALL VERIFY THE EXISTING CONDITIONS AND DETAILS SHALL CONFORM TO THE REQUIRED ALIGNMENTS AND DETAILS.
 CONTRACTOR TO MATCH EXISTING GRADE WITHIN 10 FEET OF FRONT FACE OF M.S.E. WALL.
 REMOVAL OF EXISTING ABUTMENT AS SHOWN WILL BE PAID AS PART OF "REMOVING OLD STRUCTURE 7+66.03" SEE STRUCTURE B-40-925.
 TOP OF CONCRETE LEVELING PAD TO BE AT SAME ELEVATION AS TOP OF PROPOSED ABUTMENT FOOTING. APPROX. EL. 75.64
 SEE STRUCTURE B-40-925 FOR PARAPET AND STRUCTURAL APPROACH SLAB DETAILS.
 "CONSTRUCTION STAKING STRUCTURE LAYOUT" INCLUDES VERIFYING LOCATIONS OF NEW AND EXISTING ABUTMENTS PRIOR TO MSE WALL FABRICATION.

DESIGN DATA
 MATERIAL PROPERTIES:
 PRECAST M.S.E. WALL PANEL
 BAR STEEL REINFORCEMENT
 LIVE LOAD SURCHARGE 240 PSF
 f'c = 4,000 PSI
 fy = 4,000 PSI
 fy = 60,000 PSI

STATE PROJECT NUMBER
2984 - 06 - 76

WALL EXTERNAL STABILITY EVALUATION

DIMENSIONS	EVALUATED LOCATIONS
WALL HEIGHT (FEET)	31' - 7"
EXPOSED WALL HEIGHT (FEET)	25' - 11"
MINIMUM LENGTH OF REINFORCEMENT (FEET)	25' - 3"
WALL STATION	7+92.83
BORING USED	BOR-2
CAPACITY TO DEMAND RATIO (CDR)	
SLIDING (CDR > 1.0)	1.02
ECCENTRICITY (CDR > 1.0)	1.47
OVERALL STABILITY (CDR > 1.0)	1.11
BEARING RESISTANCE (CDR > 1.0)	1.11
FACTORED BEARING RESISTANCE (PSF)	4,500

SOIL PARAMETERS

STRATUM LOCATION & SOIL DESCRIPTION	UNIT DENSITY (PCF)	FRICTION ANGLE (DEGREES)	COHESION (PSF)
STIFF TO V. STIFF CLAY	135	-	2,000
M. DENSE SILT/SILTY SAND (EL. 52.0-57.0)	125	30	-
HARD CLAY (EL. 46.0-52.0)	140	-	4,500
V. DENSE SILT/SILTY SAND (EL. 32.0-46.0)	135	36	-
M. DENSE CLAYEY SAND (EL. 27.0-32.0)	125	32	-
V. STIFF CLAY (EL. 24.0-27.0)	135	-	2,000
V. DENSE SANDY SILT W/GRAVEL (TL)	140	38	-

GEOMETRY TABLE

STATION	OFFSET TO F.F. WALL	TOP OF WALL (AT REF. POINT)	FINISHED GRADE EL.
7+17.06	25.5 LT.	111.52	84.20
7+34.82	25.5 LT.	111.39	81.51 MIN.

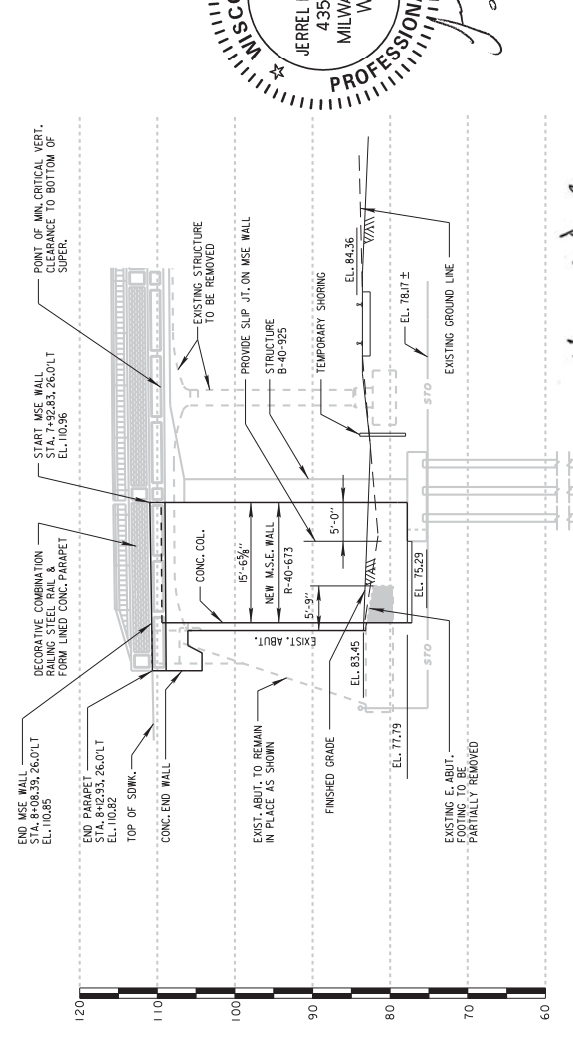
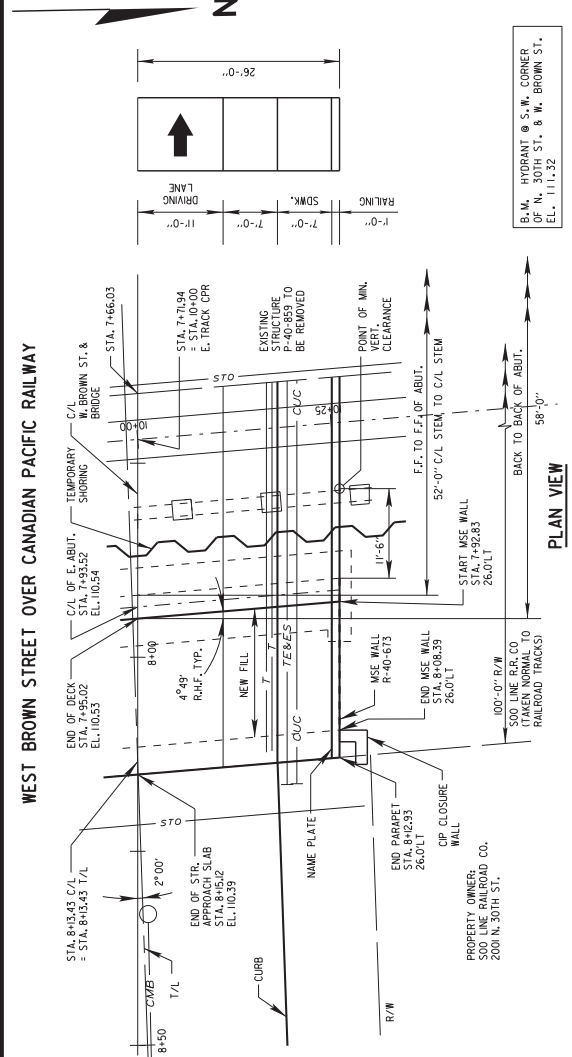
REVISIONS
 NO. DATE REASON
 2/2/18 DELETED NOTE FROM GENERAL NOTES AR

DESIGNED BY: JERREL KRUSCHKE
 DRAWN BY: JERREL KRUSCHKE
 CHECKED BY: JERREL KRUSCHKE
 CITY OF MILWAUKEE
 DEPARTMENT OF PUBLIC WORKS
 INFRASTRUCTURE SERVICES DIVISION
 STATE OF WISCONSIN
 DEPARTMENT OF TRANSPORTATION
 ACCEPTED: _____
 CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE R-40-673
W. BROWN ST. OVER C.P. RAILWAY
 COUNTY: MILWAUKEE
 TOWNSHIP: MILWAUKEE
 DESIGN SPEC: ASHTO, L.B.E.D. SPECIFICATIONS
 BY: JERREL KRUSCHKE, M.S.A.
 DATE: 02/05/18

N.E. RETAINING WALL
GENERAL PLAN
AND ELEVATION
 SHEET 1 OF 4
 60

- LIST OF DRAWINGS**
- N.E. RETAINING WALL GENERAL PLAN AND ELEVATION
 - SUBSURFACE EXPLORATION LAYOUT
 - WALL DETAILS AND QUANTITIES
 - COLUMN DETAILS



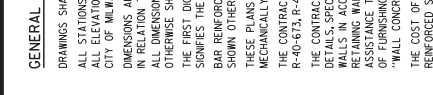
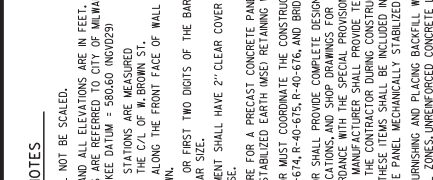
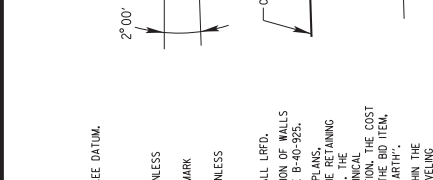
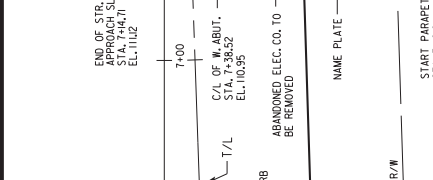
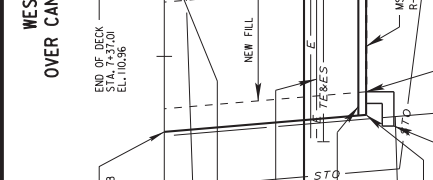
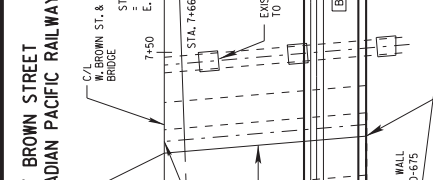
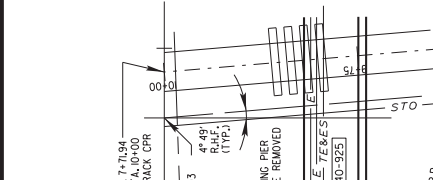
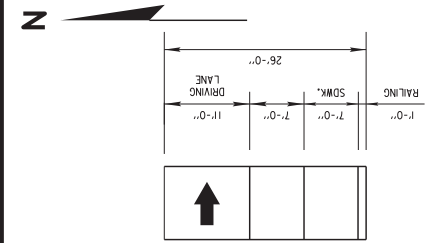
Addendum No. 01
ID 2984-06-76
Revised Sheet 60
February 5, 2018

WISDOT CONTACT: WILLIAM BREUER 608-266-8489
 CONSULTANT CONTACT: JERREL KRUSCHKE 414-266-3402
 CITY OF MILWAUKEE

DATE: 02/05/18
 DRAWN BY: JERREL KRUSCHKE
 CHECKED BY: JERREL KRUSCHKE
 CITY OF MILWAUKEE
 DEPARTMENT OF PUBLIC WORKS
 INFRASTRUCTURE SERVICES DIVISION
 STATE OF WISCONSIN
 DEPARTMENT OF TRANSPORTATION

WALL EXTERNAL STABILITY EVALUATION

DIMENSIONS	EVALUATED LOCATIONS
WALL HEIGHT (FEET)	32'-1"
EXPOSED WALL HEIGHT (FEET)	25'-7"
MINIMUM LENGTH OF REINFORCEMENT (FEET)	25'-7"
WALL STATION	7+39.20
BORING USED	BOR-3
CAPACITY TO DEMAND RATIO (CDR)	
SLUING (CDR > 1.0)	1.02
ECCENTRICITY (CDR > 1.0)	1.47
OVERALL STABILITY (CDR > 1.0)	1.11
BEARING RESISTANCE (CDR > 1.0)	1.10
FACTORED BEARING RESISTANCE (PSF)	4,500



Addendum No. 01
ID 2984-06-76
Revised Sheet 68
February 5, 2018

SOIL PARAMETERS

STRATUM LOCATION & SOIL DESCRIPTION	UNIT WEIGHT (PCF)	FRICTION ANGLE (DEGREES)	COHESION (PSF)
STIFF TO V. STIFF CLAY	135	-	2,000
DENSE TO M. DENSE SAND W/ SILT (SILT < 5%) (EL. 36.0 - 52.0)	125	30	-
V. DENSE SANDY SILT (EL. 27.0 - 36.0)	135	36	-
V. STIFF CLAY (EL. 22.0 - 27.0)	135	-	2,500
V. DENSE CLAYEY SAND W/ GRAVEL	140	38	-

GEOMETRY TABLE

STATION	OFFSET TO TOP OF WALL	FINISHED ELEVATION	LAT. REF. POINT	GRADE ELEV.
7+21.44	25.5'-RT.	111.48		84.20
7+39.20	25.5'-RT.	111.35		81.51 MIN.

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

ALL STATIONS AND ALL ELEVATIONS ARE IN FEET.

ALL ELEVATIONS ARE REFERRED TO CITY OF MILWAUKEE DATUM.

CITY OF MILWAUKEE (ADDITIONAL TO CITY OF MILWAUKEE DATUM).

IN REVISION TO THE DRAWINGS, ALL DIMENSIONS SHALL BE SHOWN UNLESS OTHERWISE SHOWN.

THE FIRST DIGIT OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

BAR REINFORCEMENT SHALL HAVE 2" CLEAR COVER UNLESS SHOWN OTHERWISE.

THESE PLANS ARE FOR A PRECAST CONCRETE PANEL MECHANICALLY STABILIZED EARTH (MSE) RETAINING WALL. THE CONTRACTOR MUST COORDINATE THE CONSTRUCTION OF WALLS R-40-674, R-40-674, R-40-675, R-40-676, AND BRIDGE B-40-925. THE CONTRACTOR SHALL PROVIDE COMPLETE DESIGN PLANS, DETAILS, SPECIFICATIONS, AND SHOP DRAWINGS FOR THE RETAINING WALLS IN ACCORDANCE WITH THE SPECIAL PROVISIONS. THE RETAINING WALL MANUFACTURER SHALL PROVIDE TECHNICAL ASSISTANCE TO THE CONTRACTOR DURING CONSTRUCTION. THE COST OF THE RETAINING WALL SHALL BE MECHANICALLY STABILIZED EARTH. THE COST OF FURNISHING AND PLACING BACKFILL WITHIN THE REINFORCED SOIL ZONES UNREINFORCED CONCRETE LEVELING PAD UNDER THE MSE PRECAST WALL PANELS, REINFORCEMENT, GEOTEXTILE FABRIC, ENGINEERED BACKFILL, JOINT MATERIAL, AND OTHER MISCELLANEOUS ITEMS IS INCLUDED IN THE COST OF BID ITEM "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH". ALL BAR STEEL REINFORCEMENT IN CAST IN PLACE CONCRETE SHALL BE EPICORDED. EXPOSED EDGES OF CONCRETE SHALL UNLESS NOTED OTHERWISE.

THE PLAN QUANTITY FOR THE ITEM "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH" IS BASED ON A WALL HEIGHT MEASURED FROM THE TOP OF THE LEVELING PAD TO THE TOP OF WALL AS SHOWN IN THE PLANS.

PLANS, ELEVATIONS AND DETAILS SHOWN ON THESE DRAWINGS ARE INTENDED TO INDICATE WALL LOCATIONS, LENGTHS, HEIGHTS, AND ELEVATIONS. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND DETAILS CONFORM TO THE REQUIRED ALIGNMENTS AND DETAILS.

THE MAXIMUM VALUE OF THE ANGLE OF INTERNAL FRICTION OF THE WALL BACKFILL MATERIAL IN THE REINFORCED ZONE SHALL BE ASSUMED TO BE 30° WITHOUT CERTIFIED TEST VALUES.

PLACE BACKFILL IN SPECIFIED LAYER THICKNESS STARTING AT BACK FACE OF WALL AND WORKING AWAY FROM WALL.

UTILITY LOCATIONS SHOWN ARE APPROXIMATE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE EXACT LOCATION OF ALL UTILITIES PRIOR TO EXCAVATING. DAMAGE TO EXISTING UTILITIES SHALL BE REPAIRED OR REPLACED AT THE CONTRACTORS EXPENSE.

THE RETAINING WALL IS TO BE DESIGNED USING THE ELEVATIONS SHOWN ON THIS SHEET.

THE LENGTHS PROVIDED IN THE TABLE ARE THE MINIMUM REQUIRED REINFORCEMENT LENGTHS BASED UPON THE MINIMUM DESCRIBED IN STABILITY SYSTEMS MANUAL. THE CONTRACTOR SHALL VERIFY ALL WALL LOCATIONS REPRESENT TYPICAL AND CRITICAL WALL LOCATIONS, BUT SHALL NOT BE CONSIDERED ALL INCLUSIVE. THE CONTRACTOR DESIGN LENGTHS SHALL MEET OR EXCEED THE MINIMUM VALUES REPRESENTED IN THE TABLE AT THESE DESIGNATED LOCATIONS.

CONTRACTOR TO MATCH EXISTING GRADE WITHIN 10 FEET OF FRONT FACE OF MSE WALL.

REMOVAL OF EXISTING ABUTMENT AS SHOWN WILL BE PAID AS PART B-40-925. "REMOVING OLD STRUCTURE 7+66.03". SEE STRUCTURE APPROX. EL. 79.56.

SEE STRUCTURE B-40-925 FOR PARAPET AND STRUCTURE APPROACH SLAB DETAILS.

"CONSTRUCTION STAGING STRUCTURE LAYOUT" INCLUDES VERIFYING LOCATIONS OF NEW AND EXISTING ABUTMENTS PRIOR TO MSE WALL FABRICATION.

DESIGN DATA

MATERIAL PROPERTIES:

CONCRETE MASS: $f_c = 4000$ PSI

PRECAST CONCRETE WALL PANEL: $f_c = 4000$ PSI

BAR STEEL REINFORCEMENT: $f_y = 60000$ PSI

LIVE LOAD: 240 PSF

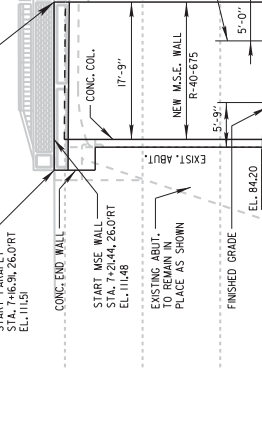
LIVE LOAD SURCHARGE

LIST OF DRAWINGS

- S.W. RETAINING WALL GENERAL PLAN AND ELEVATION
- SUBSURFACE EXPLORATION
- WALL DETAILS AND QUANTITIES
- COLUMN DETAILS

MISSOURI CONTACT:
WILLIAM DREHER 608-266-8489

CONSULTANT CONTACT:
JERREL KRUSCHKE 444-286-3402



02-02-2018

W. BROWN ST. OVER C.P. RAILWAY

COUNTY: MILWAUKEE

DESIGN SPEC: ASHTO L.R.E.D. SPECIFICATIONS

DESIGNED BY: J.P.H. (C.R.D., M.S.A.)

DRAWN BY: G.J.R. (C.R.D., A.E.)

S.W. RETAINING WALL GENERAL PLAN AND ELEVATION

SHEET 1 OF 4

68

WEST BROWN STREET OVER CANADIAN PACIFIC RAILWAY

END OF STR. STA. 7+142.71 EL. 111.42

END OF DOCK STA. 10+00.00 EL. 110.98

C/L OF W. ABUT. STA. 7+38.52 EL. 110.95

ABANDONED ELEC. CO. TO BE REMOVED

NAME PLATE

START PARAPET STA. 7+16.91 EL. 26.0 RT.

CP. CLOSURE WALL

PROPERTY OWNER: OMAR M. BARKHADE 1952 N. 351 ST. EL. 111.32

B.M. HYDRANT @ S.W. CORNER OF N. 30TH ST. & W. BROWN ST. EL. 111.32

100'-0" R/W

500 LINE RAILROAD CO. (TAKEN NORMAL TO RAILROAD TRACK)

START MSE WALL STA. 7+21.44 EL. 110.95

END MSE WALL STA. 7+39.20, 26.0 RT EL. 111.35

CONC. END WALL STA. 7+16.91, 26.0 RT EL. 111.51

START MSE WALL STA. 7+21.44, 26.0 RT EL. 111.48

EXISTING ABUT. TO REMAIN IN PLACE AS SHOWN

FINISHED GRADE

EXIST. W. ABUT. EL. 84.20

EXISTING W. ABUT. FOOTING TO BE PARTIALLY REMOVED

EXISTING PEERS TO BE REMOVED TO TOP OF FOOTING BY RUBBLIZING PER COLUMNS AND REMOVING CONCRETE, INCLUDING REBARS, BELOW GRADE

EXIST. PIER 3'-9 1/2" * EL. 81.51

SLIP JT. ON MSE WALL EL. 84.29

EXISTING GROUND LINE EL. 84.29

EXISTING TRACK C/L

STRUCTURE B-40-925

STRUCTURE TO BE REMOVED

EXISTING STRUCTURE

9'-6" (TYP.)

17'-9"

CONC. COL.

NEW MSE WALL R-40-675

5'-9"

5'-0"

EL. 79.29

EL. 78.17

LOOKING NORTH

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

ALL STATIONS AND ALL ELEVATIONS ARE IN FEET.

ALL ELEVATIONS ARE REFERRED TO CITY OF MILWAUKEE DATUM.

CITY OF MILWAUKEE (ADDITIONAL TO CITY OF MILWAUKEE DATUM).

IN REVISION TO THE DRAWINGS, ALL DIMENSIONS SHALL BE SHOWN UNLESS OTHERWISE SHOWN.

THE FIRST DIGIT OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

BAR REINFORCEMENT SHALL HAVE 2" CLEAR COVER UNLESS SHOWN OTHERWISE.

THESE PLANS ARE FOR A PRECAST CONCRETE PANEL MECHANICALLY STABILIZED EARTH (MSE) RETAINING WALL. THE CONTRACTOR MUST COORDINATE THE CONSTRUCTION OF WALLS R-40-674, R-40-674, R-40-675, R-40-676, AND BRIDGE B-40-925. THE CONTRACTOR SHALL PROVIDE COMPLETE DESIGN PLANS, DETAILS, SPECIFICATIONS, AND SHOP DRAWINGS FOR THE RETAINING WALLS IN ACCORDANCE WITH THE SPECIAL PROVISIONS. THE RETAINING WALL MANUFACTURER SHALL PROVIDE TECHNICAL ASSISTANCE TO THE CONTRACTOR DURING CONSTRUCTION. THE COST OF THE RETAINING WALL SHALL BE MECHANICALLY STABILIZED EARTH. THE COST OF FURNISHING AND PLACING BACKFILL WITHIN THE REINFORCED SOIL ZONES UNREINFORCED CONCRETE LEVELING PAD UNDER THE MSE PRECAST WALL PANELS, REINFORCEMENT, GEOTEXTILE FABRIC, ENGINEERED BACKFILL, JOINT MATERIAL, AND OTHER MISCELLANEOUS ITEMS IS INCLUDED IN THE COST OF BID ITEM "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH". ALL BAR STEEL REINFORCEMENT IN CAST IN PLACE CONCRETE SHALL BE EPICORDED. EXPOSED EDGES OF CONCRETE SHALL UNLESS NOTED OTHERWISE.

THE PLAN QUANTITY FOR THE ITEM "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH" IS BASED ON A WALL HEIGHT MEASURED FROM THE TOP OF THE LEVELING PAD TO THE TOP OF WALL AS SHOWN IN THE PLANS.

PLANS, ELEVATIONS AND DETAILS SHOWN ON THESE DRAWINGS ARE INTENDED TO INDICATE WALL LOCATIONS, LENGTHS, HEIGHTS, AND ELEVATIONS. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND DETAILS CONFORM TO THE REQUIRED ALIGNMENTS AND DETAILS.

THE MAXIMUM VALUE OF THE ANGLE OF INTERNAL FRICTION OF THE WALL BACKFILL MATERIAL IN THE REINFORCED ZONE SHALL BE ASSUMED TO BE 30° WITHOUT CERTIFIED TEST VALUES.

PLACE BACKFILL IN SPECIFIED LAYER THICKNESS STARTING AT BACK FACE OF WALL AND WORKING AWAY FROM WALL.

UTILITY LOCATIONS SHOWN ARE APPROXIMATE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE EXACT LOCATION OF ALL UTILITIES PRIOR TO EXCAVATING. DAMAGE TO EXISTING UTILITIES SHALL BE REPAIRED OR REPLACED AT THE CONTRACTORS EXPENSE.

THE RETAINING WALL IS TO BE DESIGNED USING THE ELEVATIONS SHOWN ON THIS SHEET.

THE LENGTHS PROVIDED IN THE TABLE ARE THE MINIMUM REQUIRED REINFORCEMENT LENGTHS BASED UPON THE MINIMUM DESCRIBED IN STABILITY SYSTEMS MANUAL. THE CONTRACTOR SHALL VERIFY ALL WALL LOCATIONS REPRESENT TYPICAL AND CRITICAL WALL LOCATIONS, BUT SHALL NOT BE CONSIDERED ALL INCLUSIVE. THE CONTRACTOR DESIGN LENGTHS SHALL MEET OR EXCEED THE MINIMUM VALUES REPRESENTED IN THE TABLE AT THESE DESIGNATED LOCATIONS.

CONTRACTOR TO MATCH EXISTING GRADE WITHIN 10 FEET OF FRONT FACE OF MSE WALL.

REMOVAL OF EXISTING ABUTMENT AS SHOWN WILL BE PAID AS PART B-40-925. "REMOVING OLD STRUCTURE 7+66.03". SEE STRUCTURE APPROX. EL. 79.56.

SEE STRUCTURE B-40-925 FOR PARAPET AND STRUCTURE APPROACH SLAB DETAILS.

"CONSTRUCTION STAGING STRUCTURE LAYOUT" INCLUDES VERIFYING LOCATIONS OF NEW AND EXISTING ABUTMENTS PRIOR TO MSE WALL FABRICATION.

SOIL PARAMETERS

STRATUM LOCATION & SOIL DESCRIPTION	UNIT WEIGHT (PCF)	FRICTION ANGLE (DEGREES)	COHESION (PSF)
STIFF TO V. STIFF CLAY	135	-	2,000
DENSE TO M. DENSE SAND W/ SILT (SILT < 5%) (EL. 36.0 - 52.0)	125	30	-
V. DENSE SANDY SILT (EL. 27.0 - 36.0)	135	36	-
V. STIFF CLAY (EL. 22.0 - 27.0)	135	-	2,500
V. DENSE CLAYEY SAND W/ GRAVEL	140	38	-

GEOMETRY TABLE

STATION	OFFSET TO TOP OF WALL	FINISHED ELEVATION	LAT. REF. POINT	GRADE ELEV.
7+21.44	25.5'-RT.	111.48		84.20
7+39.20	25.5'-RT.	111.35		81.51 MIN.

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

ALL STATIONS AND ALL ELEVATIONS ARE IN FEET.

ALL ELEVATIONS ARE REFERRED TO CITY OF MILWAUKEE DATUM.

CITY OF MILWAUKEE (ADDITIONAL TO CITY OF MILWAUKEE DATUM).

IN REVISION TO THE DRAWINGS, ALL DIMENSIONS SHALL BE SHOWN UNLESS OTHERWISE SHOWN.

THE FIRST DIGIT OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

BAR REINFORCEMENT SHALL HAVE 2" CLEAR COVER UNLESS SHOWN OTHERWISE.

THESE PLANS ARE FOR A PRECAST CONCRETE PANEL MECHANICALLY STABILIZED EARTH (MSE) RETAINING WALL. THE CONTRACTOR MUST COORDINATE THE CONSTRUCTION OF WALLS R-40-674, R-40-674, R-40-675, R-40-676, AND BRIDGE B-40-925. THE CONTRACTOR SHALL PROVIDE COMPLETE DESIGN PLANS, DETAILS, SPECIFICATIONS, AND SHOP DRAWINGS FOR THE RETAINING WALLS IN ACCORDANCE WITH THE SPECIAL PROVISIONS. THE RETAINING WALL MANUFACTURER SHALL PROVIDE TECHNICAL ASSISTANCE TO THE CONTRACTOR DURING CONSTRUCTION. THE COST OF THE RETAINING WALL SHALL BE MECHANICALLY STABILIZED EARTH. THE COST OF FURNISHING AND PLACING BACKFILL WITHIN THE REINFORCED SOIL ZONES UNREINFORCED CONCRETE LEVELING PAD UNDER THE MSE PRECAST WALL PANELS, REINFORCEMENT, GEOTEXTILE FABRIC, ENGINEERED BACKFILL, JOINT MATERIAL, AND OTHER MISCELLANEOUS ITEMS IS INCLUDED IN THE COST OF BID ITEM "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH". ALL BAR STEEL REINFORCEMENT IN CAST IN PLACE CONCRETE SHALL BE EPICORDED. EXPOSED EDGES OF CONCRETE SHALL UNLESS NOTED OTHERWISE.

THE PLAN QUANTITY FOR THE ITEM "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH" IS BASED ON A WALL HEIGHT MEASURED FROM THE TOP OF THE LEVELING PAD TO THE TOP OF WALL AS SHOWN IN THE PLANS.

PLANS, ELEVATIONS AND DETAILS SHOWN ON THESE DRAWINGS ARE INTENDED TO INDICATE WALL LOCATIONS, LENGTHS, HEIGHTS, AND ELEVATIONS. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND DETAILS CONFORM TO THE REQUIRED ALIGNMENTS AND DETAILS.

THE MAXIMUM VALUE OF THE ANGLE OF INTERNAL FRICTION OF THE WALL BACKFILL MATERIAL IN THE REINFORCED ZONE SHALL BE ASSUMED TO BE 30° WITHOUT CERTIFIED TEST VALUES.

PLACE BACKFILL IN SPECIFIED LAYER THICKNESS STARTING AT BACK FACE OF WALL AND WORKING AWAY FROM WALL.

UTILITY LOCATIONS SHOWN ARE APPROXIMATE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE EXACT LOCATION OF ALL UTILITIES PRIOR TO EXCAVATING. DAMAGE TO EXISTING UTILITIES SHALL BE REPAIRED OR REPLACED AT THE CONTRACTORS EXPENSE.

THE RETAINING WALL IS TO BE DESIGNED USING THE ELEVATIONS SHOWN ON THIS SHEET.

THE LENGTHS PROVIDED IN THE TABLE ARE THE MINIMUM REQUIRED REINFORCEMENT LENGTHS BASED UPON THE MINIMUM DESCRIBED IN STABILITY SYSTEMS MANUAL. THE CONTRACTOR SHALL VERIFY ALL WALL LOCATIONS REPRESENT TYPICAL AND CRITICAL WALL LOCATIONS, BUT SHALL NOT BE CONSIDERED ALL INCLUSIVE. THE CONTRACTOR DESIGN LENGTHS SHALL MEET OR EXCEED THE MINIMUM VALUES REPRESENTED IN THE TABLE AT THESE DESIGNATED LOCATIONS.

CONTRACTOR TO MATCH EXISTING GRADE WITHIN 10 FEET OF FRONT FACE OF MSE WALL.

REMOVAL OF EXISTING ABUTMENT AS SHOWN WILL BE PAID AS PART B-40-925. "REMOVING OLD STRUCTURE 7+66.03". SEE STRUCTURE APPROX. EL. 79.56.

SEE STRUCTURE B-40-925 FOR PARAPET AND STRUCTURE APPROACH SLAB DETAILS.

"CONSTRUCTION STAGING STRUCTURE LAYOUT" INCLUDES VERIFYING LOCATIONS OF NEW AND EXISTING ABUTMENTS PRIOR TO MSE WALL FABRICATION.

DESIGN DATA

MATERIAL PROPERTIES:

CONCRETE MASS: $f_c = 4000$ PSI

PRECAST CONCRETE WALL PANEL: $f_c = 4000$ PSI

BAR STEEL REINFORCEMENT: $f_y = 60000$ PSI

LIVE LOAD: 240 PSF

LIVE LOAD SURCHARGE

LIST OF DRAWINGS

- S.W. RETAINING WALL GENERAL PLAN AND ELEVATION
- SUBSURFACE EXPLORATION
- WALL DETAILS AND QUANTITIES
- COLUMN DETAILS

MISSOURI CONTACT:
WILLIAM DREHER 608-266-8489

CONSULTANT CONTACT:
JERREL KRUSCHKE 444-286-3402

02-02-2018

W. BROWN ST. OVER C.P. RAILWAY

COUNTY: MILWAUKEE

DESIGN SPEC: ASHTO L.R.E.D. SPECIFICATIONS

DESIGNED BY: J.P.H. (C.R.D., M.S.A.)

DRAWN BY: G.J.R. (C.R.D., A.E.)

S.W. RETAINING WALL GENERAL PLAN AND ELEVATION

SHEET 1 OF 4

68

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.
 ALL STATIONS AND ALL ELEVATIONS ARE IN FEET.
 ALL DIMENSIONS ARE REFERRED TO UNLESS OTHERWISE NOTED TO THE MILWAUKEE DATUM.
 DIMENSIONS AND STATIONS ARE MEASURED IN RELATION TO THE C/L OF W. BROWN ST.
 ALL DIMENSIONS ALONG THE FRONT FACE OF WALL UNLESS OTHERWISE FIRST SHOWN.
 THE FIRST DIGIT OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.
 BAR REINFORCEMENT SHALL HAVE 2" CLEAR COVER UNLESS SHOWN OTHERWISE.

THESE PLANS ARE FOR A PRECAST CONCRETE PANEL MECHANICALLY STABILIZED EARTH RETAINING WALL LFRD. THE CONTRACTOR MUST COORDINATE THE CONSTRUCTION OF WALLS R-40-67A, R-40-67A, R-40-67B, R-40-67C, R-40-67D, R-40-67E, R-40-67F, R-40-67G, R-40-67H, R-40-67I, R-40-67J, R-40-67K, R-40-67L, R-40-67M, R-40-67N, R-40-67O, R-40-67P, R-40-67Q, R-40-67R, R-40-67S, R-40-67T, R-40-67U, R-40-67V, R-40-67W, R-40-67X, R-40-67Y, R-40-67Z, R-40-67AA, R-40-67AB, R-40-67AC, R-40-67AD, R-40-67AE, R-40-67AF, R-40-67AG, R-40-67AH, R-40-67AI, R-40-67AJ, R-40-67AK, R-40-67AL, R-40-67AM, R-40-67AN, R-40-67AO, R-40-67AP, R-40-67AQ, R-40-67AR, R-40-67AS, R-40-67AT, R-40-67AU, R-40-67AV, R-40-67AW, R-40-67AX, R-40-67AY, R-40-67AZ, R-40-67BA, R-40-67BB, R-40-67BC, R-40-67BD, R-40-67BE, R-40-67BF, R-40-67BG, R-40-67BH, R-40-67BI, R-40-67BJ, R-40-67BK, R-40-67BL, R-40-67BM, R-40-67BN, R-40-67BO, R-40-67BP, R-40-67BQ, R-40-67BR, R-40-67BS, R-40-67BT, R-40-67BU, R-40-67BV, R-40-67BW, R-40-67BX, R-40-67BY, R-40-67BZ, R-40-67CA, R-40-67CB, R-40-67CC, R-40-67CD, R-40-67CE, R-40-67CF, R-40-67CG, R-40-67CH, R-40-67CI, R-40-67CJ, R-40-67CK, R-40-67CL, R-40-67CM, R-40-67CN, R-40-67CO, R-40-67CP, R-40-67CQ, R-40-67CR, R-40-67CS, R-40-67CT, R-40-67CU, R-40-67CV, R-40-67CW, R-40-67CX, R-40-67CY, R-40-67CZ, R-40-67DA, R-40-67DB, R-40-67DC, R-40-67DD, R-40-67DE, R-40-67DF, R-40-67DG, R-40-67DH, R-40-67DI, R-40-67DJ, R-40-67DK, R-40-67DL, R-40-67DM, R-40-67DN, R-40-67DO, R-40-67DP, R-40-67DQ, R-40-67DR, R-40-67DS, R-40-67DT, R-40-67DU, R-40-67DV, R-40-67DW, R-40-67DX, R-40-67DY, R-40-67DZ, R-40-67EA, R-40-67EB, R-40-67EC, R-40-67ED, R-40-67EE, R-40-67EF, R-40-67EG, R-40-67EH, R-40-67EI, R-40-67EJ, R-40-67EK, R-40-67EL, R-40-67EM, R-40-67EN, R-40-67EO, R-40-67EP, R-40-67EQ, R-40-67ER, R-40-67ES, R-40-67ET, R-40-67EU, R-40-67EV, R-40-67EW, R-40-67EX, R-40-67EY, R-40-67EZ, R-40-67FA, R-40-67FB, R-40-67FC, R-40-67FD, R-40-67FE, R-40-67FF, R-40-67FG, R-40-67FH, R-40-67FI, R-40-67FJ, R-40-67FK, R-40-67FL, R-40-67FM, R-40-67FN, R-40-67FO, R-40-67FP, R-40-67FQ, R-40-67FR, R-40-67FS, R-40-67FT, R-40-67FU, R-40-67FV, R-40-67FW, R-40-67FX, R-40-67FY, R-40-67FZ, R-40-67GA, R-40-67GB, R-40-67GC, R-40-67GD, R-40-67GE, R-40-67GF, R-40-67GG, R-40-67GH, R-40-67GI, R-40-67GJ, R-40-67GK, R-40-67GL, R-40-67GM, R-40-67GN, R-40-67GO, R-40-67GP, R-40-67GQ, R-40-67GR, R-40-67GS, R-40-67GT, R-40-67GU, R-40-67GV, R-40-67GW, R-40-67GX, R-40-67GY, R-40-67GZ, R-40-67HA, R-40-67HB, R-40-67HC, R-40-67HD, R-40-67HE, R-40-67HF, R-40-67HG, R-40-67HH, R-40-67HI, R-40-67HJ, R-40-67HK, R-40-67HL, R-40-67HM, R-40-67HN, R-40-67HO, R-40-67HP, R-40-67HQ, R-40-67HR, R-40-67HS, R-40-67HT, R-40-67HU, R-40-67HV, R-40-67HW, R-40-67HX, R-40-67HY, R-40-67HZ, R-40-67IA, R-40-67IB, R-40-67IC, R-40-67ID, R-40-67IE, R-40-67IF, R-40-67IG, R-40-67IH, R-40-67II, R-40-67IJ, R-40-67IK, R-40-67IL, R-40-67IM, R-40-67IN, R-40-67IO, R-40-67IP, R-40-67IQ, R-40-67IR, R-40-67IS, R-40-67IT, R-40-67IU, R-40-67IV, R-40-67IW, R-40-67IX, R-40-67IY, R-40-67IZ, R-40-67JA, R-40-67JB, R-40-67JC, R-40-67JD, R-40-67JE, R-40-67JF, R-40-67JG, R-40-67JH, R-40-67JI, R-40-67JJ, R-40-67JK, R-40-67JL, R-40-67JM, R-40-67JN, R-40-67JO, R-40-67JP, R-40-67JQ, R-40-67JR, R-40-67JS, R-40-67JT, R-40-67JU, R-40-67JV, R-40-67JW, R-40-67JX, R-40-67JY, R-40-67JZ, R-40-67KA, R-40-67KB, R-40-67KC, R-40-67KD, R-40-67KE, R-40-67KF, R-40-67KG, R-40-67KH, R-40-67KI, R-40-67KJ, R-40-67KL, R-40-67KM, R-40-67KN, R-40-67KO, R-40-67KP, R-40-67KQ, R-40-67KR, R-40-67KS, R-40-67KT, R-40-67KU, R-40-67KV, R-40-67KW, R-40-67KX, R-40-67KY, R-40-67KZ, R-40-67LA, R-40-67LB, R-40-67LC, R-40-67LD, R-40-67LE, R-40-67LF, R-40-67LG, R-40-67LH, R-40-67LI, R-40-67LJ, R-40-67LK, R-40-67LL, R-40-67LM, R-40-67LN, R-40-67LO, R-40-67LP, R-40-67LQ, R-40-67LR, R-40-67LS, R-40-67LT, R-40-67LU, R-40-67LV, R-40-67LW, R-40-67LX, R-40-67LY, R-40-67LZ, R-40-67MA, R-40-67MB, R-40-67MC, R-40-67MD, R-40-67ME, R-40-67MF, R-40-67MG, R-40-67MH, R-40-67MI, R-40-67MJ, R-40-67MK, R-40-67ML, R-40-67MM, R-40-67MN, R-40-67MO, R-40-67MP, R-40-67MQ, R-40-67MR, R-40-67MS, R-40-67MT, R-40-67MU, R-40-67MV, R-40-67MW, R-40-67MX, R-40-67MY, R-40-67MZ, R-40-67NA, R-40-67NB, R-40-67NC, R-40-67ND, R-40-67NE, R-40-67NF, R-40-67NG, R-40-67NH, R-40-67NI, R-40-67NJ, R-40-67NK, R-40-67NL, R-40-67NM, R-40-67NN, R-40-67NO, R-40-67NP, R-40-67NQ, R-40-67NR, R-40-67NS, R-40-67NT, R-40-67NU, R-40-67NV, R-40-67NW, R-40-67NX, R-40-67NY, R-40-67NZ, R-40-67OA, R-40-67OB, R-40-67OC, R-40-67OD, R-40-67OE, R-40-67OF, R-40-67OG, R-40-67OH, R-40-67OI, R-40-67OJ, R-40-67OK, R-40-67OL, R-40-67OM, R-40-67ON, R-40-67OO, R-40-67OP, R-40-67OQ, R-40-67OR, R-40-67OS, R-40-67OT, R-40-67OU, R-40-67OV, R-40-67OW, R-40-67OX, R-40-67OY, R-40-67OZ, R-40-67PA, R-40-67PB, R-40-67PC, R-40-67PD, R-40-67PE, R-40-67PF, R-40-67PG, R-40-67PH, R-40-67PI, R-40-67PJ, R-40-67PK, R-40-67PL, R-40-67PM, R-40-67PN, R-40-67PO, R-40-67PP, R-40-67PQ, R-40-67PR, R-40-67PS, R-40-67PT, R-40-67PU, R-40-67PV, R-40-67PW, R-40-67PX, R-40-67PY, R-40-67PZ, R-40-67QA, R-40-67QB, R-40-67QC, R-40-67QD, R-40-67QE, R-40-67QF, R-40-67QG, R-40-67QH, R-40-67QI, R-40-67QJ, R-40-67QK, R-40-67QL, R-40-67QM, R-40-67QN, R-40-67QO, R-40-67QP, R-40-67QQ, R-40-67QR, R-40-67QS, R-40-67QT, R-40-67QU, R-40-67QV, R-40-67QW, R-40-67QX, R-40-67QY, R-40-67QZ, R-40-67RA, R-40-67RB, R-40-67RC, R-40-67RD, R-40-67RE, R-40-67RF, R-40-67RG, R-40-67RH, R-40-67RI, R-40-67RJ, R-40-67RK, R-40-67RL, R-40-67RM, R-40-67RN, R-40-67RO, R-40-67RP, R-40-67RQ, R-40-67RR, R-40-67RS, R-40-67RT, R-40-67RU, R-40-67RV, R-40-67RW, R-40-67RX, R-40-67RY, R-40-67RZ, R-40-67SA, R-40-67SB, R-40-67SC, R-40-67SD, R-40-67SE, R-40-67SF, R-40-67SG, R-40-67SH, R-40-67SI, R-40-67SJ, R-40-67SK, R-40-67SL, R-40-67SM, R-40-67SN, R-40-67SO, R-40-67SP, R-40-67SQ, R-40-67SR, R-40-67SS, R-40-67ST, R-40-67SU, R-40-67SV, R-40-67SW, R-40-67SX, R-40-67SY, R-40-67SZ, R-40-67TA, R-40-67TB, R-40-67TC, R-40-67TD, R-40-67TE, R-40-67TF, R-40-67TG, R-40-67TH, R-40-67TI, R-40-67TJ, R-40-67TK, R-40-67TL, R-40-67TM, R-40-67TN, R-40-67TO, R-40-67TP, R-40-67TQ, R-40-67TR, R-40-67TS, R-40-67TT, R-40-67TU, R-40-67TV, R-40-67TW, R-40-67TX, R-40-67TY, R-40-67TZ, R-40-67UA, R-40-67UB, R-40-67UC, R-40-67UD, R-40-67UE, R-40-67UF, R-40-67UG, R-40-67UH, R-40-67UI, R-40-67UJ, R-40-67UK, R-40-67UL, R-40-67UM, R-40-67UN, R-40-67UO, R-40-67UP, R-40-67UQ, R-40-67UR, R-40-67US, R-40-67UT, R-40-67UU, R-40-67UV, R-40-67UW, R-40-67UX, R-40-67UY, R-40-67UZ, R-40-67VA, R-40-67VB, R-40-67VC, R-40-67VD, R-40-67VE, R-40-67VF, R-40-67VG, R-40-67VH, R-40-67VI, R-40-67VJ, R-40-67VK, R-40-67VL, R-40-67VM, R-40-67VN, R-40-67VO, R-40-67VP, R-40-67VQ, R-40-67VR, R-40-67VS, R-40-67VT, R-40-67VU, R-40-67VV, R-40-67VW, R-40-67VX, R-40-67VY, R-40-67VZ, R-40-67WA, R-40-67WB, R-40-67WC, R-40-67WD, R-40-67WE, R-40-67WF, R-40-67WG, R-40-67WH, R-40-67WI, R-40-67WJ, R-40-67WK, R-40-67WL, R-40-67WM, R-40-67WN, R-40-67WO, R-40-67WP, R-40-67WQ, R-40-67WR, R-40-67WS, R-40-67WT, R-40-67WU, R-40-67WV, R-40-67WW, R-40-67WX, R-40-67WY, R-40-67WZ, R-40-67XA, R-40-67XB, R-40-67XC, R-40-67XD, R-40-67XE, R-40-67XF, R-40-67XG, R-40-67XH, R-40-67XI, R-40-67XJ, R-40-67XK, R-40-67XL, R-40-67XM, R-40-67XN, R-40-67XO, R-40-67XP, R-40-67XQ, R-40-67XR, R-40-67XS, R-40-67XT, R-40-67XU, R-40-67XV, R-40-67XW, R-40-67XX, R-40-67XY, R-40-67XZ, R-40-67YA, R-40-67YB, R-40-67YC, R-40-67YD, R-40-67YE, R-40-67YF, R-40-67YG, R-40-67YH, R-40-67YI, R-40-67YJ, R-40-67YK, R-40-67YL, R-40-67YM, R-40-67YN, R-40-67YO, R-40-67YP, R-40-67YQ, R-40-67YR, R-40-67YS, R-40-67YT, R-40-67YU, R-40-67YV, R-40-67YW, R-40-67YX, R-40-67YY, R-40-67YZ, R-40-67ZA, R-40-67ZB, R-40-67ZC, R-40-67ZD, R-40-67ZE, R-40-67ZF, R-40-67ZG, R-40-67ZH, R-40-67ZI, R-40-67ZJ, R-40-67ZK, R-40-67ZL, R-40-67ZM, R-40-67ZN, R-40-67ZO, R-40-67ZP, R-40-67ZQ, R-40-67ZR, R-40-67ZS, R-40-67ZT, R-40-67ZU, R-40-67ZV, R-40-67ZW, R-40-67ZX, R-40-67ZY, R-40-67ZZ.

THE COST OF FURNISHING AND PLACING REBAR WITHIN THE REINFORCED CONCRETE SHALL BE INCLUDED IN THE BID ITEM PAID UNDER THE M&E PRECAST WALL PANELS, REINFORCEMENT, GEOTEXTILE FABRIC, ENGINEERED BACKFILL, JOINT MATERIAL, AND OTHER ACCESSORIES. ITEMS NOT INCLUDED IN THE BID ITEM SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE.
 ALL BAR STEEL REINFORCEMENT IS TO BE EPOXY COATED. BEVEL ALL EXPOSED EDGES OF CONCRETE UNLESS NOTED OTHERWISE.
 THE PLAN QUANTITY FOR THE ITEM "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH" IS BASED ON A WALL HEIGHT MEASURED FROM THE TOP OF THE LEVELING PAD TO THE TOP OF WALL AS SHOWN IN THE PLANS.

PLANS, ELEVATIONS AND DETAILS SHOWN ON THESE DRAWINGS ARE INTENDED TO INDICATE WALL LOCATIONS, LENGTHS, HEIGHTS, AND ELEVATIONS. THE CONTRACTOR SHALL VERIFY THAT THE WALL SYSTEM SELECTED WILL CONFORM TO THE REQUIRED ALIGNMENTS AND DETAILS. THE MAXIMUM VALUE OF THE ANGLE OF INTERNAL FRICTION OF THE WALL BACKFILL MATERIAL IN THE REINFORCED ZONE SHALL BE ASSUMED TO BE 30° WITHOUT CERTIFIED TEST VALUES. PLACE BACKFILL IN SPECIFIED LAYER THICKNESS STARTING AT BACK FACE OF WALL AND WORKING AWAY FROM WALL. UTILITY LOCATIONS SHOWN ARE APPROXIMATE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE EXACT LOCATION OF ALL UTILITIES PRIOR TO EXCAVATING. DAMAGE TO EXISTING UTILITIES SHALL BE REPAIRED OR REPLACED AT THE CONTRACTORS EXPENSE.
 THE RETAINING WALL IS TO BE DESIGNED USING THE ELEVATIONS SHOWN ON THIS SHEET.
 THE LENGTHS PROVIDED IN THE TABLE ARE THE MINIMUM REQUIRED REINFORCEMENT LENGTHS BASED UPON THE MINIMUM DESCRIBED IN THE WALL SYSTEM SPECIAL PROVISIONS OR EXTERNAL AND OVERALL DIMENSIONS REPRESENTED ON THE DRAWINGS. THE CONTRACTOR SHALL NOT BE RESPONSIBLE FOR EXCEEDING THE MINIMUM VALUES REPRESENTED IN THE TABLE AT THESE DESIGNATED LOCATIONS.
 CONTRACTOR TO MATCH EXISTING GRADE WITHIN 10 FEET OF FRONT FACE OF M.S.E. WALL.
 REMOVAL OF EXISTING ABUTMENT AS SHOWN WILL BE PAID AS PART OF "REMOVING OLD STRUCTURE 7+66.03" SEE STRUCTURE B-40-925.
 TOP OF CONCRETE LEVELING PAD TO BE AT SAME APPROX. EL. 78.47.
 SEE STRUCTURE B-40-926 FOR PARAPET AND STRUCTURAL APPROACH SLAB DETAILS.
 "CONSTRUCTION STAKING STRUCTURE LAYOUT" INCLUDES VERIFYING WALL FABRICATION.

DESIGN DATA

MATERIAL PROPERTIES:
 CONCRETE MASONRY f_c = 4,000 PSI
 PRECAST CONCRETE WALL PANEL f_c = 4,000 PSI
 BAR STEEL REINFORCEMENT f_y = 60,000 PSI
 LIVE LOAD: 240 PSF
 LIVE LOAD SURCHARGE

WISDOT CONTACT:
 WILLIAM DREHER 608-266-8489
 CONSULTANT CONTACT:
 CITY OF MILWAUKEE
 JERRELL KRUSCHKE 414-286-3402

02/05/18

William C. Decker

02/05/18

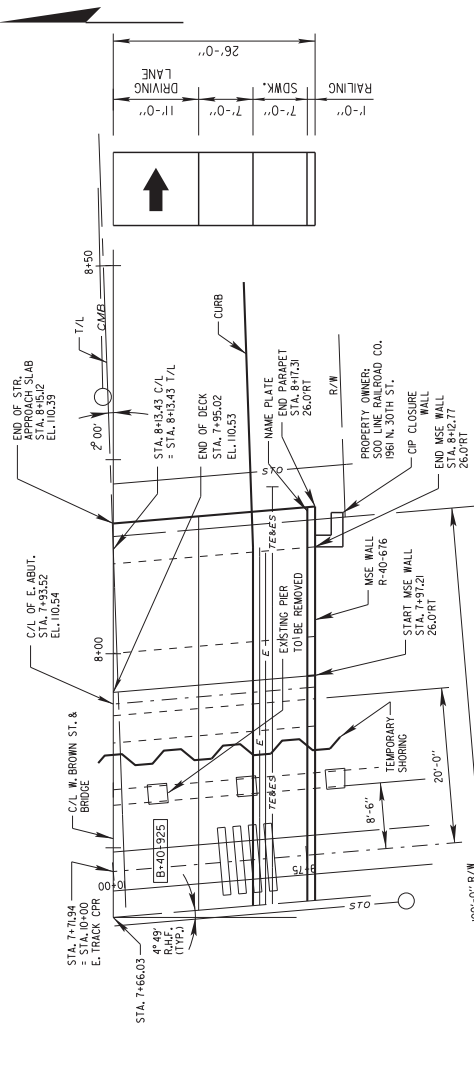
ADDENDUM NO. 01
 ID 2984-06-76
 Revised Sheet 72
 February 5, 2018

LIST OF DRAWINGS
 1. SE. RETAINING WALL
 GENERAL PLAN AND ELEVATION
 2. SUBSURFACE EXPLORATION
 3. WALL DETAILS AND QUANTITIES
 4. COLUMN DETAILS

S.E. RETAINING WALL
 GENERAL PLAN AND ELEVATION
 SHEET 1 OF 4

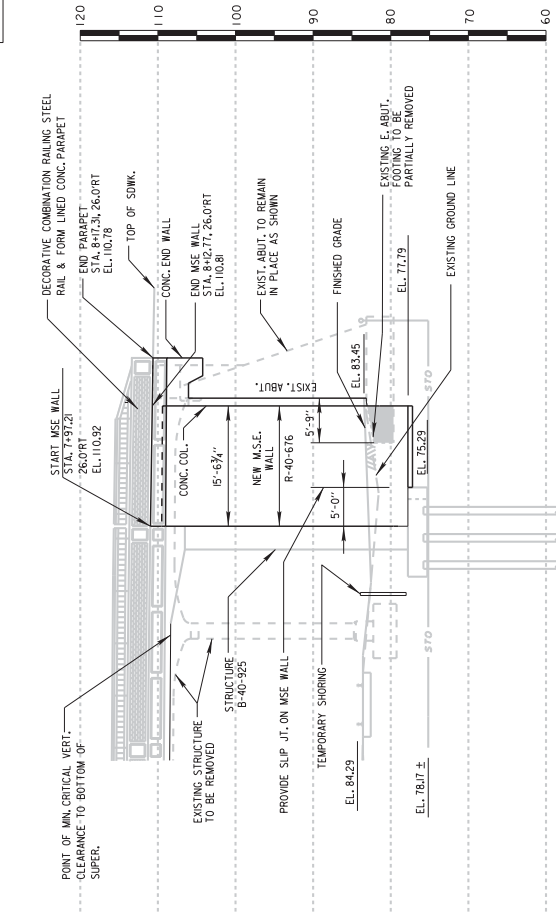
72

**WEST BROWN STREET
 OVER CANADIAN PACIFIC RAILWAY**



PLAN VIEW

B.M. HYDRANT @ S.W. CORNER
 STA. 8+00.00
 EL. 111.22



SOUTH ELEVATION

LOOKING NORTH
 (TAKEN NORMAL TO TRACKS)

STATE PROJECT NUMBER
2984 - 06 - 76

WALL EXTERNAL STABILITY EVALUATION

DIMENSIONS	EVALUATED LOCATIONS
WALL HEIGHT (FEET)	31'-6"
EXPOSED WALL HEIGHT (FEET)	25'-10"
MINIMUM LENGTH OF REINFORCEMENT (FEET)	25'-2"
WALL STATION	7+97.21
BORING USED	BOR-4
CAPACITY TO DEMAND RATIO (CDR)	
SLIDING (CDR > 1.0)	DRAINED
ECCENTRICITY (CDR > 1.0)	1.02
OVERALL STABILITY (CDR > 1.0)	1.47
BEARING RESISTANCE (CDR > 1.0)	1.11
FACTORED BEARING RESISTANCE (PSF)	1.11
	4,500

SOIL PARAMETERS

STRATUM LOCATION & SOIL DESCRIPTION	UNIT DENSITY (PCF)	FRICTION ANGLE (DEGREES)	COHESION (PSF)
STIFF TO V. STIFF CLAY	135	-	2,000
M. DENSE SILT/SILTY SAND (EL. 52.0 - 57.0)	125	30	-
HARD CLAY (EL. 46.0 - 52.0)	140	-	4,500
V. DENSE SILT/SILTY SAND (EL. 32.0 - 46.0)	135	36	-
M. DENSE CLAYEY SAND (EL. 27.0 - 32.0)	125	32	-
V. STIFF CLAY (EL. 24.0 - 27.0)	135	-	2,000
V. DENSE SANDY SILT W/ GRAVEL (FILL)	140	38	-

GEOMETRY TABLE

STATION	OFFSET TO F.F. WALL	TOP OF WALL (AS BUILT) POINT	FINISHED GRADE ELEV.
7+97.21	25.5	110.92	81.51
8+12.77	25.5	110.81	83.45

