Sam Page
County Executive

Saint Louis
COUNTY
TRANSPORTATION
PUBLIC WORKS

Daniel W. Dreisewerd, P.E., PTOE
Acting Director

Stephanie Leon Streeter, P.E.
Deputy Director

September 11, 2019

ADDENDUM NO. 4

Notice to All Persons and Firms Proposing
to Submit a Bid or Furnish Materials for
Allen Road Bridge No. 329
St. Louis County Project No. CR-1274
Federal Project No. STP-4900(634)

The construction contract for this project has been revised as follows:

No. 1

REMOVE AND REPLACE the existing plan sheet 82 of 84 with the attached plan sheet. This revised plan sheet updates the allowable bearing pressure for use in the design of the MSE walls.

No. 2

REMOVE the existing Job Special Provision **700.40.7 MSE WALL DESIGN – RESPONSIBILITIES OF CONTRACTOR** and **REPLACE** with the following:

700.40.7 MSE WALL DESIGN – RESPONSIBILITIES OF CONTRACTOR

The contractor will be solely responsible for the content of the design plans, details and computations that are submitted, for the performance of the wall system and for the internal and external stability of the structure including compound stability. Overall global stability will be the responsibility of the contractor's engineer. The contractor shall be solely responsible for ensuring that the information submitted by the manufacturer is in accordance with all contract plans and specifications and with the wall system used. Completed design plans shall meet the following requirements:

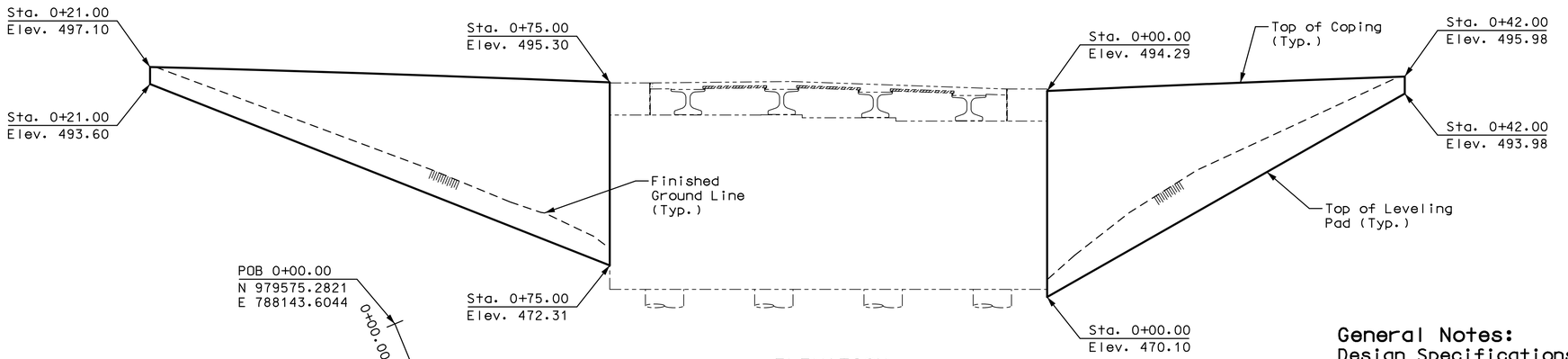
- Plans must contain all material, fabrication and construction requirements for erecting the wall system complete in place.
- Completed design plans shall show the longitudinal and lateral layout of the drainage systems used for the wall system.
- Plans must be signed and sealed by a Professional Engineer registered in the state of Missouri.

ATTENTION BIDDERS: THE FOLLOWING MUST BE COMPLETED:

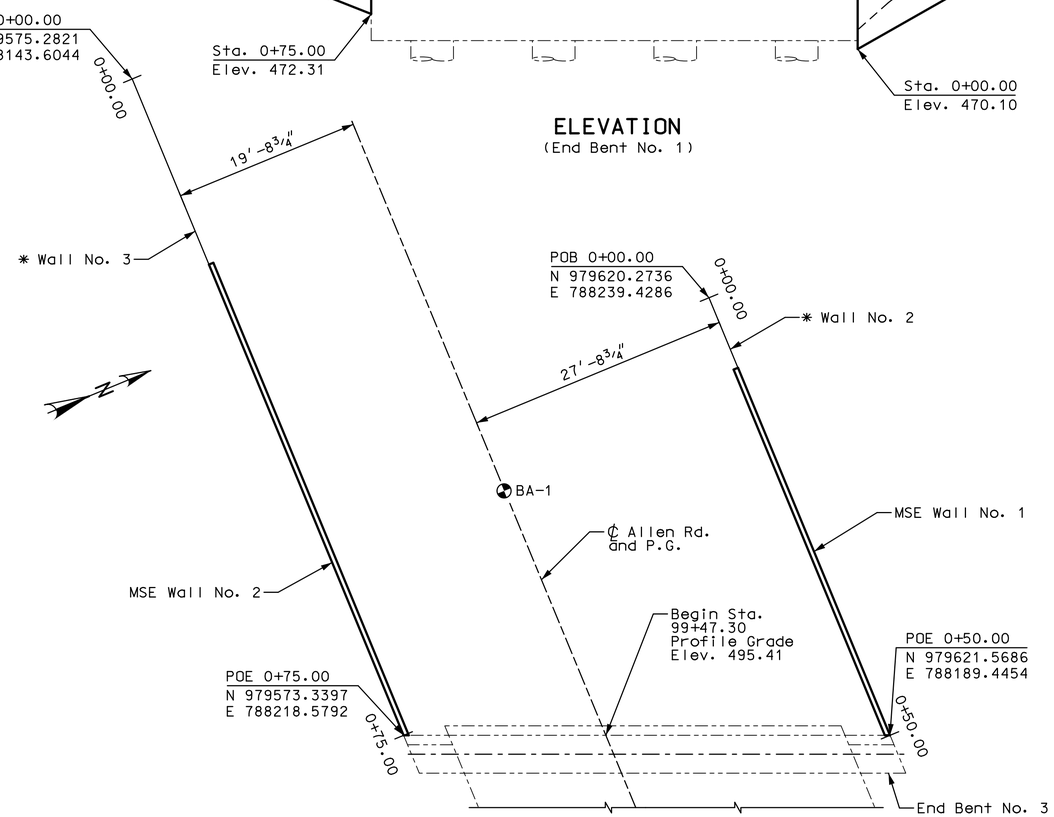
- **ADDENDUM ACKNOWLEDGEMENT IN THE BID DOCUMENTS MUST BE COMPLETED AND SUBMITTED WITH ALL BID PROPOSALS.**

Joseph W. Kulessa, P.E.
Division Manager, Design

JWK/prt
Attachments: *Revised plan sheet 82 of 84*



ELEVATION
(End Bent No. 1)



PLAN
Note: Coping and Leveling Pad not shown for clarity.

* Wall contractor shall show the following items on the design drawings and/or on the fabricator shop drawings.

1. Leveling pad horizontal. Cost of leveling pad complete in place, shall be considered incidental and covered by the cost of Mechanically Stabilized Earth Wall Systems.
2. Leveling pad length and step elevations shall be based on wall manufacturer's recommendation. Top of leveling pad elevations shall not be higher than theoretical top of leveling pad elevations shown on these plans.

Estimated Quantities		MSE Wall No. 1	MSE Wall No. 2
Item		Total	Total
Mechanically Stabilized Earth Wall Systems	sq. foot	550	715

Note: This drawing is not to scale. Follow dimensions.

General Notes:

Design Specifications:

2012 - AASHTO LRFD Bridge Design Specifications (6th Ed.)and 2013 Interim Revisions
Site Class = C
PGA=0.149g
S_S = 0.311g
S_1 = 0.091g
S_{D1}= 0.155g
S_{DS}= 0.373g
A_S = 0.179g
Seismic Zone = 2

Design Loading:

ϕ_b = 27° and Unit weight, γ_b = 120 pcf for retained backfill material to be retained by the mechanically stabilized earth wall system.

ϕ_f = 27° for unimproved foundation ground where wall is to rest.

Actual ϕ_r * 34° for the select granular backfill (reinforced backfill and wedge area backfill) for structural systems.

Design ϕ_r = 34° for the select granular backfill (reinforced backfill) only for structural systems.

The allowable bearing pressure for unimproved ground 2.0 ksf. (4)

Factor of safety shall be 2.0 for overturning and 1.5 for sliding.

For seismic design the factor of safety shall be 1.5 for overturning and 1.1 for sliding.

Design Unit Stresses:

All concrete for leveling pad and coping shall be Class B or B-1 with f'c = 4000 psi.

Miscellaneous:

The MSE wall system shall be built vertical.

The MSE wall system shall be built in accordance with Sec 720.

The MSE wall system shall be a large block wall system.

Panel and coping (or capstone) reinforcement shall be epoxy coated.

A filter cloth meeting the requirements for a Separation Geotextile material shall be placed between the select granular backfill for structural systems and the backfill being retained by the mechanically stabilized earth wall system.

Coping shall be required on these structures unless a small block system is used. Bond breaker (roofing felt or other approved alternate) between wall panel and coping required if coping is cast in place.

The top and bottom elevations are given for a vertical wall.

The baseline of the wall shown is for a vertical wall.

The contractor shall be solely responsible to coordinate construction of the wall with bridge and roadway construction and ensure that the bridge and roadway construction, resulting or existing obstructions, shall not impact the construction or performance of the wall. Soil reinforcement shall be designed and placed to avoid damage by guardrail post installation, utility and sign foundations. (See Roadway and Bridge plans.)

For notice and disclaimer regarding boring log data see Sheet No. 1.

"◓" Indicates location of borings.

St. Louis County Benchmark 17-125; NGVD29 Elev. = 491.73 Ft. US "Standard Aluminum Disk" Stamped SL-76 1992 Disk is set in the Northeast corner of Allen Road and Crescent Road: 31' North of the centerline of Allen Road. 10' South of fence and 47' East of nail with shiner set in power pole.

COUNTY PROJECT NO.
CR-1274

FEDERAL PROJECT NO.
STP-4900(634)

E-W GATEWAY TIP NO.
6607K-18

MSD:
P-0031338-00

MSD BASE MAP:
28U

REVISIONS

REV	DATE	BY	APP	DESCRIPTION
4	8/20/19	MMA	JEF	Addendum 4 - Value Revised

DISCLAIMER OF RESPONSIBILITY
I hereby specify that the documents prepared by me or authorized by my seal are limited to this sheet, and I hereby disclaim any responsibility for all other Drawings, Specifications, Estimates, Reports or other documents or electronic media relating to or intended to be used for any part of the engineering project or survey

STATE OF MISSOURI
MATTHEW J. MUENKS
NUMBER PE-2017000338
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED, AND DATED ELECTRONICALLY

DATE:
08/20/2019

JACOBS
JACOBS ENGINEERING GROUP INC.
501 NORTH BROADWAY
ST. LOUIS, MISSOURI 63102-2121
PHONE: (314) 335-4000
CERTIFICATE OF AUTHORITY #000104

Saint Louis COUNTY
TRANSPORTATION
PUBLIC WORKS
Daniel W. Dreiseward, P.E., PTOE
Acting Director

ALLEN ROAD
BRIDGE NO. 329
OVER UNION PACIFIC RR

MSE WALL GENERAL NOTES AND MSE WALL NO. 1 AND NO. 2

DESIGNED:
R. BAUM

DRAWN:
M. S. MEYER

CHECKED:
J. E. FINKE

SHEET SEQUENCE:
82 OF 84

ST. LOUIS COUNTY BRIDGE NO.
329

MSE WALL SHEET NO.
1 OF 3

MODOT BRIDGE NO.
096B329

$FILES
$TIMES
$DATES