

STATE OF OHIO DEPARTMENT OF TRANSPORTATION

CUY-480-22.86 NW

VILLAGE OF BRATENAHL
CITY OF CLEVELAND
CITY OF GARFIELD HEIGHTS
VILLAGE OF NORTH RANDALL
CUYAHOGA COUNTY

FEDERAL PROJECT NUMBER

E240219

RAILROAD INVOLVEMENT

NONE

PROJECT DESCRIPTION

THIS PROJECT WILL REPLACE DETERIORATING NOISE BARRIER PANELS ALONG IR-480 EB AT TWO LOCATIONS, IR-480 EB TO GRANGER ROAD EXIT RAMP AND LEE ROAD TO IR-480 EB ENTRANCE RAMP. THE PROJECT WILL ALSO REPLACE TRAFFIC DAMAGED NOISE BARRIER AT IR-90 WB JUST WEST OF BRATENAHL ROAD.

EARTH DISTURBED AREAS

PROJECT EARTH DISTURBED AREA: 0.78 ACRES
ESTIMATED CONTRACTOR EARTH DISTURBED AREA: 0.25 ACRES
NOTICE OF INTENT EARTH DISTURBED AREA: N/A (NOI not required) *
* Routine Maintenance Project


LIMITED ACCESS


THIS IMPROVEMENT IS ESPECIALLY DESIGNED FOR THROUGH TRAFFIC AND HAS BEEN DECLARED A LIMITED ACCESS HIGHWAY OR FREEWAY BY ACTION OF THE DIRECTOR IN ACCORDANCE WITH THE PROVISIONS OF SECTION 5511.02 OF THE OHIO REVISED CODE.

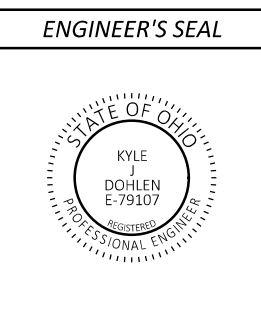
2023 SPECIFICATIONS

THE STANDARD SPECIFICATIONS OF THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, INCLUDING SUPPLEMENTAL SPECIFICATIONS LISTED IN THE PLANS, CHANGES LISTED IN THE PROPOSAL, AND THE SUPPLEMENTAL SPECIFICATION 800 VERSION INDICATED ON THE PROPOSAL SHALL GOVERN THIS IMPROVEMENT.

I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL NOT REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY EXCEPT AS NOTED ON SHEET 5B, AND THAT PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH ON THE PLANS AND ESTIMATES.


John Picuri, P.E., P.S.
District 12 Deputy Director


Jack Marchbanks, PhD
Director, Department of Transportation



SEE SHEET 2 FOR PROJECT LOCATIONS

LOCATION MAP

LATITUDE: 41°25'28" LONGITUDE: 81°33' 19"



PORTION TO BE IMPROVED	—————	=====
INTERSTATE HIGHWAY	—————	=====
FEDERAL ROUTES	—————	=====
STATE ROUTES	—————	=====
COUNTY & TOWNSHIP ROADS	—————	=====
OTHER ROADS	—————	=====

DESIGN DESIGNATION

SEE SHEET 2 FOR DESIGN DESIGNATIONS

DESIGN EXCEPTIONS

NONE REQUIRED

ADA DESIGN WAIVERS

N/A

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UNDERGROUND UTILITIES
Contact Two Working Days Before You Dig



OHIO 811. 8-1-1, or 1-800-362-2764
(Non members must be called directly)


PLAN PREPARED BY:
ODOT - DISTRICT 12 - PLANNING AND ENGINEERING
5550 TRANSPORTATION BOULEVARD
GARFIELD HEIGHTS, OH 44116

STANDARD CONSTRUCTION DRAWINGS					SUPPLEMENTAL SPECIFICATIONS	SPECIAL PROVISIONS
DM-1.1	7/17/20	TC-41.20	10/18/13		800-2023	1/19/24
DM-4.3	1/15/16	TC-41.30	4/21/23		821	4/20/12
DM-4.4	1/15/16	TC-42.20	10/18/13		832	7/21/23
		TC-52.10	10/18/13		845	4/20/18
NBS-1-09	7/15/22	TC-52.20	1/15/21		921	4/20/12
MT-95.30	7/19/19					
MT-95.40	7/21/23					
MT-95.45	7/21/23					
MT-95.50	7/21/17					
MT-98.10	1/17/20					
MT-98.13	1/17/20					
MT-98.29	1/17/20					
MT-101.76	4/21/23					
MT-101.75	7/21/23					
MT-105.10	1/17/20					

CUY-480-22.86 Noise Barrier

MODEL: Sheet PAPER SIZE: 17x11 (in.) DATE: 5/16/2024 TIME: 10:26:55 USER: kdohlen pwc:\ohdot\pwr\benley.com\shahdot\pwr-02\Documents\01 Active Projects\District 12\Cuyahoga\119443\400-Engineering\Roadway\Sheets\119443_GT001.dgn

TITLE SHEET

DESIGN AGENCY	
DESIGNER	KJD
REVIEWER	DAB 01/23/24
PROJECT ID	119443
SHEET TOTAL	P.01 21

GENERAL



Project Description

This project will replace deteriorating noise barrier panels along IR-480 EB at two locations, 480 EB to Granger Road exit ramp and Lee road to 480 EB entrance ramp and one location along CUY-90WB in Bratenhal.

Contingency Quantities

The contractor shall not order materials or perform work for items designated by plan note to be used "as directed by the engineer" unless authorized by the engineer. The actual work locations and quantities used for such items shall be incorporated into the final change order governing completion of this project.

Equipment and Material Storage

In order to provide for the safety of the traveling public the Contractor's attention is directed to 614.03. In addition the following provisions shall apply:

1. Any removed items shall not be stored on the right of way for more than thirty (30) days.
2. The storage of equipment, materials, and vehicles within the highway right of way will be permitted. The number of areas and exact locations shall be approved by the Engineer.
3. All disturbed areas shall be returned to their original condition at no expense to the state.

Construction Noise

Activities and land use adjacent to this project may be affected by construction noise. In order to minimize any adverse construction noise impacts, do not operate power-operated construction-type devices between the hours of 7 pm and 7 am. In addition, do not operate at any time any device in such a manner that the noise created substantially exceeds the noise customarily and necessarily attendant to the reasonable and efficient performance of such equipment.

Cooperation Between Contractors

The contractor shall cooperate and coordinate operations with the contractors on other projects that may be in force during the life of the contract. No waiver of any provisions of the Constructions and Material Specifications is intended.

The contractor is advised that PID 114516 - CUY-480-22.41 will be under construction for the full duration of PID 119443. Construction is anticipated to be completed by June 2025. The noise barrier contractor is advised that the maintenance of traffic for PID 114516 will take precedence over the maintenance of traffic scheme for PID 119443.

Work Limits

The work limits shown on these plans are for physical construction only. The installation and operation of all temporary traffic control and temporary traffic control devices required by these plans shall be provided by the contractor whether inside or outside these work limits.

Right Of Way

All work shall be performed within the existing right of way or easements.

Staging Areas

There are no specific areas given in the plans for the Contractor to use as a staging area(s). If the Contractor wants to use an area(s) for staging, regardless if it falls within the project limits or not, the Contractor is to use the Right of Way E-Permitting System at <https://odhcp.bemcorp.net/Accounts/Account/Account> in order to apply for a permit per Section 107.02 of the CMS. For specific permitting questions, the Contractor can contact the District Permitting Office, (Melvin Safford) at 216-584-2137, (Andrew Tomko) at 216-584-2195 or at District12Permits@dot.ohio.gov.

If a permit is granted, all conditions of the permit shall be met in addition to the requirements of 104.04 of the CMS, at no additional cost to the State. If the Project Engineer deems that all the conditions of the permit were not met, then 10% of the Contract bid amount for mobilization shall be withheld until all the conditions of the permit are satisfied.

Plan Sheet Stationing

The roadway was not surveyed prior to the preparations of these plans. Stationing was provided to prepare plan sheets.

Plan Elevations

Elevations shown are based on an assumed value and are included for an indication of height of the existing and proposed noise barriers.

Protection of Right-of-Way Landscaping

Prior to beginning work, the Contractor, the Project Engineer and a representative of the maintaining agency will review and record all landscaping items within the right-of-way (both within and outside the construction limits). A record of this review will be kept in the Project Engineer's files. Prior to final acceptance, a final review of landscaping items will be made.

Constrict all activities, equipment storage and staging to within the construction limits. Unless otherwise identified in the plans or proposal, the construction limits are identified as 30 feet from the edge of pavement.

Submit a written request to the Project Engineer to use any area outside these limits. The document submitted must clearly identify the area and explain the proposed use and restoration of the area. Use of these areas for disposal of waste material and construction debris, excavation of borrow material and placement of portable plants is prohibited. The request must be approved, in writing, before the Contractor has permission to use the area.

Any items damaged beyond the construction limits, as defined above, will be replaced in kind or as approved by the Project Engineer.

Environmental Commitments

Access to William Foster Elementary School playground shall be maintained at all times, except for the time needed to temporarily occupy the property, which shall be less than the time needed for construction of the project.

Temporary construction fencing shall be installed along proposed construction limits prior to the start of construction activities to protect the Section 4(f) property and the public.

Appropriate signage shall be installed to alert users of William Foster Elementary School playground of construction activities, access restrictions or closures.

The contractor shall be required to closely coordinate the construction schedule with ODOT and William Foster Elementary School prior to the start of construction activities.



Utilities

Listed below are all known utilities located within the project construction limits together with their respective owners:

AT&T
 13630 Lorain Ave. – 2nd Floor
 Cleveland, Ohio 44111
 Attn: James Janis
 Phone: (216) 476-6142
 Fax: (216) 476-6013
pj8191@att.com

Charter Communications
 David Sobotka
 578 Ternes Ln
 Elyria, OH 44035
 Phone: 216-575-8016
 Ext 2165554263
 Cell: (216) 854-0899
David.Sobotka@charter.com

City of Bedford
 120 Solon Road
 Bedford, Ohio 44146
 Attn: Clinton Bellar, Service Director
 Phone1: (440) 232-1600
 Fax: (440) 232-6613
cbellar@bedfordoh.gov

City of Cleveland Division of Water
 Fred Roberts
 Phone: 216-664-2444 x75590
fred_roberts@ClevelandWater.com
 1201 Lakeside Ave.
 Cleveland, Ohio 44114

City of Cleveland
 Division of Water Pollution Control
 Alan Schiely
 Associate Engineer
 12302 Kirby Avenue
 Cleveland, Ohio 44108
 Office: 216 664-3638
aschiely@ClevelandWPC.com

Dominion Energy Ohio
 320 Springside Drive, Suite 320
 Akron, OH 44333
 Phone: 330-664-2409
Relocation@dominionenergy.com

Everstream (In cooperation with One Community)
 Tom Trusnik, OSP Engineer
 800 W. St. Clair Avenue, 2nd Floor
 Cleveland, OH 44113
 Office: 216-923-2348

Illuminating Company
 John M. Zassick
 FirstEnergy
 6896 Miller Rd, Suite 101
 Brecksville, OH 44141
 Office 440-546-8706
jmzassick@firstenergycorp.com

Level 3 Communications
 Attn.: Doug Holloway
 OSP Engineer
 4000 Chester Ave.
 Cleveland, Oh 44103
 Phone: 216-906-6284
doug.holloway@centurylink.com

MCI
 Dan Arz MCI/XO OSP engineer (Cleveland metro area)
 12300 Ridge Road
 North Royalton, Ohio 44133
 O:440.457.4832
 C:216.570.9343
daniel.arz@verizon.com

Northeast Ohio Regional Sewer District (NEORSO)
 Mary Maciejowski - CDPP Manager
 NEORSO - Watershed Programs
 3900 Euclid Ave
 Cleveland, Ohio 44115-2504
 Phone: (216) 881-6600, Ext. 6466
maciejowskim@neorsd.org
 ODOT D-12
 5500 Transportation Blvd.
 Garfield Heights, Ohio 44125
 216-581-2100

ODOT Central Office - ITS
 1606 West. Broad Street
 Columbus, OH 43223
 614-387-4113
CEN.ITS.LAB@DOT.OHIO.GOV

Windstream
 560 Ternes Ave.
 Elyria, Ohio 44035
 Attn: Geoffrey Hamm (Cuyahoga County)
 OSP Engineer II
 Phone: (440) 329-4245 (office)
 Phone: (330) 256-6133 (cell)
geoffrey.p.hamm@windstream.com

GENERAL NOTES

DESIGN AGENCY



DESIGNER
 KJD

REVIEWER
 DAB 01/23/24

PROJECT ID
 119443

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Wide Open West
105 Blaze Industrial Parkway
Berea, Ohio 44017
Attn: Bob Hammond
Phone: 404-625-0349

Zayo Fiber Solutions
305 E. Wiggin Street
Gambier, Ohio 43022
Attn: Scott Heinlen
OSP Manager Ohio
Cell Phone: (740) 501-6921
scott.heinlen@zayo.com

ODOT District 12 Traffic
25609 Emery Road
Warrensville, OH 44128
Attn: David Nimrichter
216-584-2296

The location of all existing utilities shall be verified by the Contractor as required by section 153.64 of the Ohio Revised Code and be shown on the shop drawing.

Roadway and Erosion Control

Item 201 – Clearing and Grubbing

Although there are no trees or stumps specifically marked for removal within the limits of the project, a lump sum quantity is included in the general summary for Item 201, Clearing and Grubbing. No trees shall be cut down for this project. All provisions as set forth in the specifications under this item are included in the lump sum price bid for Item 201, Clearing and Grubbing.

Item 202 – Removal Misc.: Noise Barrier Panel Removal and Disposal

This item shall consist of any removal, storage and disposal of existing damaged noise barrier panels. It will also include the removal, storage and disposal of any clip angles and/or other appurtenances that may be in conflict with the proposed design. Disposal shall follow any applicable local, state, or federal laws regarding such disposal.

Care shall be taken with removal as to not damage any portion of the existing noise barrier post and foundation that is to remain. Replace or repair posts damaged by panel removal operations at no cost to the project. At least 7 days before performing repair work, submit a proposed repair plan developed by an Ohio registered professional engineer to the Engineer. Obtain the Engineer’s approval before performing the repair.

Payment for the above work shall be made at the contract price per square foot for Item 202 – Removal Misc: Noise Barrier Panel Removal and Disposal.

Item 202 – Fiberglass Panels Removed and Delivered

This item is intended for Location 3.

The contractor shall remove existing fiberglass noise barrier panels. Panels that are determined to be in salvageable condition as determined by the project engineer shall be delivered to the following location: Cleveland FSMF, 3263 E 44th Street Cleveland, Ohio 44127. Contractor shall contact Leo Cicirella (216-630-8373), a minimum of 48 hours prior to the removal of the fiberglass panels to coordinate delivery of the panels. Panels that will not be delivered to ODOT shall be handled in accordance with Item 202 – Removal Misc.: Noise Barrier Panel Removal and Disposal

Contractor shall take care to prevent damage to the fiberglass panels during removal and transportation.

Payment for item shall be paid for at the contract unit price bid per square foot under item Removal Misc.: Fiberglass Panels Removed And Delivered unless otherwise noted, and shall include all labor, equipment, materials and incidentals necessary to complete the above work.

Item 202 – Removal Misc.: Noise Barrier Post Removal

This item shall consist of any removal and disposal of existing noise barrier posts. Care shall be taken to prevent damage to mounting bolts during the removal of the noise barrier post. Disposal shall follow any applicable local, state or federal laws regarding such disposal.

This shall be paid for at the contract unit price bid per each under Item 202 – Removal Misc.: Noise Barrier Post and Foundation Removal

Item 619 – Field Office, Type B, As Per Plan

In addition to the requirements of CMS 619, the Contractor shall furnish and set up a Wi-Fi router meeting the requirements of IEEE 802.11ac for the exclusive use of the Department.

All other field office items supplied shall meet the requirements of a Type B Field Office.

Item 619 – Field Office, Type B, As Per Plan **8 Months**

Window Contract Table

Description of Critical Work	Calendar Days to Complete	Disincentive \$ per Day	Work Window	
			Start	End
All work at Location 1 – CUY-480-20.33	60	\$600	7/1/2025	Project Completion Date
All work at Location 2 – CUY-480-22.86	30	\$1000	6/15/2025	8/15/2025

Exploratory and survey work associated with the measurement of the noise barrier panels is not considered part of the critical work identified in the Window Contract Table

Drainage



Item 605 – Underdrains, Misc.: Barrier Drainage

This item of work shall be used to install, repair or replace drainage in sloped areas as directed by the engineer. Recommended installation limits for the drainage have been included in the plans. Details are provided in NBS-1-09 and in these plans.

Install drainage for slopes sections per the standard drain, except that the outlet conduit spacing shall be 100 feet maximum.

Payment for the above work shall be included in the unit price bid per foot for Item 605 – Underdrains, Misc.: Barrier Drainage and shall include all labor, equipment, materials and incidentals necessary to complete the above work.

Noise Barriers

Field Verification of Panel Dimensions

Prior to Fabrication/Casting of all new panels, contractor is to field verify the existing panel dimensions. Field Verification of existing dimensions is included in the unit price bid for the panel.

Item 202 Portions of Structure Removed, APP

Contractor shall remove the existing anchor bolts and concrete of the noise barrier foundation to the limits shown in these plans. Use chipping hammers that are not heavier than the nominal 35-pound class. Care shall be taken by the contractor to not damage the existing vertical reinforcing. Replace the ties within the removal limits in kind. Operate the chipping hammers at an angle of less than 45 degrees measured from plumb. Remove the concrete in a manner that prevents cutting, elongating or damaging reinforcing steel. Any damage to the rebar shall be repaired at the direction of a licensed engineer in the State of Ohio. Adequately support and tie back into place reinforcement which has become loose. This work will be performed for a total of three (3) noise barrier foundations.

Payment for all of the above work shall be included in the Lump Sum Bid price for Item 202 – Portions of Structure Removed, APP unless otherwise noted and shall include all labor, equipment, materials and incidentals necessary to complete the above work.

Item 606 – Special – Noise Barrier: Fire Hydrant Access Hole

This item consists of placing a minimum 12 inch high by 12 inch wide, or 12 inch diameter, hole for fire hydrant access. The fire hydrant access holes shall be placed 3 feet above the ground line at the base of the noise barrier. The fire hydrant access holes shall be identified on the shop drawings.

The fire hydrant access holes shall be prefabricated by the manufacturer of the noise barrier panels and include a flap gate cover that covers the entire opening when not in use. The perimeter of the access hole shall be a smooth surface which will prevent snagging of a fire hose. The manufacturer’s design of the fire hydrant access hole, including the flap gate cover, shall be approved by the Engineer prior to fabrication.

The contractor shall replace the existing fire hydrant access identification signs with new signs that match the existing signs. Identification signs shall be mounted on both sides of the noise barrier. The method of mounting signs on the noise barrier panels shall be per the manufacturer’s recommendations.

The location and sign text for the existing signs are listed in the table below.

Location	Bay Number	Sign Text
1	A-30	450 ft, HYD, 17901, McCracken
1	A-50	450 ft, HYD, 17901, McCracken
2	B-19	267 ft, HYD, 12019, Willard
2	B-55	115 ft, HYD, 12122, Bangor
2	B-69	134 ft, HYD, 12305, Bangor
2	B-94	175 ft, HYD, 5410, E 124 ST

Payment to complete all work to install the fire hydrant access holes is included in the unit price bid for Item 606 – Special – Noise Barrier, Misc.: Fire Hydrant Access Hole. No deduction in area will be made to the noise barrier panel quantities for the hole.

Item 606 – Special – Noise Barrier: Step Blocks

Contractor to provide step blocks that conform to NBS-01-09. A total quantity of 330 ft. of Step Blocks are to be provided by the contractor to permit the placement of the bottom of the barrier, a minimum of 6” below the existing grade in accordance with NBS-01-09. Sizes of the step blocks to be determined by the contractor. The designed supports shall be detailed in the shop drawings.

Payment for the above work shall be included in the unit price bid per foot for ITEM 606 – Special – Noise Barrier: Step Blocks and shall include all labor, equipment, materials and incidentals necessary to complete the above work.

Item 606 – Noise Barrier: Step Blocks **330 Feet**



DESIGN AGENCY



DESIGNER	KJD
REVIEWER	DAB 01/23/24
PROJECT ID	119443
SHEET	TOTAL
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Item 606 – Removal Misc: Noise Barrier Panel Removal and Reuse

This item shall consist of any removal, on-site storage, and re-installation of existing non-damaged reflective noise barrier panels. It will also include the removal, storage, disposal and replacement of any clip angles, supports, and/or other appurtenances that may be in conflict with the proposed design. Disposal shall follow any applicable local, state or federal laws regarding such disposal.

Care shall be taken with removal as to not damage any portion of the existing noise barrier post and foundation that is to remain. Replace or repair posts damaged by panel removal operations at no cost to the project. At least 7 days before performing repair work, submit a proposed repair plan developed by an Ohio registered professional engineer to the Engineer. Obtain the Engineer’s approval before performing the repair.

This item shall be paid for at the contract unit price bid per square foot under item 606 – Removal Misc.: Noise Barrier Panel Removal and Reuse.

Item 606 - Special – Noise Barrier: Post Installation

This note is intended for Location 3, CUY-90-21.84.

The contractor shall supply steel noise barrier posts in accordance with these plans.

The steel noise barrier posts at this location are 19 feet in length.

Contractor shall provide anchor bolts and all necessary hardware as shown in these plans.

Materials

W8x28 shall be ASTM A709, Grade 36 (Minimum). Anchor bolts shall be ASTM F3125 Grade A325. Plate washers shall be ASTM A36 (Minimum). Base plates shall be ASTM A572 Grade 36(Minimum).

Concrete Class QC5 – Compressive Strength 4.5 ksi

Painting

Contractor shall paint the supplied posts, contractor to apply a 3-coat paint system to the posts per C&MS 514.

The color of the posts shall be: FC#595B-27722 (Buff)

Payment for this shall be included in the unit price bid, Each for Item 606 – Special – Noise Barrier Post and Foundation Installation unless otherwise noted, and shall include all labor, equipment, materials and incidentals necessary to complete the above work.

Item 606 - Special – Noise Barrier: Post Installation – 3 Each

Item 606 – Special – Noise Barrier: Reflective Panels

This item of work is intended for Locations 1 and 2.

This item will be used to replace the existing reflective concrete noise barrier panels defined in these plans with reflective noise barrier panels.

The contractor shall supply noise barrier panels constructed of either concrete, fiberglass or an alternate ODOT approved material. The supplied panels shall be designed to fit within the existing posts. The contractor shall select and install one noise barrier material for the entire noise barrier retrofit project.

Follow standard drawing NBS-1-09 and the details of these plans.

If the contractor elects to install fiberglass panels, the panel installation shall be as follows.

Item 606 – Special – Noise Barrier: Reflective Panels, continued

Color: FC # 595B-30450 (Tan)

Fiberglass reinforced polymer composite panels (reflective) shall be used.

If the contractor elects to install concrete panels, the panel installation shall be as follows.

Pattern: Architectural Polymers Ashlar Stone 905 or Engineer Approved Equal

Color: FC # 595B-30450 (Tan).

Panels shall use an ODOT approved Concrete Waterproofing Admixture.

If the contractor elects to install an alternate ODOT approved material, the panel installation shall be as follows.

Pattern: Architectural Polymers Ashlar Stone 905 or Engineer Approved Equal

Color: FC # 595B-30450 (Tan)

If the existing clip angles installed within the noise barrier post conflict with the noise barrier panel installation, the contractor shall remove the existing clip angle per Item 202 – Removal Misc: Noise Barrier Panel Removal and Disposal. The department has provided an installation detail for installation of an angle bracket which shall be welded to the flange of the existing post. The panel shall be kept tight to the highway face. The contractor can provide an alternate installation plan which shall be developed by an Ohio registered professional engineer. The installation plan shall be provided to the Project Engineer, 10 business days prior to the beginning of installation of the panels. The clip angles shall be installed such that the panel is securely held within the existing post and shall permit minimal movement after the panels are in place. The contractor is advised that the original construction plans permitted the original contractor to install galvanized posts at their discretion. The department has no record of which posts, if any were galvanized. The contractor shall take appropriate measures to mitigate risks associated with welding to galvanized materials. If galvanized material is removed in the act of welding the angle bracket to the existing post. The contractor shall replace the galvanization using methods described in CMS 514 or CMS 711.02.

The contractor is directed to closely match the existing top of wall elevation. It is our intent to maintain a uniform top of wall within existing posts while still meeting the existing acoustic profile. Elevations may be adjusted to accommodate the contractor supplied panels. The adjusted elevation shall be discussed for each location with the Engineer prior to the approval of the shop drawings.

The Contractor shall provide supports to hold the panels at the elevation provided by the manufacturer and that are acceptable to the Engineer; however, wood shims/blocks shall not be used. The designed supports shall be detailed in the shop drawings.

The tongue and groove joints between adjoining posts must be maintained at constant elevations. Any joint that is offset from the joint in the adjacent panel shall be adjusted in the field to provide an uninterrupted joint line between adjacent panels.

Any additional embankment that is required to obtain the minimum 6” bury depth and fill any voids remaining from the previous panels is included in this item for payment. Additional embankment shall be placed in accordance with CMS 203.

Seeding and mulching is required per standard drawing NBS-1-09.

If the Contractor removes a portion of an existing right-of-way fence for access to the noise barriers or worksite, he is required to restore the fence to its original condition (at minimum). All costs for removal and restoration of the right-of-way fence are included with this item.

Item 606 – Special – Noise Barrier: Reflective Panels, continued

At the end of daily operations, the contractor shall not leave openings within the noise barrier which would allow pedestrian/animal access to the highway. Any labor and materials required to secure the ROW shall be considered incidental to this item.

Acceptance requirements shall be per the standard drawing.

Payment for all of the above shall be included in the unit price bid per square foot for Item Special – Noise Barrier (Reflective) unless otherwise noted, and shall include all labor, equipment, materials and incidentals necessary to complete the above work.

Item 606 – Special – Noise Barrier: Reflective Panels (Fiberglass)

This item of work is intended for Location 3.

This item will be used to install reflective fiberglass panels.

Noise wall construction shall adhere to NBS-1-09 and these plans.

The top of the noise barrier bays shall be covered with a fiberglass cap detailed on sheet 20 to match the existing fiberglass panels and caps.

The color of the fiberglass reflective panels shall be:

Color: Residential and Roadway: FC#595B-20219 (Cocoa)

The color of the panel caps shall be: FC#595B-27722 (Buff)

At the end of daily operations, the contractor shall not leave openings within the noise barrier which would allow pedestrian/animal access to the highway. Any labor and materials required to secure the ROW shall be considered incidental to this item.

The Contractor shall provide supports to hold the panels at the elevation provided by the manufacturer and that are acceptable to the Engineer; however, wood shims/blocks shall not be used. The designed supports shall be detailed in the shop drawings.

The tongue and groove joints between adjoining posts must be maintained at constant elevations. Any joint that is offset from the joint in the adjacent panel shall be adjusted in the field to provide an uninterrupted joint line between adjacent panels.

Any additional embankment that is required to obtain the minimum 6” bury depth and fill any voids remaining from the previous panels is included in this item for payment. Additional embankment shall be placed in accordance with CMS 203.

Underdrains per NBS-01-09 are not required for this repair location.

Seeding and mulching is required per standard drawing NBS-1-09. For areas adjacent to a residential property, use CMS 659.09 – Class 1 lawn mixture.

If the Contractor removes a portion of an existing right-of-way fence for access to the noise barriers or worksite, he is required to restore the fence to its original condition (at minimum). All costs for removal and restoration of the right-of-way fence are included with this item.

Payment for all of the above shall be include in the unit price bid per square foot for Item 606 – Special – Noise Barrier (Reflective), Fiberglass unless otherwise noted, and shall include all labor, equipment, materials and incidentals necessary to complete the above work.

DESIGN AGENCY



DESIGNER
KJD

REVIEWER
DAB 01/23/24

PROJECT ID
119443

SHEET TOTAL
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Item 607 – Fence, Misc.: Temporary Construction Fence

This item is intended for Location 2.

Contractor shall install fencing as shown in the plans conforming to Item 607 – Fence, CLT.

In lieu of the placement of the fence, the contractor can elect to remove and replace bays B-130 to B-149 such that at the end of a work shift the bays shall have a minimum of 10' of either new or existing noise barrier panels above the existing ground surface. If the contractor is unable to install noise barrier panels to this height by the end of the work shift, the contractor shall install chain link fence which is securely connected to both sides of the opening. The fencing shall conform to Item 607 – Fence, CLT.

This item of work shall be used to install a temporary fence set at a lateral offset of 10 feet from the existing noise barrier. The fence will be installed under a work agreement with the Garfield Heights School District. The work agreement will be procured by ODOT and will be provided to the contractor. The fence shall be installed before noise barrier panel removal has started and shall be removed at the completion of work at this noise barrier location. Contractor shall be responsible for any damage to landscaping or the school grounds during the installation or removal of the fence.

Payment for all of the above shall be included in the Lump Sum bid price for Item 607 – Fence, Misc.: Temporary Construction Fence unless otherwise noted and shall include all labor, equipment, materials and incidentals necessary to complete the above work.

Item 630 – Signing, Misc: Construction Notification Sign

The contractor shall provide appropriate signage to alert users of William Foster Elementary School playground of construction activities, access restrictions or closures. Prior to sign manufacture the contract shall submit a draft to the construction engineer for approval.

The contractor shall provide two signs and place them securely to the temporary construction fence or other conspicuous location. The sign size shall be 18"x 30".

ITEM 630 – Signing, Misc: Construction Notification Sign **2 Each**



DESIGN AGENCY

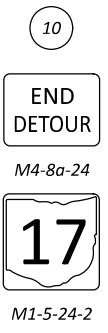
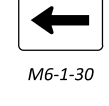
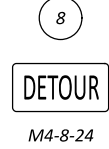
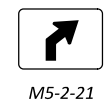
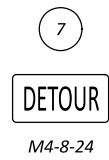
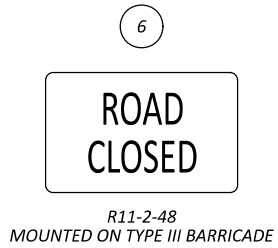
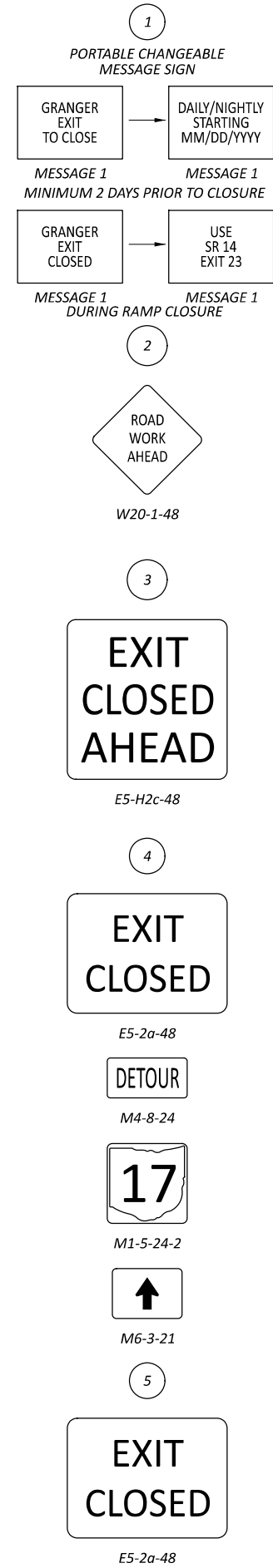
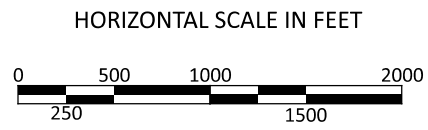


DESIGNER
KJD

REVIEWER
DAB 01/23/24

PROJECT ID
119443

SHEET TOTAL
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DESIGN AGENCY	
DESIGNER	KJD
REVIEWER	
PROJECT ID	CMW 05-16-24
SHEET	119443
TOTAL	21

Maintenance of Traffic

Maintaining Traffic – General Provisions

1. Traffic shall be maintained in accordance with the "Schedule of Through Lanes to be Maintained." The Contractor shall set up and operate his equipment in such a manner as to minimize encroachment upon the traveled width of pavement.
2. Nighttime work shall be permitted in accordance with these plans and notes. The Contractor shall provide flood lighting of the work area in accordance with CMS 401.15 in order to assure the safest conditions during nighttime work. A lighting plan for nighttime operations shall be presented to and approved by the Engineer.
3. The Contractor shall furnish, erect and maintain all warning and information signs necessary for maintaining traffic. The sign faces shall be reflectorized with type G sheeting complying with the requirements of CMS 730.19. The Contractor shall determine what signs are needed and advise the Engineer two weeks in advance of his detailed plans. See the OMUTCD and standard drawings for the minimum signage required.
4. Traffic control devices shall be set up prior to the start of construction and shall be properly maintained during the time special conditions exist. They shall remain in place only as long as they are needed and shall be immediately removed thereafter. Where operations are performed in stages, there shall be in place only those devices that apply to the condition present during the stage in progress. All signs with messages which do not apply during a certain period shall be covered or set aside out of the view of traffic.
5. Placement of final roadway pavement markings and raised pavement markers shall be accomplished in accordance with the "Schedule of Through Lanes to be Maintained." The Contractor shall provide 2 shadow vehicles as per MT-99.20 following the pavement marking equipment. The shadow vehicles shall travel 500' apart with the remote vehicle traveling on the shoulder (left or right as applicable) where usable shoulder is available. The first shadow vehicle in a traffic lane shall be equipped with a truck mounted attenuator meeting NCHRP 350 requirements. Each shadow vehicle shall have a yellow flashing beacon plus 48" construction warning signs mounted on the back facing traffic with standard type messages advising motorists of the work ahead, advisory warning speed, and which lane is closed.
6. During non-working periods, open excavations shall be delineated with warning flashers and/or other approved devices as deemed appropriate by the Engineer.
7. Existing signs located within the road work areas which are necessary for interim or permanent traffic control shall be removed and re-erected in locations as approved by the Engineer.
8. No stoppage of traffic shall occur without law enforcement personnel at each location to direct traffic.
9. Whenever a total closure is implemented, the Contractor shall provide a portable changeable message sign from ODOT's pre-approved list. It shall be placed 1.5 miles to 2 miles in advance of the closure or as directed by the Engineer.
10. For any operation not specifically mentioned in these plans, the traffic shall be maintained in accordance with the OMUTCD.

Maintenance of Traffic Control Zones

The Contractor shall be responsible to maintain the signs, drums and temporary pavement markings at the locations detailed in the plans or specified in the standard drawings. When the Contractor is notified of deficiencies he shall correct as soon as possible, preferably within 12 hours and no later than 24 hours. If any noted deficiencies are not corrected within 24 hours the Engineer shall deduct one day pay for Item 614 Maintaining Traffic, not as a penalty but as liquidated damages. The Contractor shall be subject to these liquidated damages for each and every day that these provisions are not met. All costs for

maintaining the work zones as described above shall be included under Item 614 Maintaining Traffic.

Suspension of Work

If the Contractor fails to comply with the provisions for traffic control as set forth in these plans or with provisions of the OMUTCD, the Engineer shall suspend work until the Contractor complies with the necessary requirements.

Construction Traffic

All construction traffic shall use acceptable truck routes to access the construction area. Use of local residential streets is strictly prohibited unless allowed in writing by the local enforcement authorities.

Covering of Ground-Mounted Signs--General

When required by other items or incidentally to Item 614 – Maintaining Traffic, cover existing ground-mounted signs with plywood or OSB blanks (1/2" minimum thickness) covering 80% of the sign area and all of the sign legend. The use of low quality materials such as duct tape and black plastic is not permitted.

Permitted Lane Closures

All lane closures may only be implemented at the times permitted by the "District 12 Permitted Lane Closure Times" list, which is located on the ODOT website:

<https://www.dot.state.oh.us/districts/D12/HighwayManagement/Pages/PermittedLaneClosures.aspx>

The latest revision, at 14 days prior to the bid date, shall be in effect for this project.

No lane or shoulder closures shall be in place when no work is being performed, unless directed by the Engineer.

Shoulder closures shall only be allowed at the times specified for lane closures.

Any roadway not listed shall not have any lane closures on weekdays from 6:30am to 9:00am and 3:00pm to 6:00pm. Contact Troy Onesti, District 12 Work Zone Traffic Manager, at (216) 584-2204 if there are any questions.

All notes on the Permitted Lane Closure Times shall be part of the project.

Lane Value Contract

The contractor shall be assessed disincentives as designated in the lane value contract table for each unit of time the described critical lane is restricted from full use by the traveling public within the restricted time period. The lane value contract table is located in the plan general notes. The disincentives will be assessed for all restrictions of the critical work.

Critical work is shown in the lane value contract table.

Critical work is defined as having the designated sections open to unrestricted traffic as shown in the table, or the entire project is not otherwise listed.

Unrestricted traffic is defined as all traffic lanes being available for use with specified striping and safety features in place.

Lane Value Contract Table			
Description of Critical Lane/Ramp to be Maintained	Restricted Time Period	Time Unit	Disincentive \$ Per Time Unit
Location 1 – CUY-480-22.86	As per the D12 Permitted Lane Closure Schedule	Each Minute	\$305.00
Location 2 – CUY-480-20.33	As per the D12 Permitted Lane Closure Schedule	Each Minute	\$280.00
Location 3 CUY-90-21.48	As per the D12 Permitted Lane Closure Schedule	Each Minute	\$325.00

Note: The times listed above do not apply to long term closures or emergencies.

The contractor shall be assessed a disincentive equal to the largest disincentive within all sections impacted by the physical lane restriction, including the Transition Area, Activity Area and Termination Area as defined by the OMUTCD. Holiday disincentives shall be applied per section per lane per time unit.

Item 614, Maintaining Traffic (Time Limitation on a Detour)

The Granger Road ramp shall be permitted to be closed and detoured while the contractor is actively working within the project location. When workers are not present at the project location traffic shall be restored to the ramp. Work on the ramp shall follow the D12 Permitted Lane Closure Schedule. Ramp traffic may be detoured as shown on sheet 5b. A disincentive shall be assessed in the amount of \$ 115 per hour for each hour the ramp remains closed to traffic beyond the specified limit.

Item 614 – Detour Signing

All required sign and supports shall be furnished, erected, maintained and subsequently removed by the contractor. Payment for all work associated with the detour shall be included under the lump sum bid for Item 614 – Detour Signing.

The following quantity has been carried to the general summary:

Item 614 – Detour Signing..... **LS**



DESIGN AGENCY



DESIGNER

KJD

REVIEWER

DAB 01/23/24

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Notification of Traffic Restrictions

Throughout the duration of the project, the Contractor shall notify the project engineer in writing of all traffic restrictions and upcoming maintenance of traffic changes. The Contractor shall ensure the written notification is submitted in a timely manner to allow the project engineer to meet the required time frames set forth in the table below to inform the Special Hauling Permits Section (Hauling.Permits@dot.ohio.gov) and the District Public Information Office (PIO). This notification shall be received by the project engineer prior to the physical setup of any applicable signs or message boards.

Information should include, but is not limited to, all construction activities that impact or interfere with traffic and shall list the specific location, type of work, road status, date and time of restriction, duration of restriction, number of lanes maintained, number of lanes closed, minimum vertical clearance, minimum width of drivable pavement, detour routes, if applicable, and any other information requested by the project engineer.

Notice of Closure Sign Time Table		
Item	Duration of Closure	Sign Displayed to Public
Ramp and Road Closures	≥ 2 weeks	21 calendar days prior to closure
	> 12 hours & < 2 weeks	14 calendar days prior to closure
	≤ 12 hours	4 business days prior to closure
Lane Closures and Restrict	≥ 2 weeks	2 business days prior to closure
	≤ 2 weeks	5 business days prior to closure
Start of Construction & Traffic Pattern Changes	N/A	14 calendar days prior to implementation

Any unforeseen conditions not specified in the plans requiring traffic restrictions shall also be reported to the project engineer using the Notification Time Table.

Holiday Closures

No work shall be performed and all existing lanes shall be open to traffic during the following designated holidays or events:

Christmas (Observed)	New Years (Observed)
Memorial Day	Fourth of July (Observed)
Labor Day	Thanksgiving
	General/Regular Election Day

The period of time that the lanes are to be open depends on the day of the week on which the holiday or event falls. The following schedule shall be used to determine this period:

Day of the Week	Times All Lanes Must Be Open to Traffic
Sunday	12:00 Noon Friday through 6:00AM Monday
Monday	12:00 Noon Friday through 6:00AM Tuesday
Tuesday	12:00 Noon Monday through 6:00AM Wednesday
Tuesday (Gen/Reg. Election)	5:00 AM Tuesday through 12:00AM Wednesday
Wednesday	12:00 Noon Tuesday through 6:00AM Thursday
Thursday	12:00 Noon Wednesday through 6:00AM Monday
Thursday (Thanksgiving only)	6:00AM Wednesday through 6:00AM Monday
Friday	12:00 Noon Thursday through 6:00AM Monday
Saturday	12:00 Noon Friday through 6:00AM Monday

Should the Contractor fail to meet any of these requirements, the Contractor shall be assessed a disincentive per the lane value contract (PN 127).

Floodlighting

Floodlighting of the work site for operations conducted during nighttime periods shall be accomplished so that the lights do not cause glare to the drivers on the roadway. To ensure the adequacy of the floodlight placement, the Contractor and the Engineer shall drive through the work site each night when the lighting is in place and operative prior to commencing any work. If glare is detected, the light placement and shielding shall be adjusted to the satisfaction of the Engineer before work proceeds.

Payment for all labor, equipment and materials shall be included in the lump sum contract price for Item 614 – Maintaining Traffic.

Payment

All work and traffic control devices shall be in accordance with CMS 614 and other applicable portions of the specifications, as well as the Ohio Manual of Uniform Traffic Control Devices. Payment for all labor, equipment, and materials shall be included in the lump sum contract price for Item 614 – Maintaining Traffic unless separately itemized in the plans.

Item 614 – Portable Changeable Message Signs, As Per Plan

The Contractor shall furnish, install, maintain and remove, when no longer needed, a changeable message sign. The sign shall be of a type shown on a list of approved PCMS units available on the Office of Materials Management web page. The list contains Class A and B units with minimum legibility distances of 800 feet and 650 feet, respectively.

Each sign shall be trailer-mounted and equipped with a functional dimming mechanism, to dim the sign during darkness, and a tamper and vandal proof enclosure. Each sign shall be provided with appropriate training and operation instructions to enable on-site personnel to operate and troubleshoot the unit. The sign shall also be capable of being powered by an electrical service drop from a local utility company. The PCMS shall be delineated in accordance with C&MS 614.03.

Placement, operation, maintenance and all activation of the signs by the Contractor shall be as directed by the Engineer. The PCMS shall be located in a highly visible position yet protected from traffic. The Contractor shall, at the direction of the Engineer, relocate the PCMS to improve visibility or accommodate changed conditions. When not in use, the PCMS shall be turned off. Additionally, when not in use for extended periods of time, the PCMS shall be turned away from all traffic.

The Engineer shall be provided access to each sign unit and shall be provided with appropriate training and operation instructions to enable ODOT personnel to operate and troubleshoot the unit, and to revise sign messages, if necessary.

All messages to be displayed on the sign will be provided by the Engineer. A list of all required pre-programmed messages will be given to the Contractor at the project preconstruction conference. The sign shall have the capability to store up to 99 messages. Message memory or pre-programmed displays shall not be lost as a result of power failures to the on-board computer. The sign legend shall be capable of being changed in the field. Three-line presentation formats with up to six message phases shall be supported. PCMS format shall permit the complete message for each phase to be read at least twice.

The PCMS shall contain an accurate clock and programming logic which will allow the sign to be activated, deactivated or messages changed automatically at different times of the day for different days of the week.

The PCMS unit shall be maintained in good working order by the Contractor in accordance with the provisions of C&MS 614.07. The Contractor shall, prior to activating the unit, make arrangements, with an authorized service agent for the PCMS, to assure prompt service in the event of failure. Any failure shall not result in the sign being out of

service for more than 12 hours, including weekends. Failure to comply may result in an order to stop work and open all traffic lanes and/or in the Department taking appropriate action to safely control traffic. The entire cost to control traffic, accrued by the Department due to the Contractor's noncompliance, will be deducted from moneys due, or to become due the Contractor on his contract.

The Contractor shall be responsible for 24-hour-per-day operation and maintenance of these signs on the project for the duration of the phases when the plan requires their use.

The Portable Changeable Message Sign shall have a Web Based Communication System that will allow the Contractor or ODOT to change or program the message board remotely. This system shall be password protected and may be operated from a computer or have an application that can be opened from a cell phone, android or I phone. The Web Based Communication System will show the location of each message board on a map. All charges for the Web Based Communication System will be included in the cost of this item, Portable Changeable Message Sign, As Per Plan.

Payment for the above described item shall be at the contract unit price. Payment shall include all labor, materials, equipment, fuels, lubricating oils, software, hardware and incidentals to perform the above described work.

Item 614 – Portable Changeable Message Sign,
 As Per Plan **4 Sign Month(s)**
 Assuming 2 PCMS Signs for 2 Months

Item 614, Maintaining Traffic (Notice of Closure Sign)

Notice of Closure signs (W20-H13) shall be erected by the Contractor prior to the scheduled road or ramp closure in accordance with the Notice of Closure Time Table below. [At the approval of the Engineer, portable changeable message signs may be used in lieu of the standard flatsheet sign for closure durations of less than 1 week.]

The signs shall be erected on the right-hand side of the road/ramp facing traffic. They shall be placed so as not to interfere with the visibility of any other traffic control signs. On roadways, they should be erected at or near the point of closure. The signs may be erected anywhere on ramps as long as they are visible to the motorists using the ramp. On entrance ramps, the sign shall be erected well in advance of the merge area to avoid distracting motorists.

Notice of Closure Sign Time Table		
Item	Duration of Closure	Sign Displayed to Public
Ramp & Road Closures	≥ 2 weeks	14 calendar days prior to closure
	> 12 hours & < 2 weeks	7 business days prior to closure
	≤ 12 hours	2 business days prior to closure


The sign shall display the date of the closure in MMM-DD format and the number of days of the closure. The last line of the W20-H13 sign lists a phone number which a motorist may call for additional information. This is to be a specific office within the District rather than the general switchboard number.



DESIGN AGENCY	
DESIGNER	KJD
REVIEWER	DAB
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SHEET NUM.										PART.	ITEM	ITEM	GRAND	UNIT	DESCRIPTION	SEE SHEET NO.
4	5A	6	7	8	10					01/IMS/20	EXT	TOTAL				
ROADWAY																
LS										LS	201	11000	LS		CLEARING AND GRUBBING	
LS										LS	202	11201	LS		PORTIONS OF STRUCTURE REMOVED, AS PER PLAN	4
					3					3	202	98100	3	EACH	REMOVAL MISC.: NOISE BARRIER POST REMOVAL	4
					684					684	202	98400	684	SF	REMOVAL MISC.: FIBERGLASS PANELS, REMOVED AND DELIVERED	4
					38,954					38,954	202	98400	38,954	SF	REMOVAL MISC.: NOISE BARRIER PANEL REMOVAL AND DISPOSAL	4
					6					6	SPECIAL	60610810	6	EACH	NOISE BARRIER: FIRE HYDRANT ACCESS HOLE	4
					3					3	SPECIAL	60610810	3	EACH	NOISE BARRIER: POST INSTALLATION	5
					36,930					36,930	SPECIAL	60610920	36,930	SF	NOISE BARRIER: REFLECTIVE PANELS	5
					684					684	SPECIAL	60610920	684	SF	NOISE BARRIER: REFLECTIVE PANELS, FIBERGLASS	5
					228					228	SPECIAL	60610920	228	SF	NOISE BARRIER: REMOVAL AND REUSE	5
330										330	SPECIAL	60610930	330	FT	NOISE BARRIER: STEP BLOCKS	4
	LS									LS	607	98200	LS		FENCE, MISC.: TEMPORARY CONSTRUCTION FENCE	5A
	2									2	630	97700	2	EACH	SIGNING, MISC.: CONSTRUCTION NOTIFICATION SIGN	5A
EROSION CONTROL																
										12,500	832	30000	12,500	EACH	EROSION CONTROL	
DRAINAGE																
					2,160					2,160	605	98000	2,160	FT	UNDERDRAINS, MISC.: BARRIER DRAINAGE	4
TRAFFIC CONTROL																
					150					150	630	97800	150	SF	SIGNING, MISC.: ADDITIONAL SIGNS, GROUND MOUNTED, AS DIRECTED BY THE ENGINEER	8
MAINTENANCE OF TRAFFIC																
					75					75	614	11110	75	HOUR	LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE	
										LS	614	12420	LS		DETOUR SIGNING	
										4	614	18601	4	SNMT	PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN	7
INCIDENTALS																
										LS	108	10000	LS		CPM PROGRESS SCHEDULE	
										LS	614	11000	LS		MAINTAINING TRAFFIC	
8										8	619	16011	8	MNTH	FIELD OFFICE, TYPE B, AS PER PLAN	4
										LS	623	10000	LS		CONSTRUCTION LAYOUT STAKES AND SURVEYING	
										LS	624	10000	LS		MOBILIZATION	

GENERAL SUMMARY

DESIGN AGENCY

 DESIGNER
 KJD
 REVIEWER
 DAB 01/23/24
 PROJECT ID
 119443
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