

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.


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

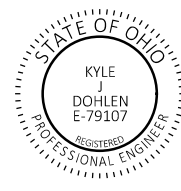

OHIO811.org
Before You Dig

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-98.11	1/17/20				
MT-101.70	4/21/23				
MT-101.75	7/21/23				
MT-105.10	1/17/20				

ENGINEER'S SEAL

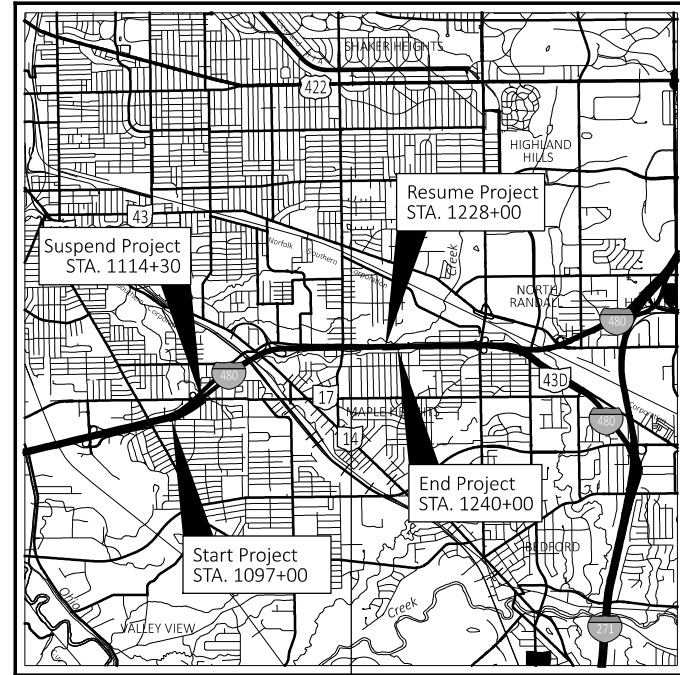


CUY-480-22.86 Noise Barrier

MODEL: Sheet PAPER: 17x11 (in.) DATE: 4/30/2024 TIME: 13:01:13 USER: kdohlen pwc:\ohio\dot-pw-bentley.com\shado-cpw-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	P.01
TOTAL	21



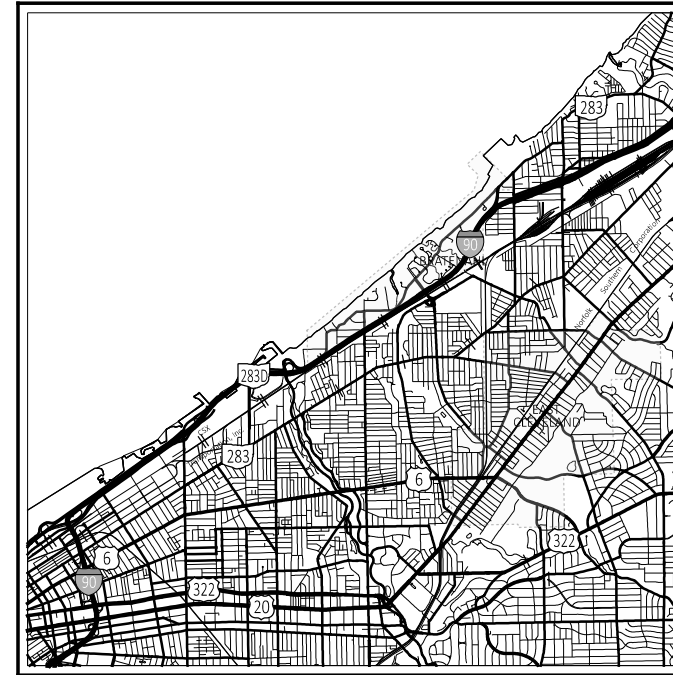
LOCATION MAP

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



DESIGN DESIGNATION

	Location 1 CUY-480-22.86	Location 2 CUY-480-20.33
CURRENT ADT (2022)	137,000	127,000
DESIGN YEAR ADT (2042)	139,000	140,000
DESIGN HOURLY VOLUME (2042)	12,500	12,500
DIRECTIONAL DISTRIBUTION	50%	50.8%
TRUCKS (24 HOUR B&C)	3%	3%
DESIGN SPEED	65 mph	65 mph
LEGAL SPEED	60 mph	60 mph
DESIGN FUNCTIONAL CLASSIFICATION:		
INTERSTATE		
NHS PROJECT	YES	YES



LOCATION MAP

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



DESIGN DESIGNATION

	Location 3 CUY-90-21.48
CURRENT ADT (2022)	137,000
DESIGN YEAR ADT (2042)	139,000
DESIGN HOURLY VOLUME (2042)	12,500
DIRECTIONAL DISTRIBUTION	50%
TRUCKS (24 HOUR B&C)	3%
DESIGN SPEED	65 mph
LEGAL SPEED	60 mph
DESIGN FUNCTIONAL CLASSIFICATION:	
INTERSTATE	
NHS PROJECT	YES

DESIGN AGENCY



DESIGNER

KJD

REVIEWER

DAB 04-29-24

PROJECT ID

119443

SHEET

P.2

TOTAL

21

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**

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 – 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.
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)

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

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 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.
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.



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.



SHEET NUM.											PART.	ITEM	ITEM	GRAND	UNIT	DESCRIPTION	SEE SHEET NO.
4	5	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	4
				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	4
330											330	SPECIAL	60610930	330	FT	NOISE BARRIER: STEP BLOCKS	4
	LS										LS	607	98200	LS		FENCE, MISC.: TEMPORARY CONSTRUCTION FENCE	5
	2										2	630	97700	2	EACH	SIGNING, MISC.: CONSTRUCTION NOTIFICATION SIGN	5
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	
		4									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

SHEET

P.09

TOTAL

21

CUY-480-22.86 Noise Barrier

MODEL: Sheet_SurvFl_PAPER SIZE: 17x11 (in.) DATE: 4/30/2024 TIME: 12:09:11 USER: kjoehlen
 pwc:\hoboc-pw-bentley.com\shoboc-pw-02\Documents\01 Active Projects\Distifed 12\Cuyahoga\119443\400-Engineering\Roadway\Sheets\119443_GS001.dgn

REF. NO.	SHEET NO.	PLAN SPLIT NO.	STATION TO STATION		202	202	202	605	SPECIAL	SPECIAL	SPECIAL	SPECIAL	SPECIAL
					REMOVAL MISC.: NOISE BARRIER PANEL REMOVAL AND DISPOSAL SF	REMOVAL MISC.: FIBERGLASS PANELS, REMOVED AND DELIVERED SF	REMOVAL MISC.: NOISE BARRIER POST REMOVAL EACH	UNDERDRAINS, MISC.: BARRIER DRAINAGE FT	NOISE BARRIER: FIRE HYDRANT ACCESS HOLE EACH	NOISE BARRIER: POST INSTALLATION EACH	NOISE BARRIER: REFLECTIVE PANELS SF	NOISE BARRIER: REFLECTIVE PANELS, FIBERGLASS SF	NOISE BARRIER: REMOVAL AND REUSE SF
Location 1 - Lee Road													
R-1	11	1	1+00	3+30	4540								
UD-1	11	1	1+00	3+30			230						
B-1	11	1	1+00	3+30						4195			
R-2	12	1	3+30	5+80	4388								
UD-2	12	1	3+30	5+80			250						
B-2	12	1	3+30	5+80						4013			
B-3	12	1	4+34					1					
R-3	13	1	5+80	8+20	4030								
UD-3	13	1	5+80	8+20			240						
B-4	13	1	5+80	8+20						3670			
B-5	13	1	6+94					1					
Location 2 - Granger Road													
R-4	14	1	1+00	5+50	7596								
B-6	14	1	1+00	5+50						7371			
UD-4	14	1	1+00	5+50			450						
B-7	14	1	3+22					1					
R-5	15	1	5+50	10+50	6808								
UD-5	15	1	5+50	10+50			500						
B-8	15	1	5+50	10+50						6533			
B-9	15	1	7+54					1					
B-10	15	1	9+22					1					
R-6	16	1	10+50	15+50	6764								
B-11	16	1	10+50	15+50						6489			
UD-6	16	1	10+50	15+50			490						
B-12	16	1	12+20					1					
R-7	17	1	15+50	18+88	4828								
B-13	17	1	15+50	18+88						4659			
Location 3 - CUY-90 WB, 21.84													
R-8	19	1	334+27	334+63		684		3					
B-14	19	1	334+27	334+63						684			
B-15	19	1	334+75	334+87							228		
TOTALS CARRIED TO GENERAL SUMMARY					38954	684	3	2160	6	3	36930	684	228

NOISE BARRIER SUB-SUMMARY

DESIGN AGENCY

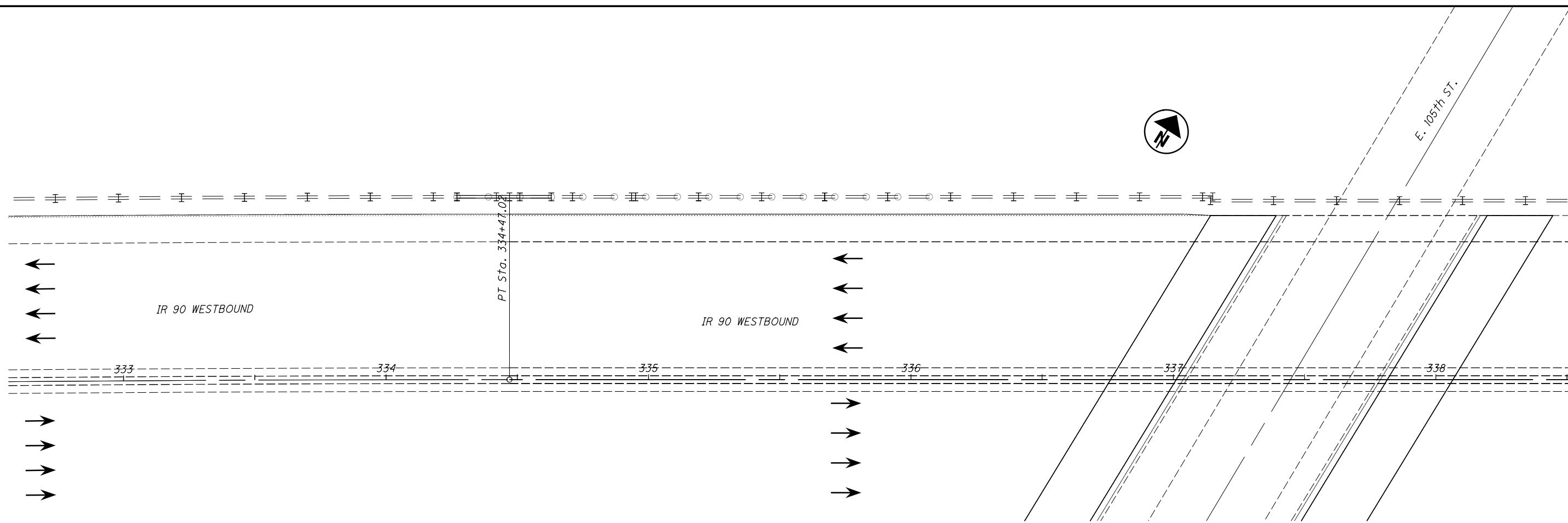


DESIGNER
KJD

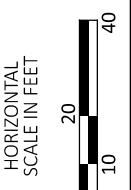
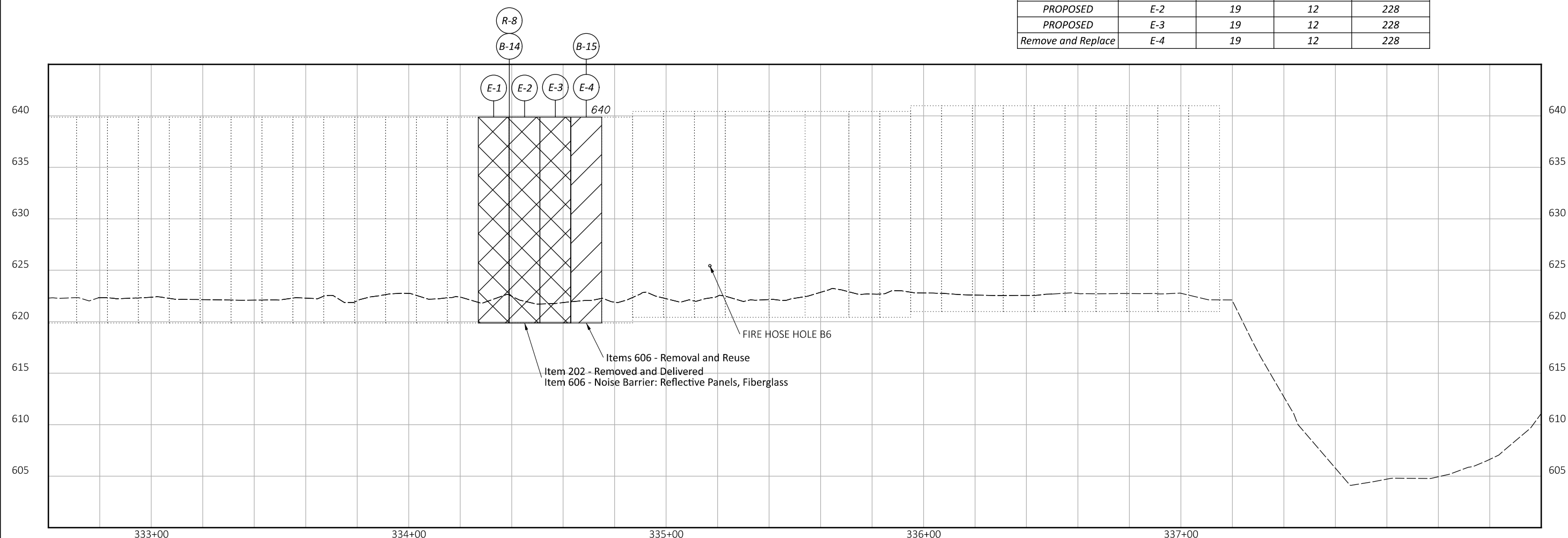
REVIEWER
DAB 01/23/24

PROJECT ID
119443

SHEET TOTAL
P.10 | 21



	BAY	HEIGHT (FT.)	WIDTH (FT.)	SF
PROPOSED	E-1	19	12	228
PROPOSED	E-2	19	12	228
PROPOSED	E-3	19	12	228
Remove and Replace	E-4	19	12	228



LOCATION 3 - PLAN AND PROFILE
 CUY-90-21.84

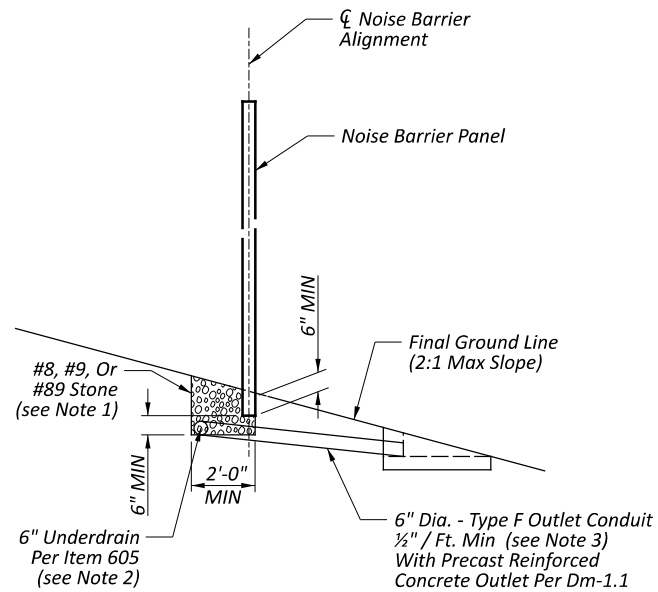
DESIGN AGENCY

DESIGNER
 KJD

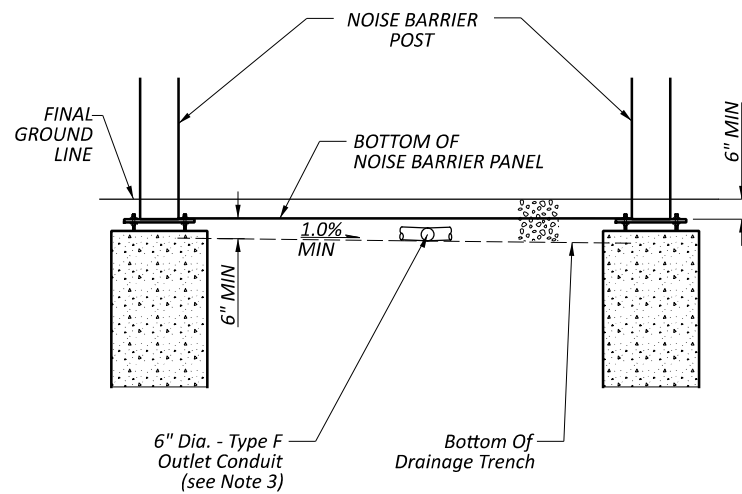
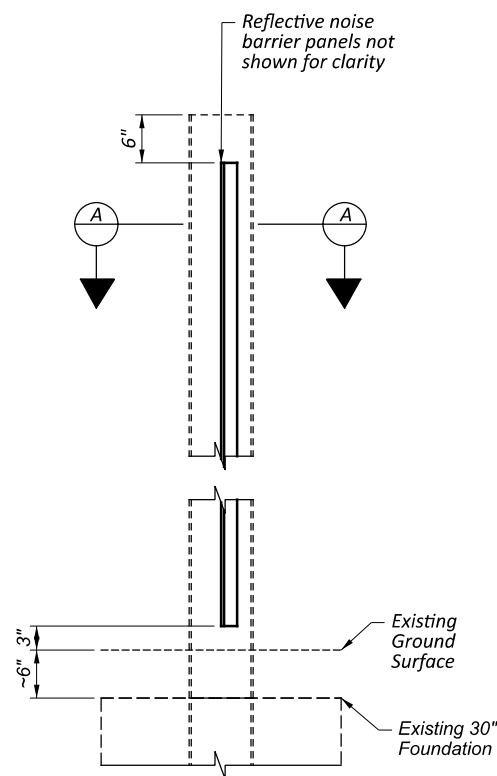
REVIEWER
 KJD 08-08-22

PROJECT ID
 119443

SHEET TOTAL
 P.19 | 21



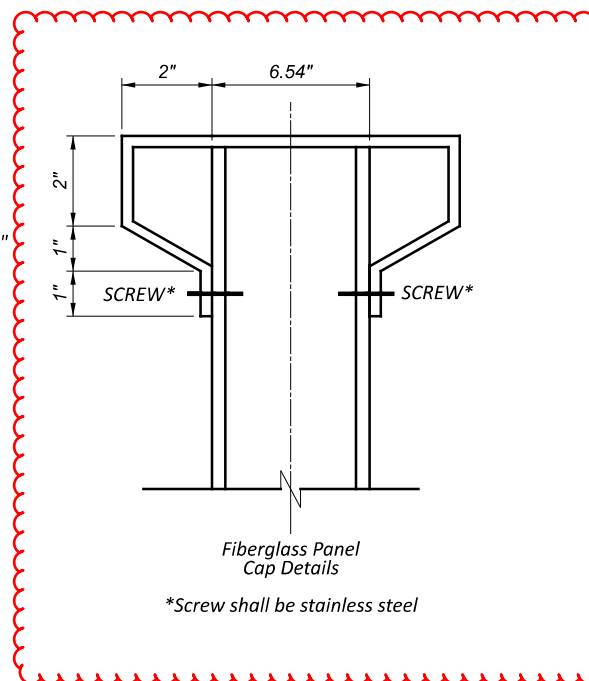
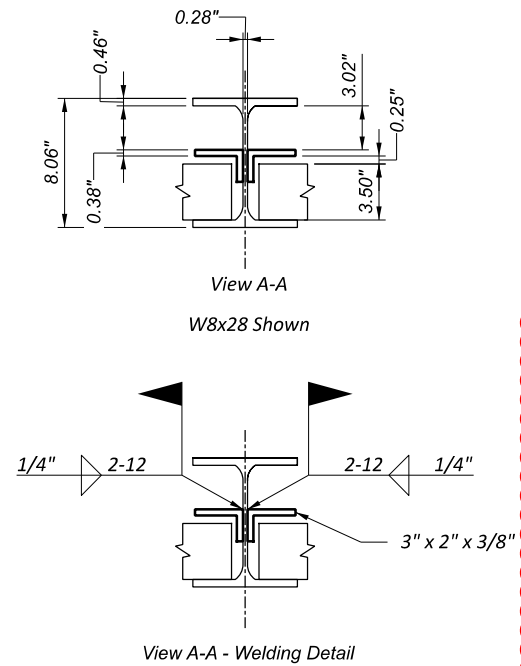
TYPICAL SLOPED SECTION



TYPICAL ELEVATION OF SLOPED SECTION A - DRAINAGE

SLOPED SECTION DRAINAGE NOTES:

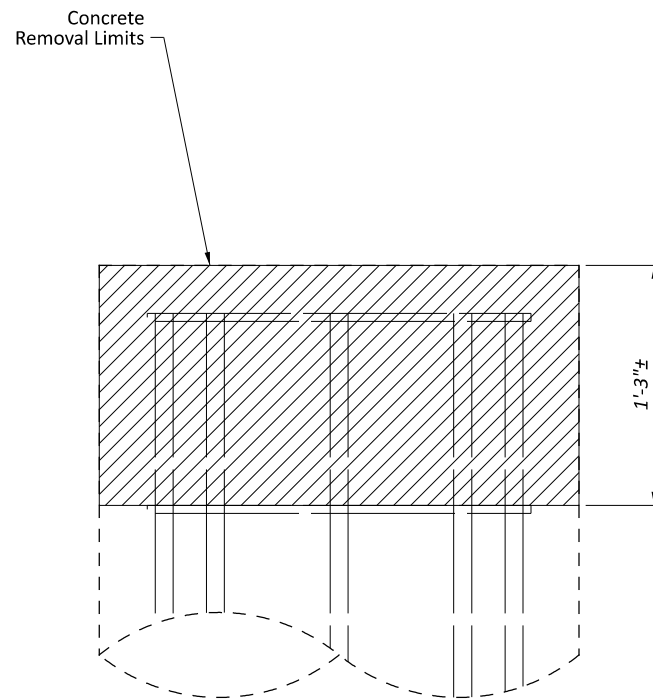
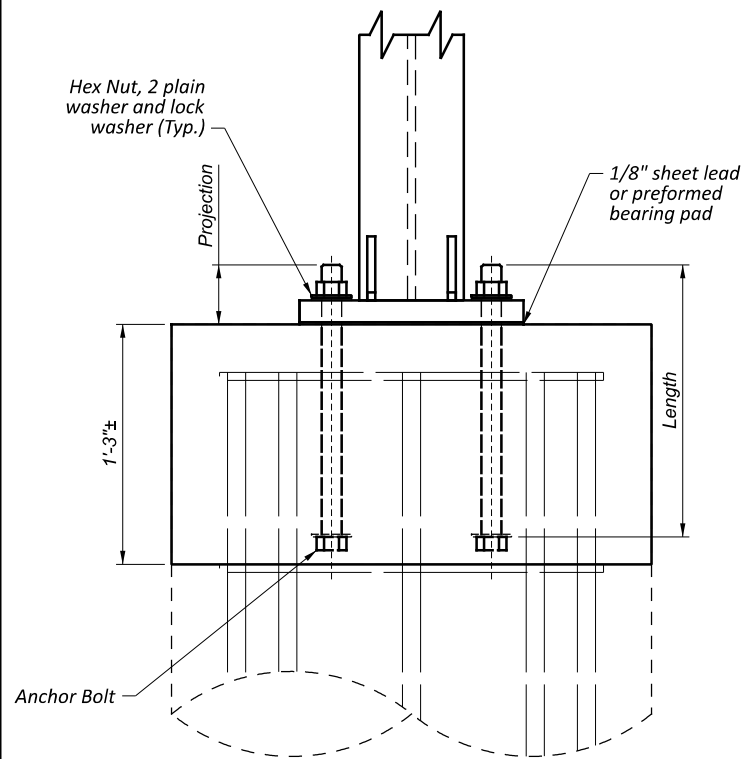
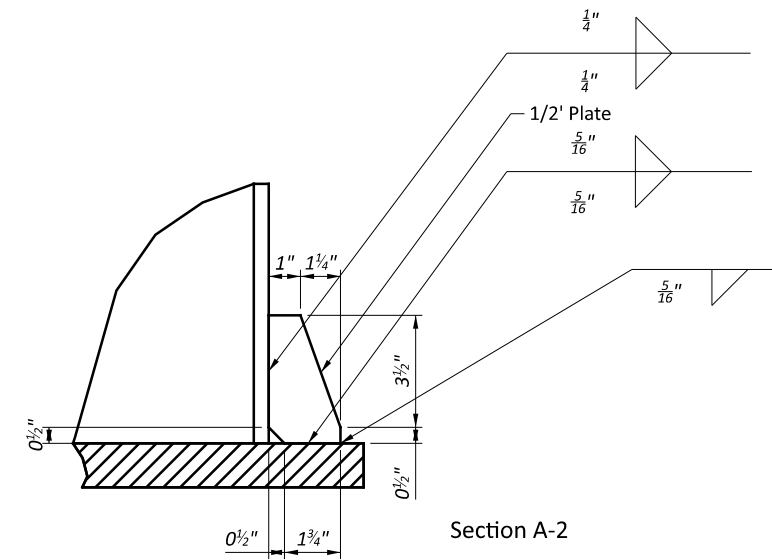
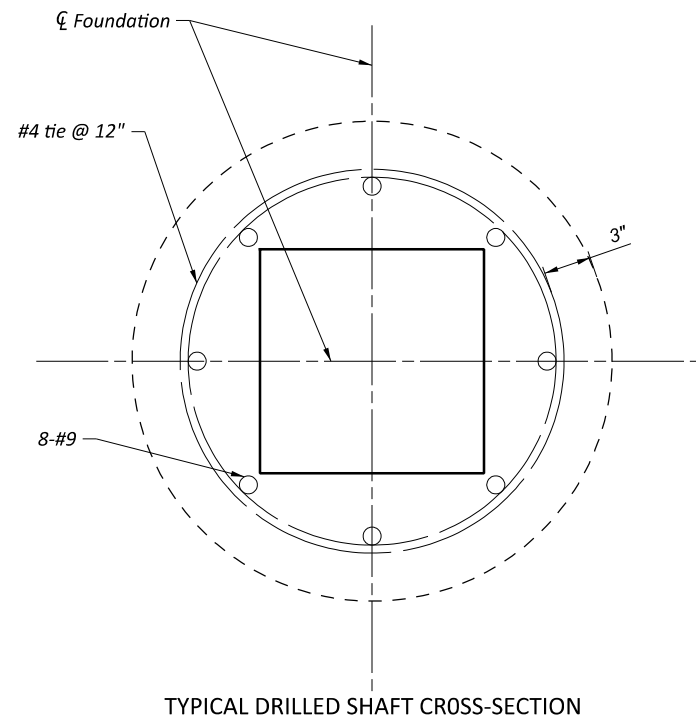
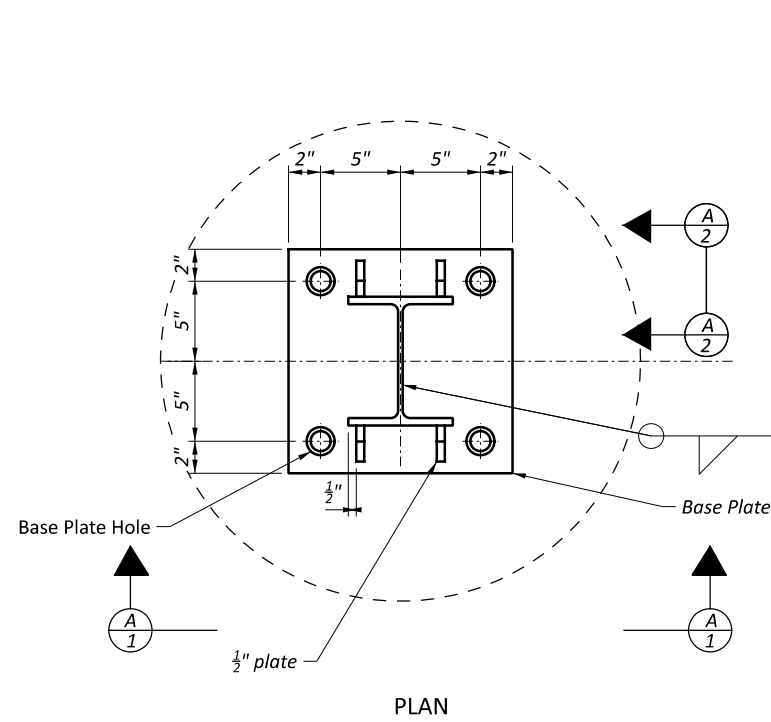
1. Construct a trench with a minimum longitudinal slope of 1.0% under the noise barrier panels as shown in the typical elevation.
2. Provide underdrain slope of 1% minimum or as specified in project plans. install in accordance with item 605.
3. Outlet conduit to be spaced at 100' max.; install in accordance with item 605.



*Screw shall be stainless steel

Note:
 The 0.25" gap between the 3" x 2" x 3/8" angle and the reflective noise barrier panel was selected to minimize lateral movement of the panel at the completion of construction. If the provided reflective noise barrier panels deviate from as shown dimensions, the contractor shall adjust angle placement to maintain shown gap.





Post Mounting Details

Steel Post	Base Plate	Min. Weld Size	Anchor Bolts	Projection	Threaded Length	Base Plate Hole Dimension
W 8x28	14"x14"x1-3/8"	5/16"	4 - 1-1/4" Ø x 17"	3-1/4"	5-1/4"	1-3/4"