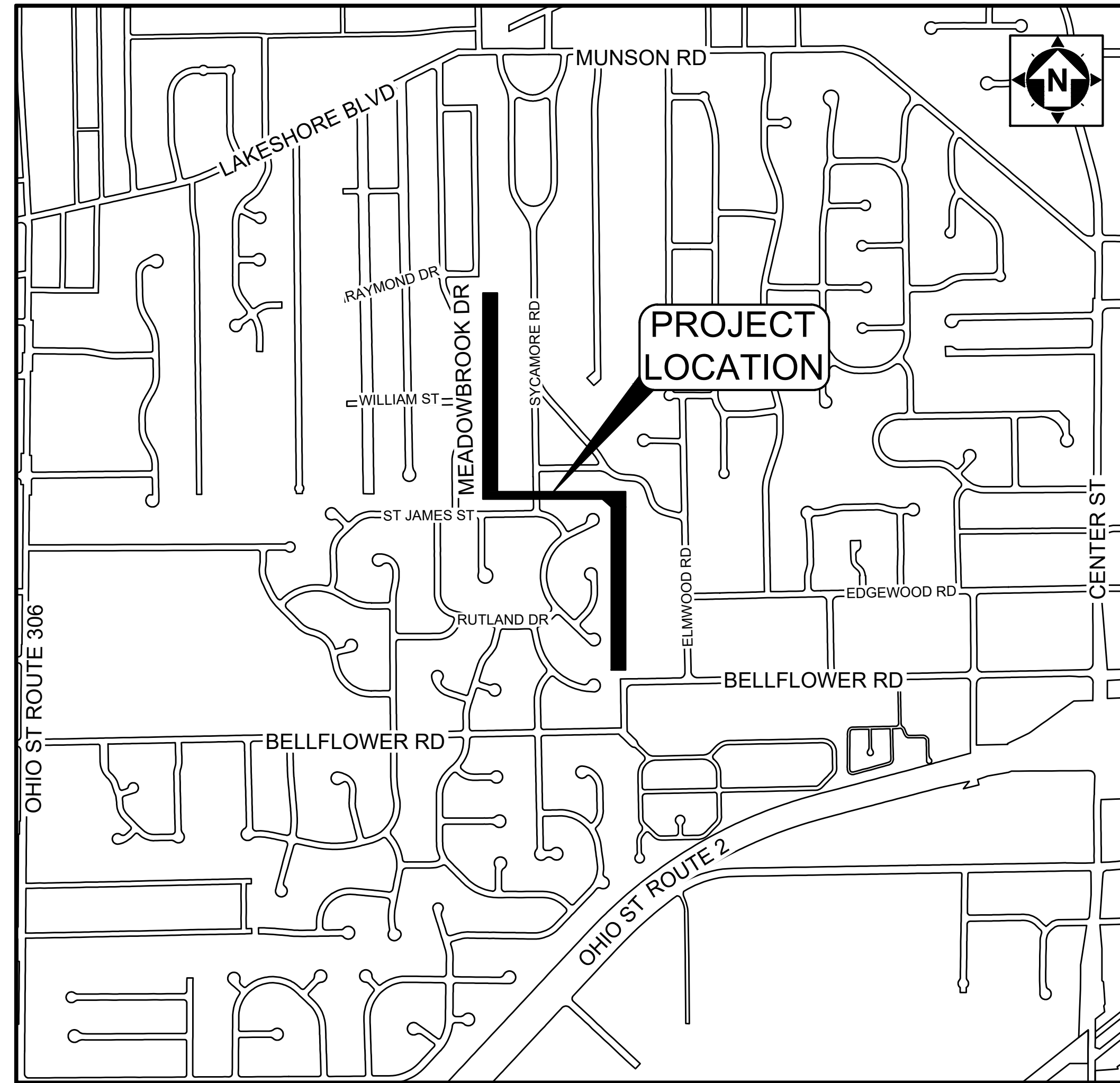
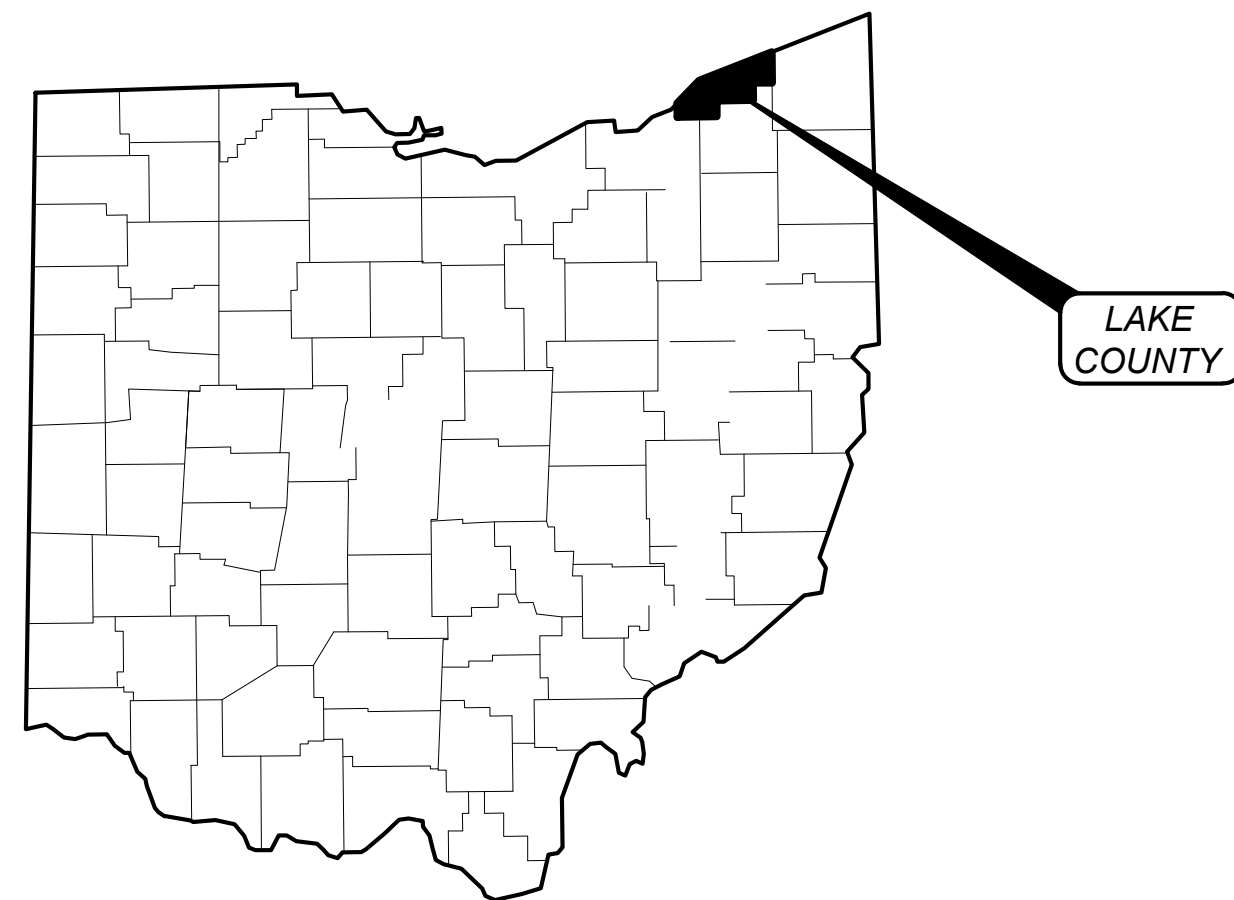


BELLFLOWER/MEADOWBROOK DITCH RESTORATION PROJECT

MENTOR, OH
LAKE COUNTY
DECEMBER 2024



INDEX MAP
1000 0' 1000
SCALE: 1" = 1000

LIST OF DRAWINGS	
1	COVER SHEET
2	GENERAL NOTES
3-4	SCHEMATIC AND TYPICAL SECTIONS
5-10	LAYOUT GRADING PLAN
11-13	NORTH CROSS SECTIONS
14-16	SOUTH CROSS SECTIONS
17	CONSTRUCTION DETAILS
18-19	SWPPP DETAILS AND NOTES

CITY OFFICIALS:

KENNETH J. FILIPIAK.....CITY MANAGER
JOSEPH P. SZEMAN.....LAW DIRECTOR
KATHY CANTANZRITI.....PLANNING DIRECTOR
DAVE SWIGER.....CITY ENGINEER
MATTHEW BENNETT.....ENGINEER

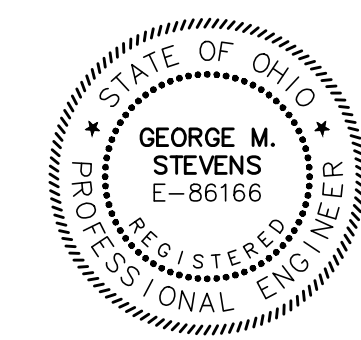
CITY COUNCIL:

SEAN P. BLAKE.....PRESIDENT OF COUNCIL, WARD 1
JOHN A. KRUEGER.....VICE PRESIDENT OF COUNCIL, WARD 4
MATTHEW E. DONOVAN.....COUNCILPERSON, WARD 2
MARK T. FREEMAN.....COUNCILPERSON, WARD 3
SCOTT J. MARN.....COUNCILPERSON-AT-LARGE
JANET A. DOWLING.....COUNCILPERSON-AT-LARGE
RAY KIRCHNER.....COUNCILPERSON-AT-LARGE
JULIE SCHIAVONI.....CLERK OF COUNCIL

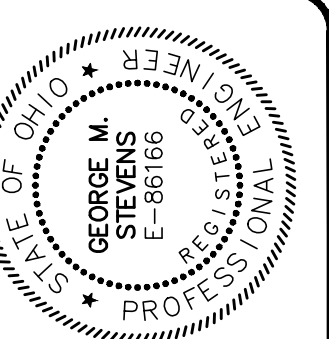
DESIGN ENGINEER:

THIS IS TO CERTIFY THAT GOOD ENGINEERING PRACTICES HAVE BEEN UTILIZED IN THE DESIGN OF THIS PROJECT AND THAT ALL MINIMUM STANDARDS FOR LAKE COUNTY, INCLUDING THOSE STANDARDS GREATER THAN MINIMUM WHERE, IN OUR OPINION, THEY ARE NEEDED TO PROTECT THE SAFETY OF THE PUBLIC. ANY VARIANCES TO THE ABOVE STANDARDS ARE CONSISTENT WITH SOUND ENGINEERING PRACTICES AND ARE NOT DETRIMENTAL TO THE PUBLIC SAFETY AND CONVENIENCE.

George M. Stevens
GEORGE M STEVENS, P.E. NO. E-86166



12/11/2024
DATE



ISSUED FOR:	BID SET	NO	REVISION	DATE
ISSUE DATE:	12/11/2024			
SCALE:	AS SHOWN			
DESIGNED BY:	SNK			
DRAWN BY:	SNK			
CHECKED BY:	GMS			

BELLFLOWER/MEADOWBROOK DITCH
RESTORATION PROJECT
MENTOR, OH
LAKE COUNTY
COVER SHEET

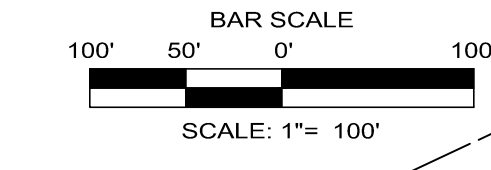
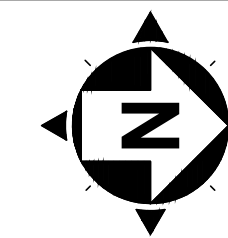
PROJECT NO.	241472
DISCIPLINE	CIVIL
SHEET NAME	COVER
SHEET	OF
1	20



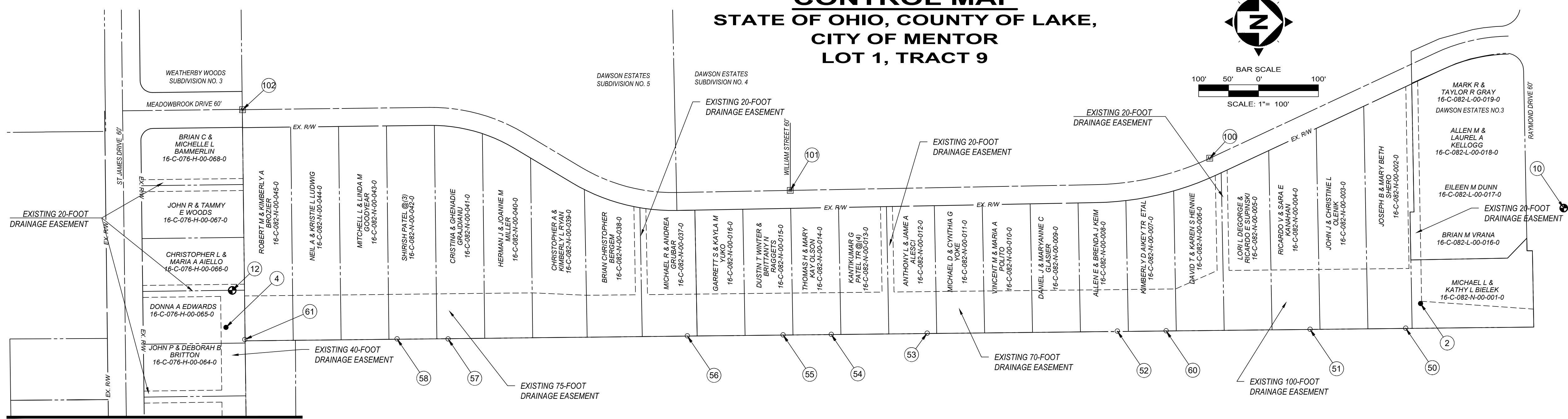
ENGINEER'S PROJECT No. 241472

CONTROL MAP

STATE OF OHIO, COUNTY OF LAKE, CITY OF MENTOR LOT 1, TRACT 9



POINT TABLE			
PNT #	NORTHING	EASTING	DESCRIPTION
1	740318.2198	228000.9905	Iron Pin (Set)
2	742306.5388	227953.4570	Iron Pin (Set)
3	738595.8237	2280816.8131	Iron Pin (Set)
4	740311.6844	227953.2772	Iron Pin (Set)
10	742545.6728	2279374.0117	Benchmark (Set)
11	738463.4177	2280865.0888	Benchmark (Set)
12	740322.2220	2279511.4954	Benchmark (Set)
50	742281.6793	2279574.6399	Iron Pin (Fnd)
51	742121.8966	2279576.5113	Iron Pin (Fnd)
52	741900.1442	2279579.4093	Iron Pin (Fnd)
53	741482.5233	2279582.9572	Iron Pin (Fnd)
54	741322.3411	2279584.8452	Iron Pin (Fnd)
55	741241.9518	2279585.8332	Iron Pin (Fnd)
56	741082.0500	2279587.5176	Iron Pin (Fnd)
57	740682.5577	2279592.5659	Iron Pin (Fnd)
58	740597.3354	2279592.3881	Iron Pin (Fnd)
60	741981.6299	2279579.9069	Iron Pin (Fnd)
61	740342.9898	2279593.5731	Iron Pin (Fnd)
62	740046.4258	2280815.1303	Iron Pin (Fnd)
63	739781.8473	2280817.7786	Iron Pin (Fnd)
64	739976.5990	2280763.4054	Iron Pin (Fnd)
100	741954.4606	2279290.7398	Monument Box (Fnd)
101	741254.1404	2279344.5108	Monument Box (Fnd)
102	740339.3785	2279209.6420	Monument Box (Fnd)
103	740150.4930	2279992.1514	Monument Box (Fnd)
104	740150.2034	2280009.0022	Monument Box (Fnd)
105	740064.1994	2280574.8856	Monument Box (Fnd)
106	739214.4445	2280214.7496	Monument Box (Fnd)
107	739052.9822	2280382.6080	Monument Box (Fnd)
108	738888.5434	2280553.7668	Monument Box (Fnd)
109	739379.3907	2280576.7872	Monument Box (Fnd)
110	739556.6574	2280574.6417	Monument Box (Fnd)

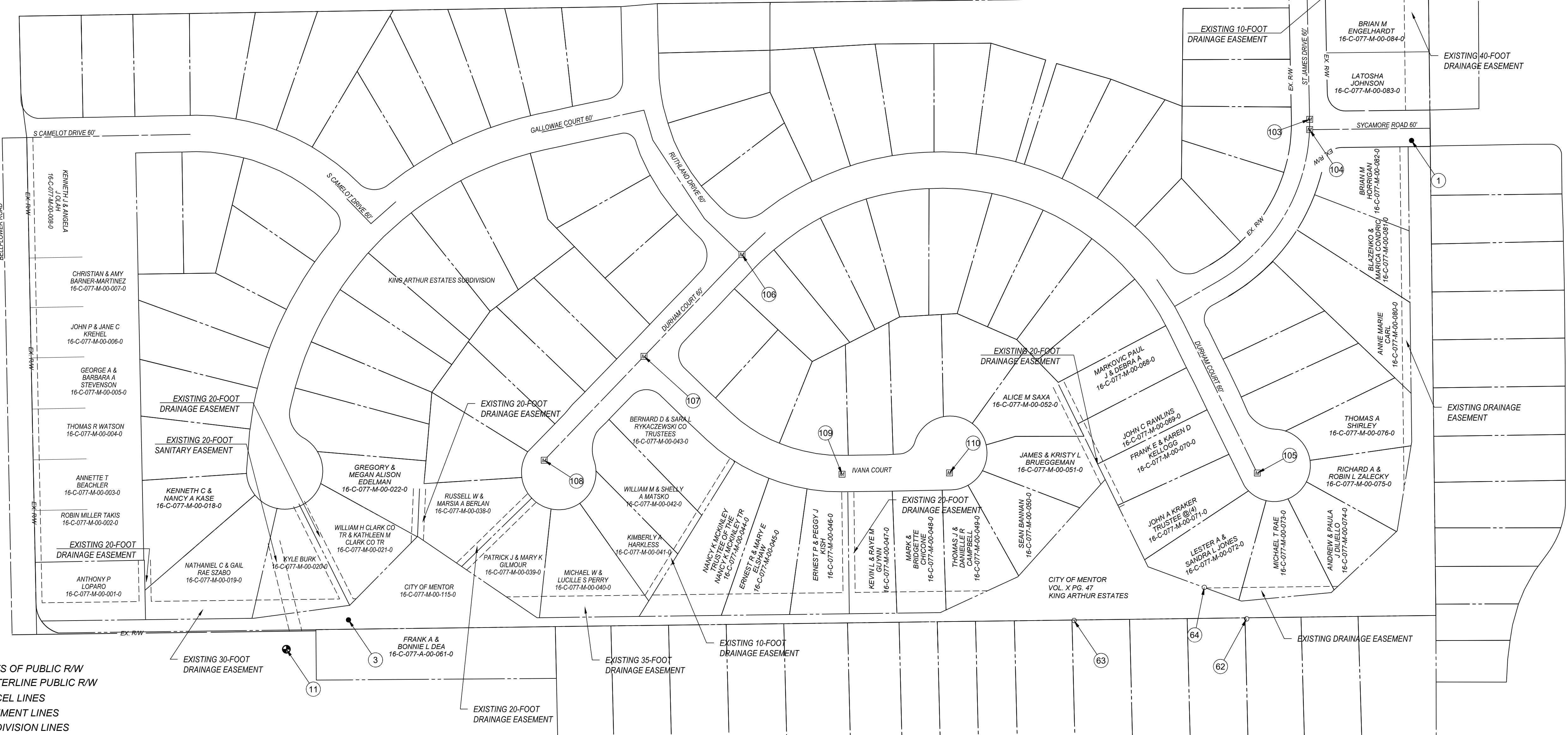


MATCH LINE

MATCH LINE

NOTES:

- THIS PLAN HAS BEEN PREPARED WITHOUT THE BENEFIT OF A TITLE REPORT AND MAY BE SUBJECT TO EASEMENTS AND OTHER RESTRICTIONS, EITHER RECORDED OR UNRECORDED. THE SURVEYOR HAS MADE NO INVESTIGATION OR INDEPENDENT SEARCH FOR EASEMENTS, RECORD ENCUMBRANCES, RESTRICTIVE COVENANTS OR ANY OTHER FACTS THAT AN ACCURATE AND CURRENT TITLE SEARCH MAY DISCLOSE.
- THESE PLANS MAY HAVE BEEN ALTERED IN SIZE BY REPRODUCTION. THIS MUST BE CONSIDERED WHEN OBTAINING SCALED DATA.
- THE PROJECT CONTROL COORDINATE SYSTEM IS BASED UPON THE FOLLOWING: HORIZONTAL DATUM - PROJECT CONTROL COORDINATES FOR THIS PROJECT HAVE BEEN ESTABLISHED BY GPS/RTK OBSERVATIONS UTILIZING THE OHIO COORDINATE SYSTEM OF 1983 (ZONE 3401-OHIO NORTH), OHIO STATE PLANE GRID COORDINATE VALUES ARE EXPRESSED IN UNITS OF U.S. SURVEY FEET. VERTICAL DATUM - NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).
- THE SURVEY AND STREET ALIGNMENTS SHOWN HEREON WERE OBSERVED IN THE FIELD FOR CONSTRUCTION PURPOSES ONLY AND MAY NOT BE SUITABLE FOR PROPERTY LINE SURVEYS OR OTHER PURPOSES. THE PROPERTY LINES SHOWN HEREON OURS SUBJECT TO AN ACCURATE BOUNDARY SURVEY AND ARE BASED ON FOUND MONUMENTS LOCATED IN THE FIELD BEST FIT TO THE RECORDS.
- AN ALTA/NSPS LAND TITLE SURVEY WAS NOT PERFORMED.
- EASEMENTS, RECORD RESTRICTIONS AND SETBACKS WERE NOT ADDRESSED DURING THIS SURVEY.
- ALL DIMENSIONS GIVEN ARE EXPRESSED IN US SURVEY FEET.
- THE BENCHMARK ELEVATIONS SHOWN IN THE PROJECT CONTROL TABLE ARE AT THE TOP OF THE IRON PIN SET.
- IRON PINS SET ARE 5/8" IRON PINS SET WITH A RED CAP INSCRIBED WITH "CT REF".



LEGEND:

- BENCHMARK
- CENTERLINE MONUMENT
- I.PIN SET
- I.PIN FOUND
- I.PIPE FOUND
- LIMITS OF PUBLIC R/W
- CENTERLINE PUBLIC R/W
- PARCEL LINES
- EASEMENT LINES
- SUBDIVISION LINES

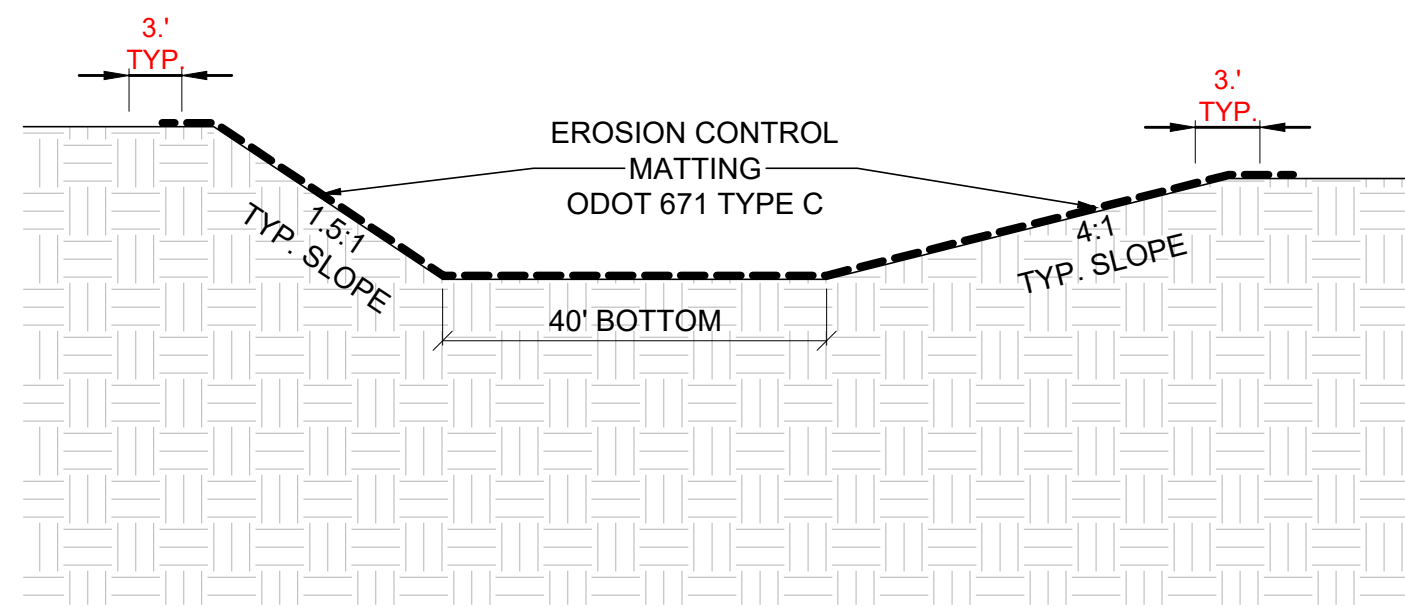
your trusted advisor
consultants → engineers
architects
planners

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			06/04/2024	AS SHOWN					

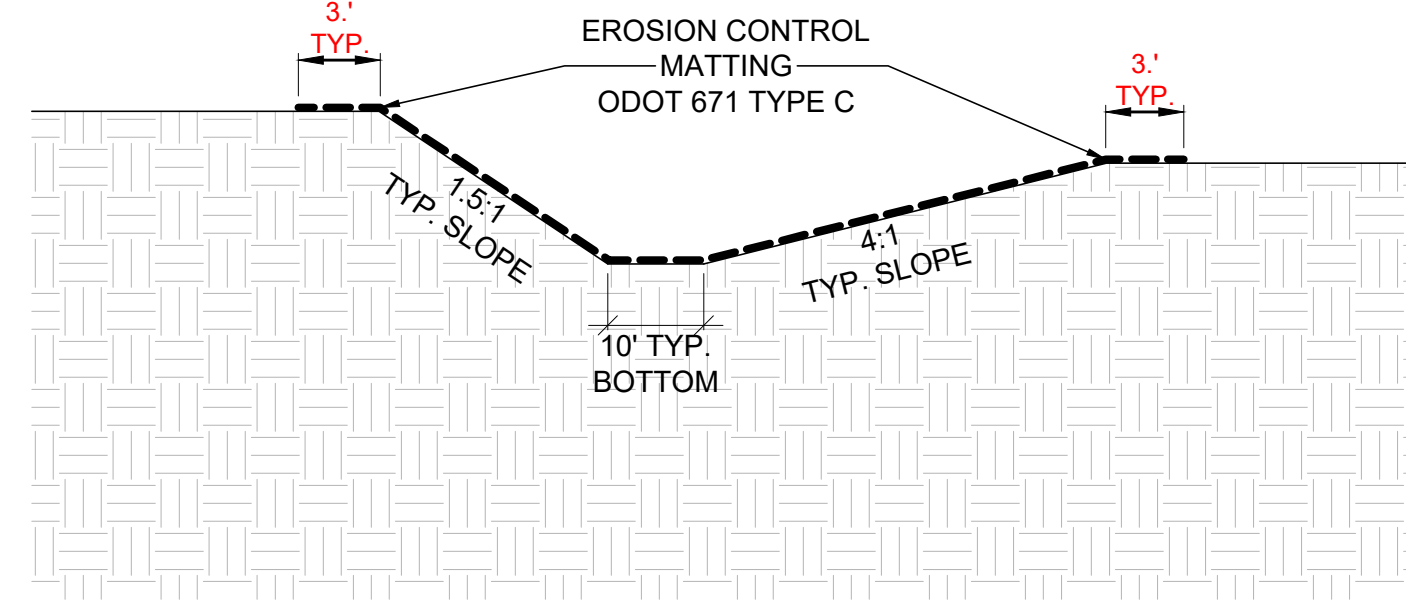
**BELFLOWER/MEADOWBROOK DITCH
RESTORATION PROJECT
MENTOR, OH
LAKE COUNTY**

CONTROL PLAN

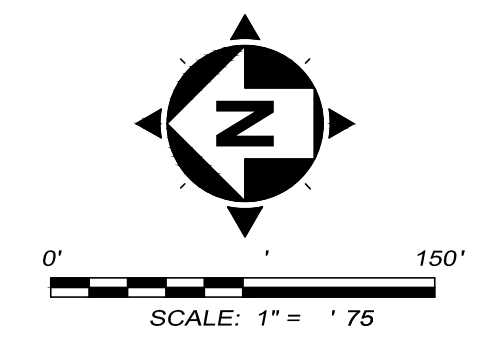
PROJECT NO.	241472
DISCIPLINE	CIVIL
SHEET NAME	SC-1
SHEET	3
OF	20



TYPICAL SECTION STA. 2+15 TO 5+00



TYPICAL SECTION STA. 5+00 TO 21+65.02

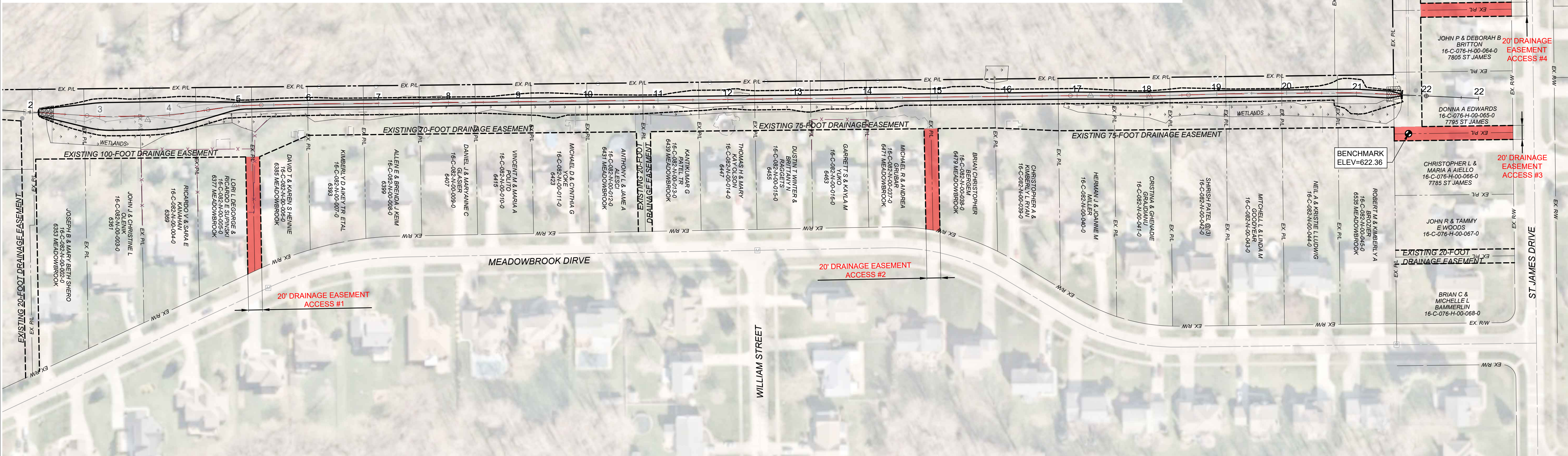


ACCESS NOTE

- THE FOLLOWING EASEMENT ACCESS LOCATIONS ARE AVAILABLE FOR USE:
 - ACCESS #1: BETWEEN 6377 & 6385 MEADOWBROOK DR FENCE ALONG PROPERTY LINE. TO BE REMOVED DURING CONSTRUCTION AND RECONSTRUCTED TO ORIGINAL QUALITY.
 - ACCESS #2: BETWEEN 6471 & 6479 MEADOWBROOK DR
 - ACCESS #3 BETWEEN 7785 & 7795 ST JAMES DR
 - ACCESS #4 BETWEEN 7804 & 7814 ST JAMES DR
- THE FOLLOWING EASEMENT ACCESS LOCATIONS SHALL NOT BE USED:
 - 20' DRAINAGE EASEMENT BETWEEN 6345 & 6353 MEADOWBROOK DR DUE TO MANY LARGE TREES AND LANDSCAPING
 - 20' DRAINAGE EASEMENT BETWEEN 6431 & 6439 MEADOWBROOK DR DUE TO SMALL OPENING BETWEEN MANY LARGE TREES
 - 40' DRAINAGE EASEMENT BETWEEN 7835 ST JAMES & 6530 SYCAMORE DUE TO WOOD AND CHAIN LINK FENCE BLOCKING ACCESS
- CONTRACTOR SHALL SUBMIT A PLAN FOR DAMAGE RISK MITIGATION BETWEEN HOUSES DURING EASEMENT ACCESS PRIOR TO WORK BEGINNING. CONTRACTOR MAY USE STEEL PLATES OR ALTERNATE APPROVED METHOD TO ENSURE NO DAMAGE IS DONE TO HOME FOUNDATIONS ALONG EASEMENT ACCESS LOCATIONS.

CLEARING NOTE

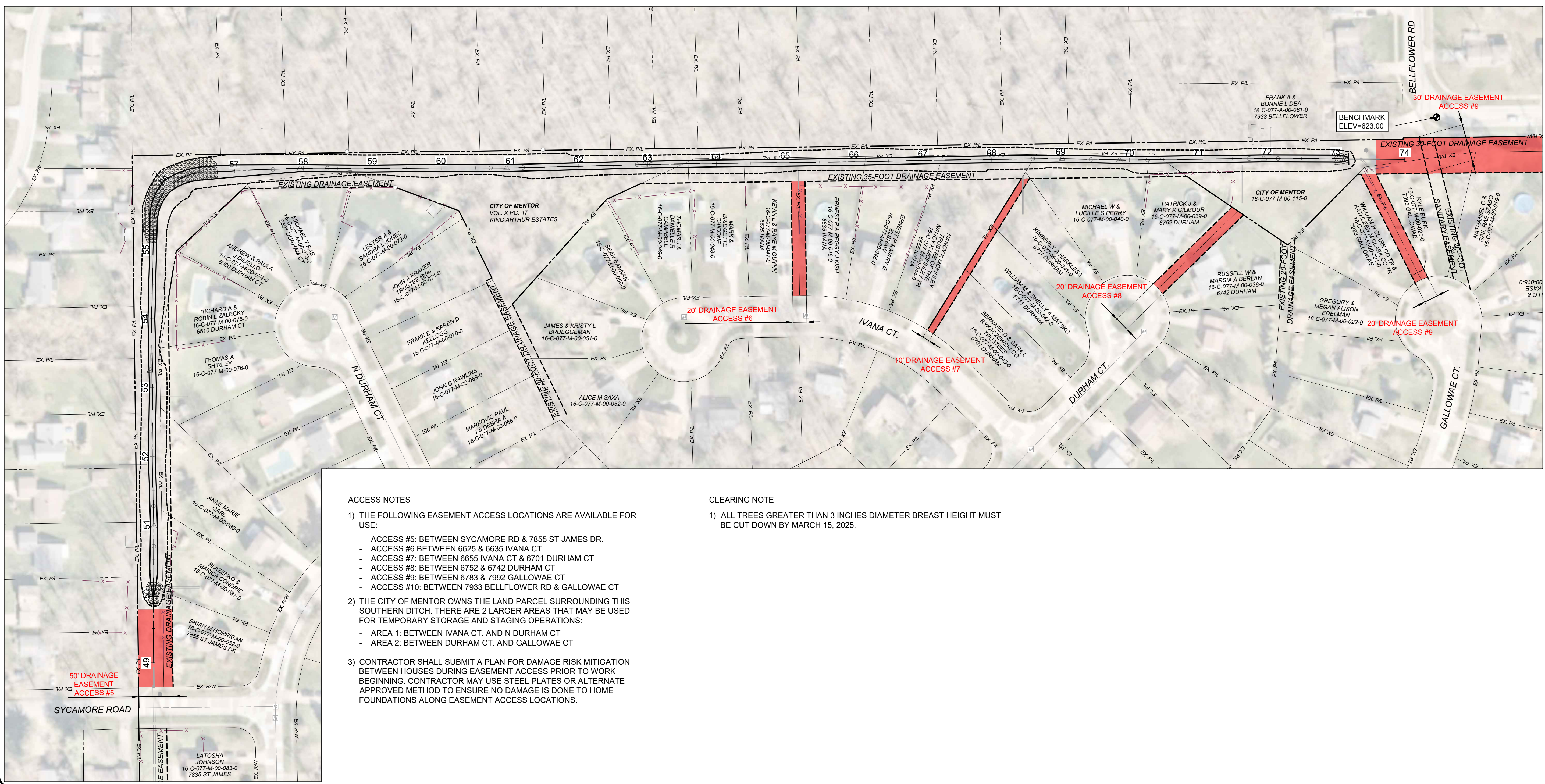
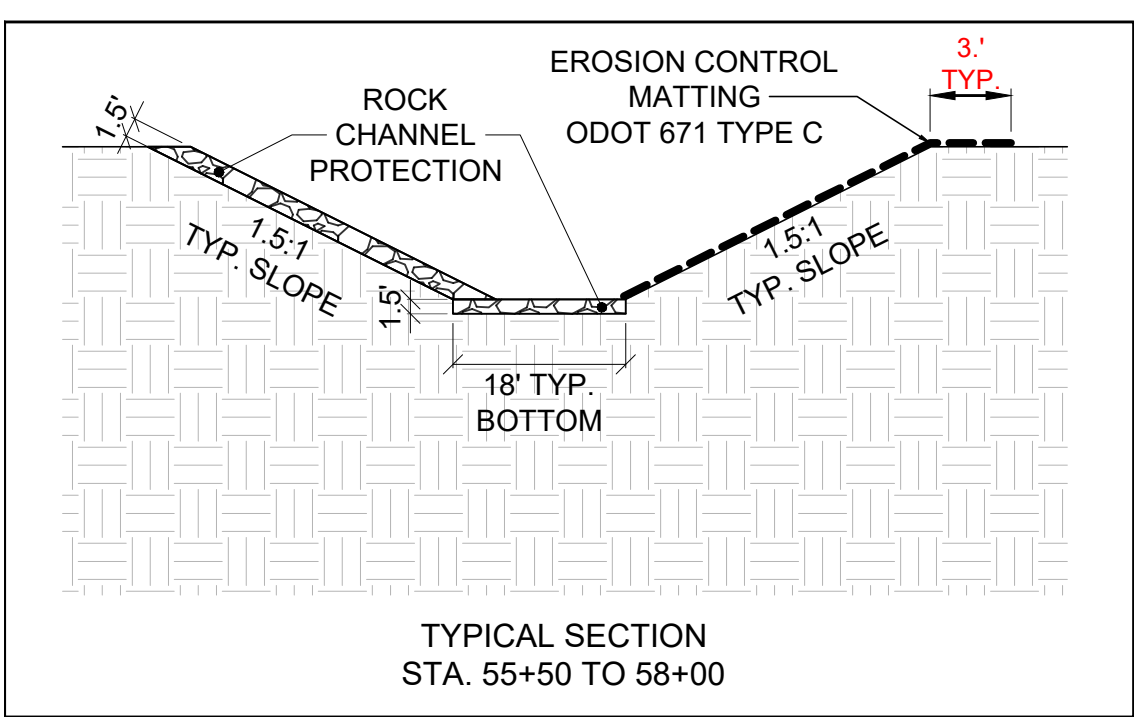
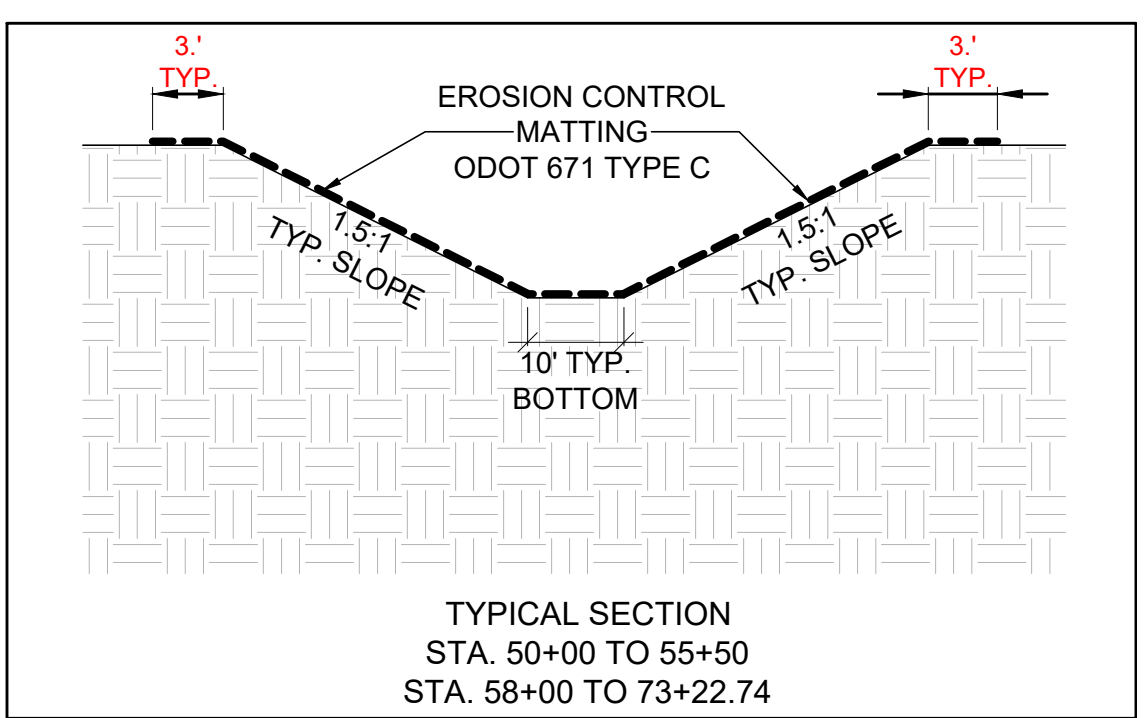
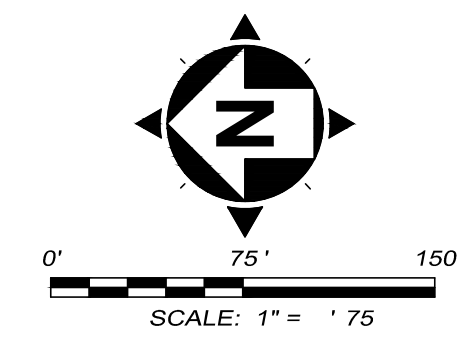
- ALL TREES GREATER THAN 3 INCHES DIAMETER BREAST HEIGHT MUST BE CUT DOWN BY MARCH 15, 2025.



DATE	REVISION	NO	BID SET	ISSUED FOR:	ISSUE DATE:	SCALE:	DESIGNED BY:	DRAWN BY:	CHECKED BY:
					12/11/2024	AS SHOWN	SNK	SNK	GMS

BELFLOWER/MEADOWBROOK DITCH RESTORATION PROJECT
MENTOR, OH
LAKE COUNTY
NORTHERN SECTION SCHEMATIC & TYPICAL SECTIONS

PROJECT NO.	241472
DISCIPLINE	CIVIL
SHEET NAME	SCM-1
SHEET	4
OF	20



- ACCESS NOTES**
- THE FOLLOWING EASEMENT ACCESS LOCATIONS ARE AVAILABLE FOR USE:
 - ACCESS #5: BETWEEN SYCAMORE RD & 7855 ST JAMES DR.
 - ACCESS #6 BETWEEN 6625 & 6635 IVANA CT
 - ACCESS #7: BETWEEN 6655 IVANA CT & 6701 DURHAM CT
 - ACCESS #8: BETWEEN 6752 & 6742 DURHAM CT
 - ACCESS #9: BETWEEN 6783 & 7992 GALLOWAE CT
 - ACCESS #10: BETWEEN 7933 BELLFLOWER RD & GALLOWAE CT
 - THE CITY OF MENTOR OWNS THE LAND PARCEL SURROUNDING THIS SOUTHERN DITCH. THERE ARE 2 LARGER AREAS THAT MAY BE USED FOR TEMPORARY STORAGE AND STAGING OPERATIONS:
 - AREA 1: BETWEEN IVANA CT. AND N DURHAM CT
 - AREA 2: BETWEEN DURHAM CT. AND GALLOWAE CT
 - CONTRACTOR SHALL SUBMIT A PLAN FOR DAMAGE RISK MITIGATION BETWEEN HOUSES DURING EASEMENT ACCESS PRIOR TO WORK BEGINNING. CONTRACTOR MAY USE STEEL PLATES OR ALTERNATE APPROVED METHOD TO ENSURE NO DAMAGE IS DONE TO HOME FOUNDATIONS ALONG EASEMENT ACCESS LOCATIONS.

- CLEARING NOTE**
- ALL TREES GREATER THAN 3 INCHES DIAMETER BREAST HEIGHT MUST BE CUT DOWN BY MARCH 15, 2025.

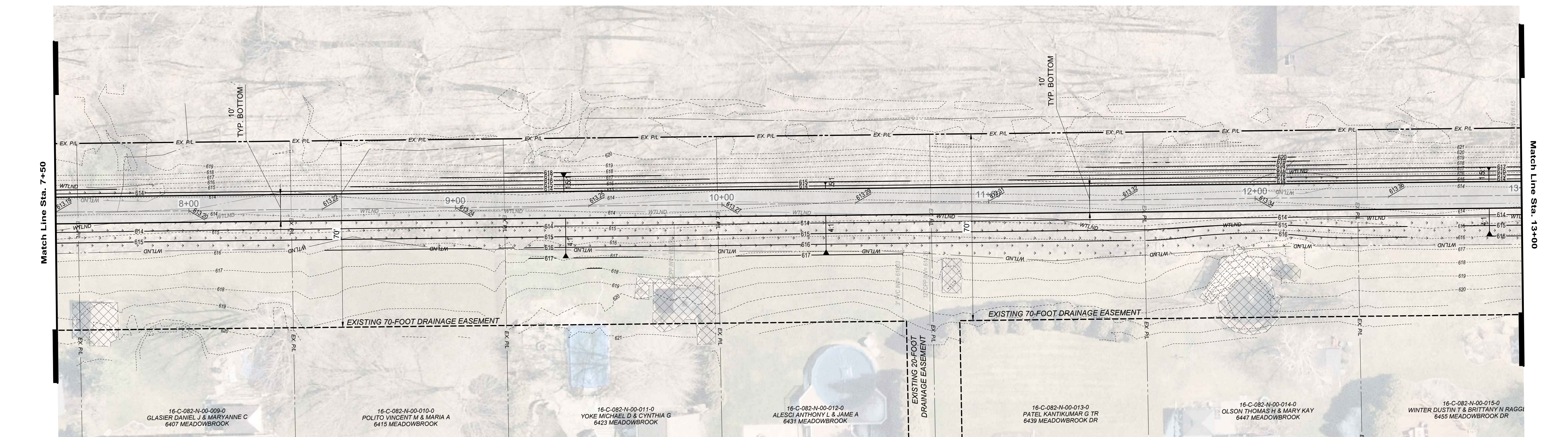
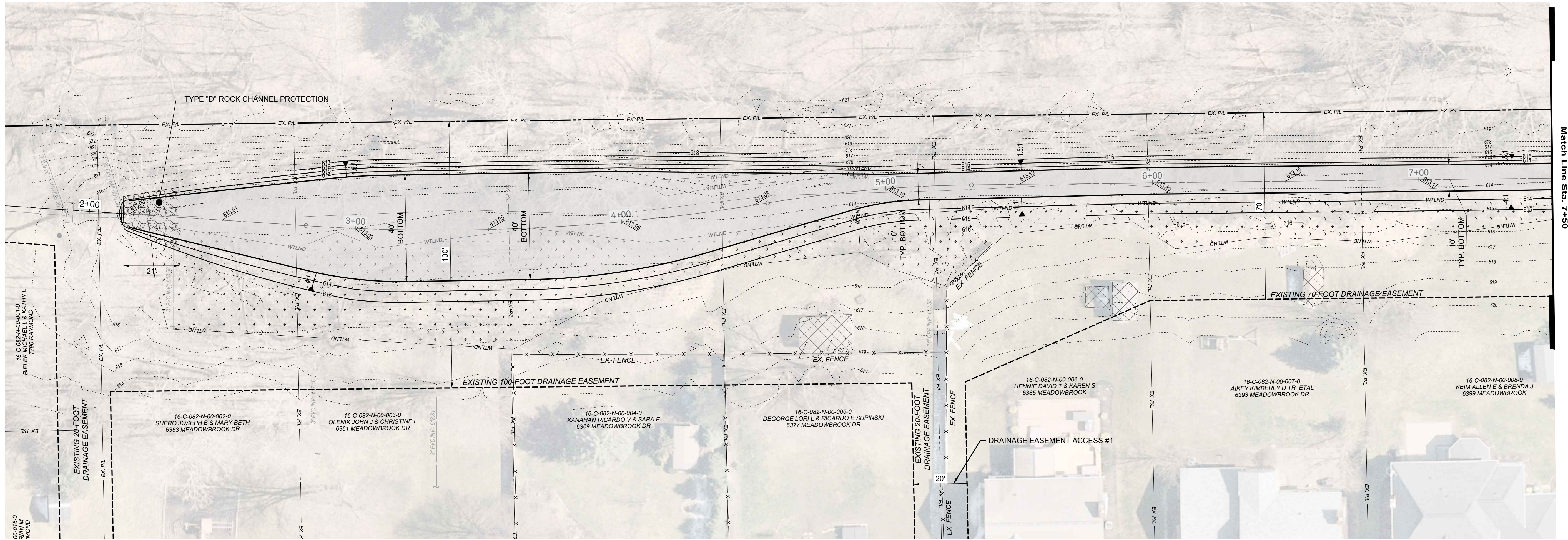
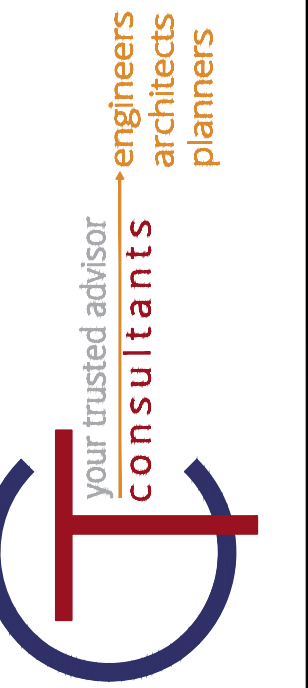
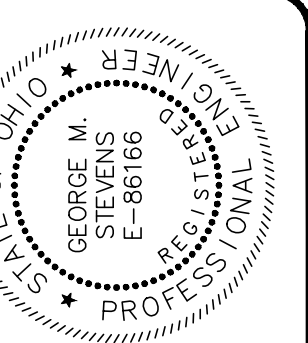
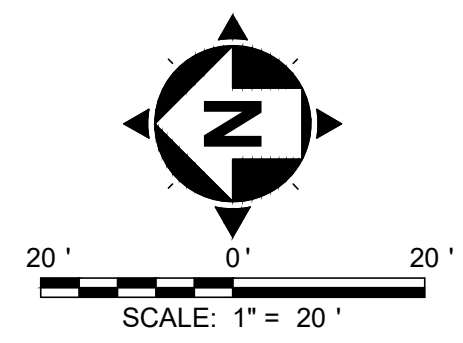
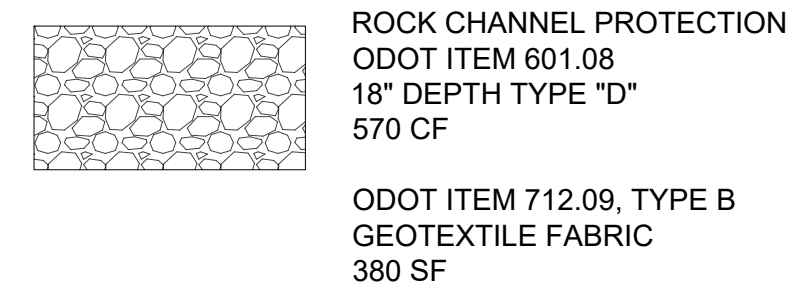
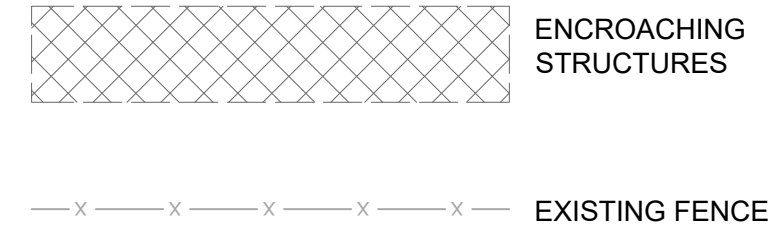
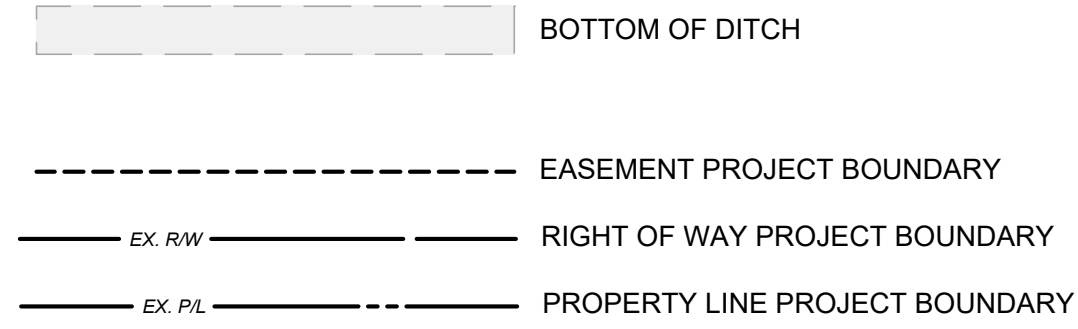
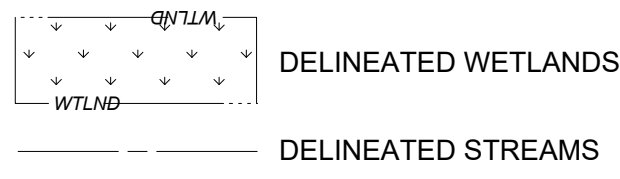


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12/11/2024 <td></td> <td></td> <td></td>			
AS SHOWN	SNK		
DESIGNED BY:	SNK		
DRAWN BY:	SNK		
CHECKED BY:	GMS		

BELLFLOWER/MEADOWBROOK DITCH RESTORATION PROJECT
 MENTOR, OH
 LAKE COUNTY

SOUTHERN SECTION SCHEMATIC & TYPICAL SECTIONS

PROJECT NO.	241472
DISCIPLINE	CIVIL
SHEET NAME	SCM-2
SHEET	OF
5	20

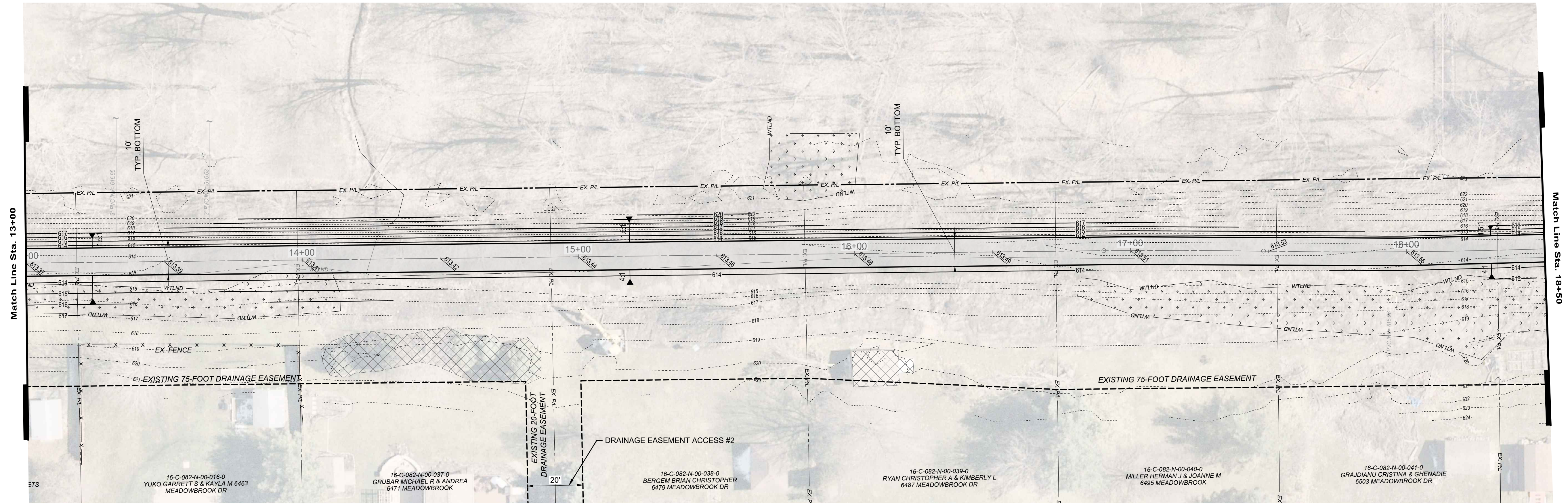
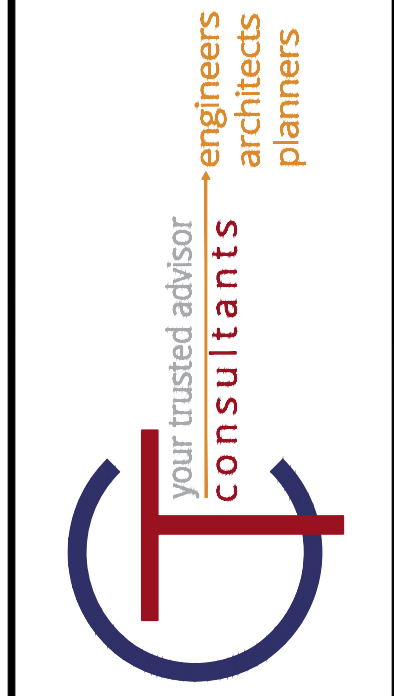
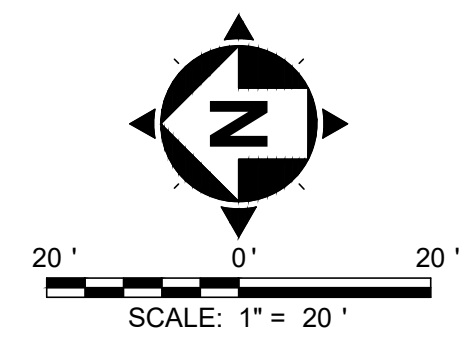
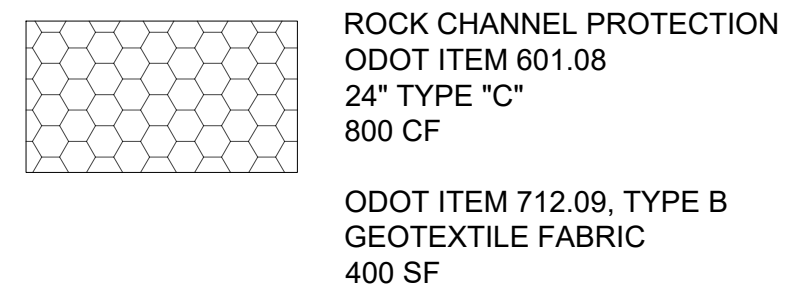
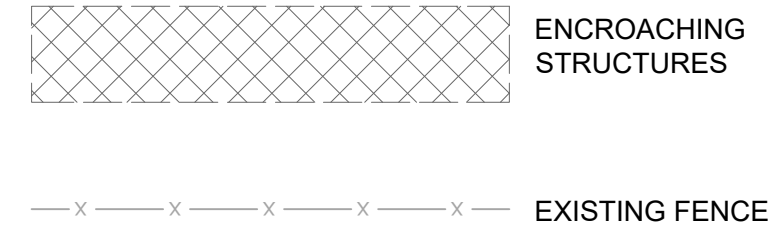
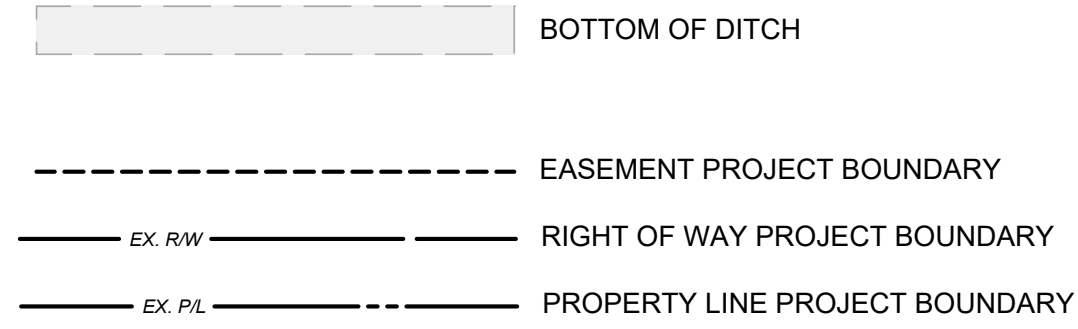
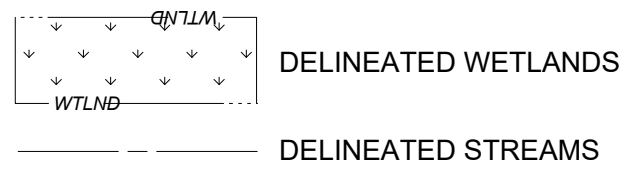


BELFLOWER/MEADOWBROOK DITCH RESTORATION PROJECT
MENTOR, OH
LAKE COUNTY

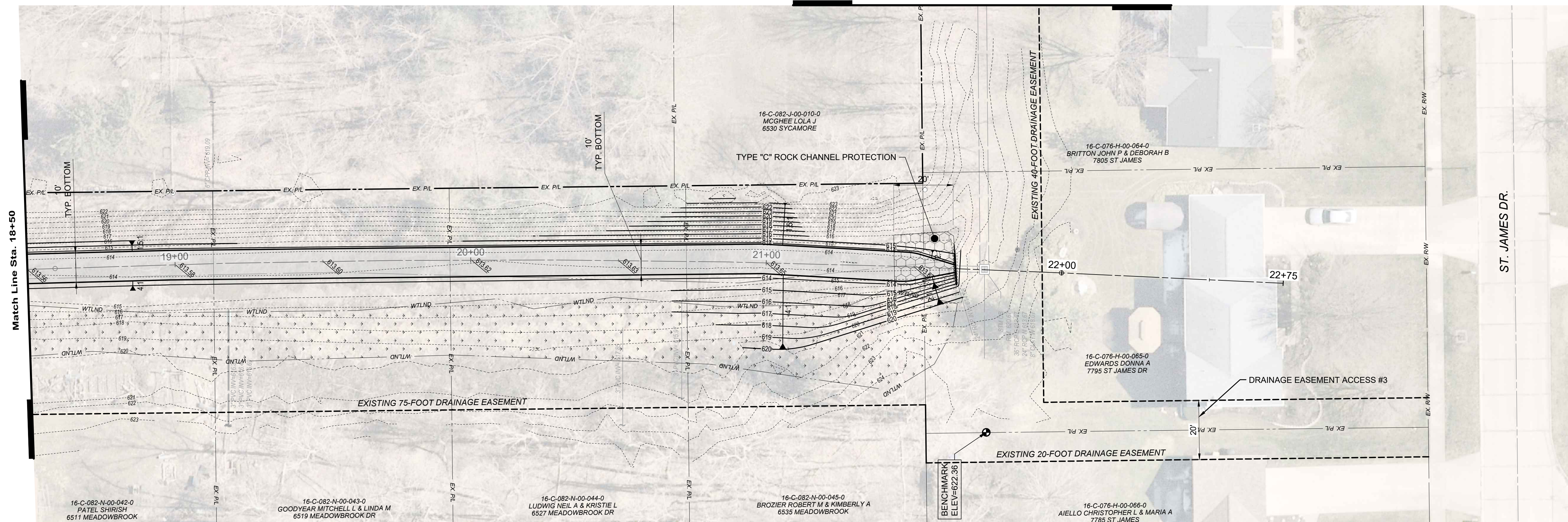
LAYOUT GRADING PLAN
STA. 2+00 TO STA. 13+00

PROJECT NO.	241472
DISCIPLINE	CIVIL
SHEET NAME	P-1
SHEET	6
OF	20

ISSUED FOR:	BID SET	NO.	REVISION	DATE
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DRAWN BY:	SNK			
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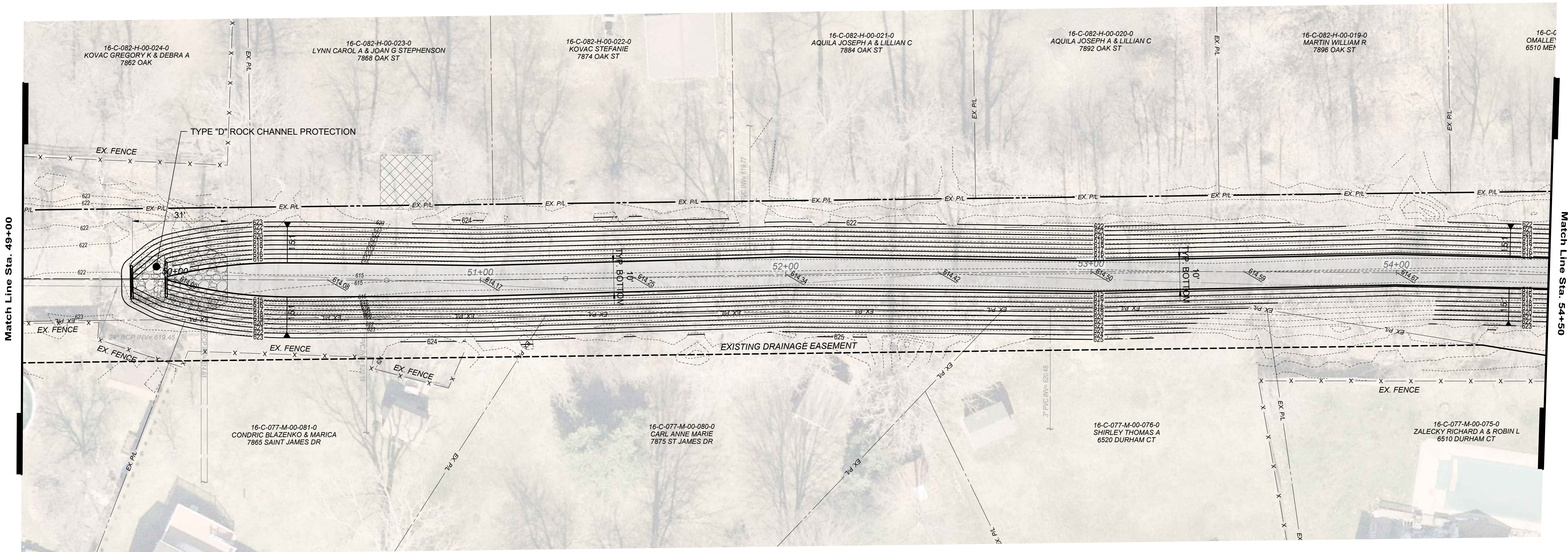
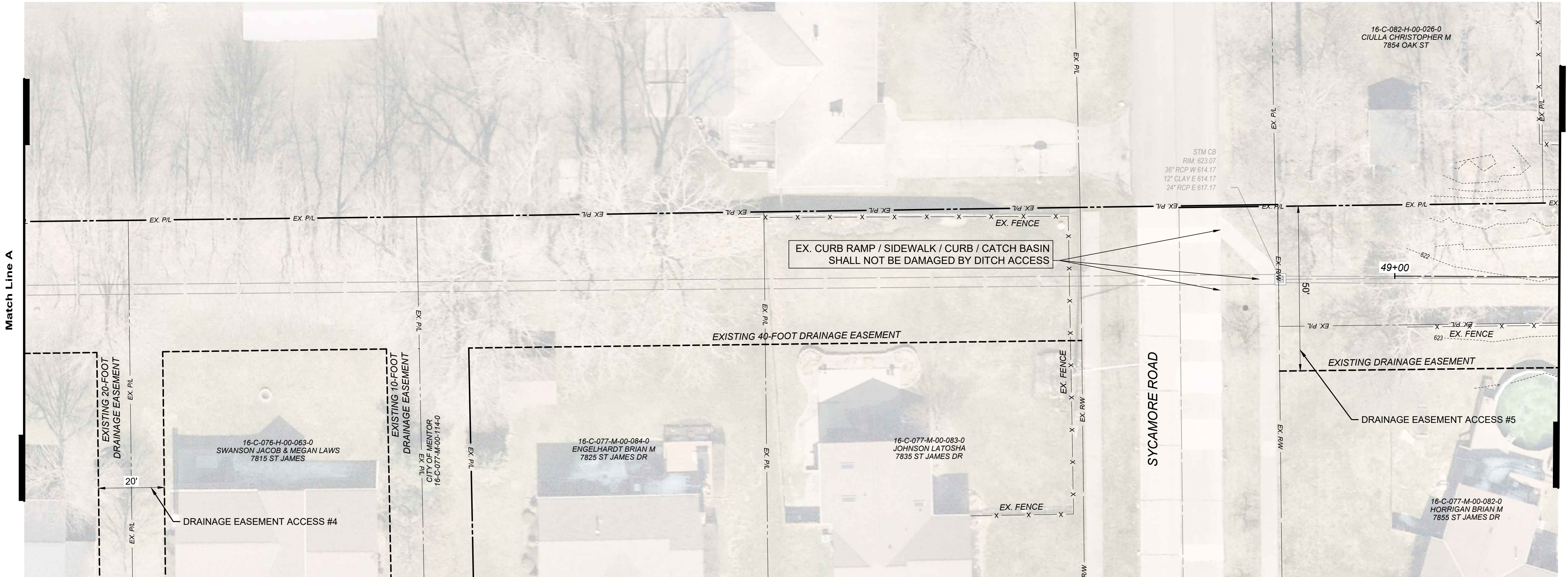
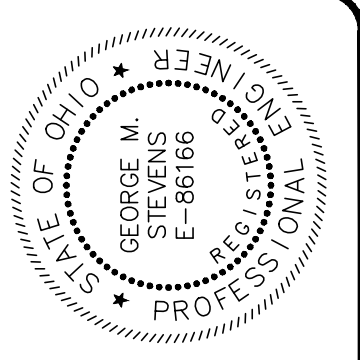
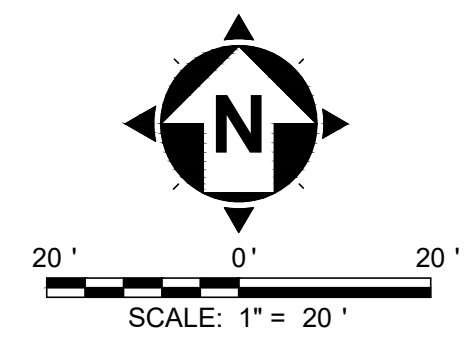
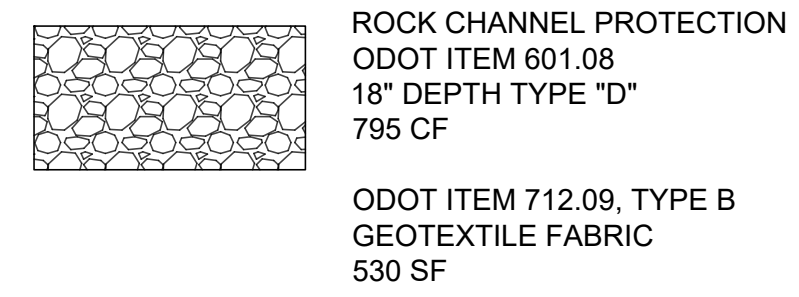
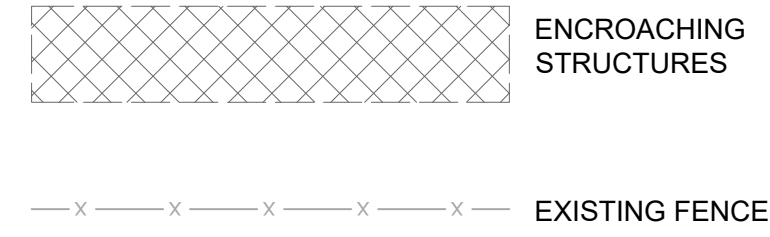
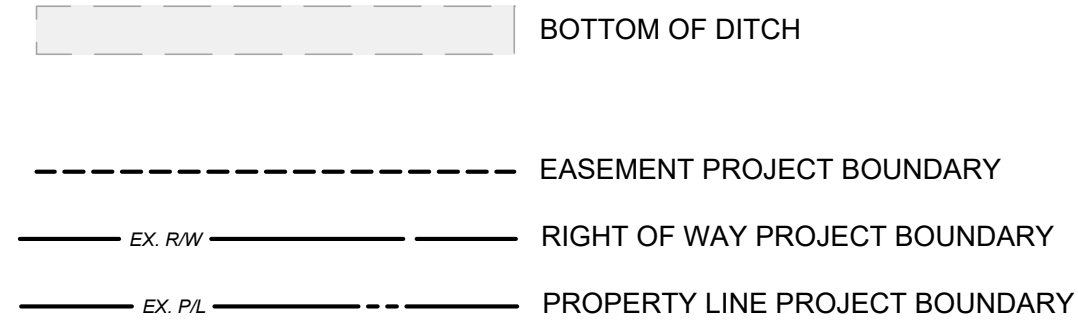
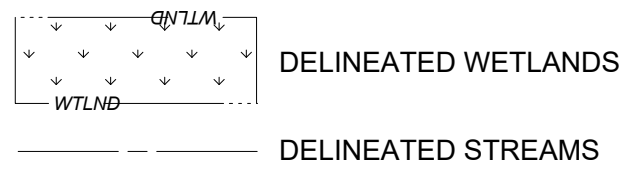
Match Line A



BELFLOWER/MEADOWBROOK DITCH RESTORATION PROJECT
MENTOR, OH
LAKE COUNTY
LAYOUT GRADING PLAN
STA. 13+00 TO STA. 22+00

PROJECT NO.	241472
DISCIPLINE	CIVIL
SHEET NAME	P-2
SHEET	7
OF	20

ISSUED FOR:	BID SET	NO.	REVISION	DATE
ISSUE DATE:	12/11/2024			
SCALE:	AS SHOWN			
DESIGNED BY:	SNK			
DRAWN BY:	SNK			
CHECKED BY:	GMS			



BELFLOWER/MEADOWBROOK DITCH RESTORATION PROJECT
MENTOR, OH
LAKE COUNTY

LAYOUT GRADING PLAN
STA. 49+00 TO STA. 54+50

ISSUED FOR:	BID SET:	NO.	REVISION	DATE
AS SHOWN	12/11/2024			

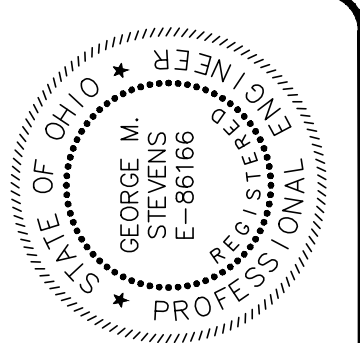
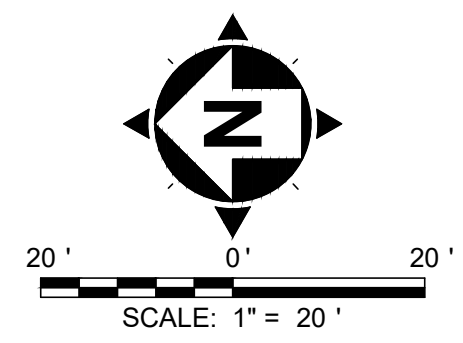
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SNK	SNK	GMS

PROJECT NO.	241472
DISCIPLINE	CIVIL
SHEET NAME	P-3
SHEET	8
OF	20

DELINEATED WETLANDS
DELINEATED STREAMS

BOTTOM OF DITCH
EASEMENT PROJECT BOUNDARY
RIGHT OF WAY PROJECT BOUNDARY
PROPERTY LINE PROJECT BOUNDARY

ENCROACHING STRUCTURES
EXISTING FENCE

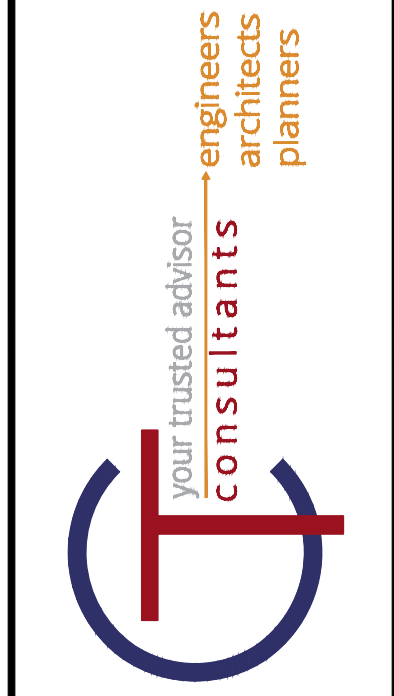
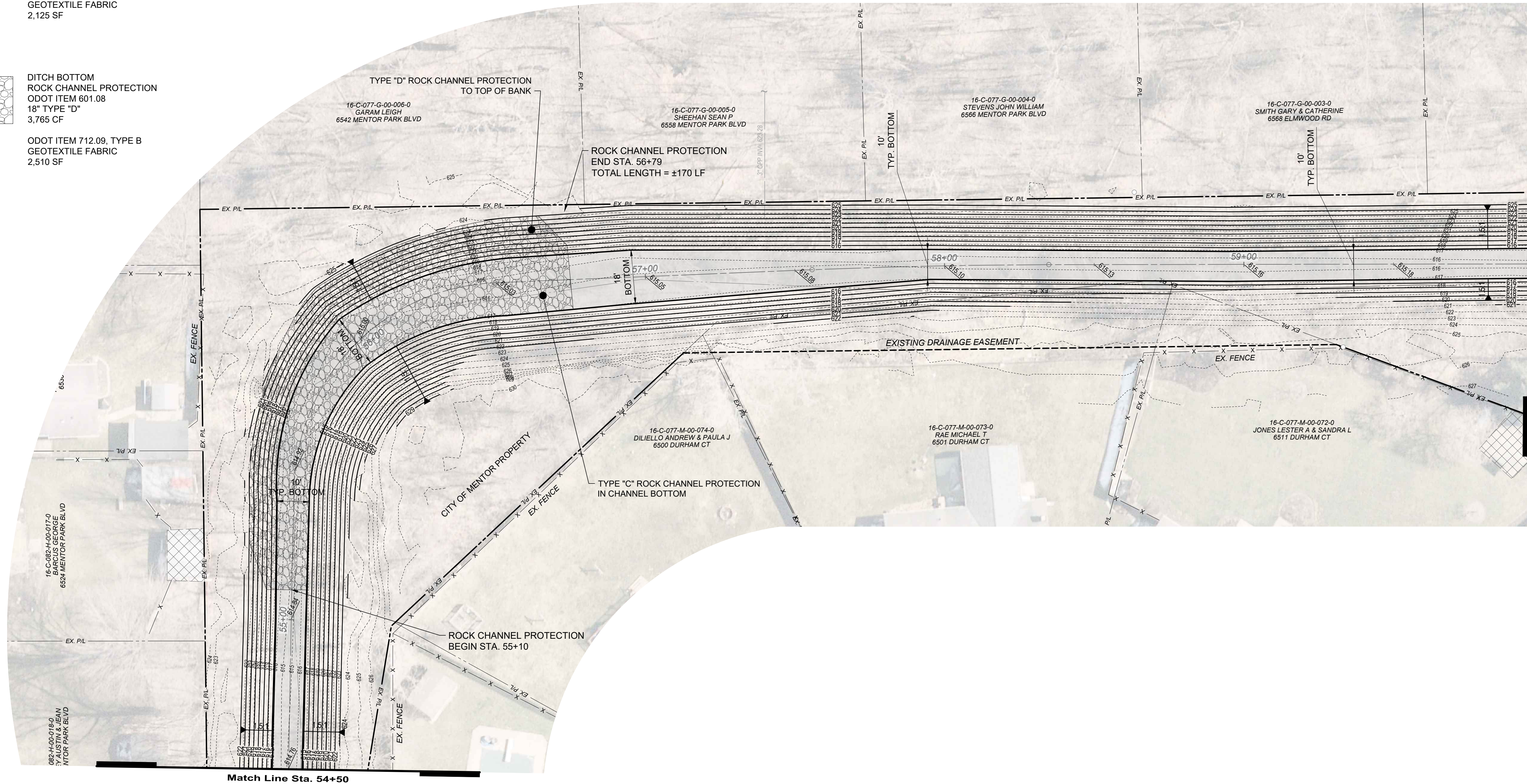


DITCH BANK
ROCK CHANNEL PROTECTION
ODOT ITEM 601.08
18" DEPTH TYPE "D"
3,186 CF

ODOT ITEM 712.09, TYPE B
GEOTEXTILE FABRIC
2,125 SF

DITCH BOTTOM
ROCK CHANNEL PROTECTION
ODOT ITEM 601.08
18" TYPE "D"
3,765 CF

ODOT ITEM 712.09, TYPE B
GEOTEXTILE FABRIC
2,510 SF

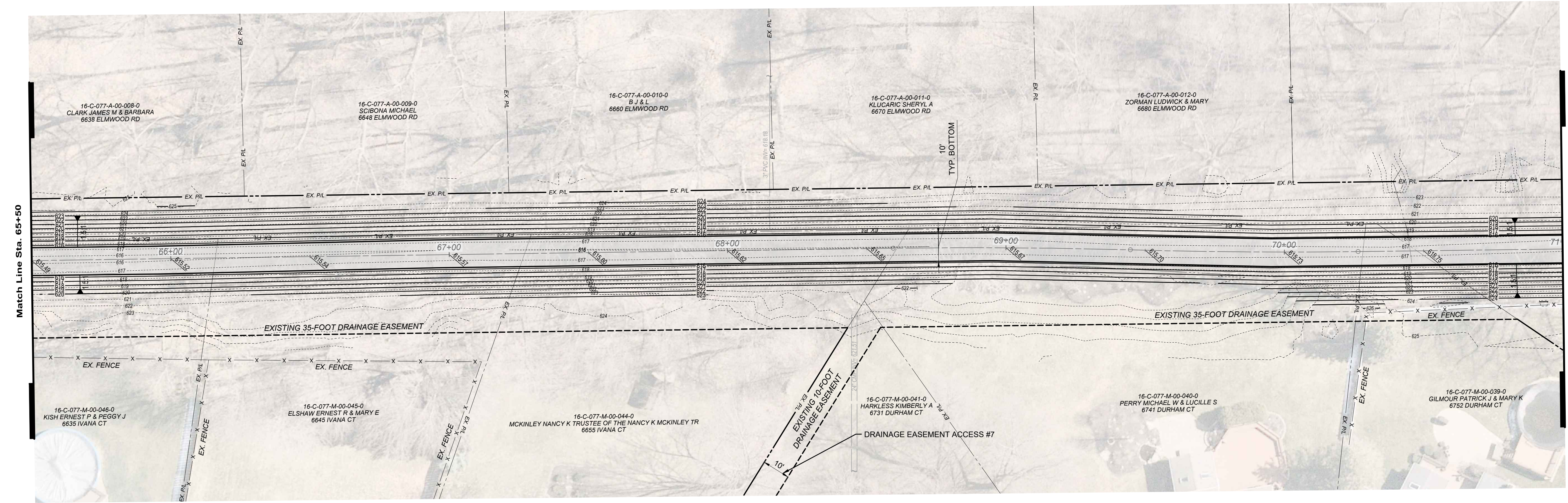
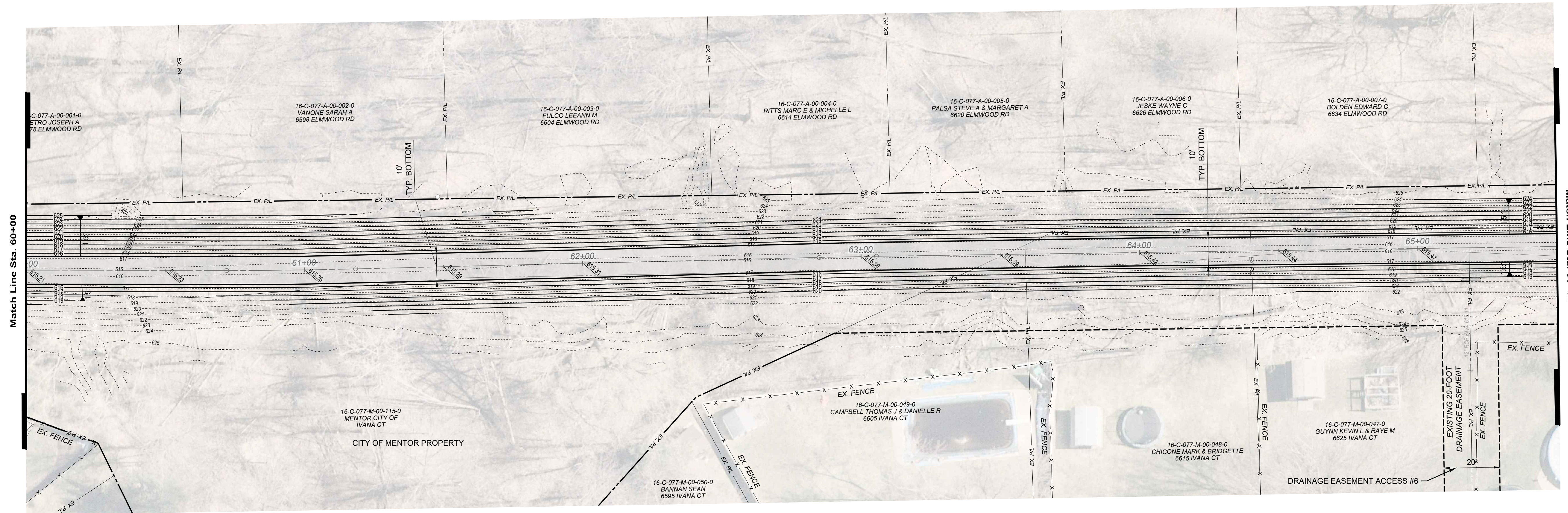
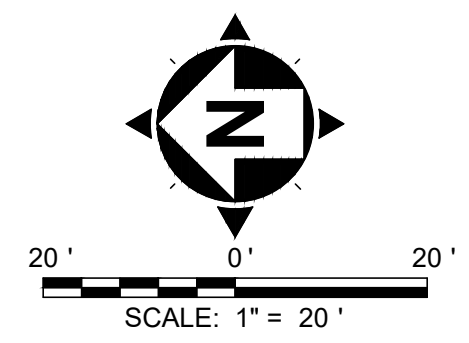
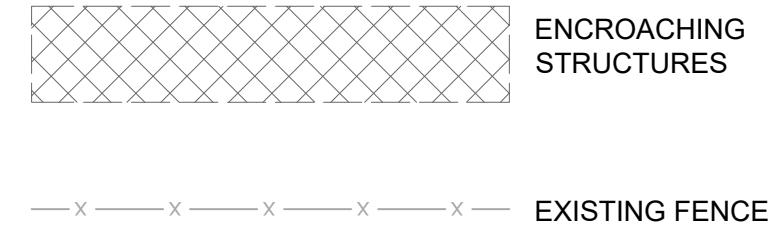
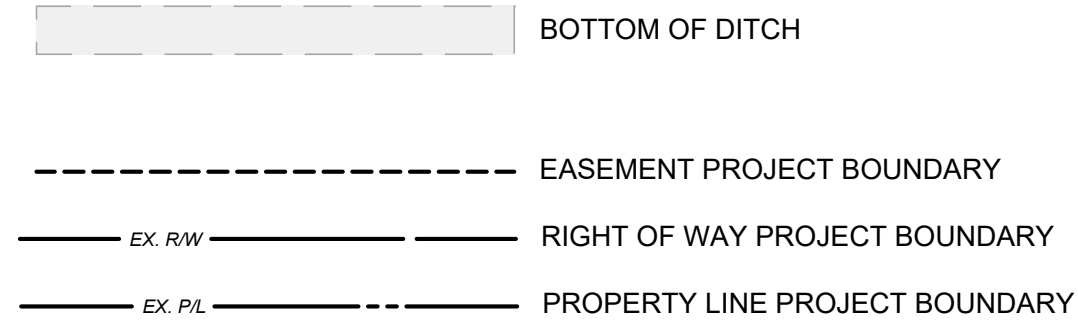
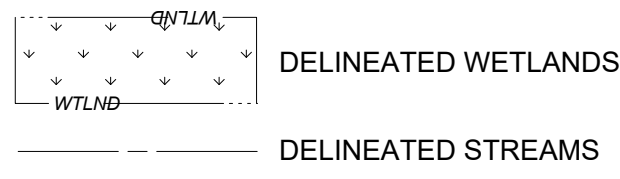


ISSUED FOR:	BID SET	NO	REVISION	DATE
ISSUE DATE:	12/11/2024			
SCALE:	AS SHOWN			
DESIGNED BY:	SNK			
DRAWN BY:	SNK			
CHECKED BY:	GMS			

BELFLOWER/MEADOWBROOK DITCH RESTORATION PROJECT
MENTOR, OH
LAKE COUNTY

LAYOUT GRADING PLAN
STA. 54+50 TO STA. 60+00

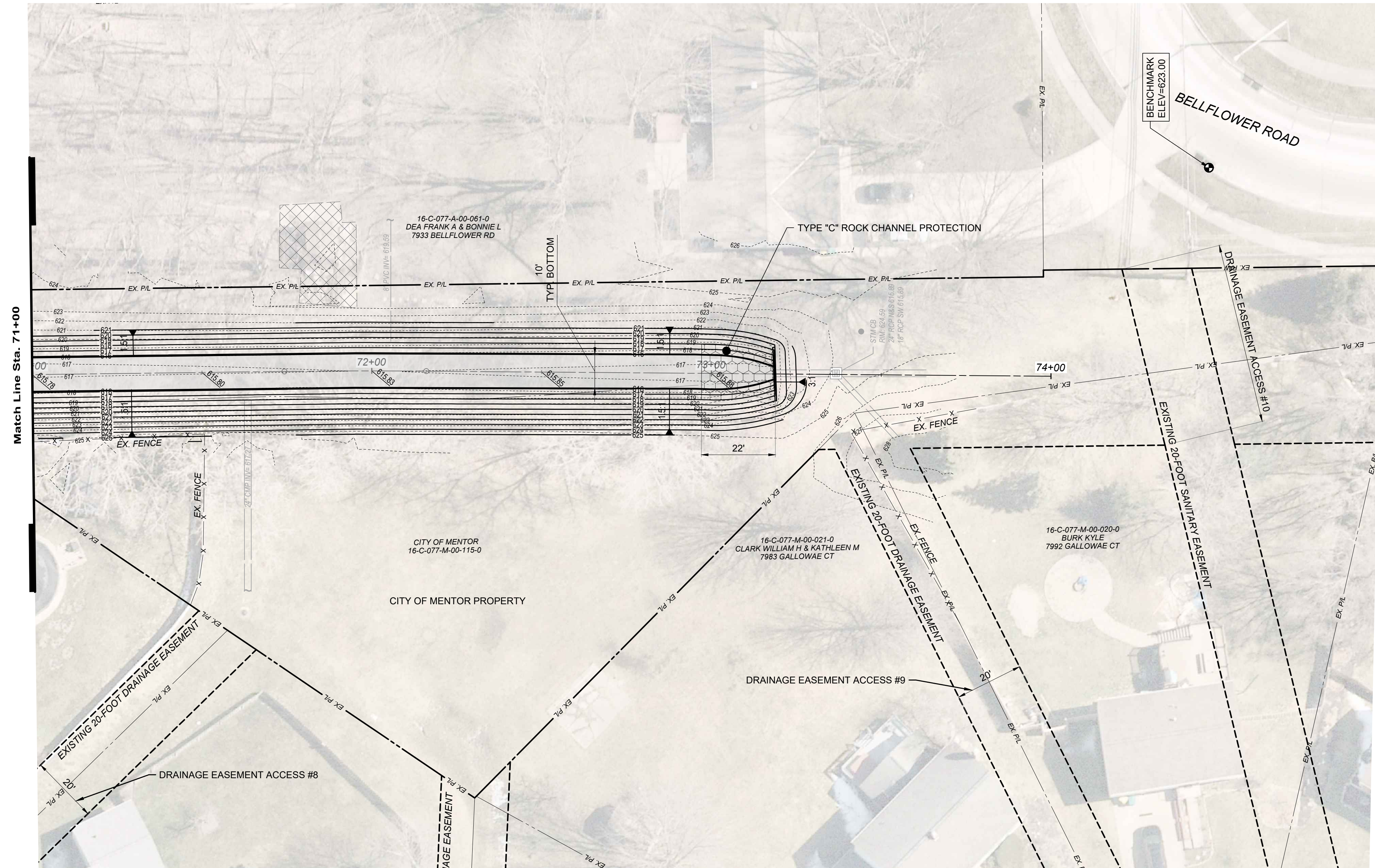
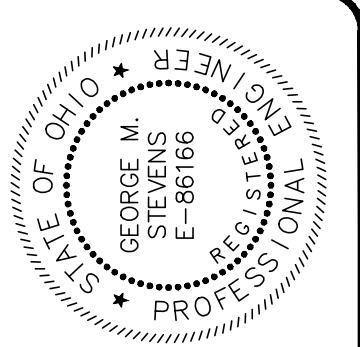
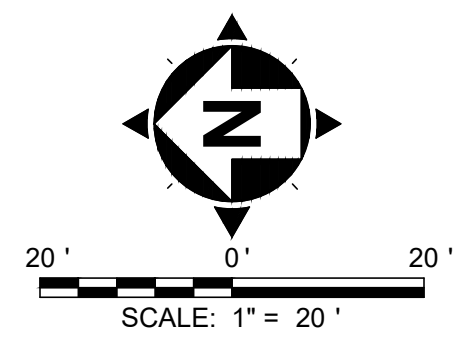
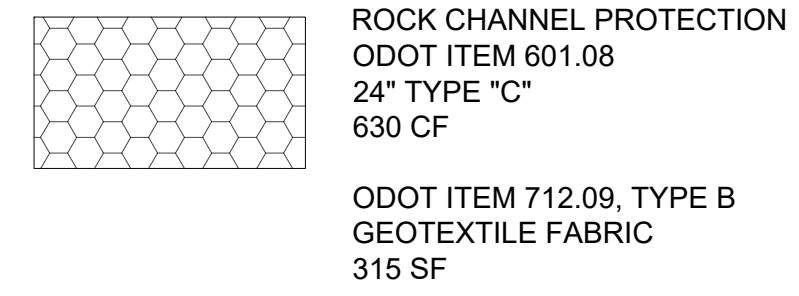
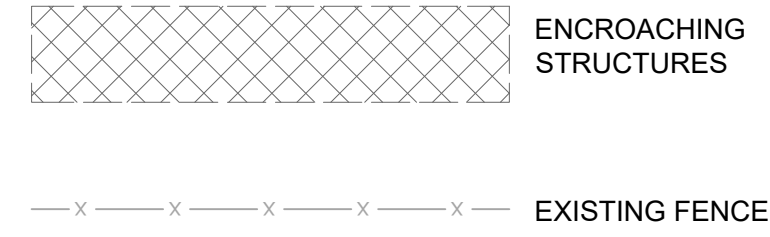
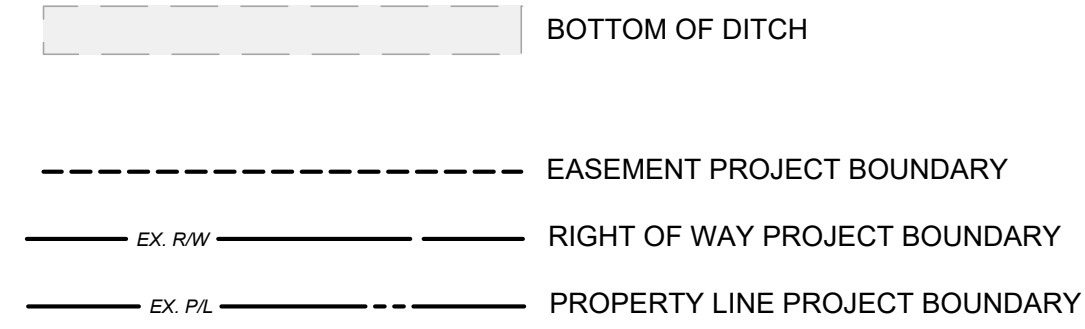
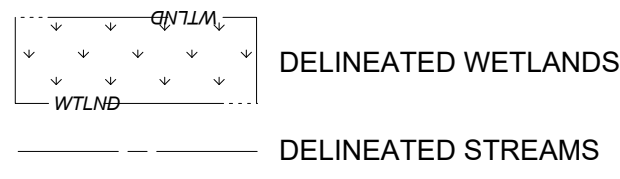
PROJECT NO.	241472
DISCIPLINE	CIVIL
SHEET NAME	P-4
SHEET	9
OF	20



DATE	REVISION	NO	BID SET	ISSUED FOR:
			12/11/2024	AS SHOWN
				DESIGNED BY: SNK
				DRAWN BY: SNK
				CHECKED BY: GMS

BELFLOWER/MEADOWBROOK DITCH RESTORATION PROJECT
MENTOR, OH
LAKE COUNTY
LAYOUT GRADING PLAN
STA. 60+00 TO STA. 71+00

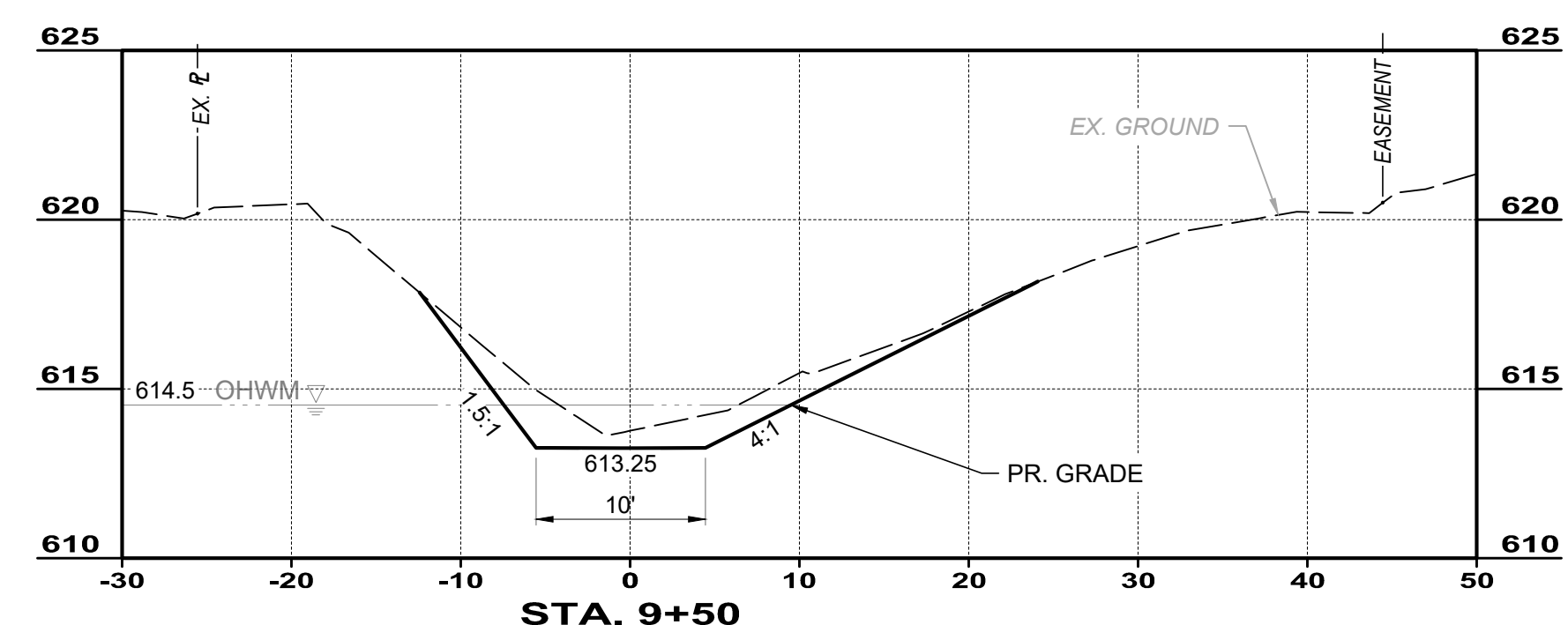
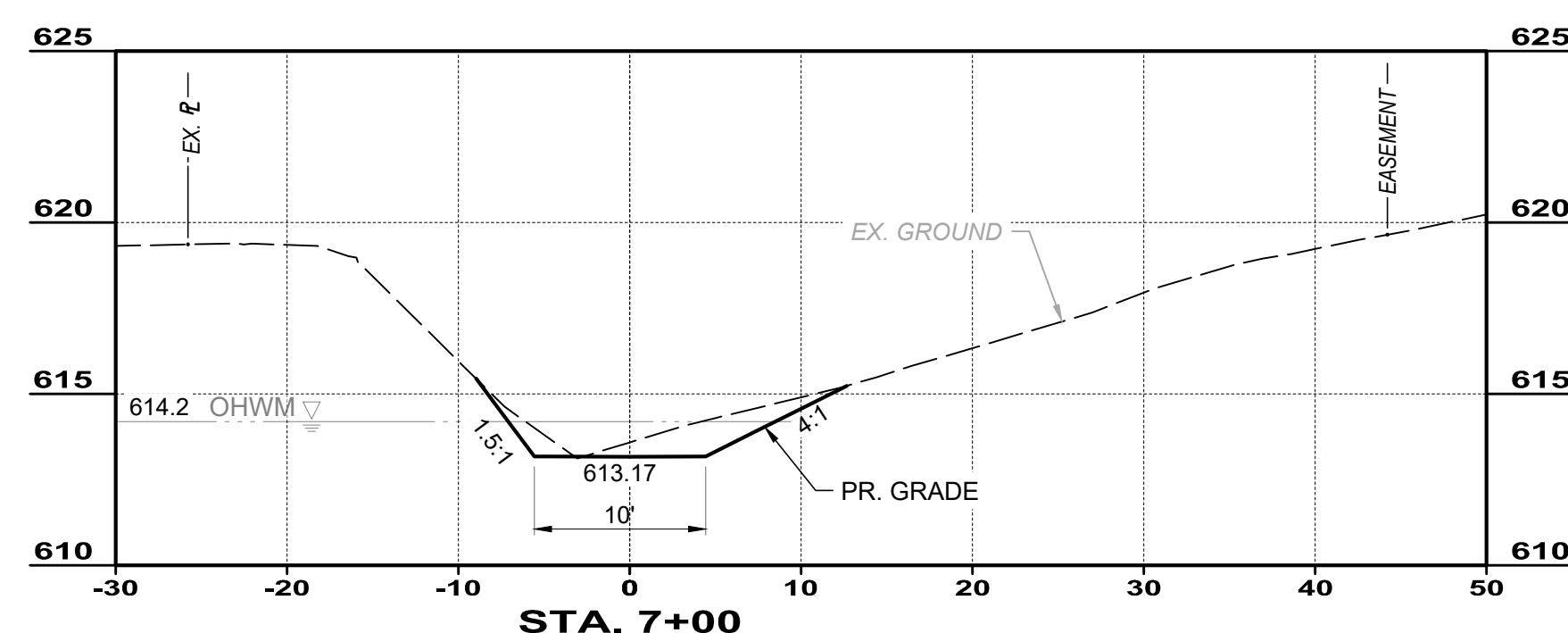
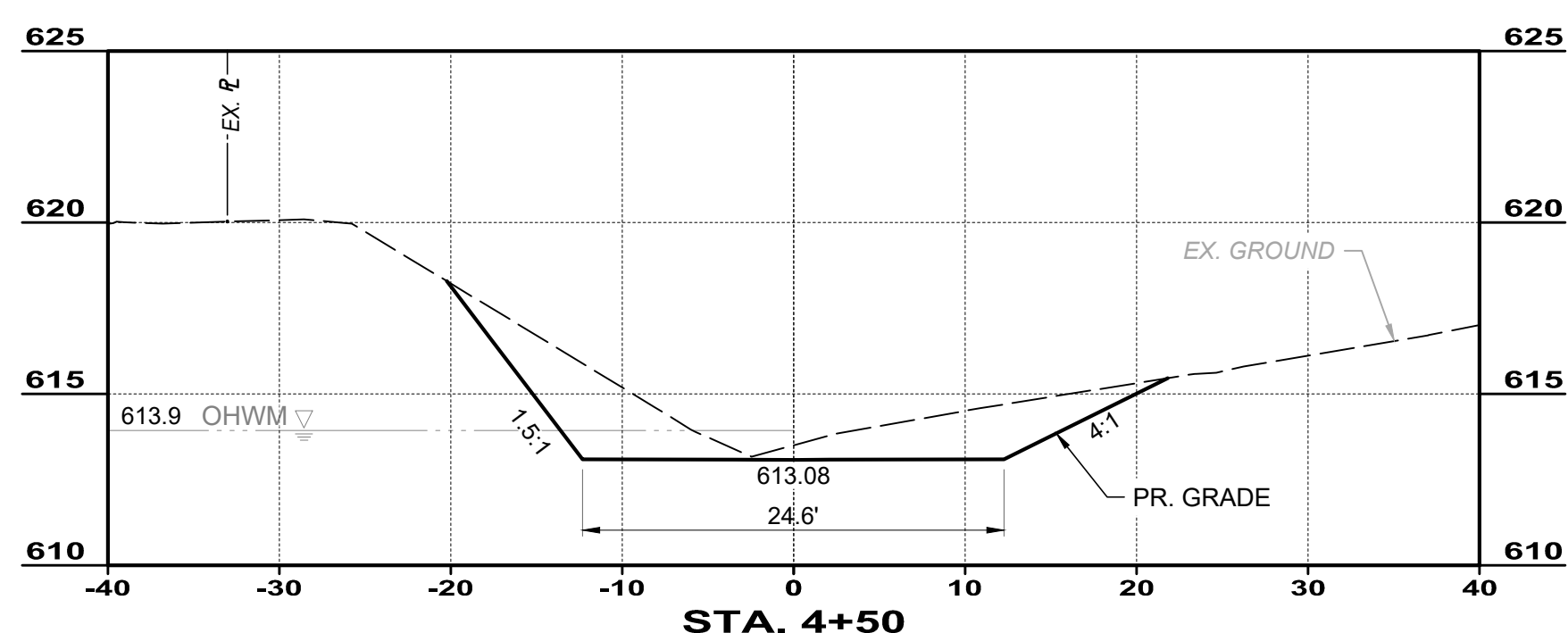
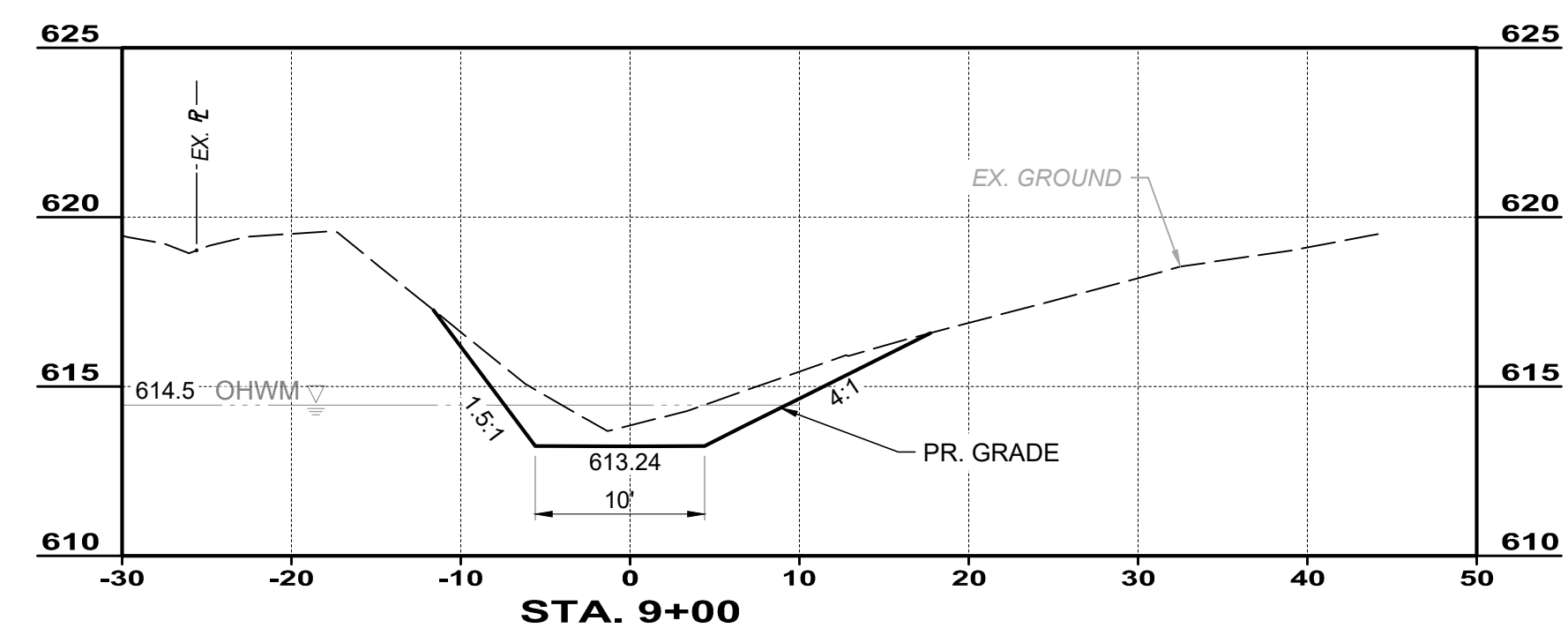
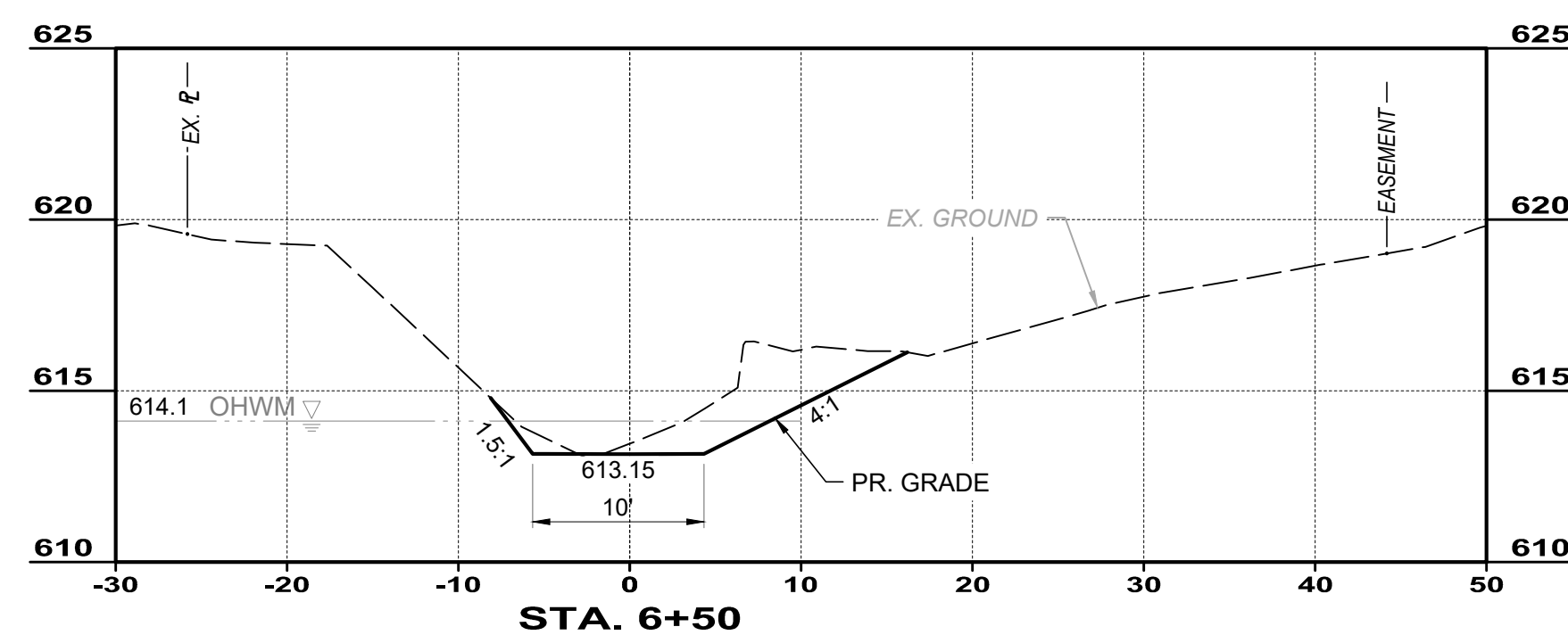
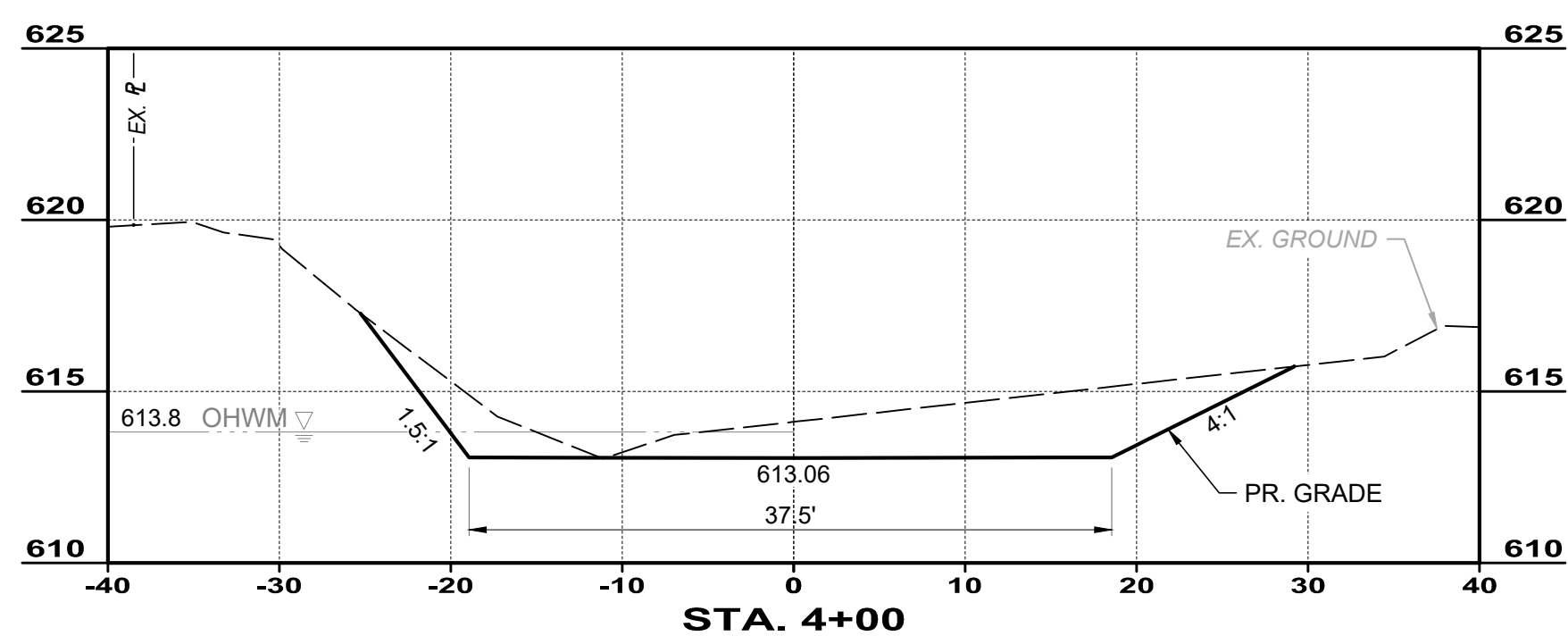
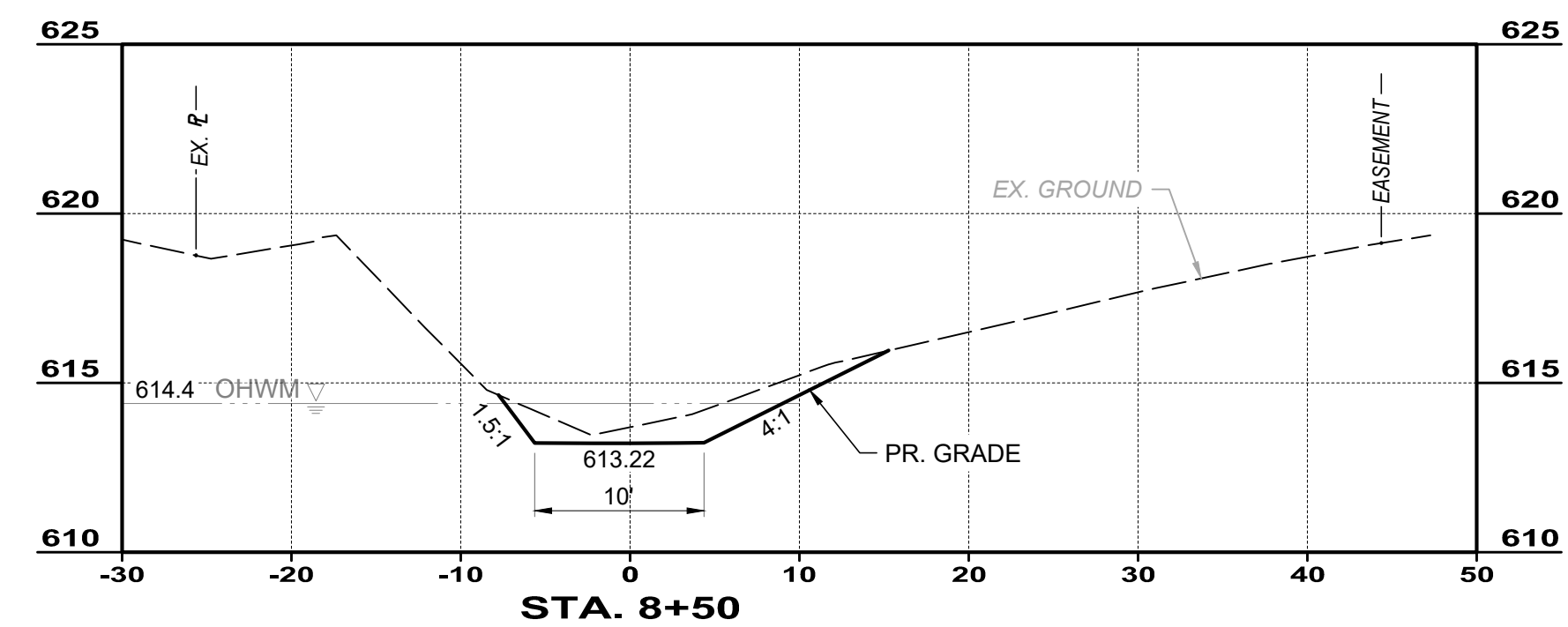
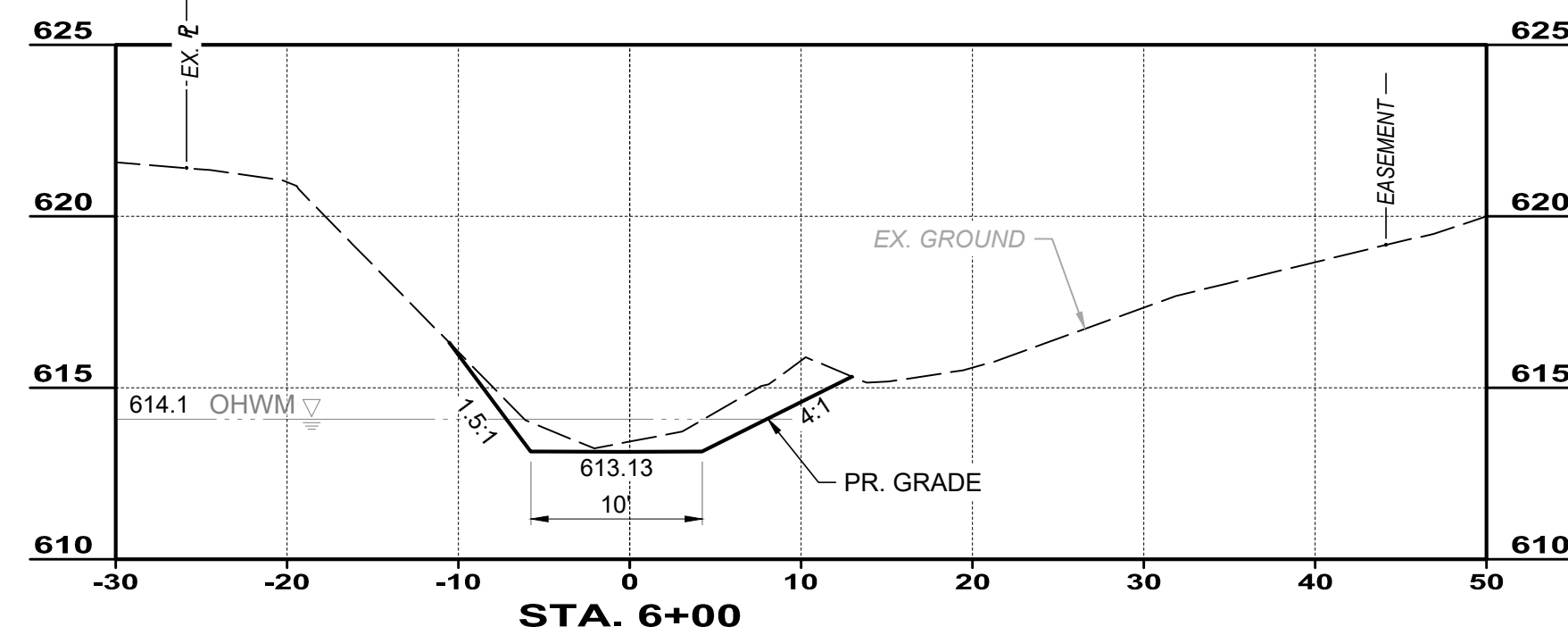
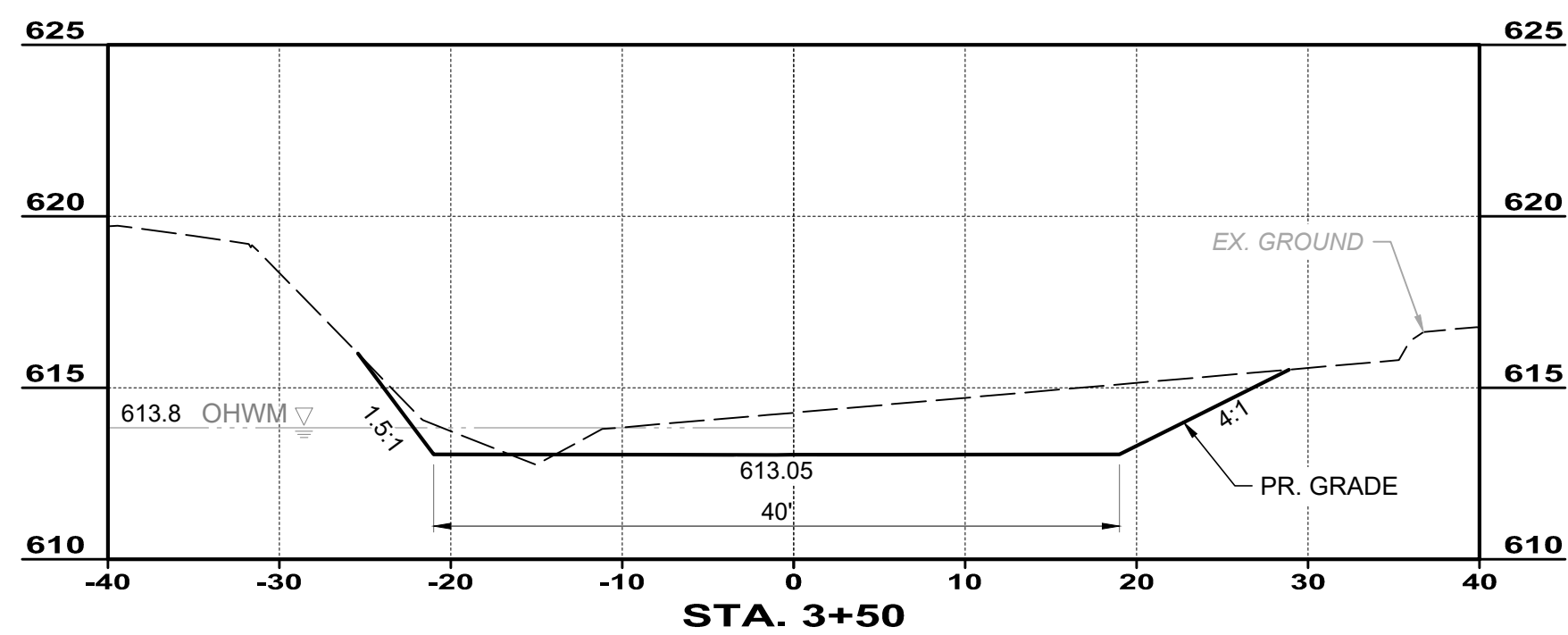
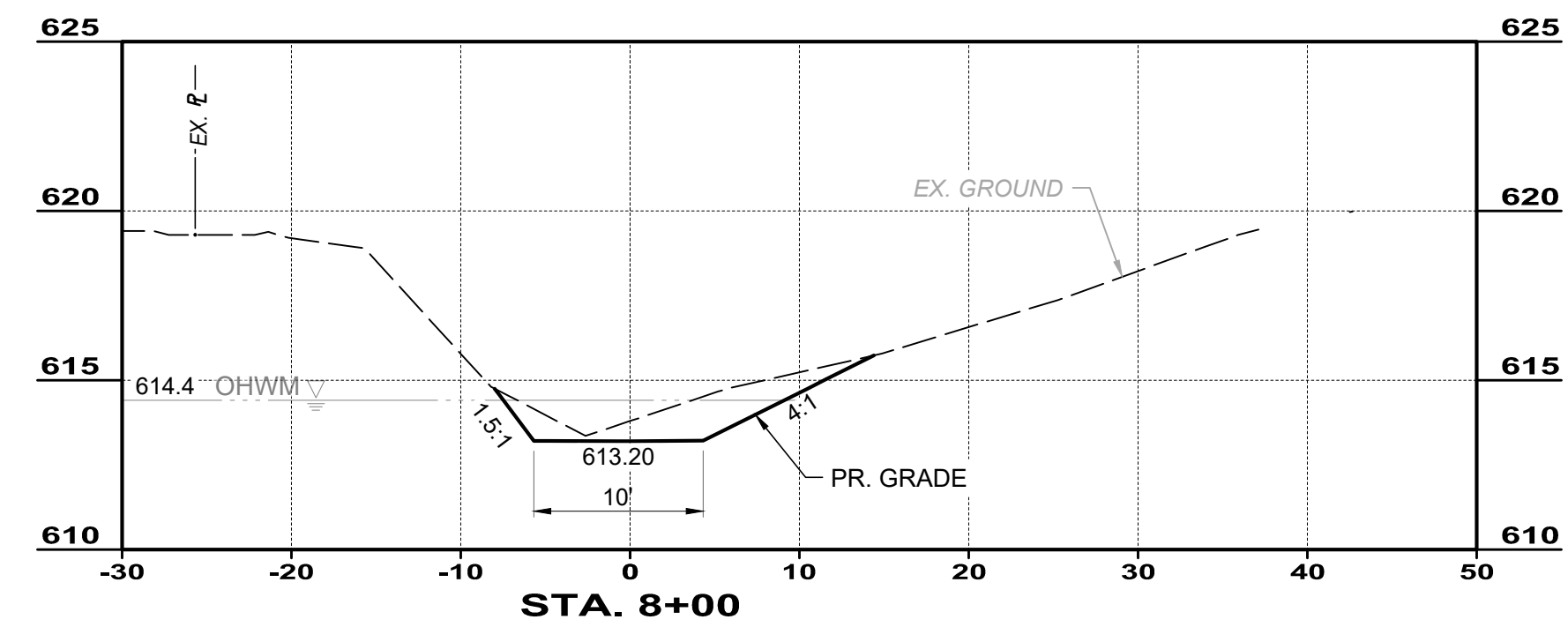
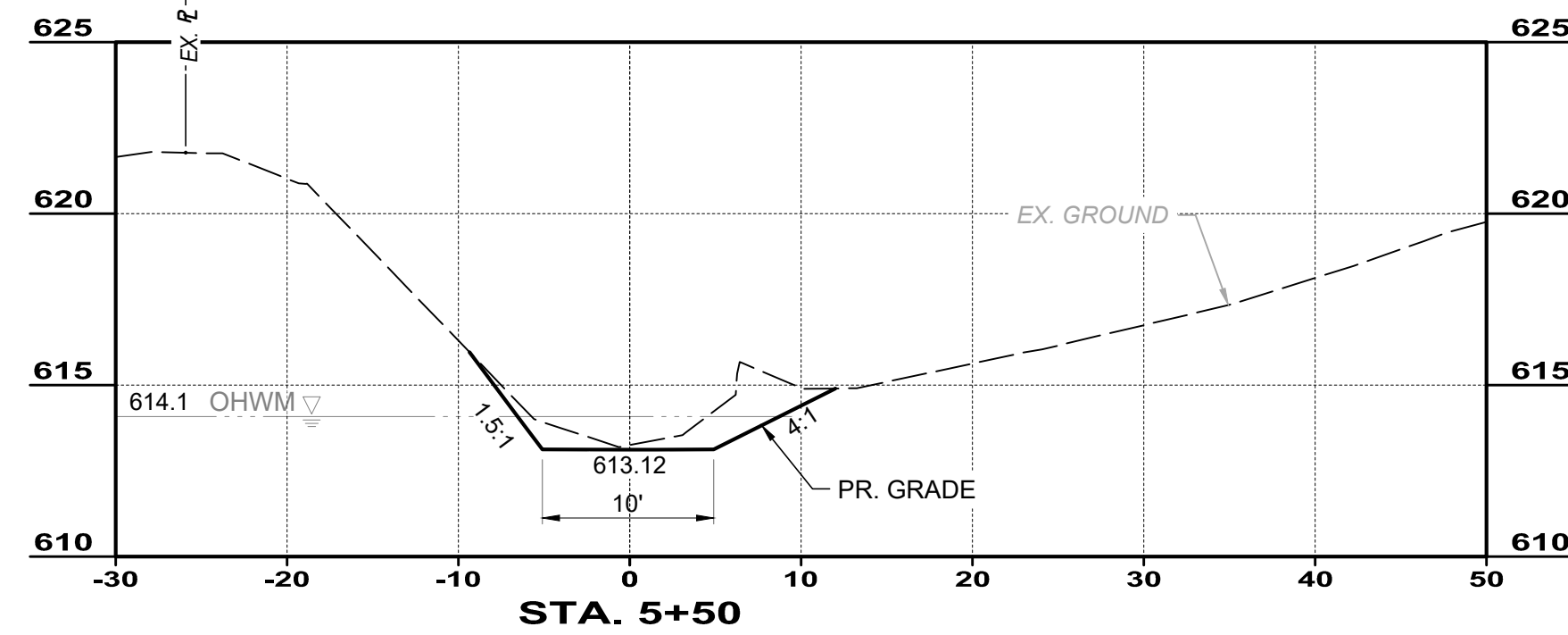
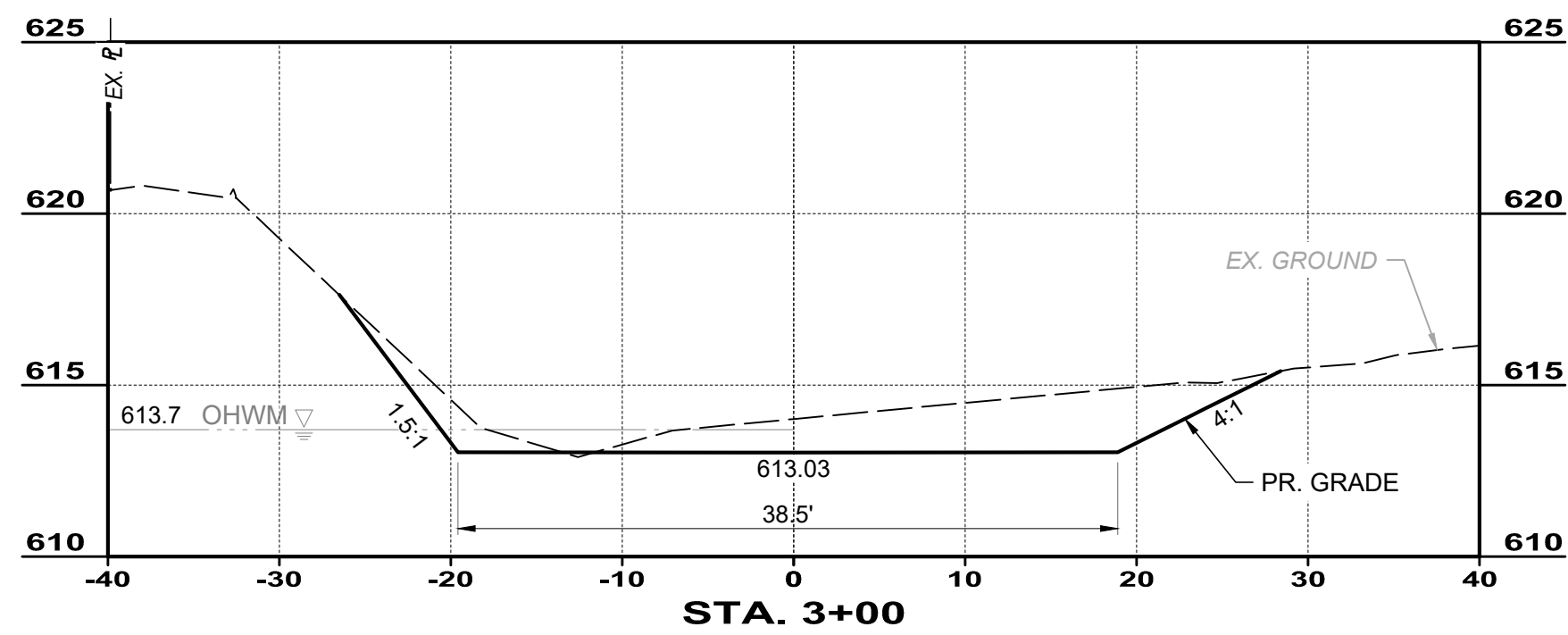
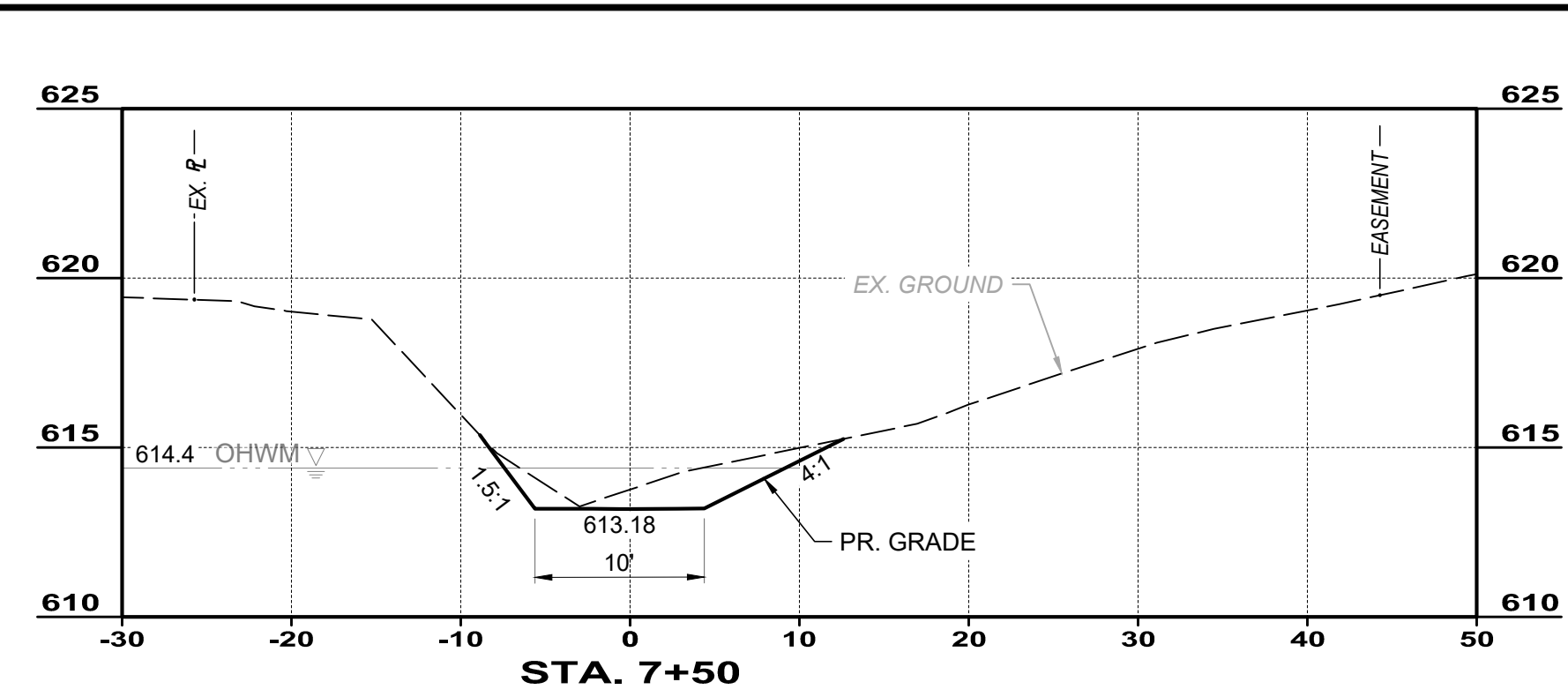
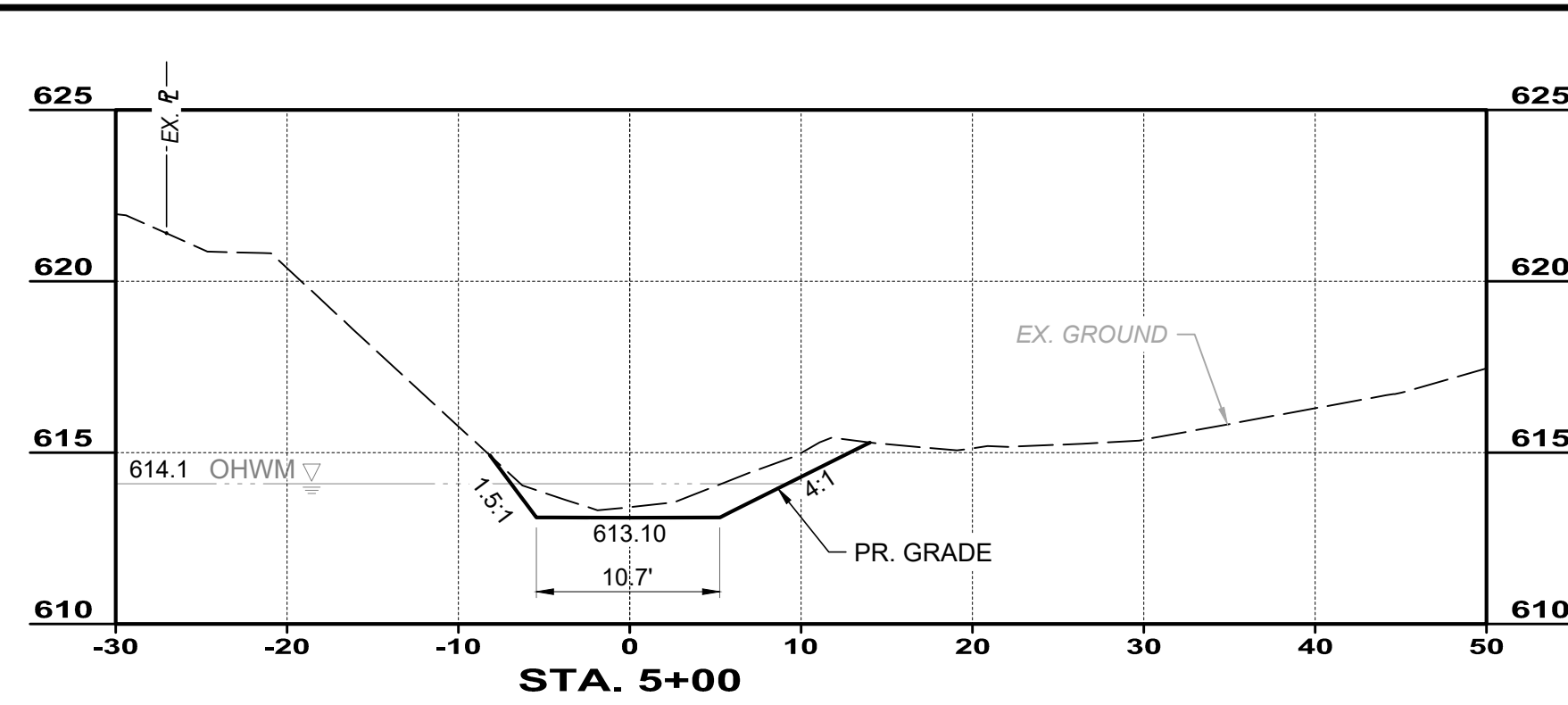
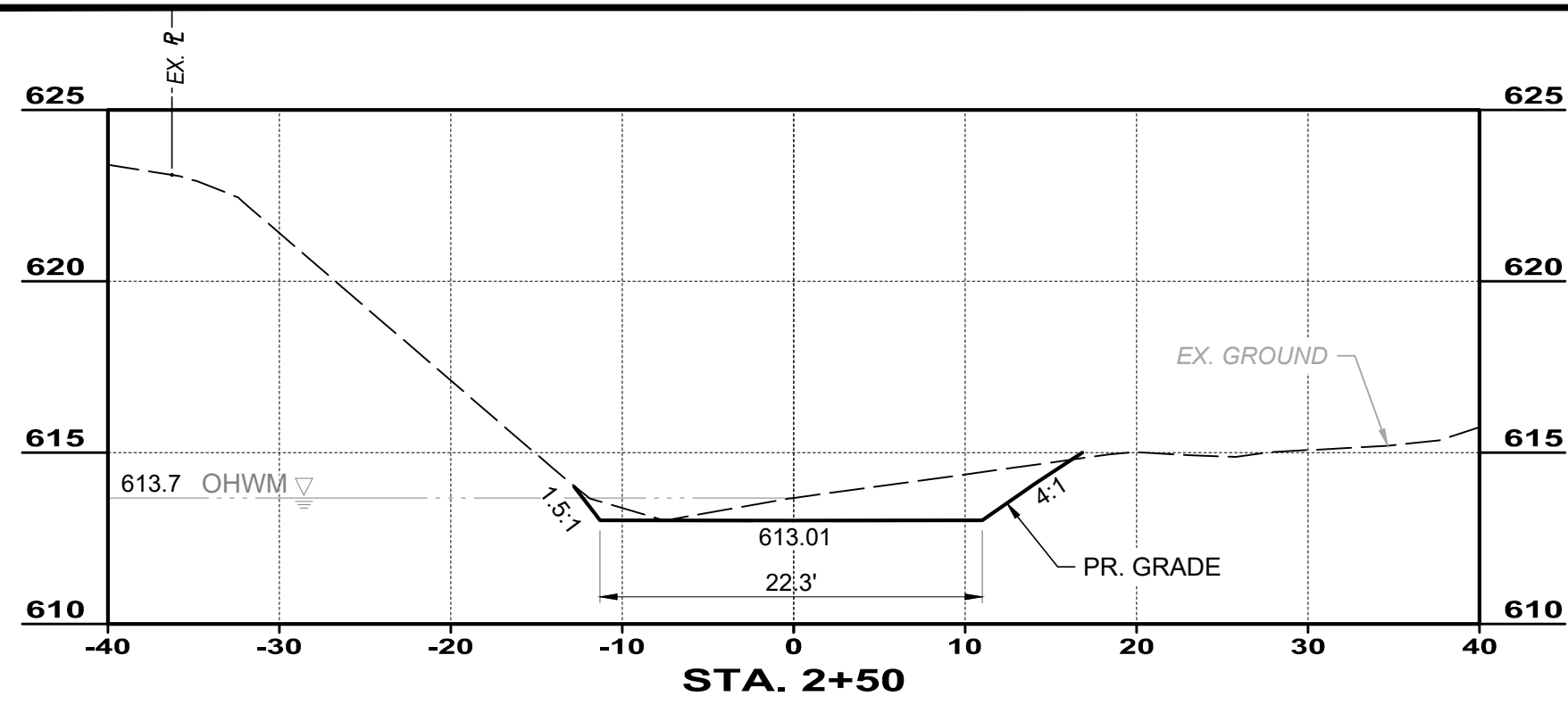
PROJECT NO.	241472
DISCIPLINE	CIVIL
SHEET NAME	P-5
SHEET	10
OF	20



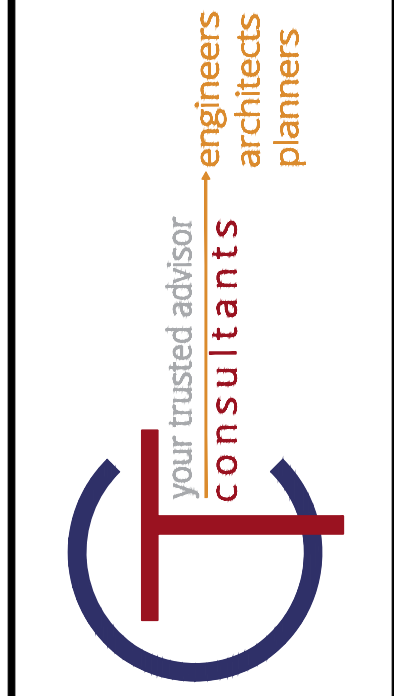
ISSUED FOR:	BID SET	NO	REVISION	DATE
ISSUE DATE:	12/11/2024			
SCALE:	AS SHOWN			
DESIGNED BY:	SNK			
DRAWN BY:	SNK			
CHECKED BY:	GMS			

BELLFLOWER/MEADOWBROOK DITCH RESTORATION PROJECT
 MENTOR, OH
 LAKE COUNTY
LAYOUT GRADING PLAN
 STA. 71+00 TO STA. 74+00

PROJECT NO.	241472
DISCIPLINE	CIVIL
SHEET NAME	P-6
SHEET	11
OF	20



NORTH DITCH - CROSS SECTIONS (1 OF 3)



ISSUED FOR:	BID SET NO.	REVISION NO.	DATE
ISSUE DATE: 12/11/2024	AS SHOWN		
SCALE:	DESIGNED BY: SNK	DRAWN BY: SNK	CHECKED BY: GMS

BELFLOWER/MEADOWBROOK DITCH RESTORATION PROJECT
 MENTOR, OH
 LAKE COUNTY
NORTH CROSS SECTIONS 1

PROJECT NO.	241472
DISCIPLINE	CIVIL
SHEET NAME	N-CS-1
SHEET	12
OF	20

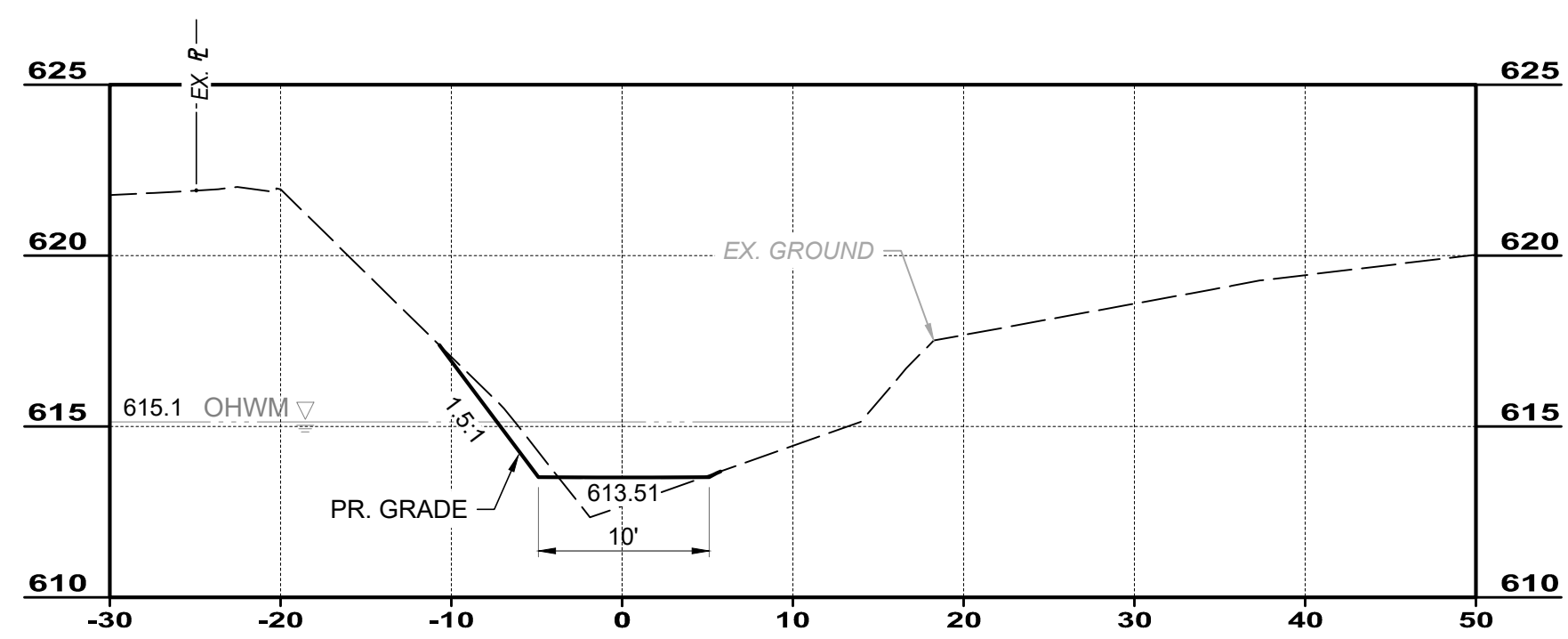
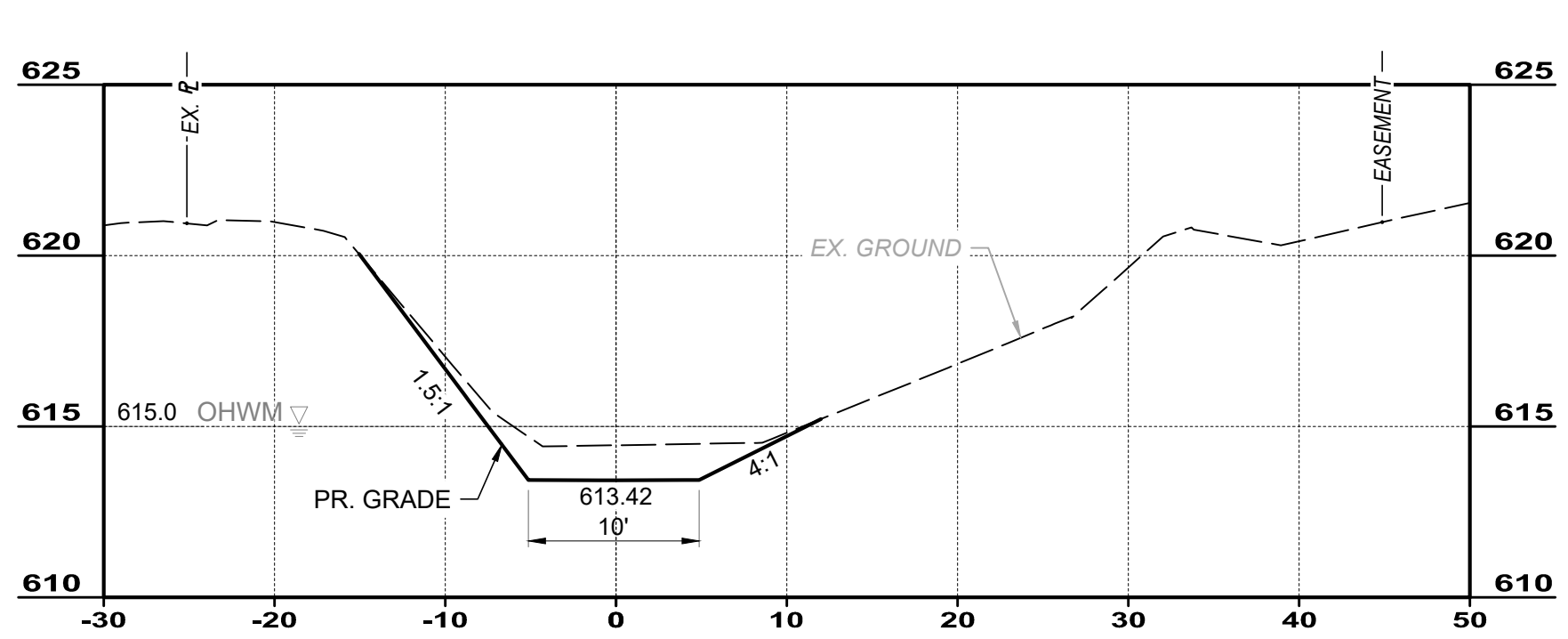
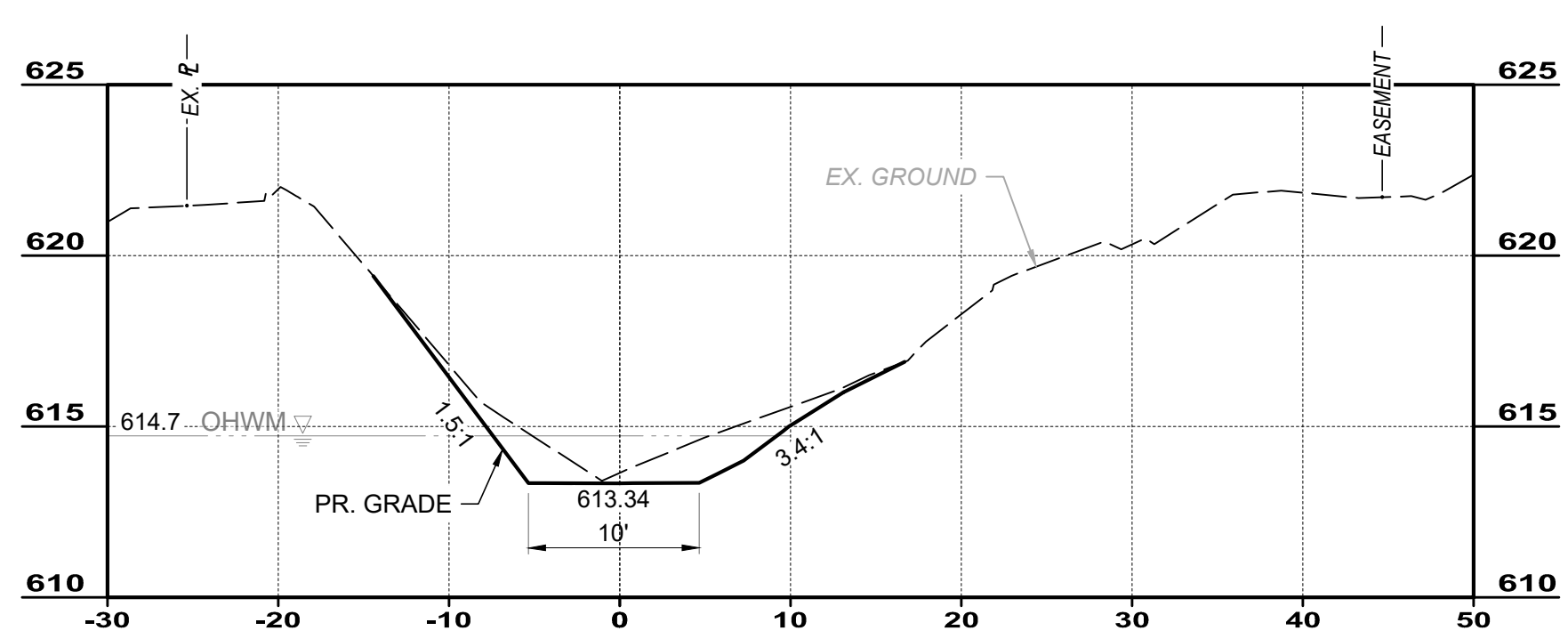
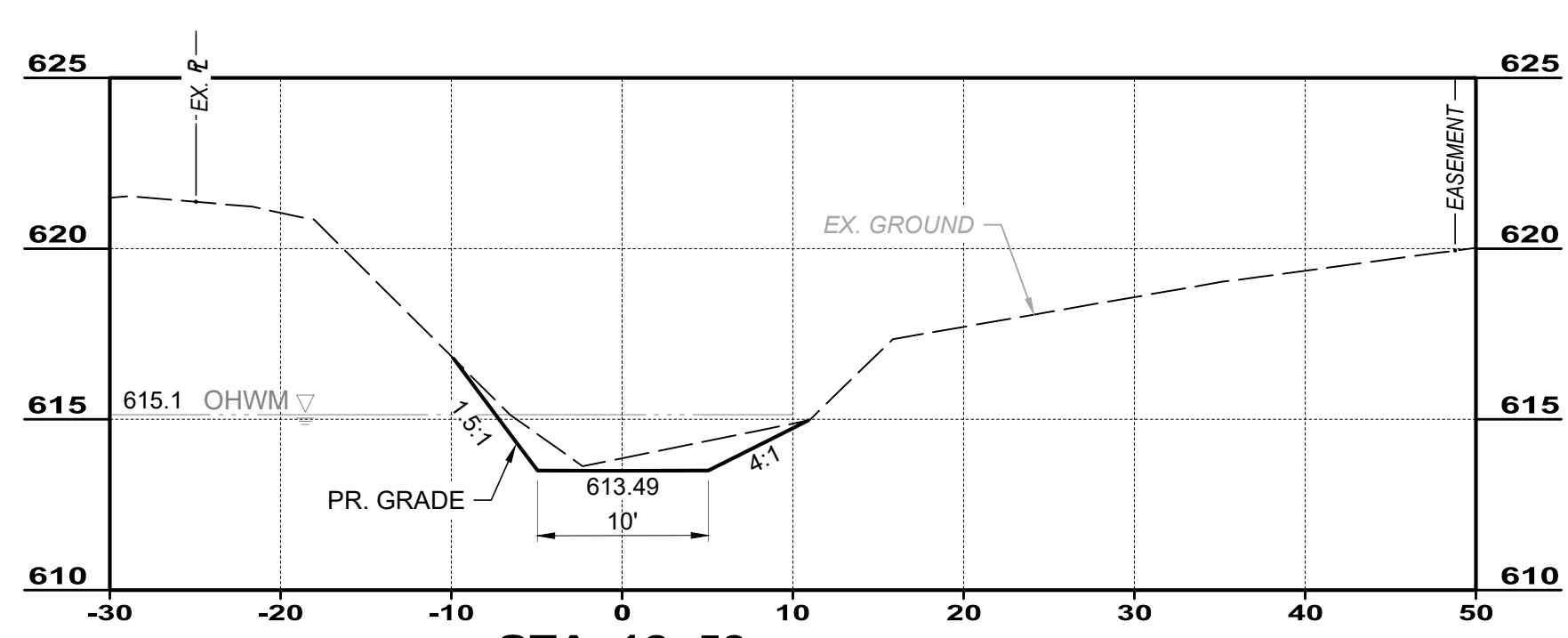
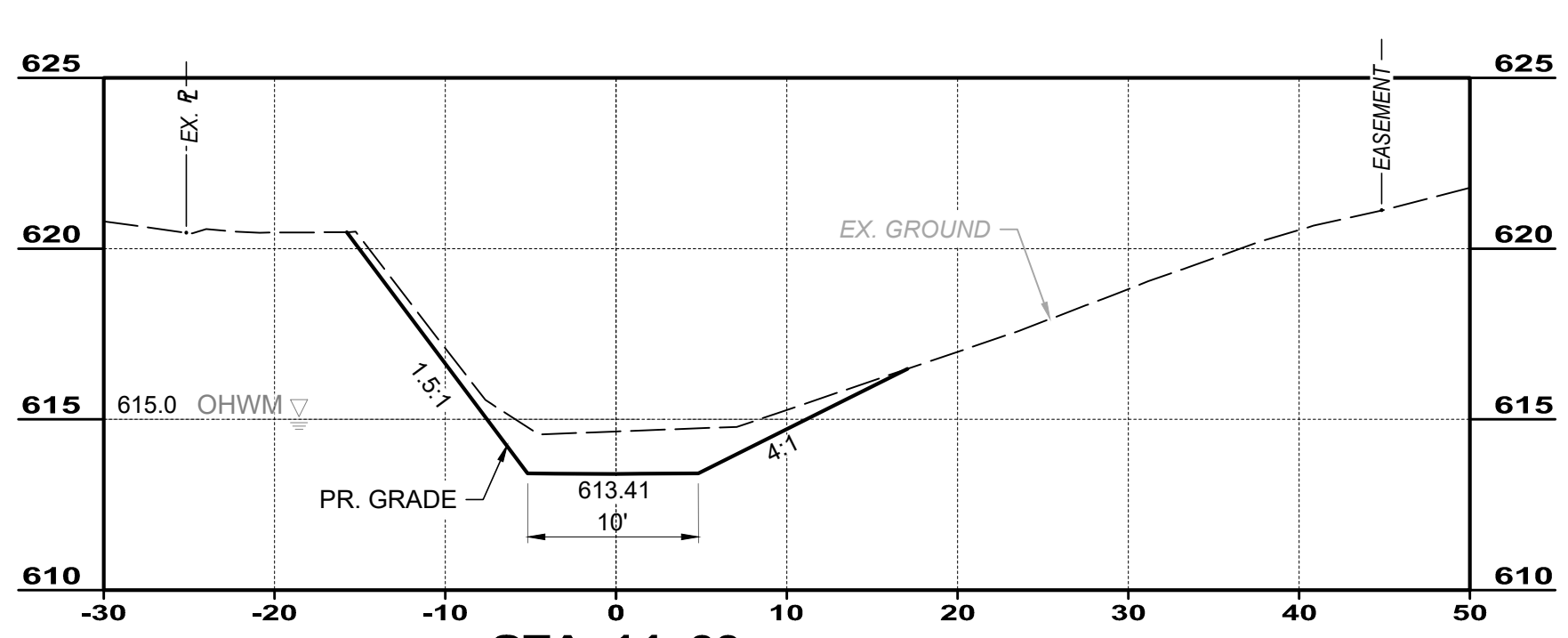
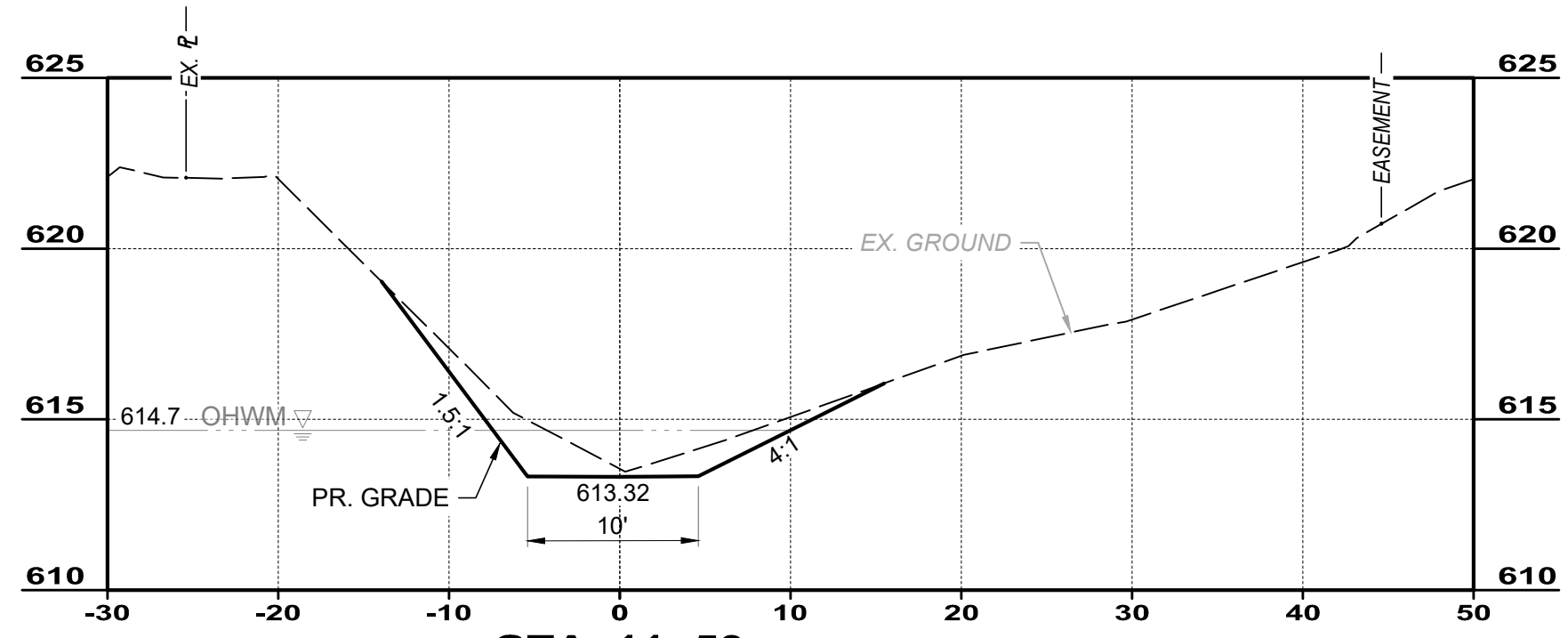
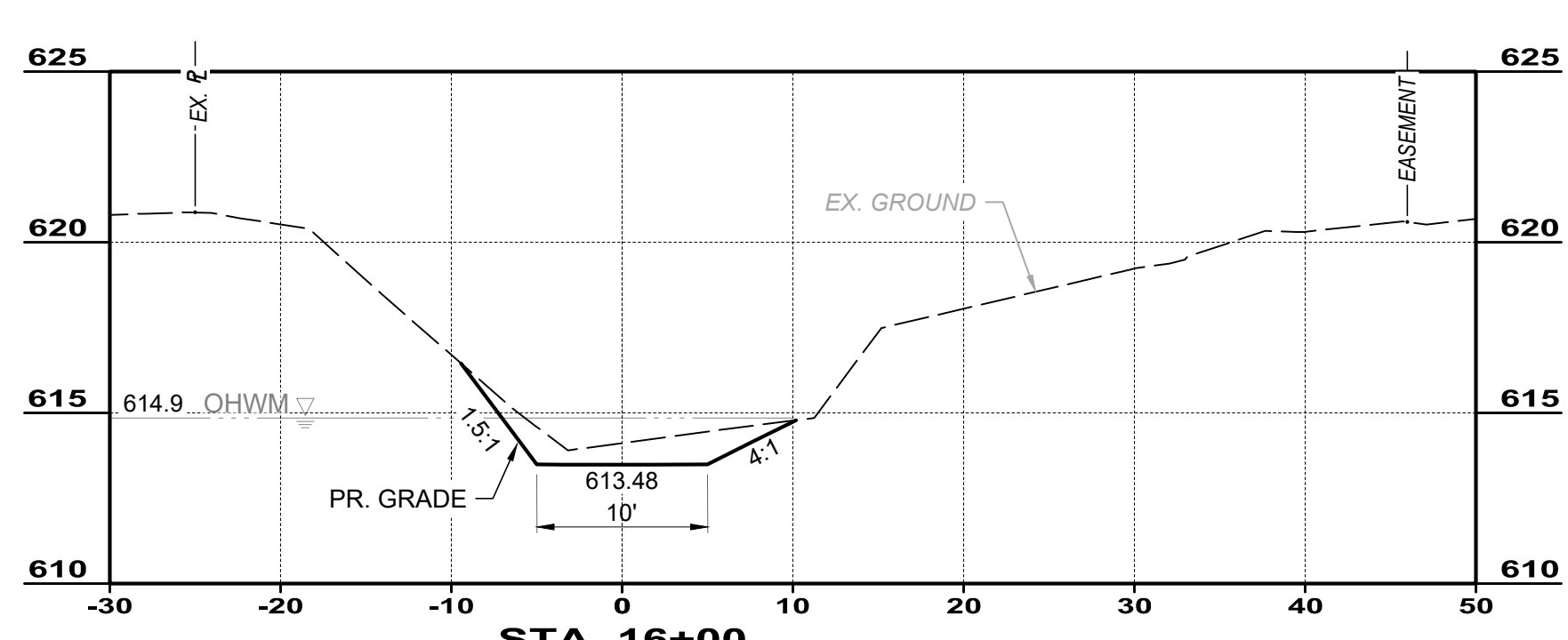
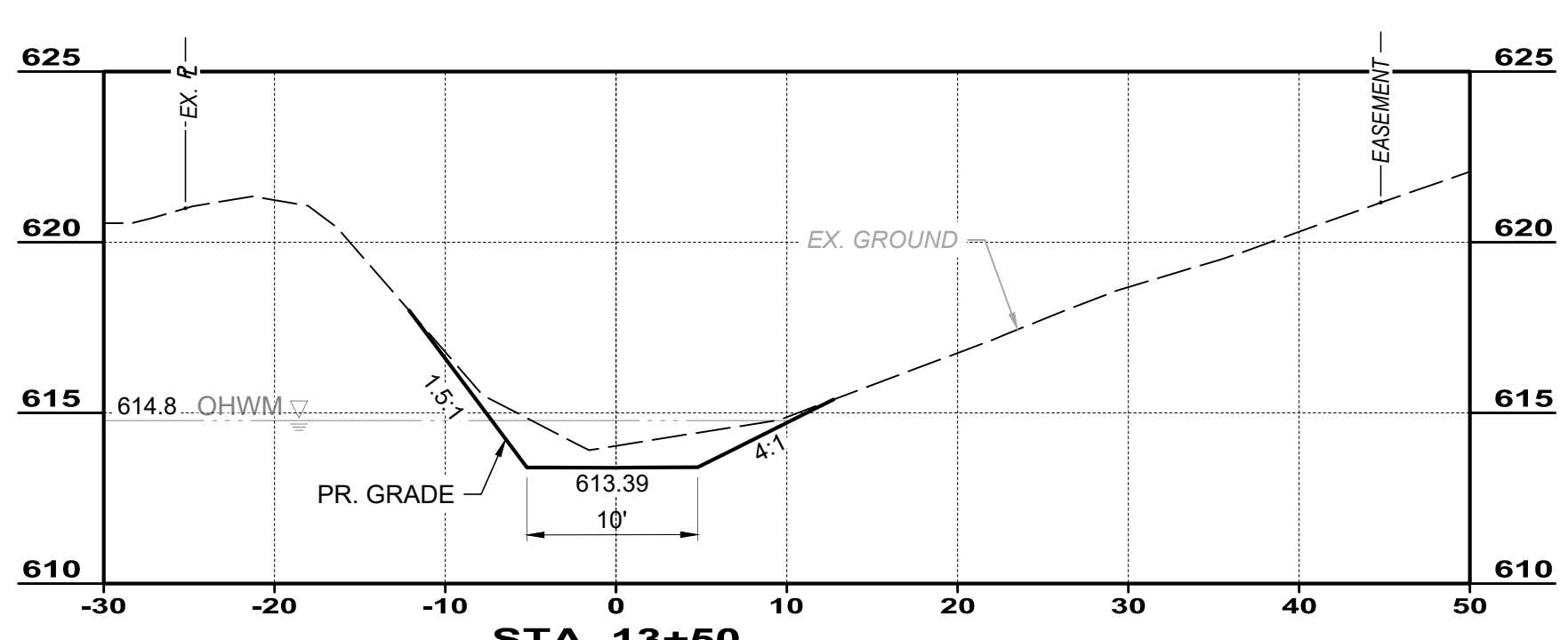
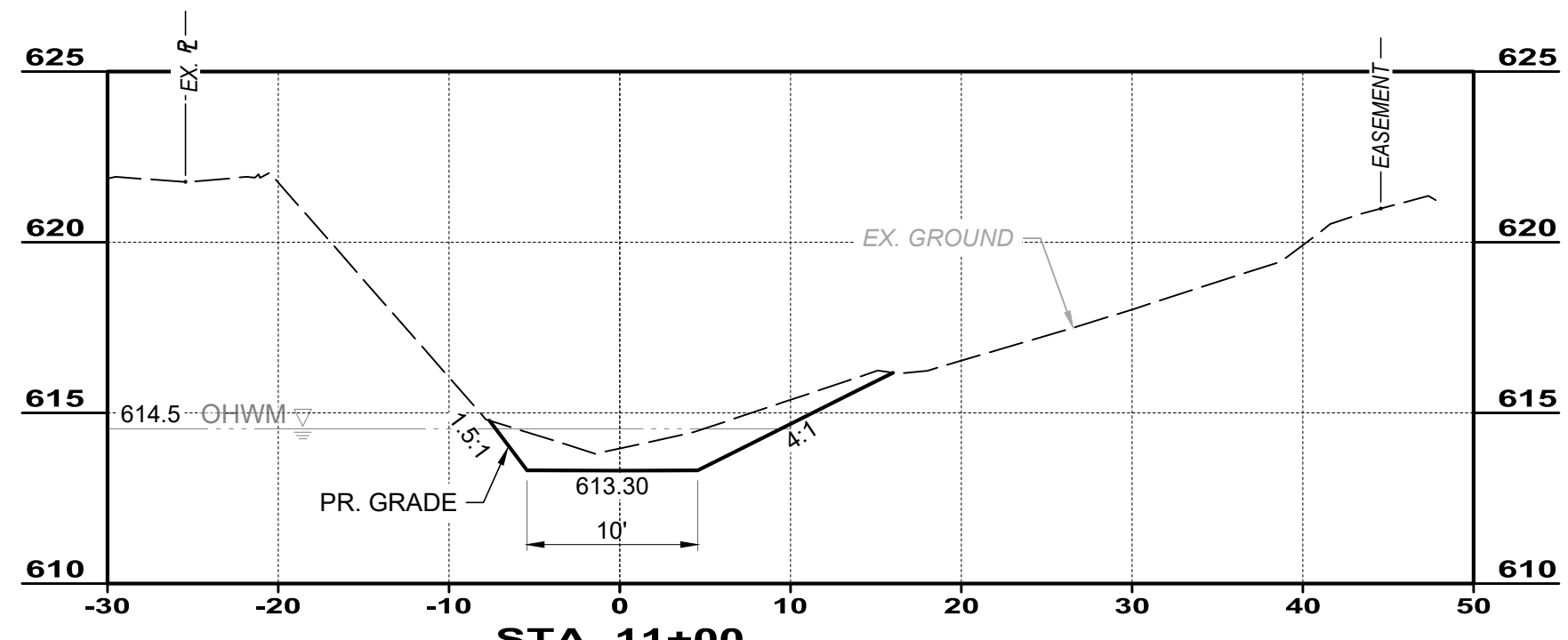
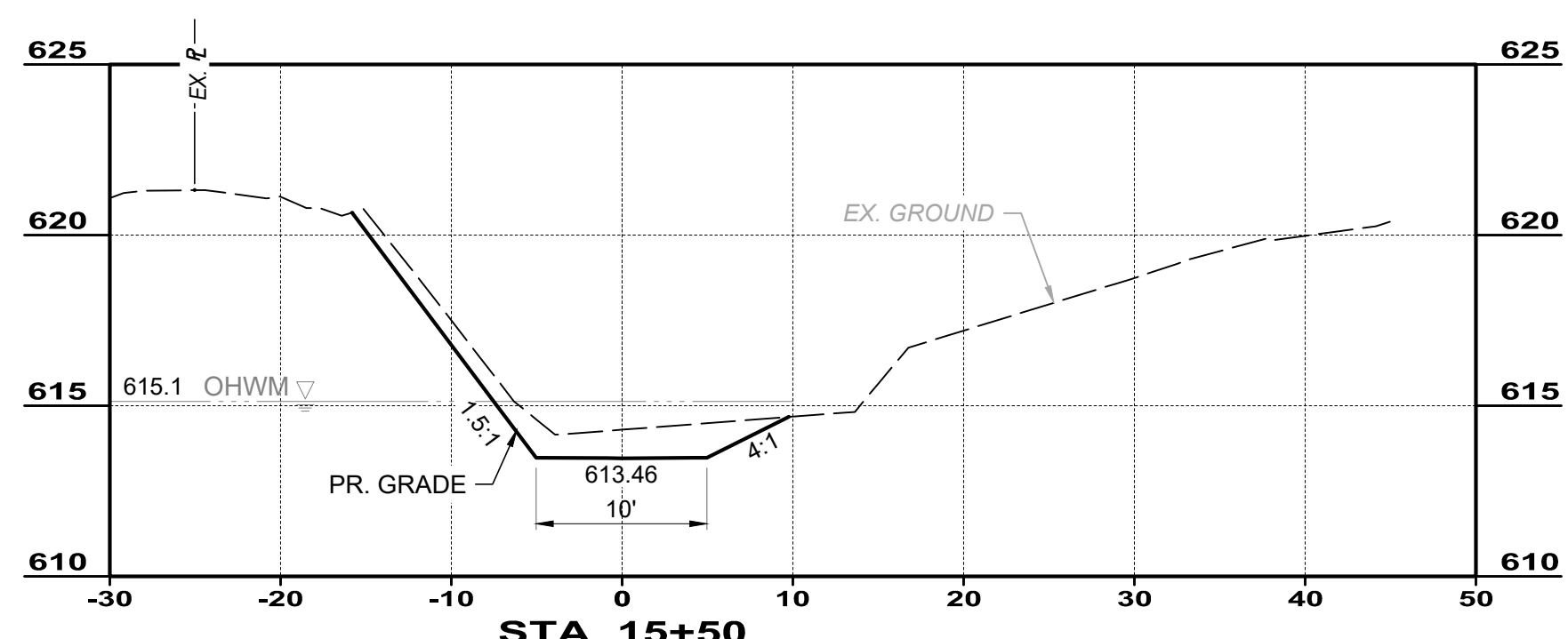
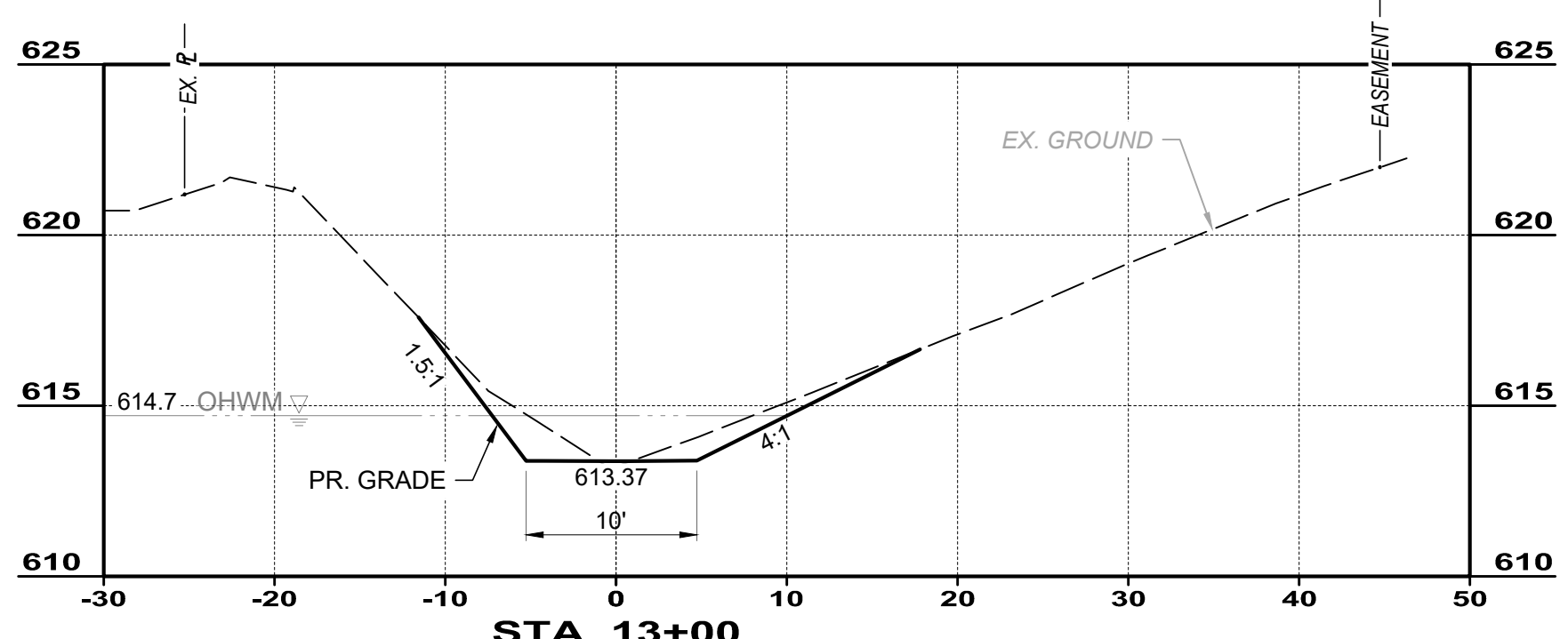
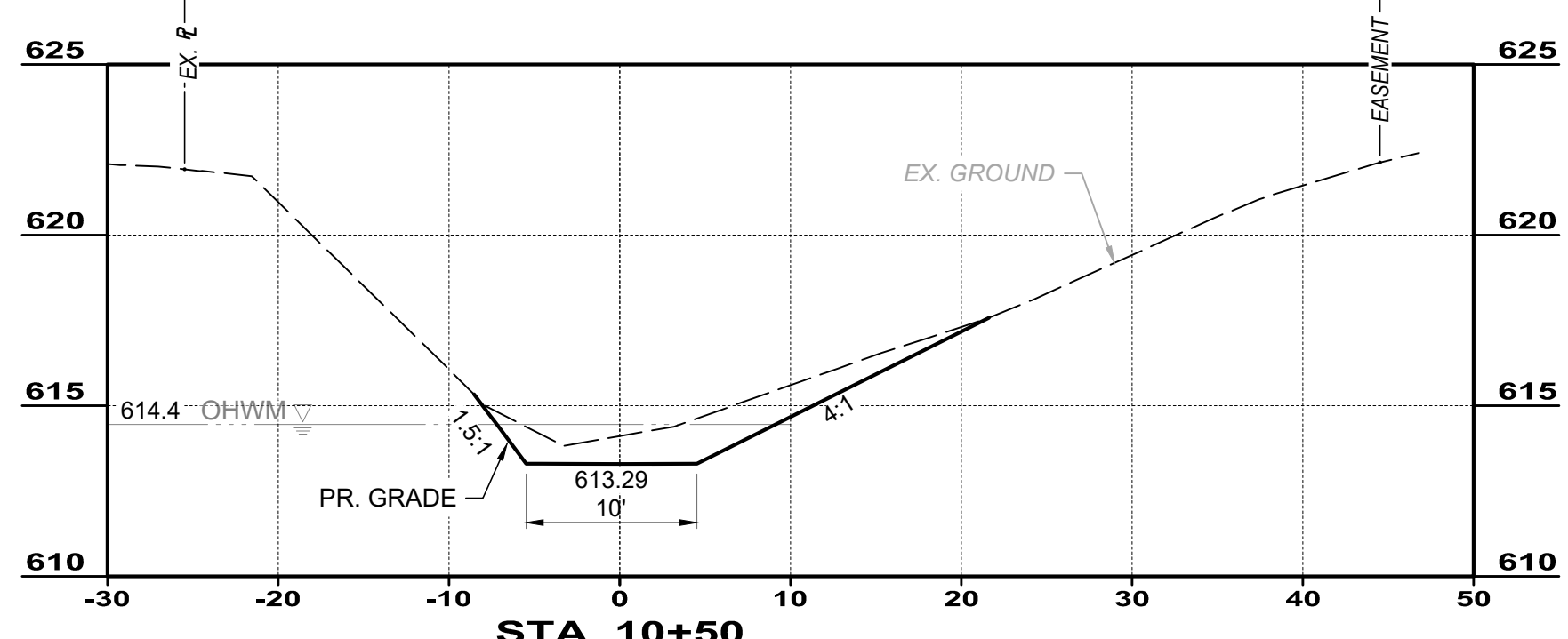
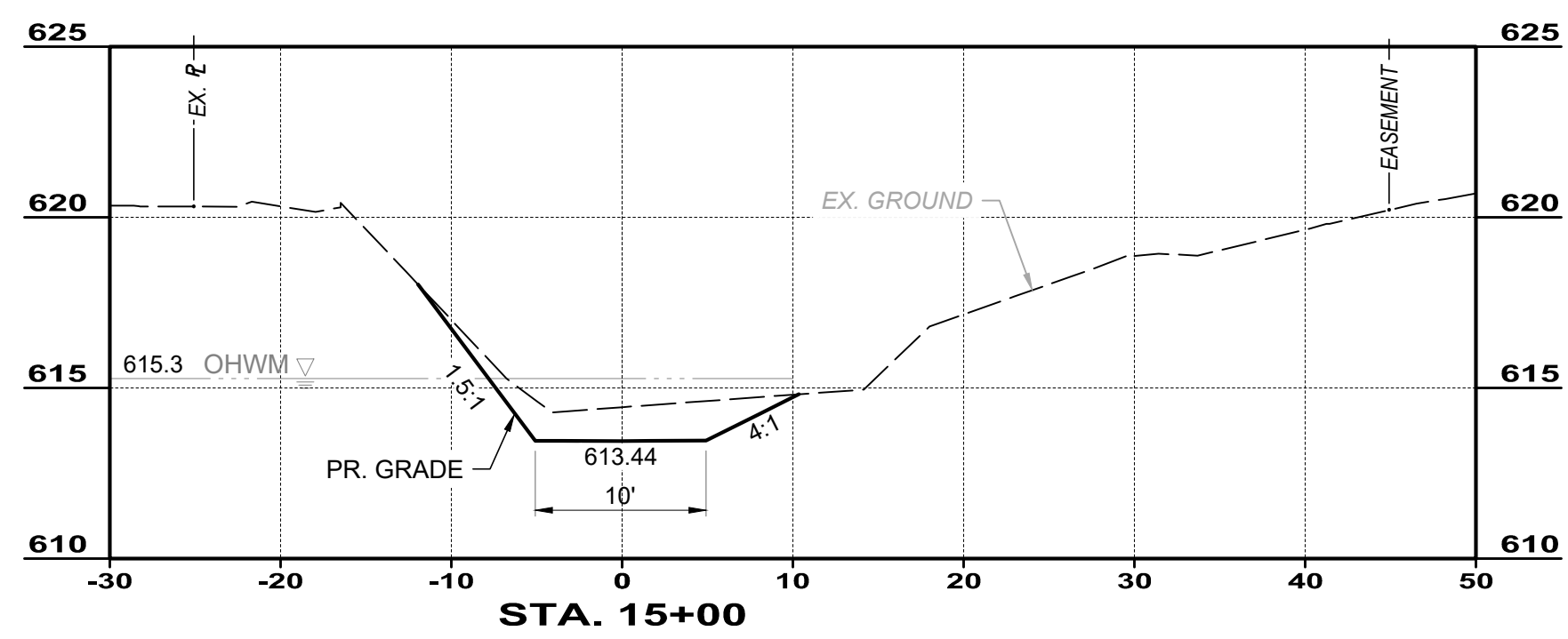
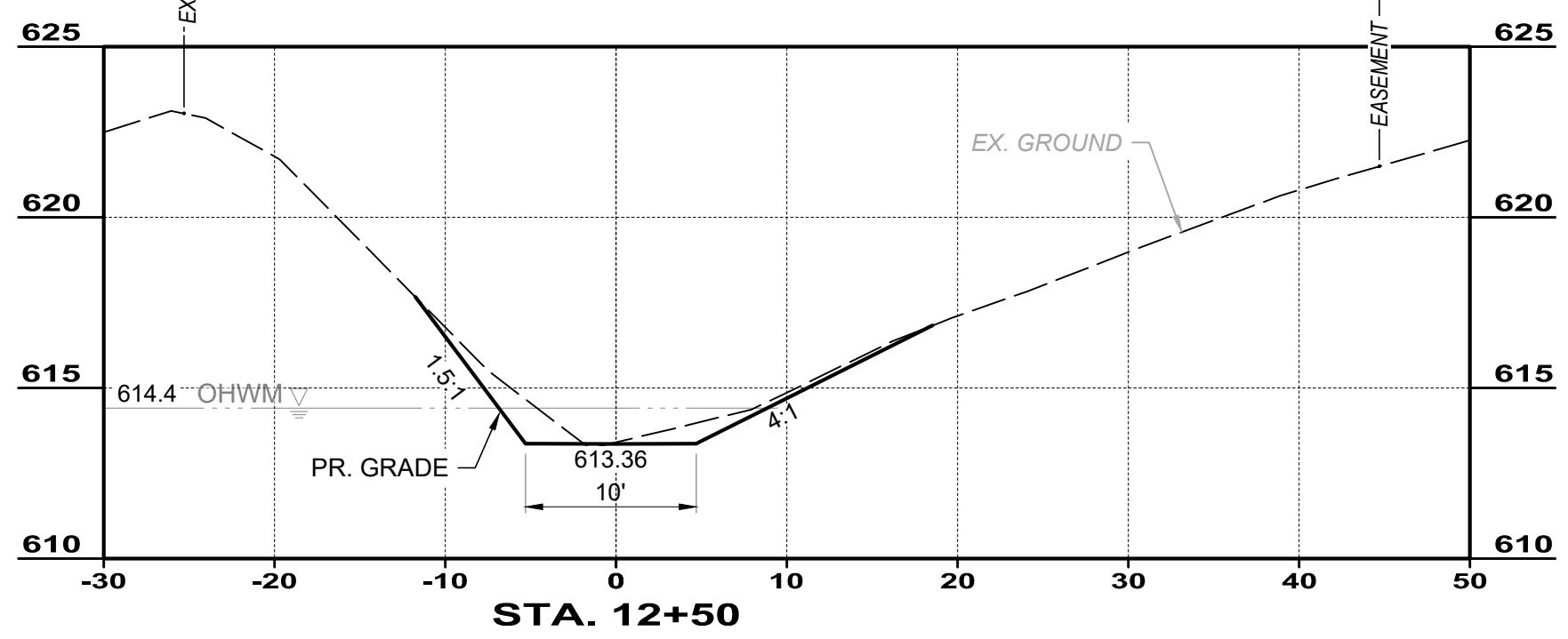
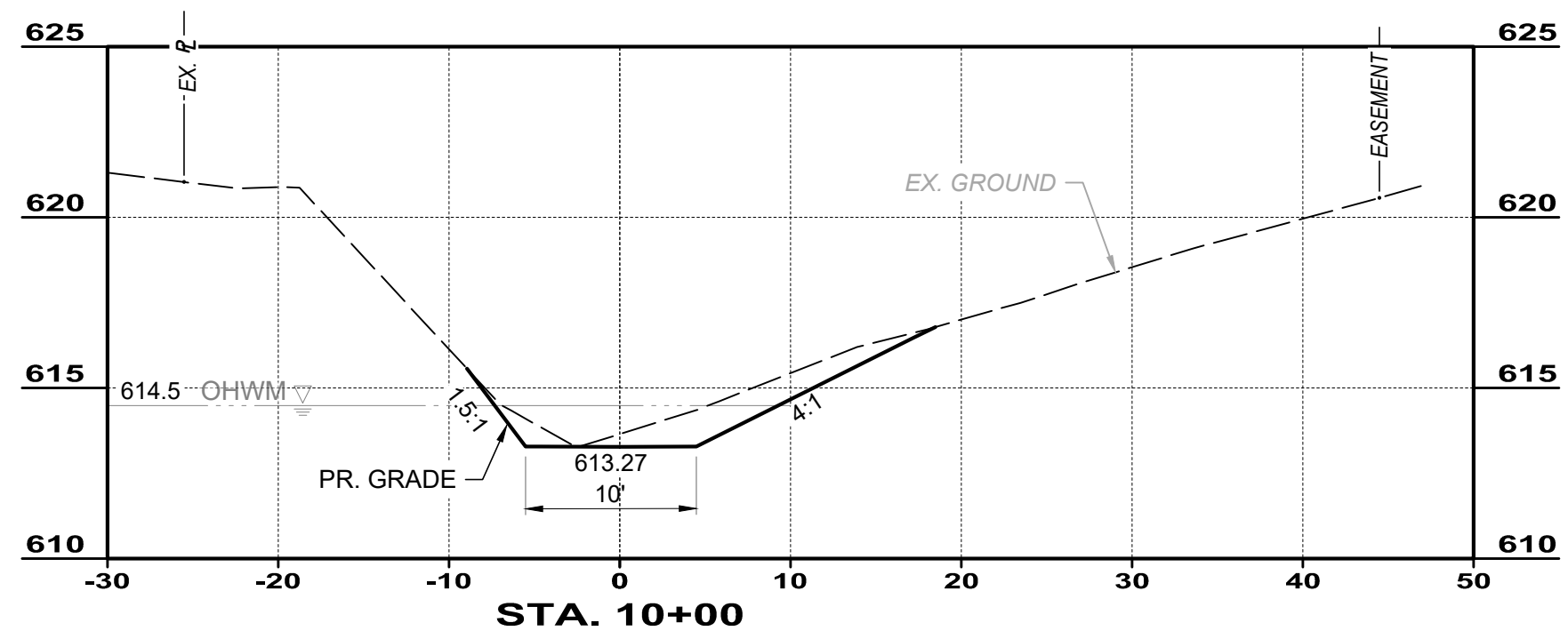
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ISSUED FOR:	BID SET NO.	REVISION	DATE
ISSUE DATE:	12/11/2024		
SCALE:	AS SHOWN		
DESIGNED BY:	SNK		
DRAWN BY:	SNK		
CHECKED BY:	GMS		

BELFLOWER/MEADOWBROOK DITCH RESTORATION PROJECT
 MENTOR, OH
 LAKE COUNTY
NORTH CROSS SECTIONS 2

PROJECT NO.	241472
DISCIPLINE	CIVIL
SHEET NAME	N-CS-2
SHEET	13
OF	20



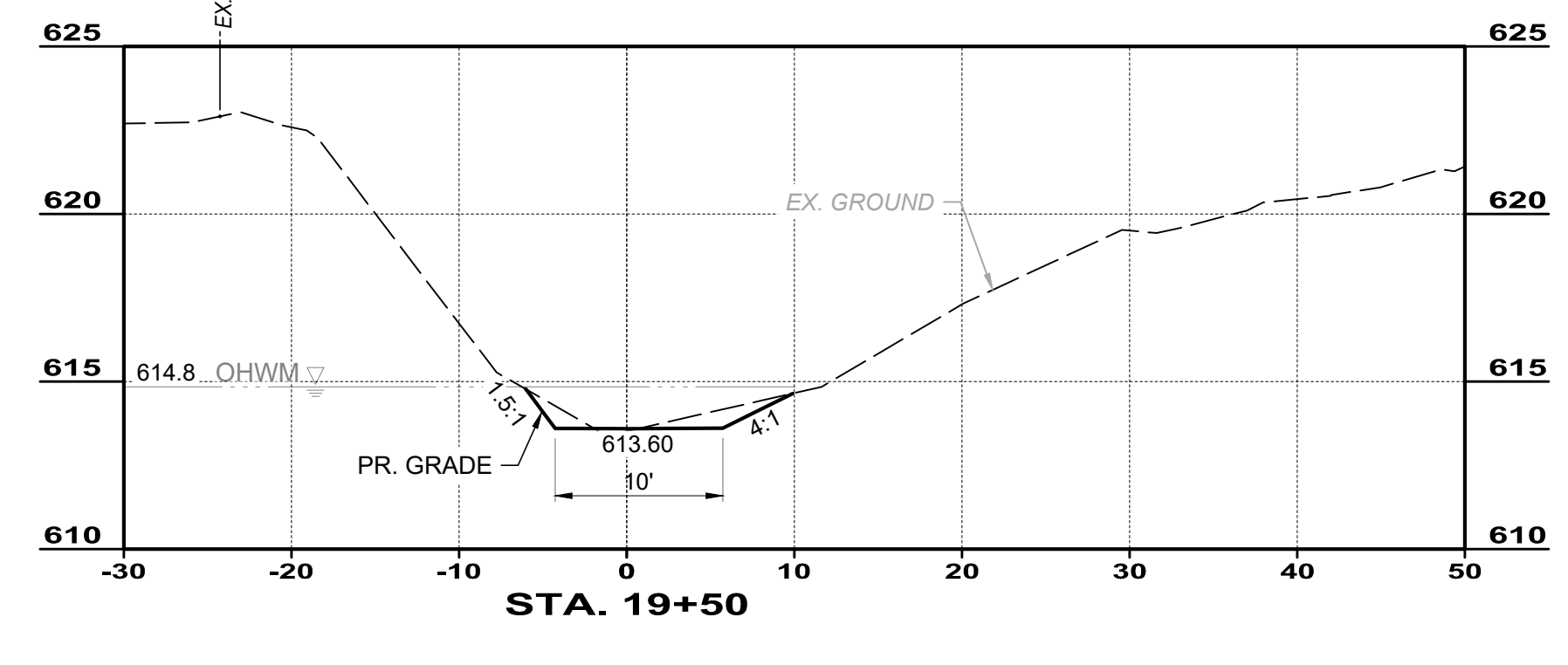
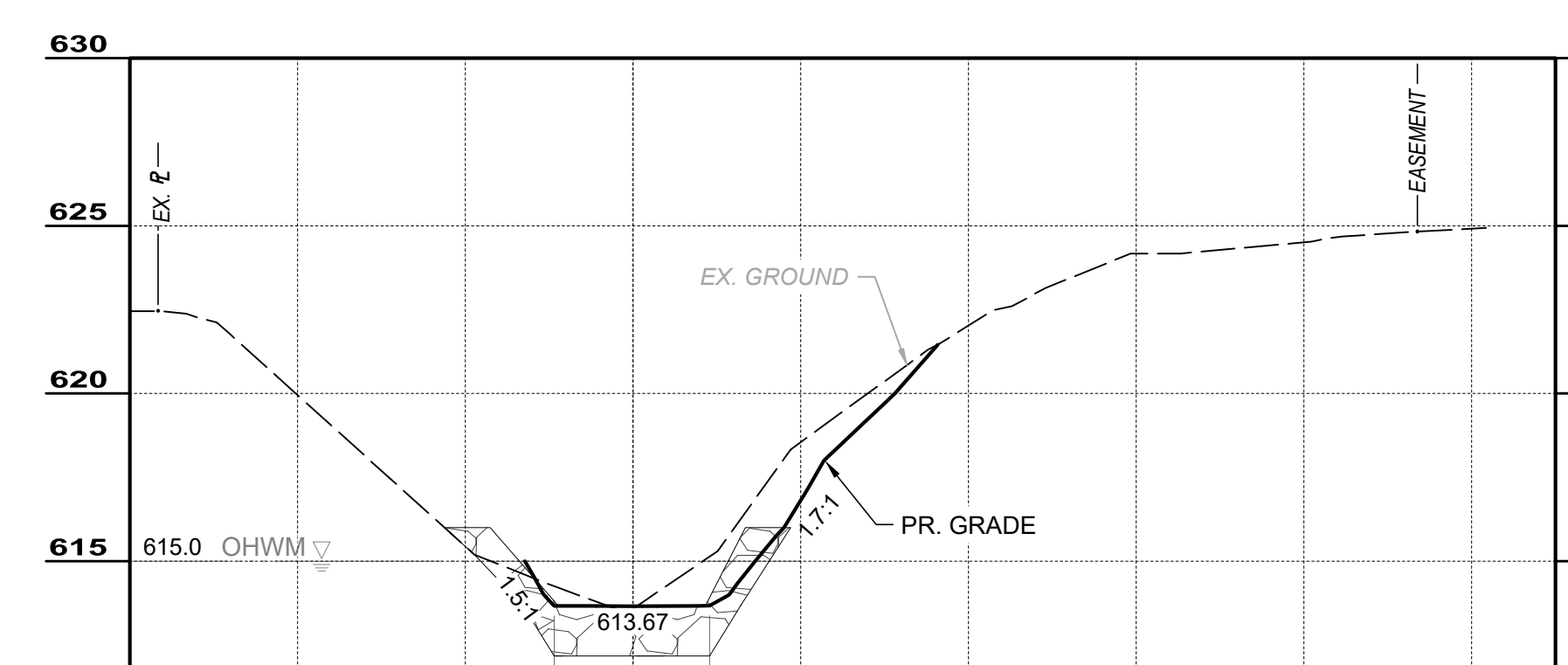
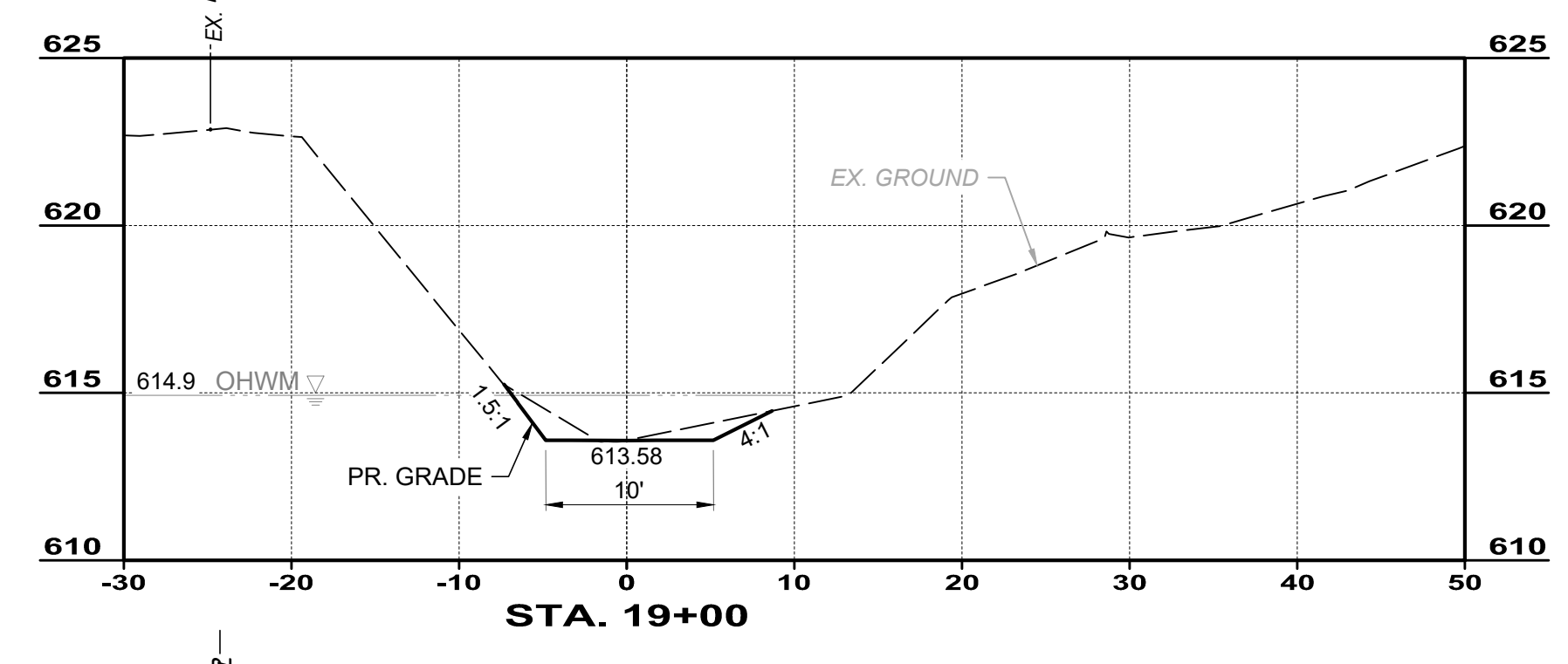
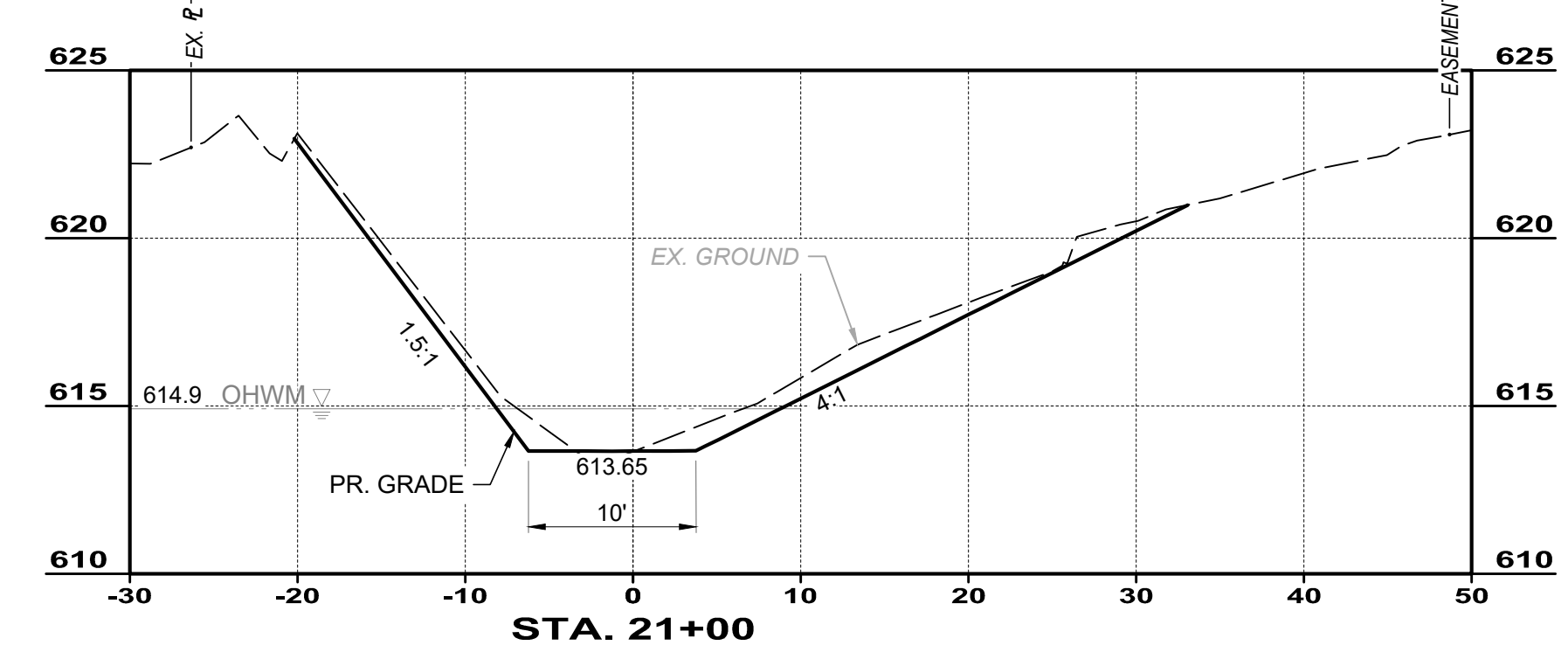
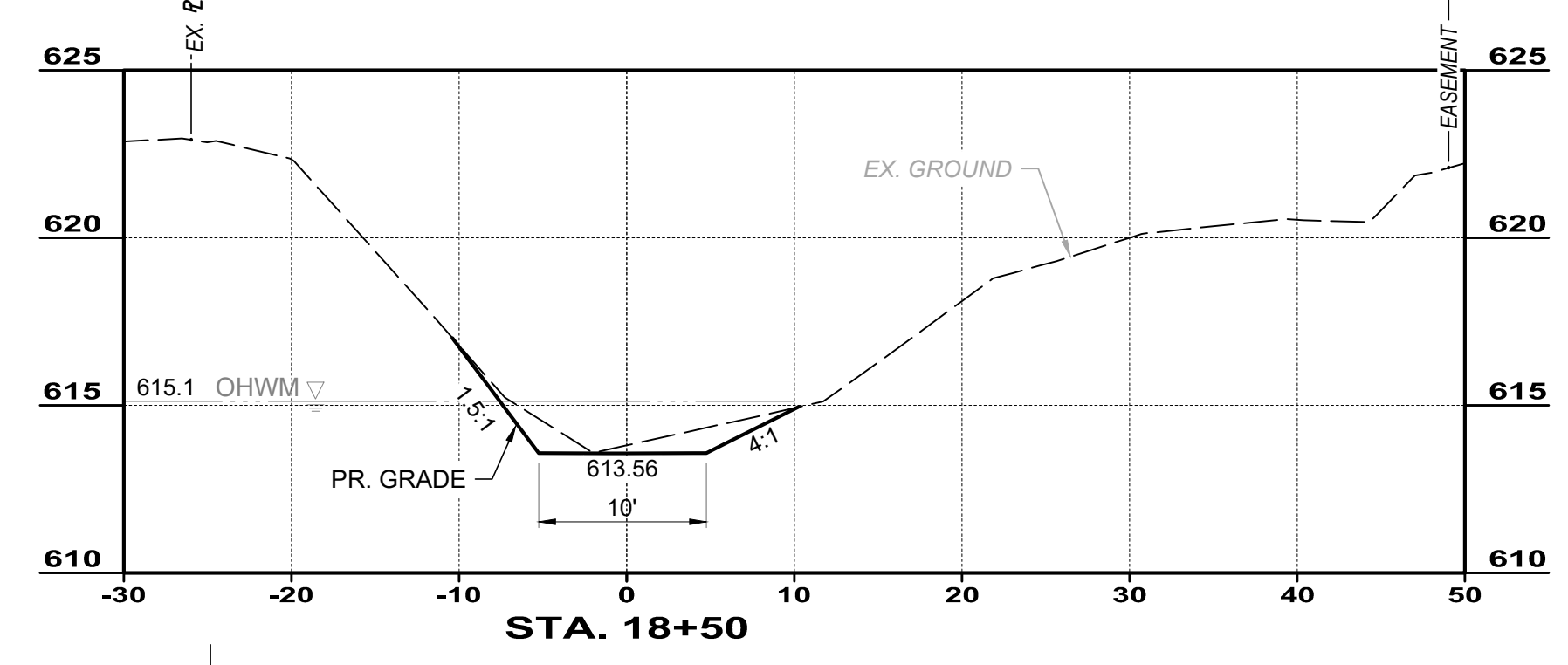
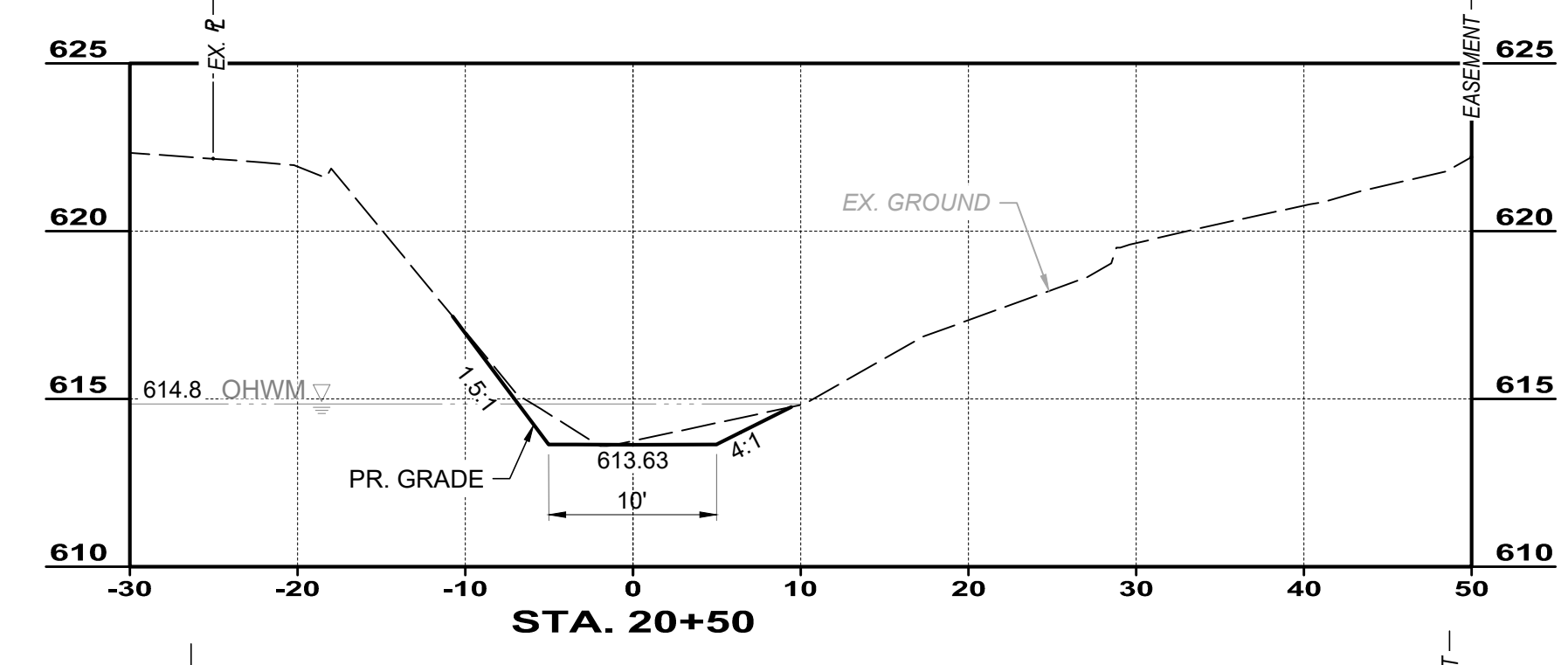
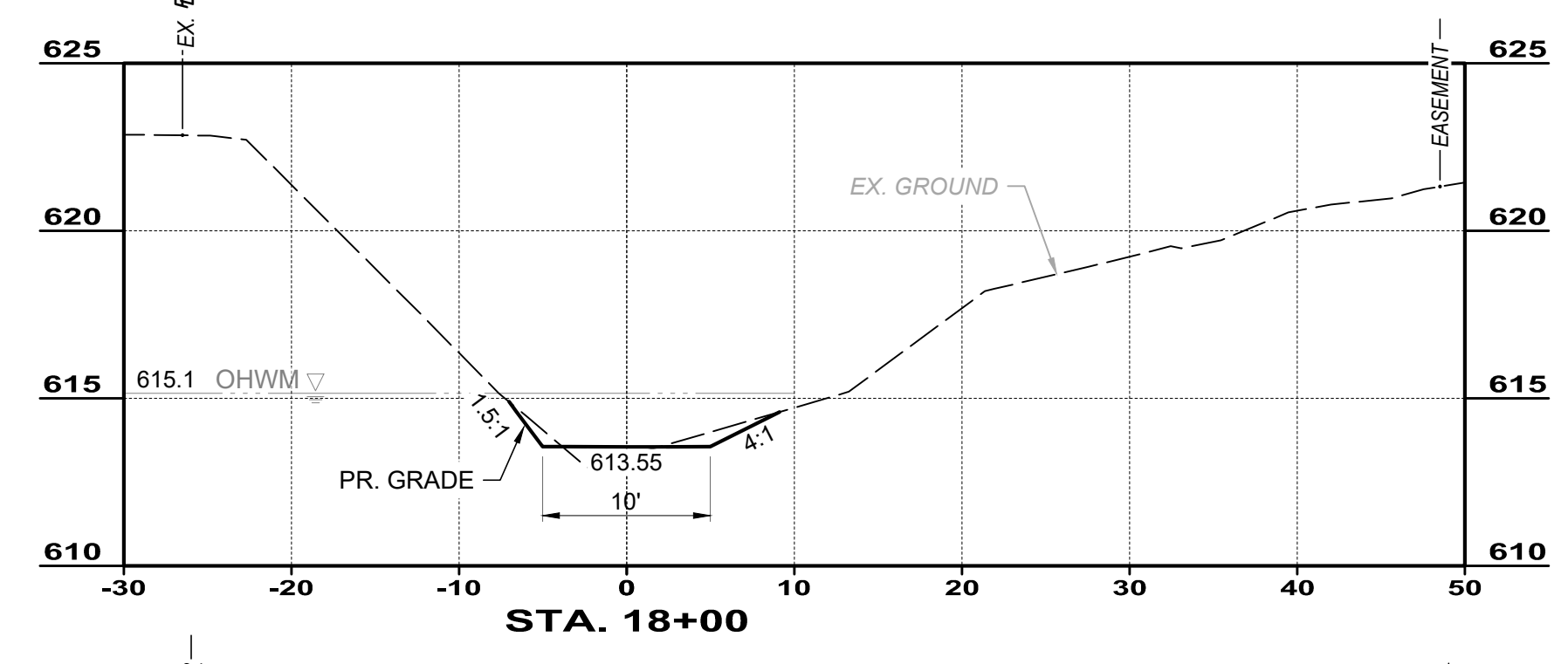
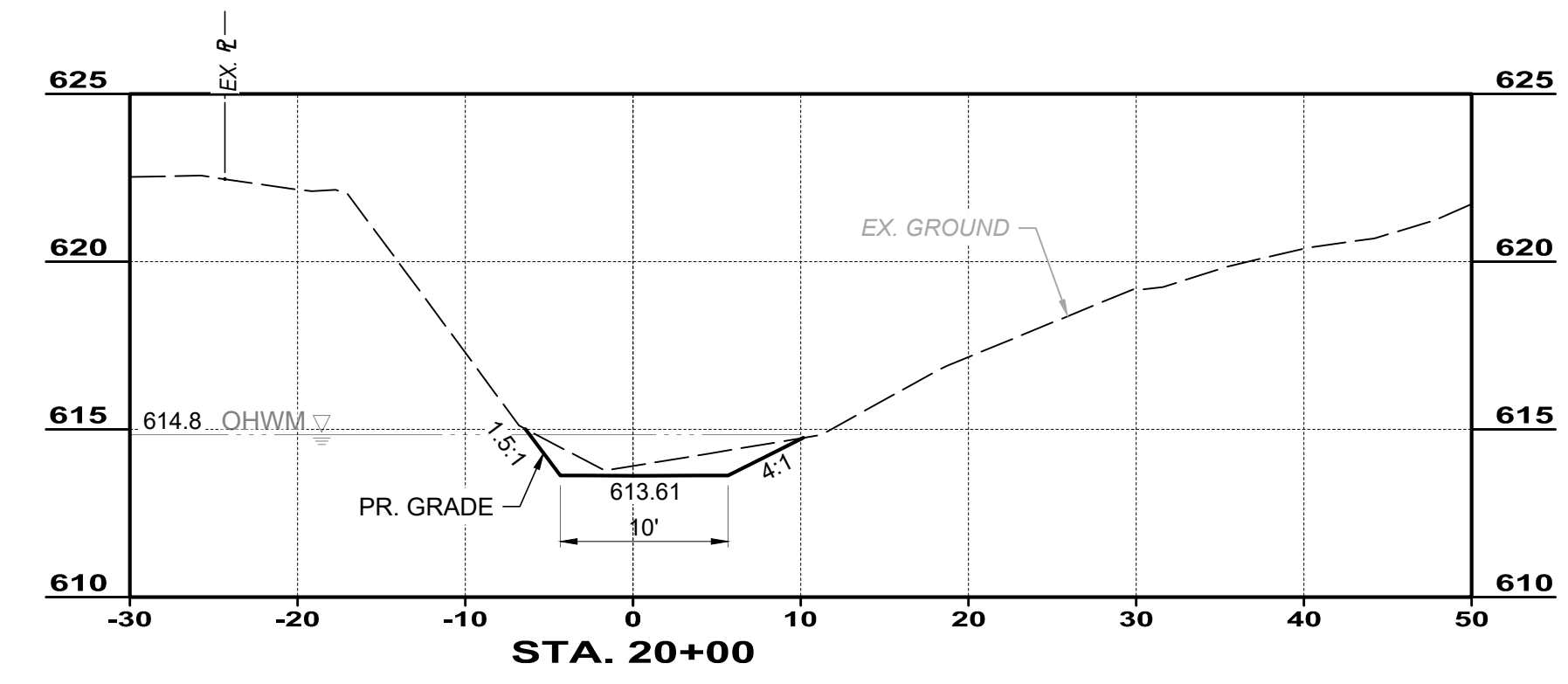
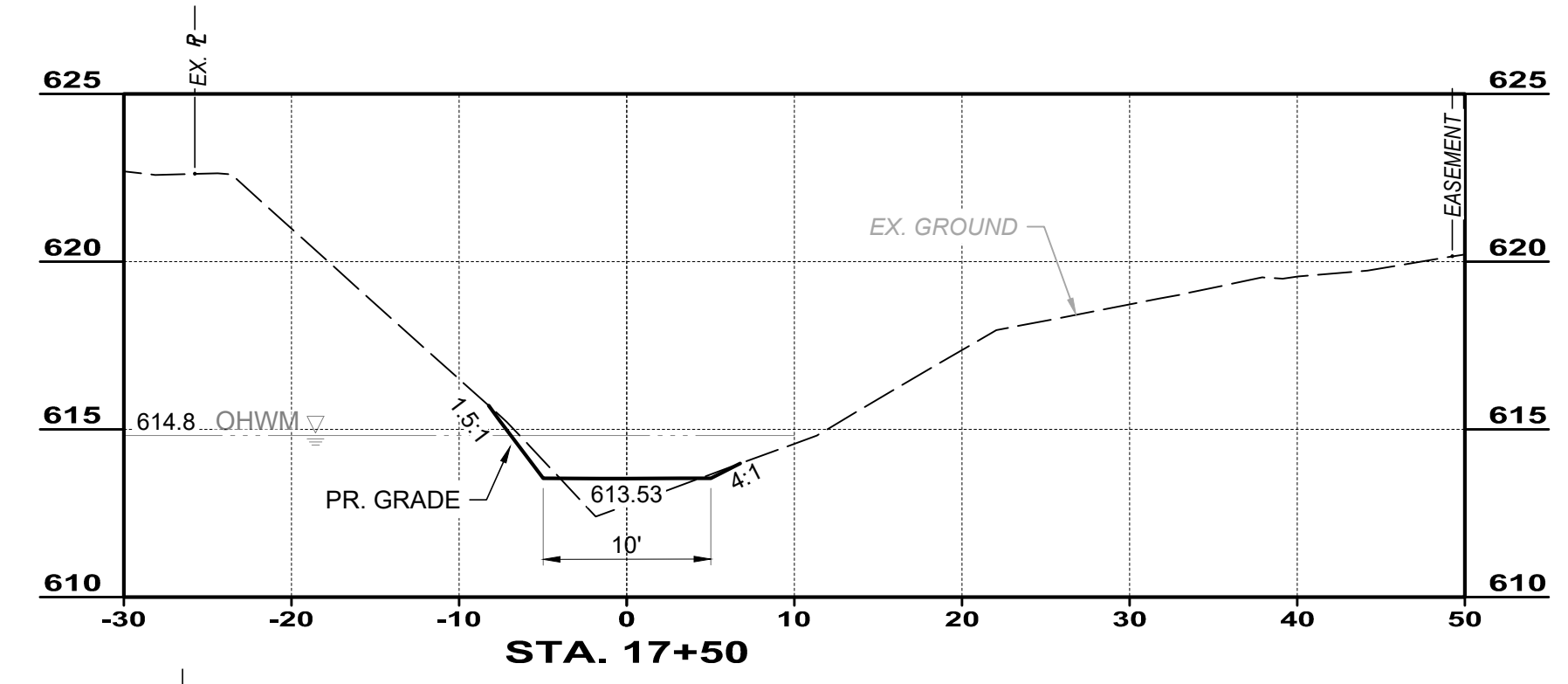
NORTH DITCH - CROSS SECTIONS (2 OF 3)



ISSUED FOR:	BID SET NO.	REVISION	DATE
ISSUE DATE:	12/11/2024		
SCALE:	AS SHOWN		
DESIGNED BY:	SNK		
DRAWN BY:	SNK		
CHECKED BY:	GMS		

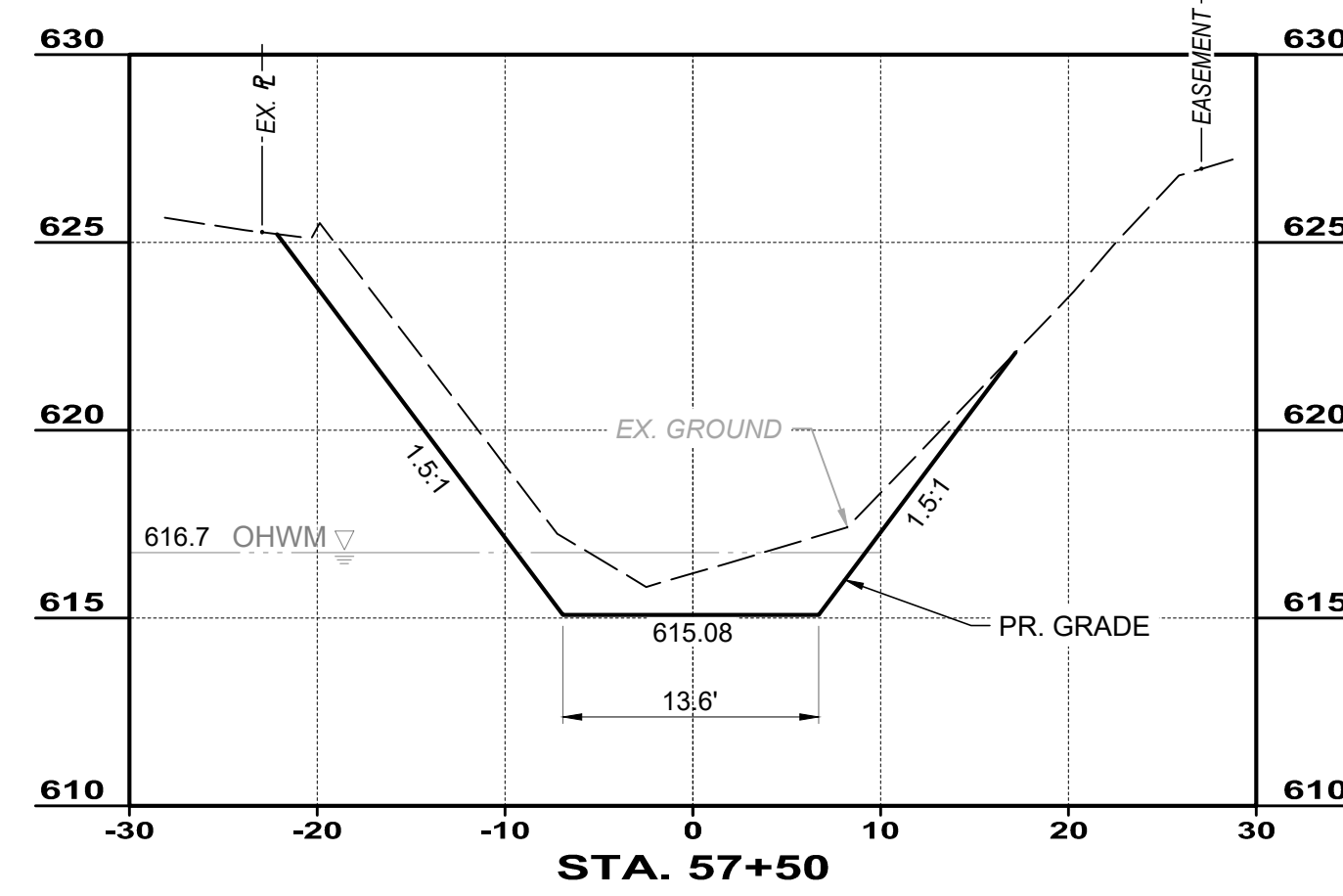
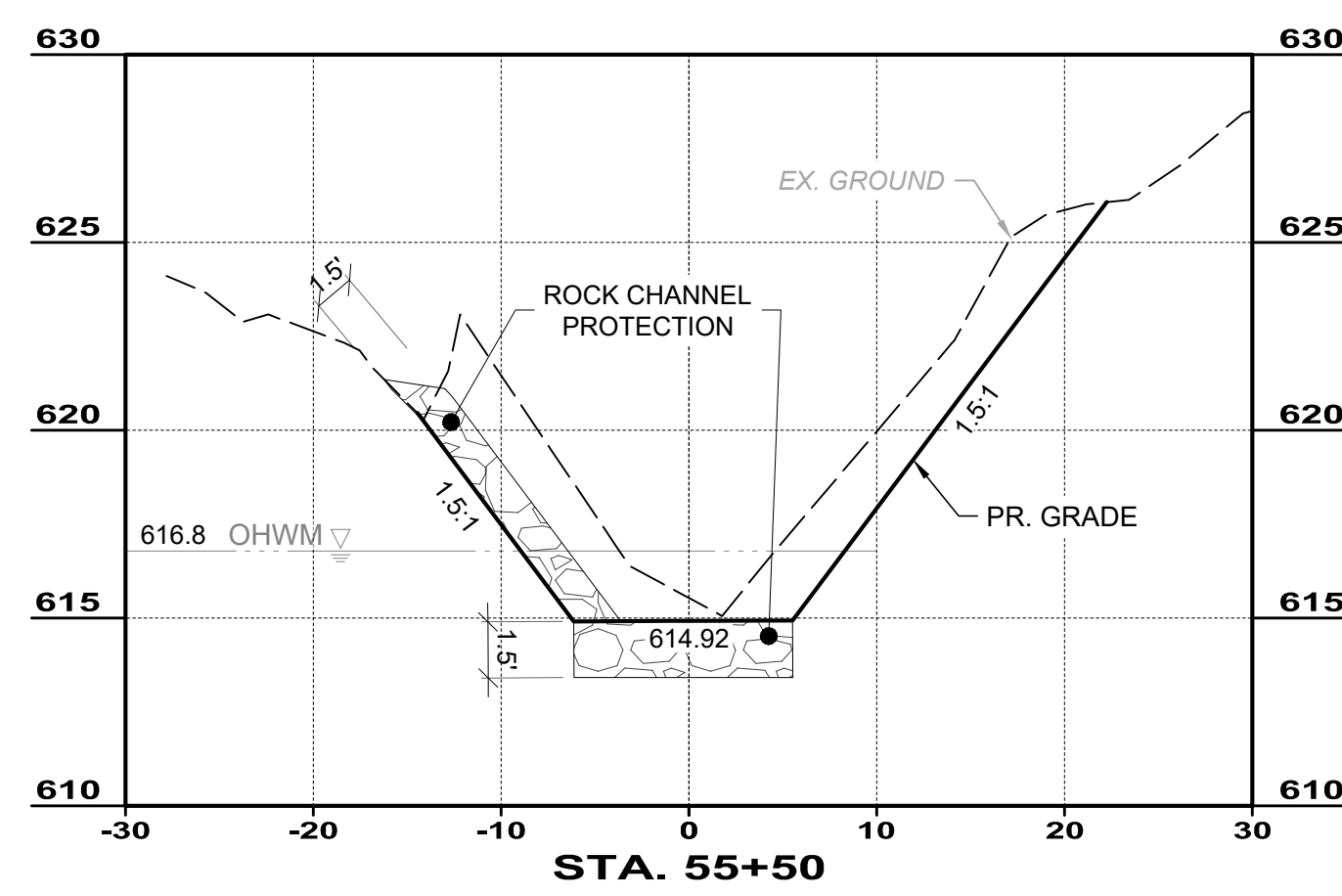
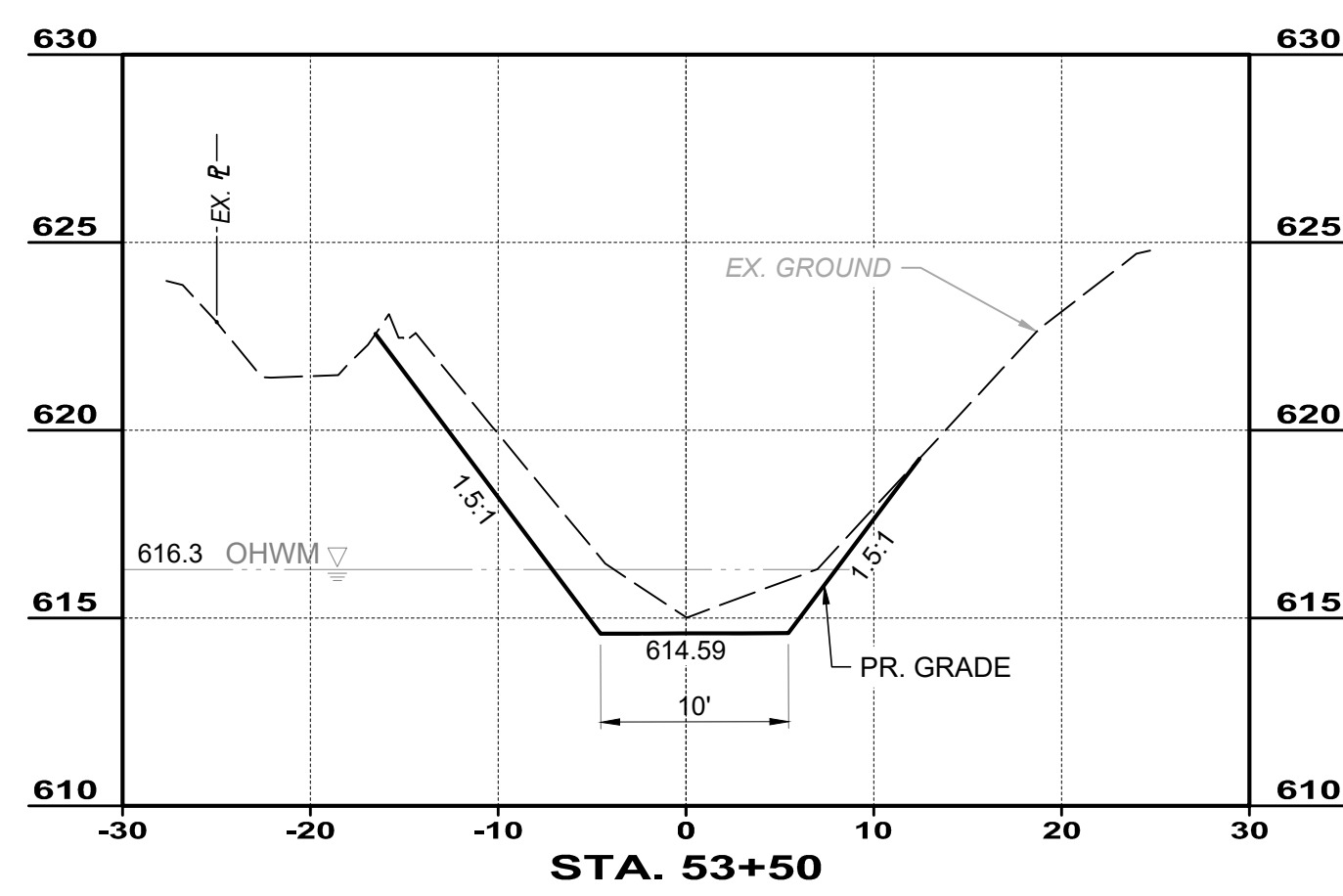
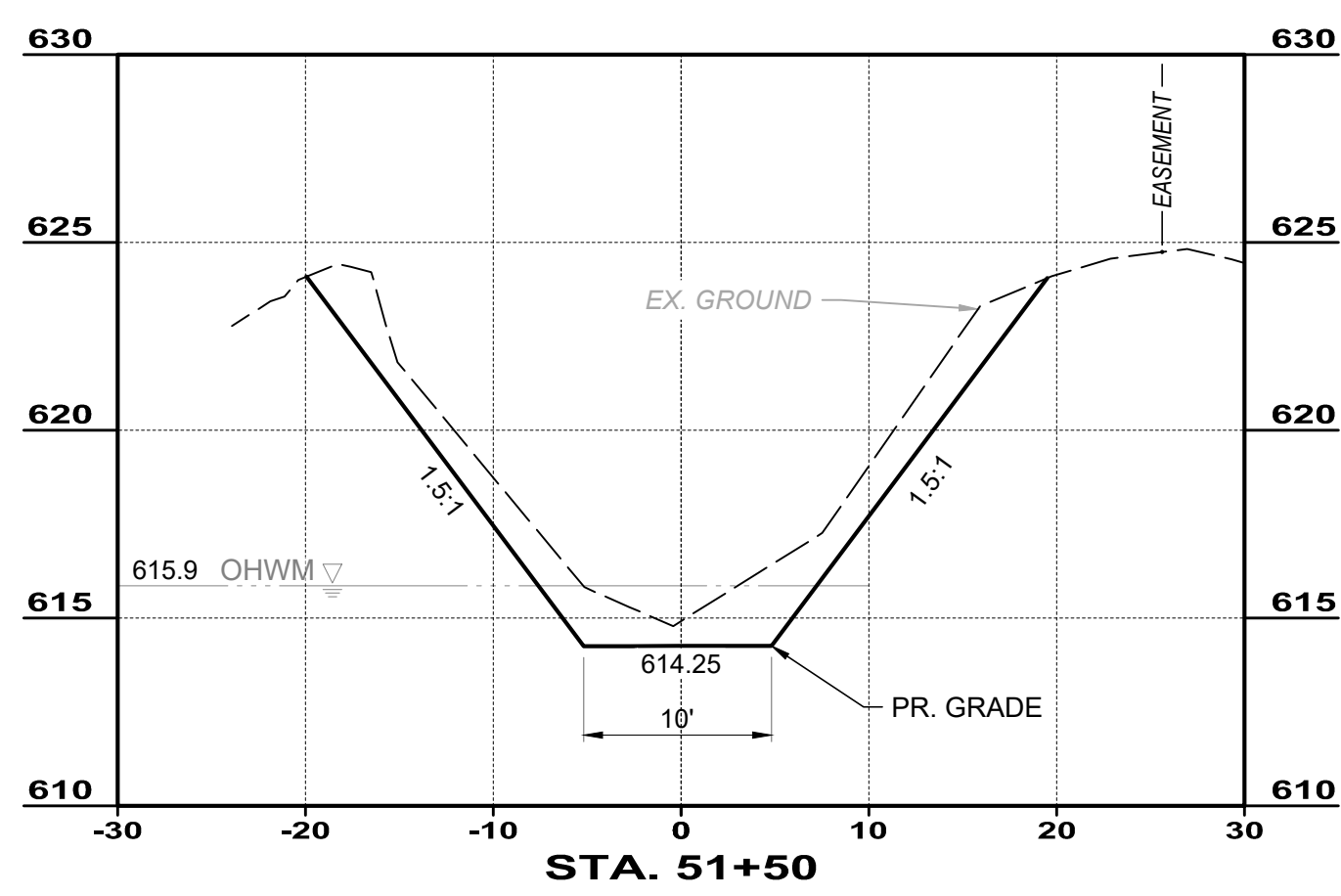
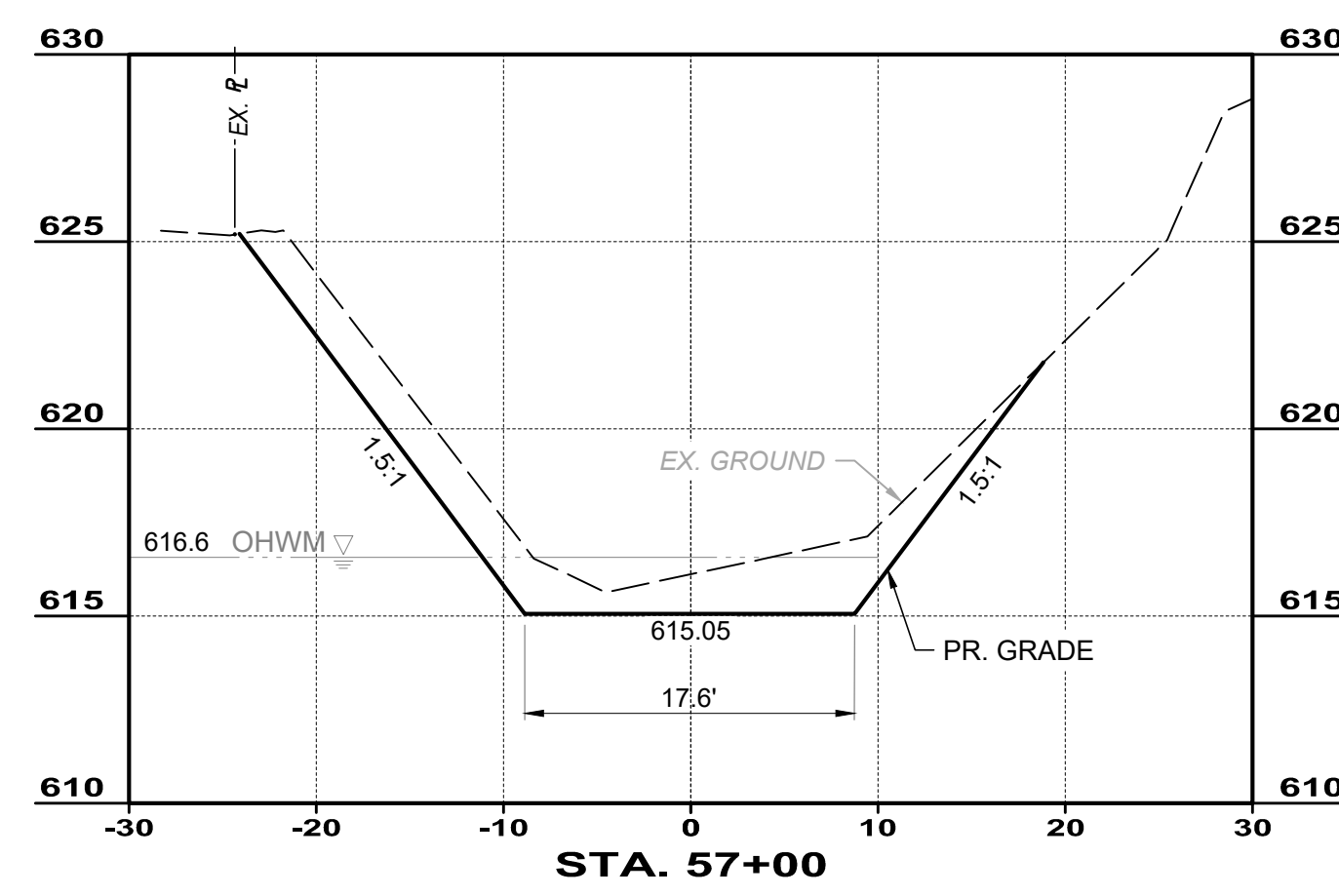
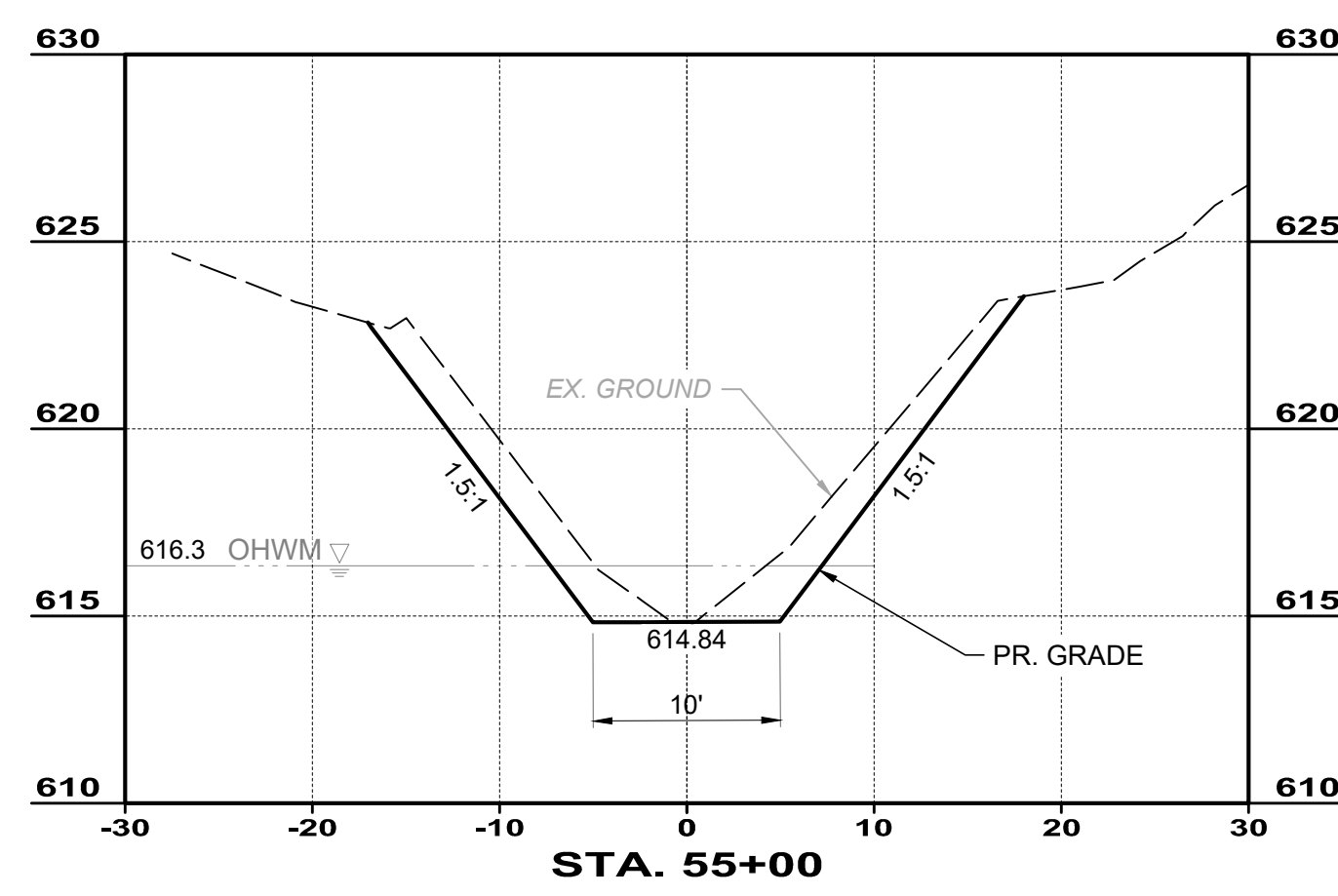
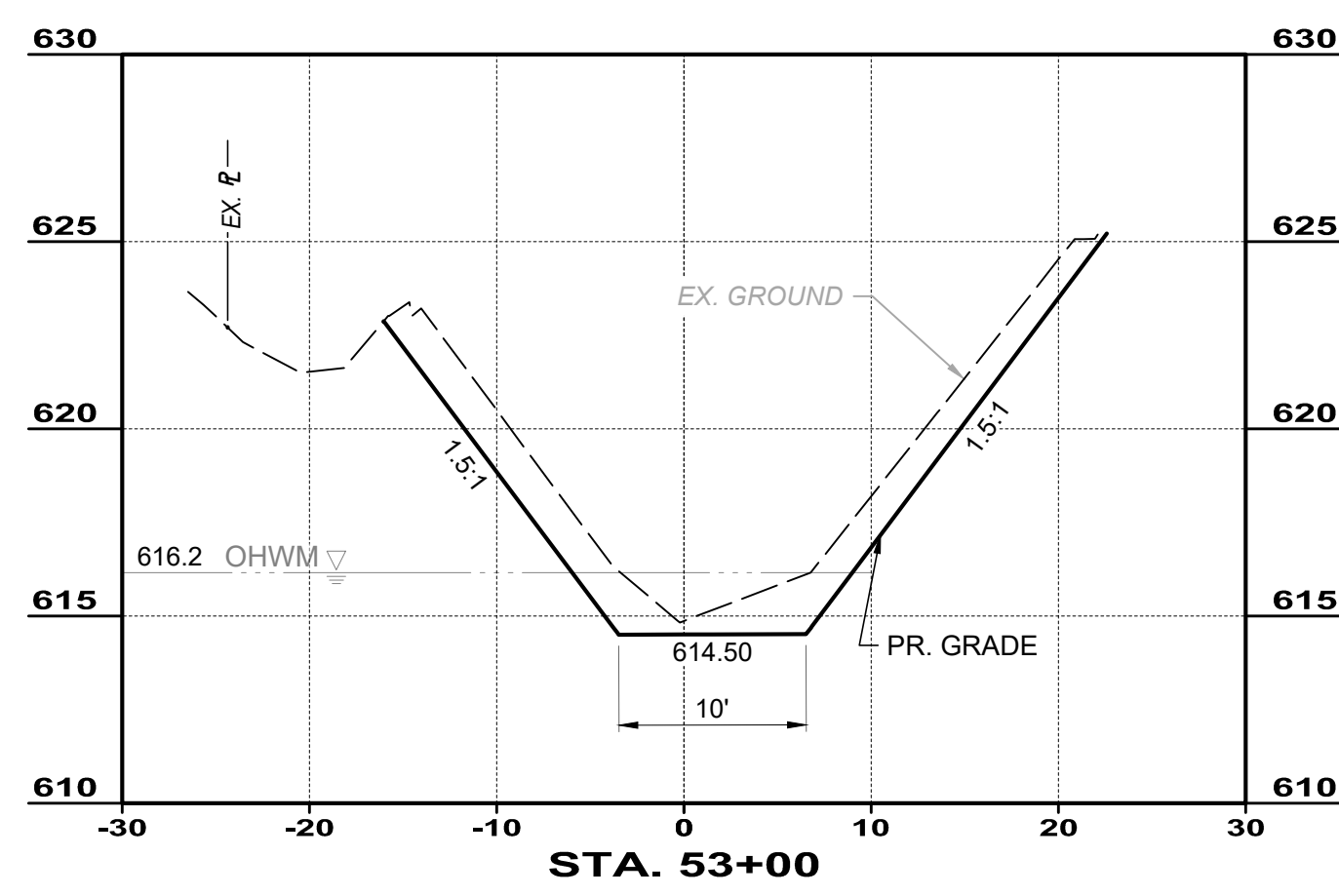
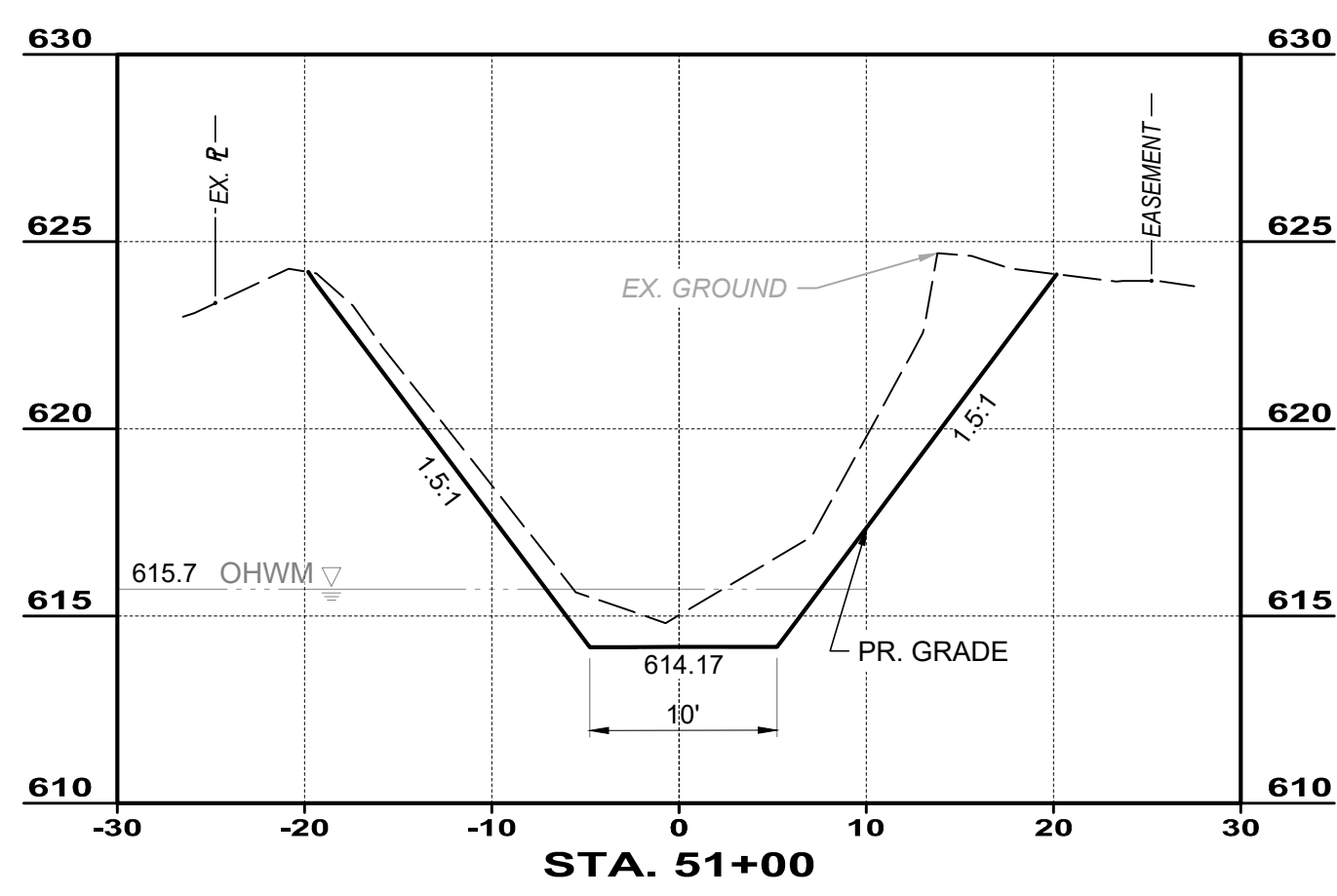
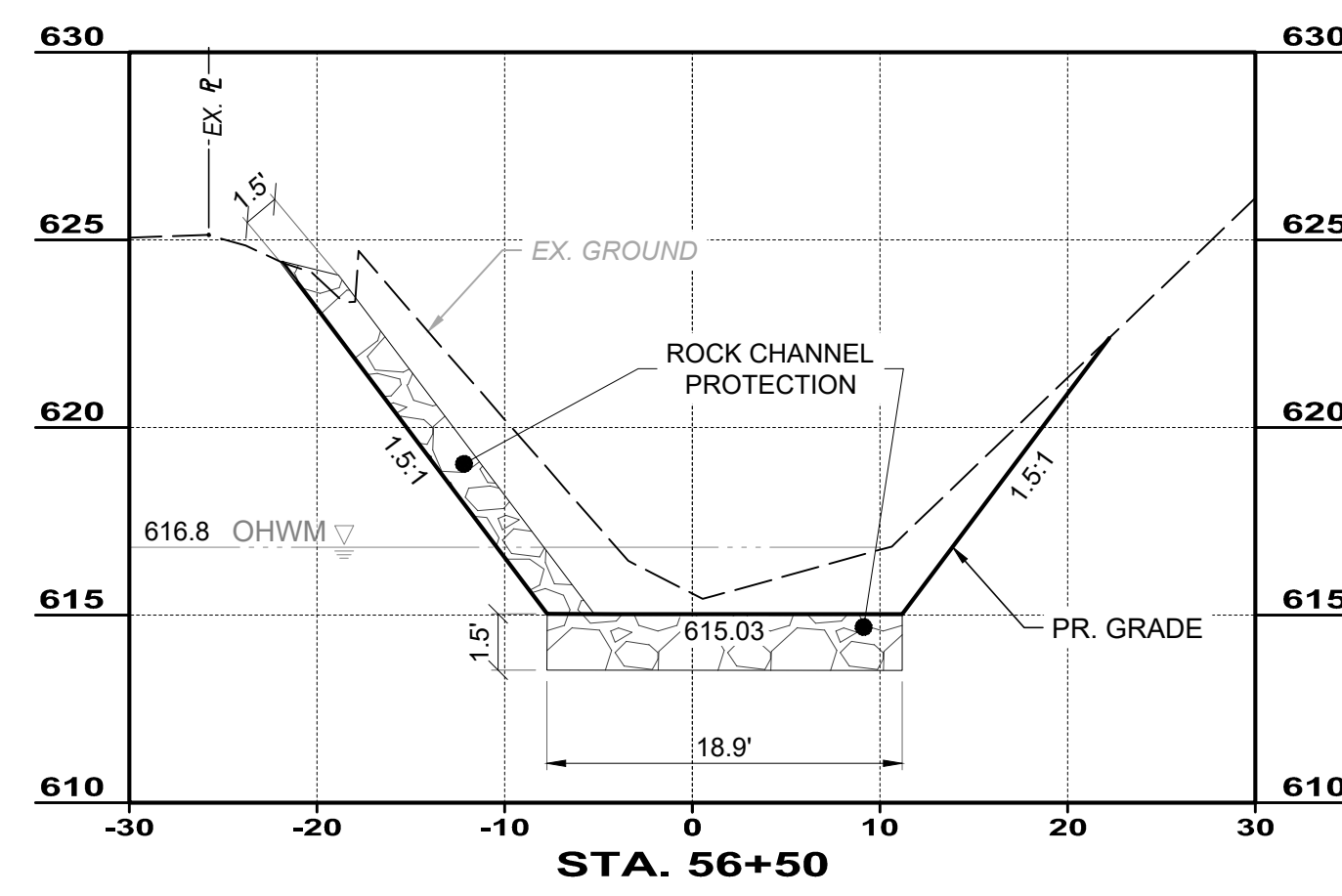
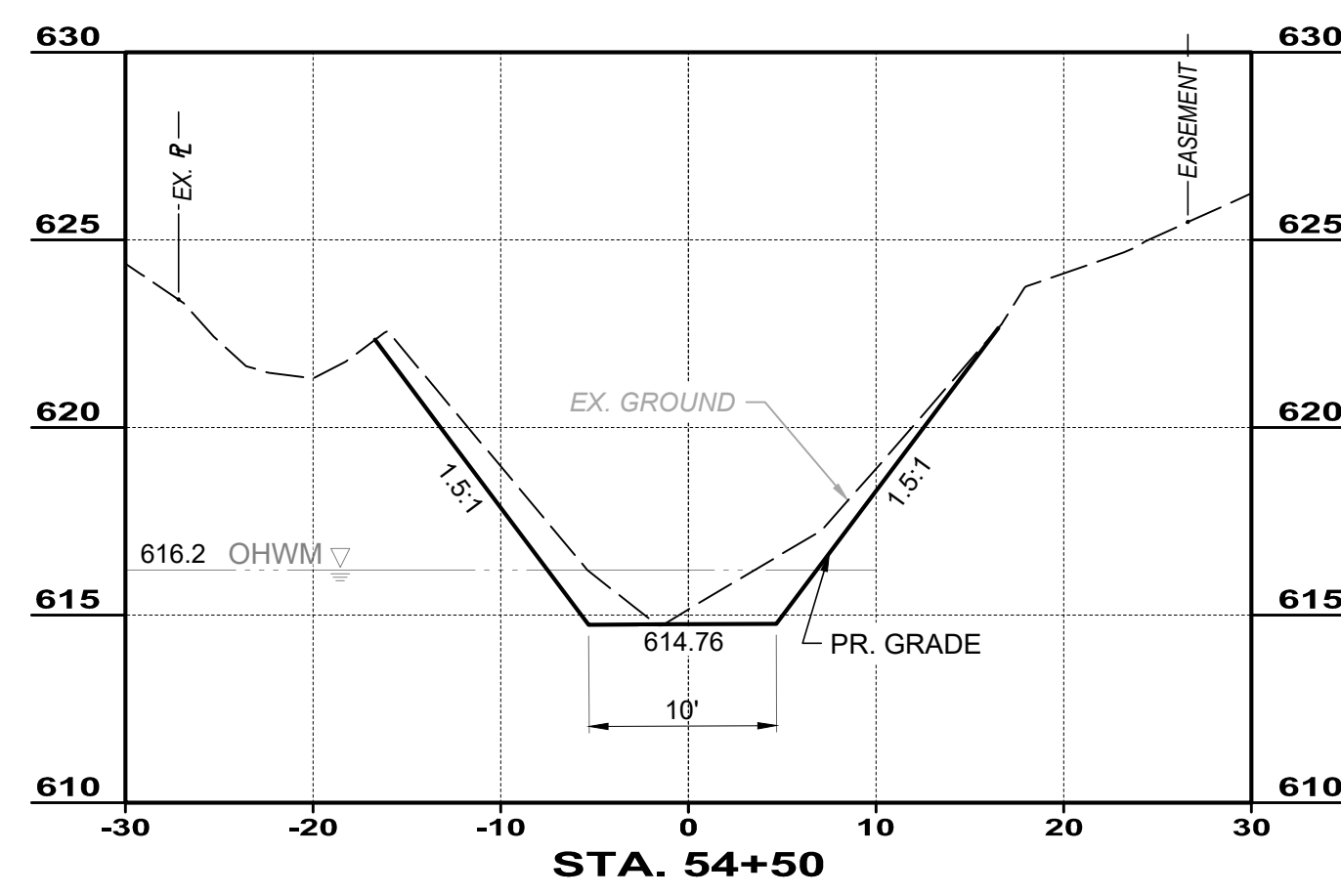
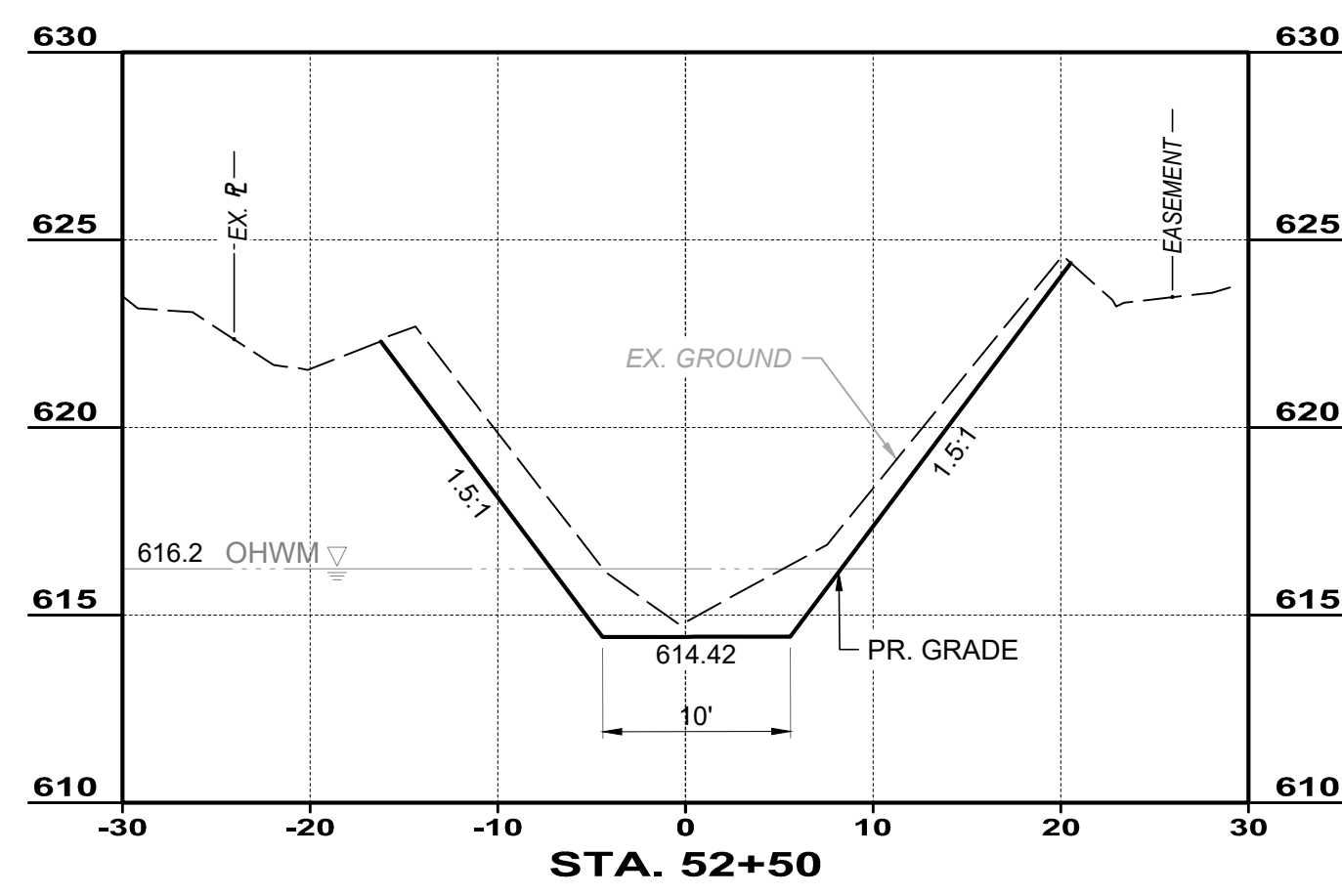
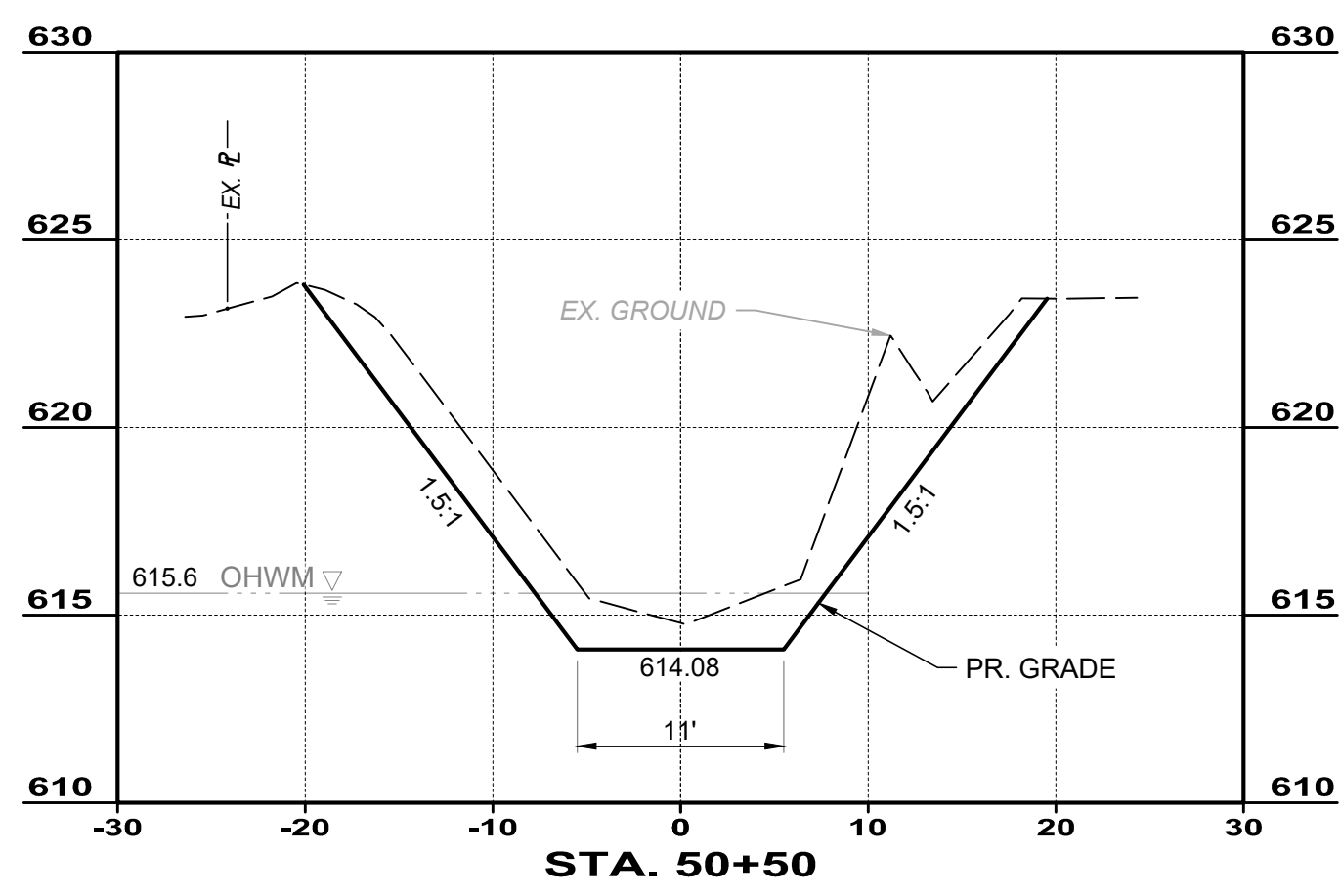
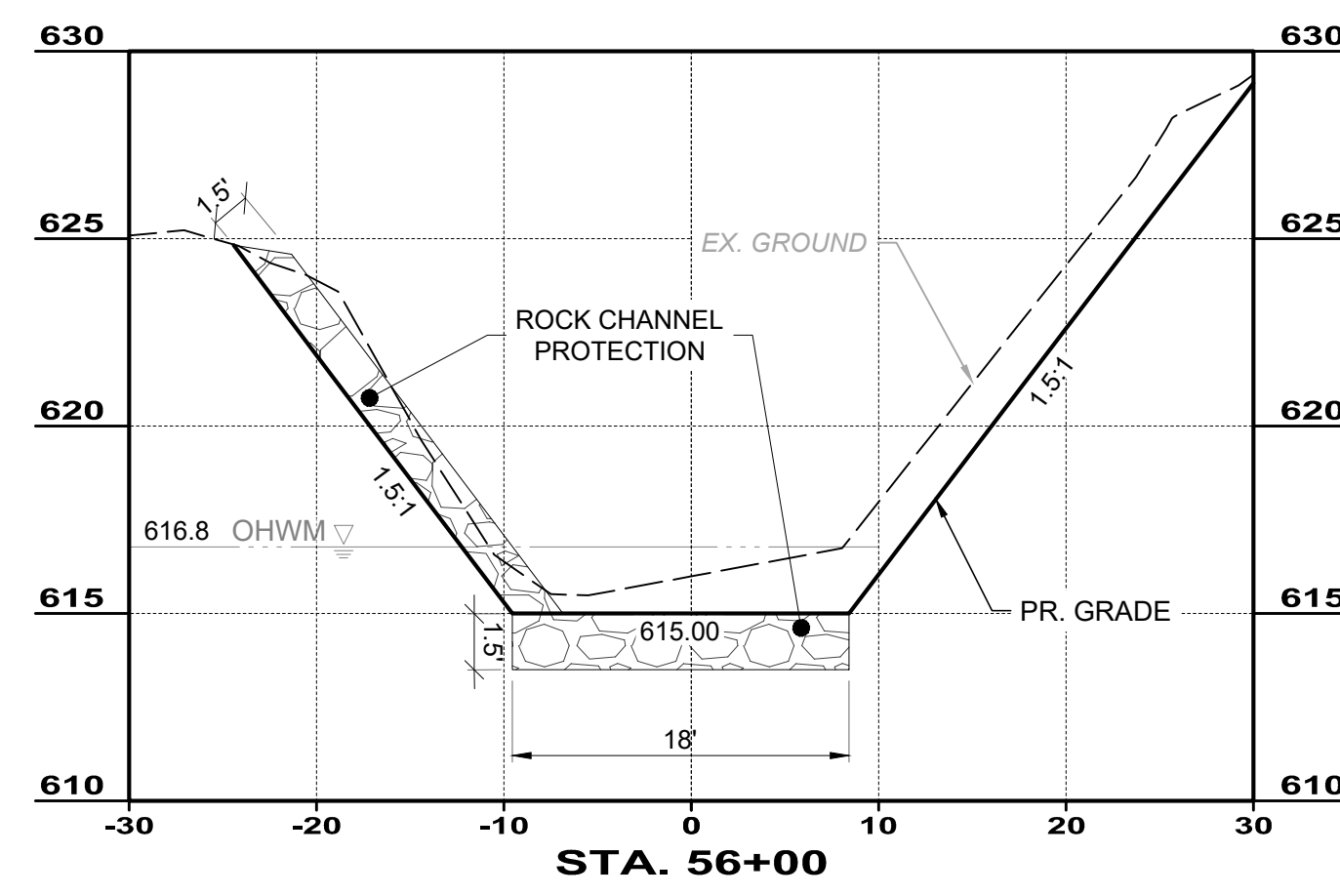
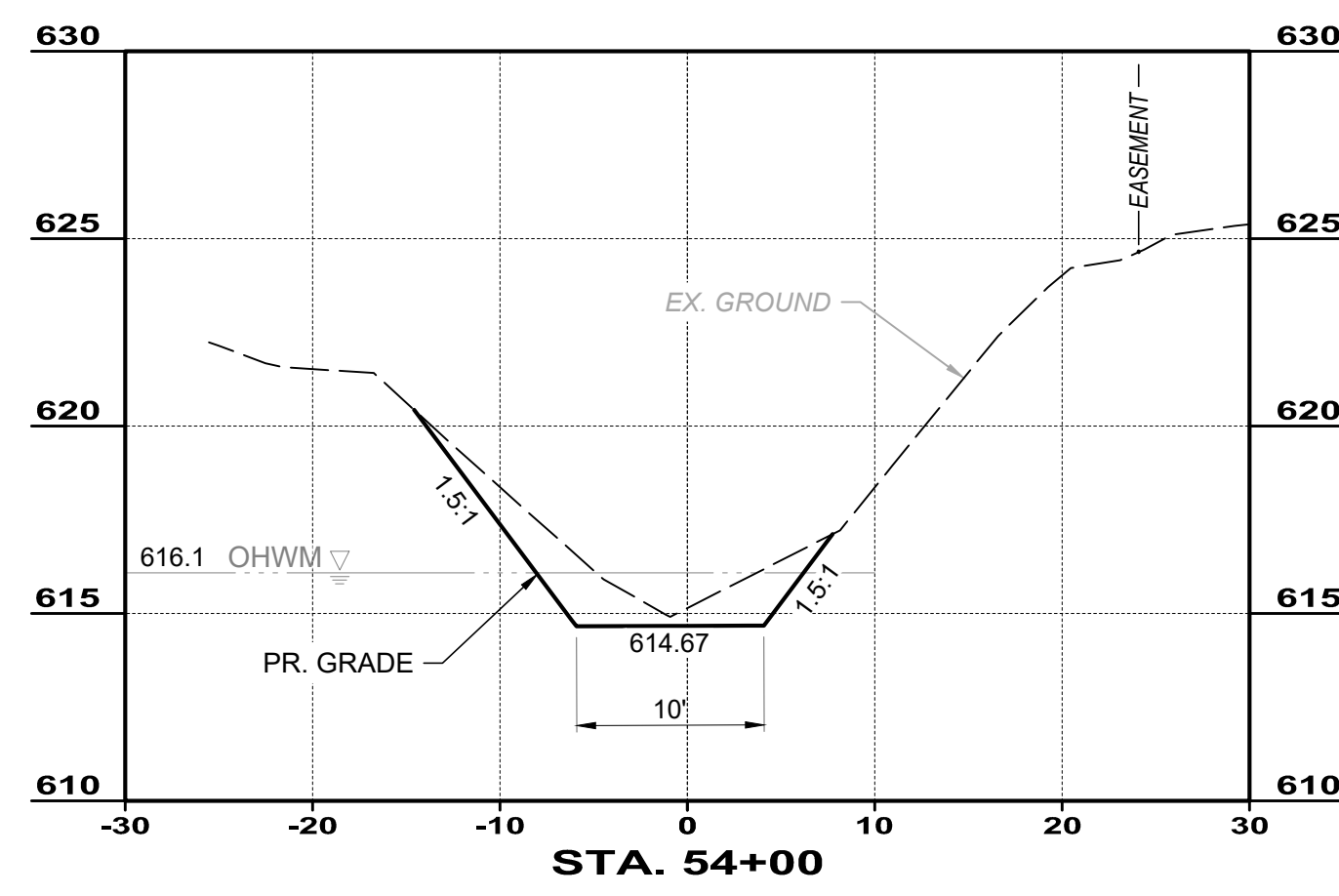
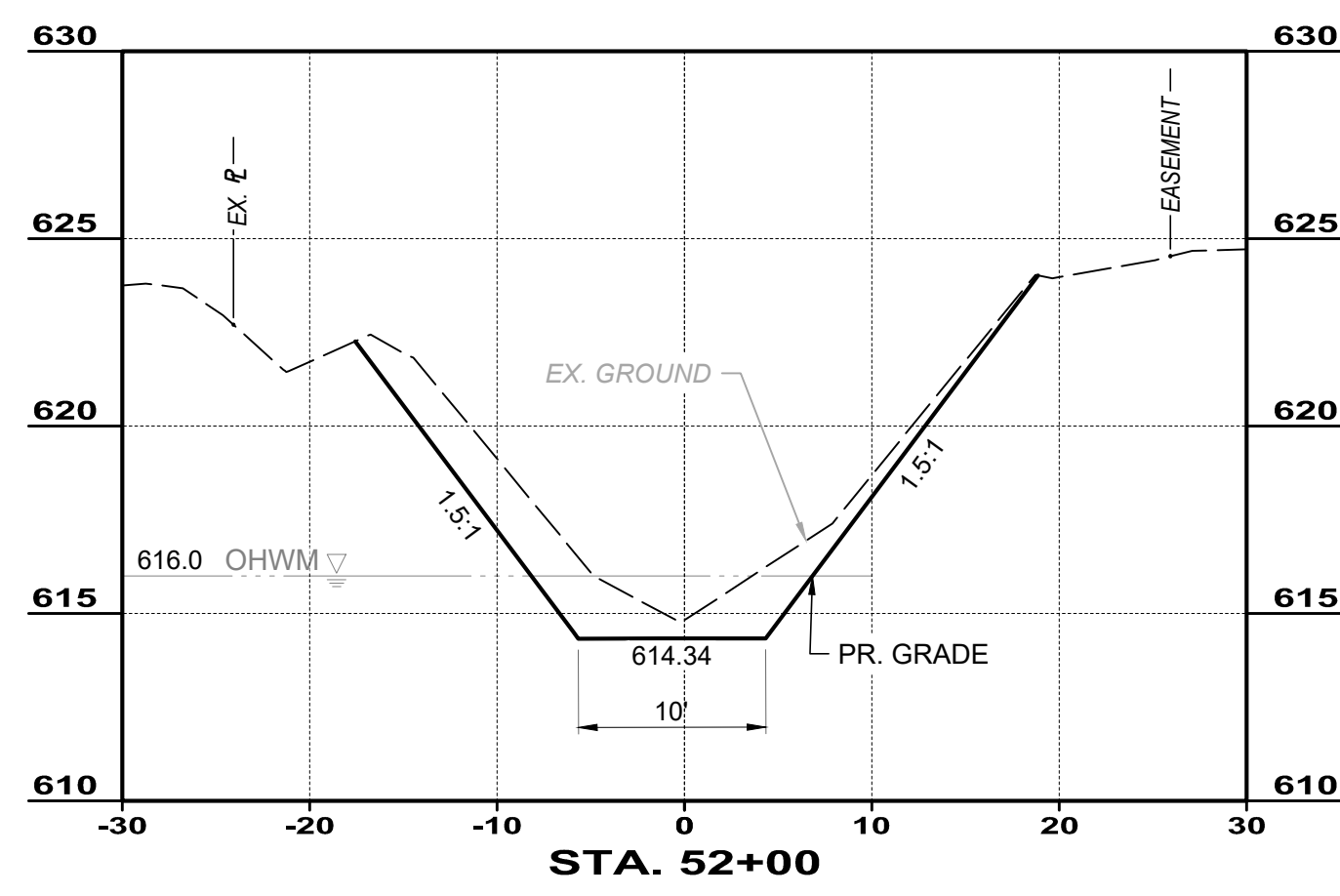
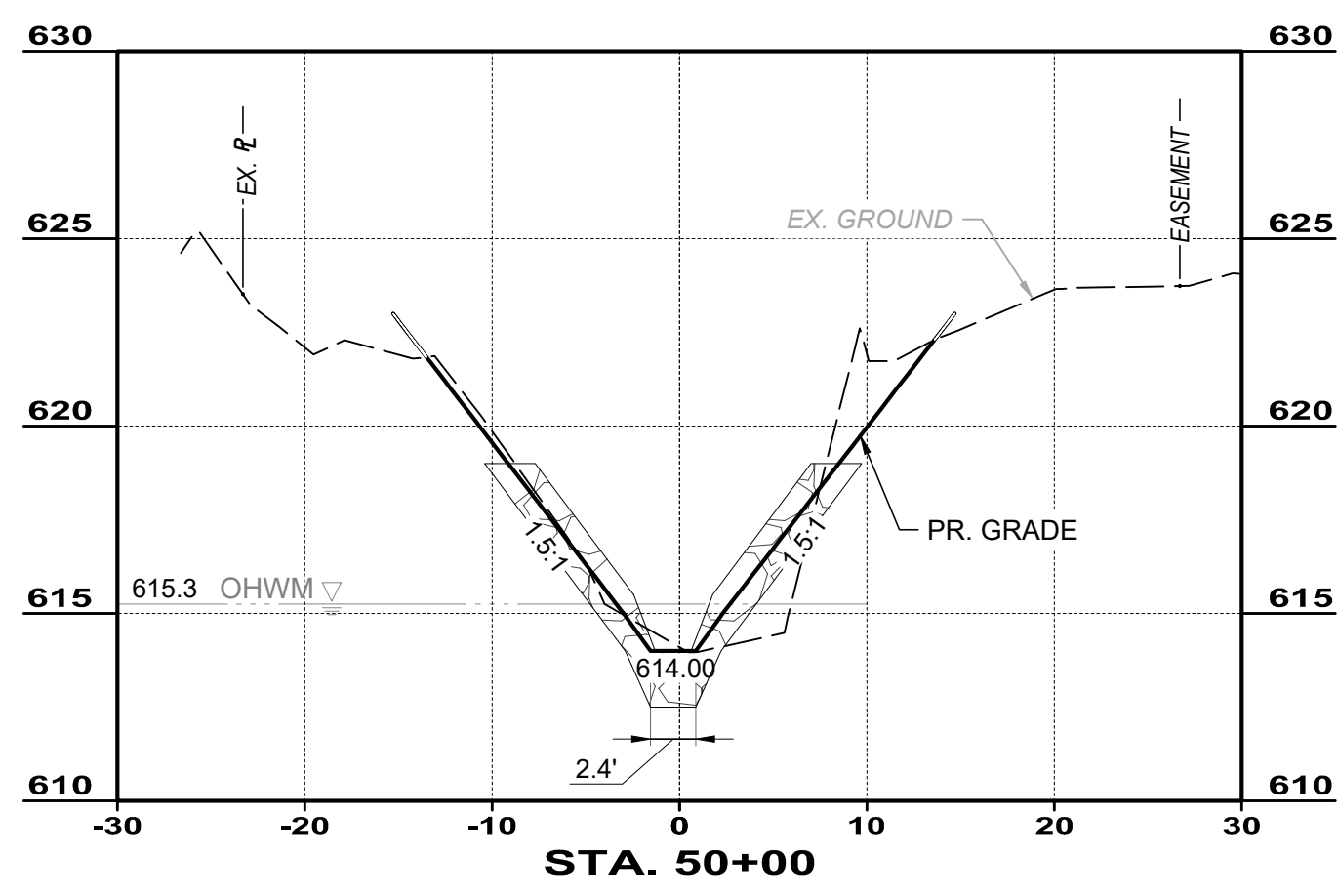
BELFLOWER/MEADOWBROOK DITCH RESTORATION PROJECT
 MENTOR, OH
 LAKE COUNTY
NORTH CROSS SECTIONS 3

PROJECT NO.	241472
DISCIPLINE	CIVIL
SHEET NAME	N-CS-3
SHEET	OF
14	20

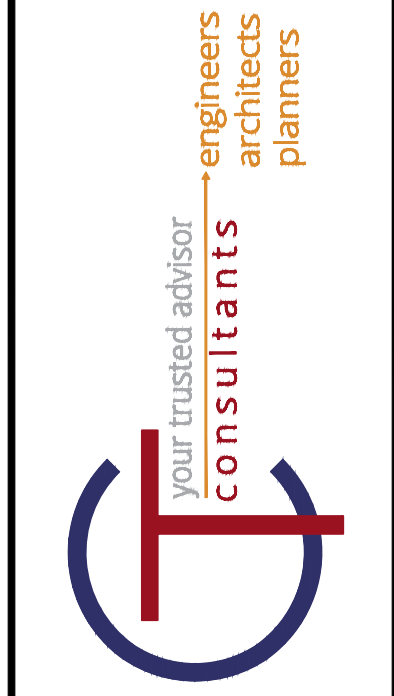


NORTH DITCH - CROSS SECTIONS (3 OF 3)

H:\2024\41472\DWG\BHE\ESTC_241472 - CROSS SECTIONS.DWG - N-CS-3 - 12/11/2024 1:40:15 PM - GEORGE STEVENS



SOUTH DITCH - CROSS SECTIONS (1 OF 3)



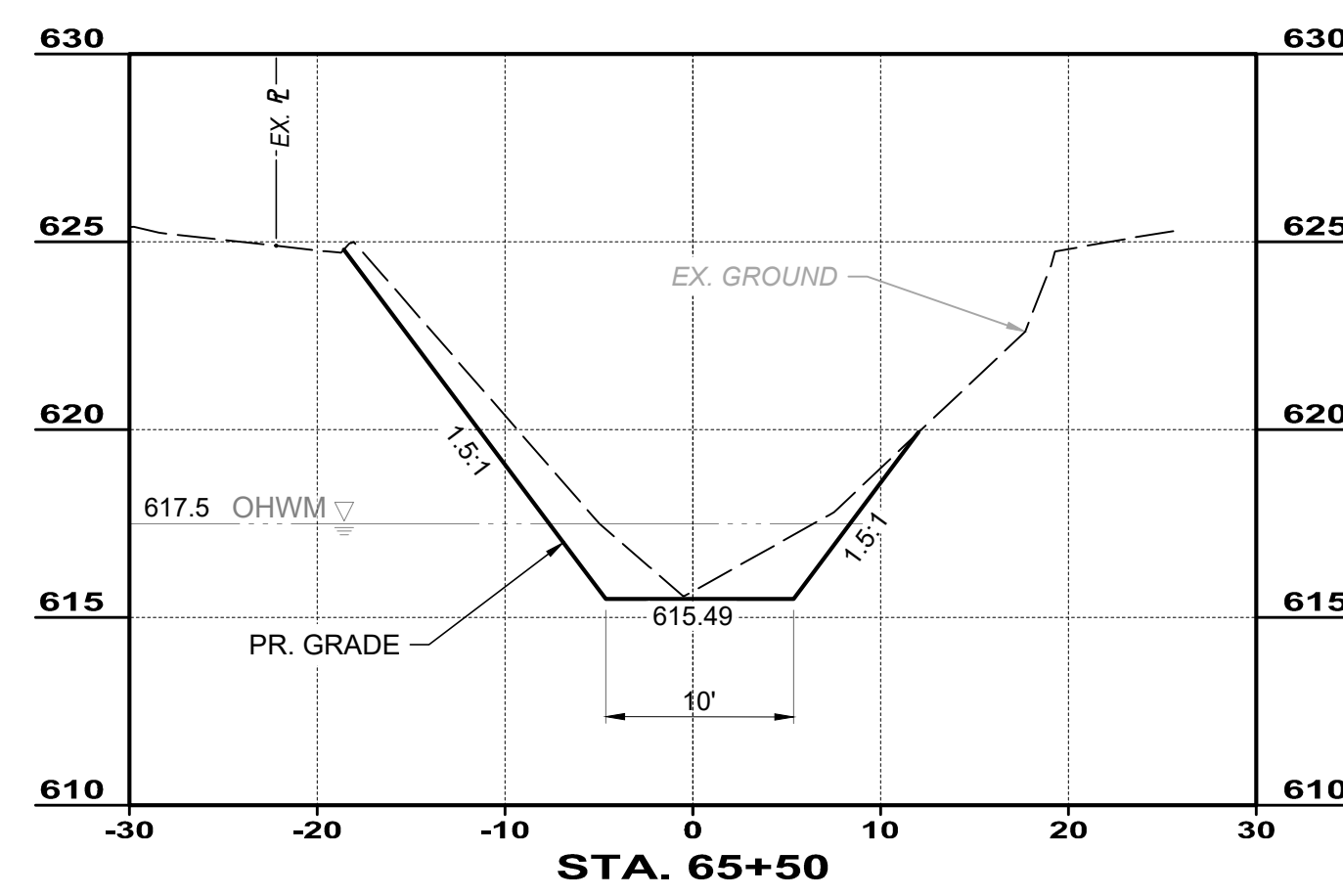
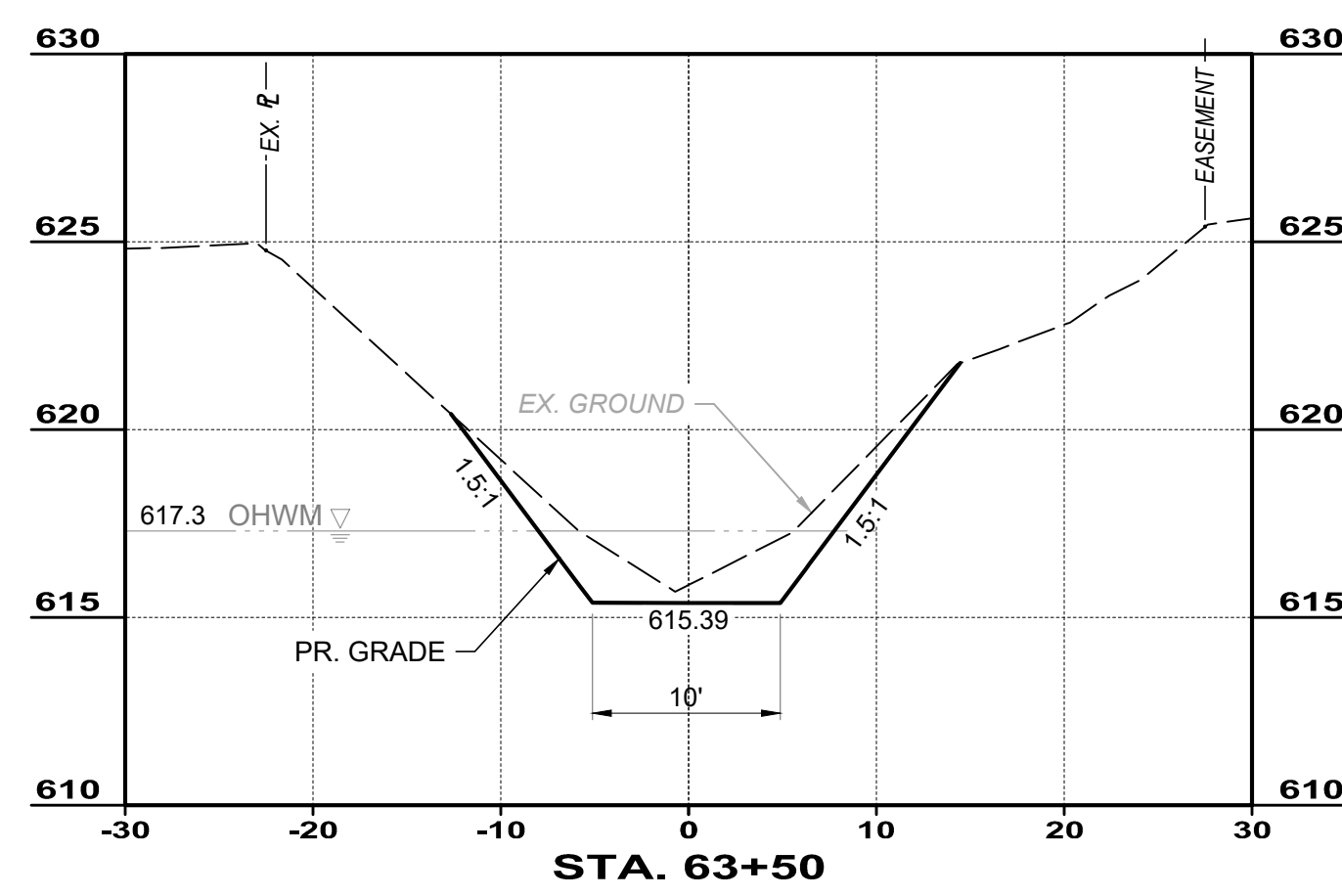
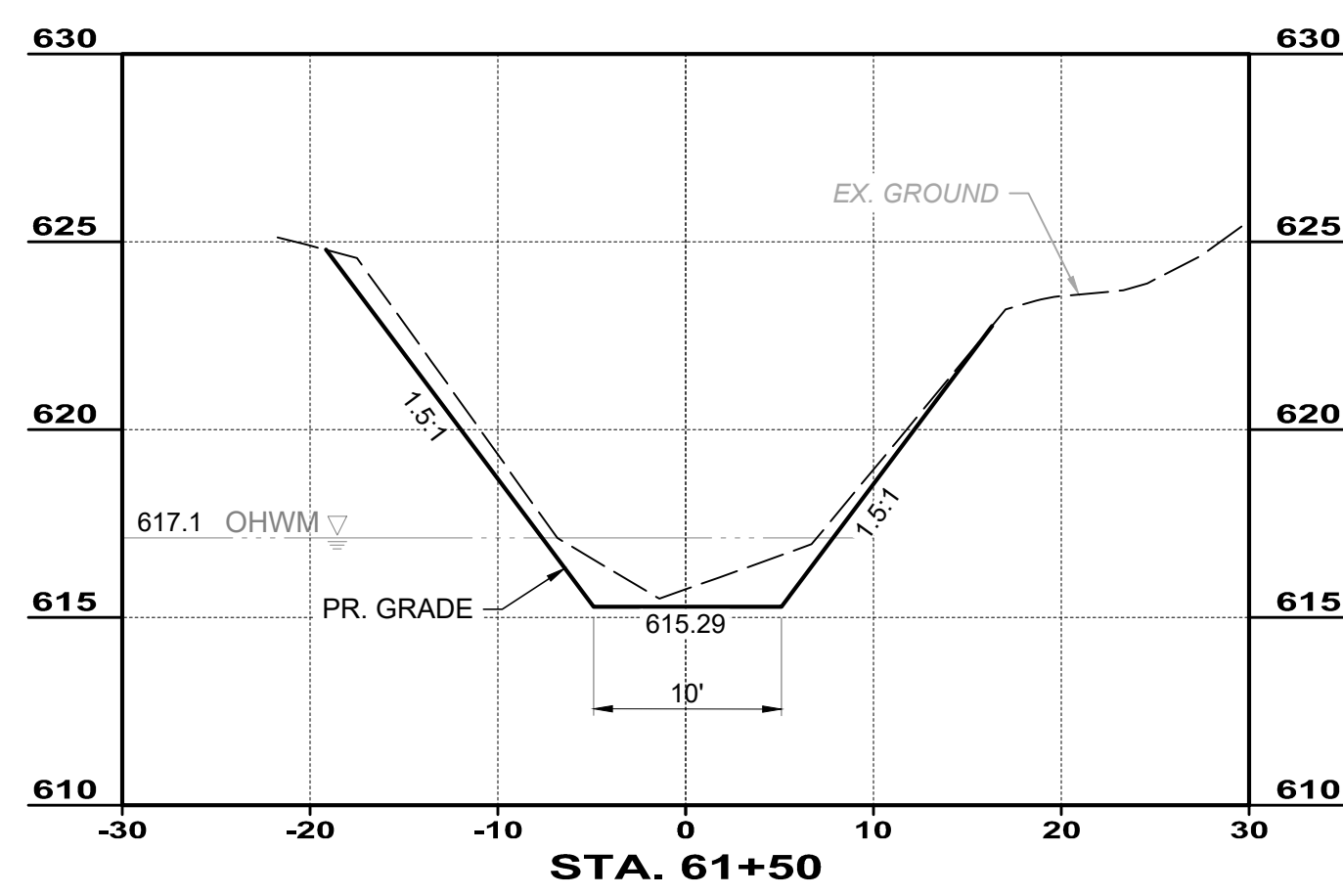
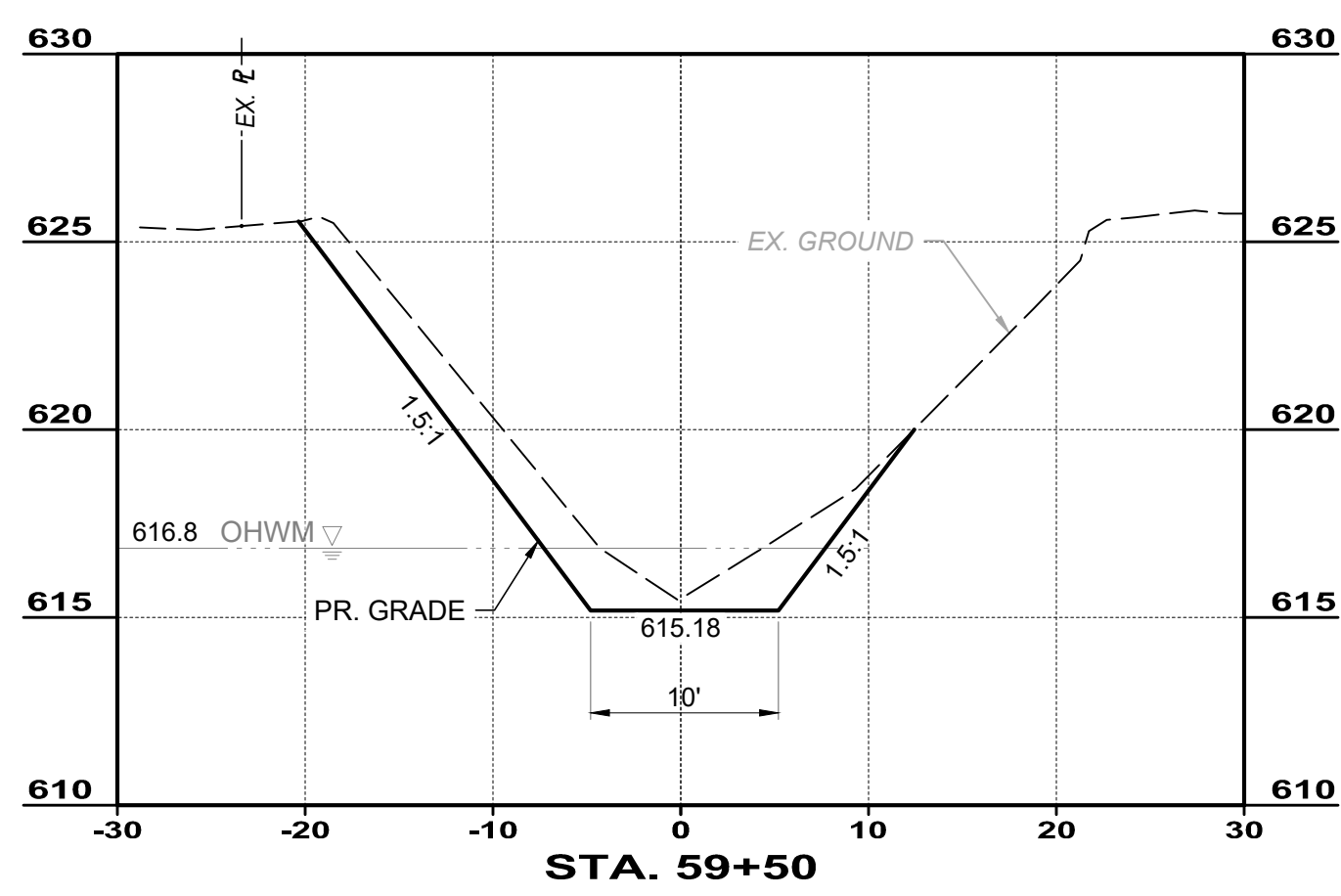
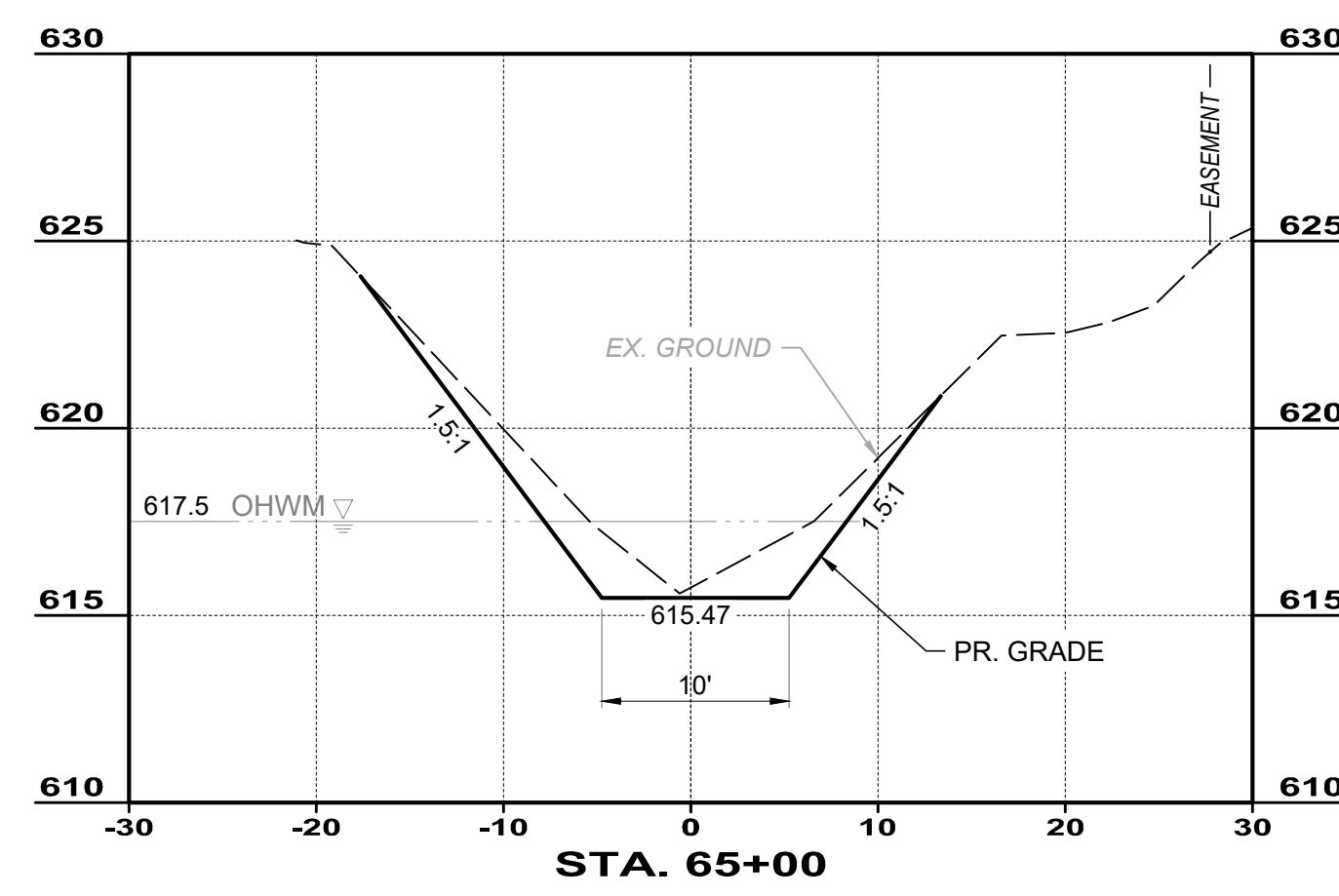
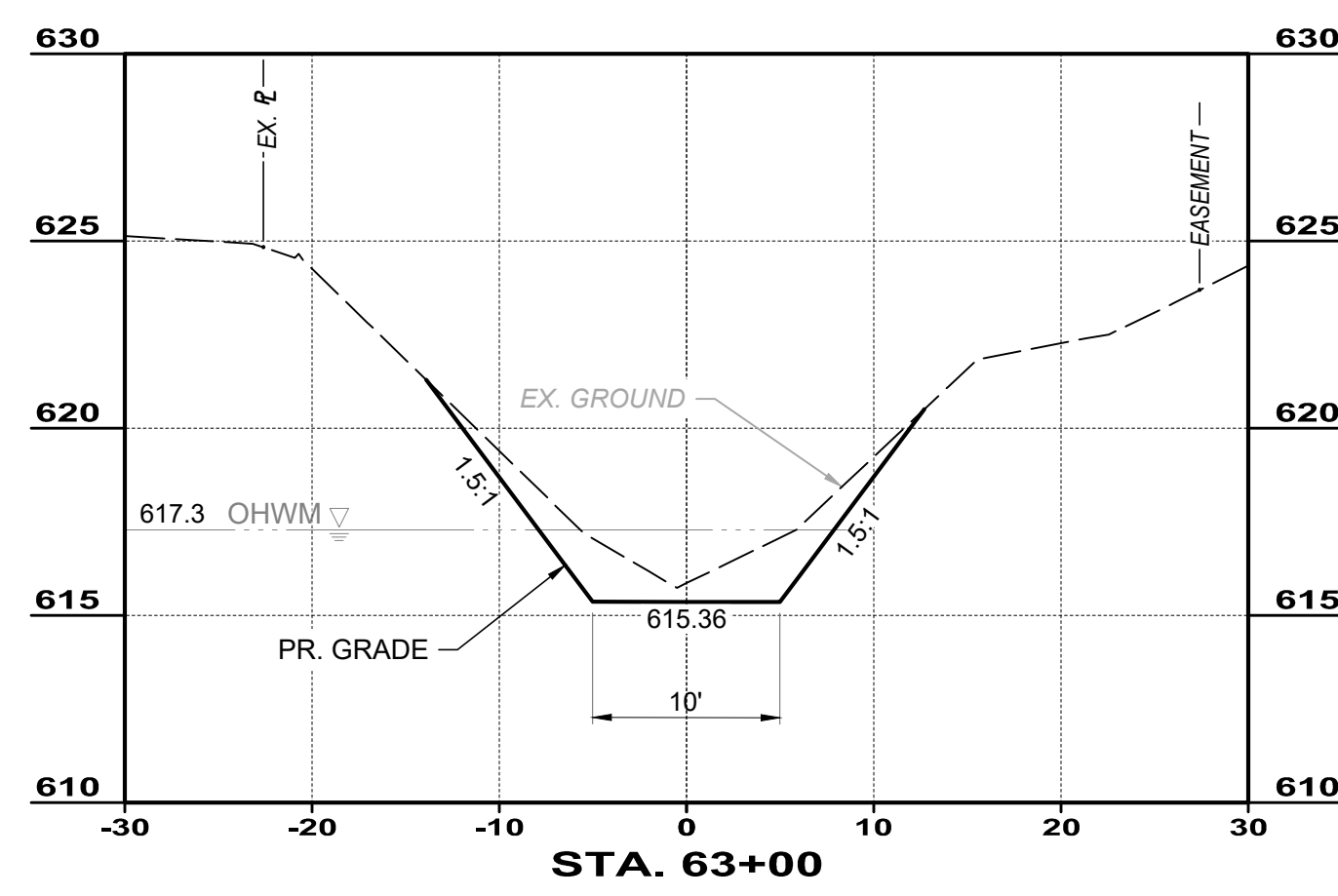
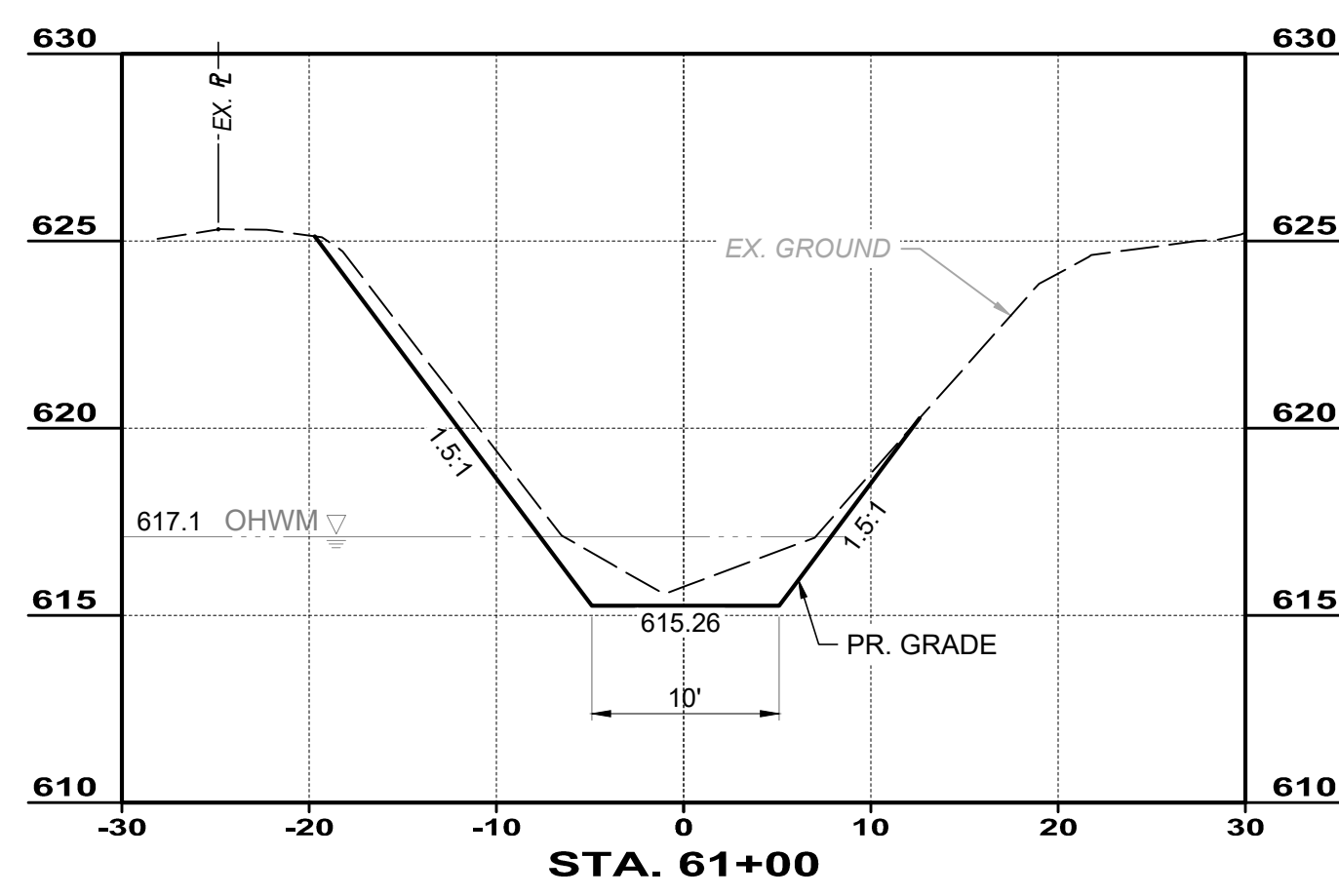
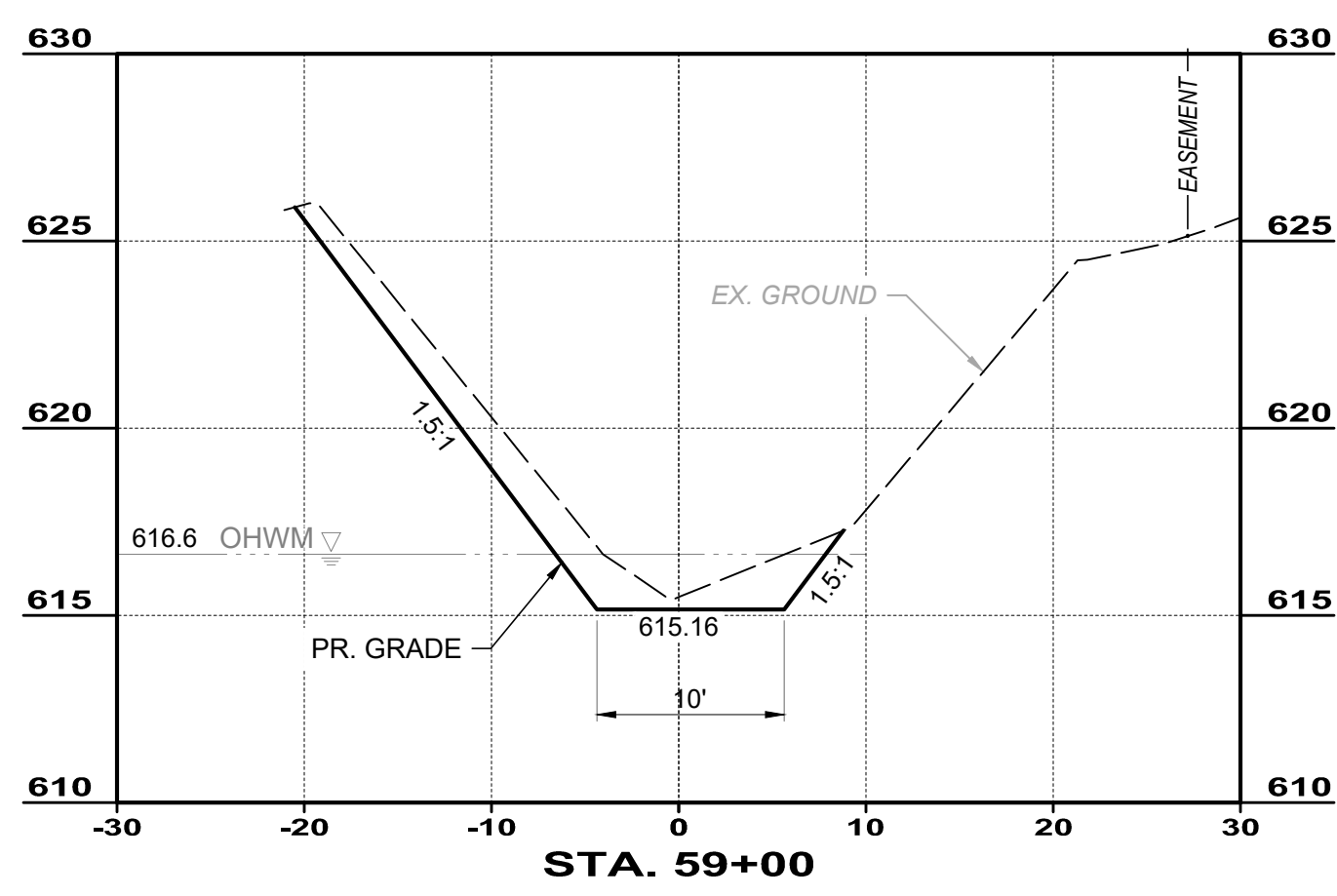
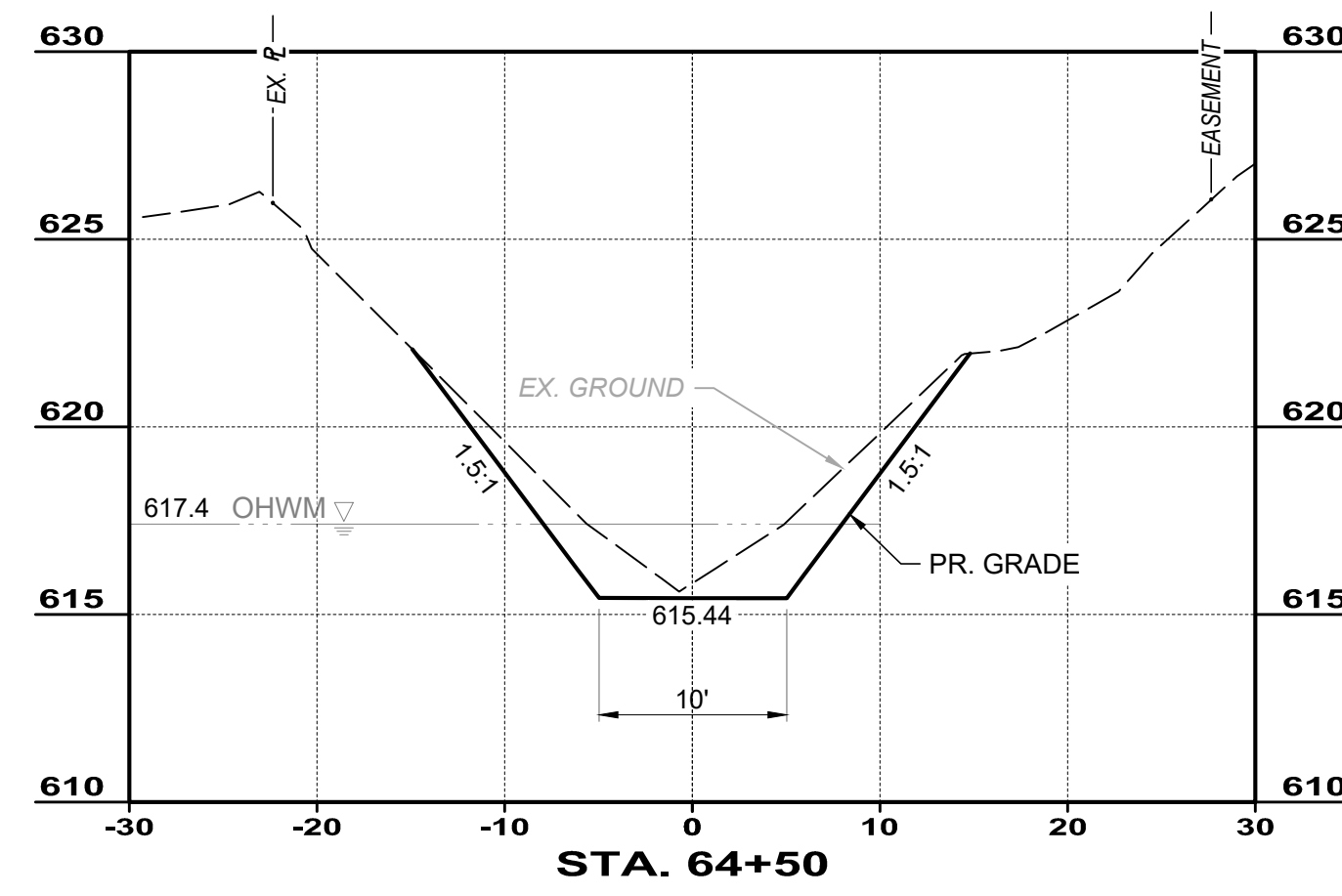
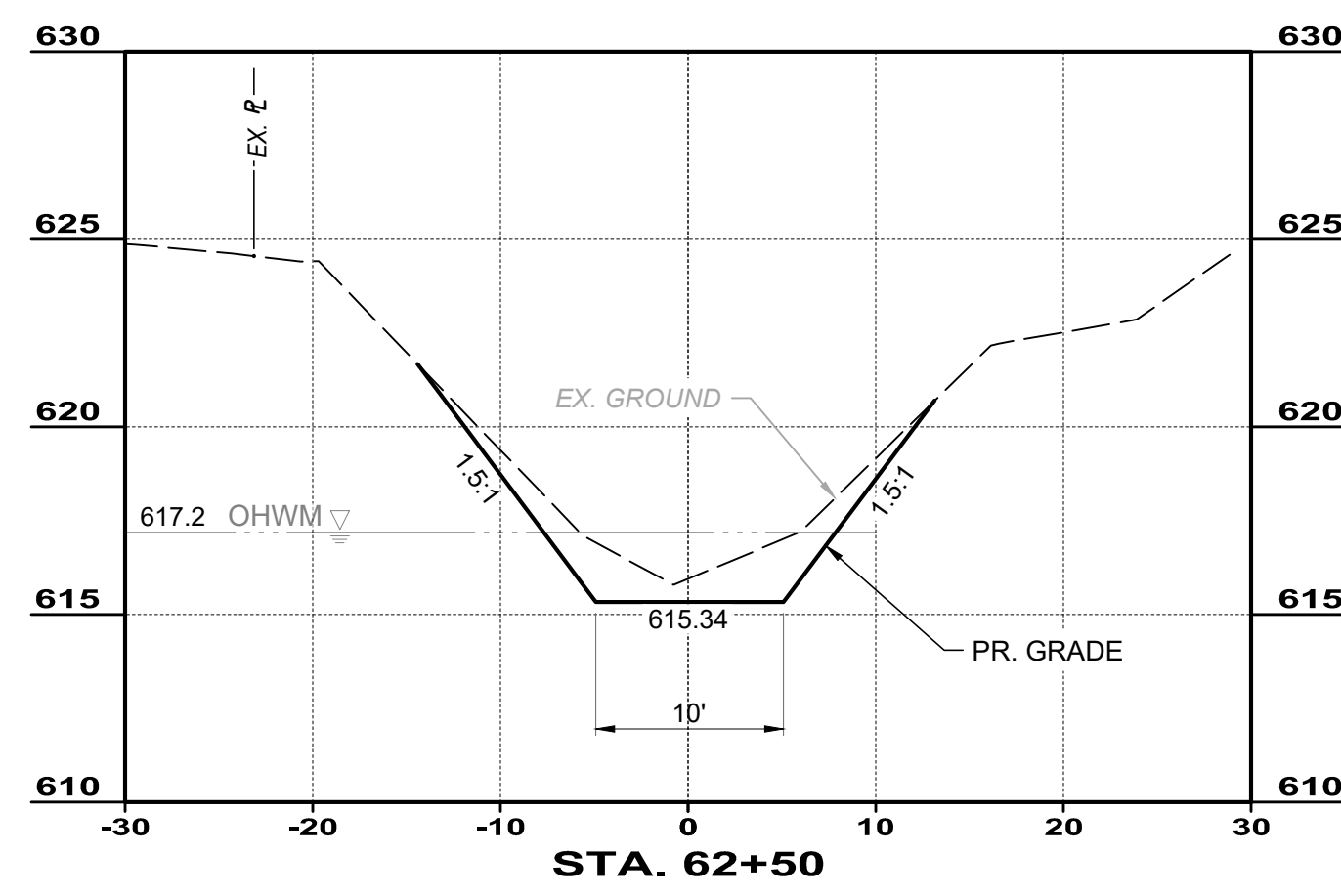
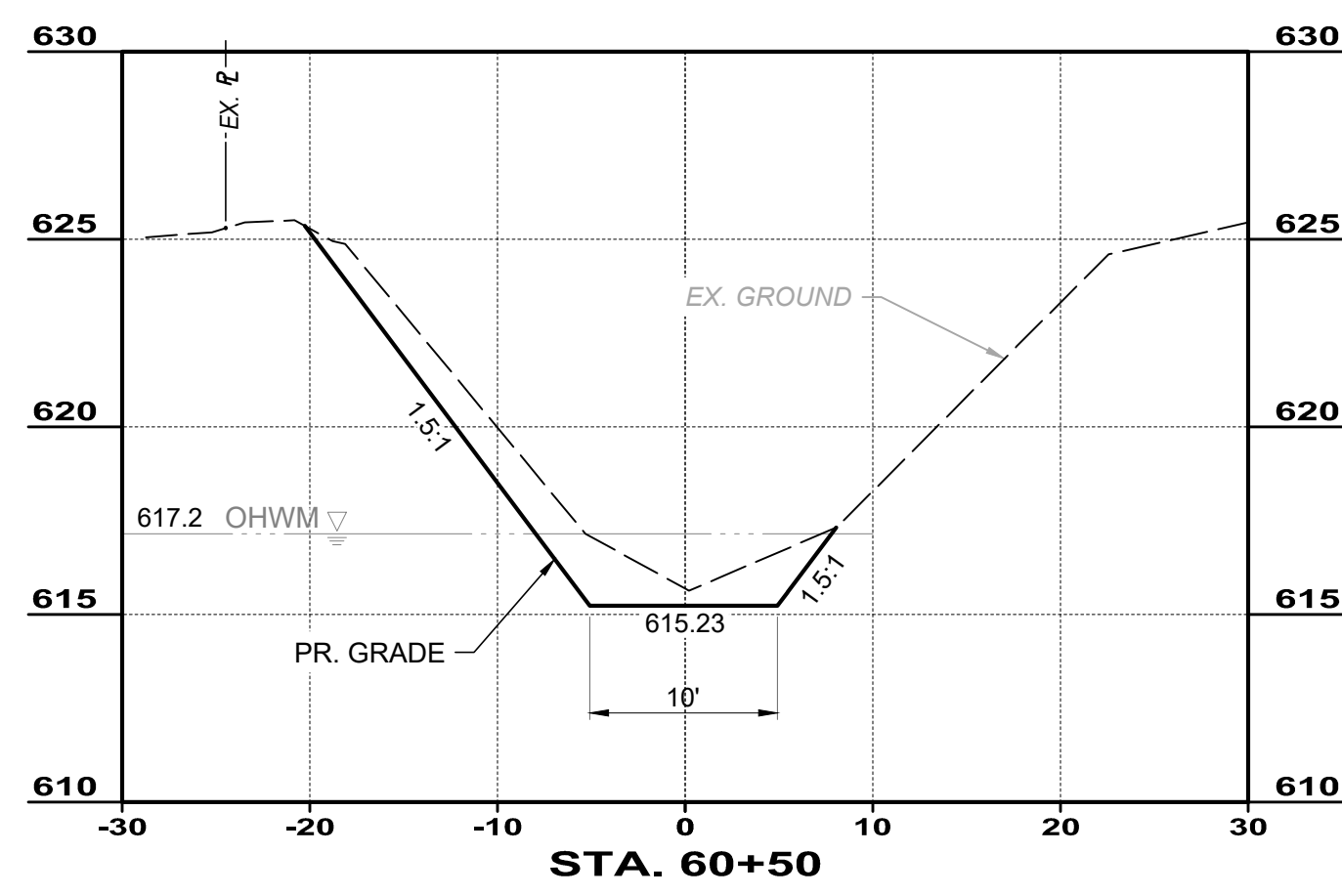
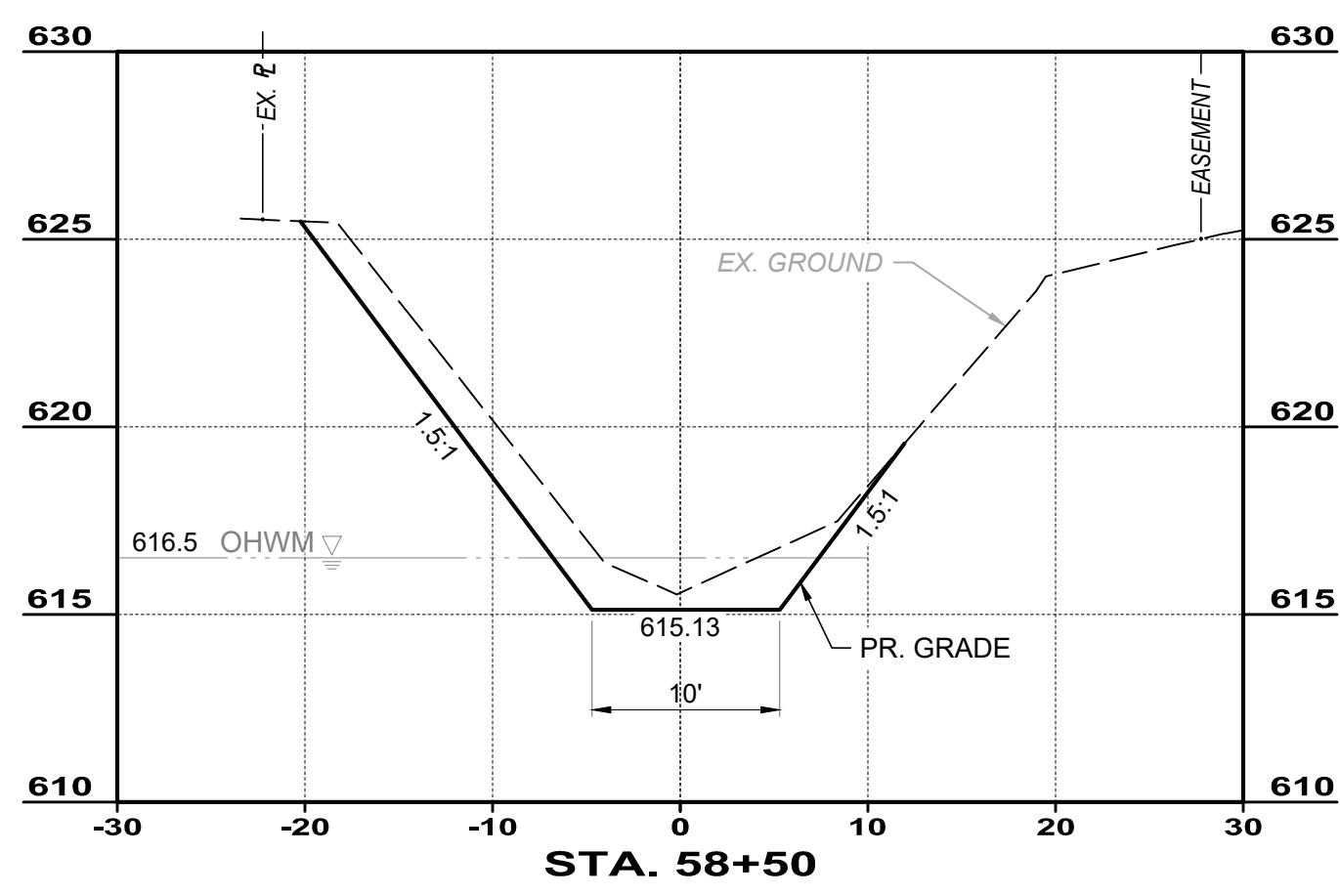
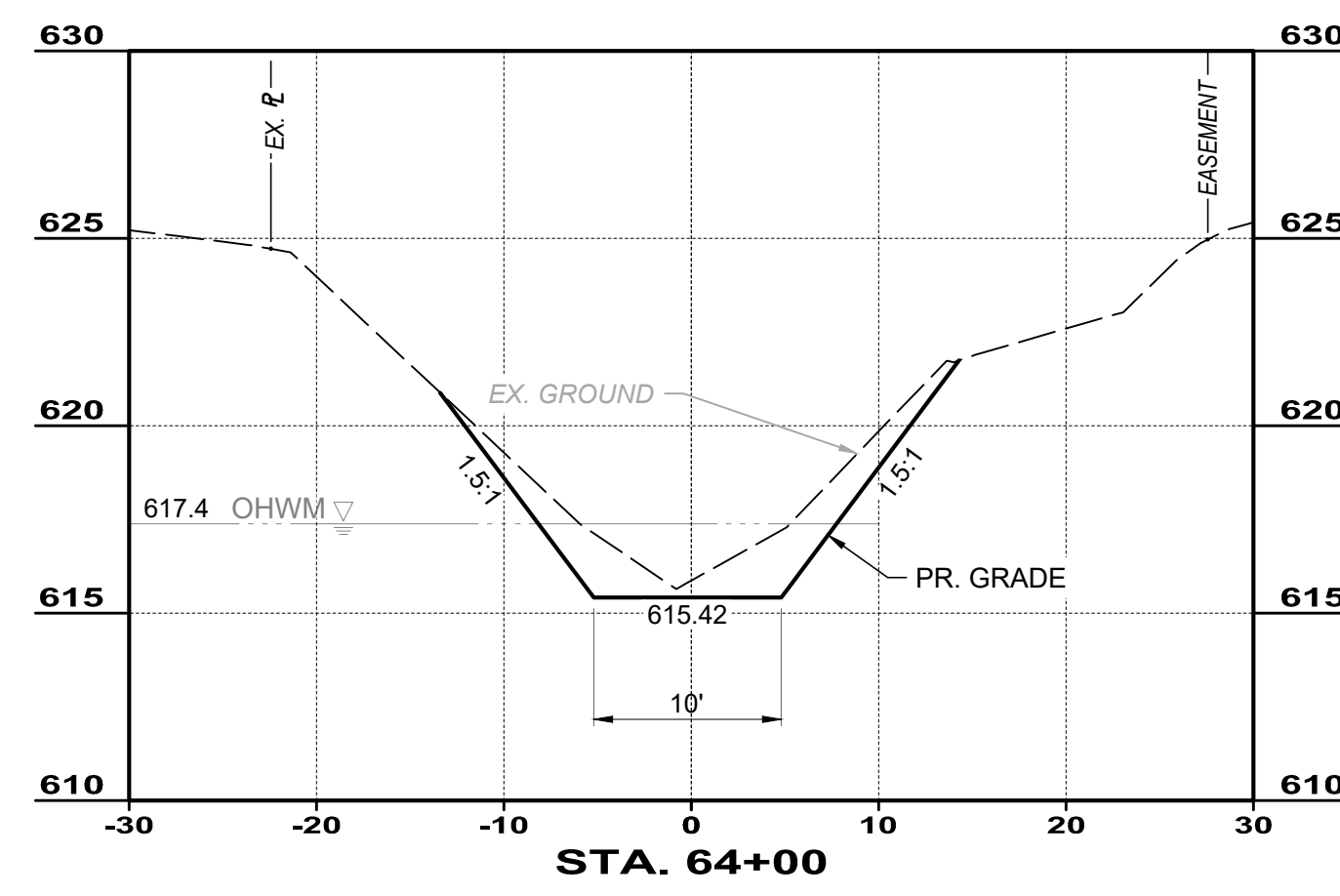
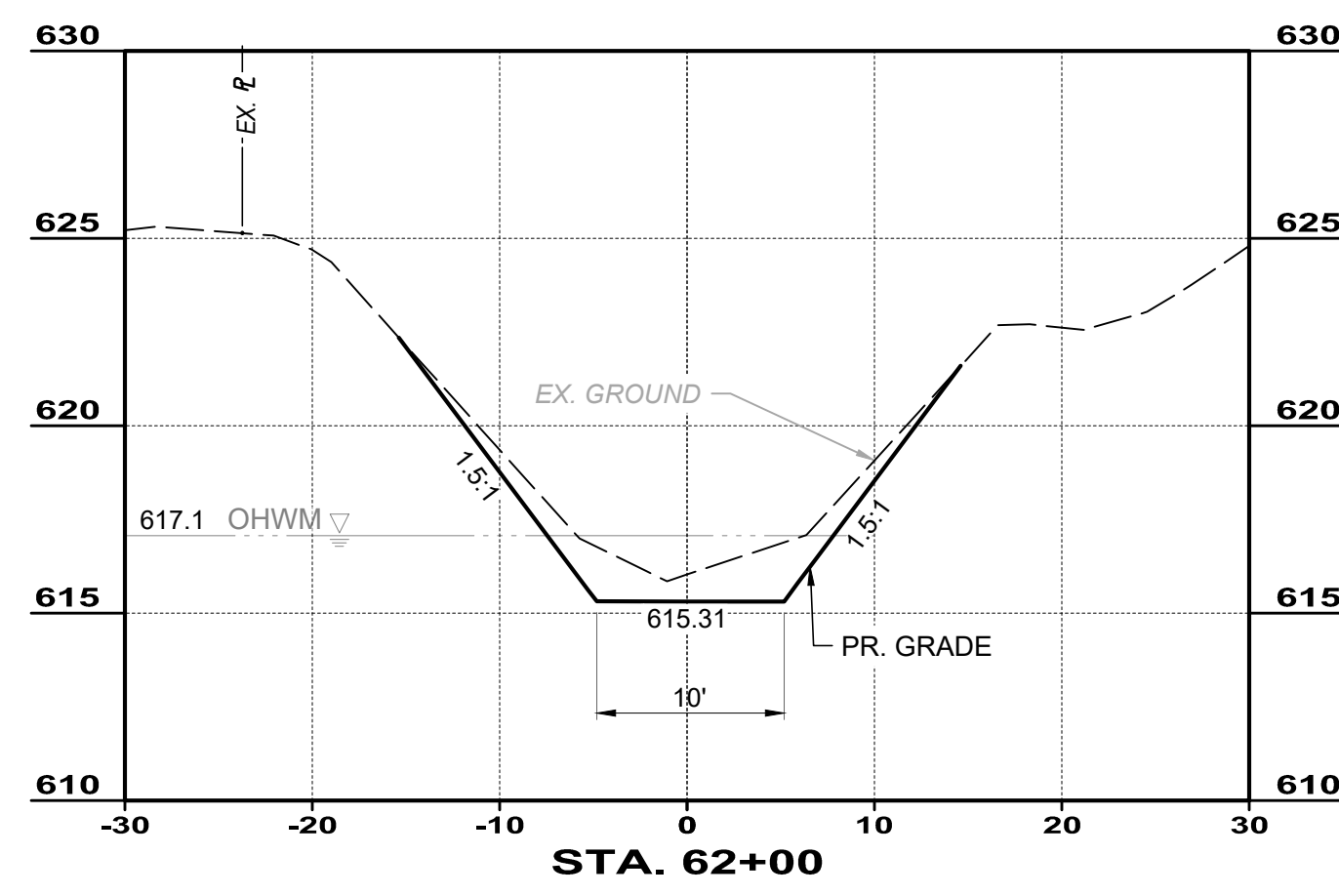
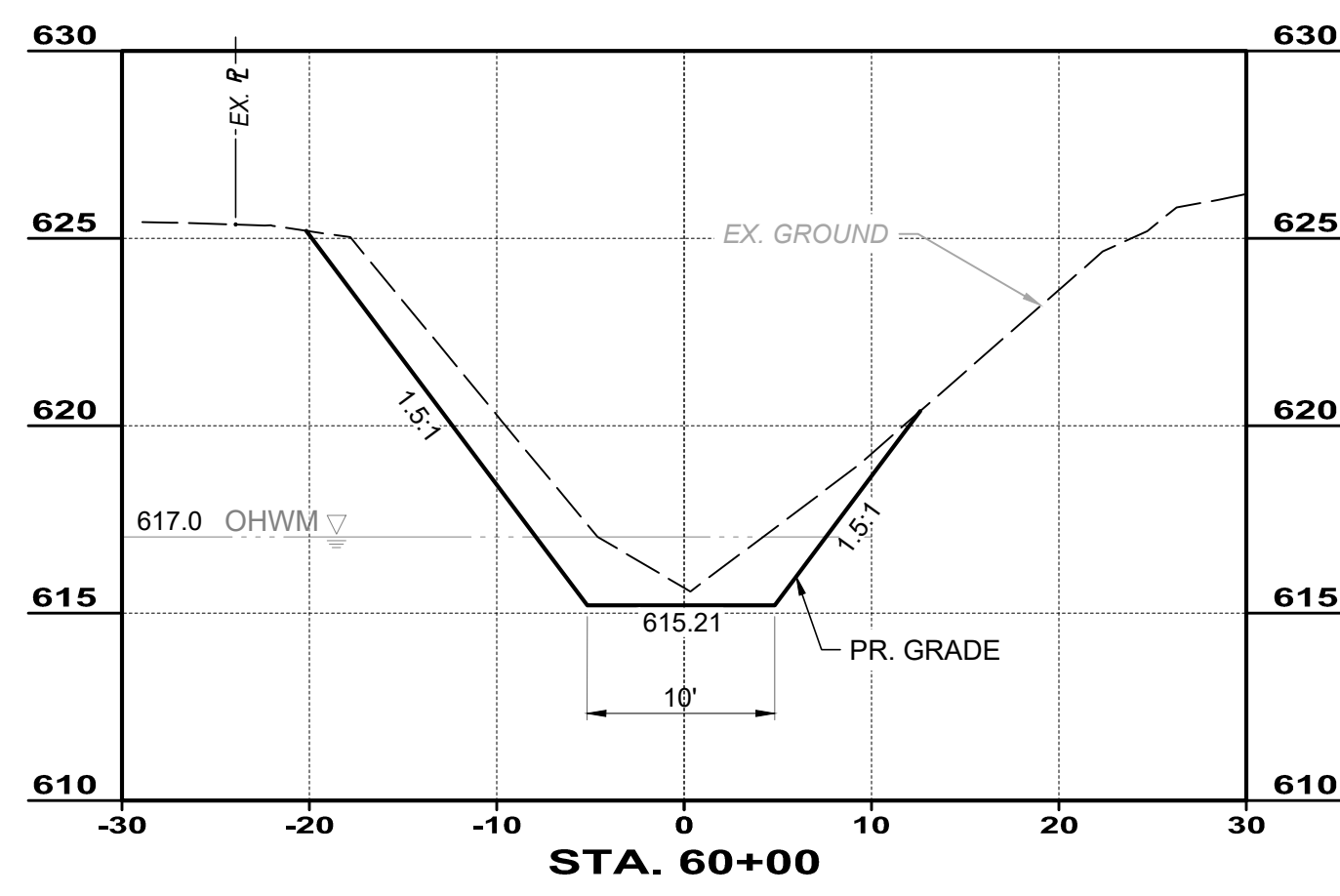
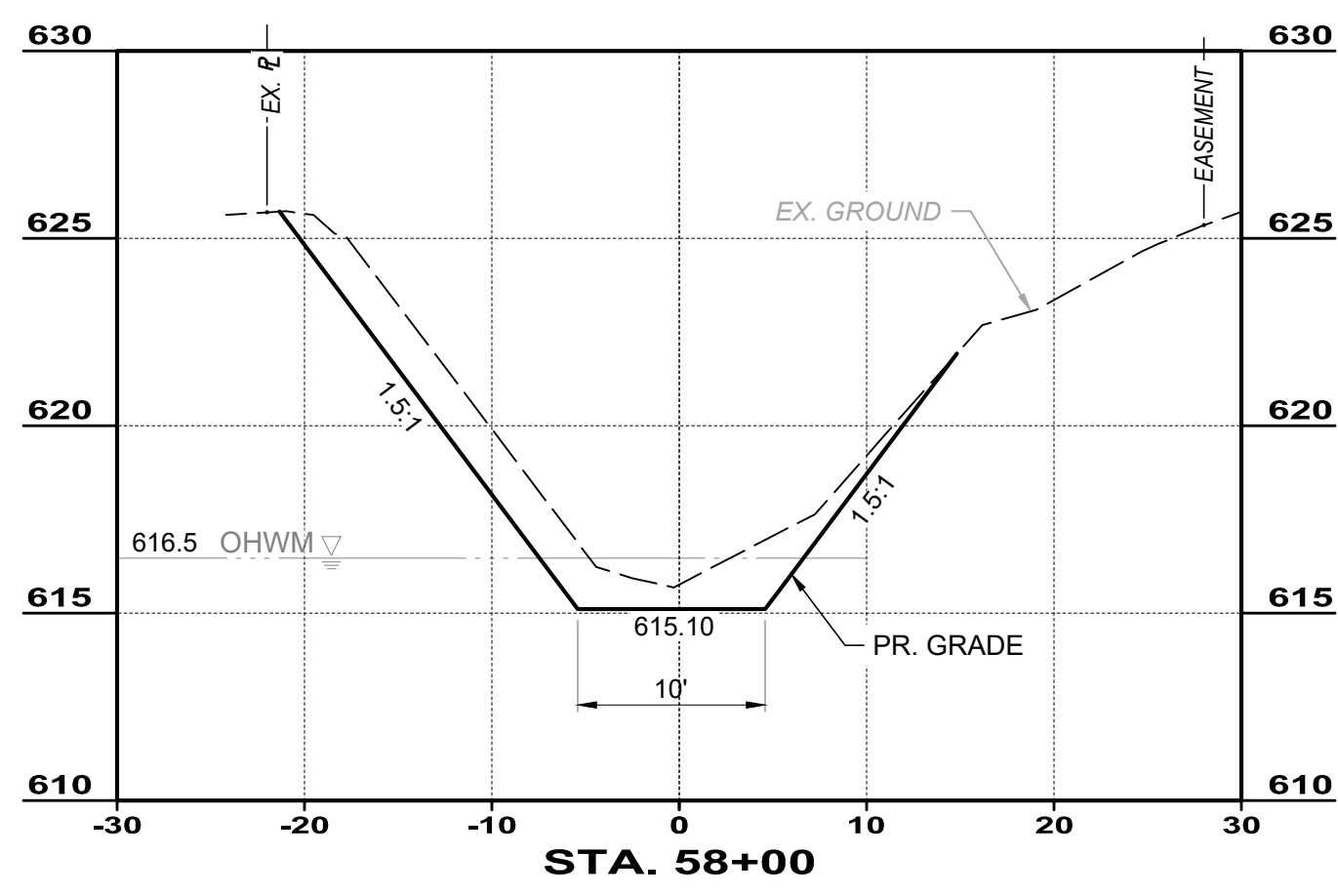
NO.	REVISION	DATE

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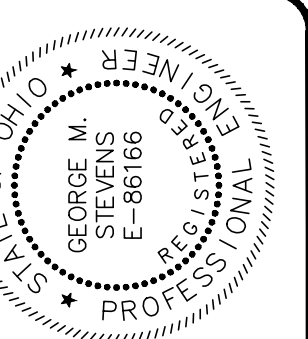
BELFLOWER/MEADOWBROOK DITCH RESTORATION PROJECT
 MENTOR, OH
 LAKE COUNTY
SOUTH CROSS SECTIONS 1

PROJECT NO.	241472
DISCIPLINE	CIVIL
SHEET NAME	S-CS-1
SHEET	15
OF	20

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SOUTH DITCH - CROSS SECTIONS (2 OF 3)



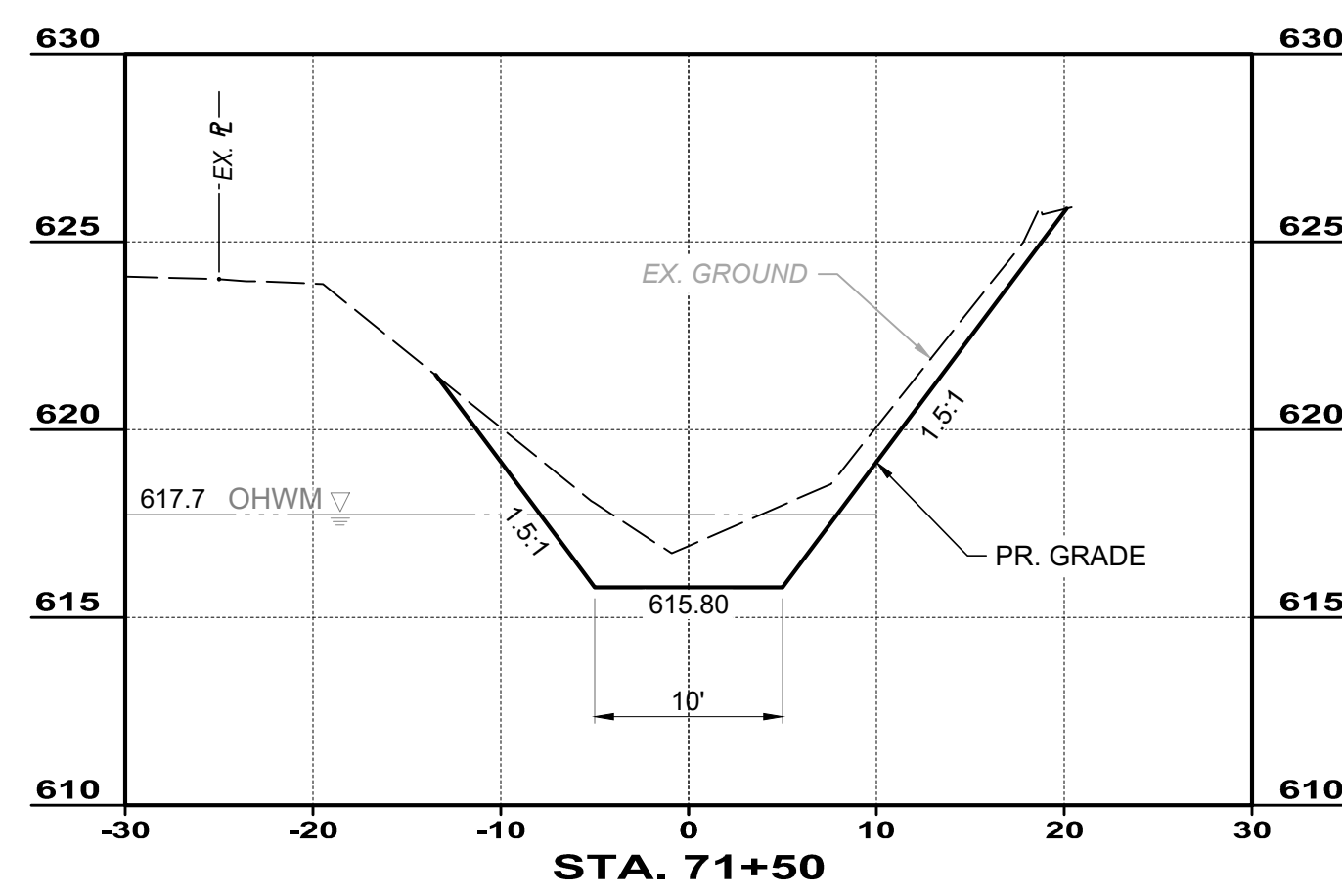
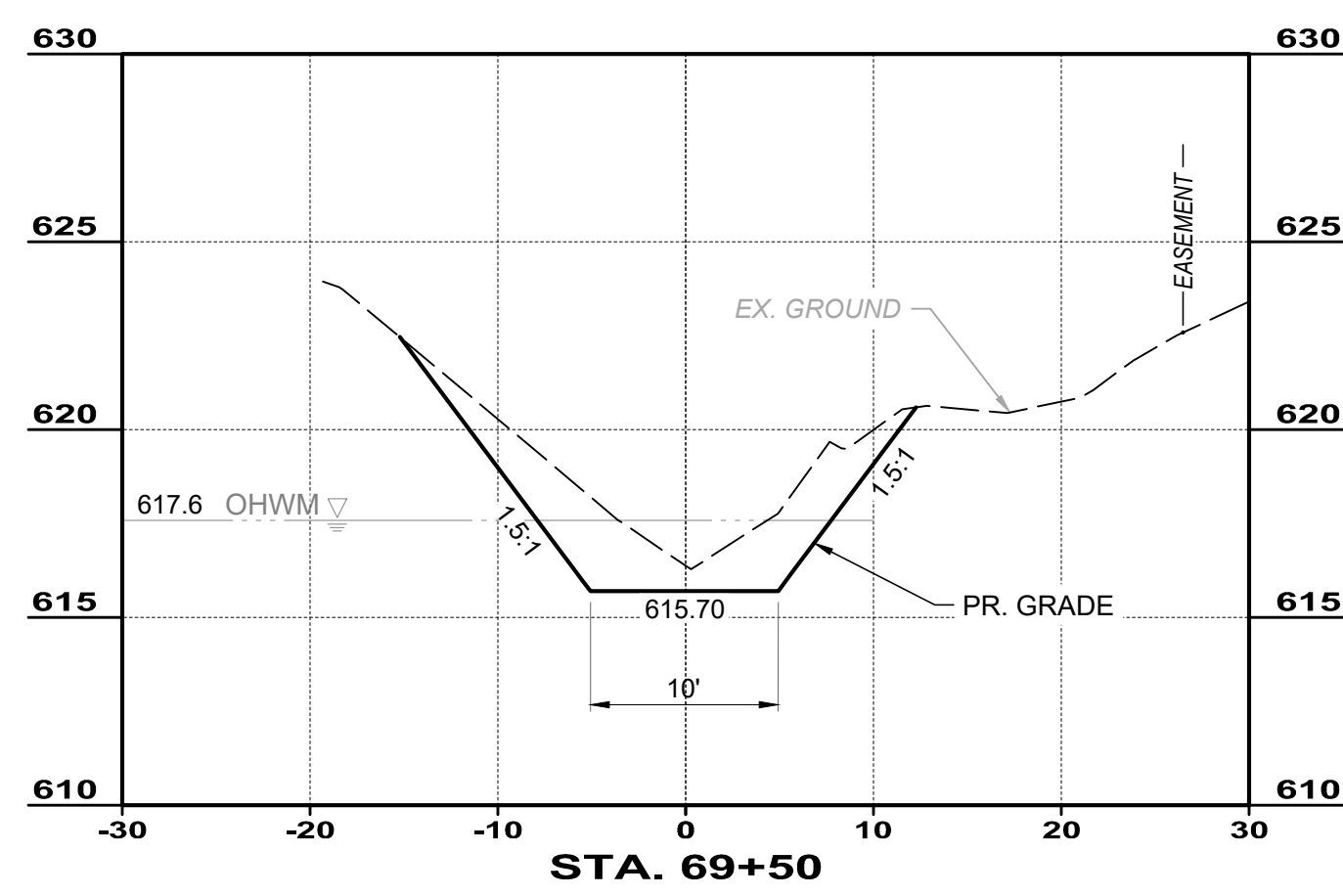
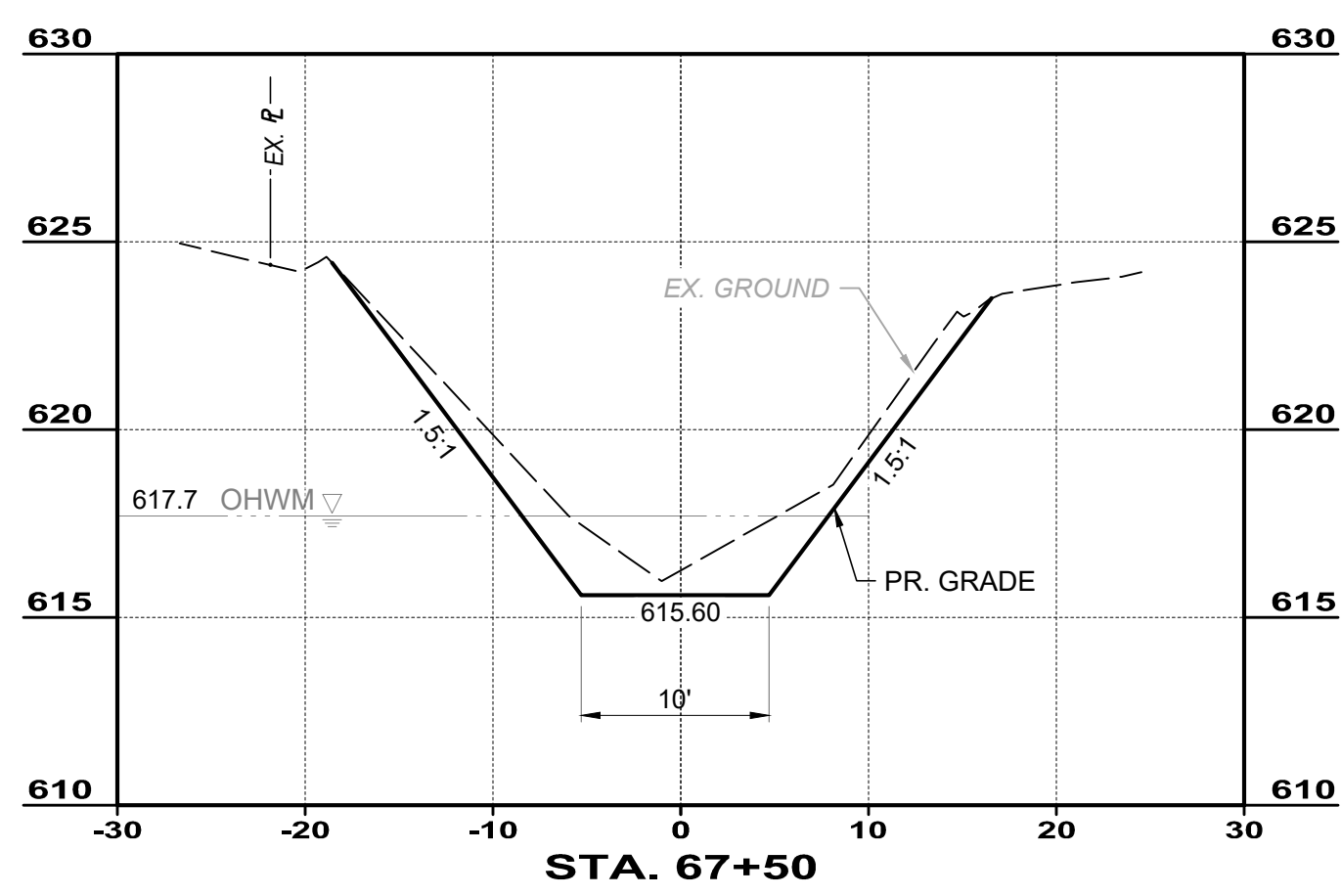
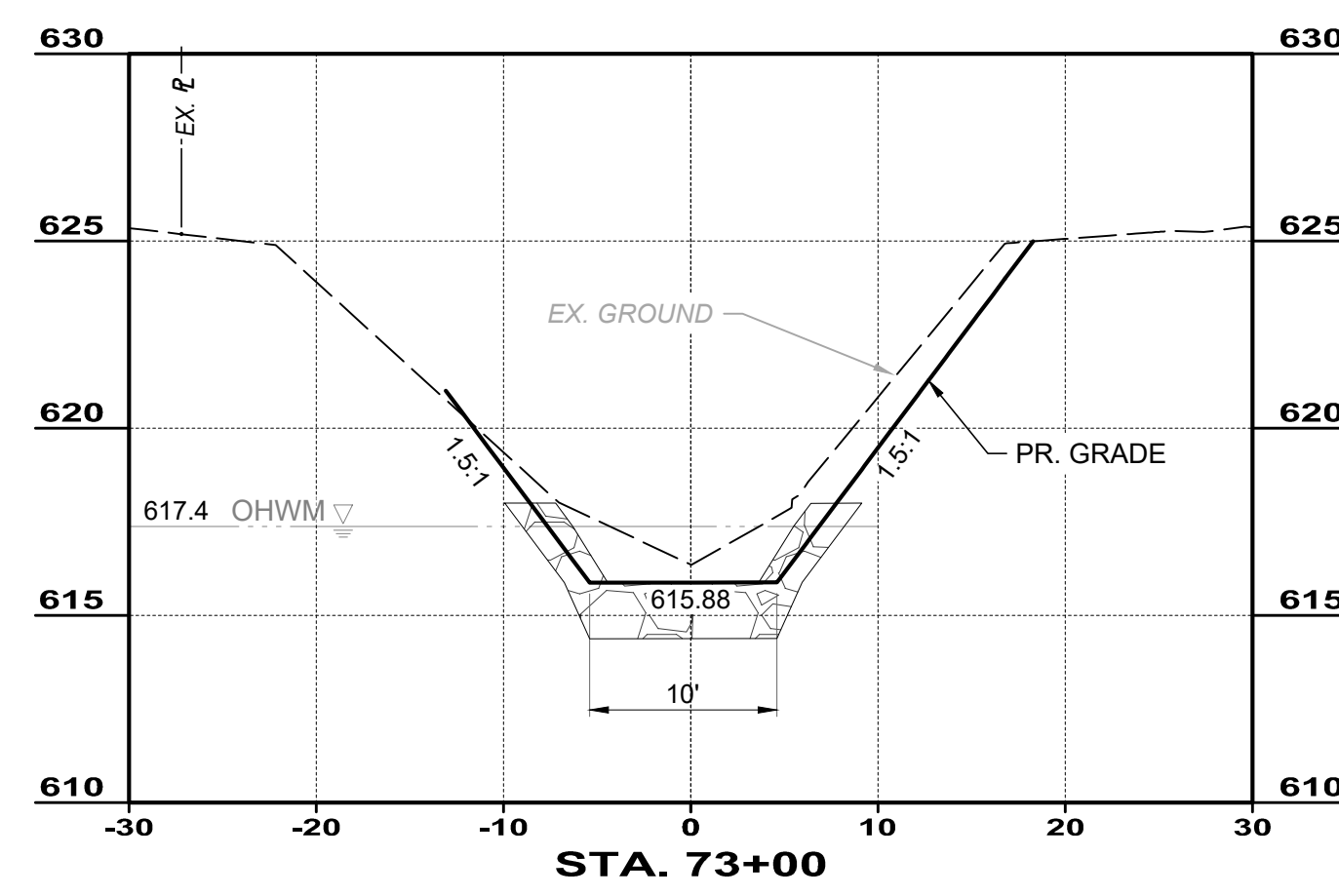
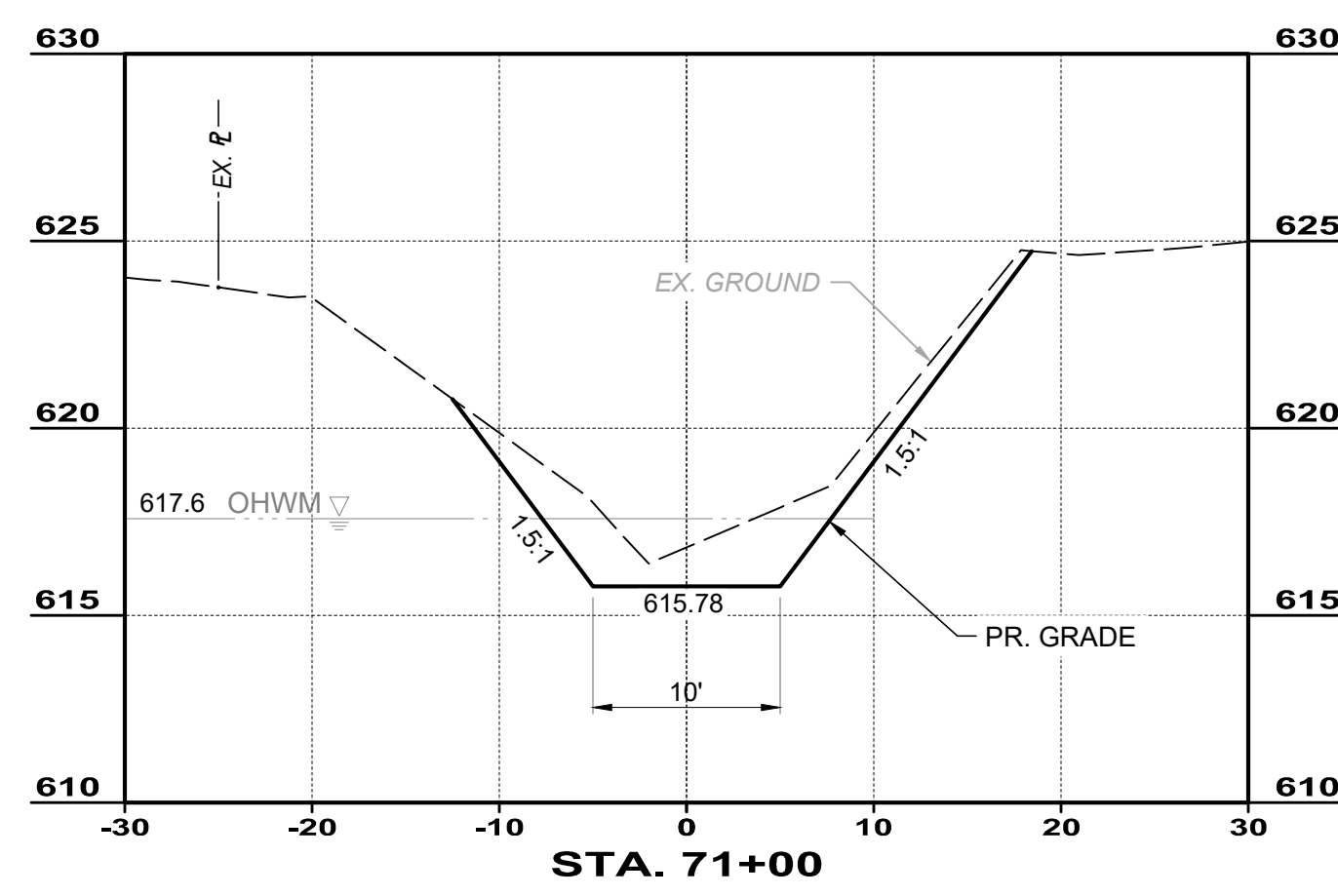
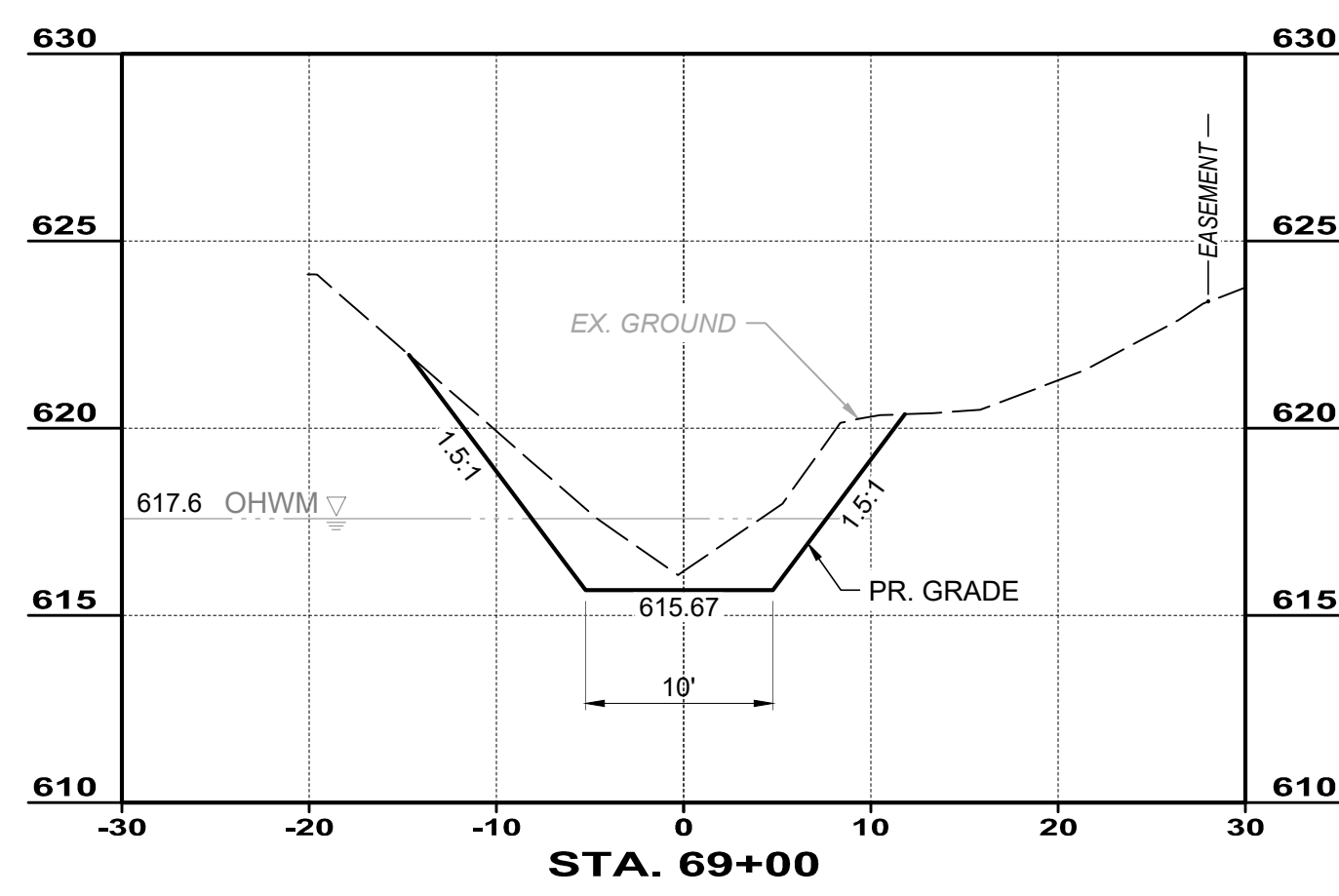
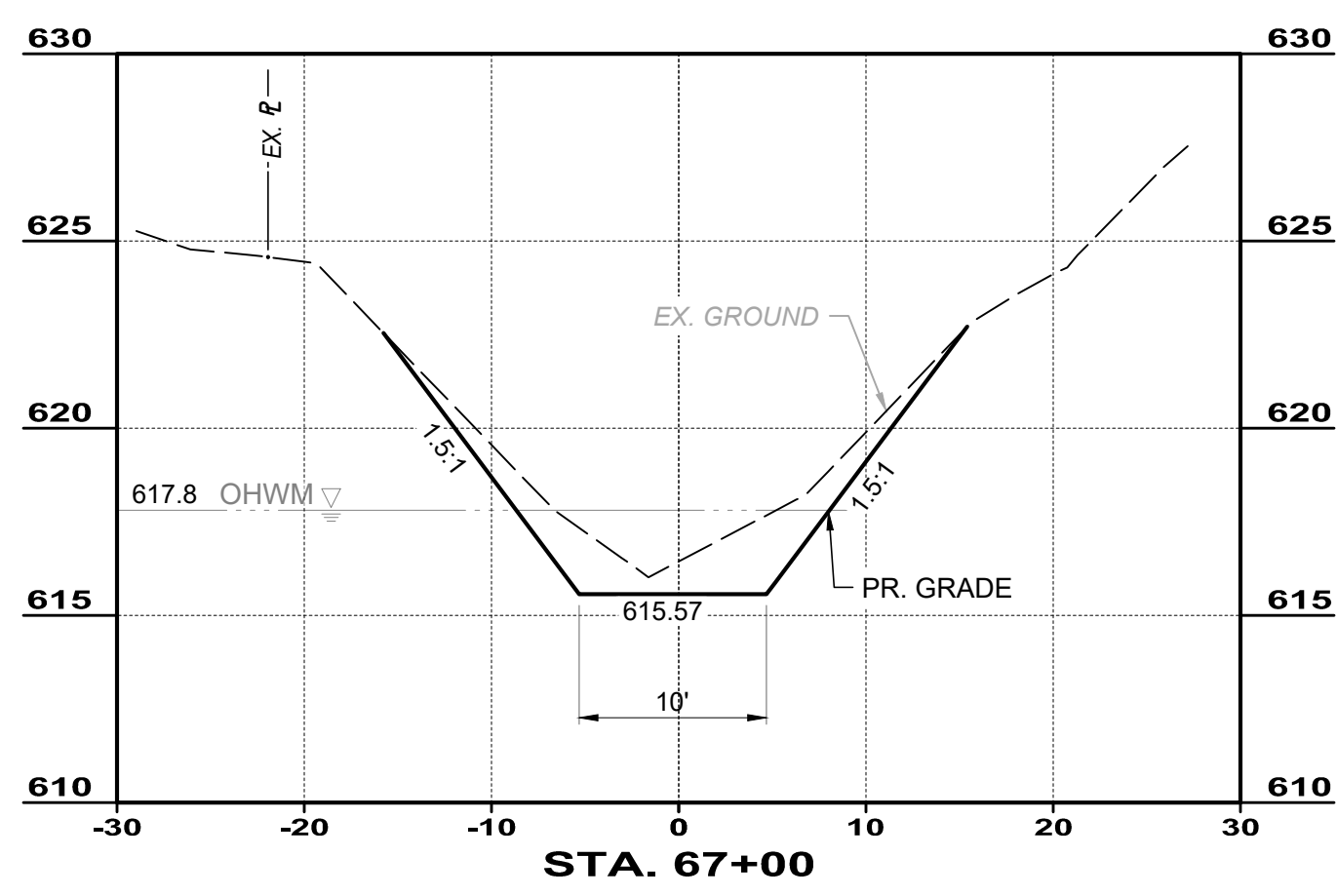
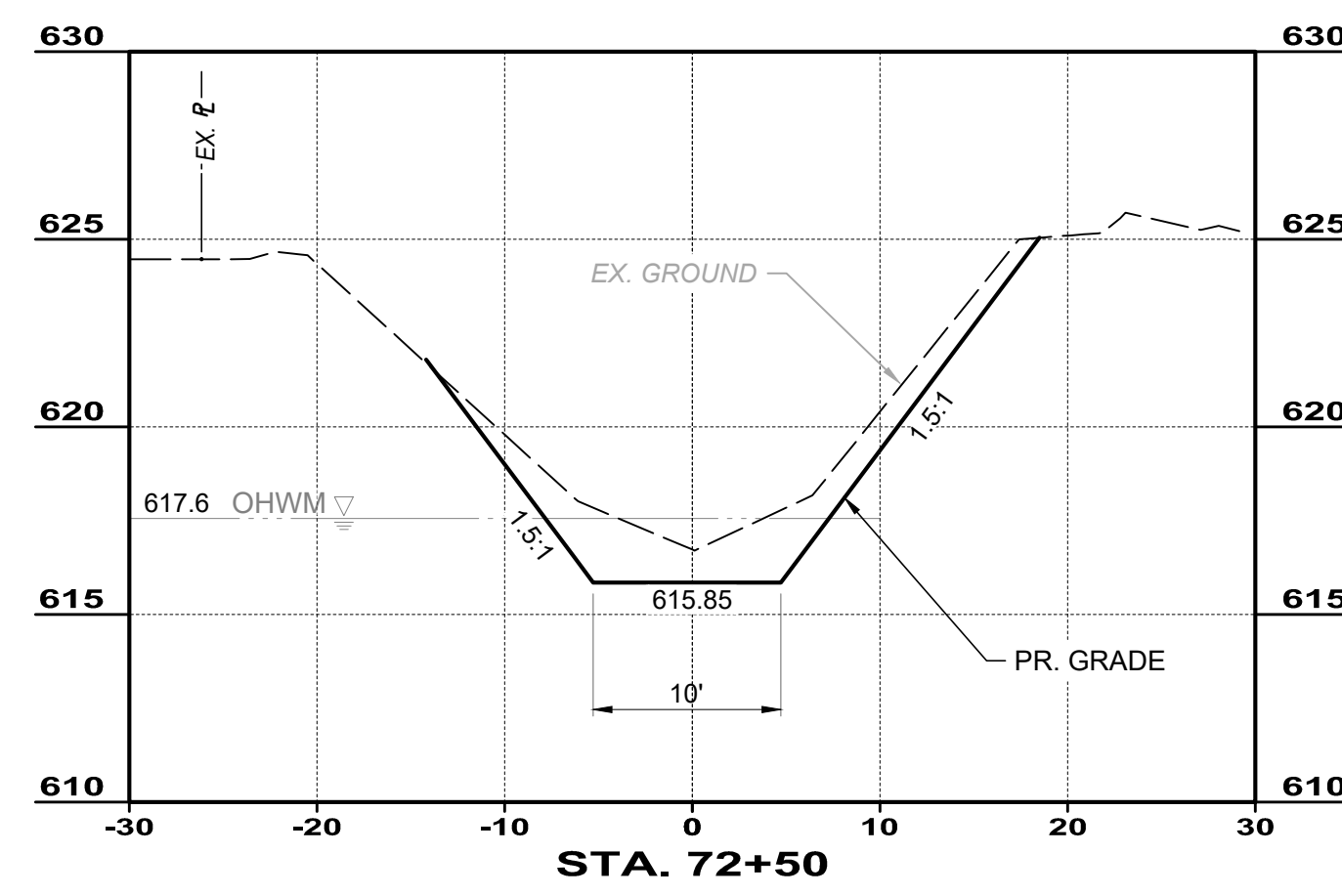
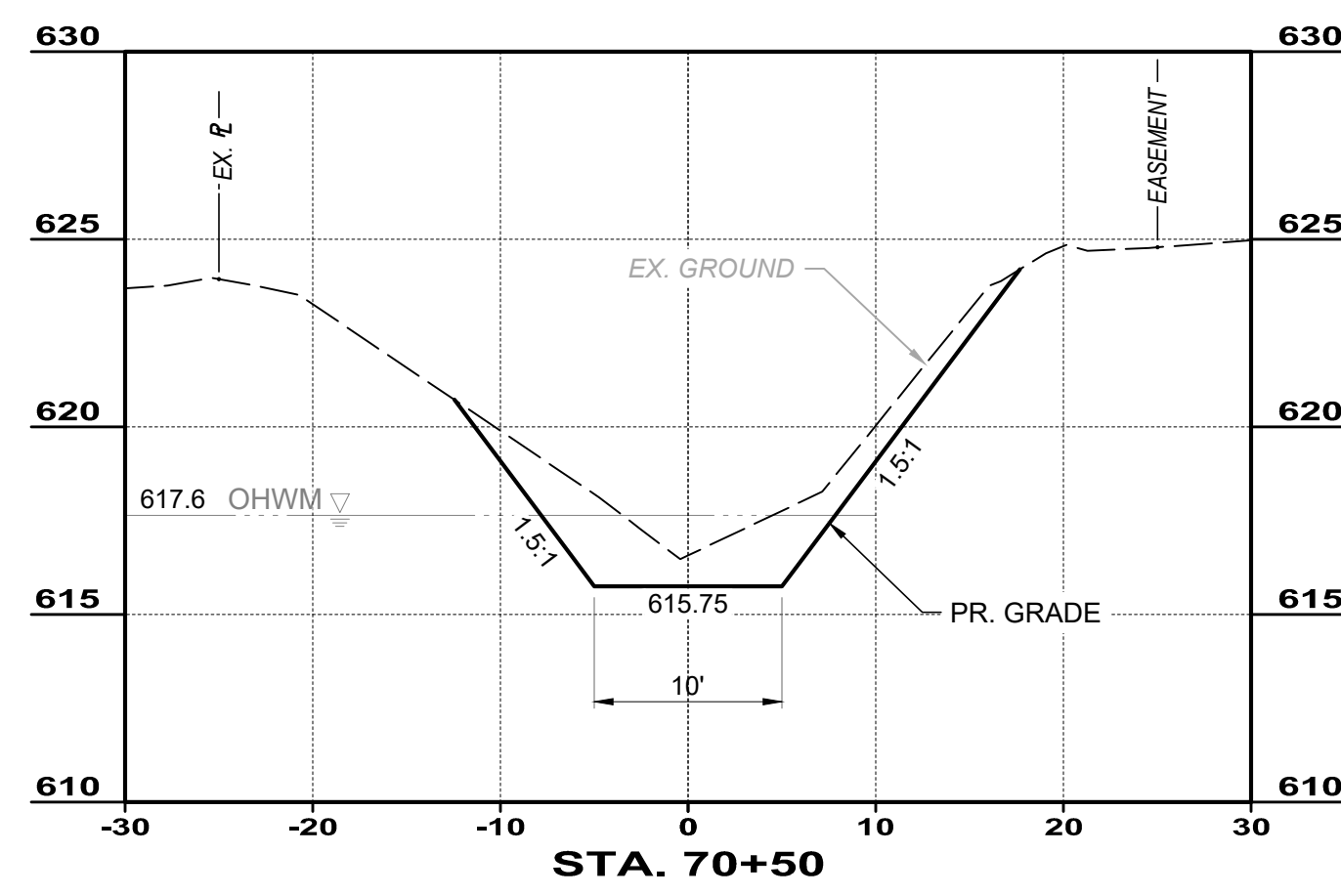
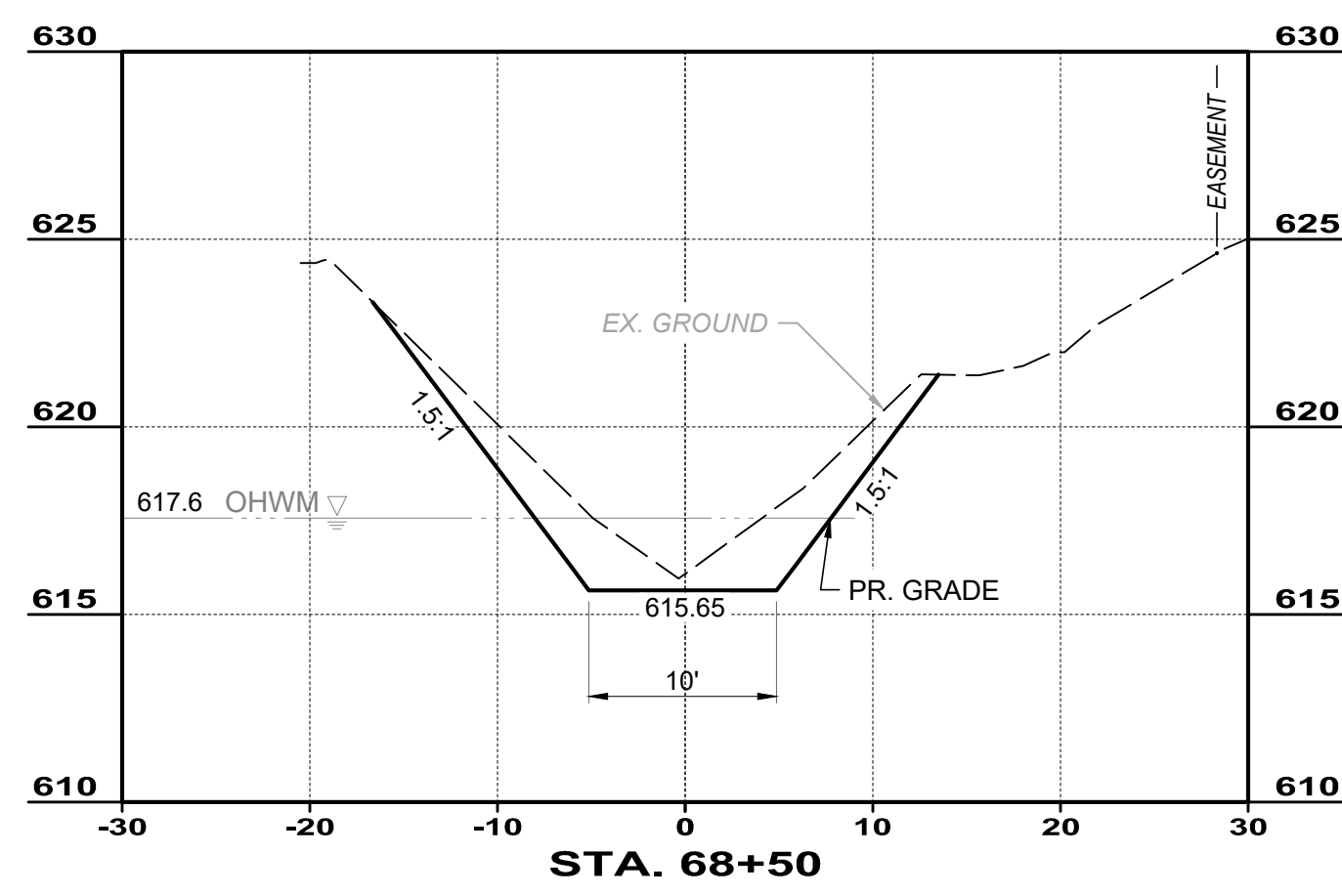
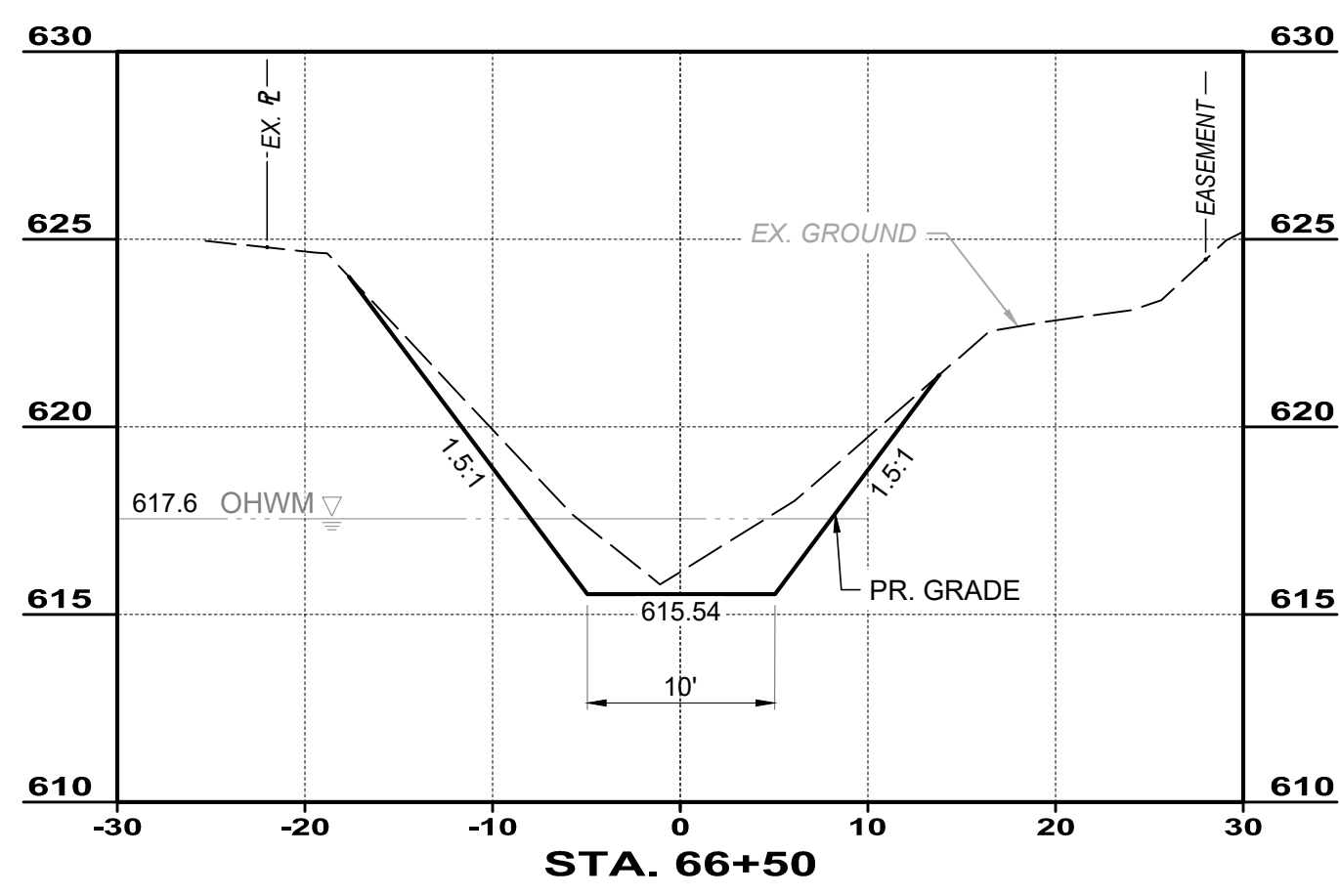
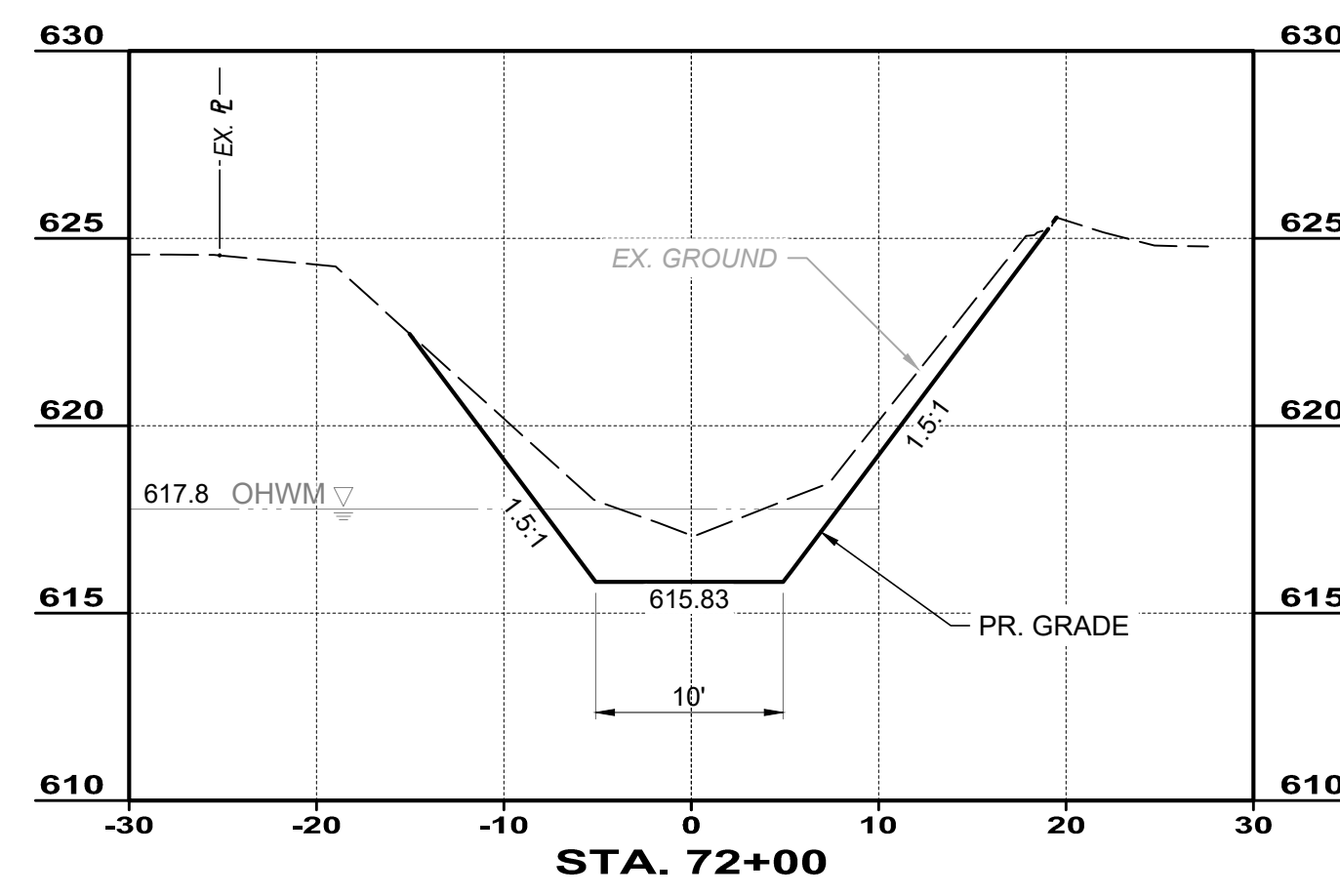
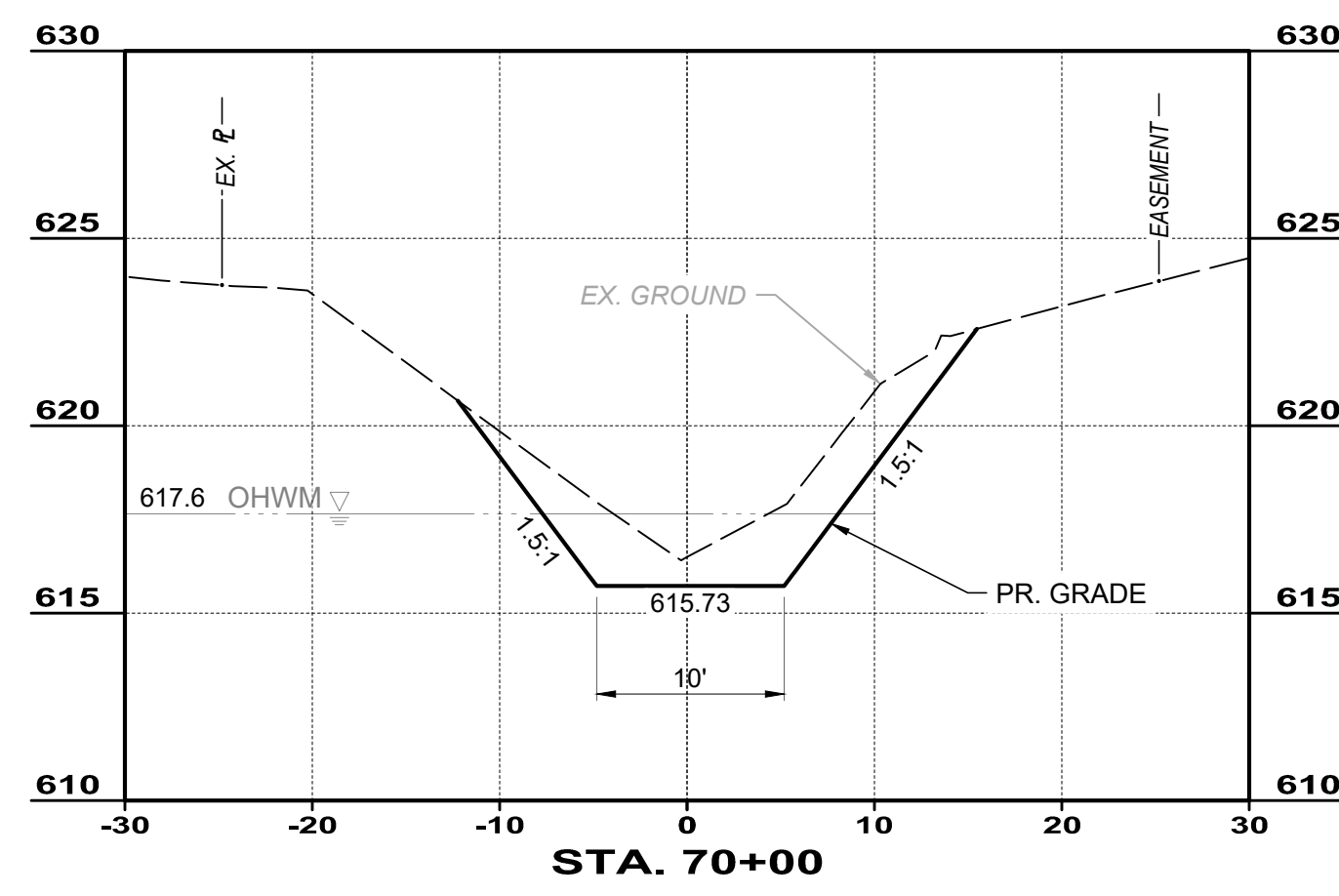
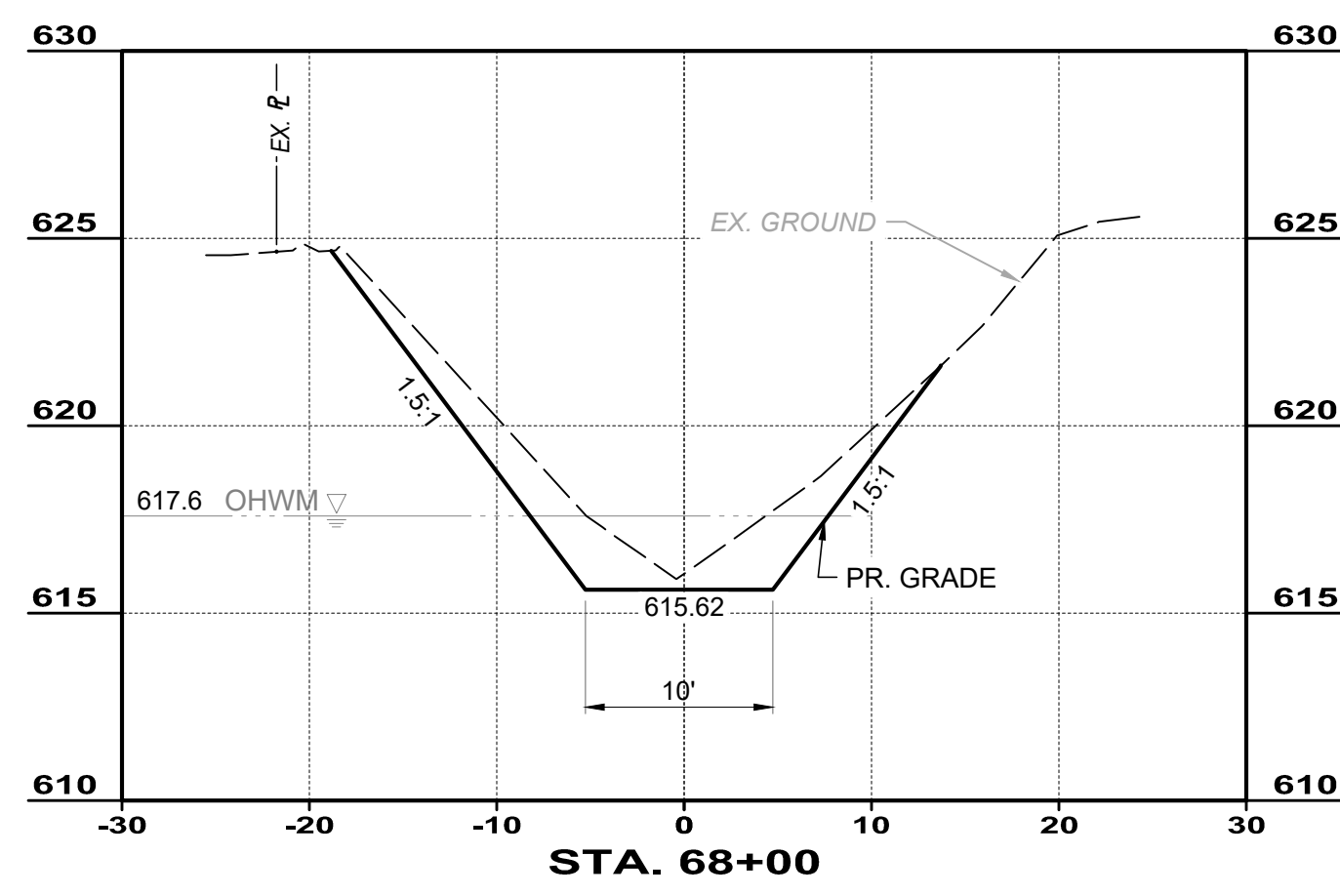
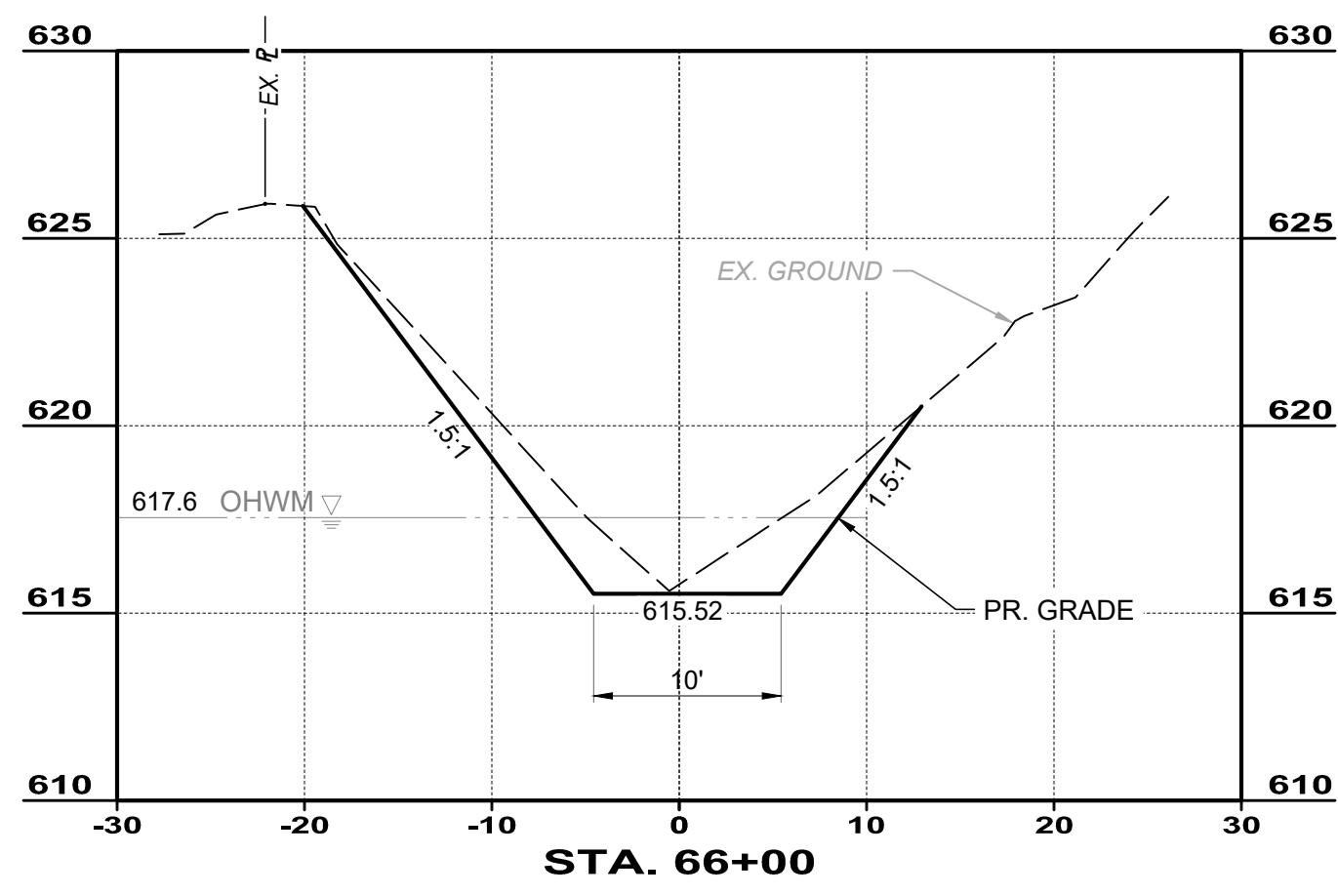
NO.	REVISION	DATE

ISSUED FOR:	BID SET	
ISSUE DATE:	12/11/2024	
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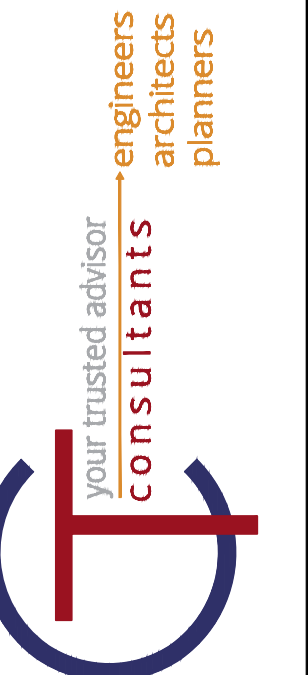
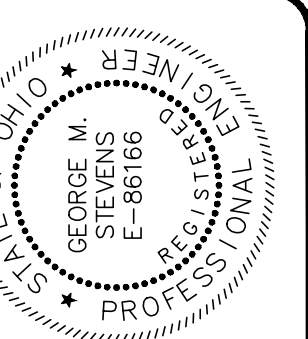
BELFLOWER/MEADOWBROOK DITCH RESTORATION PROJECT
 MENTOR, OH
 LAKE COUNTY
SOUTH CROSS SECTIONS 2

PROJECT NO.	241472
DISCIPLINE	CIVIL
SHEET NAME	S-CS-2
SHEET	16
OF	20

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SOUTH DITCH - CROSS SECTIONS (3 OF 3)

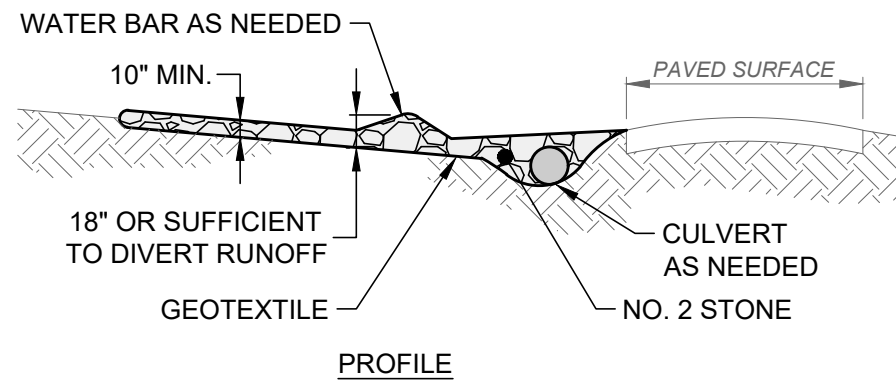
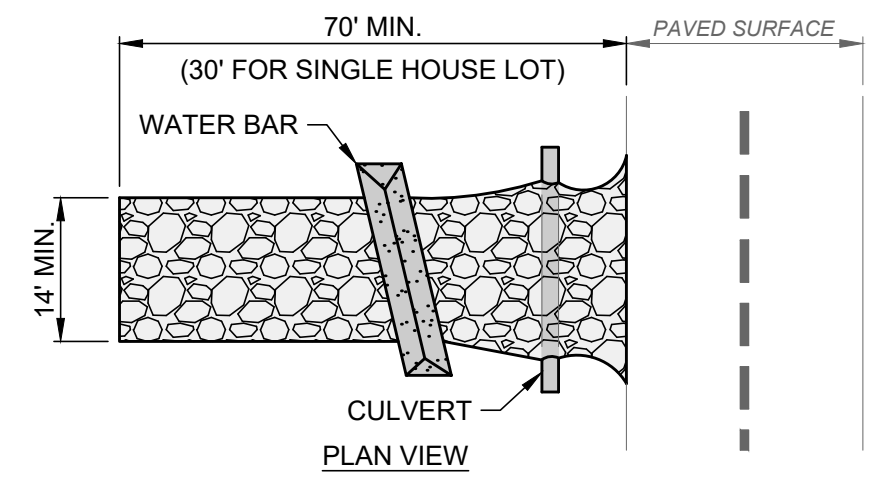


NO.	REVISION	DATE

BELFLOWER/MEADOWBROOK DITCH
RESTORATION PROJECT
MENTOR, OH
LAKE COUNTY

SOUTH
CROSS SECTIONS 3

PROJECT NO.	241472
DISCIPLINE	CIVIL
SHEET NAME	S-CS-3
SHEET	17
OF	20



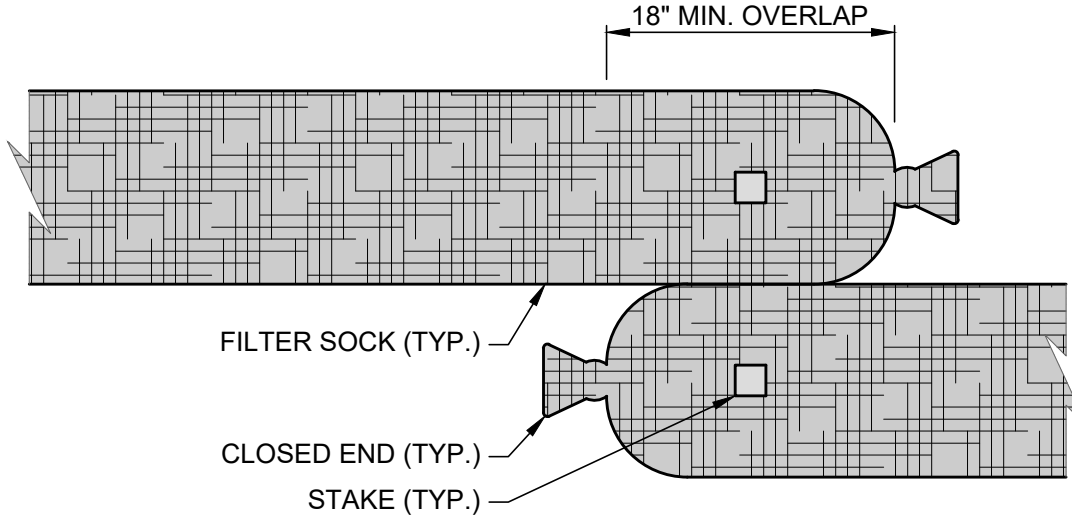
NOTES:

1. GEOTEXTILE SHALL BE COMPOSED OF STRONG ROT-PROOF POLYMERIC FIBERS MEETING THE FOLLOWING:

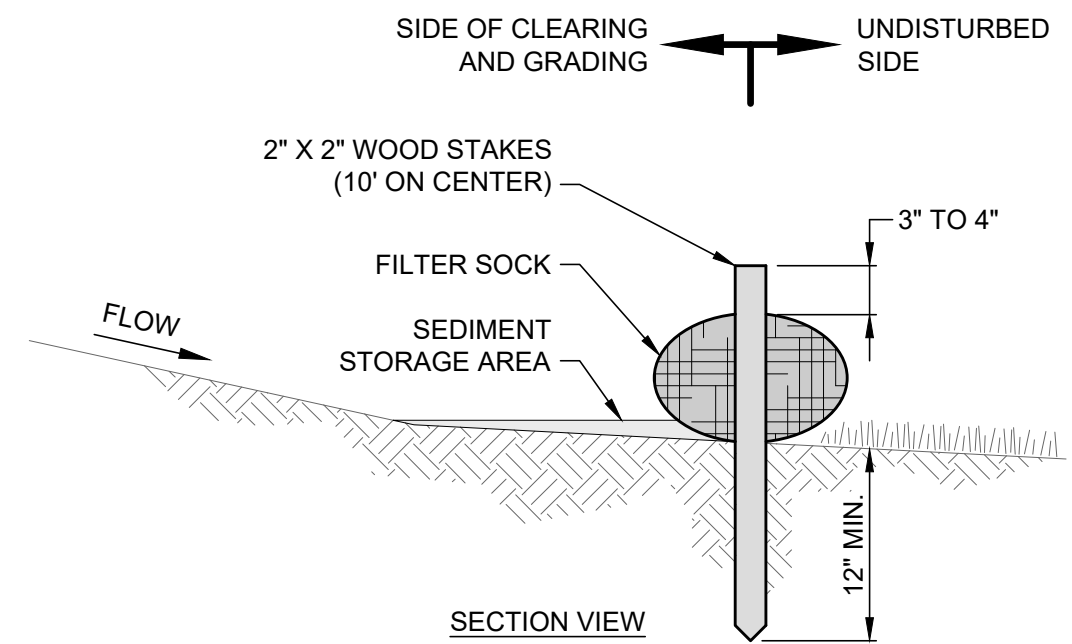
TENSILE STRENGTH	200 LB
PUNCTURE STRENGTH	80 PSI
TEAR STRENGTH	50 LB
BURST STRENGTH	320 PSI
ELONGATION	20%
EQUIVALENT OPENING SIZE	< 0.6 MM
PERMITTIVITY	0.001 CM/SEC.

2. INSTALL WATER BAR, AS NEEDED, TO PREVENT SURFACE RUNOFF FROM FLOWING OUT ONTO PAVEMENT.
3. APPLY ADDITIONAL STONE AS CONDITIONS DEMAND, REPLENISH STONE WHEN THE DEPTH IS LESS THAN 6", AND REPLACE IF STONES BECOMES MUD-LADEN.
4. IMMEDIATELY REMOVE MUD DROPPED, WASHED OR TRACKED ONTO ROADS OR ANY SURFACE WHERE RUNOFF IS NOT CHECKED BY SEDIMENT CONTROLS BY SCRAPING OR SWEEPING.
5. CONSTRUCTION ENTRANCE SHALL NOT BE RELIED UPON TO REMOVE MUD FROM VEHICLES OR PREVENT OFF-SITE TRACKING. VEHICLES THAT ENTER AND LEAVE THE SITE SHALL BE RESTRICTED FROM MUDDY AREAS.
6. CONSTRUCTION ENTRANCE SHALL REMAIN UNTIL THE DISTURBED AREA IS STABILIZED OR REPLACED WITH A PERMANENT ROADWAY.

CONSTRUCTION ENTRANCE DETAIL
SCALE: NONE



FILTER SOCK CONNECTION



NOTES:

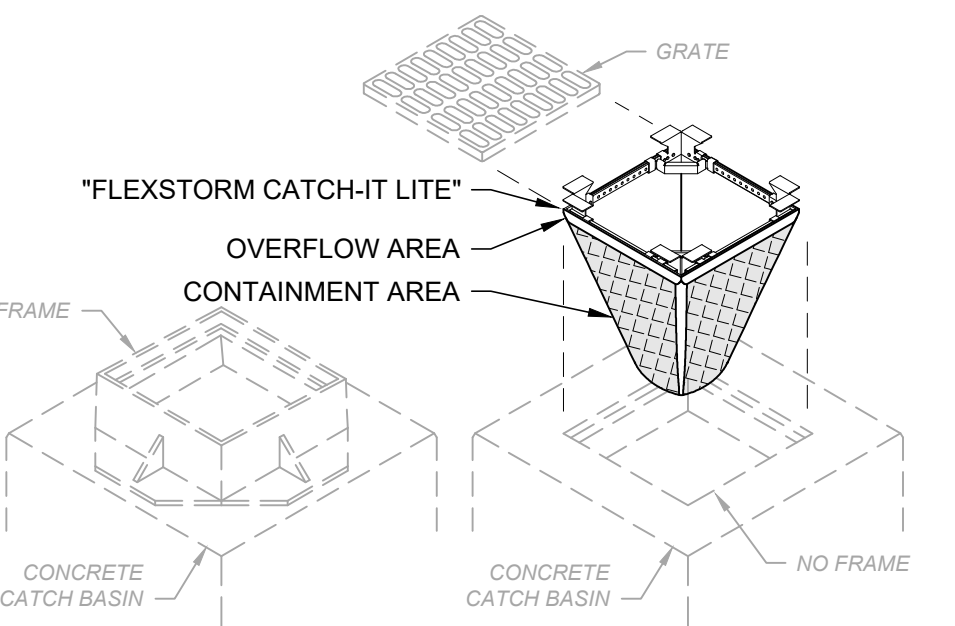
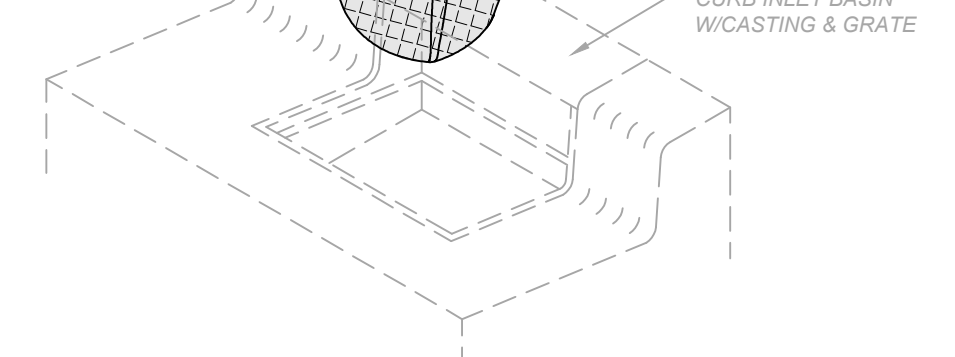
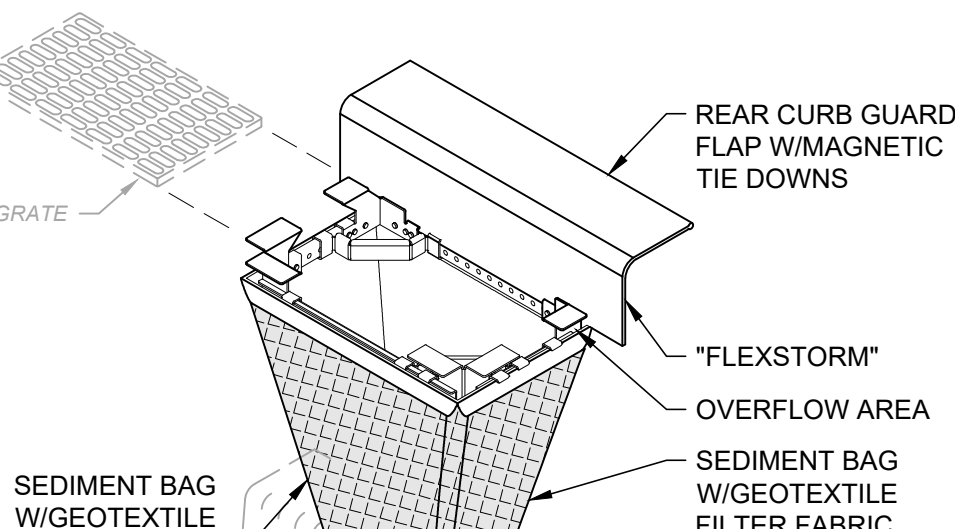
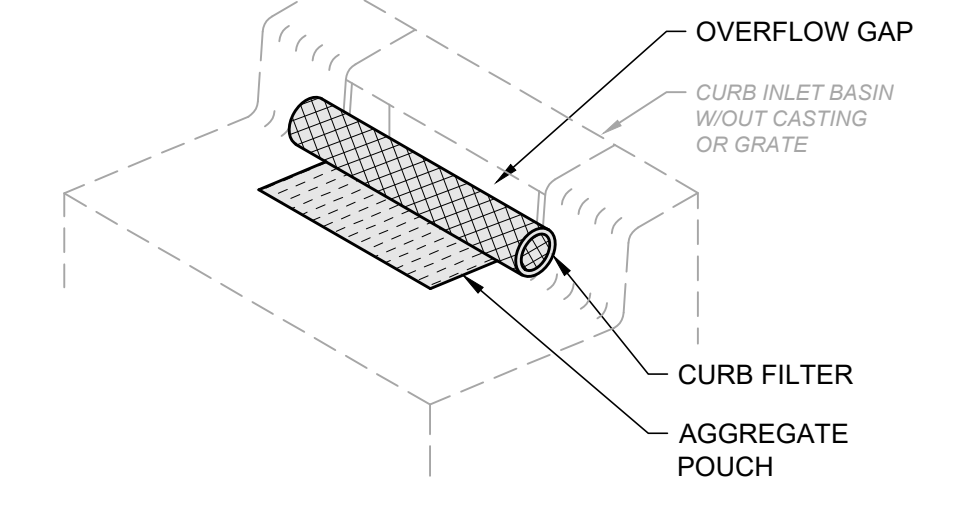
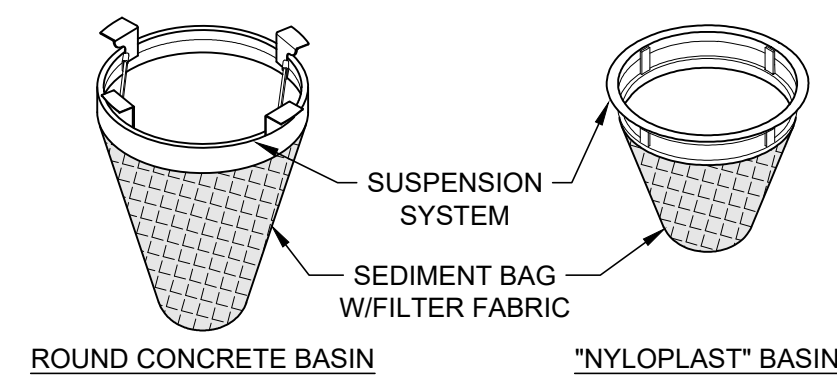
1. FILTER SOCKS SHALL BE CONTINUOUS, TUBULAR, HDPE KNITTED MESH NETTING MATERIAL, FILLED WITH COMPOST.
2. COMPOST SHALL BE WEED, PATHOGEN AND INSECT FREE, FREE OF REFUSE, CONTAMINANTS OR MATERIALS TOXIC TO PLANT GROWTH, BE DERIVED FROM A WELL-DECOMPOSED SOURCE OF ORGANIC MATTER, AND CONSIST OF PARTICLES RANGING FROM 3/8" TO 2".
3. FILTER SOCKS SHALL BE PLACED ON A LEVEL LINE ACROSS SLOPES PARALLEL TO THE BASE OF THE SLOPE. ON SLOPES APPROACHING 2:1, ADDITIONAL SOCKS SHALL BE PROVIDED AT THE TOP AND MID-SLOPE.
4. THE FLAT DIMENSION OF THE SOCK SHALL BE AT LEAST 1.5 TIMES THE NOMINAL DIAMETER.
5. FILTER SOCKS SHALL BE PLACED AT LEAST 5' FROM THE TOE OF SLOPE FOR SEDIMENT DEPOSIT.
6. TRAFFIC SHALL NOT BE PERMITTED TO CROSS FILTER SOCKS.
7. BUILT UP SEDIMENT SHALL BE REMOVED WHEN IT HAS REACHED 1/3 THE FILTER SOCK HEIGHT.
8. BIODEGRADABLE FILTER SOCKS SHALL BE REPLACED AFTER 6 MONTHS; PHOTODEGRADABLE SOCKS AFTER 1 YEAR. POLYPROPYLENE SOCKS SHALL BE REPLACED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.
9. WHEN A FILTER SOCK IS NO LONGER REQUIRED, IT SHALL BE DISPERSED ON-SITE.
10. THE MAXIMUM DRAINAGE AREA PER 100 FEET OF FILTER SOCK IS 1/2 ACRE AND IS DEPENDENT ON THE SLOPE PER THE CHARTS BELOW:

MAX. DRAINAGE AREA (AC.) PER 100-FT OF FILTER SOCK (*)	RANGE OF SLOPE PER INDIVIDUAL DRAINAGE AREA
0.50 AC.	<2% (50H:1V)
0.25 AC.	≥2% (50H:1V) BUT <20% (5H:1V)
0.125 AC.	≥20% (5H:1V) BUT <50% (2H:1V)

(*) FILTER SOCK CANNOT BE USED FOR SLOPES ≥50% (2H:1V).

SLOPE (%)	RATIO (H:V)	MAX. SLOPE LENGTH ABOVE FILTER SOCK		
		12"	18"	24"
0% TO <2%	0 TO <50:1	250'	300'	350'
≥2% TO <10%	≥50:1 TO <10:1	125'	200'	25'
≥10% TO <20%	≥10:1 TO <5:1	100'	150'	200'
≥20% TO <50%	≥5:1 TO ≥2:1	50'	75'	100'

FILTER SOCK DETAIL
SCALE: NONE



NOTES:

1. ALL NEW AND EXISTING STORM INLET BASINS WITHIN THE WORK LIMITS SHALL HAVE INLET PROTECTION INSTALLED.
2. INLET PROTECTION SHALL BE INSTALLED AS EACH STORM INLET IS CONSTRUCTED.
3. NOT ALL ITEMS SHOWN MAY APPLY OR DIFFERENT TYPES OR CONFIGURATIONS MAY BE REQUIRED. THE CONTRACTOR SHALL MEASURE EACH INLET TO CONFIGURE AND ASSEMBLE CUSTOMIZED INLET FILTERS.

INLET PROTECTION DETAIL
SCALE: NONE

1. SUBSOILING SHALL OCCUR WHEN SOIL MOISTURE IS LOW ENOUGH TO ALLOW THE SOIL TO CRACK OR FRACTURE. SUBSOILING IS NOT PERMITTED ON SLIP-PRONE AREAS.
2. THE SEED BED SHALL BE PREPARED BY APPLYING AGRICULTURAL GROUND LIMESTONE OR FERTILIZER AS RECOMMENDED BY A SOIL TEST. IN LIEU OF A SOIL TEST, APPLY LIME AT 2 TONS/AC. OR FERTILIZER AT 500 LB/AC. OF 10-10-10 OR 12-12-12 ANALYSIS. LIME AND FERTILIZER SHALL BE WORKED INTO THE SOIL TO A DEPTH OF 3".
3. APPLY SEED UNIFORMLY ON FIRM, MOIST SEED BED BETWEEN MARCH 1 AND MAY 31 OR AUGUST 1 AND SEPTEMBER 30. TILLAGE FOR SEEDBED PREPARATION SHALL OCCUR WHEN THE SOIL IS DRY ENOUGH TO CRUMBLE AND NOT FORM RIBBONS WHEN COMPRESSED BY HAND. SEEDING SHOULD NOT BE APPLIED BETWEEN OCTOBER 1 AND NOVEMBER 20 BECAUSE SEEDS MAY GERMINATE, BUT WILL NOT SURVIVE THE WINTER. IF SEEDING MUST OCCUR, INCREASE THE SEEDING RATE BY 50% AND ANCHOR. APPLY ADDITIONAL MULCH AND IRRIGATION AS REQUIRED TO ENSURE GERMINATION.
4. MULCH SHALL BE APPLIED IMMEDIATELY AFTER SEEDING.
5. SEEDING SHALL INCLUDE IRRIGATION TO ESTABLISH VEGETATION DURING DRY OR HOT WEATHER OR ON ADVERSE SITE CONDITIONS.
6. SEEDING SHALL NOT BE CONSIDERED ESTABLISHED FOR AT LEAST 1 FULL YEAR FROM THE TIME OF SEEDING. DURING THIS PERIOD INSPECT FOR SOIL EROSION OR VEGETATION LOSS AND REPAIR BARE OR SPARSE AREAS, FILL GULLIES, RE-FERTILIZE, RE-SEED AND RE-MULCH AS NEEDED.
7. ADEQUATE PERMANENT VEGETATION SHALL BE GROUND COVER DENSE ENOUGH TO COVER 80% OF THE SOIL SURFACE BASED ON VISUAL INSPECTION.

MIXTURE	FORMULA	LB/ AC.	TIME	MOW
CREeping RED FESCUE DOMESTIC RYEGRASS KENTUCKY BLUEGRASS	10-10-10	500	FALL, YEARLY, OR AS NEEDED	≥3"
TALL FESCUE	10-10-10	500		≥4"
TURF-TYPE FESCUE	10-10-10	500		
CROWN VETCH FESCUE	0-20-20	400	SPRING, AND YEARLY AFTER ESTABLISHED	DO NOT MOW
FLAT PEA FESCUE	0-20-20	400		

SEED MIX	SEED RATE LB/AC.	NOTES:
GENERAL USE		
CREeping RED FESCUE	20 - 40	FOR CLOSE MOWING AND WATERWAYS WITH <2.0 FT./SEC. VELOCITY
DOMESTIC RYEGRASS	10 - 20	
KENTUCKY BLUEGRASS	20 - 40	
TALL FESCUE	40 - 50	
TURF-TYPE FESCUE	90	
STEEP BANKS OR CUT SLOPES		
TALL FESCUE	40 - 50	
CROWN VETCH TALL FESCUE	10 - 20 20 - 30	DO NOT SEED LATER THAN AUGUST
FLAT PEA TALL FESCUE	20 - 25 20 - 30	DO NOT SEED LATER THAN AUGUST
ROAD DITCHES AND SWALES		
TALL FESCUE	40 - 50	
TURF-TYPE FESCUE KENTUCKY BLUEGRASS	90 5	
LAWN		
KENTUCKY BLUEGRASS PERENNIAL RYEGRASS	100 - 120 100 - 120	
KENTUCKY BLUEGRASS CREeping RED FESCUE	100 - 120 100 - 120	FOR SHADED AREAS

PERMANENT SEEDING NOTES

ALL IMPACTED WETLANDS WILL BE RESTORED TO ORIGINAL GRADE WITH ORIGINAL SOIL, REPLANTED WITH NATIVE EMERGENT WETLAND SEEDING MIX BELOW.

PRIOR TO SITE GRADING ERADICATE EXISTING VEGETATION. MOW AND REMOVE FROM THE SITE ALL HEAVY GRASS, WEEDS, AND OTHER VEGETATION BEFORE STRIPPING TOPSOIL FROM THE EXCAVATION AREAS. GRADING OPERATIONS MAY BEGIN.

AFTER SITE GRADING IS COMPLETE PLACE STOCKPILED WETLAND TOPSOIL THAT PROVIDES A 12" DEPTH OR TO A DEPTH AS ON SITE WETLAND SOIL QUANTITIES ALLOW.

ALL EXISTING AREAS OUTSIDE OF THE CONSTRUCTION AREA SHALL REMAIN UNDISTURBED.

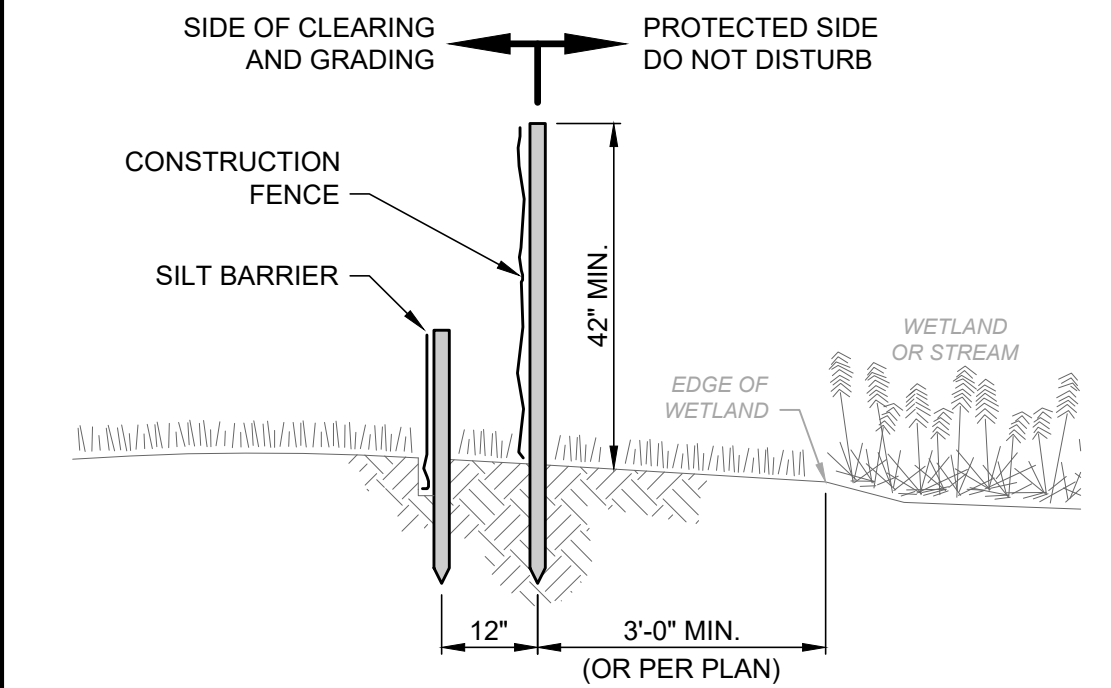
ALL SUBSTITUTIONS OF SIZES OR VARIETIES SUBJECT TO APPROVAL BY ENGINEER.

OHIO FLOOD PLAN NATIVE SEED MIX

GRASS AND GRASSLIKE:

- ELYMUS VIRGINICUS - VIRGINIA WILD RYE
- ELYMUS CANADENSIS - NODDING WILD RYE
- ANDROPOGON GERARDII - BIG BLUESTEM
- PANICUM (DICHANTHELIUM) CLANDESTINUM - DEER-TONGUE GRASS
- ELYMUS RIPARIUS - RIVERBANK WILD RYE
- CAREX GRAYI - GRAY'S SEDGE
- CAREX FRANKII - FRANK'S SEDGE
- SCRIPUS ATROVIRENS - DARK GREEN BULRUSH
- GLYCERIA GRANDIS - RED MANNA GRASS/AMERICAN MANNA GRASS
- SCRIPUS CYPERINUS - WOOLGRASS

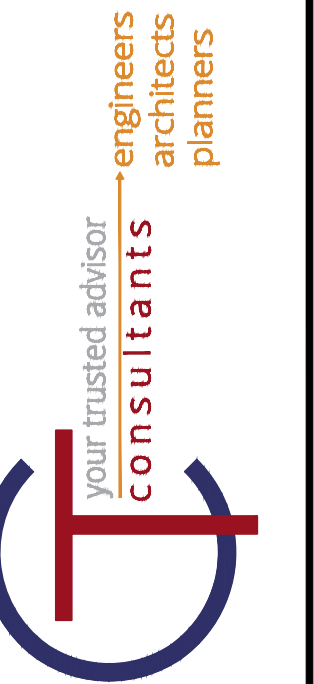
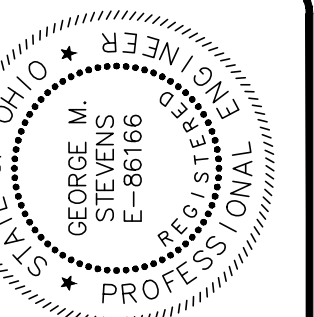
EMERGENT WETLAND SEEDING NOTES



NOTES:

1. THE CONTRACTOR SHALL INSTALL AND MAINTAIN TEMPORARY BARRIERS AROUND NON-IMPACTED WETLANDS AND STREAMS TO PREVENT DISTURBANCE OR CONSTRUCTION ACTIVITIES WITHIN THE PROTECTED AREAS AND, UPON COMPLETION OF THE PROJECT, BE REMOVED.
2. CONSTRUCTION FENCE SHALL BE HIGH VISIBILITY, ORANGE COLOR, HIGH DENSITY POLYETHYLENE GRID SECURED TO STEEL POSTS LOCATED ON MAXIMUM 10' CENTERS.
3. THE FOLLOWING ACTIVITIES ARE PROHIBITED WITHIN OR THROUGH NON-IMPACTED WETLANDS AND STREAMS:
 - A. EXCAVATION OR OTHER DIGGING
 - B. IMPOUNDMENT OF WATER
 - C. STORAGE OF CONSTRUCTION MATERIALS, DEBRIS OR EXCAVATED MATERIAL
 - D. OPERATING OR PARKING VEHICLES OR EQUIPMENT
 - E. FOOT TRAFFIC
 - F. ATTACHMENT OF SIGNS TO OR WRAPPING MATERIALS AROUND TREES
 - G. ANYTHING THAT WOULD DISTURB THE GROUND

WETLAND BARRIER DETAIL
SCALE: NONE



ISSUED FOR:	ISSUE DATE:	SCALE:	DESIGNED BY:	DRAWN BY:	CHECKED BY:
	12/11/2024	AS SHOWN	SNK	SNK	GMS

BELLFLOWERMEADOWBROOK DITCH RESTORATION PROJECT
MENTOR, OH
LAKE COUNTY

PROJECT NO.	241472
DISCIPLINE	CIVIL
SHEET NAME	D-1
SHEET	OF
18	20

DETAILS

ADMINISTRATIVE NOTES

- AN OHIO EPA NPDES PERMIT IS REQUIRED WHERE CONSTRUCTION ACTIVITIES (I.E. CLEARING, GRUBBING, GRADING, EXCAVATING, FILLING AND/OR TRENCH DEWATERING) AND/OR SUPPORT ACTIVITIES (I.E. CONCRETE OR ASPHALT BATCH PLANT, EQUIPMENT STAGING YARD, MATERIAL STORAGE AREA, AND ON-SITE OR OFF-SITE BORROW AREA OR SOIL DISPOSAL AREA) DISTURB 1 OR MORE ACRES OF LAND, OR SMALLER SITES LESS THAN 1 ACRE THAT ARE PART OF A LARGER COMMON DEVELOPMENT. DISTURBED LAND IS LAND IN WHICH SOILS ARE EXPOSED TO STORM WATER.
- THE CONTRACTOR SHALL FOLLOW THE PRACTICES AND REQUIREMENTS PROVIDED IN THE OHIO EPA NPDES CONSTRUCTION SITE STORMWATER GENERAL PERMIT OHC000006 AND THE ODNR RAINWATER AND LAND DEVELOPMENT MANUAL, AND BE RESPONSIBLE FOR ALL NPDES TERMS AND CONDITIONS UNTIL A NOT IS FILED.
- NO CONSTRUCTION ACTIVITIES MAY BEGIN UNTIL ALL OF THE FOLLOWING OCCUR:
 - OHIO EPA NPDES AUTHORIZATION LETTER RECEIVED.
 - THE CONTRACTOR FILES A CO-PERMITTEE APPLICATION TO THE OHIO EPA.
 - THE CONTRACTOR ATTENDS A PRE-CONSTRUCTION MEETING WITH THE SWCD TO DISCUSS OHIO EPA NPDES PERMIT REQUIREMENTS.
- OHIO EPA APPLICATION FORMS (I.E. NOI, NOT, CO-PERMITTEE NOI/NOT, INDIVIDUAL LOT NOI/NOT AND PERMIT TRANSFER) ARE ONLY ACCESSIBLE ELECTRONICALLY VIA THE OHIO EPA STREAMS APPLICATION SUBMITTAL SYSTEM USING AN INDIVIDUAL EBUSINESS CENTER ACCOUNT. VISIT THE OHIO EPA'S ELECTRONIC BUSINESS SERVICES WEBSITE (HTTPS://EBIZ.EPA.OHIO.GOV/) FOR MORE INFORMATION, GUIDANCE AND REPORTING QUESTIONS.
- THE CONTRACTOR SHALL SELECT QUALIFIED INSPECTION PERSONNEL KNOWLEDGEABLE IN THE PRINCIPLES AND PRACTICES OF EROSION AND SEDIMENT CONTROLS FOR INSPECTIONS, MAINTENANCE, REPAIRS, AND COMPLETING INSPECTION AND MAINTENANCE REPORTS. THE CONTRACTOR SHALL COMPLETE A "DELEGATION OF AUTHORITY FOR STORMWATER POLLUTION PREVENTION PLAN".
- ALL PROCEDURES AND REQUIREMENTS CONTAINED IN THE SWP3 APPLY TO ALL GENERAL AND SUBCONTRACTORS. THE CONTRACTOR SHALL IMPLEMENT, INFORM, REQUIRE AND ENFORCE ALL ASPECTS AND PROCEDURES OF THE SWP3. THE CONTRACTOR SHALL HAVE ALL SUBCONTRACTORS THAT ARE OR MAY BE ENGAGED IN ACTIVITIES THAT COULD IMPACT STORMWATER COMPLETE A "SUBCONTRACTOR AGREEMENT FOR EROSION AND SEDIMENT CONTROL" TO ACKNOWLEDGE THEY REVIEWED AND UNDERSTOOD THE SWP3.
- ALL NPDES PERMITS, NOI, SWP3, INSPECTION LOGS, REPORTS AND CERTIFICATIONS MUST BE SIGNED AND BE KEPT ON-SITE.
- EROSION AND SEDIMENT CONTROL WORK SHALL BE SUBJECT TO INSPECTION BY THE OWNER, SWCD AND OHIO EPA.

GENERAL NOTES

- THE CONTRACTOR SHALL REVIEW AND FOLLOW THE PRACTICES AND REQUIREMENTS PROVIDED IN THE CURRENT, ACTIVE OHIO EPA NPDES PERMIT.
- THIS SWP3 HAS BEEN PREPARED SHOWING THE ITEMS LISTED BELOW, BUT THE CONTRACTOR MAY NEED TO MOVE OR ADD ITEMS AS CONSTRUCTION PROGRESSES OR DURING THE VARIOUS STAGES OF CONSTRUCTION.
 - LIMITS OF EARTH DISTURBING ACTIVITY
 - CONSTRUCTION ENTRANCE
 - EROSION AND SEDIMENT CONTROL MEASURES
 - INLET PROTECTIONS
 - CONCRETE WASHOUT PITS
 - EQUIPMENT STAGING
 - FUEL STORAGE AND VEHICLE FUELING AREA
 - CONSTRUCTION TRAILER
 - SANITATION FACILITY
 - MATERIAL STOCKPILE LOCATION
 - CHEMICAL COMPOUND MIXING AND STORAGE AREA
 - ANY OTHER EROSION CONTROL REQUIRED
- ALL WORK REQUIRED TO IMPLEMENT THE SWP3 INCLUDING INSPECTION FEES, MAINTENANCE AND REPAIRS SHALL BE DONE BY AND AT THE EXPENSE OF THE CONTRACTOR.
- THE CONTRACTOR SHALL AMEND THE SWP3 WHEN THERE IS A CHANGE IN DESIGN, CONSTRUCTION, OPERATION OR MAINTENANCE THAT HAS A SIGNIFICANT POTENTIAL FOR DISCHARGE OF POLLUTANTS TO SURFACE WATERS OF THE STATE.
- ADDITIONAL OR DIFFERENT BMPs MAY BE NEEDED AS CONSTRUCTION PROGRESSES OR AS REQUIRED BY THE OWNER, SWCD OR OHIO EPA.
- NO CONDITION OF THE SWP3 OR NPDES PERMIT SHALL RELEASE THE CONTRACTOR OF THEIR RESPONSIBILITY OR REQUIREMENTS UNDER ANY OTHER ENVIRONMENTAL STATUE OR REGULATION.

EROSION & SEDIMENT CONTROL NOTES

- SPECIAL MEASURES SHALL BE TAKEN TO STABILIZE DRAINAGE CHANNELS AND STORM WATER OUTFALLS.
- STORMWATER DIVERSION PRACTICES SHALL BE USED TO KEEP SURFACE RUNOFF AWAY FROM DISTURBED AREAS AND STEEP SLOPES WHERE PRACTICABLE.
- STABILIZATION OF DISTURBED AREAS SHALL, AT A MINIMUM, BE INITIATED WITHIN THE TIME FRAMES IN THE FOLLOWING TABLES:

PERMANENT STABILIZATION	
AREA REQUIRING PERMANENT STABILIZATION	TIME FRAME TO APPLY EROSION CONTROLS
ANY AREAS TO LIE DORMANT FOR 1 YEAR OR MORE.	WITHIN 7 DAYS OF MOST RECENT DISTURBANCE.
ANY AREAS WITHIN 50 FEET OF A SURFACE WATER OF THE STATE (*) AND AT FINAL GRADE.	WITHIN 2 DAYS OF REACHING FINAL GRADE.
OTHER AREAS AT FINAL GRADE.	WITHIN 7 DAYS OF REACHING FINAL GRADE.

TEMPORARY STABILIZATION	
AREA REQUIRING TEMPORARY STABILIZATION	TIME FRAME TO APPLY EROSION CONTROLS
ANY DISTURBED AREAS WITHIN 50 FEET OF A SURFACE WATER OF THE STATE (*) AND NOT AT FINAL GRADE.	WITHIN 2 DAYS OF MOST RECENT DISTURBANCE IF TO REMAIN IDLE MORE THAN 14 DAYS.
ANY DISTURBED AREAS TO BE DORMANT FOR MORE THAN 14 DAYS, BUT LESS THAN 1 YEAR, AND NOT WITHIN 50 FEET OF A SURFACE WATER OF THE STATE (*).	FOR RESIDENTIAL SUBDIVISION, DISTURBED AREAS MUST BE STABILIZED AT LEAST 7 DAYS PRIOR TO TRANSFER OF PERMIT COVERAGE FOR INDIVIDUAL LOT(S).
DISTURBED AREAS THAT WILL BE IDLE OVER WINTER.	PRIOR TO ONSET OF WINTER WEATHER.

(*) SURFACE WATERS OF THE STATE INCLUDE WETLANDS, STREAMS, LAKES, PONDS, MARSHES, WATERCOURSES, WELLS, SPRINGS, IRRIGATION SYSTEMS, DRAINAGE SYSTEMS, AND OTHER ACCUMULATIONS OF WATER, SURFACE AND UNDERGROUND, NATURAL OR ARTIFICIAL.

- INLET PROTECTION AND SEDIMENT CONTROLS MUST BE INSTALLED PRIOR TO CLEARING AND GRUBBING.
- SEDIMENT PONDS, TEMPORARILY MODIFIED PERMANENT PONDS AND PERIMETER SEDIMENT BARRIERS MUST BE INSTALLED AS THE FIRST STEP OF GRADING AND WITHIN 7 DAYS FROM THE START OF CLEARING AND GRUBBING, AND CONTINUE TO FUNCTION UNTIL ALL DISTURBED UPLAND AREAS ARE STABILIZED.
- SEDIMENT CONTROLS MUST POND RUNOFF TO BE CONSIDERED FUNCTIONAL.
- SEDIMENT-LADEN TRENCH OR GROUND WATER MUST PASS THROUGH A SEDIMENT-SETTLING POND OR BE DEWATERED IN-PLACE USING A SUMP PIT, FILTER BAG OR OTHER COMPARABLE METHOD PRIOR TO DISCHARGE FROM THE SITE. TRENCH AND GROUND WATER FREE FROM SEDIMENT OR OTHER POLLUTANTS MAY BE DISCHARGED WITHOUT TREATMENT, PROVIDED THIS WATER DOES NOT BECOME POLLUTANT-LADEN BY TRAVERSING OVER DISTURBED SOILS OR OTHER POLLUTANT SOURCES.
- SEDIMENT BARRIERS SHALL NOT EXCEED THEIR DESIGN CAPACITIES. INSTALLING SEDIMENT BARRIERS IN PARALLEL SERIES DOES NOT INCREASE THE DESIGN CAPACITY.
- SETTLED MATERIAL SHALL BE DISPOSED IN A LOCATION WHERE IT WILL NOT BE CARRIED OFF-SITE OR INTO A STORM SEWER BY RAINFALL.
- SOIL STOCKPILES SHALL BE RINGED WITH SILT FENCE ALONG THE BOTTOM FOOTPRINT. IF THE STOCKPILE WILL BE INACTIVE FOR 14 DAYS OR MORE, THE SURFACE SHALL BE SEEDED OR STABILIZED WITHIN 7 DAYS OF LAST DISTURBANCE.

PROJECT INFORMATION

PROJECT LOCATION:
 BELLFLOWER RD AND MEADOWBROOK DR
 CITY OF MENTOR, LAKE COUNTY, OHIO 44060
 LATITUDE: 41.693057 LONGITUDE: -81.356801

PROPERTY OWNER INFORMATION:
 CITY OF MENTOR
 8500 CIVIC CENTER BLVD, MENTOR, OHIO 44060
 CONTACT: DAVE SWIGER
 PHONE: (440) 974-5783
 EMAIL: SWIGER@CITYOFMENTOR.COM

SITE-CIVIL ENGINEER INFORMATION:
 CT CONSULTANTS, INC.
 8150 STERLING COURT
 MENTOR, OHIO 44060
 CONTACT: GEORGE STEVENS, PE
 PHONE: (440) 530-2365
 EMAIL: GSTEVENS@CTCONSULTANTS.COM

ESTIMATED CONSTRUCTION START DATE: 10/01/2024
 ESTIMATED CONSTRUCTION COMPLETION DATE: 12/30/2025

TYPE OF CONSTRUCTION ACTIVITY:
 CLEARING GRUBBING GRADING
 EXCAVATING FILLING TRENCH DEWATERING

TYPE OF CONSTRUCTION SUPPORT ACTIVITY:
 ASPHALT BATCH PLANT CONCRETE BATCH PLANT
 EQUIPMENT STAGING YARD MATERIAL STORAGE AREA
 BORROW AREA OFF-SITE BORROW AREA
 SOIL DISPOSAL AREA OFF-SITE SOIL DISPOSAL AREA

TYPE OF PROJECT:
 RETAIL COMMUNITY MIXED USE
 OFFICE RECREATION SHOPPING MALL
 MEDICAL PUBLIC SAFETY RESTAURANT
 HIGHWAY EDUCATION APARTMENT
 ROAD INDUSTRIAL MANUFACTURING
 HIGHWAY LOW DENSITY RESIDENTIAL
 LINEAR UTILITY HIGH DENSITY RESIDENTIAL

DESCRIPTION OF PROJECT:
 MAINTENANCE OF EXISTING OPEN CHANNEL FOR STORMWATER CONTROL. THE PROJECT WILL INCLUDE CLEARING AND GRUBBING, RE-GRADING OF THE DITCH, AND ROCK CHANNEL PROTECTION BEING ADDED ALONG THE BEND OF THE DITCH.

SOIL DISTURBING ACTIVITIES INCLUDE:
 EROSION AND SEDIMENT CONTROL INSTALLATION; REMOVAL OF TREES, VEGETATION, TOPSOIL; EARTHWORK GRADING; OFF-SITE BORROW AREA.

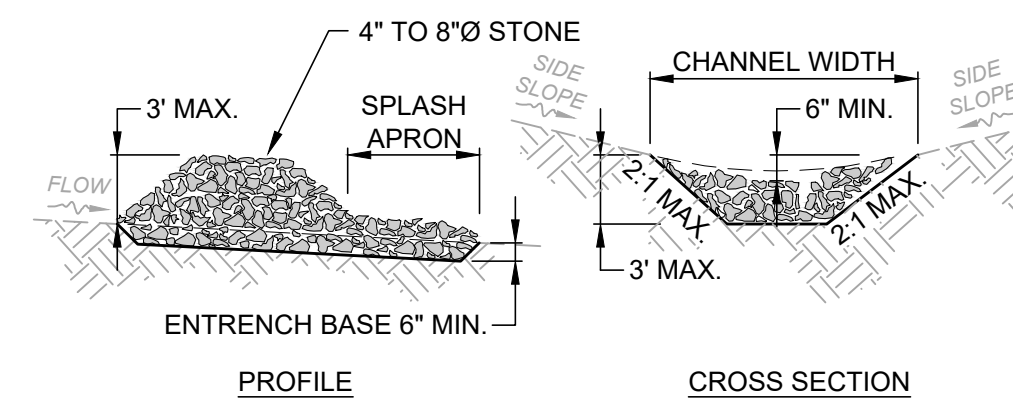
DESCRIPTION OF PRIOR LAND USE:
 AREA WAS AN EXISTING OPEN CHANNEL USED FOR STORM WATER CONTROL.

SITE AREA INFORMATION:
 TOTAL PROPERTY BOUNDARY AREA = 8.183 AC.
 CONSTRUCTION LIMIT AREA = 8.183 AC.
 TOTAL SOIL DISTURBANCE AREA = 3.815 AC.
 EXISTING IMPERVIOUS AREA = 0.000 AC.
 PROPOSED IMPERVIOUS AREA = 0.000 AC.
 INCREASE OR DECREASE IMPERVIOUS AREA = 0.000 %

NAME OF IMMEDIATE RECEIVING STREAM, SURFACE WATER OR MS4:
 UNNAMED TRIBUTARY TO MARSH CREEK TO LAKE ERIE

DESCRIPTION OF ON-SITE STREAM(S) CONDITION:
 PRIOR CHANNELIZATION BED INSTABILITY OR HEADCUTS
 NATURAL CHANNEL PUBLIC MAINTENANCE CHANNEL

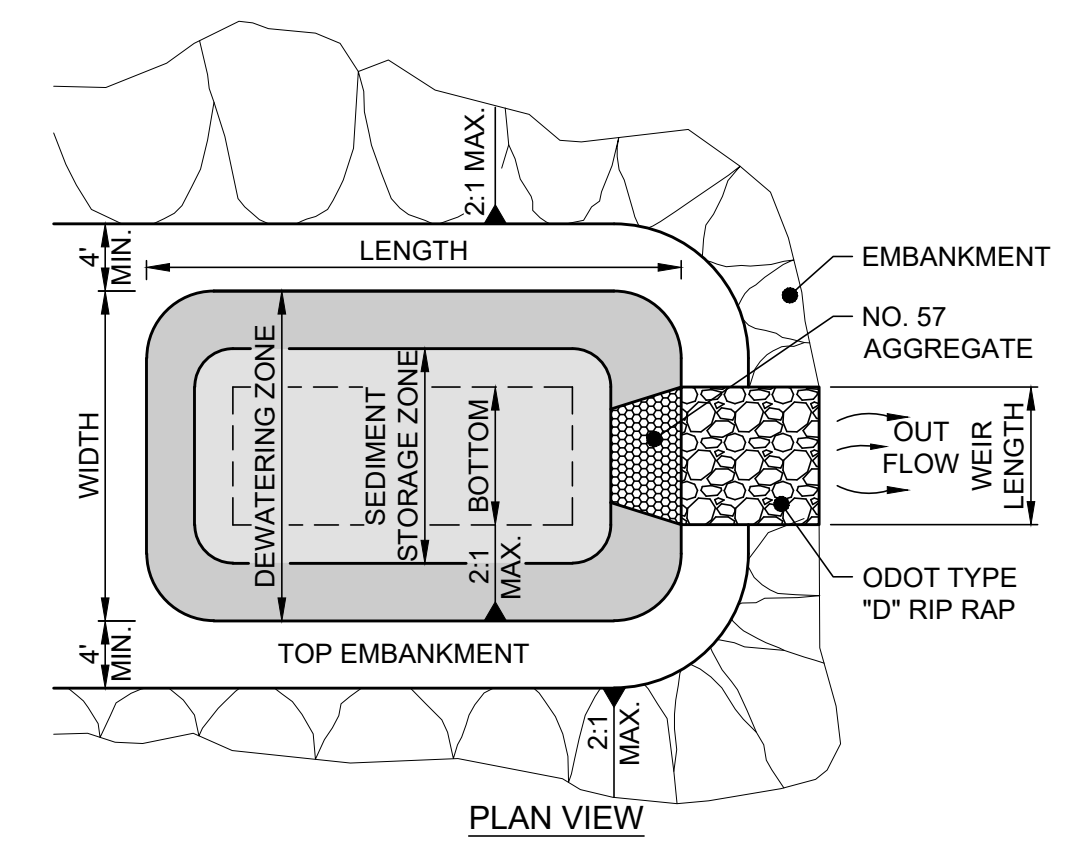
QUALITY OF STORM WATER DISCHARGE FROM SITE:
 EXAMPLE: UNKNOWN



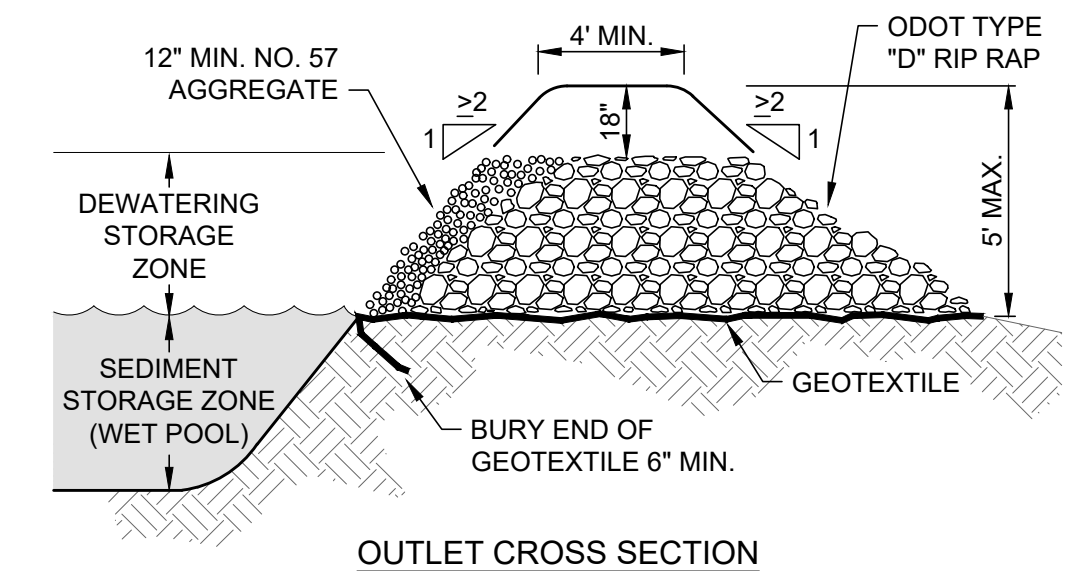
- NOTES:
- STONE MUST COVER THE FULL CHANNEL WIDTH.
 - ODOT TYPE 'D' STONE IS ACCEPTABLE, BUT MUST BE UNDERLAIN WITH NO. 3 OR 4 STONE OR FILTER FABRIC.
 - THE MIDPOINT OF THE CHECK DAM SHALL BE A MINIMUM OF 6" LOWER THAN THE SIDES TO DIRECT WATER ACROSS THE CENTER AND AWAY FROM CHANNEL SIDES.
 - SPACE CHECK DAMS SO TOE OF UPSTREAM DAM IS AT SAME ELEVATION AS TOP OF DOWNSTREAM DAM, OR AS FOLLOWS:

CHECK DAM HEIGHT	CHANNEL SLOPE			
	< 5%	5% - 10%	10% - 15%	15% - 20%
1 FT.	65 FT.	30 FT.	20 FT.	15 FT.
2 FT.	130 FT.	65 FT.	40 FT.	30 FT.
3 FT.	200 FT.	100 FT.	65 FT.	50 FT.

CHECK DAM DETAIL
 SCALE: NONE



DRAINAGE AREA	WEIR LENGTH
≤ 1 AC.	4 FT.
≤ 2 AC.	6 FT.
≤ 3 AC.	8 FT.
≤ 4 AC.	10 FT.
≤ 5 AC.	12 FT.



- NOTES:
- WORK SHALL CONSIST OF INSTALLATION, MAINTENANCE AND REMOVAL OF SEDIMENT TRAP.
 - SEDIMENT TRAP MUST BE CONSTRUCTED AND OPERATIONAL PRIOR TO UPSLOPE LAND DISTURBANCE.
 - THE AREA BENEATH THE EMBANKMENT SHALL BE CLEARED, GRUBBED AND STRIPPED OF VEGETATION TO A MINIMUM DEPTH OF 6". THE POOL SHALL BE CLEARED AS NEEDED TO FACILITATE SEDIMENT CLEANOUT.
 - EMBANKMENT FILL SHALL BE FREE OF ROOTS OR OTHER WOODY VEGETATION, LARGE ROCKS, ORGANICS OR OTHER OBJECTIONABLE MATERIALS. FILL MATERIAL SHALL BE PLACED IN 6" LIFTS AND COMPACTED. CONSTRUCTION SHALL NOT BE PERMITTED IF THE FILL OR COMPACTION SURFACE IS FROZEN.
 - DIKES DIRECTING WATER TO THE TRAP SHALL BE HIGHER THAN THE HEIGHT OF THE EMBANKMENT.
 - 67 C.Y. OF STORAGE VOLUME IS REQUIRED BELOW THE OUTLET CREST FOR EACH 1 AC. OF CONTRIBUTING DRAINAGE AREA. THIS STORAGE VOLUME IS ACHIEVED BY THE DIMENSIONS SHOWN ON THE PLANS.
 - ESTABLISH TEMPORARY SEEDING ON ALL NON-SUBMERGED AREAS AND MAINTAIN OVER THE LIFE OF THE SEDIMENT TRAP.
 - WHERE GEOTEXTILE IS USED, OVERLAPS SHALL BE 2' MINIMUM WITH THE UPPER MOST LAYER PLACED LAST.
 - WARNING SIGNS AND SAFETY FENCE SHALL BE PLACED AROUND THE ENTIRE SEDIMENT TRAP AND MAINTAINED UNTIL THE SEDIMENT TRAP IS REMOVED.
 - REMOVE SEDIMENT AND RESTORE THE SEDIMENT TRAP TO ITS ORIGINAL DIMENSIONS WHEN SEDIMENT HAS FILLED 40% OF THE TRAP'S ORIGINAL DEPTH. SPREAD REMOVED SEDIMENT IN A SUITABLE AREA AND STABILIZED SO IT WILL NOT ERODE.
 - AFTER UPSLOPE SEDIMENT PRODUCING AREAS HAVE BEEN PERMANENTLY STABILIZED, THE SEDIMENT TRAP AND ALL SEDIMENT SHALL BE REMOVED, BACKFILLED AND SEEDED.

SEDIMENT TRAP DETAIL
 SCALE: NONE



DATE	REVISION	NO	BID SET	ISSUED FOR:
			12/11/2024	AS SHOWN
				DESIGNED BY: SNK
				DRAWN BY: SNK
				CHECKED BY: GMS

BELLFLOWER/MEADOWBROOK DITCH RESTORATION PROJECT
 MENTOR, OH
 LAKE COUNTY

SWPPP NOTES AND DETAILS

PROJECT NO.	241472
DISCIPLINE	CIVIL
SHEET NAME	SWPPP-1
SHEET	OF
19	20

DELEGATION OF AUTHORITY FOR EROSION AND SEDIMENT CONTROL

PROJECT NAME: _____
PROJECT ADDRESS: _____

I, _____, HEREBY DESIGNATE THE PERSON OR DESCRIBED POSITION BELOW TO BE A DULY AUTHORIZED REPRESENTATIVE FOR THE PURPOSE OF OVERSEEING COMPLIANCE WITH ENVIRONMENTAL REQUIREMENTS, INCLUDING THE OHIO EPA NPDES CONSTRUCTION GENERAL PERMIT, AT THE DESIGNATED PROJECT. THE DESIGNEE IS AUTHORIZED TO SIGN REPORTS, STORM WATER POLLUTION PREVENTION PLANS (SWP3) AND OTHER DOCUMENTS AS REQUIRED BY THE NPDES PERMIT.

NAME OF QUALIFIED PERSON AND/OR POSITION _____
COMPANY NAME _____ PHONE NO. _____
STREET ADDRESS _____

BY SIGNING THIS AUTHORIZATION, I CERTIFY UNDER THE PENALTY OF LAW THAT ALL REQUIRED DOCUMENTS WILL BE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHER AND EVALUATE THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON(S) WHO MANAGES THE SYSTEM OR IS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION TO BE SUBMITTED WILL BE, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE AND COMPLETE. I AM AWARE THERE ARE SUBSTANTIAL PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS.

COMPANY NAME _____ PHONE NO. _____
STREET ADDRESS _____
PRINT NAME AND TITLE _____
SIGNATURE _____ DATE _____

SUBCONTRACTOR AGREEMENT FOR EROSION AND SEDIMENT CONTROL

PROJECT NAME: _____
PROJECT ADDRESS: _____

BY SIGNING THIS AGREEMENT, I CERTIFY UNDER THE PENALTY OF LAW THAT I HAVE READ AND UNDERSTAND THE TERMS AND CONDITIONS OF THE STORM WATER POLLUTION PREVENTION PLAN (SWP3) FOR THE DESIGNATED PROJECT AND AGREE TO FOLLOW THE PRACTICES DESCRIBED. AS A SUBCONTRACTOR, I AM REQUIRED TO COMPLY WITH THE SWP3 FOR ANY WORK I PERFORM AT THE PROJECT. IT IS MY RESPONSIBILITY TO OBTAIN A COPY OF THE SWP3 FROM THE CONTRACTOR AND TO ADVISE MY EMPLOYEES WORKING ON THIS PROJECT OF THE REQUIREMENTS. I AM AWARE THERE ARE SUBSTANTIAL PENALTIES OR LOSS OF CONTRACT FOR VIOLATING ANY CONDITION OF THE SWP3, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS.

COMPANY NAME _____ PHONE NO. _____
STREET ADDRESS _____

PRINT NAME AND TITLE _____
SIGNATURE _____ DATE _____

DESCRIPTION OF CONSTRUCTION SERVICE(S) I AM TO PROVIDE:

FINAL CERTIFICATION AND NOTIFICATION FOR EROSION AND SEDIMENT CONTROL

PROJECT NAME: _____
PROJECT ADDRESS: _____

I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHERED AND EVALUATED THE INFORMATION SUBMITTED FOR THE DESIGNATED PROJECT. BASED ON MY INQUIRY OF THE PERSON(S) WHO MANAGED THE SYSTEM OR DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE AND COMPLETE. I AM AWARE THERE ARE SUBSTANTIAL PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS.

COMPANY NAME _____ PHONE NO. _____
STREET ADDRESS _____

PRINT NAME AND TITLE _____
SIGNATURE _____ DATE _____

GRADING AND STABILIZATION ACTIVITY LOG

PROJECT NAME: _____ SHEET NO.: _____
PROJECT ADDRESS: _____

DATE GRADING ACTIVITY INITIATED	DESCRIPTION OF GRADING ACTIVITY	DATE GRADING ACTIVITY CEASED	STABILIZATION MEASURE INITIATED		DESCRIPTION OF STABILIZATION MEASURE AND LOCATION (ATTACH SKETCH IF NECESSARY)
			DATE	TYPE	
				<input type="checkbox"/> TEMP. <input type="checkbox"/> PERM.	
				<input type="checkbox"/> TEMP. <input type="checkbox"/> PERM.	
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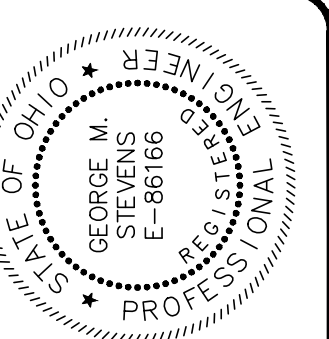
EROSION AND SEDIMENT CONTROL AMENDMENT LOG

PROJECT NAME: _____ SHEET NO.: _____
PROJECT ADDRESS: _____

AMENDMENT NO.	DATE OF AMENDMENT	DESCRIPTION OF AMENDMENT	DESCRIPTION OF STABILIZATION MEASURE AND LOCATION (ATTACH SKETCH IF NECESSARY)

SOIL TYPES

NAME	DESCRIPTION
CtA	CONNENAUT SILT LOAM, 0 TO 1 PERCENT SLOPES
Pa	PAINESVILLE FINE SANDY LOAM



ISSUED FOR:	BID SET	NO	REVISION	DATE
ISSUE DATE:	12/11/2024			
SCALE:	AS SHOWN			
DESIGNED BY:	SNK			
DRAWN BY:	SNK			
CHECKED BY:	GMS			

BELLFLOWER/MEADOWBROOK DITCH RESTORATION PROJECT
MENTOR, OH
LAKE COUNTY
SWPPP NOTES AND DETAILS

PROJECT NO.	241472
DISCIPLINE	CIVIL
SHEET NAME	SWPPP-2
SHEET	OF
20	20