



Incidental Take Conservation Plan
Unnamed tributary to Waupecan Creek, Grundy County Illinois
A part of the SE $\frac{1}{4}$ of Section 1, Township 31N, R 5E, 3 PM LaSalle County Illinois and
The SW $\frac{1}{4}$ of Section 6, Township 31N, R6E. 3PM, Grundy County Illinois.
LYB Project 4056.02

Prepared for
Illinois Department of Natural Resources
Permit Number 2012-1677

Prepared by
Lewis Yockey & Brown, Inc
505 N. Main Street
Bloomington, IL 61701
1-7-14

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Section 1.0 Introduction

The project is the improvements to the approach grades to the Railroad Crossing of East 30th Road in Allen Township with the Norfolk Southern Railroad. An unnamed tributary to Waupecan creek runs along the east side of East 30th Road and functions as the roadside ditch. As a part of this project this unnamed tributary will be shifted east to accommodate a safer roadway with flatter side slopes. This plan is to provide a conservation outline for the incidental taking of the Slippershell mussel (*Alasmidonta viridis*), which have been found to be living in the areas affected by our project.

Section 2.0 Description of Impact

The primary impact from this construction will be the filling in of the existing channel as a part of the relocation of the unnamed tributary to the Waupecan Creek in LaSalle and Grundy County Illinois. The existing channel provides a collection point for runoff and discharge from surrounding farm fields and provides habitat for aquatic flora and fauna. By collecting this water it reduces nuisance flooding damages to adjacent property and maintains the functionality of the watershed.

2.1 LEGAL DESCRIPTION

The project location is shown on the plan cover sheet and a layman's description would be the east side of LaSalle County East 30th Road between N 17th and N 18th Road along the LaSalle Grundy county lines. All property affected by this project is on public Right of way managed by the Allen Township Highway Department.

2.2. BIOLOGICAL DATA ON SPECIES

The Slippershell mussel, *Alasmidonta Viridis*, is a small somewhat rectangular shell mussel with wavy green rays on the posterior half of the shell generally found in sand deposits and sandy mud in headwater streams. This species is widespread in the eastern U.S. and distributed from Lake Huron, St. Clair and Erie, and upper Mississippi River system, south to Ohio, Cumberland, and Tennessee River systems. It is considered stable throughout most of its range while being endangered in Illinois and Iowa and threatened in Wisconsin.

The Illinois Natural History Survey has provided an overview of the Slippershell mussel at:

<http://wx.inhs.illinois.edu/collections/mollusk/publications/guide/index/86> a copy of which is attached to this report.

2.3 DESCRIPTION OF ACTIVITIES

The activity which will result in the taking of the endangered species is the filling in of the existing channel as part of the relocation of the waterway.

2.4 ANTICIPATED ADVERSE EFFECTS

This filling of the channel will result in the mortality of any mussels left in the channel at the time of filling and will permanently destroy the suitability of the existing channel as habitat for the slippershell mussel.

SECTION 3.0 MEASURES TO MINIMIZE AND MITIGATE THE IMPACT

3.1 PLANS TO MINIMIZE AREAS IMPACTED

In order to minimize the impact upon the mussels the extent of the channel length being relocated has been minimized to only those areas necessary for the safety improvements to the roadway. The existing waterway inside of the limits of construction between station 395+00 and 405+00 has a measured channel length of 1,016 feet. It has 6,440 square feet of area below the measured water surface. A biological survey of the channel in an area approximately 60 feet long by 5' wide turned up one slippershell mussel. Extrapolating this area to the entire channel being affected would yield a population of 21 slippershell mussels (1 mussel/300 sq feet over 6440 sq ft) in the area to be affected. This disruption to the habitat of the slippershell should be short lived as the construction plans include provisions to excavate the sediment in the existing channel and transfer it to the proposed channel to a depth of 12" transferring the majority of the mussels in the channel where they will find habitat that closely replicates the existing habitat they are currently in.

3.2 PLANS FOR MANAGEMENT OF AFFECTED AREAS

The new channel area will be completely inside of the public ROW both existing and newly acquired for this project. As this area is located inside of the flood plain and development is regulated by the LaSalle County Flood Damage Prevention Ordinance and the Grundy County floodplain restrictions contained in their zoning ordinance. Ownership and maintenance of the property will remain with the Allen Township Road Commissioner and they will ensure that the area is maintained as a protected channel surrounded by a vegetated native buffer area in the same manner as other stream areas that are maintained by Allen Township.

3.3 MEASURES TO BE IMPLEMENTED

To maximize the success rate of this transfer, during construction the Township Road Commissioner and the Resident Engineer will both monitor the actions of the contractor to verify the majority of the existing channel sediment has been transferred from the existing channel to the proposed channel. This work will also be restricted to time periods when the water temperature is favorable for reestablishment of the mussels in their new habitat, specifically when the water temperature is above 40 degrees Fahrenheit.

3.4 PLANS FOR MONITORING THE EFFECTS

While the area of construction is completely inside of the public ROW, the majority of the watershed is privately owned and used for agriculture. The township will on an annual basis inspect the waterway and remove trash, debris and excess silt to maintain the channel. However the greatest threat to this

habitat is from runoff or spills into the waterway from the upstream property owners. The township will make contact with the LaSalle County Soil and Water Conservation District to inform them of this project and partner with them to provide guidance to the upstream landowners about steps they can take to protect the stream channel.

3.5 ADAPTIVE MANAGEMENT PRACTICES

On this project adaptive management practices will be implemented to allow the township to monitor and improve the habitat over time to meet the changing needs of the flora and fauna. For example at this time the majority of the channel is silty mud with scattered sand and gravel deposits. As reductions in runoff occur from the surrounding fields the township will monitor the potential transition of the channel to greater percentages of sand and gravel with less silt. They will maintain contacts with the LaSalle County Soil Conservation Office, the Illinois Department of Natural Resources and the Illinois Natural History Department to modify and implement the current management practices relevant to channel maintenance as new methodologies are developed. Should the channel change in different ways, or other unexpected events occur in the new channel the township will discuss these changes with their contacts and continue to manage and monitor the channel in accordance with the best available information available at that time.

3.6 VERIFICATION OF SUFFICIENT FUNDING

The Allen Township Highway Department is a public entity with taxing authority. They will be the entity responsible for implementing this plan and maintaining these improvements into the future. The construction costs for these improvements will be included with the funding provided by the Illinois Commerce Commission as a part of their safe railroad crossings program. The anticipated cost of maintaining the proposed channel should be very similar to the costs of maintaining the existing channel and these costs are already included in the ongoing maintenance budget of Allen Township and therefore sufficient funding is available for the support and implementation of the mitigation plan.

SECTION 4 CONSIDERED ALTERNATES

The primary purpose of this project is to improve safety for the public for the grade crossing between East 30th road and the Norfolk Southern Railroad. The number one safety issue is sight distance due to the sharp approach grades at crossing.

4.1 No Action Alternate

The first alternate considered was closing this crossing entirely. This would eliminate any impact to the waterway, but was rejected based upon comments received from the public that use this crossing as well as an analysis of the potential of this road to serve the surrounding population into the future as the center of an existing stretch of roadway extending 6.5 Miles north and 5 miles south of this crossing.

To keep the crossing open will require improved safety at this crossing. The biggest safety issue is the sight lines provided at the crossing. The roadway profile needs to be raised to create smoother approach grades with a longer tapered approach. This will increase the visibility of trains to approaching vehicles and also allows vehicles to observe oncoming traffic at the crossing and avoid sudden movements as vehicles come into view near the crossing.

4.2 Construction Alternates

To revise the approach three alternates were considered. The alternatives were as follows:

- 4.2.1 Shifting the roadway to the west to avoid any impact to the creek
- 4.2.2 Installing sheet pilings or retaining walls to limit the widening to the existing embankment footprint and avoiding relocation of the creek
- 4.2.3 Construct an earthen embankment and relocating the channel to the east.

Alternate 4.2.1 was rejected due to the need to keep the roadway centered on the county line and also due to the need to cross the RR tracks at the existing crossing.

Alternate 4.2.2 was considered and rejected due to the cost and safety issues involved with installing sheet pilings or retaining walls and guardrails at this location. Consideration was given to the long term maintenance of the retaining walls and the sheet pilings and the expense was not justified.

Alternate 4.2.3 is the selected alternate which meets the political, financial and esthetic needs of the owner and the public in the most efficient manner.

SECTION 5 LIKELIHOOD OF SURVIVAL OF THE SPECIES

This proposed taking should not significantly reduce the likelihood of the survival of the species in the wild as slippershell mussels are found across a range in the United States stretching from Maine to South Dakota and from Georgia to Arkansas. While threatened in Illinois, the habitat being lost as a part of this project is being recreated at approximately the same location and will serve the same function. This particular stream is an intermittent stream and in discussions

with Edward Dewalt of the Prairie Research Institute at the Illinois Natural History Survey he expressed his opinion that as this stream is intermittent most likely the specimen found at this location was an offspring of a larger community dwelling in the Waupecan Creek. Every few years there will be a drought and this stream will completely dry up and all mussels in this reach will die. This is a natural occurrence and one that the slippershell has evolved to deal with as a part of their natural environment. When the drought ends this unnamed tributary will be flooded again and a direct connection to the mussel reservoir in the Waupecan creek will be restored allowing mussels to again colonize this tributary. This occurs as the glochidia are transported up this tributary by fish and drop off into suitable habitat creating a new colony. Then at some time after that the creek will again dry up and wipe out the new mussel colony starting the cycle over again. This construction project should not wipe out all of the mussels in this stretch of the channel, but if it does it will mimic a natural occurrence that the mussels have evolved to survive.

A second check on the survivability of the species led to the finding that the slippershell mussel is not considered at risk of failure to survive in the wild in Illinois. The International Union for Conservation of Nature says that the "*Alasmidonta viridis* has been assessed as Least Concern due to its wide distribution and lack of threat processes impacting its global population. However, this species is listed as Threatened in many states and is Vulnerable under American Fisheries Society classification and populations demonstrate local declines, thus requiring careful future monitoring." Based upon the limited geographic impact from this project, there is only a minor potential impact to the overall population of this species and its survival in Illinois.

SECTION 6 IMPLEMENTATION AGREEMENT

This plan is agreed to by the following:

Bill Bergeson, Roadway Commissioner, Allen Township.

Specifically the Road Commissioner is agreeing to:

Monitor the construction of these improvements and minimize the mortality of the slippershell mussels living in the channel. At a minimum during construction the site will be checked weekly to assure compliance by the contractor with the plans.

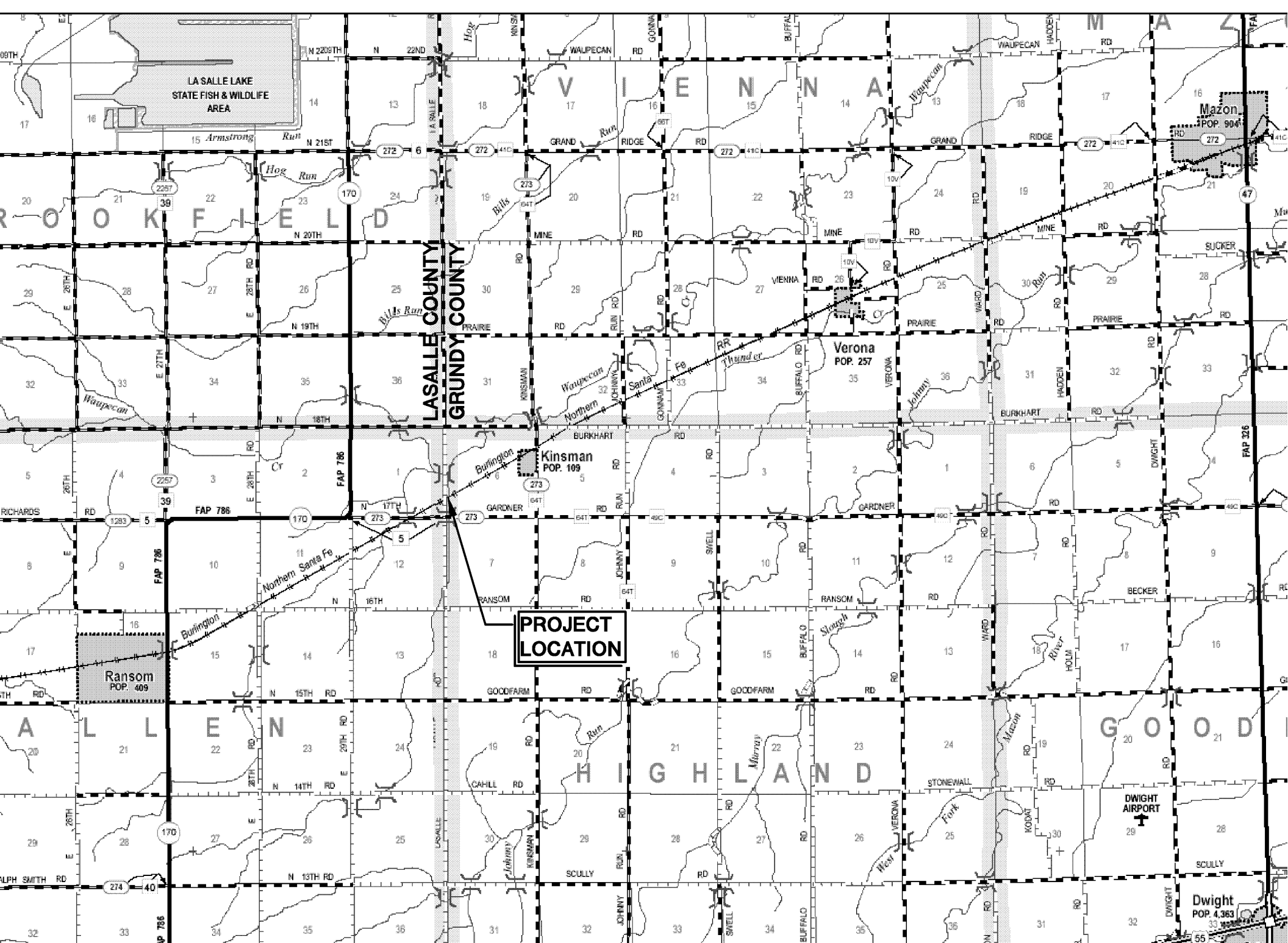
Provide the IEPA with monthly progress reports during construction verifying that the plan is being implemented. This work should begin in April of 2014 and be complete by July of 2014.

Maintain the channel into the future and take steps to react to changes in the watershed and channel to meet the needs of the flora and fauna existing in the channel. This will be on going work over the life of the improvements and into the future.

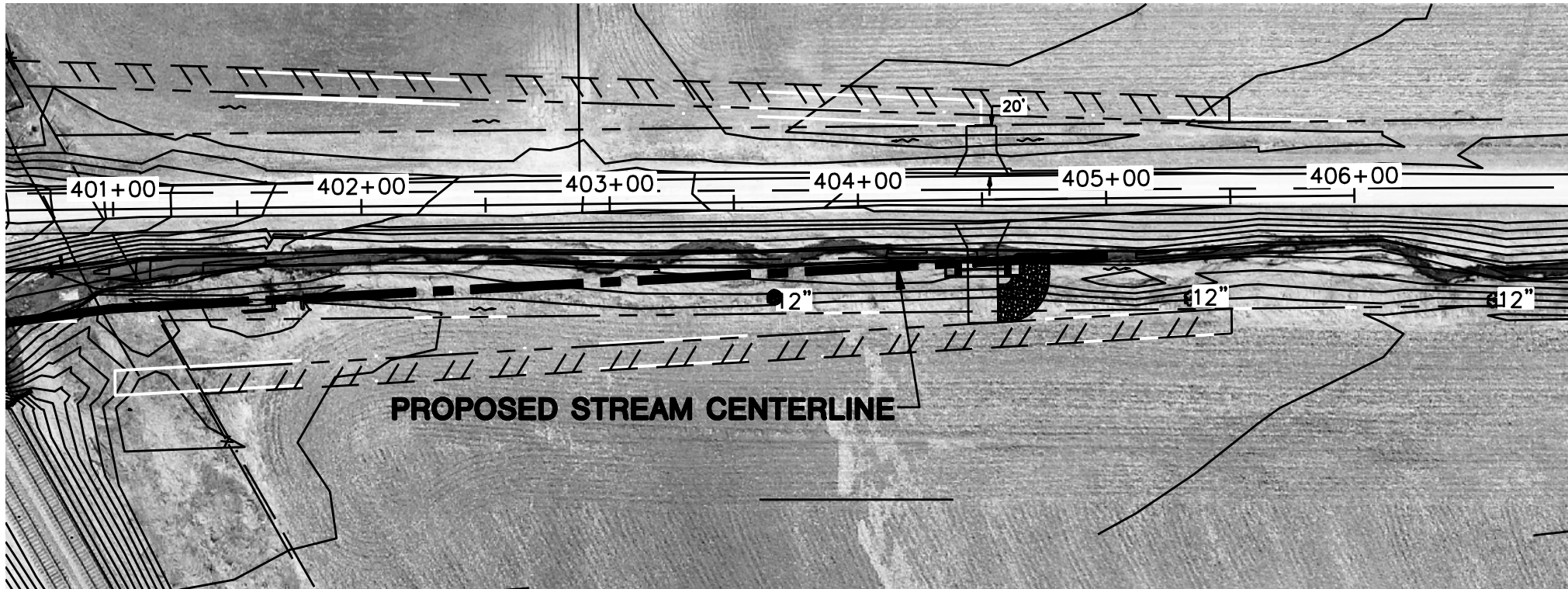
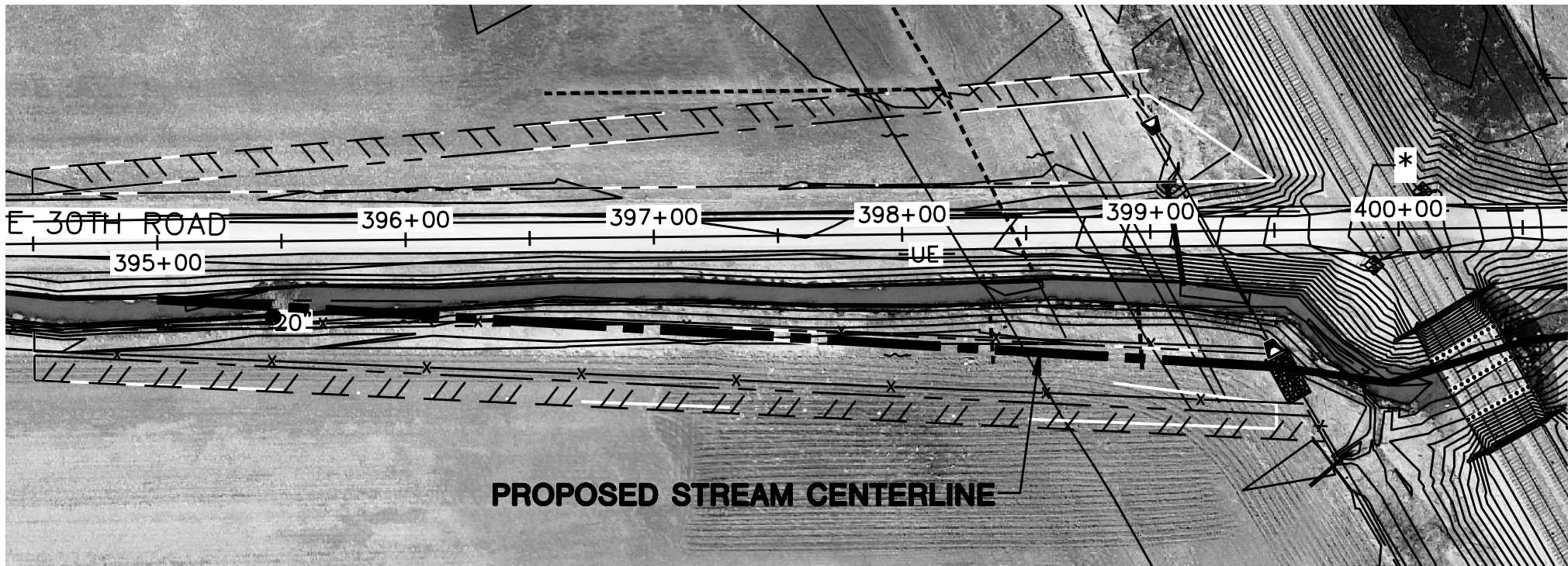
Verify that the construction is in compliance with the requirements of:

The Army Corp of Engineers, Rock Island District
The Illinois Department of Natural Resources
The Illinois Environmental Protection Agency
The LaSalle County Highway Department

This compliance will be verified during the weekly inspections and final compliance will be assured at the end of the construction as a part of the project closeout prior to issuing final payment to the contractor.



LOCATION MAP
NO SCALE



ALLEN ROAD DISTRICT IMPROVEMENT EAST 30th ROAD

PART OF THE SE1/4, SECTION 1, T.31N, R.5E, 3P.M, LASALLE COUNTY, ILLINOIS
AND SW1/4, SECTION 6, T.31N, R.6E, 3P.M, GRUNDY COUNTY, ILLINOIS

SCALE: CUSTOM
LIVINGSTON COUNTY

INDEX OF SHEETS

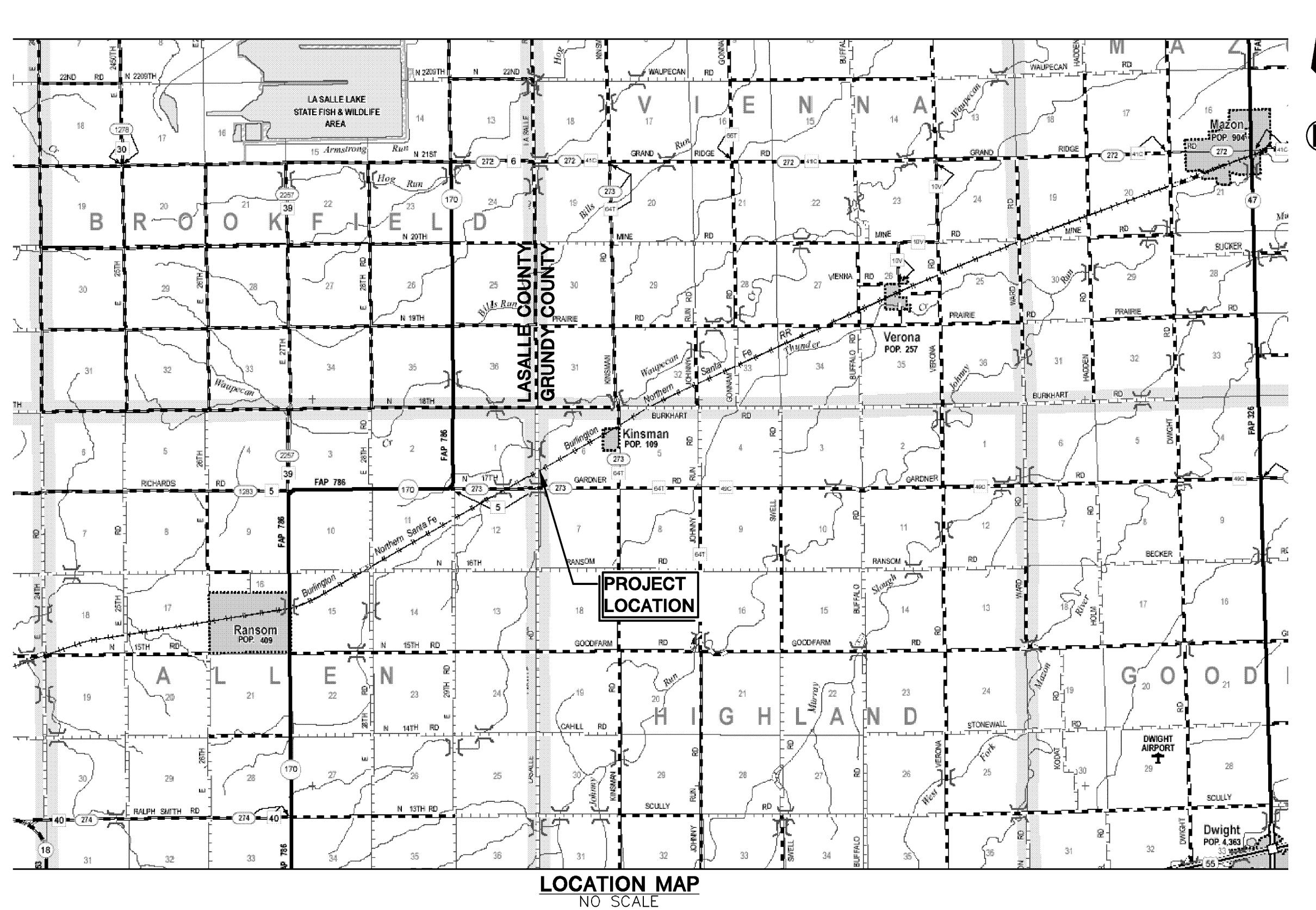
SHEET No.	SUBJECT
1.	COVER SHEET
2.	PLAN AND PROFILE PLAN
3.	CROSS SECTIONS STA 394+00 TO STA 397+50
4.	CROSS SECTIONS STA 398+00 TO STA 399+23.68
5.	CROSS SECTIONS STA 399+50 TO STA 402+50
6.	CROSS SECTIONS STA 403+00 TO STA 406+00
7.	EROSION CONTROL PLAN & DETAILS

OWNER: ALLEN TOWNSHIP
KEN ARRIGO TOWNSHIP ROAD COMMISSIONER
P.O. BOX 231
RANSOM, IL 61470

LEGEND

---	CENTERLINE OF PROPOSED ROAD
---	TEMPORARY CONSTRUCTION EASEMENT
---	EXISTING ROW AS OCCUPIED
---	PROPOSED ROW
•	5/8" IRON ROD FOUND
o	5/8" IRON ROD SET
⊗	ROW MARKER
⊠	CONCRETE MONUMENT
•	CROSS IN CONCRETE
◆	SECTION CORNER
---	EDGE OF FIELD
⊕	EXISTING SIGN
⊕	RAILROAD WARNING LIGHT
⊕	EXISTING POWER POLE
⊕	EXISTING GUY WIRE
⊕	EXISTING TELEPHONE PEDESTAL
⊕	EXISTING ELECTRIC BOX
⊕	EXISTING CABLE PEDESTAL
OE	EXISTING OVERHEAD POWER LINE
OX	EXISTING OVERHEAD UTILITY
UX	EXISTING UNDERGROUND UTILITY
8" G	EXISTING STORM SEWER
15" SS	EXISTING STORM SEWER
G	EXISTING GAS MAIN OR PIPELINE
8" G	GAS MAIN IN CASING PIPE
12" G	GAS MAIN IN CASING PIPE
8" G	EXISTING FENCE
▲	PROPOSED FLARED END SECTION
15" SS	PROPOSED STORM SEWER
→	PROPOSED DIRECTION OF DRAINAGE
→	FLOOD ROUTE
⊕	EXISTING TREE
⊕	EXISTING TREE W/ DIAMETER
⊕	EXISTING TREE TO BE REMOVED

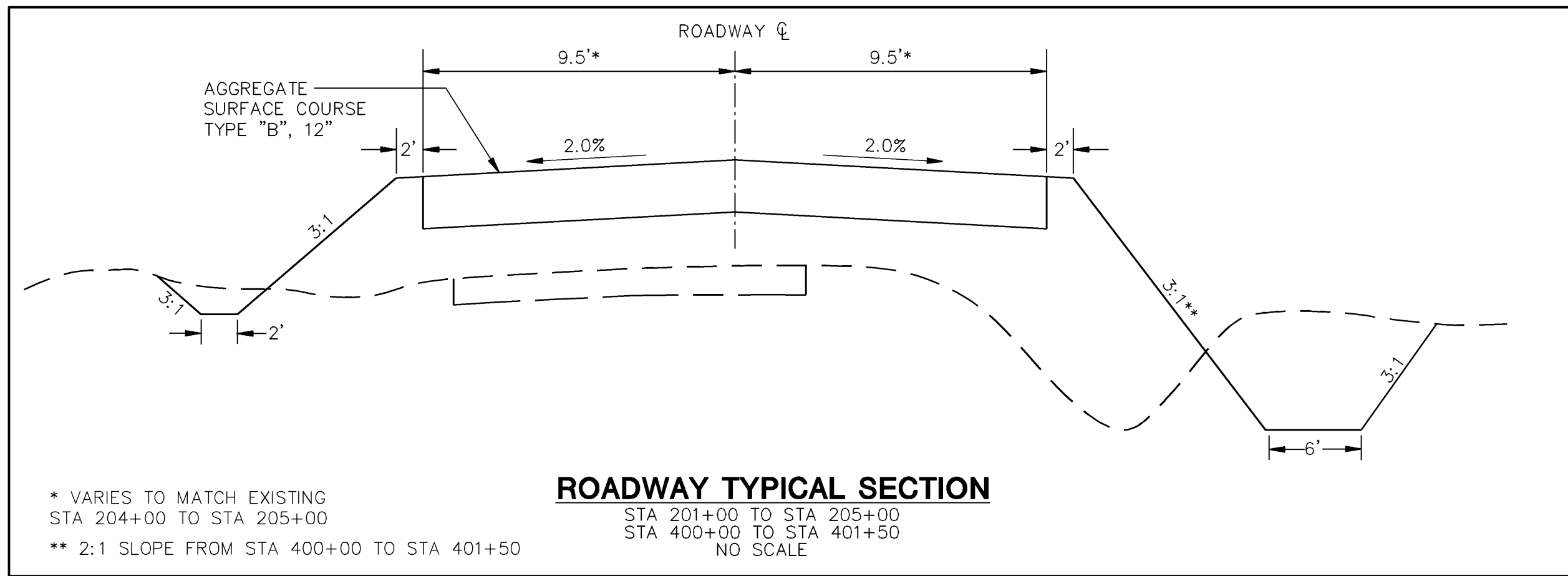
Summary of Quantities		
Description	Unit	Quantity
EARTH EXCAVATION	CU YD	2058
FURNISHED EXCAVATION	CU YD	5761
SEEDING, CLASS 3 SLOPE MIXTURE	ACRE	2.2
MULCH	ACRE	2.2
NITROGEN FERTILIZER NUTRIENT	POUND	200
PHOSPHORUS FERTILIZER NUTRIENT	POUND	200
POTASSIUM FERTILIZER NUTRIENT	POUND	200
INLET AND PIPE PROTECTION	EACH	2
TEMPORARY DITCH CHECKS	EACH	10
PERMIETER EROSION BARRIER	FOOT	60
STONE DUMPED RIPRAP, CLASS B4	SQ YD	67.1
FILTER FABRIC	SQ YD	67.1
AGGREGATE SURFACE COURSE TYPE B	TON	1496
3 STRAND BARBED WIRE FENCE	FOOT	520
8" FIELD TILE	FOOT	25
24" CORRUGATED METAL PIPE	FOOT	95
24" METAL END SECTIONS	EACH	2
6' X 3' PRECAST CONCRETE BOX CULVERT	FOOT	18
6' X 3' PRECAST CONCRETE BOX CULVERT END SECTIONS	EACH	2
TRENCH BACKFILL	CU YD	38.9
REMOVE EXISTING FENCE	FOOT	545
REMOVE EXISTING CULVERTS	EACH	1
REMOVE EXISTING FIELD TILE	FOOT	50
REMOVE EXISTING CONCRETE ABUTMENT	EACH	2
RAILROAD PROTECTIVE LIABILITY INSURANCE	L SUM	1
RAILROAD FLAGGER	L SUM	1



BEGINNING STATION=394+50
END STATION =405+50
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STA. 399+80 TO STA. 400+20

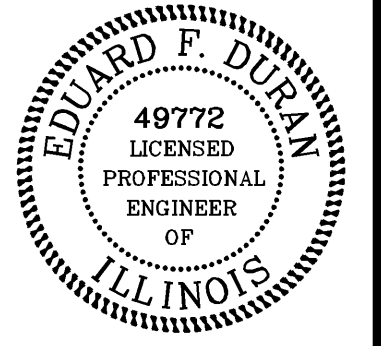
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OMISSION LENGTH: 40 FEET (0.01 MILES)
LENGTH OF IMPROVEMENT: 1060 FEET (0.20 MILES)

BENCHMARK #3:
CAPPED IRON ROD STA 393+60.97, 9.01' RT. ELEV. 646.57
BENCHMARK #4:
CAPPED IRON ROD STA 408+91.32, 13.59' LT. ELEV. 645.84



APPROVED _____ 20____
KEN ARRIGO ROAD COMMISSIONER
ALLEN TOWNSHIP

APPROVED _____ 20____
LAWRENCE KINZER COUNTY ENGINEER
LASALLE COUNTY



EDUARD F. DURAN I.L.P.E. #49772 DATE
LICENSE EXPIRES 11/30/2011

CALL JULIE. BEFORE YOU DIG: 811 AND 1-800-892-0123

THE CONTRACTOR(S) SHALL CONTACT ALL UTILITY COMPANIES, INCLUDING THE OWNER, FOR THE LOCATIONS OF UNDERGROUND UTILITIES PRIOR TO BEGINNING CONSTRUCTION ACTIVITIES. THE LOCATIONS, SIZES, AND ELEVATIONS OF EXISTING UTILITIES SHOWN ON THE PLAN MAY BE INCOMPLETE AND ARE APPROXIMATE ONLY. THE CONTRACTOR(S) SHALL BE RESPONSIBLE FOR KEEPING EXISTING UTILITIES IN SERVICE AND PROMPTLY REPAIRING ANY WHICH ARE DAMAGED DURING CONSTRUCTION AT NO COST TO THE OWNER.

CONTRACTOR SHALL CONTACT BUCKEYE PETROLEUM PIPELINE RIGHT OF WAY AGENT JOMARIE JENKINS AT 1-610-904-4138 PRIOR TO STARTING ANY FILL OR EXCAVATION WITHIN 25' OF THE EXISTING FACILITIES SHOWN ON THE PLANS. NO VIBRATORY EQUIPMENT LARGER THAN WALK BEHIND UNITS SHALL BE USED WITHIN 25' OF THE PIPELINE.

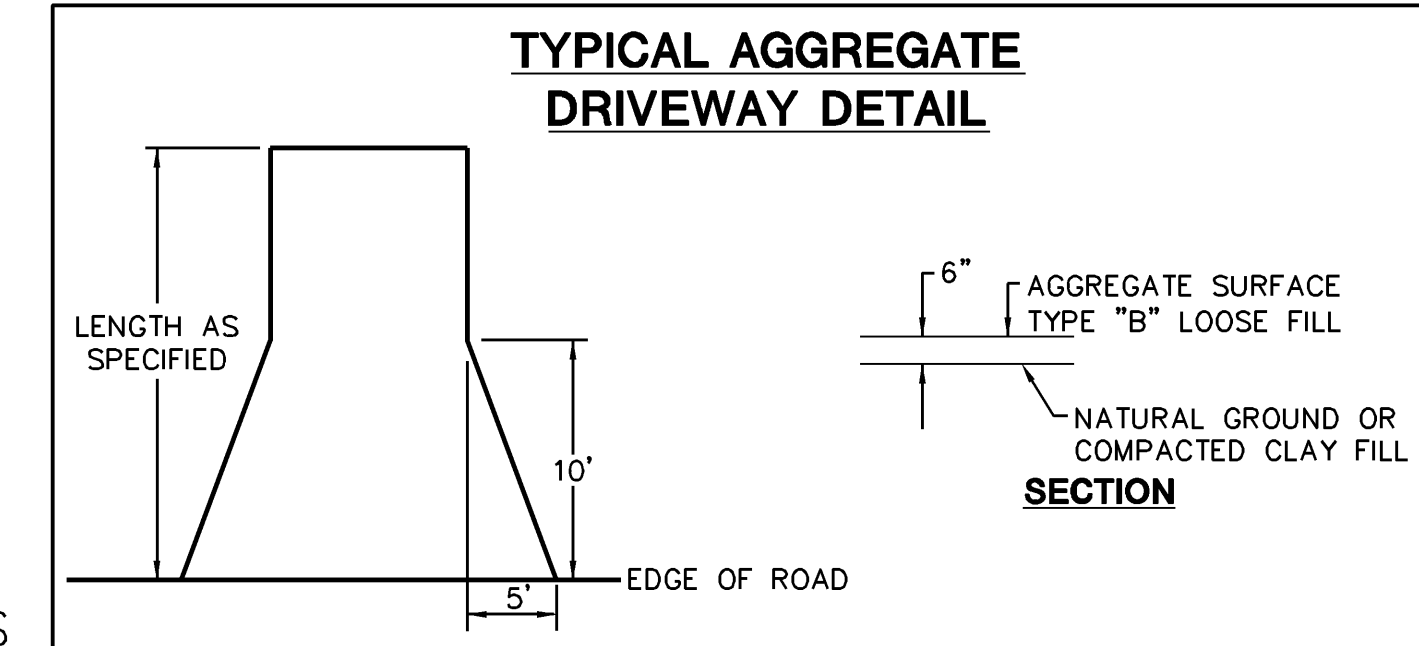
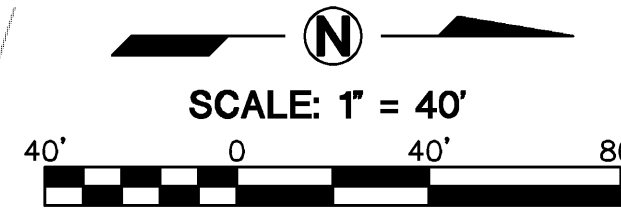
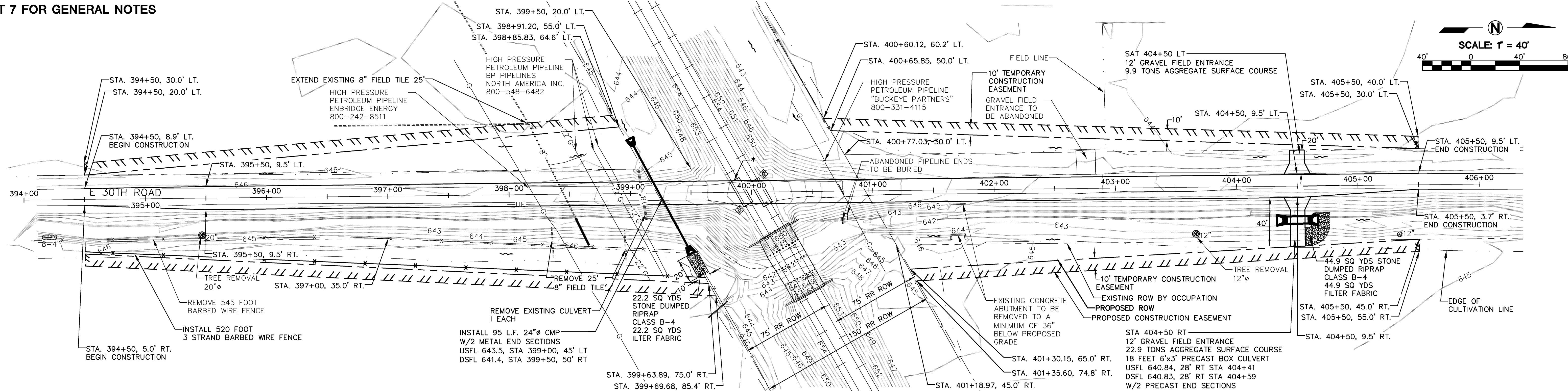
Lewis, Yockey & Brown, Inc.
Consulting Engineers & Land Surveyors
Professional Design Firm Registration #184000808
505 North Main Street, 222 East Center Street, 155 South Elm Street
Bloomington, Illinois LeRoy, Illinois El Paso, Illinois
Ph. (309) 829-2552 Ph. (309) 962-8151 Ph. (309) 527-2552

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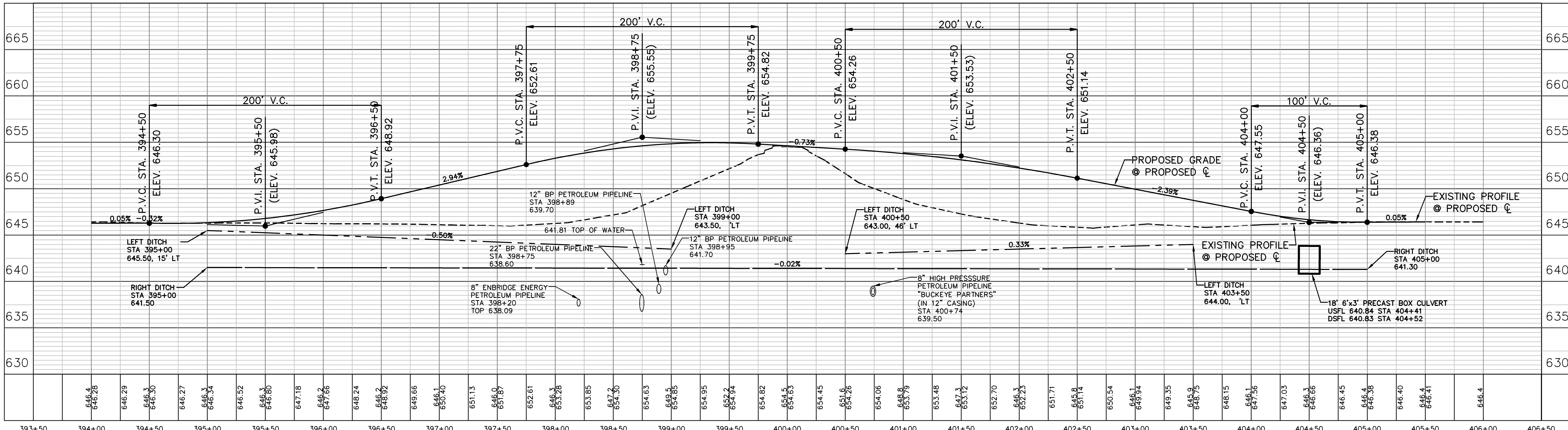
**EAST 30TH ROAD RR CROSSING
LASALLE COUNTY, ILLINOIS
COVER SHEET**

4056.02

SEE SHEET 7 FOR GENERAL NOTES



* OMISSION STA 399+80 TO 400+20 BNSF RR CROSSING #4453F TO BE WIDENED & UPGRADED BY OTHERS



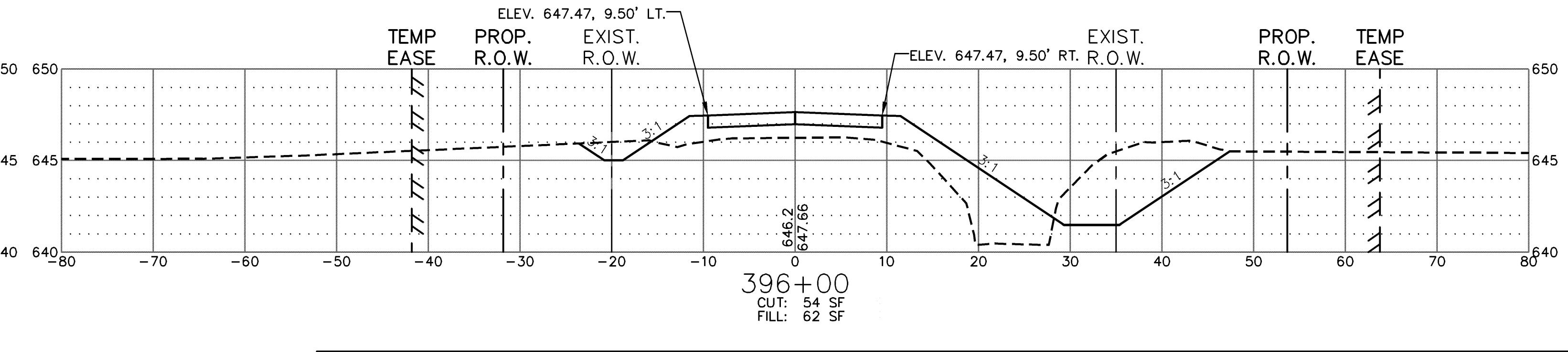
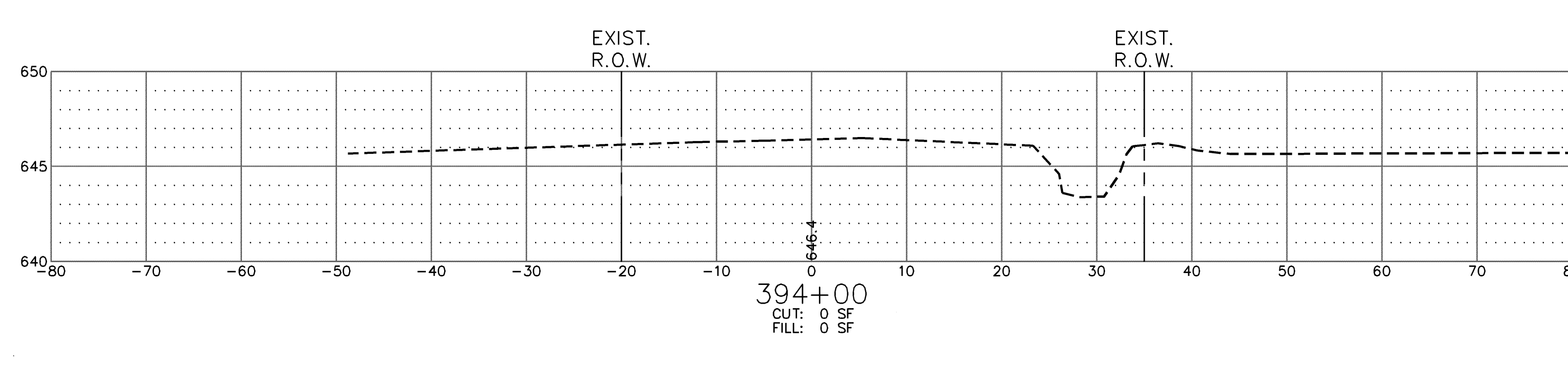
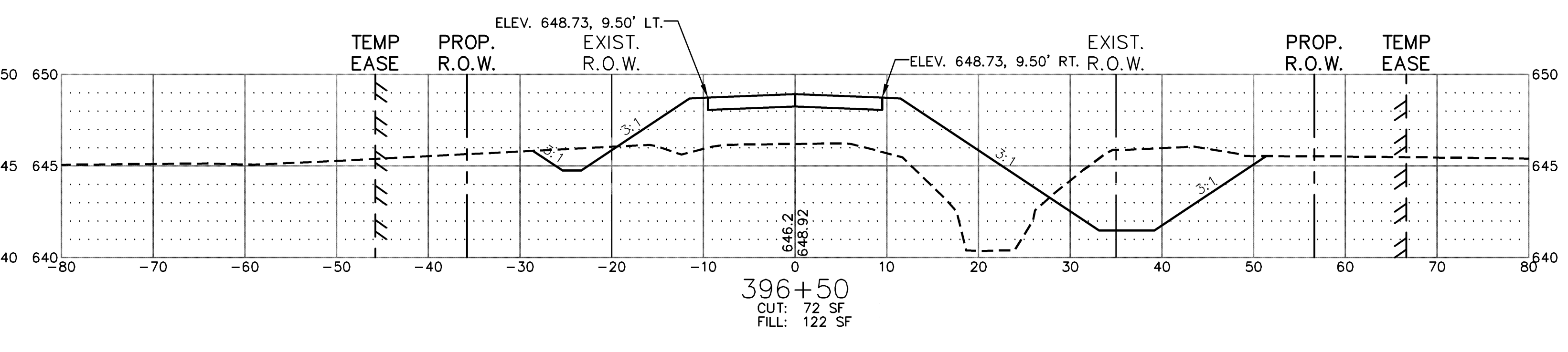
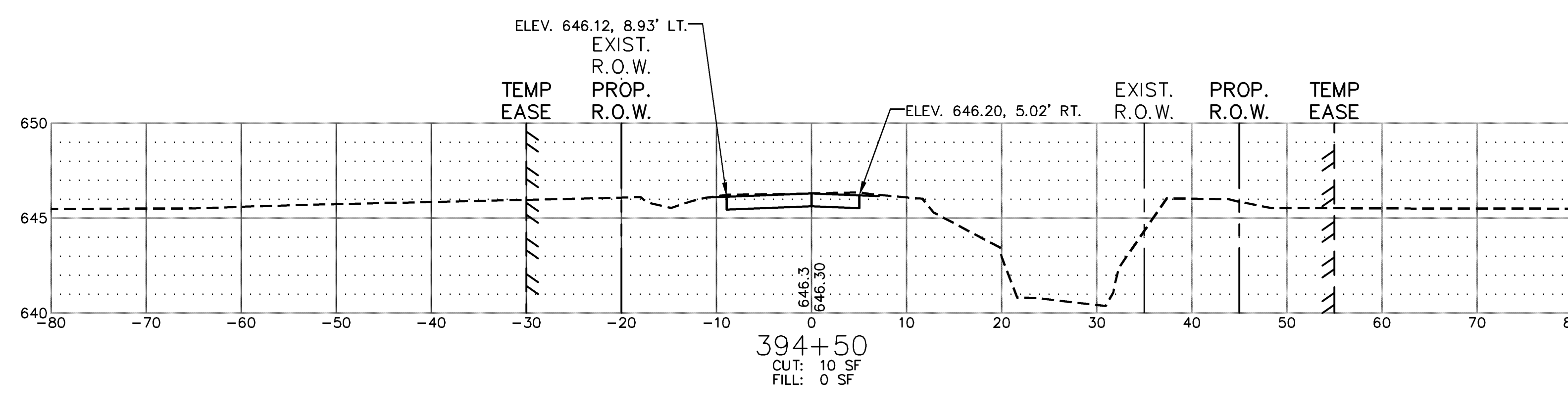
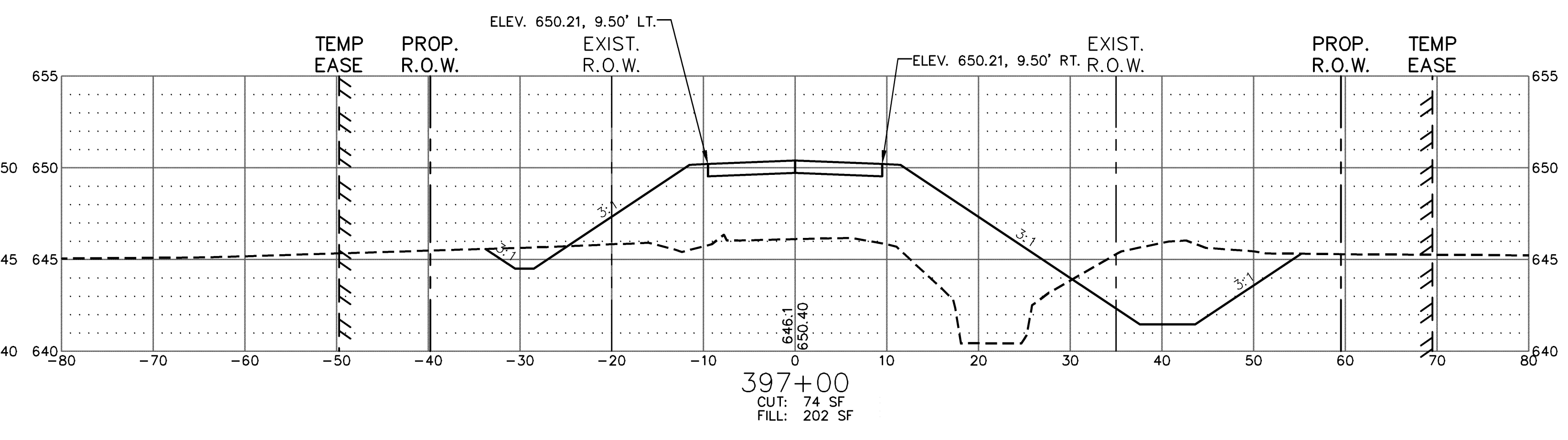
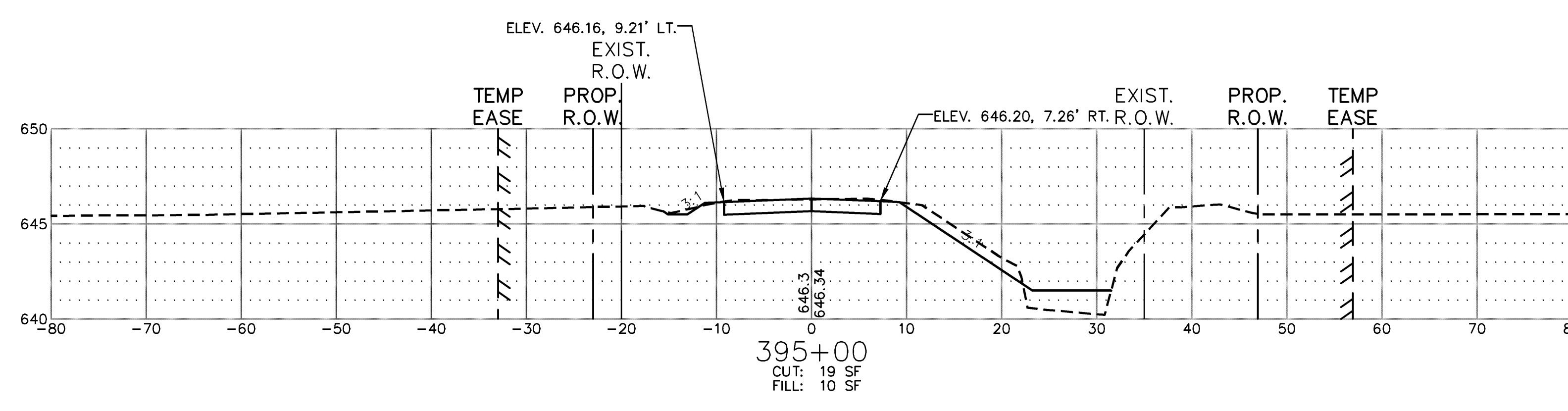
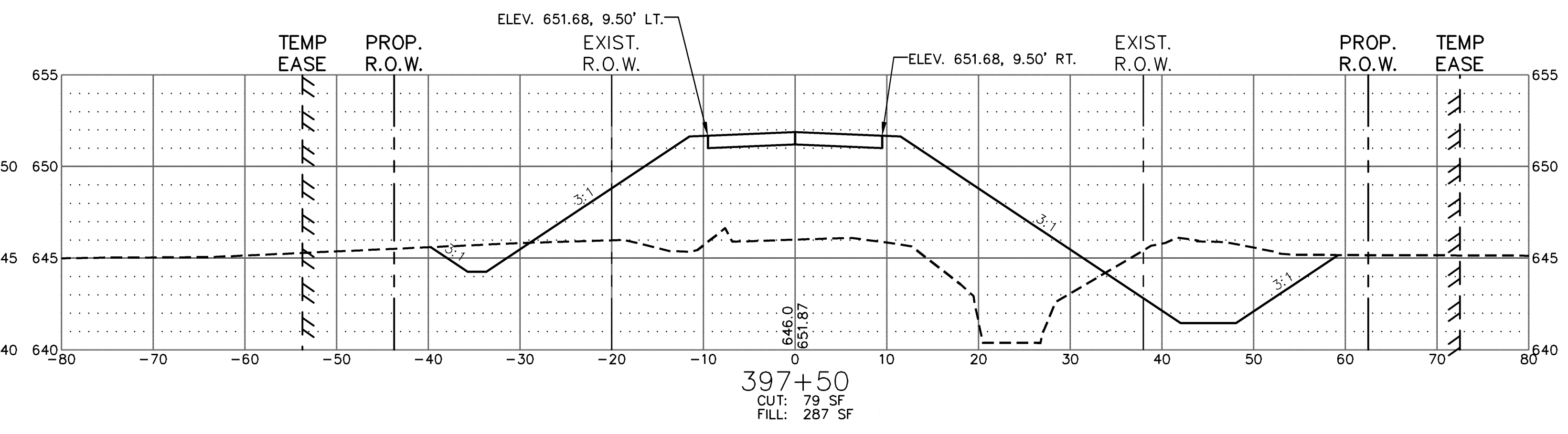
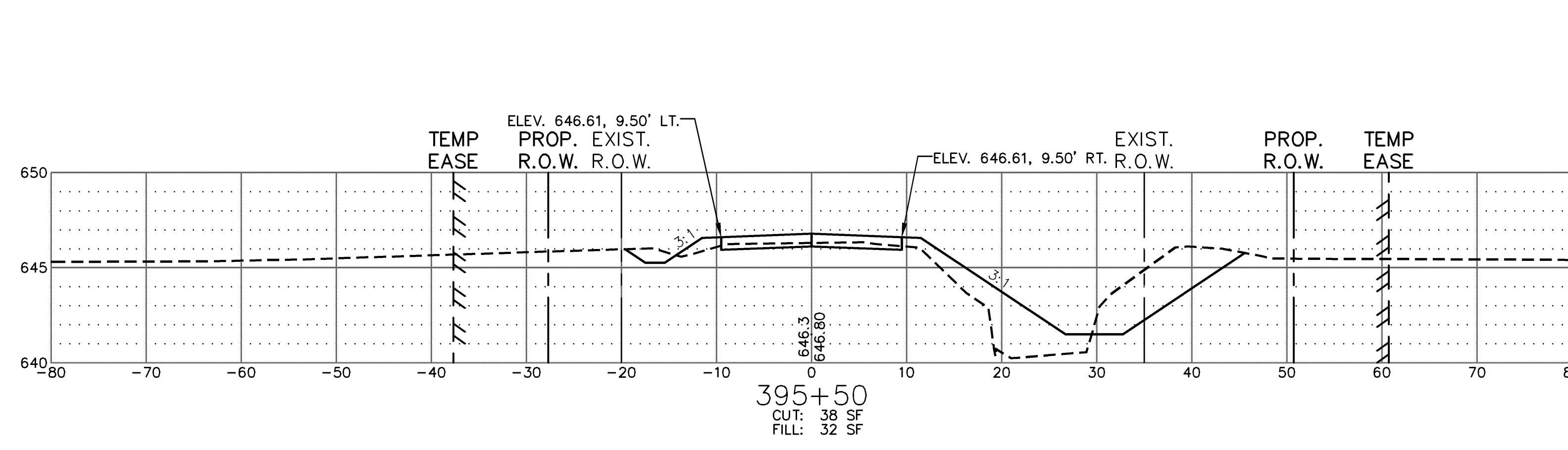
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**EAST 30TH ROAD RR CROSSING
 LASALLE COUNTY, ILLINOIS
 PLAN & PROFILE
 ROADWAY STA 394+00 TO STA 406+00**

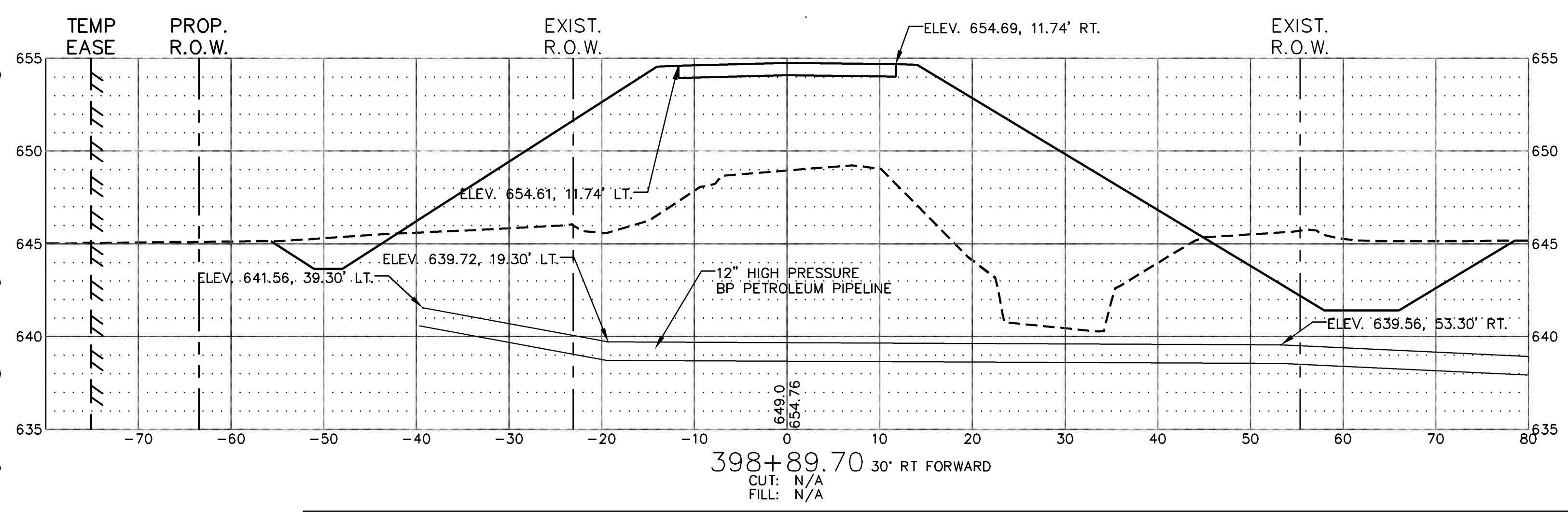
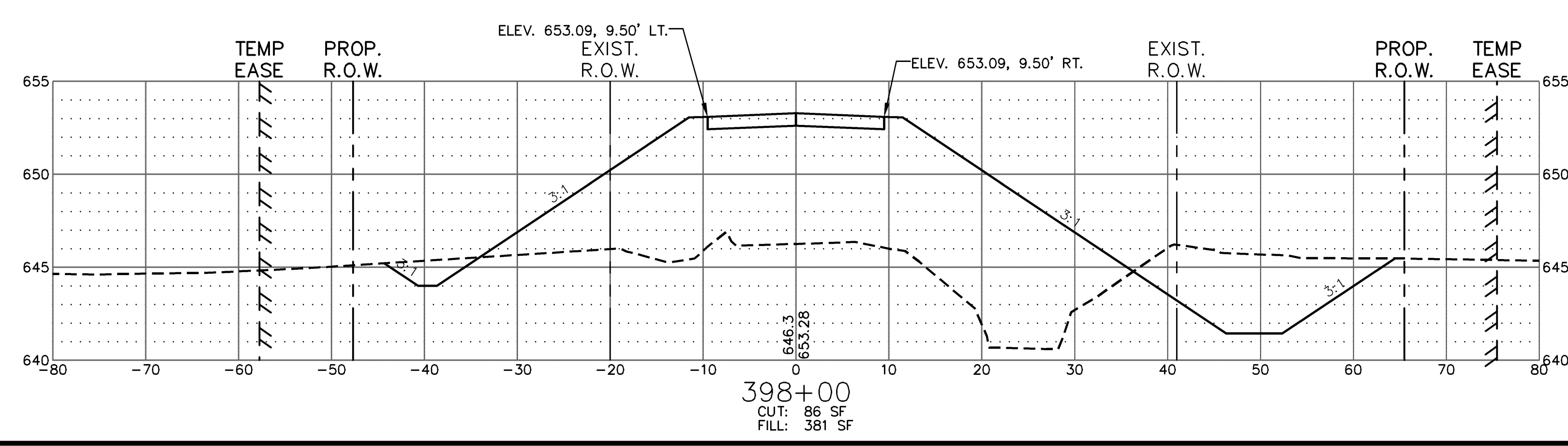
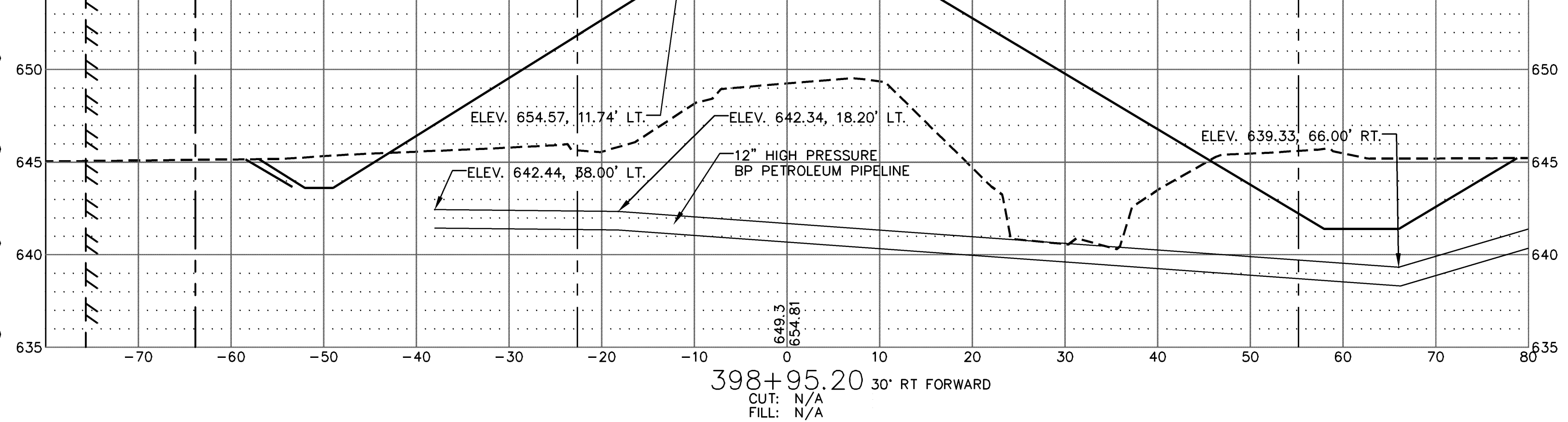
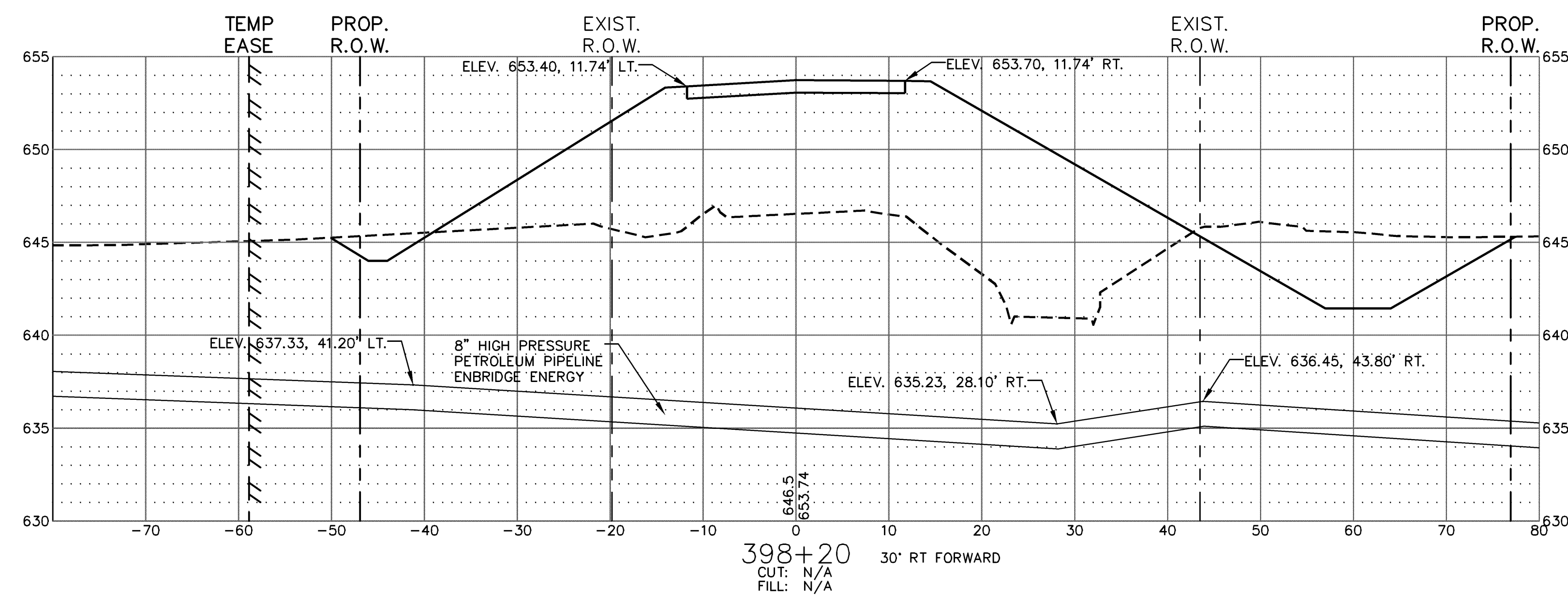
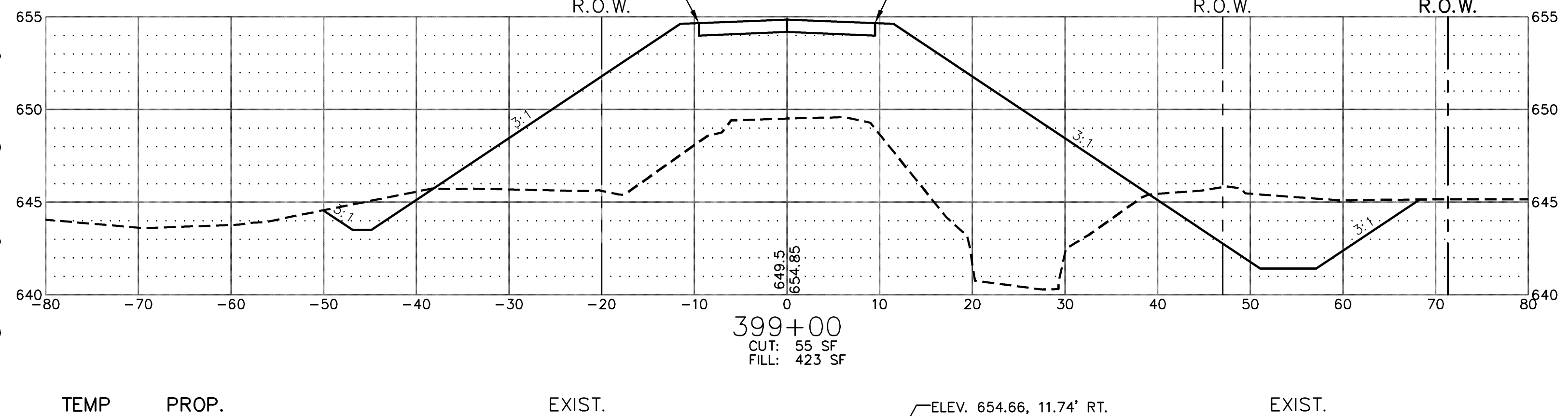
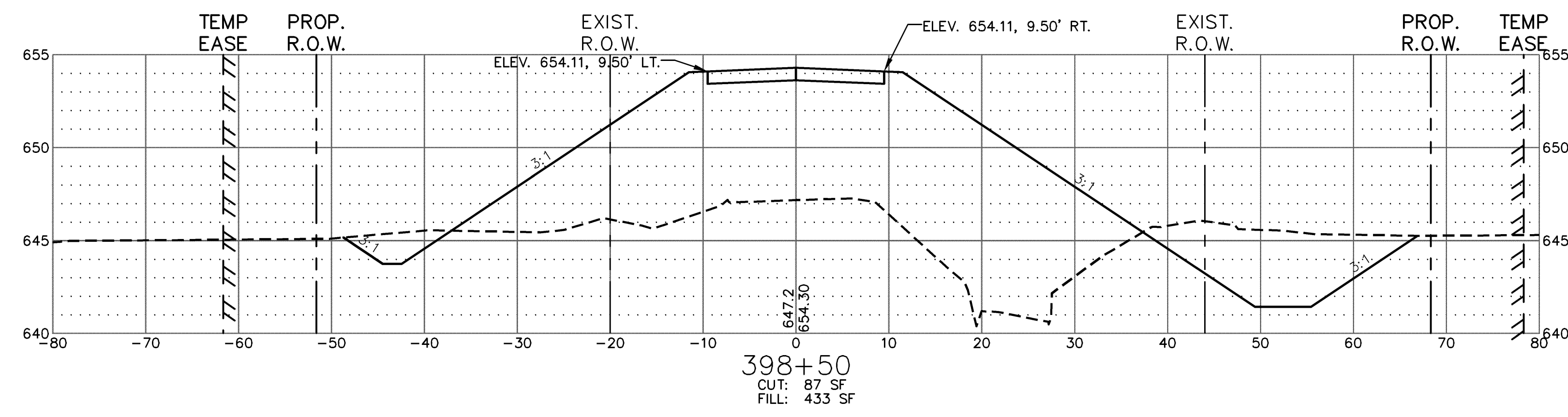
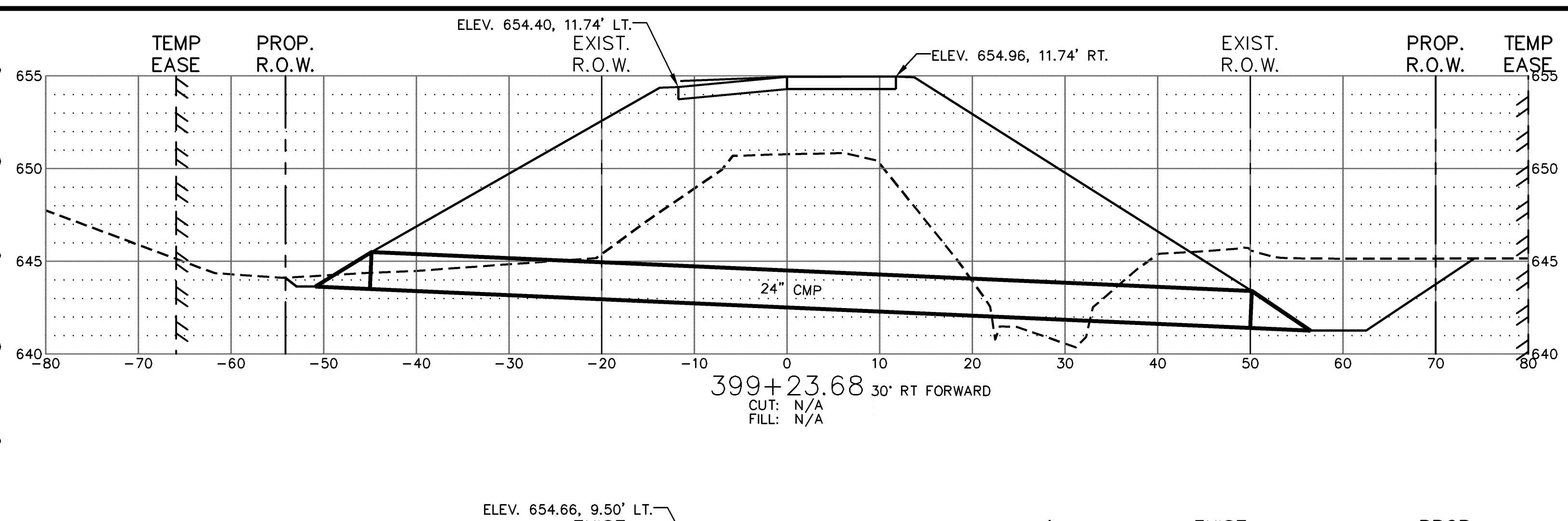
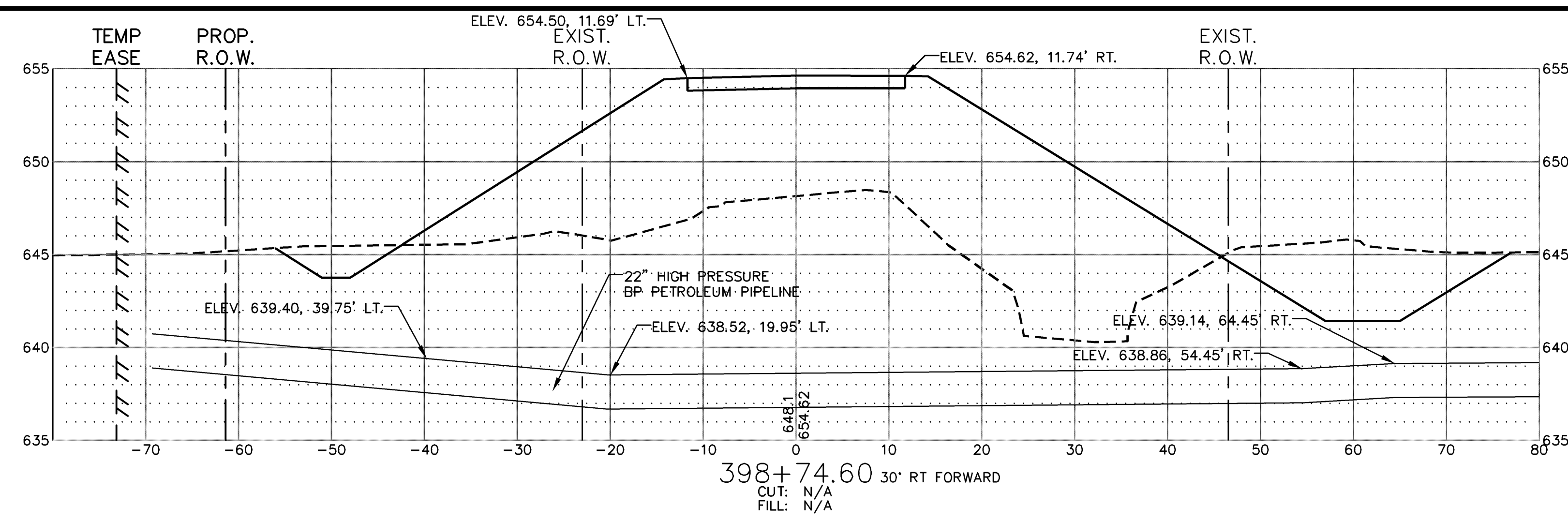
Sheet **2** of 7

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Lewis, Yockey & Brown, Inc. Consulting Engineers & Land Surveyors Professional Design Firm Registration #184000808 505 North Main Street 222 East Center Street 155 South Elm Street Bloomington, Illinois LeRoy, Illinois El Paso, Illinois Ph. (309) 829-2552 Ph. (309) 962-8151 Ph. (309) 527-2552			Rev.	Bk.	EAST 30TH ROAD RR CROSSING LASALLE COUNTY, ILLINOIS ROADWAY CROSS SECTIONS STA 394+00 TO STA 397+50	Sheet
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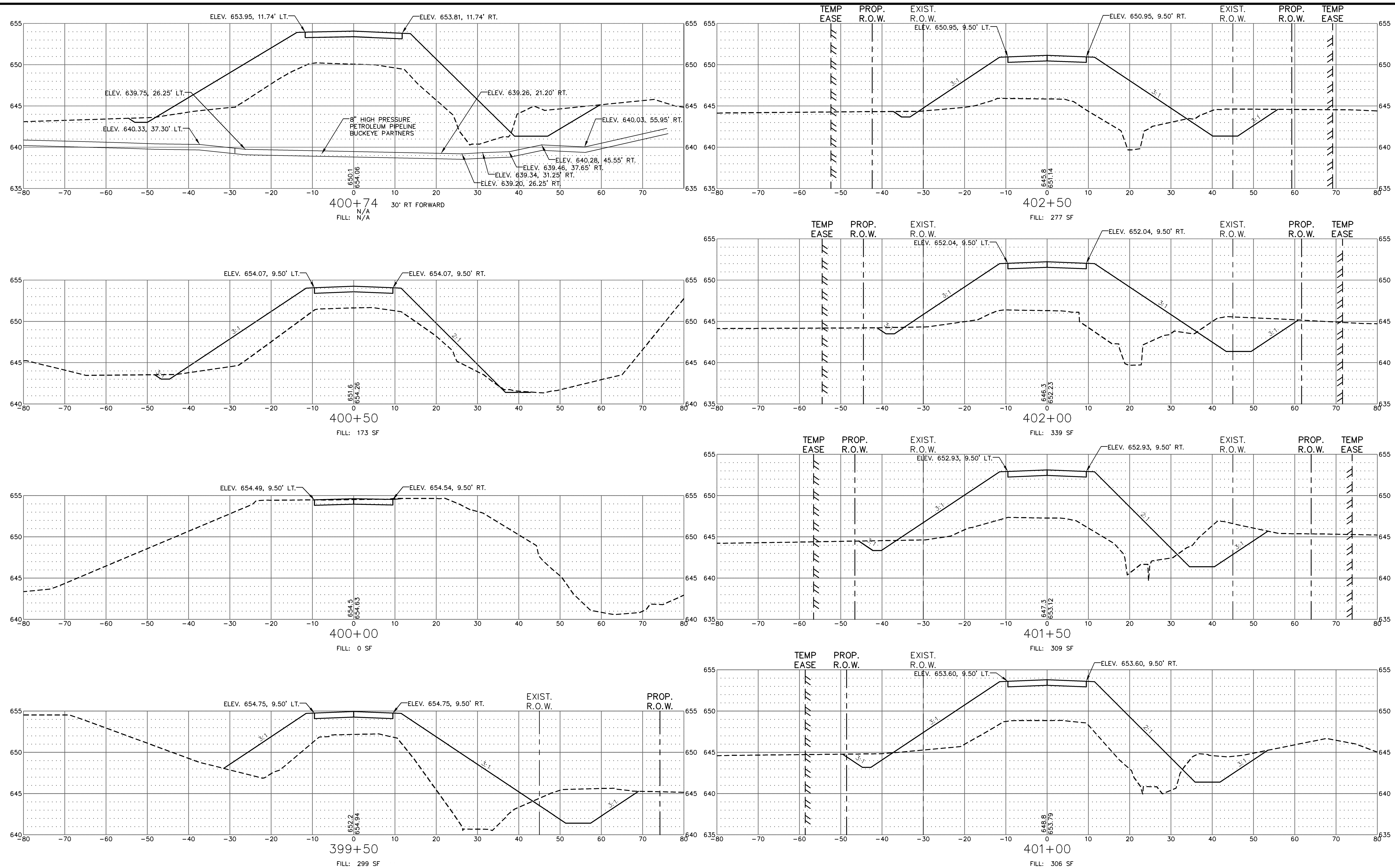
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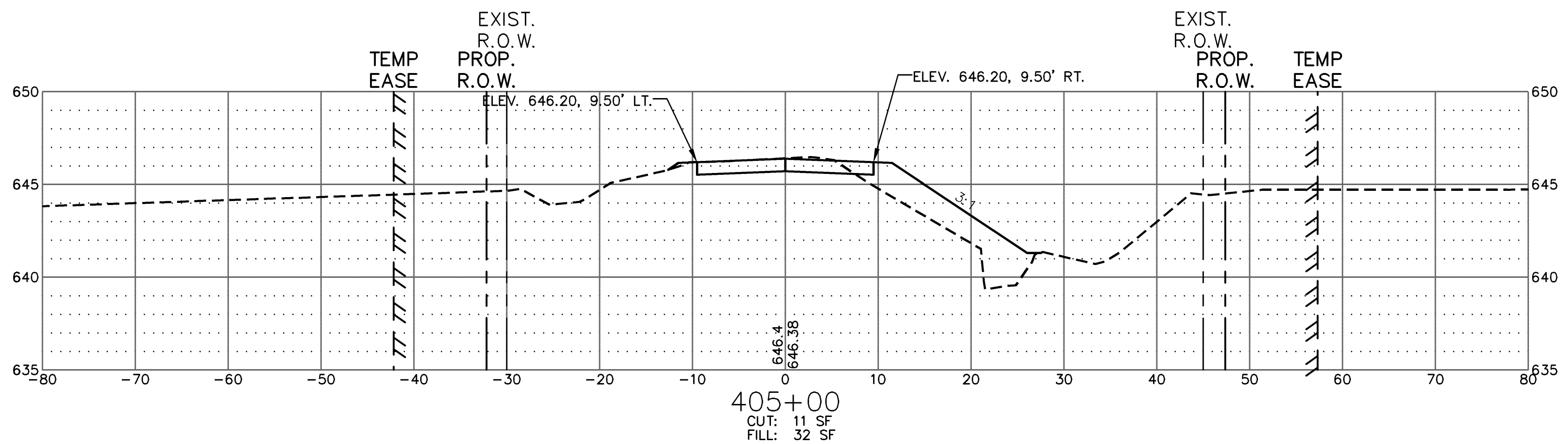
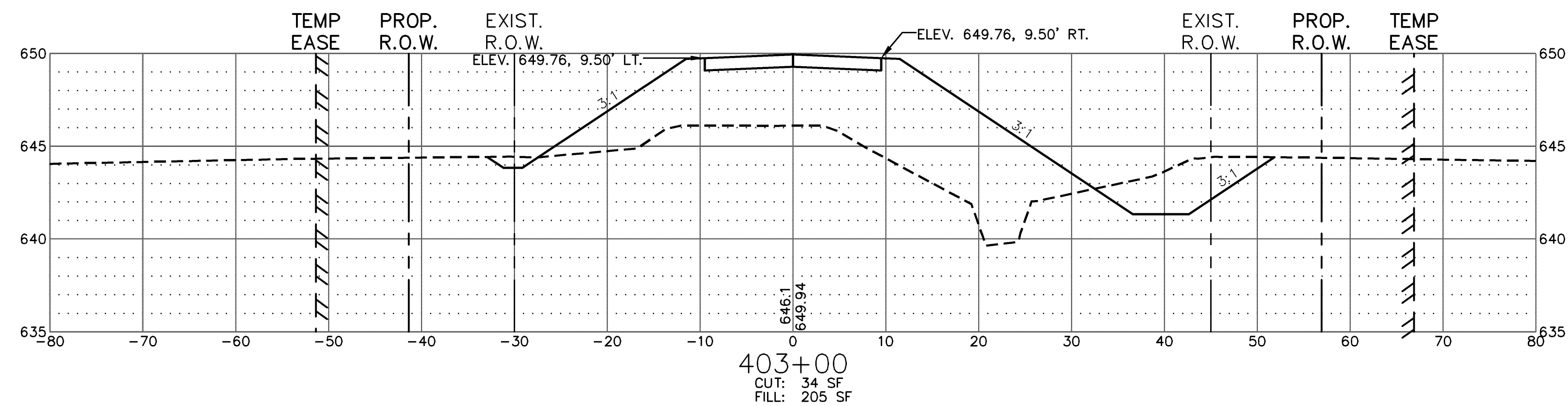
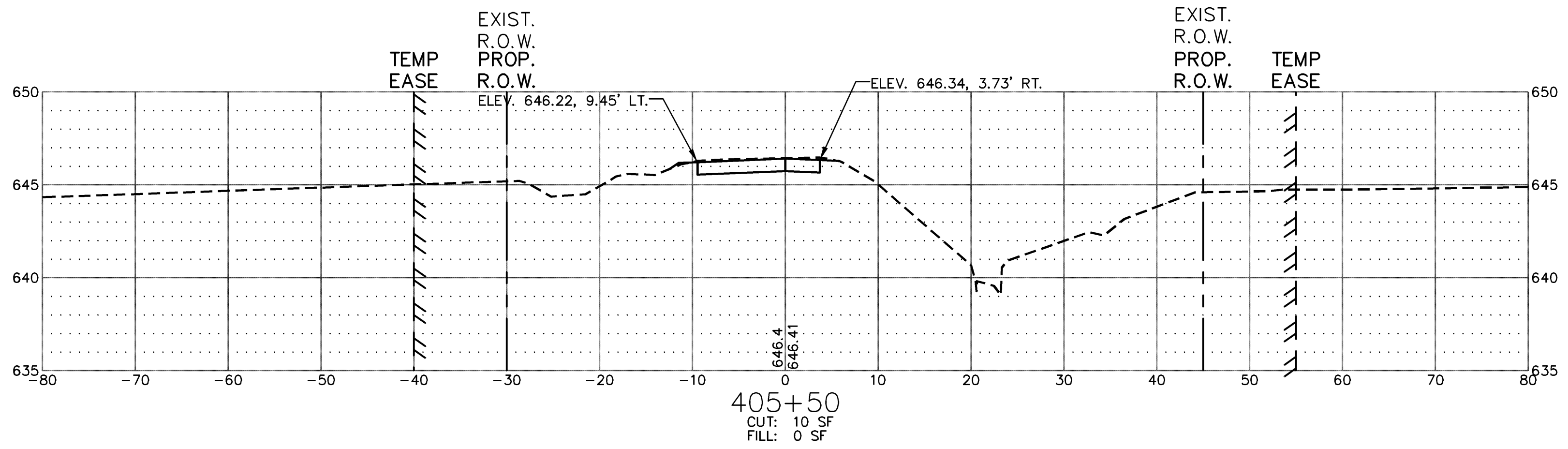
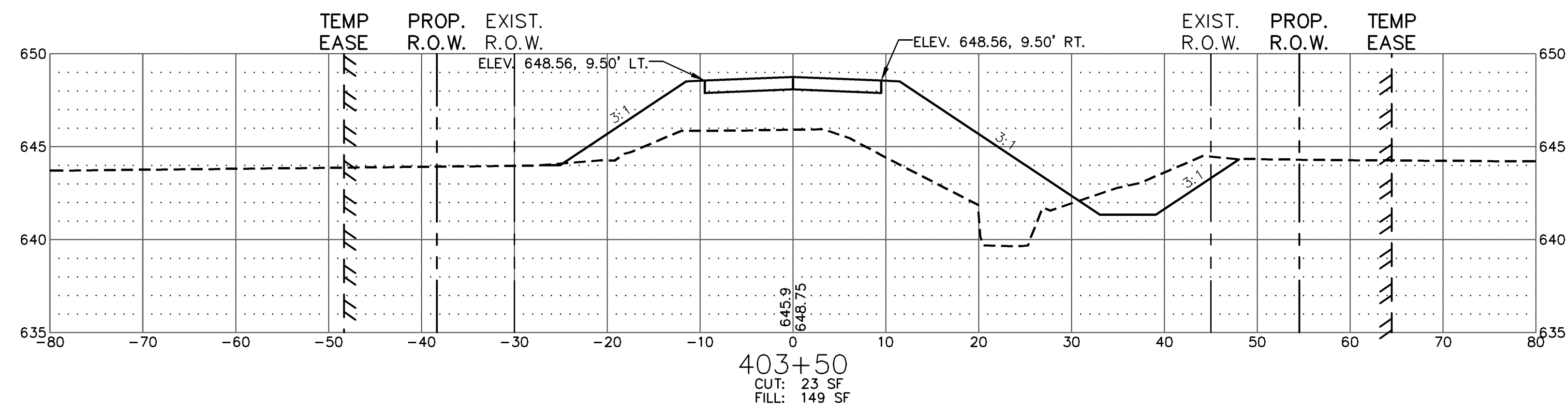
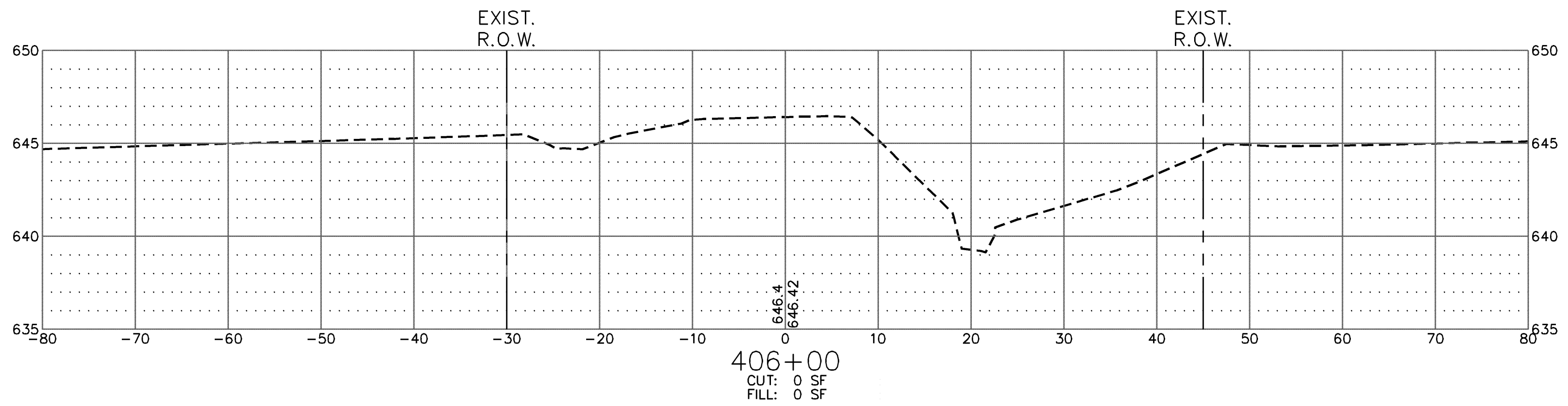
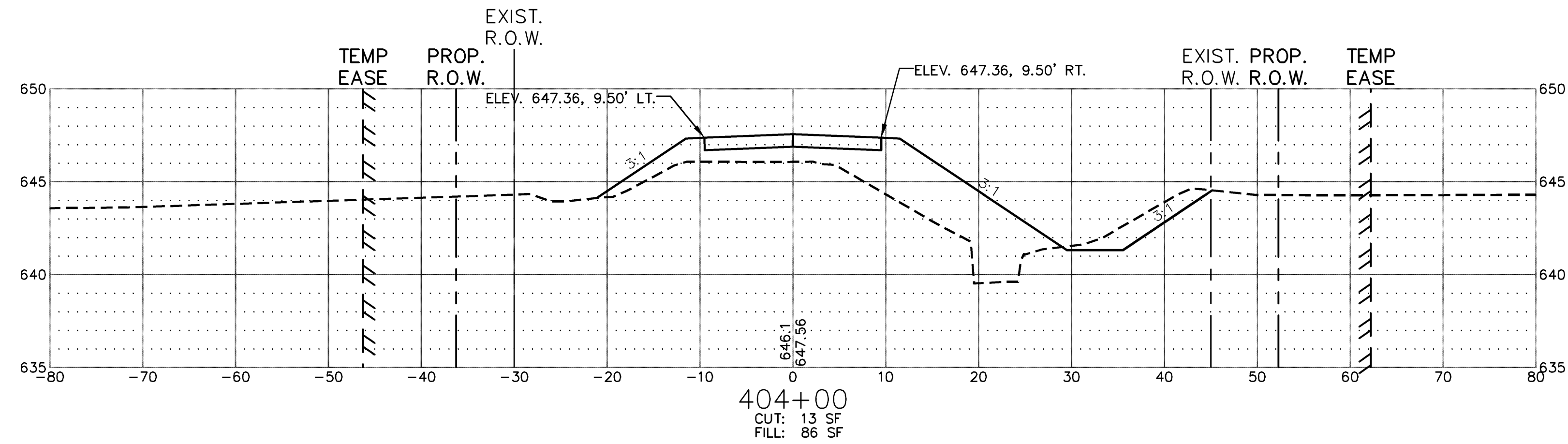
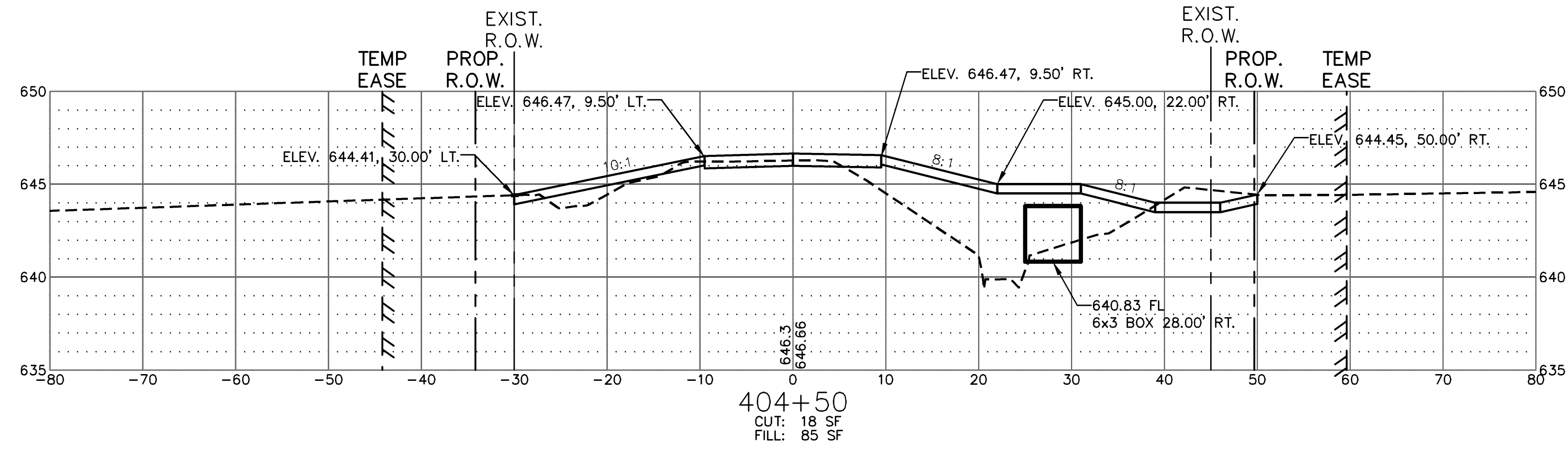
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	895
	SPN
	EFD
	LDY

**EAST 30TH ROAD RR CROSSING
 LASALLE COUNTY, ILLINOIS
 ROADWAY CROSS SECTIONS
 STA 398+00 TO STA 399+23.68**



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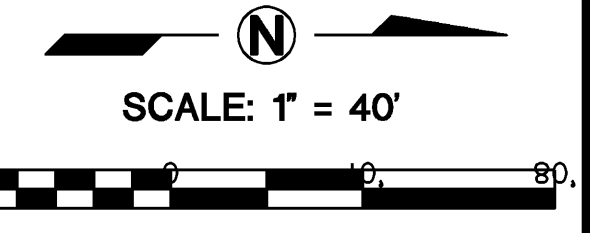
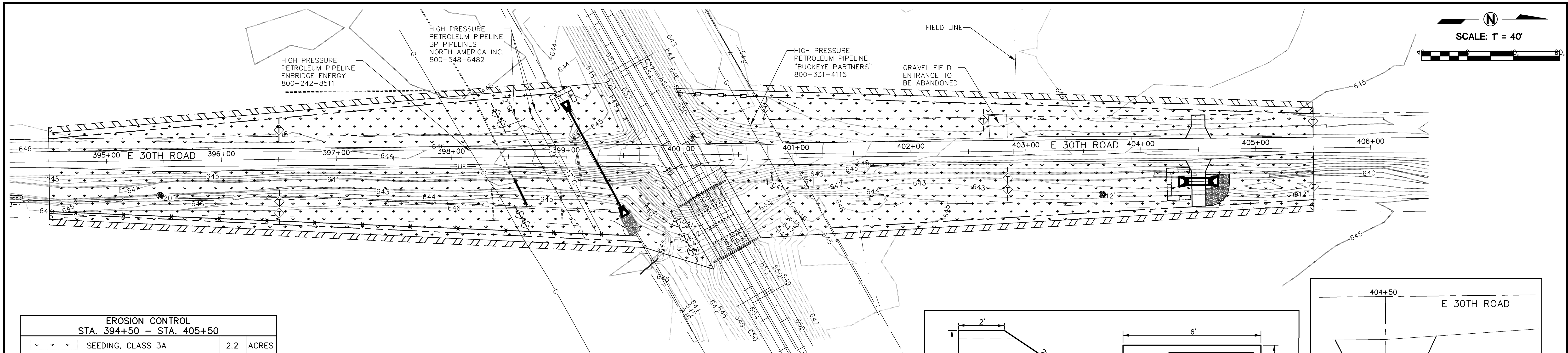


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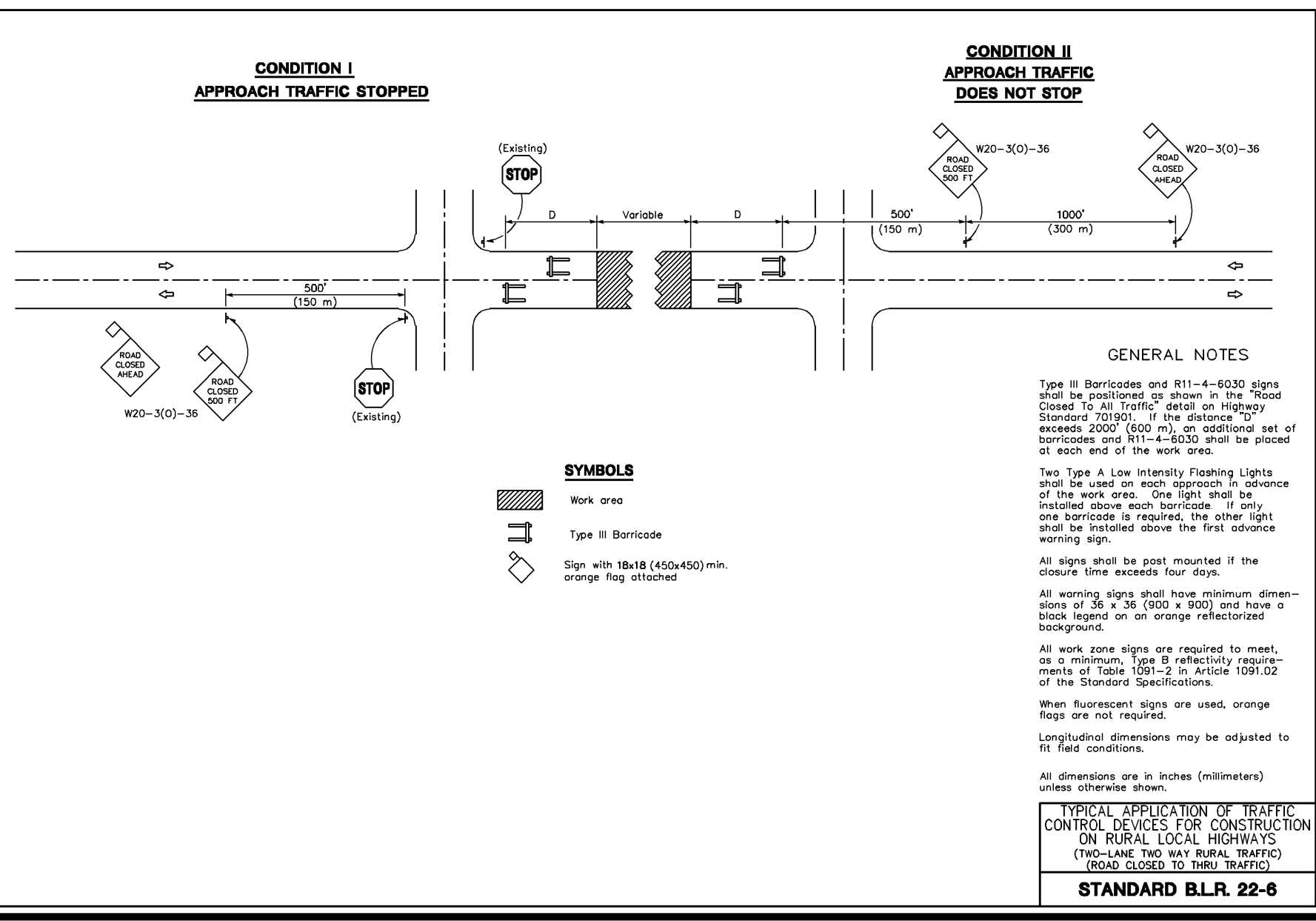
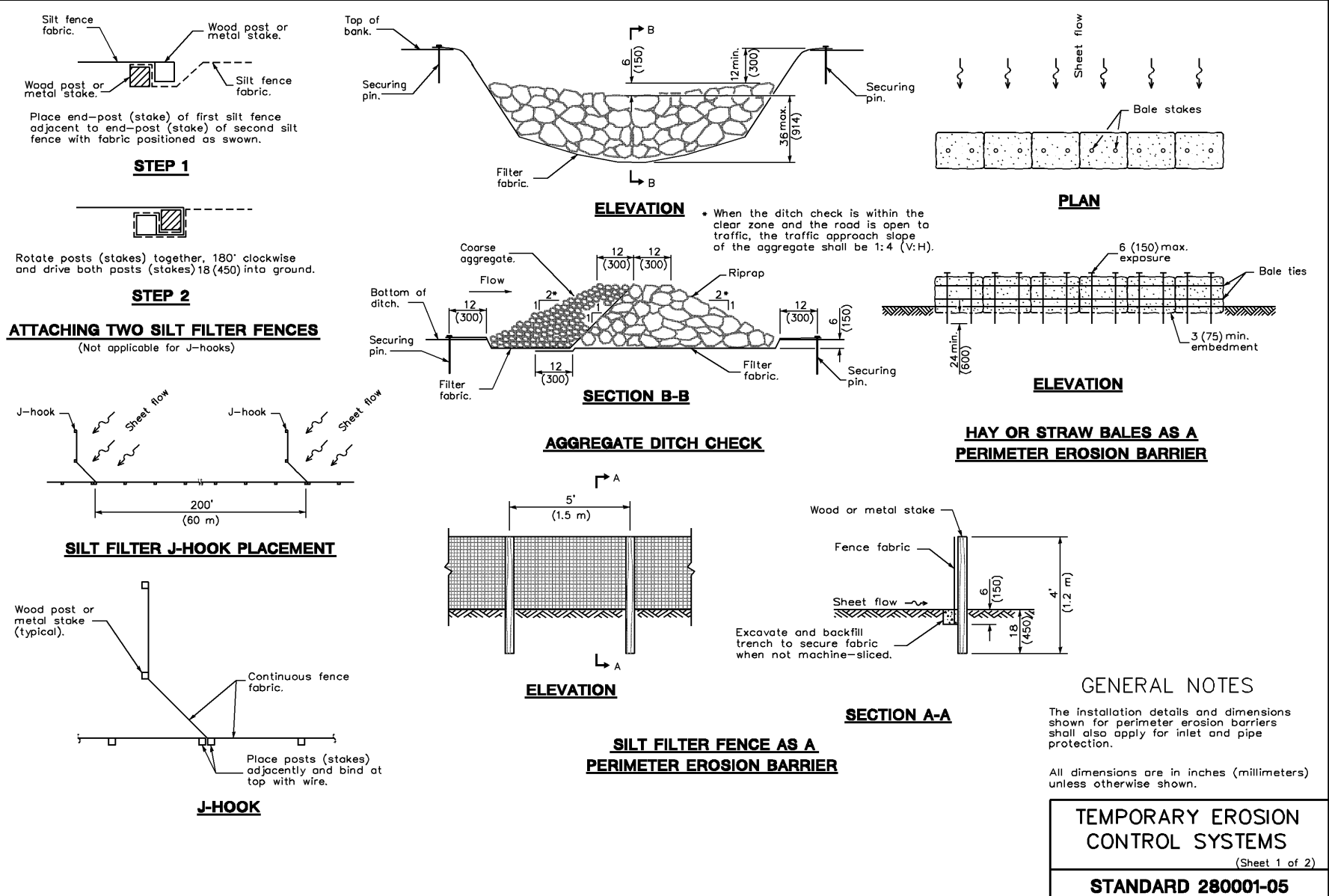
Rev.		Bk.	895
		Drn.	SPN
		Dsn.	EFD
		App.	LDY

EAST 30TH ROAD RR CROSSING
LASALLE COUNTY, ILLINOIS
ROADWAY CROSS SECTIONS
STA 403+00 TO STA 406+00

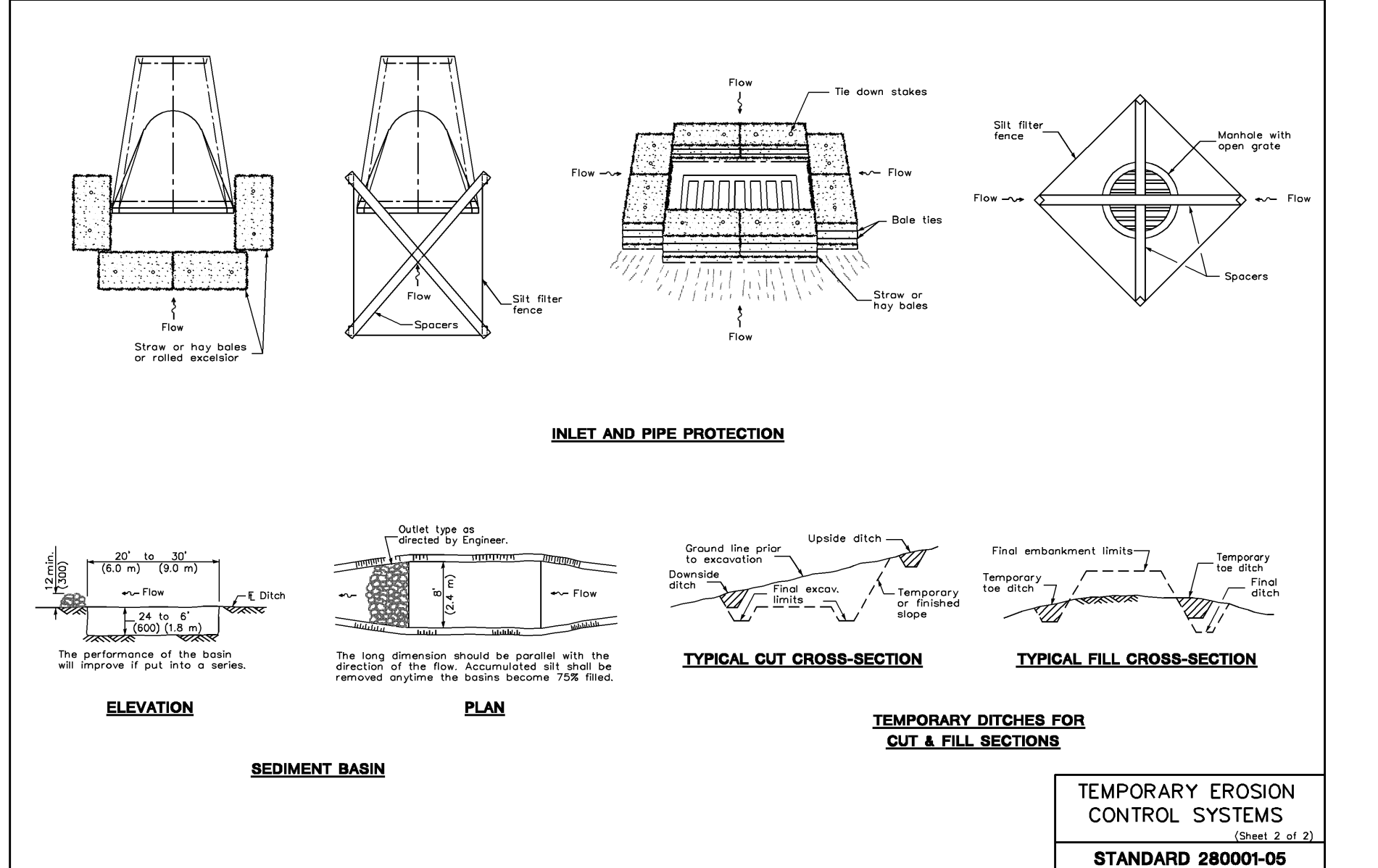
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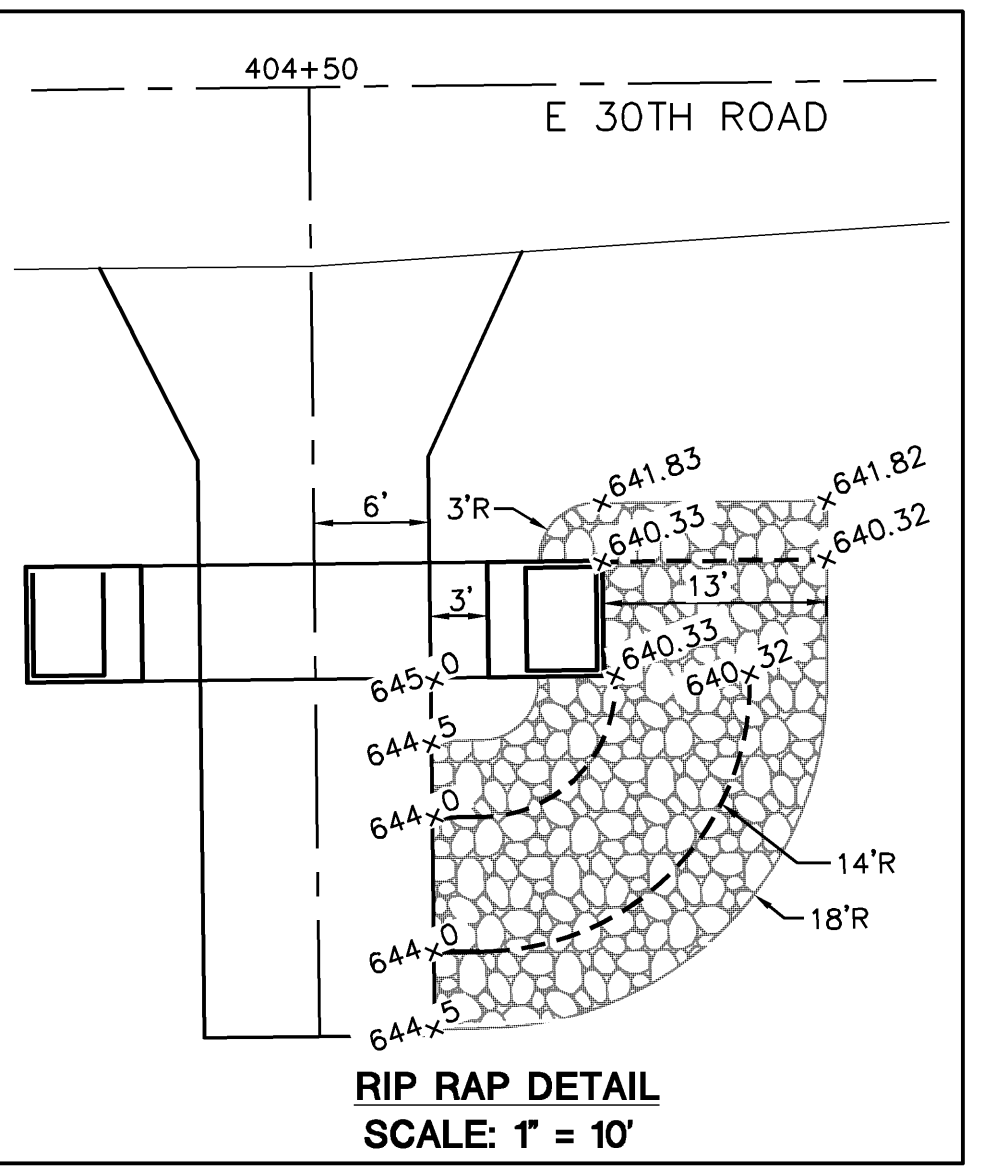
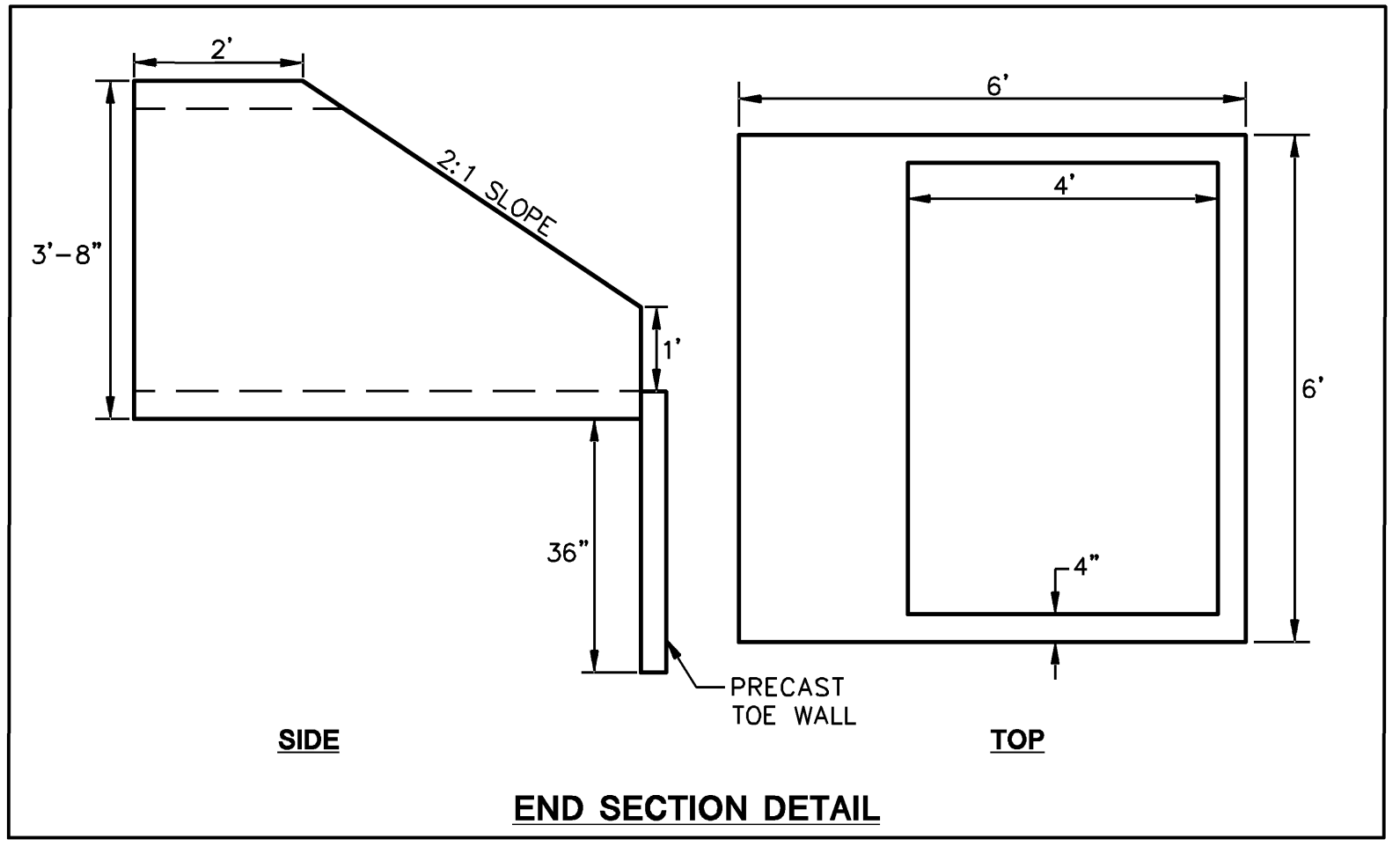
EROSION CONTROL STA. 394+50 - STA. 405+50			
	SEEDING, CLASS 3A	2.2	ACRES
	PERIMETER EROSION BARRIER	60	FOOT
	TEMPORARY DITCH CHECKS	10	EACH
	INLET AND PIPE PROTECTION	2	EACH



SEE SHEET 1 FOR LEGEND



PIPE DIA.	THICKNESS	DIMENSIONS					SLOPE (Approx.)	BODY
		A	B	H	L	W		
12	0.064	6	6	18	18	24	1:26	1 Pc.
15	0.064	8	8	24	24	30	1:26	1 Pc.
18	0.064	10	10	30	30	36	1:26	1 Pc.
21	0.064	12	12	36	36	42	1:26	1 Pc.
24	0.064	14	14	42	42	48	1:26	1 Pc.
30	0.079	18	18	54	54	60	1:26	2 Pcs.
36	0.079	24	24	72	72	78	1:26	2 Pcs.
42	0.079	30	30	90	90	96	1:26	2 Pcs.
48	0.079	36	36	108	108	114	1:16	3 Pcs.
54	0.079	42	42	126	126	132	1:16	3 Pcs.
60	0.079	48	48	144	144	150	1:16	3 Pcs.
66	0.109	54	54	162	162	168	1:16	3 Pcs.
72	0.109	60	60	180	180	186	1:16	3 Pcs.
78	0.109	66	66	198	198	204	1:16	3 Pcs.
84	0.109	72	72	216	216	222	1:16	3 Pcs.
90	0.109	78	78	234	234	240	1:16	3 Pcs.



- GENERAL NOTES**
- ALL WORK SHALL BE IN ACCORDANCE WITH THE "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION," ADOPTED JANUARY 1, 2007 BY THE ILLINOIS DEPARTMENT OF TRANSPORTATION, THE "SUPPLEMENTAL SPECIFICATIONS AND RECURRING SPECIAL PROVISIONS," ADOPTED JANUARY 1, 2010 (IDOT), THE "STANDARD SPECIFICATIONS FOR WATER AND SEWER MAIN CONSTRUCTION IN ILLINOIS," LATEST EDITION AND THE LASALLE COUNTY HIGHWAY CONSTRUCTION STANDARDS.
 - THE EXISTING CONTOUR AND TOPOGRAPHIC INFORMATION IS BASED UPON SURVEYS MADE BY LEWIS, YOCKEY & BROWN, INC. THROUGH OCTOBER 2010.
 - ALL STATIONING ON THE PLANS IS REFERENCED TO THE CENTERLINE OF THE PROPOSED ROADWAY.
 - THE CONTRACTOR SHALL USE EXTREME CARE IN THIS CONSTRUCTION TO PROTECT THE PUBLIC'S PROPERTY, HEALTH AND SAFETY. ANY DAMAGE TO PROPERTY, FENCES, LANDSCAPING, STREETS, EXISTING UTILITIES, STORM SEWERS, DRAINAGE WAYS, ETC. AS A RESULT OF THIS CONSTRUCTION SHALL BE REPAIRED TO THE SATISFACTION OF THE OWNER OF SAME AT THE CONTRACTOR'S EXPENSE.
 - THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING EXISTING FIELD ENTRANCES.
 - CONSTRUCTION RUBBLE, DEBRIS AND OTHER UNSUITABLE MATERIALS GENERATED BY CONSTRUCTION SHALL BE REMOVED FROM THE SITE BY THE CONTRACTOR AT THEIR EXPENSE AND DISPOSED IN A LEGAL MANNER.
 - BORROW EXCAVATION REQUIRED TO CONSTRUCT THE IMPROVEMENTS TO PROPOSED ELEVATIONS SHALL BE FURNISHED AND PLACED BY THE CONTRACTOR AT HIS EXPENSE.
 - ALL EARTHEN AREAS DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL RECEIVE A MINIMUM OF (4) FOUR INCHES OF TOPSOIL. THIS ITEM SHALL INCLUDE TOPSOIL FURNISHED AND PLACED TO THE PROPOSED LINES AND GRADES SHOWN ON THE PLANS. TOPSOIL PLACEMENT SHALL NOT BE PAID FOR SEPARATELY AND SHALL BE INCLUDED IN ROADWAY EXCAVATION AND EMBANKMENT QUANTITIES.
 - THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING DRAINAGE THROUGHOUT THE CONSTRUCTION OF THIS PROJECT. ALL ROADSIDE DITCHES SHALL BE GRADED TO DRAIN.

- EROSION CONTROL NOTES**
- EROSION CONTROL PRACTICES SHALL BE IN ACCORDANCE WITH THE 2002 ILLINOIS URBAN MANUAL AND THE STANDARD SPECIFICATIONS.
 - THE CONTRACTOR SHALL INSTALL EROSION CONTROL AT THE ONSET OF CONSTRUCTION AND MAINTAIN UNTIL VEGETATIVE STABILIZATION OF DISTURBED AREAS HAS BEEN ACHIEVED.
 - TEMPORARY SEEDING SHALL BE PER THE ILLINOIS URBAN MANUAL.
 - ALL DISTURBED EARTHEN AREAS AND TOPSOIL AREAS WITHIN PUBLIC RIGHT-OF-WAY SHALL BE SEEDDED AND MULCHED (METHOD 2) ACCORDING TO SECTIONS 250 AND 251 OF THE STANDARD SPECIFICATIONS. SEEDING AND MULCHING SHALL BE PAID FOR PER ACRE. SEEDING SHALL BE CLASS 3 SLOPE MIXTURE. SEEDING WILL NOT BE PERMITTED AT ANY TIME WHEN THE GROUND IS FROZEN, WET OR IN AN UNTILTABLE CONDITION. SEED BED PREPARATION SHALL BE INCIDENTAL.
 - ALL FERTILIZER NUTRIENTS (NITROGEN, PHOSPHORUS AND POTASSIUM) SHALL BE APPLIED AT A RATE OF 90 POUNDS EACH PER ACRE OF SEEDING AREAS.
 - EROSION CONTROL OTHER THAN THAT SHOWN ON THE PLANS, WHICH MAY BE REQUIRED TO PREVENT THE EROSION OR WASHING OF DIRT ONTO ADJACENT LANDS, PUBLIC ROADS OR INTO GRASS WATERWAYS OR DITCHES SHALL BE INCIDENTAL TO THE CONTRACT.
 - THE CONTRACTOR SHALL PLACE STRAW BALE DIKES AROUND EXISTING STORM DRAINAGE STRUCTURES WHEN EXISTING STRUCTURES ARE LOCATED DOWNSTREAM OF STORM WATER RUNOFF TO PREVENT SILT AND DEBRIS FROM ENTERING STRUCTURES.
 - ALL EROSION CONTROL MEASURES SHALL COMPLY WITH THE STORM WATER POLLUTION PREVENTION PLAN AS PREPARED FOR THIS PROJECT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADMINISTERING THE PLAN.

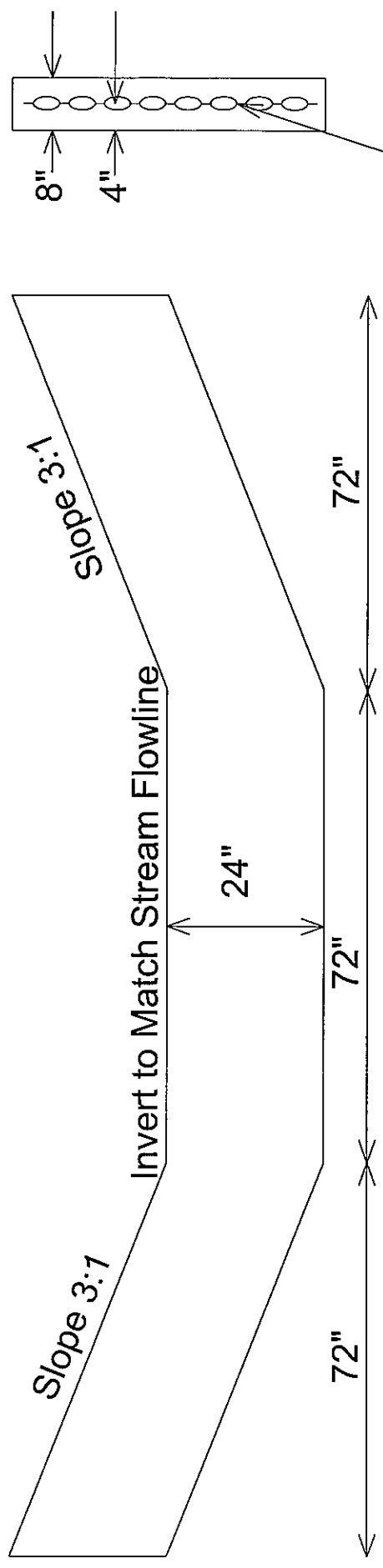
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**EAST 30TH ROAD RR CROSSING
 LASALLE COUNTY, ILLINOIS
 EROSION CONTROL PLAN
 & DETAILS**

Sheet **7** of 7

4056.02



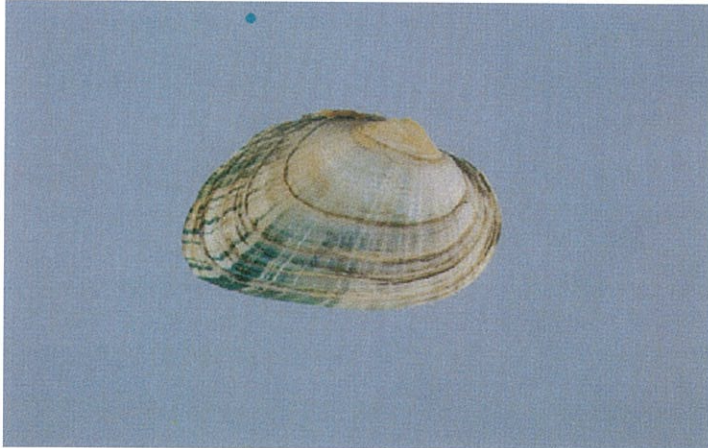
1.2 Cu Yds of Class SI Concrete required. Concrete may be direct deposited into a trench and forming will not be required.

Welded wire Fabric Weighing not less than 58 lbs per 100 square ft.

Concrete Erosion Control Structure Station 495+00 Rt and 505+00 Rt

Alasmidonta viridis (Rafinesque, 1820)

Slippershell mussel



Alasmidonta viridis, INHS 7866. Baker Creek, Kankakee County, Illinois.

Length: 1.4 inches (3.6 cm).

Other common names None.

Key characters Small, somewhat rectangular shell, high posterior ridge, wavy green rays on posterior half of the shell, poorly developed lateral teeth.

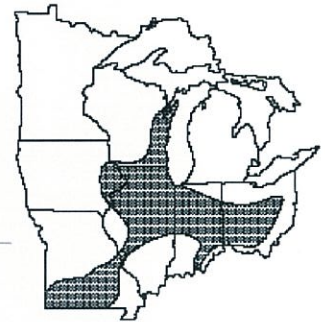
Similar species [Elktoe](#).

Description Shell small (usually about an inch), somewhat inflated, thin in young individuals to moderately thick in adults. Anterior end rounded, posterior end squared or truncated. Posterior ridge high and rounded, posterior slope flattened. Ventral margin straight or slightly arched. Umbos full and elevated above the hinge line. Beak sculpture of three or four elevated ridges or loops. Shell smooth to rough and yellowish green with numerous wavy green rays, particularly on the posterior half of the shell. Length to 1.5 inches (3.8 cm).

Pseudocardinal teeth triangular; two in the left valve, one in the right. Lateral teeth poorly developed, generally appearing as a slight swelling along the hinge line. Beak cavity moderately deep. Nacre white, iridescent on the posterior third of the shell.

Habitat Creeks and the headwaters of large rivers in sand, mud, or fine gravel.

Status Endangered in Illinois and Iowa. Threatened in Wisconsin.



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cms@inhs.illinois.edu

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