

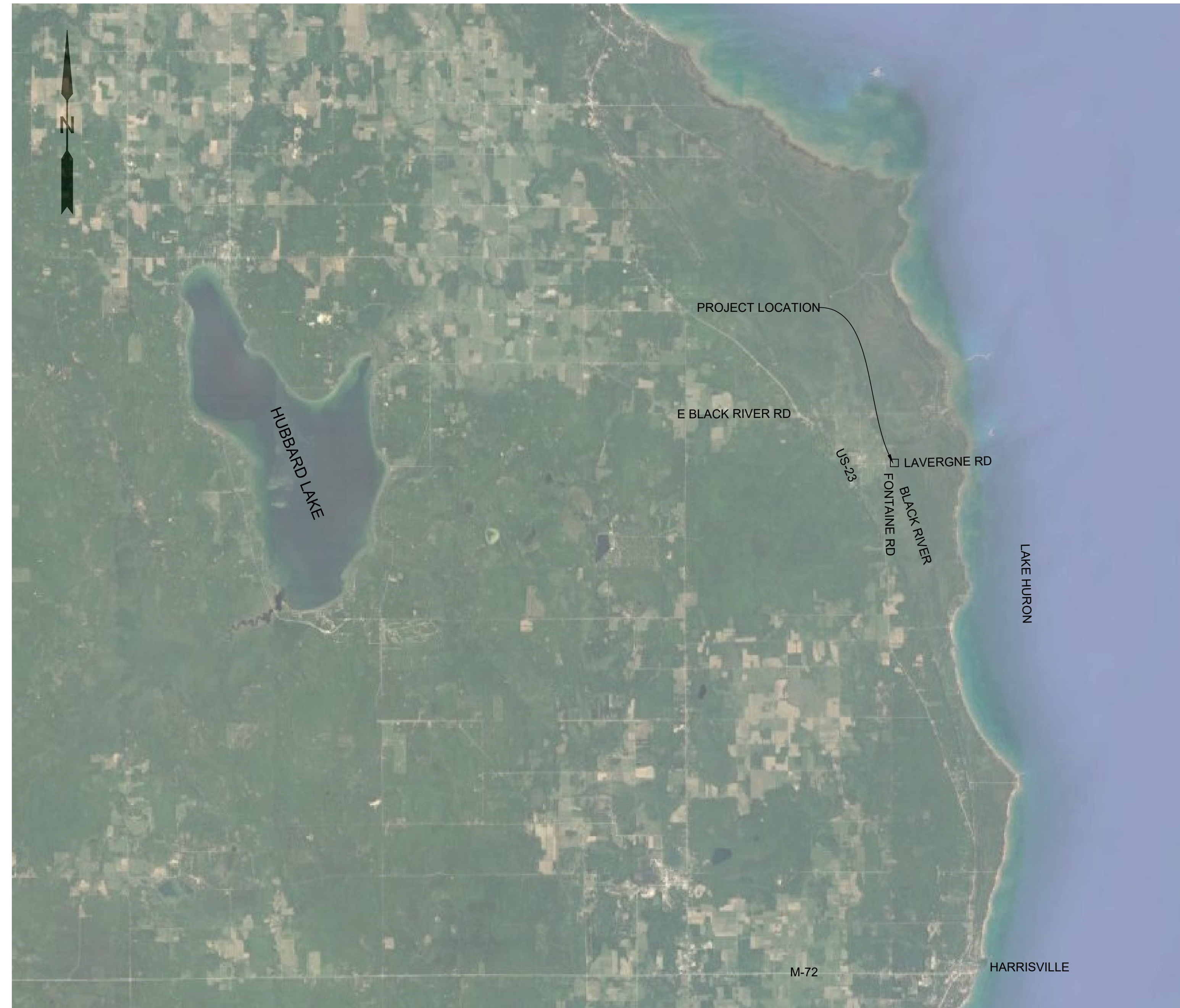
HURON PINES IN COOPERATION WITH ALCONA COUNTY ROAD COMMISSION

PLANS OF PROPOSED IMPROVEMENTS LAVERGNE RD OVER BLACK RIVER SECTION 23 AND 26, T28N, R9E, ALCONA TOWNSHIP ALCONA COUNTY, MICHIGAN

GENERAL NOTES

EXCEPT WHERE OTHERWISE INDICATED ON THESE PLANS OR IN THE PROPOSAL AND SUPPLEMENTAL SPECIFICATIONS CONTAINED HEREIN, ALL MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE MICHIGAN DEPARTMENT OF TRANSPORTATION 2012 STANDARD SPECIFICATIONS FOR CONSTRUCTION.

FOR PROTECTION OF UNDERGROUND UTILITIES AND IN CONFORMANCE WITH PUBLIC ACT 174, 2013, THE CONTRACTOR SHALL DIAL 811 A MINIMUM OF THREE FULL WORKING DAYS, EXCLUDING SATURDAYS, SUNDAYS, AND HOLIDAYS PRIOR TO BEGINNING EACH EXCAVATION IN AREAS WHERE PUBLIC UTILITIES HAVE NOT BEEN PREVIOUSLY LOCATED. MEMBERS WILL THUS BE ROUTINELY NOTIFIED. THIS DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF NOTIFYING UTILITY OWNERS WHO MAY NOT BE A PART OF THE "MISS DIG" ALERT SYSTEM.



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SCALE
N/A

ENGINEER
RIVARD

DATE
JULY 28, 2023

SITE NUMBER
LAVERGNE ROAD

JOB NUMBER
22-128

HURON
ENGINEERING & SURVEYING, INC.



SHEET NO.

UNDERGROUND UTILITIES

THE CONTRACTOR SHALL LOCATE ALL ACTIVE UNDERGROUND UTILITIES PRIOR TO STARTING WORK AND SHALL CONDUCT HIS OPERATIONS IN SUCH A MANNER AS TO ENSURE THAT THOSE UTILITIES NOT REQUIRING RELOCATION WILL NOT BE DISTURBED.

SOIL BORING DATA

SOIL BORING LOGS REPRESENT POINT INFORMATION. PRESENTATION OF THIS INFORMATION IN NO WAY INFERS THAT SUBSURFACE CONDITIONS ARE THE SAME OTHER THAN AT THE EXACT LOCATION OF BORINGS.

SOIL EROSION MEASURES

PLACE TOPSOIL, FERTILIZER, AND MULCH AS SOON AS POSSIBLE. CRITICAL GRADES SHOULD BE PROTECTED WITH MULCH BLANKETS AS DIRECTED BY THE ENGINEER. CIRCLED NUMBERS ON PLANS REFER TO ITEMS ON THE MDT STANDARD PLAN-96-SERIES.

IMMEDIATELY AFTER THE CONSTRUCTION OF AN ABUTMENT IS COMPLETED, SLOPE PROTECTION AND SEEDING OR SODDING SHALL BE PLACED ON THE ADJACENT EMBANKMENT SLOPES.

WATER LEVEL

WATER LEVEL IS SUBJECT TO CHANGE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING A DETERMINATION OF WATER LEVELS THAT MAY EXIST DURING CONSTRUCTION.

MEASURES SHALL BE TAKEN TO PREVENT DEBRIS FROM FALLING FROM THE STRUCTURE. (IF DEBRIS FALLS INTO THE WATERWAY, IT SHALL BE REMOVED WITHIN 24 HOURS. SINCE DISTURBANCE OF THE WATERWAY BOTTOM MAY BE AS HARMFUL AS THE DEBRIS ITSELF, THE PREVENTIVE MEASURES MUST BE EFFECTIVE.) REMOVAL OF DEBRIS WILL NOT BE PAID FOR SEPARATELY, BUT WILL BE INCLUDED IN OTHER BID ITEMS.

PILING

THE PREFABRICATED BRIDGE SUPPLIER SHALL DESIGN THE FOUNDATION PILING AND SHOW PILE LAYOUT IN THE SHOP DRAWINGS, INCLUDED IN PAY ITEM "STRUCTURE, TIMBER, MODIFIED."

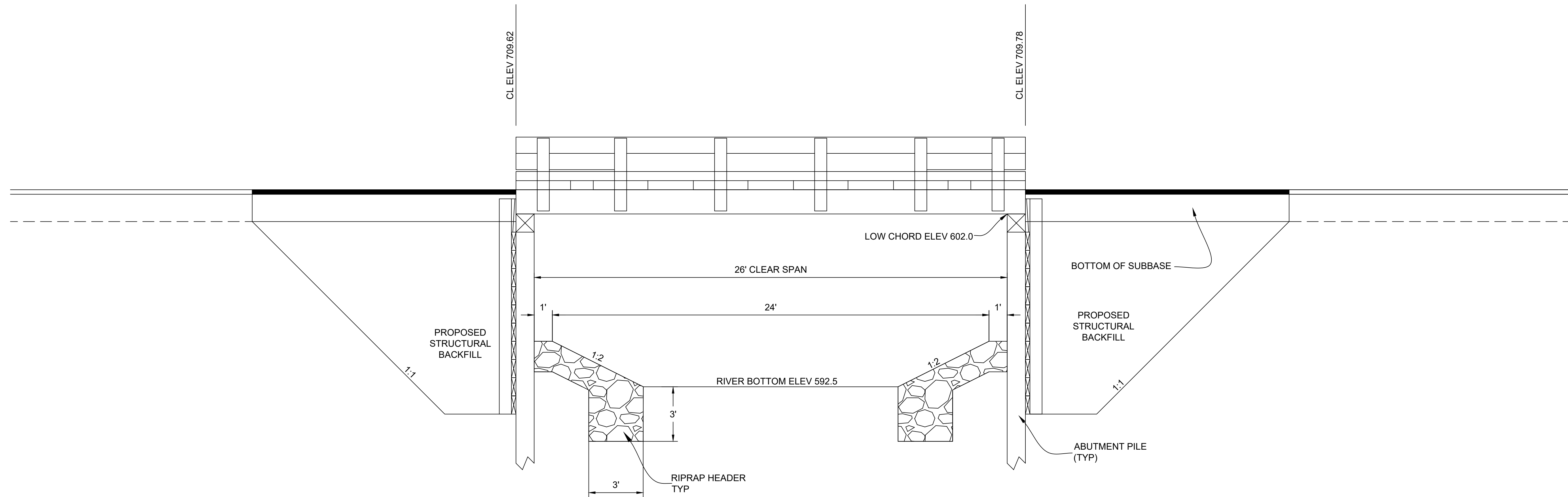
DRIVE TIMBER PILES TO ACHIEVE THE STRENGTH REQUIRED BY THE PREFABRICATED BRIDGE SUPPLIER. QUANTITIES FOR DRIVEN PILE ARE ESTIMATED ONLY. ACTUAL QUANTITIES SHALL BE DETERMINED BY THE BRIDGE SUPPLIER AND DURING CONSTRUCTION.

THIS INFORMATION DOES NOT RELIEVE THE CONTRACTOR OF THE INFORMATION

FRONTIER/VERIZON TELEPHONE
3249 FOREST ROAD
GAYLORD, MI 49735
CHUCK HARDIN
989-350-8575

CONSUMERS ENERGY ELECTRIC ELECTRICAL
4100 W M-76
WEST BRANCH, MI 48661
ROB LOCKMAN
989-516-4101

CHARTER COMMUNICATIONS FIBER
345 S STATE STREET
OSCODA, MI 48750
STEVE KOLNOWSKI
989-671-7243



TYPICAL AND NOTE SHEET

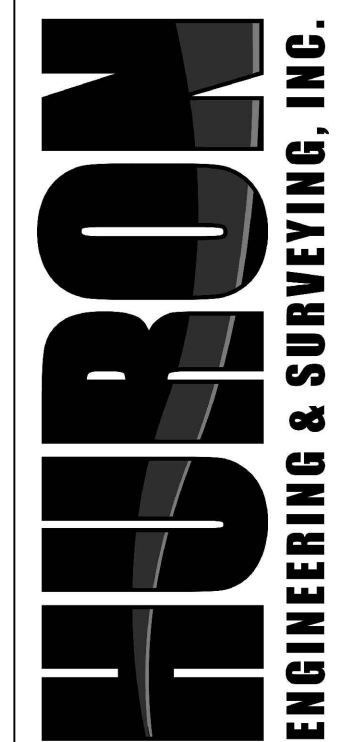
SCALE
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SHEET NO.
2

WATER & DRAINAGE SYMBOLS

- EXISTING CATCH BASIN
- PROPOSED CATCH BASIN
- EXISTING MANHOLE
- PROPOSED MANHOLE
- EXISTING CULVERT END SECTION
- PROPOSED CULVERT END SECTION
- EXISTING HEADWALL
- PROPOSED HEADWALL
- WATER SHUTOFF(Service Valve)
- GATE VALVE
- GATEWELL
- WATER METER
- WATER MANHOLE
- EXISTING FIRE HYDRANT
- PROPOSED FIRE HYDRANT
- ADJUST FIRE HYDRANT
- ADJUST DRAINAGE STRUCTURE
- ADJUST DRAINAGE STRUCTURE W/COVER
- ADJUST DRAINAGE STRUCTURE BY OTHERS
- RELOCATE - BY OTHERS
- SIDEWALK RAMP TYPE
- CHECK DAM (PROFILES)
- DIKE (PROFILES)
- WATER TABLE (PROFILES)
- POST
- WATER WELL

REAL ESTATE SYMBOLS

- PROPERTY OWNERSHIP ARROW
- CONTIGUOUS PROPERTY SYMBOL
- PARCEL NUMBER BOX
- PARCEL LINES

UTILITIES SYMBOLS

- POWER POLE
- TELEPHONE POLE
- GUY POLE
- LIGHT POLE
- POWER LIGHT POLE
- TELEPHONE MANHOLE
- POWER TOWER
- GAS VALVE
- WALK/NO-WALK
- GUY ANCHOR
- RAILROAD SIGNAL
- ELECTRICAL MANHOLE
- ELECTRICAL HANDHOLE
- TELEPHONE PEDESTAL/RISER
- FIBER OPTIC MARKER

MISCELLANEOUS SYMBOLS

- RIPRAP
- SIGN
- STUMP
- SWAMP
- DECIDUOUS TREE
- CONIFEROUS TREE
- BUSH
- MAIL BOX
- FLAG
- BAR & CAP
- SECTION CORNER
- QUARTER SECTION
- BENCHMARK
- USGS MARKER
- CONTROL POINT
- BEAM G. R. RUN NUMBER (EXISTING)
- BEAM G. R. RUN NUMBER (PROPOSED)

HAZARDOUS OR FLAMMABLE MATERIAL USED WITH UNDERGROUND GAS & ELECTRICAL LINES

CAUTION - CRITICAL UNDERGROUND UTILITY USED WITH FIBER OPTICS LINES

PROP 36" PROPOSED CULVERT/SEWER

EX 12" CMP EXISTING CULVERT/SEWER

UTILITY PATTERNS

- ELEC ELECTRICAL LINE
- 24" GAS GAS LINE
- 12" OIL OIL LINE
- TELE TELEPHONE LINE
- 36" WM WATER LINE
- CTV CABLE TV
- FO FIBER OPTICS
- POWER TRANSMISSION LINE

R.O.W. PATTERNS

- EX. LIMITED ACCESS R.O.W.
- EXISTING R.O.W.
- PROP LIMITED ACCESS R.O.W.
- PROP FREE ACCESS R.O.W.
- SECTION LINE
- GRADING EASEMENT

TOPO PATTERNS

- HEDGE LINE
- TREE LINE
- EXISTING FENCE
- PROPOSED FENCE
- EXISTING GUARD RAIL
- PROPOSED GUARD RAIL
- DRAINAGE CRS/EDGE OF WATER
- WETLANDS AREA
- ABANDON ANY UTILITY
- CITY LIMITS
- RAILROAD
- SOUND ABATEMENT WALL
- CONCRETE MEDIAN BARRIER
- SLOPE STAKE LINE

DRIVE/APPROACH LEGEND

- CONCRETE
- HMA
- AGGREGATE

REMOVAL LEGEND

- REMOVING
- ABANDONING
- SAVE
- BULKHEAD
- REMOVING CURB & GUTTER

SPECIAL LEGEND THIS PROJECT

- STANDARD PLAN R-96-E SOIL EROSION & SEDIMENTATION
- SILT FENCE
- STANDARD PLAN R-96-E SOIL EROSION & SEDIMENTATION CHECK DAM
- ROAD BORING LOCATION

LEGEND SHEET

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SHEET NO.

3

PLACE RIPRAP AT INLET AND OUTLET OF THE CULVERT ON THE BANKS ADJACENT TO THE ROADWAY AS DIRECTED BY THE OWNER AT THE TIME OF CONSTRUCTION

DURING STREAM ENCLOSURE ACTIVITIES AND ALL CONSTRUCTION ACTIVITIES PLACE EROSION CONTROL MEASURES TO PREVENT SEDIMENT FROM ENTERING THE WATERWAY.

ALL EROSION CONTROL MATERIALS SHALL USE WILDLIFE SAFE NETTING PER THE FISH AND WILDLIFE SERVICE SPECIFICATIONS.

ALL DISTURBED AREAS WILL BE RESTORED WITH TOPSOIL, SEED, FERTILIZER, AND MULCH.

ALL EQUIPMENT WILL BE SPRAYED WITH WATER PRIOR TO MOVING TO THE SITE TO AVOID THE INTRODUCTION OF INVASIVE SPECIES.

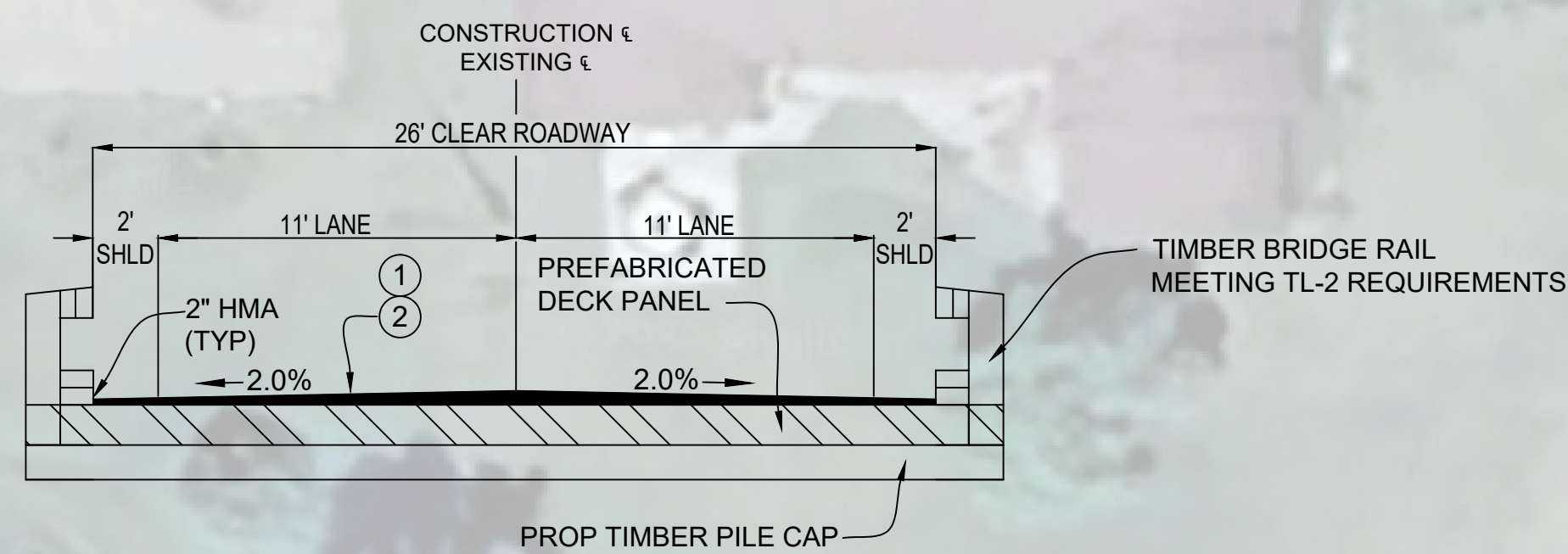
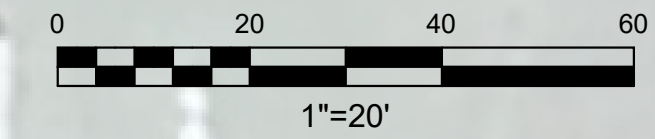
SILT FENCE WILL BE INSTALLED A MINIMUM OF 48 HOURS PRIOR TO THE START OF CONSTRUCTION.

CONTRACTOR SHALL CONSTRUCT THE PROPOSED TEMP ROAD AS SHOWN IN THE DETAIL BELOW. THE TEMPORARY BRIDGE WILL BE DELIVERED AND SET IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. AFTER CONSTRUCTION IS COMPLETE THE GRAVEL ROAD WILL BE REMOVED AND RESTORED.

PROPOSED TEMP BRIDGE TO BE PROVIDED BY THE CONTRACTOR. THE BRIDGE WILL BE PROVIDED BY THE MDNR AND DELIVERED/SET ON PREPARED SURFACE BY 1ST CHOICE TRUCKING & RENTALS (231-258-0417). THE COST OF TRUCKING AND INSTALLATION/REMOVAL WILL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE TEMPORARY ROAD WILL INCLUDE 6" OF AGGREGATE BASE AND BE 12' WIDE.

AFTER THE PROJECT IS COMPLETED THE TEMPORARY ROAD WILL BE REMOVED AND ALL DISTURBED AREAS WILL BE RESTORED WITH TOPSOIL, SEED, FERTILIZER AND MULCH.

PROPOSED PREFABRICATED TIMBER BRIDGE WITH HEADWALLS AND WINGWALLS

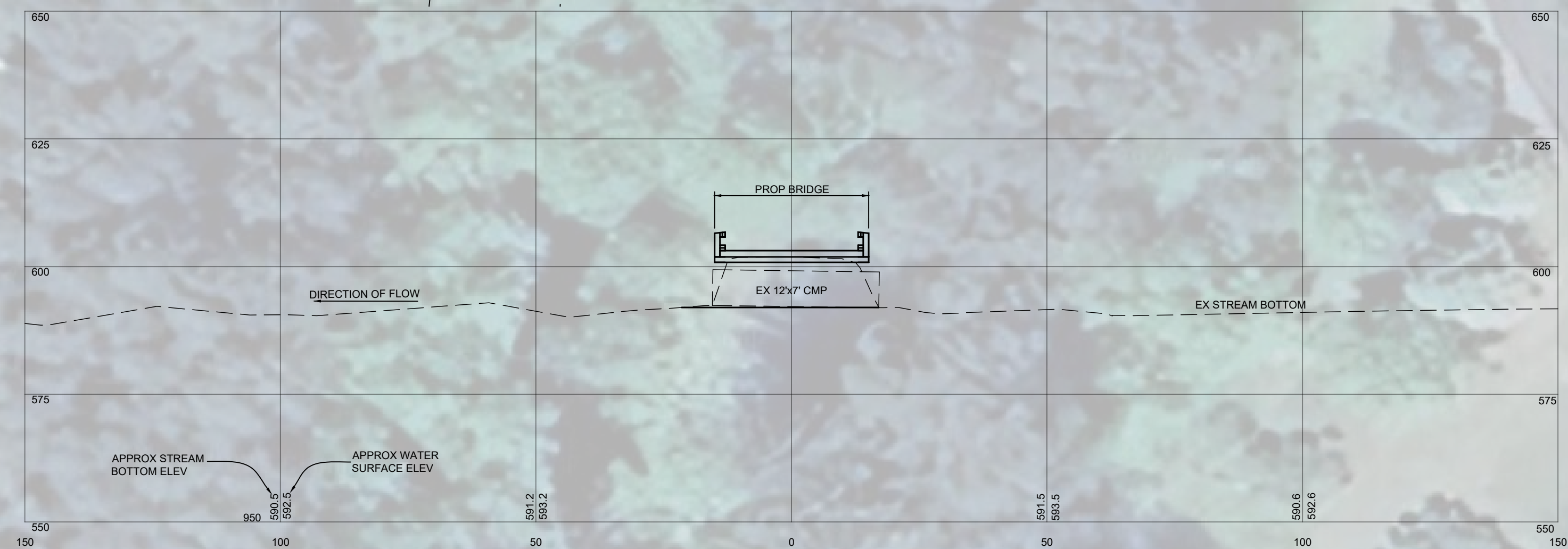


PROPOSED BRIDGE DECK CROSS SECTION

NOT TO SCALE

HMA APPLICATION TABLE

IDENT.	PAY ITEM	RATE #/SYD	PERFORMANCE GRADE	REMARKS
1	HMA, 13A	220	58-28	TOP COURSE
2	HMA, 13A	VARIES	58-28	WEDGE
HMA BOND COAT		0.05-0.15 GAL/SYD (FOR INFORMATION ONLY)		



STREAM PROFILE DETAIL

AB13 LAVERGNE ROAD OVER THE BLACK RIVER

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N/A

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ALL DISTURBED AREAS WILL BE RETURNED TO PREEXISTING CONDITIONS AFTER THE PROJECT IS COMPLETED.

STEEL SHEET PILE NOTES:

STEEL SHEET PILING DESIGNED TO SUPPORT EARTH PRESSURE VIA CANTILEVER CAPACITY. THE MAXIMUM RETAINED HEIGHT WILL BE 12 FEET. THE MINIMUM SHEET PILE LENGTH IS 38 FEET, CORRESPONDING TO AN EMBEDMENT DEPTH OF 26 FEET.

STEEL SHEET PILING SHALL BE SK225, PZ35, NZ22, OR EQUAL WITH A SECTION MODULUS OF AT LEAST 40 CUBIC INCHES PER FOOT OF WALL AND MEET THE REQUIREMENTS OF AASHTO M202 OR AASHTO M270

CONTRACTOR TO PROVIDE NEW OR USED CONTINUOUS INTERLOCK TYPE SHEET PILING INCLUDING CONNECTION AND CORNER PIECES. USED STEEL SHEET PILING MUST BE IN GOOD CONDITION AND APPROVED BY THE ENGINEER PRIOR TO DRIVING.

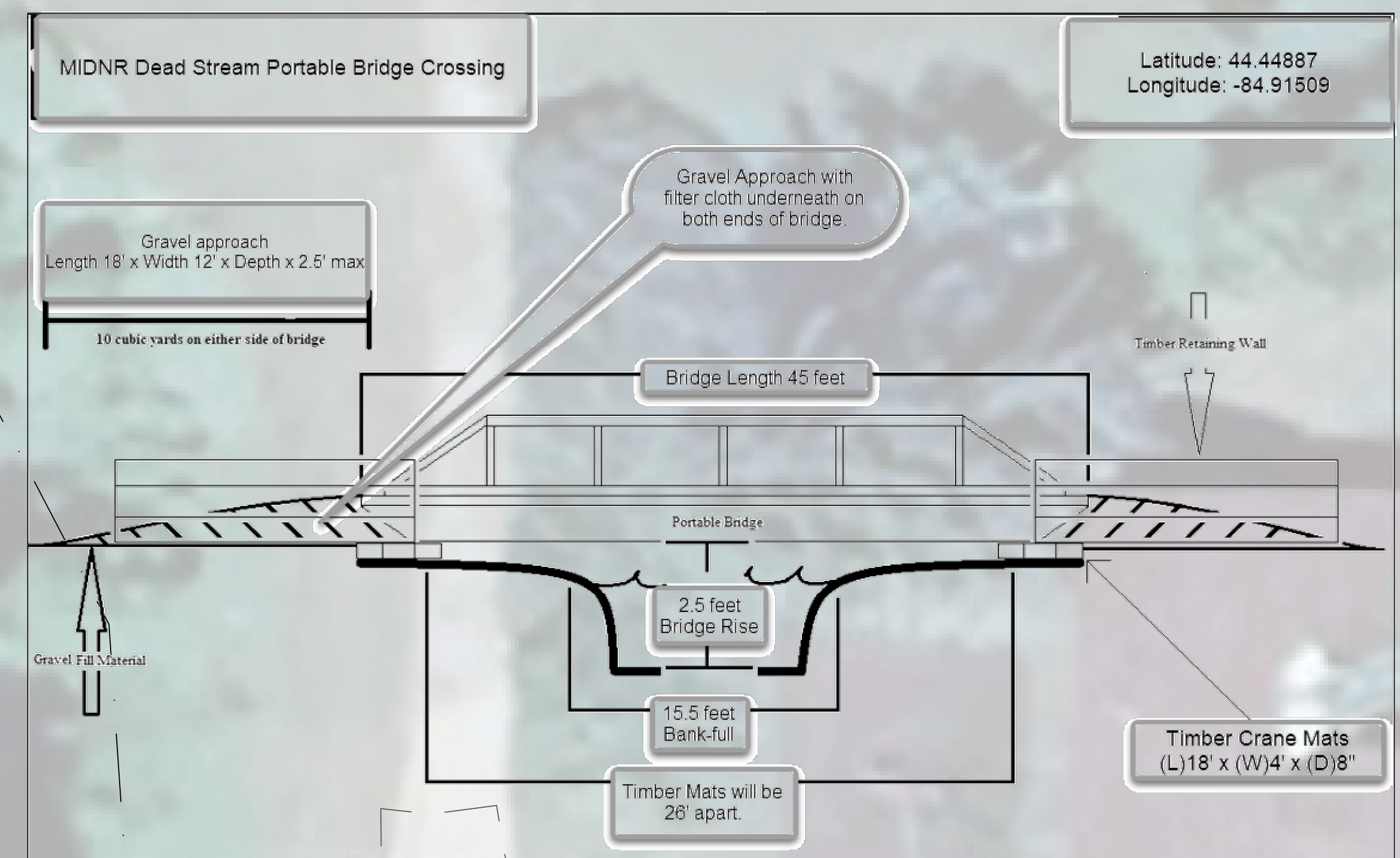
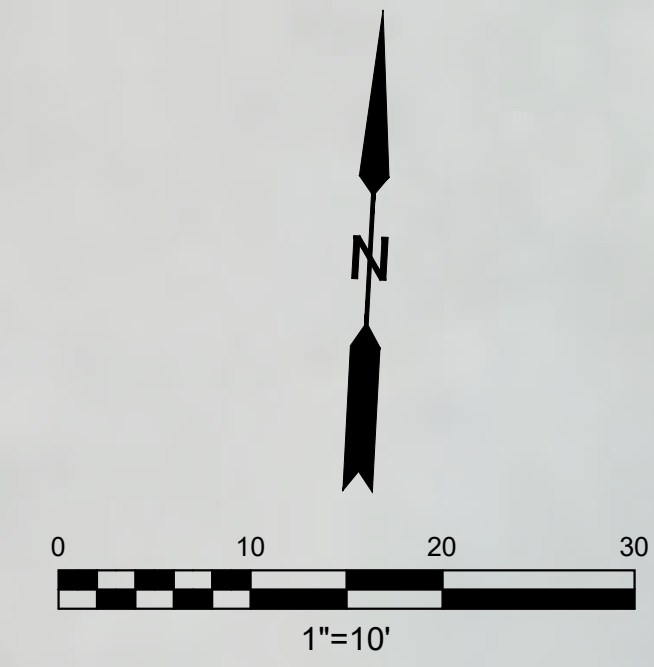
STEEL SHEET PILE SHALL BE DRIVEN TO THE ELEVATION SHOWN ON THE PLAN USING A VIBRATORY OR IMPACT HAMMER. A DRIVABILITY ANALYSIS IS RECOMMENDED TO VERIFY THE HAMMER IS CAPABLE OF DRIVING THE SHEET PILE TO THE REQUIRED DEPTH.

VERIFY ALL APPLICABLE LOCATIONS, DIMENSIONS, AND ELEVATIONS WITH CONTRACTOR, CIVIL DRAWINGS, AND OWNER PRIOR TO CONSTRUCTION

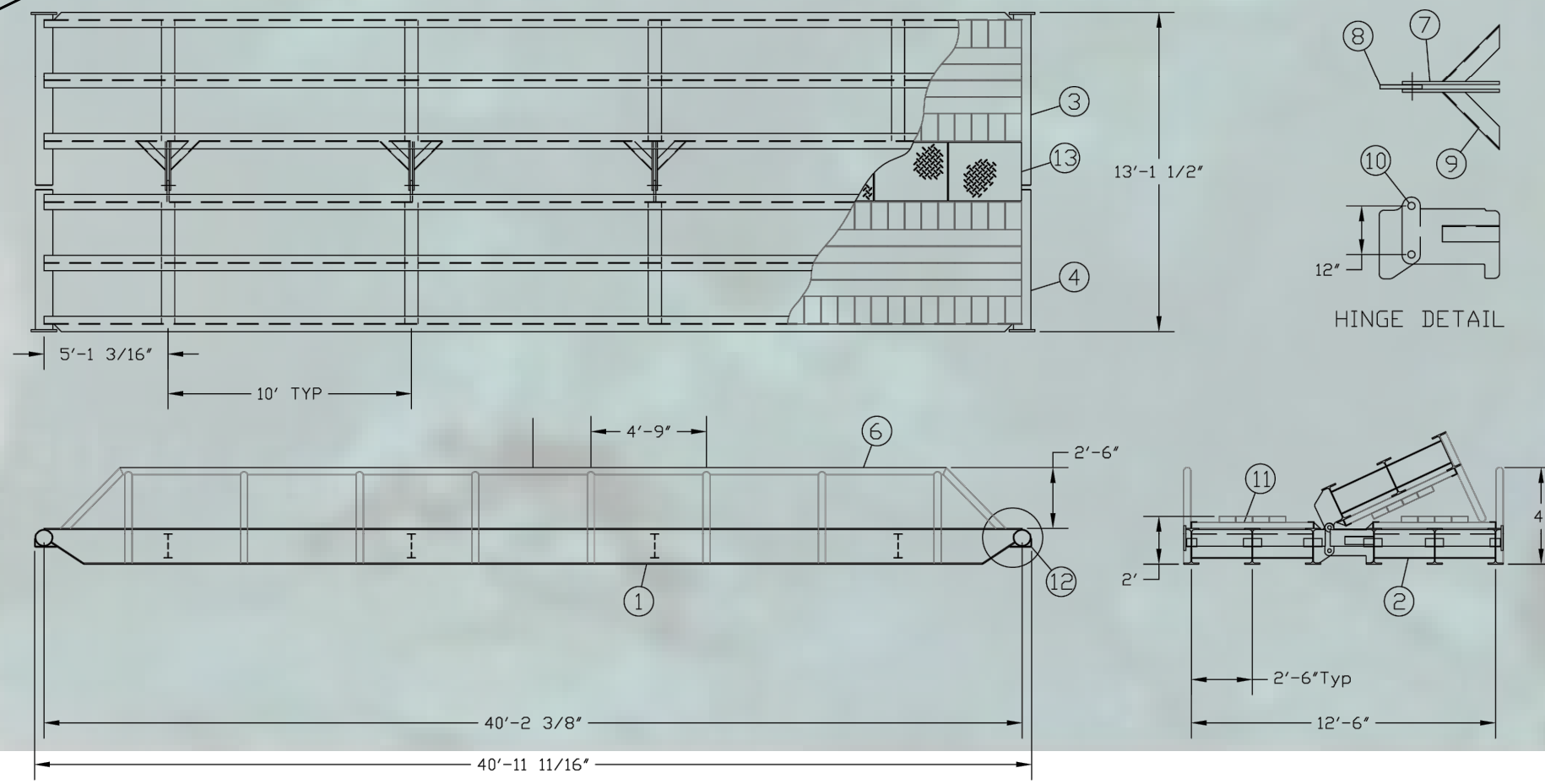
THE MAXIMUM DEFLECTION ALLOWED AT THE TOP OF THE SHEET PILING IS 2 INCHES

CUT OFF SHEET PILING TO THE ELEVATION SHOWN ON THE PLANS. DO NOT PULL UP SHEET PILING TO MATCH THE REQUIRED CUTOFF ELEVATION

PLACE FILL AND 6" OF GRAVEL TO CONNECT TEMP BRIDGE TO EXISTING GRAVEL DRIVE TYP

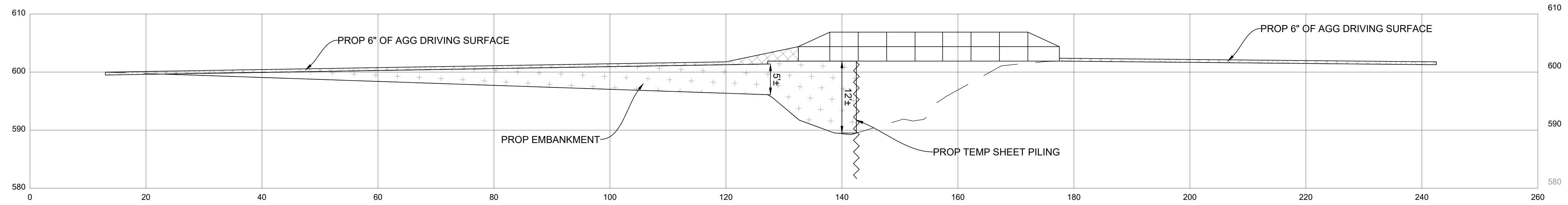


BRIDGE DIMENSIONS DETAIL



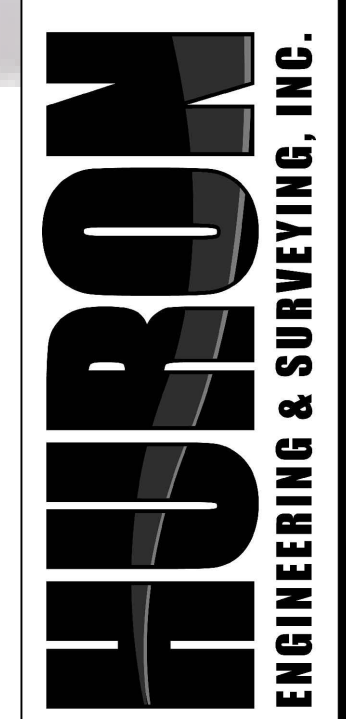
NOTES:
 1) 50 TON CAPACITY HS 25-44
 2) 3/8 WELD UNLESS NOTED

BRIDGE DIMENSIONS DETAIL



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