

Vermont Department of Environmental Conservation

Watershed Management Division
Springfield Regional Office
100 Mineral Street, Suite 303
Springfield, VT 05156
www.watershedmanagement.vt.gov

Agency of Natural Resources

[phone] 802-885-8855
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AUTHORIZATION TO CONDUCT STREAM ALTERATION ACTIVITIES

Pursuant to Section C.2.2.5 of the VT Stream Alteration General Permit (Reporting activities not requiring an application)

Project Number: **SA-05-020-2015 Marlboro ATC Culvert**
Applicant Name: American Tower Corporation (ATC)
Mailing Address: 10 Presidential Way, Woburn, MA 01801
Project Location: Off Auger Hole Road over Bellows Brook

ATC Site # 281476 Marlboro West
Contact: Margaret Robinson
Phone: (781) 926-4753
Email: margaret.robinson@americantower.com

The Secretary of the Vermont Agency of Natural Resources (VT ANR) has determined that:

1. This project authorizes the construction of a new 30'-11" x 10'-8" multi-plate arch pipe culvert for a new tower access road over Bellows Brook off of Auger Hole Road in Marlboro, VT to construct a communications tower.
2. The proposed activity is eligible for coverage under the VT ANR Stream Alteration General Permit.
3. The proposed activity will meet the terms and conditions of the General Permit provided:
 - a) The project will be completed and approved as shown on the attached plans dated 5/19/15, prepared by DuBois & King, and as approved herein by the VT ANR as attached.
 - b) The project will not adversely affect the public safety by increasing flood hazards.
 - c) The project will not significantly damage fish life or wildlife.
 - d) The project will not significantly damage the rights of riparian owners.
 - e) The project will not obstruct the movement of aquatic life indigenous to the waterbody beyond the actual duration of construction.
 - f) The project is conducted in a manner which minimizes or avoids any discharge of sediment or other pollutants to surface waters in violation of the VT Water Quality Standards.
 - g) The ANR River Management Engineer is notified by phone or email when construction begins and when the project is complete.
 - h) In-stream working dates for all GP activities are from July 1st through October 1st; any in-stream work outside these dates will require an Individual Stream Alteration Permit authorization by the River Management Engineer.
 - i) This authorization has been posted for three days public comment. This authorization constitutes final approval.

If there are any changes in the project plan or deviation in construction from the plan, the Permittee must notify the River Management Engineer immediately.

If the project is constructed as you have described, as shown on the above referenced approved plans and according to the above conditions, there is no reason to expect any violation of Vermont Water Quality Standards.

Signed this 23rd day of June, 2015
David K. Mears, Commissioner
Department of Environmental Conservation

This permit expires October 1, 2016.

by 

Todd Menees, P.E., P.H., River Management Engineer

**NOT FOR
CONSTRUCTION
PRELIMINARY
PLANS**

| NO. | DATE | DESCRIPTION | BY | CK'D |
|-----|----------|---|-----|------|
| 3 | 5/19/15 | EDITS PER CHANGES TO BRIDGE DETAILS | TJD | LJH |
| 2 | 3/16/15 | REVISED FOR WETLAND/STREAM PERMIT APPLICATION | TJD | LJH |
| 1 | 12/30/14 | ISSUED FOR 45 DAY NOTICE | TJD | LJH |



AMERICAN TOWER CORPORATION

SITE NO.: 281476

MARLBORO WEST

AUGUR HOLE ROAD
MARLBORO, VT
05344

SHEET TITLE

PLAN
AND
PROFILE

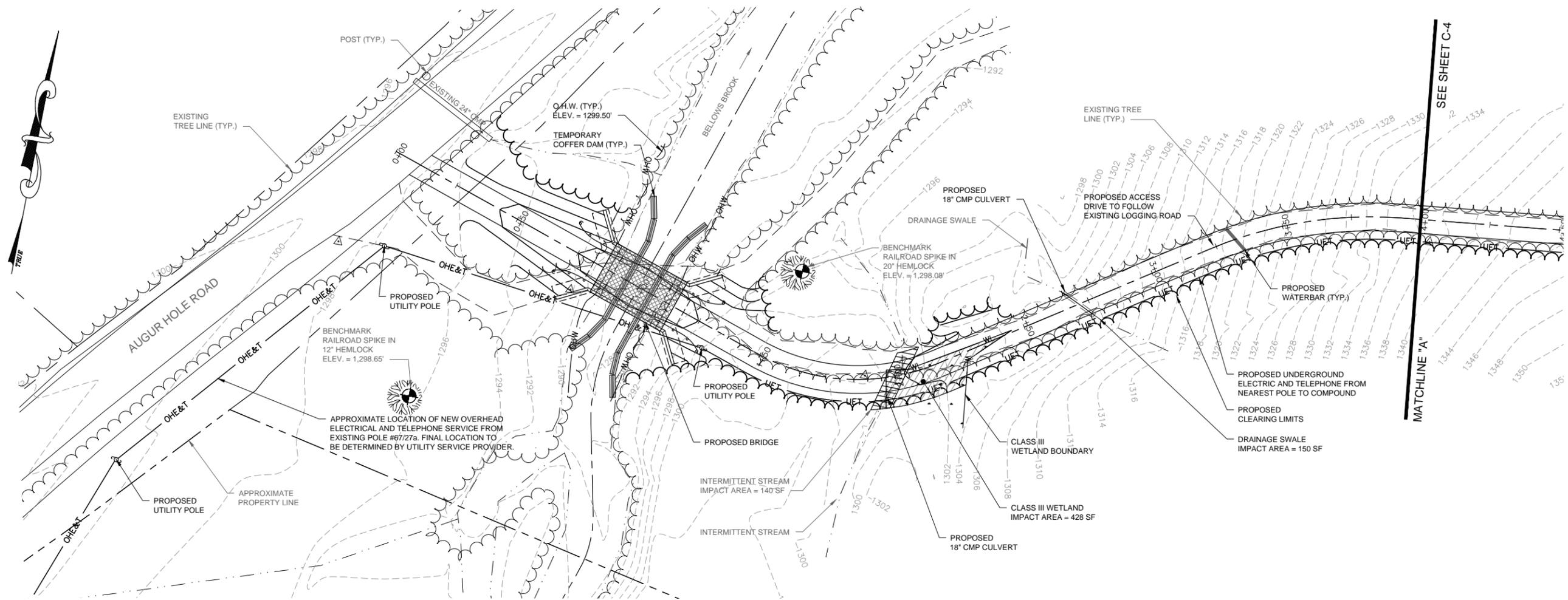
PERMIT PLANS

| DRAWN BY | DATE |
|----------|--------------------------|
| TJD | NOV. 2014 |
| LJH | D&K PROJECT # 422230L |
| LJH | D&K ARCHIVE # |

SHEET NUMBER

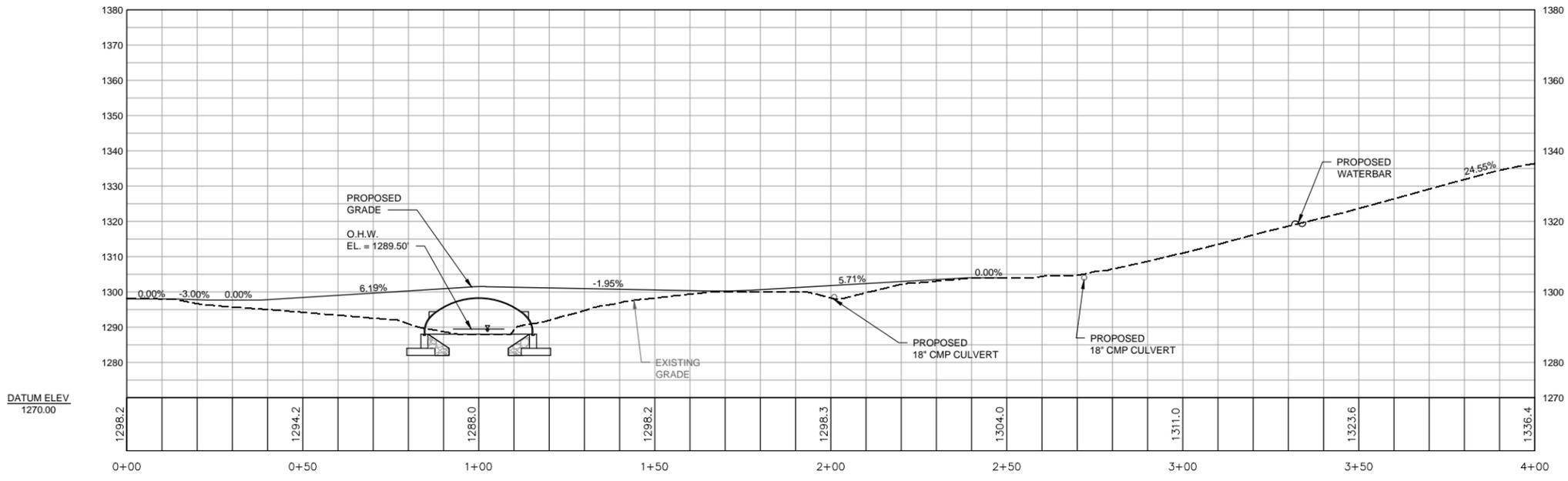
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SHEET 4 OF 27

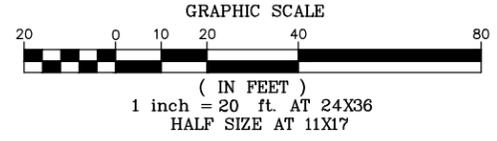


NOTES:

- LIMITS OF TREE CLEARING SHOWN AS APPROXIMATE. FIELD CONDITIONS AND INDIVIDUAL TREES WILL VARY. CONTRACTOR SHALL LIMIT CLEARING TO THE MINIMUM REQUIRED TO CONSTRUCT THE TEMPORARY ACCESS DRIVE AND SITE UTILITIES.
- ALL DISTURBED AREAS SHALL BE SEEDED AND MULCHED AS SOON AS FEASIBLE TO RE-ESTABLISH A VEGETATED COVER.
- THE PROPOSED ACCESS DRIVE FOLLOWS EXISTING WOODS ROAD WHENEVER FEASIBLE. FOLLOWING CONSTRUCTION OF THE SITE COMPOUND, THE CONTRACTOR SHALL TOPSOIL, SEED AND MULCH THE ACCESS DRIVE TO RE-ESTABLISH A GRASS COVER.
- LIMIT ACCESS IMPROVEMENTS TO ALLOW CONSTRUCTION VEHICLE ACCESS. INSTALL WATERBARS AND CULVERTS AS SHOWN TO MINIMIZE SURFACE FLOW DURING AND AFTER CONSTRUCTION.
- PROPOSED WATERBAR'S ARE SHOWN AS APPROXIMATE. FINAL LOCATION TO BE DETERMINED AS NECESSARY TO LIMIT RUNOFF IN THE ROADWAY AND PROVIDE STABLE DISCHARGE POINTS AT REGULAR INTERVALS ON SLOPES EXCEEDING 18%.



| TEMPORARY IMPACT BELOW O.H.W. (TEMPORARY COFFER DAM) | |
|--|---------------------|
| 275 SF | 27.2 CY EXCAVATION |
| 27.2 CY FILL | 0 CY NET |
| PERMANENT IMPACT BELOW O.H.W. | |
| 578 SF | 125.4 CY EXCAVATION |
| 125.4 CY FILL | 0 CY NET |



GENERAL NOTES:

A. GENERAL NOTES

- ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE STATE OF VERMONT, AGENCY OF TRANSPORTATION'S STANDARD SPECIFICATIONS FOR CONSTRUCTION, DATED 2011, AND ITS LATEST REVISIONS, AND THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 5TH EDITION, DATED 2010, WITH LATEST INTERIM REVISIONS.
- ALL DIMENSIONS ARE HORIZONTAL OR VERTICAL, AND ARE GIVEN AT 68 DEGREES FAHRENHEIT, UNLESS NOTED OTHERWISE.
- THE CONTRACTOR SHALL SUBMIT AN EROSION PREVENTION AND SEDIMENT CONTROL PLAN (EPSC PLAN) FOR APPROVAL. THE PLAN SHALL BE IN ACCORDANCE WITH THE 2006 LOW RISK SITE HANDBOOK FOR EROSION PREVENTION AND SEDIMENT CONTROL, PUBLISHED BY THE VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION. REFERENCE SHOULD BE MADE TO THE WINTER STABILIZATION AND DEWATERING ACTIVITIES SECTIONS OF THE HANDBOOK.
- ALL WORK SHALL BE COMPLETED INSIDE THE EXISTING RIGHT-OF-WAY LIMITS AND THE CONSTRUCTION LIMITS. IF THE CONTRACTOR REQUIRES TO WORK OUTSIDE OF THE EXISTING RIGHT-OF-WAY, IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN THE NECESSARY RIGHTS.

B. EXISTING INFORMATION

- LANDOWNER: TIMOTHY & MADONNA RACINE
- RIGHT-OF-WAY LINE LOCATIONS ARE APPROXIMATE ONLY AND ARE BASED ON ROAD RIGHT OF WAY WIDTHS. DUBOIS & KING MAKES NO CLAIM TO ITS ACCURACY OR COMPLETENESS.
 - TOPOGRAPHIC SURVEY BASED ON 2013 SURVEY DATA BY DUBOIS & KING, INC.
 - THE LOCATION AND EXTENT OF OVERHEAD AND UNDERGROUND UTILITIES SHOWN ON THE SITE DRAWINGS ARE BASED ON SURVEY. DUBOIS & KING, INC INCLUDES INFORMATION WITHOUT WARRANTING ITS ACCURACY IN ANY WAY. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING AND DETERMINING THE LOCATION, SIZE, AND ELEVATION OF ALL UTILITIES PRIOR TO THE START OF CONSTRUCTION. THE OWNER SHALL BE NOTIFIED IN WRITING OF ANY UTILITIES FOUND INTERFERING WITH THE PROPOSED CONSTRUCTION, AND APPROPRIATE REMEDIAL ACTION SHALL BE DETERMINED AND AGREED UPON BY OWNER OR OWNER'S REPRESENTATIVE BEFORE PROCEEDING WITH WORK.
 - WRITTEN DIMENSIONS HAVE PRECEDENCE OVER SCALED DIMENSIONS. IN CASE OF CONFLICT BETWEEN THIS PLAN SET AND ANY OTHER DRAWING OR SPECIFICATION, THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY FOR CLARIFICATIONS.
 - THE CONTRACTORS SHALL FAMILIARIZE THEMSELVES WITH THE EXISTING CONDITIONS OF THE SITE AND SURROUNDINGS PRIOR TO THE START OF ANY CONSTRUCTION.
 - PROPOSED WORK SHALL BE CONSTRUCTED FROM A COMPLETE SET OF PLANS. THE ENGINEER IS TO BE NOTIFIED OF ANY CONFLICT WITHIN THIS PLAN SET.
 - TO LIMIT INADVERTENT DAMAGE TO AND UNAUTHORIZED REMOVAL OF TREES ADJACENT TO THE WORK AREA, CONTRACTOR SHALL COORDINATE WITH OWNER AND OBTAIN APPROVAL PRIOR TO CUTTING OR TRIMMING TREES WITHIN AND ADJACENT TO THE WORK AREA.
 - EASEMENTS, RIGHTS OF WAY, AND RELATED PERMISSION FROM LANDOWNERS HAS BEEN OBTAINED BY OWNER. PRIOR TO CONSTRUCTION THE CONTRACTOR SHALL REVIEW CONDITIONS OF ENTRY AND ABIDE BY THEM.
 - CONTRACTOR SHALL INSTALL CONSTRUCTION LIMITS FENCE PRIOR TO START OF CONSTRUCTION, AND THERE SHALL BE NO DISTURBANCE BEYOND THE LIMITS OF FENCE.
 - THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING DIG SAFE, AT 1-888-DIG-SAFE, AT LEAST 72 HOURS BEFORE DIGGING.

C. CODES & PERMITS

- THE CONTRACTOR IS RESPONSIBLE FOR PERFORMING ALL WORK IN STRICT ACCORDANCE WITH ALL MUNICIPAL, STATE, & FEDERAL ORDINANCES, CODES, RULES, AND LAWS HAVING JURISDICTION. THE CONTRACTOR SHALL NOT PROCEED WITH ANY WORK WHICH MAY NOT COMPLY COMPLETELY WITH ALL MUNICIPAL, STATE, & FEDERAL ORDINANCES, CODES, RULES, AND LAWS HAVING JURISDICTION. THESE INCLUDE, BUT ARE NOT LIMITED TO:
 - STATE OF VT ENVIRONMENTAL PROTECTION RULES, CHAPTER 1.
 - STATE OF VT STREAM ALTERATION PERMIT.
 - VERMONT OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION.
 - MUNICIPAL ROAD ACCESS PERMIT.
- THE OWNER HAS OBTAINED ALL NECESSARY PERMITS PRIOR TO CONSTRUCTION. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO BE FAMILIAR WITH THE APPLICABLE PROVISIONS OF EACH PERMIT AS THEY APPLY TO THE WORK AND ABIDE BY THOSE PROVISIONS DURING CONSTRUCTION.
- SEQUENCING OF WORK
 - WORK WITHIN THE STREAM LIMITS SHALL BE LIMITED BY THE FISH BREEDING SEASON AND SHALL NOT START UNTIL JULY 1ST AND BE COMPLETED BY OCTOBER 1ST.
 - ALL WORK WITHIN THE STREAM OCCURRING BETWEEN OCTOBER 1ST THROUGH JULY 1ST SHALL REQUIRE PRIOR APPROVAL BY THE ENGINEER AND ANR STREAM ALTERATION ENGINEER. PROVIDE WORK PLAN INCLUDING SCHEDULE, DURATION, CONSTRUCTION METHODOLOGY TO MINIMIZE STREAM DISTURBANCE, STREAM PROTECTION MEASURES (TURBITY CURTAINS AT MINIMUM), TEMPORARY BYPASS OR PUMPING MEASURES AS NECESSARY FOR REVIEW AND APPROVAL.
 - MODIFICATIONS TO INCREASE THE WIDTH AND/OR LENGTH OF THE ARCH WOULD BE ACCEPTABLE IF CONTRACTOR DEEMED IT NECESSARY. IF MODIFICATION IS INTENDED, ALL COSTS ASSOCIATED WITH THESE MODIFICATIONS WOULD BE INCORPORATED IN THE PROJECT BASE BID. PRIOR TO IMPLEMENTING ANY MODIFICATION, SUBMIT ALTERNATIVE STRUCTURE FOR REVIEW AND APPROVAL. POTENTIAL MODIFICATIONS SHALL BE LIMITED BY THE FOLLOWING:
 - THE CONTRACTOR SHALL IDENTIFY FOR REVIEW AND APPROVAL ASSOCIATED MODIFICATIONS TO THE WINGWALLS, HEADWALLS, STREAM STONE FILL, OR OTHER WORK DEEMED NECESSARY.

E. UNSUITABLE BACKFILL MATERIAL

- SUITABLE EXCAVATED MATERIALS MAY BE INCORPORATED INTO THE PROJECT. THIS PROVISION SHALL IN NO WAY RELIEVE THE CONTRACTOR OF THE OBLIGATION TO REMOVE AND DISPOSE OF ANY MATERIAL DETERMINED BY THE ENGINEER TO BE UNSUITABLE FOR BACKFILLING OR EXCESS SUITABLE MATERIAL.

F. TESTING

- COMPACTION TESTING IS REQUIRED ON BACKFILL AREAS.

G. GRADING

- GRADING SHALL BE PERFORMED IN ACCORDANCE WITH THE DRAWINGS. IF CHANGES ARE REQUIRED, NOTIFY THE ENGINEER.

H. EROSION CONTROL

- CONTRACTOR SHALL CONSTRUCT TEMPORARY AND PERMANENT EROSION AND SEDIMENTATION CONTROL FACILITIES PRIOR TO THE COMMENCEMENT OF OPERATIONS. EROSION CONTROL MEASURES SHALL INCLUDE, BUT ARE NOT LIMITED TO, ITEMS IDENTIFIED WITHIN THIS PLAN SET OR WITHIN THE VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION (VTDEC) BEST MANAGEMENT PRACTICES (BMP'S) FOR EROSION CONTROL. SEE EROSION AND SEDIMENTATION CONTROL DETAILS SHEET.
- THE CONTRACTOR SHALL CONSTRUCT AND MAINTAIN EROSION AND SEDIMENTATION CONTROL DEVICES THROUGHOUT THE PROJECT SITE FOR THE DURATION OF THE CONSTRUCTION. THE CONTRACTOR SHALL (DAILY OR AS REQUIRED BASIS) INSPECT AND RECORD FINDINGS OF ALL EROSION AND SEDIMENTATION CONTROL DEVICES TO ENSURE THAT ALL ITEMS ARE IN STABLE CONDITION. IN THE EVENT THAT SAID ITEMS ARE DETERMINED TO BE IN UNSATISFACTORY CONDITION, THE CONTRACTOR SHALL RECORD THE UNSATISFACTORY ISSUE, THE DATE OF THE UNSATISFACTORY FINDING, THE APPROPRIATE CORRECTIVE MEASURE AND THE DATE THE CORRECTIVE MEASURE WAS COMPLETED.
- ALL DISTURBED AREAS SHALL NOT BE LEFT BARE FOR MORE THAN 30 DAYS. SHALL BE STABILIZED IN A MANNER TO MITIGATE EROSION OR SEDIMENTATION FROM EXITING THE LIMIT OF WORK AND SHALL BE RESTORED IN-KIND UPON COMPLETION OF THE PROJECT. THE MAXIMUM AREA ALLOWED TO BE DISTURBED AND LEFT UNSTABILIZED IS TWO ACRES PER DRAINAGE AREA.
- ALL SLOPES GREATER THAN 1V:3H SHALL BE PROTECTED FROM EROSION WITH APPROPRIATE SLOPE STABILIZATION CONTROL MEASURES PRIOR TO LOAMING, SEEDING AND MULCHING WITHIN 72 HOURS OF COMPLETION. CONTRACTOR SHALL MAINTAIN EROSION CONTROL PROTECTION UNTIL VEGETATION GROWTH HAS BEEN ESTABLISHED. ALL SLOPE STABILIZATION CONTROL MEASURES SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATION AND VERMONT BEST MANAGEMENT PRACTICES.
- ALL SWALES AND DITCHES WITH SLOPES EXCEEDING 5% SLOPE SHALL BE PROTECTED FROM EROSION WITH MATTING. ALL MATTING SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATION. ALL SWALES AND DITCHES SHALL BE PROPERLY STABILIZED PRIOR TO DIRECTING FLOW TO THEM.
- THE CONTRACTOR SHALL NOT PLACE PERMANENT PLANTING AND SEEDING PRIOR TO MAY 1st AND AFTER SEPTEMBER 1st. TEMPORARY SEEDING SUCH AS WINTER RYE MAY BE USED OUTSIDE OF THIS PERIOD.
- ALL WORK MUST BE DONE IN A MANNER WHICH MINIMIZES THE POTENTIAL FOR THE DISCHARGE OF SEDIMENT-LADEN WATER. CONTRACTOR IS RESPONSIBLE FOR DIVERTING, PUMPING, OR OTHERWISE CONTROLLING WATER AS NECESSARY.

I. UTILITIES

- ALL EXISTING UTILITIES ENCOUNTERED DURING CONSTRUCTION ARE TO REMAIN IN SERVICE UNLESS OTHERWISE NOTED ON PLANS. AT NO ADDITIONAL COST TO THE OWNER, THE CONTRACTOR SHALL REPAIR OR COORDINATE WITH THE RESPECTIVE UTILITY FOR DAMAGE TO UTILITIES.

J. COMPACTION & FILL

- WITHIN THE NEW STRUCTURE FOOTPRINT, THE FILL IS STRUCTURAL FILL AS DEFINED IN THE SPECIFICATIONS. THE EXISTING FILL CAN BE RE-USED IN AREAS OUTSIDE OF NEW STRUCTURES IF PROCESSED OR SEGREGATED TO ENSURE DELETERIOUS MATERIALS ARE NOT INCLUDED IN THE FILL (E.G., ROOTS, VEGETATION, DEBRIS, CINDERS, ETC. ARE REMOVED PRIOR TO PLACEMENT AND PROPER COMPACTION).
- EXISTING SURFACES TO RECEIVE BACKFILL SHOULD BE BROUGHT TO THE OPTIMUM MOISTURE CONTENT (+2%), AND COMPACTED IN PLACE TO AT LEAST 90% OF MAXIMUM DRY DENSITY.
- FILL PLACEMENT EFFORTS USING VIBRATORY EQUIPMENT SHOULD BE CLOSELY MONITORED TO GAUGE THE EFFECTS OF VIBRATIONS ON CUT SLOPE STABILITY, THE SIZE OF VIBRATORY EQUIPMENT SHOULD BE SELECTED TO MINIMIZE POTENTIAL ADVERSE EFFECTS, AND IF SHOWN TO BE UNACCEPTABLE, NON-VIBRATORY EQUIPMENT SHOULD BE SUBSTITUTED.
- STRUCTURAL FILL FOR USE SHOULD CONSIST OF DURABLE SOILS CONFORMING TO VAOT SPECIFICATION 704.08 GRANULAR BACKFILL FOR STRUCTURES OR AN EQUIVALENT MATERIAL APPROVED BY THE ENGINEER.
- FILL MATERIALS SHOULD BE BROUGHT TO THE OPTIMUM MOISTURE CONTENT (+2%), PLACED IN THIN LIFTS (NOT EXCEEDING 10"), AND COMPACTED. TO AVOID PLACING FILL ON A SLOPING SURFACE, THE NEW FILL SHOULD BE KEYED INTO THE NATIVE SOILS WITH BENCHES AT LEAST HALF THE WIDTH OF EQUIPMENT (APPROXIMATELY 6 FEET).
- SIMILARLY, COMPACTION WITH VIBRATORY EQUIPMENT IN CLOSE PROXIMITY TO RETAINING STRUCTURES SHOULD BE PERFORMED WITH EXTREME CAUTION. THIS IS PARTICULARLY TRUE WHEN HIGH MOISTURE CONTENTS AT OR ABOVE OPTIMUM MOISTURE ARE IN EVIDENCE. DURING COMPACTION AT MOISTURE CONTENTS ABOVE OPTIMUM, VIBRATING EQUIPMENT CAN CAUSE SUDDEN HYDROSTATIC LOADING CONDITIONS AGAINST WALLS WHICH, IF NOT BRACED OR CAPABLE OF WITHSTANDING SUCH FORCES, COULD INCUR DAMAGE.
- MAXIMUM DENSITY AND OPTIMUM MOISTURE CONTENTS SHOULD BE DETERMINED FOR ALL FILL MATERIALS IN ACCORDANCE WITH ASTM D1557 (MODIFIED PROCTOR).

K. CONTROL OF WATER NOTES

- A COFFERDAM AND PUMPING WILL BE REQUIRED ADJACENT TO THE ABUTMENT TO CONTROL THE FLOW OF WATER AND DEWATERING OF THE WORK AREA. SUMP PUMPING WILL BE REQUIRED TO ADEQUATELY CONTROL THE GROUNDWATER WITHIN ANY AND ALL EXCAVATIONS.
 - THE CONTRACTOR SHALL SUBMIT DETAILS, INDICATING HIS/HER METHOD OF DEWATERING AND HIS/HER PROPOSED METHOD OF HANDLING THE WATER FROM THE WORK AREA.
 - THE DESIGN, INSTALLATION, MAINTENANCE AND REMOVAL OF WATER DIVERSION STRUCTURES AND COFFERDAM SHALL BE IN ACCORDANCE WITH VTRANS SPECIFICATION 208.
- L. STREAM BOTTOM RESTORATION PLAN
- NO EXISTING STREAM BOTTOM MATERIAL OUTSIDE OF THE LIMITS OF EXCAVATION IS TO BE REMOVED FROM ITS CURRENT LOCATION.
 - NO FILL IS PROPOSED FOR THE STREAM BOTTOM EXCEPT FOR THE PLACEMENT OF STONE FILL AS SHOWN ON THE PLANS.
 - ANY AREAS OF THE STREAM COMPACTED DOWN BY CONSTRUCTION TRAFFIC SHALL BE LOOSENEED UP VIA USE OF APPROPRIATE MECHANICAL EQUIPMENT TO A CONDITION PRIOR TO CONSTRUCTION.
 - ANY DISTURBED AREAS SHALL BE RESTORED/REGRADED BACK TO THEIR GENERAL EXISTING GRADES.

M. CONSTRUCTION NOTES

- ALL UTILITY POLES ARE TO REMAIN UNDISTURBED.
- NO BACKFILL SHALL BE PLACED AGAINST ANY STRUCTURAL ELEMENTS UNTIL THE ENGINEER HAS APPROVED THIS WORK.
- THE CONTRACTOR AT THE EXPENSE OF THE CONTRACTOR, SHALL REPAIR DAMAGE TO CONCRETE WALLS RESULTING FROM IMPROPER BACKFILLING.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING AND DETERMINING ALL UTILITIES (ABOVE AND BELOW GROUND) WITHIN THE PROJECT LIMITS, AND TO TAKE THE NECESSARY PRECAUTIONS TO PROTECT UTILITIES DURING CONSTRUCTION. CONTACT DIG-SAFE BY CALLING 811 OR WWW.DIGSAFE.COM.
- THE CONTRACTOR IS RESPONSIBLE FOR ALL ASPECTS OF ON-SITE SAFETY AND FOR THE MEANS AND METHODS OF CONSTRUCTION. THE CONTRACTOR SHALL PREPARE OR OBTAIN THE APPROPRIATE SAFETY SYSTEMS WHICH MAY BE REQUIRED BY THE U.S. OCCUPATIONAL SAFE AND HEALTH ADMINISTRATION (OSHA) AND/OR STATE AND LOCAL REGULATIONS.
- STONE FILL, TYPE IV (4'-0" DEPTH) SHALL BE PLACED AS SHOWN ON THE PLANS.

N. SUBSTRUCTURE NOTES

- IF LEDGE IS ENCOUNTERED ABOVE THE DESIGN/SHOWN BOTTOM OF FOOTING, THE FOOTING MAY BE RAISED, BEFORE ANY UPWARD ADJUSTMENT IS MADE IN THE FOOTING ELEVATION, THE ENGINEER SHALL BE CONTACTED AND PROVIDED WITH A LEDGE PROFILE. NO FURTHER WORK SHALL BE DONE UNTIL APPROVAL OF THE CONFIGURATION IS RECEIVED.
- IF LARGE BOULDERS ARE ENCOUNTERED DURING EXCAVATION, THE ENGINEER SHALL BE NOTIFIED TO DETERMINE WHETHER THESE BOULDERS ARE ADEQUATE FOR SUBSTRUCTURE BEARING, AND WHETHER THE BOTTOM OF FOOTING MAY BEAR ON SUCH BOULDERS.

O. CONCRETE NOTES

- CAST-IN-PLACE OR PRECAST CONCRETE USED FOR THE SUBSTRUCTURE SHALL BE HIGH PERFORMANCE CLASS B.
- WATER REPELLENT, SILANE SHALL BE APPLIED TO ALL EXPOSED CONCRETE ON THE BRIDGE SUBSTRUCTURES AND SUPERSTRUCTURE.
- ALL EXPOSED CONCRETE CORNERS SHALL BE CHAMFERED 1" X 1", UNLESS OTHERWISE NOTED.
- JOINTS AND SCORE MARKS IN CONCRETE SHALL BE CONSTRUCTED AS INDICATED ON THE PLANS, OR AS DIRECTED BY THE ENGINEER.

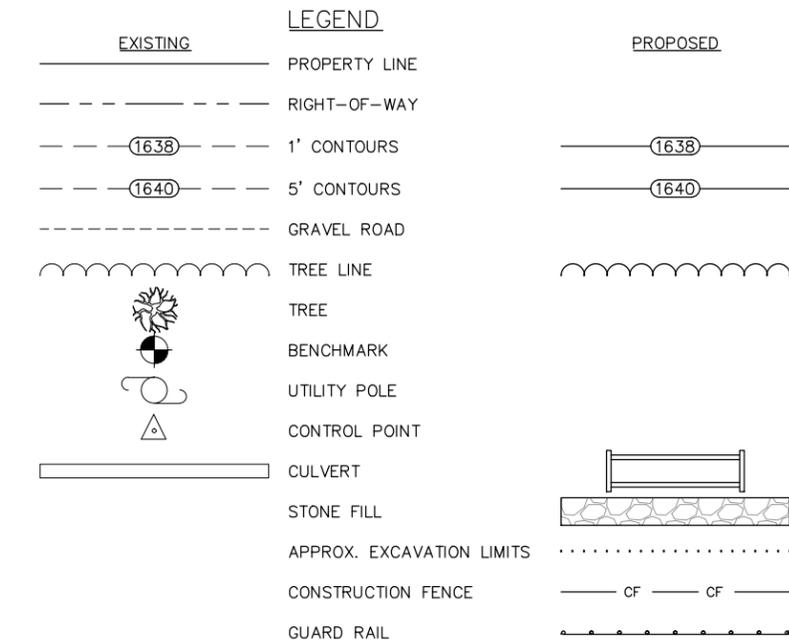
P. REINFORCING STEEL NOTES

- THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING, DESIGNING, SIZING, SPACING, LENGTHS AND REINFORCING BAR BENDS BASED ON THESE DRAWINGS. PRIOR TO FABRICATING MATERIALS, THE CONTRACTOR SHALL SUBMIT STAMPED CALCULATIONS, AND FABRICATION DRAWINGS IN ACCORDANCE WITH SUBSECTION 105.03.
- ALL REINFORCING STEEL SHALL BE DETAILED AND FABRICATED USING PROCEDURES AND TOLERANCES IN ACCORDANCE WITH APPLICABLE PUBLICATIONS OF THE "CONCRETE REINFORCING STEEL INSTITUTE" (CRSI).
- ALL REINFORCING SHALL MEET THE REQUIREMENTS OF SECTION 507 OF THE SPECIFICATIONS.
- MINIMUM CLEAR COVER FOR REINFORCING STEEL SHALL BE AS FOLLOWS:
 - ALONG BACK FACES OF WALLS AGAINST EARTH 2 INCHES
 - ELSEWHERE UNLESS OTHERWISE NOTED 3 INCHES
- REINFORCEMENT STEEL PLACEMENT TOLERANCES SHALL BE:
 - SPACING: 1 INCH ±
 - CLEARANCE: 1/4 INCH ±

TYPICAL ABBREVIATIONS:

AASHTO = AMERICAN ASSOCIATION OF STATE HIGHWAY & TRANSPORTATION OFFICIALS
 ASTM = AMERICAN SOCIETY OF TESTING MATERIALS
 B = BORING
 BIT = BITUMINOUS
 BM = BENCH MARK
 BMP = BEST MANAGEMENT PRACTICE
 CF = CUBIC FEET, OR CONSTRUCTION FENCE
 CFS = CUBIC FEET PER SECOND
 CMP = CORRUGATED METAL PIPE
 CY = CUBIC YARD
 DWL = DOWEL
 ELEV = ELEVATION
 EW = EACH WAY
 EX = EXISTING
 FE = FLANGED END
 FT = FOOT, FEET
 HDPE = HIGH DENSITY POLYETHYLENE
 ID = INSIDE DIAMETER
 IN = INCH
 IN = INVERT
 LF = LINEAR FEET, LINEAL FEET
 MAX = MAXIMUM
 MIN = MINIMUM

N/F = NOW OR FORMERLY
 NTS = NOT TO SCALE
 OD = OUTSIDE DIAMETER
 OHT&P = OVERHEAD TELEPHONE & POWER
 PCA = PORTLAND CEMENT ASSOCIATION
 PL = PROPERTY LINE
 PVC = POLYVINYLCHLORIDE
 ROW = RIGHT-OF-WAY
 S = SEWER
 SF = SQUARE FEET, OR SILT FENCE
 SD = STORM DRAIN
 SMH = SEWER MANHOLE
 SY = SQUARE YARD
 T = TELEPHONE
 TBM = TEMPORARY BENCHMARK
 TP = TEST PIT, OR TURNING POINT
 TYP = TYPICAL
 UG&P = UNDERGROUND TELEPHONE & POWER
 UP = UTILITY POLE
 VAOT = VERMONT AGENCY OF TRANSPORTATION
 VT DEC = VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION
 VTRANS = VERMONT AGENCY OF TRANSPORTATION



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 MANAGEMENT • DEVELOPMENT
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 SPRINGFIELD, VT
 BEDFORD, NH
 LACONIA, NH

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PROFESSIONAL SEAL

**NOT FOR
 CONSTRUCTION
 PRELIMINARY
 PLANS**

| NO. | DATE | ISSUED FOR | BY | CK'D |
|-----|----------|---|-----|------|
| 2 | 3/16/15 | REVISED FOR WETLAND/STREAM PERMIT APPLICATION | TJD | |
| 1 | 12/30/14 | ISSUED FOR 45 DAY NOTICE | TJD | |



SITE NO.

**MARLBORO
 WEST**

AUGUR HOLE ROAD
 MARLBORO, VT
 05344

SHEET TITLE

**GENERAL
 NOTES
 &
 LEGEND**

PERMIT PLANS

| DRAWN BY | DATE |
|------------|---------------|
| TJD | MAY 2014 |
| CHECKED BY | D&K PROJECT # |
| PCB | 422230L |
| PROJ. ENG. | D&K ARCHIVE # |
| PCB | |

SHEET NUMBER

B-2

SHEET 21 OF 27

**NOT FOR
CONSTRUCTION
PRELIMINARY
PLANS**

| NO. | DATE | DESCRIPTION |
|-----|----------|---|
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AMERICAN TOWER CORPORATION

SITE NO.

MARLBORO WEST

AUGUR HOLE ROAD
MARLBORO, VT
05344

SHEET TITLE

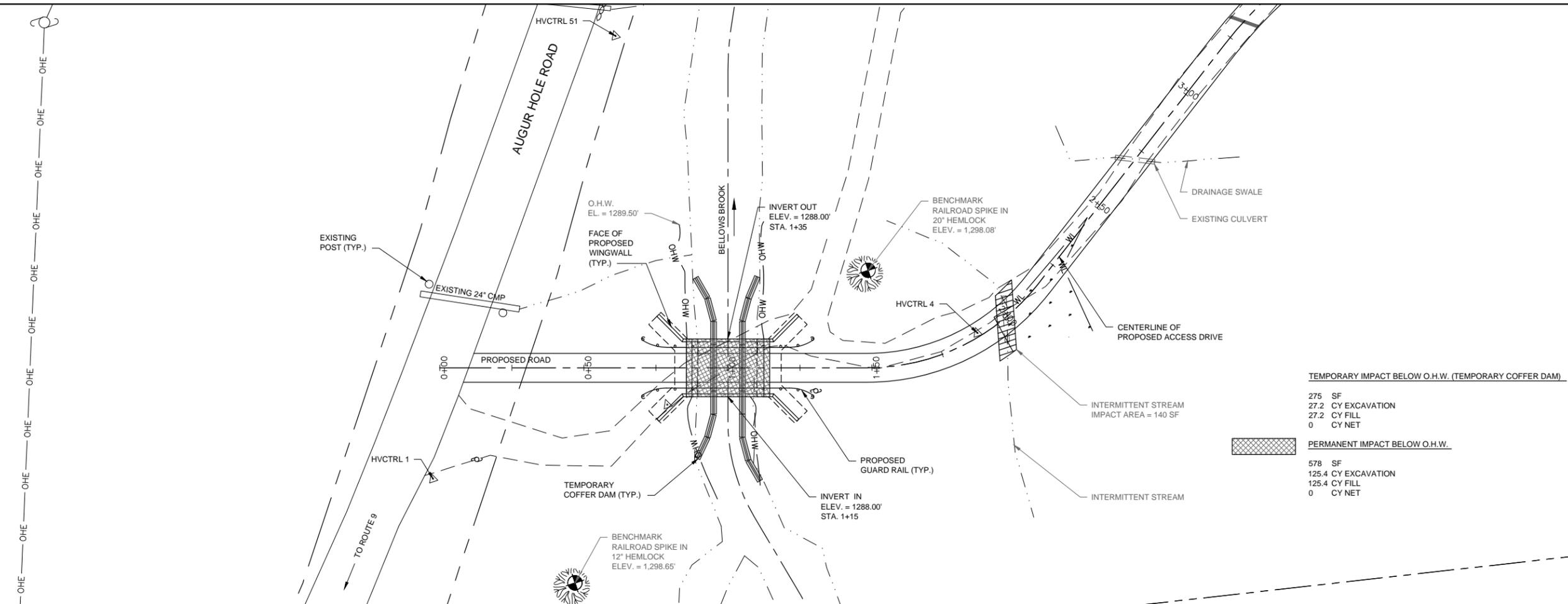
TIE &
LAYOUT
SHEET

PERMIT PLANS

| DRAWN BY | DATE |
|------------|---------------|
| TJD | MAY 2014 |
| CHECKED BY | D&K PROJECT # |
| PCB | 422230L |
| PROJ. ENG. | D&K ARCHIVE # |
| PCB | |

SHEET NUMBER

B-3

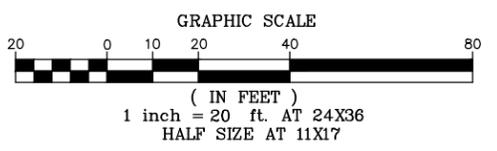


TEMPORARY IMPACT BELOW O.H.W. (TEMPORARY COFFER DAM)

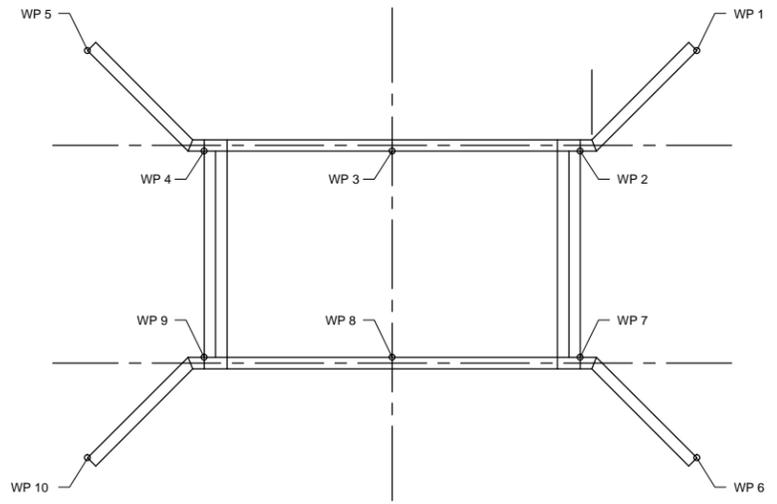
| |
|--------------------|
| 275 SF |
| 27.2 CY EXCAVATION |
| 27.2 CY FILL |
| 0 CY NET |

PERMANENT IMPACT BELOW O.H.W.

| |
|---------------------|
| 578 SF |
| 125.4 CY EXCAVATION |
| 125.4 CY FILL |
| 0 CY NET |



- NOTES:
- TOPOGRAPHY BASED ON SURVEY PERFORMED BY DUBOIS & KING, INC. ON 12/20/2013 AND 1/3/2014.

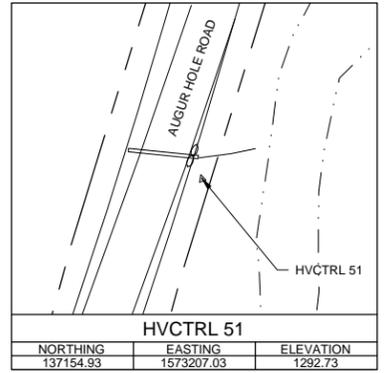
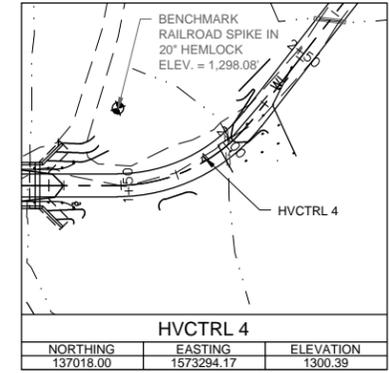
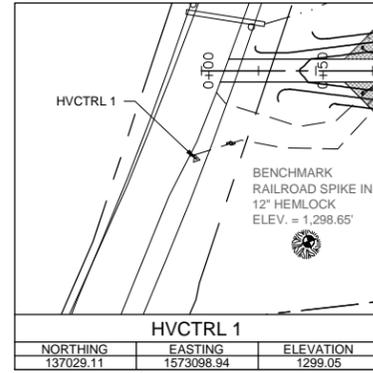


LAYOUT FOR PROPOSED CULVERT

WORKING POINT TABLE

| WP | STATION | OFFSET | NORTHING | EASTING |
|-----|---------|----------|-----------|------------|
| #1 | 1+25.90 | 17.78' L | 137042.82 | 1573237.10 |
| #2 | 1+15.71 | 9.00' L | 137037.67 | 1573224.68 |
| #3 | 1+01.25 | 9.00' L | 137042.19 | 1573210.95 |
| #4 | 0+96.79 | 9.00' L | 137046.71 | 1573197.21 |
| #5 | 0+76.60 | 17.78' L | 137068.24 | 1573190.27 |
| #6 | 1+25.90 | 17.78' R | 137009.05 | 1573225.99 |
| #7 | 1+15.71 | 9.00' R | 137020.57 | 1573219.05 |
| #8 | 1+01.25 | 9.00' R | 137025.09 | 1573205.32 |
| #9 | 0+96.79 | 9.00' R | 137029.61 | 1573191.58 |
| #10 | 0+76.60 | 17.78' R | 137024.46 | 1573179.16 |

DATUM (GPS DERIVED)
VERTICAL: NAVD 88
HORIZONTAL: NAD 88



**NOT FOR
CONSTRUCTION
PRELIMINARY
PLANS**

| NO. | DATE | DESCRIPTION | BY | CK'D |
|-----|----------|---|-----|------|
| 2 | 3/16/15 | REVISED FOR WETLAND/STREAM PERMIT APPLICATION | TJD | |
| 1 | 12/30/14 | ISSUED FOR 45 DAY NOTICE | TJD | |



AMERICAN TOWER CORPORATION

SITE NO.

MARLBORO WEST

AUGUR HOLE ROAD
MARLBORO, VT
05344

SHEET TITLE

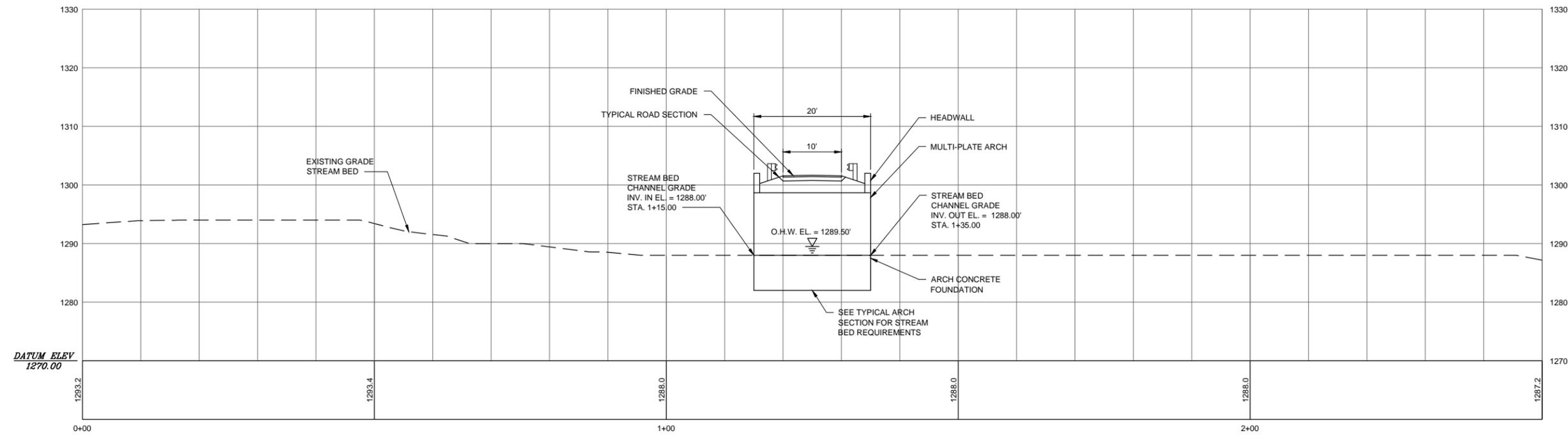
**STREAM PROFILE &
LAYOUT**

PERMIT PLANS

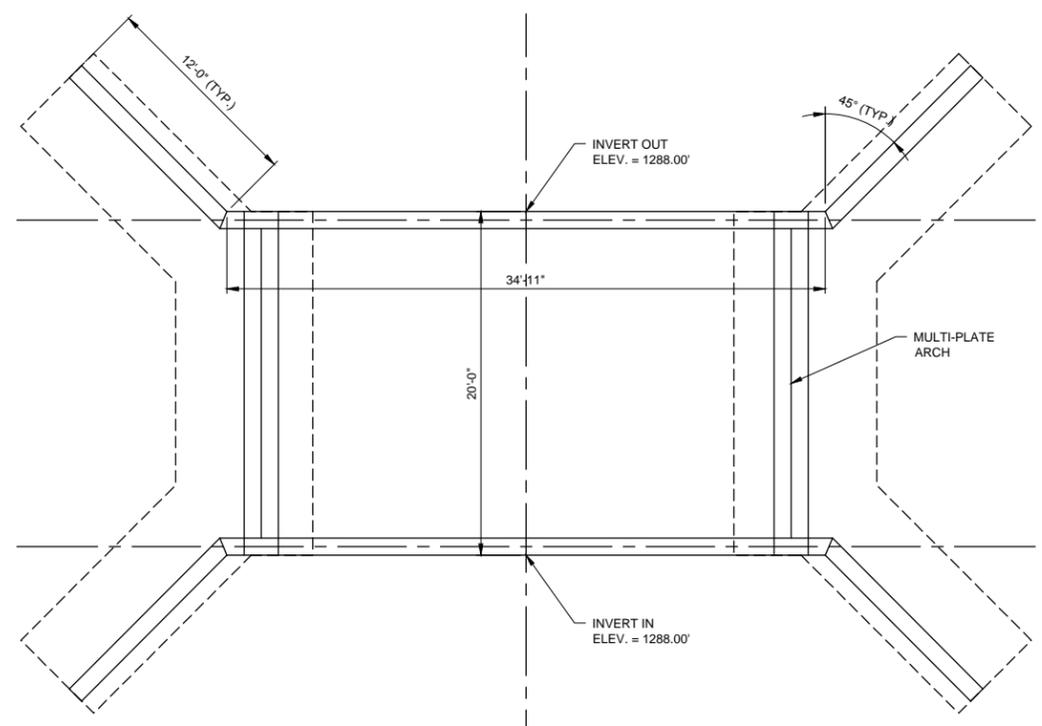
| | |
|-------------------|--------------------------|
| DRAWN BY TJD | DATE MAY 2014 |
| CHECKED BY PCB | D&K PROJECT # 422230L |
| PROJ. ENG. PCB | D&K ARCHIVE # |

SHEET NUMBER

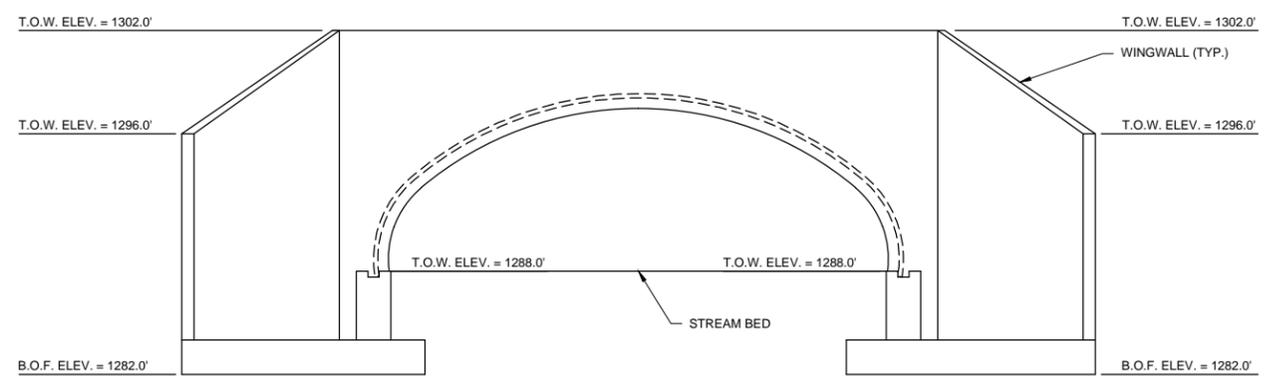
B-5



CENTERLINE STREAM PROFILE
1" = 10'



FRAME & WINGWALL LAYOUT
3/16" = 1'-0"



UPSTREAM AND DOWNSTREAM ELEVATION
3/16" = 1'-0"

**NOT FOR
CONSTRUCTION
PRELIMINARY
PLANS**

| NO. | DATE | DESCRIPTION | BY | CHK'D |
|-----|----------|---|-----|-------|
| 2 | 3/16/15 | REVISED FOR WETLAND/STREAM PERMIT APPLICATION | TJD | LJH |
| 1 | 12/30/14 | ISSUED FOR 45 DAY NOTICE | TJD | LJH |



SITE NO.
MARLBORO WEST

AUGUR HOLE ROAD
MARLBORO, VT
05344

SHEET TITLE

EROSION CONTROL PLAN

PERMIT PLANS

| DRAWN BY | DATE |
|----------|----------|
| TJD | MAY 2014 |

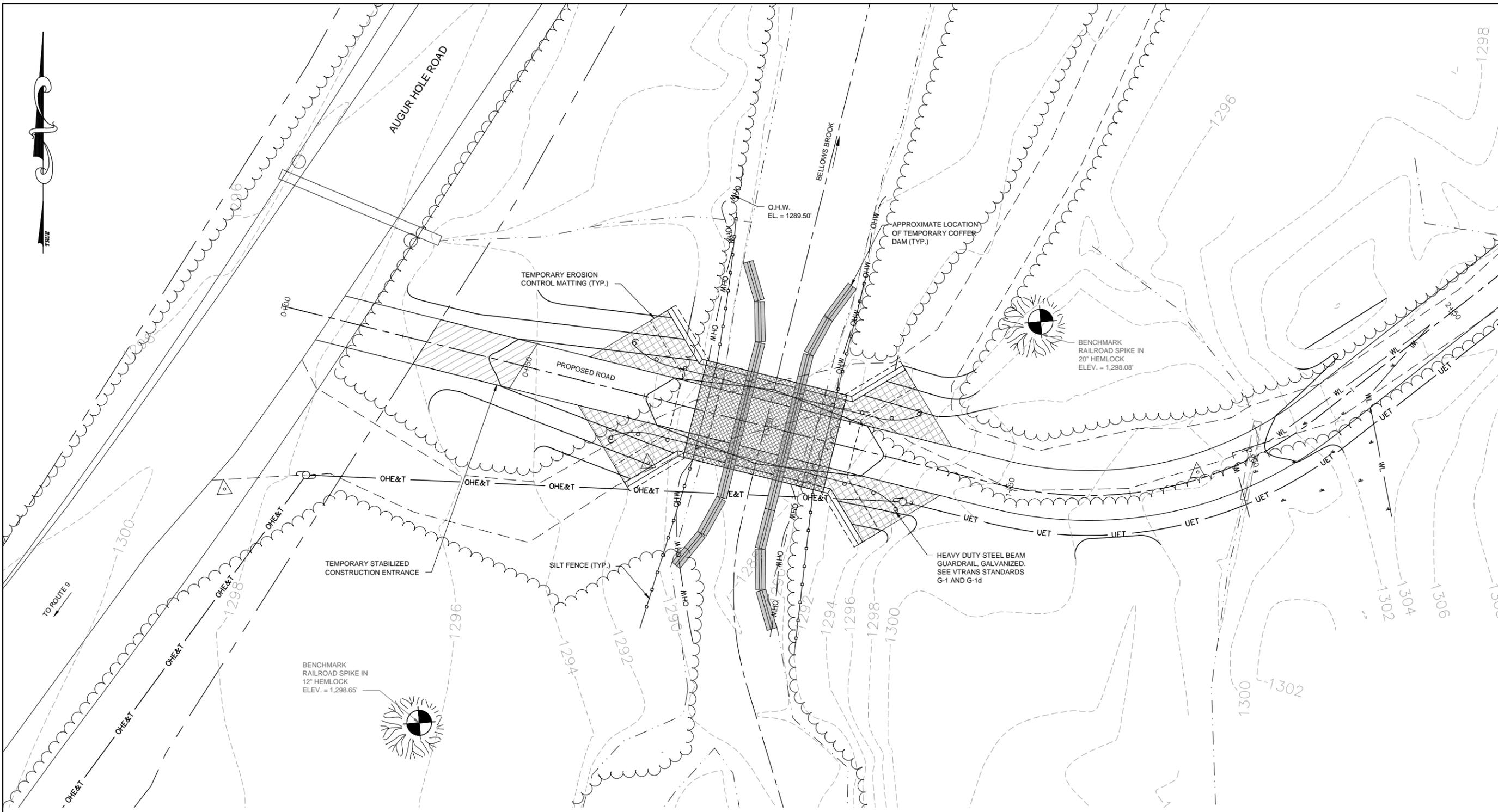
| CHECKED BY | D&K PROJECT # |
|------------|---------------|
| PCB | 422230L |

| PROJ. ENG. | D&K ARCHIVE # |
|------------|---------------|
| PCB | |

SHEET NUMBER

B-6

SHEET 25 OF 27



TEMPORARY IMPACT BELOW O.H.W. (TEMPORARY COFFER DAM)

- 275 SF
- 27.2 CY EXCAVATION
- 27.2 CY FILL
- 0 CY NET

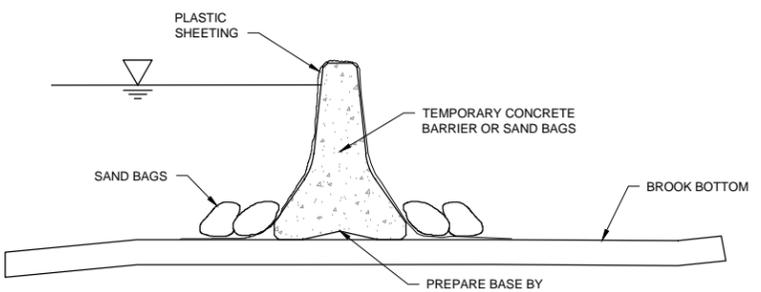


PERMANENT IMPACT BELOW O.H.W.

- 578 SF
- 125.4 CY EXCAVATION
- 125.4 CY FILL
- 0 CY NET

NOTES:

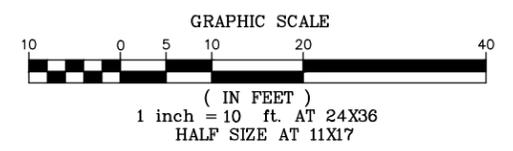
1. HEIGHT OF A COMMON JERSEY BARRIER OR CONCRETE WASTE BLOCK MAY NOT BE SUFFICIENT TO DAM UP WATER. ADDITIONAL HEIGHT MAY BE NEEDED.
2. ADDITIONAL HEIGHT MAY BE PROVIDED BY PLACING SAND BAGS ALONG THE TOP OF THE CONCRETE BARRIER AND PLACING THE PLASTIC SHEETING UP AND OVER THE CONCRETE BARRIER AND SAND BAGS.



SUGGESTED TEMPORARY COFFERDAM
NOT TO SCALE

STREAM PROTECTION ALTERNATIVES:

1. CONTRACTOR MAY INSTALL TEMPORARY COFFERDAMS AND PUMPING AS NECESSARY TO RE-ROUTE STREAM FROM CONSTRUCTION LIMITS.
2. CONTRACTOR TO SUBMIT MEANS AND METHODS SEQUENCING TO ISOLATE WORK FROM THE STREAM.



**NOT FOR
CONSTRUCTION
PRELIMINARY
PLANS**

| NO. | DATE | DESCRIPTION | BY | CK'D |
|-----|----------|---|-----|------|
| 3 | 5/19/15 | EDITS PER CHANGES TO BRIDGE DETAILS | TJD | LJH |
| 2 | 3/16/15 | REVISED FOR WETLAND/STREAM PERMIT APPLICATION | TJD | LJH |
| 1 | 12/30/14 | ISSUED FOR 45 DAY NOTICE | TJD | LJH |



AMERICAN TOWER CORPORATION

SITE NO.
MARLBORO WEST

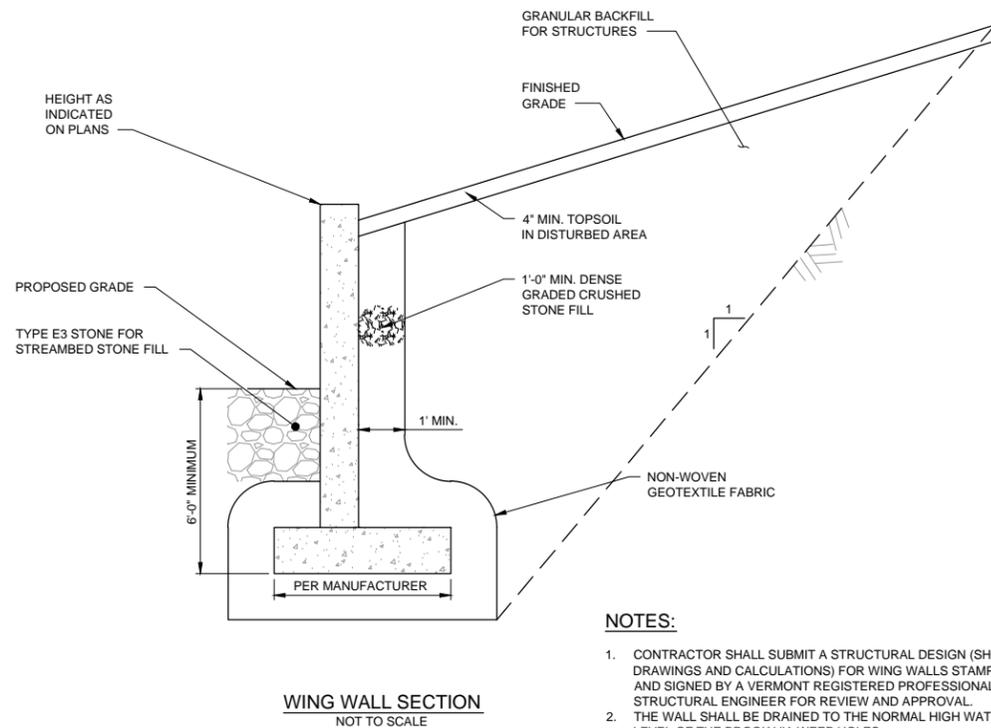
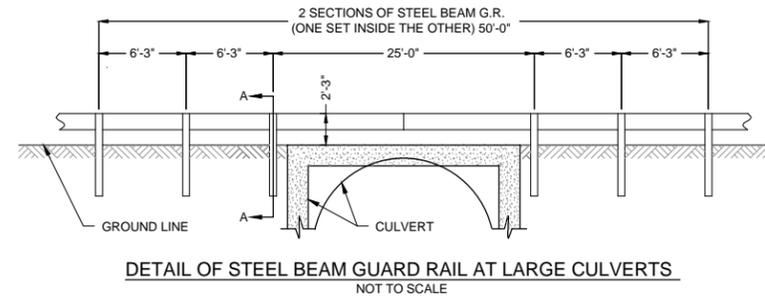
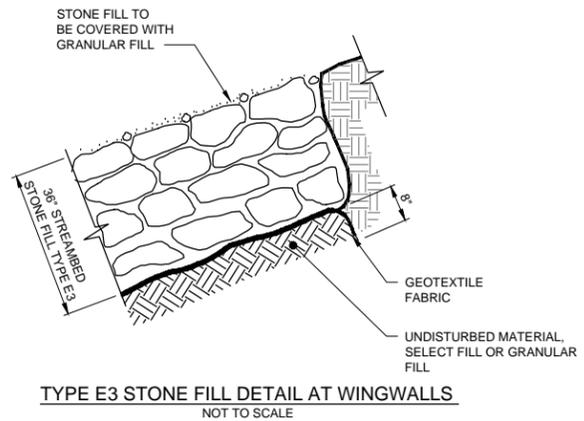
AUGUR HOLE ROAD
MARLBORO, VT
05344

SHEET TITLE
**CIVIL
DETAILS**

PERMIT PLANS

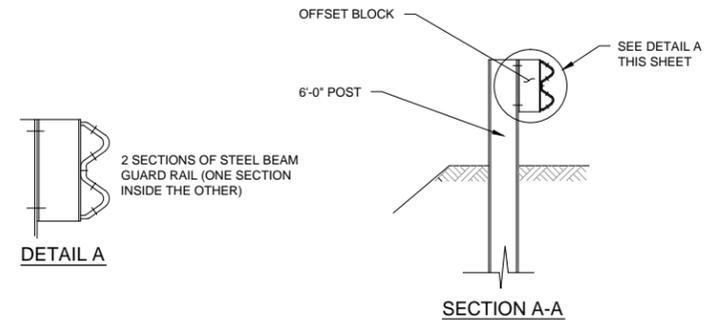
| | |
|------------|---------------|
| DRAWN BY | DATE |
| TJD | MAY 2014 |
| CHECKED BY | D&K PROJECT # |
| PCB | 422230L |
| PROJ. ENG. | D&K ARCHIVE # |
| PCB | |

SHEET NUMBER
B-7
SHEET 26 OF 27



NOTES:

- CONTRACTOR SHALL SUBMIT A STRUCTURAL DESIGN (SHOP DRAWINGS AND CALCULATIONS) FOR WING WALLS STAMPED AND SIGNED BY A VERMONT REGISTERED PROFESSIONAL STRUCTURAL ENGINEER FOR REVIEW AND APPROVAL.
- THE WALL SHALL BE DRAINED TO THE NORMAL HIGH WATER LEVEL OF THE BROOK VIA WEEP HOLES.



NOTES:

- SEE STANDARDS G-1 & G-1D FOR STEEL BEAM GUARD RAIL DETAILS.