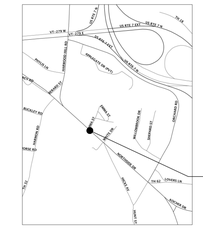
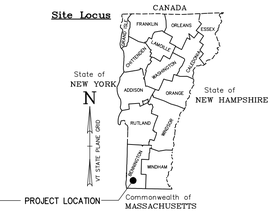
# PROPOSED ROUNDABOUT
# TOWN OF BENNINGTON
# COUNTY OF BENNINGTON
# VT ROUTE 7A – URBAN MINOR ARTERIAL

## LEGEND

| | EXISTING | PROPOSED |
|---|---|---|
| DRAINAGE MANHOLE | D | D |
| CATCH BASIN | | |
| END SECTION | | |
| SEWER MANHOLE | S | S |
| SEWER CLEANOUT | | |
| HYDRANT | | |
| END CAP | | |
| CURB STOP | | |
| GATE VALVE | V | V |
| WELL | W | W |
| UTILITY POLE | | |
| GUY WIRE | | |
| LIGHT POLE | | |
| TRANSFORMER BOX | | |
| TELEPHONE BOX | T | T |
| ELEVATION BENCHMARK | | |
| PROPERTY LINE | | |
| RIGHT-OF-WAY | | |
| CENTERLINE OF ROAD | | |
| STORMDRAIN | SD | |
| UNDERDRAIN | UD | UD |
| GRAVITY SANITARY SEWER | SS | SS |
| PRESSURE SANITARY SEWER | PS | PS |
| WATER MAIN/SERVICE | W | W |
| GAS MAIN/SERVICE | G | G |
| OVERHEAD UTILITY | OU | OU |
| UNDERGROUND UTILITY | UU | UU |
| OVERHEAD ELECTRICAL | OE | OE |
| UNDERGROUND ELECTRICAL | UE | UE |
| OVERHEAD TELEPHONE | OT | OT |
| UNDERGROUND TELEPHONE | UT | UT |
| EDGE OF WOODS | | |



NOT TO SCALE



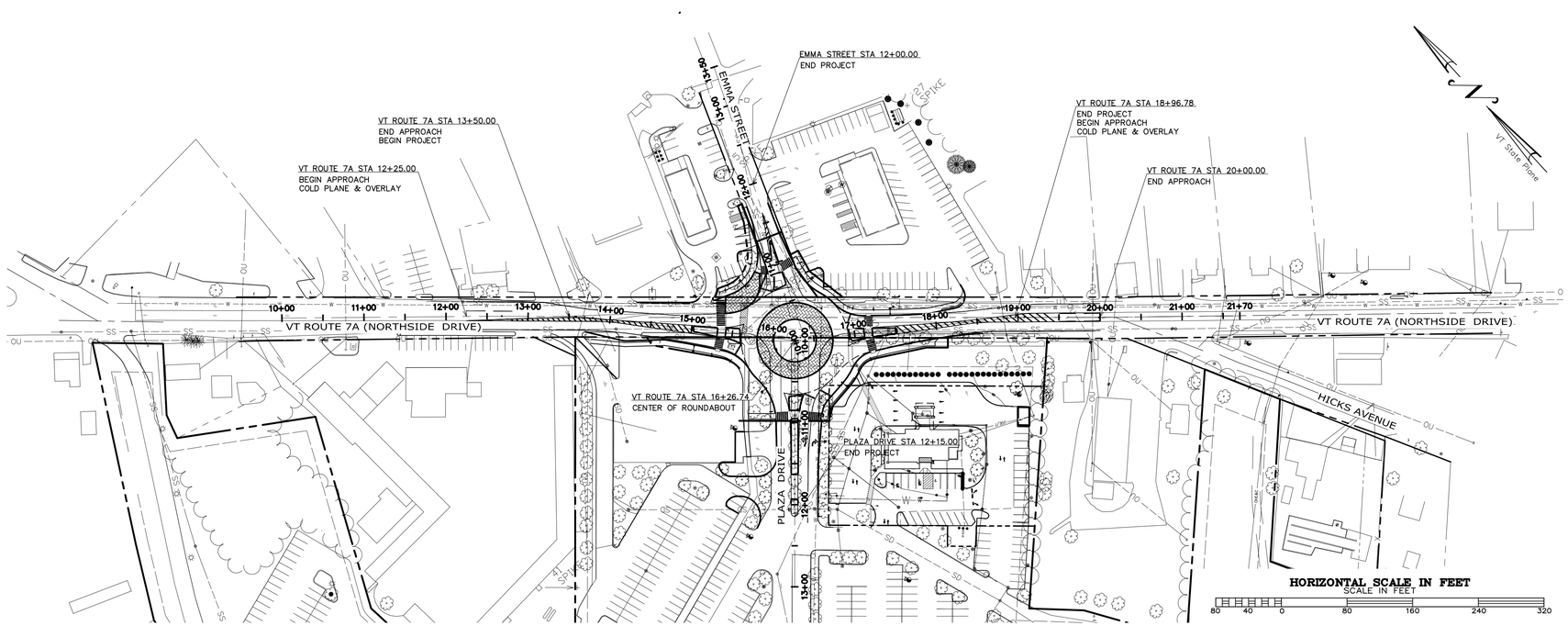

LOCATED IN THE TOWN OF BENNINGTON AT THE INTERSECTION OF VT ROUTE 7A (NORTHSIDE DRIVE, MM 0.63), EMMA STREET, AND PLAZA DRIVE, STARTING AT VT ROUTE 7A MM 0.56 AND ENDING AT VT ROUTE 7A MM 0.71.

WORK TO BE PERFORMED UNDER THIS PROJECT INCLUDES THE CONSTRUCTION OF A ROUNDABOUT, LANDSCAPING, PEDESTRIAN AND BICYCLE FACILITIES, STREET LIGHTING AND DRAINAGE.

LENGTH OF PROJECT:
VT ROUTE 7A = 780 FT = 0.148 MILES
EMMA STREET = 200 FT = 0.038 MILES
PLAZA DRIVE = 215 FT = 0.041 MILES

**TRAFFIC DATA**

| TRAFFIC SECTION | AADT | | DHV | | %T | | %D | | ADTT | | ESAL'S | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2015 | 2035 | 2015 | 2035 | 2015 | 2035 | 2015 | 2035 | 2015 | 2035 | (2015–2035) | (2015–2055) |
| VT 7A (NORTHSIDE DRIVE) – BEGIN PROJECT TO EMMA ST. | 16,700 | 17,200 | 1,800 | 1,800 | 0.8 | 1.1 | 52 | 52 | 260 | 360 | 2,102,000 | 4,793,000 |
| VT 7A (NORTHSIDE DRIVE) – EMMA ST. TO END PROJECT | 13,300 | 13,700 | 1400 | 1500 | 0.9 | 1.3 | 53 | 53 | 240 | 330 | 1,931,000 | 4406000 |




| DATUM | |
|---|---|
| VERTICAL | NAVD 88 |
| HORIZONTAL | NAD 83 (2007) |

Construction Plans – Issued For Bid

PROJECT: 03112.4
DATE: Feb. 13, 2014
DESIGN: DSW
DRAWN: DSW
CHECKED: PHC
APPROVED: PHC


Tel. 802-524-2113
Fax. 802-524-9681
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Title Sheet

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BLS Bennington, LC
Youngstown, OH
Northside Drive Roundabout
VT 7A - Northside Drive
Bennington, VT

CIVIL

CT-01.01


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| CT-12.09 | Cross Sections |
| CT-12.10 | Cross Sections |
| CT-12.11 | Cross Sections |
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| CT-12.14 | Cross Sections |

## STANDARDS LIST

| | | |
|---|---|---|
| B-5 | SLOPE GRADING, EMBANKMENT, MUCK | 06-01-1994 |
| B-12 | SIDE ROAD INTERSECTION, DEPRESSED RAMP | 06-01-1994 |
| B-71 | RESIDENTAL AND COMMERCIAL DRIVES | 07-08-2005 |
| C-2B | PORTLAND CEMENT CONCRETE SIDEWALK DRIVE ENTRANCES WITH SIDEWALK AND GREEN STRIP | 10-14-2005 |
| C-3A | SIDEWALK RAMPS | 03-10-2008 |
| C-3B | SIDEWALK RAMPS AND MEDIAN ISLANDS | 03-10-2008 |
| C-10 | CURBING | 02-11-2008 |
| D-1 | PRECAST REINFORCED CONCRETE DROP INLET DETAILS REINFORCED CONCRETE PIPE | 06-01-1994 |
| | D.I. WITH CAST IRON GRATE REINFORCED CONCRETE PIPE D.I. WITH CONCRETE COVER | 06-01-1994 |
| D-11 | STEEL OR IRON GRATES & COVERS (TYPE A) | 06-01-1994 |
| D-15 | PRECAST REINFORCED CONCRETE MANHOLE GRATES (BICYCLE SAFE) CAST IRON GRATE WITH FRAME, TYPE D CAST IRON GRATE WITH FRAME, TYPE E | 06-01-1994 |
| E-119 | UTILITY WORK ZONE | 03-01-2004 |
| E-171B | TRAFFIC CONTROL SIGNALS MISC. DETAILS | 08-09-1995 |
| E-173 | PULL BOXES AND JUNCTION BOXES | 08-09-1995 |
| E-175 | POWER DROP STANCHIONS | 06-08-2009 |
| E-180A | STREET LIGHTING DETAILS | 08-09-1995 |
| E-180B | STREET LIGHTING DETAILS | 08-09-1995 |
| E-191 | PAVEMENT MARKING DETAILS | 02-01-1999 |
| E-192 | PAVEMENT MARKING DETAILS | 10-12-2000 |
| E-193 | PAVEMENT MARKING DETAILS | 08-18-1995 |
| T-1 | TRAFFIC CONTROL GENERAL NOTES | 08-06-2012 |
| T-10 | CONSTRUCTION APPROACH SIGNING | 08-06-2012 |
| T-28 | CONSTRUCTION SIGN DETAILS | 08-06-2012 |
| T-29 | CONSTRUCTION SIGN DETAILS | 08-06-2012 |
| T-30 | CONSTRUCTION SIGN DETAILS | 08-06-2012 |
| T-31 | CONSTRUCTION SIGN DETAILS | 08-06-2012 |
| T-35 | CONSTRUCTION ZONE LONGITUDINAL DROP-OFFS | 08-06-2012 |
| T-45 | SQUARE TUBE SIGN POST AND ANCHOR | 01-02-2013 |

REFER TO THE 2009 MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) FOR REGULATORY AND WARNING SIGNS, with Revisions 1 and 2, DATED May 2012.

FOR VTRANS STANDARDS, REFER TO
https://outside.vermont.gov/agency/vtrans/external/CADD/WebFiles/Downloads/Standards/StandardList.htm

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Index And Standards

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BLS Bennington, LC
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Northside Drive Roundabout
VT 7A - Northside Drive Bennington, VT

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CT-01.02

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## MATERIAL TOLERANCES

| MATERIAL ITEM | THICKNESS TOLERANCE |
|---|---|
| PAVEMENT (TOTAL DEPTH) | +/- 1/4" |
| SUBBASE | +/- 1" |
| SAND BORROW | +/- 1" |

## VT ROUTE 7A (NORTHSIDE DRIVE)

1.5" BITUMINOUS CONCRETE PAVEMENT (TYPE IVS)
2.5" BITUMINOUS CONCRETE PAVEMENT (TYPE IIS)
2.5" BITUMINOUS CONCRETE PAVEMENT (TYPE IIS)
24" SUBBASE OF DENSE GRADED CRUSHED STONE
12" SAND BORROW

## EMMA STREET & PLAZA DRIVE

1.5" BITUMINOUS CONCRETE PAVEMENT (TYPE IVS)
2.5" BITUMINOUS CONCRETE PAVEMENT (TYPE IIS)
2.5" BITUMINOUS CONCRETE PAVEMENT (TYPE IIS)
24" SUBBASE OF DENSE GRADED CRUSHED STONE
12" SAND BORROW

## SEEDING FORMULA

SEE EPSC DETAILS SHEET CT-11.05 FOR THE URBAN SEEDING FORMULA

## GENERAL NOTES

1. TACK COAT: EMULSIFIED ASPHALT IS TO BE APPLIED AT THE RATE OF 0.025 GAL/SY BETWEEN SUCCESSIVE COURSES OF PAVEMENT OR AS DIRECTED BY THE ENGINEER.

2. SLOPE ROUNDING: ALL CUT SLOPES TO BE ROUNDED IN ACCORDANCE WITH STANDARD B-5.

3. ALL MATERIALS AND CONSTRUCTION PRACTICES SHALL CONFORM TO THE STATE OF VERMONT AGENCY OF TRANSPORTATION'S 2011 STANDARD SPECIFICATIONS FOR CONSTRUCTION AND IT'S LATEST REVISIONS.

4. SEE PLANS FOR LIMITS OF 5.0' PORTLAND CEMENT CONCRETE SIDEWALK.

5. CONTRACTOR TO NOTIFY DIG-SAFE (1-888-344-7233) BEFORE COMMENCING CONSTRUCTION TO VERIFY UTILITY LOCATIONS.

6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF THE EXISTING UTILITIES WITHIN AND ADJACENT TO THE LIMITS OF WORK. IN THE EVENT OF DAMAGE TO THESE SYSTEMS, THE REPAIRS OR REPLACEMENT SHALL BE COMPLETED AT THE CONTRACTOR'S EXPENSE AS APPROVED BY THE RESIDENT ENGINEER.

7. ANY DISCREPENCIES BETWEEN THESE DRAWINGS AND ACTUAL FIELD CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF THE RESIDENT ENGINEER BEFORE PROCEEDING WITH THE WORK.

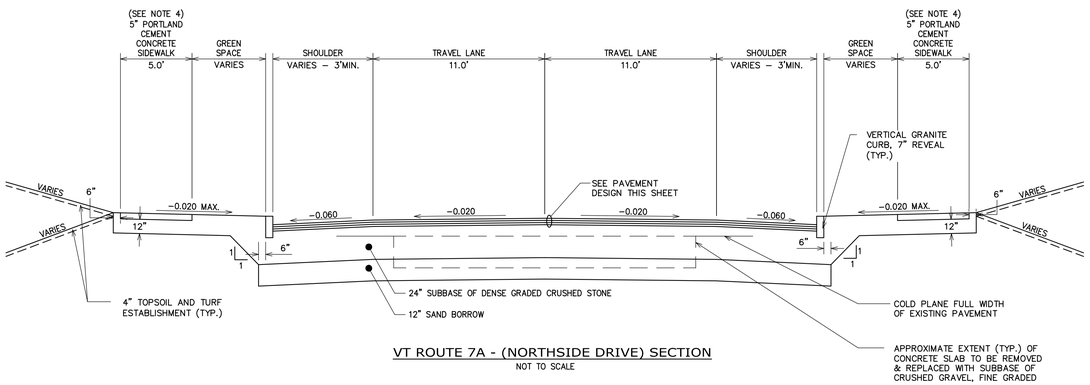
## PAVEMENT NOTES

1. COLD PLANING SHALL BE COMPLETED ACCORDING TO THE TYPICAL OR AS OTHERWISE NOTED ON THE PLANS. A FULL DEPTH BUTT JOINT SHALL BE CONSTRUCTED AT THE BEGINNING AND END OF THE PROJECT AND SIDE ROAD APPROACHES AS DENOTED ON THE PROJECT PLANS OR AS OTHERWISE DIRECTED BY THE ENGINEER.

2. EMULSIFIED ASPHALT TYPE CRS-1H OR RS-1H SHALL BE APPLIED AS A TACK COAT ON ALL EXISTING PAVEMENT SURFACES, AND BETWEEN ALL COURSES OF PAVEMENT (WHERE APPLICABLE), AT THE RATE OF 0.025 TO 0.040 GAL/SY OR AS DIRECTED BY THE ENGINEER.

3. EXCEPT WHERE CURB IS SHOWN, EDGES OF PAVEMENT SHALL BE BACKED UP TO FULL HEIGHT WITH AGGREGATE SHOULDER MATERIAL AS DIRECTED BY THE ENGINEER.

4. PAVED AND GRAVEL DRIVES SHALL RECEIVE A PAVED APRON OF 4' UNLESS OTHERWISE SHOWN ON PLANS OR AS DIRECTED BY THE ENGINEER. ANY AND ALL REQUIRED EXCAVATION AND ASSOCIATED DRIVE GRADING IN DRIVE AREAS SHALL BE AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.




VT ROUTE 7A - (NORTHSIDE DRIVE) SECTION
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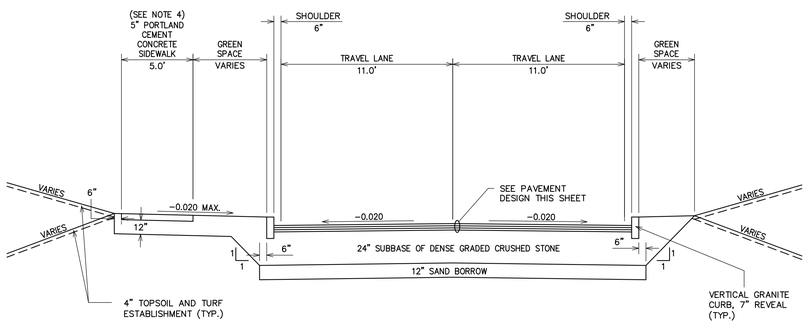


EMMA STREET SECTION
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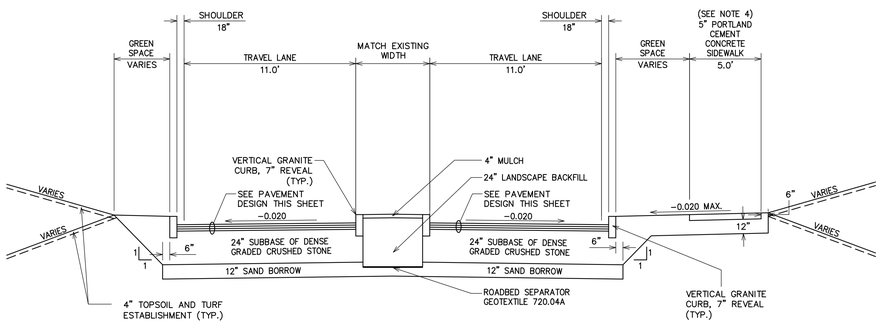


PLAZA DRIVE SECTION
NOT TO SCALE

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# Typical Sections

BLS Bennington, LC
Youngstown, OH
Northside Drive Roundabout
VT 7A - Northside Drive
Bennington, VT

CIVIL

CT-02.01


Q:\2003 Drawings\03112.4 Northside Drive\Current\CT-02.01 Typical Sections.dwg Plotted: 7/2/2015 9:33:26 AM

## MATERIAL TOLERANCES

| MATERIAL ITEM | THICKNESS TOLERANCE |
|---|---|
| PAVEMENT (TOTAL DEPTH) | +/- 1/4" |
| SUBBASE | +/- 1" |
| SAND BORROW | +/- 1" |

## ROUNDABOUT

1.5" BITUMINOUS CONCRETE PAVEMENT (TYPE IVS)
2.5" BITUMINOUS CONCRETE PAVEMENT (TYPE IIS)
2.5" BITUMINOUS CONCRETE PAVEMENT (TYPE IIS)
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12" SAND BORROW

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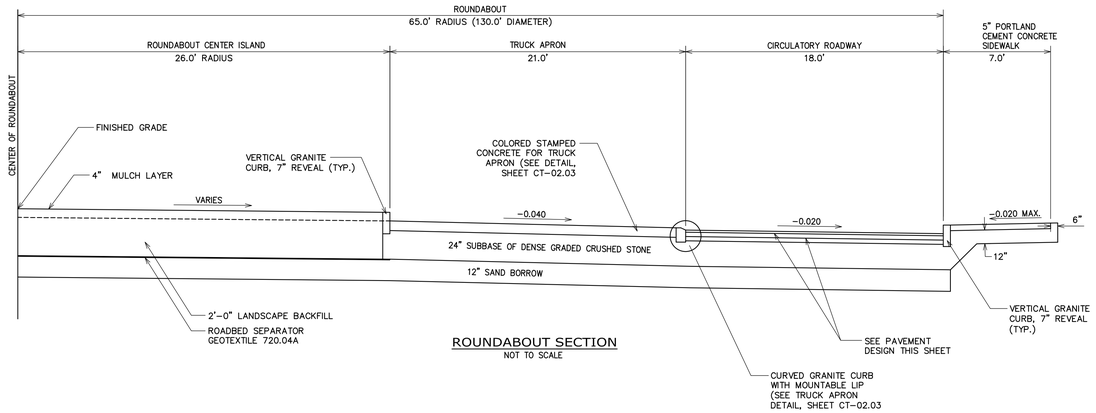
6. ANY DISCREPENCIES BETWEEN THESE DRAWINGS AND ACTUAL FIELD CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF THE TVTRANS ENGINEER BEFORE PROCEEDING WITH THE WORK.




ROUNDABOUT SECTION
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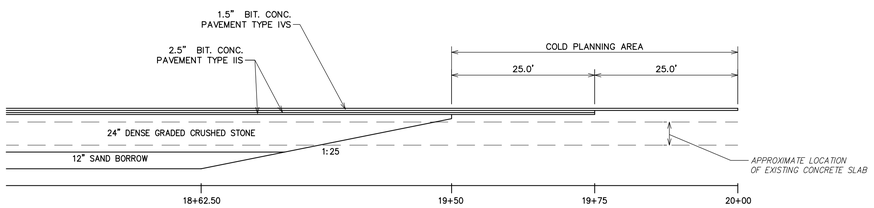


VT ROUTE 7A END APPROACH
MATERIAL TRANSITION DETAIL
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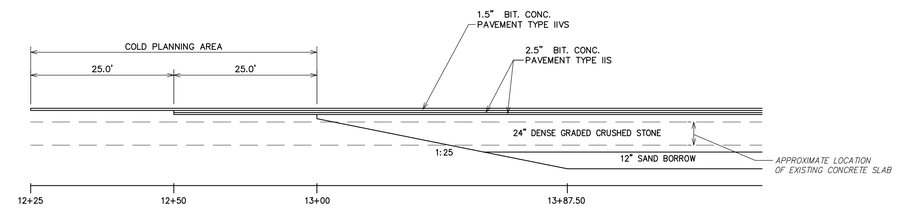


VT ROUTE 7A BEGIN APPROACH
MATERIAL TRANSITION DETAIL
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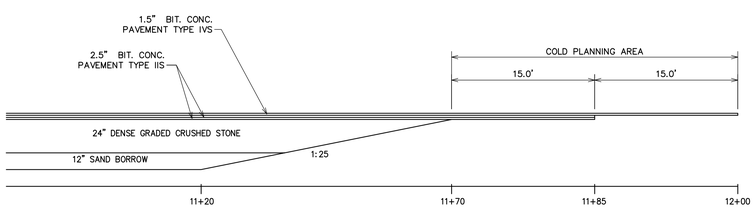


EMMA STREET END APPROACH
MATERIAL TRANSITION DETAIL
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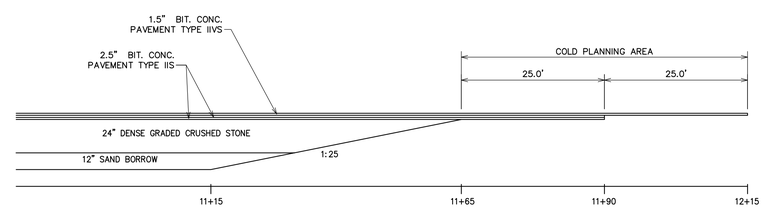


PLAZA DRIVE END APPROACH
MATERIAL TRANSITION DETAIL
NOT TO SCALE

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# Typical Sections

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BLS Bennington, LC
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Northside Drive Roundabout
VT 7A - Northside Drive
Bennington, VT

CIVIL
CT-02.02


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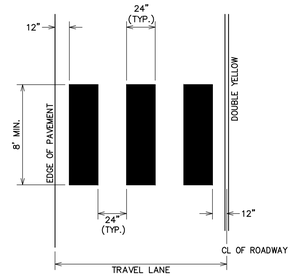
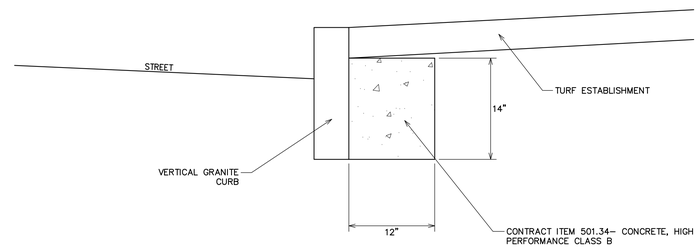
## MATERIAL TOLERANCES

| MATERIAL ITEM | THICKNESS TOLERANCE |
|---|---|
| PAVEMENT (TOTAL DEPTH) | +/- 1/4" |
| SUBBASE | +/- 1" |
| SAND BORROW | +/- 1" |

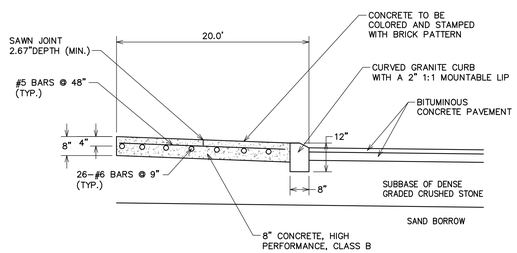



NOTES:
1. ADJUST SPACING (1-2 FEET) SO THAT MARKINGS AVOID WHEEL PATHS.

BLOCK PATTERN CROSSWALK DETAIL
NOT TO SCALE

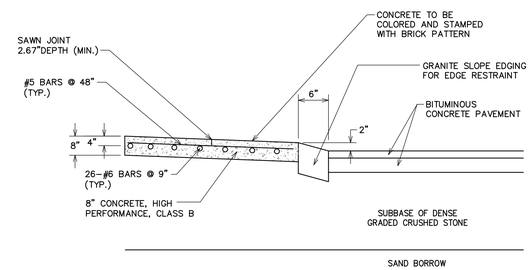



CONCRETE BEHIND CURB ON RADII DETAIL
NOT TO SCALE



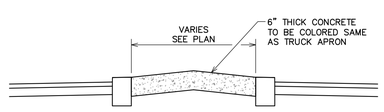

NOTES:
1. ALL STEEL SHALL BE EPOXY COATED.

TRUCK APRON DETAIL
NOT TO SCALE




NOTES:
1. ALL STEEL SHALL BE EPOXY COATED.

TRACKING APRON DETAIL
NOT TO SCALE




SPLITTER ISLAND DETAIL
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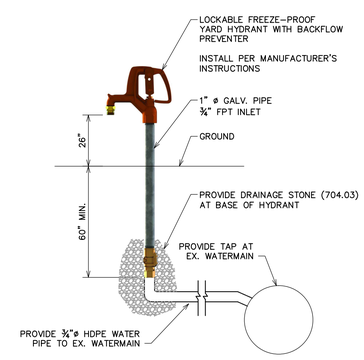


FREEZE-PROOF YARD HYDRANT
NOT TO SCALE

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# Miscellaneous Details

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CT-02.03


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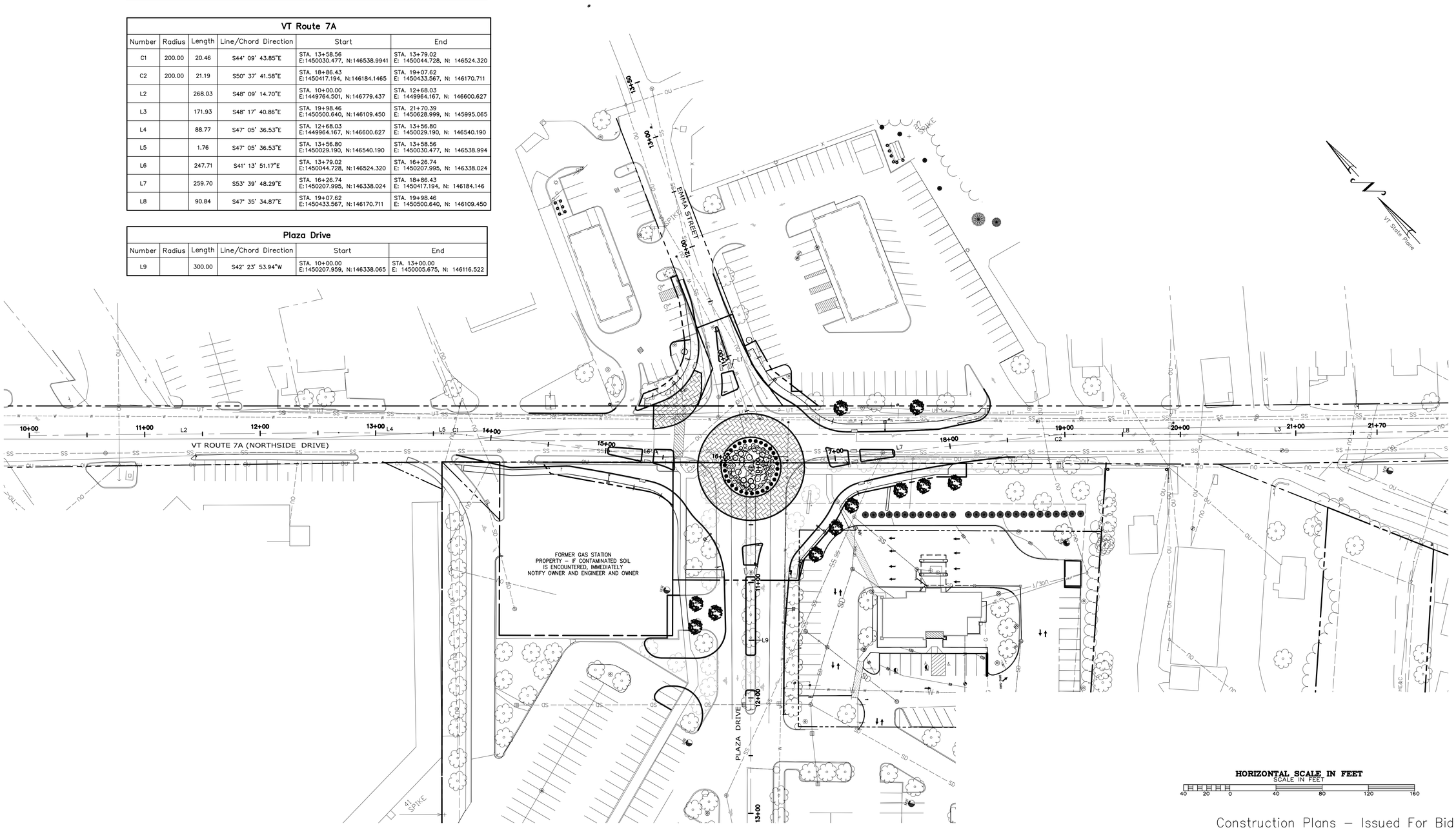
| Emma Street | | | | | |
|---|---|---|---|---|---|
| Number | Radius | Length | Line/Chord Direction | Start | End |
| L1 | | 350.00 | N23° 52' 28.15"E | STA. 10+00.00<br>E:1450218.062, N:146330.620 | STA. 13+50.00<br>E: 1450359.719, N: 146650.672 |

| VT Route 7A | | | | | |
|---|---|---|---|---|---|
| Number | Radius | Length | Line/Chord Direction | Start | End |
| C1 | 200.00 | 20.46 | S44° 09' 43.85"E | STA. 13+58.56<br>E:1450030.477, N:146538.9941 | STA. 13+79.02<br>E: 1450044.728, N: 146524.320 |
| C2 | 200.00 | 21.19 | S50° 37' 41.58"E | STA. 18+86.43<br>E:1450417.194, N:146184.1465 | STA. 19+07.62<br>E: 1450433.567, N: 146170.711 |
| L2 | | 268.03 | S48° 09' 14.70"E | STA. 10+00.00<br>E:1449764.501, N:146779.437 | STA. 12+68.03<br>E: 1449964.167, N: 146600.627 |
| L3 | | 171.93 | S48° 17' 40.86"E | STA. 19+98.46<br>E:1450500.640, N:146109.450 | STA. 21+70.39<br>E: 1450628.999, N: 145995.065 |
| L4 | | 88.77 | S47° 05' 36.53"E | STA. 12+68.03<br>E:1449964.167, N:146600.627 | STA. 13+56.80<br>E: 1450029.190, N: 146540.190 |
| L5 | | 1.76 | S47° 05' 36.53"E | STA. 13+56.80<br>E:1450029.190, N:146540.190 | STA. 13+58.56<br>E: 1450030.477, N: 146538.994 |
| L6 | | 247.71 | S41° 13' 51.17"E | STA. 13+79.02<br>E:1450044.728, N:146524.320 | STA. 16+26.74<br>E: 1450207.995, N: 146338.024 |
| L7 | | 259.70 | S53° 39' 48.29"E | STA. 16+26.74<br>E:1450207.995, N:146338.024 | STA. 18+86.43<br>E: 1450417.194, N: 146184.146 |
| L8 | | 90.84 | S47° 35' 34.87"E | STA. 19+07.62<br>E:1450433.567, N:146170.711 | STA. 19+98.46<br>E: 1450500.640, N: 146109.450 |

| Plaza Drive | | | | | |
|---|---|---|---|---|---|
| Number | Radius | Length | Line/Chord Direction | Start | End |
| L9 | | 300.00 | S42° 23' 53.94"W | STA. 10+00.00<br>E:1450207.959, N:146338.065 | STA. 13+00.00<br>E: 1450005.675, N: 146116.522 |




Construction Plans – Issued For Bid

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DATE: Feb. 13, 2014
DESIGN: DSW
DRAWN: DSW
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# Layout Plan

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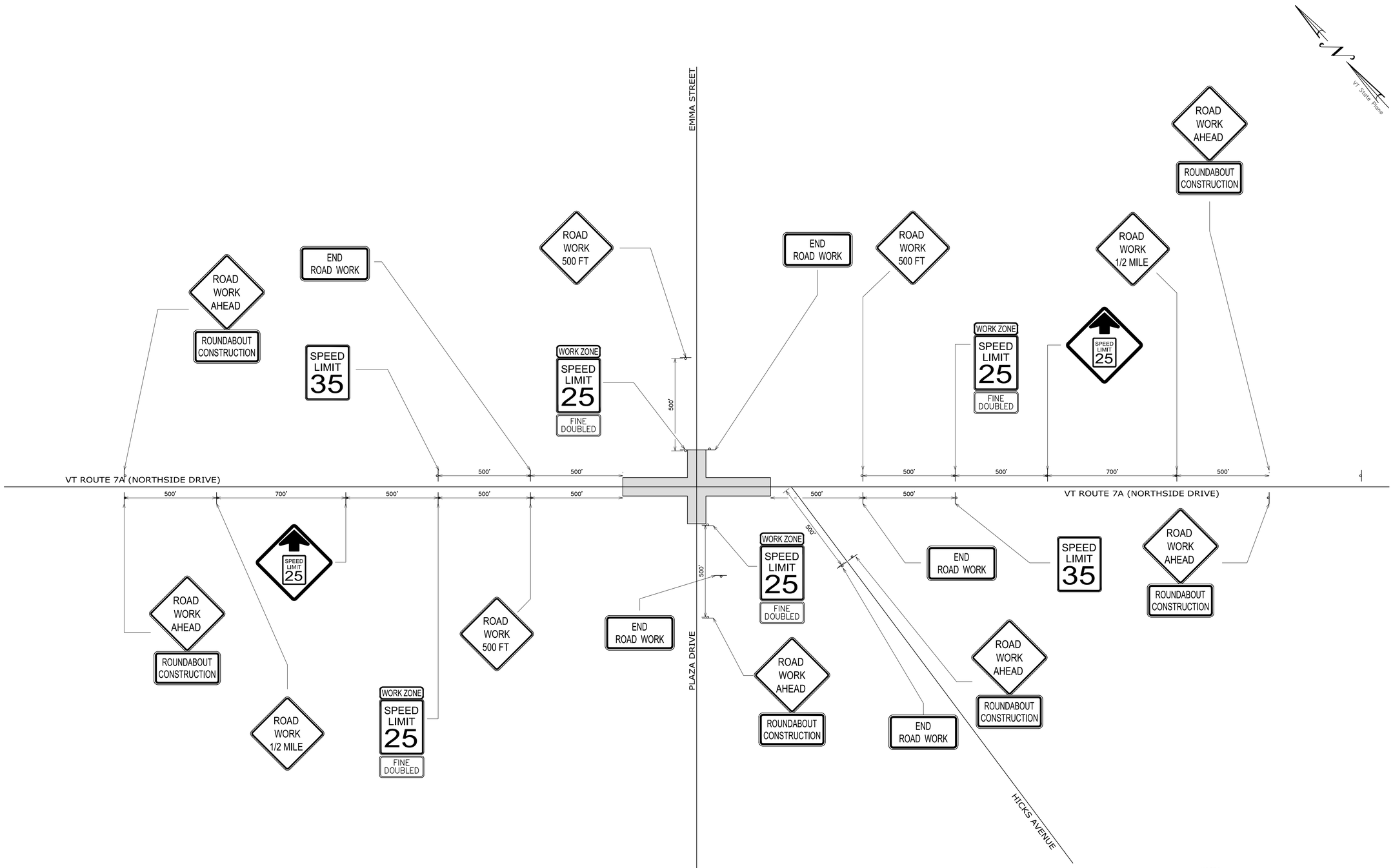
BLS Bennington, LC
Youngstown, OH
Northside Drive Roundabout
VT 7A - Northside Drive
Bennington, VT

CIVIL

CT-03.01

Q:\2003 Drawings\03112-4 Northside Drive\Current\CT-03.01 Layout Plan.dwg Plotted: 7/2/2015 9:34:00 AM




NOTES:
1. ALL SIGNS SHALL BE INSTALLED SO THAT THEY ARE NOT BLOCKED TO THE TRAVELING TRAFFIC AND THAT IT DOES NOT INTERFERE WITH CORNER SIGHT DISTANCE.
2. THE CONTRACTOR SHALL PROVIDE FOUR (4) PORTABLE CHANGEABLE MESSAGE SIGNS FOR THE DURATION OF THE PROJECT. THE LOCATION AND MESSAGE CONTENT SHALL BE DETERMINED IN THE FIELD BY THE RESIDENT ENGINEER.
3. ALL PERMANENT SIGNS THAT CONFLICT WITH TEMPORARY TRAFFIC CONTROL SHALL BE COMPLETELY COVERED DURING CONSTRUCTION.

CONSTRUCTION APPROACH SIGNING
CONCEPT DRAWING – NO SCALE
SEE STD E-100 FOR SIGN PLACEMENT

Construction Plans – Issued For Bid

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# Construction Approach Signing

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VT 7A - Northside Drive
Bennington, VT

CIVIL

CT-04.01

Q:\2003 Drawings\03112.4 Northside Drive\Current\CT-04.01 Construction Approach Signing.dwg Plotted: 7/2/2015 9:34:07 AM

TRAFFIC CONTROL GENERAL NOTES:

1. THE TRAFFIC CONTROL PLAN IS SUGGESTED FOR CONSTRUCTION PURPOSES. THE CONTRACTOR SHALL SUBMIT A SEPARATE TRAFFIC CONTROL PLAN TO THE RESIDENT ENGINEER FOR REVIEW AND ACCEPTANCE.

2. REFER TO T–SERIES VERMONT STATE STANDARDS AND THE LATEST VERSION OF THE MUTCD FOR DETAILED INFORMATION REGARDING CHANNELIZATION DEVICES, TAPER LENGTHS, BARRICADES, DETOURS, LONGITUDINAL DROP–OFFS AND MISCELLANEOUS TRAFFIC CONTROL DETAILS, IF APPLICABLE. THE MUTCD. IN THE EVENT OF A CONFLICT, THE MUTCD TAKES PRECEDENCE OVER THE STATE STANDARDS.

3. EXISTING SIGNS SHALL BE COMPLETELY COVERED OR REMOVED WHEN THEY CONFLICT WITH CONSTRUCTION TRAFFIC OPERATIONS.

4. THE POSTED SPEED LIMIT FOR ALL PHASES OF WORK SHALL BE 25 M.P.H. CONTRACTOR TO SUBMIT REQUEST TO VTRANS FOR TEMPORARY SPEED CERTIFICATE A MINIMUM OF 7 DAYS PRIOR TO START OF CONSTRUCTION.

5. MAINTAIN ACCESS TO ALL DRIVEWAYS DURING CONSTRUCTION.

6. FURNISH, INSTALL, MAINTAIN, RELOCATE AND REMOVE REFLECTORIZED DRUMS, CONSTRUCTION SIGNING FOR TRAFFIC SHIFTS AND PEDESTRIAN BARRICADES AS REQUIRED TO COMPLY WITH THE TRAFFIC CONTROL PLAN.

7. FURNISH AND PERFORM ORIGINAL INSTALLATION AND FINAL REMOVAL FROM THE PROJECT OF TEMPORARY TRAFFIC BARRIERS.

8. PROVIDE FOUR (4) PORTABLE CHANGEABLE MESSAGE SIGNS FOR THE DURATION OF THE PROJECT. THE LOCATION AND MESSAGE CONTENT SHALL BE DETERMINED IN THE FIELD BY THE RESIDENT ENGINEER. MESSAGES SHALL CONSIST OF A MAXIMUM OF TWO PHRASES OF 3 LINES WITH 8 CHARACTERS.

9. MAINTAIN PEDESTRIAN ACCESS TO COMMERCIAL AND RESIDENTIAL PROPERTIES DURING BUSINESS HOURS. PEDESTRIAN ACCESS AND STREET CROSSINGS, BOTH TEMPORARY AND PERMANENT, SHALL MEET ALL APPLICABLE AMERICANS WITH DISABILITIES ACT (ADA) AND MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), 2009 EDITION, REQUIREMENTS. POSITIVE GUIDANCE SHALL BE PROVIDED TO SEPARATE PEDESTRIAN ACCESS FROM THE WORK AREA AND VERTICAL GRADE CHANGES. ACCESS TO PROPERTIES MAY BE RESTRICTED FOR SHORT DURATIONS OF NOT MORE THAN TWO HOURS WITH PERMISSION AND PRIOR NOTIFICATION OF THE BUILDING OWNER DURING BUSINESS HOURS. COORDINATE MAJOR WORK ADJACENT TO COMMERCIAL AND RESIDENTIAL ACCESS AREAS WITH THE OWNER AND TOWN AT LEAST ONE WEEK PRIOR TO STARTING THE WORK IN THE AREA. DO NOT STORE MATERIALS ON SIDEWALKS; DO NOT PLACE EQUIPMENT OR OTHER HAZARDS IN CONFLICT WITH PEDESTRIANS.

10. SPECIAL CARE SHALL BE TAKEN TO PROVIDE ACCESS THROUGH THE WORK ZONES FOR EMERGENCY VEHICLES. COORDINATE WITH BOTH POLICE AND FIRE DEPARTMENTS TO DETERMINE THEIR MINIMUM ACCESS REQUIREMENTS BEFORE PROCEEDING TO THE NEXT PHASE OF CONSTRUCTION. ENSURE THAT ACCESS IS AVAILABLE TO ALL PROPERTIES AT ALL TIMES FOR EMERGENCY VEHICLES.

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Traffic Control Notes

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VT 7A - Northside Drive Bennington, VT

CIVIL

CT-04.02

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POTENTIAL CONSTRUCTION ACTIVITIES ASSOCIATED WITH TRAFFIC CONTROL, PHASE 1

1. PRIOR TO THE COMMENCEMENT OF ANY WORK OR THE PLACEMENT OF EQUIPMENT ON THE ROADWAY PROVIDE ADVANCED WARNING SIGNS IN ACCORDANCE WITH THE CONSTRUCTION SIGNING APPROACH PLAN AND THE LATEST EDITION OF THE MUTCD.

2. INSTALL AND MAINTAIN ANY EROSION CONTROL MEASURES IN ACCORDANCE WITH THE EROSION CONTROL PLANS AND DETAILS IN ADDITION TO THE VERMONT D.E.C'S "LOW RISK SITE HANDBOOK FOR EROSION PREVENTION AND SEDIMENT CONTROL."

3. INSTALL ALL WARNING SIGNAGE, REFLECTORIZED DRUMS, TRAFFIC BARRIER, AND ANY OTHER TRAFFIC CONTROL DEVICES PER ACCEPTED TRAFFIC CONTROL PLAN OR AS DIRECTED BY THE RESIDENT ENGINEER.

4. INSTALL STORMWATER MANAGEMENT AND DRAINAGE SYSTEMS AS SHOWN ON PLAN.

5. REINFORCE TRAVELED PORTIONS OF THE WORKING AREA WITH SURE-PAK OR AN APPROVED EQUIVALENT. INSTALLATION OF TEMPORARY PAVEMENT MARKINGS ON GRAVEL WORKING SURFACE WILL BE ALLOWED.

6. COMPLETE CONSTRUCTION OF EAST SIDE OF PLAZA DRIVE AS SHOWN ON PLANS.

7. COMPLETE CONSTRUCTION OF SOUTH SIDE OF VT ROUTE 7A AS SHOWN ON PLANS.

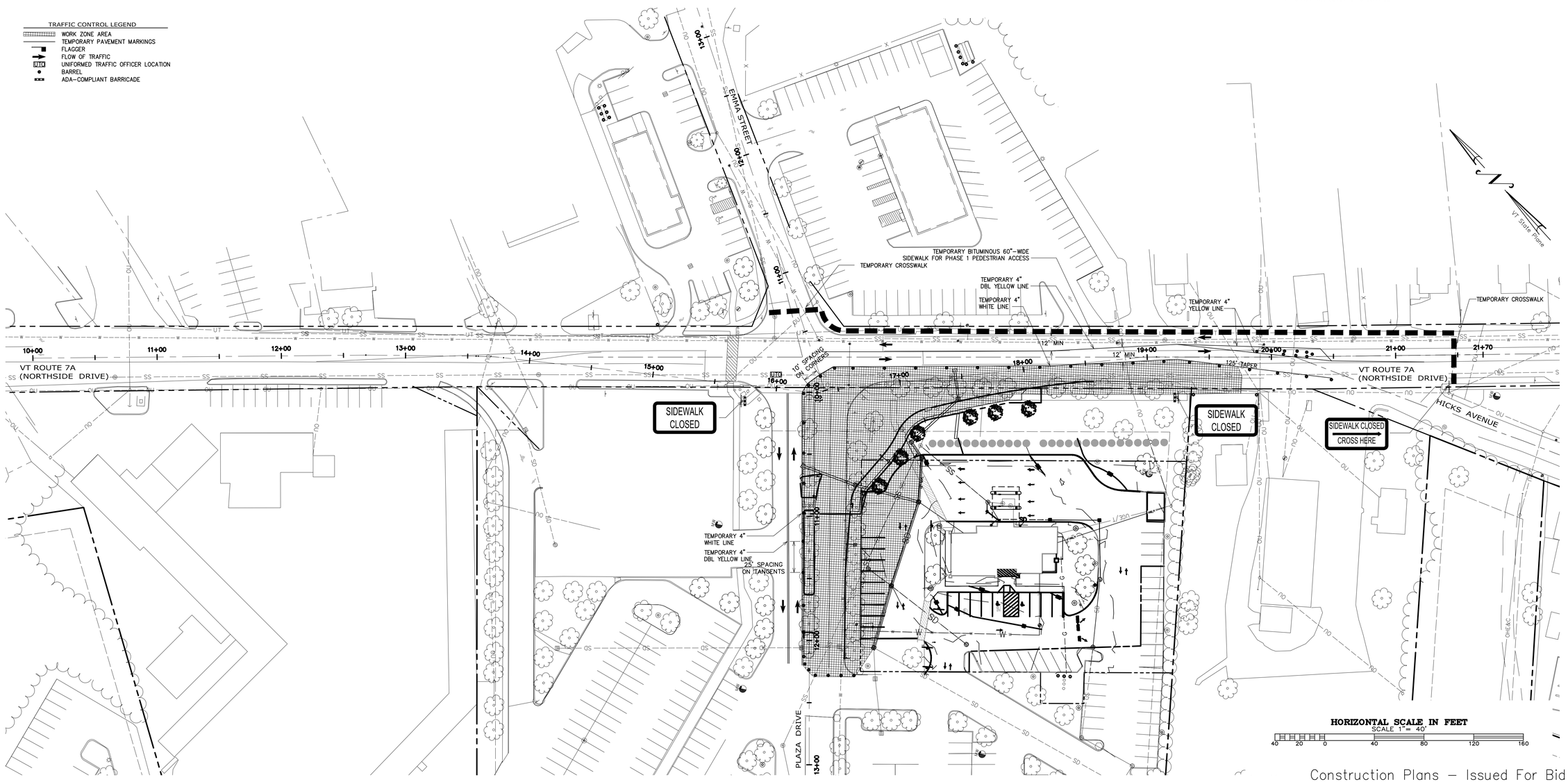
8. DURING THIS PHASE, IN WORK ZONE AREAS WHERE TRAFFIC WILL BE PRESENT, THE CONTRACTOR MAY TEMPORARILY REDUCE THE TRAVEL WAY TO ONE 14-FOOT LANE DURING CONSTRUCTION AND UNDER FLAGGER'S OR UNIFORMED TRAFFIC OFFICER'S CONTROL AT ALL TIMES TO ALLOW FOR COMPLETION OF WORK. RESTORE TRAVEL WAYS TO TWO-WAY TRAFFIC PRIOR TO THE END OF THE CONSTRUCTION DAY.

9. A TEMPORARY BASE COURSE OF PAVEMENT SHALL BE APPLIED PRIOR TO THE CONCLUSION OF PHASE 1 WORK.

NOTES:
FOR TRAFFIC CONTROL GENERAL NOTES SEE TRAFFIC CONTROL GENERAL NOTES SHEET.

TRAFFIC CONTROL LEGEND

- WORK ZONE AREA
- TEMPORARY PAVEMENT MARKINGS
- FLAGGER
- FLOW OF TRAFFIC
- UTC UNIFORMED TRAFFIC OFFICER LOCATION
- BARREL
- ADA-COMPLIANT BARRICADE

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# Traffic Control Plan - Phase 1

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Youngstown, OH
Northside Drive Roundabout
VT 7A - Northside Drive
Bennington, VT

CIVIL

CT-04.03

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POTENTIAL CONSTRUCTION ACTIVITIES ASSOCIATED WITH TRAFFIC CONTROL, PHASE 2

1. PRIOR TO THE COMMENCEMENT OF ANY WORK OR THE PLACEMENT OF EQUIPMENT ON THE ROADWAY, PROVIDE ADVANCED WARNING SIGNS IN ACCORDANCE WITH THE CONSTRUCTION SIGNING APPROACH PLAN AND THE LATEST VERSION OF THE M.U.T.C.D.

2. INSTALL AND MAINTAIN ANY EROSION CONTROL MEASURES IN ACCORDANCE WITH THE EROSION CONTROL PLANS AND DETAILS IN ADDITION TO THE VERMONT DEC'S "LOW RISK SITE HANDBOOK FOR EROSION PREVENTION AND SEDIMENT CONTROL."

3. INSTALL ALL WARNING SIGNAGE, REFLECTORIZED DRUMS, TRAFFIC BARRIER, AND ANY OTHER TRAFFIC CONTROL DEVICES PER ACCEPTED TRAFFIC CONTROL PLAN OR AS DIRECTED BY THE RESIDENT ENGINEER.

4. REINFORCE GRAVEL TRAVELED PORTIONS OF THE WORKING AREA WITH SURE-PAK OR AN APPROVED EQUIVALENT. TEMPORARY PAVEMENT MARKINGS ON THE GRAVEL WORKING SURFACE WILL BE ALLOWED.

5. COMPLETE CONSTRUCTION OF SOUTH SIDE OF VT ROUTE 7A AS SHOWN ON PLANS.

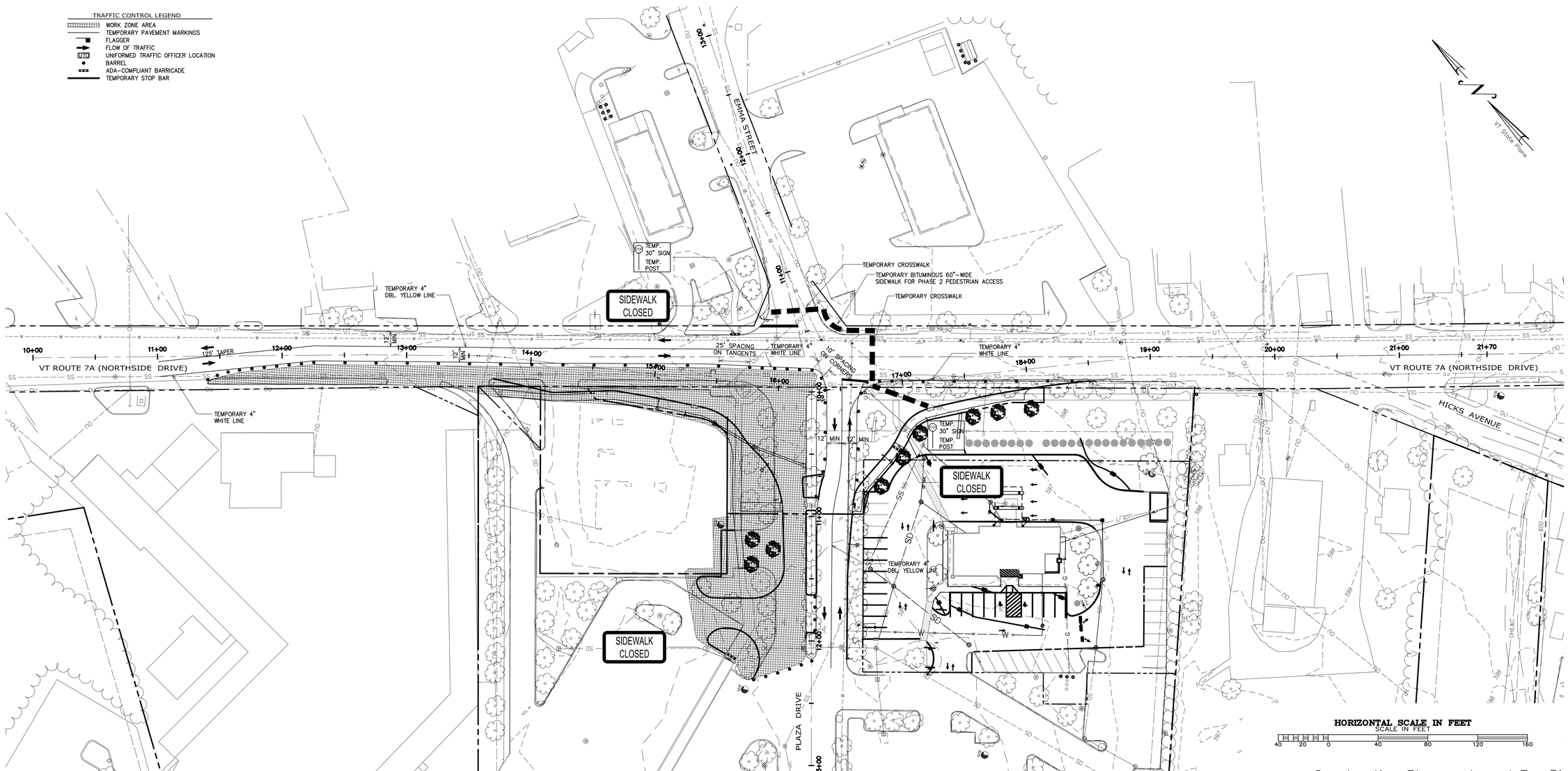
6. COMPLETE CONSTRUCTION OF WEST SIDE OF PLAZA DRIVE AS SHOWN ON PLANS.

7. A TEMPORARY BASE COURSE OF PAVEMENT SHALL BE APPLIED PRIOR TO THE CONCLUSION OF PHASE 2 WORK.

NOTES:
FOR TRAFFIC CONTROL GENERAL NOTES SEE TRAFFIC CONTROL GENERAL NOTES SHEET.

TRAFFIC CONTROL LEGEND

- WORK ZONE AREA
- TEMPORARY PAVEMENT MARKINGS
- FLAGGER
- FLOW OF TRAFFIC
- UTO UNIFORMED TRAFFIC OFFICER LOCATION
- BARREL
- ADA-COMPLIANT BARRICADE
- TEMPORARY STOP BAR

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# Traffic Control Plan - Phase 2

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Youngstown, OH

Northside Drive Roundabout

VT 7A - Northside Drive
Bennington, VT

CIVIL

CT-04.04

POTENTIAL CONSTRUCTION ACTIVITIES ASSOCIATED WITH TRAFFIC CONTROL, PHASE 3

1. PRIOR TO THE COMMENCEMENT OF ANY WORK OR THE PLACEMENT OF EQUIPMENT ON THE ROADWAY, PROVIDE ADVANCED WARNING SIGNS IN ACCORDANCE WITH THE CONSTRUCTION SIGNING APPROACH PLAN AND THE LATEST VERSION OF THE MUTCD.

2. INSTALL AND MAINTAIN ANY EROSION CONTROL MEASURES IN ACCORDANCE WITH THE EROSION CONTROL PLANS AND DETAILS IN ADDITION TO THE VERMONT DEC'S "LOW RISK SITE HANDBOOK FOR EROSION PREVENTION AND SEDIMENT CONTROL."

3. INSTALL ALL WARNING SIGNAGE, REFLECTORIZED DRUMS, TRAFFIC BARRIER, AND ANY OTHER TRAFFIC CONTROL DEVICES PER ACCEPTED TRAFFIC CONTROL PLAN OR AS DIRECTED BY THE RESIDENT ENGINEER.

4. DURING THIS PHASE, IN WORK ZONE AREAS WHERE TRAFFIC WILL BE PRESENT, THE CONTRACTOR MAY TEMPORARILY REDUCE THE TRAVEL WAY TO ONE 14-FOOT LANE DURING CONSTRUCTION AND UNDER FLAGGER'S OR UNIFORMED TRAFFIC OFFICER'S CONTROL AT ALL TIMES TO ALLOW FOR COMPLETION OF WORK. RESTORE TRAVEL WAYS TO TWO-WAY TRAFFIC PRIOR TO THE END OF THE CONSTRUCTION DAY.

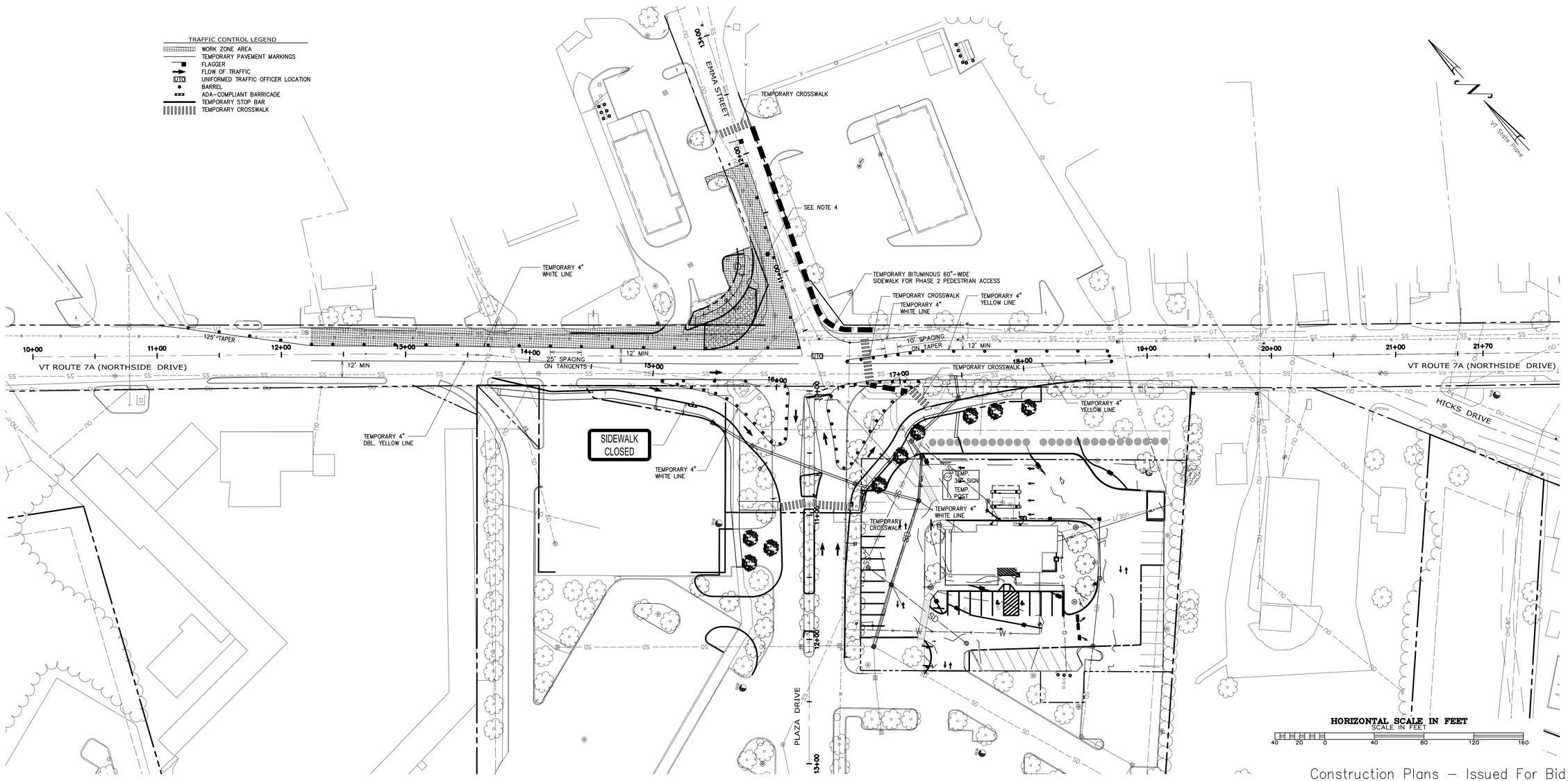
5. REINFORCE GRAVEL TRAVELED PORTIONS OF THE WORKING AREA WITH SURE-PAK OR AN APPROVED EQUIVALENT. TEMPORARY PAVEMENT MARKINGS ON THE GRAVEL WORKING SURFACE WILL BE ALLOWED.

6. COMPLETE CONSTRUCTION OF SOUTH SIDE OF VT ROUTE 7A AS SHOWN ON PLANS.

7. COMPLETE CONSTRUCTION OF WEST SIDE OF PLAZA DRIVE AS SHOWN ON PLANS.

8. A TEMPORARY BASE COURSE OF PAVEMENT SHALL BE APPLIED PRIOR TO THE CONCLUSION OF PHASE 3 WORK.

NOTES:
FOR TRAFFIC CONTROL GENERAL NOTES SEE TRAFFIC CONTROL GENERAL NOTES SHEET.

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# Traffic Control Plan - Phase 3

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Youngstown, OH
Northside Drive Roundabout
VT 7A - Northside Drive
Bennington, VT

CIVIL

CT-04.05

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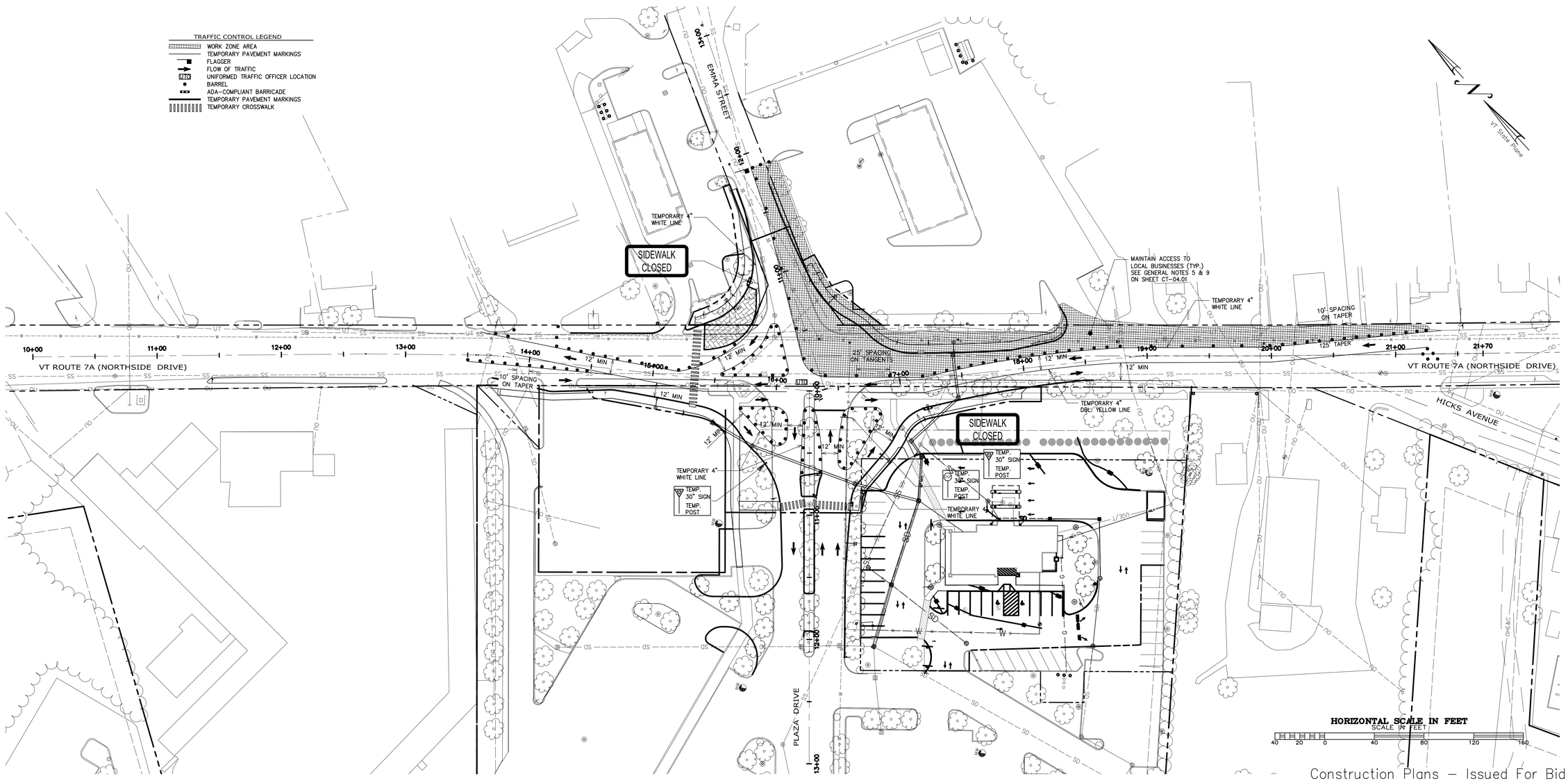
## POTENTIAL CONSTRUCTION ACTIVITIES ASSOCIATED WITH TRAFFIC CONTROL, PHASE 4

1. PRIOR TO THE COMMENCEMENT OF ANY WORK OR THE PLACEMENT OF EQUIPMENT ON THE ROADWAY, PROVIDE ADVANCED WARNING SIGNS IN ACCORDANCE WITH THE CONSTRUCTION SIGNING APPROACH PLAN AND THE LATEST VERSION OF THE M.U.T.C.D.
2. INSTALL AND MAINTAIN ANY EROSION CONTROL MEASURES IN ACCORDANCE WITH THE EROSION CONTROL PLANS AND DETAILS IN ADDITION TO THE VERMONT D.E.C'S "LOW RISK SITE HANDBOOK FOR EROSION PREVENTION AND SEDIMENT CONTROL."
3. INSTALL ALL WARNING SIGNAGE, REFLECTORIZED DRUMS, TRAFFIC BARRIER, AND ANY OTHER TRAFFIC CONTROL DEVICES PER ACCEPTED TRAFFIC CONTROL PLAN OR AS DIRECTED BY THE RESIDENT ENGINEER.
4. REINFORCE GRAVEL TRAVELED PORTIONS OF THE WORKING AREA WITH SURE-PAK OR AN APPROVED EQUIVALENT. TEMPORARY PAVEMENT MARKINGS ON THE GRAVEL WORKING SURFACE WILL BE ALLOWED.
5. COMPLETE CONSTRUCTION OF NORTH SIDE OF VT ROUTE 7A AS SHOWN ON PLANS.
6. COMPLETE CONSTRUCTION OF EAST SIDE OF EMMA STREET AS SHOWN ON PLANS.
7. A TEMPORARY BASE COURSE OF PAVEMENT SHALL BE APPLIED PRIOR TO THE CONCLUSION OF PHASE 4 WORK.

NOTES:
FOR TRAFFIC CONTROL GENERAL NOTES SEE TRAFFIC CONTROL GENERAL NOTES SHEET.

TRAFFIC CONTROL LEGEND

- WORK ZONE AREA
- TEMPORARY PAVEMENT MARKINGS
- FLAGGER
- FLOW OF TRAFFIC
- UTC UNIFORMED TRAFFIC OFFICER LOCATION
- BARREL
- ADA-COMPLIANT BARRICADE
- TEMPORARY PAVEMENT MARKINGS
- TEMPORARY CROSSWALK

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# Traffic Control Plan - Phase 4

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Northside Drive Roundabout
VT 7A - Northside Drive
Bennington, VT

CIVIL
CT-04.06

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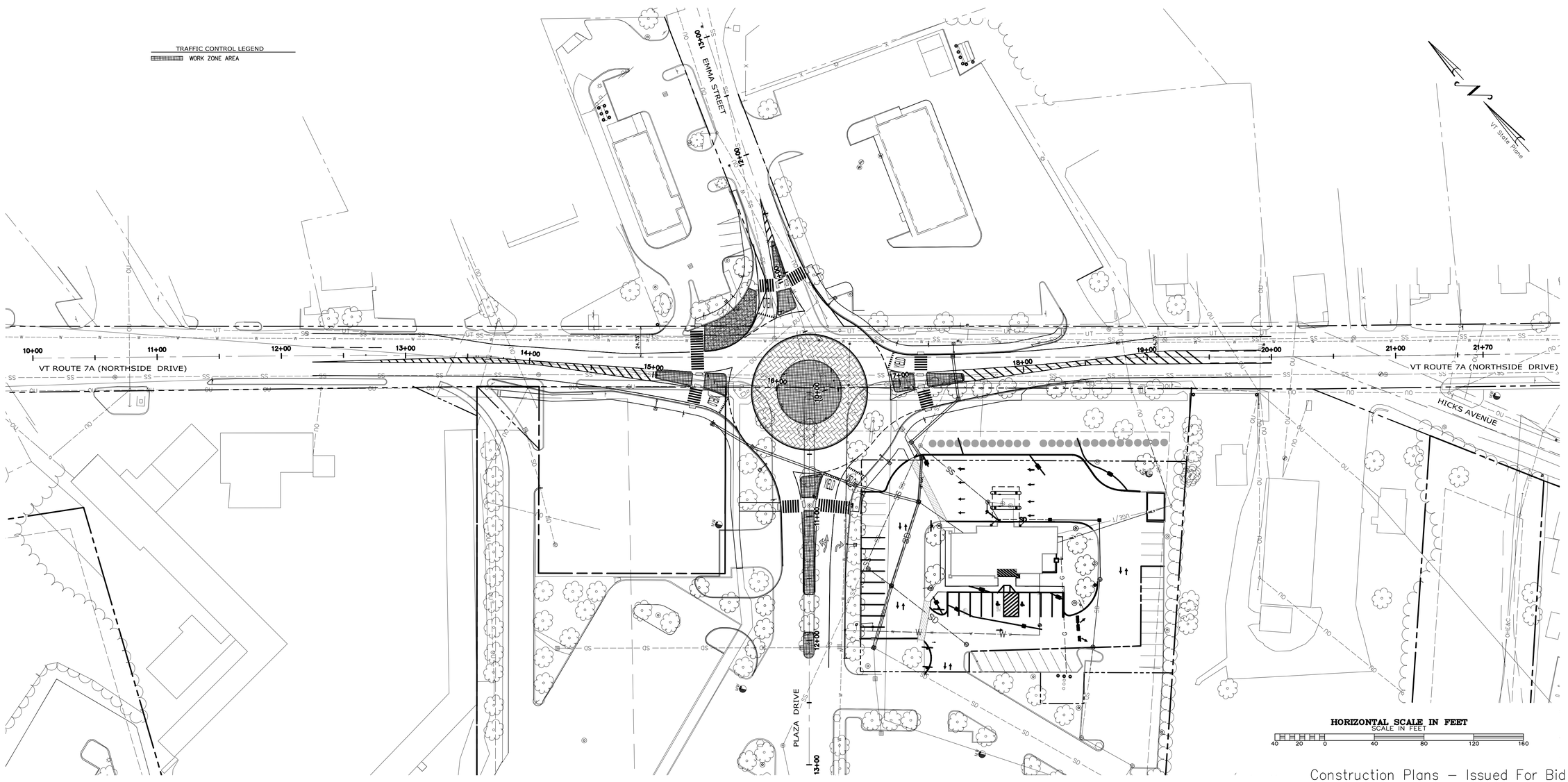
## POTENTIAL CONSTRUCTION ACTIVITIES ASSOCIATED WITH TRAFFIC CONTROL, PHASE 5

1. PRIOR TO THE COMMENCEMENT OF ANY WORK OR THE PLACEMENT OF EQUIPMENT ON THE ROADWAY PROVIDE ADVANCED WARNING SIGNS IN ACCORDANCE WITH THE CONSTRUCTION SIGNING APPROACH PLAN AND THE LATEST VERSION OF THE M.U.T.C.D.
2. INSTALL AND MAINTAIN ANY EROSION CONTROL MEASURES IN ACCORDANCE WITH THE EROSION CONTROL PLANS AND DETAILS IN ADDITION TO THE VERMONT D.E.C'S "LOW RISK SITE HANDBOOK FOR EROSION PREVENTION AND SEDIMENT CONTROL".
3. INSTALL ALL WARNING SIGNAGE, REFLECTORIZED DRUMS, TRAFFIC BARRIER, AND ANY OTHER TRAFFIC CONTROL DEVICES PER ACCEPTED TRAFFIC CONTROL PLAN OR AS DIRECTED BY THE RESIDENT ENGINEER.
4. COMPLETE CONSTRUCTION OF CENTRAL ISLAND AS SHOWN ON PLANS.
5. COMPLETE CONSTRUCTION OF TRUCK APRON AND TRACKING APRON AS SHOWN ON PLANS.
6. COMPLETE CONSTRUCTION OF SPLITTER ISLANDS.
7. COMPLETE ALL PAVING OPERATIONS OF ALL TRAVELED PORTIONS OF THE PROJECT TO FINAL ELEVATIONS.
8. COMPLETE ALL FINAL GRADING, DRAINAGE, LIGHTING AND LANDSCAPING WITHIN THE PROJECT LIMITS IN ACCORDANCE WITH THE APPLICABLE PLANS.
9. INSTALL ALL RAISED CROSSWALKS, PERMANENT SIGNING, AND RECESSED AND NON-RECESSED DURABLE PAVEMENT MARKINGS IN ACCORDANCE WITH THE SIGNING AND PAVEMENT MARKINGS PLAN.

NOTES:
FOR TRAFFIC CONTROL GENERAL NOTES SEE TRAFFIC CONTROL GENERAL NOTES SHEET.

TRAFFIC CONTROL LEGEND
WORK ZONE AREA

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PROJECT: 03112.4
DATE: Feb. 13, 2014
DESIGN: DSW
DRAWN: DSW
CHECKED: PHC
APPROVED: PHC


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# Traffic Control Plan - Phase 5

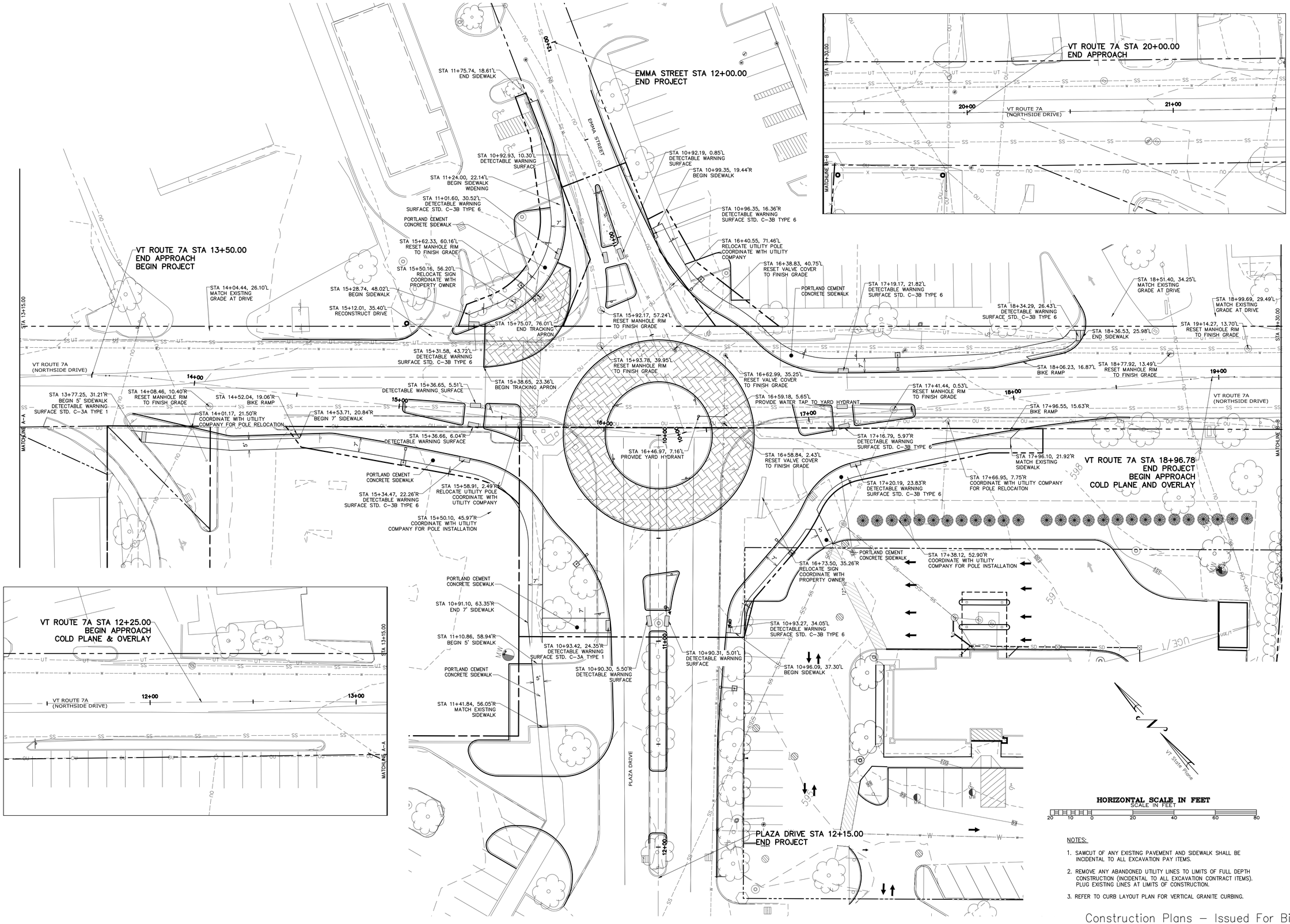
REVISIONS:
2015-06-30: REVISIONS PER UPDATED TELEPHONE INFORMATION

BLS Bennington, LC
Youngstown, OH
Northside Drive Roundabout
VT 7A - Northside Drive
Bennington, VT

CIVIL

CT-04.07

Q:\2003 Drawings\03112.4 Northside Drive\Current\CT-04.07 Traffic Control Plan.dwg Plotted: 7/2/2015 9:36:25 AM




NOTES:

1. SAWCUT OF ANY EXISTING PAVEMENT AND SIDEWALK SHALL BE INCIDENTAL TO ALL EXCAVATION PAY ITEMS.
2. REMOVE ANY ABANDONED UTILITY LINES TO LIMITS OF FULL DEPTH CONSTRUCTION (INCIDENTAL TO ALL EXCAVATION CONTRACT ITEMS). PLUG EXISTING LINES AT LIMITS OF CONSTRUCTION.
3. REFER TO CURB LAYOUT PLAN FOR VERTICAL GRANITE CURBING.

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# General Plan

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Northside Drive Roundabout
VT 7A - Northside Drive
Bennington, VT

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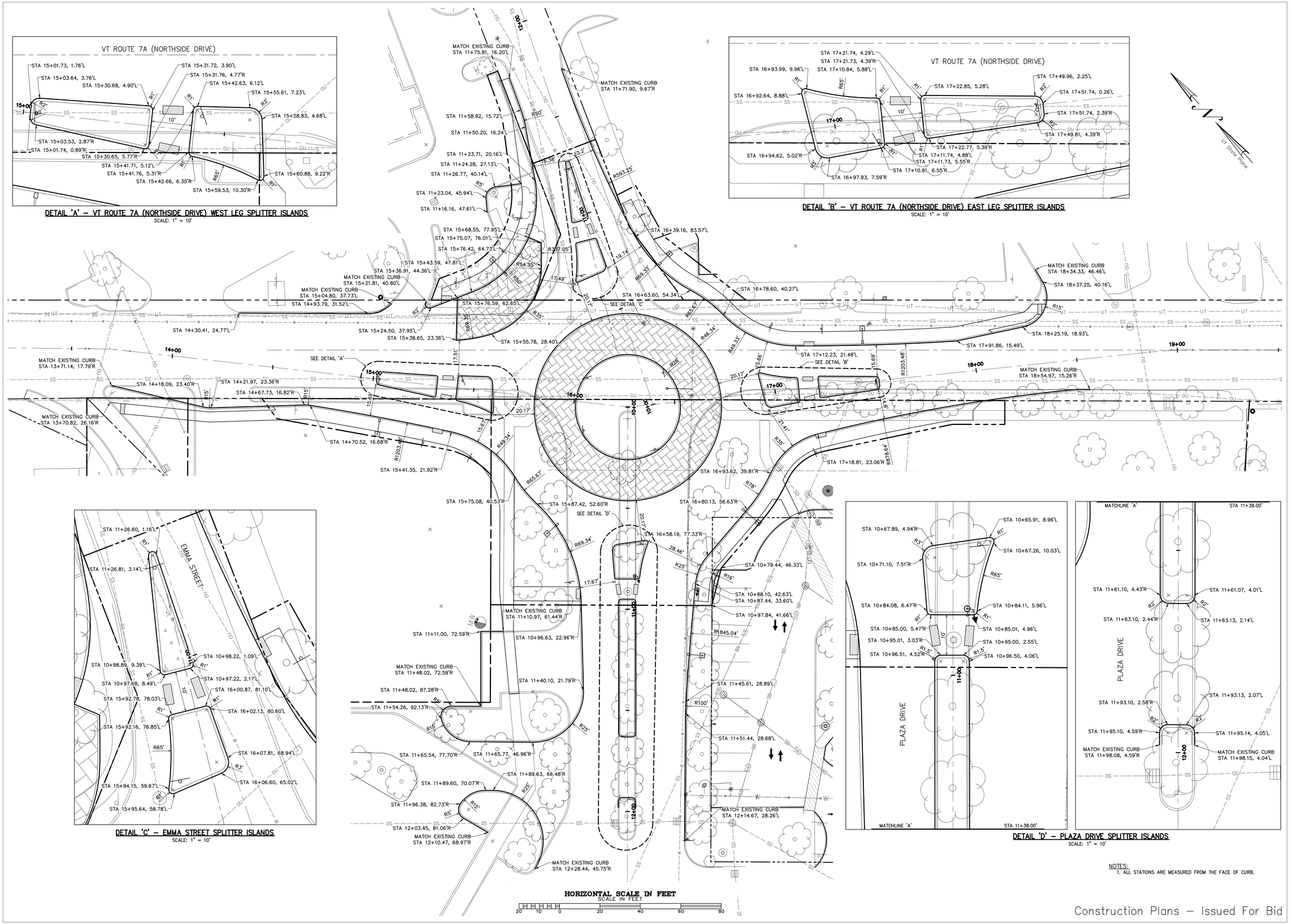
CT-05.01

Q:\2003 Drawings\03112-4 Northside Drive\Current\CT-05.01 General Plan.dwg Plotted: 7/2/2015 9:37:00 AM

DETAIL 'A' – VT ROUTE 7A (NORTHSIDE DRIVE) WEST LEG SPLITTER ISLANDS
SCALE: 1" = 10'




DETAIL 'B' – VT ROUTE 7A (NORTHSIDE DRIVE) EAST LEG SPLITTER ISLANDS
SCALE: 1" = 10'







DETAIL 'C' – EMMA STREET SPLITTER ISLANDS
SCALE: 1" = 10'







DETAIL 'D' – PLAZA DRIVE SPLITTER ISLANDS
SCALE: 1" = 10'

NOTES:
1. ALL STATIONS ARE MEASURED FROM THE FACE OF CURB.

HORIZONTAL SCALE IN FEET
SCALE IN FEET
20 10 0 20 40 60 80

Construction Plans – Issued For Bid

PROJECT: 03112.4
DATE: Feb. 13, 2014
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APPROVED: PHC


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# Curb Layout Plan

REVISIONS:
2015-06-30: REVISIONS PER UPDATED TELEPHONE INFORMATION

BLS Bennington, LC
Youngstown, OH
Northside Drive Roundabout
VT 7A - Northside Drive
Bennington, VT

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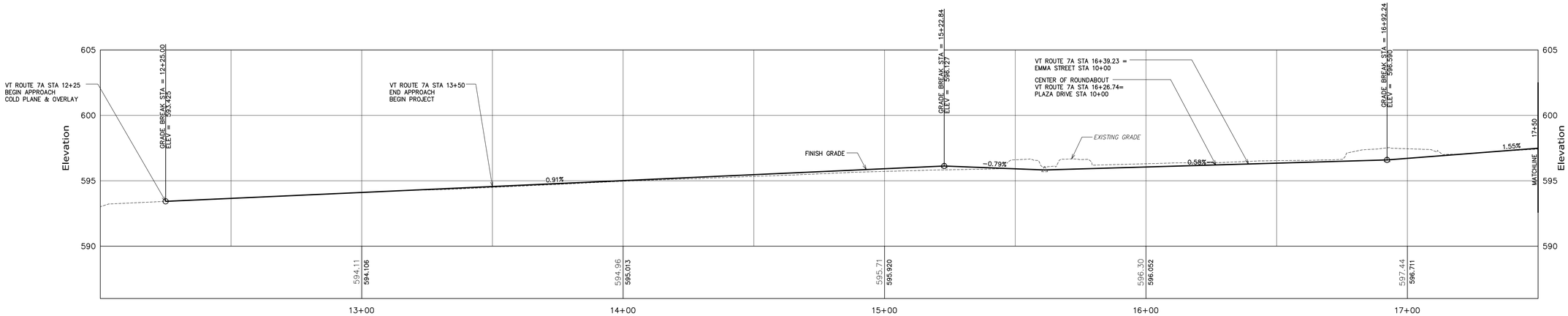
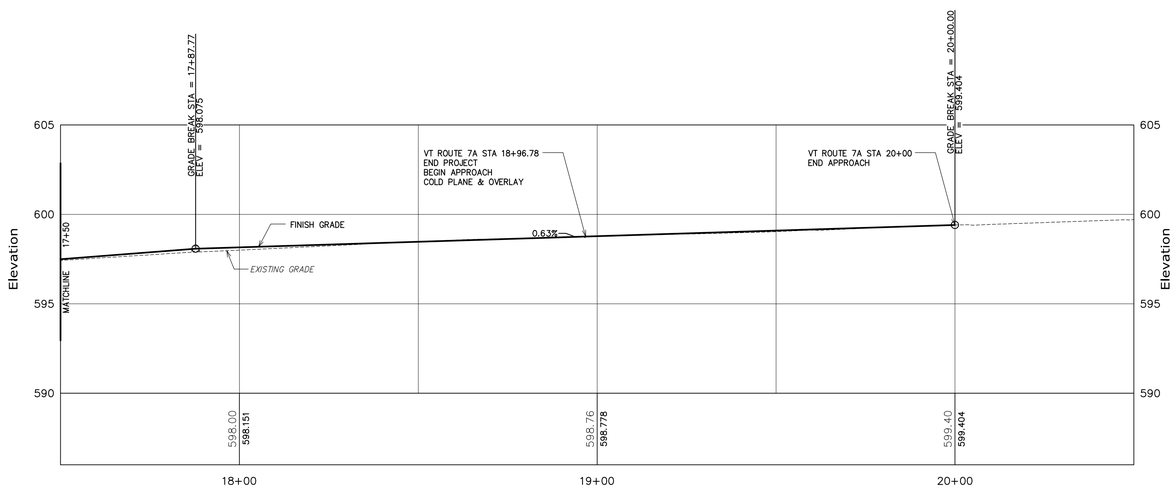
CT-05.02

Q:\2003 Drawings\03112.4 Northside Drive\Current\CT-05.02 Curb Layout Plan.dwg Plotted: 7/22/2015 9:38:01 AM




**VT Route 7A 12+00 to 17+50 Profile**
**Horizontal Scale: 1" = 20'**
**Vertical Scale: 1" = 4'**




**VT Route 7A 17+50 to 20+50 Profile**
**Horizontal Scale: 1" = 20'**
**Vertical Scale: 1" = 4'**

NOTES:
1. GRADES SHOWN TO THE NEAREST TENTH ARE AT EXISTING GROUND ALONG CENTERLINE.
2. GRADES SHOWN TO THE NEAREST HUNDREDTH ARE AT FINISHED GRADE ALONG CENTERLINE.

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# Profile Sheets

REVISIONS:
2014-07-18: REVISIONS PER VTRANS COMMENTS DATED 2014-04-08

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VT 7A - Northside Drive Bennington, VT

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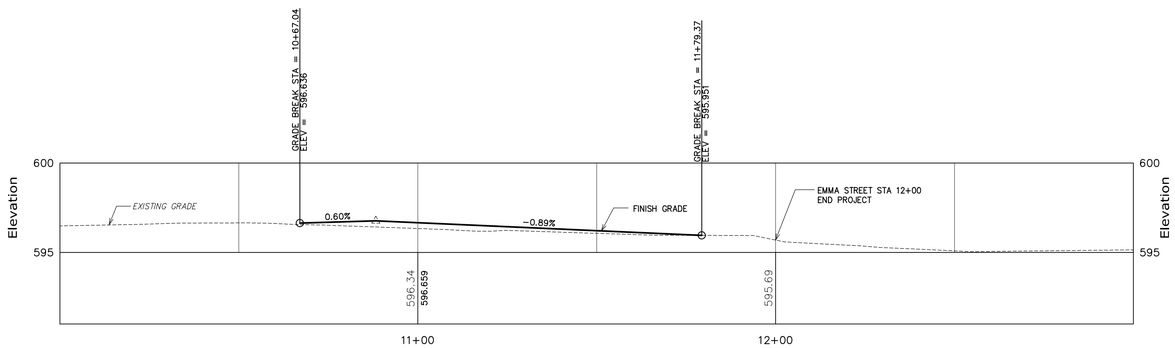
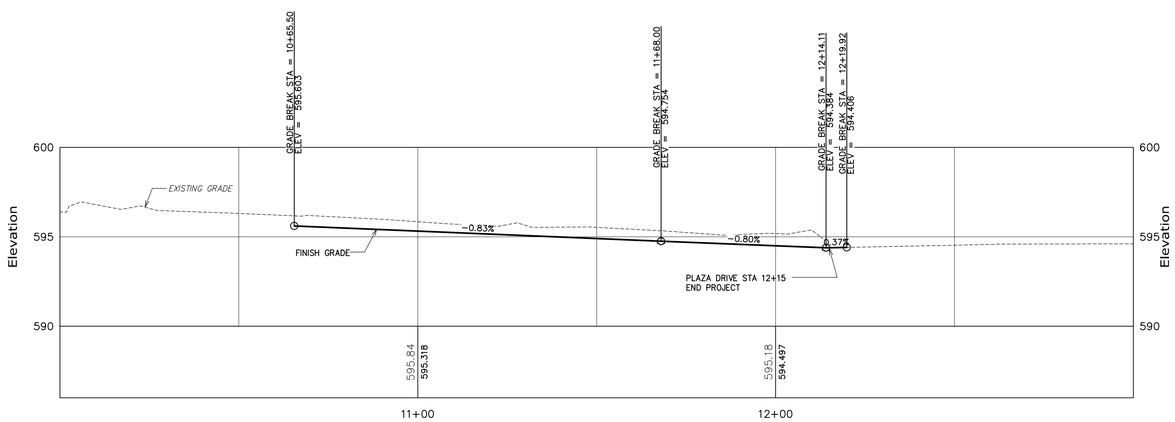



**Emma Street 10+00 to 13+00 Profile**
**Horizontal Scale: 1" = 20'**
**Vertical Scale: 1" = 4'**




**Plaza Drive 10+00 to 13+00 Profile**
**Horizontal Scale: 1" = 20'**
**Vertical Scale: 1" = 4'**

NOTES:
1. GRADES SHOWN TO THE NEAREST TENTH ARE AT EXISTING GROUND ALONG CENTERLINE.
2. GRADES SHOWN TO THE NEAREST HUNDREDTH ARE AT FINISHED GRADE ALONG CENTERLINE.

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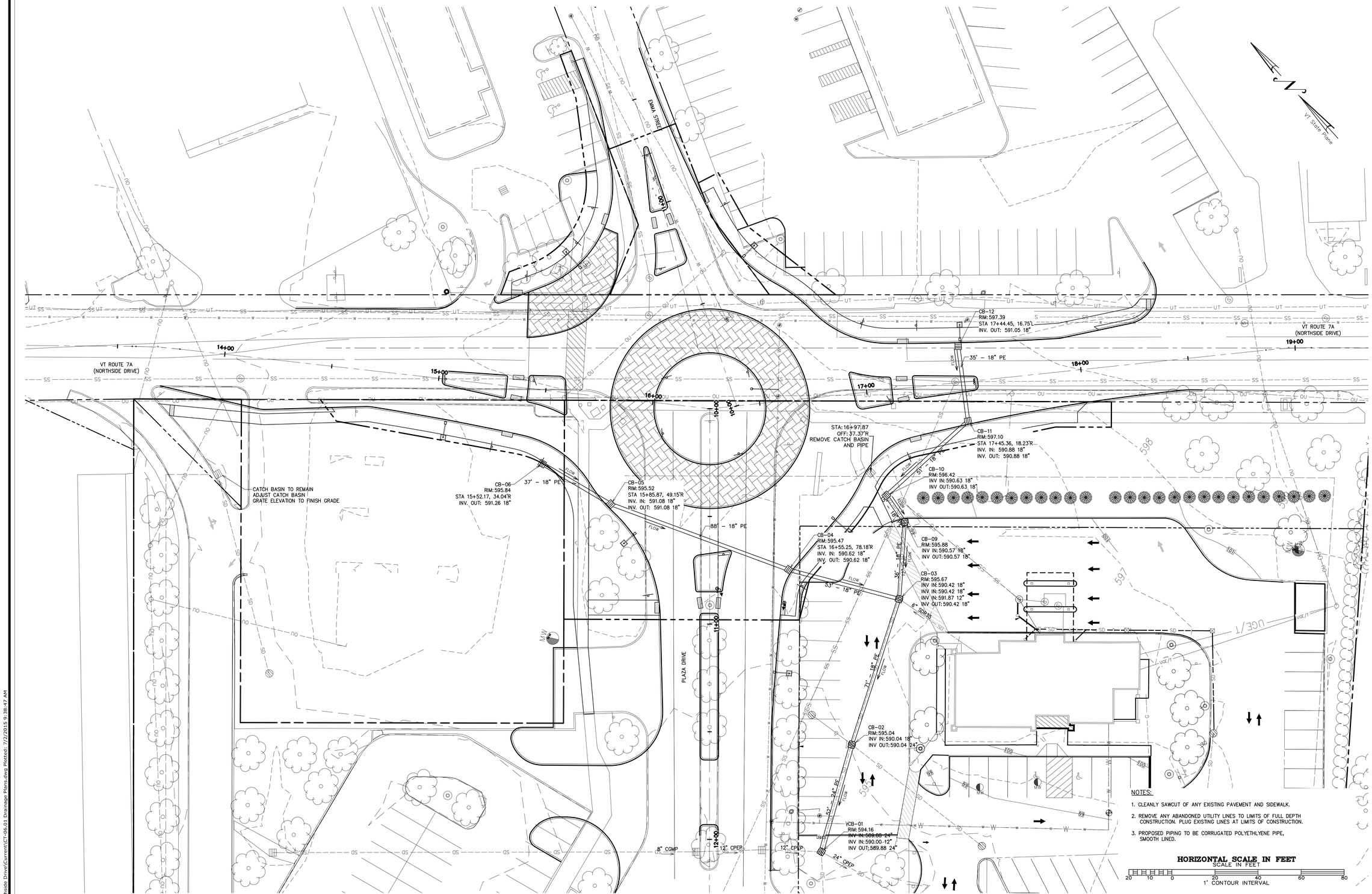


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# Drainage Plans

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VT 7A - Northside Drive
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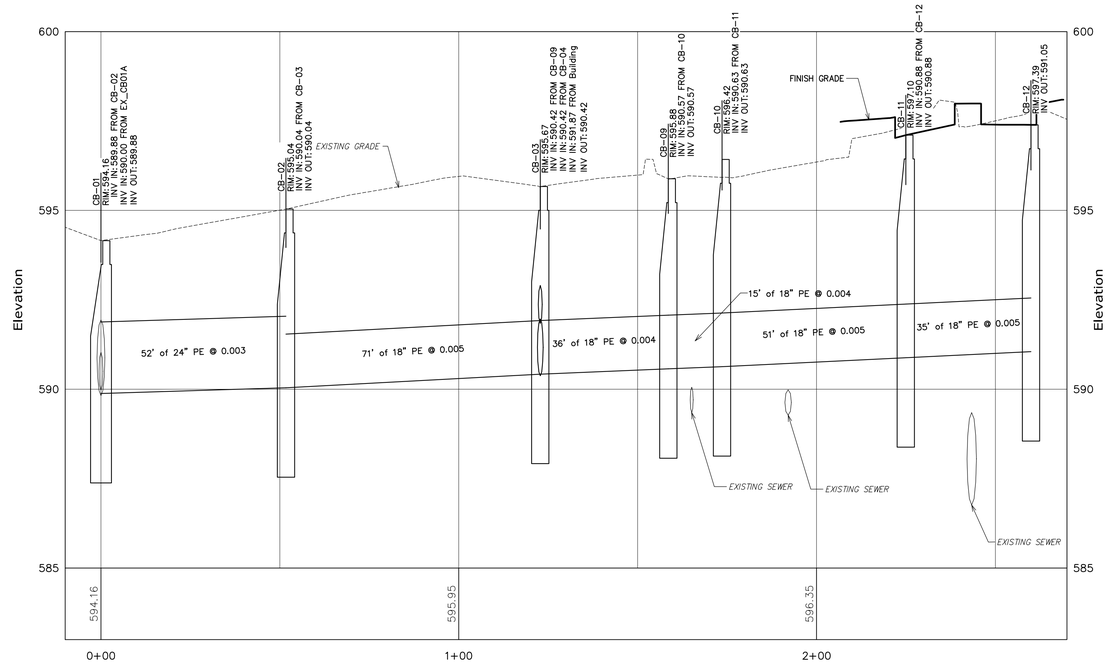
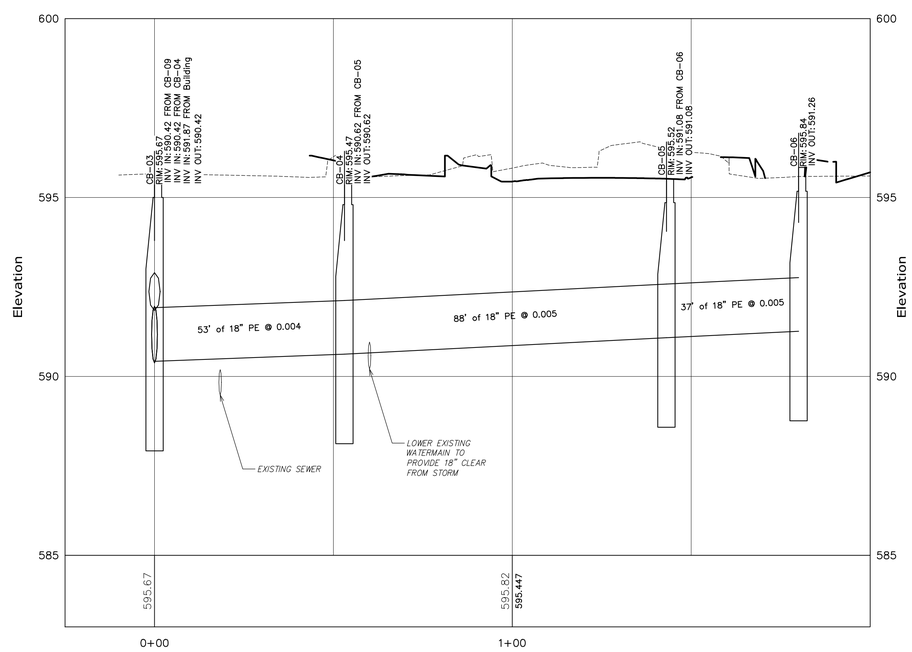
CT-06.01

Q:\2003 Drawings\03112.4 Northside Drive\Current\CT-06.01 Drainage Plans.dwg Plotted: 7/2/2015 9:38:47 AM




**CB-12 to CB-01 -0+10 to 2+70 Profile**
**Horizontal Scale: 1" = 20'**
**Vertical Scale: 1" = 2'**




**CB-06 to CB-03 -0+25 to 2+00 Profile**
**Horizontal Scale: 1" = 20'**
**Vertical Scale: 1" = 2'**

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# Drainage Profile Sheets

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VT 7A - Northside Drive
Bennington, VT

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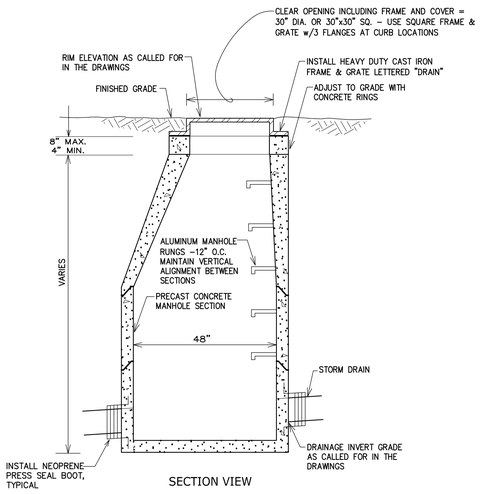
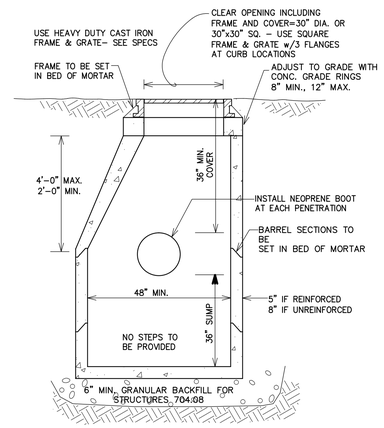
CT-06.02

Q:\2003 Drawings\03112.4 Northside Drive\Current\CT-06.02 Drainage Profile Sheets.dwg Plotted: 7/2/2015 9:39:37 AM




**TYPICAL PRE–CAST STORM DRAINAGE MANHOLE**

NOT TO SCALE




**TYPICAL PRE–CAST CATCH BASIN**

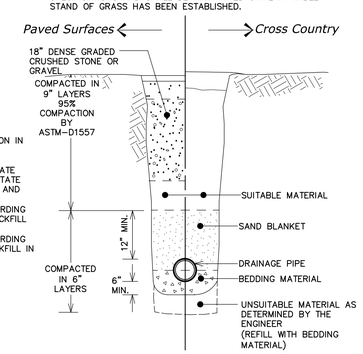
NOT TO SCALE

NOTE:

1.) IN GENERAL, DISTURBED CROSS–COUNTRY AREAS SHALL BE RESTORED TO THE SATISFACTION OF THE ENGINEER AND SHALL BE TOPSOILED AND SEEDED IN ACCORDANCE WITH THE SPECIFICATIONS AND SHALL BE MAINTAINED UNTIL A VIABLE STAND OF GRASS HAS BEEN ESTABLISHED.

NOTES:

1.) CONTRACTOR TO PROVIDE SHORING DURING CONSTRUCTION IN CONFORMANCE WITH VOSH STANDARDS.
2.) CONTRACTOR TO COORDINATE TRAFFIC MANAGEMENT WITH STATE AND LOCAL TRANSPORTATION AND PUBLIC SAFETY OFFICIALS.
3.) SEE SPECIFICATIONS REGARDING SURCHARGING OF TRENCH BACKFILL IN GRASSED AREAS.
4.) SEE SPECIFICATIONS REGARDING COMPACTION OF TRENCH BACKFILL IN PAVED AREAS.




**TYPICAL STORM DRAINAGE TRENCH**

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# Drainage Details

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VT 7A - Northside Drive Bennington, VT

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CT-06.03


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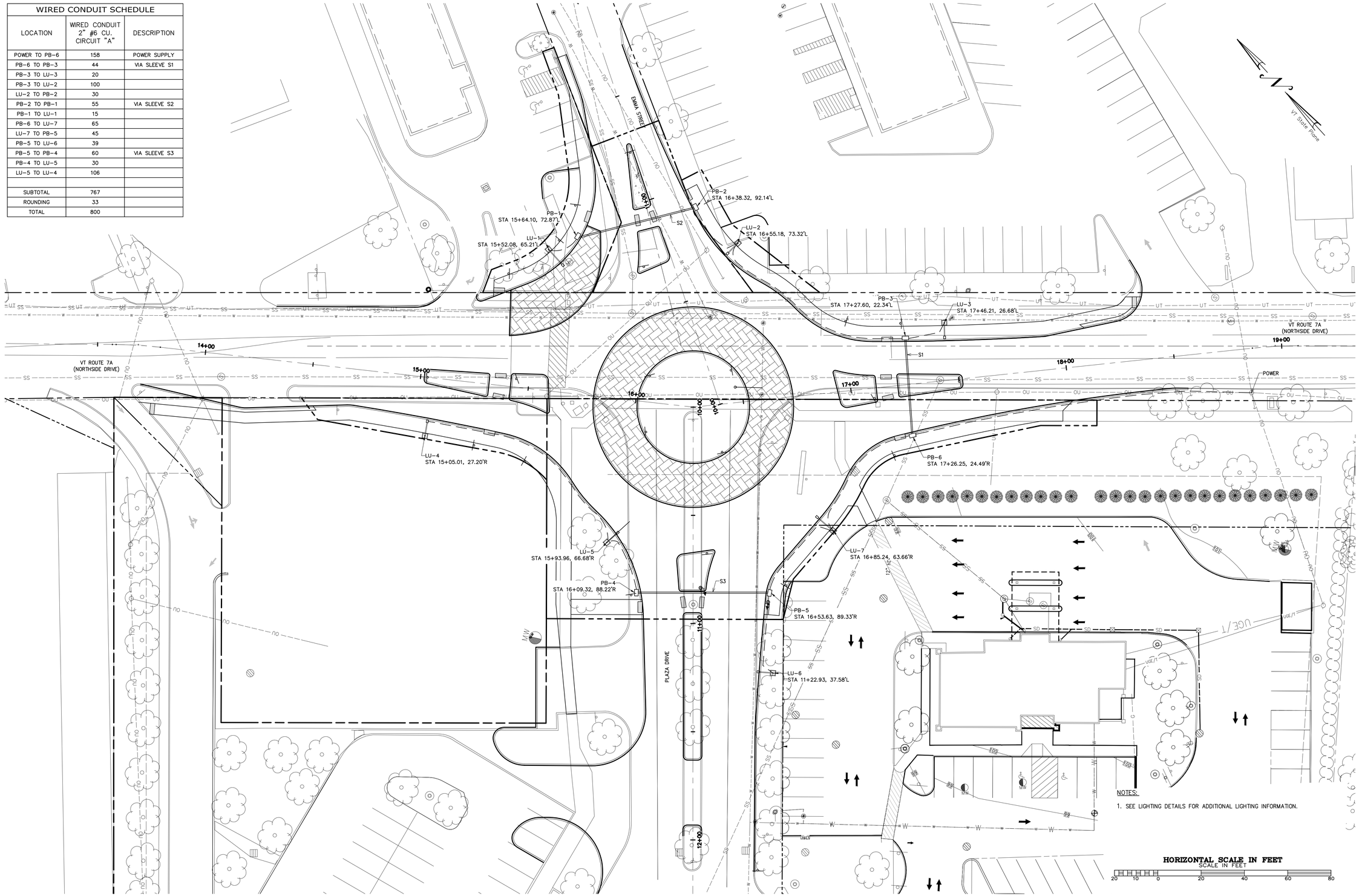
| WIRED CONDUIT SCHEDULE | | |
|---|---|---|
| LOCATION | WIRED CONDUIT 2" #6 CU. CIRCUIT "A" | DESCRIPTION |
| POWER TO PB-6 | 158 | POWER SUPPLY |
| PB-6 TO PB-3 | 44 | VIA SLEEVE S1 |
| PB-3 TO LU-3 | 20 | |
| PB-3 TO LU-2 | 100 | |
| LU-2 TO PB-2 | 30 | |
| PB-2 TO PB-1 | 55 | VIA SLEEVE S2 |
| PB-1 TO LU-1 | 15 | |
| PB-6 TO LU-7 | 65 | |
| LU-7 TO PB-5 | 45 | |
| PB-5 TO LU-6 | 39 | |
| PB-5 TO PB-4 | 60 | VIA SLEEVE S3 |
| PB-4 TO LU-5 | 30 | |
| LU-5 TO LU-4 | 106 | |
| | | |
| SUBTOTAL | 767 | |
| ROUNDING | 33 | |
| TOTAL | 800 | |




NOTES:

1. SEE LIGHTING DETAILS FOR ADDITIONAL LIGHTING INFORMATION.

| LIGHTING LEGEND | |
|---|---|
| — — — | 2" WIRED CONDUIT (#6CU) |
| ═══ | 8" WIRED CONDUIT SLEEVE (PVC) |
| □ | PULL BOX |
| | LUMINAIRE WITH BRACKET ARM |

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# Lighting Plan

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VT 7A - Northside Drive
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CT-07.01

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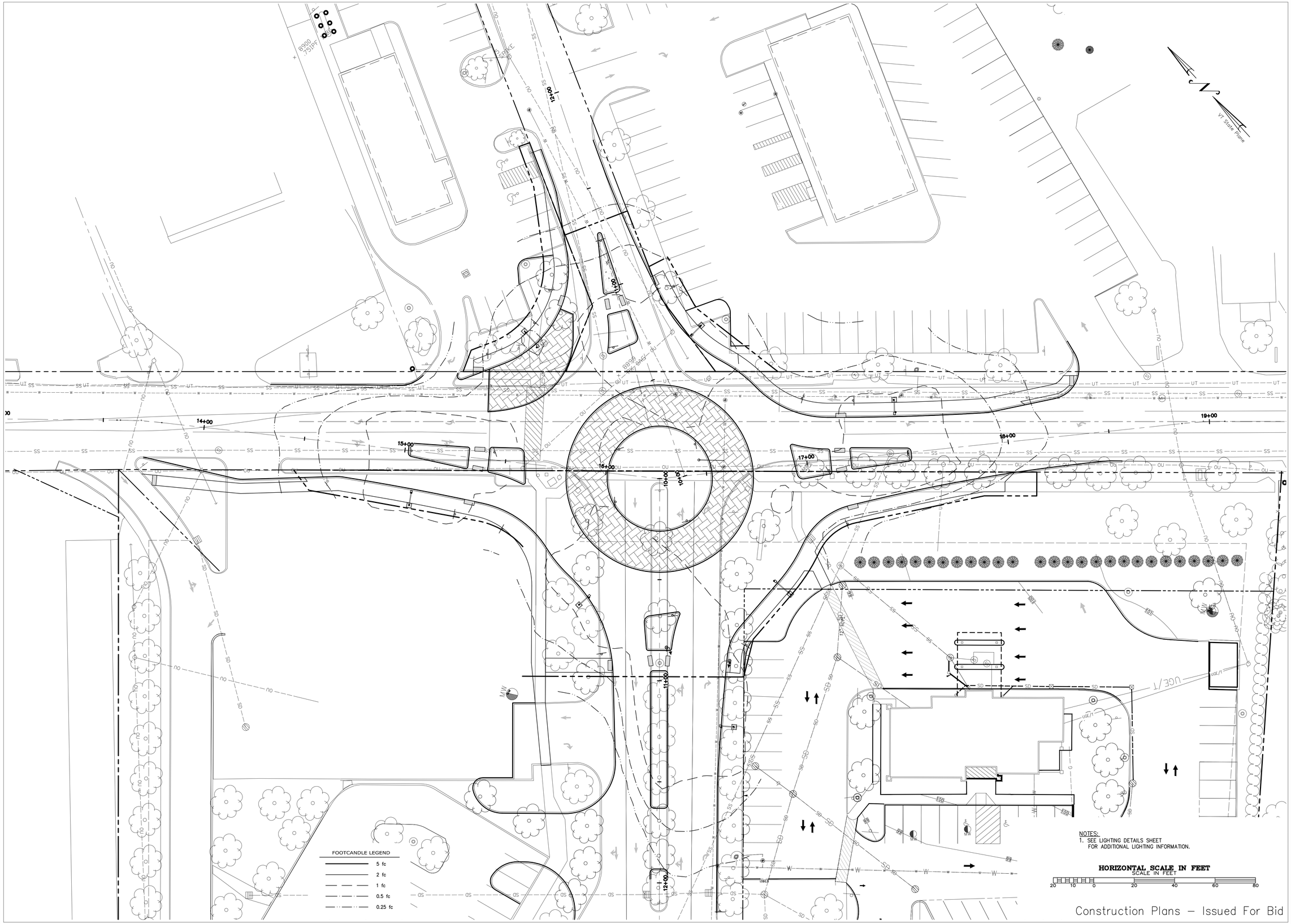


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# Illumination Plan

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Youngstown, OH
Northside Drive Roundabout
VT 7A - Northside Drive
Bennington, VT

CIVIL

CT-07.02

Q:\2003 Drawings\03112.4 Northside Drive\Current\CT-07.02 Illumination Plan.dwg Plotted: 7/22/2015 9:40:33 AM

## LUMINAIRE SCHEDULE

| Label | Qty | Catalog Number | Description | Lamp | LLF | Watts |
|---|---|---|---|---|---|---|
| LU-2, LU-3 LU-4, LU-5, LU-6 | 5 | STR-LWY-2S-XX-06--E-UL-SV-700-40K-XXX or BXSL0F06E-UD7 | 60 LED Type II Short Optic, 700mA 4000K LEDway Streetlight | SIXTY WHITE LIGHT EMITTING DIODES VERTICAL BASE-UP POSTION Serial Number:180410231211244 7 | 0.70 | 134.5 |
| LU-1, LU-7 | 2 | STR-LWY-3M-XX-06-E-UL-SV-700-40K-XXX or BXSL0306E-UD7 | 60 LED Type III Medium Optic, 700mA 4000K LEDway Streetlight | SIXTY WHITE LIGHT EMITTING DIODES VERTICAL BASE-UP POSITION Serial Number: 180410231211244 7 | 0.70 | 134.2 |

Pole heights are 35-feet, with bases placed behind sidewalks.

## STATISTICS

| Description | Symbol | Avg | Max | Min | Max/Min | Avg/Min |
|---|---|---|---|---|---|---|
| Emma_NB_crosswalk | + | 1.1 fc | 1.2 fc | 0.9 fc | 1.3:1 | 1.2:1 |
| Emma_SB_crosswalk | + | 1.1 fc | 1.2 fc | 0.9 fc | 1.3:1 | 1.2:1 |
| Plaza_NB_crosswalk | + | 1.5 fc | 1.6 fc | 1.3 fc | 1.2:1 | 1.2:1 |
| Plaza_SB_crosswalk | + | 1.0 fc | 1.4 fc | 0.6 fc | 2.3:1 | 1.7:1 |
| Roundabout | × | 1.1 fc | 1.8 fc | 0.2 fc | 9.0:1 | 5.5:1 |
| Route7A_East_EB_crosswalk | + | 1.0 fc | 1.3 fc | 0.5 fc | 2.6:1 | 2.0:1 |
| Route7A_East_WB_crosswalk | + | 1.1 fc | 1.2 fc | 1.0 fc | 1.2:1 | 1.1:1 |
| Route7A_West_EB_crosswalk | + | 1.2 fc | 1.4 fc | 1.1 fc | 1.3:1 | 1.1:1 |
| Route7A_West_WB_crosswalk | + | 0.8 fc | 1.4 fc | 0.5 fc | 2.8:1 | 1.6:1 |

CONCRETE BASES

WHEN CONCRETE BASES ARE INSTALLED IN SLOPING GROUND, THE GREATEST EXPOSED HEIGHT TO KEEP ALL OF THE TOP ABOVE GROUND MUST BE DOUBLED AND THEN ADDED TO THE MINIMUM DEPTH FOR THE TOTAL BASE DEPTH.

CARE SHOULD BE TAKEN WHERE CONCRETE BASES, DRAINAGE STRUCTURES OR UTILITIES ARE CLOSE TOGETHER.

POLES, ANCHOR BASES AND ARM

ALL NEW STREET LIGHTS POLES AND LUMINAIRE ARMS SHOULD BE ALUMINUM IN ACCORDANCE WITH SUBSECTION 753.01 (B).

ALL STREET LIGHT POLES SHALL HAVE A FRANGIBLE OR BREAKAWAY DEVICE (TRANSFORMER BASE, UNLESS NOTED ON THE PLANS.

LUMINAIRES

LUMINAIRE SUBSTITUTIONS SHALL MEET THE ISO FOOTCANDLE DATA AND THE ILLUMINATION LEVELS AS SHOWN ON THIS PLAN.

PULLBOXES

POLYMER CONCRETE AND REINFORCED FIBERGLASS U.L. LISTED PULLBOXES SHALL BE INSTALLED WITH HEAVY DUTY COVERS.

CONDUIT SLEEVE

THE SLEEVE SHALL EXTEND TO WITHIN 2 FEET OF THE SIDE OF A CONCRETE BASE OR PULLBOX. WHERE NO CONCRETE BASE OR PULLBOX IS PRESENT, THE SLEEVE SHALL EXTEND 4 FEET BEYOND THE OUTSIDE EDGE OF SHOULDER OR FACE OF CURB. BACKFILLING AROUND A SLEEVE SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS. THE SLEEVE SHALL BE SCHEDULE 80.

WIRE

ALL WIRING BETWEEN THE METER AND/OR POWER SOURCE AND THE FIRST POLE AND/OR PULLBOX AND BETWEEN POLES AND/OR PULLBOXES SHALL BE COPPER AND SIZE AS SPECIFIED ON THE PLANS. ALL WIRE SHALL HAVE TYPE XHHW INSULATION OR EQUIVALENT.

GROUNDING

ALL CONDUIT MUST INCLUDE A GROUNDING CONDUCTOR. RIGID STEEL CONDUIT SHALL BE PROPERLY CONNECTED AT THE JOINTS SO AS TO BE WATERTIGHT AND MAINTAIN ELECTRICAL CONTINUITY AND HAVE GROUNDING BUSHINGS SO AS TO ACT AS A GROUNDING CONDUCTOR. ALUMINUM WIRE SHALL NOT BE USED FOR GROUND WIRE.

GENERAL

THE LOAD ON EACH BRANCH OF A THREE WIRE CIRCUIT SHALL BE AS BALANCED AS POSSIBLE. LOAD TO NEUTRAL.

THE LAST CONCRETE POLE BASE AT THE END OF EACH CIRCUIT AND SOME PULLBOXES SHALL HAVE A CONDUIT SWEEP WITH CAP INSTALLED FOR FUTURE USE.

THE CONTRACTOR SHALL ACQUIRE ALL NECESSARY PERMITS AND MAKE ALL NECESSARY ARRANGEMENTS WITH THE UTILITY COMPANY TO PROVIDE A PERMANENT POWER SUPPLY TO THE STREET LIGHTING SYSTEM.

ALL CONNECTING HARDWARE (NUTS, BOLTS, ETC.) SHALL BE STAINLESS STEEL.

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# Street Lighting Details

REVISIONS:
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Youngstown, OH
Northside Drive Roundabout
VT 7A - Northside Drive Bennington, VT

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CT-07.03

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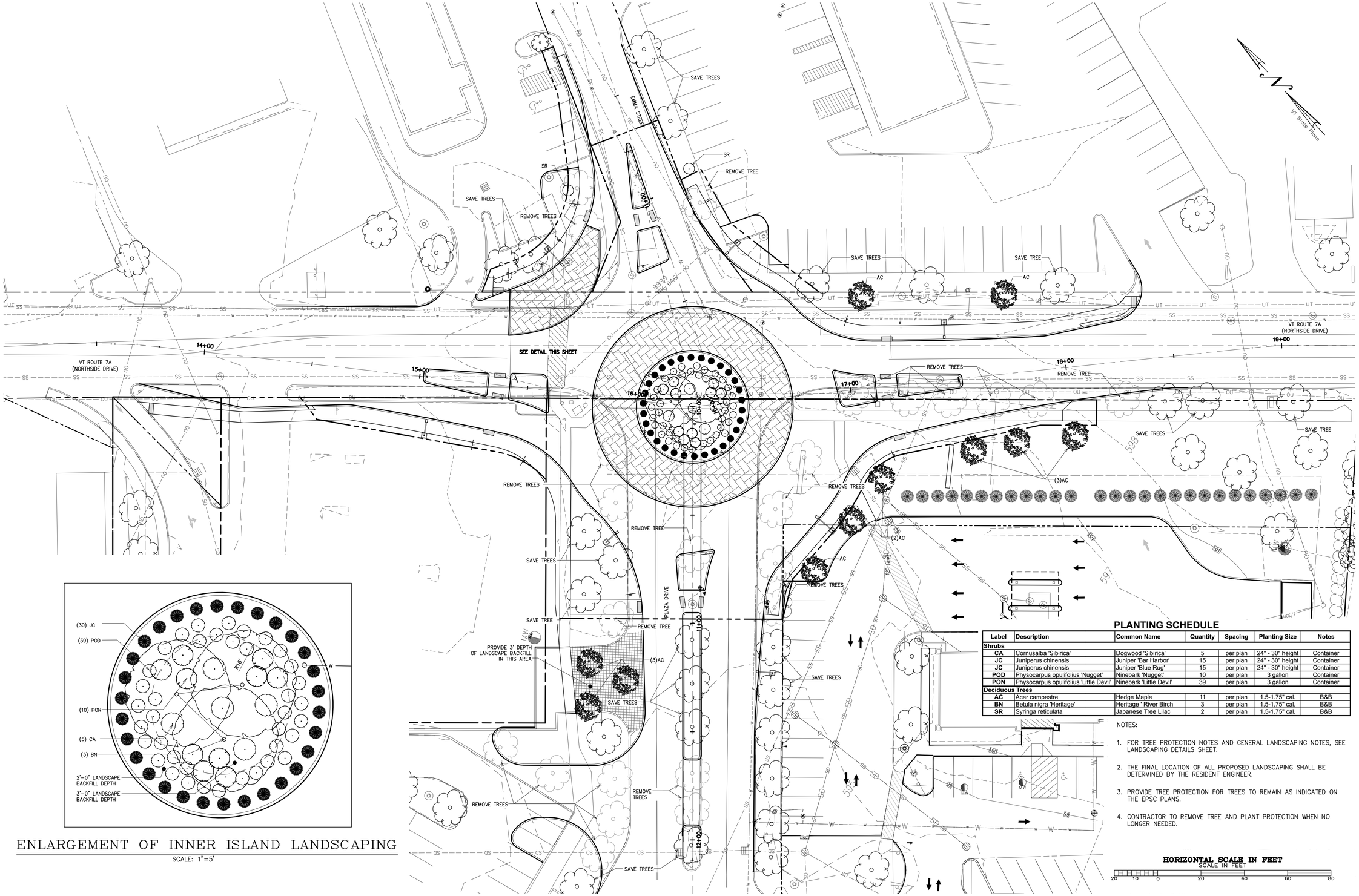


## ENLARGEMENT OF INNER ISLAND LANDSCAPING

SCALE: 1"=5'

## PLANTING SCHEDULE

| Label | Description | Common Name | Quantity | Spacing | Planting Size | Notes |
|---|---|---|---|---|---|---|
| **Shrubs** | | | | | | |
| CA | Cornusalba 'Sibirica' | Dogwood 'Sibirica' | 5 | per plan | 24" - 30" height | Container |
| JC | Juniperus chinensis | Juniper 'Bar Harbor' | 15 | per plan | 24" - 30" height | Container |
| JC | Juniperus chinensis | Juniper 'Blue Rug' | 15 | per plan | 24" - 30" height | Container |
| POD | Physocarpus opulifolius 'Nugget' | Ninebark 'Nugget' | 10 | per plan | 3 gallon | Container |
| PON | Physocarpus opulifolius 'Little Devil' | Ninebark 'Little Devil' | 39 | per plan | 3 gallon | Container |
| **Deciduous Trees** | | | | | | |
| AC | Acer campestre | Hedge Maple | 11 | per plan | 1.5-1.75" cal. | B&B |
| BN | Betula nigra 'Heritage' | Heritage ' River Birch | 3 | per plan | 1.5-1.75" cal. | B&B |
| SR | Syringa reticulata | Japanese Tree Lilac | 2 | per plan | 1.5-1.75" cal. | B&B |

NOTES:

1. FOR TREE PROTECTION NOTES AND GENERAL LANDSCAPING NOTES, SEE LANDSCAPING DETAILS SHEET.
2. THE FINAL LOCATION OF ALL PROPOSED LANDSCAPING SHALL BE DETERMINED BY THE RESIDENT ENGINEER.
3. PROVIDE TREE PROTECTION FOR TREES TO REMAIN AS INDICATED ON THE EPSC PLANS.
4. CONTRACTOR TO REMOVE TREE AND PLANT PROTECTION WHEN NO LONGER NEEDED.

**HORIZONTAL SCALE IN FEET**
SCALE IN FEET
20 10 0 20 40 60 80

Construction Plans – Issued For Bid

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# Landscaping Plans

REVISIONS:
2015-08-30: REVISIONS PER UPDATED TELEPHONE INFORMATION

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Youngstown, OH
Northside Drive Roundabout
VT 7A - Northside Drive
Bennington, VT

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CT-08.01

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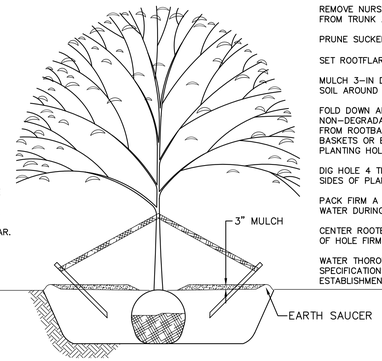
# LANDSCAPING DETAILS

STAKING NOTES
STAKING IS REQUIRED BY VTRANS:

1. STAKE WITH 2X2 HARWOOD STAKES OR APPROVED EQUAL, DRIVEN 8-INCHES OUTSIDE OF ROOTBALL.
2. USE #12 GAVANIZED WIRE AND 2.5 mm RUBBER HOSE. STAKE TREE ON OPPOSITE SIDES. TENSION WIRE TO PREVENT TREE FROM FALLING OVER DURING HIGH WINDS.
3. REMOVE STAKING MATERIALS WITHIN 1 YEAR.




TREE PLANTING DETAIL
NOT TO SCALE

PLANTING NOTES
DO NOT PRUNE TERMINAL LEADER OR BRANCH TIPS.

PRUNE AWAY DEAD OR BROKEN BRANCHES ONLY.

REMOVE NURSERY APPLIED TREE WRAP, TAPE OR STRING FROM TRUNK AND CROWN. REMOVE TABS OR LABELS.

PRUNE SUCKERS OFF.

SET ROOTFLARE OF MAIN ORDER ROOT 1/2-INCH ABOVE GRADE.

MULCH 3-IN DEEP LEAVING 3-IN CIRCLE OF BARE SOIL AROUND TRUNK OF TREE.

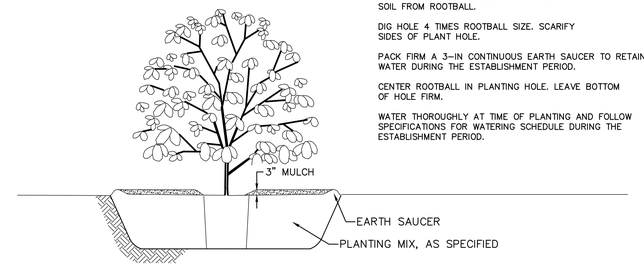
FOLD DOWN AND CUT STRING, BURLAP. REMOVE NON-DEGRADABLE MATERIALS. DO NOT REMOVE SOIL FROM ROOTBALL. CUT AWAY AND REMOVE SIDES OF WIRE BASKETS OR BURLAPONCE ROOTBALL IS SETTLED IN PLANTING HOLE.

DIG HOLE 4 TIMES ROOTBALL SIZE. SCARIFY SIDES OF PLANT HOLE.

PACK FIRM A 3-IN CONTINUOUS EARTH SAUCER TO RETAIN WATER DURING THE ESTABLISHMENT PERIOD.

CENTER ROOTBALL IN PLANTING HOLE. LEAVE BOTTOM OF HOLE FIRM.

WATER THOROUGHLY AT TIME OF PLANTING AND FOLLOW SPECIFICATIONS FOR WATERING SCHEDULE DURING THE ESTABLISHMENT PERIOD.




SHRUB PLANTING DETAIL
NOT TO SCALE

PLANTING NOTES
PRUNE AWAY DEAD OR BROKEN BRANCHES ONLY.

REMOVE NURSERY APPLIED TREE WRAP, TAPE OR STRING FROM TRUNK AND CROWN. REMOVE TABS OR LABELS.

PRUNE SUCKERS OFF.

SET ROOTFLARE OF MAIN ORDER ROOT 1/2-INCH ABOVE GRADE.

MULCH 3-IN DEEP LEAVING 3-IN CIRCLE OF BARE SOIL AROUND TRUNK OF TREE.

REMOVE NON-DEGRADABLE MATERIALS. DO NOT REMOVE SOIL FROM ROOTBALL.

DIG HOLE 4 TIMES ROOTBALL SIZE. SCARIFY SIDES OF PLANT HOLE.

PACK FIRM A 3-IN CONTINUOUS EARTH SAUCER TO RETAIN WATER DURING THE ESTABLISHMENT PERIOD.

CENTER ROOTBALL IN PLANTING HOLE. LEAVE BOTTOM OF HOLE FIRM.

WATER THOROUGHLY AT TIME OF PLANTING AND FOLLOW SPECIFICATIONS FOR WATERING SCHEDULE DURING THE ESTABLISHMENT PERIOD.

GENERAL PLANTING NOTES
1. PROVIDE CERTIFIED ARBORIST TO INVENTORY TREES TO REMAIN DESCRIBING TYPE, SIZE, CONDITION, AND SPECIAL REQUIREMENTS FOR TREE PROTECTION.
2. REQUIRE CERTIFIED ARBORIST TO OBSERVE HAND DIGGING, WHEN REQUIRED.
3. REQUIRE CERTIFIED ARBORIST TO INSPECT TREE PROTECTION MEASURES PRIOR TO AND DURING CONSTRUCTION.
4. CLEANLY CUT ROOTS LARGER THAN 1-INCH IN DIAMETER.
5. WARRANTY THE PLANTINGS FOR 1 YEAR PER VTRANS SPECS. WARRANTY TO INCLUDE REPLACEMENT.
6. FINAL PLACEMENT OF PLANT MATERIALS TO BE VERIFIED IN FIELD BY VTRANS TO ENSURE SAFETY AND LINE OF SIGHT.

Construction Plans – Issued For Bid

PROJECT: 03112.4
DATE: Feb. 13, 2014
DESIGN: DSW
DRAWN: DSW
CHECKED: PHC
APPROVED: PHC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Fax. 802-524-9681
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Landscaping Details

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2015-06-30: REVISIONS PER UPDATED TELEPHONE INFORMATION

BLS Bennington, LC
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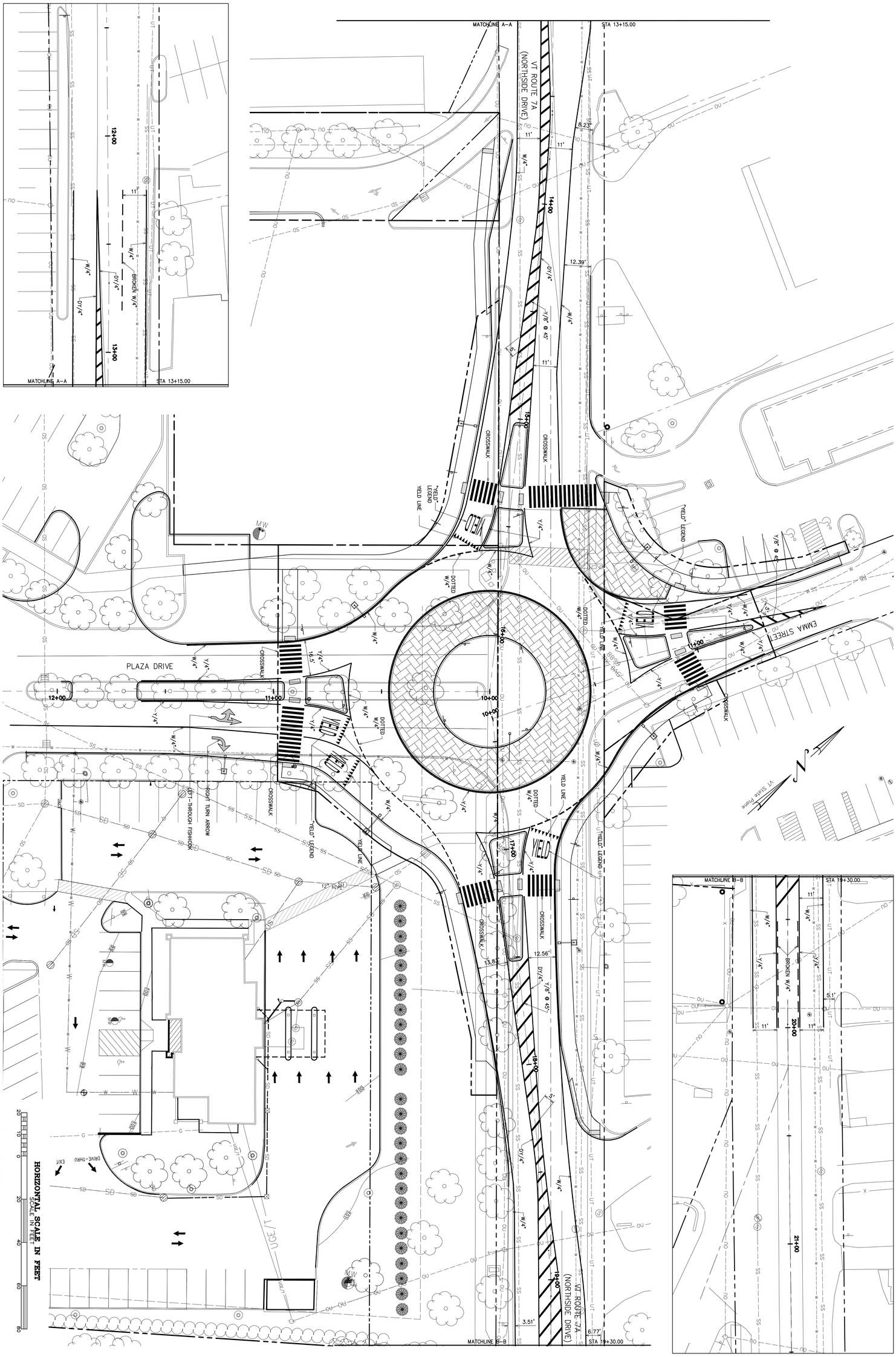
Northside Drive Roundabout
VT 7A - Northside Drive Bennington, VT

CIVIL
CT-08.02

Q:\2003 Drawings\03112.4 Northside Drive\Current\CT-08.02 Landscaping Details.dwg Plotted: 7/2/2015 9:41:20 AM




Construction Plans – Issued For Bid

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CT-09.01

BLS Bennington, LC

Youngstown, OH

Northside Drive Roundabout

VT 7A - Northside Drive Bennington, VT

Pavement Marking Plans

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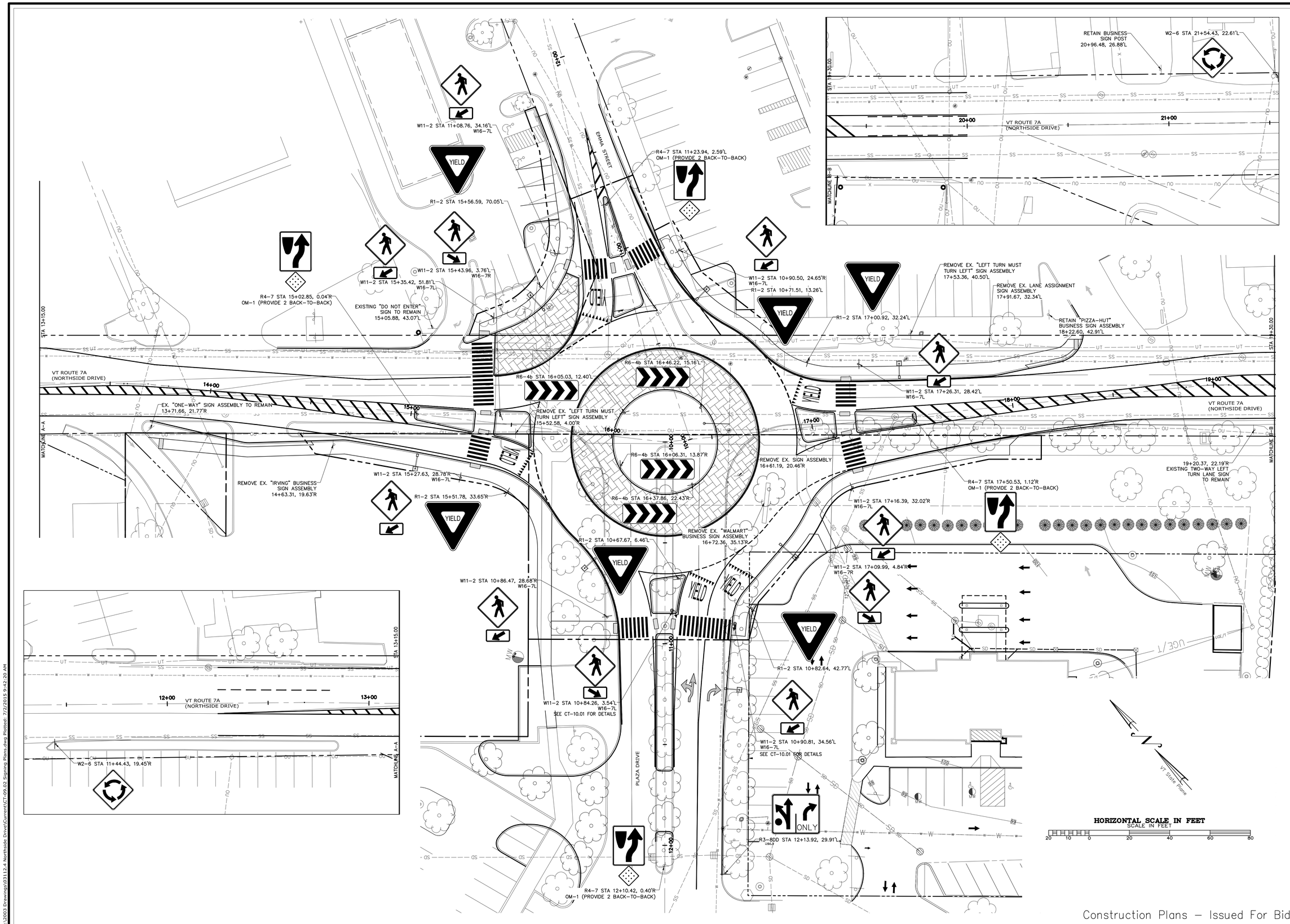


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DATE: Feb. 13, 2014
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# Signage Plans

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CT-09.02

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## VT ROUTE 7A (NORTHSIDE DRIVE)
### SIGN SUMMARY SHEET

| STATION | SIGN LEGEND | SIGN DIMENSIONS EA | WIDTH (IN) | HEIGHT (IN) | Sign Posts No. of Posts | 2.0in SQ. 2.42 lb/ft | Anchor | Sleeve | Remarks | Sign Detail Source |
|---|---|---|---|---|---|---|---|---|---|---|
| STA: 11+44, R | | 1 | 30 | 30 | 1 | X | X | | W2-6 | SHS |
| STA: 15+03, R | | 1 | 24 | 30 | 1 | X | X | X | R4-7 | SHS |
| | | 2 | 18 | 18 | | | | | OM1-1 | SHS |
| STA: 15+28, R | | 1 | 30 | 30 | 1 | X | X | | W11-2 | SHS |
| | | 1 | 24 | 12 | | | | | W16-7PL | SHS |
| STA: 15+35, L | | 1 | 30 | 30 | 1 | X | X | | W11-2 | SHS |
| | | 1 | 24 | 12 | | | | | W16-7PL | SHS |
| STA: 15+44, L | | 1 | 30 | 30 | 1 | X | X | | W11-2 | SHS |
| | | 1 | 24 | 12 | | | | | W16-7PR | SHS |
| STA: 15+52, R | | 1 | 36 | 36 | 1 | X | X | | R1-2 | SHS |
| STA: 16+05, L | | 1 | 60 | 24 | 2 | X | X | | R6-4B [NOTE 1] | SHS |
| STA: 16+06, R | | 1 | 60 | 24 | 2 | X | X | | R6-4B [NOTE 1] | SHS |
| STA: 16+38, R | | 1 | 60 | 24 | 2 | X | X | | R6-4B [NOTE 1] | SHS |
| STA: 16+46, L | | 1 | 60 | 24 | 2 | X | X | | R6-4B [NOTE 1] | SHS |
| STA: 17+01, L | | 1 | 36 | 36 | 1 | X | X | | R1-2 | SHS |
| STA: 17+10, R | | 1 | 30 | 30 | 1 | X | X | X | W11-2 [NOTE 2] | SHS |
| | | 1 | 24 | 12 | | | | | W16-7PR [NOTE 2] | SHS |
| STA: 17+16, R | | 1 | 30 | 30 | 1 | X | X | | W11-2 [NOTE 2] | SHS |
| | | 1 | 24 | 12 | | | | | W16-7PL [NOTE 2] | SHS |
| STA: 17+26, L | | 1 | 30 | 30 | 1 | X | X | | W11-2 [NOTE 2] | SHS |
| | | 1 | 24 | 12 | | | | | W16-7PL [NOTE 2] | SHS |
| STA: 17+50, R | | 1 | 24 | 30 | 1 | X | X | X | R4-7 | SHS |
| | | 2 | 18 | 18 | | | | | OM1-1 | SHS |
| STA: 21+54, L | | 1 | 30 | 30 | 1 | X | X | | W2-6 | SHS |

## EMMA STREET
### SIGN SUMMARY SHEET

| STATION | SIGN LEGEND | SIGN DIMENSIONS EA | WIDTH (IN) | HEIGHT (IN) | Sign Posts No. of Posts | 2.0in SQ. 2.42 lb/ft | Anchor | Sleeve | Remarks | Sign Detail Source |
|---|---|---|---|---|---|---|---|---|---|---|
| STA: 10+71, L | | 1 | 36 | 36 | 1 | X | X | X | R1-2 | SHS |
| STA: 10+95, L | | 1 | 36 | 36 | 1 | X | X | | R1-2 | SHS |
| STA: 10+90, R | | 1 | 30 | 30 | 1 | X | X | | W11-2 [NOTE 2] | SHS |
| | | 1 | 24 | 12 | | | | | W16-7PL [NOTE 2] | SHS |
| STA: 11+09, L | | 1 | 30 | 30 | 1 | X | X | | W11-2 [NOTE 2] | SHS |
| | | 1 | 24 | 12 | | | | | W16-7PL [NOTE 2] | SHS |
| STA: 11+24, L | | 1 | 24 | 30 | 1 | X | X | X | R4-7 | SHS |
| | | 2 | 18 | 18 | | | | | OM1-1 | SHS |

NOTES:
1. INSTALL CHEVRONS AT 4 FEET HEIGHT.
2. FLUORESCENT YELLOW-GREEN SHEETING

## PLAZA DRIVE
### SIGN SUMMARY SHEET

| STATION | SIGN LEGEND | SIGN DIMENSIONS EA | WIDTH (IN) | HEIGHT (IN) | Sign Posts No. of Posts | 2.0in SQ. 2.42 lb/ft | Anchor | Sleeve | Remarks | Sign Detail Source |
|---|---|---|---|---|---|---|---|---|---|---|
| STA: 10+68, L | | 1 | 36 | 36 | 1 | X | X | X | R4-7 | SHS |
| STA: 10+82, L | | 1 | 36 | 36 | 1 | X | X | | R4-7 | SHS |
| STA: 10+83, L | | 1 | 30 | 30 | 1 | X | X | | W11-2 [NOTE 2] | SHS |
| | | 1 | 24 | 12 | | | | | W16-7PR [NOTE 2] | SHS |
| | PUSH BUTTON TO TURN ON WARNING LIGHTS | 1 | 9 | 12 | | | | | R10-25 | SHS |
| STA: 10+86, R | | 1 | 30 | 30 | 1 | X | X | | W11-2 [NOTE 2] | SHS |
| | | 1 | 24 | 12 | | | | | W16-7PL [NOTE 2] | SHS |
| | PUSH BUTTON TO TURN ON WARNING LIGHTS | 1 | 9 | 12 | | | | | R10-25 | SHS |
| STA: 10+91, L | | 1 | 30 | 30 | 1 | X | X | | W11-2 [NOTE 2] | SHS |
| | | 1 | 24 | 12 | | | | | W16-7PL [NOTE 2] | SHS |
| STA: 12+10, R | | 1 | 24 | 30 | 1 | X | X | X | R4-7 | SHS |
| | | 2 | 18 | 18 | | | | | OM1-1 | SHS |
| STA: 12+14, L | ONLY | 1 | 36 | 30 | 2 | X | X | | R3-8DD | SHS |

Construction Plans – Issued For Bid

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DATE: Feb. 13, 2014
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# Signing Summary

REVISIONS:
2015-08-30: REVISIONS PER UPDATED TELEPHONE INFORMATION

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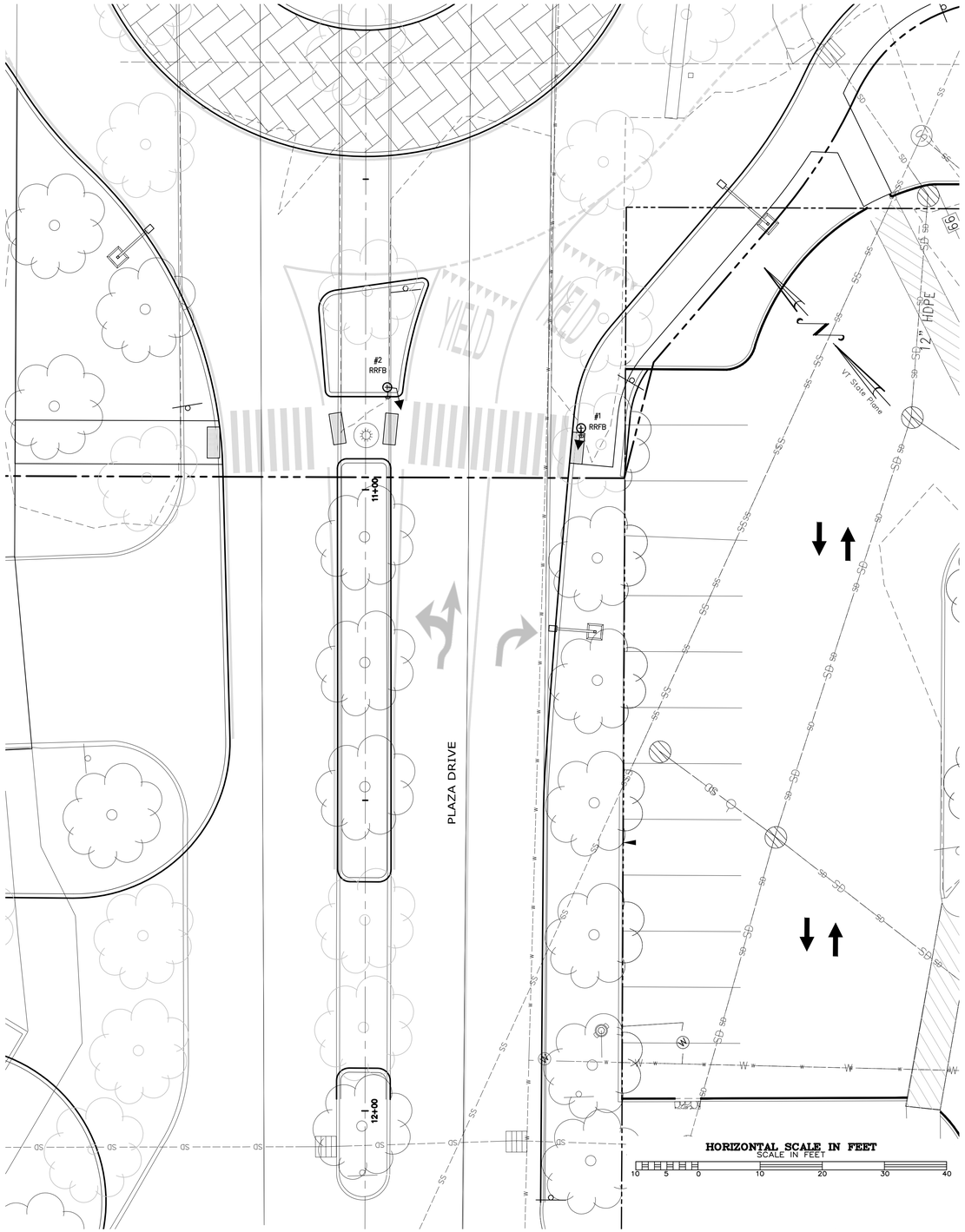
Youngstown, OH
Northside Drive Roundabout
VT 7A - Northside Drive
Bennington, VT

CIVIL

CT-09.03

Q:\2003 Drawings\03112.4 Northside Drive\Current\CT-09.03 Signing Summary.dwg Plotted: 7/2/2015 9:42:33 AM




Rectangular Rapid Flashing Beacons (RRFB)
- Two rectangular-shaped yellow indications:
  - Light source: LED-based.
  - Size: 5 inches wide by 2 inches high.
  - Alignment: horizontal.
  - Minimum spacing: 7 inches between inside edges.
  - Maximum spacing: Less than outside edges of W11-2 or S1-1 sign specified.
  - Beacon flashing requirements:
    - Sequence: Beacons to flash in an alternate wig-wag flashing sequence.
    - Flash Rate: 70 to 80 periods of flashing per minute alternating between equal periods of rapid pulsing light emissions and dark operation.
    - Rapid Pulse: One indication to emit 2 rapid pulses of light and the other indication to emit 3 rapid pulses of light during the standard flash rate.
    - Flash Rates Not Permitted: a rates between 5 to 30 flashes per second, as applied over the full on-off sequence of a flashing period, is not permitted.
- Operation:
  - Activation: Normally dark; activation upon pedestrian actuation
  - Length of Operation:
  - Confirmation Light: Provide a small light directed at and visible to pedestrians within the pushbutton to indicate that the RRFB is in operation.
- Power:
  - Self-contained Solar engine housed in a NEMA 3R enclosure with replaceable, recyclable, maintenance-free, dual-battery system.

Construction Plans – Issued For Bid

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DATE: Feb. 13, 2014
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# Traffic Signal Plans

REVISIONS:
2015-06-30: REVISIONS PER UPDATED TELEPHONE INFORMATION

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VT 7A - Northside Drive
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CT-10.01

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1. PROJECT DESCRIPTION

THIS PROJECT INVOLVES THE CONSTRUCTION OF A ROUNDABOUT AT THE INTERSECTION OF VT ROUTE 7A (NORTHSIDE DRIVE), EMMA STREET AND PLAZA DRIVE IN THE TOWN OF BENNINGTON. WORK TO BE PERFORMED INCLUDES GRADING, DRAINAGE, SUBBASE, PAVEMENT, LIGHTING AND LANDSCAPING.

2. AREA OF DISTURBANCE

THE TOTAL DISTURBANCE ASSOCIATED WITH CONSTRUCTION OF THIS PROJECT IS APPROXIMATELY 1.46 ACRES. SEE BREAKDOWN OF DISTURBANCE PER AREA IN #5 BELOW.

3. CONSTRUCTION SEQUENCE

SEQUENCE CONSTRUCTION ACTIVITIES TO MINIMIZE THE EXTENT OF DISTURBED SOILS LEFT OPEN TO EROSION AT ANY GIVEN TIME. A PROPOSED GENERAL SEQUENCE FOR EACH OF THE MAJOR CONSTRUCTION ACTIVITIES IS AS FOLLOWS:

3.1. ESTABLISH PERIMETER CONTROLS.
3.2. INSTALL TREE PROTECTION ZONES PER EPSC PLANS.
3.3. INSTALL SEDIMENT CONTROL MEASURES.
3.4. CLEARING.
3.5. BEGIN CUT AND FILL OPERATIONS, LIMIT AREA OF DISTURBANCE TO <2 ACRES.
3.6. CONCURRENTLY INSTALL TEMPORARY AND PERMANENT STABILIZATION AND EPSC MEASURES AS WORK PROGRESSES.
3.7. INSTALL DRAIN PIPES AND STRUCTURE. CONNECT DRAINAGE SYSTEM INTO EXISTING SYSTEM.
3.8. PLACE SUBBASE MATERIAL FOR ROADWAY AND FINAL GRADE AND STABILIZE ALL EARTH DISTURBANCE AS WORK PROGRESSES.
3.9. PAVE ROADWAY.
3.10. INSTALL OTHER INTERSECTION-RELATED ITEMS.

4. STABILIZATION OF EXPOSED SOILS

- SEED AND MULCH WILL BE USED FOR BOTH PERMANENT AND TEMPORARY STABILIZATION MEASURES. ROLLED EROSION CONTROL PRODUCT (RECP) WILL BE USED IN PLACE OF MULCH FOR SLOPES GREATER THAN 1V:3H. MULCH IS TO BE APPLIED AT A MINIMUM APPLICATION RATE SHOWN ON SHEET CT-11.05 UNLESS DIRECTED OTHERWISE BY THE ENGINEER.
- DISTURBED AREAS AND SOIL STOCKPILES THAT WILL NOT BE WORKED FOR MORE THAN 7 DAYS SHALL BE TEMPORARILY STABILIZED WITH MULCH/RECP WITHIN 48 HOURS.
- EXPOSED AREAS THAT HAVE ACHIEVED FINAL GRADE SHALL BE PERMANENTLY STABILIZED WITHIN 48 HOURS.
- IN AREAS WHERE VEGETATIVE COVER WILL PROVIDE PERMANENT STABILIZATION, SEEDING TO BE COMPLETED BETWEEN APRIL 15 AND SEPTEMBER 15.

5. DRAINAGE AREAS AND DISCHARGE POINTS

THE TOPOGRAPHY OF THE AREA IS GENERALLY FLAT WITH SLOPES TO THE EAST AND WEST OF THE INTERSECTION. THE AREA IS URBAN WITH COMMERCIAL PROPERTIES WITH DRIVES AND LAWNS ON BOTH SIDES OF ALL STREETS ON THE PROJECT.

THE PROJECT HAS ONE DISCHARGE POINT TO THE RECEIVING WATER, WALLOOMSAC RIVER.

- DRAINAGE AREA 1
  DRAINAGE AREA #1 CONSISTS OF THE ROUNDABOUT PROPER AND BOTH SIDES OF VT ROUTE 7A. THE DISCHARGE POINT IS AT THE EXISTING STORM SYSTEM WITHIN THE SHOPPING CENTER. THE EXISTING STORM SYSTEM EVENTUALLY DISCHARGES INTO THE STORM SYSTEM AND DETENTION POND OF THE SHOPPING CENTER.

DRAINAGE AREA SUMMARY

| DRAINAGE AREA | TOTAL DISTURB. (ACRES) | LIMIT OF CONCURRENT DISTURBANCE | RECEIVING WATER |
|---|---|---|---|
| 1 | 1.46 | 2.00 | WALLOOMSAC RIVER |

6. WASTE, BORROW, AND STAGING AREAS

- OFF-SITE WASTE AND BORROW AREAS HAVE NOT BEEN IDENTIFIED FOR THIS PROJECT. LARGE QUANTITIES OF WASTE AND BORROW ARE NOT ANTICIPATED. IT WILL BE THE CONTRACTORS RESPONSIBILITY TO IDENTIFY AND PERMIT, AS NECESSARY, ANY OFF-SITE WASTE AND BORROW AREAS THAT ARE NEEDED.
- LOCATE ADDITIONAL AREAS FOR DISPOSAL OF STUMPS, EXCESS SOILS AND COLLECTED SEDIMENT, IF NECESSARY. DISPOSE OF THESE MATERIALS IN A MANNER THAT WILL NOT RESULT IN SEDIMENTS ENTERING WATERS OF THE STATE.
- DISPOSAL SITES REQUIRE RELATIVELY LEVEL TERRAIN WITH AN ISOLATION DISTANCE OF AT LEAST 100 FEET FROM ANY SURFACE WATERS, INCLUDING WETLANDS.
- VEHICLE AND EQUIPMENT STORAGE AREAS OR AREAS ADJACENT TO CONSTRUCTION TRAILERS OR OTHER HIGH TRAFFIC AREAS SHALL BE COVERED WITH GEOTEXTILE FABRIC AND 12 INCHES OF GRAVEL. FOLLOWING COMPLETION OF CONSTRUCTION, ALL NON-NATIVE MATERIALS SHALL BE REMOVED FROM THE STAGING AREA. COMPACTED, RUTTED, OR OTHERWISE DISTURBED SOILS SHALL BE TILLED, RAKED, SEEDED AND MULCHED.
- ERODIBLE MATERIALS STOCKPILED WITHIN THE MATERIAL STORAGE AREAS SHALL BE ISOLATED WITH SILT FENCE OR OTHER ACCEPTABLE SEDIMENT BARRIER. SOIL STOCKPILED ON THE SITE SHALL BE SEEDED AND MULCHED.

7. WINTER CONSTRUCTION REQUIREMENTS

IT IS NOT ANTICIPATED THAT CONSTRUCTION ACTIVITY WOULD CONTINUE INTO THE WINTER CONSTRUCTION SEASON.

## CONTRACTOR RESPONSIBILITIES, LIMITATIONS AND PROHIBITIONS

1. GENERAL NOTES

- IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO AMEND/UPDATE ALL PLANS AND EXISTING PERMITS WHEN ADDING DETAILED CONSTRUCTION PHASING OR ANYTHING ELSE THAT MAY DEVIATE FROM THE APPROVED PLANS AS DIRECTED BY THE RESIDENT ENGINEER.
- OTHER THAN THOSE SHOWN ON THE PLANS ALL LAND DISTURBANCES WITHIN 50 FEET OF ALL WATER BODIES, MEASURED FROM THE TOP OF BANK, AND WETLANDS, ARE PROHIBITED WITHOUT FURTHER REGULATORY REVIEW.
- CONTRACTOR TO MAINTAIN ALL EXISTING STREAMS AND RIPARIAN BUFFER ZONES IN THEIR NATURAL CONDITION.
- OFF-SITE DISCHARGES OF ANY MATERIAL OTHER THAN STORMWATER, SUCH AS VEHICLE AND EQUIPMENT MAINTENANCE SPILLS, FUELS, WASH WATER, CONSTRUCTION DEBRIS, OIL, WET CONCRETE (INCLUDING WASHOUT WATER FROM CONCRETE BATCH TRUCKS OR EQUIPMENT USED TO MIX CONCRETE), AND OTHER SUBSTANCES, ARE PROHIBITED.
- THE FAILURE TO PROMPTLY ABATE THE DISCHARGE OF SEDIMENT OR ANY OTHER WASTE WHICH CAUSES A VISIBLE DISCOLORATION OF SURFACE WATERS (INCLUDING WETLANDS), OR IS FOUND TO BE VIOLATING WATER QUALITY STANDARDS BASED ON MONITORING, IS PROHIBITED. ANY CORRECTIVE ACTION UNDERTAKEN TO REMOVE SEDIMENT FROM A WETLAND IS ALSO PROHIBITED.
- WEATHER CONDITIONS WILL BE MONITORED DURING THE CONSTRUCTION SEASON. IF AN EXTENDED RAIN PERIOD OR HEAVY RAIN IS PREDICTED, EXPOSED SOIL AREAS WILL BE MULCHED PRIOR TO AND DAILY DURING THE RAIN EVENT. IF DETERMINED NECESSARY BY THE RESIDENT ENGINEER, WORK MAY BE SUSPENDED OR LIMITED DURING THE STORM.

2. INSPECTION AND MONITORING NOTES

- CONTRACTOR TO CONDUCT INSPECTIONS AND MONITORING IN ACCORDANCE WITH THE SPECIAL PROVISIONS AND PERMIT SPECIFIC REQUIREMENTS.

Construction Plans – Issued For Bid

PROJECT: 03112.4
DATE: Feb. 13, 2014
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EPSC Narrative

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VT 7A - Northside Drive
Bennington, VT

REVISIONS:
2015-06-26: REVISIONS PER UPDATED TELEPHONE INFORMATION

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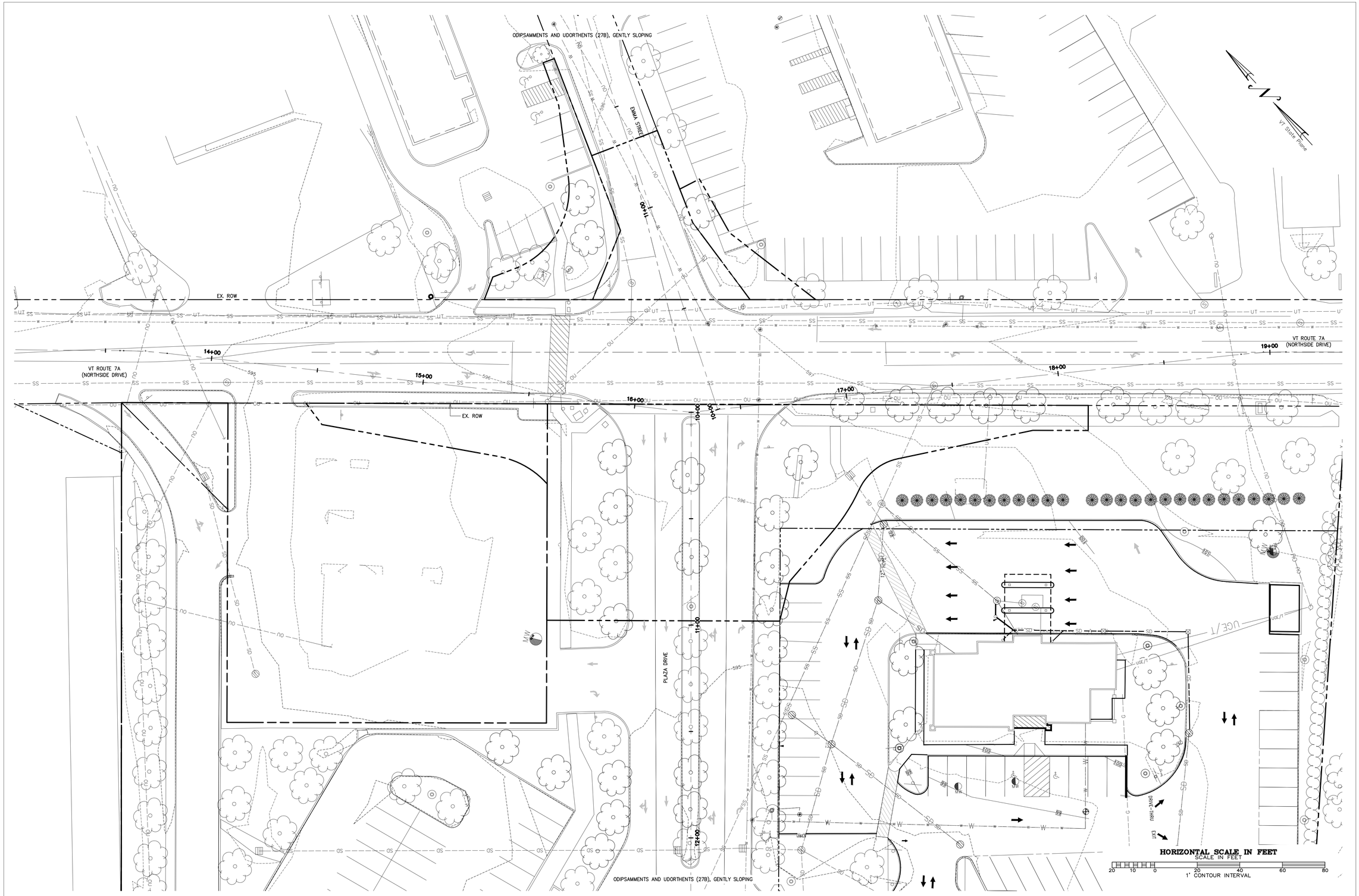
CT-11.01

Q:\2003 Drawings\03112.4 Northside Drive\Current\CT-11.01 EPSC Narrative.dwg Plotted: 7/22/2015 9:43:14 AM

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# EPSC Existing Conditions

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Northside Drive Roundabout
VT 7A - Northside Drive Bennington, VT

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CT-11.02

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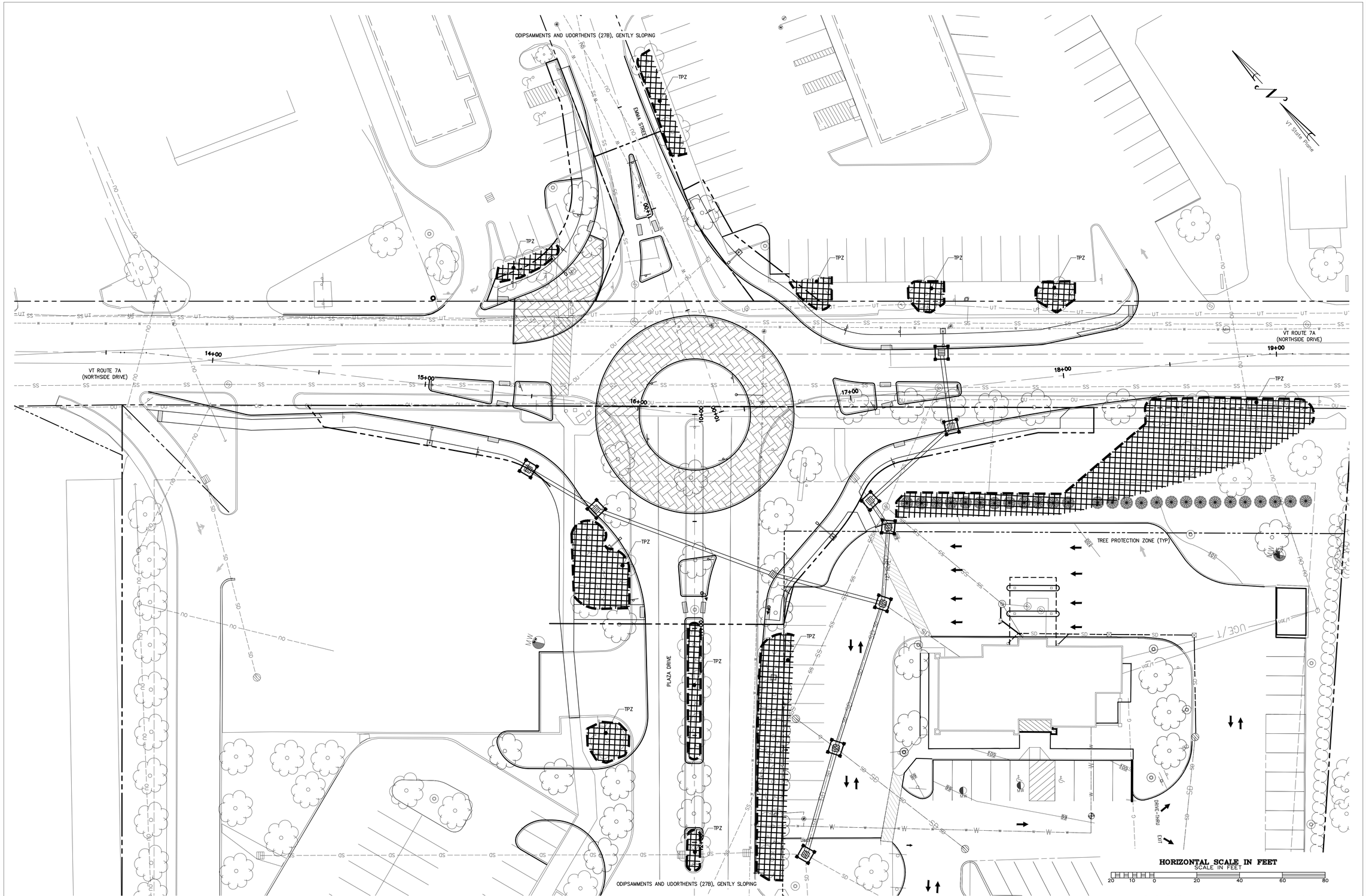


| EPSC LEGEND | |
|---|---|
| | LANDSCAPING |
| | INLET PROTECTION |
| | TREE PROTECTION ZONE (TPZ) |

Construction Plans – Issued For Bid

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# EPSC Construction Plan

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12-05-2014: REVISIONS PER UPDATED TELEPHONE INFORMATION

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VT 7A - Northside Drive
Bennington, VT

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CT-11.03

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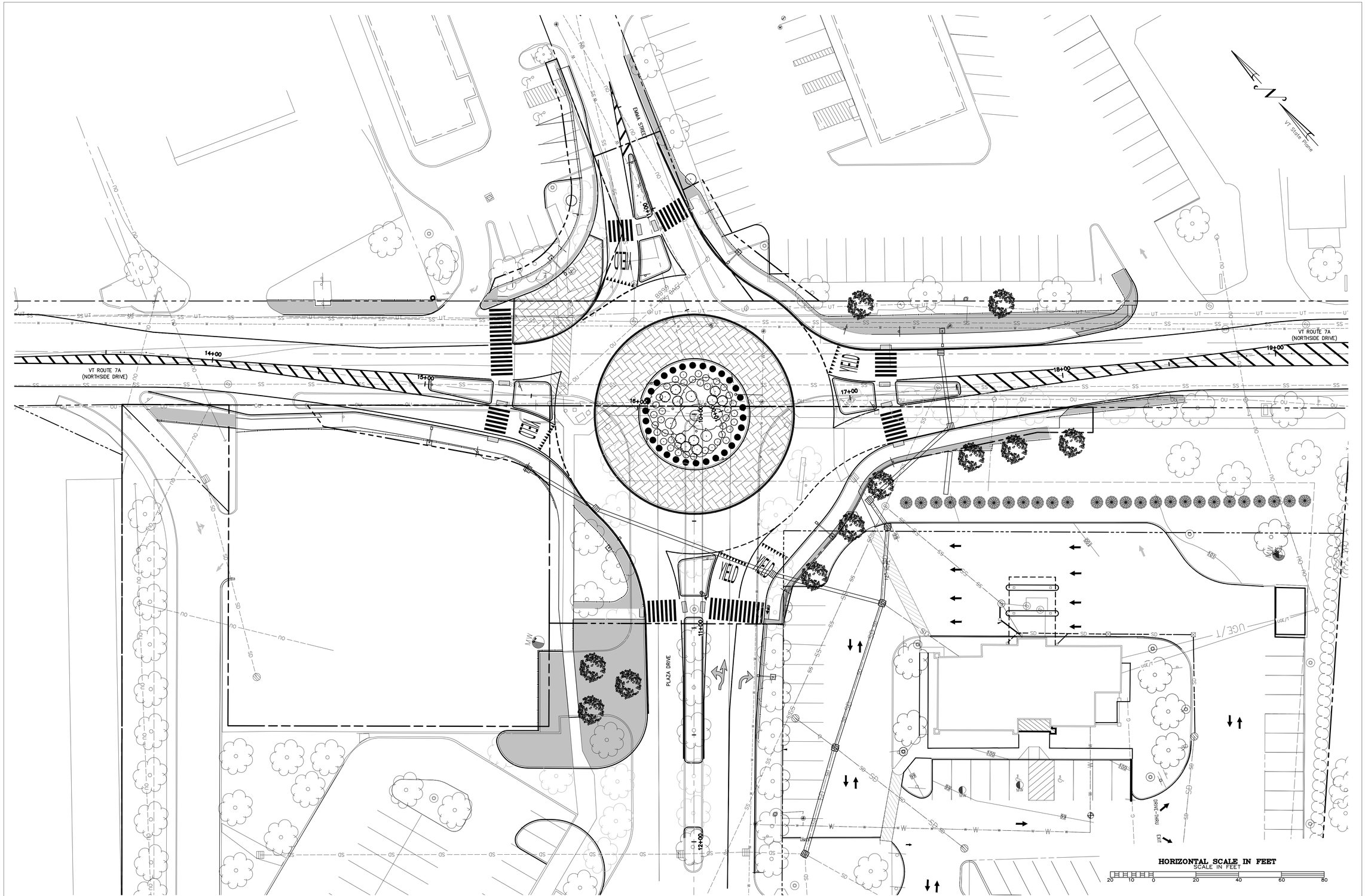


| LEGEND | |
|---|---|
| | LIMIT OF SOIL DISTURBANCE |
| | TURF ESTABLISHMENT |
| | PROPOSED PLANTING |

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DESIGN: DSW
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CHECKED: PHC
APPROVED: PHC

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# EPSC Final Conditions Plan

REVISIONS:
2015-06-30: REVISIONS PER UPDATED TELEPHONE INFORMATION

BLS Bennington, LC
Youngstown, OH
Northside Drive Roundabout
VT 7A - Northside Drive
Bennington, VT

CIVIL

CT-11.04

Q:\2003 Drawings\03112.4 Northside Drive\Current\CT-11.04 EPSC Final Conditions Plan.dwg Plotted: 7/2/2015 9:44:24 AM

| VAOT URBAN LAWN MIX | | | | | | |
|---|---|---|---|---|---|---|
| | LBS/AC | | | | | |
| WEIGHT | BROADCAST | HYDROSEED | NAME | LATIN NAME | GERM | PURITY |
| 42.5% | 34 | 68 | CREEPING RED FESCUE | FESTUCA RUBRA X RUBRA | 85% | 98% |
| 20.0% | 16 | 32 | PERENNIAL RYE GRASS | LOLIUM PERENNE | 90% | 95% |
| 32.5% | 26 | 52 | KENTUCKY BLUE GRASS | POA PRATENSIS | 85% | 85% |
| 5.0% | 4 | 8 | ANNUAL RYE GRASS | LOLIUM MULTIFLORUM | 85% | 95% |
| 100% | 80 | 160 | | | | |

| GENERAL AMENDMENT GUIDANCE | | |
|---|---|---|
| FERTILIZER | LIME | |
| 10/20/10 | AG LIME | PELLITIZED |
| 500 LBS/AC | 2 TONS/AC | 1 TONS/AC |

## CONSTRUCTION GUIDANCE

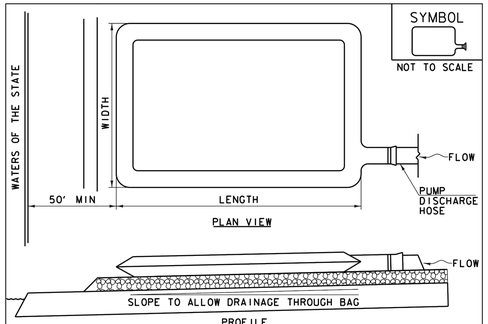
1. SEED MIX: THE URBAN AREA MIX SHALL NOT BE USED IN WETLANDS OR ANY WATERS OF THE STATE OF VERMONT.
2. SEED MIX: USE ONLY AS INDICATED IN THE PLANS.
3. SEED MIX: SHALL NOT HAVE A WEED CONTENT EXCEEDING 0.40% BY WEIGHT AND SHALL BE FREE OF ALL NOXIOUS SEED.
4. FERTILIZER AND LIMESTONE: SHALL FOLLOW RATES SHOWN ON PLAN OR AS DIRECTED BY THE ENGINEER
5. HAY MULCH: TO BE PLACED ON EARTH SLOPES AT THE RATE OF 2 TONS/ACRE, ACHIEVE 90% GROUND COVER OR AS DIRECTED BY THE ENGINEER.
6. HYDROSEEDING: ALTHOUGH GUIDANCE IS GIVEN ABOVE THE SITE CONDITIONS AND THE TYPE OF HYDROSEED WILL ULTIMATELY DICTATE THE AMOUNTS AND TYPES OF SOIL AMENDMENTS TO BE APPLIED
7. TURF ESTABLISHMENT: PLACING SEED, FERTILIZER, LIME AND MULCH PRIOR TO SEPTEMBER 15 AND AFTER APRIL 15 CAN BETTER ENSURE A VIGOROUS GROWTH OF GRASS.

ADAPTED FROM VTRANS TECHNICAL LANDSCAPE MANUAL FOR ROADWAYS AND TRANSPORTATION FACILITIES

# TURF ESTABLISHMENT

THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 651(FOR SEED (PAY ITEM 651.15)

| REVISIONS | |
|---|---|
| JANUARY 22, 2015 | WHF |




## CONSTRUCTION SPECIFICATIONS

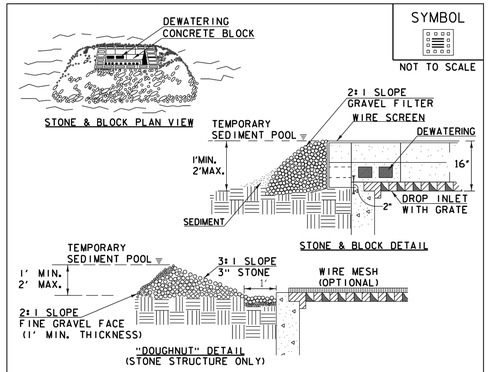
1. THE PRIMARY PURPOSE OF FILTER BAG IS TO RETAIN SILT, SAND, AND FINES DURING DEWATERING OPERATIONS.
2. FILTER BAGS SHALL BE INSTALLED ON A VEGETATED SLOPE GRADED TO ALLOW INCOMING WATER TO FLOW THROUGH THE BAG.
3. FILTER BAGS MAY ALSO BE PLACED ON COARSE AGGREGATE, STONE, OR HAYBALES TO INCREASE FILTRATION EFFICIENCY.
4. FILTER BAGS SHALL BE LOCATED A MINIMUM OF 50' FROM WATERS OF THE STATE UNLESS OTHERWISE APPROVED BY THE ENGINEER.
5. THE NECK OF THE FILTER BAG SHALL BE STRAPPED TIGHTLY TO THE DISCHARGE HOSE.
6. A FILTER BAG IS FULL WHEN IT NO LONGER CAN EFFICIENTLY FILTER SEDIMENT OR ALLOW WATER TO PASS AT A REASONABLE RATE.
7. FILTER BAG SHALL BE DISPOSED OF AS APPROVED IN THE EPSC PLAN OR AS DIRECTED BY THE ENGINEER.

# FILTER BAG

NOTES:
REFER TO "THE VERMONT STANDARDS & SPECIFICATIONS FOR EROSION PREVENTION & SEDIMENT CONTROL -2006- "FROM THE VT AGENCY OF NATURAL RESOURCES FOR ADDITIONAL GUIDANCE.

THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 653 FOR FILTER BAG (PAY ITEM 653.45) AND AS SPECIFIED IN THE CONTRACT.

| REVISIONS | |
|---|---|
| MARCH 24, 2008 | WHF |
| JANUARY 13, 2009 | WHF |




## CONSTRUCTION SPECIFICATIONS

1. LAY ONE BLOCK ON EACH SIDE OF THE STRUCTURE ON ITS SIDE FOR DEWATERING. FOUNDATION SHALL BE 2" MINIMUM BELOW REST OF INLET AND BLOCKS SHALL BE PLACED AGAINST INLET FOR SUPPORT.
2. HARDWARE CLOTH OR ½" WIRE MESH SHALL BE PLACED OVER BLOCK OPENINGS TO SUPPORT STONE.
3. USE CLEAN STONE OR GRAVEL ½"- ¾" IN DIAMETER PLACED 2" BELOW TOP OF THE BLOCK ON A 2:1 SLOPE OR FLATTER.
4. FOR STONE STRUCTURES ONLY, A 1' THICK LAYER OF THE FILTER STONE WILL BE PLACED AGAINST THE 3" STONE AS SHOWN ON THE DRAWINGS.
5. MAXIMUM DRAINAGE AREA 1 ACRE

ADAPTED FROM DETAILS PROVIDED BY: NEW YORK STATE DEC ORIGINALLY DEVELOPED BY USDA-NRCS VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION

# STONE & BLOCK DROP INLET PROTECTION

NOTES:
REFER TO "THE VERMONT STANDARDS & SPECIFICATIONS FOR EROSION PREVENTION & SEDIMENT CONTROL -2006- "FROM THE VT AGENCY OF NATURAL RESOURCES FOR ADDITIONAL GUIDANCE.

THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 653 FOR INLET PROTECTION DEVICE, TYPE I(PAY ITEM 653.40).

| REVISIONS | |
|---|---|
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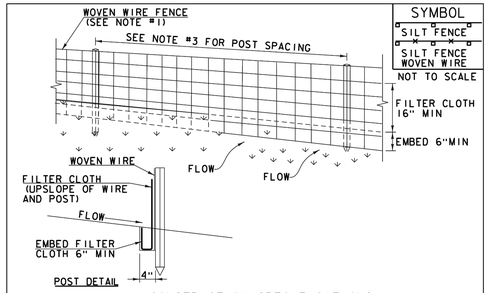
| JANUARY 13, 2009 | WHF |




## CONSTRUCTION SPECIFICATIONS

1. WOVEN WIRE REINFORCED FENCE IS REQUIRED WITHIN 100' UPSLOPE OF RECEIVING WATERS WHEN THE PROJECT FALLS UNDER A CONSTRUCTION STORMWATER PERMIT. WOVEN WIRE SHALL BE A MIN. 14 GAUGE WITH A 6" MAX. MESH OPENING.
2. FILTER CLOTH SHALL BE EITHER FILTER X, MIRAFI 100X, STABILINKA T140N OR APPROVED EQUIVALENT.
3. POST SPACING FOR WIRE-BACKED FENCE SHALL BE 10' MAXIMUM. FOR FILTER-CLOTH FENCE, WHEN ELONGATION IS >50%, POST SPACING SHALL NOT EXCEED 4' AND WHEN ELONGATION IS <50%, POST SPACING SHALL NOT EXCEED 6'.
4. WOVEN WIRE FENCE IS TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES. FILTER CLOTH IS TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION.
5. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVER-LAPPED BY 6" AND FOLDED.
6. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN SEDIMENT REACHES HALF OF FABRIC HEIGHT.

ADAPTED FROM DETAILS PROVIDED BY: NEW YORK STATE DEC ORIGINALLY DEVELOPED BY USDA-NRCS VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION

# SILT FENCE

NOTES:
REFER TO "THE VERMONT STANDARDS & SPECIFICATIONS FOR EROSION PREVENTION & SEDIMENT CONTROL -2006- "FROM THE VT AGENCY OF NATURAL RESOURCES FOR ADDITIONAL GUIDANCE.

THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 649 AND AS SHOWN IN THE PLANS FOR GEOTEXTILE FOR SILT FENCE (PAY ITEM 649.51) OR GEOTEXTILE FOR SILT FENCE, WOVEN WIRE REINFORCED (PAY ITEM 649.515).

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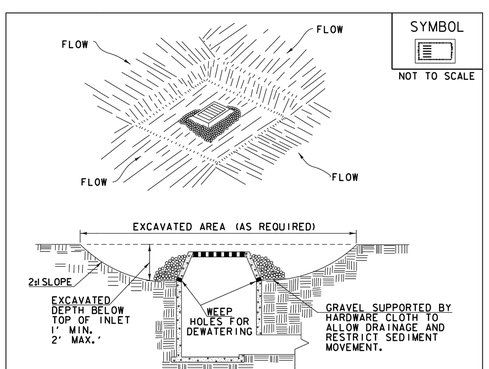
| DECEMBER 11, 2008 | WHF |
| JANUARY 13, 2009 | WHF |




## CONSTRUCTION SPECIFICATIONS

1. CLEAR THE AREA OF ALL DEBRIS THAT WILL HINDER EXCAVATION.
2. GRADE APPROACH TO THE INLET UNIFORMLY AROUND THE BASIN.
3. WEEP HOLES SHALL BE PROTECTED BY GRAVEL.
4. UPON STABILIZATION OF CONTRIBUTING DRAINAGE AREA, SEAL WEEP HOLES, FILL BASIN WITH STABLE SOIL TO FINAL GRADE, COMPACT IT PROPERLY AND STABILIZE WITH PERMANENT SEEDING.
5. MAXIMUM DRAINAGE AREA 1 ACRE

ADAPTED FROM DETAILS PROVIDED BY: NEW YORK STATE DEC ORIGINALLY DEVELOPED BY USDA-NRCS VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION

# EXCAVATED DROP INLET PROTECTION

NOTES:
REFER TO "THE VERMONT STANDARDS & SPECIFICATIONS FOR EROSION PREVENTION & SEDIMENT CONTROL -2006- "FROM THE VT AGENCY OF NATURAL RESOURCES FOR ADDITIONAL GUIDANCE.

THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 653 FOR INLET PROTECTION DEVICE, TYPE I(PAY ITEM 653.40).

| REVISIONS | |
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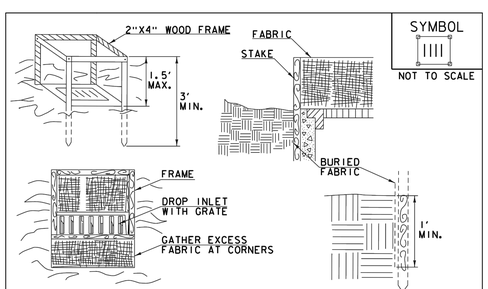
| JANUARY 13, 2009 | WHF |




## CONSTRUCTION SPECIFICATIONS

1. FILTER FABRIC SHALL HAVE AN APPARENT OPENING SIZE OF 40-85. BURLAP MAY BE USED FOR SHORT TERM APPLICATIONS.
2. CUT FABRIC FROM A CONTINUOUS ROLL TO ELIMINATE JOINTS. IF JOINTS ARE NEEDED THEY WILL BE OVERLAPPED TO THE NEXT STAKE.
3. STAKE MATERIALS WILL BE STANDARD 2"x 4" WOOD OR EQUIVALENT METAL WITH A MINIMUM LENGTH OF 3'.
4. SPACE STAKES EVENLY AROUND INLET 3' APART AND DRIVE A MINIMUM 18" DEEP. SPANS GREATER THAN 3' MAY BE BRIDGED WITH THE USE OF WIRE MESH BEHIND THE FILTER FABRIC FOR SUPPORT.
5. FABRIC SHALL BE EMBEDDED 1' MINIMUM BELOW GROUND AND BACKFILLED. IT SHALL BE SECURELY FASTENED TO THE STAKES AND FRAME.
6. A 2" x 4" WOOD FRAME SHALL BE COMPLETED AROUND THE CREST OF THE FABRIC FOR OVER FLOW STABILITY.
7. MAXIMUM DRAINAGE AREA 1 ACRE

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# FILTER FABRIC DROP INLET PROTECTION

NOTES:
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THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 653 FOR INLET PROTECTION DEVICE, TYPE I(PAY ITEM 653.40).

| REVISIONS | |
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| MARCH 7, 2008 | WHF |
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Construction Plans – Issued For Bid


PROJECT: 03112.4
DATE: Feb. 13, 2014
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# EPSC Details

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Bennington, VT

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CT-11.05

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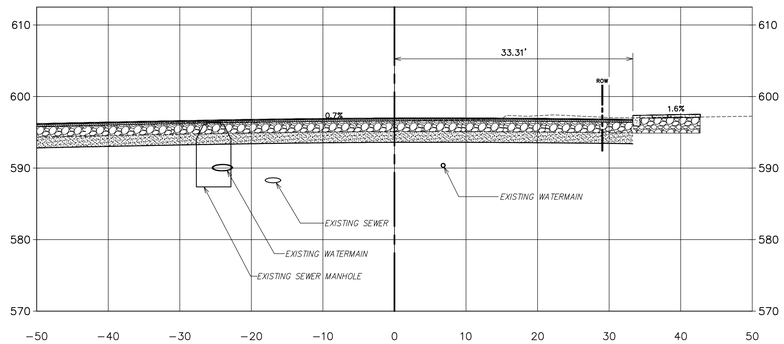


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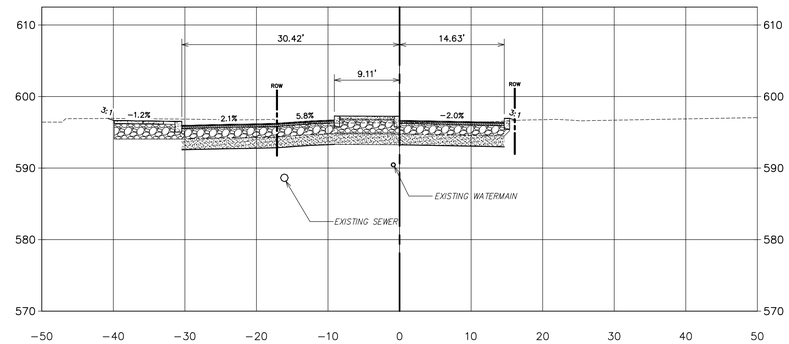


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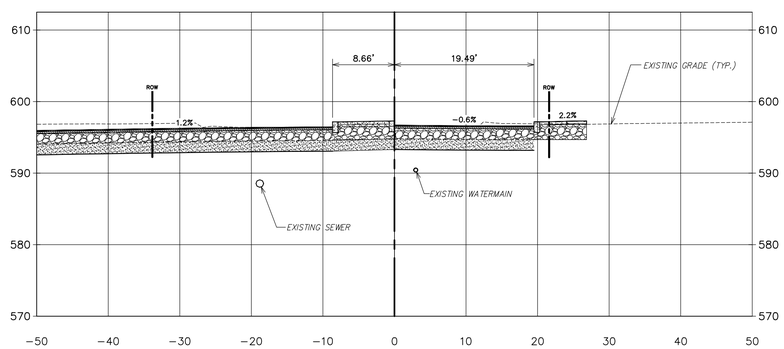


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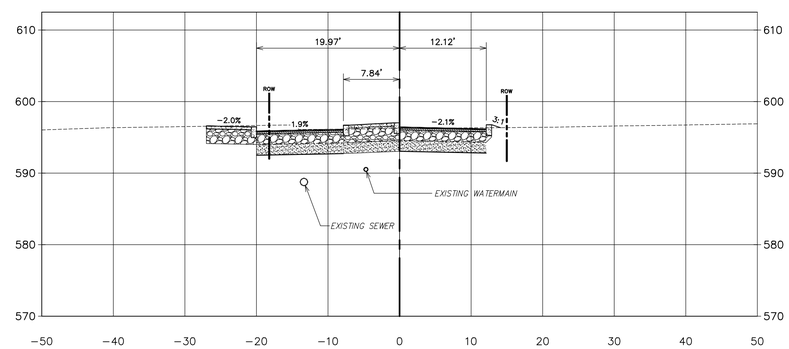


11+25.00

EMMA STREET

**HORIZONTAL SCALE IN FEET**

10 5 0 10 20 30 40

Construction Plans – Issued For Bid

PROJECT: 03112.4
DATE: Feb. 13, 2014
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CT-12.01

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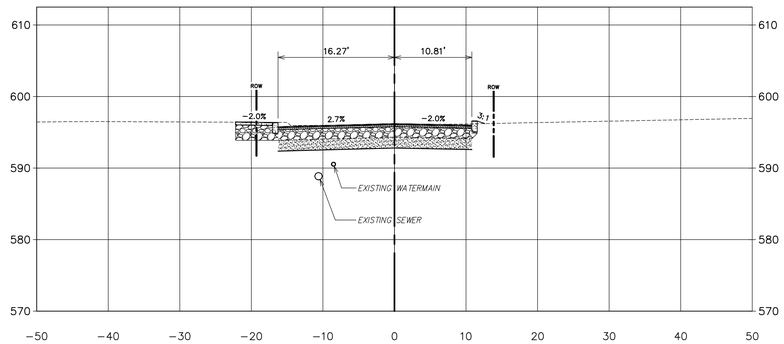


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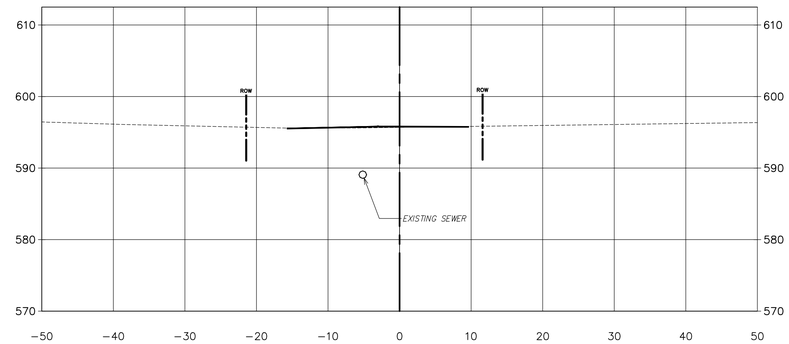


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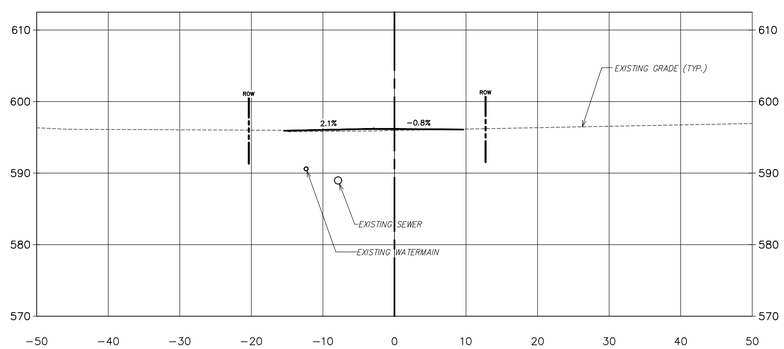


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EMMA STREET

HORIZONTAL SCALE IN FEET

10 5 0 10 20 30 40

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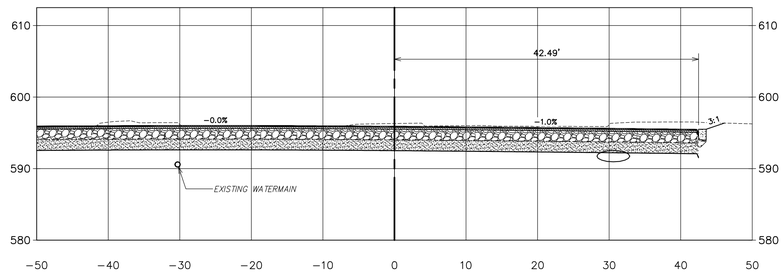


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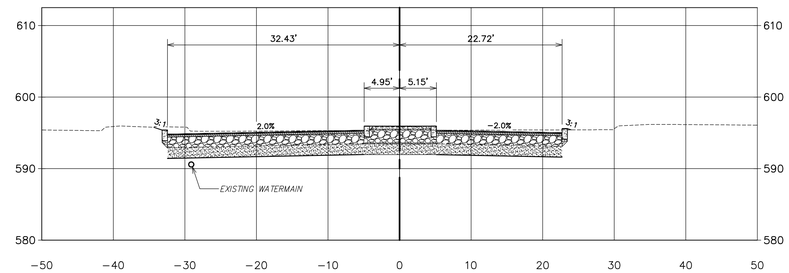


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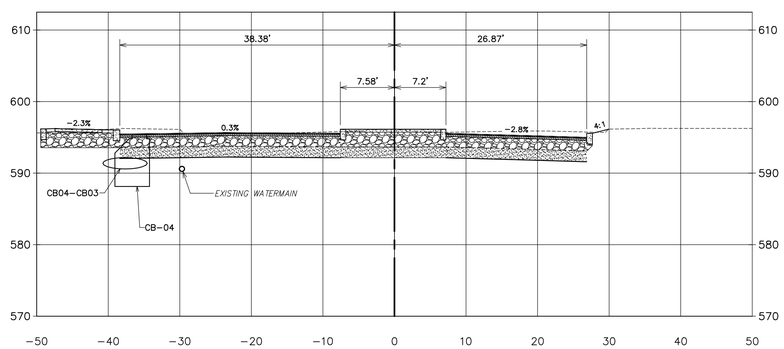


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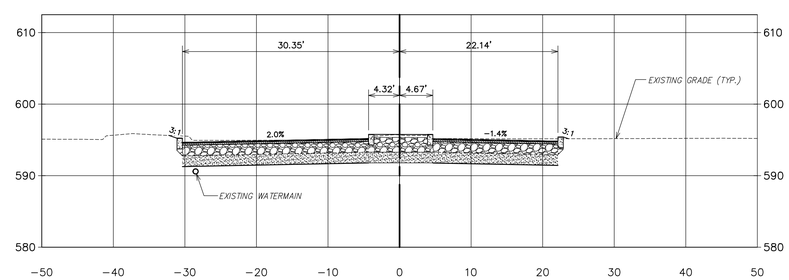


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PLAZA DRIVE

HORIZONTAL SCALE IN FEET

10 5 0 10 20 30 40

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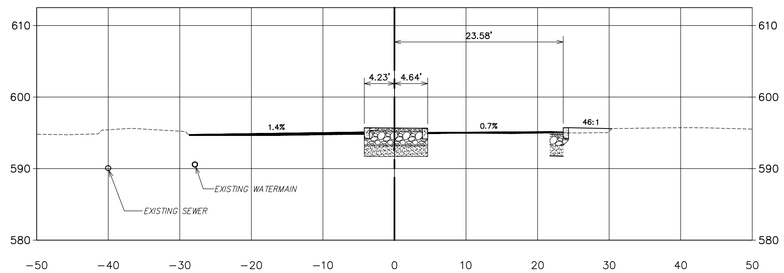


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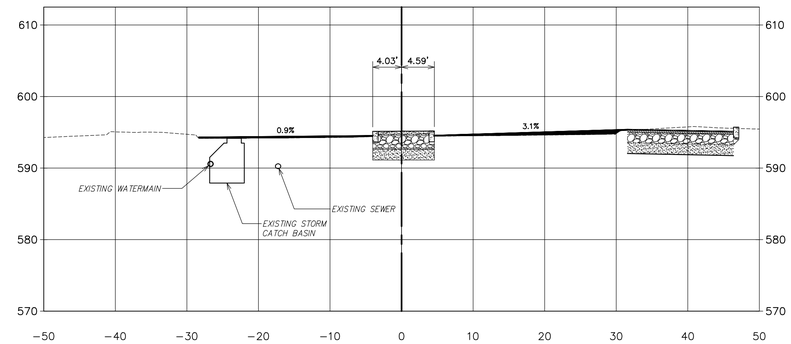


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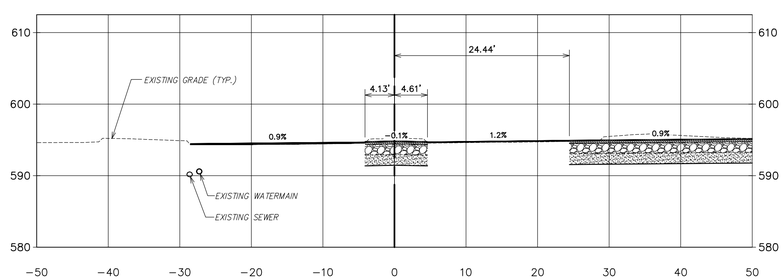


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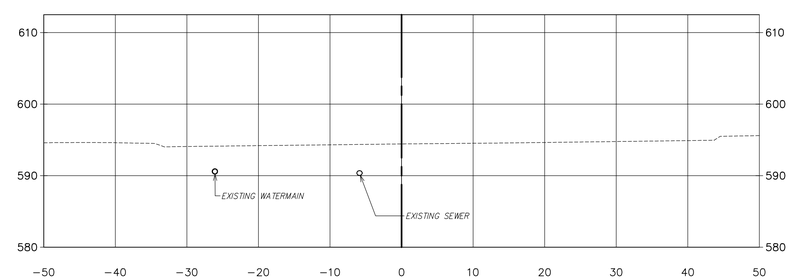


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PLAZA DRIVE

**HORIZONTAL SCALE IN FEET**

10 5 0 10 20 30 40

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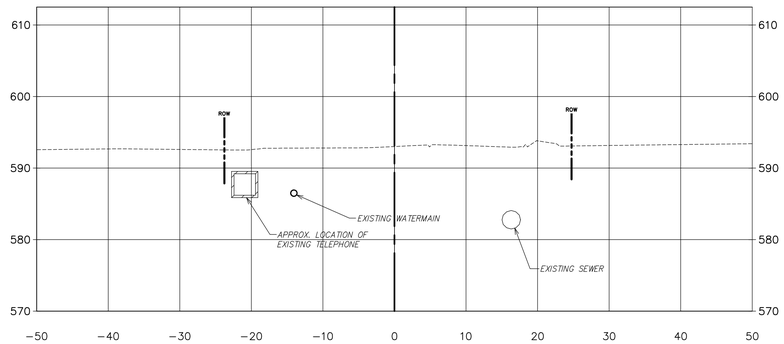


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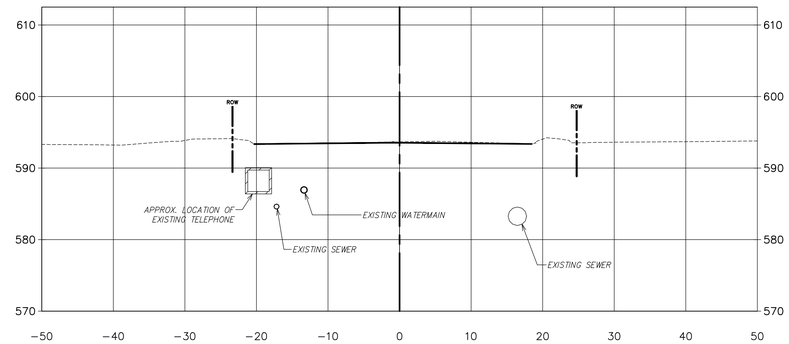


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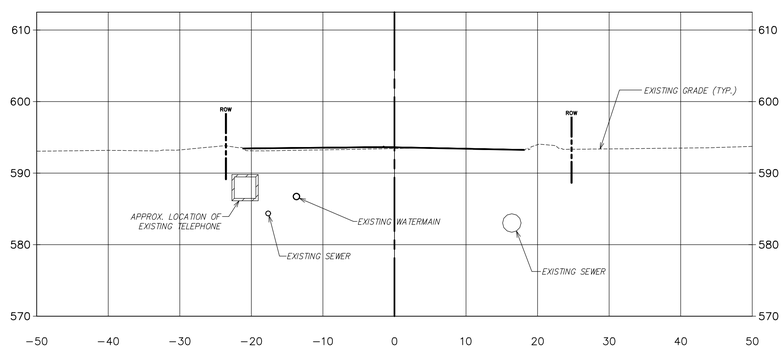


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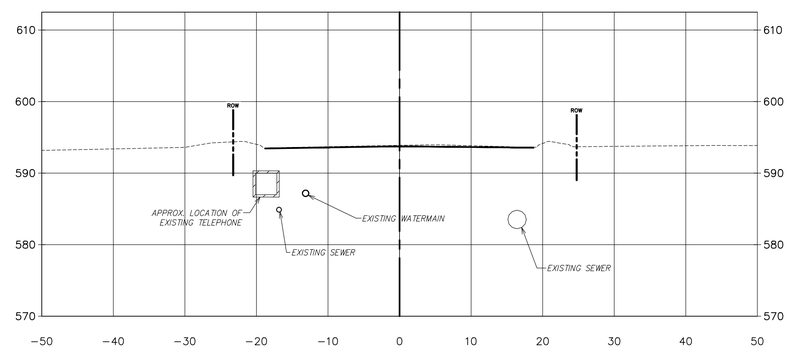


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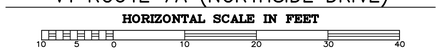
VT ROUTE 7A (NORTHSIDE DRIVE)

**HORIZONTAL SCALE IN FEET**




Construction Plans – Issued For Bid

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APPROVED: PHC


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# Cross Sections

REVISIONS:
2015-06-30: REVISIONS PER UPDATED TELEPHONE INFORMATION

BLS Bennington, LC
Youngstown, OH
Northside Drive Roundabout
VT 7A - Northside Drive
Bennington, VT

CIVIL

CT-12.05


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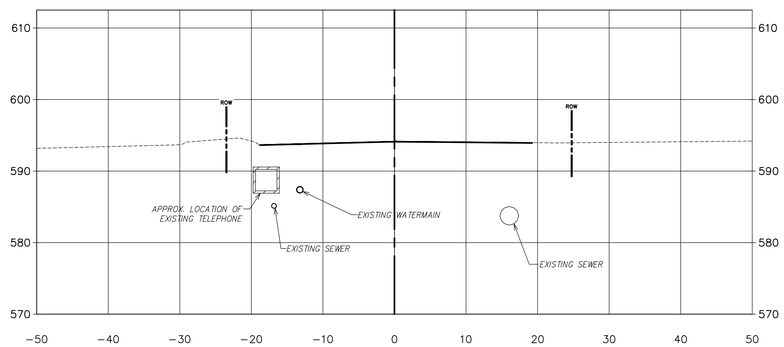


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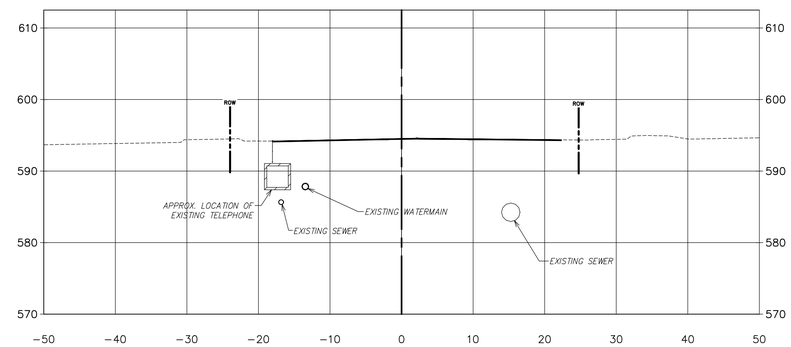


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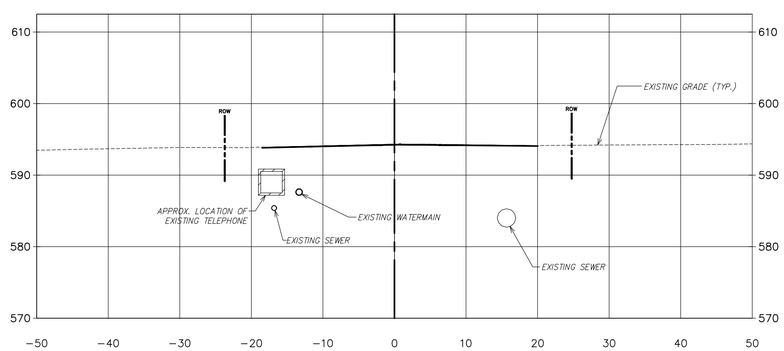


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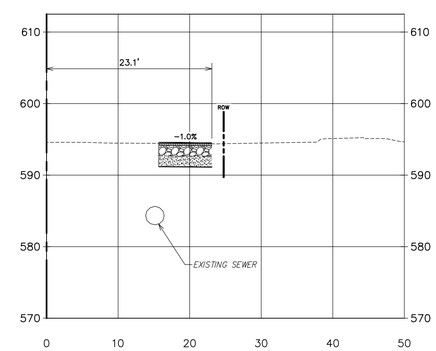


13+58.00 (DRIVE RIGHT)

VT ROUTE 7A (NORTHSIDE DRIVE)

**HORIZONTAL SCALE IN FEET**

10 5 0 10 20 30 40

Construction Plans – Issued For Bid

PROJECT: 03112.4
DATE: Feb. 13, 2014
DESIGN: DSW
DRAWN: DSW
CHECKED: PHC
APPROVED: PHC

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103 Fairfax Rd.
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Youngstown, OH

Northside Drive Roundabout

VT 7A - Northside Drive Bennington, VT

CIVIL

CT-12.06

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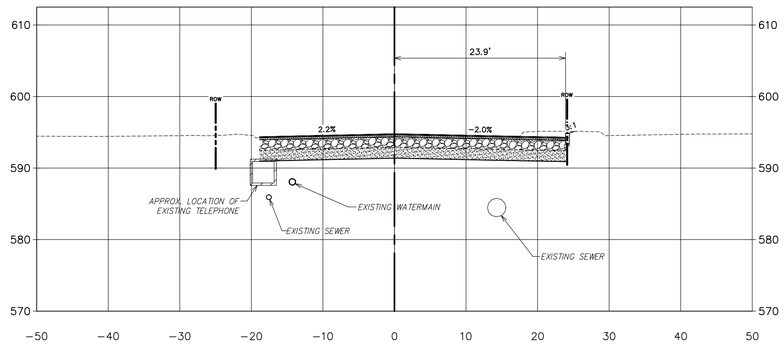


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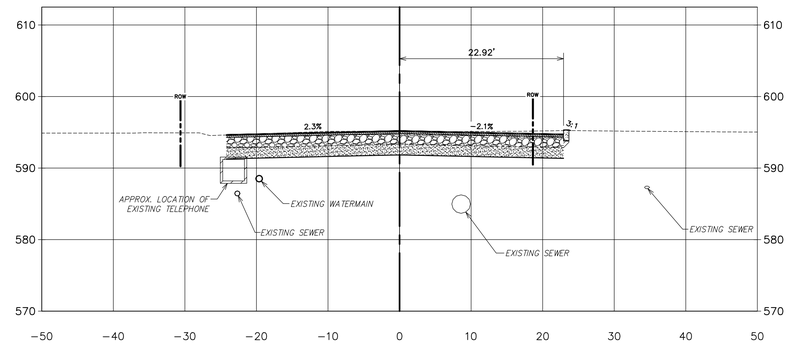


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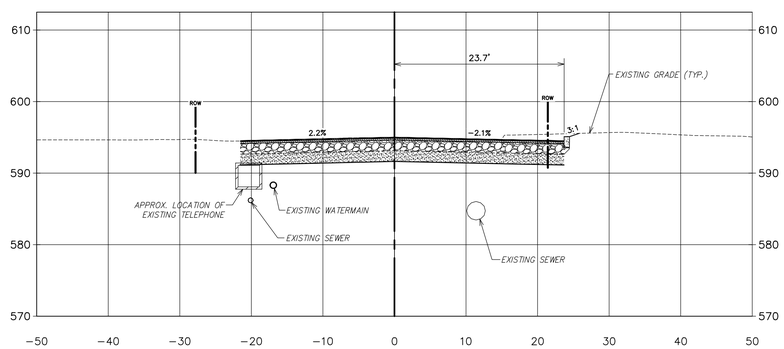


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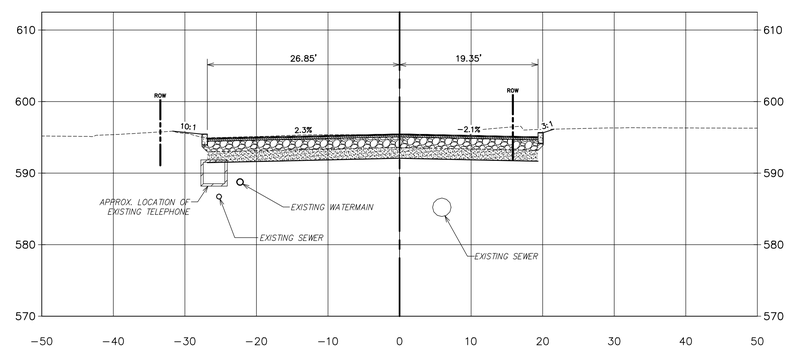


14+50.00

VT ROUTE 7A (NORTHSIDE DRIVE)

**HORIZONTAL SCALE IN FEET**

10 5 0 10 20 30 40

Construction Plans – Issued For Bid

PROJECT: 03112.4
DATE: Feb. 13, 2014
DESIGN: DSW
DRAWN: DSW
CHECKED: PHC
APPROVED: PHC


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VT 7A - Northside Drive
Bennington, VT

CIVIL

CT-12.07

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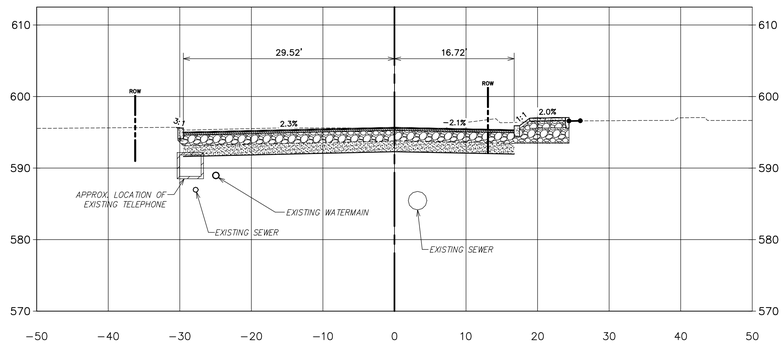


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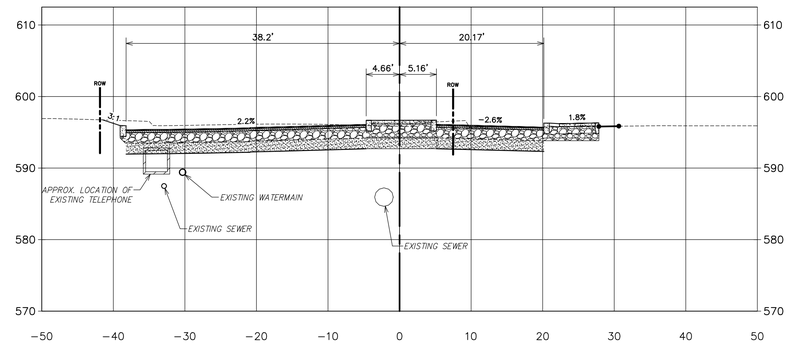


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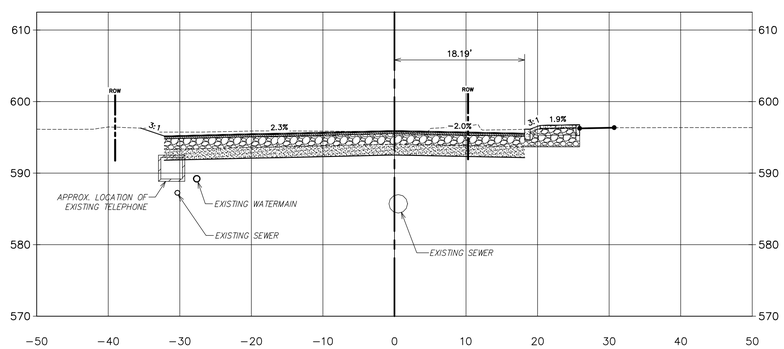


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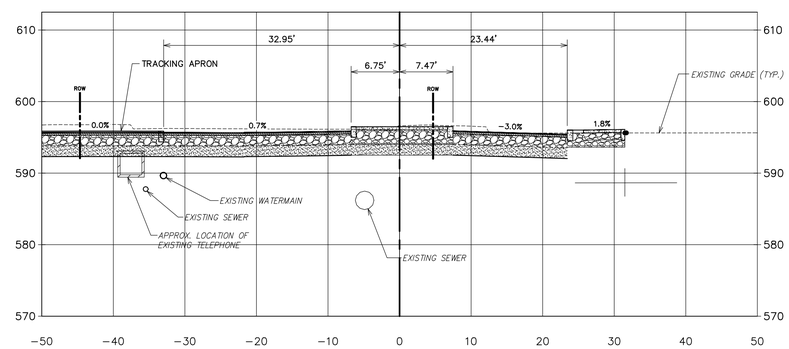


15+50.00

VT ROUTE 7A (NORTHSIDE DRIVE)

**HORIZONTAL SCALE IN FEET**

10 5 0 10 20 30 40

Construction Plans – Issued For Bid

PROJECT: 03112.4
DATE: Feb. 13, 2014
DESIGN: DSW
DRAWN: DSW
CHECKED: PHC
APPROVED: PHC


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Youngstown, OH
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VT 7A - Northside Drive
Bennington, VT

CIVIL

CT-12.08

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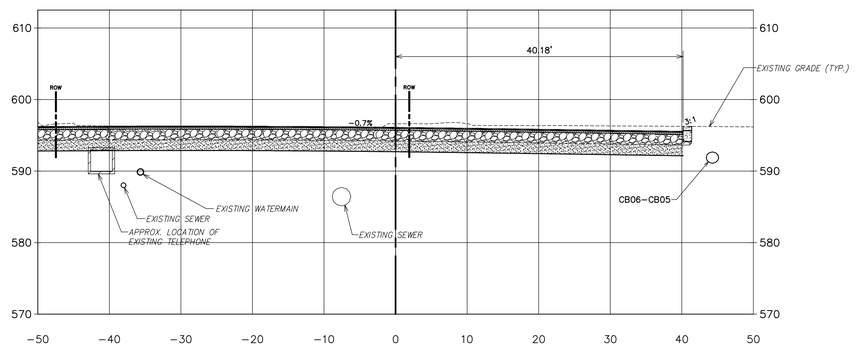


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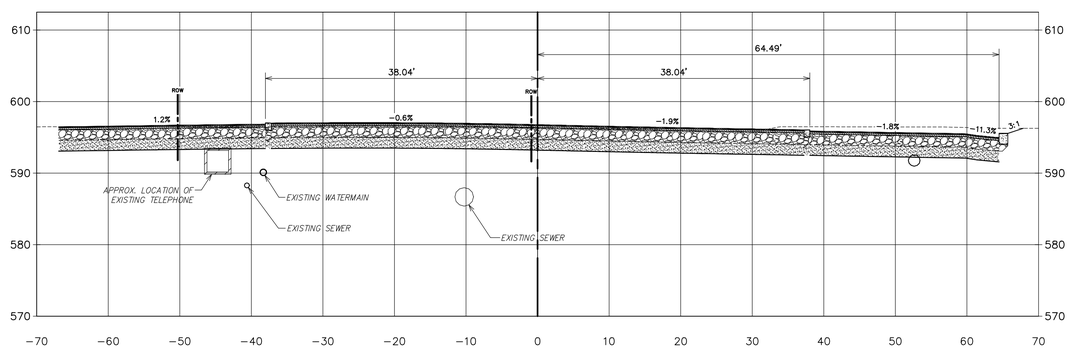


16+00.00

VT ROUTE 7A (NORTHSIDE DRIVE)

**HORIZONTAL SCALE IN FEET**

10 5 0 10 20 30 40

Construction Plans – Issued For Bid

PROJECT: 03112.4
DATE: Feb. 13, 2014
DESIGN: DSW
DRAWN: DSW
CHECKED: PHC
APPROVED: PHC


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Youngstown, OH

Northside Drive Roundabout

VT 7A - Northside Drive Bennington, VT

CIVIL

CT-12.09


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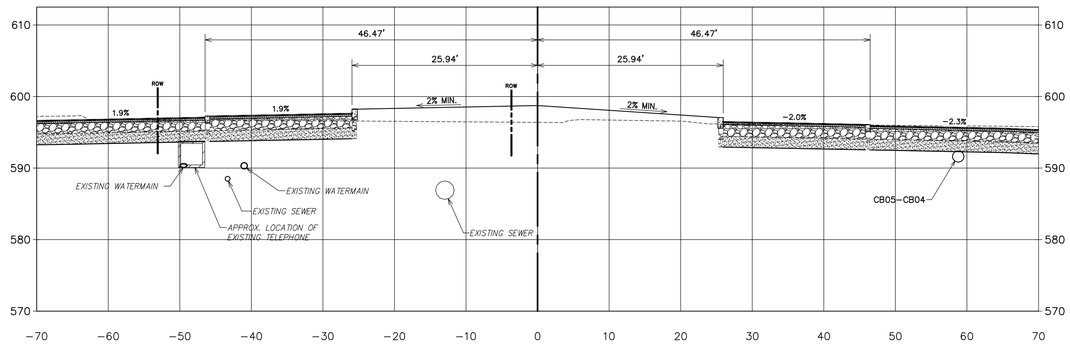


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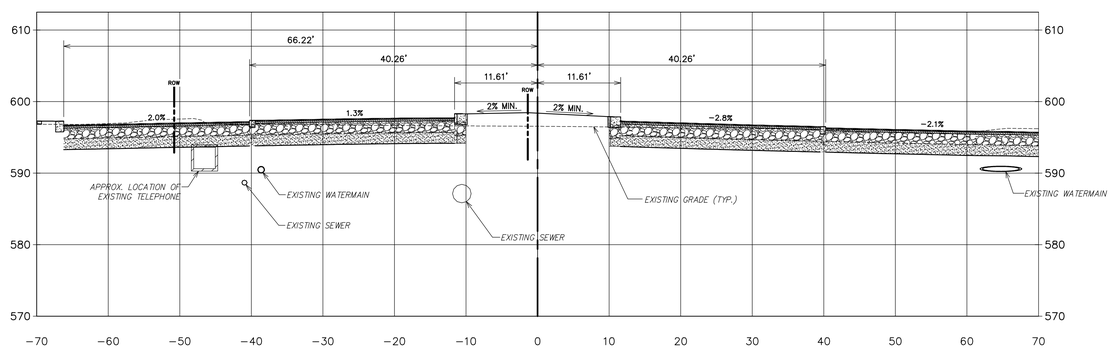


16+50.00

VT ROUTE 7A (NORTHSIDE DRIVE)

**HORIZONTAL SCALE IN FEET**

10 5 0 10 20 30 40

Construction Plans – Issued For Bid

PROJECT: 03112.4
DATE: Feb. 13, 2014
DESIGN: DSW
DRAWN: DSW
CHECKED: PHC
APPROVED: PHC

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VT 7A - Northside Drive Bennington, VT

CIVIL

CT-12.10

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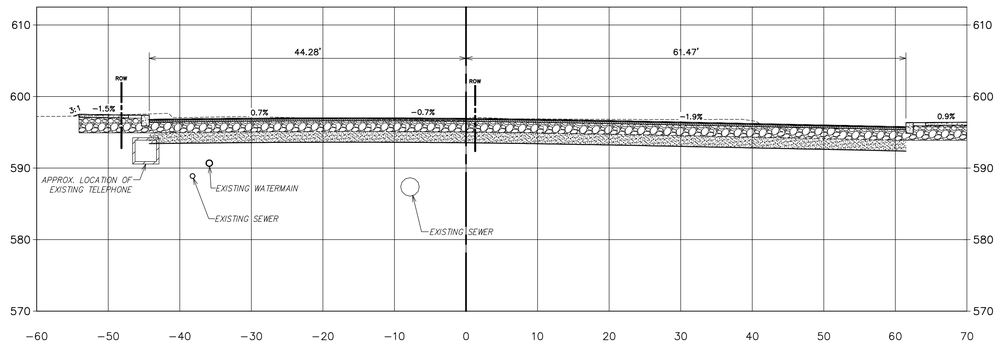


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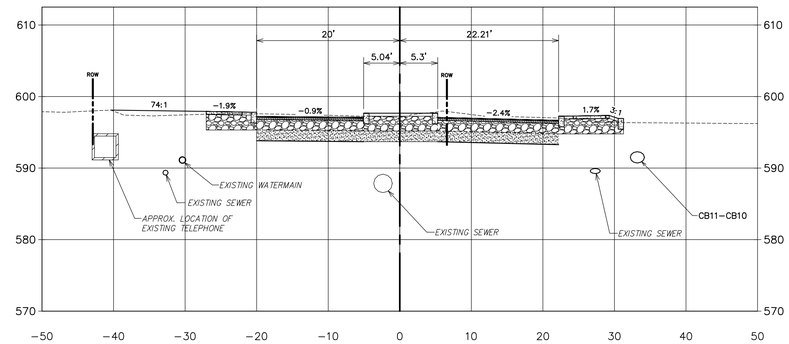


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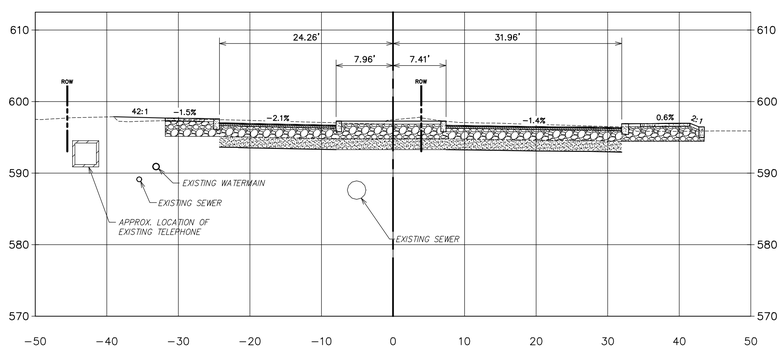


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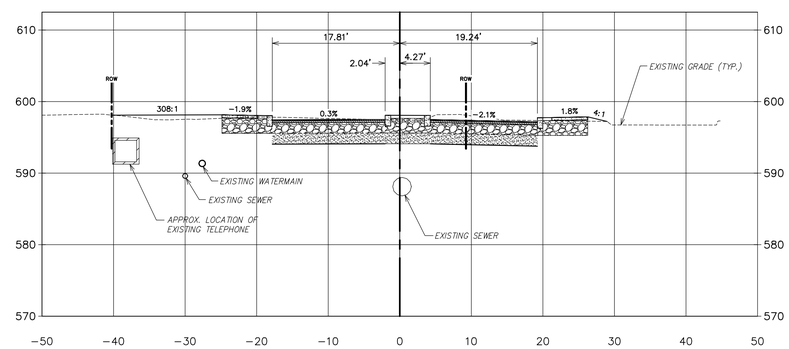


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VT ROUTE 7A (NORTHSIDE DRIVE)

**HORIZONTAL SCALE IN FEET**

10 5 0 10 20 30 40

Construction Plans – Issued For Bid

PROJECT: 03112.4
DATE: Feb. 13, 2014
DESIGN: DSW
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# Cross Sections

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Youngstown, OH
Northside Drive Roundabout
VT 7A - Northside Drive
Bennington, VT

CIVIL

CT-12.11

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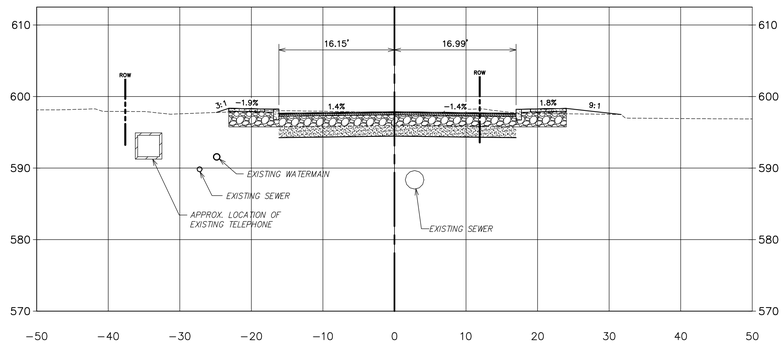


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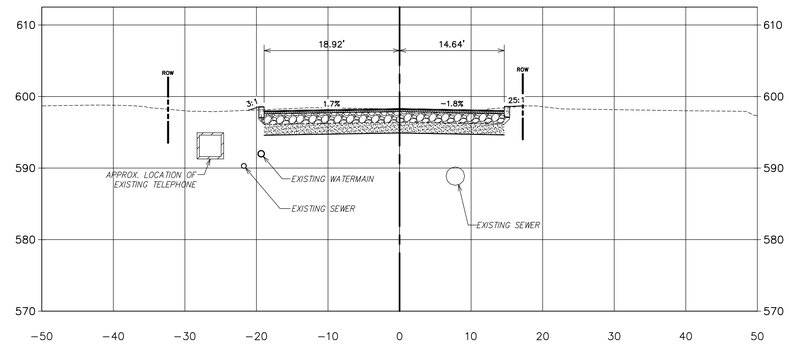


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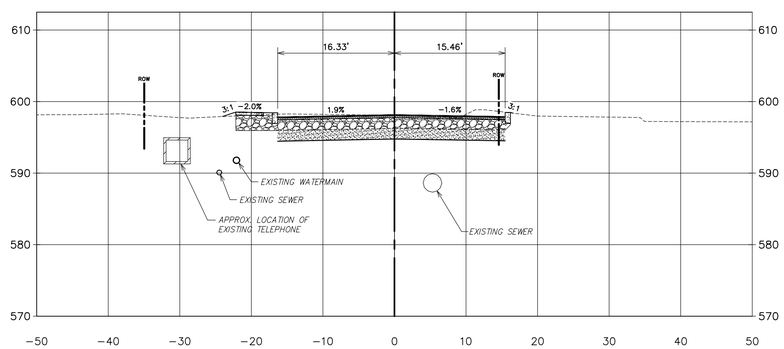


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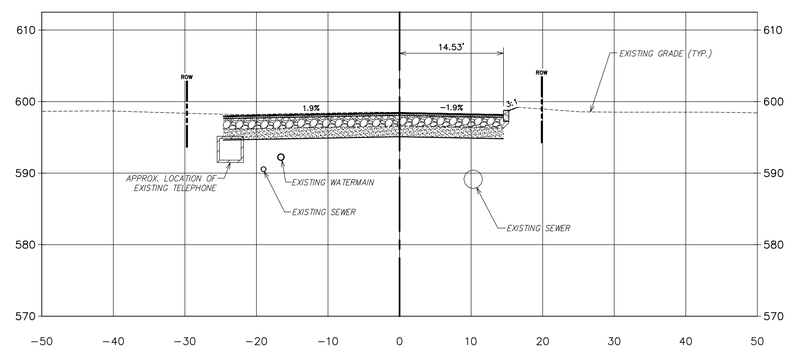


18+50.00

VT ROUTE 7A (NORTHSIDE DRIVE)

**HORIZONTAL SCALE IN FEET**

10 5 0 10 20 30 40

Construction Plans – Issued For Bid

PROJECT: 03112.4
DATE: Feb. 13, 2014
DESIGN: DSW
DRAWN: DSW
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# Cross Sections

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2015-06-30: REVISIONS PER UPDATED TELEPHONE INFORMATION

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Youngstown, OH
Northside Drive Roundabout
VT 7A - Northside Drive
Bennington, VT

CIVIL

CT-12.12

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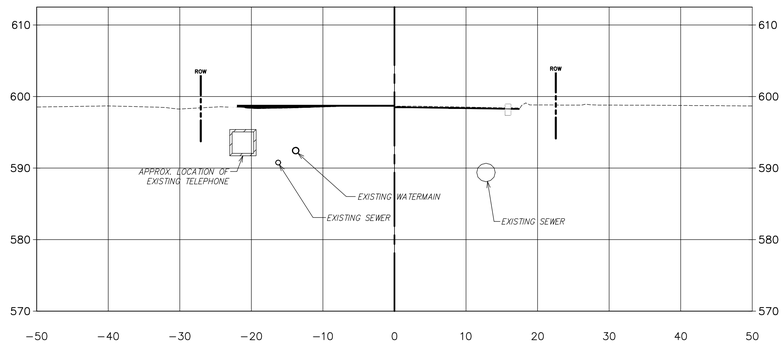


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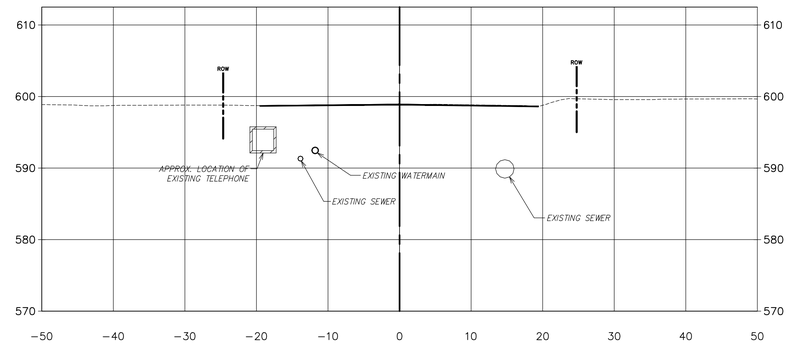


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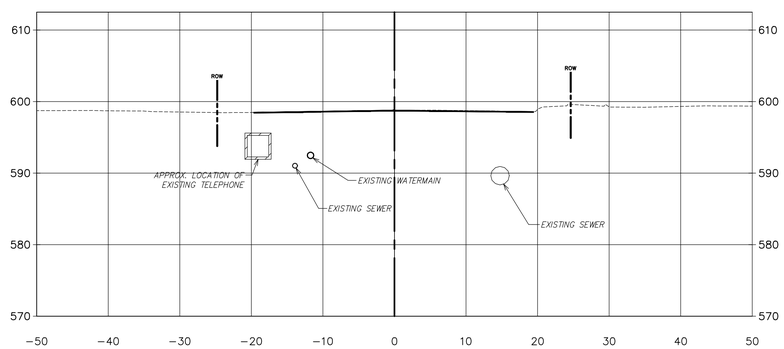


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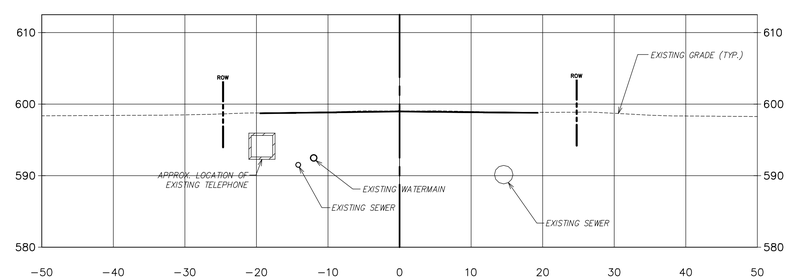


19+50.00

VT ROUTE 7A (NORTHSIDE DRIVE)

**HORIZONTAL SCALE IN FEET**

10 5 0 10 20 30 40

Construction Plans – Issued For Bid

PROJECT: 03112.4
DATE: Feb. 13, 2014
DESIGN: DSW
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# Cross Sections

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Youngstown, OH
Northside Drive Roundabout
VT 7A - Northside Drive
Bennington, VT

CIVIL

CT-12.13

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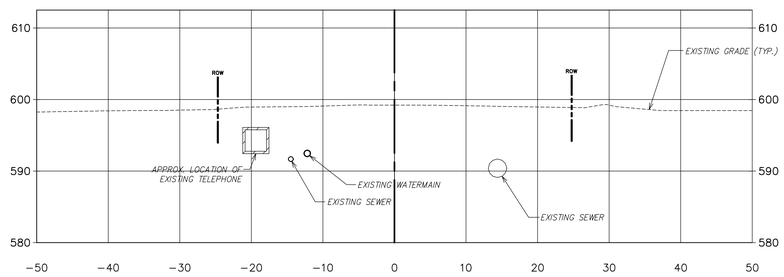


19+75.00

VT ROUTE 7A (NORTHSIDE DRIVE)

HORIZONTAL SCALE IN FEET

10 5 0 10 20 30 40

Construction Plans – Issued For Bid

PROJECT: 03112.4
DATE: Feb. 13, 2014
DESIGN: DSW
DRAWN: DSW
CHECKED: PHC
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# Cross Sections

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Northside Drive Roundabout

VT 7A - Northside Drive Bennington, VT

CIVIL

CT-12.14

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