

# PLANS OF PROPOSED INTERSECTION IMPROVEMENTS NH ROUTE 3A/LOWELL ROAD & FRIARS DRIVE HUDSON, NEW HAMPSHIRE

DESIGN DATA ROUTE 3A
AADT 2017
AADT 2027
PERCENT OF TRUCKS
DESIGN SPEED
LENGTH OF PROJECT

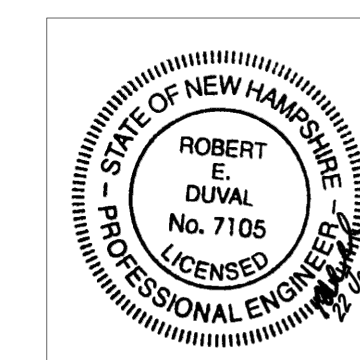


PROJECT LAYOUT  
SCALE: 1"=500'±

REV	DATE	DESCRIPTION	DR	CK
6	1/22/2024	REDUCE SHEET SIZE TO 22" X 34"	JLL	RED
5	11/9/2023	PROPOSED UTILITY EASEMENT	JAT	RED



## TOWN OF HUDSON HILLSBOROUGH COUNTY, NH



Civil Engineers  
Structural Engineers  
Traffic Engineers  
Land Surveyors  
Landscape Architects  
Scientists

48 Constitution Drive  
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Fax (603) 472-9747  
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TFM PROJECT	CADFILE	SHEET SCALE	FEDERAL PROJECT NO.	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
16415.16	16415-16 Turn Lane Details_34x22.dwg	AS NOTED			1	9

TOWN OF HUDSON NH ROUTE 3A / LOWELL ROAD
COVER SHEET

# INDEX OF SHEETS

SHEET NO.	DESCRIPTION
1	COVER SHEET
2	INDEX OF SHEETS & GENERAL NOTES
3	STANDARD SYMBOLS & PLANS
4	TYPICAL SECTIONS AND PAVEMENT MATCHING DETAILS
	<u>SPECIAL USE PLANS</u>
5	EROSION CONTROL DETAILS
	<u>ROADWAY PLANS</u>
6	PAVEMENT, STRIPING AND SIGNAGE
7	GRADING, DRAINAGE AND UTILITIES
	<u>CROSS SECTIONS</u>

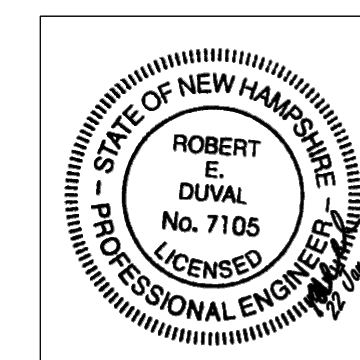
# GENERAL NOTES

- 1 R.O.W. AND TOPOGRAPHIC INFORMATION BASED ON SURVEYS AS OF MARCH 2022 BY THE DUBAY GROUP. VERTICAL DATUM IS BASED ON NGVD 88. HORIZONTAL DATUM IS NAD 83/86.
- 2 UTILITY INFORMATION IS BASED ON REFERENCE PLANS AND SURFACE EVIDENCE.
- 3 THE CONTRACTOR SHALL BID AND PERFORM THE WORK IN ACCORDANCE WITH ALL LOCAL, STATE AND NATIONAL CODES, SPECIFICATIONS, REGULATIONS AND STANDARDS.
- 4 ALL CURB TIE DIMENSIONS ARE TO THE FACE OF THE CURB.
- 5 WRITTEN DIMENSIONS HAVE PRECEDENCE OVER SCALED DIMENSIONS. THE CONTRACTOR SHALL USE CAUTION WHEN SCALING REPRODUCED PLANS. IN CASE OF CONFLICT BETWEEN THIS PLAN SET AND ANY OTHER DRAWING AND/OR SPECIFICATION, THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY FOR CLARIFICATIONS.
- 6 THE CONTRACTOR IS RESPONSIBLE FOR THE MEANS AND METHODS OF CONSTRUCTION AND FOR CONDITIONS AT THE SITE. THESE PLANS, PREPARED BY TFMORAN, INC., DO NOT EXTEND TO OR INCLUDE SYSTEMS PERTAINING TO THE SAFETY OF THE CONSTRUCTION CONTRACTOR OR THEIR EMPLOYEES, AGENTS OR REPRESENTATIVES IN THE PERFORMANCE OF THE WORK.
- 7 IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO FAMILIARIZE HIMSELF WITH THE SITE AND ALL EXISTING CONDITIONS SURROUNDING IT AND THEREON.
- 8 THE CONTRACTOR SHALL ESTABLISH SURVEY CONTROL PRIOR TO BEGINNING WORK ON THE CONTRACT USING THE REFERENCE POINTS PROVIDED BY THE DUBAY GROUP.

- 9 AT LEAST TWO WEEKS PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR SHALL SUBMIT A SCHEDULE OF OPERATIONS AND TRAFFIC CONTROL PLAN TO THE TOWN OF HUDSON FOR REVIEW AND APPROVAL.
- 10 THE CONTRACTOR SHALL CONFORM TO M.U.T.C.D. (LATEST EDITION) FOR WORK ZONE PROTECTION DURING CONSTRUCTION.
- 11 CONSTRUCT THIS PROJECT IN ACCORDANCE WITH CURRENT NHDOT STANDARD SPECIFICATIONS, CURRENT STANDARD PLANS, AND SUPPLEMENTAL SPECIFICATIONS.
- 12 THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING AND DETERMINING THE LOCATION, SIZE AND ELEVATION OF ALL EXISTING UTILITIES, SHOWN OR NOT SHOWN ON THESE PLANS, PRIOR TO THE START OF ANY CONSTRUCTION. THE ENGINEER SHALL BE NOTIFIED IN WRITING OF ANY UTILITIES FOUND INTERFERING WITH THE PROPOSED CONSTRUCTION AND APPROPRIATE REMEDIAL ACTION SHALL BE AGREED TO BY THE ENGINEER BEFORE PROCEEDING WITH THE WORK. THE CONTRACTOR SHALL BE RESPONSIBLE TO CONTACT "DIGSAFE" (811) AT LEAST 72 HOURS BEFORE DIGGING.
- 13 THE CONTRACTOR SHALL CONTACT ALL UTILITY COMPANIES OWNING UTILITIES, EITHER OVERHEAD OR UNDERGROUND, WITHIN THE CONSTRUCTION AREA AND SHALL COORDINATE AS NECESSARY WITH THE UTILITY COMPANIES OF SAID UTILITIES. THE PROTECTION OR RELOCATION OF UTILITIES IS ULTIMATELY THE RESPONSIBILITY OF THE CONTRACTOR.
- 14 THE CONTRACTOR SHALL COORDINATE WITH THE INDIVIDUAL UTILITY AGENCIES/COMPANIES, AND ARRANGE FOR ALL INSPECTIONS.  
 HUDSON PUBLIC WORKS (SEWER, DRAIN, ETC.): (603) 886-6018  
 HUDSON WATER DEPARTMENT: (603) 886-6002  
 EVERSOURCE (ELECTRIC): (603) 634-2074  
 CONSOLIDATED COMMUNICATIONS (TELEPHONE): (603) 222-4500  
 LIBERTY UTILITIES (GAS): (603) 222-3762  
 COMCAST (CABLE) (603) 626-9900
- 15 IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO CHECK THE ACCURACY OF THE TOPOGRAPHY AND REPORT ANY DISCREPANCIES TO THE ENGINEER PRIOR TO ANY EARTHWORK BEING PERFORMED ON THE SITE. NO CLAIM FOR EXTRA EARTHWORK TOPOGRAPHY WILL BE CONSIDERED AFTER EARTHWORK HAS COMMENCED.
- 16 REMOVE TOPSOIL FOR ITS TOTAL DEPTH WITHIN THE LIMITS OF THE SLOPE LINES. UNLESS OTHERWISE DIRECTED, STOCKPILE TOPSOIL AND USE IT ON THIS PROJECT AS NEEDED UNDER SECTION 641 - LOAM AND/OR SECTION 647 - HUMUS.
- 17 REMOVE ALL LOAM, CLAY, MUCK, STUMPS, AND OTHER IMPROPER ROAD FOUNDATION MATERIAL WITHIN 2' OF SUBGRADE. REPLACE WITH COMPACTED GRANULAR FILL MATERIAL ACCEPTABLE TO APPROVING AGENCY. COMPACTION TO BE AT LEAST 95% OF STANDARD PROCTOR.
- 18 ALL MANHOLES IN PAVEMENT SHALL HAVE RIMS SET TO FINISH GRADE AND SLOPE REGARDLESS OF ANY ELEVATIONS OTHERWISE SHOWN.
- 19 THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING AND MAINTAINING ALL EROSION AND SEDIMENT CONTROL DEVICES NECESSARY TO CONTROL EROSION THROUGHOUT THE DURATION OF THE PROJECT IN ACCORDANCE WITH APPLICABLE NHDES/USEPA STANDARDS. THE DETAILS PROVIDED REPRESENT MINIMUM PERMITTED CONTROLS ONLY AND SHALL BE SUPPLEMENTED BY THE CONTRACTOR AS NECESSARY.
- 20 ALL EXCAVATIONS SHALL BE THOROUGHLY SECURED ON A DAILY BASIS BY THE CONTRACTOR AT THE COMPLETION OF CONSTRUCTION OPERATIONS IN THE IMMEDIATE AREA. AT THE CONCLUSION OF EACH WORK DAY, THE CONTRACTOR SHALL FILL ANY OPEN EXCAVATIONS WITHIN 8 FEET OF THE TRAVELWAY OF NH ROUTE 3A AND FRIARS DRIVE. ALTERNATIVELY, THE CONTRACTOR MAY PROVIDE PORTABLE JERSEY BARRIERS (PROPERLY PINNED TOGETHER) TO SEPARATE THE WORK AREA FROM THE FLOW OF TRAFFIC. ANY WORK BETWEEN DUSK AND DAWN MUST BE COORDINATED AND APPROVED BY THE TOWN OF HUDSON.
- 21 CONTRACTOR SHALL MAINTAIN ACCESS AND EGRESS TO ADJUTING PROPERTIES AT ALL TIMES.
- 22 EXISTING DELINEATORS AND WITNESS MARKERS THAT ARE REMOVED AND DETERMINED BY THE ENGINEER TO BE IN ACCEPTABLE CONDITION SHALL BE RESET.

- 23 NO EXISTING MONUMENTS, BOUNDS, OR BENCHMARKS SHALL BE DISTURBED WITHOUT FIRST MAKING PROVISIONS FOR RELOCATION. THIS WILL REQUIRE THE CONTRACTOR TO COORDINATE WITH STATE, COUNTY AND TOWN AGENCIES AS REQUIRED.
- 24 PERFORM ALL WORK WITHIN THE EXISTING RIGHT-OF-WAY AND EASEMENTS SHOWN ON THE PLANS OR AS APPROVED BY THE TOWN.
- 25 THE CONTRACTOR SHALL DISPOSE OF ALL WASTE MATERIAL IN ACCORDANCE WITH ALL FEDERAL, STATE AND LOCAL REGULATIONS AT HIS OWN EXPENSE, OUTSIDE OF THE PROJECT LIMITS.
- 26 DAMAGE OF PROPERTY BEYOND THE WORK LIMITS CAUSED BY THE CONTRACTOR'S OPERATIONS SHALL BE REPLICATED-IN-KIND BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE, SUBJECT TO THE APPROVAL OF THE TOWN.
- 27 WORK SHALL BE CONSTRUCTED FROM A COMPLETE SET OF PLANS, NOT ALL FEATURES ARE DETAILED ON EVERY PLAN. IN THE EVENT OF A CONFLICT BETWEEN PLANS, SPECIFICATIONS, AND DETAILS, THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY FOR CLARIFICATION.
- 28 IF CONDITIONS AT THE SITE ARE DIFFERENT THAN SHOWN ON THE PLANS, THE ENGINEER SHALL BE NOTIFIED PRIOR TO PROCEEDING WITH THE AFFECTED WORK.
- 29 THESE PLANS WERE PREPARED UNDER THE SUPERVISION OF A LICENSED PROFESSIONAL ENGINEER. TFMORAN INC. ASSUMES NO LIABILITY AS A RESULT OF ANY CHANGES OR NON-COMFORMANCE WITH THESE PLANS EXCEPT UPON THE WRITTEN APPROVAL OF THE ENGINEER OF RECORD.
- 30 PROVIDE TESTING OF ALL CONSTRUCTION MATERIALS BY AN INDEPENDENT TESTING AGENCY. NO WORK SHALL BE PERFORMED WITHOUT AN ACCEPTABLE PROGRAM OF TESTING AND INSPECTION AS APPROVED BY THE ENGINEER OF RECORD. PROVIDE SUBMITTALS FOR ALL PRODUCTS AND MATERIALS PROPOSED FOR USE ON THIS PRODUCT.
- 31 A PRE-CONSTRUCTION MEETING WILL BE REQUIRED PRIOR TO THE START OF ANY WORK WITHIN THE NHDOT RIGHT-OF-WAY. CONTACT THE HUDSON TOWN ENGINEER AT LEAST TWO (2) WEEKS PRIOR TO THE ANTICIPATED START DATE TO SCHEDULE THIS MEETING.

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16415.16	16415-16 Turn Lane Details_34x22.dwg	NONE			2	9

**BOUNDARY & R.O.W.**

	EXISTING	PROPOSED
DRILL HOLE	●	○
IRON PIN	□	○
CONCRETE BOUND	▣	▣
LOT LINE	---	---
PERMANENT EASEMENT	---	---
TEMPORARY EASEMENT	---	---
STONEWALL	⊘	⊘
BENCHMARK	⊗	⊗
TAX MAP & LOT NUMBER	22-26	

**UTILITIES**

	EXISTING	PROPOSED
OVERHEAD UTILITIES	—OHW—	—OHE—
HYDRANT	⊕	⊕
WATER GATE	⊕	⊕
UTILITY POLE	⊕	⊕
GUY WIRE	—	—
WATER	—W—	—W—
SEWER	—S—	—S—
GAS	—G—	—G—

**DRAINAGE**

	EXISTING	PROPOSED
DRAINAGE FLOW	←	→
RIP-RAP	⊘	⊘
DRAIN LINE	---	---
DRAIN MANHOLE	⊕	⊕
CATCH BASIN	⊕	⊕
HEADWALL	⊕	⊕
FLARED END SECTION	⊕	⊕
SEWER MANHOLE	⊕	⊕

**ROADWAY**

	EXISTING	PROPOSED
VERTICAL GRANITE CURB	---	---
EDGE OF PAVEMENT	---	---
CONSTRUCTION BASELINE	104	---
GROUND LINE	---	---
(PROFILES AND CROSS-SECTIONS)		
PVC, PVT (PROFILES)		○

**EROSION/SEDIMENT CONTROL**

	PROPOSED
STONE CHECK DAM	⊕
CATCH BASIN EROSION PROTECTION	⊕
DANDY BAG II	⊕
SILT FENCE	⊕
BLANKET SLOPE PROTECTION	⊕

**WETLANDS**

	EXISTING	PROPOSED
EDGE OF WETLAND	⊕	⊕
S.C.S. SOILS BOUNDARY	---	---
LIMIT OF WETLAND PROTECTION DISTRICT	---	---

**PAVEMENT MARKINGS**

	EXISTING	PROPOSED
EDGE OF PAVEMENT	SBL(W)	SBL(W)
SINGLE BROKEN WHITE LINE	---	---
SINGLE SOLID WHITE LINE	---	---
DOUBLE SOLID YELLOW LINE	---	---
SINGLE SOLID YELLOW LINE	---	---
SINGLE BROKEN YELLOW LINE	---	---
TRAFFIC FLOW	←	←
STOP BAR	---	---
CROSSWALK	---	---

**SIGNAL**

	EXISTING	PROPOSED
CONTROLLER CABINET	⊕	⊕
MAST ARM	---	---
PULL BOX	⊕	⊕
SIGNAL HEAD	⊕	⊕
PEDESTRIAN HEAD	⊕	⊕
PEDESTRIAN PUSHBUTTON	⊕	⊕
LOOP DETECTOR	⊕	⊕
OPTICOM STROBE	⊕	⊕
OPTICOM RECEIVER	⊕	⊕
MAST ARM MOUNTED SIGN	⊕	⊕
STREET LIGHT	⊕	⊕
SIGNAL CONDUIT	---	---

**MISC.**

	EXISTING	PROPOSED
GUARD RAIL	---	---
SILT FENCE	---	---
SIGN	⊕	⊕
SPOT GRADE	x200.5	202.5
INDEX CONTOUR	---	---
INTERMEDIATE CONTOUR	---	---
LIMITS OF CLEARING / TREELINE	---	---
TREES	⊕	⊕
LIGHT POLE	⊕	⊕
LIMITS OF WORK	---	---
BUILDINGS	⊕	⊕
SLOPE LINE (FILL)	---	---
SLOPE LINE (CUT)	---	---

**HIGHWAY STANDARD PLANS**

STANDARD	CR-1	GRANITE CURB DETAILS	REVISED	JUNE 16, 2010
STANDARD	DP-1	DRAINAGE PIPE DETAILS		
STANDARD	DR-1	TYPE "B" GRATE & FRAME - PLATE 2	REVISED	AUG. 14, 2015
STANDARD	DR-2	MANHOLE FRAME & COVER - PLATE 2	REVISED	AUG. 14, 2015
STANDARD	DR-5	PRECAST REINFORCED CONCRETE C.B., D.I., AND M.H.	REVISED	JUNE 16, 2010
STANDARD	GR-23	PORTABLE CONCRETE BARRIER	REVISED	OCT. 03, 2013
STANDARD	HW-1	HEADWALLS FOR PIPES OTHER THAN R.C. - PLATE 1	REVISED	JUNE 16, 2010

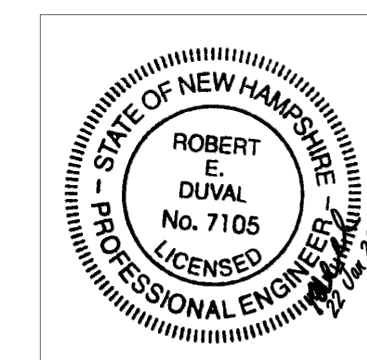
**TRAFFIC STANDARD PLANS**

STANDARD	PM-1	LAYOUT DETAILS		
STANDARD	PM-2	TOLERANCES FOR PAVEMENT MARKING LINES	REVISED	FEB. 26, 2010
STANDARD	PM-6	PAINTED ISLAND DETAILS	REVISED	NOV. 5, 2010
STANDARD	PM-7	INTERSECTION DETAILS	REVISED	NOV. 5, 2010
STANDARD	PM-8	WORD AND SYMBOL LANE LAYOUT	REVISED	MARCH 21, 2017
STANDARD	PM-10	TURNING LANE EXTENSION DETAILS	REVISED	FEB. 26, 2010
STANDARD	PM-12	WORDS & SYMBOLS	REVISED	FEB. 26, 2010
STANDARD	PS-1	ALUMINUM PLANK DETAILS		
STANDARD	PS-2	ALUMINUM PLANK DETAILS		
STANDARD	PS-3	ALUMINUM PLANK DETAILS		
STANDARD	PS-4	TUBULAR/U-CHANNEL POST DETAIL		
STANDARD	PS-9	BREAKAWAY MOUNTS		

**WORK ZONE TRAFFIC CONTROL STANDARD PLANS \***

TC-2	PERMANENT CONSTRUCTION SIGNAGE	REVISED	MARCH 16, 2017
TC-3	TWO LANE TRAFFIC LANE SHIFT	REVISED	MARCH 16, 2017
TC-8	CONSTRUCTION SIGNAGE FOR COLD-PLANED SURFACES	REVISED	MARCH 16, 2017
MUTCD 6H-3	WORK ON SHOULDERS	REVISED	2009 REV. 2
MUTCD 6H-10	LANE CLOSURE WITH FLAGGERS	REVISED	2009 REV. 2
MUTCD 6H-21	LANE CLOSURE ON NEAR SIDE OF INTERSECTION	REVISED	2009 REV. 2
MUTCD 6H-30	INTERIOR LANE CLOSURE - MULTI-LANE	REVISED	2009 REV. 2

\* THE CONTRACTOR SHALL PREPARE AND SUBMIT A DETAILED PROJECT-SPECIFIC TRAFFIC CONTROL PLAN 2 WEEKS PRIOR TO CONSTRUCTION START.



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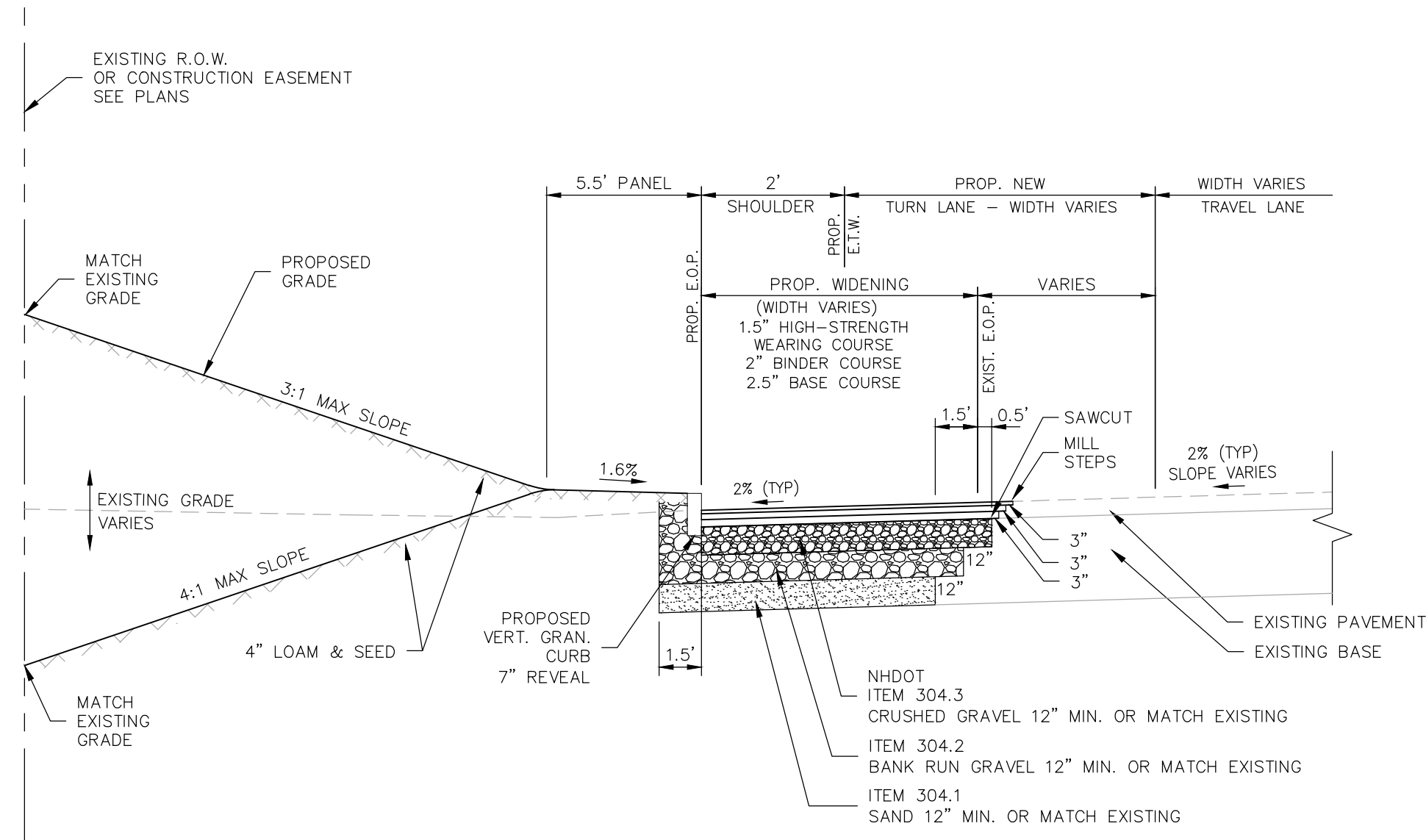
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**STANDARD SYMBOLS & PLANS**

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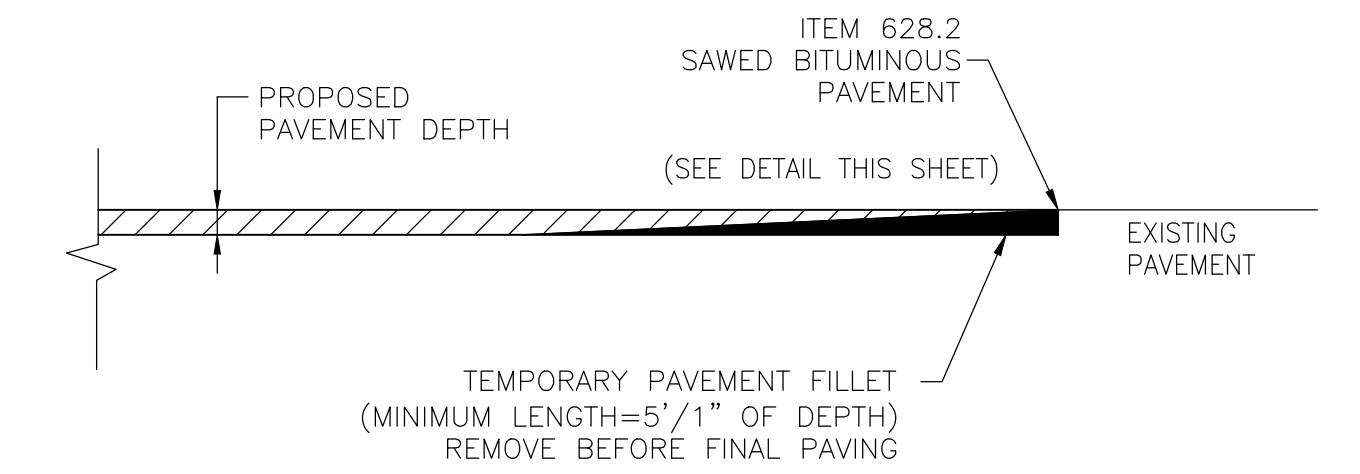


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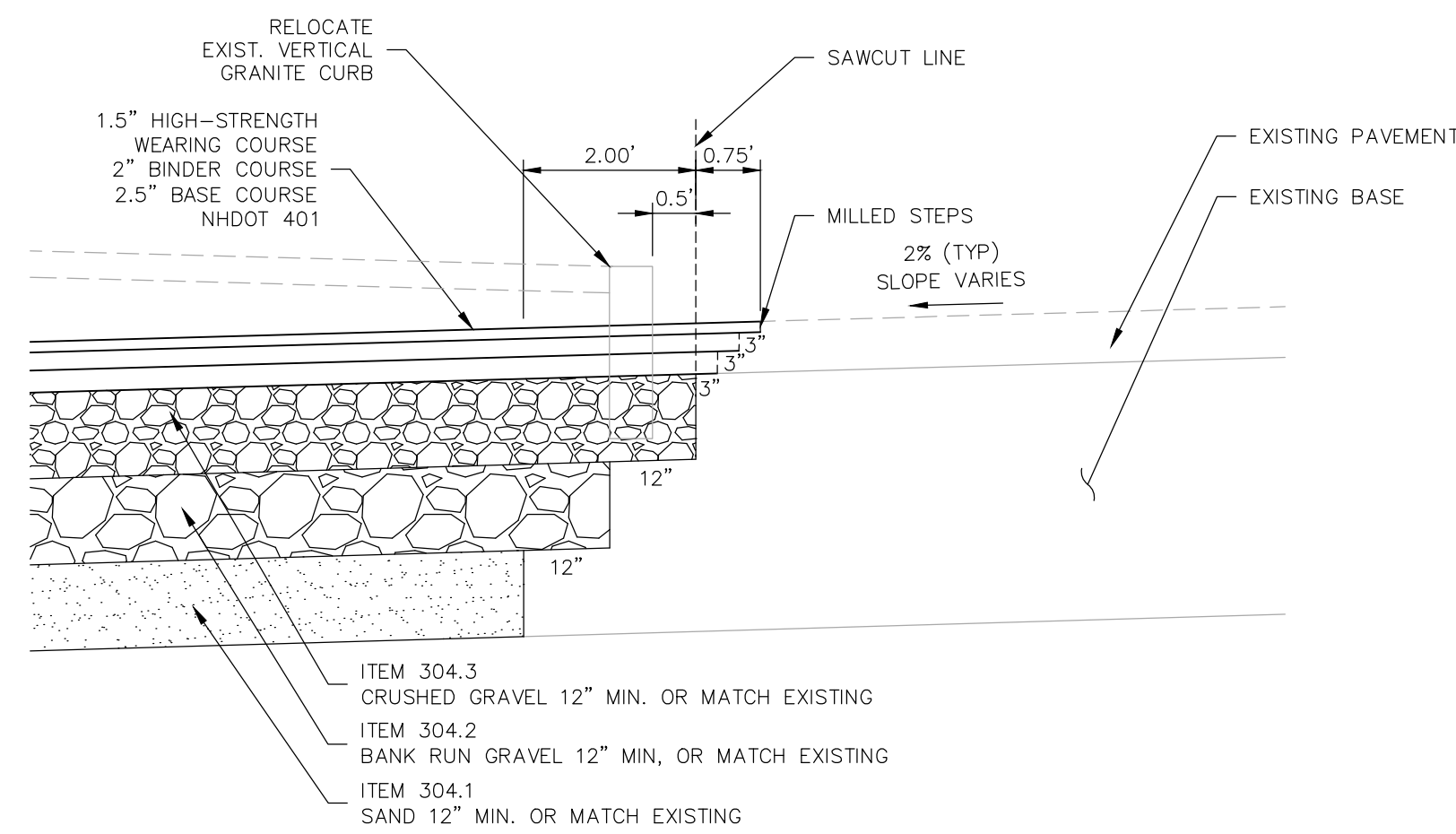
**TYPICAL ROADWAY WIDENING SECTION**

NOT TO SCALE



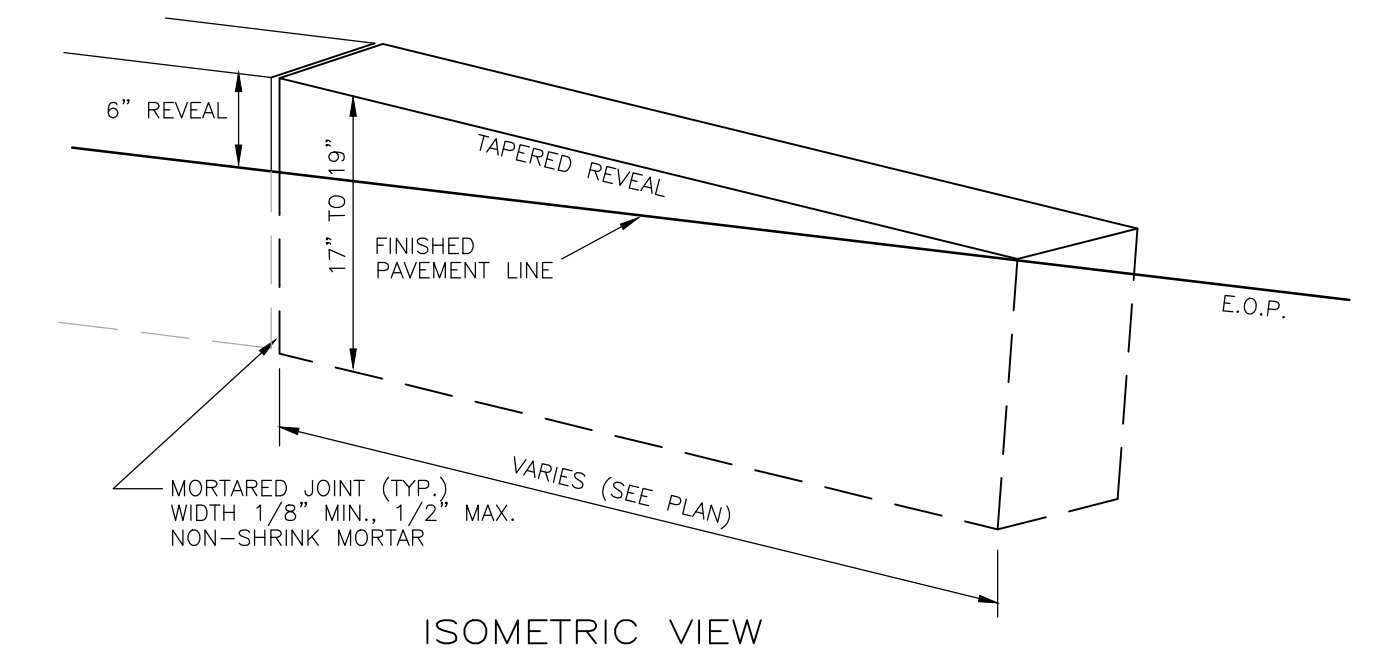
**TEMPORARY PAVEMENT MATCH**

NOT TO SCALE



**SAW CUT SECTION DETAIL**

NOT TO SCALE

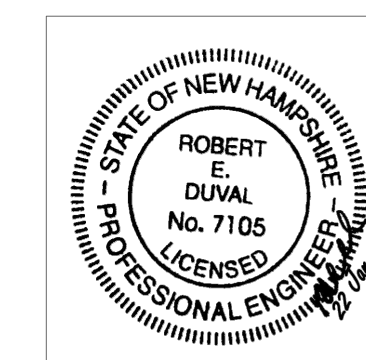


**CURB TIP DOWN**

VERTICAL GRANITE NHDOT 609.01

NOT TO SCALE

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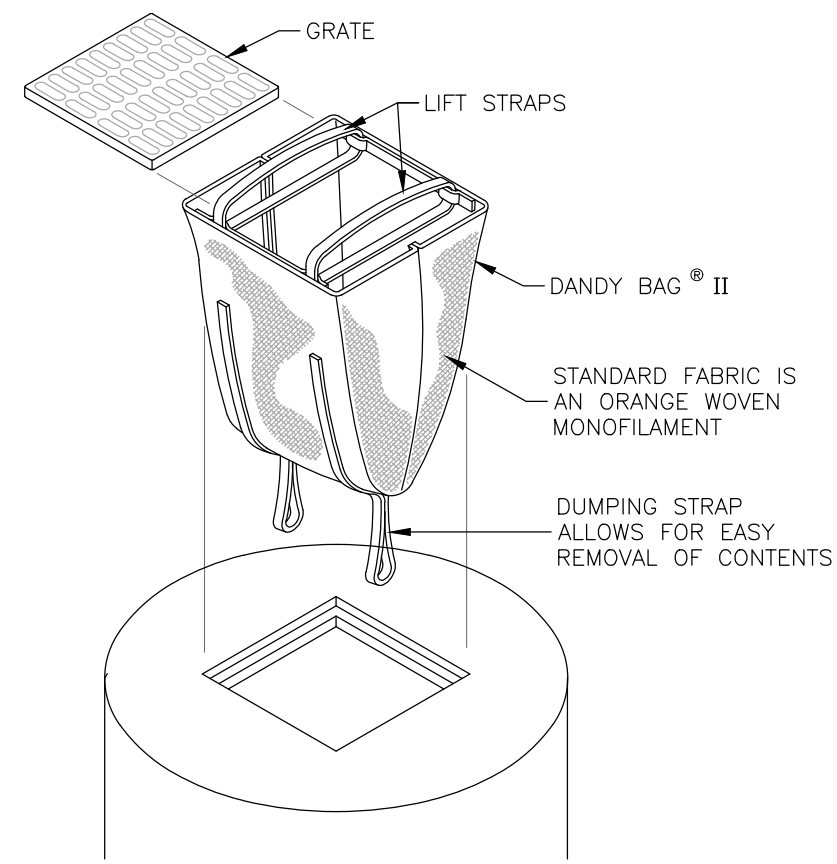
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**TYPICAL SECTIONS AND PAVEMENT MATCHING DETAILS**

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**INSTALLATION**

INSTALLATION: REMOVE THE GRATE FROM CATCH BASIN. IF USING OPTIONAL OIL ABSORBENTS; PLACE ABSORBENT PILLOW IN UNIT. STAND THE GRATE ON END. MOVE THE TOP LIFTING STRAPS OUT OF THE WAY AND PLACE THE GRATE INTO THE DANDY BAG II SO THAT THE GRATE IS BELOW THE TOP STRAPS AND ABOVE THE LOWER STRAPS. HOLDING THE LIFTING DEVICES, INSERT THE GRATE INTO THE INLET.

**MAINTENANCE**

MAINTENANCE: REMOVE ALL ACCUMULATED SEDIMENT AND DEBRIS FROM VICINITY OF UNIT AFTER EACH STORM EVENT. AFTER EACH STORM EVENT AND AT REGULAR INTERVALS, LOOK INTO THE DANDY BAG II. IF THE CONTAINMENT AREA IS MORE THAN 1/3 FULL OF SEDIMENT, THE UNIT MUST BE EMPTIED. TO EMPTY UNIT, LIFT THE UNIT OUT OF THE INLET USING THE LIFTING STRAPS AND REMOVE THE GRATE. IF USING OPTIONAL OIL ABSORBENTS; REPLACE ABSORBENT WHEN NEAR SATURATION.

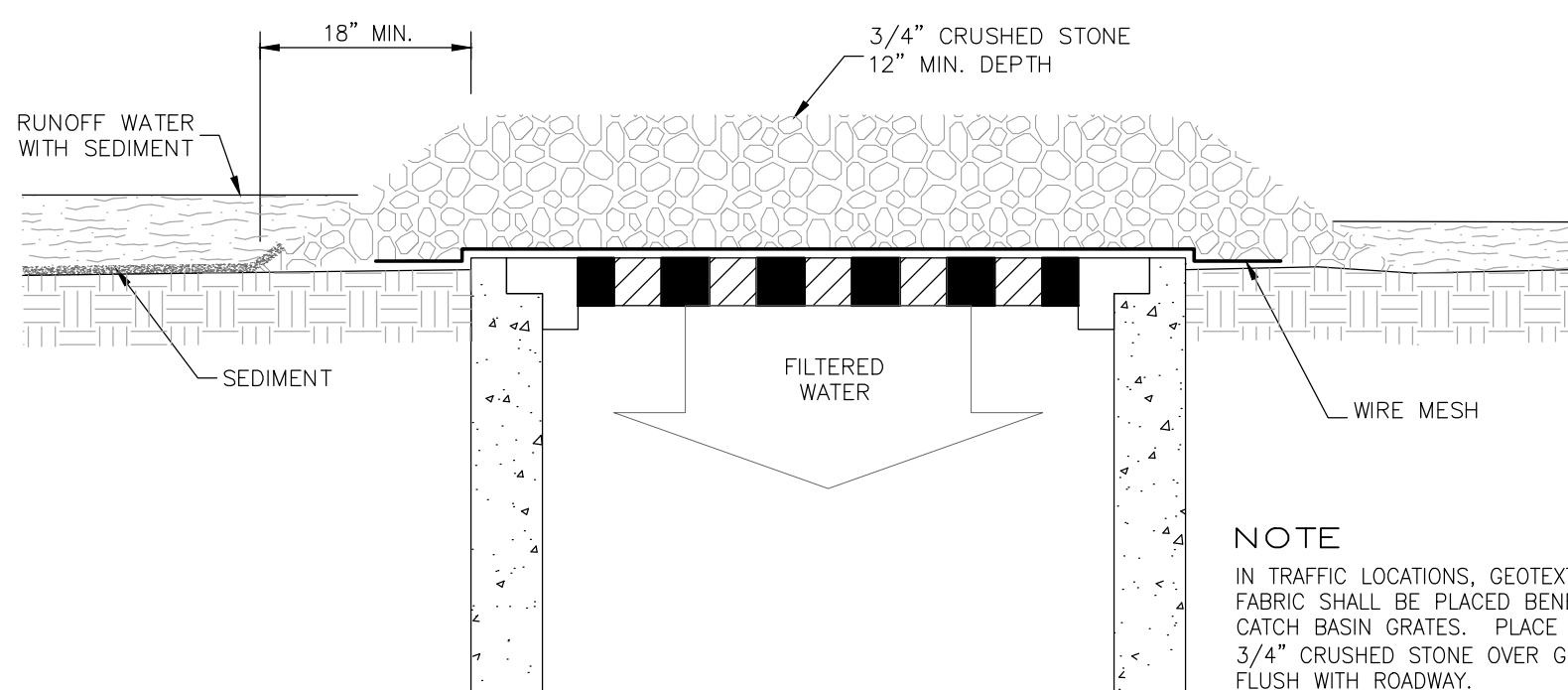
**DANDY BAG® II**

CATCH BASIN INLET PROTECTION

NOT TO SCALE

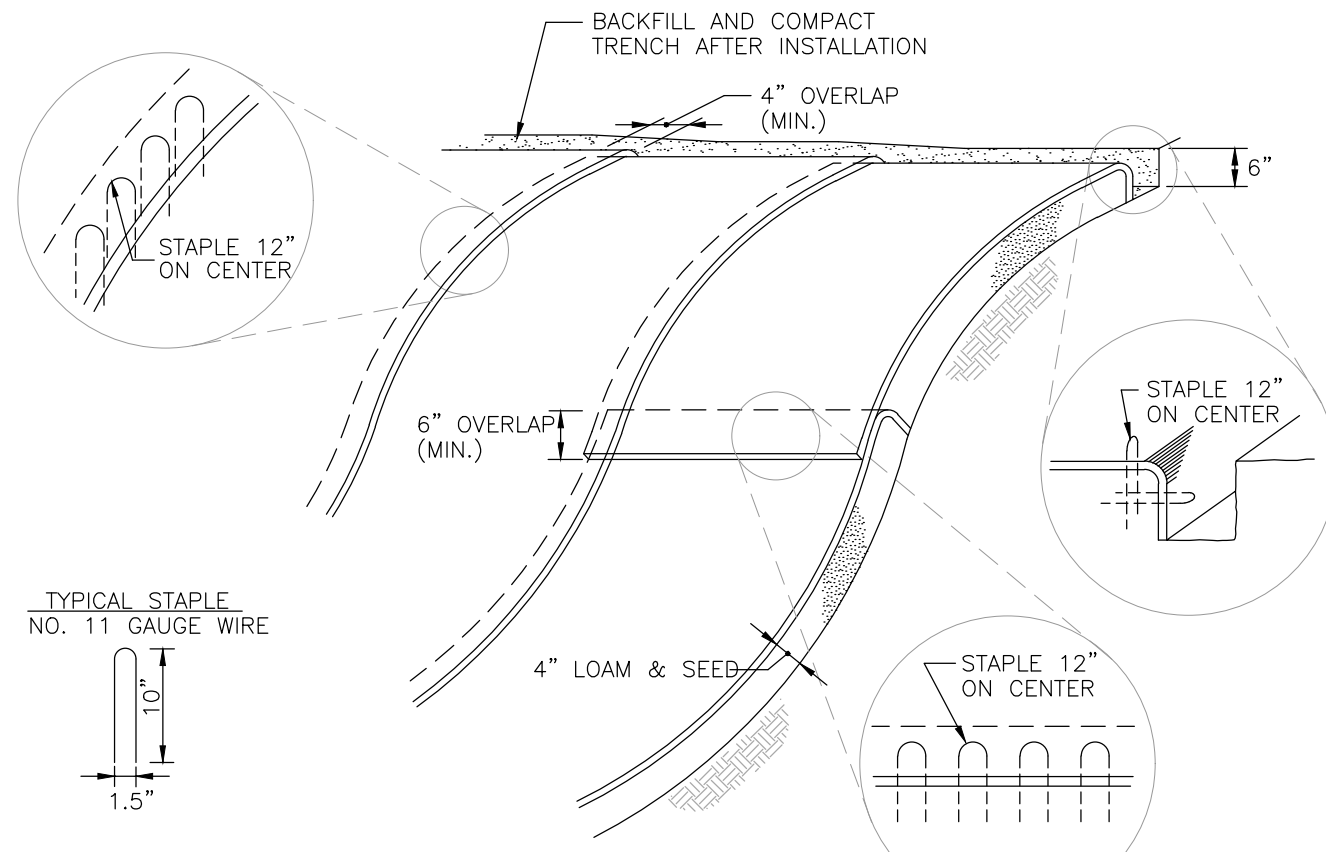
**MAINTENANCE NOTES**

1. ALL STRUCTURES SHOULD BE INSPECTED AFTER EVERY RAIN STORM AND REPAIRS MADE AS NECESSARY.
2. SEDIMENT SHOULD BE REMOVED FROM THE TRAPPING DEVICES AFTER THE SEDIMENT HAS REACHED A MAXIMUM OF ONE HALF THE DEPTH OF THE TRAP.
3. THE SEDIMENT SHOULD BE DISPOSED OF IN A SUITABLE AREA AND PROTECTED FROM EROSION BY EITHER STRUCTURAL OR VEGETATIVE MEANS.
4. THE TEMPORARY TRAPS SHOULD BE REMOVED AND THE AREA REPAIRED AS SOON AS THE CONTRIBUTING DRAINAGE AREA TO THE INLET HAS BEEN COMPLETELY STABILIZED.



**CATCH BASIN EROSION PROTECTION**

NOT TO SCALE



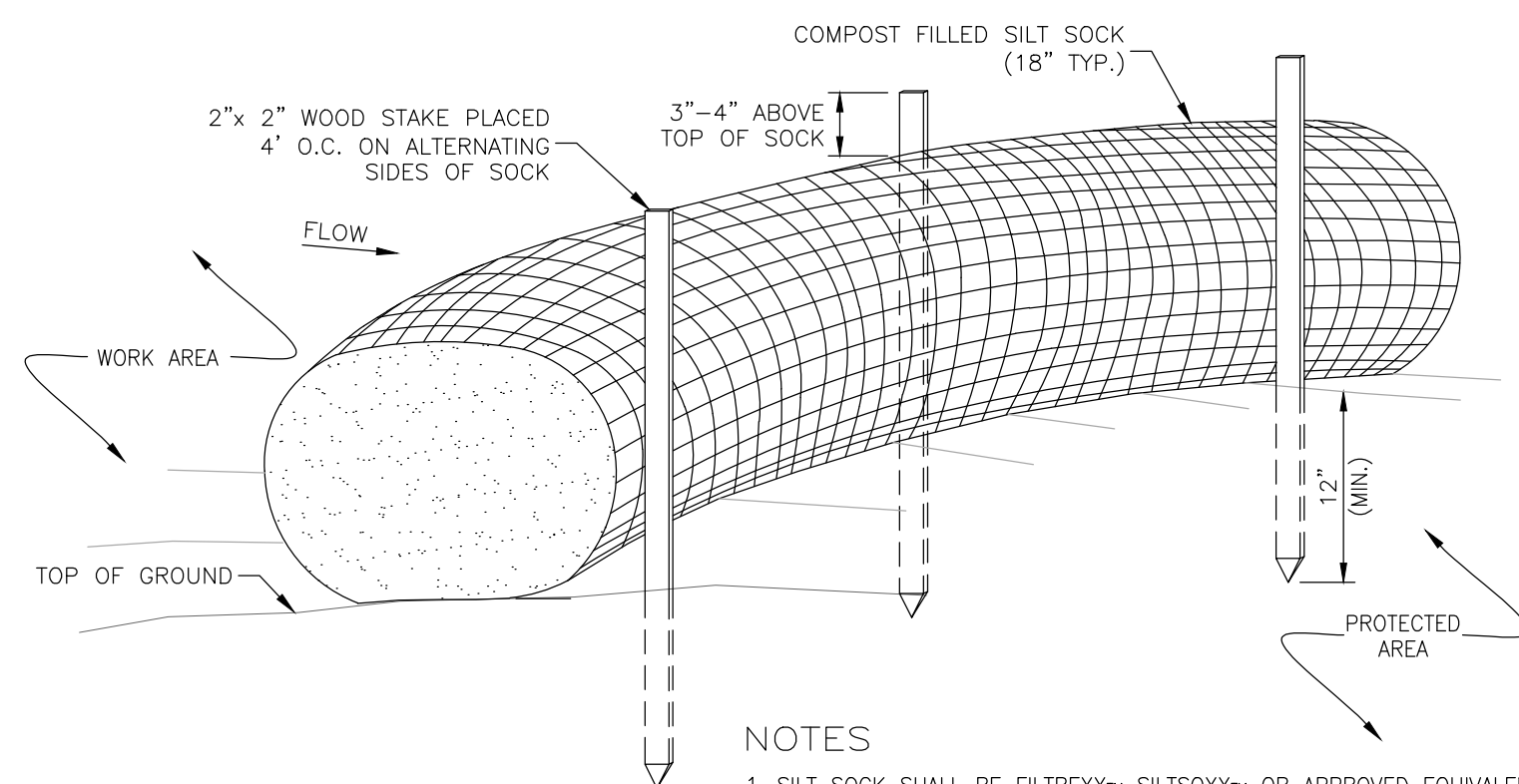
**NOTES**

1. BEGIN AT THE TOP OF BLANKET INSTALLATION AREA BY ANCHORING BLANKET IN A 6" DEEP TRENCH. BACKFILL AND COMPACT TRENCH AFTER STAPLING.
2. ROLL THE BLANKET DOWN THE SWALE IN THE DIRECTION OF THE WATER FLOW.
3. THE EDGES OF BLANKETS MUST BE STAPLED WITH APPROX. 4 INCH OVERLAP WHERE 2 OR MORE STRIP WIDTHS ARE REQUIRED.
4. WHEN BLANKETS MUST BE SPLICED DOWN THE SWALE, PLACE BLANKET END OVER END WITH 6 INCH (MIN.) OVERLAP AND ANCHOR DOWN SLOPE BLANKET IN A 6 INCH DEEP TRENCH.
5. BLANKET SHALL BE NORTH AMERICAN GREEN SC-150 OR APPROVED EQUAL.

**BLANKET SLOPE PROTECTION**

FOR EROSION CONTROL

NOT TO SCALE



**NOTES**

1. SILT SOCK SHALL BE FILTREXX™ SILTSOXX™ OR APPROVED EQUIVALENT.
2. SEE SPECIFICATIONS FOR SOCK SIZE AND COMPOST FILL REQUIREMENTS.
3. SILT SOCK SHALL BE INSPECTED PERIODICALLY AND AFTER ALL STORM EVENTS, AND REPAIR OR REPLACEMENT SHALL BE PERFORMED AS NEEDED.
4. COMPOST MATERIAL SHALL BE DISPERSED ON SITE, AS DETERMINED BY THE ENGINEER.

**SILT SOCK**

NOT TO SCALE

**EROSION CONTROL NOTES**

DURING CONSTRUCTION AND THEREAFTER, EROSION CONTROL MEASURES ARE TO BE IMPLEMENTED AS NOTED:

1. INSTALLATION OF SILTATION SOCKS AND OTHER EROSION CONTROL MEASURES SHALL BE COMPLETED PRIOR TO THE START OF SITE WORK IN ANY GIVEN AREA.
2. SILTATION SOCKS AND OTHER EROSION CONTROL MEASURES SHALL BE KEPT CLEAN DURING CONSTRUCTION AND REMOVED WHEN ALL SLOPES HAVE A VEGETATIVE COVER OF GREATER THAN 85%. EROSION CONTROL MEASURES SHALL BE INSPECTED ON A WEEKLY BASIS AND AFTER EVERY RAINFALL.
3. EXISTING VEGETATION IS TO REMAIN UNDISTURBED WHEREVER POSSIBLE.
4. THE AREA OF LAND EXPOSED AND THE TIME OF EXPOSURE SHALL BE MINIMIZED. ALL DISTURBED AREAS SHALL BE STABILIZED WITHIN 72 HOURS AFTER FINAL GRADING.
5. ALL DISTURBED AREAS SHALL HAVE A MINIMUM OF 4" OF LOAM. ACCEPTABLE SEED MIXES ARE AS FOLLOWS:

**TYPICAL LAWN MIX (MIN. 200 LBS/ACRE):**

- 33% CREEPING RED FESCUE (MIN. 66 LBS/ACRE)
- 42% PERENNIAL RYEGRASS (MIN. 84 LBS/ACRE)
- 21% KENTUCKY BLUEGRASS (MIN. 42 LBS/ACRE)
- 4% REDTOP (MIN. 8 LBS/ACRE)

**TEMPORARY LAWN MIX: (MIN. 47 LBS/ACRE)**

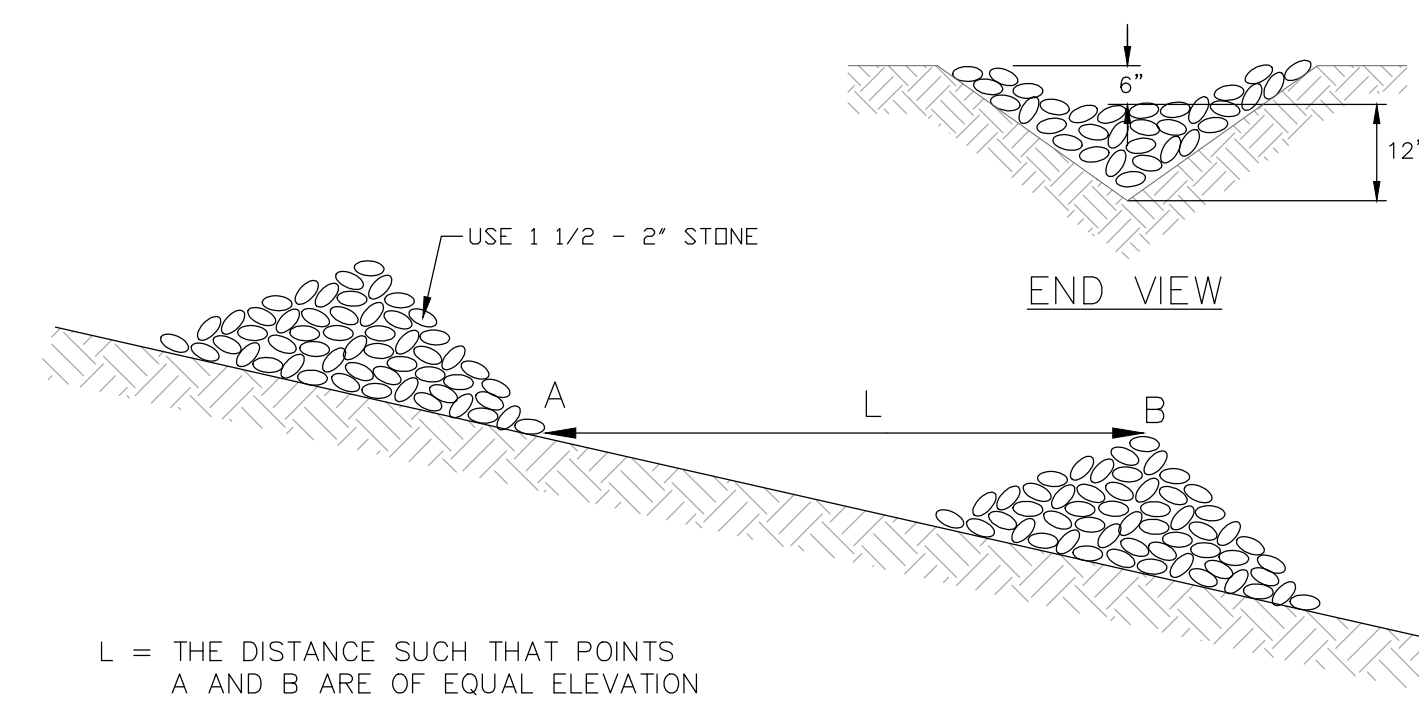
100% ANNUAL RYE

**GENERAL SLOPE (NHDOT TYPE 44) MIX 3:1 OR GREATER SLOPES (MIN. 160 LBS/ACRE):**

- 44% CREEPING RED FESCUE (MIN. 70 LBS/ACRE)
- 38% PERENNIAL RYEGRASS (MIN. 60 LBS/ACRE)
- 6% REDTOP (MIN. 10 LBS/ACRE)
- 6% ALSIKE CLOVER (MIN. 10 LBS/ACRE)
- 6% BIRDSFOOT TREFLOIL (MIN. 10 LBS/ACRE)

- A. PLACING LOAM ON SITE
  - a. ALL SUBGRADE ELEVATIONS SHOULD BE UNIFORMLY GRADED TO RECEIVE LOAM AND SHALL BE INSPECTED AND APPROVED BY THE GENERAL CONTRACTOR PRIOR TO PLACEMENT OF LOAM.
  - b. PLACE LOAM TO FORM A MINIMUM DEPTH OF 4". WHEN ROLLED, UNLESS OTHERWISE INDICATED.
  - c. ALL DEPRESSIONS EXPOSED DURING THE ROLLING SHALL BE FILLED WITH ADDITIONAL LOAM.
- B. SEED BED PREPARATION
  - a. AFTER FINISH GRADING AND JUST BEFORE SEEDING, THE AREAS TO BE SEEDDED SHALL BE LOOSENEED TO PROVIDE A ROUGH, FIRM BUT FINELY PULVERIZED SEEDBED. THE INTENT IS A TEXTURE CAPABLE OF RETAINING WATER, SEED AND FERTILIZER WHILE REMAINING STABLE AND ALLOWING SEED TIME TO GERMINATE. SEED SHALL BE APPLIED TO THE CONDITIONED SEEDBED NOT MORE THAN 48 HOURS AFTER THE SEEDBED HAS BEEN PREPARED.

6. LIME AND FERTILIZER SHALL BE INCORPORATED INTO THE SOIL PRIOR TO OR AT THE TIME OF AT THE TIME OF SEEDING. A MINIMUM OF 2 TONS PER ACRE OF AGRICULTURAL LIMESTONE AND 500 LBS. PER ACRE OF 10-20-20 FERTILIZER SHALL BE APPLIED. SEEDING PRACTICES SHALL COMPLY WITH LOCAL USDA SOIL CONSERVATION SERVICES RECOMMENDATIONS.
7. HAY MULCH OR JUTE MATTING SHALL BE USED WHERE INDICATED ON THE PLANS. A MINIMUM OF 1.5 TONS OF MULCH PER ACRE SHALL BE APPLIED. MULCH SHALL BE ANCHORED IN PLACE WHERE NECESSARY. JUTE MATTING SHALL BE LAID IN THE DIRECTION OF RUNOFF FLOW AND APPLIED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
8. PERMANENT OR TEMPORARY COVER MUST BE IN PLACE BEFORE THE GROWING SEASON ENDS. WHEN SEEDDED AREAS ARE MULCHED, PLANTINGS MAY BE MADE FROM EARLY SPRING TO EARLY OCTOBER. WHEN SEEDDED AREAS ARE NOT MULCHED, PLANTINGS SHOULD BE MADE FROM EARLY SPRING TO MAY 20 OR FROM AUGUST 15 TO SEPTEMBER 15. NO DISTURBED AREA SHALL BE LEFT EXPOSED DURING WINTER MONTHS.
9. WATER SHALL BE USED FOR DUST CONTROL AS NECESSARY.



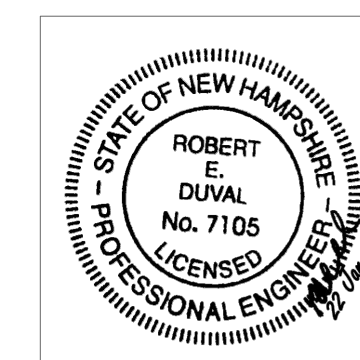
**CHECK DAM**

**STONE CHECK DAM**

IN SWALE

NOT TO SCALE

REV	DATE	DESCRIPTION	DR	CK
6	1/22/2024	REDUCE SHEET SIZE TO 22" X 34"	JLL	RED
5	11/9/2023	PROPOSED UTILITY EASEMENT	JAT	RED



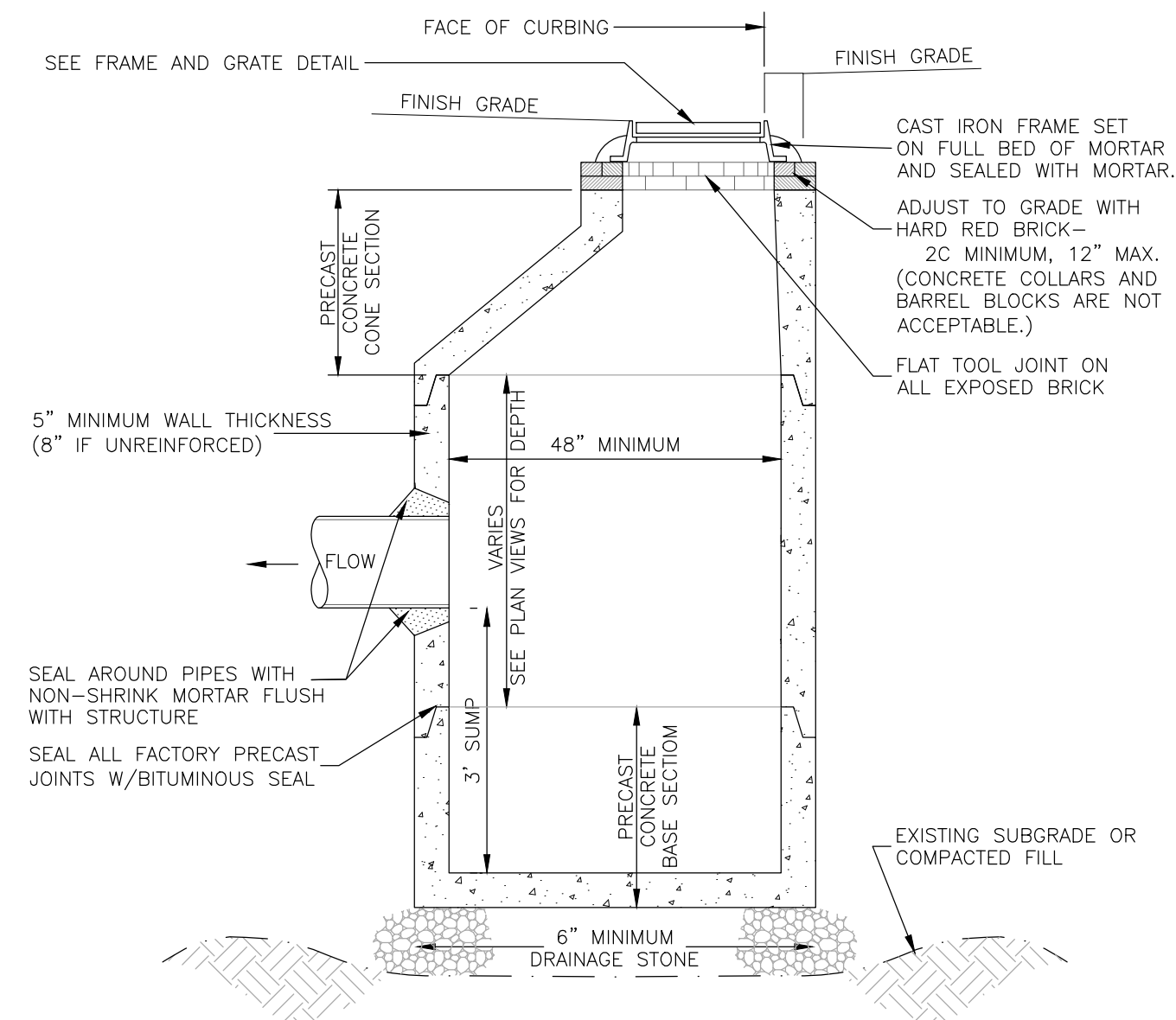
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TOWN OF HUDSON  
NH ROUTE 3A / LOWELL ROAD

**EROSION CONTROL  
DETAILS**

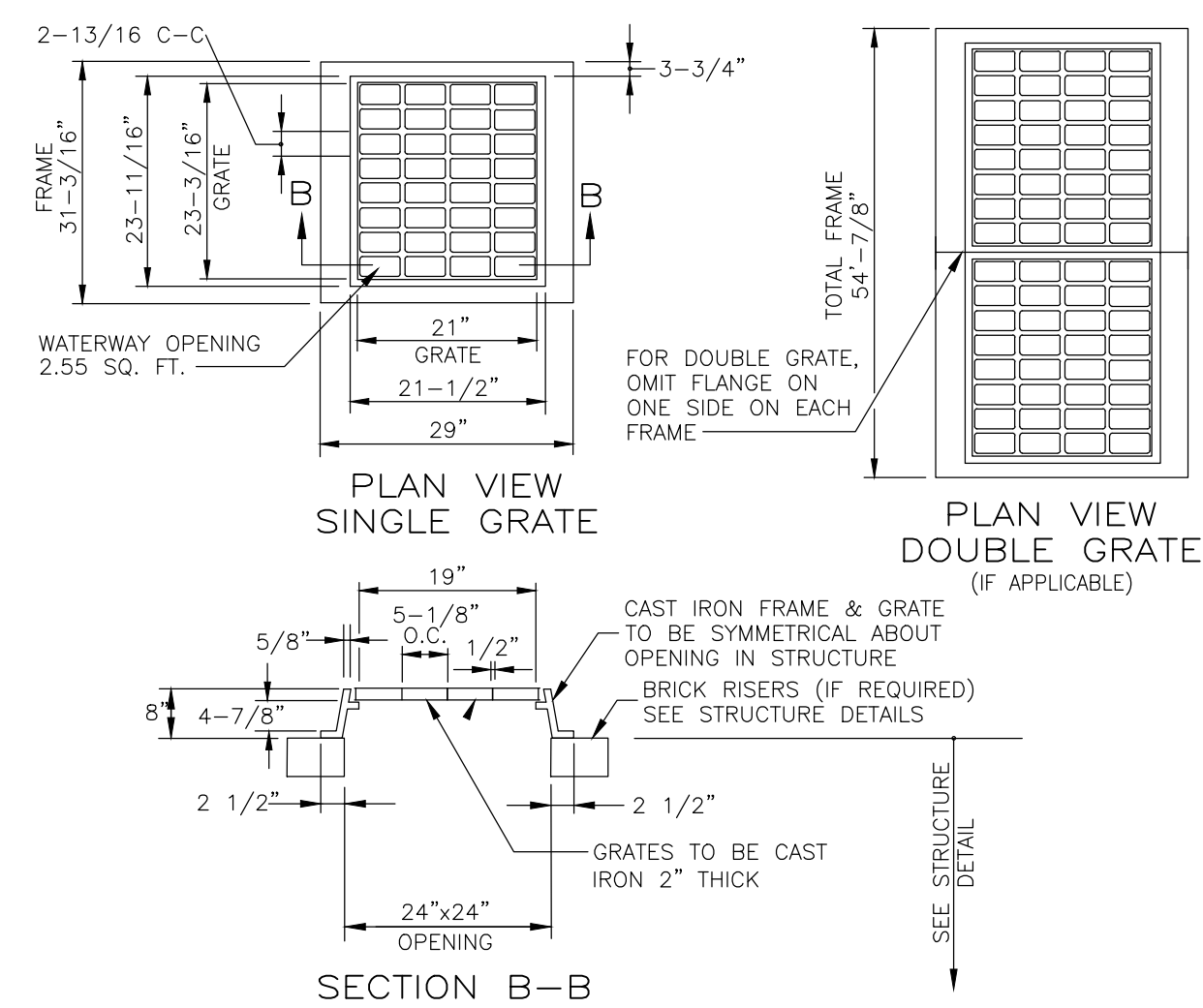
TFM PROJECT	CADFILE	SHEET SCALE	FEDERAL PROJECT NO.	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
16415.16	16415-16 Turn Lane Details_34x22.dwg	AS NOTED			5	9



NOTE: ALL PRECAST SECTIONS SHALL CONFORM TO ASTM C-478

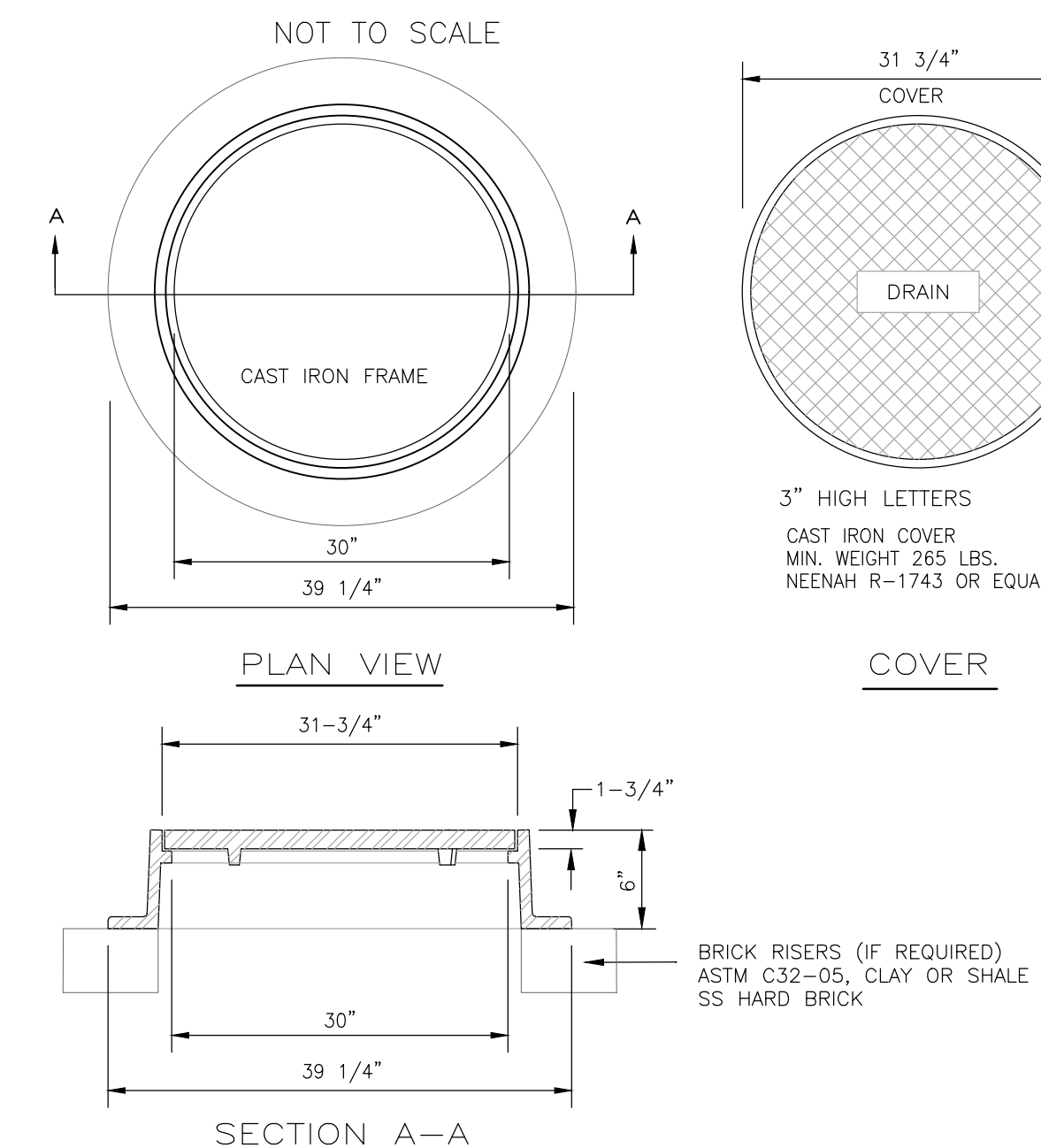
### CATCH BASIN

ECCENTRIC CONE (FOR USE IN CURBED AREAS) NOT TO SCALE



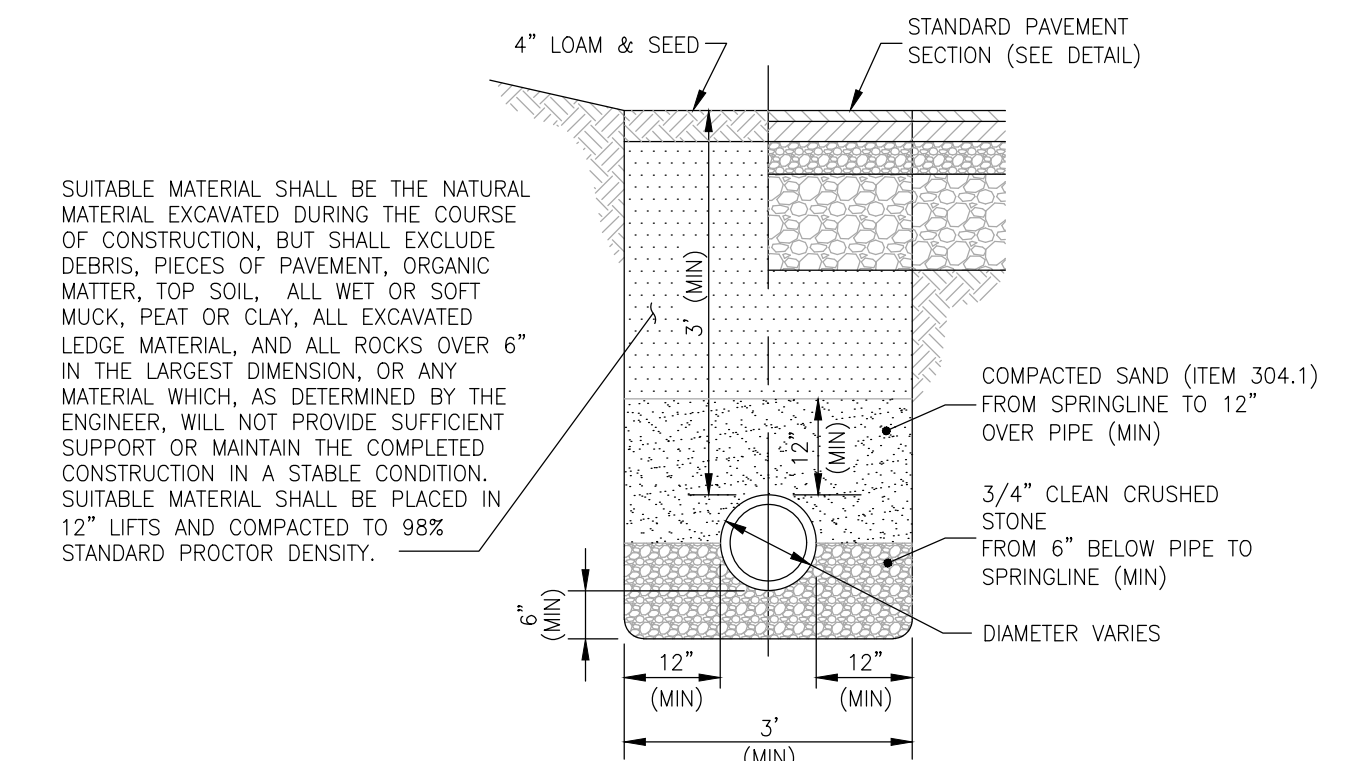
### FRAME AND GRATE

NHDOT TYPE B ALT 1 NOT TO SCALE



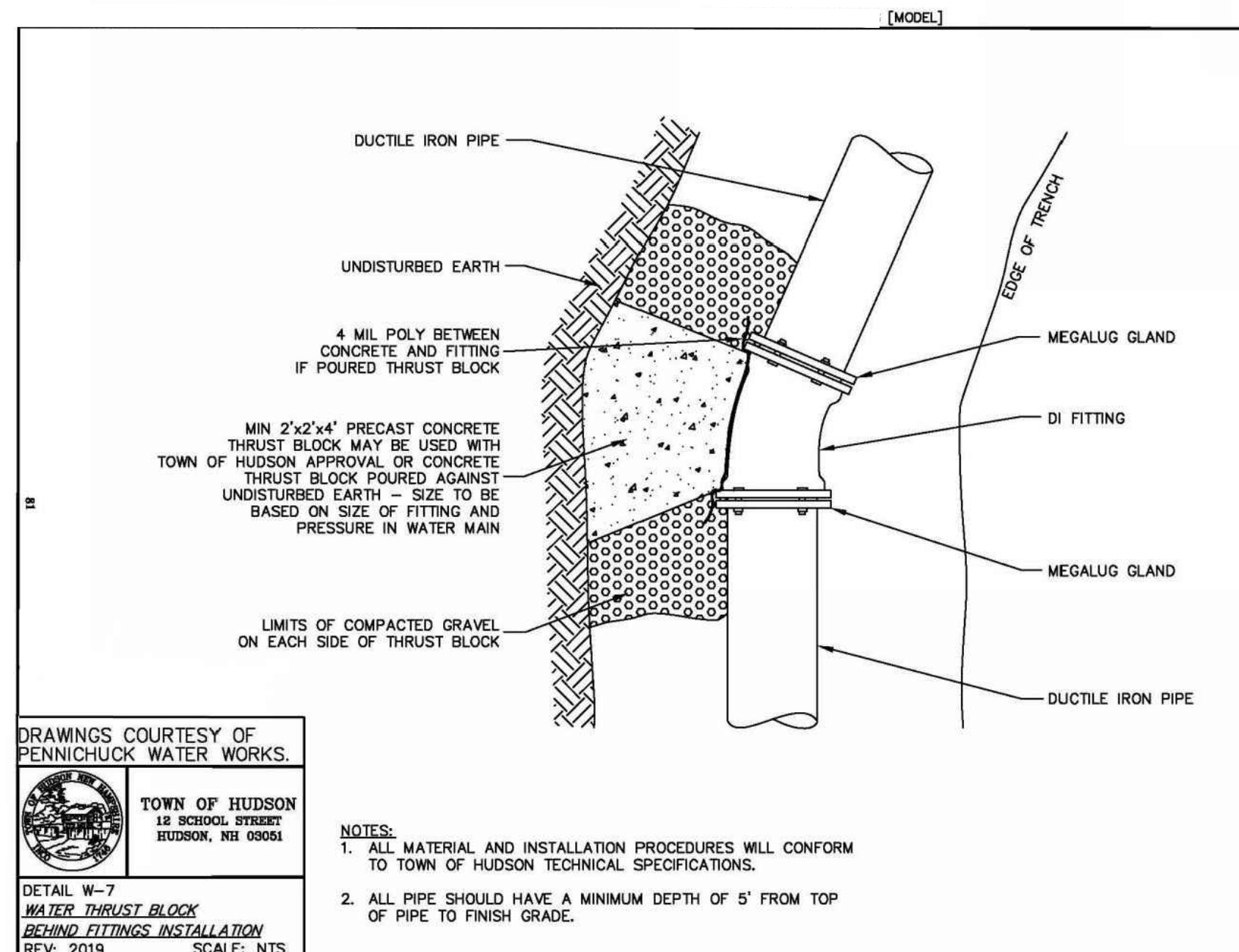
### MANHOLE FRAME & COVER

HEAVY DUTY



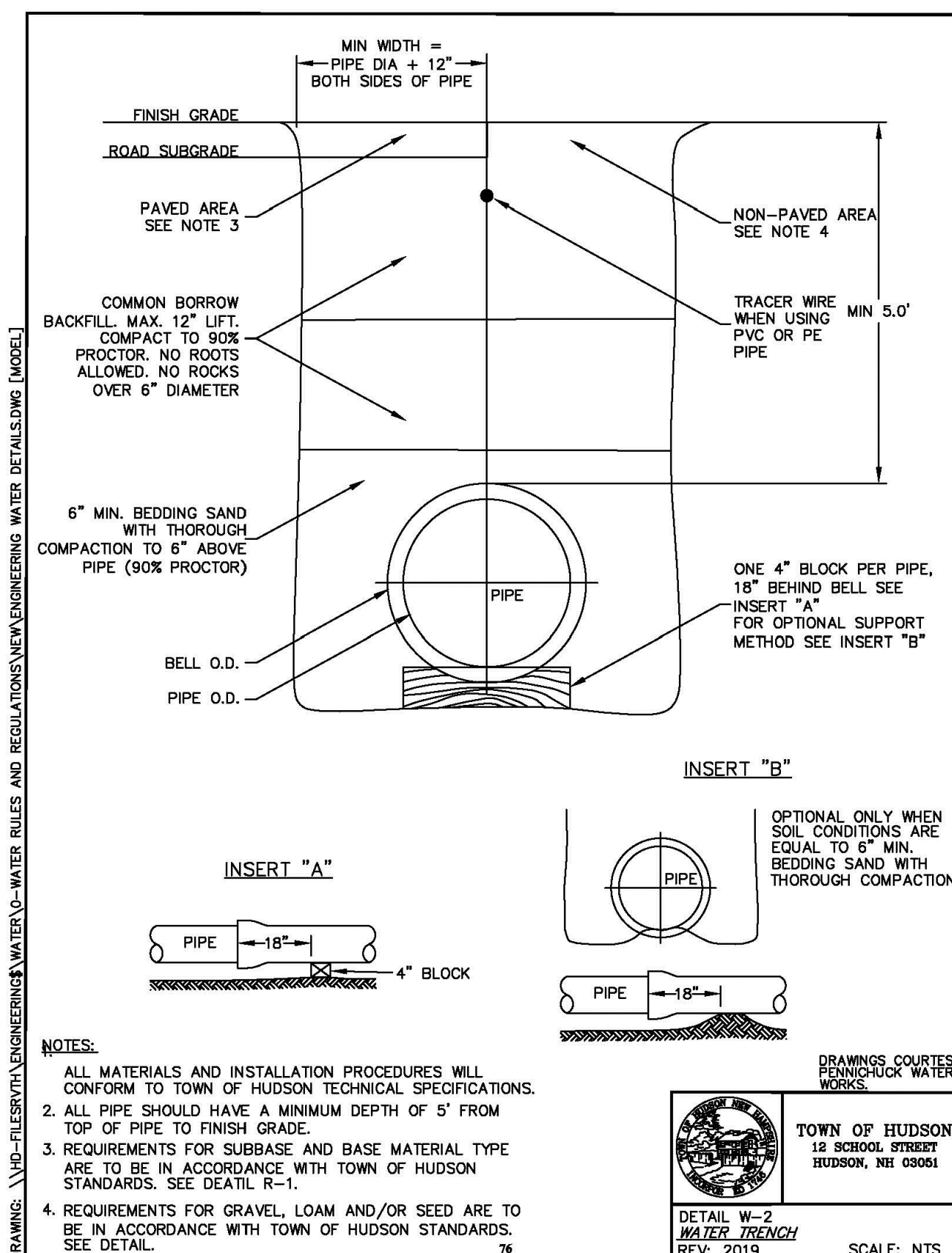
### STORM DRAIN TRENCH

NOT TO SCALE



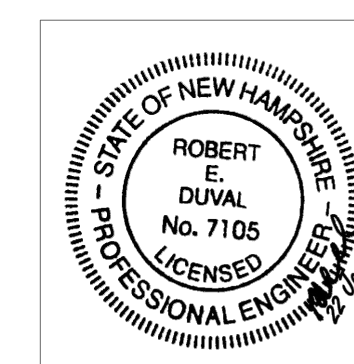
DRAWINGS COURTESY OF PENNICHUCK WATER WORKS.  
**TOWN OF HUDSON**  
 12 SCHOOL STREET  
 HUDSON, NH 03051  
 DETAIL W-7  
 WATER THRUST BLOCK  
 BEHIND FITTINGS INSTALLATION  
 REV: 2019 SCALE: NTS

- NOTES:
1. ALL MATERIAL AND INSTALLATION PROCEDURES WILL CONFORM TO TOWN OF HUDSON TECHNICAL SPECIFICATIONS.
  2. ALL PIPE SHOULD HAVE A MINIMUM DEPTH OF 5' FROM TOP OF PIPE TO FINISH GRADE.



- NOTES:
1. ALL MATERIALS AND INSTALLATION PROCEDURES WILL CONFORM TO TOWN OF HUDSON TECHNICAL SPECIFICATIONS.
  2. ALL PIPE SHOULD HAVE A MINIMUM DEPTH OF 5' FROM TOP OF PIPE TO FINISH GRADE.
  3. REQUIREMENTS FOR SUBBASE AND BASE MATERIAL TYPE ARE TO BE IN ACCORDANCE WITH TOWN OF HUDSON STANDARDS. SEE DETAIL R-1.
  4. REQUIREMENTS FOR GRAVEL, LOAM AND/OR SEED ARE TO BE IN ACCORDANCE WITH TOWN OF HUDSON STANDARDS. SEE DETAIL. 76

DRAWINGS COURTESY PENNICHUCK WATER WORKS.  
**TOWN OF HUDSON**  
 12 SCHOOL STREET  
 HUDSON, NH 03051  
 DETAIL W-2  
 WATER TRENCH  
 REV: 2019 SCALE: NTS



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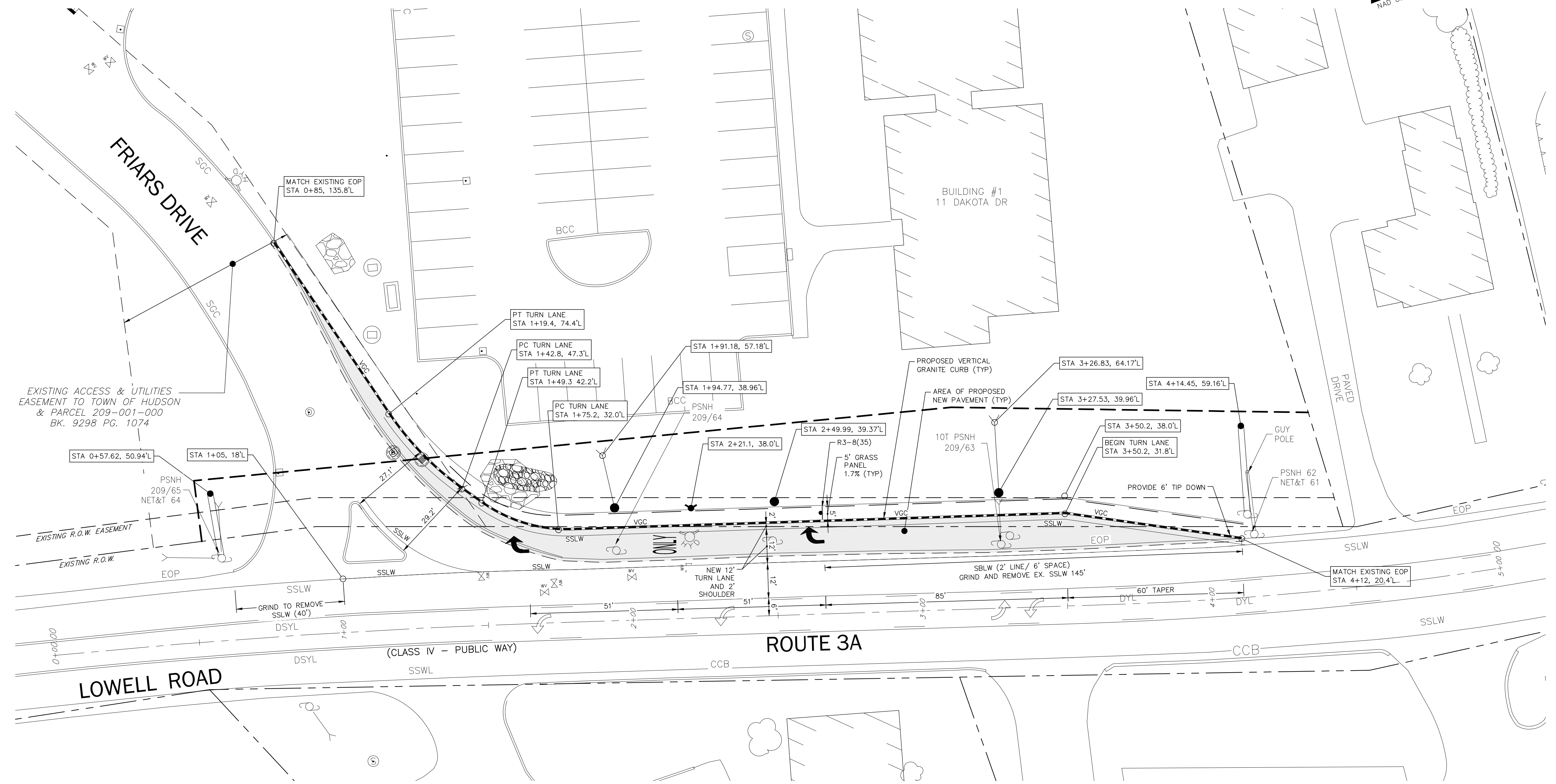
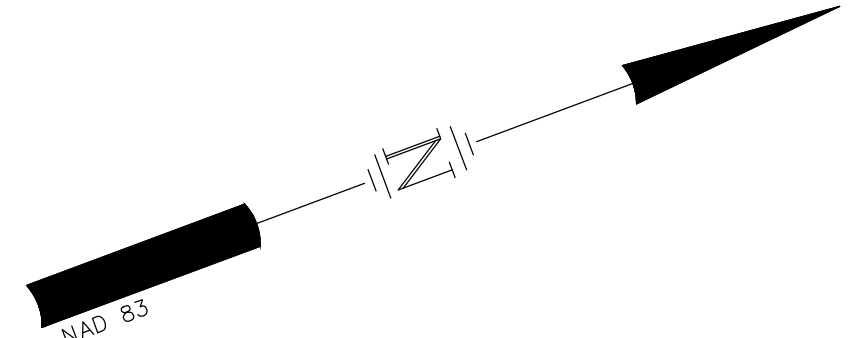


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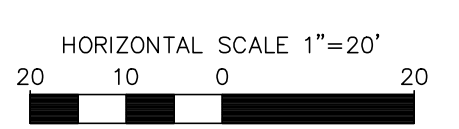
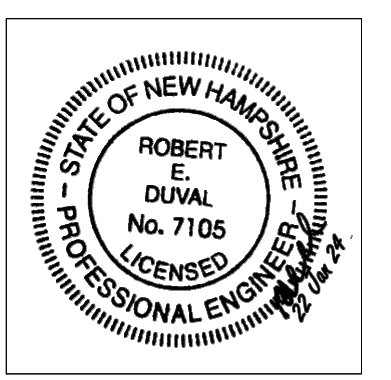
TOWN OF HUDSON  
 NH ROUTE 3A / LOWELL ROAD  
**EROSION CONTROL  
 DETAILS**

TFM PROJECT	CADFILE	SHEET SCALE	FEDERAL PROJECT NO.	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
16415.16	6415-16 Turn Lane Details_34x22.dwg	AS NOTED			6	9



**NOTES**  
 1. EXISTING SPEED LIMIT IS 30 MPH

REV	DATE	DESCRIPTION	DR	CK
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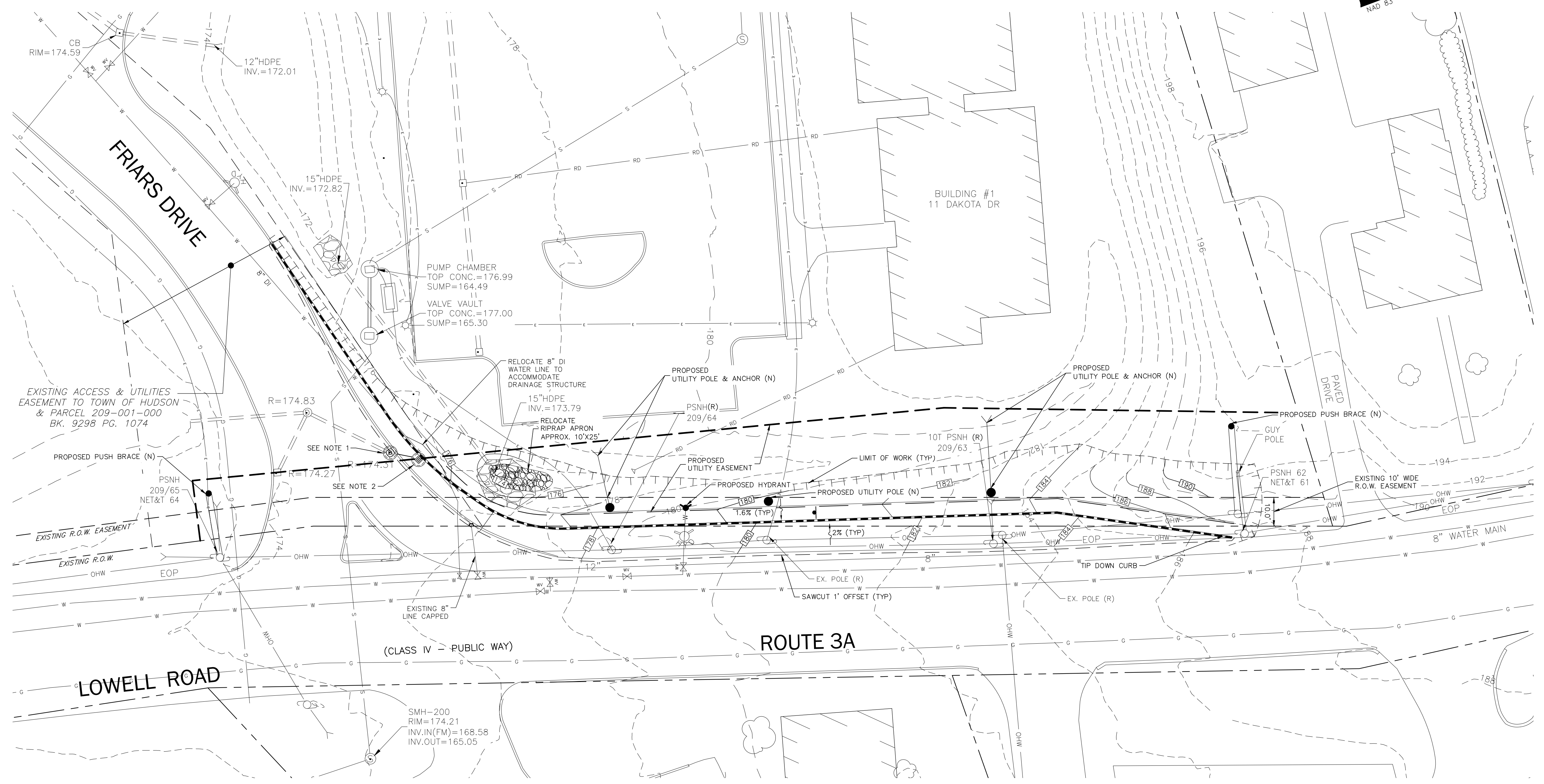
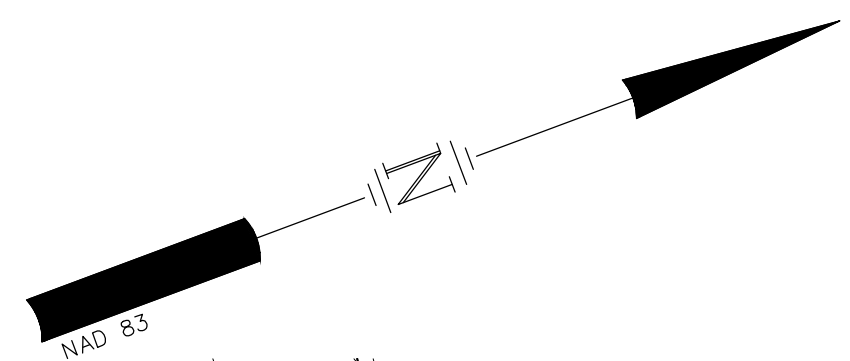


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TFM PROJECT	CADFILE	SHEET SCALE	FEDERAL PROJECT NO.	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
16415.16	16415-16 Turn Lane_34x22.dwg	1" = 20'			7	9

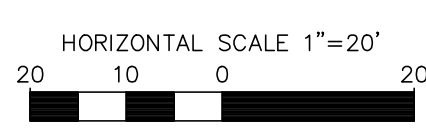
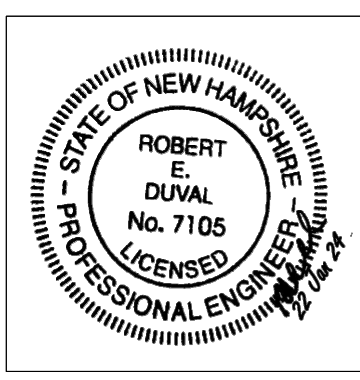
TOWN OF HUDSON  
 NH ROUTE 3A / LOWELL ROAD  
**PAVEMENT, STRIPING  
 AND SIGNAGE**



**NOTES**

1. REPLACE EXISTING GRATE WITH DMH COVER. CORE THE EXISTING STRUCTURE TO ACCEPT A 12" HDPE.  
RIM = 174.27  
INVO = 169.46 (EXIST.)  
INVI = 169.56 (PROP.)
2. INSTALL CB 1+29.8 58.0'L  
RIM = 174.60  
INVO = 169.61  
INSTALL 5 LF 12" HDPE.

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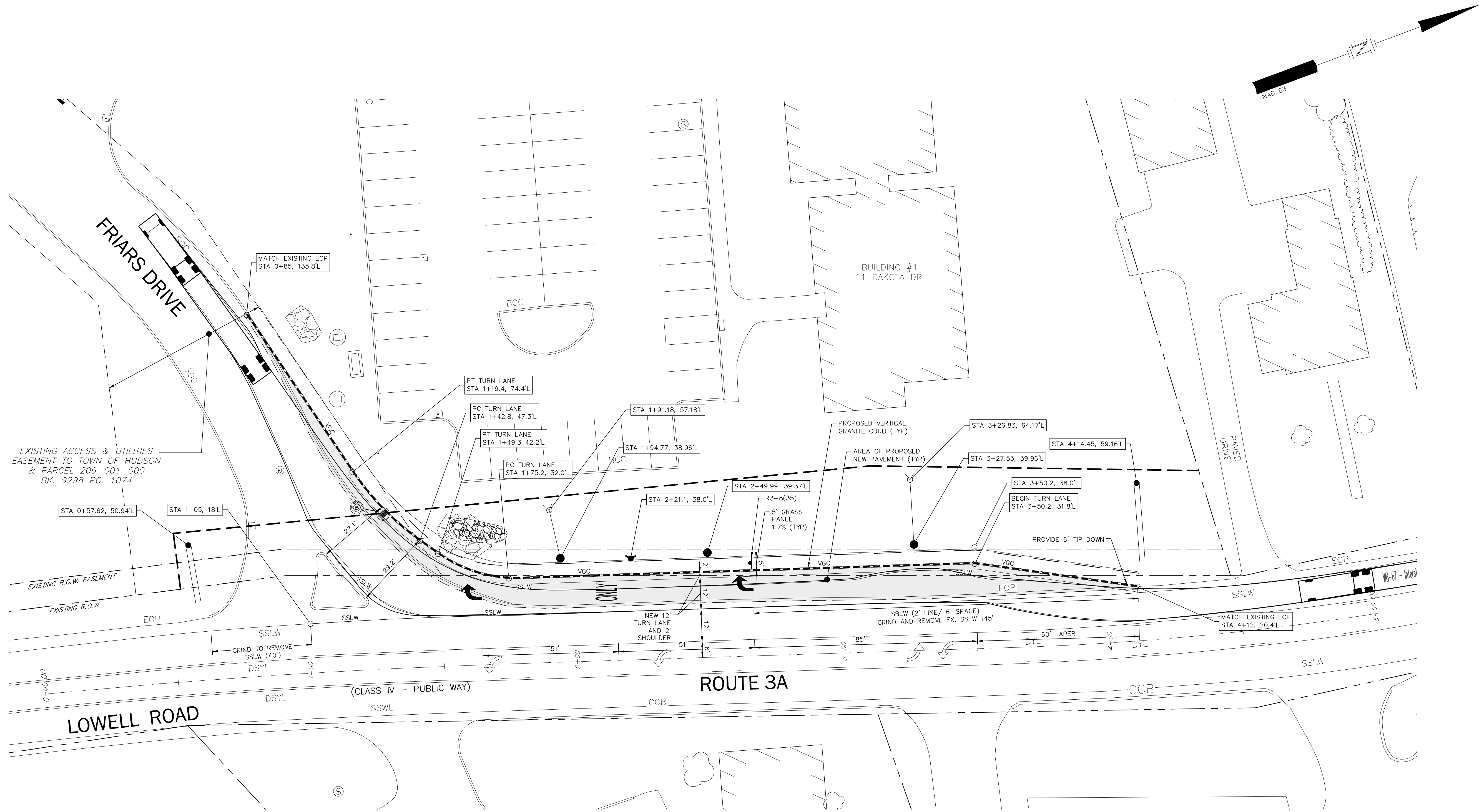
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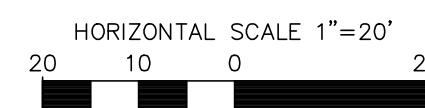
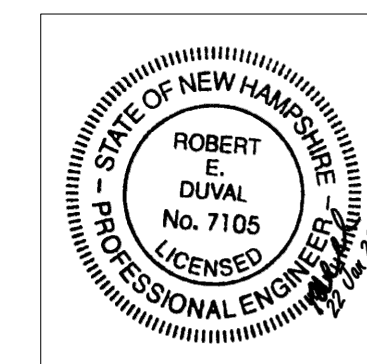
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16415.16	16415-16 Turn Lane_34x22.dwg	1" = 20'			8	9

TOWN OF HUDSON  
NH ROUTE 3A / LOWELL ROAD  
**GRADING, DRAINAGE  
AND UTILITIES**





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TFM PROJECT	CADFILE	SHEET SCALE	FEDERAL PROJECT NO.	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
16415.16	16415-16 Turn Lane_34x22.dwg	1" = 20'			9	9

TOWN OF HUDSON  
NH ROUTE 3A / LOWELL ROAD

**TRUCK TURN**