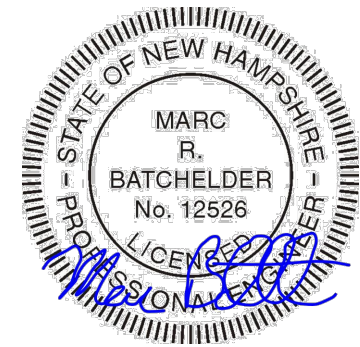


Outer Islington Street Portsmouth, New Hampshire ROADWAY IMPROVEMENT PLANS SPRING 2017

PREPARED FOR: DEPARTMENT OF PUBLIC WORKS
CITY OF PORTSMOUTH
680 PEVERLY HILL ROAD
PORTSMOUTH, NH 03801

PREPARED BY: SEAPORT ENGINEERING, LLC
PORTSMOUTH, NH 03801
WWW.SEAPORTENG.COM
603-498-8449



SURVEY BY: JAMES VERRA and ASSOCIATES, INC.
101 SHATTUCK WAY, SUITE 8
NEWINGTON, NH 03801

GEOTECHNICAL BY: JOHN TURNER CONSULTING
19 DOVER STREET
DOVER, NH 03820



INDEX	SHEET NO.	LATEST REV.
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DETAILS SHEETS	C-4 TO C-8	1/9/2017

ISSUED FOR BID

1/9/2017

SURVEY NOTES:

- THESE PLANS ARE BASED ON FIELD SURVEY CONDUCTED 12/2015 BY JAMES VERRA AND ASSOCIATES, INC.
- THE RELATIVE ERROR OF CLOSURE WAS LESS THAN 1 FOOT IN 15,000 FEET.
- ON SITE CONTROL ESTABLISHED USING SURVEY GRADE GPS UNITS.
HORIZONTAL DATUM: NAD 1983 (2011)(EPOCH 2010.0000)
HORIZONTAL POSITION VIA NGS "CORS" NETWORK.
STATIONS USED: MASA, NHC0, NHUN, P776 & ZBW1.
VERTICAL DATUM: NAVD 1988
PRIMARY BM: CITY CONTROL POINT "ALBA"
- THE LOCATION OF ALL UNDERGROUND UTILITIES SHOWN HEREON ARE APPROXIMATE AND ARE BASED UPON THE FIELD LOCATION OF ALL VISIBLE STRUCTURES (I.E. CATCH BASINS, MANHOLES, WATER GATES, ETC.) AND INFORMATION COMPILED FROM PLANS PROVIDED BY UTILITY COMPANIES AND GOVERNMENTAL AGENCIES. ALL CONTRACTORS SHOULD NOTIFY, IN WRITING, SAID AGENCIES PRIOR TO ANY EXCAVATION WORK AND CALL DIG-SAFE @ 1-888-DIG-SAFE.
- WETLAND DELINEATION 12/2015 BY MICHAEL CUOMO, NHCWS# 4, 6 YORK POND RD, YORK, ME 03909. WETLANDS FLAGS SURVEY LOCATED BY JAMES VERRA AND ASSOC., INC.
- ENGINEER OR CONTRACTOR TO VERIFY SITE BENCHMARKS BY LEVELING BETWEEN 2 BENCHMARKS PRIOR TO THE SETTING OR ESTABLISHMENT OF ANY GRADES/ELEVATIONS. DISCREPANCIES ARE TO BE REPORTED TO JAMES VERRA AND ASSOC., INC.
- ISLINGTON STREET FROM THE CURRENT INTERSECTION WITH BARTLETT STREET TO GREENLAND ROAD AT THE PORTSMOUTH PLAINS WAS LAID OUT AS 3 RODS (49.5') WIDE IN 1793. A PORTION OF THE ROAD WAS RELOCATED IN 1933 PER FEDERAL AID PROJECT NRM 152-C. THE RIGHT OF WAY SHOWN HEREON IS BASED ON MONUMENTATION FOUND AND DIFFERS SLIGHTLY FROM THE RECORD LAYOUT. MONUMENTS FOUND THAT WERE SUBSTANTIALLY OUT OF CONFORMITY WITH THE RECORD LAYOUT WERE REJECTED AND NOT HELD.

DEMOLITION NOTES:

- LOCATIONS OF UNDERGROUND UTILITIES ARE APPROXIMATE AND NOT GUARANTEED. CONTRACTOR SHALL LOCATE ALL UTILITIES, ANTICIPATE CONFLICTS, REPAIR AND/OR RELOCATE EXISTING UTILITIES REQUIRED TO COMPLETE THE WORK.
- MATERIAL TO BE REMOVED SHALL BECOME THE PROPERTY OF THE CONTRACTOR UNLESS OTHERWISE NOTED. DISPOSAL SHALL BE IN ACCORDANCE WITH ALL FEDERAL, STATE AND LOCAL REGULATIONS.
- ANY DAMAGE BY THE CONTRACTOR DURING DEMOLITION AND/OR CONSTRUCTION SHALL BE REPAIRS OR REPLACED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
- CONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS AND FEES NECESSARY TO COMPLETE THE WORK.
- CONTRACTOR SHALL REMOVE TREES AND BRUSH AS INDICATED AND AS REQUIRED FOR COMPLETION OF THE WORK. ALL STUBS SHALL BE REMOVED AND SURFACES GRUBBED WITHIN THE LIMITS OF WORK.
- ALL WORK WITHIN THE PUBLIC RIGHT OF WAY SHALL BE COORDINATED WITH THE CITY OF PORTSMOUTH.
- CONTRACTOR SHALL PROTECT ALL FIELD STONE WALLS, FENCES, MAILBOXES, STRUCTURES, ETC. THROUGHOUT THE COMPLETION OF THE WORK.
- EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO THE START OF ANY CLEARING OR DEMOLITION WORK. THIS INCLUDES SILT FENCE / SILT SOCK AND INLET PROTECTION BARRIERS.
- CONTRACTOR SHALL SAWCUT PAVEMENT AT EDGES OF TRENCHES FOR CLEAN VERTICAL EDGES.
- CONTRACTOR SHALL PHASE DEMOLITION AND CONSTRUCTION AS REQUIRED TO PROVIDE CONTINUOUS ACCESS TO RESIDENTIAL PROPERTIES THROUGHOUT THE CONSTRUCTION PERIOD.
- PAVEMENT RECLAMATION LIMITS ARE SHOWN FOR CONTRACTOR'S CONVENIENCE. ADDITIONAL RECLAMATION MAY BE REQUIRED. CONTRACTOR TO VERIFY FULL LIMITS OF PAVEMENT RECLAMATION.
- CONTRACTOR SHALL REMOVE AND DISPOSE OF ALL EXISTING STRUCTURES, CONCRETE PADS, PAVEMENT, PIPES AND HEADWALLS WITHIN THE LIMITS OF CONSTRUCTION.
- CONTRACTOR SHALL COORDINATE WITH ALL APPLICABLE UTILITIES. WORK ASSOCIATED WITH UTILITIES, BUT NOT LIMITED TO, RELOCATION OF UTILITY POLES.
- CONTRACTOR SHALL NOTIFY DIG-SAFE 72 HOURS PRIOR TO ANY WORK STARTING. CONTRACTOR REQUIRED TO MAINTAIN AN ACTIVE DIG-SAFE PERMIT THROUGHOUT THE DURATION OF CONSTRUCTION.

GRADING NOTES:

- CONTRACTOR SHALL PROVIDE A FINISH PAVEMENT SURFACE FREE OF LOW SPOTS AND PONDING AREAS. CONTRACTOR SHALL PAY CLOSE ATTENTION TO DRIVEWAY ENTRANCES.
- EXISTING MANHOLES AND CATCHBASINS WITHIN LIMITS OF CONSTRUCTION SHALL BE ADJUSTED TO FINISH GRADES.
- ALL WATER SHUT OFF VALVES WITHIN THE LIMITS OF CONSTRUCTION SHALL BE ADJUSTED TO FINISH GRADES.
- CONTRACTOR SHALL CLEAN ALL STRUCTURES WITHIN THE CONSTRUCTION LIMITS IMMEDIATELY UPON COMPLETION OF THE WORK. ALL SEDIMENT AND DEBRIS SHALL BE DISPOSED OF PER FEDERAL, STATE AND LOCAL REGULATIONS.
- STORM DRAIN PIPING, UNLESS OTHERWISE NOTED, SHALL BE HIGH DENSITY POLYETHYLENE (HANCOR HI-Q, ADS N-12 OR APPROVED EQUAL).
- PROPOSED CATCHBASINS SHALL BE EQUIPPED WITH OIL/WATER SEPARATOR HOODS AND 2' SUMPS.
- ALL DISTURBED AREAS THAT ARE NOT TO BE PAVED OR OTHERWISE TREATED SHALL RECEIVE 6" LOAM, SEED FERTILIZER AND MULCH.
- CONTRACTOR SHALL PROVIDE THE FOLLOWING MINIMUM REQUIREMENTS FOR COMPACTION:
BELOW PAVEMENT AND CONCRETE AREAS 95%
TRENCH BEDDING AND BACKFILL 95%
BELOW LOAM AND SEED AREAS 90%
COMPACTION PERCENTAGES SHALL BE THE MAXIMUM DRY DENSITY AT OPTIMUM MOISTURE CONTENT IN ACCORDANCE WITH ASTM D-1557, METHOD C. FIELD DENSITY TESTS SHALL BE CONDUCTED IN ACCORDANCE WITH ASTM D-1556 OR ASTM-2922.
- STORM DRAIN CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE STATE OF NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION (NHDOT) AND CITY OF PORTSMOUTH DPW STANDARD SPECIFICATIONS.
- CONTRACTOR SHALL GRADE SLOPES TO THE LINES AND GRADES SHOWN ON THE PLANS. SLOPES STEEPER THAN 2:1 SHALL INCLUDE 6" RIP-RAP STONE FOR A DEPTH OF 18". SLOPES FROM 4:1 TO 2:1, CONTRACTOR SHALL PROVIDE A SLOPE STABILIZATION BLANKET.

SITE NOTES:

- ALL DIMENSIONS ARE TO THE FACE OF CURB UNLESS OTHERWISE SPECIFIED.
- ALL WORK SHALL CONFORM TO THE CITY OF PORTSMOUTH DEPARTMENT OF PUBLIC WORKS STANDARD SPECIFICATIONS.
- CONTRACTOR SHALL PROVIDE AS-BUILT PLANS (MYLAR AND .DWG FORMAT AUTOCAD FILES) TO THE CITY OF PORTSMOUTH UPON COMPLETION OF THE PROJECT. AS-BUILT SHALL BE PREPARED AND CERTIFIED BY A LAND SURVEYOR OR PROFESSIONAL ENGINEER LICENSED IN THE STATE OF NEW HAMPSHIRE.
- MATERIALS AND CONSTRUCTION SHALL COMPLY TO ALL APPLICABLE FEDERAL, STATE AND LOCAL CODES AND SPECIFICATIONS.
- CONTRACTOR SHALL PROVIDE A LICENSED ENGINEER OR SURVEYOR TO DETERMINE ALL LINES AND GRADE.
- CONTRACTOR IS RESPONSIBLE TO MAINTAIN ALL VERTICAL AN HORIZONTAL CONTROL FOR THE PROJECT.
- PAVEMENT MARKINGS AND SIGNS SHALL CONFORM TO THE "MANUAL ON UNIFORM CONTROL DEVICES". "STANDARD ALPHABETS FOR HIGHWAY SIGNS AND PAVEMENT MARKINGS".
- CONTRACTOR SHALL SUBMIT A MAINTENANCE OF TRAFFIC PLAN TO THE CITY OF PORTSMOUTH FOR APPROVAL.
- CONTRACTOR SHALL BE FAMILIAR WITH ALL AMERICAN WITH DISABILITY ACT (ADA) REQUIREMENTS FOR ACCESSIBILITY.
- PAVEMENT MARKINGS SUCH AS CROSSWALKS, STOP BARS, LEGENDS AND SYMBOLS SHALL BE THERMOPLASTIC PER AASHTO M249. CENTERLINE AND EDGE STRIPING SHALL BE TRAFFIC PAINT PER AASHTO M248 TYPE 'F'. TRAFFIC PAINT COLOR AS INDICATED IN THE PLANS.

UTILITY NOTES:

- CONTRACTOR SHALL IDENTIFY AND RECORD SWING TIES TO ALL EXISTING UTILITY STRUCTURES, INCLUDING, BUT NOT LIMITED TO WATER SHUT OFF VALVES, MANHOLES, FIRE HYDRANTS.
- CONTRACTOR SHALL UTILITY WORK WITH THE APPROPRIATE UTILITY COMPANY.
ELECTRIC - EVERSOURCE
TELEPHONE - FAIRPOINT OR VERIZON
WATER/SEWER - CITY OF PORTSMOUTH
- LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE APPROXIMATE AND NOT GUARANTEED. CONTRACTOR SHALL LOCATE ALL UTILITIES, ANTICIPATE CONFLICTS, REPAIR AND/OR RELOCATE EXISTING UTILITIES REQUIRED TO COMPLETE THE WORK.
- CONTRACTOR SHALL OBTAIN AND PAY FOR ALL REQUIRED PERMITS, ARRANGE ALL INSPECTIONS, AND SUBMIT CERTIFICATES OF ACCEPTANCE TO THE OWNER PRIOR TO COMPLETION OF THE PROJECT.
- CONTRACTOR SHALL NOTIFY DIG-SAFE 72 HOURS PRIOR TO ANY WORK STARTING. CONTRACTOR REQUIRED TO MAINTAIN AN ACTIVE DIG-SAFE PERMIT THROUGHOUT THE DURATION OF CONSTRUCTION.
- CONTRACTOR SHALL PROVIDE AND INSTALL ALL MANHOLES, CATCHBASINS, FRAMES, GRATES & COVERS, AND OTHER MISCELLANEOUS ITEMS NOTE NECESSARILY DETAILED ON THESE DRAWINGS TO RENDER INSTALLATION OF THE UTILITY COMPLETE AND OPERATIONAL.
- CONTRACTOR SHALL AS-BUILT PROPOSED STORM WATER DRAINAGE SYSTEM, TO INCLUDE ELEVATIONS OF RIM AND ALL INVERTS.
- ALL HYDRANTS AND VALVES SHALL BE INSPECTED AND MUST MEET CITY OF PORTSMOUTH STANDARDS.

GRAVITY SEWER NOTES:

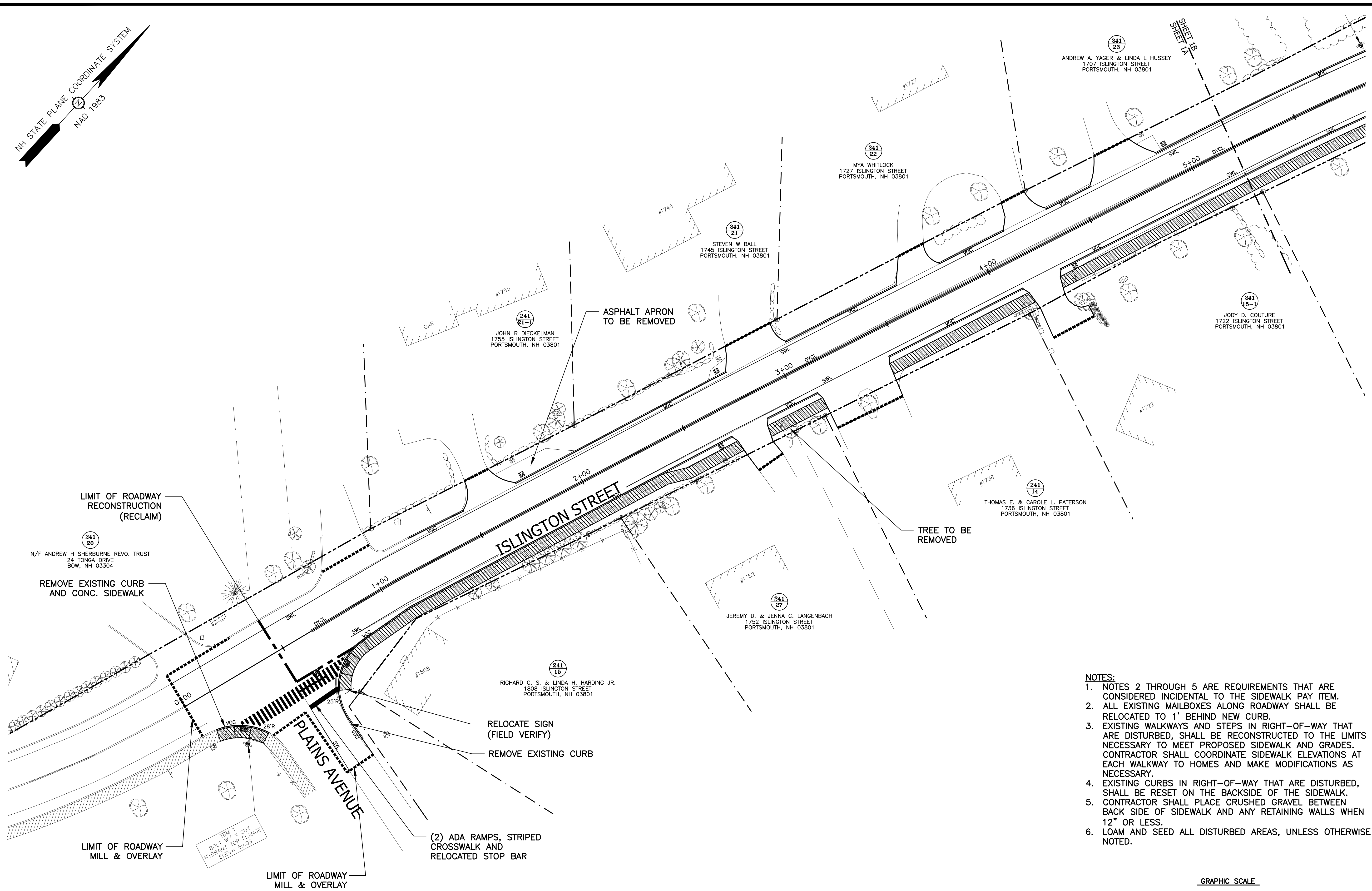
- ORDERED EXCAVATION OF UNSUITABLE MATERIAL BELOW GRADE: BACKFILL AS STATED IN THE TECHNICAL SPECIFICATIONS OR AS SHOWN ON THE DRAWINGS.
- BEDDING: SEE NOTE 7 OF STANDARD MANHOLE NOTES. WHERE ORDERED BY THE ENGINEER TO STABILIZE THE TRENCH BASE, GRADED SCREENED GRAVEL OR CRUSHED STONE 1/2 INCH TO 1-1/2 INCH SHALL BE USED.
- SAND BLANKET: CLEAN SAND FREE FROM ORGANIC MATTER, SO GRADED THAT 90-100% PASSES A 1/2 INCH SIEVE AND NOT MORE THAN 15% WILL PASS A #200 SIEVE. NO STONE LARGER THAN 2" SHOULD BE IN CONTACT WITH THE PIPE.
- SUITABLE MATERIAL: IN ROADS, ROAD SHOULDERS, WALKWAYS AND TRAVELED WAYS, SUITABLE MATERIAL FOR TRENCH BACKFILL SHALL BE THE NATURAL MATERIAL EXCAVATED DURING THE COURSE OF CONSTRUCTION, BUT SHALL EXCLUDE DEBRIS; PIECES OF PAVEMENT; ORGANIC MATTER; TOP SOIL; ALL WET OR SOFT MUCK, PEAT, OR CLAY; ALL EXCAVATED LEDGE MATERIAL; ALL ROCKS OVER 6 INCHES IN LARGEST DIMENSION; AND ANY MATERIAL WHICH, AS DETERMINED BY THE ENGINEER, WILL NOT PROVIDE SUFFICIENT SUPPORT OR MAINTAIN THE COMPLETED CONSTRUCTION IN A STABLE CONDITION. IN CROSS-COUNTRY CONSTRUCTION, SUITABLE MATERIAL SHALL BE AS DESCRIBED ABOVE, EXCEPT THAT THE ENGINEER MAY PERMIT THE USE OF TOP SOIL, LOAM, MUCK, OR PEAT, IF HE IS SATISFIED THAT THE COMPLETED CONSTRUCTION WILL BE ENTIRELY STABLE AND PROVIDED THAT EASY ACCESS TO THE SEWER, FOR MAINTENANCE AND POSSIBLY RECONSTRUCTION, WILL BE PRESERVED.
- BASE COURSE AND PAVEMENT SHALL MEET THE REQUIREMENTS OF THE NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION'S LATEST EDITION OF THE STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES - DIVISIONS 300 AND 400 RESPECTIVELY AND LOCAL REGULATION.
- WOOD SHEETING, IF REQUIRED: WHERE SHEETING IS PLACED ALONGSIDE THE PIPE AND EXTENDS BELOW MID-DIAMETER, IT SHALL BE CUT OFF AND LEFT IN PLACE TO AN ELEVATION 1 FOOT ABOVE THE TOP OF PIPE. WHERE SHEETING IS ORDERED BY THE ENGINEER TO BE LEFT IN PLACE, IT SHALL BE CUT OFF AT LEAST 3 FEET BELOW FINISHED GRADE, BUT NOT LESS THAN 1 FOOT ABOVE THE TOP OF THE PIPE.
- W = MAXIMUM ALLOWABLE TRENCH PAYMENT WIDTH FOR LEDGE EXCAVATION AND FOR ORDERED EXCAVATION BELOW GRADE. FOR PIPES 15 INCHES NOMINAL DIAMETER OR LESS, W SHALL BE NO MORE THAN 36 INCHES. FOR PIPES GREATER THAN 15 INCHES IN NOMINAL DIAMETER, W SHALL BE 24 INCHES PLUS PIPE OUTSIDE DIAMETER (O.D.) ALSO, W SHALL BE THE PAYMENT WIDTH.
- FOR CROSS COUNTRY CONSTRUCTION, BACKFILL OR FILL SHALL BE MOUNDED TO A HEIGHT OF 6 INCHES ABOVE THE ORIGINAL GROUND SURFACE.
- CONCRETE FOR ENCASEMENT SHALL CONFORM TO THE REQUIREMENTS OF SECTION 520, (NHDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, LATEST EDITION).
- CONCRETE FULL ENCASEMENT: IF FULL ENCASEMENT IS UTILIZED, DEPTH OF CONCRETE BELOW PIPE SHALL BE 1/4 I.D. (4" MINIMUM). BLOCK SUPPORT SHALL BE SOLID CONCRETE BLOCKS.
- GRAVEL DRIVEWAY AND SHOULDER RESTORATION: CRUSHED GRAVEL IN DRIVEWAYS AND ROAD SHOULDERS SHALL MATCH EXISTING WITH A MINIMUM OF 12". GRAVEL REPLACEMENT SHALL BE SUBSIDIARY TO SEWER CONSTRUCTION AND WILL NOT BE MEASURED FOR PAYMENT.

LEGEND:

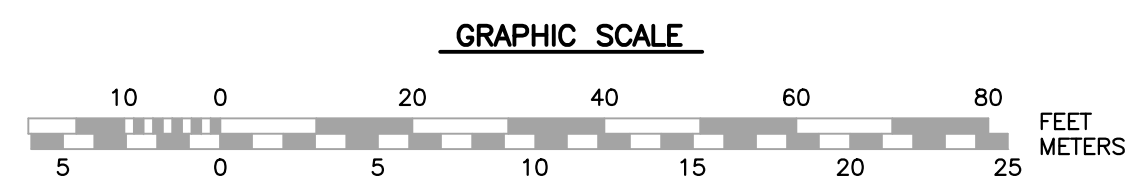
EXISTING	PROPOSED	
---	---	PROPERTY LINE
---	---	RIGHT-OF-WAY
▨	▨	BUILDING
---	---	EDGE OF PAVEMENT
---	---	CURB
---	---	SIDEWALK
---	---	ADA RAMP
---	---	ADA SYMBOL
---	---	SIGN
---	---	MAILBOX
---	---	SINGLE WHITE LINE
---	---	DOUBLE YELLOW CENTERLINE
---	---	RETAINING WALL
---	---	LOOSE STONE WALL
---	---	FENCE
---	---	GUARDRAIL
---	---	SHRUB
---	---	TREE
---	---	TEMPORARY BENCHMARK
---	---	1' CONTOUR
---	---	WETLANDS
---	---	WETLANDS BOUNDARY
---	---	DRAINAGE
---	---	WATER
---	---	GRAVITY SEWER
---	---	LOW PRESSURE SEWER MAIN
---	---	UNDERGROUND TELE.
---	---	OVERHEAD WIRES
---	---	GAS
---	---	FIRE HYDRANT
---	---	UTILITY POLE
---	---	UTILITY POLE w/ LIGHT
---	---	CATCHBASIN
---	---	MANHOLE
---	---	WATER SHUT OFF
---	---	WATER VALVE
---	---	LEDGE
---	---	EROSION CONTROL
---	---	SAWCUT
---	---	LIMITS OF RECLAIM
---	---	BORING LOCATION

DATE: FEBRUARY 2, 2016	SCALE: NONE	PROJECT NO.: Cop-002	ISSUED FOR BID	NO.	APPD	DATE
FOR: Outer Islington St Sidewalk Design Portsmouth, NH 03801			REVISIONS			
Seaport Engineering, LLC PORTSMOUTH, NH (603) 498-8449 www.seaporteng.com			DESCRIPTION			
GENERAL NOTES AND LEGEND			G-1			

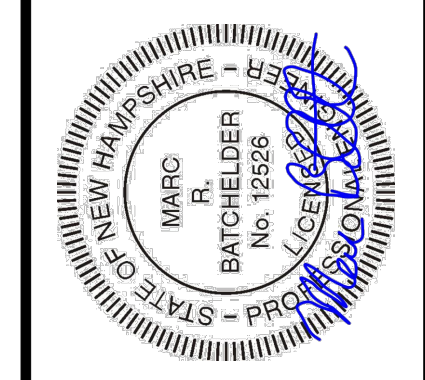
NH STATE PLANE COORDINATE SYSTEM
NAD 1983



- NOTES:**
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 - ALL EXISTING MAILBOXES ALONG ROADWAY SHALL BE RELOCATED TO 1' BEHIND NEW CURB.
 - EXISTING WALKWAYS AND STEPS IN RIGHT-OF-WAY THAT ARE DISTURBED, SHALL BE RECONSTRUCTED TO THE LIMITS NECESSARY TO MEET PROPOSED SIDEWALK AND GRADES. CONTRACTOR SHALL COORDINATE SIDEWALK ELEVATIONS AT EACH WALKWAY TO HOMES AND MAKE MODIFICATIONS AS NECESSARY.
 - EXISTING CURBS IN RIGHT-OF-WAY THAT ARE DISTURBED, SHALL BE RESET ON THE BACKSIDE OF THE SIDEWALK.
 - CONTRACTOR SHALL PLACE CRUSHED GRAVEL BETWEEN BACK SIDE OF SIDEWALK AND ANY RETAINING WALLS WHEN 12" OR LESS.
 - LOAM AND SEED ALL DISTURBED AREAS, UNLESS OTHERWISE NOTED.



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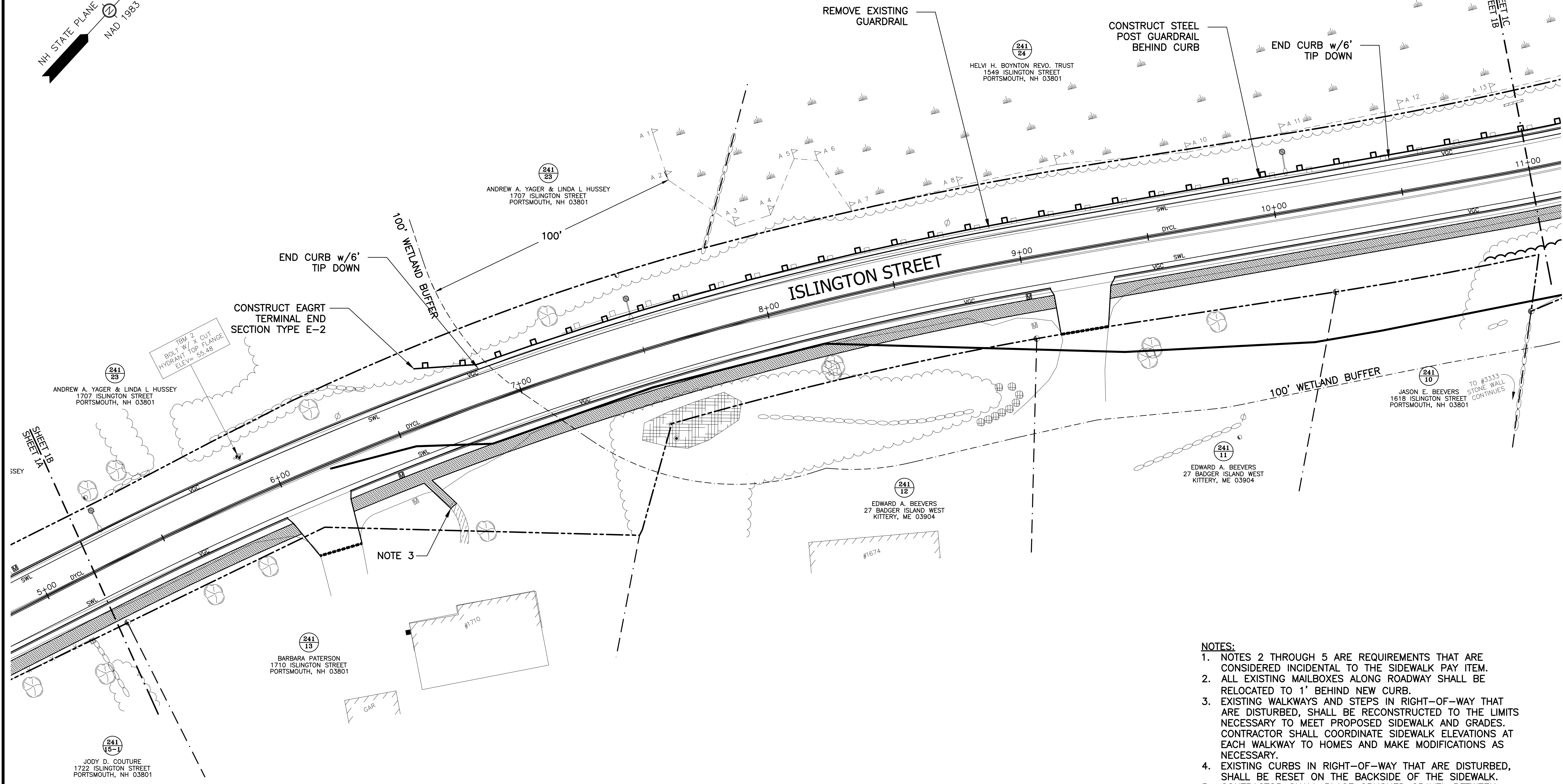
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PROJECT NO.: Cop-002
MARC R. BATCHELDER, PE
ENGINEER OF RECORD

FOR: Outer Islington St
Sidewalk Design
Portsmouth, NH
03801

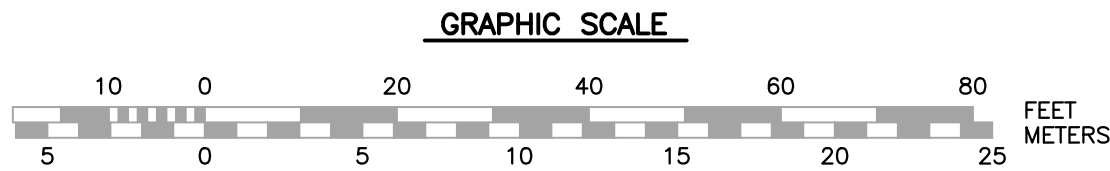
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TITLE: ROADWAY LAYOUT PLAN

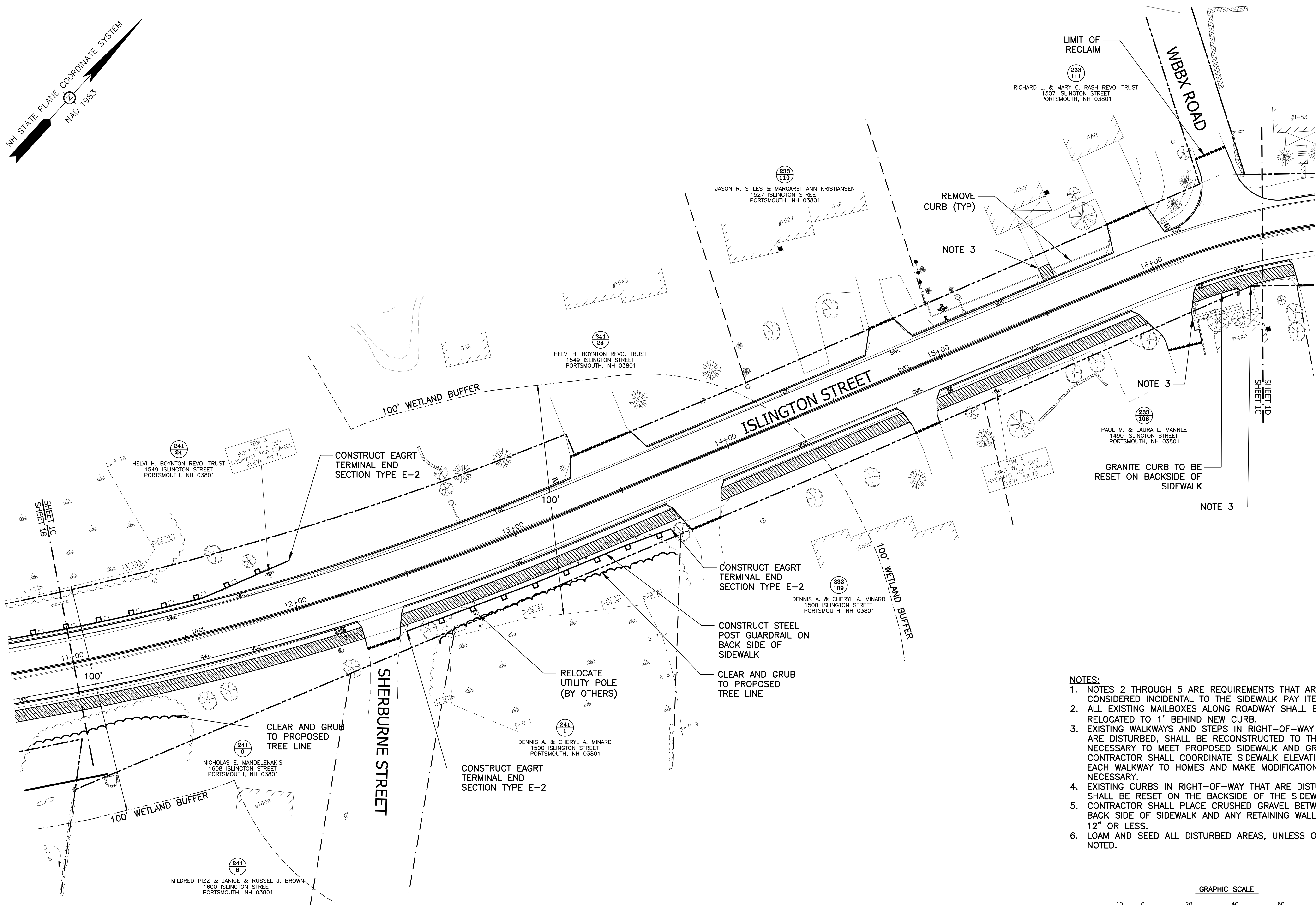
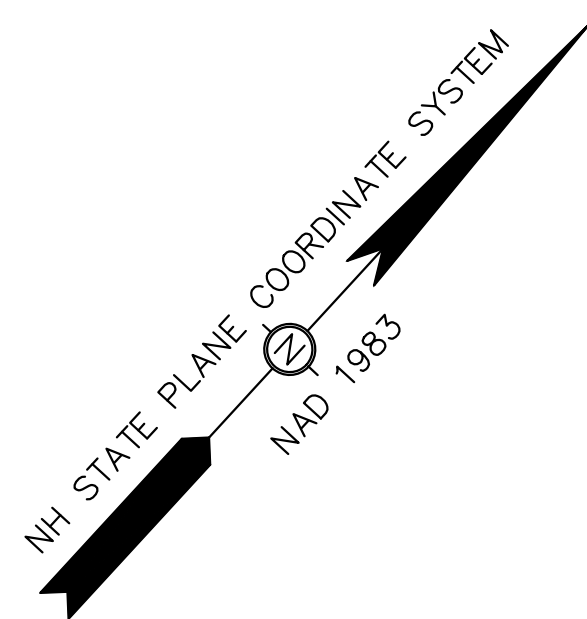
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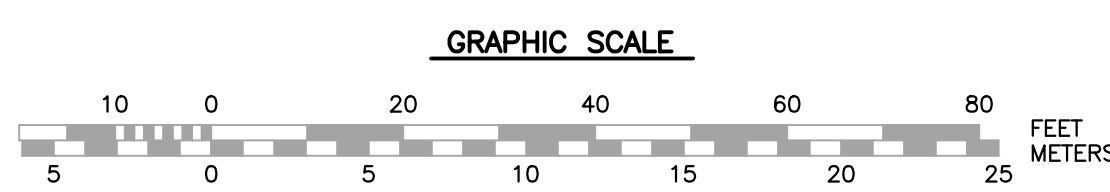
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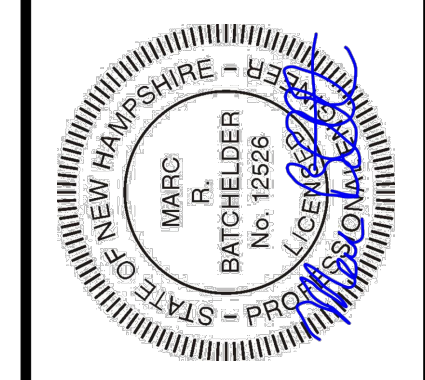
TITLE: ROADWAY LAYOUT PLANS	FOR: Outer Islington St Sidewalk Design Portsmouth, NH 03801	DATE: FEBRUARY 2, 2016	PROJECT NO.: Cop-002	ISSUED FOR BID	NO.	DESCRIPTION	REVISIONS
		SCALE: 1:20	PROJECT NO.: Cop-002	MARC R. BATCHELDER, PE	ENGINEER OF RECORD	NO.	DESCRIPTION
Seaport Engineering, LLC PORTSMOUTH, NH (603) 498-8449 www.seaporteng.com		MARC R. BATCHELDER, PE ENGINEER OF RECORD		NO.		REVISIONS	
C-1B		MARC R. BATCHELDER, PE ENGINEER OF RECORD		NO.		REVISIONS	



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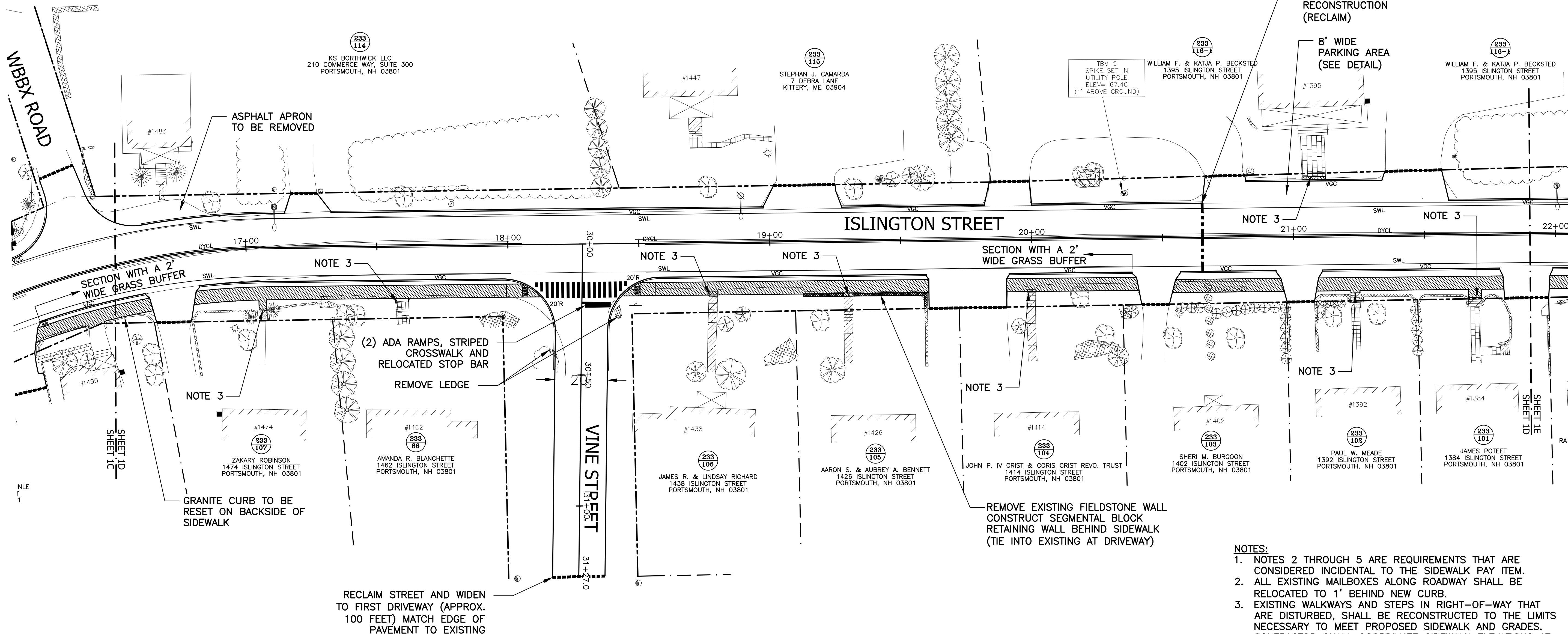
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 ENGINEER OF RECORD

FOR: Outer Islington St
 Sidewalk Design
 Portsmouth, NH
 03801

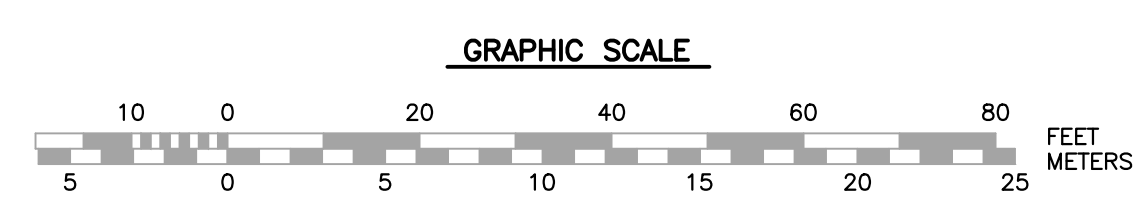
Seaport Engineering, LLC
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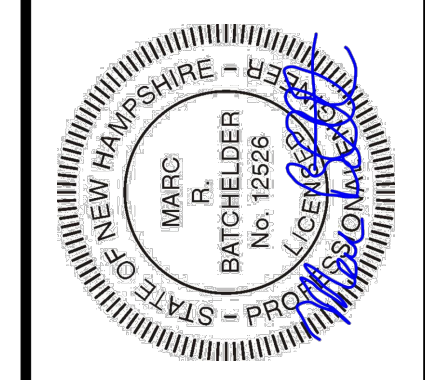
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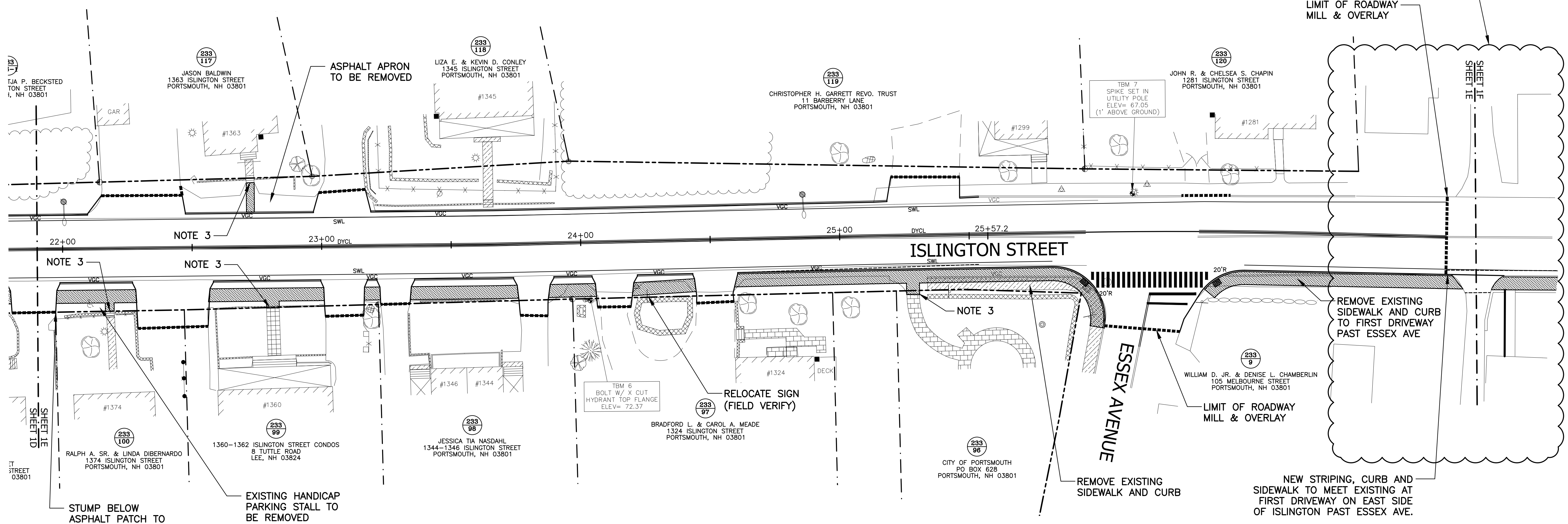
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PORTSMOUTH, NH
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TITLE: ROADWAY LAYOUT
PLANS

C-1D

NH STATE PLANE COORDINATE SYSTEM
NAD 1983



DATA PROVIDED BY CITY OF PORTSMOUTH GIS (APPROXIMATE)

LIMIT OF ROADWAY MILL & OVERLAY

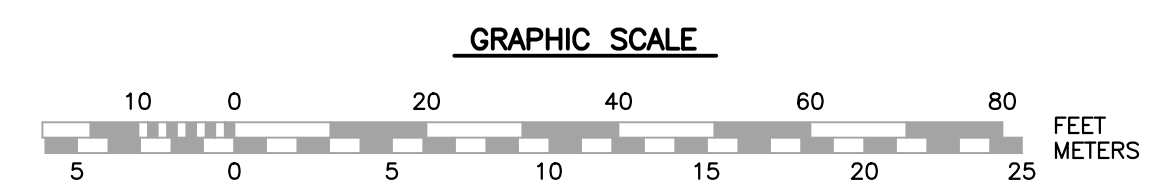
REMOVE EXISTING SIDEWALK AND CURB TO FIRST DRIVEWAY PAST ESSEX AVE

LIMIT OF ROADWAY MILL & OVERLAY

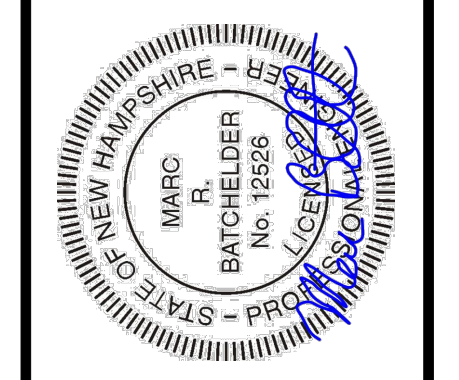
NEW STRIPING, CURB AND SIDEWALK TO MEET EXISTING AT FIRST DRIVEWAY ON EAST SIDE OF ISLINGTON PAST ESSEX AVE.

NOTES:

1. NOTES 2 THROUGH 5 ARE REQUIREMENTS THAT ARE CONSIDERED INCIDENTAL TO THE SIDEWALK PAY ITEM.
2. ALL EXISTING MAILBOXES ALONG ROADWAY SHALL BE RELOCATED TO 1' BEHIND NEW CURB.
3. EXISTING WALKWAYS AND STEPS IN RIGHT-OF-WAY THAT ARE DISTURBED, SHALL BE RECONSTRUCTED TO THE LIMITS NECESSARY TO MEET PROPOSED SIDEWALK AND GRADES. CONTRACTOR SHALL COORDINATE SIDEWALK ELEVATIONS AT EACH WALKWAY TO HOMES AND MAKE MODIFICATIONS AS NECESSARY.
4. EXISTING CURBS IN RIGHT-OF-WAY THAT ARE DISTURBED, SHALL BE RESET ON THE BACKSIDE OF THE SIDEWALK.
5. CONTRACTOR SHALL PLACE CRUSHED GRAVEL BETWEEN BACK SIDE OF SIDEWALK AND ANY RETAINING WALLS WHEN 12" OR LESS.
6. LOAM AND SEED ALL DISTURBED AREAS, UNLESS OTHERWISE NOTED.



NO.	DESCRIPTION	APPD	DATE
A	ISSUED FOR BID	MRB	01/09/17



DATE: FEBRUARY 2, 2016
SCALE: 1:20
PROJECT NO.: Cop-002
MARC R. BATCHELDER, PE
ENGINEER OF RECORD

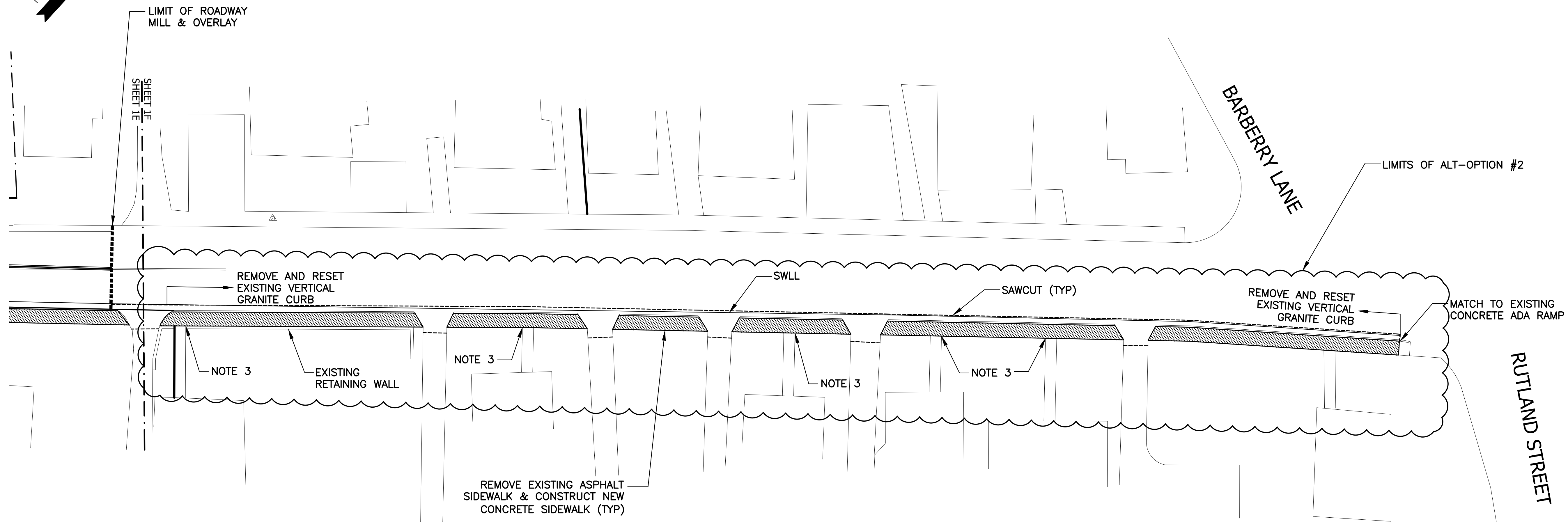
FOR: Outer Islington St
Sidewalk Design
Portsmouth, NH
03801

Seaport Engineering, LLC
PORTSMOUTH, NH
(603) 498-8449
www.seaporteng.com

TITLE: ROADWAY LAYOUT PLANS

C-1E

NH STATE PLANE COORDINATE SYSTEM
NAD 1983

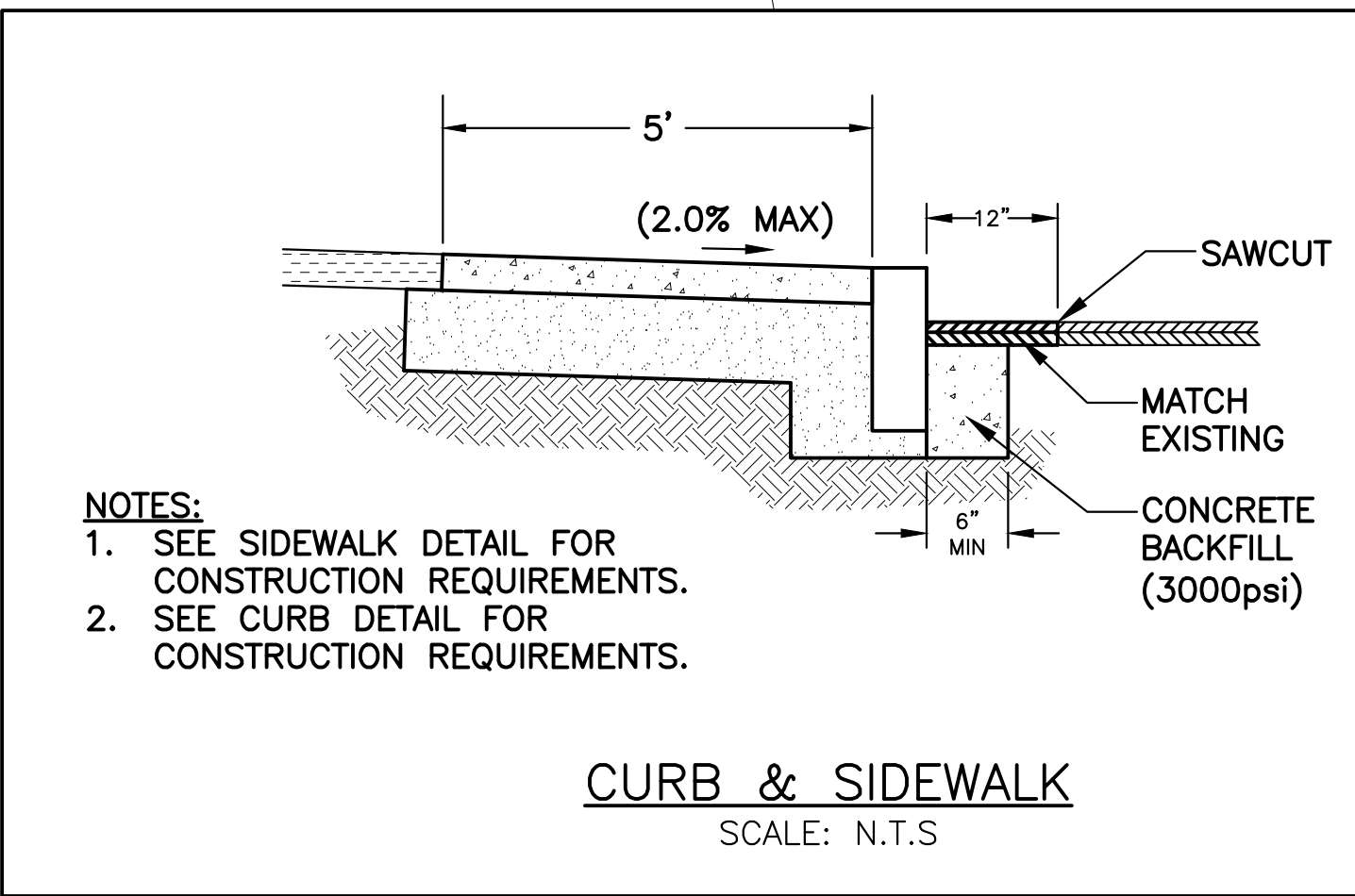


NOTES:

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6. LOAM AND SEED ALL DISTURBED AREAS, UNLESS OTHERWISE NOTED.
7. DATA PROVIDED FOR ROADWAY, CURB, SIDEWALKS, DRIVEWAYS, RETAINING WALLS AND BUILDINGS FROM ESSEX AVENUE TO RUTLAND STREET PROVIDED BY CITY OF PORTSMOUTH GIS AND/OR ASSESSOR'S MAPS. ALL LOCATIONS ARE CONSIDERED APPROXIMATE AND WERE NOT SURVEYED.

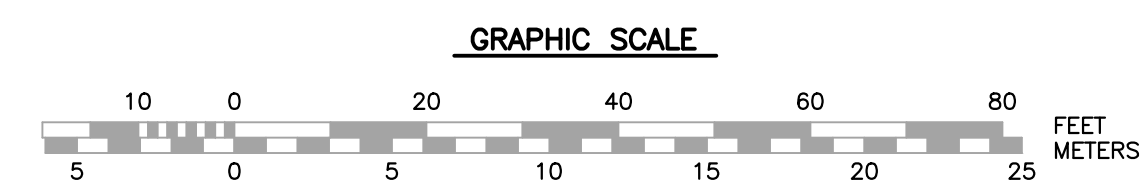
ALT-OPTION #2:

1. SAWCUT 12" FROM FACE OF EXISTING CURB AND DRIVEWAYS.
2. REMOVE EXISTING ASPHALT SIDEWALKS (INCL. THROUGH DRIVEWAYS) AND BASE MATERIAL TO APPROPRIATE DEPTHS.
3. REMOVE AND RESET VERTICAL GRANITE CURB. CONTRACTOR SHALL TAKE CARE AND REMOVE IN SUCH A MANNER AS TO NOT DAMAGE THE CURB.
4. PROVIDE MINOR GRADING OF SIDEWALK (INCL. THROUGH DRIVEWAYS) SUB-BASE TO PROVIDE APPROPRIATE SLOPES.
5. CONSTRUCT NEW 5' WIDE CONCRETE SIDEWALKS.
6. PATCH ASPHALT ALONG CURB FRONT AND DRIVEWAYS AS NECESSARY.

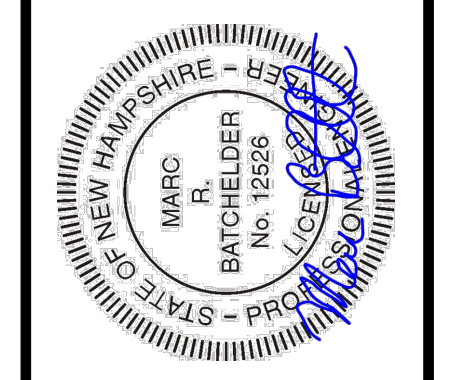


- NOTES:**
1. SEE SIDEWALK DETAIL FOR CONSTRUCTION REQUIREMENTS.
 2. SEE CURB DETAIL FOR CONSTRUCTION REQUIREMENTS.

CURB & SIDEWALK
SCALE: N.T.S



NO.	DESCRIPTION	APP'D	DATE
A	ISSUED FOR BID	MRB	01/09/17

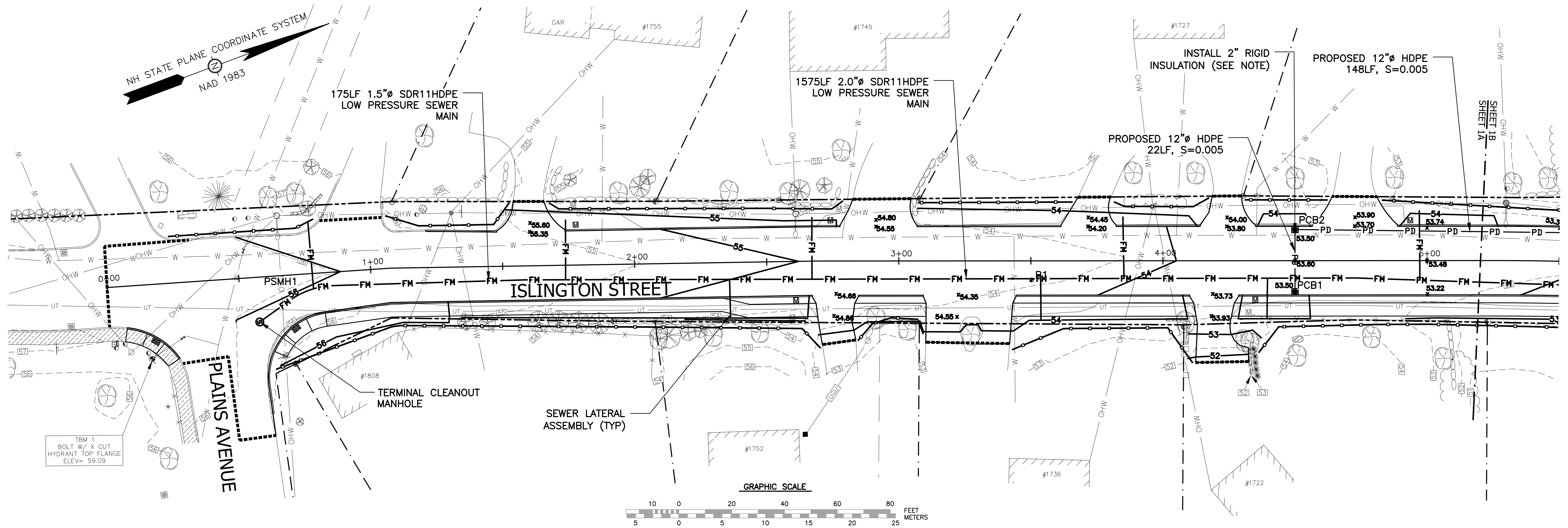


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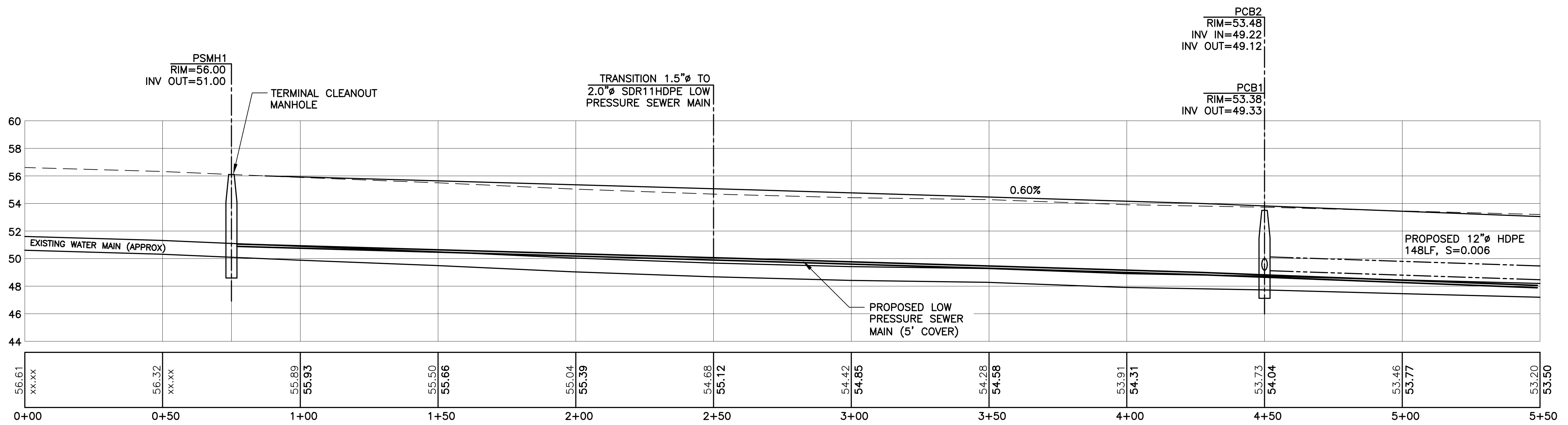
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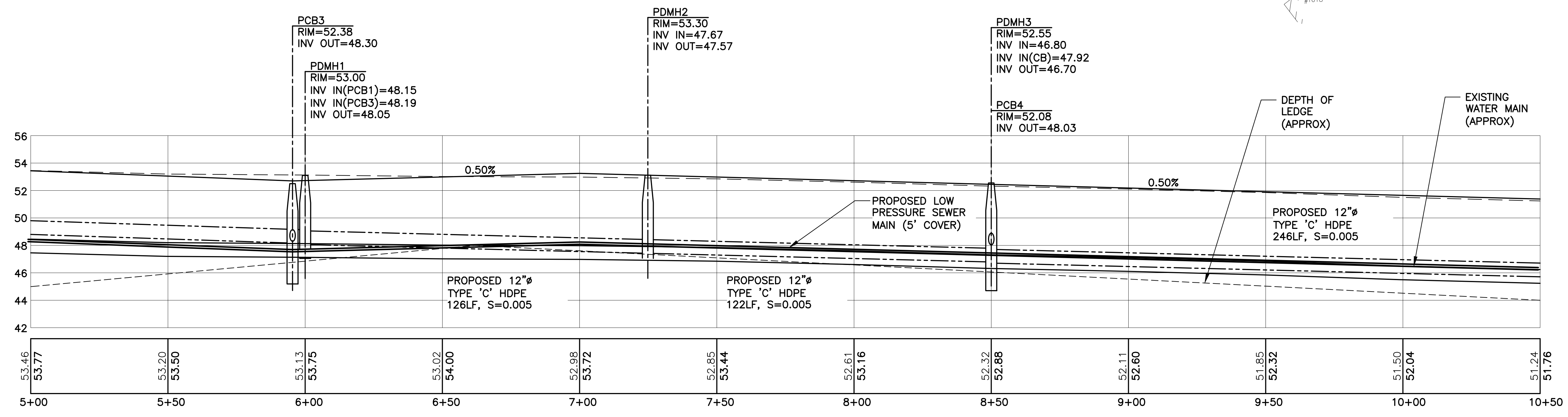
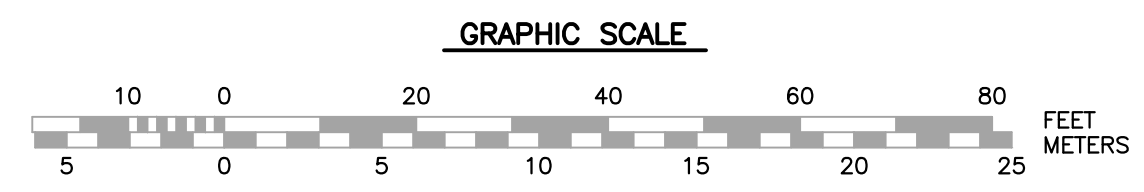
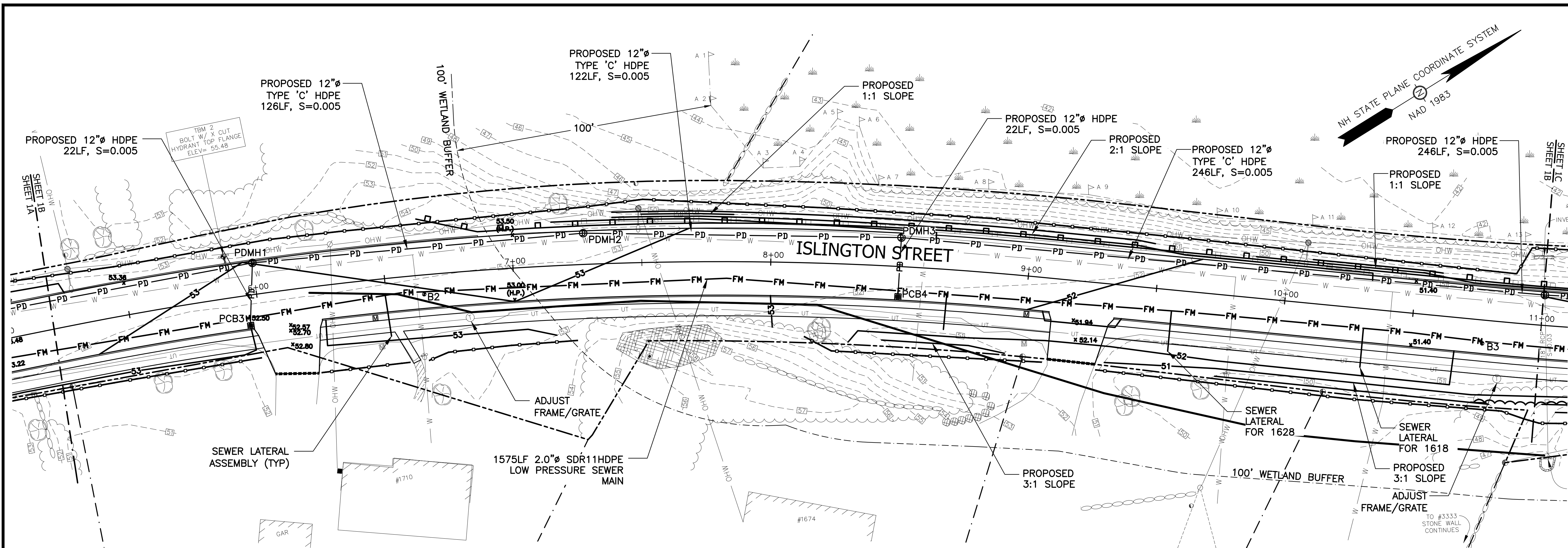
TITLE: ROADWAY LAYOUT PLANS



NOTES:
 1. INSTALL 2" RIGID INSULATION BETWEEN PCB AND WATER MAIN. INSTALL 2" RIGID INSULATION FOR LENGTH OF DRAIN LINE WHERE LESS THAN 3' CLEARANCE TO WATER MAIN.



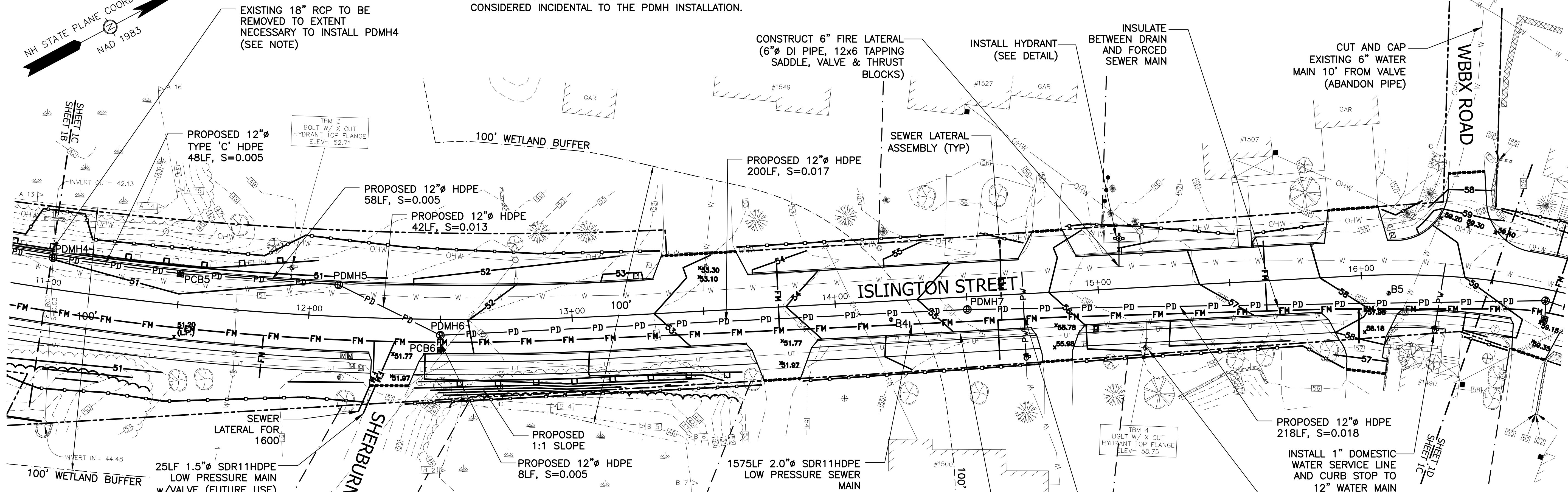
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SCALE: 1:20	ENGINEER OF RECORD: MARC R. BATCHELDER, PE
FOR: Outer Islington St Sidewalk Design Portsmouth, NH 03801	
Seaport Engineering, LLC PORTSMOUTH, NH (603) 498-8449 www.seaporteng.com	
TITLE: UTILITIES PLAN and PROFILE	
C-2A	



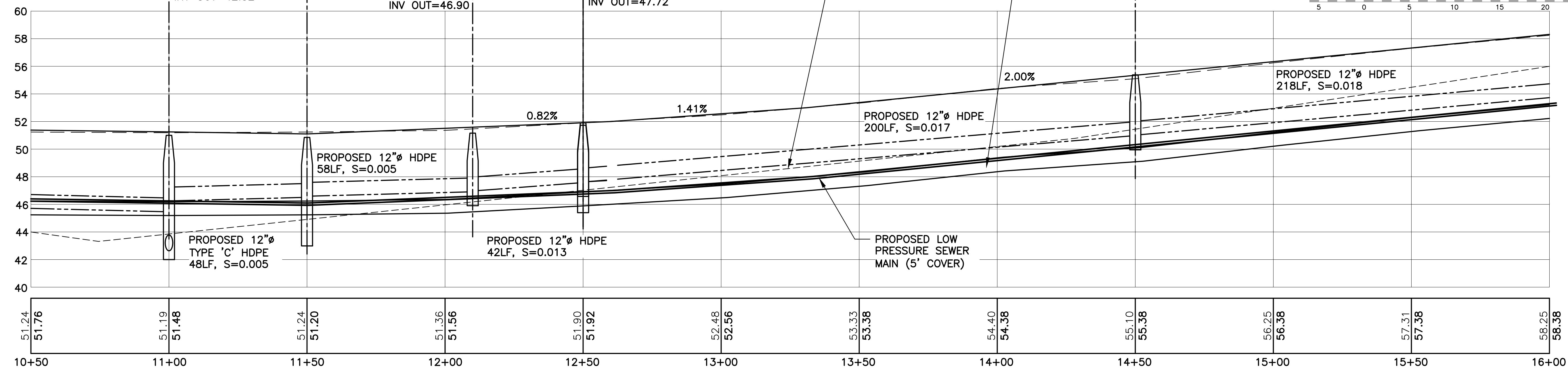
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FOR: Outer Islington St Sidewalk Design Portsmouth, NH 03801		ENGINEER OF RECORD: MARC R. BATCHELDER, PE		REVISIONS:	
TITLE: UTILITIES PLAN and PROFILE		C-2B		NO.:	
Seaport Engineering, LLC PORTSMOUTH, NH (603) 498-8449 www.seaporteng.com		NH STATE PLANE COORDINATE SYSTEM NAD 1983		ISSUED FOR BID	
MARB		APPD		DATE	
01/09/17					

NH STATE PLANE COORDINATE SYSTEM
NAD 1983

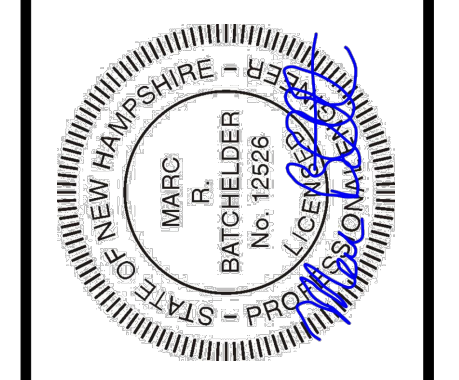
NOTES:
1. REMOVAL OF 18" RCP AND ALL SPECIAL CONNECTIONS NEEDED TO RECONSTRUCT CULVERT TO PDMH4 ARE CONSIDERED INCIDENTAL TO THE PDMH INSTALLATION.



PDMH4 RIM=51.00 INV IN(PDMH3)=45.47 INV IN(18"RCP)=42.64 INV IN(PCB5)=46.26 INV OUT=42.52	PCB5 RIM=50.73 INV IN=46.60 INV OUT=46.50	PDMH5 RIM=51.16 INV IN=47.00 INV OUT=46.90	PDMH6 RIM=51.82 INV IN(PDMH6)=47.65 INV IN(PCB6)=47.68 INV OUT(PDMH4)=47.55	PCB6 RIM=51.78 INV OUT=47.72
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NO.	DESCRIPTION	APPROVED	DATE
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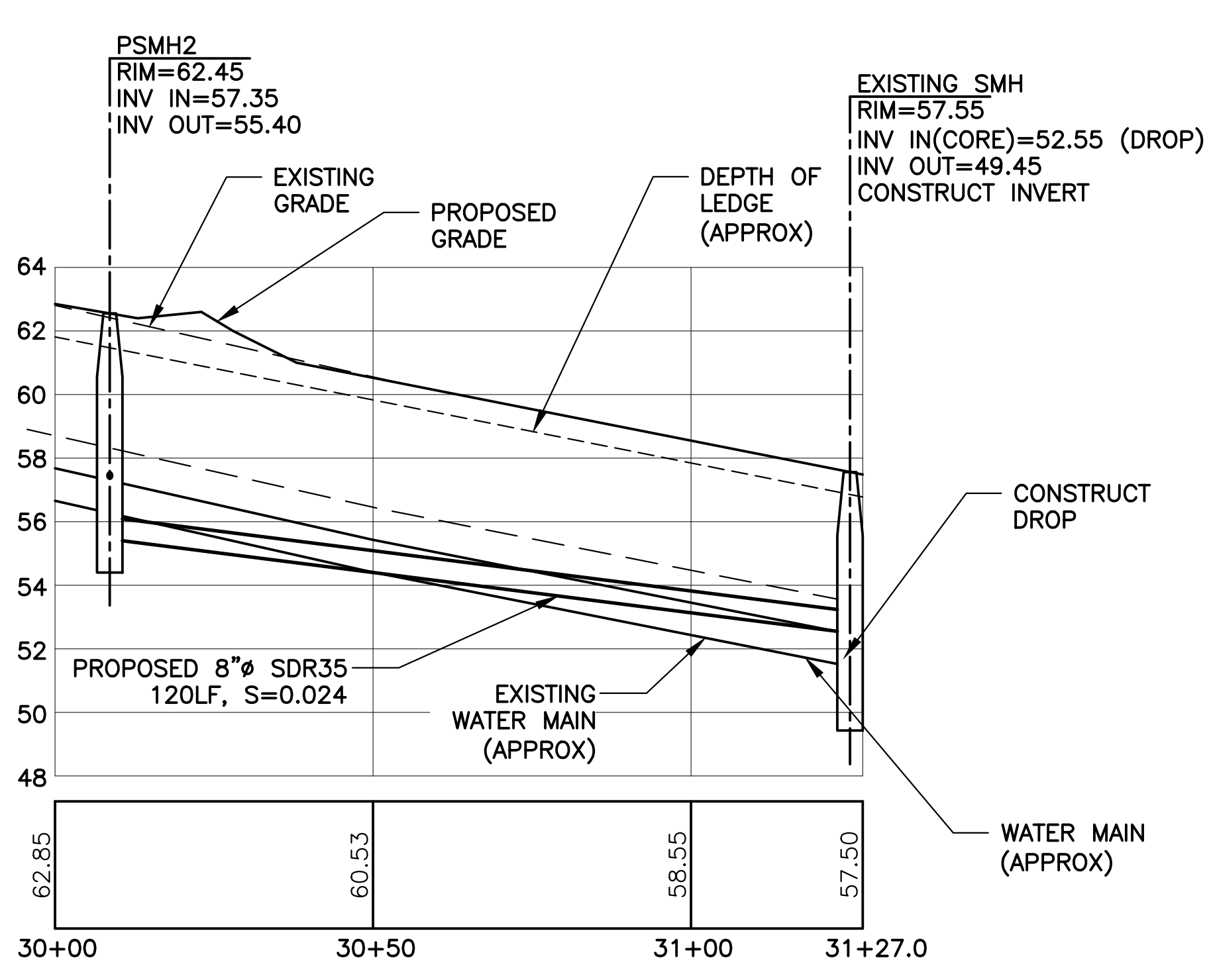
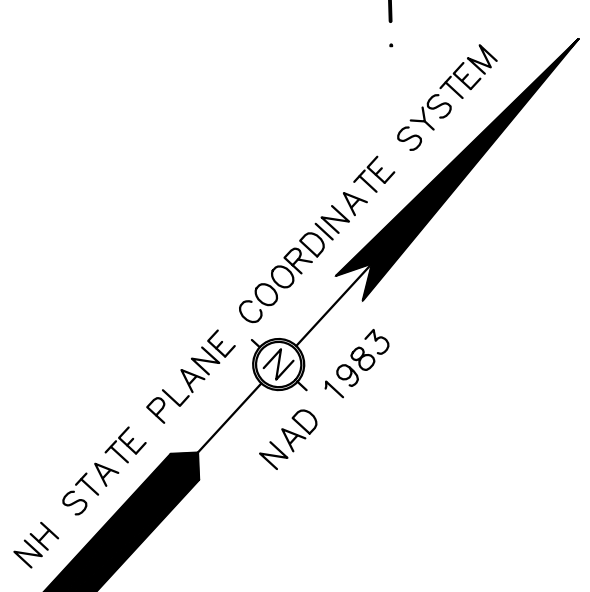
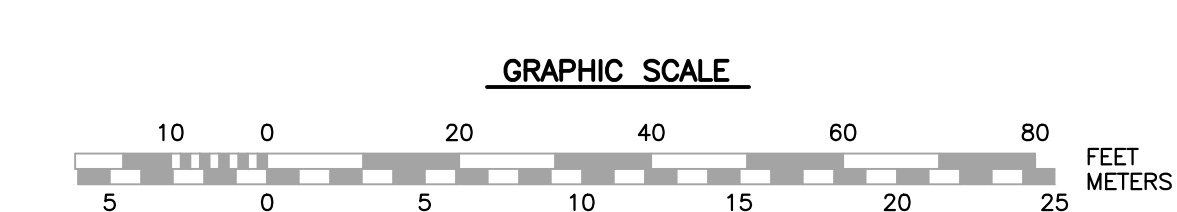
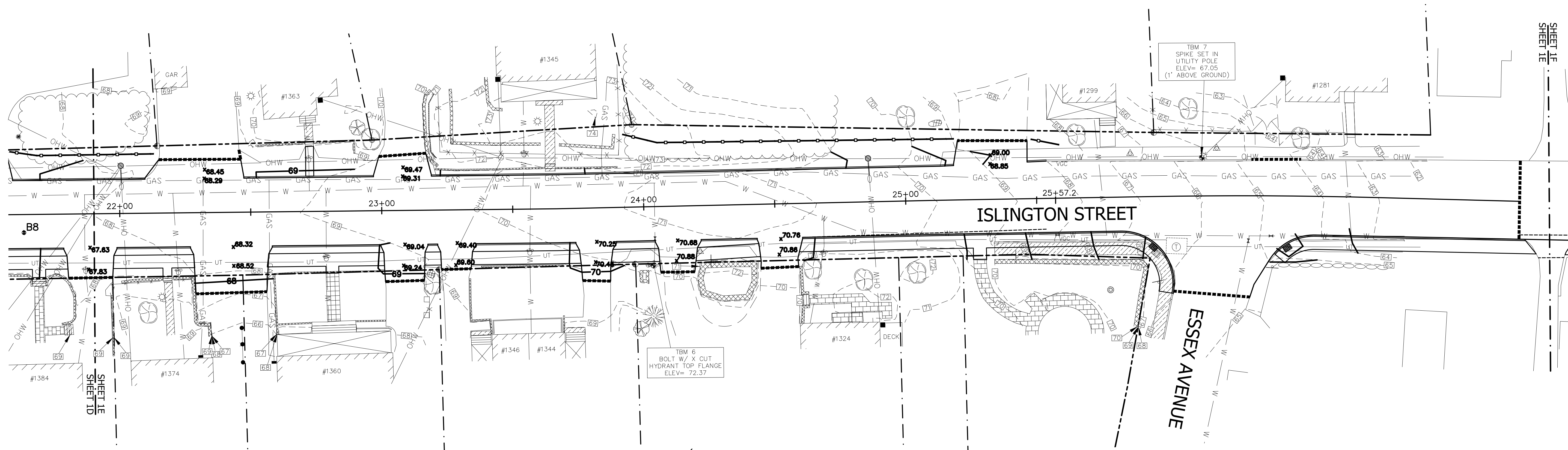
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MARC R. BATCHELDER, PE
ENGINEER OF RECORD

FOR: Outer Islington St
Sidewalk Design
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03801

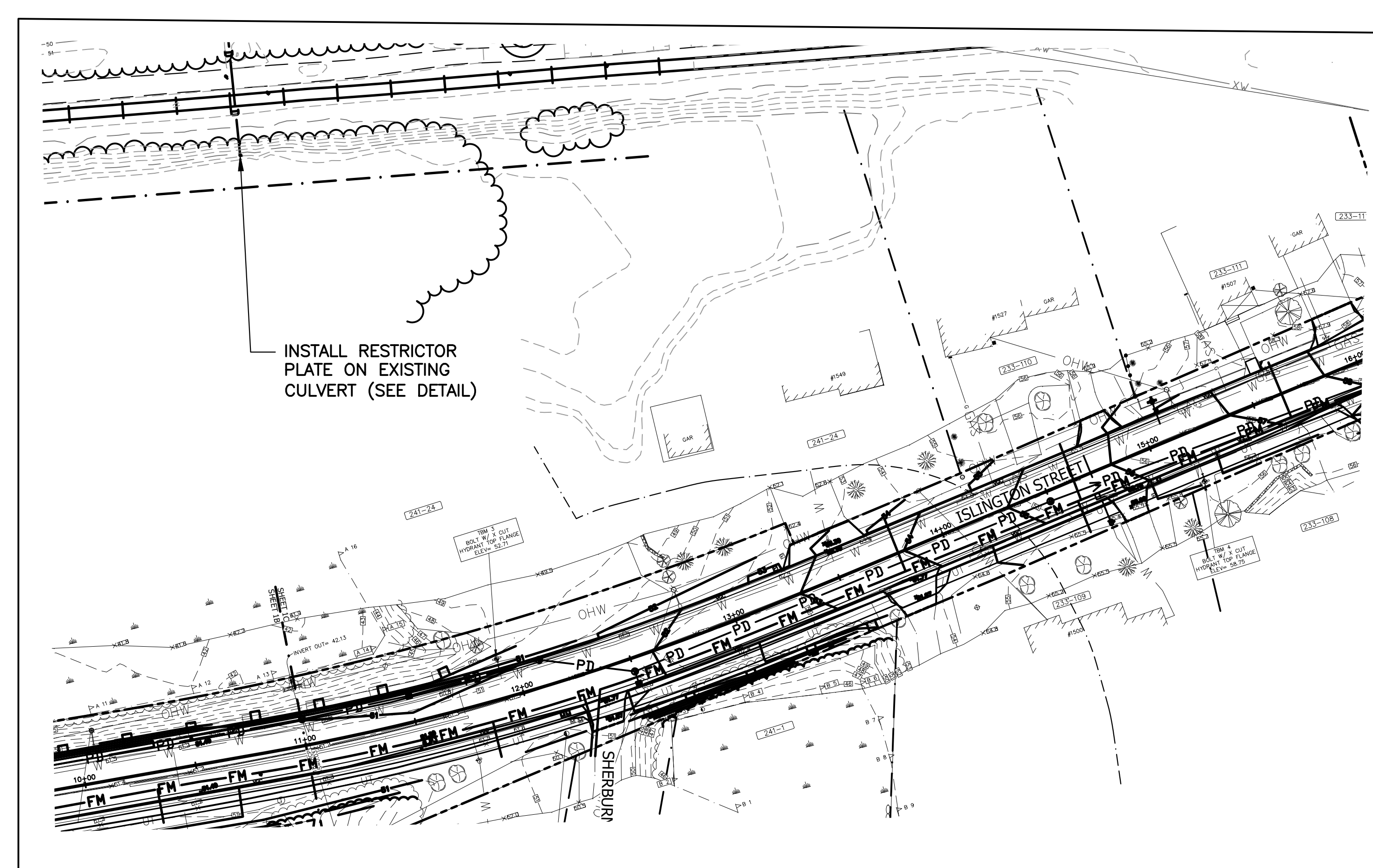
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TITLE: UTILITIES PLAN and PROFILE

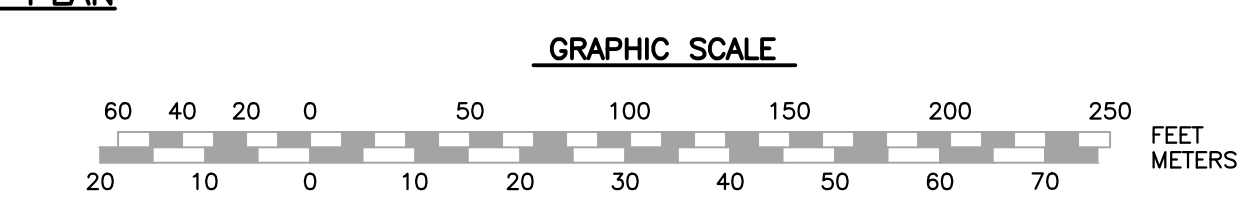
C-2C



VINE STREET PROFILE



RAILROAD CULVERT PLAN



NO.		DESCRIPTION		REVISIONS	
A	ISSUED FOR BID	MRB	01/09/17	APP'D	DATE

DATE: FEBRUARY 2, 2016
SCALE: 1:20
PROJECT NO.: Cop-002
MARC R. BATCHELDER, PE
ENGINEER OF RECORD

FOR: Outer Islington St
Sidewalk Design
Portsmouth, NH
03801

Seaport Engineering, LLC
PORTSMOUTH, NH
(603) 498-8449
www.seaporteng.com

TITLE: UTILITIES PLAN and PROFILE

C-2E

PROJECT NAME AND LOCATION:

OUTER ISLINGTON STREET ROADWAY IMPROVEMENTS
PORTSMOUTH, NEW HAMPSHIRE

DESCRIPTION:

THE PROJECT CONSISTS OF RECLAIMING THE EXISTING ASPHALT PAVEMENT SURFACE, REGRADING THE BASE MATERIALS AND RESURFACING. INCLUDES INSTALLATION OF DRAINAGE SYSTEM, CURBING AND SIDEWALKS.

CONSTRUCTION SEQUENCE:

1. INSTALL ALL EROSION CONTROL MEASURES.
2. REMOVE TREES AND VEGETATION.
3. INSTALLATION OF NEW STORMWATER DRAINAGE SYSTEM.
4. RECLAIM EXISTING ASPHALT PAVEMENT.
5. GRADE AND COMPACT BASE MATERIALS.
6. PLACE BASE COURSE OF ROADWAY PAVEMENT.
7. INSTALL NEW CURBING, SIDEWALKS AND RETAINING WALLS.
8. FINISH GRADE BEHIND CURB, SIDEWALKS AND RETAINING WALLS.
9. PLACE SEED AND MULCH ON LOAMED AREAS.
10. PLACE WEARING COURSE OF PAVEMENT.
11. INSTALL ALL ROADWAY STRIPING AND SIGNS.
12. WHEN CONSTRUCTION ACTIVITY IS COMPLETE AND SITE IS STABILIZED, REMOVE EROSION CONTROL MEASURES.

EROSION AND SEDIMENT CONTROLS AND STABILIZATION PRACTICES:

THE EROSION CONTROL PROCEDURES SHALL CONFORM TO SECTION 645 OF THE "STANDARD SPECIFICATION FOR ROAD AND BRIDGE CONSTRUCTION" OF THE NHDOT, AND "STORM WATER MANAGEMENT AND EROSION AND SEDIMENT CONTROL HANDBOOK FOR URBAN AND DEVELOPING AREAS IN NEW HAMPSHIRE".

DURING CONSTRUCTION AND THEREAFTER, EROSION CONTROL MEASURES ARE TO BE IMPLEMENTED AS NOTED. THE SMALLEST PRACTICAL AREA OF LAND SHOULD BE EXPOSED AT ANY ONE TIME DURING CONSTRUCTION, BUT IN NO CASE SHALL EXCEED 5 ACRES AT ANY ONE TIME BEFORE DISTURBED AREAS ARE STABILIZED.

AN AREA SHALL BE CONSIDERED STABLE IF ONE OF THE FOLLOWING HAS OCCURRED:

- BASE COURSE GRAVELS HAVE BEEN INSTALLED IN AREAS TO BE PAVED;
- A MINIMUM OF 85% VEGETATED GROWTH HAS BEEN ESTABLISHED;
- A MINIMUM OF 3" OF NON-EROSIVE MATERIAL SUCH AS STONE OR RIPRAP HAS BEEN INSTALLED; OR
- EROSION CONTROL BLANKETS HAVE BEEN PROPERLY INSTALLED.

ANY DISTURBED AREAS WHICH ARE TO BE LEFT TEMPORARILY, AND WHICH WILL BE REGRADED LATER DURING CONSTRUCTION SHALL BE MACHINE HAY MULCHED AND SEEDED WITH RYE GRASS TO PREVENT EROSION.

DUST CONTROL: IF TEMPORARY STABILIZATION PRACTICES, SUCH AS TEMPORARY VEGETATION AND MULCHING, DO NOT ADEQUATELY REDUCE DUST GENERATION, APPLICATION OF WATER OR CALCIUM CHLORIDE SHALL BE APPLIED IN ACCORDANCE WITH BEST MANAGEMENT PRACTICES.

ALL EROSION CONTROLS SHALL BE INSPECTED WEEKLY DURING THE LIFE OF THE PROJECT AND AFTER EACH STORM OF 0.5" OR GREATER. ALL DAMAGED SILT FENCES SHALL BE REPAIRED. SEDIMENT DEPOSITS SHALL PERIODICALLY BE REMOVED AND DISPOSED IN A SECURED LOCATION.

AVOID THE USE OF FUTURE OPEN SPACES (LOAM AND SEED AREAS) WHEREVER POSSIBLE DURING CONSTRUCTION. CONSTRUCTION TRAFFIC SHALL USE THE ROADBEDS OF FUTURE ACCESS DRIVES AND PARKING AREAS.

TOPSOIL REQUIRED FOR THE ESTABLISHMENT OF VEGETATION SHALL BE STOCKPILED IN AMOUNTS NECESSARY TO COMPLETE FINISHED GRADING OF ALL EXPOSED AREAS. CONSTRUCT SILT FENCE AROUND TOPSOIL STOCKPILE.

ALL FILLS SHALL BE PLACED AND COMPACTED TO REDUCE EROSION, SLIPPAGE, SETTLEMENT, SUBSIDENCE OR OTHER RELATED PROBLEMS.

DISTURBED AREAS SHALL BE SEEDED WITHIN 72 HOURS FOLLOWING FINISHED GRADING.

AT NO TIME SHALL ANY DISTURBED AREA REMAIN UNSTABILIZED FOR LONGER THAN 72 HOURS. ALL AREAS WHERE CONSTRUCTION IS NOT COMPLETE WITHIN THIRTY DAYS OF THE INITIAL DISTURBANCE SHALL BE MACHINE HAY MULCHED AND SEEDED WITH RYE GRASS TO PREVENT EROSION.

INSTALLATION PROCEDURES OF EROSION AND SEDIMENT CONTROLS:

A. VEGETATIVE PRACTICE

FOR PERMANENT MEASURES AND PLANTINGS FROM EARLY SPRING TO SEPTEMBER 30:

LIMESTONE SHALL BE THOROUGHLY INCORPORATED INTO THE LOAM LAYER AT A RATE OF 2 TONS PER ACRE.

FERTILIZER SHALL BE SPREAD ON THE TOP LAYER OF LOAM AND WORKED INTO THE SURFACE. FERTILIZER APPLICATION RATE SHALL BE 500 POUNDS PER ACRE OF 10-20-20 FERTILIZER.

SEED SHALL BE SOWN AT THE RATES SHOWN IN THE TABLE BELOW. IMMEDIATELY BEFORE SEEDING, THE SOIL SHALL BE LIGHTLY RAKED. ONE HALF THE SEED SHALL BE SOWN IN ONE DIRECTION AND THE OTHER HALF AT RIGHT ANGLES TO THE ORIGINAL DIRECTION. IT SHALL BE LIGHTLY RAKED INTO THE SOIL TO A DEPTH NOT OVER 1/4 INCH AND ROLLED WITH A HAND ROLLER WEIGHING NOT OVER 100 POUNDS PER LINEAR FOOT OF WIDTH. HAY MULCH SHALL BE APPLIED IMMEDIATELY AFTER SEEDING AT A RATE OF 1.5 TO 2 TONS PER ACRE, AND SHALL BE HELD IN PLACE USING APPROPRIATE TECHNIQUES FROM THE EROSION AND SEDIMENT CONTROL HANDBOOK.

THE SURFACE SHALL BE WATERED AND KEPT MOIST WITH A FINE SPRAY AS REQUIRED, WITHOUT WASHING AWAY THE SOIL, UNTIL THE GRASS IS WELL ESTABLISHED. ANY AREAS WHICH ARE NOT SATISFACTORILY COVERED SHALL BE RESEDED, AND ALL NOXIOUS WEEDS REMOVED.

A GRASS SEED MIXTURE CONTAINING THE FOLLOWING SEED REQUIREMENTS SHALL BE:

GENERAL COVER	SEEDING RATE
CREeping RED FESCUE	100 LBS/ACRE
KENTUCKY BLUEGRASS	100 LBS/ACRE
SLOPE SEED (USED ON ALL SLOPES GREATER THAN OR EQUAL TO 3:1)	
CREeping RED FESCUE	20 LBS/ACRE
TALL FESCUE	20 LBS/ACRE
BIRDSFOOT TREFLOIL	2 LBS/ACRE

IN NO CASE SHALL THE WEED CONTENT EXCEED ONE PERCENT BY WEIGHT. ALL SEED SHALL COMPLY WITH APPLICABLE STATE AND FEDERAL SEED LAWS.

FOR TEMPORARY PROTECTION OF DISTURBED AREAS: MULCHING AND SEEDING SHALL BE APPLIED AT THE FOLLOWING RATES:

PERENNIAL RYE:	0.7 LBS/1,000 S.F.
MULCH:	1.5 TONS/ACRE

B. MULCHING

IN ORDER TO BE EFFECTIVE, MULCHING MUST BE IN PLACE PRIOR TO MAJOR STORM EVENTS. THERE ARE TWO TYPES OF STANDARDS: APPLY MULCH PRIOR TO ANY STORM EVENT: THIS IS APPLICABLE WHEN WORKING WITHIN 100 FEET OF WETLANDS. IT WILL BE NECESSARY TO CLOSELY MONITOR WEATHER FORECASTS FOR ADEQUATE WARNING TO SIGNIFICANT STORMS. REQUIRED MULCHING WITHIN SPECIFIED TIME PERIOD: THE TIME PERIOD CAN RANGE FROM 14 TO 21 DAYS OF INACTIVITY IN AN AREA, THE LENGTH OF TIME VARYING WITH SITE CONDITIONS. JUDGEMENT SHALL BE USED TO EVALUATE THE INTERACTION OF SITE CONDITIONS AND THE POTENTIAL FOR IMPACT ON ADJACENT AREAS TO CHOOSE AN APPROPRIATE TIME RESTRICTION. WHEN MULCH IS TO BE APPLIED TO PROVIDE PROTECTION OVER WINTER MONTHS, IT SHALL BE AT A RATE OF 6,000 POUNDS OF HAY OR STRAW PER ACRE. A TACKIFIER SHALL BE ADDED TO THE MULCH.

C. WINTER NOTES

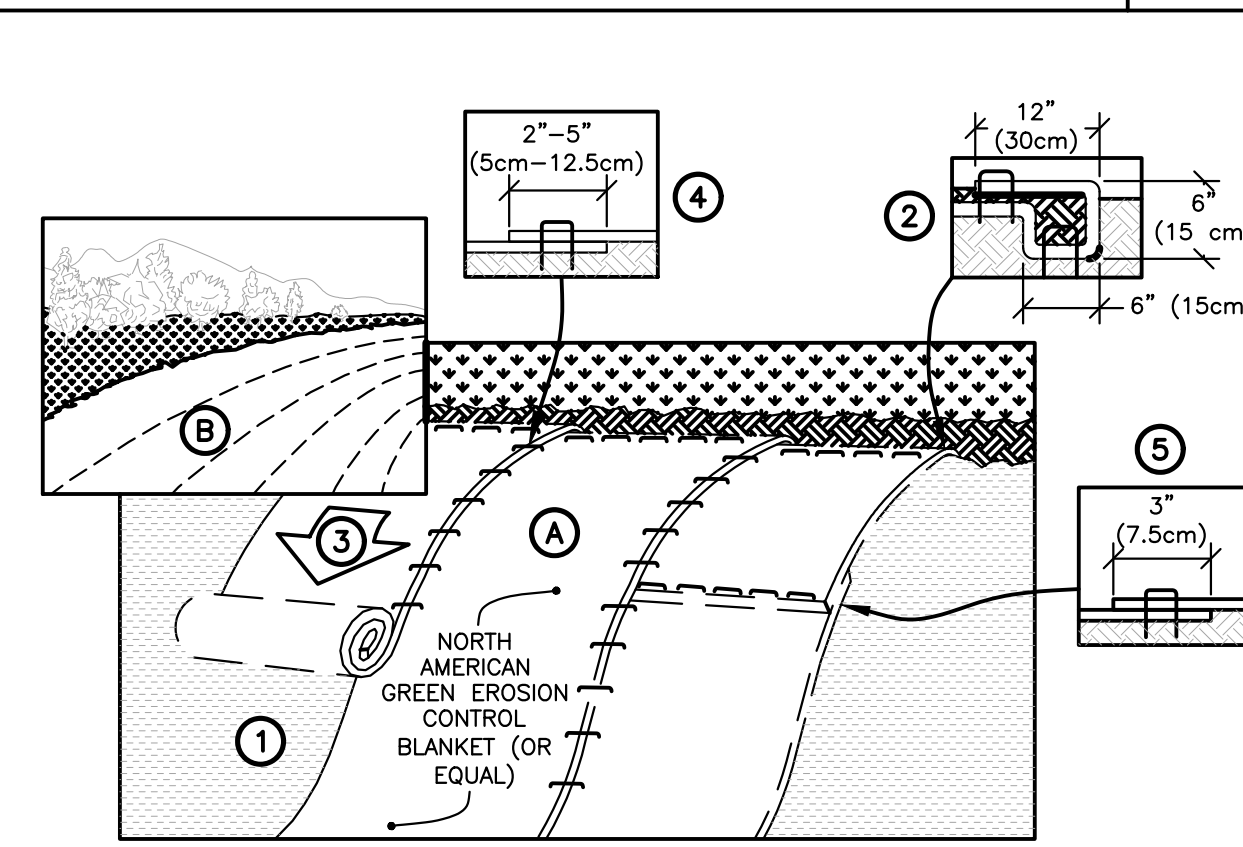
ALL PROPOSED VEGETATED AREAS WHICH DO NOT EXHIBIT A MINIMUM OF 85% VEGETATIVE GROWTH BY OCTOBER 15TH, OR WHICH ARE DISTURBED AFTER OCTOBER 15TH, SHALL BE STABILIZED BY SEEDING AND INSTALLING EROSION CONTROL BLANKETS ON SLOPES GREATER THAN 3:1, AND SEEDING AND PLACING 3 TO 4 TONS OF MULCH PER ACRE, SECURED WITH ANCHORED NETTING, ELSEWHERE. THE INSTALLATION OF EROSION CONTROL BLANKETS OR MULCH AND NETTING SHALL NOT OCCUR OVER ACCUMULATED SNOW OR ON FROZEN GROUND AND SHALL BE COMPLETED IN ADVANCE OF THAW OR SPRING MELT EVENTS.

ALL DITCHES OR SWALES WHICH DO NOT EXHIBIT A MINIMUM OF 85% VEGETATIVE GROWTH BY OCTOBER 15TH, OR WHICH ARE DISTURBED AFTER OCTOBER 15TH, SHALL BE STABILIZED TEMPORARILY WITH STONE OR EROSION CONTROL BLANKETS APPROPRIATE FOR THE DESIGN FLOW CONDITIONS.

AFTER NOVEMBER 15TH, INCOMPLETE ROAD OR PARKING SURFACES, WHERE WORK HAS STOPPED FOR THE WINTER SEASON, SHALL BE PROTECTED WITH A MINIMUM OF 3 INCHES OF CRUSHED GRAVEL PER NHDOT ITEM 304.3.

MAINTENANCE AND PROTECTION:

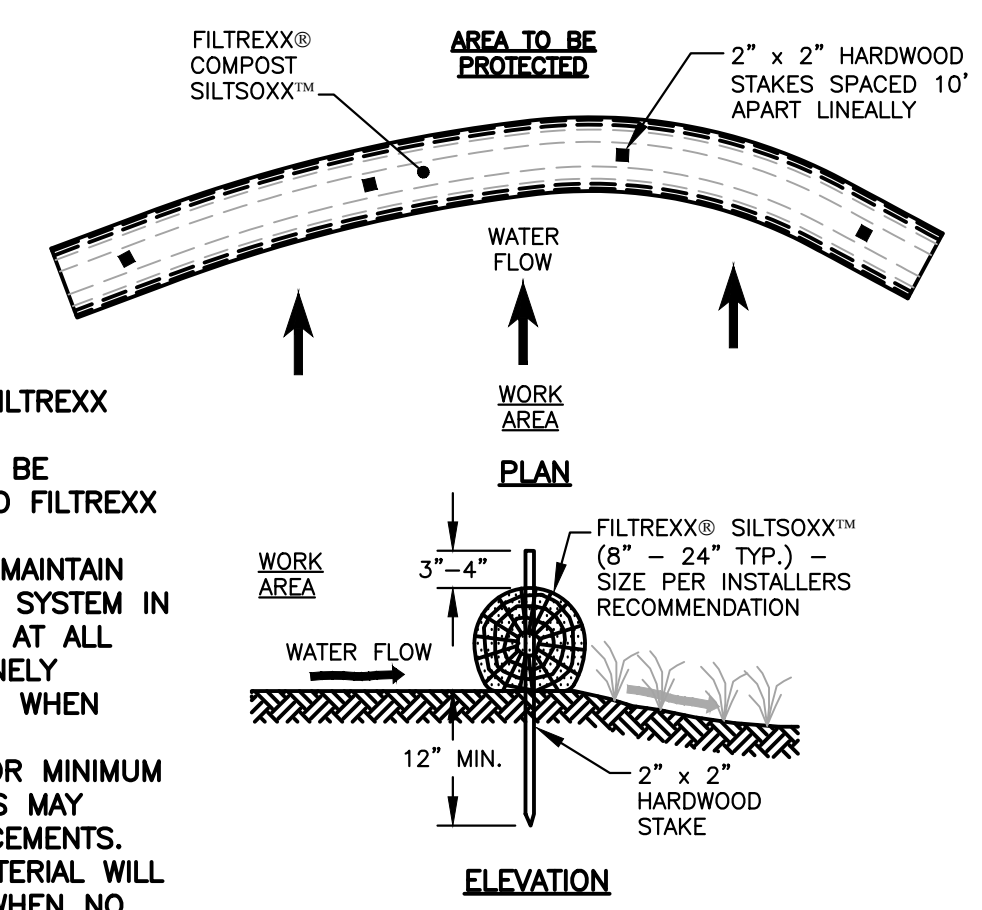
1. THE CONTRACTOR SHALL MAINTAIN ALL LOAM & SEED AREAS UNTIL FINAL ACCEPTANCE AT THE COMPLETION OF THE CONTRACT. MAINTENANCE SHALL INCLUDE WATERING, WEEDING, REMOVAL OF STONES AND OTHER FOREIGN OBJECTS OVER 1/2 INCHES IN DIAMETER WHICH MAY APPEAR AND THE FIRST TWO (2) CUTTINGS OF GRASS NO CLOSER THEN TEN (10) DAYS APART. THE FIRST CUTTING SHALL BE ACCOMPLISHED WHEN THE GRASS IS FROM 2 1/2 TO 3 INCHES HIGH. ALL BARE AND DEAD SPOTS WHICH BECOME APPARENT SHALL BE PROPERLY PREPARED, LIMED AND FERTILIZED, AND RESEEDED BY THE CONTRACTOR AT HIS EXPENSE AS MANY TIMES AS NECESSARY TO SECURE GOOD GROWTH. THE ENTIRE AREA SHALL BE MAINTAINED, WATERED AND CUT UNTIL ACCEPTANCE OF THE LAWN BY THE OWNER'S REPRESENTATIVE.
2. THE CONTRACTOR SHALL TAKE WHATEVER MEASURES ARE NECESSARY TO PROTECT THE GRASS WHILE IT IS DEVELOPING.
3. TO BE ACCEPTABLE, SEEDED AREAS SHALL CONSIST OF A UNIFORM STAND OF AT LEAST 90 PERCENT ESTABLISHED PERMANENT GRASS SPECIES, WITH UNIFORM COUNT OF AT LEAST 100 PLANTS PER SQUARE FOOT.
4. SEEDED AREAS WILL BE FERTILIZED AND RESEEDED AS NECESSARY TO INSURE VEGETATIVE ESTABLISHMENT.
5. THE SWALES WILL BE CHECKED WEEKLY AND REPAIRED WHEN NECESSARY UNTIL ADEQUATE VEGETATION IS ESTABLISHED.
6. THE SILT FENCE BARRIER SHALL BE CHECKED AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL.
7. SILT FENCING SHALL BE REMOVED ONCE VEGETATION IS ESTABLISHED, AND DISTURBED AREAS RESULTING FROM SILT FENCE REMOVAL SHALL BE PERMANENTLY SEEDED.



- NOTES:**
1. PREPARE SOIL BEFORE INSTALLING ROLLED EROSION CONTROL PRODUCTS (RECP'S), INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED. NOTE: WHEN USING CELL-0-SEED DO NOT SEED PREPARED AREA. CELL-0-SEED MUST BE INSTALLED WITH PAPER SIDE DOWN.
 2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE RECP'S IN A 6" DEEP X 6" WIDE TRENCH WITH APPROXIMATELY 12" OF RECP'S EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE RECP'S WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" PORTION OF RECP'S BACK OVER SEED AND COMPACTED SOIL. SECURE RECP'S OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" APART ACROSS THE WIDTH OF THE RECP'S.
 3. ROLL THE RECP'S (A.) DOWN OR (B.) HORIZONTALLY ACROSS THE SLOPE. RECP'S WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL RECP'S MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE. WHEN USING THE DOT SYSTEM™, STAPLES/STAKES SHOULD BE PLACED THROUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN.
 4. THE EDGES OF PARALLEL RECP'S MUST BE STAPLED WITH APPROXIMATELY 2"-5" OVERLAP DEPENDING ON RECP'S TYPE.
 5. CONSECUTIVE RECP'S SPICED DOWN THE SLOPE MUST BE PLACED END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 3" OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" APART ACROSS ENTIRE RECP'S WIDTH.
- NOTE: IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTH GREATER THAN 6" MAY BE NECESSARY TO PROPERLY SECURE THE RECP'S.

SLOPE STABILIZATION BLANKET

SCALE: N.T.S

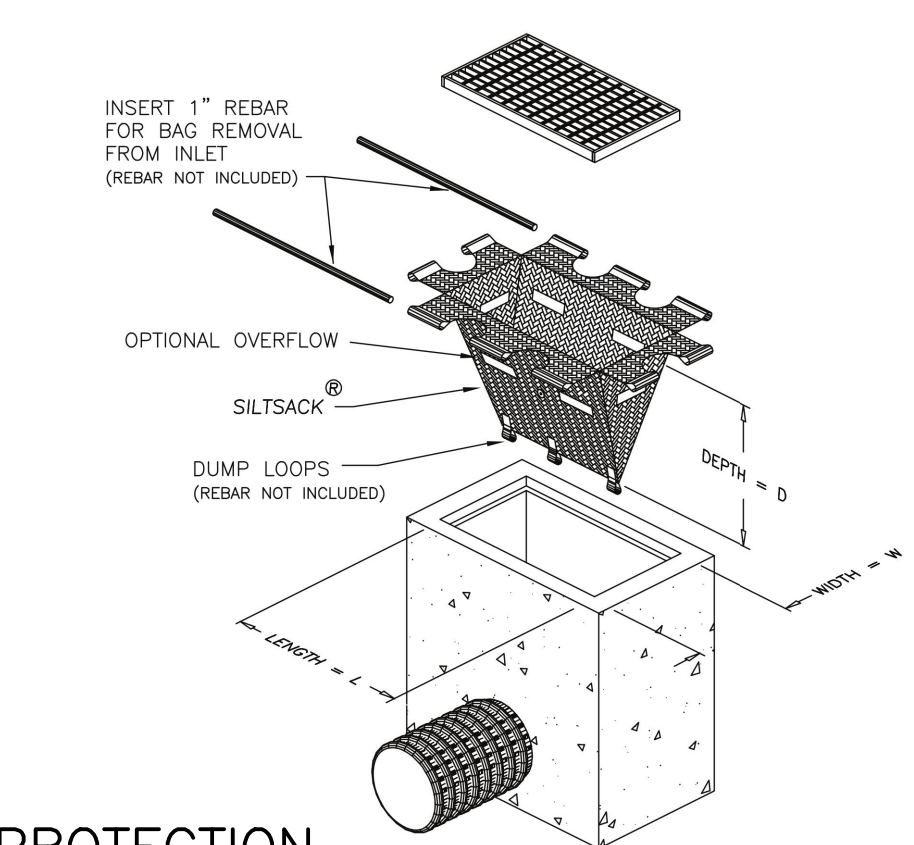


SEDIMENTATION FENCE / LOG

SCALE: N.T.S

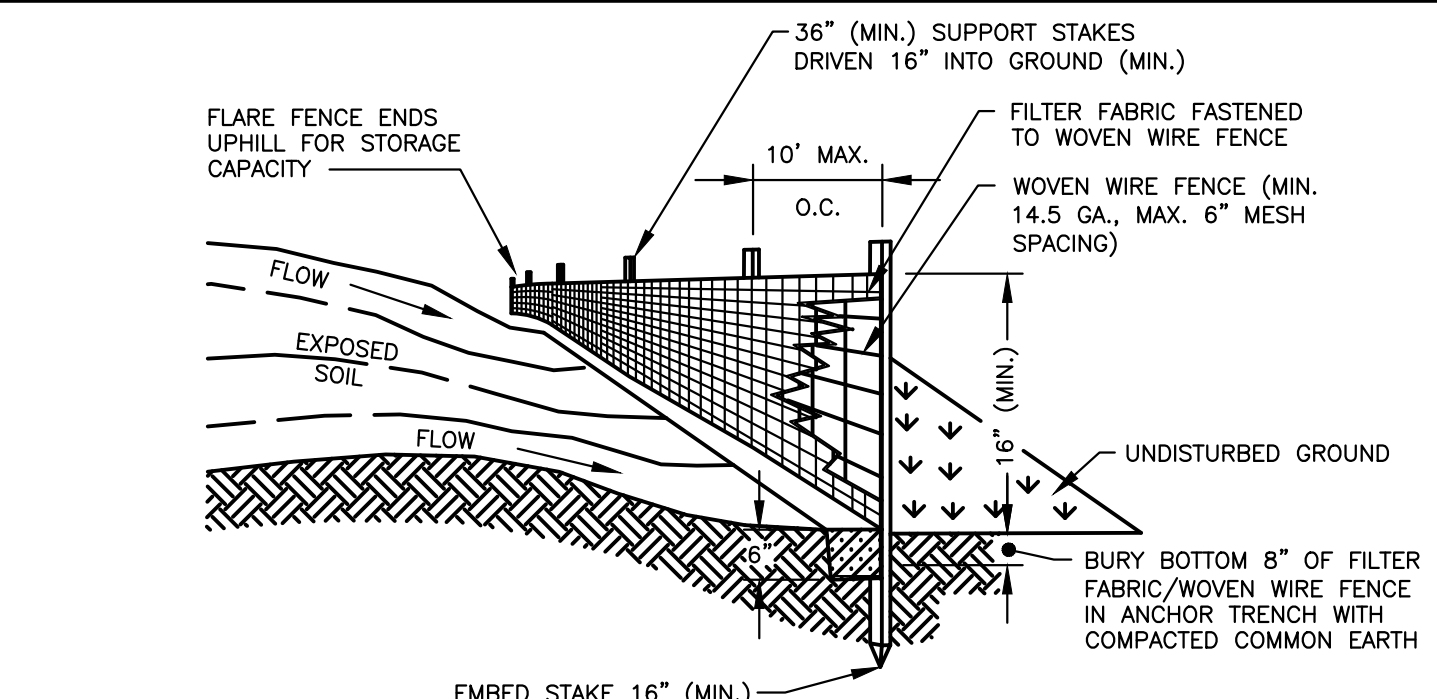
- NOTES:**
1. ALL MATERIAL TO MEET FILTREXX SPECIFICATIONS.
 2. FILTREXX SYSTEM SHALL BE INSTALLED BY A CERTIFIED FILTREXX INSTALLER.
 3. THE CONTRACTOR SHALL MAINTAIN THE COMPOST FILTRATION SYSTEM IN A FUNCTIONAL CONDITION AT ALL TIMES. IT WILL BE ROUTINELY INSPECTED AND REPAIRED WHEN REQUIRED.
 4. SILT-SOXX DEPICTED IS FOR MINIMUM SLOPES, GREATER SLOPES MAY REQUIRE ADDITIONAL PLACEMENTS.
 5. THE COMPOST FILTER MATERIAL WILL BE DISPERSED ON SITE WHEN NO LONGER REQUIRED, AS DETERMINED BY THE ENGINEER.

- NOTES:**
1. SILT SACK SHALL BE INSTALLED AT ALL EXISTING AND PROPOSED CATCH BASINS AND INLETS WITHIN THE LIMITS OF CONSTRUCTION SHOWN ON THE PLANS.
 2. INSTALL AND MAINTAIN PER MANUFACTURERS REQUIREMENTS.



DRAINAGE INLET PROTECTION

SCALE: N.T.S

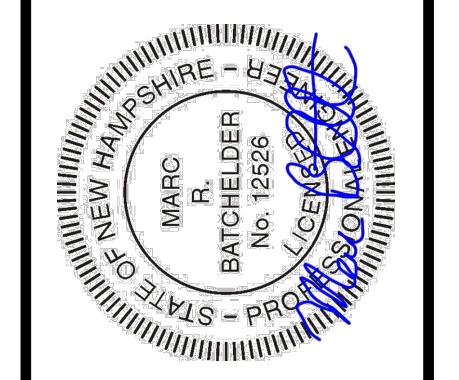


- NOTES:**
1. THE GEOTEXTILE FABRIC SHALL MEET THE DESIGN CRITERIA FOR SILT FENCES, AS IN THE NEW HAMPSHIRE STORMWATER MANAGEMENT AND EROSION CONTROL HANDBOOK BEST MANAGEMENT PRACTICE FOR SILT FENCE.
 2. THE FABRIC SHALL BE EMBEDDED A MINIMUM OF 6 INCHES INTO THE GROUND AND THE SOIL COMPACTED OVER THE EMBEDDED FABRIC.
 3. WOVEN WIRE FENCE SHALL BE FASTENED SECURELY TO THE FENCE POSTS WITH WIRE TIES OR STAPLES.
 4. FILTER CLOTH SHALL BE FASTENED SECURELY TO THE WOVEN WIRE FENCE WITH TIES SPACED EVERY 24 INCHES AT THE TOP, MID-SECTION, AND BOTTOM.
 5. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER, THEY SHALL BE OVERLAPPED BY 12 INCHES, FOLDED, AND STAPLED.
 6. FENCE POSTS SHALL BE A MINIMUM OF 36 INCHES LONG AND DRIVEN A MINIMUM OF 16 INCHES INTO THE GROUND. WOOD POSTS SHALL BE OF SOUND QUALITY HARDWOOD AND SHALL HAVE A MINIMUM CROSS SECTIONAL AREA OF 3.0 SQUARE INCHES.
 7. MAINTENANCE SHALL BE PERFORMED AS NEEDED TO PREVENT BULGES IN THE SILT FENCE DUE TO DEPOSITION OF SEDIMENT.
 8. SILT FENCES SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REPAIRS THAT ARE REQUIRED SHALL BE MADE IMMEDIATELY.
 9. IF THE FABRIC ON A SILT FENCE SHOULD DECOMPOSE OR BECOME INEFFECTIVE DURING THE EXPECTED LIFE OF THE FENCE, THE FABRIC SHALL BE REPLACED PROMPTLY.
 10. SEDIMENT DEPOSITS SHOULD BE INSPECTED AFTER EVERY STORM EVENT. THE DEPOSITS SHOULD BE REMOVED WHEN THEY REACH APPROXIMATELY ONE-HALF THE HEIGHT OF THE BARRIER.
 11. SEDIMENT DEPOSITS THAT ARE REMOVED OR LEFT IN PLACE AFTER THE FABRIC HAS BEEN REMOVED SHALL BE GRADED TO CONFORM WITH THE EXISTING TOPOGRAPHY, AND VEGETATED.

SILT FENCE

SCALE: N.T.S

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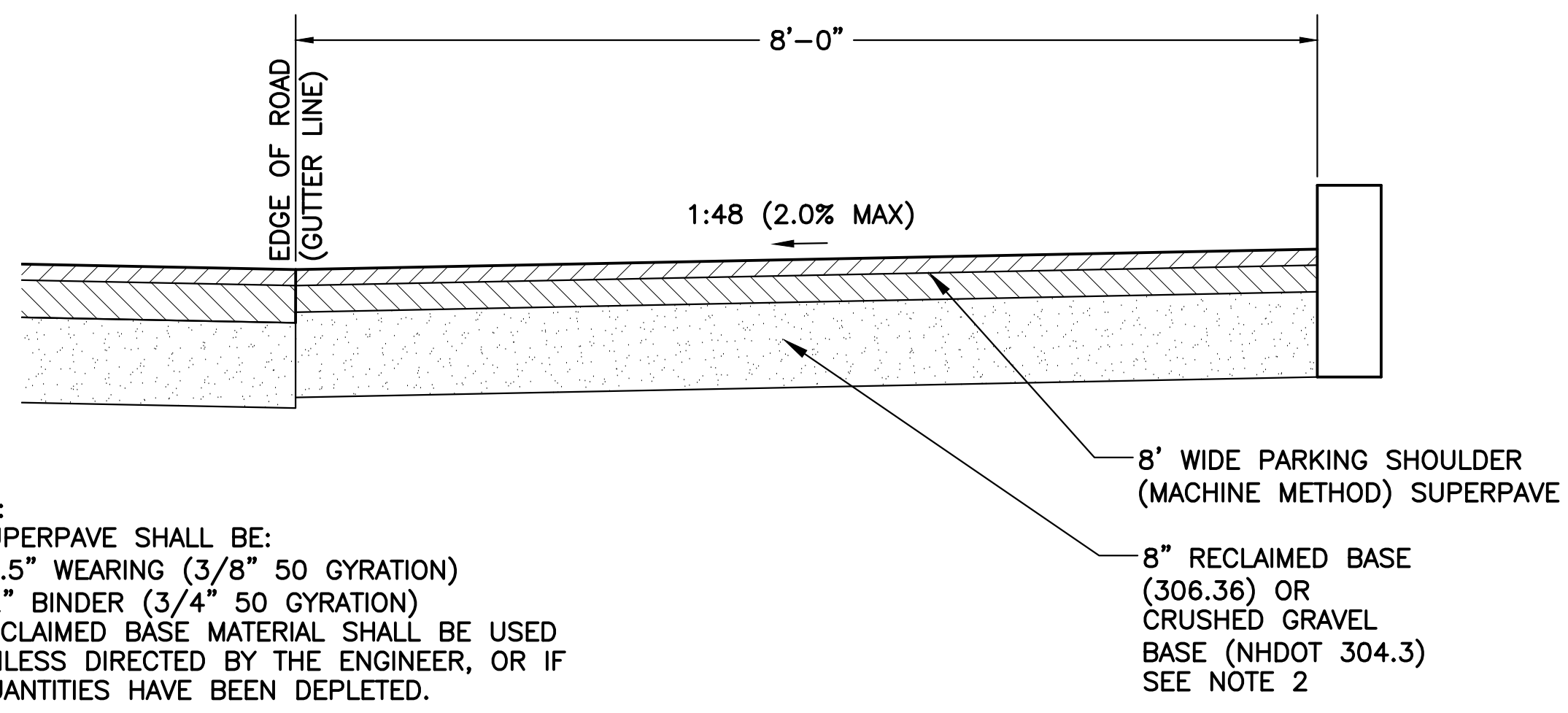


DATE: FEBRUARY 2, 2016
SCALE: VARIES
PROJECT NO.: Cop-002
MARC R. BATCHELDER, PE
ENGINEER OF RECORD

FOR: Outer Islington St
Sidewalk Design
Portsmouth, NH
03801

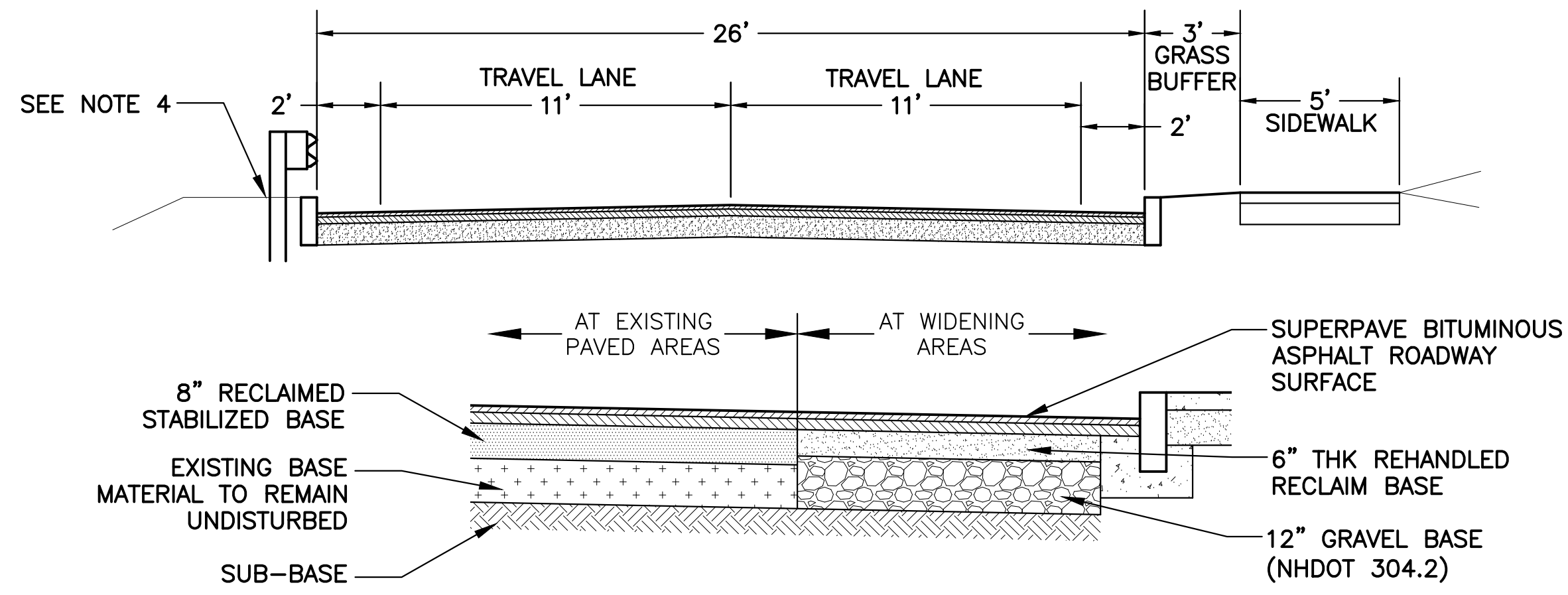
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PORTSMOUTH, NH
(603) 498-8449
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TITLE: EROSION CONTROL NOTES AND DETAILS



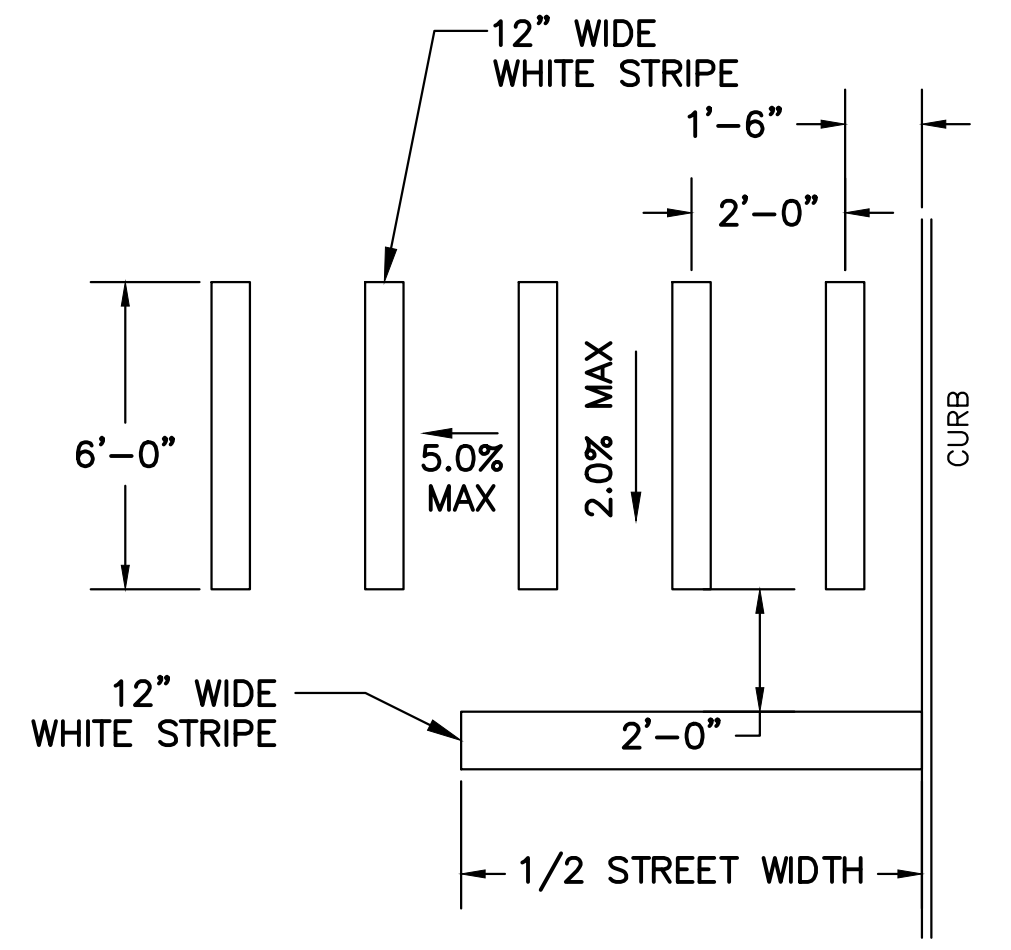
- NOTES:
- SUPERPAVE SHALL BE:
 - 1.5" WEARING (3/8" 50 GYRATION)
 - 2" BINDER (3/4" 50 GYRATION)
 - RECLAIMED BASE MATERIAL SHALL BE USED UNLESS DIRECTED BY THE ENGINEER, OR IF QUANTITIES HAVE BEEN DEPLETED.

PARKING SHOULDER DETAIL
SCALE: N.T.S.



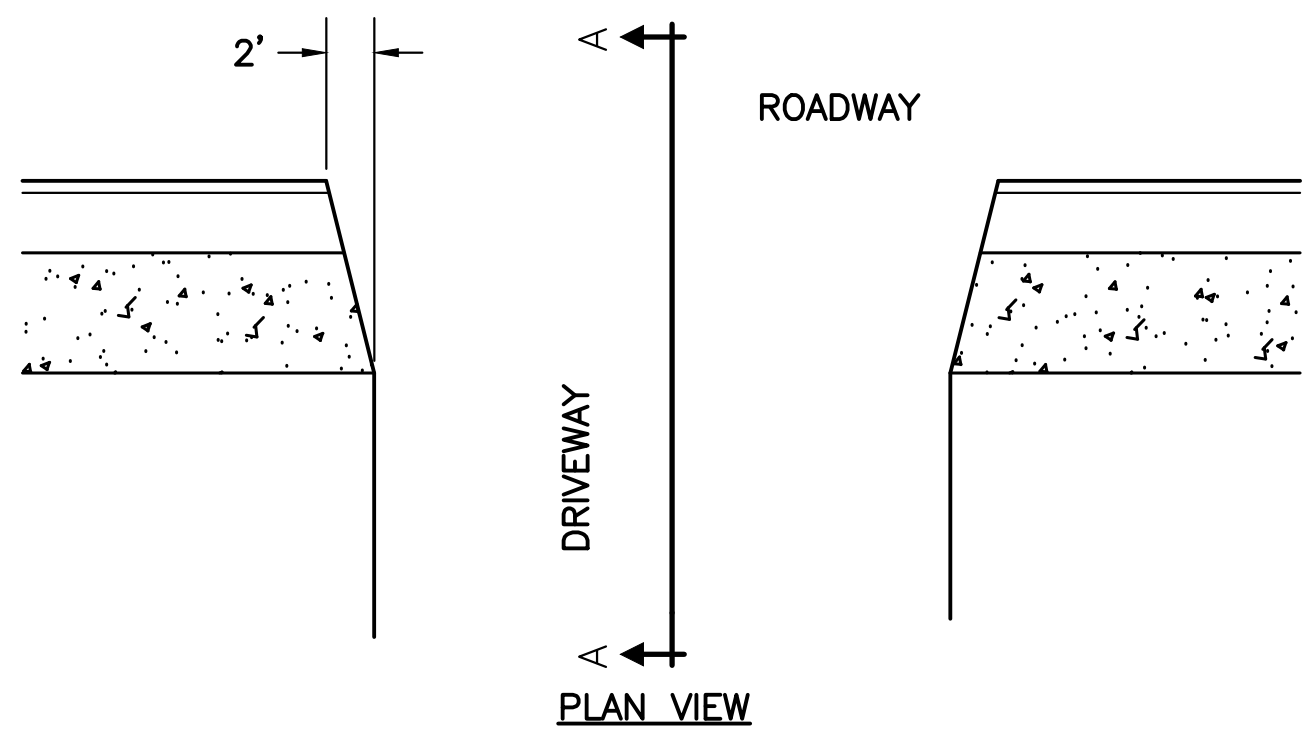
- NOTES:
- RECLAIMED STABILIZED BASE SHALL COMPLY WITH NHDOT ITEM 306.
 - RECLAIM MATERIAL TO BE TESTED TO DETERMINE IF ADDITIONAL 1.5" STONE WILL BE ADDED. IN THE EVENT ADDITIONAL CRUSHED STONE IS REQUIRED, CONTRACTOR SHALL SPREAD STONE TO THE REQUIRED THICKNESS AND RECLAIM MATERIAL A SECOND TIME TO MIX ADDED STONE TO A DEPTH OF 8".
 - AT WIDENED AREAS, CRUSHED GRAVEL (NHDOT 304.3) SHALL BE USED IF REHANDLED RECLAIM QUANTITY IS NOT AVAILABLE.
 - GUARDRAIL ON CURB LINE THAT DOES NOT HAVE CURBING SHALL HAVE GEOTEXTILE FABRIC AND 2' WIDE BY 8" DEEP STONE FILL CLASS C (NHDOT 585.3). EXCLUDES GUARDRAIL BEHIND SIDEWALKS.
- PAVEMENT THICKNESS:
 ISLINGTON ST. PAVEMENT:
 1.5" WEARING (3/8" 50 GYRATION)
 3.5" BINDER (3/4" 50 GYRATION)
 VINE ST. PAVEMENT:
 1.5" WEARING (3/8" 50 GYRATION)
 2.5" BINDER (3/4" 50 GYRATION)

TYPICAL ROADWAY SECTION
SCALE: N.T.S.



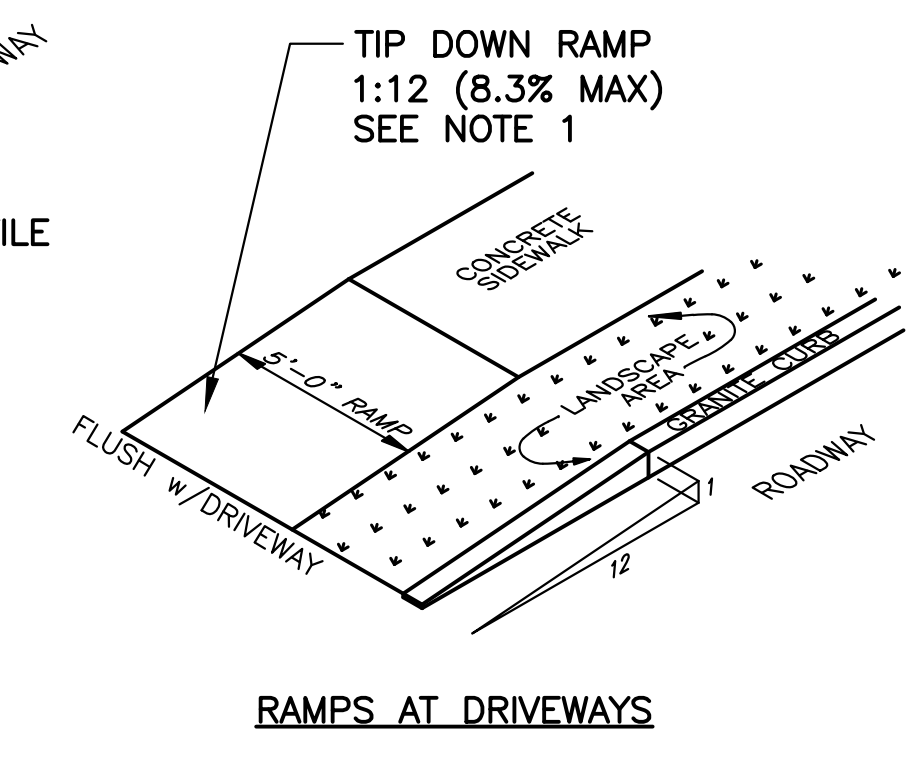
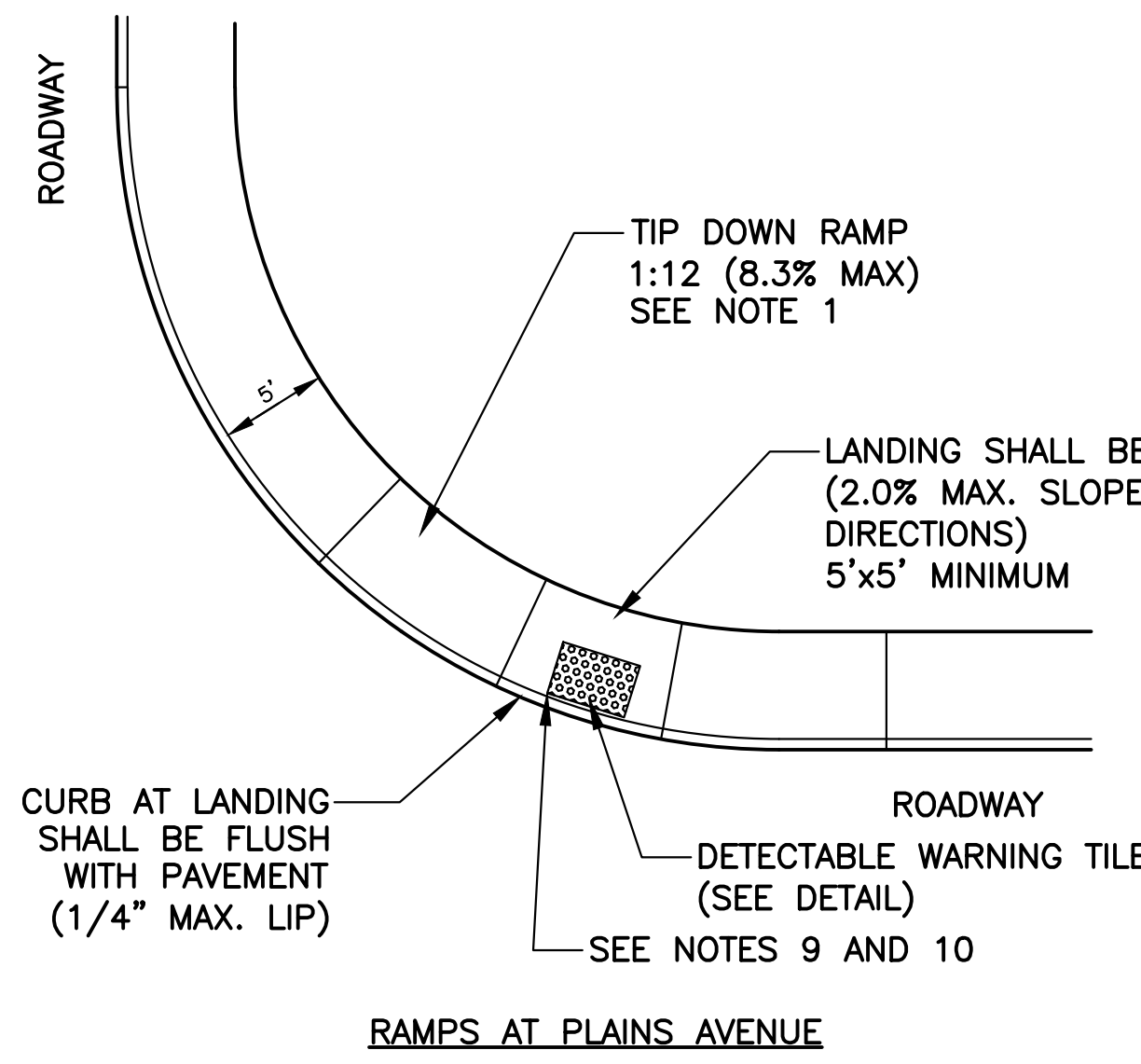
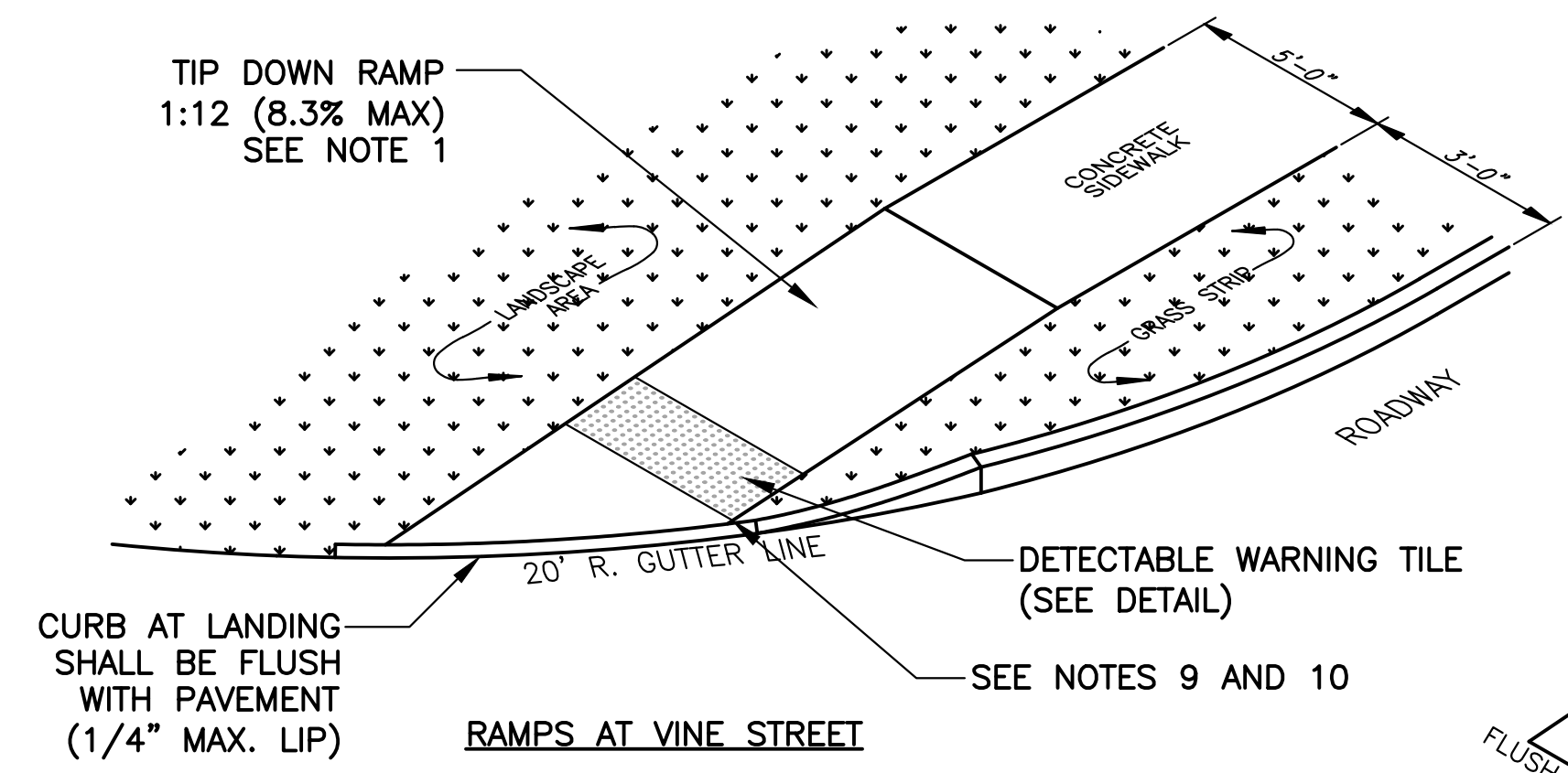
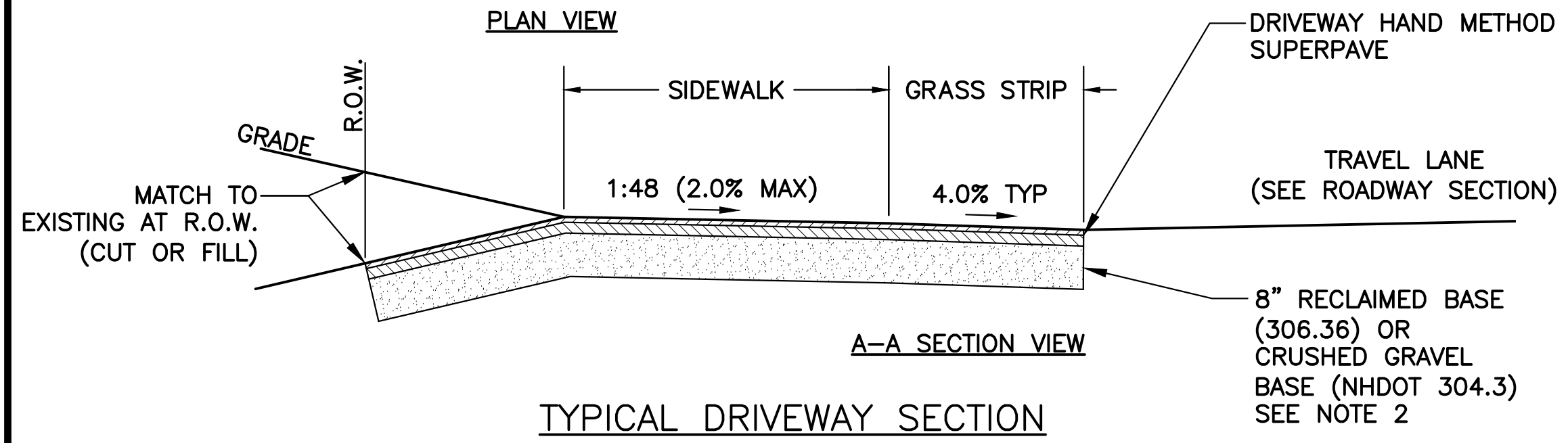
- NOTES:
- STRIPING SHALL BE THERMO PLASTIC RETROREFLECTIVE PAVEMENT MARKING PER ASTM D 4505.

STOP BAR AND CROSSWALK
SCALE: N.T.S.



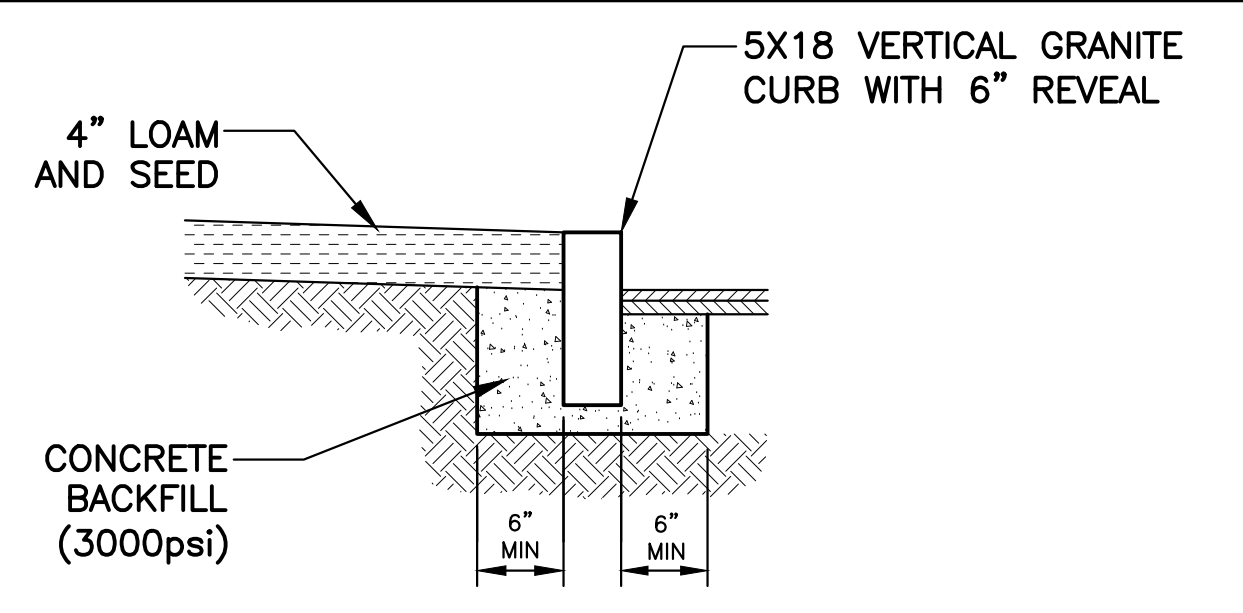
- NOTES:
- DRIVEWAY PAVEMENT SHALL BE:
 - 1-1/4" WEARING (3/8" 50 GYRATION)
 - 1-3/4" BINDER (3/4" 50 GYRATION)
 - RECLAIMED BASE MATERIAL SHALL BE USED UNLESS DIRECTED BY THE ENGINEER, OR IF QUANTITIES HAVE BEEN DEPLETED.

TYPICAL DRIVEWAY SECTION
SCALE: N.T.S.



- NOTES:
- TIP DOWN RAMPS SHALL HAVE A MAXIMUM SLOPE OF 8.3% FOR A DISTANCE OF 6'. IF RAMP IS GREATER THAN 6', A MAXIMUM SLOPE OF 5.0% ALLOWED.
 - MAXIMUM ALLOWABLE CROSS SLOPE IS 2.0% FOR SIDEWALK AND CURB.
 - THERE SHALL BE NO CHANGE IN ELEVATION (LIP) OR GAPS IN THE SIDEWALK RAMPS GREATER THAN 1/4".
 - AREAS OF CHANGE IN DIRECTION SHALL HAVE A MAXIMUM SLOPE OF 2.0% IN ALL DIRECTIONS.
 - DIAGONAL CURB RAMPS SHALL HAVE A FLAT (2.0% MAX.) LANDING AT THE TOP AND BOTTOM.
 - ON RAMPS PERPENDICULAR WITH CURB LINE, PATTERN SHALL BE IN LINE WITH DIRECTION OF TRAVEL. RAMPS ON A RADIUS, PATTERN SHALL BE IN LINE WITH DIRECTION OF TRAVEL TO THE EXTENT POSSIBLE.
 - WARNING TILE SHALL BE PLACED SO THAT THE EDGE CLOSEST TO THE CURB IS BETWEEN 6"-8" FROM CURB LINE.
 - WARNING TILE SHALL SPAN THE FULL WIDTH OF THE RAMP AND A MINIMUM OF 24" DEEP.
 - TRUNCATED DOME TILE SHALL BE CAST IRON, NEENAH FOUNDRY OR APPROVED EQUAL.

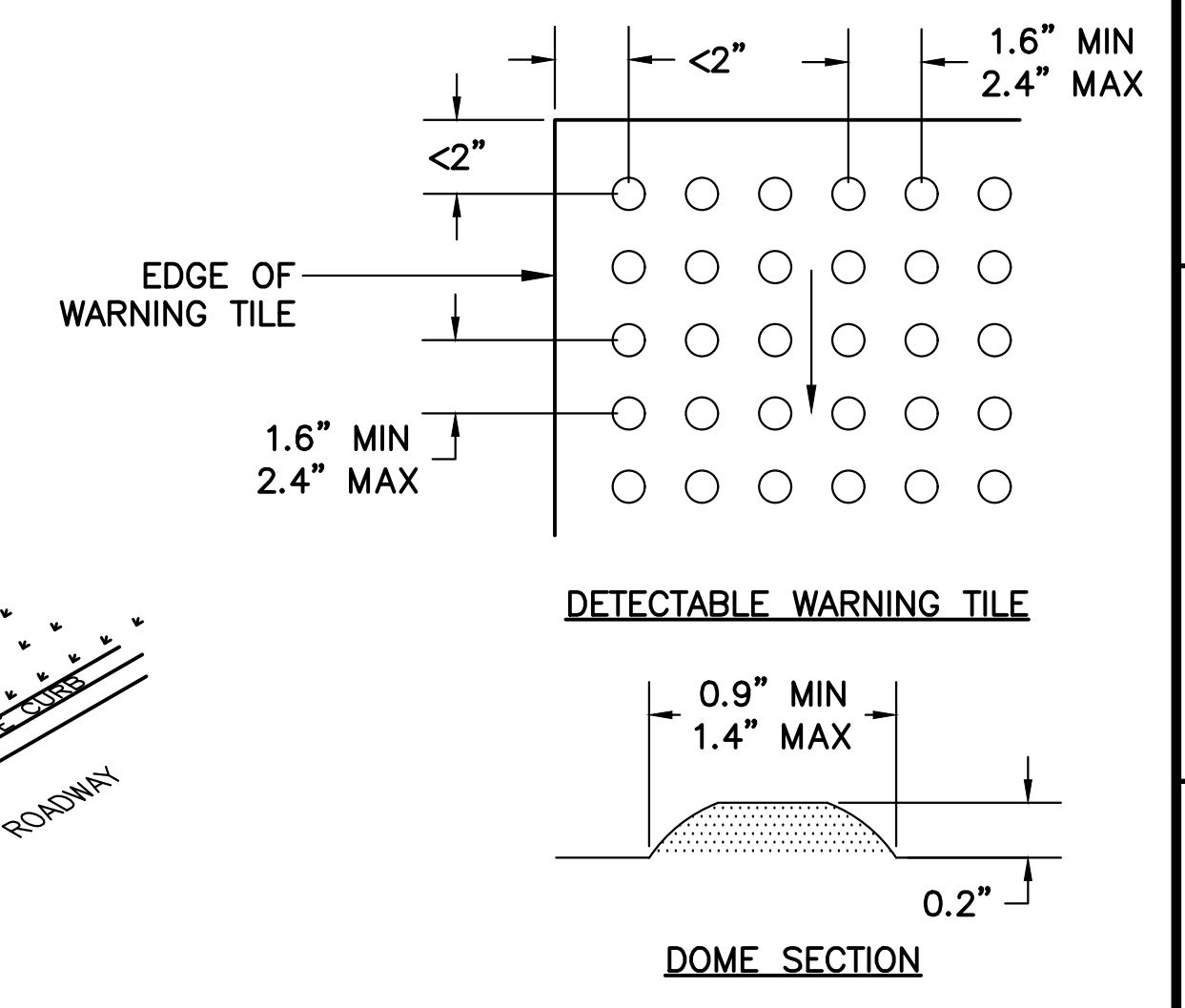
SIDEWALK RAMPS
SCALE: N.T.S.



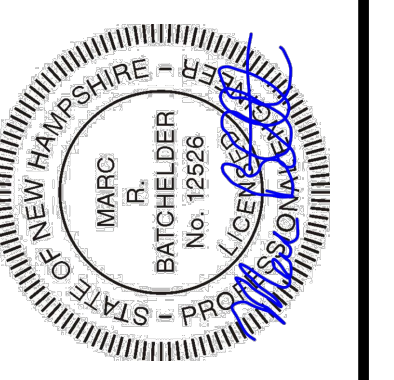
- NOTES:
- CURB TO BE SET TO LINE AND GRADE SPECIFIED.
 - ALL RADII 20 FEET AND SMALLER SHALL USE CURVED SECTIONS.
 - CURB AT FLUSH SECTION OF SIDEWALK SHALL BE SET TO 1:48 (2.0% MAX.) SLOPE. CONTRACTOR TO VERIFY WITH SMART LEVEL.
 - VERTICAL GRANITE JOINTS SHALL BE MORTARED.
 - SEE CHART FOR MAX / MIN STONE LENGTHS.

RADIUS	MAX. LENGTH
<20'	USE CURVED CURB
21'-25'	3'
26'-30'	4'
31'-35'	5'
36'-40'	6'
41'-50'	7'
51'-56'	8'
56'-60'	9'
OVER 60'	10'

VERTICAL GRANITE CURB
SCALE: N.T.S.



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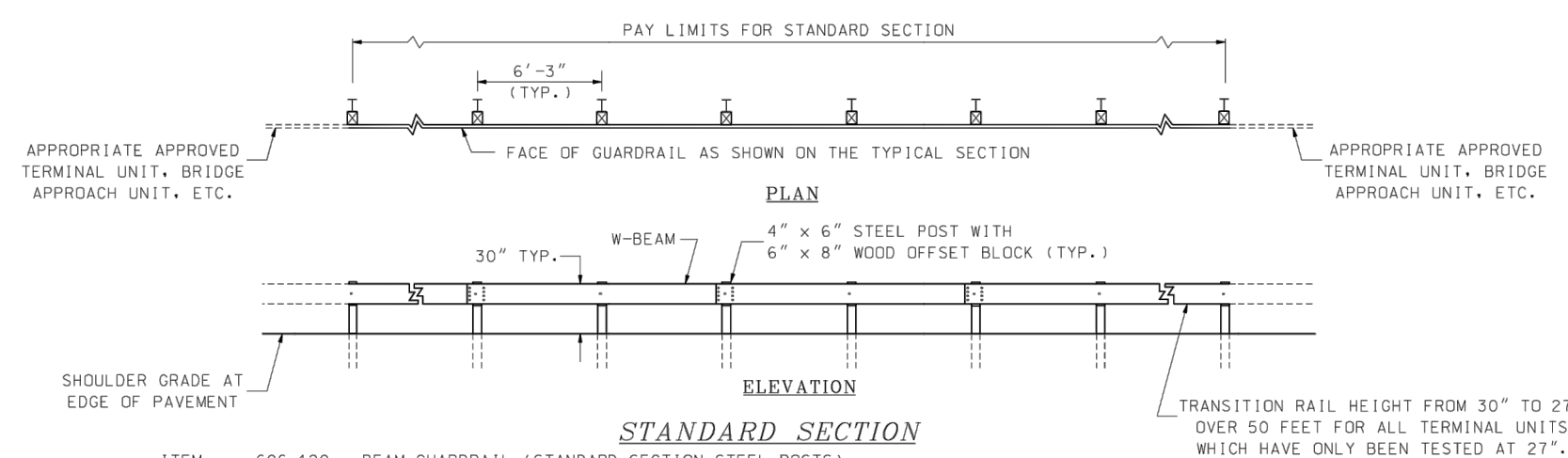
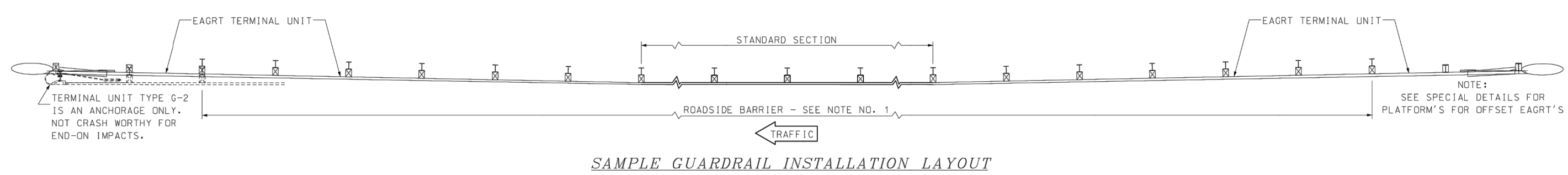
DATE: FEBRUARY 2, 2016
 SCALE: VARIES
 PROJECT NO.: Cop-002
 MARC R. BATCHELDER, PE
 ENGINEER OF RECORD

FOR: Outer Islington St
 Sidewalk Design
 Portsmouth, NH
 03801

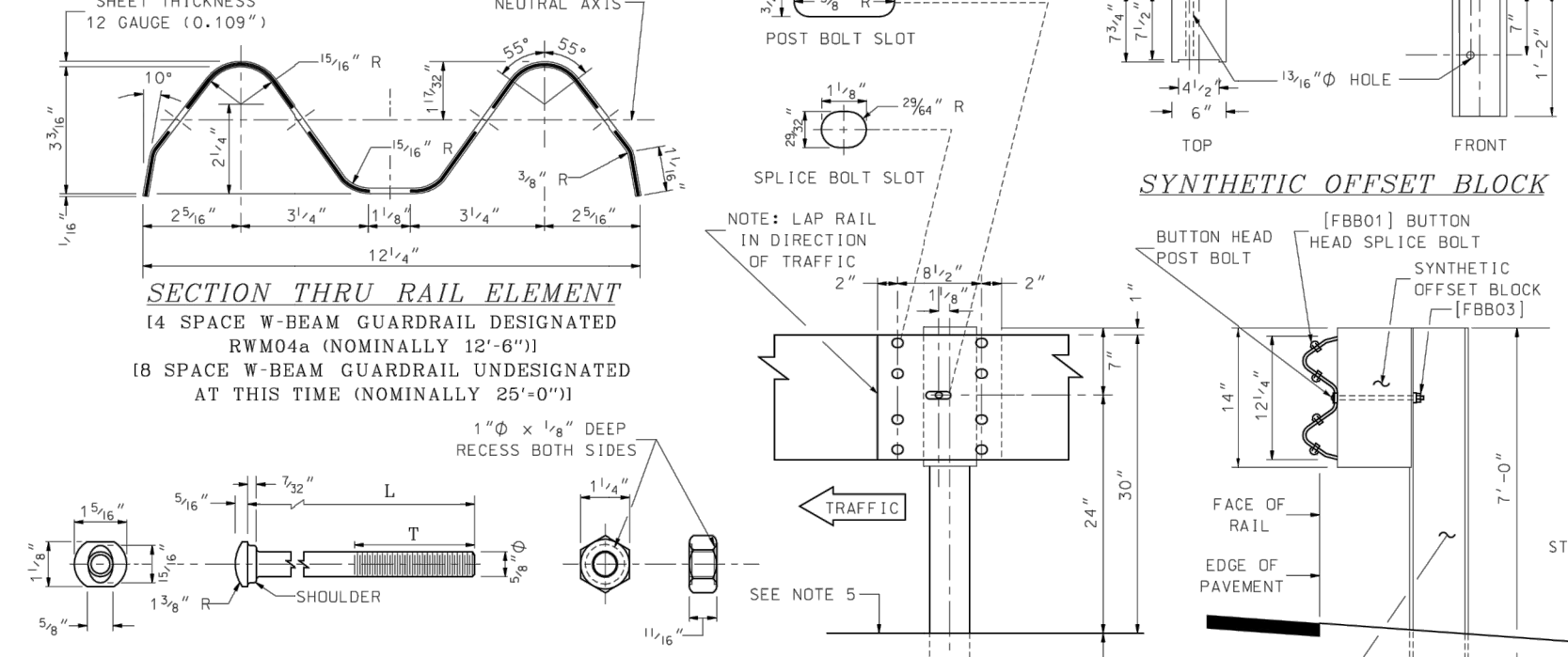
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DETAILS

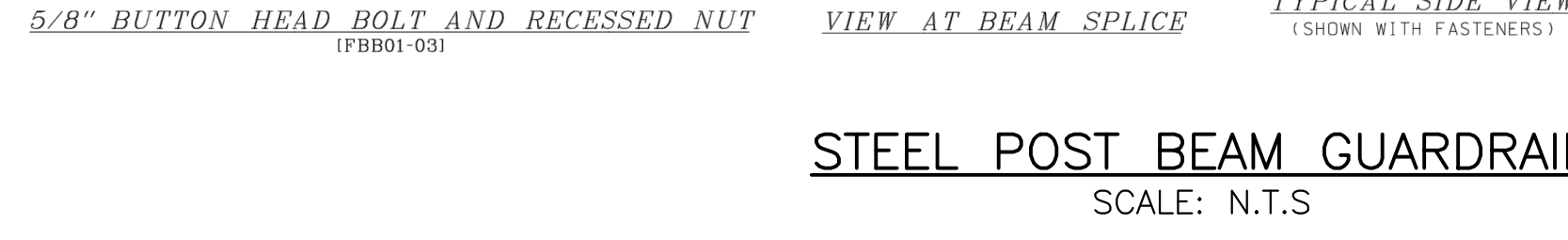
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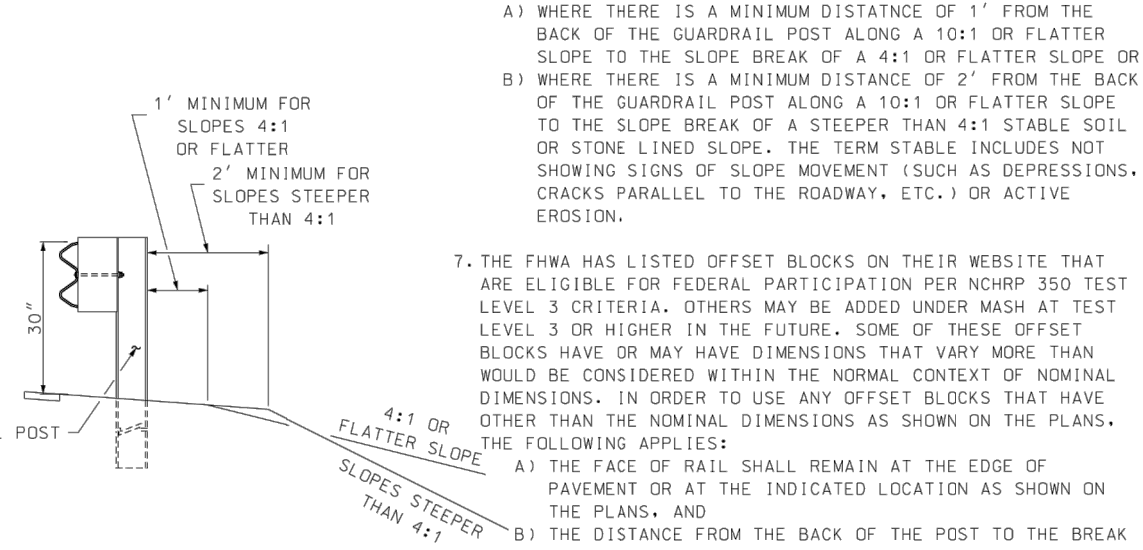
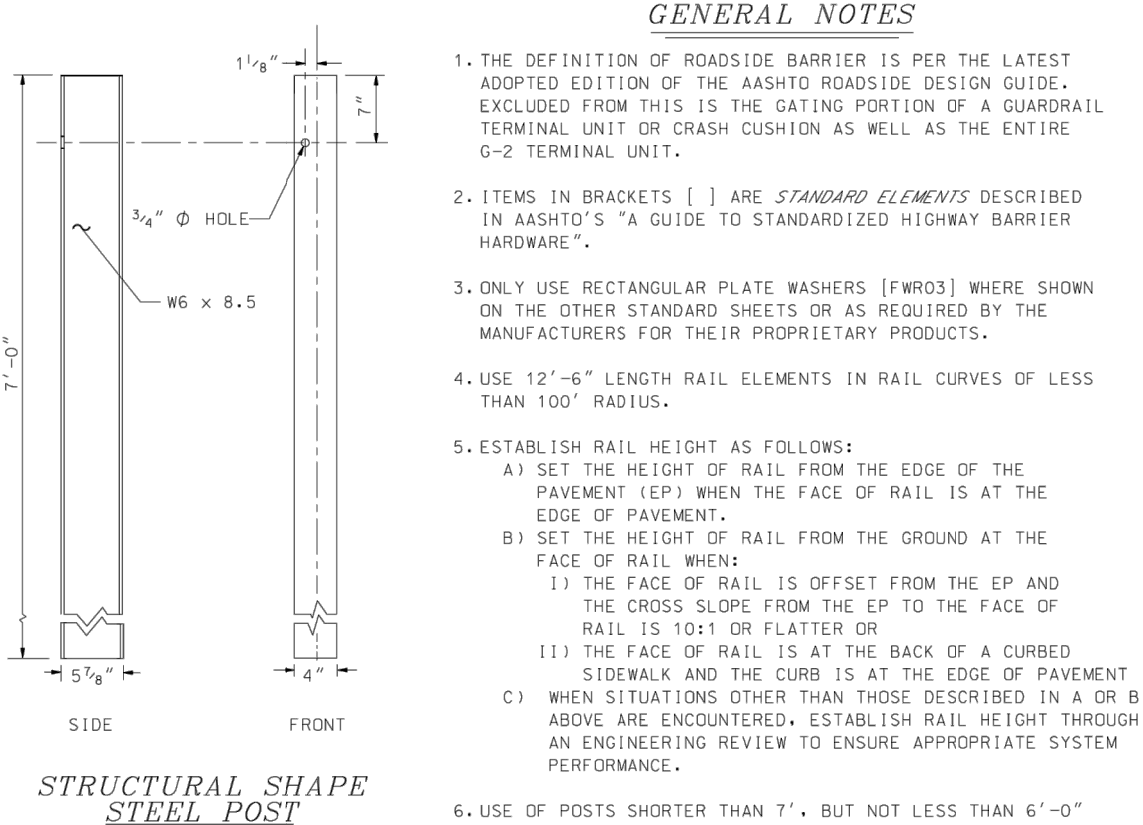
ITEM 606-120 - BEAM GUARDRAIL (STANDARD SECTION-STEEL POSTS)
 LINEAR FOOT
 USE: STRONG STEEL POST W-BEAM WITH SPLICE ON POST IS APPROPRIATE FOR REPAIRS OF EXISTING STRONG POST W-BEAM SPLICE ON POST GUARDRAIL RUNS OF LIMITED LENGTH OR SPECIFIC LOCATIONS WHERE USE OF 31" MID-SPLICE STEEL POST W-BEAM GUARDRAIL WOULD NOT BE PRACTICAL. OTHERWISE, 31" MID-SPLICE STEEL POST W-BEAM GUARDRAIL IS TO BE USED



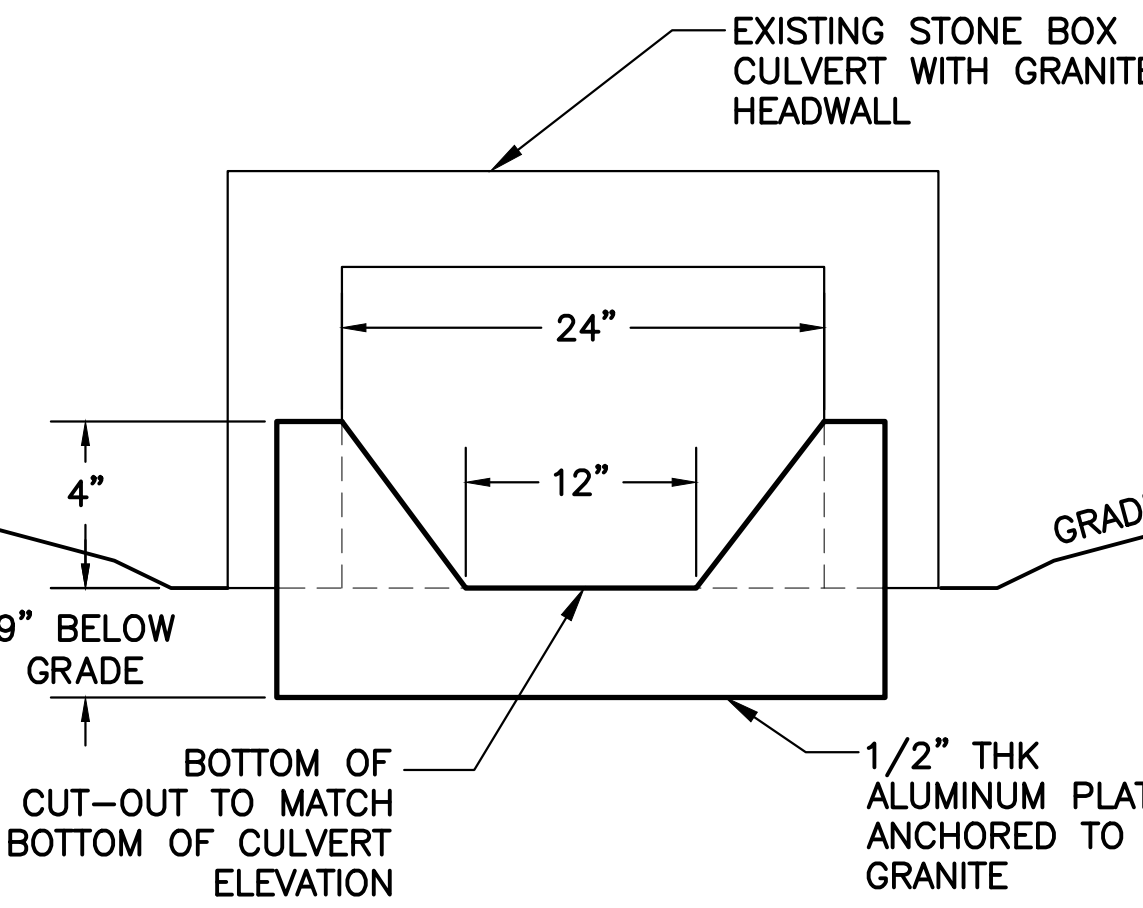
DESIGNATOR	L	T	INTENDED USE
FBB01	1 1/4"	FULL LENGTH THREAD	RAIL SPLICE BOLTS
FBB02	2"	1 3/4" MIN. THREAD LENGTH	POST BOLT (STEEL POSTS)
FBB03	9 1/2"	4" MIN. THREAD LENGTH	POST BOLT



STEEL POST BEAM GUARDRAIL
 SCALE: N.T.S.

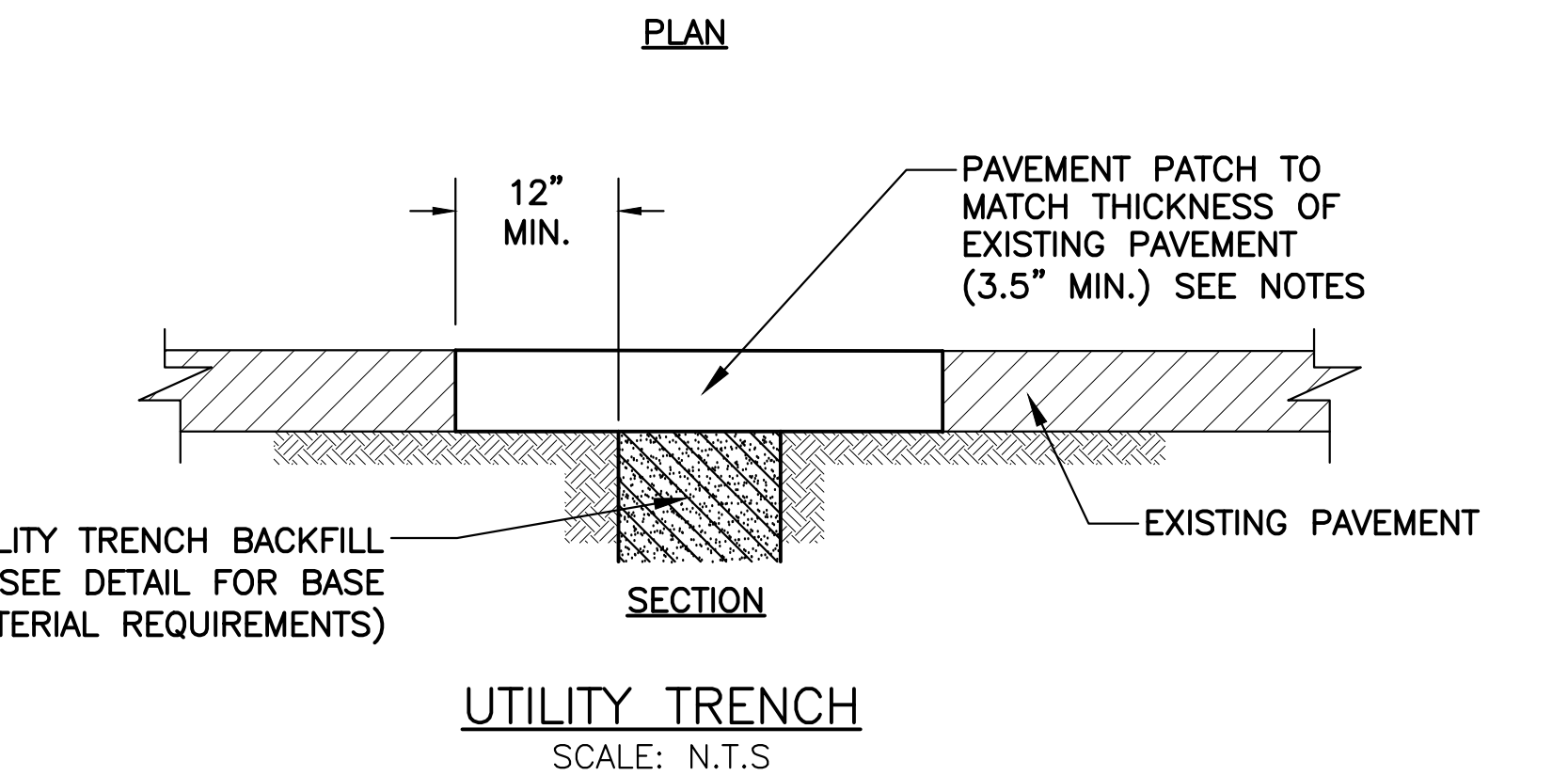
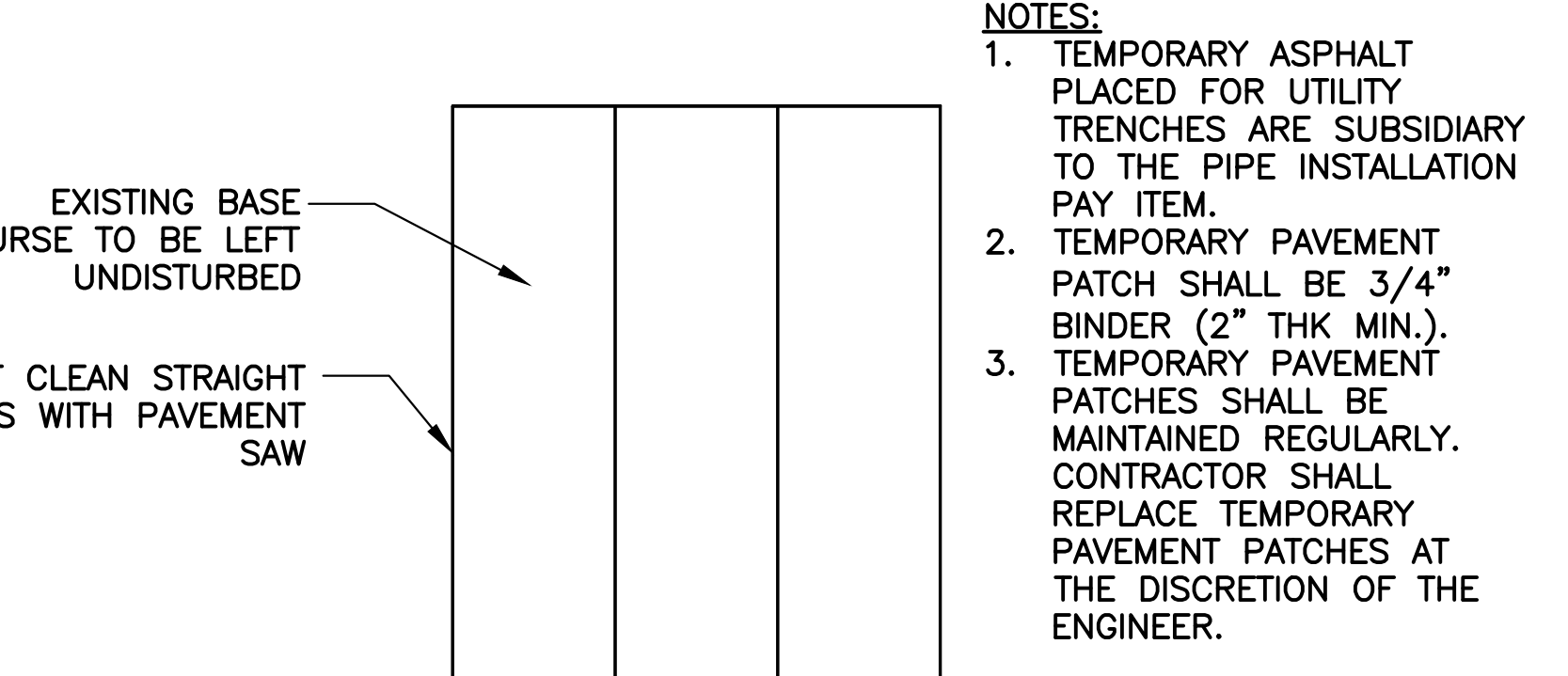


CLARIFICATION
 DETAIL FOR
 GENERAL NOTE 6

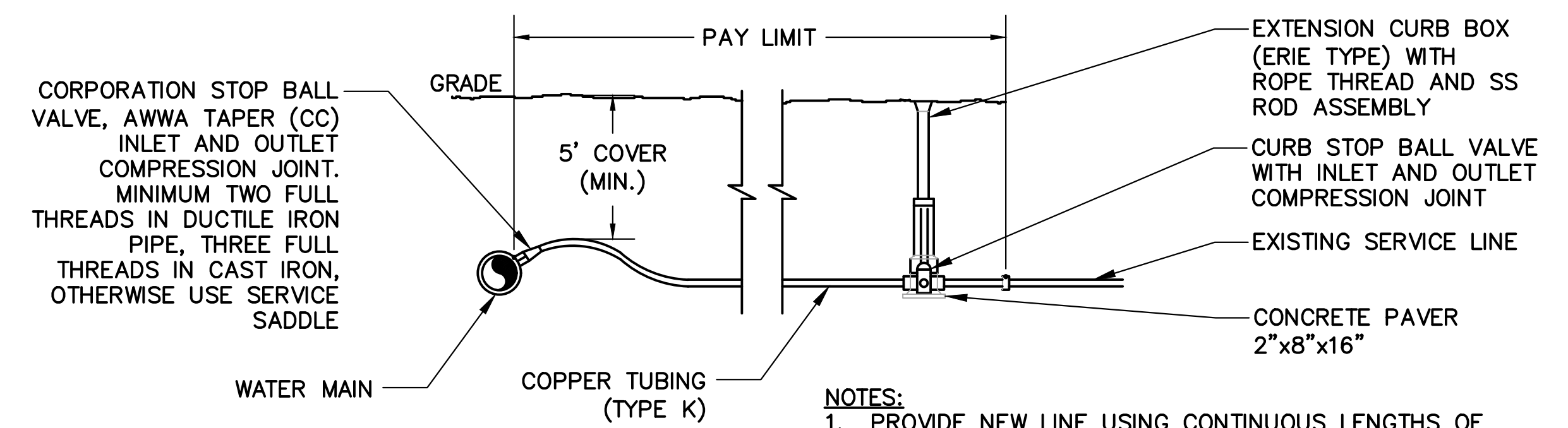


- NOTES:
1. VERIFY ACTUAL WIDTH NEEDED TO MOUNT PLATE TO GRANITE HEADWALL.
 2. ANCHOR PLATE TO HEADWALL BY DRILL & EPOXY ANCHORS INTO GRANITE HEADWALL.
 3. VERIFY BOTTOM ELEVATION OF CULVERT INLET TO MATCH TO BOTTOM ELEVATION OF 4" CUT-OUT IN PLATE.
 4. CONTRACTOR SHALL WORK WITH THE CITY OF PORTSMOUTH ENGINEER TO CONFIRM DESIGN OF PLATE PRIOR TO FABRICATION.

RAILROAD CULVERT RESTRICTOR
 SCALE: N.T.S.



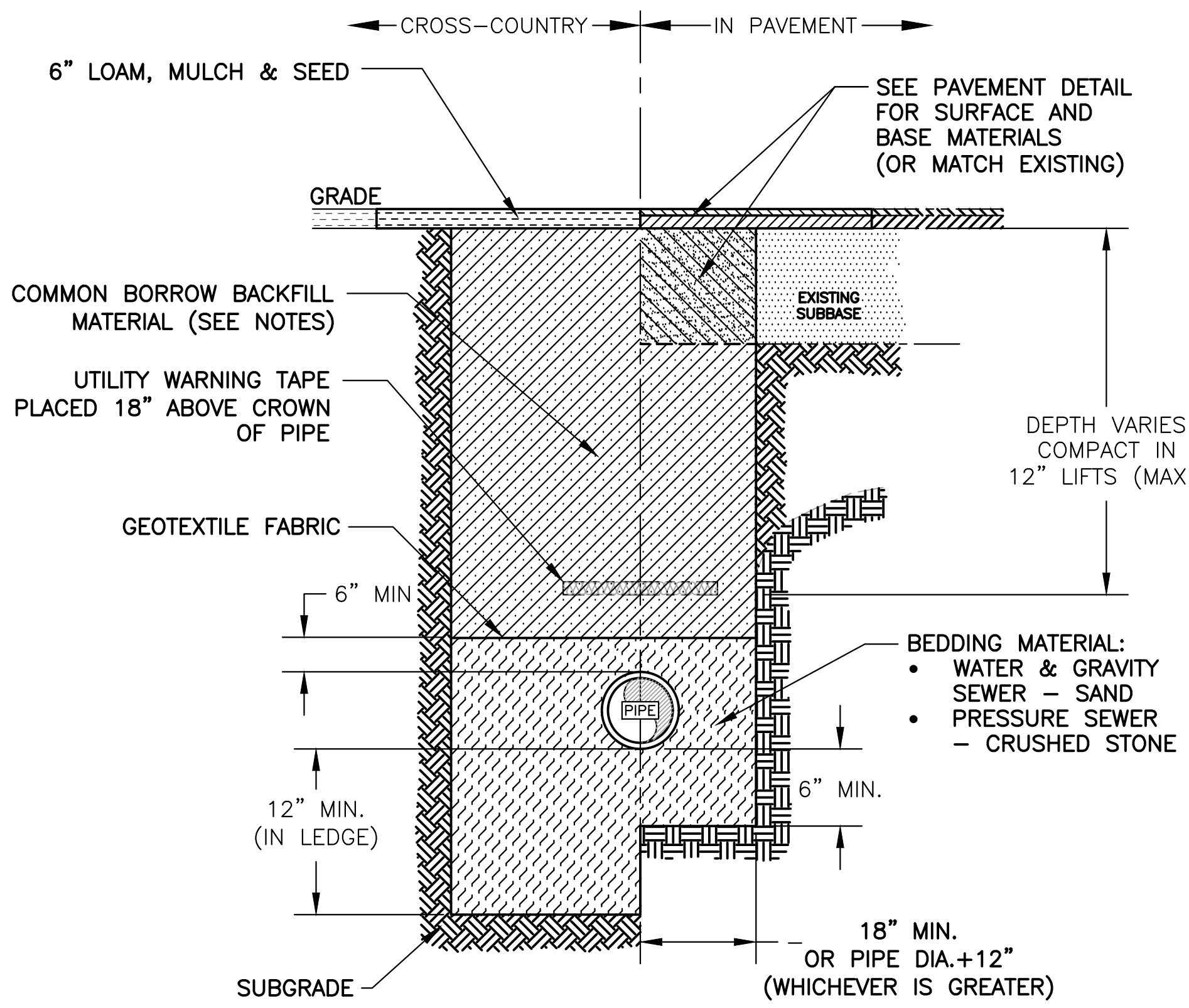
UTILITY TRENCH
 SCALE: N.T.S.



- NOTES:
1. PROVIDE NEW LINE USING CONTINUOUS LENGTHS OF COPPER. NO COUPLING ALLOWED IN ROADWAY WITHOUT APPROVAL OF ENGINEER.
 2. TAPS TO BE MADE AT APPROX. 2:00 AND 10:00.
 3. PROVIDE FOR SERVICE LINE CONTRACTION AND EXPANSION BY INSTALLING "S" IN SERVICE LINE NEAR MAIN.
 4. IF SERVICE IS INSTALLED WITH LESS THAN 5' COVER, INSULATE OVER LINE.
 5. REMOVE EXISTING CURB STOP AND REPLACE.
 6. CONNECT CURB STOP TO EXISTING SERVICE LINE AT PROPERTY LINE OR AT LOCATION APPROVED BY THE ENGINEER (NO COUPLING WITHOUT APPROVAL OF ENGINEER) AFTER PRESSURE TESTING AND DISINFECTION.
 7. CURB BOX SHALL BE SET IN THE SIDEWALK NEAR THE HOUSE SIDE UNLESS DIRECTED OTHERWISE.
 8. 2" SERVICE CONNECTIONS SHALL USE A STAINLESS STEEL SERVICE SADDLE.

WATER SERVICE CONNECTION DETAIL
 SCALE: N.T.S.

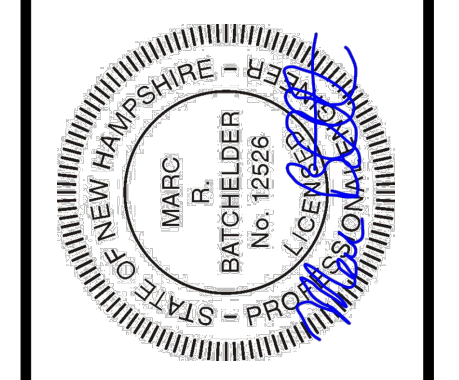
- WATER NOTES:
1. ORDERED EXCAVATION OF UNSUITABLE MATERIAL BELOW GRADE: BACKFILL AS STATED IN THE TECHNICAL SPECIFICATIONS OR AS SHOWN ON THE DRAWINGS.
 2. BEDDING AND BLANKET: CLEAN SAND FREE FROM ORGANIC MATTER (SECTION 02228). BLANKET MAY BE OMITTED FOR DUCTILE IRON AND REINFORCED CONCRETE PIPE, PROVIDED HOWEVER, THAT NO STONE LARGER THAN 2" IS IN CONTACT WITH THE PIPE.
 3. BACKFILL MATERIAL: IN ROADS, ROAD SHOULDERS, WALKWAYS AND TRAVELED WAYS, SUITABLE MATERIAL FOR TRENCH BACKFILL SHALL BE THE NATURAL MATERIAL EXCAVATED DURING THE COURSE OF CONSTRUCTION, BUT SHALL EXCLUDE DEBRIS; PIECES OF PAVEMENT; ORGANIC MATTER; TOP SOIL; ALL WET OR SOFT MUCK, PEAT, OR CLAY; ALL EXCAVATED LEDGE MATERIAL; ALL ROCKS OVER 6 INCHES IN LARGEST DIMENSION; AND ANY MATERIAL WHICH, AS DETERMINED BY THE ENGINEER, WILL NOT PROVIDE SUFFICIENT SUPPORT OR MAINTAIN THE COMPLETED CONSTRUCTION IN A STABLE CONDITION.
 4. IN CROSS-COUNTRY CONSTRUCTION, SUITABLE MATERIAL SHALL BE AS DESCRIBED ABOVE, EXCEPT THAT THE ENGINEER MAY PERMIT THE USE OF TOP SOIL, LOAM, MUCK, OR PEAT, IF ENGINEER IS SATISFIED THAT THE COMPLETED CONSTRUCTION WILL BE ENTIRELY STABLE AND PROVIDED THAT EASY ACCESS TO THE PIPE LINE, FOR MAINTENANCE AND POSSIBLY RECONSTRUCTION, WILL BE PRESERVED.
 5. MINIMUM COVER: NOT LESS THAN 5 FEET, 7 MAX, EXCEPT TO AVOID SUBSURFACE STRUCTURES.
 6. FOR CROSS COUNTRY CONSTRUCTION, BACKFILL OR FILL SHALL BE MOUNDED TO A HEIGHT OF 6 INCHES ABOVE THE ORIGINAL GROUND SURFACE.
 7. DRIVEWAYS: CRUSHED GRAVEL IN DRIVEWAYS SHALL MATCH EXISTING WITH A MINIMUM OF 6". EXISTING GRAVEL SHALL BE REMOVED AND REPLACED AND SHALL NOT BE MEASURED FOR PAYMENT.



- NOTES:
1. SUITABLE MATERIAL FOR TRENCH BACKFILL SHALL BE THE NATURAL MATERIAL EXCAVATED DURING CONSTRUCTION, BUT SHALL EXCLUDE DEBRIS, PIECES OF PAVEMENT, ORGANIC MATTER, TOP SOIL, ALL WET OR SOFT MUCK, PEAT OR CLAY, ALL EXCAVATED LEDGE MATERIAL, AND ALL ROCKS OVER SIX INCHES IN LARGEST DIMENSION, OR ANY MATERIALS DEEMED TO BE UNACCEPTABLE BY THE ENGINEER.
 2. BEDDING MATERIAL SHALL BE SAND (NHDOT 304.1) FOR WATER AND GRAVITY SEWER, AND CRUSHED STONE (NHDOT 304.4) FOR PRESSURE SEWER TO DEPTHS ABOVE AND BELOW PIPE SHOWN. BEDDING MATERIAL SUBSIDIARY TO PIPE PAY ITEM.

SEWER & WATER TRENCH DETAIL
 SCALE: N.T.S.

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DATE: FEBRUARY 2, 2016
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 PROJECT NO.: Cop-002
 MARC R. BATCHELDER, PE
 ENGINEER OF RECORD

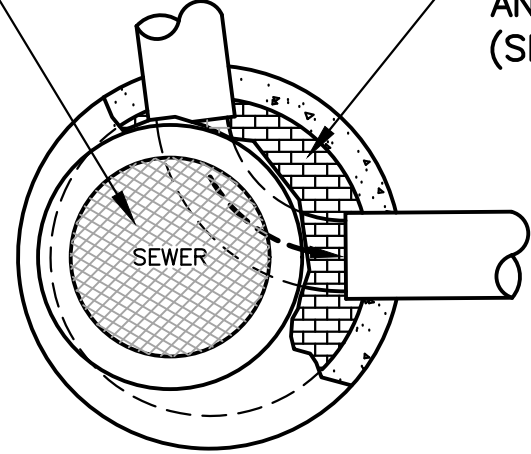
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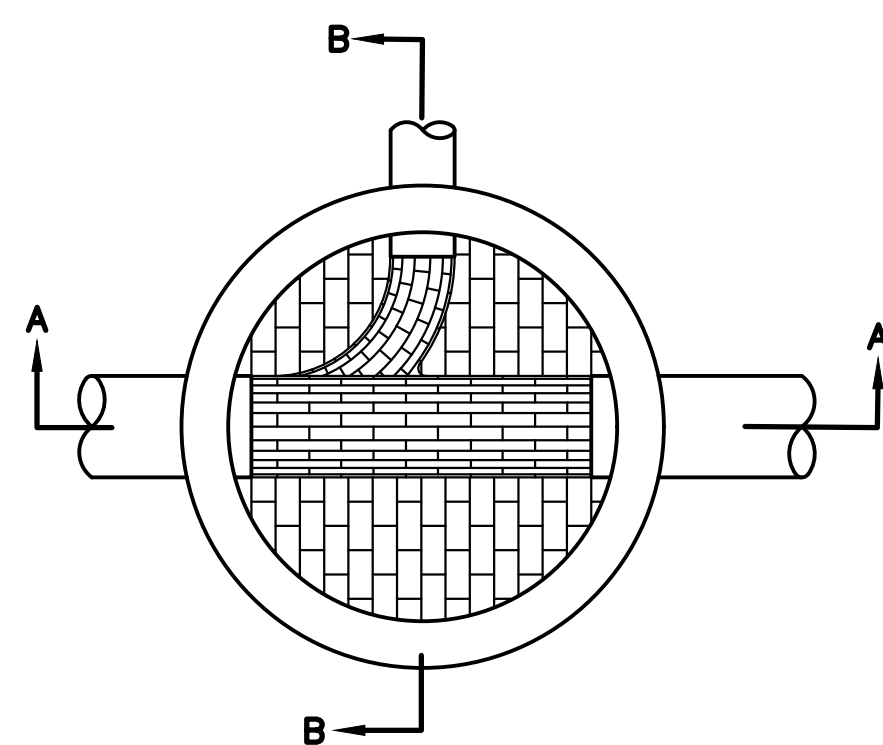
TITLE: DETAILS
 C-6

30" DIAMETER HINGED CAST IRON FRAME AND COVER (SEE NOTE 11)

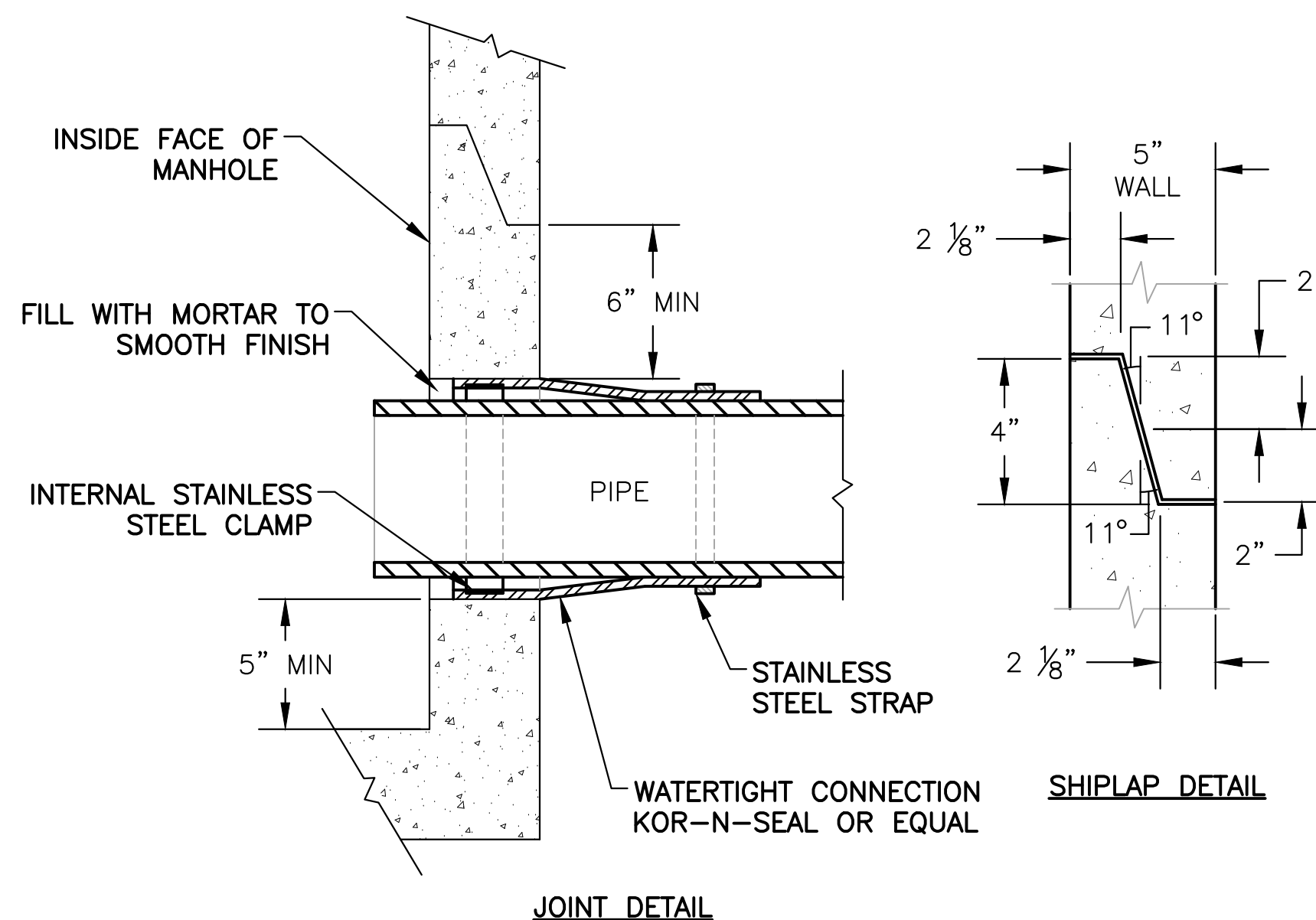
CONSTRUCT BRICK SHELVES AND INVERT (SLOPE SHELVES TO DRAIN)



TOP PLAN VIEW



INTERIOR PLAN VIEW

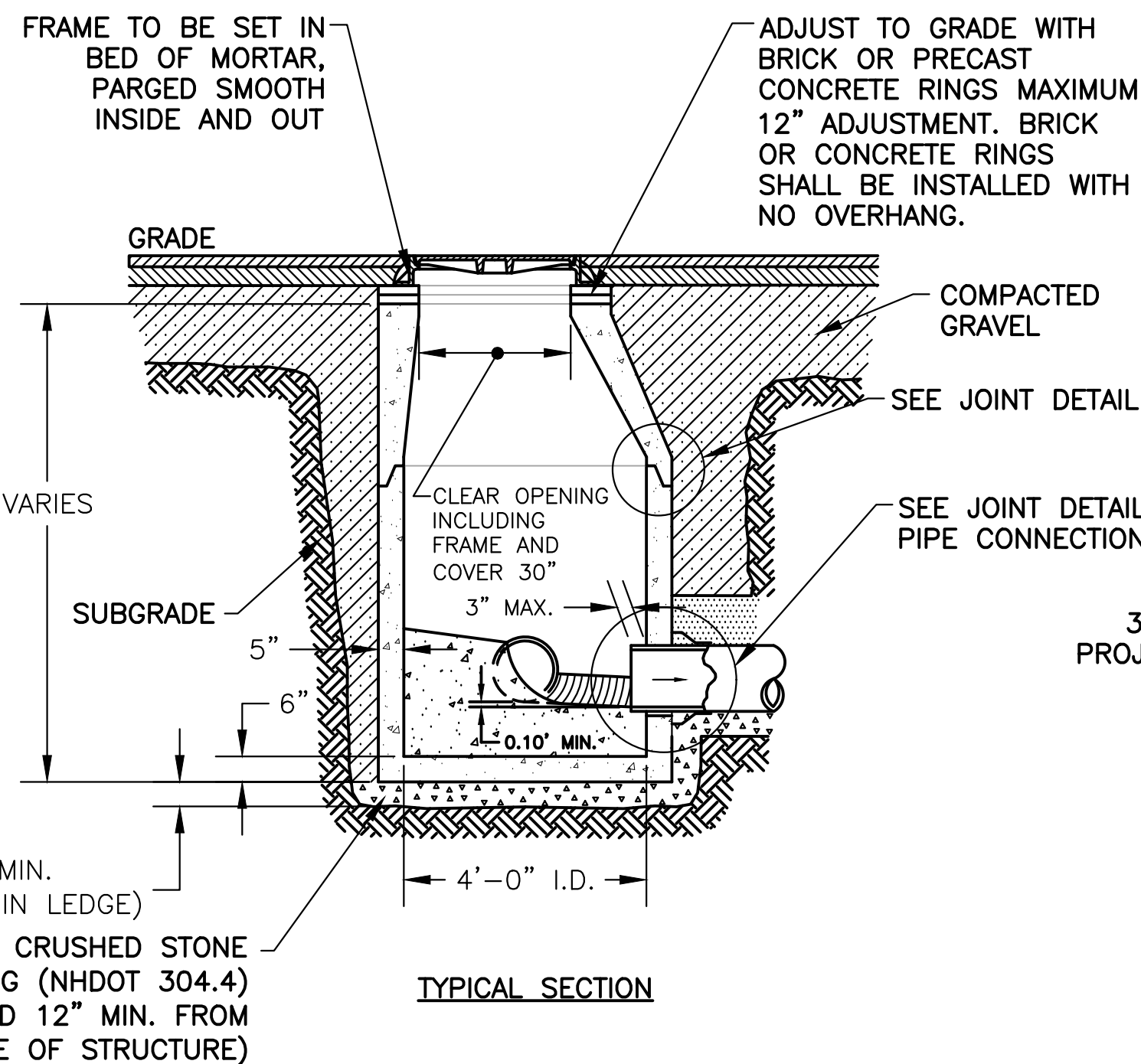


JOINT DETAIL

SHIPLAP DETAIL

NOTES:

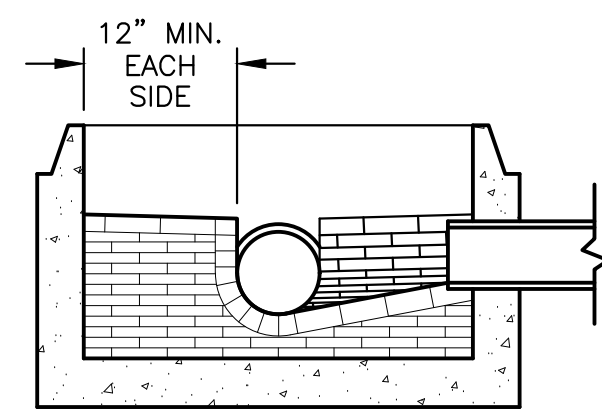
1. INVERT AND SHELF TO BE INSTALLED AFTER LEAKAGE TEST.
2. INVERT BRICKS SHALL BE LAID ON EDGE AND SHALL BE A SMOOTH CONTINUATION OF THE SEWER INVERT.
3. BITUMINOUS WATERPROOF COATING SHALL BE APPLIED TO ENTIRE EXTERIOR OF MANHOLE.
4. HORIZONTAL JOINTS SHALL BE SEALED FOR WATER TIGHTNESS USING A DOUBLE ROW OF ELASTOMERIC (KENT SEAL OR EQUAL) OR MASTIC SEALANT.
5. BARREL AND CONE SECTIONS SHALL BE PRECAST REINFORCED CONCRETE DESIGNED FOR H-20 LOADING, CONFORMING TO ASTM C478-06.
6. CONCRETE SHALL BE 4,000 P.S.I. AFTER 28 DAYS.
7. CIRCUMFERENTIAL REINFORCEMENT SHALL BE 0.12 SQ. IN. PER LINEAR FT. IN ALL SECTIONS AND SHALL BE PLACED IN THE CENTER THIRD OF THE WALL.
8. THE TONGUE OR THE GROOVE OF THE JOINT SHALL CONTAIN ONE LINE OF CIRCUMFERENTIAL REINFORCEMENT EQUAL TO 0.12 SQ. IN. PER LINEAR FT..
9. EACH CASTING TO HAVE LIFTING HOLES CAST IN. LIFTING HOLES SHALL BE PATCHED PRIOR TO BACKFILL.
10. SHALL COMPLY WITH CITY OF PORTSMOUTH DEPARTMENT OF PUBLIC WORKS STANDARDS.
11. SMH COVERS SHALL HAVE THE CITY LOGO AND BE PURCHASED THROUGH THE CITY AT COST. COSTS ASSOCIATED WITH FRAME AND COVER IS CONSIDERED SUBSIDIARY TO THE MANHOLE PAY ITEM.
12. STEPS SHALL NOT BE PROVIDED.



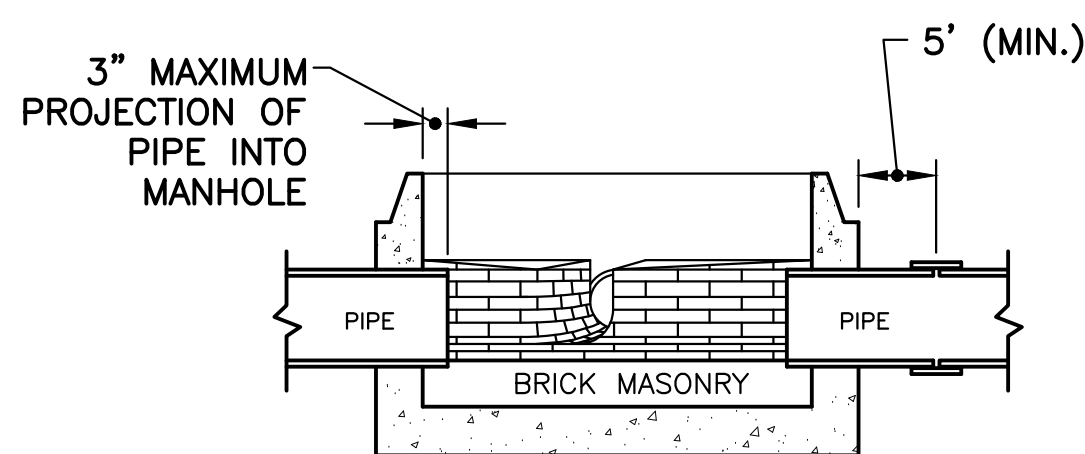
TYPICAL SECTION

SEWER MANHOLE

SCALE: N.T.S



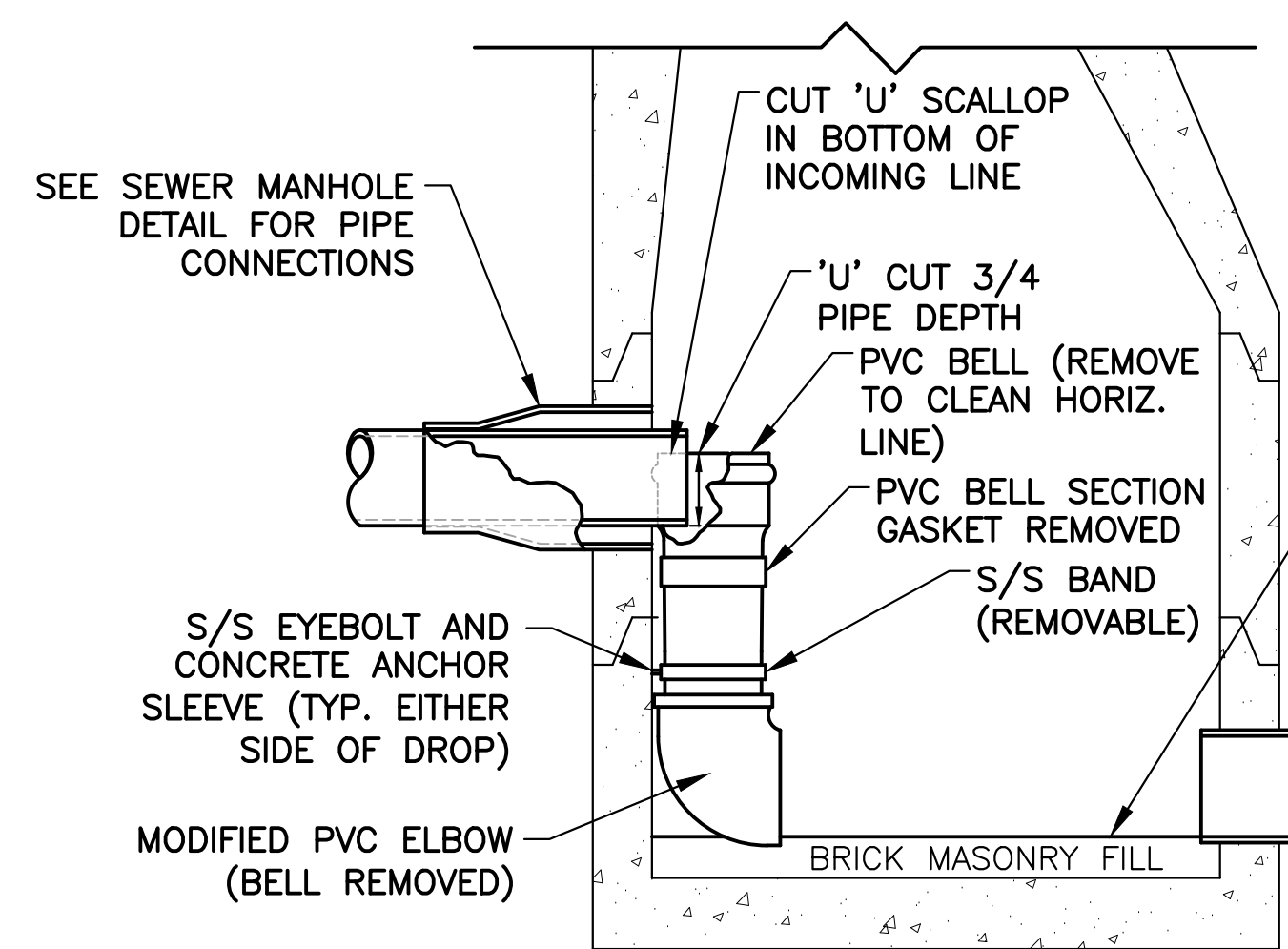
SECTION "B-B"



SECTION "A-A"

MANHOLE NOTES:

1. IT IS THE INTENTION THAT THE MANHOLE, INCLUDING ALL COMPONENT PARTS, HAVE ADEQUATE SPACE, STRENGTH, AND LEAKPROOF QUALITIES CONSIDERED NECESSARY BY THE NEW HAMPSHIRE DEPARTMENT OF ENVIRONMENTAL SERVICES (NHDES) FOR THE INTENDED SERVICE. SPACE REQUIREMENTS AND CONFIGURATIONS SHALL BE AS SHOWN IN THE DRAWING. MANHOLES MAY BE AN ASSEMBLY OF PRECAST SECTIONS, WITH STEEL REINFORCEMENT. IN ANY APPROVED MANHOLE, THE COMPLETE STRUCTURE SHALL BE OF SUCH MATERIAL AND QUALITY AS TO WITHSTAND LOADS OF 8 TONS (H-20 LOADING) WITHOUT FAILURE, AND TO PREVENT LEAKAGE IN EXCESS OF ONE GALLON PER DAY PER VERTICAL FOOT OF MANHOLE, CONTINUOUSLY FOR THE LIFE OF THE STRUCTURE. A PERIOD GENERALLY IN EXCESS OF 25 YEARS IS TO BE UNDERSTOOD IN BOTH CASES.
2. BARRELS AND CONE SECTIONS SHALL BE PRECAST REINFORCED CONCRETE.
3. PRECAST CONCRETE BARREL SECTIONS, CONES, AND BASES SHALL CONFORM TO ASTM C478.
4. LEAKAGE TEST SHALL BE PERFORMED IN ACCORDANCE WITH THE SPECIFICATIONS. INVERT AND SHELF TO BE PLACED AFTER LEAKAGE TEST.
5. INVERTS AND SHELVES: MANHOLES SHALL HAVE A BRICK PAVED SHELF AND INVERT, CONSTRUCTED TO CONFORM TO THE SIZE OF PIPE AND FLOW. CARE SHALL BE TAKEN TO INSURE THAT THE BRICK INVERT IS A SMOOTH CONTINUATION OF THE SEWER INVERT. INVERT BRICKS SHALL BE LAID ON EDGE. AT CHANGES IN DIRECTION, THE INVERTS SHALL BE LAID OUT IN CURVES OF THE LONGEST POSSIBLE TANGENT TO THE CENTER LINE OF THE SEWER PIPES. SHELVES SHALL BE CONSTRUCTED TO AN ELEVATION OF 1" ABOVE THE HIGHEST PIPE CROWN AND SLOPE TO DRAIN TOWARD THE FLOWING THROUGH CHANNEL. UNDERLAYMENT OF INVERT AND SHELF SHALL CONSIST OF BRICK MASONRY.
6. FRAMES AND COVERS: MANHOLE FRAMES AND COVERS SHALL BE OF HEAVY DUTY DESIGN US MADE AND PROVIDE A 30-INCH CLEAR OPENING. LETTER "S" OR WORD "SEWER", IN 3-INCH LETTERS SHALL BE PLAINLY CAST INTO THE CENTER OF EACH COVER.
7. BEDDING: SCREENED GRAVEL AND/OR CRUSHED STONE FREE FROM CLAY, LOAM, ORGANIC MATTER AND MEETING ASTM C33. STONE SIZE NO. 67.
 100% PASSING 1 INCH SCREEN
 0-10% PASSING #4 SIEVE
 90-100% PASSING 3/4 INCH SCREEN
 0- 5% PASSING #8 SIEVE
 20- 55% PASSING 3/8 INCH SCREEN
 WHERE ORDERED BY THE ENGINEER TO STABILIZE THE BASE, SCREENED GRAVEL OR CRUSHED STONE 1-1/2 INCH TO 1/2 INCH SHALL BE USED.
8. SHALLOW MANHOLE: IN LIEU OF A CONE SECTION, WHEN MANHOLE IS LESS THAN 6 FEET, A REINFORCED CONCRETE SLAB COVER HAVING AN ECCENTRIC ENTRANCE AND CAPABLE OF SUPPORTING H-20 LOADS MAY BE USED.
9. FLEXIBLE JOINT: A FLEXIBLE JOINT SHALL BE PROVIDED WITHIN THE FOLLOWING DISTANCES:
 RCP AND CI PIPE - ALL SIZES - 48"
 AC AND VC PIPE - UP THROUGH 12" DIA. - 18"
 AC AND VC PIPE - LARGER THAN 12" DIA. - 36"
 DI PIPE - NONE REQUIRED
 PVC (ASTM 3034) - UP THROUGH 15" DIA. - NONE REQUIRED
 PVC (ASTM F679) - LARGER THAN 15" DIA. - 48"/60"
 PVC (ASTM F789) - ALL SIZES - 48"/60"
 ABS (ASTM D2680) - ALL SIZES - SAME AS VC ABOVE.
10. SPECIFICATIONS: ADDITIONAL CONSTRUCTION SPECIFICATIONS ARE INCLUDED IN THE PROJECT MANUAL. THESE STANDARD MANHOLE DRAWINGS ARE NOT COMPLETE WITHOUT THESE SPECIFICATIONS.



INSIDE DROP SEWER MANHOLE

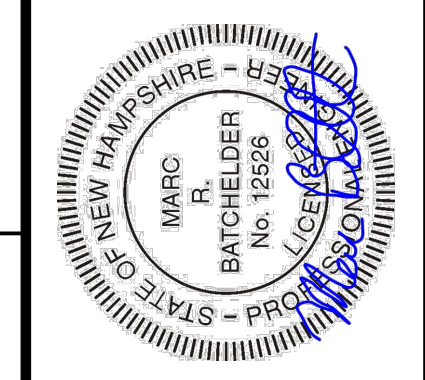
SCALE: N.T.S

SIZE GUIDE:

- (1) 8" OR 10" DROP: 4'-0" DIA. MANHOLE
- (2) 8" OR 10" DROPS: 5'-0" DIA. MANHOLE
- (1) 12" DROP: 5'-0" DIA. MANHOLE
- (1) 15" DROP: 5'-0" DIA. MANHOLE

SEE SEWER MANHOLE DETAIL FOR INVERT AND SHELF DETAILS (NOT SHOWN FOR CLARITY)

NO.	DESCRIPTION	DATE
A <td>ISSUED FOR BID <td>01/09/17</td> </td>	ISSUED FOR BID <td>01/09/17</td>	01/09/17
	APPROVED <td></td>	
	REVISIONS <td></td>	



DATE: FEBRUARY 2, 2016
 SCALE: VARIES
 PROJECT NO.: Cop-002
 MARC R. BATCHELDER, PE
 ENGINEER OF RECORD

FOR: Outer Islington St
 Sidewalk Design
 Portsmouth, NH
 03801

Seaport Engineering, LLC
 PORTSMOUTH, NH
 (603) 498-8449
 www.seaporteng.com

TITLE: SEWER DETAILS

C-7

