

"HARTFORD VILLAGE II"

MULTI-FAMILY DEVELOPMENT

BELLINGHAM, MASSACHUSETTS

APRIL 4, 2016

PREPARED FOR:
K & S REALTY TRUST
ONE STALLBROOK ROAD
MILFORD, MA 01757

PREPARED BY:
ANDREWS SURVEY & ENGINEERING, INC.
104 MENDON STREET
P.O. BOX 312
UXBRIDGE, MA 01569
P: 508.278.3897
F: 508.278.2289

TRAFFIC:
TIGHE & BOND
177 CORPORATE DRIVE
PORTSMOUTH, NH 03801

LANDSCAPE ARCHITECT:
EARTHDESIGN LANDSCAPE ARCHITECTURE
280 BEVERLY ROAD
WORCESTER, MA 01605

WETLANDS:
B&C ASSOCIATES INC.
2 RICE STREET
HUDSON, MA 01749

REQUIRED PERMITS:

- 240-15 SPECIAL PERMIT
- 240-15 DEVELOPMENT PLAN APPROVAL
- 240-54 STORMWATER MANAGEMENT PLAN

AS PROPOSED HEREIN THE PROJECT WILL REQUIRE A MODIFICATION TO AMEND THE SPECIAL PERMIT DECISION FOR HARTFORD VILLAGE DATED NOVEMBER 11, 1999.

WAIVER REQUESTS:

- § 240-95 BUFFER AREAS
A BUFFER AREA OF 100 FEET SHALL BE PROVIDED AT THE PERIMETER OF THE PROPERTY WHERE IT ADJACENTS RESIDENTIALLY ZONED OR OCCUPIED PROPERTIES, EXCEPT FOR DRIVEWAYS NECESSARY FOR ACCESS AND EGRESS TO AND FROM THE SITE.

THE APPLICANT REQUESTS A WAIVER FROM THIS REQUIREMENT. THE PROJECT AS PROPOSED IS, IN THE APPLICANT'S OPINION, THE MOST COMPATIBLE WITH THE EXISTING NEIGHBORHOOD. THE AREA ENCROACHING INTO THE BUFFER IN THE VICINITY OF UNIT #9, WILL BE IMPROVED WITH A GRADED BERM AND ADDITIONAL LANDSCAPING BOTH INTENDED TO SERVE AS A VISUAL BUFFER TO THE NEIGHBORS.

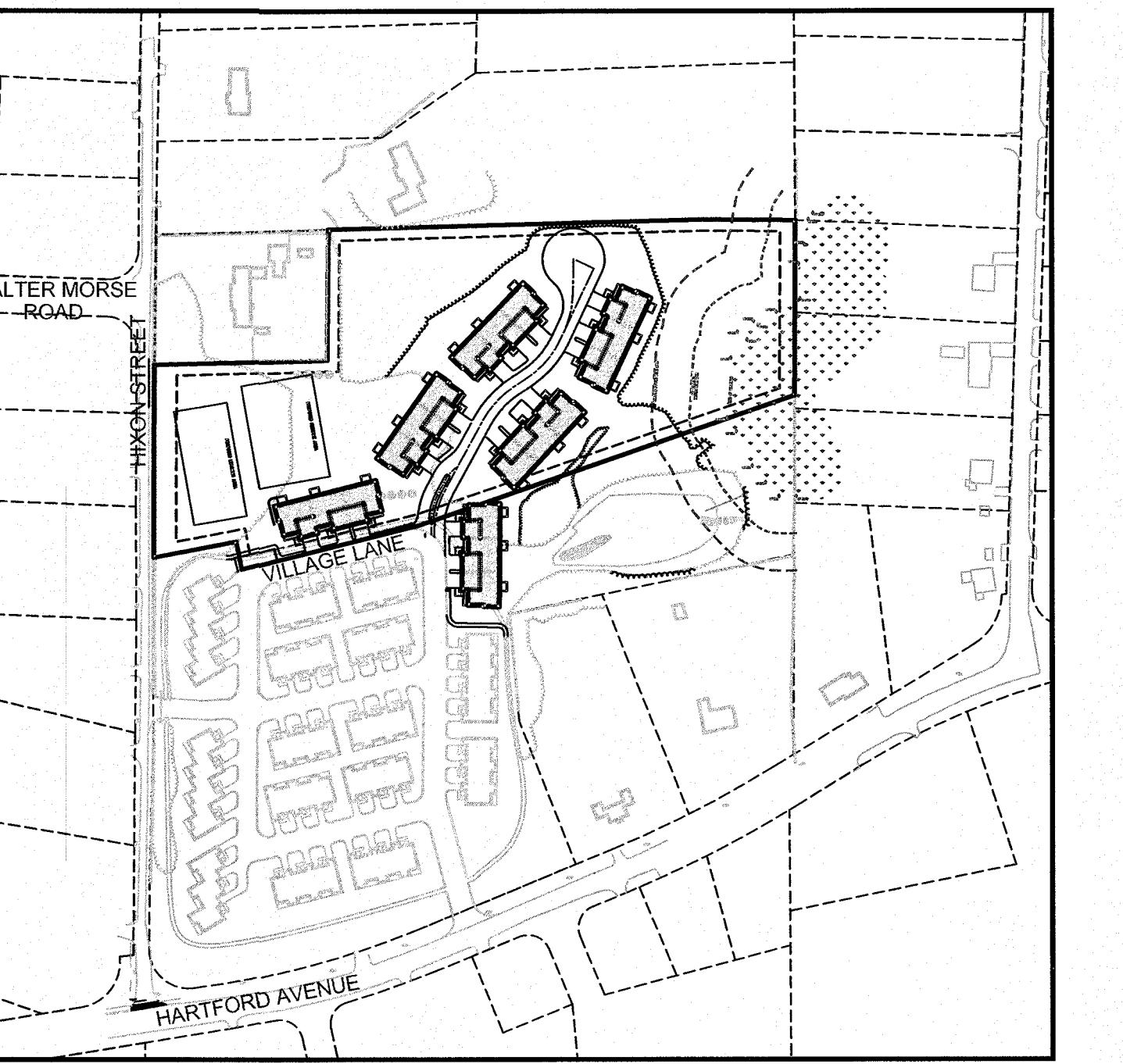
- § 240-17.B (1)(d) SITE PLAN
LOCATION AND BOUNDARIES OF THE SITE AND OF ANY LOTS PROPOSED, FRONTAGE, AND ABUTTING LAND, AND AN INDICATION OF THE ABUTTING LAND UNDER SAME OWNERSHIP. THE LOCATION OF ZONING DISTRICTS, AND OVERLAY ZONING DISTRICTS WITHIN THE LOCUS OF THE PLAN.

PROPERTY BOUNDARIES ARE DEPICTED ON PLAN OF LAND IN BELLINGHAM, MASSACHUSETTS PREPARED FOR K&S REALTY LTD. ON MAY 6, 2000 WHICH WAS APPROVED BY THE TOWN OF BELLINGHAM PLANNING BOARD AND RECORDED AT THE NORFOLK REGISTRY OF DEEDS. THIS PLAN WAS INCLUDED WITH THE SPECIAL PERMIT APPLICATION, AND SHOULD BE THE DOCUMENT USED OR REFERENCED TO ILLUSTRATE METES AND BOUNDS OF THE PROJECT SITE. NO NEW PROPERTIES BOUNDARIES ARE BEING PROPOSED SINCE THIS PROJECT IS NOT A SUBDIVISION.

F:\\ACAD\\2014\\PROJECTS\\2014-026\\DRAWINGS\\PERMIT\\PHASED\\REV\\ZDNG\\07-18-17 9:34:37 AM - LAYOUT.C1

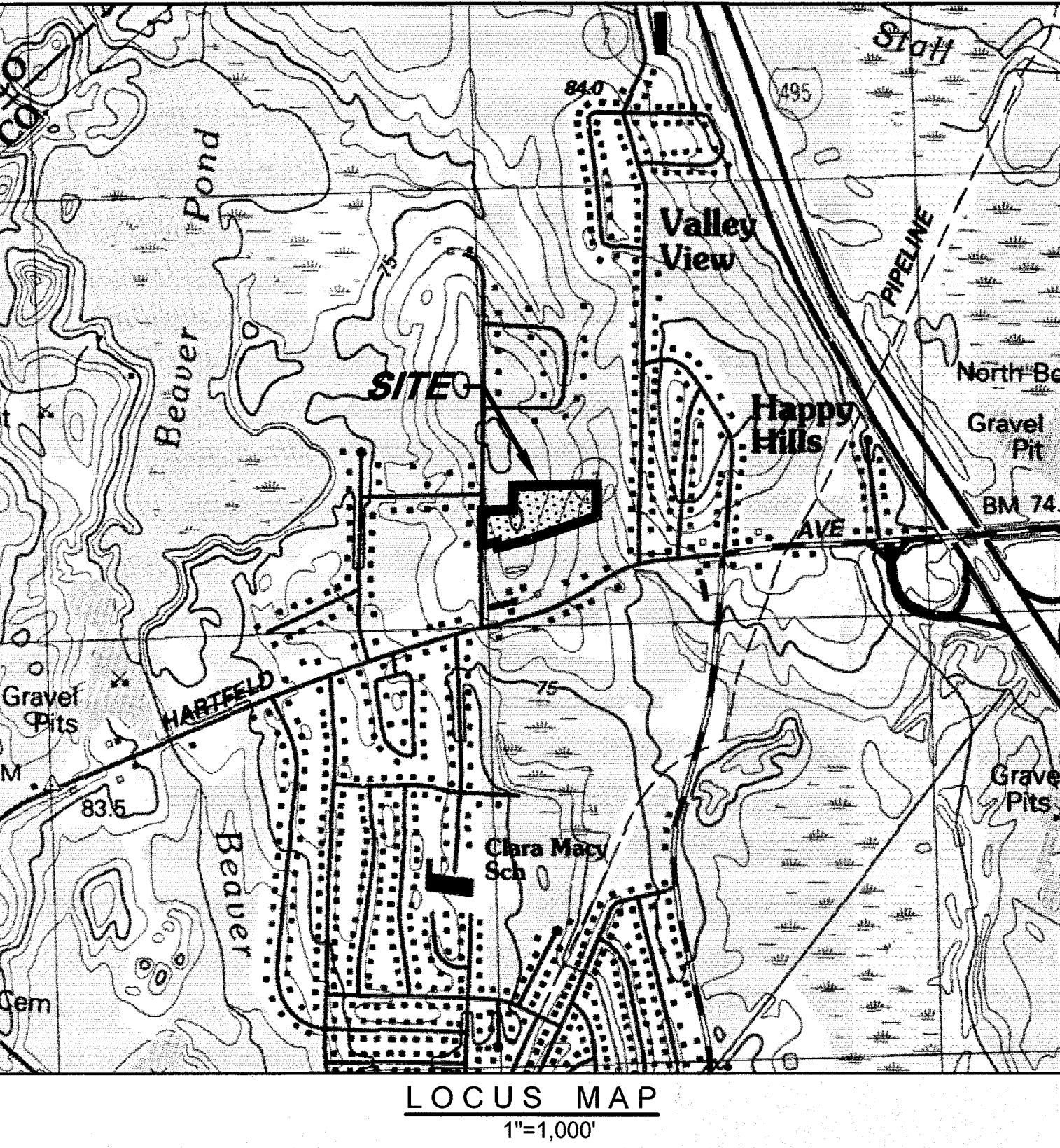
APPROVED

By Bellingham Planning Board at 10:09 am, Apr 12, 2016



SITE OVERVIEW MAP

1"=200'



LOCUS MAP

1"=1,000'

ASE
Andrews Survey & Engineering, Inc.
Land Surveying - Civil Engineering - Site Planning
P.O. Box 312, 104 Mendon Street
Uxbridge, Massachusetts 01569
P: 508.278.3897 F: 508.278.2289
500 East Washington Street
North Attleboro, Massachusetts 02760
P: 508.316.0452 F: 508.316.0963

APPROVAL FOR SPECIAL PERMIT REQUIRED.
BELLINGHAM PLANNING BOARD

BEING A MAJORITY DATE:
THIS CERTIFIES THAT THE NOTICE OF APPROVAL OF THIS PLAN BY THE BELLINGHAM PLANNING BOARD HAS BEEN RECEIVED AND RECORDED ON AT
AND NO APPEAL WAS RECEIVED DURING THE 20 DAYS NEXT AFTER SUCH RECEIPT OF SAID NOTICE.

BELLINGHAM TOWN CLERK DATE

PROJECT: "HARTFORD VILLAGE II"
MULTI-FAMILY DEVELOPMENT
BELLINGHAM, MA 02019
OWNER/APPLICANT: K & S REALTY TRUST
ONE STALLBROOK ROAD
MILFORD MA, 01757

REVISIONS		
NO.	DATE	DESCRIPTION
1	8/24/16	REVISE ROAD & BUILDING LAYOUT
2	11/10/16	REVISE ROAD & BUILDING LAYOUT
3	2/14/17	REVISE ROAD & BUILDING LAYOUT
4	7/5/17	REVISE BUILDING SEPARATION

DRAWN BY WMB, JPC
CHECKED BY PBH, SJO
DATE APRIL 4, 2016
PROJECT NO. 2014-260

SHEET TITLE

COVER SHEET
P.E. P.L.S.
PLAN NO. L-4427 DRAWING NO. C1
2014 © CIVIL ENGINEERING INC.

DRAWING DATE	LAST REVISION	SHEET NO.	SHEET TITLE
4/4/16	7/5/17	C1	COVER SHEET
4/4/16	7/5/17	C2	LEGEND, ABBREVIATIONS, & GENERAL NOTES
4/4/16	7/5/17	C3	AREA LOCUS & ZONING DISTRICT PLAN
4/4/16	7/5/17	C4	EXISTING CONDITIONS & DEMOLITION PLANS
4/4/16	7/5/17	C5	SITE LAYOUT PLAN
4/4/16	7/5/17	C6	UTILITY PLAN
4/4/16	7/5/17	C7	GRADING & DRAINAGE PLAN
4/4/16	7/5/17	C8 - C8.3	CONSTRUCTION DETAILS
4/4/16	7/5/17	C-9	EROSION & SEDIMENT CONTROL PLAN
4/4/16	7/5/17	C-9.1	EROSION & SEDIMENT CONTROL NOTES
2/14/17	7/5/17	C10	FIRE ACCESS EXHIBIT
2/14/17	7/5/17	C11	LIGHTING PLAN
4/4/16	2/03/17	L1-L3	LANDSCAPE PLANS & NOTES
4/4/16	12/29/14		ARCHITECTURAL PLANS

GOVERNMENT & UTILITY CONTACTS		
BELLINGHAM POLICE DEPT.	BELLINGHAM D.P.W.	MASSACHUSETTS ELECTRIC CO.
6 MECHANIC STREET	26 BLACKSTONE STREET	1.800.322.3223
P: 508.966.1515	P: 508.966.5813 (DPW)	VERIZON COMMUNICATIONS
F: 508.966.4669	P: 508.966.5813 (WATER DIVISION)	1.800.870.9999
ATTN: GERARD DAIGLE, CHIEF	P: 508.966.5816 (HIGHWAY DIVISION)	
	ATTN: DONALD DIMARTINO, DIRECTOR	
BELLINGHAM FIRE DEPT.	BELLINGHAM BUILDING DEPT.	
28 BLACKSTONE STREET	10 MECHANIC STREET	
P: 508.966.1112	P: 508.657.2851	
F: 508.966.5835	F: 508.966.5844	
ATTN: RICHARD RANIERI, CHIEF		
BELLINGHAM PLANNING DEPARTMENT		
2 MECHANIC STREET		
P: 508.657.2892		
F: 508.966.2317		
ATTN: JAMES S. KUPFER, PLANNER		

OWNERS OF RECORD:
K & S REALTY TRUST
ONE STALLBROOK ROAD
MILFORD, MA 01757

BELLINGHAM ASSESSORS INFORMATION:
MAP 23, LOT 6, BLOCK 1

LOT AREA:
6.17± ACRES

BELLINGHAM ZONING INFORMATION:
ZONE: MULTI-FAMILY DWELLING DISTRICT (M)
MINIMUM AREA: 40,000 S.F.
MINIMUM FRONTAGE: 150'

SETBACKS: FRONT 30', SIDE 15', REAR 20'

MINIMUM LANDSCAPED OPEN SPACE: 2,000 SF/DWELLING UNIT

MAXIMUM BUILDING HEIGHT: 35'

DEED REFERENCES: BK. 6672, PG. 297

PLAN REFERENCES: PB. 474, PL. 289

GENERAL NOTES

PART 1 – TOPOGRAPHIC AND PROPERTY LINE INFORMATION

A. NOTICE TO CONTRACTOR: THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AND STRUCTURES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF VARIOUS UTILITY COMPANIES AND WHERE THE INFORMATION IS NOT UP-TO-DATE, THE FIELD SURVEYOR SHALL NOT BE RELIED ON AS BEING EXACT OR COMPLETE. THE LOCATION OF ALL UNDERGROUND UTILITIES AND STRUCTURES SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR MUST CONTACT THE APPROPRIATE UTILITY COMPANY, ANY GOVERNING PERMITTING AUTHORITY, AND "DIGSAFE" AT LEAST 72 HOURS PRIOR TO ANY EXCAVATION WORK TO REQUEST EXACT LOCATION AND USE. THE ENGINEER SHALL BE NOTIFIED IN WRITING OF ANY UTILITIES INTERFERING WITH THE PROPOSED CONSTRUCTION AND APPROPRIATE REMEDIAL ACTION SHALL BE TAKEN BEFORE PROCEEDING WITH THE WORK. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLAN.

B. PROPERTY LINE AND TOPOGRAPHY:

• EXISTING BOUNDARY INFORMATION EFFECTING THE AREA OF THE PROPOSED DEVELOPMENT BASED UPON AN ON-THE-GROUND SURVEY PERFORMED BY ANDREW SURVEY & ENGINEERING, INC. SUPPLEMENTAL ABUTTER INFORMATION OBTAINED FROM TOWN OF BELLINGHAM GIS.

• EXISTING TOPOGRAPHIC INFORMATION BASED UPON AERIAL PHOTOGRAPHY SUPPLIED BY AN ON THE GROUND SURVEY PERFORMED BY ANDREWS SURVEY & ENGINEERING, INC.

C. WETLAND DELINEATION BY B&C ASSOCIATES, INC.

D. DATUM: NGVD 1929

E. COORDINATE SYSTEM: MASSACHUSETTS STATE PLANE

F. CONSTRUCTION STAKING CONTROL: THE CONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHING AND MAINTAINING ALL CONTROL POINTS AND BENCH MARKS NECESSARY TO PERFORM THE WORK.

G. FLOODPLAIN: THE PROPERTY DOES NOT LIE IN A FLOOD HAZARD AREA OR 100-YEAR FLOODPLAIN ACCORDING TO THE MOST RECENT FLOOD INSURANCE RATE MAPS FOR BELLINGHAM.

PART 2 – EXECUTION

2.1 DEMOLITION, SEDIMENTATION, AND EROSION CONTROL

A. THE FIRST STAGE INVOLVES ACTIVITIES NEEDED TO ADDRESS STORMWATER MANAGEMENT, EXCAVATING MATERIAL DESIGNED FOR OFF-SITE REMOVAL OR ON-SITE RELOCATION AND FENCING SELECTED AREAS. STAGE ONE WILL PREPARE SITE FOR CONVENTIONAL CONSTRUCTION.

B. THE SECOND STAGE WILL CONSIST OF ROUTINE CONSTRUCTION INVOLVING BUILDING, PAVING, LANDSCAPING, AND UTILITIES.

C. THERE ARE GENERAL PHASES OF CONSTRUCTION. IN EACH PHASE OF CONSTRUCTION, IMPLEMENT STANDARD EROSION AND SEDIMENT CONTROL PRACTICES PRIOR TO INITIATING EARTH DISTURBING ACTIVITIES, AND MAINTAIN THESE PRACTICES THROUGHOUT THE COURSE OF CONSTRUCTION.

D. DURING DEMOLITION, EXCAVATIONS AS MUCH AS 20 FEET MAY BE REQUIRED FOR INSTALLATION OF FOUNDATIONS, RETAINING WALLS, AND UTILITIES. EXCAVATIONS SHALL BE CUT TO STABILIZE SLOPES, BE TEMPORARILY BRACED, DEPENDENT ON THE EXCAVATION DEPTHS, AND THE ENCOUNTERED SUBSURFACE CONDITIONS. THE CONTRACTOR MAY BE REQUIRED TO SUBMIT EXCAVATION AND SLOPE STABILIZATION METHODS PRIOR TO THE START OF CONSTRUCTION TO THE ENGINEER FOR REVIEW.

E. BASED ON THE COMPOSITION OF SOILS ENCOUNTERED DURING THE EXPLORATION PROGRAM, SITE SOILS ARE GENERALLY CLASSIFIED AS TYPES B AND C SOILS AS DEFINED BY (USGS) NATIONAL RESOURCES CONSERVATION SERVICE (NRCS), FORMERLY SOIL CONSERVATION SURVEY (SCS). TEMPORARY CONSTRUCTION SLOPES SHOULD BE DESIGNED IN STRICT COMPLIANCE WITH THE MOST RECENT GOVERNING REGULATIONS. STOCKPILES SHOULD BE PLACED WELL AWAY FROM THE EDGE OF THE EXCAVATION AND THEIR SLOPES SHOULD BE STABILIZED TO PREVENT SURCHARGE TO THE SIDES OF THE EXCAVATION. SURFACE DRAINAGE SHOULD BE CONTROLLED TO AVOID FLOW OF SURFACE WATER INTO THE EXCAVATIONS.

F. CONSTRUCTION SLOPES SHOULD BE REVIEWED FOR MASS MOVEMENT. IF POTENTIAL SLIDE CONDITIONS ARE OBSERVED, WORK SHOULD CEASE, AND A GEOTECHNICAL ENGINEER SHOULD BE CONTACTED IMMEDIATELY. THE RESPONSIBILITY FOR EXCAVATION SAFETY AND STABILITY OF TEMPORARY CONSTRUCTION SLOPES SHOULD LE SOLELY WITH THE CONTRACTOR.

2.2 – TYPICAL PRACTICES TO BE APPLIED TO THE SITE INCLUDE THE FOLLOWING:

A. PRIOR TO EARTH DISTURBANCE IN ANY WORK AREA, INSTALL EROSION CONTROL BARRIERS BETWEEN THE WORK AREA AND THE SURFACE WATER RESOURCE TO WHICH IT DRAINS.

B. DISCHARGE WATER FROM DEWATERING OPERATIONS TO A TEMPORARY SILTATION TRAP OR SEDIMENTATION BASIN.

C. PROVIDE TEMPORARY BERMS AND SWALES TO DIVERT SURFACE WATER AWAY FROM THE AREAS THAT WILL BE EXPOSED BY CONSTRUCTION ACTIVITY TO MINIMIZE THE AMOUNT OF SURFACE WATER COMING INTO CONTACT WITH EXPOSED SOILS. PROVIDE STABLE OUTLETS FOR THESE DEVICES, AND LINE OR VEGETATE THESE DIVERSIONS TO PROVIDE FOR THEIR STABILITY DURING CONSTRUCTION.

D. LIMIT THE EXTENT OF EXPOSED SOILS TO AREAS THAT CAN BE WORKED AND RESTABILIZED WITHIN THE CONSTRUCTION SEASON AND DURING THE SPECIFIC CONSTRUCTION PHASE.

E. WHEN EARTHWORK CONSTRUCTION ACTIVITY IN AN AREA IS COMPLETE, STABILIZE THE AREA WITH A SUITABLE SURFACE AS DESCRIBED BELOW.

F. IN ADDITION TO THESE PRACTICES, FOLLOW THE SPECIAL PRACTICES DESCRIBED BELOW, COUPLED WITH THE DIRECTIONS OF THE APPLICANT'S REPRESENTATIVE TO ADDRESS EROSION AND SEDIMENTATION CONDITIONS THAT MAY ARISE ON A CASE BY CASE BASIS DURING CONSTRUCTION.

G. THE FOLLOWING IS A DESCRIPTION OF MINIMUM CONSTRUCTION REQUIREMENTS AND DOES NOT RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITIES WITH REGARD TO DETERMINING THE ADEQUACY OF MEANS AND METHODS OF CONSTRUCTION.

2.3 – CONSTRUCTION SEQUENCING

A. SEQUENCING SHALL BE AS SHOWN ON THE PLAN AND AS DICTATED BY THE REQUIREMENTS OF CONSTRUCTION. SEE SHEET C-10.3 FOR DETAILED CONSTRUCTION SEQUENCING.

2.4 – MAINTENANCE

A. DURING THE PERIOD OF CONSTRUCTION AND/OR UNTIL LONG TERM VEGETATION IS ESTABLISHED:

B. SEDED AREAS WILL BE FERTILIZED AND RESEEDED AS NECESSARY TO INSURE VEGETATION ESTABLISHMENT.

C. TEMPORARY SEDIMENTATION BASINS WILL BE CHECKED AFTER EACH SIGNIFICANT RAINFALL AND CLEANED AS NEEDED TO RETAIN STORAGE CAPACITY.

D. TEMPORARY DRAINAGE SWALES WILL BE CHECKED WEEKLY AND REPAIRED WHEN NECESSARY.

E. THE EROSION CONTROL BARRIERS AND OTHER EROSION AND SEDIMENT CONTROL MEASURES/DEVICES SHALL BE INSPECTED, CLEANED, REPLACED, AND/OR REPAIRED AS NECESSARY, PERIODICALLY AND AFTER EACH SIGNIFICANT RAINFALL.

F. SWEEP ON-SITE PAVED AREAS AND OFF-SITE STREETS AS NECESSARY TO PREVENT SILT AND DEBRIS ORIGINATING ON-SITE FROM ENTERING CLOSED DRAINAGE SYSTEMS AND/OR ENVIRONMENTALLY SENSITIVE AREAS. WHEN NECESSARY UTILIZE WATER SPRAYING, SURFACE ROUGHENING AND/OR APPLY POLYMERS, SPRAY-ON TACKIFIERS, CHLORIDES AND BARRIERS FOR DUST CONTROL.

2.5 – GENERAL

A. ALL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE CONSTRUCTED IN ACCORDANCE WITH (USA) NATURAL RESOURCES CONSERVATION SERVICE (NRCS, FORMERLY SCS) GUIDELINES AND ALL LOCAL, COUNTY AND MUNICIPAL REGULATIONS.

B. EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE IN PLACE PRIOR TO THE COMMENCEMENT OF ANY WORK OR EARTHWORK OPERATIONS. SHALL BE MAINTAINED DURING CONSTRUCTION, AND SHALL REMAIN IN PLACE UNTIL ALL SITE WORK IS COMPLETE AND GROUNDCOVER IS ESTABLISHED.

C. ALL WORK SHALL BE IN ACCORDANCE WITH THE PERMITS AND APPROVALS ISSUED AND THE CONSTRUCTION SPECIFICATIONS. PRIOR TO ANY BLASTING, THE CONTRACTOR SHALL CONDUCT A PRE-BLAST SURVEY OF ALL DWELLINGS WITHIN THREE HUNDRED (300') FEET OF THE SITE.

PART 2 – CONTINUED

D. STOCKPILES SHALL BE SURROUNDED ON THEIR PERIMETERS WITH STAKED HAYBALES AND/OR SILTATION FENCES TO PREVENT AND/OR CONTROL SILTATION AND EROSION.

E. TOPS OF STOCKPILES SHALL BE COVERED IN SUCH A MANNER THAT STORMWATER DOES NOT INFILTRATE THE MATERIALS AND THEREBY RENDER THE SAME UNSUITABLE FOR FILL USE.

F. ALL DISTURBED OR EXPOSED AREAS SHALL BE PERMANENTLY STABILIZED WITHIN FIVE (5) BUSINESS DAYS OF COMPLETION OF CONSTRUCTION OF A GIVEN AREA. EXPOSED AREAS WHERE NO WORK HAS OCCURRED FOR FOURTEEN (14) DAYS SHALL BE TEMPORARILY STABILIZED WITH HYDROSEED OR OTHER APPROVED METHOD.

G. THE LOCATION OF TEMPORARY DRAINAGE SWALES AND SEDIMENTATION TRAPS ARE APPROXIMATE ONLY AND SHALL BE RELOCATED AS REQUIRED AS CONSTRUCTION PROGRESSES.

H. EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE IN PLACE PRIOR TO THE COMMENCEMENT OF ANY SITE WORK OR EARTHWORK OPERATIONS, SHALL BE MAINTAINED DURING CONSTRUCTION, AND SHALL REMAIN IN PLACE UNTIL ALL SITE WORK IS COMPLETE AND GROUNDCOVER IS ESTABLISHED.

I. ALL WORK SHALL BE IN ACCORDANCE WITH THE PERMITS AND APPROVALS ISSUED AND THE CONSTRUCTION SPECIFICATIONS. PRIOR TO ANY BLASTING, THE CONTRACTOR SHALL CONDUCT A PRE-BLAST SURVEY OF ALL DWELLINGS WITHIN THREE HUNDRED (300') FEET OF THE SITE.

J. STOCKPILES SHALL BE SURROUNDED ON THEIR PERIMETERS WITH STAKED HAYBALES AND/OR SILTATION FENCES TO PREVENT AND/OR CONTROL SILTATION AND EROSION.

K. TOPS OF STOCKPILES SHALL BE COVERED IN SUCH A MANNER THAT STORMWATER DOES NOT INFILTRATE THE MATERIALS AND THEREBY RENDER THE SAME UNSUITABLE FOR FILL USE.

L. WITHIN FIVE (5) BUSINESS DAYS OF COMPLETION OF CONSTRUCTION OF A GIVEN AREA, EXPOSED AREAS WHERE NO WORK HAS OCCURRED FOR FOURTEEN (14) DAYS SHALL BE TEMPORARILY STABILIZED WITH HYDROSEED OR OTHER APPROVED METHOD.

M. THE LOCATION OF TEMPORARY DRAINAGE SWALES AND SEDIMENTATION TRAPS ARE APPROXIMATE ONLY AND SHALL BE RELOCATED AS REQUIRED AS CONSTRUCTION PROGRESSES.

N. HAYBALES DIES SHALL BE CONSTRUCTED AT ALL EXISTING & PROPOSED CATCH BASINS LOCATED IN FILL AREAS & SUBJECT TO STORMWATER RUN-OFF FROM PROPOSED FILL AREAS DURING CONSTRUCTION, OR AS DIRECTED BY THE OWNER'S REPRESENTATIVE. NO SEDIMENTS SHALL ENTER THE ON-SITE OR OFF-SITE DRAINAGE SYSTEMS AT ANY TIME.

O. CULVERT/PIPE INLETS AND OUTFALLS SHALL BE PROTECTED BY HAYBALE FILTERS UNTIL DISTURBED AREAS ARE PERMANENTLY STABILIZED.

P. EROSION CONTROLS SHALL BE PERIODICALLY INSPECTED AND REPLACED AS REQUIRED.

Q. ALL PROPOSED NON-RIPRAP SLOPES STEEPER THAN 3:1 SHALL BE STABILIZED WITH EXCELSIOR BLANKETS AND PROTECTED FROM EROSION.

R. THE CONTRACTOR SHALL KEEP ON SITE AT ALL TIMES ADDITIONAL HAYBALES AND EXTRA SILTATION FENCING FOR INSTALLATION AT THE DIRECTION OF THE OWNER'S REPRESENTATIVE OR LOCAL OFFICIALS TO MITIGATE ANY EMERGENCY CONDITION.

S. DISPOSAL OF ALL DEMOLISHED MATERIALS IS THE RESPONSIBILITY OF THE CONTRACTOR AND MUST BE HAULED OFF-SITE IN ACCORDANCE WITH ALL FEDERAL, STATE, AND LOCAL MUNICIPAL REQUIREMENTS.

T. THE CONTRACTOR SHALL PROTECT AND/OR CAP OFF ALL EXISTING ON-SITE UTILITY SERVICES DESIGNATED AS SUCH ON THESE DRAWINGS.

U. THE LIMIT OF WORK LINE FOR THE AREA TO BE CLEARED AND GRUBBED SHALL BE THE SAME AS THE LIMIT OF WORK LINE NECESSARY FOR GRADING PURPOSES, (I.E., THE GRADING LIMITS AROUND THE PERIMETER OF THE PROJECT AREA).

V. THE AREA OR AREAS OF ENTRANCE AND EXIT TO AND FROM THE SITE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT INTO PUBLIC RIGHTS-OF-WAY. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.

W. FOLLOWING THE ADDITION OF A BINDER COURSE, THE CONTRACTOR SHALL SWEEP ALL ON-SITE PAVEMENT, IF NECESSARY, UNTIL ALL SITE CONSTRUCTION IS COMPLETED.

X. THE MATERIALS AND METHODS USED IN THE CONSTRUCTION OF ROADWAYS SHALL CONFORM TO THE REQUIREMENTS OF THE BELLINGHAM SUBDIVISION REGULATIONS; WHEN NO TOWN SPECIFICATION IS PROVIDED, THE MATERIALS AND METHODS USED IN THE CONSTRUCTION OF ROADWAYS SHALL CONFORM TO THE REQUIREMENTS OF "THE COMMONWEALTH OF MASSACHUSETTS, DEPARTMENT OF PUBLIC WORKS, STANDARDS & SPECIFICATIONS FOR HIGHWAYS & BRIDGES," LATEST EDITION.

Y. FOUNDATION DRAINS SHALL BE PROVIDED AND SHALL DISCHARGE BY GRAVITY OR MECHANICAL MEANS INTO AN APPROVED DRAINAGE SYSTEM THAT COMPLIES WITH THE INTERNATIONAL PLUMBING CODE.

PART 3 – STORM DRAINS

A. UNLESS INDICATED OTHERWISE, STORM DRAIN PIPING (INDICATED BY LETTER "D") SHALL BE CLASS V REINFORCED CONCRETE PIPE (RCP) PER AASHTO M170 MANUFACTURED TO MEET ASTM C76.

B. STORM DRAIN MANHOLES (INDICATED BY LETTERS "DMH") SHALL BE PRECAST 4', 5' OR 6' DIAMETER CONCRETE PER ASTM C478 (AS CALLED FOR ON DRAWINGS OR FIELD CONDITIONS REQUIRE) WITH RUBBER GASKET JOINTS CONFORMING TO ASTM C443. PIPE TO MANHOLE CONNECTIONS SHALL BE MORTARED PIPE OPENINGS.

C. CATCH BASINS (INDICATED BY LETTERS "CB") SHALL BE PRECAST 5' DIAMETER CONCRETE PER ASTM C478, (ALTERNATE TOP SLAB WHERE NECESSARY) AND RUBBER GASKET JOINTS CONFORMING TO ASTM C443, WITH 4 FOOT SUMPS AND GAS TRAP OUTLET ELBOW PIPE TO STRUCTURE CONNECTIONS SHALL BE MORTARED PIPE OPENINGS.

D. COORDINATES OF MANHOLES REFER TO CENTERS OF STRUCTURES AND CATCH BASINS REFER TO THE CENTER BACK OF THE FRAME AND GRATE.

E. FLARED END SECTIONS (FES) SHALL BE CLASS V REINFORCED CONCRETE PIPE (RCP) PER AASHTO M170 MANUFACTURED TO MEET ASTM C76.

PART 4 – UTILITIES

A. DURING THE PERIOD OF CONSTRUCTION AND/OR UNTIL LONG TERM VEGETATION IS ESTABLISHED:

B. SEDED AREAS WILL BE FERTILIZED AND RESEEDED AS NECESSARY TO INSURE VEGETATION ESTABLISHMENT.

C. TEMPORARY SEDIMENTATION BASINS WILL BE CHECKED AFTER EACH SIGNIFICANT RAINFALL AND CLEANED AS NEEDED TO RETAIN STORAGE CAPACITY.

D. TEMPORARY DRAINAGE SWALES WILL BE CHECKED WEEKLY AND REPAIRED WHEN NECESSARY.

E. THE EROSION CONTROL BARRIERS AND OTHER EROSION AND SEDIMENT CONTROL MEASURES/DEVICES SHALL BE INSPECTED, CLEANED, REPLACED, AND/OR REPAIRED AS NECESSARY, PERIODICALLY AND AFTER EACH SIGNIFICANT RAINFALL.

F. SWEEP ON-SITE PAVED AREAS AND OFF-SITE STREETS AS NECESSARY TO PREVENT SILT AND DEBRIS ORIGINATING ON-SITE FROM ENTERING CLOSED DRAINAGE SYSTEMS AND/OR ENVIRONMENTALLY SENSITIVE AREAS. WHEN NECESSARY UTILIZE WATER SPRAYING, SURFACE ROUGHENING AND/OR APPLY POLYMERS, SPRAY-ON TACKIFIERS, CHLORIDES AND BARRIERS FOR DUST CONTROL.

2.6 – CONSTRUCTION SEQUENCING

A. SEQUENCING SHALL BE AS SHOWN ON THE PLAN AND AS DICTATED BY THE REQUIREMENTS OF CONSTRUCTION. SEE SHEET C-10.3 FOR DETAILED CONSTRUCTION SEQUENCING.

B. EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE CONSTRUCTED IN ACCORDANCE WITH (USA) NATURAL RESOURCES CONSERVATION SERVICE (NRCS, FORMERLY SCS) GUIDELINES AND ALL LOCAL, COUNTY AND MUNICIPAL REGULATIONS.

C. ALL WORK SHALL BE IN ACCORDANCE WITH THE PERMITS AND APPROVALS ISSUED AND THE CONSTRUCTION SPECIFICATIONS. PRIOR TO ANY BLASTING, THE CONTRACTOR SHALL CONDUCT A PRE-BLAST SURVEY OF ALL DWELLINGS WITHIN THREE HUNDRED (300') FEET OF THE SITE.

PART 4 – CONTINUED

C. WHERE SANITARY SEWERS CROSS WATER MAINS, THE SEWER SHALL BE LAID AT SUCH AN ELEVATION THAT THE CROWN OF THE SEWER IS AT LEAST TWO FEET BELOW THE INVERT OF THE WATER MAIN. IF THE ELEVATION OF THE SEWER CANNOT BE VARIED TO MEET THIS REQUIREMENT, THE CONTRACTOR SHALL DO THE FOLLOWING:

• THE WATER MAIN SHALL BE RELOCATED TO PROVIDE THIS SEPARATION OR EACH SIDE OF THE SEWER, ONE FULL LENGTH OF WATER MAIN SHALL BE CENTERED OVER THE SEWER SO THAT BOTH JOINTS WILL BE AS FAR FROM THE SEWER AS POSSIBLE. IN ADDITION, THE WATER MAIN SHALL BE ENCASED IN CONCRETE, AS PER TOWN OF BELLINGHAM DPW STANDARDS.

D. PRIMARY ELECTRICAL ENCASED CONDUIT MUST BE SEPARATED FROM GAS BY 3' MIN. AND FROM OTHER UTILITIES BY 2' MINIMUM.

E. TELEPHONE AND FIRE ALARM WHICH SHARE THE SAME TRENCH MUST HAVE A 1' VERTICAL SEPARATION.

F. GAS MAINS MUST BE SEPARATED FROM OTHER UTILITIES BY 2' MINIMUM.

4.3 – ELECTRIC AND COMMUNICATIONS

A. INSTALLATION OF COMMUNICATIONS (TELEPHONE, CABLE AND FIRE ALARM) SYSTEMS SHALL BE COORDINATED AND SCHEDULED BY THE CONTRACTOR WITH THE APPROPRIATE UTILITY COMPANY SERVICING THE PROJECT SITE.

B. COORDINATES REFER TO THE CENTER OF STRUCTURES UNLESS OTHERWISE NOTED OR DETAILED. CONTRACTOR SHALL COORDINATE LIGHT BASE LOCATIONS WITH PROPOSED CURBING AND PARKING LOT STRIPPING.

C. CONTRACTOR IS RESPONSIBLE FOR VERIFYING ELECTRICAL SERVICE PRIOR TO ORDERING ANY EQUIPMENT.

4.4 – STREET LIGHTING

A. CONTRACTOR SHALL SUPPLY ALL LIGHTING PRODUCTS (OR APPROVED EQUALS) AS SHOWN ON THIS PLAN. ADDITIONAL LIGHTS MAY BE REQUIRED FOR LIGHTING ENTRANCEWAYS, SIGNS OR OTHER OUTDOOR AREAS OF SPECIAL LIGHTING INTEREST. IN NO CASE SHALL THE CONTRACTOR USE LESS LIGHTS THAN SHOWN.

B. ALL LIGHTING PRODUCTS AND ACCESSORIES, INCLUDING POLES AND MOUNTING UNITS, SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S SPECIFICATIONS. ALTERNATIVE PRODUCTS MAY BE USED IN LIGHTING ASSEMBLY AS LONG AS IT IS APPROVED BY THE MANUFACTURER.

C. EACH LIGHTING POLE IS TO BE EQUIPPED WITH LIGHTNING PROTECTION AS ESTABLISHED BY NFPA 780 (NATIONAL FIRE PROTECTION ASSOCIATION).

D. LIGHT TYPES AS INDICATED ON THIS PLAN ARE SUGGESTIONS ONLY. FINAL SELECTION OF LIGHT TYPES AND ASSEMBLIES TO BE DETERMINED AT TIME OF PURCHASE, DEPENDING ON AVAILABILITY, BALLAST, WATTAGE, QUANTITY AND POLE HEIGHT ARE NOT TO CHANGE WITHOUT PRIOR APPROVAL OF THE PLANNING

APPROVED

By Bellingham Planning Board at 10:10 am, Apr 12, 2018



Andrews Survey & Engineering, Inc.
Land Surveying - Civil Engineering - Site Planning

P.O. Box 312, 104 Mendon Street
Uxbridge, Massachusetts 01569
P: 508-278-3897 F: 508-278-2289

500 East Washington Street
North Attleboro, Massachusetts 02760
P: 508-316-0452 F: 508-316-0963

APPROVAL FOR SPECIAL PERMIT REQUIRED.
BELLINGHAM PLANNING BOARD

BEING A MAJORITY DATE:

THIS CERTIFIES THAT THE NOTICE OF APPROVAL OF THIS PLAN BY THE BELLINGHAM PLANNING BOARD HAS BEEN RECEIVED AND RECORDED ON AT
AND NO APPEAL WAS RECEIVED DURING THE 20 DAYS NEXT AFTER SUCH RECEIPT OF SAID NOTICE.

BELLINGHAM TOWN CLERK DATE

"HARTFORD VILLAGE II"
MULTI-FAMILY DEVELOPMENT
BELLINGHAM, MA 02019

K & S STALLBROOK TRUST
ONE STALLBROOK ROAD
MILFORD MA, 01757

OWNER/APPLICANT:

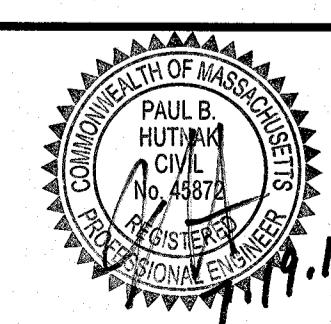
REVISIONS		
NO.	DATE	DESCRIPTION
1	8/24/16	NO CHANGE THIS SHEET
2	11/10/16	NO CHANGE THIS SHEET
3	2/14/17	NO CHANGE THIS SHEET
4	7/5/17	NO CHANGE THIS SHEET

DRAWN BY WMB
CHECKED BY PBH, SJO
DATE APRIL 4, 2016
PROJECT NO. 2014-260

GRAPHIC SCALE
80 0 40 80 160
(IN FEET)
1 inch = 80 feet

SHEET TITLE
AREA LOCUS &
ZONING DISTRICT
PLAN

DRAWING NO. C3
PLAN NO. L-4427



17



APPROVED

By Bellingham Planning Board at 10:10 am, Apr 12, 2016

GENERAL NOTES:

1. NOTICE TO CONTRACTOR: THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AND STRUCTURES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF VARIOUS UTILITIES COMPANIES, PLANS, DRAWINGS AND MEASUREMENTS TAKEN IN THE FIELD. THIS INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE LOCATION OF ALL UNDERGROUND UTILITIES AND STRUCTURES SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR MUST CONTACT THE APPROPRIATE UTILITY COMPANY AND GOVERNING PERMITTING AUTHORITY, AND DISAFE, AT LEAST 24 HOURS PRIOR TO ANY EXCAVATION WORK TO RELOCATE ANY UTILITIES. THE CONTRACTOR SHALL BE ADVISED IN WRITING OF ANY UTILITIES INTERFERING WITH THE PROPOSED CONSTRUCTION AND APPROPRIATE REMEDIAL ACTION SHALL BE TAKEN BEFORE PROCEEDING WITH THE WORK. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLAN.

2. PROPERTY BOUNDARIES SHOWN HEREON ARE SHOWN PER "PLAN OF LAND IN BELLINGHAM, MA" PREPARED FOR K & S REALTY, DATED MAY 8, 2000; APPROVED BY THE BELLINGHAM PLANNING BOARD ON MAY 25, 2000; RECORDED AT THE NORFOLK REGISTRY OF DEEDS ON JUNE 5, 2000 FILED AS NO. 289/PLN BK 479.

OBSERVATION TEST HOLE DATA
PERFORMED BY: BILL BLAIS, ANDREWS SURVEY
1/21/2014

0'-9"		
1212-1 ELEV. = 293.5	24'-120'	Ap SANDY LOAM
0'-10"	Bw SANDY LOAM	Bw SANDY LOAM
10'-24"	C LOAMY SAND	C LOAMY SAND
24'-120"		
MOTTLES @ 48° WEPPING @ 108° NO REFUSAL		

0'-9"		
1212-2 ELEV. = 265.5	36'-120'	Ap SANDY LOAM
0'-8"	Bw SANDY LOAM	Bw SANDY LOAM
8'-30"	C LOAMY SAND	C LOAMY SAND
30'-120"		
MOTTLES @ 32° WEPPING @ 96° NO REFUSAL		

0'-9"		
1212-3 ELEV. = 276.1	36'-120'	Ap SANDY LOAM
0'-9"	Bw SANDY LOAM	Bw SANDY LOAM
9'-26"	C LOAMY SAND	C LOAMY SAND
26'-120"		
MOTTLES @ 32° WEPPING @ 108° NO REFUSAL		

0'-9"		
1212-4 ELEV. = 284.5	36'-120'	Ap SANDY LOAM
0'-8"	Bw SANDY LOAM	Bw SANDY LOAM
8'-30"	C LOAMY SAND	C LOAMY SAND
30'-120"		
MOTTLES @ 32° WEPPING @ 96° NO REFUSAL		

0'-9"		
1212-5 ELEV. = 270.1	36'-120'	Ap SANDY LOAM
0'-9"	Bw SANDY LOAM	Bw SANDY LOAM
9'-26"	C LOAMY SAND	C LOAMY SAND
26'-120"		
MOTTLES @ 32° WEPPING @ 108° NO REFUSAL		

0'-9"		
1116-1 ELEV. = 266.0	36'-120'	Ap SANDY LOAM
0'-9"	Bw SANDY LOAM	Bw SANDY LOAM
9'-26"	C LOAMY SAND	C LOAMY SAND
26'-120"		
MOTTLES @ 35° WEPPING @ 57° NO REFUSAL		

0'-9"		
1116-2 ELEV. = 266.0	36'-120'	Ap SANDY LOAM
0'-9"	Bw SANDY LOAM	Bw SANDY LOAM
9'-26"	C LOAMY SAND	C LOAMY SAND
26'-120"		
MOTTLES @ 32° WEPPING @ 84° NO REFUSAL		

0'-9"		
1116-3 ELEV. = 266.0	36'-120'	Ap SANDY LOAM
0'-9"	Bw SANDY LOAM	Bw SANDY LOAM
9'-26"	C LOAMY SAND	C LOAMY SAND
26'-120"		
MOTTLES @ 37° WEPPING @ 57° NO REFUSAL		

0'-9"		
1116-4 ELEV. = 265.7	36'-120'	Ap SANDY LOAM
0'-8"	Bw SANDY LOAM	Bw SANDY LOAM
8'-16"	C LOAMY SAND	C LOAMY SAND
16'-32"		
MOTTLES @ 34° WEPPING @ 63° NO REFUSAL		

0'-9"		
1116-5 ELEV. = 263.9	36'-120'	Ap SANDY LOAM
0'-8"	Bw SANDY LOAM	Bw SANDY LOAM
8'-16"	C LOAMY SAND	C LOAMY SAND
16'-32"		
MOTTLES @ 37° WEPPING @ 57° NO REFUSAL		

0'-9"		
1116-6 ELEV. = 263.9	36'-120'	Ap SANDY LOAM
0'-8"	Bw SANDY LOAM	Bw SANDY LOAM
8'-16"	C LOAMY SAND	C LOAMY SAND
16'-32"		
MOTTLES @ 37° WEPPING @ 57° NO REFUSAL		

BOH - MIKE CATALANO, TOWN OF BELLINGHAM, BOARD OF HEALTH
BOHCOM - MIKE CATALANO, TOWN OF BELLINGHAM, BOARD OF HEALTH & CLIFF MATTHEWS, TOWN OF BELLINGHAM, CONSERVATION COMMISSIONAndrews Survey & Engineering, Inc.
Land Surveying - Civil Engineering - Site PlanningP.O. Box 312, 104 Mendon Street
Uxbridge, Massachusetts 01569
P: 508-278-3897 F: 508-278-2289500 East Washington Street
North Attleboro, Massachusetts 02760
P: 508-316-0452 F: 508-316-0963APPROVAL FOR SPECIAL PERMIT REQUIRED.
BELLINGHAM PLANNING BOARDBEING A MAJORITY DATE:
THIS CERTIFIES THAT THE NOTICE OF APPROVAL OF THIS PLAN BY THE BELLINGHAM PLANNING BOARD HAS BEEN RECEIVED AND RECORDED ON
AND NO APPEAL WAS RECEIVED DURING THE 20 DAYS NEXT AFTER SUCH RECEIPT OF SAID NOTICE.

BELLINGHAM TOWN CLERK DATE

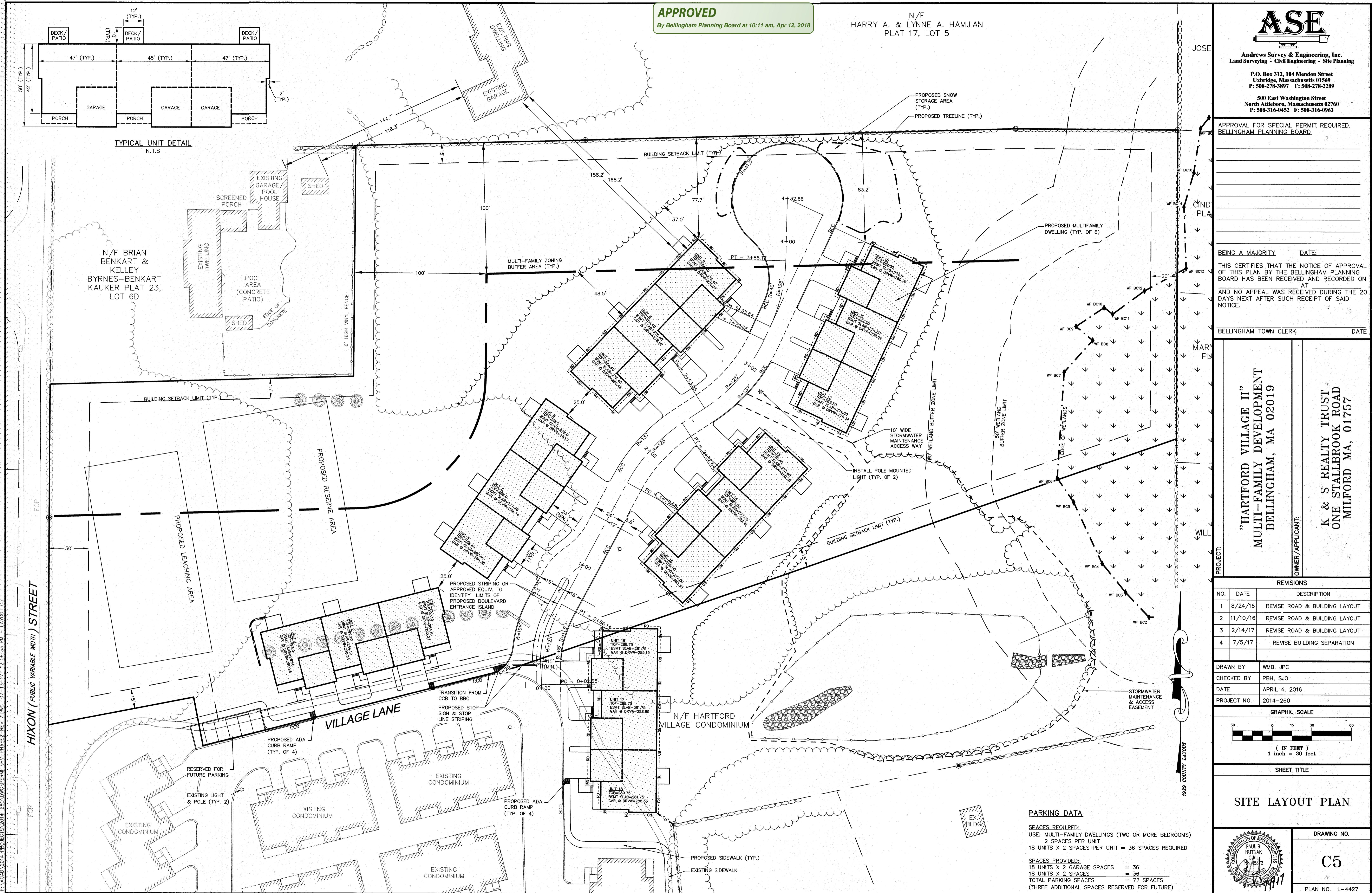
PROJECT: "HARTFORD VILLAGE II"
MULTI-FAMILY DEVELOPMENT
BELLINGHAM, MA 02019
OWNER/APPLICANT: K & S STALLBROOK TRUST
ONE STALLBROOK ROAD
MILFORD MA, 01757

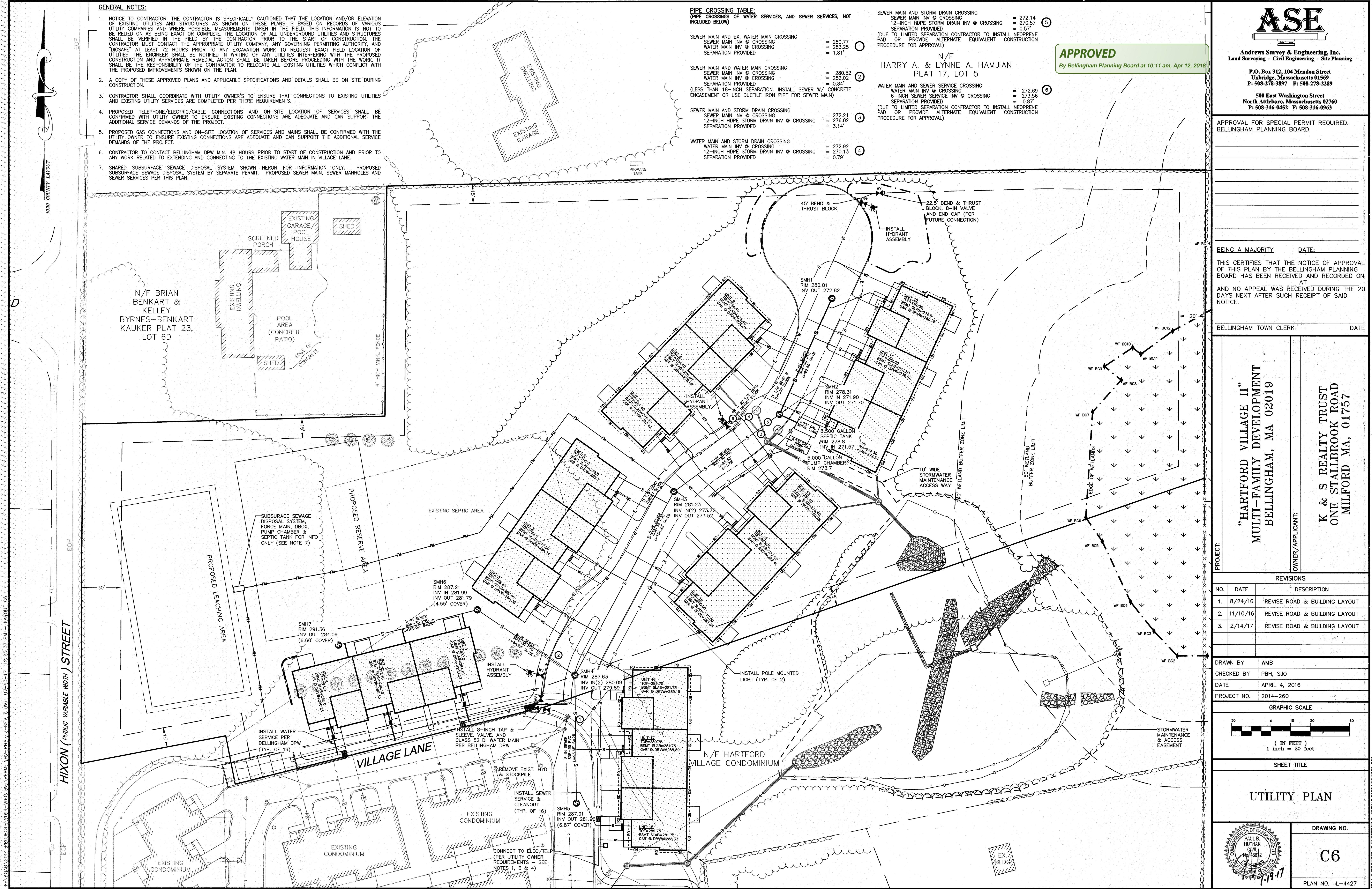
REVISIONS
NO. DATE DESCRIPTION
1 8/24/16 NO CHANGE THIS SHEET
2 11/10/16 REVISE EXISTING UTILITY LOCATIONS
3 2/14/17 NO CHANGE THIS SHEET
4 7/5/17 NO CHANGE THIS SHEET

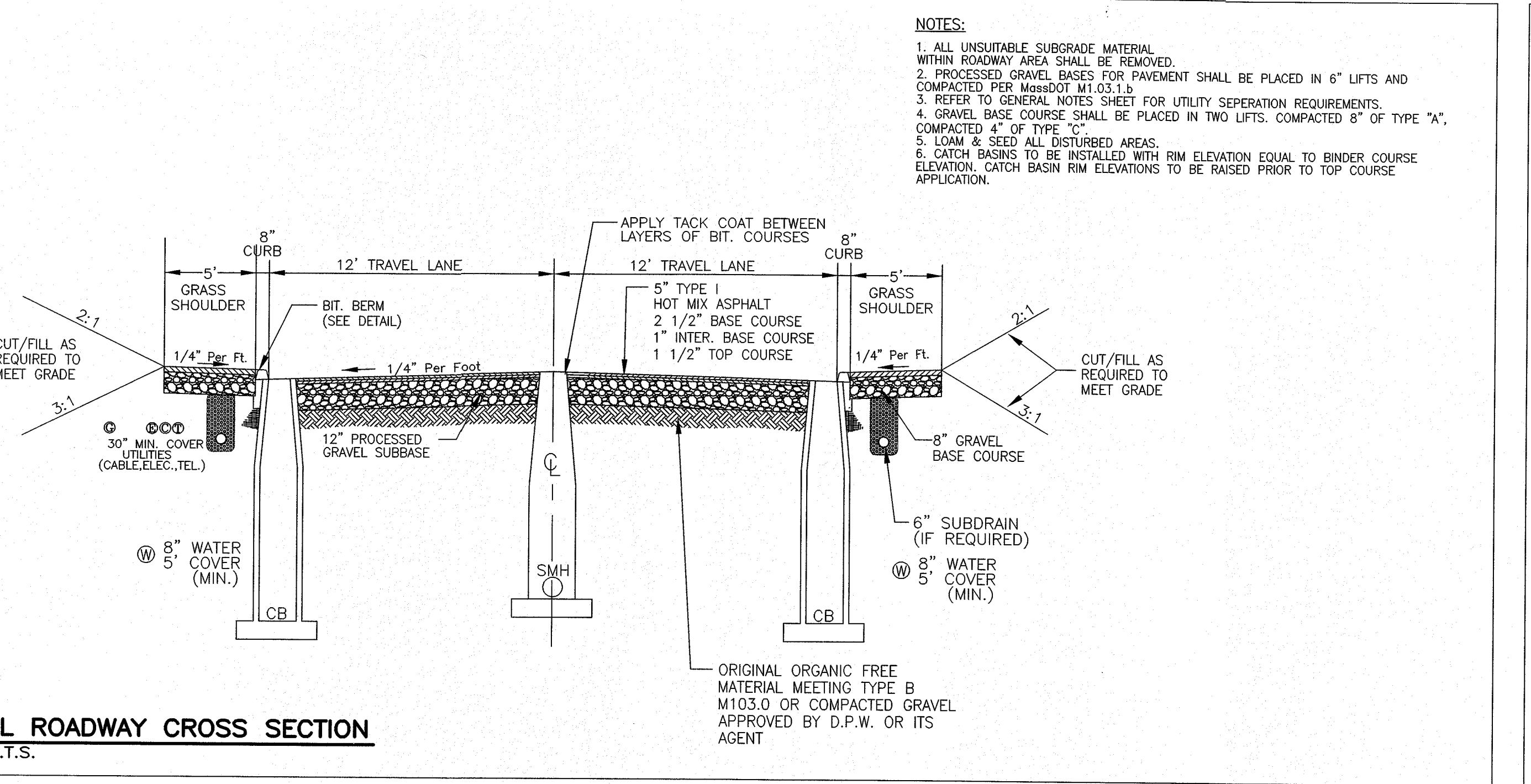
DRAWN BY WMB, JPC
CHECKED BY PBH, SJO
DATE APRIL 4, 2016
PROJECT NO. 2014-260

GRAPHIC SCALE
(IN FEET)
1 inch = 40 feet

SHEET TITLE
EXISTING CONDITIONS & DEMOLITION PLAN
DRAWING NO. C4
PLAN NO. L-4427
7/19/17
MASSACHUSETTS SURVEY & ENGINEERING, INC.
BYRON J. ANDREWS No. 47398
© 2014 BYRON J. ANDREWS SURVEY & ENGINEERING, INC.





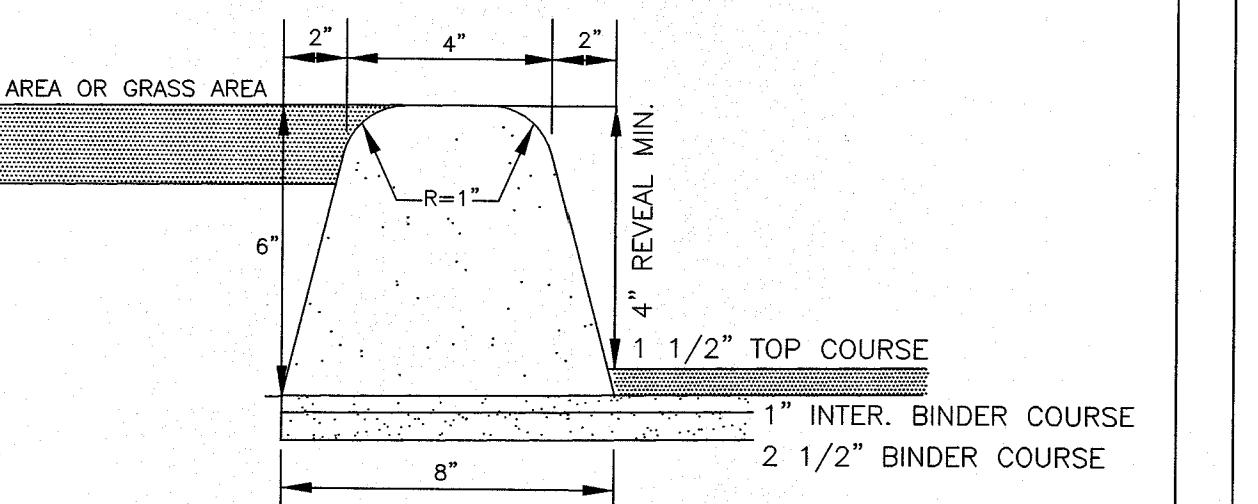


1 TYPICAL ROADWAY CROSS SECTION

SCALE: N.T.S.

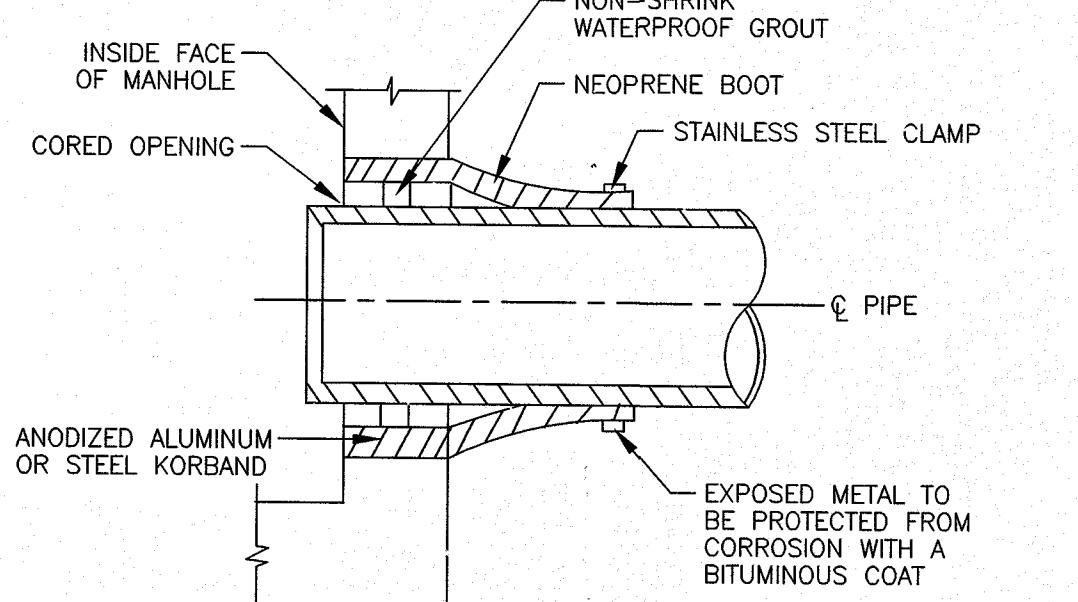
APPROVED

By Bellingham Planning Board at 10:12 am, Apr 12, 2018



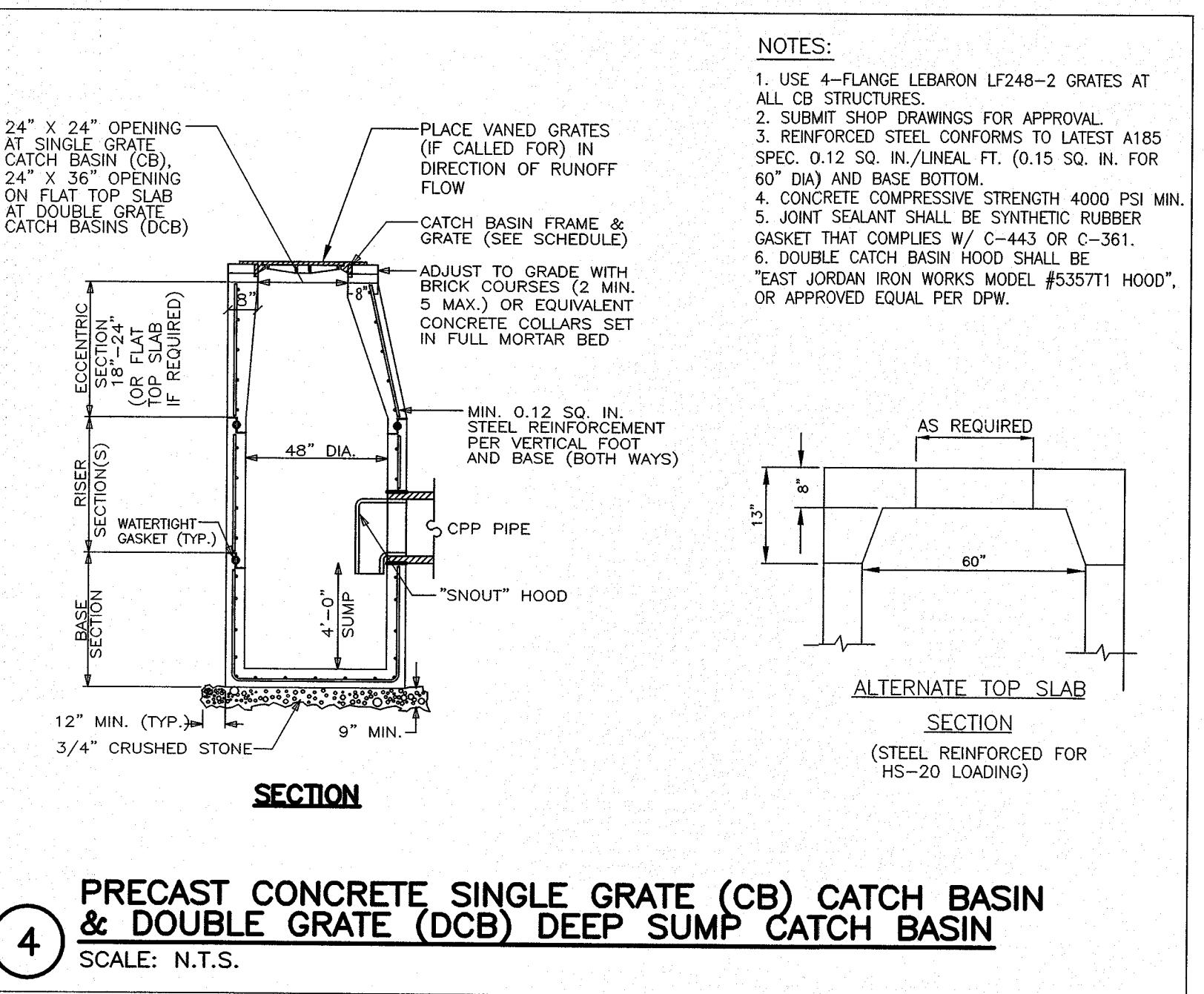
2 VERTICAL FACE BITUMINOUS BERM

SCALE: N.T.S.



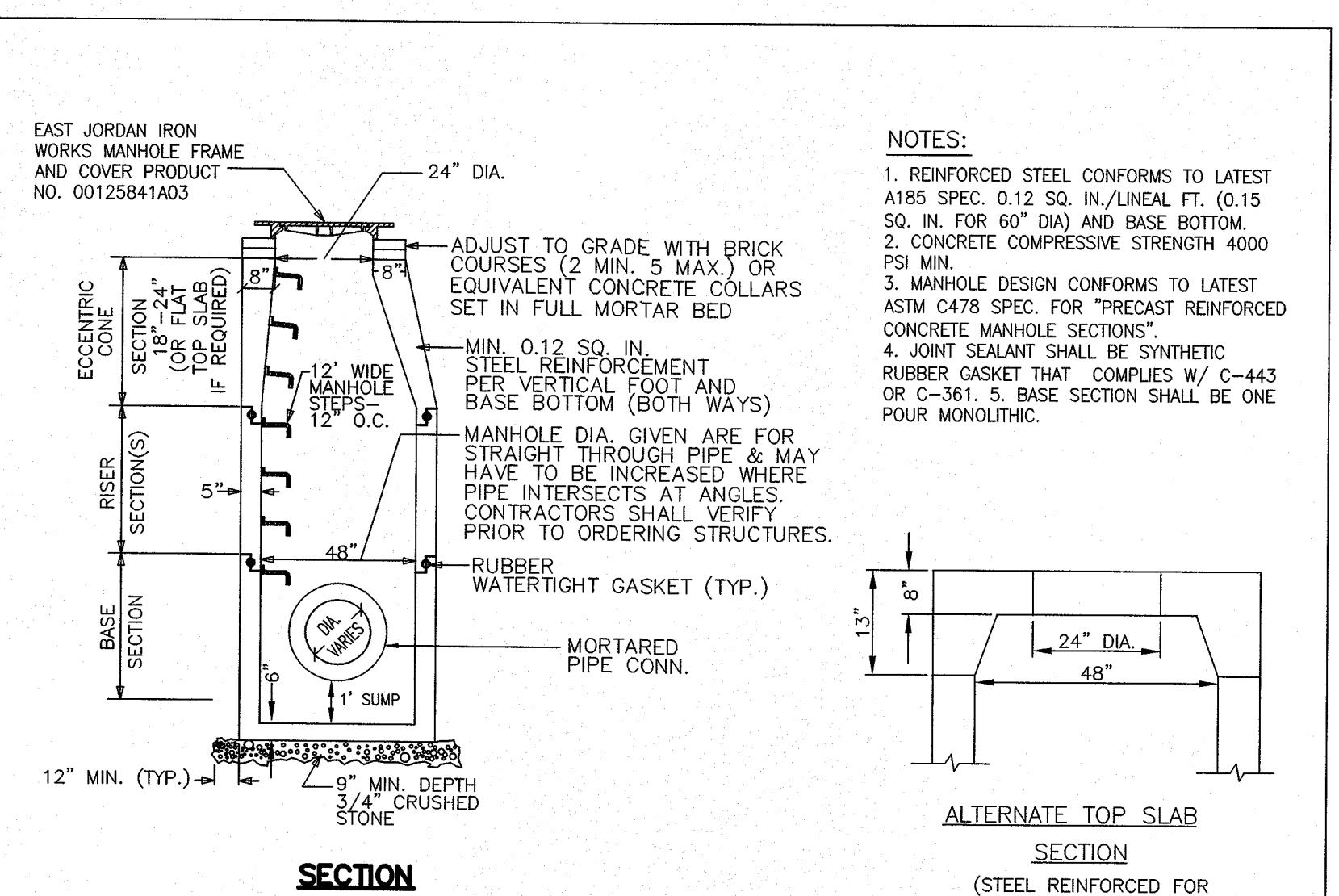
3 SEWER PIPE CONNECTION

SCALE: N.T.S.



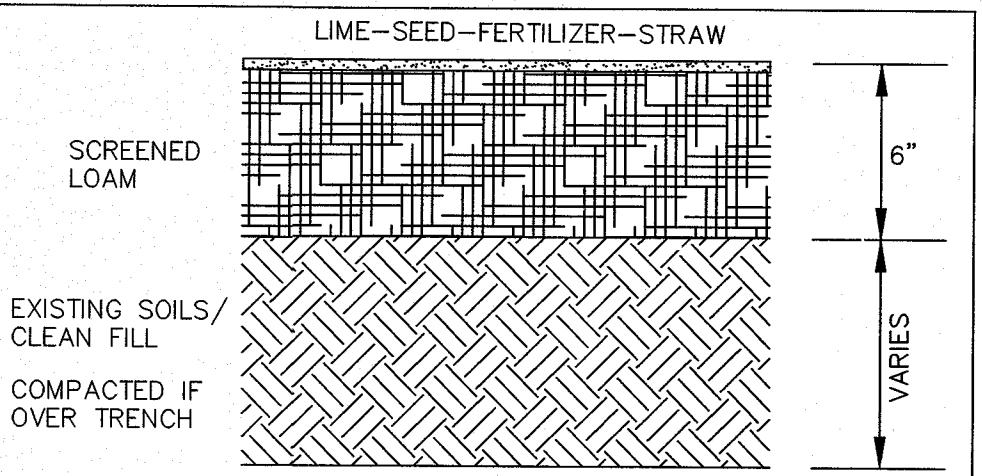
4 PRECAST CONCRETE SINGLE GRATE (CB) CATCH BASIN & DOUBLE GRATE (DCB) DEEP SUMP CATCH BASIN

SCALE: N.T.S.

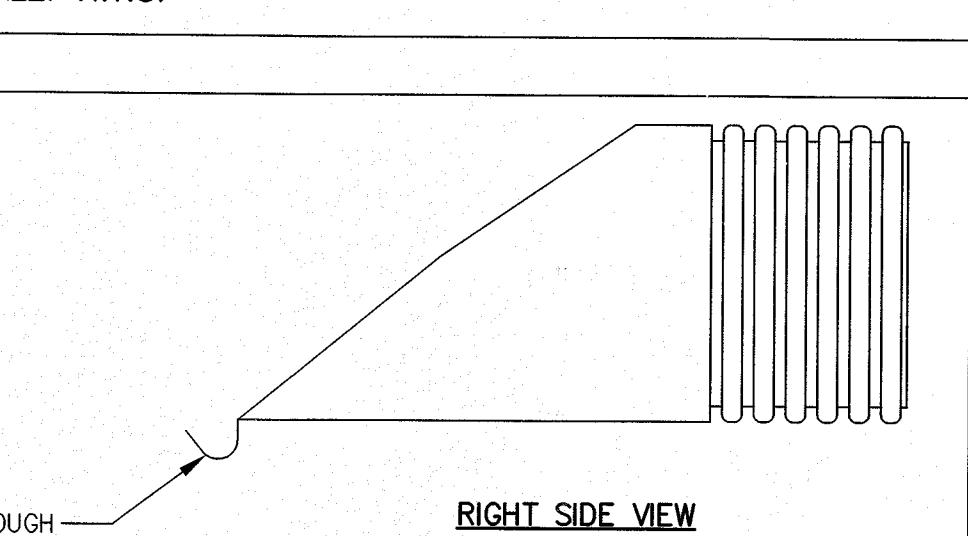


5 TYPICAL PRECAST CONCRETE 48" DIAMETER DRAIN MANHOLE (DMH) FOR PIPE DIAMETERS 24" OR LESS

SCALE: N.T.S.

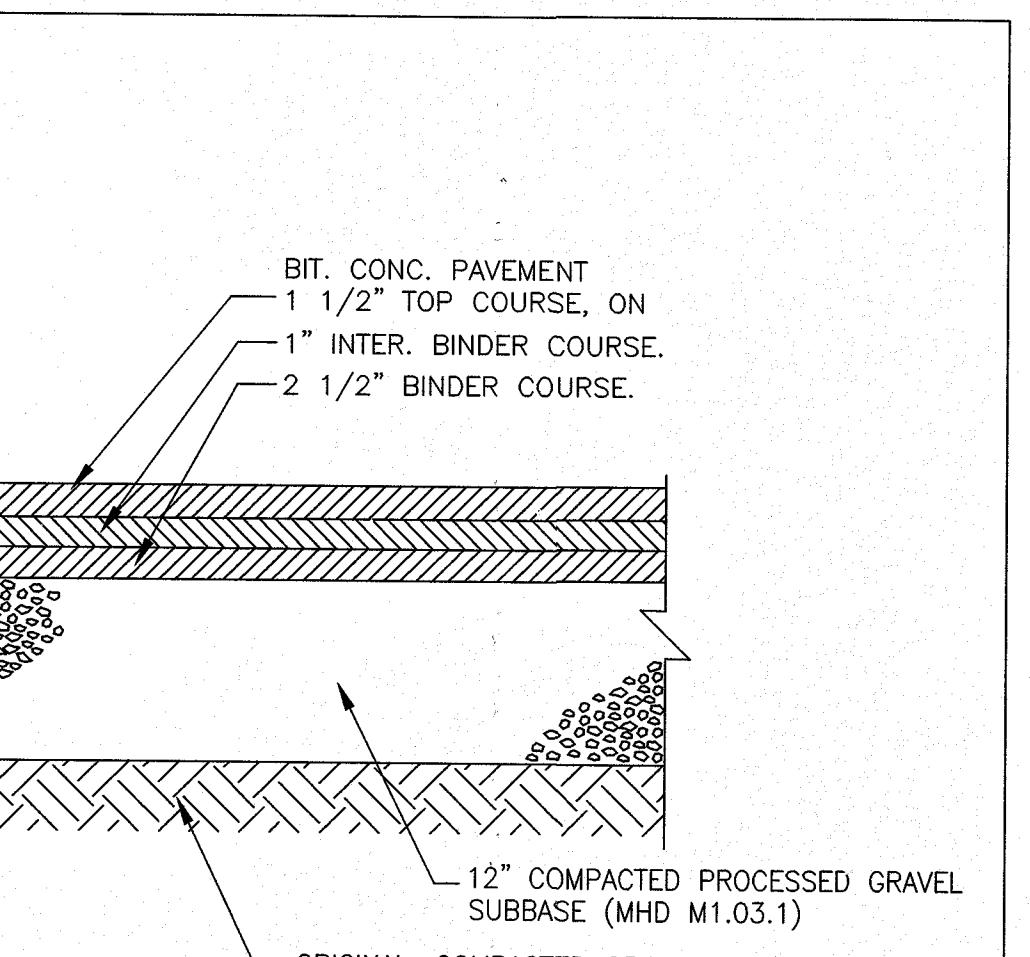


6 LOAM & SEED DETAIL



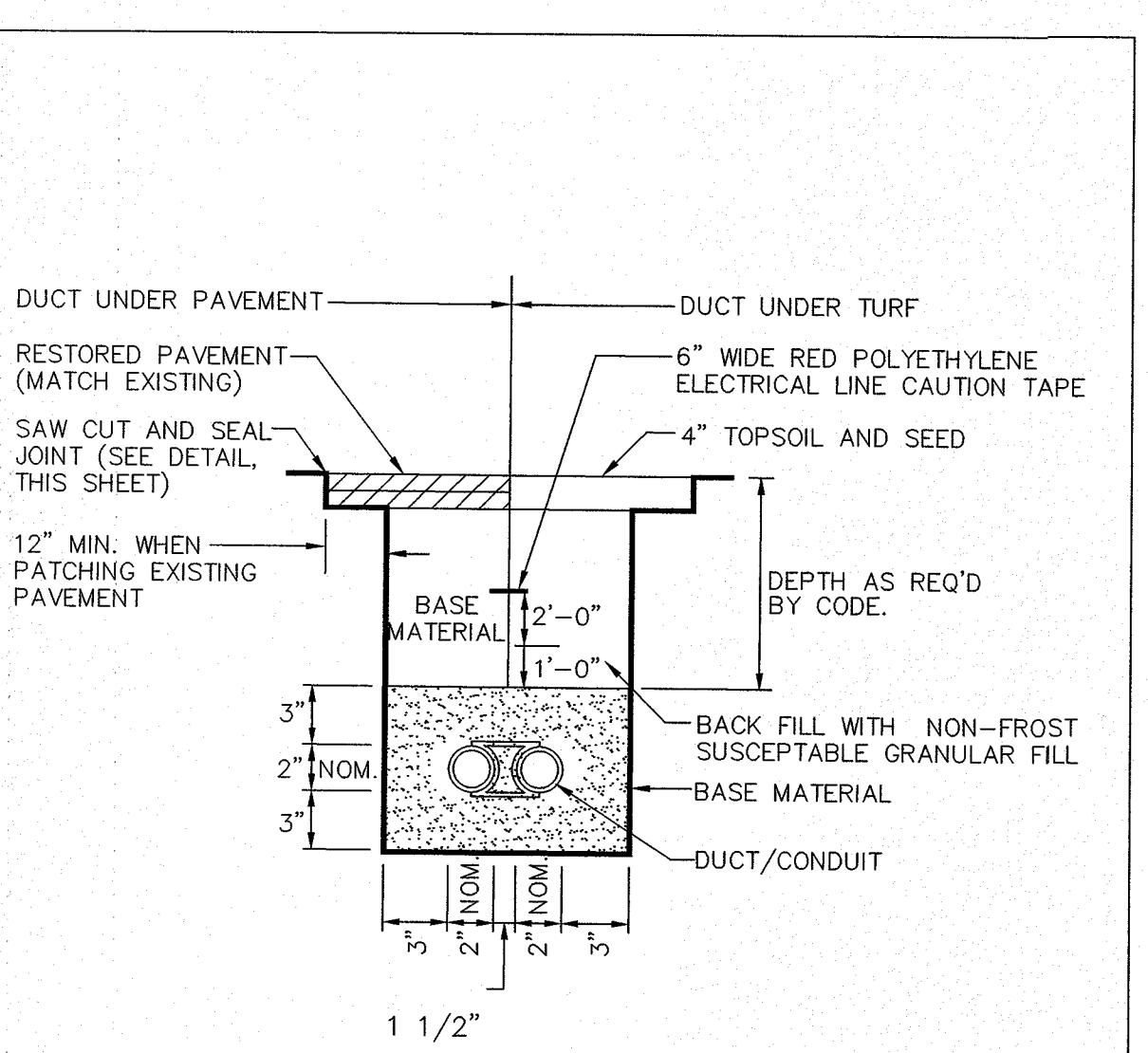
7 CORRUGATED POLYETHYLENE FLARED-END SECTION (FES)

SCALE: N.T.S.



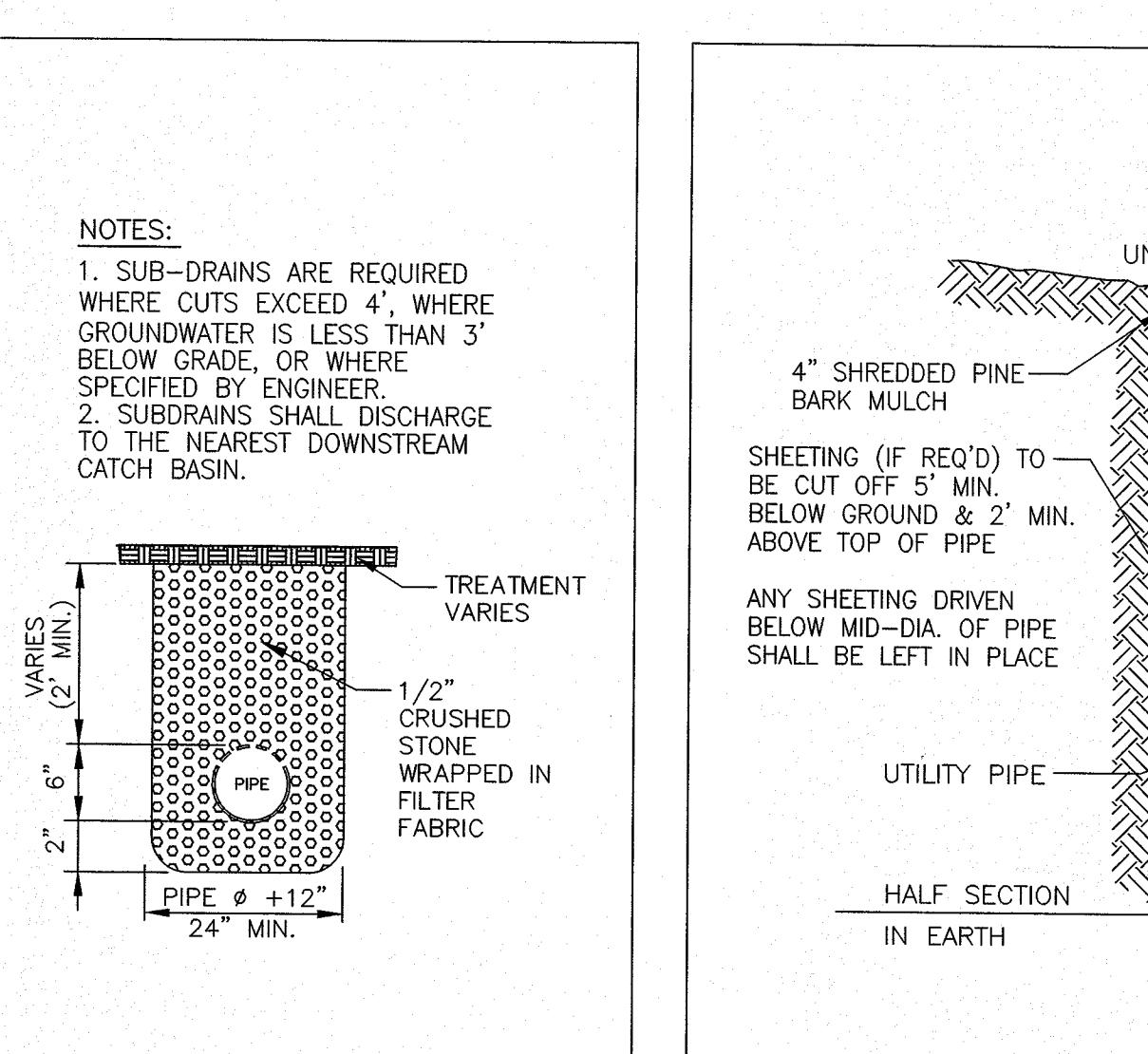
8 BITUMINOUS CONCRETE PAVEMENT DETAIL

SCALE: N.T.S.



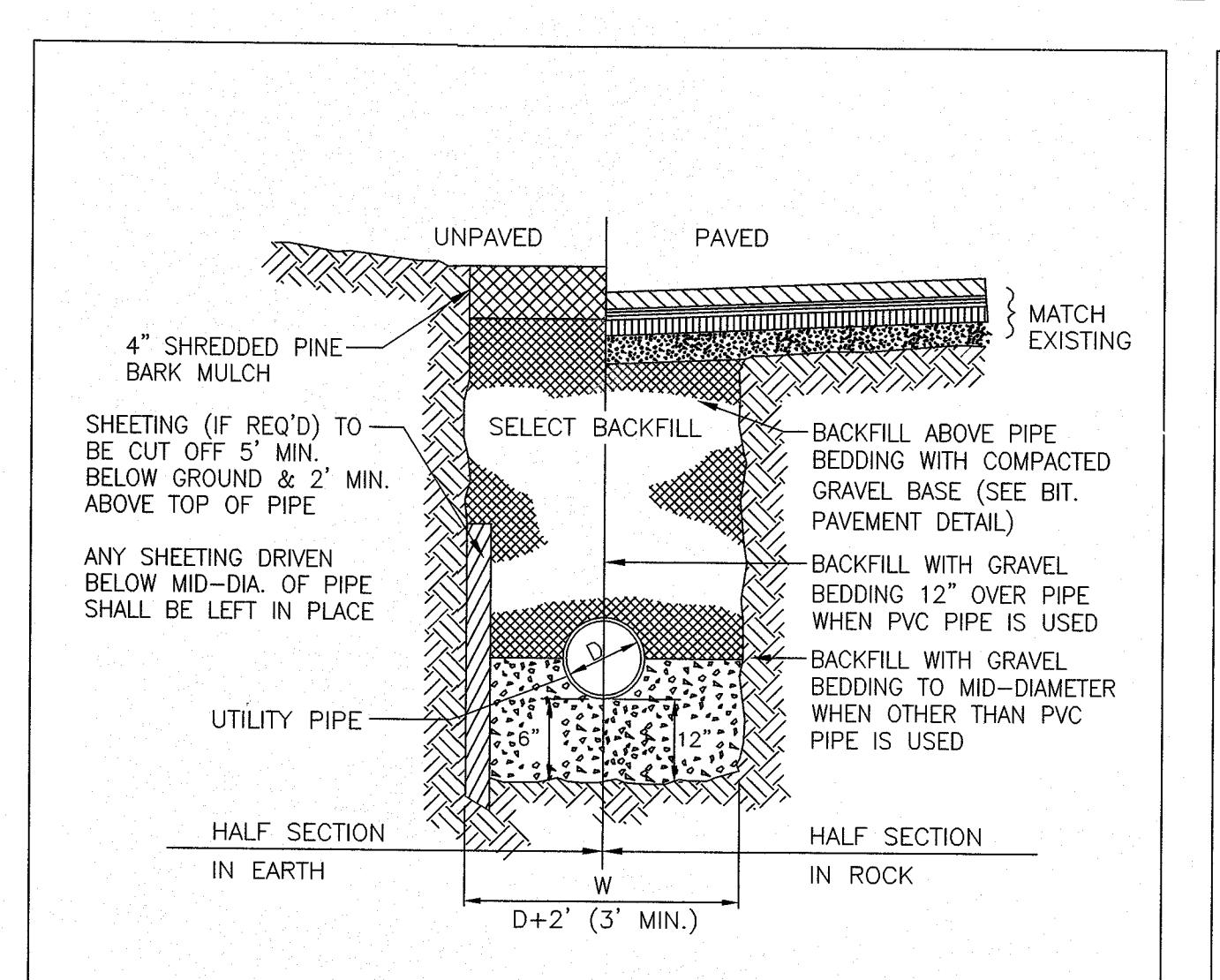
9 UNENCASED DUCT/CONDUIT DETAIL

SCALE: N.T.S.



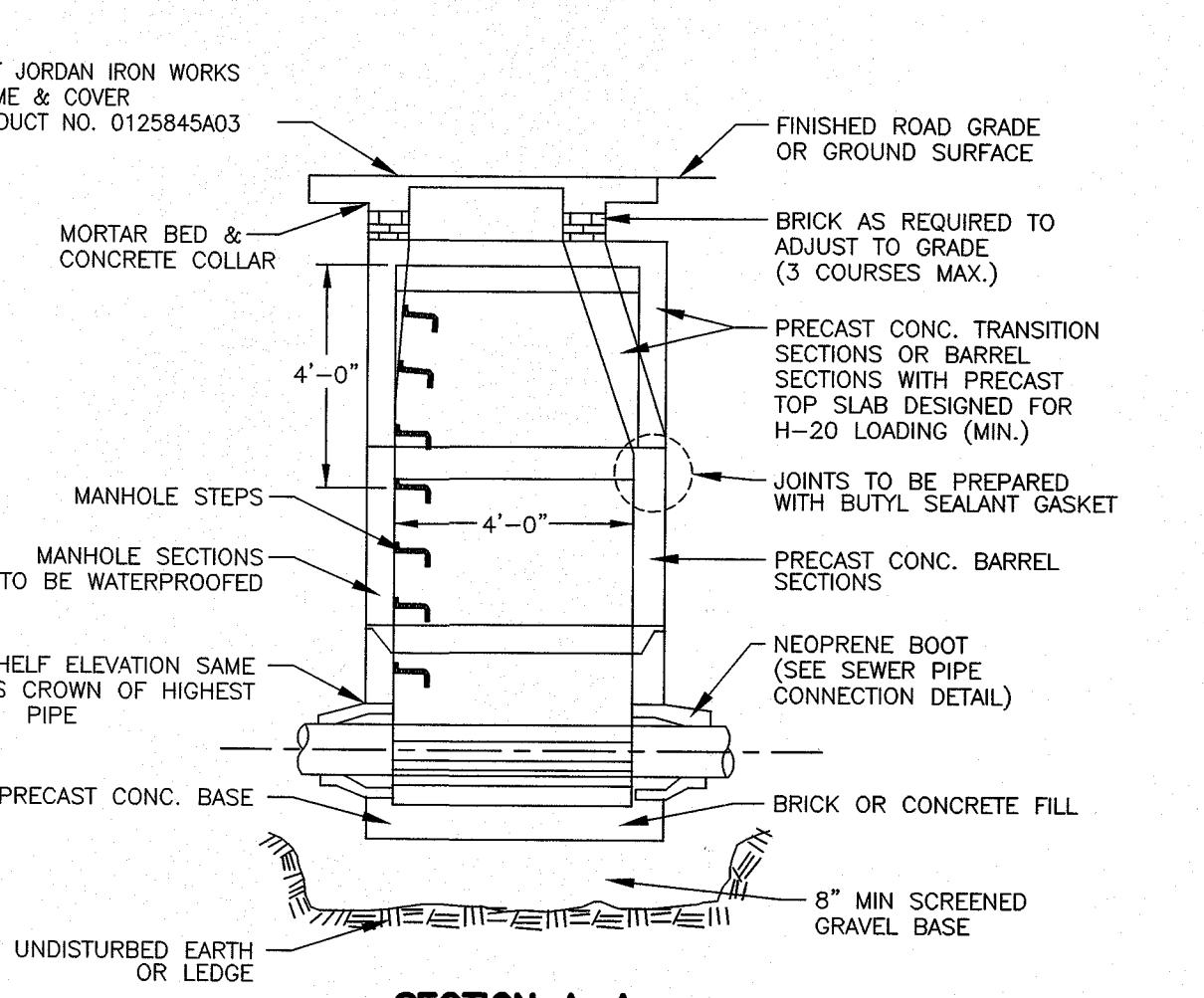
10 TYPICAL SUB-DRAIN

SCALE: N.T.S.



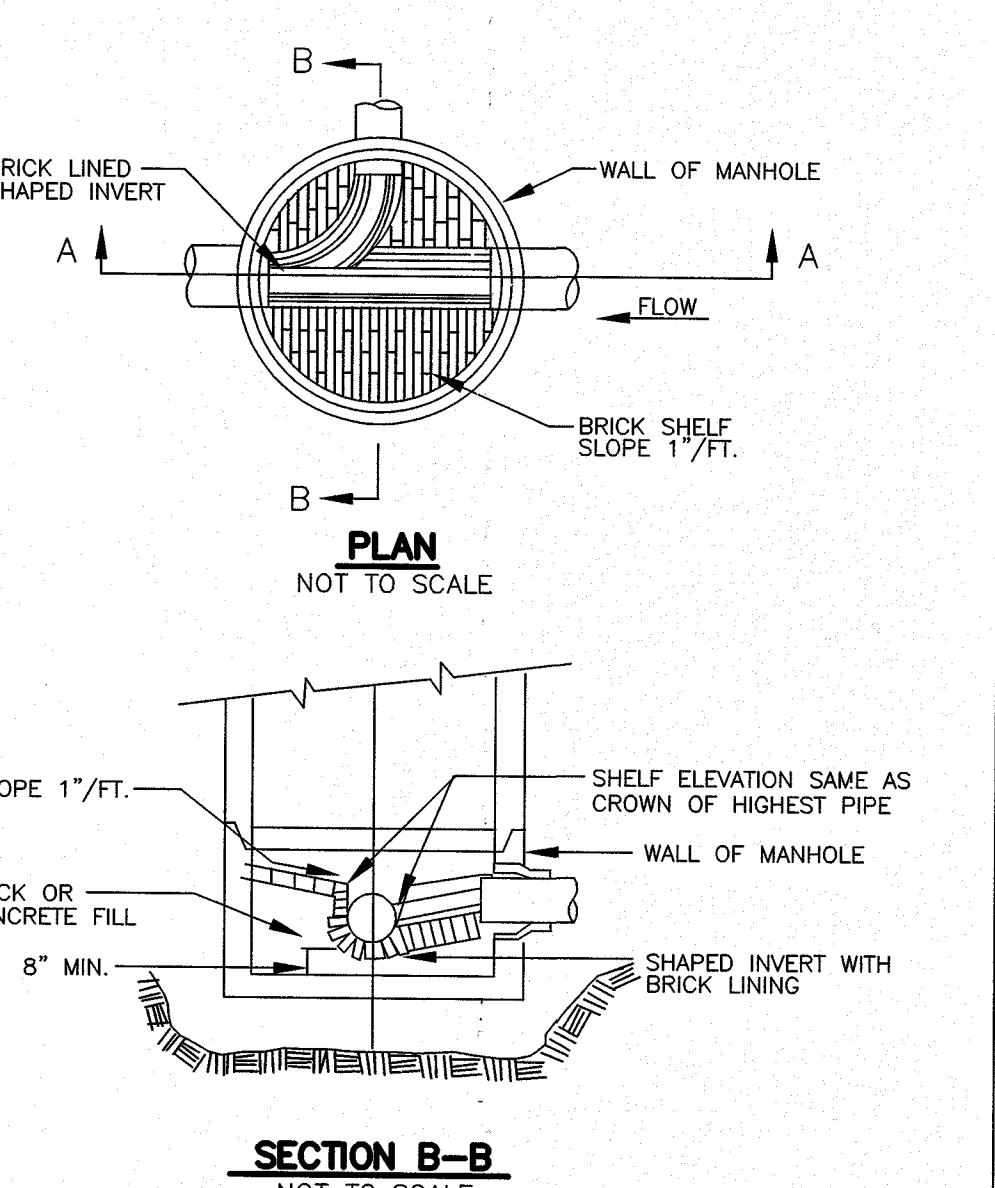
11 TYPICAL UTILITY TRENCH DETAIL

SCALE: N.T.S.



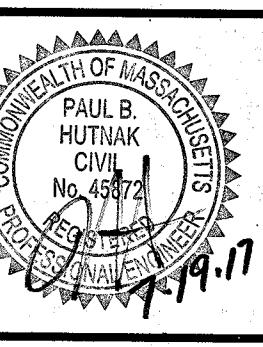
12 TYPICAL PRECAST CONCRETE 48" DIAMETER SEWER MANHOLE (SMH)

SCALE: N.T.S.



12 TYPICAL PRECAST CONCRETE 48" DIAMETER SEWER MANHOLE (SMH) SECTION B-B

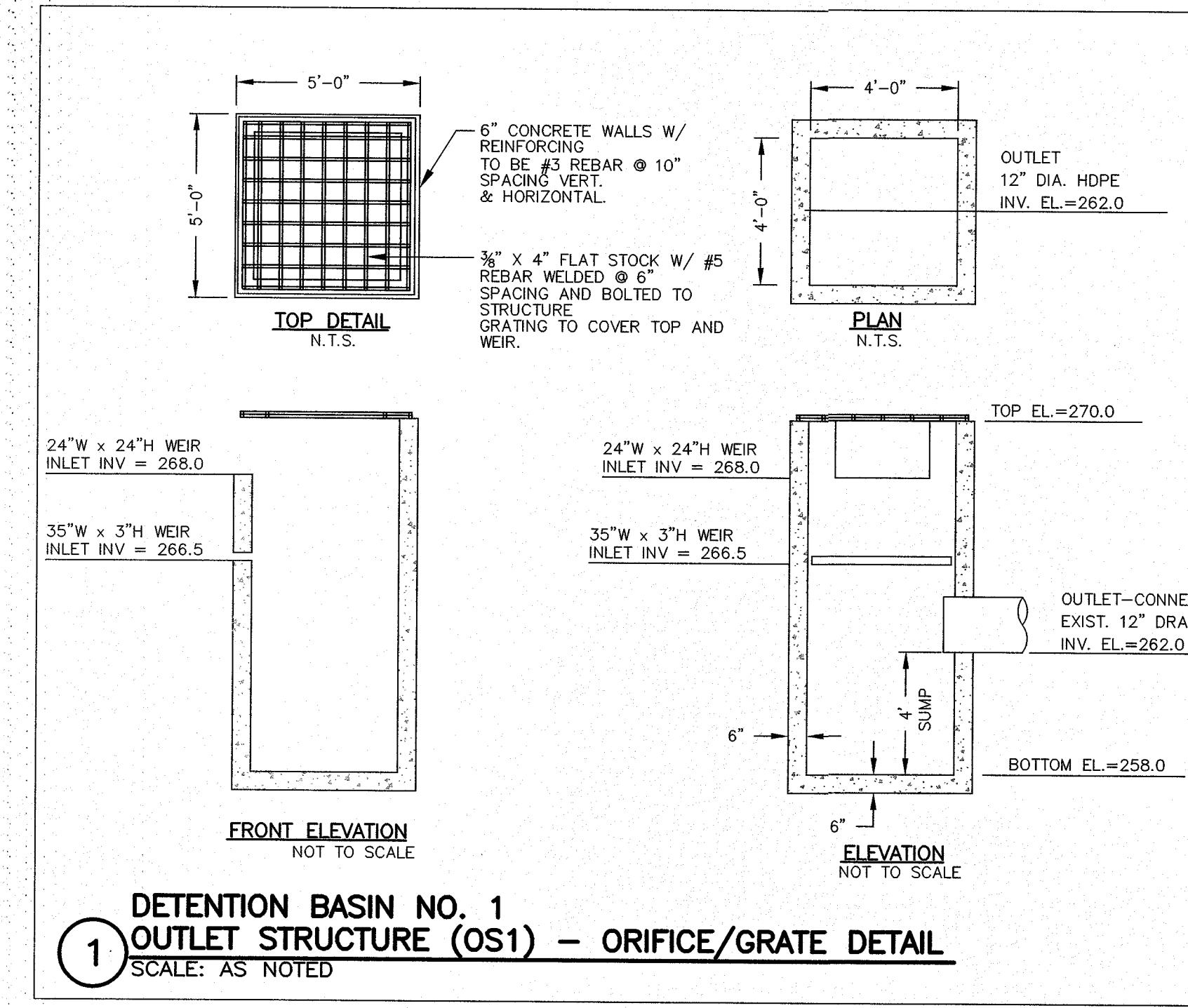
NOT TO SCALE



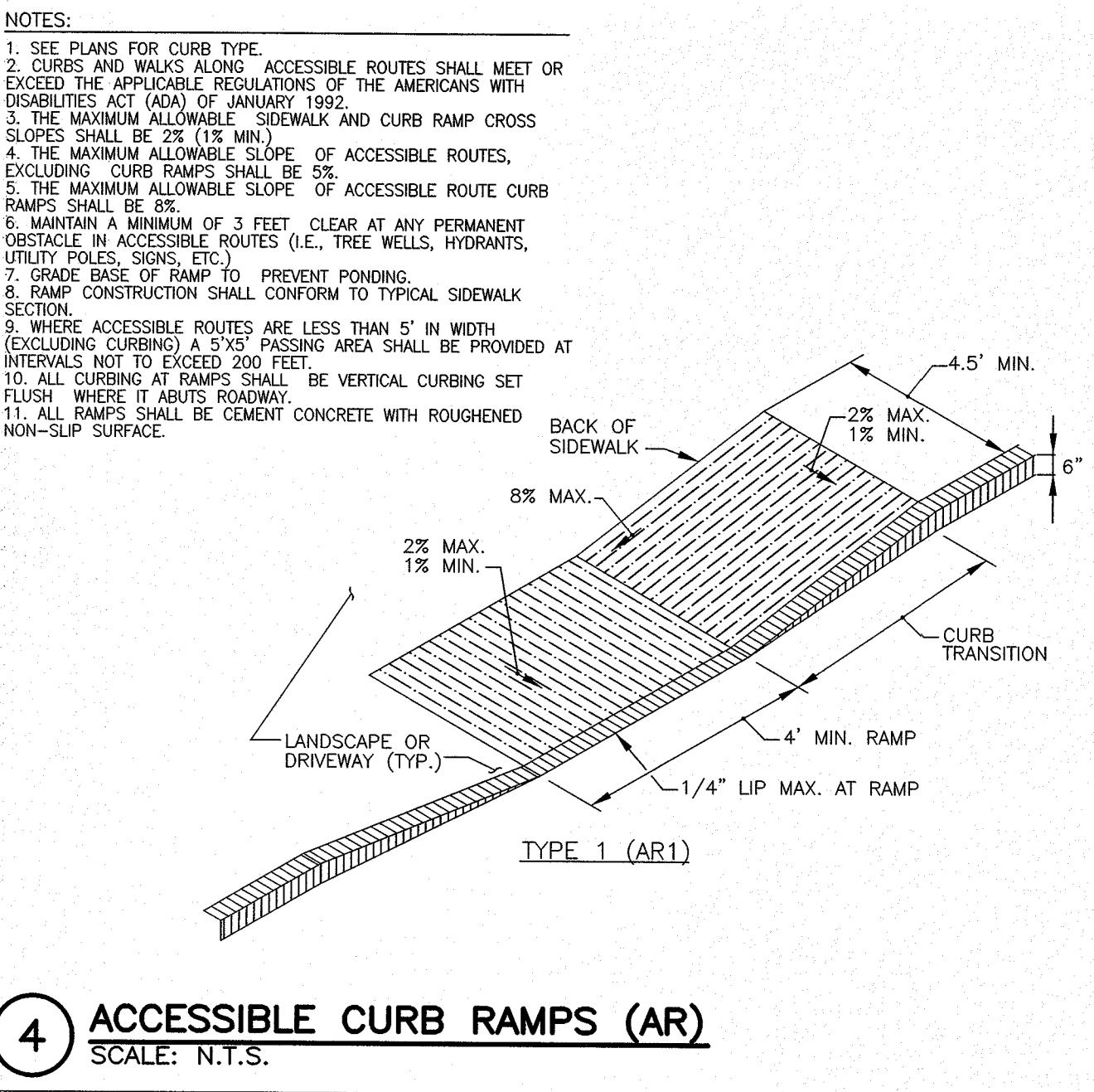
DRAWING NO. C8

PLAN NO. L-4427

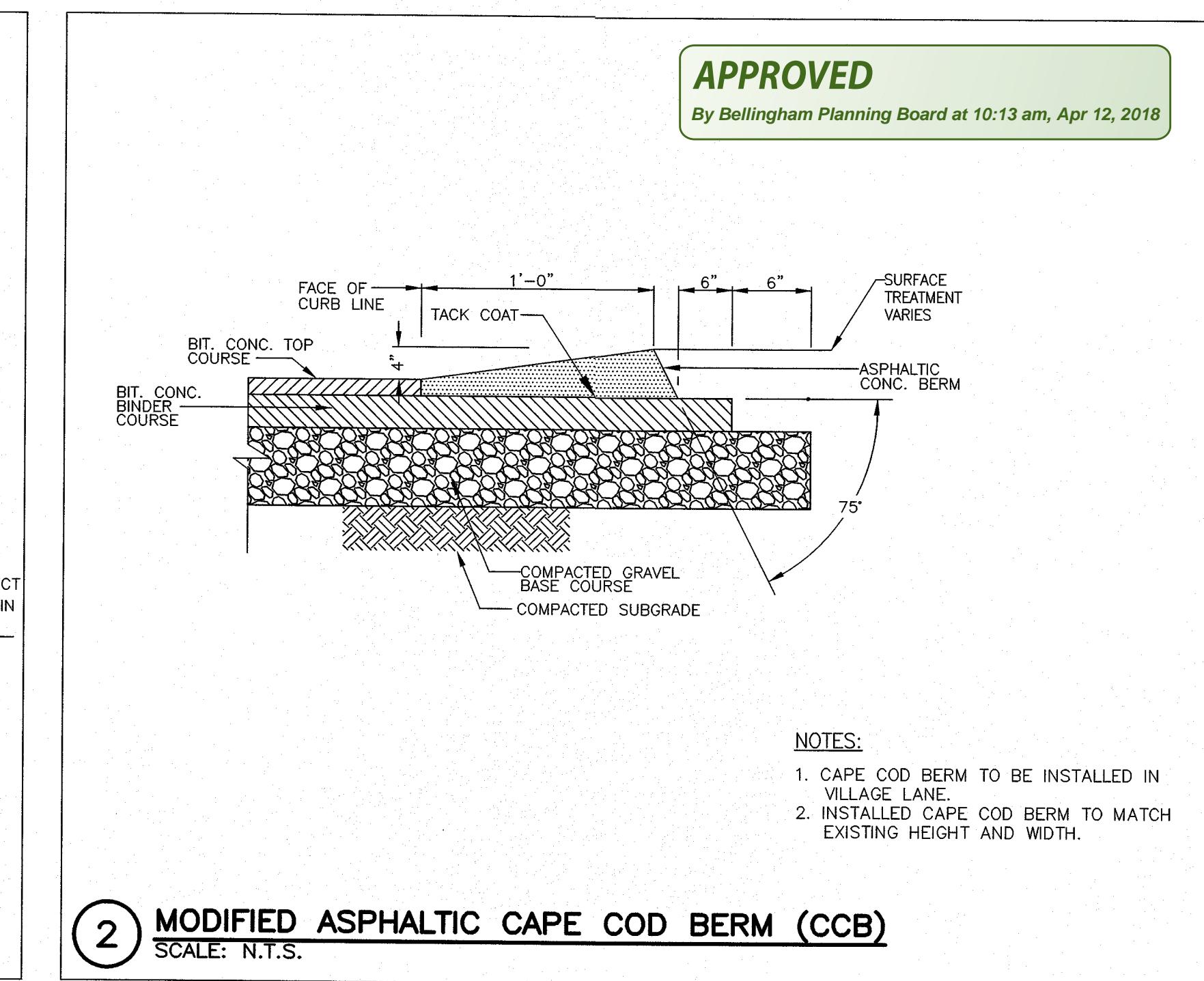
2014



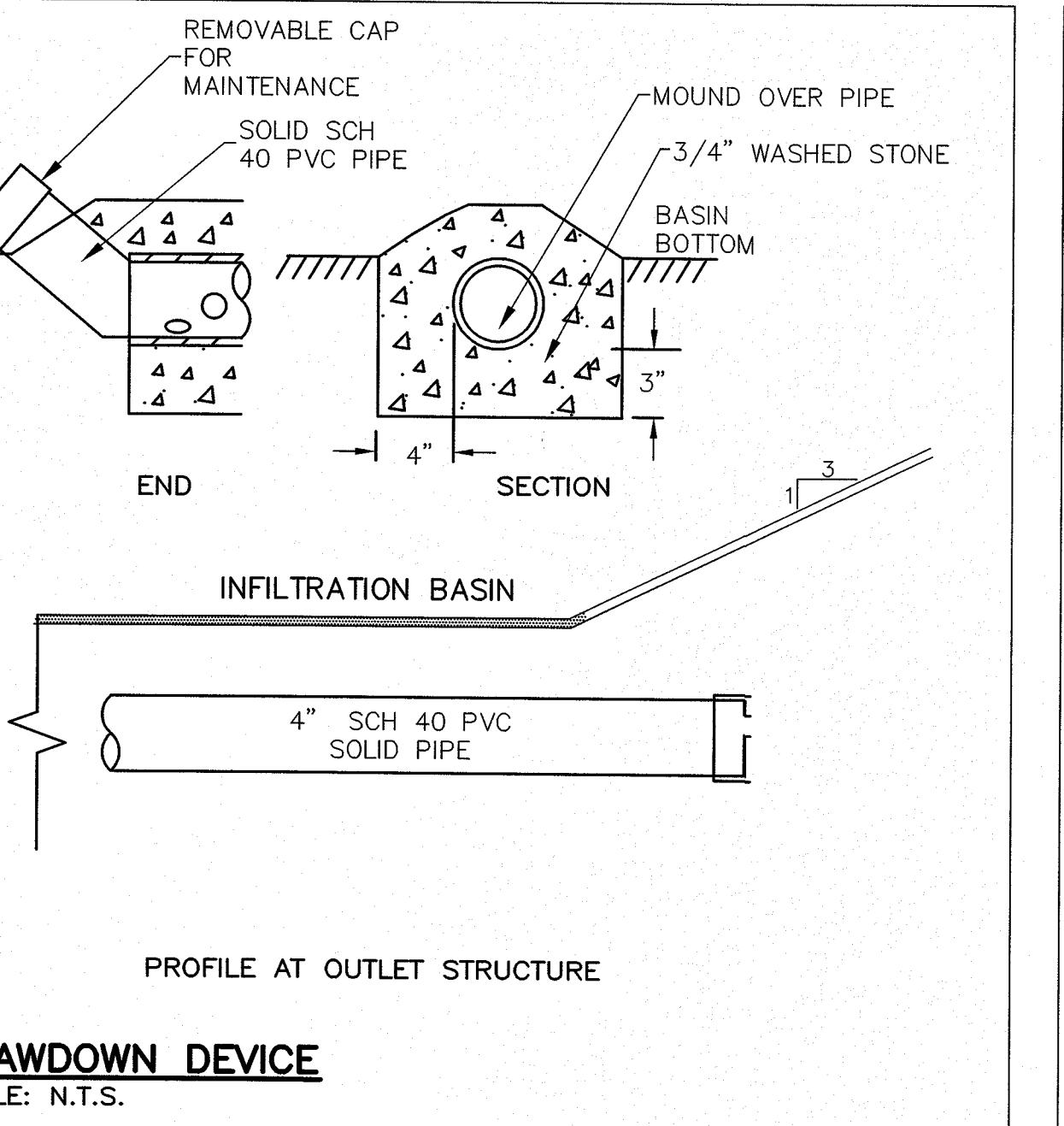
1 DETENTION BASIN NO. 1
1 OUTLET STRUCTURE (OS1) - ORIFICE/GRADE DETAIL



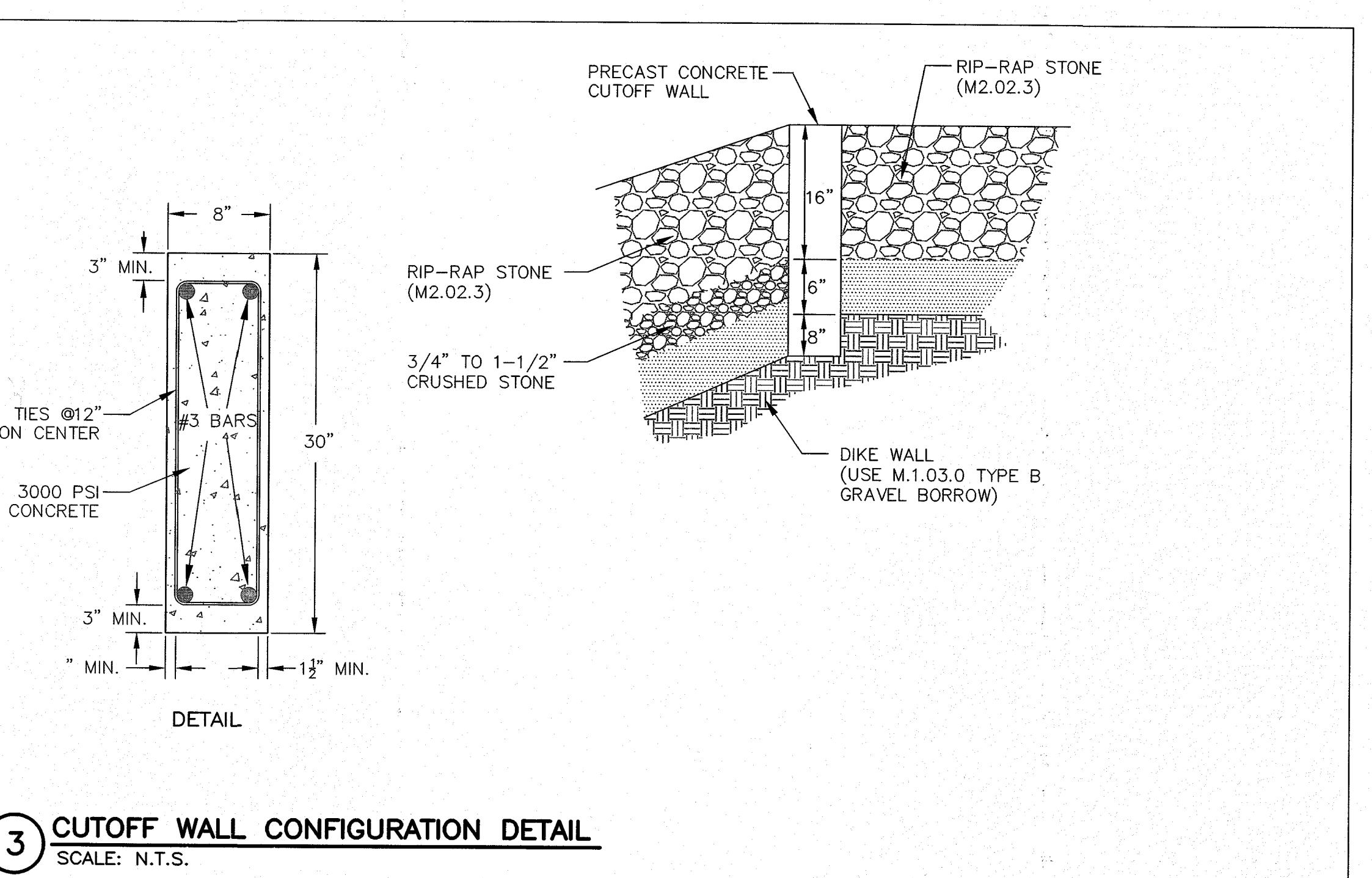
4 ACCESSIBLE CURB RAMPS (AR)



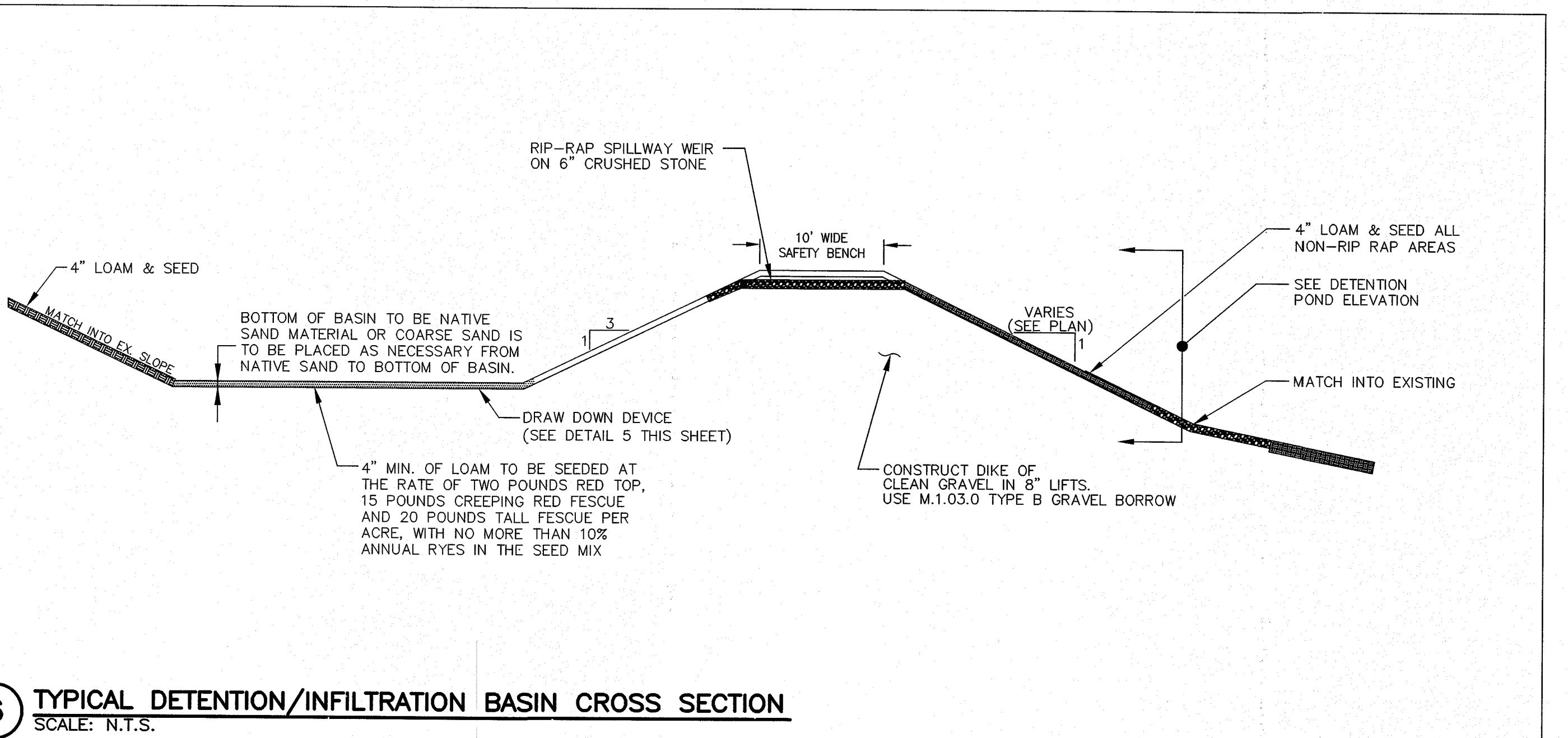
2 MODIFIED ASPHALTIC CAPE COD BERM (CCB)



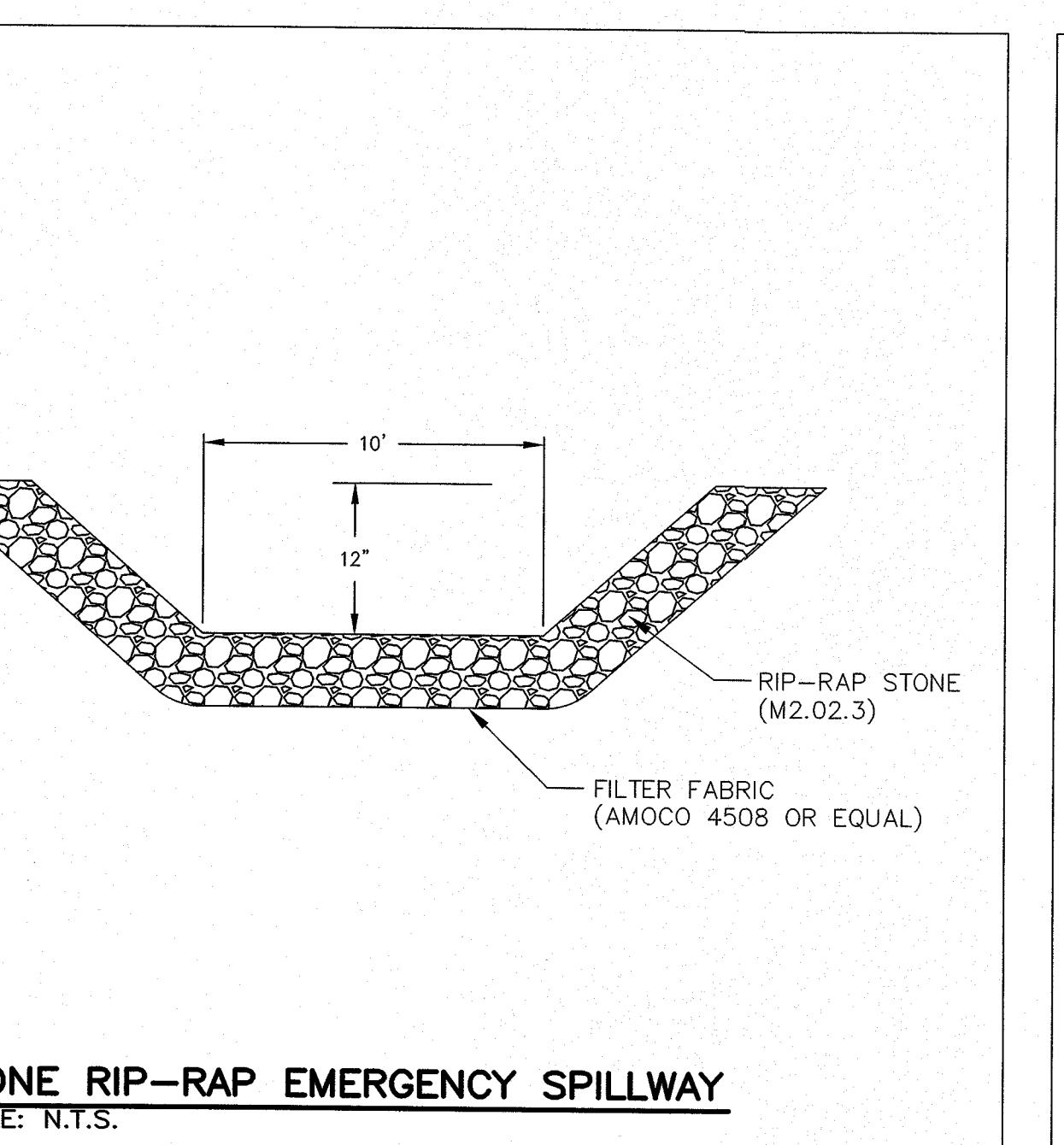
5 DRAWDOWN DEVICE



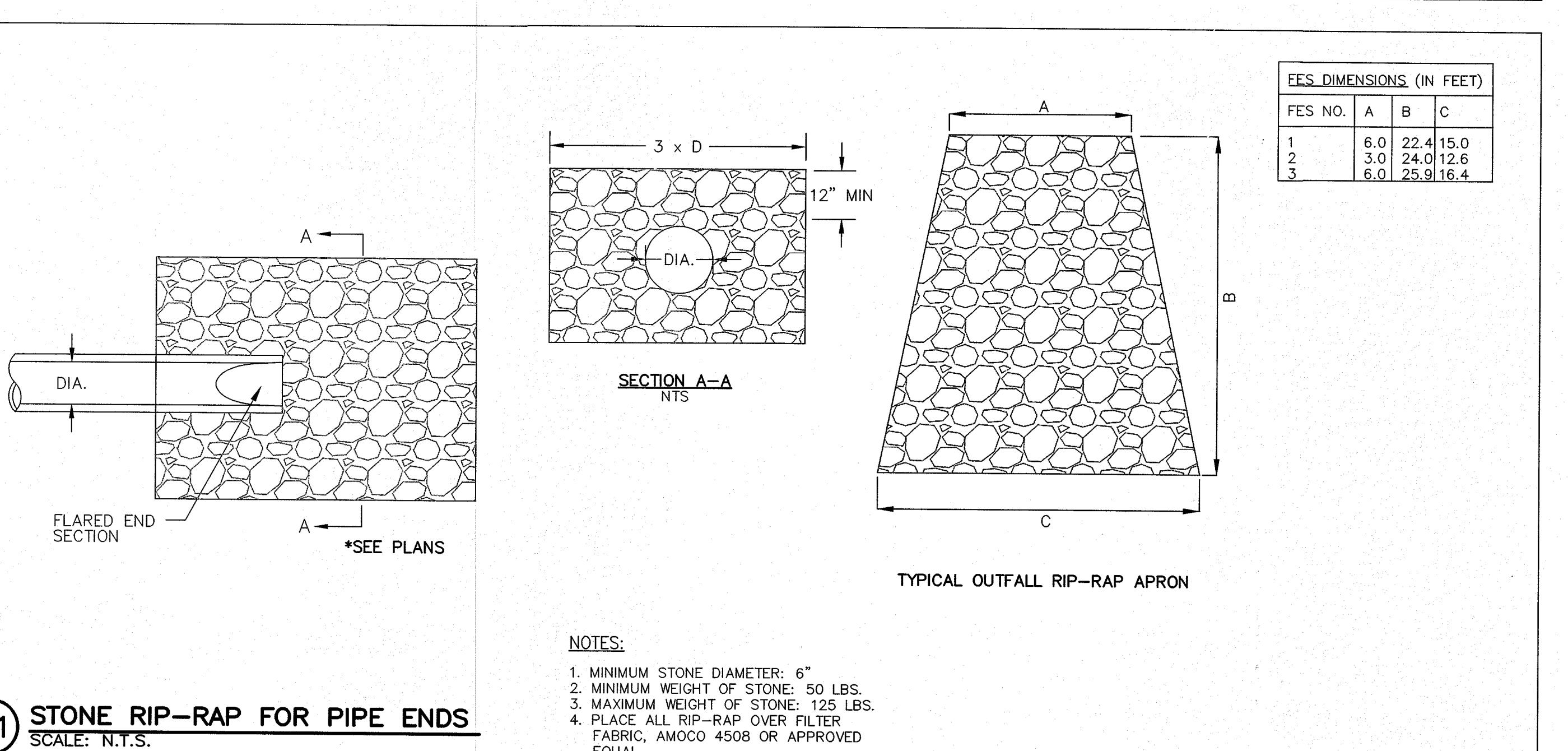
3 CUTOFF WALL CONFIGURATION DETAIL



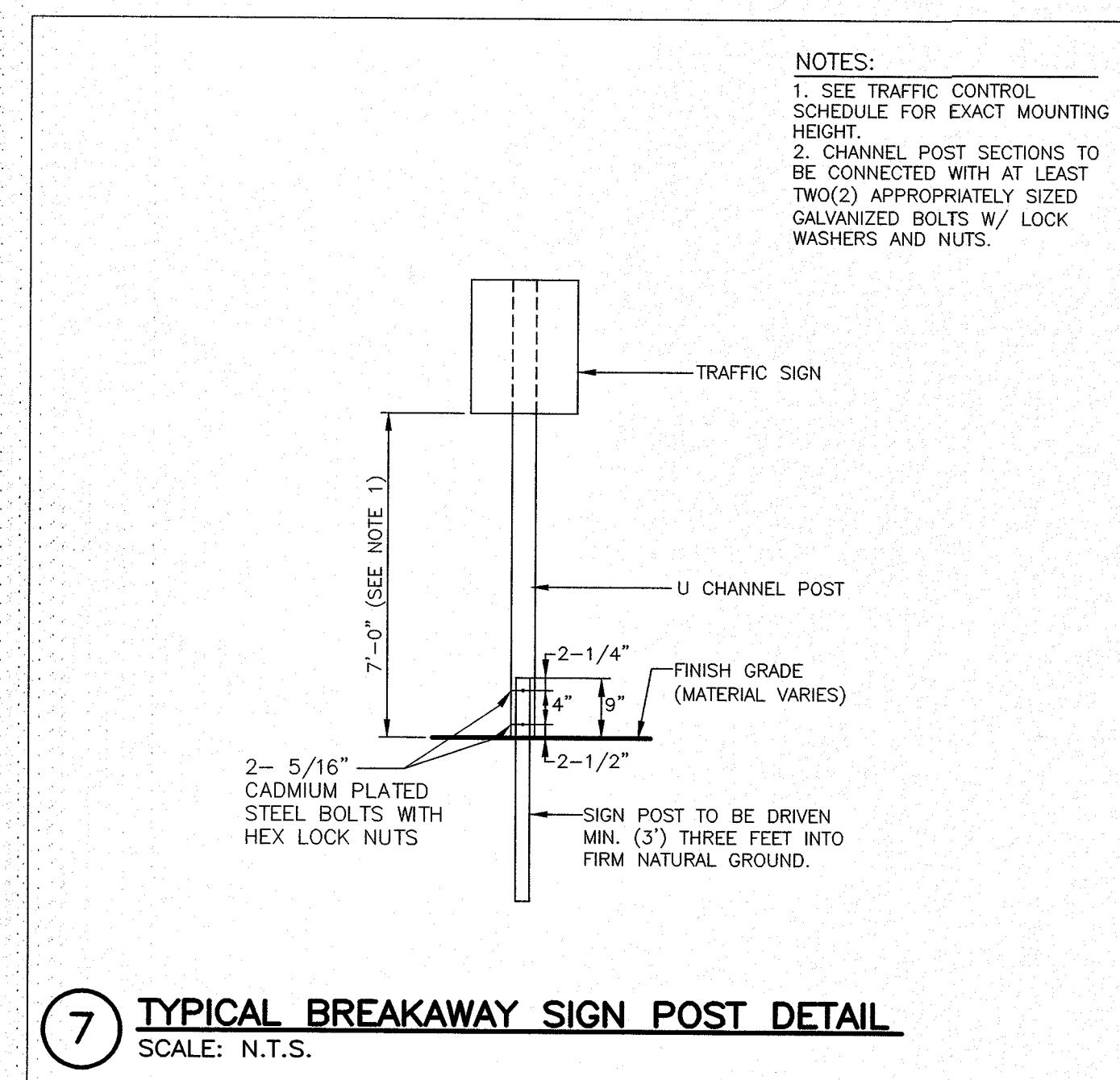
6 TYPICAL DETENTION/INFILTRATION BASIN CROSS SECTION



8 STONE RIP-RAP EMERGENCY SPILLWAY



11 STONE RIP-RAP FOR PIPE ENDS



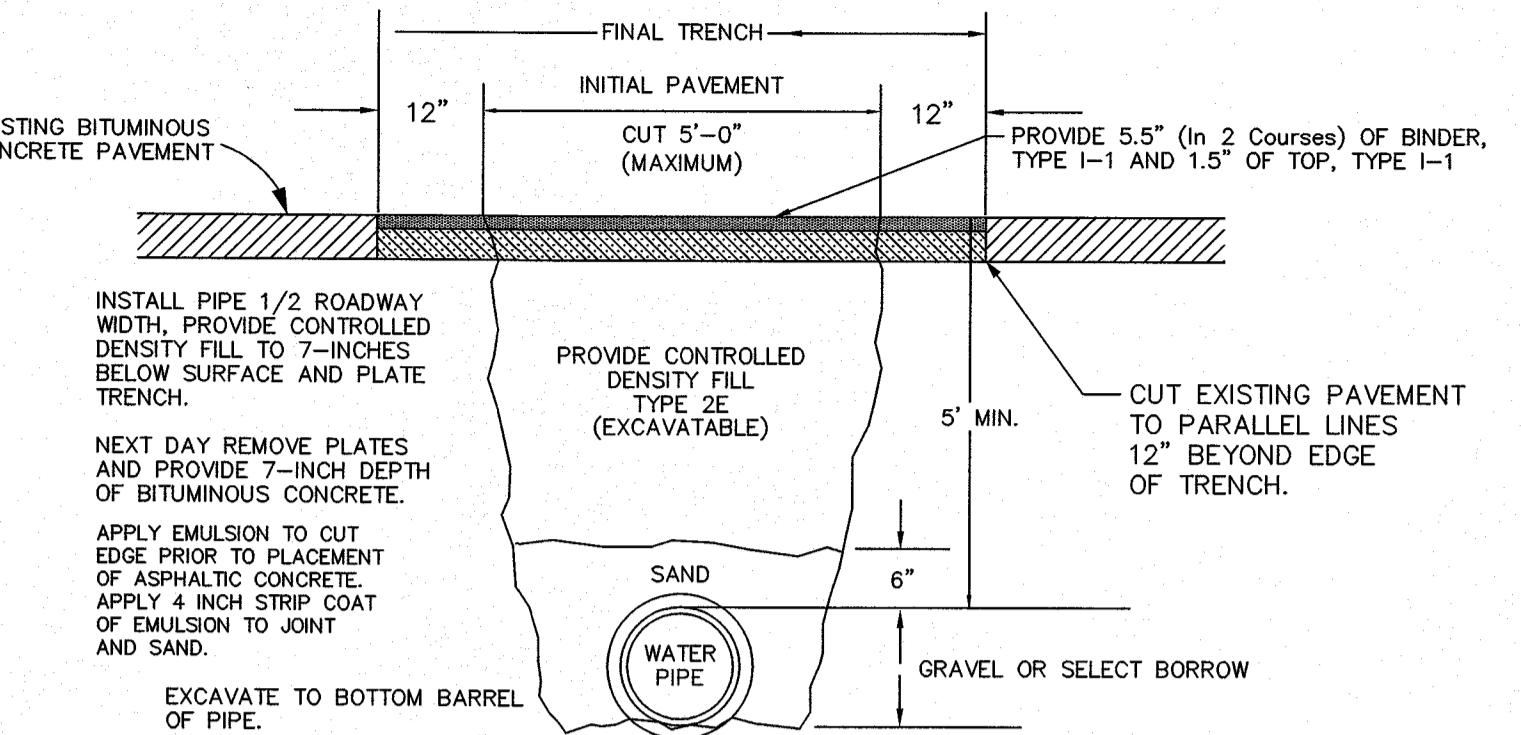
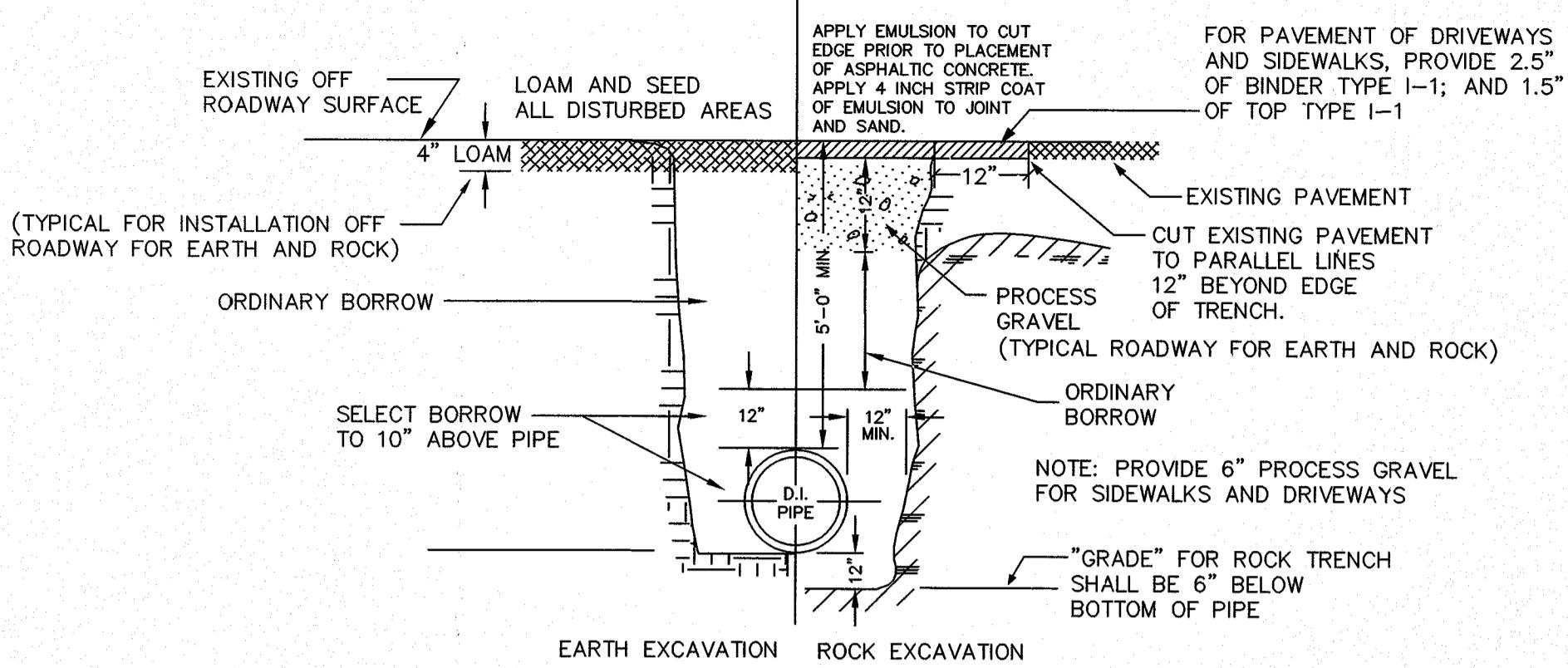
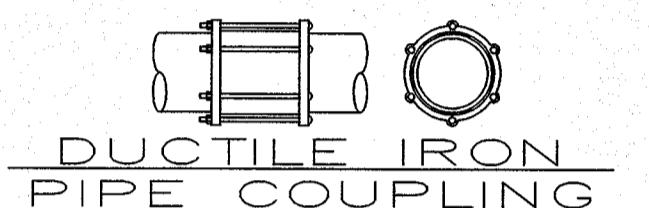
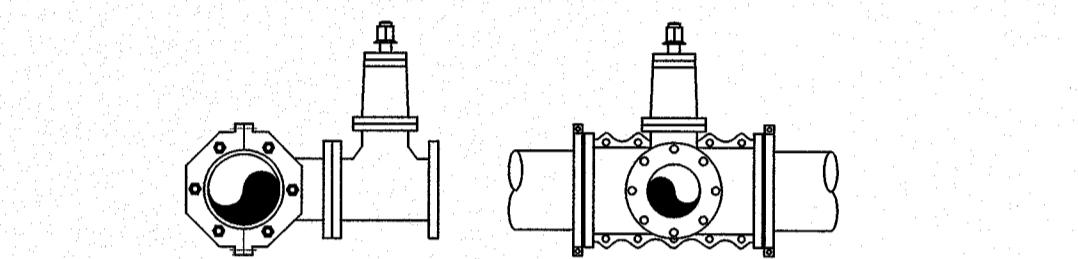
7 TYPICAL BREAKAWAY SIGN POST DETAIL

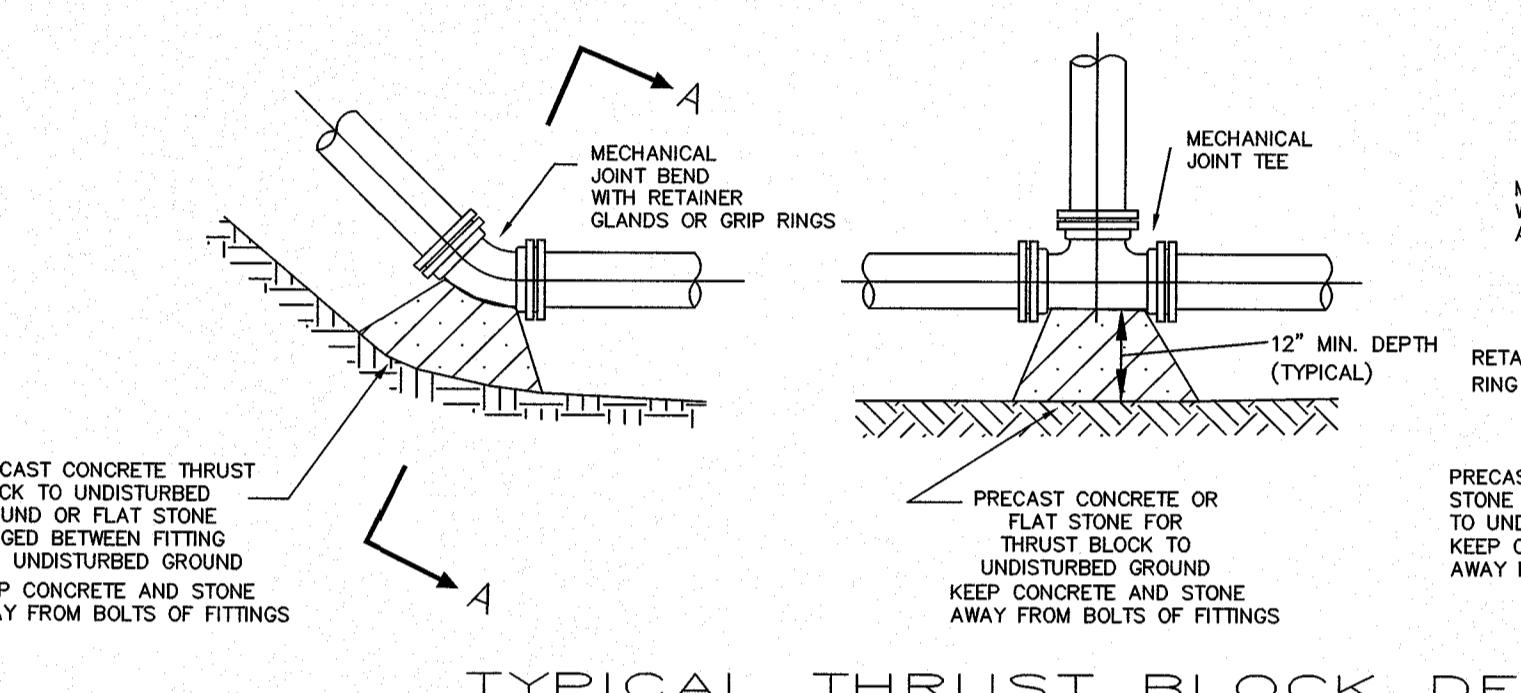
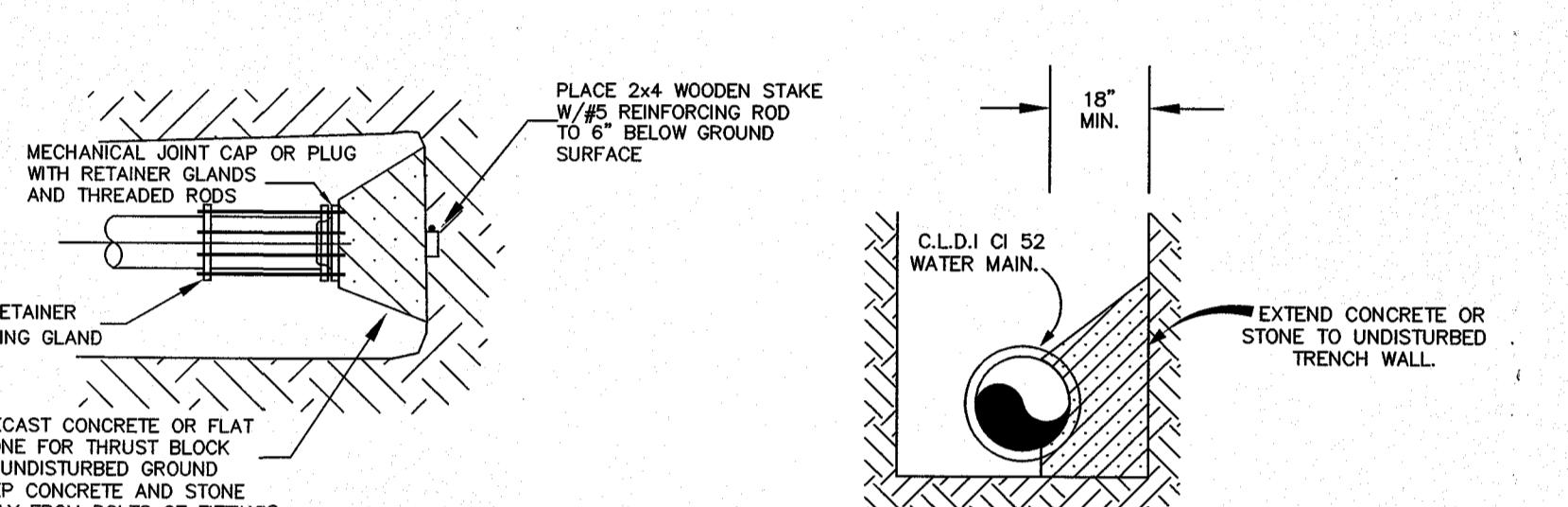
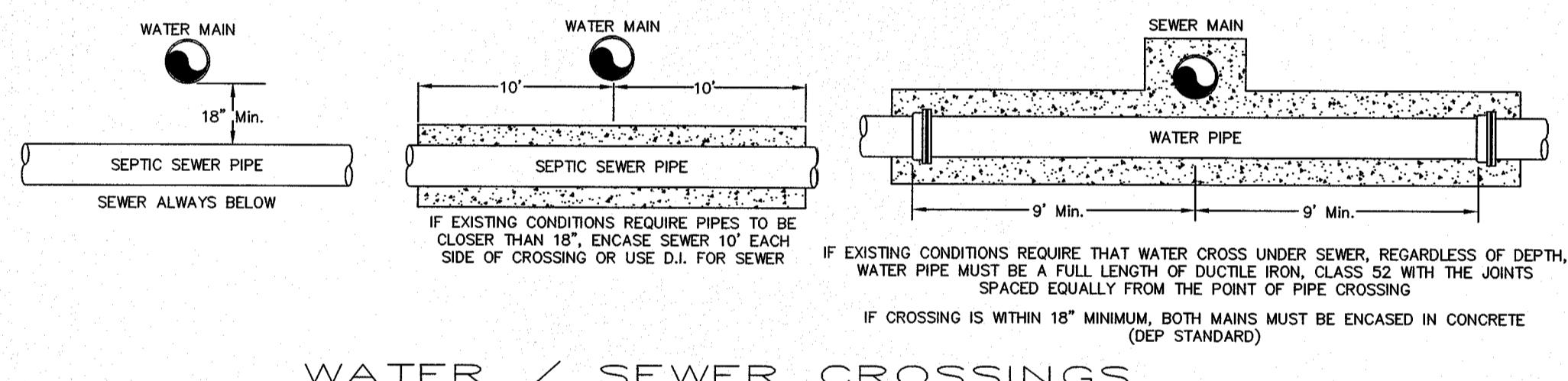
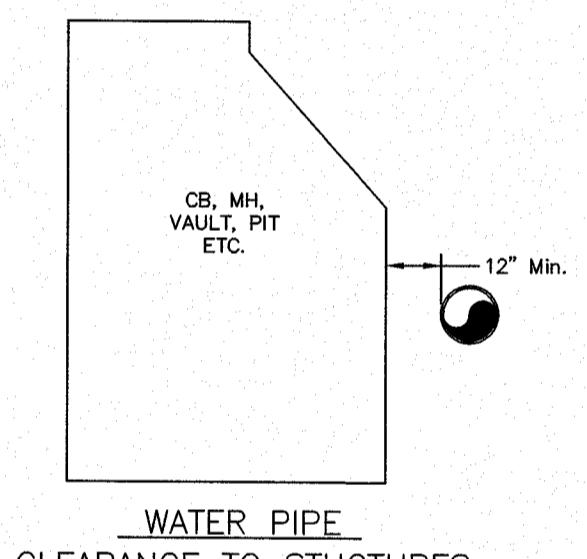
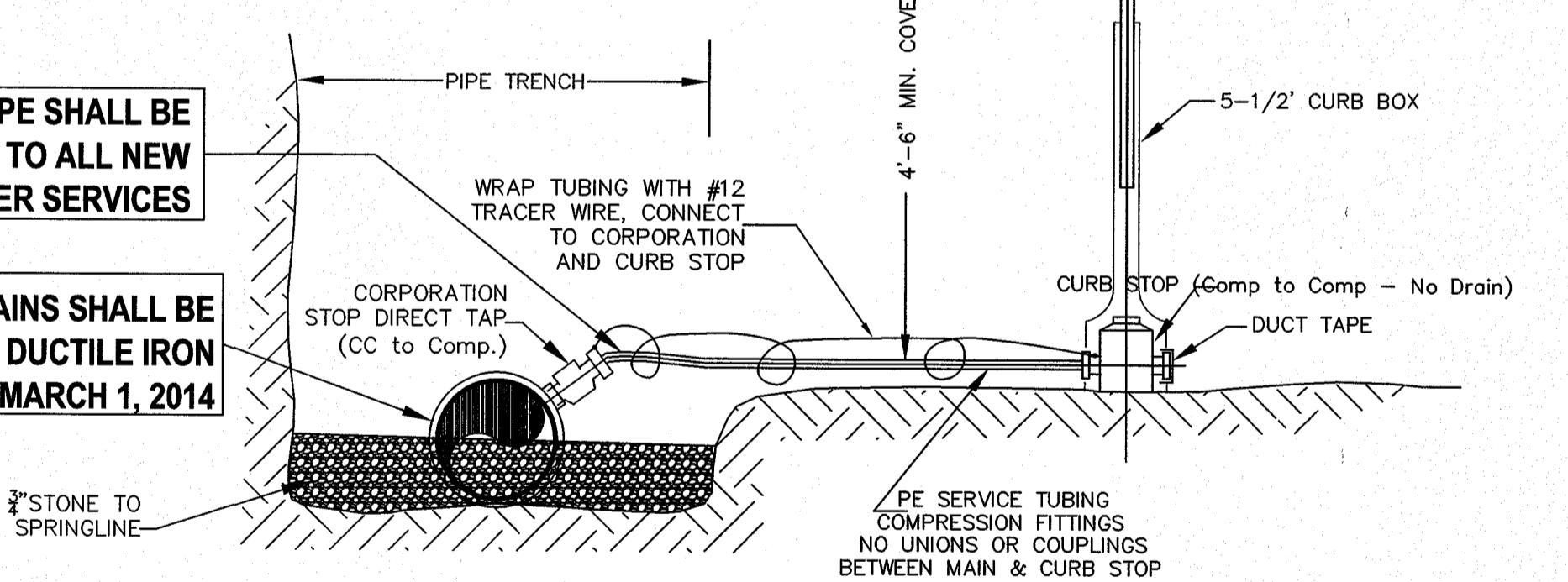
APPROVED

By Bellingham Planning Board at 10:13 am, Apr 12, 2018

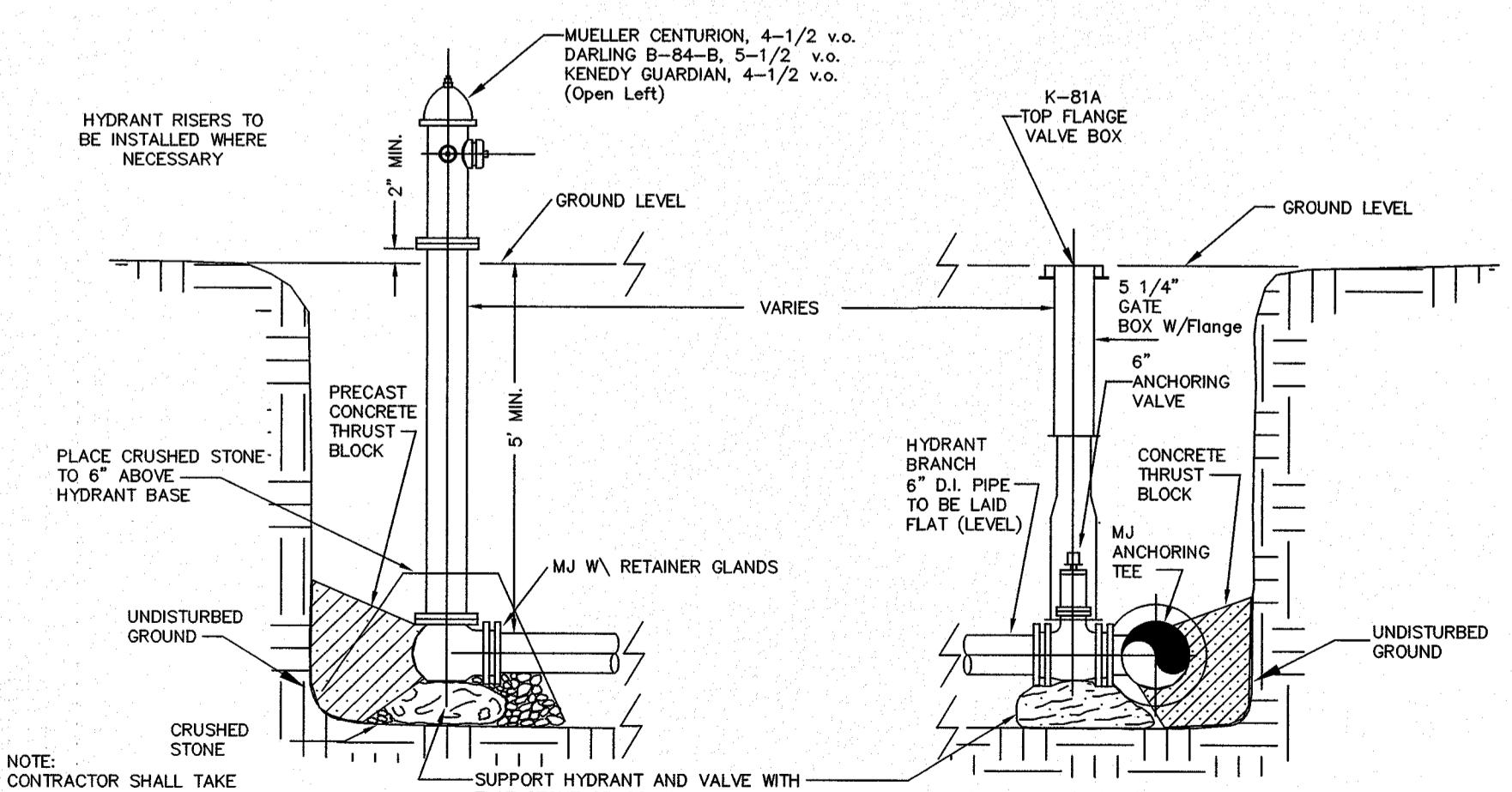
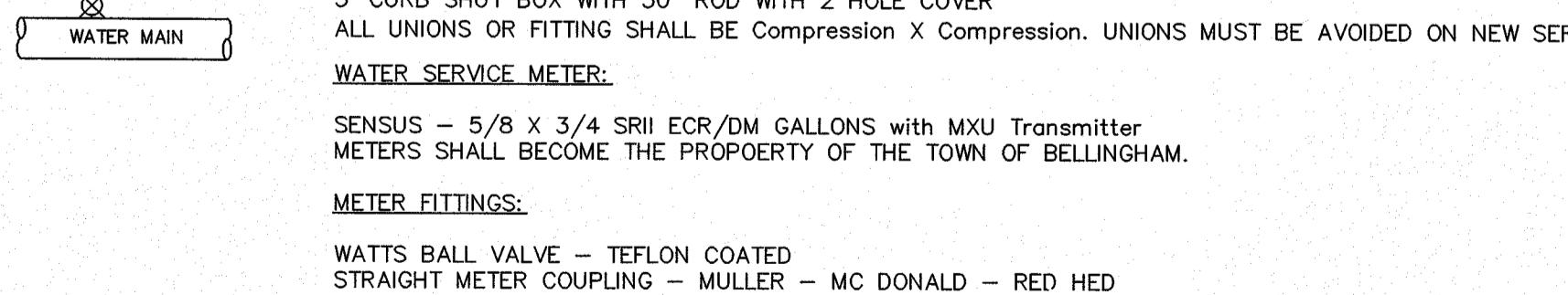
NOTES:

1. ALL NEW WATER MAINS FROM 6" THRU 12" DIAMETER SHALL BE DUCTILE IRON PRESSURE CLASS 350 PIPE.
2. TEFLON TAPE SHALL BE REQUIRED FOR ALL DIRECT TAPS
3. NO DIRECT TAPS GREATER THAN 1" SHALL BE ALLOWED ON 6" THRU 12" DIAM. PIPE
4. ANY BRANCH OR SERVICES LARGER THAN 1" MUST BE ACCOMPLISHED BY INSTALLATION OF APPROPRIATE DUCTILE IRON FITTING

**TYPICAL TRENCH RESURFACING
IN STATE HIGHWAY & ON MAIN ROADS****TYPICAL TRENCH SECTION
FOR DUCTILE IRON WATER MAINS****DUCTILE IRON
PIPE COUPLING**
STYLE 501 & RC 501
BY ROMAC INDUSTRIES OR EQUIVALENT
TO BE USED FOR PIPE REPAIRS,
"CUT-INS", COUPLING DIFFERENT
TYPES OF PIPE, & CORRECTING
MISSALIGNED PIPE
(DI to C-900; DI to AC; C-900 to AC)**TAPPING SLEEVE & VALVE**
MJ TAPPING SLEEVE WITH MUELLER T-2360 (OR EQUIVALENT)
RESILIENT WEDGE TAPPING VALVE - MJ x FL ENDS
OPEN LEFT

NOTE:
ALL MAIN LINE VALVES - (OPEN LEFT, NON RISING STEM)
SIZES 3" TO 12" - (GATE VALVES)
SIZES GREATER THAN 12" - (BUTTERFLY VALVES)
MUELLER - KENNEDY - DARLING - EPOXY COATED
MUELLER RESILIENT SEAT EPOXY COATED, AWWA APPROVED**TYPICAL THRUST BLOCK DETAILS****SECTION A-A**
NOT TO SCALE**WATER / SEWER CROSSINGS****WATER PIPE
CLEARANCE TO STRUCTURES****TEFLON TAPE SHALL BE
ADDED TO ALL NEW
WATER SERVICES****ALL NEW WATER MAINS SHALL BE
PRESSURE CLASS 350 DUCTILE IRON
EFFECTIVE MARCH 1, 2014****TYPICAL SERVICE CONNECTION**

SEE SPEC. SHEET

**TYPICAL HYDRANT INSTALLATION****WATER SERVICE CONNECTION
WITH
SECOND METER
(LAWN SPRINKLER SYSTEMS)**Andrews Survey & Engineering, Inc.
Land Surveying - Civil Engineering - Site PlanningP.O. Box 312, 104 Mendon Street
Uxbridge, Massachusetts 01569
P: 508-278-3897 F: 508-278-2289500 East Washington Street
North Attleboro, Massachusetts 02760
P: 508-316-0452 F: 508-316-9963APPROVAL FOR SPECIAL PERMIT REQUIRED.
BELLINGHAM PLANNING BOARDBEING A MAJORITY DATE:
THIS CERTIFIES THAT THE NOTICE OF APPROVAL OF THIS PLAN BY THE BELLINGHAM PLANNING BOARD HAS BEEN RECEIVED AND RECORDED ON AT AND NO APPEAL WAS RECEIVED DURING THE 20 DAYS NEXT AFTER SUCH RECEIPT OF SAID NOTICE.

BELLINGHAM TOWN CLERK DATE

PROJECT:		
OWNER/APPLICANT:		
"HARTFORD VILLAGE II" MULTI-FAMILY DEVELOPMENT BELLINGHAM, MA 02019		

REVISIONS		
NO.	DATE	DESCRIPTION
1	8/24/16	REVISE ROAD & BUILDING LAYOUT
2	11/10/16	REVISED DETAILS PER BELLINGHAM DPW
3	2/14/17	NO CHANGE THIS SHEET
4	7/5/17	NO CHANGE THIS SHEET

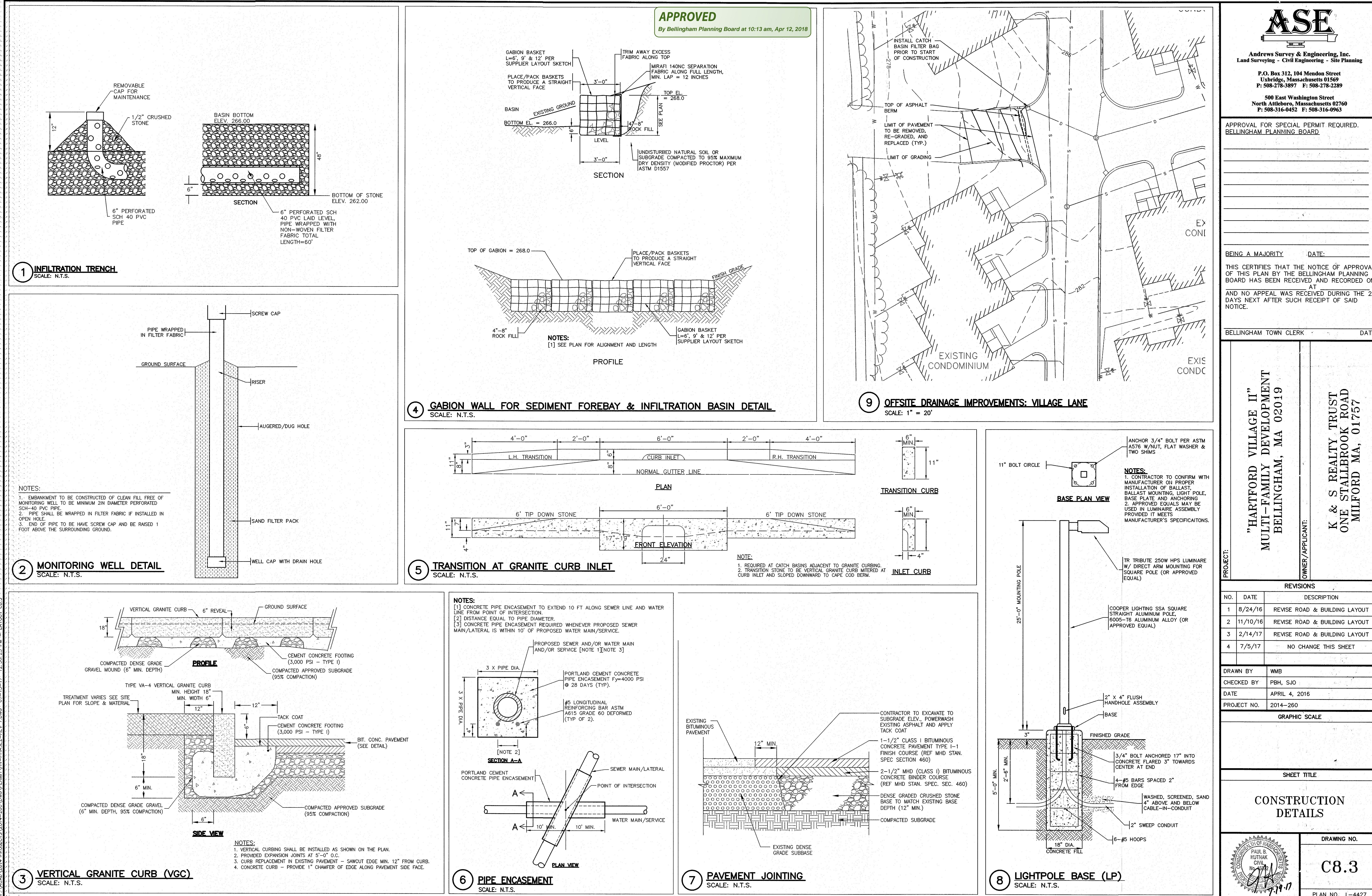
DRAWN BY	WMB, JPC
CHECKED BY	PBH, SJO
DATE	APRIL 4, 2016
PROJECT NO.	2014-260

GRAPHIC SCALE

SHEET TITLE

CONSTRUCTION
DETAILS

PAUL B. HUTNAK CIVIL ENGINEER SCE	DRAWING NO.
C8.2	
PLAN NO. L-4427	





Andrews Survey & Engineering, Inc.
Land Surveying - Civil Engineering - Site Planning

**P.O. Box 312, 104 Mendon Street
Uxbridge, Massachusetts 01569
P: 508-278-3897 F: 508-278-2289**

**500 East Washington Street
North Attleboro, Massachusetts 02760
P: 508-316-0452 F: 508-316-0963**

APPROVAL FOR SPECIAL PERMIT REQUIRED.
BELLINGHAM PLANNING BOARD

BEING A MAJORITY DATE:
THIS CERTIFIES THAT THE NOTICE OF APPROVAL
OF THIS PLAN BY THE BELLINGHAM PLANNING
BOARD HAS BEEN RECEIVED AND RECORDED ON

AT _____
AND NO APPEAL WAS RECEIVED DURING THE 20
DAYS NEXT AFTER SUCH RECEIPT OF SAID
NOTICE.

BELLINGHAM TOWN CLERK DATE

“HARTFORD VILLAGE II”
MULTI-FAMILY DEVELOPMENT
BELLINGHAM, MA 02019

OWNER/APPLICANT:

K & S REALTY TRUST
ONE STALLBROOK ROAD
MILFORD MA, 01757

REVISIONS	
DATE	DESCRIPTION
8/24/16	REVISE ROAD & BUILDING LAYOUT
11/10/16	REVISE ROAD & BUILDING LAYOUT
2/14/17	REVISE ROAD & BUILDING LAYOUT
7/5/17	REVISE BUILDING SEPARATION

OWN BY	WMB
CKED BY	PBH, SJO
RE	APRIL 4, 2016
JECT NO	2014-260

(IN FEET)

1 inch = 40 feet

SHEET TITLE

EROSION & SEDIMENT

ENGINEERING, INC.

DRAWING NO. C9

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EROSION AND SEDIMENT CONTROL REQUIREMENTS

PART 1 – GENERAL

1.01 SUMMARY

A. FURNISH, INSTALL, AND MAINTAIN TEMPORARY AND PERMANENT EROSION AND SEDIMENT CONTROL MEASURES, SUCH AS, BUT NOT NECESSARILY LIMITED TO, STRAW BALES AND SILT FENCE BARRIERS, RIPRAP, VEHICLE TRACKING PADS, DIVERSION CHANNELS AND BERMS, CHECK DAMS, STRATEGICALLY LOCATED STOCKPILES, SEDIMENT BASINS, MULCH, AND SEED MIX (HEREINAFTER "CONTROL MEASURES") ADEQUATE TO PREVENT THE CONVEYANCE OF EROSION PRODUCTS (E.G. SOIL, MULCH, SOD) OFF SITE, OR INTO ENVIRONMENTALLY SENSITIVE AREAS, INTO AREAS WHERE WORK WILL BE ADVERSELY IMPACTED. ENVIRONMENTALLY SENSITIVE AREAS INCLUDE, BUT ARE NOT NECESSARILY LIMITED TO, WETLANDS, TRIBUTARIES TO WETLANDS, WETLAND BUFFER ZONES, INTERMITTENT AND PERENNIAL STREAMS / RIVERS, AND THEIR ATTENDANT BUFFER ZONES.

ALL METHODS AND MATERIALS USED FOR EROSION CONTROL SHALL CONFORM TO THE REQUIREMENTS SET FORTH IN "EROSION AND SEDIMENT CONTROL GUIDELINES FOR URBAN AND SUBURBAN AREAS A GUIDE FOR PLANNERS, DESIGNERS, AND MUNICIPAL OFFICIALS" AS PUBLISHED BY THE MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION, BUREAU OF RESOURCE PROTECTION, UNLESS OTHERWISE APPROVED IN WRITING.

1. REFER TO DRAWINGS FOR LOCATION AND DETAILS OF LIMITS OF DISTURBANCE AND CONTROL MEASURES REQUIRED TO COMMENCE WORK. LIMITS OF DISTURBANCE SHALL BE MARKED WITH TAPE, SIGNS, OR ORANGE CONSTRUCTION FENCE PRIOR TO COMMENCING ANY LAND DISTURBANCE ACTIVITIES. CONTROL MEASURES WILL BE ADEQUATE ONLY FOR VEGETATION CLEARING. THE DRAWINGS ARE NOT INTENDED TO GRAPHICALLY DEPICT ALL CONTROL MEASURES THAT WILL BE REQUIRED TO MEET THE REQUIREMENTS DESCRIBED IN 1.01A.

2. DEVISE AND EMPLOY CONTROL MEASURES THROUGHOUT THE DURATION OF PROJECT, OVER ALL AREAS DISTURBED OR UNDISTURBED BY CONSTRUCTION, AS NECESSARY TO MEET THE REQUIREMENTS DESCRIBED IN 1.01A.

3. DEVISE AND EMPLOY TEMPORARY CONTROL MEASURES AS NECESSARY TO MEET THE REQUIREMENTS DESCRIBED IN 1.01A, WHILE ALLOWING WORK TO PROCEED IN AN EFFICIENT, COST-EFFECTIVE MANNER.

4. DEVISE, EMPLOY AND MAINTAIN CONTROL MEASURES UNTIL SUCH TIME AS THE ENTIRE SITE IS PERMANENTLY STABILIZED BY ESTABLISHED VEGETATION, FINISH LANDSCAPE MATERIALS, PAVED SURFACES, AND/OR ROOF AREA.

5. ONCE THE SITE IS PERMANENTLY STABILIZED AND CERTIFIED AS SUCH BY ENGINEER, REMOVE TEMPORARY CONTROL MEASURES WHILE PROTECTING STABILIZED SURFACES.

1.02 SUBMITTALS

A. SUBMIT PRODUCT DATA, WARRANTY, AND TEST REPORTS AS INDICATED ON THE DRAWINGS.

B. SUBMIT SKETCH SHOWING LOCATIONS OF PROPOSED STOCKPILE AREAS, CONSTRUCTION ENTRANCES AND EROSION CONTROLS IF NOT SHOWN ON THE SITE PLAN OR DIFFERENT FROM THOSE LOCATIONS SHOWN ON THE SITE PLAN.

C. A SITE-SPECIFIC SEQUENCE OF CONSTRUCTION FOR EACH PORTION OF THE SITE. NO PORTION OF THE SITE SHALL EXCEED FIVE (5) ACRES.

1.03 QUALITY ASSURANCE

A. COMPLY WITH GOVERNING CODES AND REGULATIONS. PROVIDE PRODUCTS FROM ACCEPTABLE MANUFACTURERS. USE EXPERIENCED INSTALLERS. DELIVER, HANDLE, AND STORE MATERIALS IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.

B. CONFORM TO CONDITIONS OF APPROVAL ISSUED BY REGULATORY AGENCIES INCLUDING, BUT NOT NECESSARILY LIMITED TO, LOCAL PLANNING BOARD, CONSERVATION COMMISSION, CITY COUNCIL, BOARD OF HEALTH, PUBLIC WORKS / HIGHWAY DEPARTMENT, STATE ENVIRONMENTAL PROTECTION DEPARTMENT, AND U.S. GOVERNMENT, ENVIRONMENTAL PROTECTION AGENCY. WHERE CONDITIONS OF REGULATORY APPROVAL DIFFER FROM REQUIREMENTS CONTAINED HEREIN OR ON THE DRAWINGS, COMPLY WITH THE MORE STRINGENT REQUIREMENT.

PART 2 – PRODUCTS

2.01 MATERIALS

A. STRAW BALES: WEED FREE DRY GRASS OR STRAW, MACHINE BOUND WITH JUTE OR WIRE, APPROXIMATE SIZE EACH BALE 42" X 16" X 16". EACH BALE SHALL BE STAKED WITH A MINIMUM OF TWO 24" LONG HARDWOOD STAKES. NOTE: HAY SHALL NOT BE USED.

B. STRAW WATTERS: NORTH AMERICAN GREEN MODEL WS1210 OR APPROVED EQUAL.

C. SILT FENCE: NON-WOVEN, UV-RESISTANT, POLYPROPYLENE FABRIC, FLOW RATED AT 10 GPM/SF MINIMUM, GRAB TENSILE RATED AT 124 POUNDS MINIMUM, WITH INTEGRAL STAKE LOOPS, AND HARDWOOD STAKES. USE NO. 2130 BY AMOCO FABRICS & FIBERS, OR APPROVED EQUAL.

D. MULCH: ORGANICS INCLUDING STRAW, PROCESSED PINE / HEMLOCK TWIGS AND NEEDLES.

E. SEED MIXES: SHALL MEET THE REQUIREMENTS OF MASSACHUSETTS HIGHWAY DEPARTMENT STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES, LATEST EDITION SECTION 6.03.0 OR 6.03.1 AS APPROPRIATE.

F. EXCELSIOR BLANKET: CURLED WOOD FIBER ON PHOTODEGRADABLE EXTRUDED PLASTIC MATRIX, 80% OF FIBERS 6-INCHES LONG OR LONGER, WEIGHT 0.975 POUNDS / SF, CONTAINING NO CHEMICAL ADDITIVES. USE CURLEX I BLANKET BY AMERICAN EXCELSIOR COMPANY, OR APPROVED EQUAL.

G. ROCK RIPRAP: SOUND, ANGULAR, 6-INCH MINUS PROCESSED ROCK, BLAST ROCK, OR TAILINGS.

H. CRUSHED STONE: SOUND, ANGULAR, 2-INCH MINUS PROCESSED CRUSHED STONE.

PART 3 – EXECUTION

3.01 THROUGHOUT CONSTRUCTION

A. DEVISE WORK SEQUENCE SO AS TO LIMIT DRAINAGE AREA THAT IS TRIBUTARY TO DISTURBED AREAS. DEVISE, EMPLOY, AND MAINTAIN CONTROL MEASURES SUCH AS DIVERSION CHANNELS AND BERMS, STRATEGICALLY LOCATED STOCKPILES, AND SEDIMENT BASINS TO SUBDIVIDE DRAINAGE AREAS INTO SMALL, MANAGEABLE SUBAREAS, THEREBY MINIMIZING RUNOFF AND THE POTENTIAL FOR EROSION.

B. MAINTAIN BARRIER AT LIMIT OF WORK AND PROTECT EXISTING VEGETATION / FACILITIES OUTSIDE OF LIMIT OF WORK.

C. MAINTAIN SPARE MATERIAL STOCKPILES FOR IMMEDIATE EMPLOYMENT / REPAIR / EXPANSION OF CONTROL MEASURES. AT A MINIMUM, SUCH MATERIALS SHALL INCLUDE HAY BALES, SILT FENCE AND STAKES, AND CRUSHED STONE.

D. INSPECT AND MAINTAIN EFFECTIVENESS OF CONTROL MEASURES BY REPAIRING AS NECESSARY TO ENSURE INTENDED FUNCTION; BY SUPPLEMENTING AS NECESSARY FOR ADEQUATE EXTENT; BY REMOVING TRAPPED PRODUCTS OF EROSION AS NECESSARY TO MAINTAIN EFFECTIVE TRAP VOLUME.

E. LIMIT EXTENT OF WORK AREA SO THAT ALL DISTURBED AREAS CAN BE STABILIZED WITH CONTROL MEASURES WITHIN A 24-HOUR PERIOD.

F. INSTALL CONTROL MEASURES AS SOON AS PRACTICABLE AFTER EACH MANAGEABLE PORTION OF EARTHWORK IS COMPLETE. EMPLOY TEMPORARY MEASURES AS NECESSARY TO STABILIZE DISTURBED AREAS, EVEN WHERE SUBSEQUENT CONSTRUCTION OPERATIONS MAY REQUIRE RE-DISTURBANCE.

PART 3 – CONTINUED

G. WHEN INTENSE RAINFALL IS EXPECTED, CONSIDER, DEVISE, AND EMPLOY REINFORCING CONTROL MEASURES PRIOR TO THE RAINFALL EVENT TO MEET THE REQUIREMENTS DESCRIBED IN 1.01A. IF NECESSARY, EMPLOY TEMPORARY CONTROL MEASURES ON MATERIAL STOCKPILES TO COUNTERACT POTENTIAL SEDIMENT TRANSPORT DURING INTENSE RAINFALL.

H. WHEN VEHICLE REFUELING IS REQUIRED ON SITE, CONDUCT REFUELING OPERATIONS OUTSIDE OF ENVIRONMENTALLY SENSITIVE AREAS.

I. PROPERLY DISPOSE OF DEBRIS, SOLID WASTE, TRASH, AND CONSTRUCTION WASTE / BYPRODUCTS OFF SITE.

J. SWEEP ON-SITE PAVED AREAS AND OFF-SITE STREETS AS NECESSARY TO PREVENT SILT AND DEBRIS ORIGINATING ON SITE FROM ENTERING CLOSED DRAINAGE SYSTEMS AND / OR ENVIRONMENTALLY SENSITIVE AREAS. WHEN NECESSARY UTILIZE WATER SPRAYING, SURFACE ROUGHENING AND / OR APPLY POLYMERS, SPRAY-ON TACKIFIERS, CHLORIDES AND BARRIERS FOR DUST CONTROL.

K. INSPECT EROSION CONTROLS DAILY THROUGHOUT CONSTRUCTION REPAIR DAMAGED CONTROLS IMMEDIATELY.

3.02 SITE PREPARATION AND ACCESS

A. WALK SITE AND IDENTIFY LOCATIONS OF LIMIT OF WORK AND ENVIRONMENTALLY SENSITIVE AREAS. ESTABLISH CONSTRUCTION STAGING AREA, LOCATED BEYOND ENVIRONMENTALLY SENSITIVE AREAS.

B. INSTALL CONTROL MEASURES AS SHOWN ON THE DRAWINGS, INCLUDING THOSE DEFINING THE LIMIT OF WORK.

C. LIMIT VEHICULAR TRAFFIC TO AN FROM SITE TO MINIMIZE TRANSPORT OF SEDIMENT.

3.03 CLEARING, GRUBBING, AND STRIPPING

A. SCHEDULE GRUBBING AND STRIPPING TO OCCUR IMMEDIATELY PRIOR TO EARTH DISTURBANCE. DEPENDING ON SITE AREA, CONSIDER MULTIPLE GRUBBING PHASES, SEQUENCED TO TAKE ADVANTAGE OF THE EROSION PREVENTION POTENTIAL OF EXISTING VEGETATIVE COVER.

B. MINIMIZE THE AREA OF EXISTING VEGETATION REMOVED WHEREVER POSSIBLE. NO GREATER THAN FIVE (5) ACRES SHALL BE UNSTABLE AT ANY TIME.

C. LOCATE AND SIZE STOCKPILES TO MINIMIZE EROSION POTENTIAL, TAKING ADVANTAGE OF TERRAIN SLOPE AND ASPECT, WHERE APPROPRIATE.

D. PROTECT VEGETATION, INCLUDING ROOT SYSTEMS, BEYOND LIMIT OF CLEARING.

E. PROCESS TIMBER, STUMPS, SLASH, AND BRUSH SO AS TO PROTECT ENVIRONMENTALLY SENSITIVE AREAS AND INSTALLED CONTROL MEASURES. PROPERLY DISPOSE OF EXCESS OFF SITE. BURIAL OF STUMPS ON SITE IS PROHIBITED.

3.04 EXCAVATION FOR BUILDING FOUNDATIONS AND UTILITIES

A. DEVISE AND INSTALL CONTROL MEASURES ADEQUATE TO HANDLE DISCHARGES AND TRAP SEDIMENT FROM FOOTING SUMP AND WELL POINT PUMPS PRIOR TO EXCAVATION.

B. ARMOR SUMP PUMP DISCHARGE LOCATIONS TO PREVENT EROSION AT POINT OF DISCHARGE AND AREAS DOWNSTREAM.

C. IF FOUNDATION EXCAVATIONS GRADE TO DAYLIGHT ON THE LOW SIDE, DEVISE AND INSTALL CONTROL MEASURES TO HANDLE SURFACE AND GROUNDWATER FLOW FROM EXCAVATION LOW POINT.

D. STOCKPILE EXCAVATED MATERIALS TO BAFFLE OVERLAND RUNOFF, AVOIDING THE CREATION OF LENGTHY PATHS OF CONCENTRATED RUNOFF. STOCKPILE SLOPES SHALL NOT EXCEED 2:1.

E. BACKFILL UTILITY TRENCHES AS SOON AS PRACTICABLE TO PREVENT FLOODING, SLOUGHING, POTENTIAL OVERFLOW, AND REPETITIVE EARTH DISTURBANCE.

3.05 SITE GRADING

A. WHERE APPLICABLE, FOLLOW EXCAVATION AND FILL PRACTICES SHOWN ON DRAWINGS TO LOCALIZE AND MINIMIZE EROSION.

B. MONITOR SEDIMENT VOLUME IN TEMPORARY SEDIMENT BASINS AND AT DIVERSION BERMS AND CHECK DAMS. IN ALL AREAS EXCEPT THOSE THAT DO NOT PRESENT POTENTIAL PROBLEMS WITH REGARD TO FUTURE SOIL STABILITY, DRAINAGE, OR BEARING CAPACITY, REMOVE AND PROPERLY DISPOSE OF TRAPPED SEDIMENT BEFORE BRINGING SITE TO FINAL SUBGRADE.

C. EXPOSED SOILS SHALL BE PERMANENTLY STABILIZED WITHIN FIVE (5) BUSINESS DAYS OF COMPLETION OF CONSTRUCTION OF A GIVEN AREA. EXPOSED AREAS WHERE NO WORK HAS OCCURRED FOR FOURTEEN (14) DAYS SHALL BE TEMPORARILY STABILIZED WITH HYDROSEED OR OTHER APPROVED METHOD.

D. SLOPES STEEPER THAN 3:1 SHALL BE STABILIZED IMMEDIATELY AFTER COMPLETION.

3.06 LANDSCAPING

A. COMPLETE LANDSCAPING AS SOON AS POSSIBLE AFTER COMPLETION OF FINAL SUBGRADE.

B. IMMEDIATELY AFTER PLACEMENT OF TOPSOIL, STABILIZE WITH CONTROL MEASURES INCLUDING, BUT NOT NECESSARILY LIMITED TO, SEED MIX, MULCH, AND / OR BLANKET.

C. PERMANENT SEEDING MAY BE PERFORMED IN THE SPRING PRIOR TO JULY 1 AND IN BETWEEN AUGUST 1 AND OCTOBER 15. PERMANENT SEEDING AT OTHER TIMES SHALL BE APPROVED AND SHALL ONLY BE ALLOWED WITH AN APPROVED MULCHING AND IRRIGATION PROGRAM.

GENERAL SEQUENCE OF CONSTRUCTION

1. PLACE LIMIT OF WORK BARRIERS, FENCES, CONSTRUCTION ENTRANCES AND REQUIRED FENCING & SIGNS.

2. CONSTRUCT SEDIMENT TRAPS & BARRIERS AND PLACE OTHER CONTROLS, DIVERSION TRENCHES, PERIMETER DIKES, WATER BARS & OUTLET PROTECTION.

3. ESTABLISH STOCKPILE AND STAGING AREAS.

4. CUT TREES AND SHRUBS AND REMOVE FROM SITE OR STOCKPILE AND PROTECT STOCKPILE(S) BY APPROVED METHODS.

5. EXCAVATE STUMPS AND REMOVE FROM SITE OR STOCKPILE AND PROTECT STOCKPILE(S) BY APPROVED METHODS.

6. INSTALL DRAINAGE SYSTEM BEGINNING WITH INFILTRATION AND DETENTION AREAS. INSTALL, STABILIZE AND PROTECT INFILTRATION AND DETENTION AREAS AND OTHER AREAS DISTURBED FOR COMPONENTS OF DRAINAGE SYSTEM. CLEAR, ROUGH GRADE & STABILIZE SLOPES OF ROADWAY FROM STATION 0+00 TO END BETWEEN JULY 1 AND SEPTEMBER 15TH.

7. BEGIN EARTHWORKS, ESTABLISH, STABILIZE AND PROTECT CUT AND FILL SLOPES.

8. BEGIN INSTALLATION OF OTHER UTILITIES. ESTABLISH COVER, STABILIZE AND PROTECT AREAS DISTURBED FOR UTILITY INSTALLATION.

9. BEGIN EXCAVATION FOR STRUCTURES. STOCKPILE AND PROTECT EXCAVATED AREAS.

10. BACKFILL FOUNDATIONS STABILIZE ALL DISTURBED AREAS AND REMOVE EXCESS SOIL FROM SITE.

11. PERFORM SITE WORK IN ACCORDANCE WITH "EROSION AND SEDIMENT CONTROL REQUIREMENTS, PART 3 – EXECUTION".

12. VERIFY ALL AREAS HAVE BEEN STABILIZED, RE-SEED EXPOSED SOILS.

13. CLEAN INFILTRATION AREA, CLEAR CATCH BASINS AND STORM DRAINS. REMOVE SOILS FROM SITE.

14. REMOVE ALL EROSION CONTROLS, LIMIT OF WORK BARRIERS, FENCES, CONSTRUCTION ENTRANCES, SIGNS AND SWEEP PAVED AREAS.

APPROVED

By Bellingham Planning Board at 10:14 am, Apr 12, 2018

ASE
Andrews Survey & Engineering, Inc.
Land Surveying - Civil Engineering - Site Planning

APPROVAL FOR SPECIAL PERMIT REQUIRED.
BELLINGHAM PLANNING BOARD

BELLINGHAM TOWN CLERK DATE
PROJECT: "HARTFORD VILLAGE II"
OWNER/APPLICANT: K & S REALTY TRUST
ONE STALLBROOK ROAD
MILFORD MA, 01757

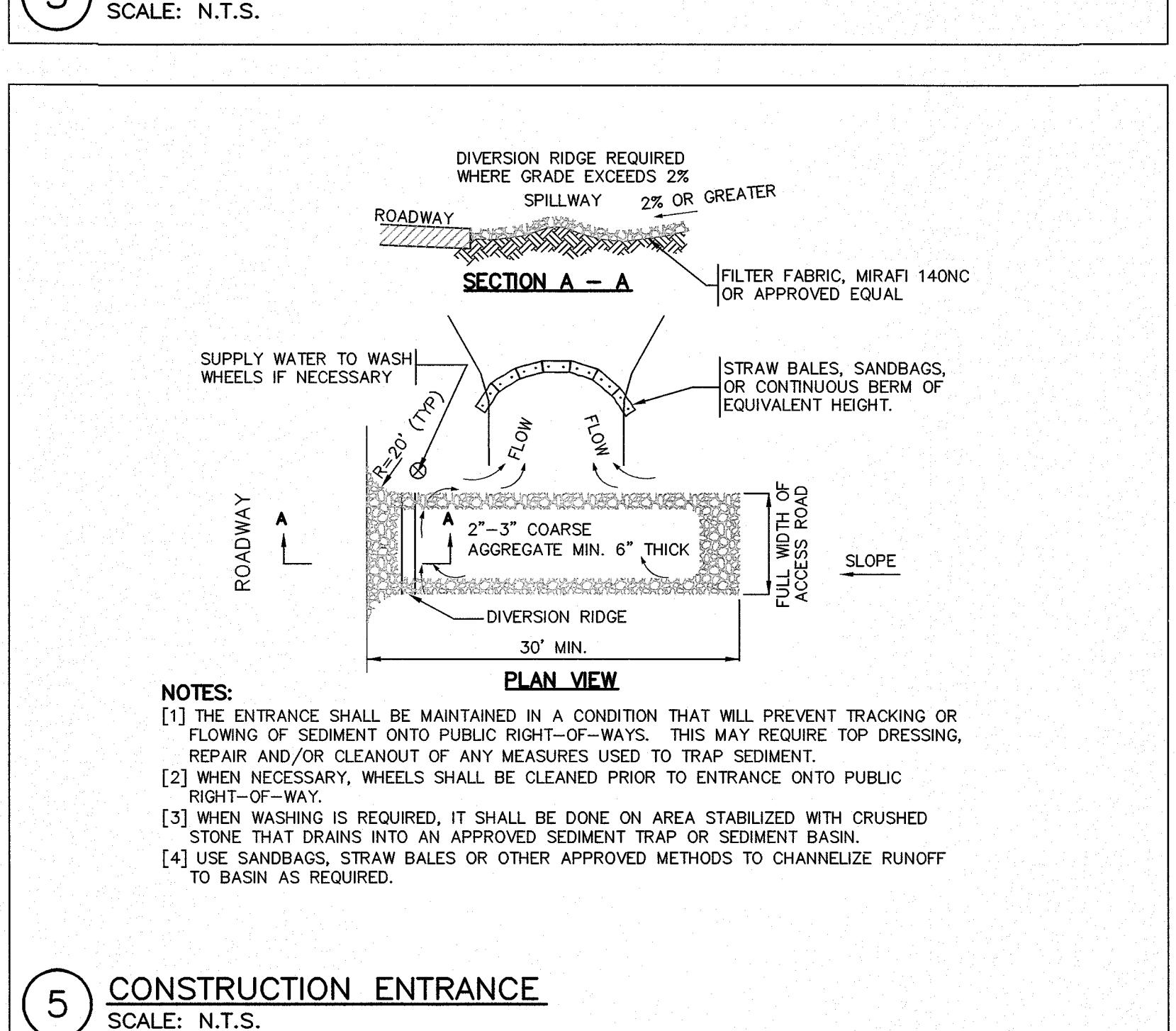
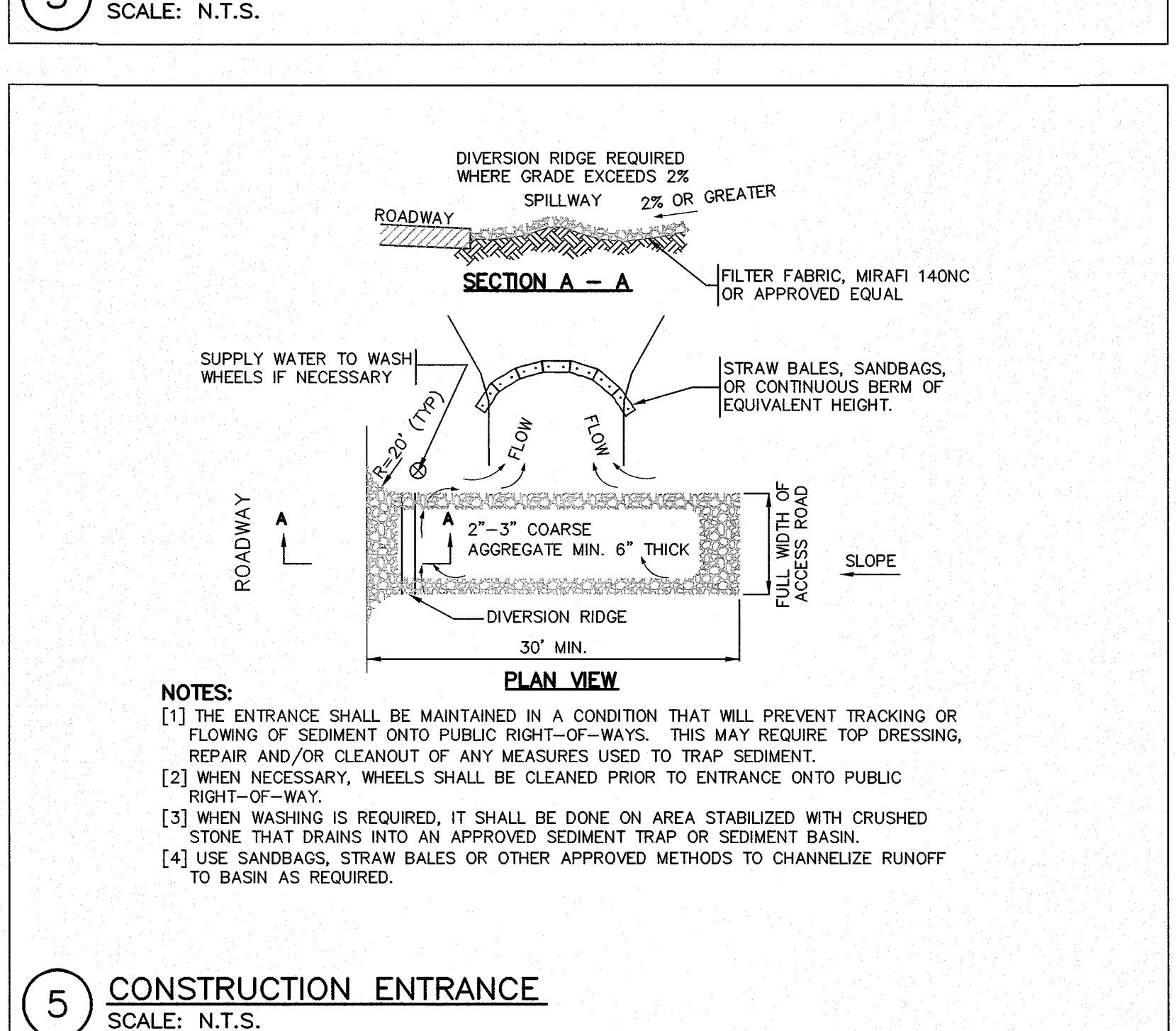
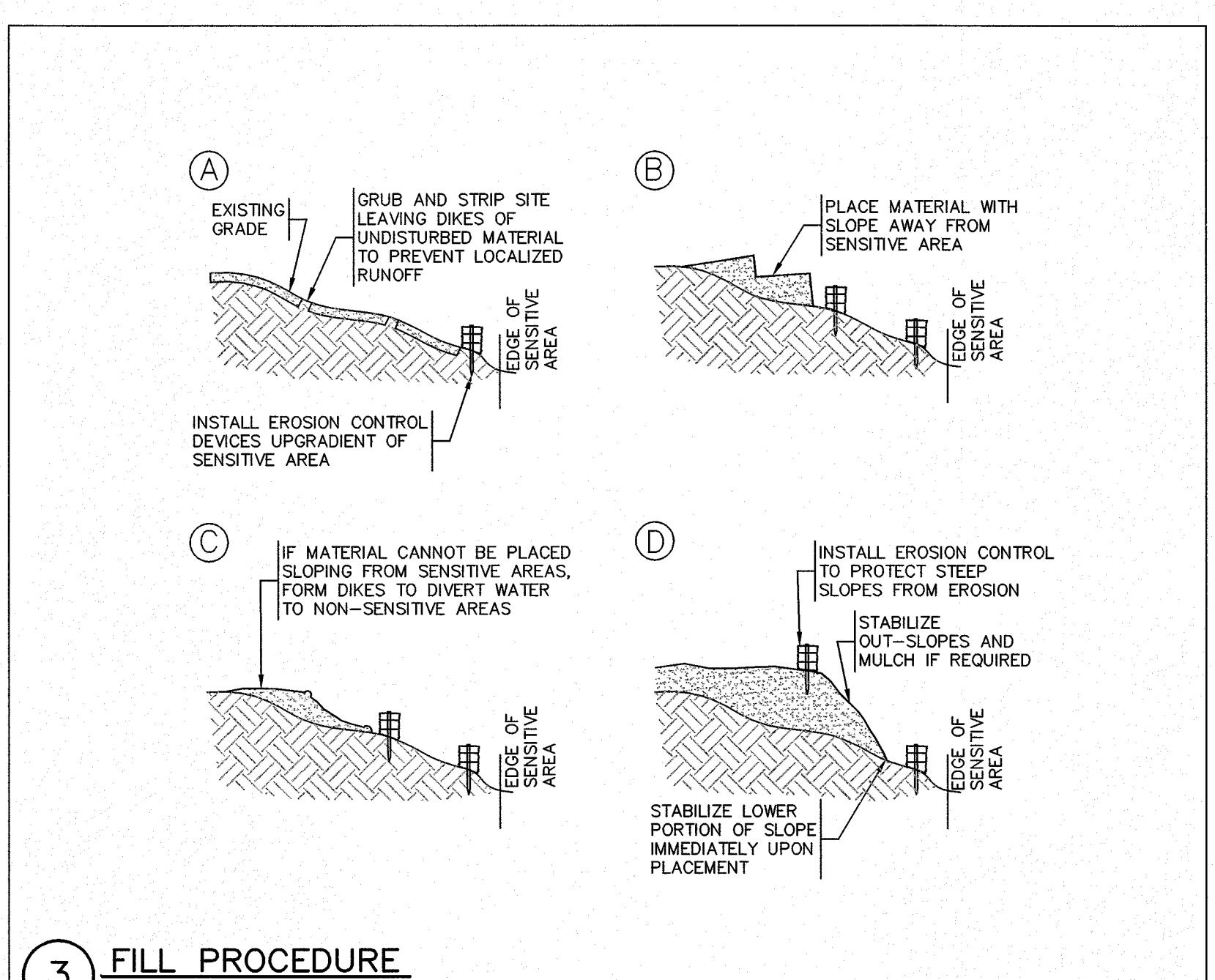
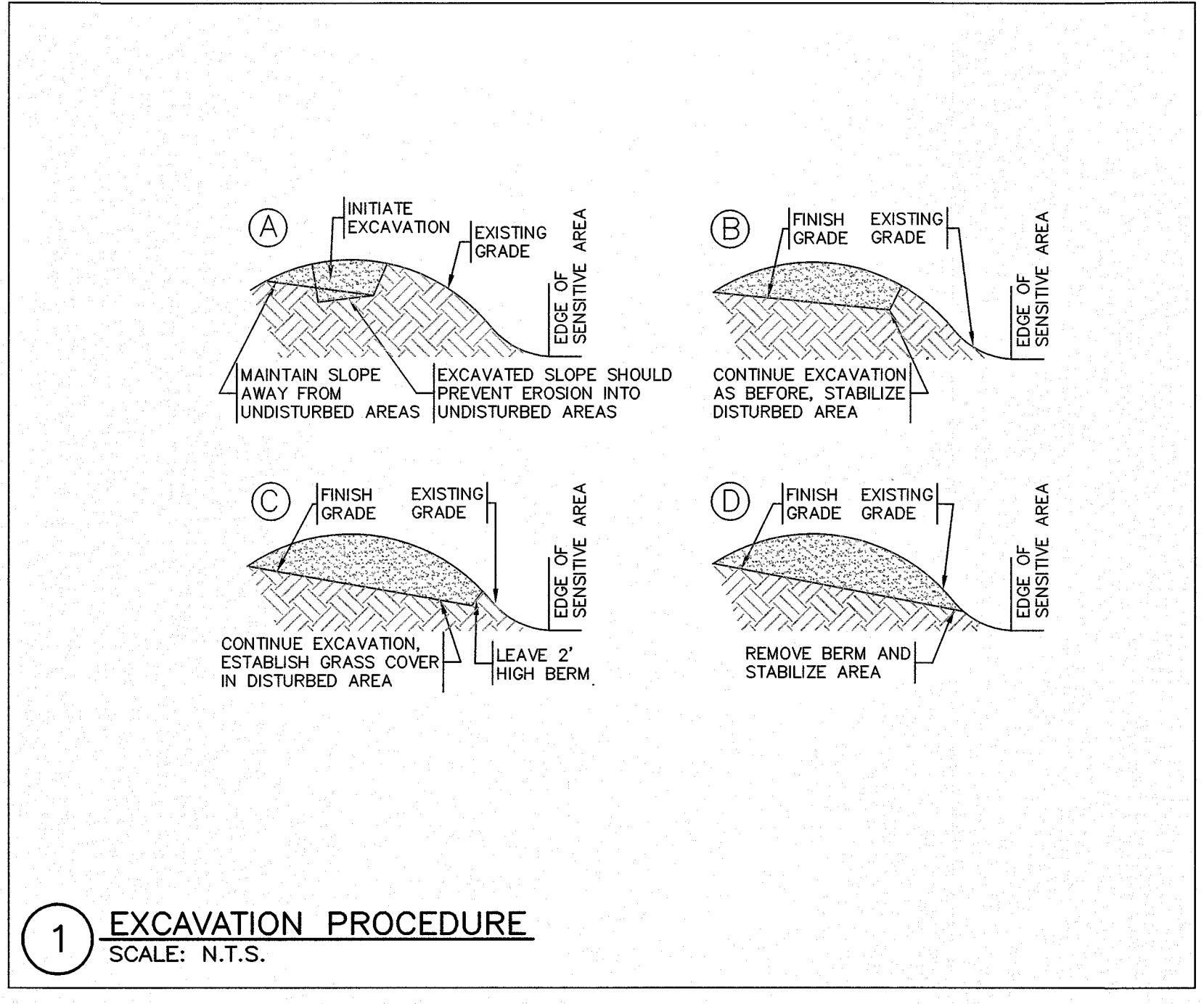
REVISIONS
NO. DATE DESCRIPTION
1 8/24/16 REVISE ROAD & BUILDING LAYOUT
2 11/10/16 REVISE ROAD & BUILDING LAYOUT
3 2/14/17 REVISE ROAD & BUILDING LAYOUT
4 7/5/17 NO CHANGE THIS SHEET

DRAWN BY WMB
CHECKED BY PBH, SJO
DATE APRIL 4, 2016
PROJECT NO. 2014-260

GRAPHIC SCALE
0 20 40 60
(IN FEET)
1 inch = 40 feet

SHEET TITLE
EROSION & SEDIMENT CONTROL NOTES & DETAILS

DRAWING NO. C9.1
PLAN NO. L-4427
PAUL B. HUTRAK CIVIL No. 4632
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NOTES:
[1] TO BE SILITACK BY ATLANTIC CONSTRUCTION FABRICS, INC., OR APPROVED EQUAL.
[2] TO BE INSTALLED IMMEDIATELY FOLLOWING THE INSTALLATION OF CATCH BASIN STRUCTURE AND REMAIN UNTIL FINISH CONCRETE IS PLACED.<br

APPROVED

By Bellingham Planning Board at 10:14 am, Apr 12, 2016

ASE

Andrews Survey & Engineering, Inc.
Land Surveying - Civil Engineering - Site Planning
P.O. Box 312, 104 Mendon Street
Uxbridge, Massachusetts 01569
P: 508-278-3897 F: 508-278-2289

500 East Washington Street
North Attleboro, Massachusetts 02760
P: 508-316-0454 F: 508-316-0963

APPROVAL FOR SPECIAL PERMIT REQUIRED
BELLINGHAM PLANNING BOARD

BEING A MAJORITY DATE:
THIS CERTIFIES THAT THE NOTICE OF APPROVAL
OF THIS PLAN BY THE BELLINGHAM PLANNING
BOARD HAS BEEN RECEIVED AND RECORDED ON
AT
AND NO APPEAL WAS RECEIVED DURING THE 20
DAYS NEXT AFTER SUCH RECEIPT OF SAID
NOTICE.

BELLINGHAM TOWN CLERK DATE

"HARTFORD VILLAGE II"
MULTI-FAMILY DEVELOPMENT
BELLINGHAM, MA 02019

K & S REALTY TRUST
ONE STALLBROOK ROAD
MILFORD MA, 01757

PROJECT: OWNER/APPLICANT:

REVISIONS

NO.	DATE	DESCRIPTION
1	8/24/16	NO CHANGE THIS SHEET
2	11/10/16	NO CHANGE THIS SHEET
3	2/14/17	sheet added
4	7/5/17	REVISE BUILDING SEPARATION

DRAWN BY WMB
CHECKED BY PBH, SJO
DATE APRIL 4, 2016
PROJECT NO. 2014-260

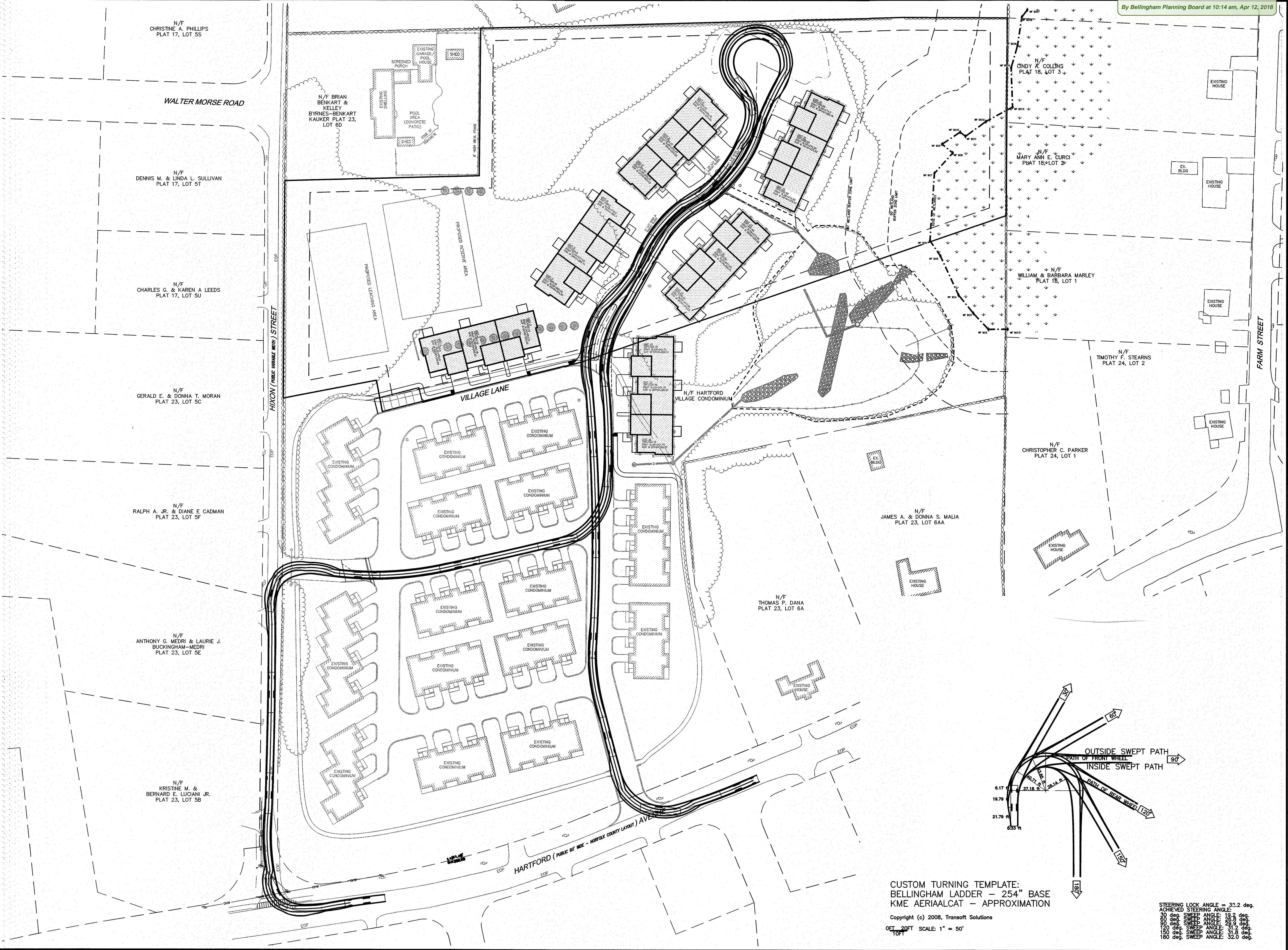
GRAPHIC SCALE
(IN FEET)
1 inch = 50 feet

SHEET TITLE

FIRE ACCESS EXHIBIT

DRAWING NO. C10
PLAN NO. L-4427
PAUL B. HUTNICK CIVIL NO. 46532
MASSACHUSETTS STATE BOARD OF SURVEYORS
7/17/17

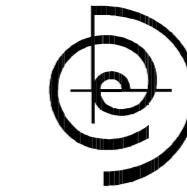
CUSTOM TURNING TEMPLATE:
BELLINGHAM LADDER - 254" BASE
KME AERIALCAT - APPROXIMATION
Copyright (c) 2008, Transoft Solutions
001 20FT SCALE: 1" = 50'
10FT
STEERING LOCK ANGLE = 32.2 deg.
ACHIEVED STEERING ANGLE:
00 deg. SWEEP ANGLE: 19.2 deg.
90 deg. SWEEP ANGLE: 29.9 deg.
180 deg. SWEEP ANGLE: 31.8 deg.
150 deg. SWEEP ANGLE: 32.0 deg.



ACAD: 2014: HTRUEG13 2014-2015: DNGA-FERMI-HVETASE2-REV 1.0WG 07-13-17 12:30:22 PM - LAYUG

APPROVED

By Bellingham Planning Board at 10:15 am, Apr 12, 2018



earthdesign
LANDSCAPE ARCHITECTURE
WORCESTER, MA • 508.852.2644



Andrews Survey & Engineering, Inc.
Land Surveying - Civil Engineering - Site Planning

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APPROVAL UNDER SUBDIVISION CONTROL LAW
REQUIRED: BELLINGHAM PLANNING BOARD

BEING A MAJORITY DATE:

THIS CERTIFIES THAT THE NOTICE OF APPROVAL OF THIS PLAN BY THE BELLINGHAM PLANNING BOARD HAS BEEN RECEIVED AND RECORDED ON
AT
AND NO APPEAL WAS RECEIVED DURING THE 20 DAYS NEXT AFTER SUCH RECEIPT OF SAID NOTICE.

BELLINGHAM TOWN CLERK DATE

"HARTFORD VILLAGE II"
MULTI-FAMILY DEVELOPMENT
BELLINGHAM, MA 02019

K & S REALTY TRUST
ONE STALLBROOK ROAD
MILFORD MA, 01757

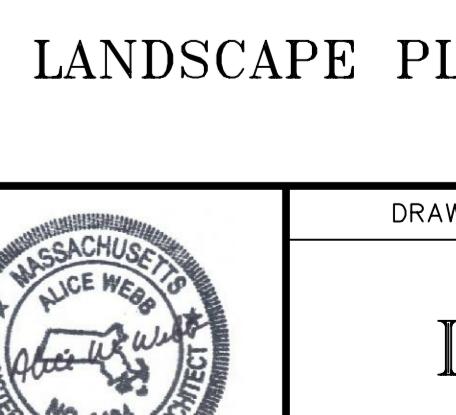
PROJECTS
OWNER/APPLICANT:

REVISIONS
NO. DATE DESCRIPTION
1. 8/24/16 REVISE ROAD & BUILDING LAYOUT
2. 2/3/17 MISC. LAYOUT & GRADING REVISIONS

DRAWN BY AWW
CHECKED BY AWW
DATE AUGUST 17, 2016
PROJECT NO. 2014-260

GRAPHIC SCALE
30 0 15 30 60
(IN FEET)
1 inch = 30 feet

SHEET TITLE



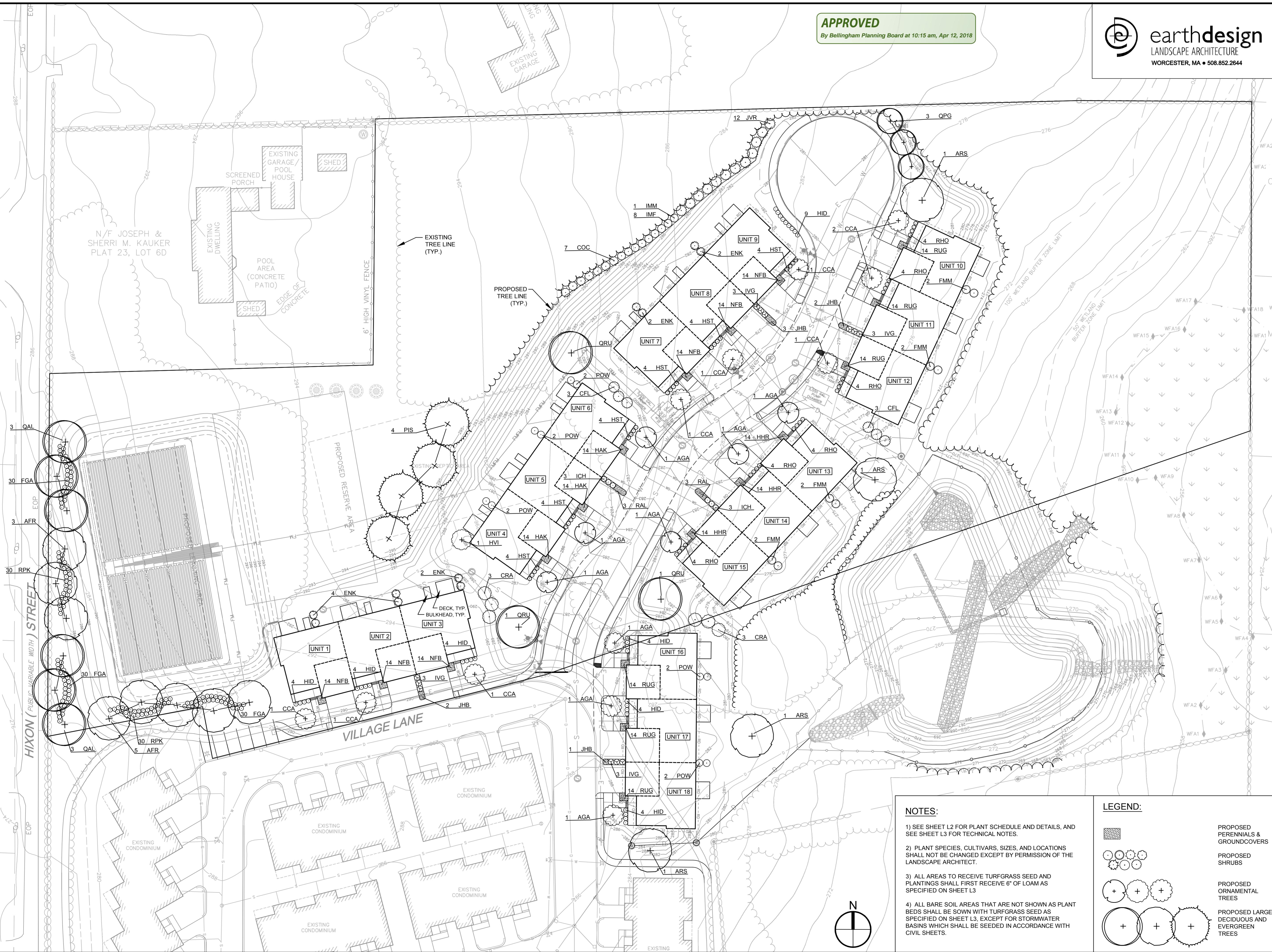
LANDSCAPE PLAN
DRAWING NO. L1
PLAN NO. L-4427

NOTES:

- 1) SEE SHEET L2 FOR PLANT SCHEDULE AND DETAILS, AND SEE SHEET L3 FOR TECHNICAL NOTES.
- 2) PLANT SPECIES, CULTIVARS, SIZES, AND LOCATIONS SHALL NOT BE CHANGED EXCEPT BY PERMISSION OF THE LANDSCAPE ARCHITECT.
- 3) ALL AREAS TO RECEIVE TURFGRASS SEED AND PLANTINGS SHALL FIRST RECEIVE 6" OF LOAM AS SPECIFIED ON SHEET L3.
- 4) ALL BARE SOIL AREAS THAT ARE NOT SHOWN AS PLANT BEDS SHALL BE SOWN WITH TURFGRASS SEED AS SPECIFIED ON SHEET L3, EXCEPT FOR STORMWATER BASINS WHICH SHALL BE SEADED IN ACCORDANCE WITH CIVIL SHEETS.

LEGEND:

- PROPOSED PERENNIALS & GROUNDCOVERS
- PROPOSED SHRUBS
- PROPOSED ORNAMENTAL TREES
- PROPOSED LARGE DECIDUOUS AND EVERGREEN TREES



APPROVED

By Bellingham Planning Board at 10:15 am, Apr 12, 2018



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Uxbridge, Massachusetts 01569
P: 508-278-3897 F: 508-278-2289

509 East Washington Street
North Attleboro, Massachusetts 02760
P: 508-316-0452 F: 508-316-0963

APPROVAL UNDER SUBDIVISION CONTROL LAW
REQUIRED: BELLINGHAM PLANNING BOARD

TECHNICAL NOTES FOR LOAM BORROW:

1) SCOPE OF WORK: FOR THIS PROJECT, THE WORK SHALL INCLUDE PLACING LOAM ALL AREAS TO RECEIVE PLANTS AND TURFGRASS SEEDING.

2) THE CONTRACTOR SHALL FURNISH A CERTIFIED LABORATORY REPORT SHOWING THE SOILS CLASSIFICATION AND NUTRIENT ANALYSIS OF REPRESENTATIVE SAMPLES OF THE LOAM THIS IS PROPOSED TO BE USED, INCLUDING THE EXTENT OF LIME AND FERTILIZER REQUIRED. ALL COSTS FOR SUCH WORK SHALL BE BORNE BY THE CONTRACTOR.

3) IN ACCORDANCE WITH THE SPECIFIC REQUIREMENTS OF THIS PROJECT, EXISTING ON-SITE SOIL MAY BE RE-USED AS LOAM BORROW ONLY IF IT MEETS THIS SPECIFICATION. EXISTING TOPSOIL THAT DOES NOT MEET THIS SPECIFICATION MAY BE RE-USED ONLY UP TO THE SUBGRADE ELEVATION WITHIN THE LIMITS OF AREAS TO RECEIVE NEW LOAM BORROW. THE CONTRACTOR SHALL FURNISH ALL REQUIRED LOAM BORROW, FROM OFF-SITE SOURCES, AS NECESSARY, TO COMPLETE THE PROJECT.

4) SCREENED LOAM SHALL BE "FINE SANDY LOAM" OR "SANDY LOAM" DETERMINED BY MECHANICAL ANALYSIS (ASTM D-422) AND BASED ON THE "USDA CLASSIFICATION SYSTEM". SCREENED LOAM SHALL HAVE THE FOLLOWING MECHANICAL ANALYSIS:

TEXTURAL CLASS PERCENTAGE	PERCENTAGE OF TOTAL WEIGHT	AVERAGE PERCENTAGE
SAND (0.05 - 2.0 MM)	45 - 75	60
SILT (0.002 - 0.05 MM)	5 - 35	25
CLAY (LESS THAN 0.002 MM)	5 - 20	15

5) SCREENED LOAM SHALL BE A NATURAL PRODUCT CONSISTING PRIMARILY OF NATURAL TOPSOIL, FREE FROM SUBSOIL, AND OBTAINED FROM AN AREA THAT HAS NEVER BEEN STRIPPED BEFORE. SCREENED LOAM SHALL NOT CONTAIN LESS THAN FIVE PERCENT (5%) NOR MORE THAN TEN PERCENT (10%) ORGANIC MATTER. TO ADJUST ORGANIC MATTER CONTENT, THE SOIL MAY BE AMENDED, PRIOR TO SITE DELIVERY, BY THE ADDITION OF COMPOSTED LEAF MOLD OR PEAT MOSS. NO MIXING OR AMENDING OF LOAM IS PERMITTED ON SITE.

6) THE LOAM SHALL NOT BE DELIVERED IN A WET OR FROZEN CONDITION.

7) SCREENED LOAM SHALL CONSIST OF FERTILE, FRIABLE, LOAM CAPABLE OF SUSTAINING VIGOROUS PLANT GROWTH. LOAM SHALL BE WITHOUT ADMIXTURE OF SUBSOIL AND REFUSE. IT SHALL BE A HOMOGENEOUS MATERIAL FREE OF STONES GREATER THAN ONE-HALF (1/2) INCH IN THE LONGEST DIMENSION; FREE OF LUMPS, PLANTS, GRASS, ROOTS, STICKS, EXCESSIVE STONE CONTENT, DEBRIS, AND EXTRANEOUS MATTER AS DETERMINED BY THE OWNER.

8) SCREENED LOAM SHALL BE WITHIN THE PH RANGE OF 6.0 TO 6.5. IT SHALL BE UNCONTAMINATED BY SALT WATER, FOREIGN MATTER, AND SUBSTANCES HARMFUL TO PLANT GROWTH. THE MAXIMUM SOLUBLE SALT INDEX SHALL BE 100. SCREENED LOAM SHALL NOT HAVE LEVELS OF ALUMINUM GREATER THAN 200 PARTS PER MILLION.

9) SEE TURFGRASS NOTES FOR LIME AND FERTILIZER REQUIREMENTS FOR LAWN AREAS.

10) TOPSOIL STRUCTURE SHALL NOT BE DESTROYED THROUGH EXCESSIVE AND UNNECESSARY HANDLING OR COMPACTION. INAPPROPRIATE HANDLING LEADING TO THE COMPACTION OF DETERIORATION OF SOIL STRUCTURE WILL RESULT IN REJECTION OF TOPSOIL FOR USE.

11) AT NO TIME SHALL EQUIPMENT OR MATERIAL REST ON THE SOIL.

12) THE CONTRACTOR SHALL FURNISH AND SPREAD LOAM TO A MINIMUM 6-INCH DEPTH (AFTER SOIL SETTLEMENT) IN ALL LAWN AND PLANT BED AREAS. THE TOP OF THE SETTLED LOAM BORROW LAYER SHALL BE TO GRADES SPECIFIED ON THE DRAWINGS. NO COMPACTION SHALL BE REQUIRED BEYOND THAT EXTENT NECESSARY TO PLACE SOD OR TO PLANT TREES AND SHRUBS TO ENSURE AGAINST UNEVENNESS OR SETTLING BELOW ACCEPTED GROWTH LINES.

TECHNICAL NOTES FOR TURFGRASS SEEDING:

1) SCOPE OF WORK: FOR THIS PROJECT, THE WORK SHALL INCLUDE SEEDING ALL DENUDED AREAS, EXCEPT WHERE PLANT BEDS ARE INSTALLED.

2) ALL AREAS SHALL BE SEADED WITHIN 30 DAYS AFTER FINISHED GRADES ARE ESTABLISHED AND OTHER ELEMENTS INCLUDED IN THIS CONTRACT ARE CONSTRUCTED.

3) SEED SPECIFICATIONS:

A) AREAS RECEIVING FULL SUN OR PART SHADE:

FESCUE/BLUEGRASS/PERENNIAL RYEGRASS MIXTURE:
MIXTURE REQUIREMENTS ARE AS FOLLOWS (WITH APPROXIMATE PERCENTAGES):

35% FINE FESCUE (ENDOPHYTIC)
35% KENTUCKY BLUEGRASS
30% PERENNIAL RYEGRASS (ENDOPHYTIC)

B) AREAS RECEIVING MOSTLY SHADE:

FESCUE/PERENNIAL RYEGRASS MIXTURE:
MIXTURE REQUIREMENTS ARE AS FOLLOWS (WITH APPROXIMATE PERCENTAGES):

90% FINE FESCUE (ENDOPHYTIC)
10% PERENNIAL RYEGRASS (ENDOPHYTIC)

C) ANY PROPOSED SUBSTITUTIONS SHALL BE PRESENTED TO THE LANDSCAPE ARCHITECT FOR APPROVAL PRIOR TO SEEDING.

D) ALL SEED SHALL HAVE A MINIMUM PURITY OF 98 PERCENT AND A GERMINATION RATE OF 85 PERCENT.

E) ALL SEED SHALL BE LABELED TO SHOW THAT IT IS WITHIN THE REQUIREMENTS OF THE USDA AS TO PURITY, GERMINATION, AND PRESENCE OF RESTRICTED OR PROHIBITED WEEDS.

4) BED PREPARATION FOR AREAS TO BE SEADED: A ROTOVATOR, CHISEL PLOW, OR CULTIVATOR SHALL BE USED TO WORK THE SOIL TO A DEPTH OF SIX INCHES. AFTER THIS OPERATION, REMOVE AND DISPOSE OF STICKS, STONES OVER 1 INCH DIAMETER, AND RUBBISH TO A MINIMUM DEPTH OF TWO INCHES.

5) LIME AND NUTRIENTS: LIME SHALL BE GROUND DOLOMITIC LIMESTONE, APPLIED AT THE RATE OF 50 POUNDS PER 1000 SQUARE FEET. LIME SHALL BE WELL-MIXED INTO THE TOP THREE INCHES OF LOAM.

6) FERTILIZER: FERTILIZER SHALL BE A COMMERCIAL GRADE WITH A MINIMUM OF 50 PERCENT OF THE NITROGEN COMPONENT IN A CONTROLLED RELEASE FORM LABELED TO RELEASE NITROGEN FOR A MINIMUM OF SIX WEEKS. FERTILIZER SHALL HAVE AN N/P/K RATIO IN THE RANGE OF 1:1:1 TO 1:2:2. IT SHALL BE APPLIED AT A RATE WHICH ACHIEVES ONE POUND OF NITROGEN PER 1000 SQUARE FEET.

7) SEEDING PROCEDURE FOR TURFGRASS: SOWING OF SEED SHALL BE DONE ONLY AFTER THE PREPARED SOIL, TO WHICH LIME AND FERTILIZER HAVE BEEN ADDED AS SPECIFIED, HAS BEEN THOROUGHLY SETTLED BY RAINFALL OR ARTIFICIAL WATERING IMMEDIATELY BEFORE ANY SEED IS SOWN. THE GROUND SHALL BE SCARIFIED AS SPECIFIED. LAWN AREAS SHALL BE SEADED EVENLY WITH A MECHANICAL SPREADER. SEED MIXTURES SHALL BE SOWN AT A RATE OF 5 POUNDS PER 1000 SQUARE FEET. AFTER SEEDING, THE LAWN SHALL BE LIGHTLY RAKED, ROLLED WITH A 200-POUND ROLLER, AND WATERED WITH A FINE SPRAY. THIS METHOD OF SEEDING MAY BE VARIED AT THE DISCRETION OF THE CONTRACTOR ON HIS OWN RESPONSIBILITY TO ESTABLISH A SMOOTH, UNIFORMLY GRASSED LAWN.

8) SEED FOR PERMANENT TURFGRASS SHALL ONLY BE SOWN FROM THE THIRD WEEK IN APRIL THROUGH JUNE AND DURING THE MONTH OF SEPTEMBER.

9) TEMPORARY SEEDING FOR EROSION CONTROL: IN THE EVENT THAT THE CONTRACT IS SUSPENDED, TEMPORARY SEEDING SHALL BE USED ON ANY BARE AREAS THAT MAY BE SUBJECT TO EROSION AND WHERE TEMPORARY VEGETATION CAN BE USED TO RETARD EROSION FROM 2 TO 12 MONTHS. THE SEED TYPE USED FOR TEMPORARY COVER SHALL BE 100 PERCENT TALL FESCUE APPLIED AT A RATE OF 300 POUNDS PER ACRE.

10) MAINTENANCE: MAINTAIN THE TURFGRASS FROM TIME OF INSTALLATION UNTIL THE FINAL INSPECTION IMMEDIATELY PRIOR TO THE BEGINNING OF THE GUARANTEE PERIOD. MAINTENANCE SHALL INCLUDE WATERING OF TURF AREAS, REPAIRS TO TURF AREAS, AND OTHER NECESSARY OPERATIONS. THE MAINTAINED TURF AREAS SHALL BE MOVED TO A UNIFORM HEIGHT OF APPROXIMATELY TWO AND ONE-HALF INCHES. MOWING SHALL BE PROVIDED AS REQUIRED SO THAT THE TURF NEVER EXCEEDS FOUR INCHES IN HEIGHT. TURF SHALL BE PROTECTED AND REPLANTED AS NECESSARY TO ESTABLISH A UNIFORM STAND OF THE SPECIFIED TURF AND UNTIL ACCEPTANCE. SCATTERED BARE SPOTS, NONE OF WHICH IS LARGER THAN ONE SQUARE FOOT, WILL BE ALLOWED UP TO A MAXIMUM OF THREE PERCENT OF ANY TURF AREA. WHEN TURF AREAS ARE READY FOR FINAL INSPECTION, THE MAINTAINED TURF AREAS SHALL BE NEATLY MOVED TO THE UNIFORM HEIGHTS AS NOTED ABOVE. THE LAWNS SHALL BE CONSIDERED ESTABLISHED ONLY WHEN THE SPECIFIED GRASS IS VIGOROUS AND GROWING WELL IN ADDITION TO MEETING THE OTHER REQUIREMENTS SPECIFIED. AT THE TIME OF ACCEPTANCE FOLLOWING FINAL INSPECTION, THE CONTRACTOR IS RELIEVED OF ROUTINE MAINTENANCE RESPONSIBILITIES FOR THE TURF UNDER THIS CONTRACT.

11) FINAL INSPECTION, CLEANUP AND COMPLETION: FINAL INSPECTION SHALL BE FOR THE COMPLETED LANDSCAPE AND SHALL BE MADE AT THE CONCLUSION OF THE LANDSCAPE WORK. UPON COMPLETION OF THE WORK, THE CONTRACTOR SHALL REMOVE FROM THE SITE ALL EQUIPMENT AND OTHER ARTICLES USED. ALL EXCESS SOIL, STONES, AND DEBRIS SHALL BE REMOVED FROM THE SITE. ALL WORK AREAS SHALL BE LEFT IN A CLEAN AND NEAT CONDITION. ALL DAMAGE TO EXISTING CONSTRUCTION CAUSED BY THE LANDSCAPING OPERATIONS SHALL BE REPAIRED TO THE SATISFACTION OF THE OWNER AT THE CONTRACTOR'S EXPENSE.

12) GUARANTY AND REPLACEMENT: IF A SATISFACTORY STAND OF MAINTAINED TURF HAS BEEN PRODUCED AT THE TIME OF FINAL INSPECTION, IT SHALL BE GUARANTEED THROUGH ONE COMPLETE GROWING SEASON. IF RENOVATION AND/OR RESEEDING ARE REQUIRED AT THE END OF THE GUARANTEE PERIOD, THIS WORK SHALL BE DONE IN CONFORMANCE WITH THE REQUIREMENTS NOTED ABOVE. IF A SATISFACTORY STAND OF MAINTAINED TURF HAS NOT BEEN PRODUCED AT THE TIME OF FINAL INSPECTION, NECESSARY REPAIRS SHALL BE PERFORMED IN CONFORMANCE WITH THE REQUIREMENTS NOTED ABOVE. UPON COMPLETION OF THESE REPAIRS, THE TURF GRASS SHALL BE GUARANTEED AS NOTED ABOVE.

TECHNICAL NOTES FOR TREE, SHRUB, AND GROUNDCOVER PLANTINGS:

1) NOMENCLATURE: THE NAMES OF PLANTS REQUIRED UNDER THIS CONTRACT SHALL CONFORM TO THOSE GIVEN IN STANDARDIZED PLANT NAMES, 1942 EDITION, PREPARED BY THE AMERICAN JOINT COMMITTEE ON HORTICULTURAL NOMENCLATURE. NAMES OF VARIETIES NOT INCLUDED THEREIN SHALL CONFORM GENERALLY WITH NAMES ACCEPTED IN THE NURSERY TRADE.

2) QUALITY AND SIZE: PLANTS SHALL HAVE A HABIT OF GROWTH THAT IS NORMAL FOR THE SPECIES AND SHALL BE SOUND, HEALTHY, VIGOROUS, AND FREE FROM INSECT PESTS, PLANT DISEASES, AND INJURIES. ALL PLANTS SHALL EQUAL OR EXCEED THE MEASUREMENTS SPECIFIED IN THE PLANT LIST, WHICH ARE MINIMUM ACCEPTABLE SIZES. THEY SHALL BE MEASURED BEFORE PRUNING IS DONE AT TIME OF PLANTING. REQUIREMENTS FOR THE MEASUREMENTS, BRANCHING, GRADING, QUALITY, BALLING, AND BURLAPPING OF PLANTS IN THE PLANT LIST SHALL FOLLOW THE CODE OF STANDARDS CURRENTLY RECOMMENDED BY THE AMERICAN ASSOCIATION OF NURSERYMEN, INC., IN THE AMERICAN STANDARD FOR NURSERY STOCK.

3) SUBSTITUTIONS: SUBSTITUTIONS WILL BE PERMITTED ONLY UPON SUBMISSION OF PROOF THAT ANY PLANT AS SPECIFIED IS NOT OBTAINABLE DURING THE SCHEDULED PLANTING SEASON. WRITTEN AUTHORIZATION BY THE LANDSCAPE ARCHITECT SHALL BE REQUIRED FOR ANY SUBSTITUTION. THE NEAREST EQUIVALENT SIZE OR VARIETY OF PLANT HAVING THE SAME ESSENTIAL CHARACTERISTICS SHALL BE USED.

4) BALLED AND BURLAPPED MATERIALS: PLANTS DESIGNATED "B&B" IN THE PLANT LIST SHALL BE BALLED AND BURLAPPED. THEY SHALL BE DUG WITH FIRM, NATURAL BALLS OF EARTH OF SUFFICIENT DIAMETER AND DEPTH TO ENCOMPASS THE FIBROUS AND FEEDING ROOT SYSTEM NECESSARY FOR FULL RECOVERY OF THE PLANT. MATERIAL SHALL BE IN A CONDITION WHERE THE NATURAL ROOT COLLAR OF THE PLANT IS WITHIN APPROXIMATELY TWO (2) INCHES OF THE SOIL LEVEL OF THE BALL. BALLS SHALL BE FIRMLY WRAPPED WITH BURLAP OR SIMILAR MATERIAL AND BOUND WITH TWINE, CORD, OR WIRE MESH. NO SYNTHETIC FABRIC IS ALLOWED. WHERE NECESSARY TO PREVENT BREAKING OR CRACKING OF THE BALL DURING THE PROCESS OF PLANTING, THE BALL MAY BE SECURED TO A PLATFORM. BALLS SHALL BE KEPT MOIST AND SHADED UNTIL THEY ARE PLANTED. REMOVE ALL BALL TIES OR STRAPPING FROM ROOT BALL PRIOR TO PLANTING. PLANT IN ACCORDANCE WITH TREE, SHRUB, AND GROUNDCOVER PLANTING DETAILS.

5) CONTAINER-GROWN MATERIALS: PLANTS NOT DESIGNATED OTHERWISE IN THE PLANT LIST MAY BE PURCHASED AS CONTAINER-GROWN OR BALLED/BURLAPPED. CONTAINER-GROWN PLANTS, IF STORED ON THE SITE, SHALL BE WATERED THOROUGHLY AT LEAST ONCE EVERY 48 HOURS. ROOT SYSTEMS OF CONTAINER-GROWN PLANTS SHALL BE WELL-DEVELOPED BUT NOT IN "POT-BOUND" CONDITION OF DENSE, ENCIRCLING ROOTS. THE ROOT BALL OF THE PLANT SHALL BE LOOSENED TO ALLEVIATE ENCIRCLING ROOTS AND TO PROVIDE AN INCREASED ROOT INTERFACE WITH THE FILL SOIL. PLANT IN ACCORDANCE WITH TREE, SHRUB, AND GROUNDCOVER PLANTING DETAILS.

6) PROTECTION OF PLANTS PRIOR TO INSTALLATION: THE ROOT ZONE OF ALL PLANTS NOT YET INSTALLED SHALL BE PROTECTED FROM FREEZING, DRYING, AND DIRECT SUNLIGHT.

7) MULCHING: DOUBLE-SHREDDED HARDWOOD MULCH SHALL BE USED AS THE MULCH FOR ALL PLANT BEDS INDICATED ON THE LANDSCAPE PLAN, INCLUDING AREAS SURROUNDING THE PLANTS AS SHOWN ON THE TREE, SHRUB, AND GROUNDCOVER PLANTING DETAILS.

8) PLANTING SEASON: THE NORMAL PLANTING SEASON IS APRIL THROUGH NOVEMBER. SOME PLANTS SPECIFIED AS BALLED AND BURLAPPED CANNOT BE DUG DURING PORTIONS OF THIS PLANTING SEASON. CHECK WITH NURSERIES FOR SPECIFICS. PLANTING OPERATIONS SHALL BE CONDUCTED UNDER FAVORABLE WEATHER CONDITIONS DURING THE NORMAL PLANTING SEASON.

9) WEATHER CONDITIONS: PLANTING SHALL NOT TAKE PLACE WHEN SOILS ON SITE ARE FROZEN OR WET AND IN POOR TILTH.

10) LAYOUT: NEW PLANTINGS SHALL BE LOCATED ACCORDING TO THE LANDSCAPE PLAN. THE CONTRACTOR SHALL STAKE THE PLANT LOCATIONS, AND SHALL THEN CONTACT THE LANDSCAPE ARCHITECT FOR APPROVAL.

11) SETTING PLANTS: ALL PLANTS SHALL BE PLANTED IN PREPARED SOIL BEDS, AND SET ON FIRM SOIL TO SUCH DEPTH AS INDICATED IN THE PLANTING DETAILS. TREES, SHRUBS, GROUNDCOVERS, AND PERENNIALS SHALL BE SET SO THAT THE PLANT'S NATURAL ROOT COLLAR OR CROWN IS ABOVE FINISHED GRADE AT THE HEIGHTS INDICATED IN THE PLANTING DETAILS. NO BURRAP SHALL BE PULLED FROM UNDER THE BALLS. ROOTS ON BARE-ROOT PLANTS SHALL BE SPREAD IN THEIR NORMAL POSITION. ALL BROKEN OR FRAYED ROOTS SHALL BE CUT OFF CLEANLY. PREPARED SOIL SHALL BE PLACED AND COMPACTED CAREFULLY TO AVOID INJURY TO ROOTS. FILL ALL Voids, AND TO MINIMIZE ROCKING OF ROOT BALL. ADD WATER AND TAMP THE BACKFILL UNTIL THE BACKFILL IS COMPLETELY SATURATED, THEN ALLOW IT TO SOAK AWAY. FILL THE HOLE TO FINISHED GRADE, AND FORM A SHALLOW SAUCER AROUND EACH TREE AND SHRUB BY PLACING A RIDGE OF TOPSOIL AROUND THE EDGE OF EACH PIT. AFTER THE GROUND SETTLES, ADDITIONAL SOIL SHALL BE FILLED IN TO THE LEVEL OF THE FINISHED GRADE.

12) STAKING TREES: DO NOT STAKE TREES, UNLESS TREES ARE PLANTED ON STEEP SLOPES, IN WHICH CASE THE CONTRACTOR SHALL CONTACT THE LANDSCAPE ARCHITECT FOR PERMISSION TO STAKE THOSE TREES.

13) MAINTENANCE: MAINTAIN PLANTS AND PLANT BEDS FROM THE TIME OF INSTALLATION UNTIL THE FINAL INSPECTION IMMEDIATELY PRIOR TO COMMENCEMENT OF THE GUARANTEE PERIOD. MAINTENANCE SHALL INCLUDE WATERING AND PROTECTION OF PLANTINGS AND OTHER NECESSARY OPERATIONS.

14) FINAL INSPECTION: WHEN THE TREE AND SHRUB PLANTINGS ARE READY FOR FINAL INSPECTION, ALL MULCHED AREAS SHALL BE FREE FROM WEEDS AND MULCHED TO THE EXTENT INDICATED ON THESE DRAWINGS. PLANT TAGS SHALL BE REMOVED BY THE CONTRACTOR PRIOR TO THE INSPECTION FOR ACCEPTANCE.

15) GUARANTEE: AFTER ACCEPTANCE AT TIME OF FINAL INSPECTION, ALL PLANTS SHALL BE GUARANTEED FOR ONE (1) YEAR. PLANTINGS SHALL BE ALIVE AND IN SATISFACTORY VIGOR AT THE END OF THE GUARANTEE PERIOD.

16) REPLACEMENT: AT THE END OF THE GUARANTEE PERIOD, ANY PLANT REQUIRED UNDER THIS CONTRACT THAT IS DEAD OR IN POOR VIGOR SHALL BE REMOVED FROM THE SITE. THESE AND ANY MISSING PLANTS SHALL BE REPLACED AS SOON AS CONDITIONS PERMIT, BUT DURING THE NORMAL PLANTING SEASON. ALL REPLACEMENTS SHALL BE PLANTS OF THE SAME KIND AS ORIGINALLY PLANTED AND SHALL BE OF SIZE EQUAL TO THAT ATTAINED BY ADJACENT PLANTS OF THE SAME KIND AT THE TIME REPLACEMENT IS MADE. ONLY ONE REPLACEMENT WILL BE REQUIRED FOR EACH PLANT DECLARED DEAD, IN AN UNHEALTHY OR BADLY IMPAIRED CONDITION, OR MISSING AT THE TIME OF FINAL INSPECTION.

LANDSCAPE NOTES	
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	L3
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