

LAND USE TABLES

LOCATION: 135, 139 & 149R HOWARD STREET
READING, MA 01876

ZONE: RESIDENCE DISTRICT - S-15 DISTRICT
USE: SINGLE FAMILY RESIDENTIAL

	REQUIRED
MINIMUM LOT AREA	15,000-SF
MINIMUM LOT FRONTAGE	100-FOOT
MINIMUM FRONT SETBACK	20-FOOT
MINIMUM SIDE SETBACK	15-FOOT
MINIMUM REAR SETBACK	25%
MAX. BUILDING COVERAGE	15%

- PROJECT NOTES:**
- PROJECT LOCATION: 135, 139 & 149R HOWARD STREET (MAP 10 - LOTS 75 (#135), 76 (#139) - & 77 (#149R))
 - PROPERTY REFERENCES: SOUTH MIDDLESEX REGISTRY OF DEEDS BOOK 47898 PAGE 406 (#135) BOOK 44647 PAGE 383 (#139) BOOK 71028 PAGE 115 (#149R)
 - OWNERS: KEVIN GREENWOOD (#135) KEVIN GREENWOOD & JAMES DOHERTY (#139) KEVIN GREENWOOD (#149R)
 - LAND SURVEYOR: SEC & ASSOCIATES PLAISTOW, NH 03865 TEL: (603) 382-5065
 - SOILS / WETLANDS: NORSE ENVIRONMENTAL SERVICES, INC. 92 MIDDLESEX ROAD - UNIT 4 TYNGSBORO, MA. 01879

FOR REGISTRY USE ONLY
THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE RULES AND REGULATIONS FOR RECORDING ADOPTED BY THE REGISTERS OF DEEDS IN 1978 AND AMENDED JANUARY 12, 1988.

Warren A. Wagner 12-21-2018
SURVEYOR DATE

INFRASTRUCTURE HOLDINGS, LLC
122 BOSTON ROAD
BILLERICA, MA 01862

PROJECT:
135, 139 & 149R, HOWARD STREET
READING, MA 01867

DATE ISSUED: DECEMBER 21, 2018
PROJECT #: 18-10020
PREPARED BY: WARREN A. WAGNER

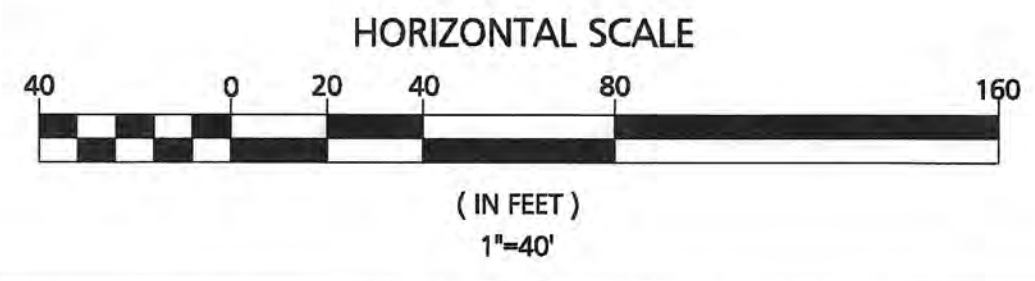


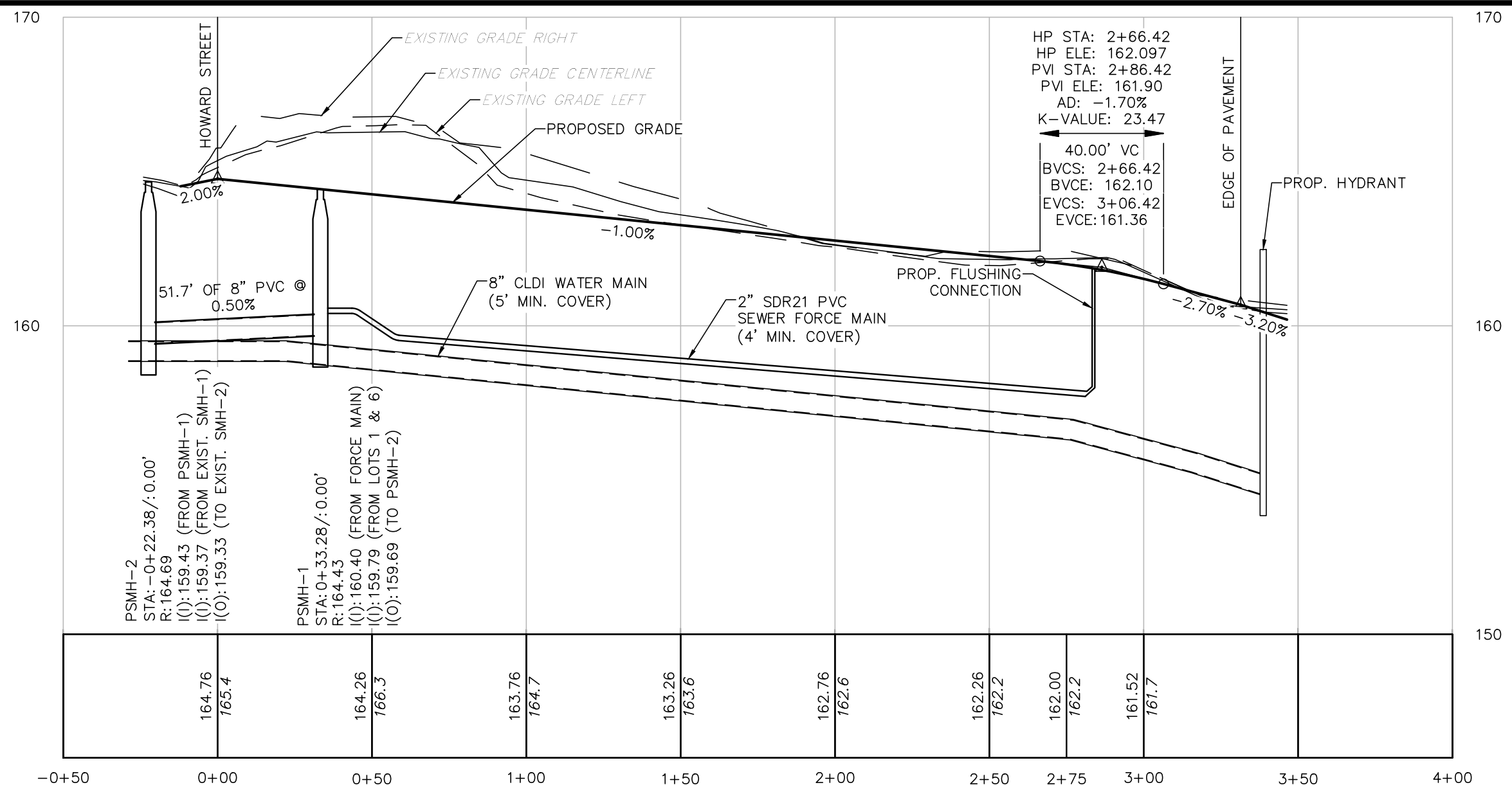
Warren A. Wagner
PROFESSIONAL LAND SURVEYOR FOR CIVIL DESIGN CONSULTANTS, INC.

CIVIL DESIGN Consultants, Inc.
SURVEY • DESIGN • PERMITTING • CONSTRUCTION ADMINISTRATION
30 River Street Methuen, MA 01844 Tel: (978) 416-0920 Fax: (978) 416-7865

DRAWING TITLE:
SUBDIVISION PLAN

DRAWING #:
C-3





- NOTES:
- SEE SHEET C-1 FOR COMPLETE PROJECT NOTES.
 - PLAN BEARINGS ARE BASED UPON THE MASSACHUSETTS STATE PLANE COORDINATE SYSTEM (NAD83) - MAINLAND ZONE PER GPS OBSERVATIONS.
 - ELEVATIONS ARE BASED UPON THE NORTH AMERICAN VERTICAL DATUM (NAVD88) PER GPS OBSERVATIONS.

FOR REGISTRY USE ONLY
 THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE RULES AND REGULATIONS FOR RECORDING ADOPTED BY THE REGISTERS OF DEEDS IN 1978 AND AMENDED JANUARY 12, 1988.

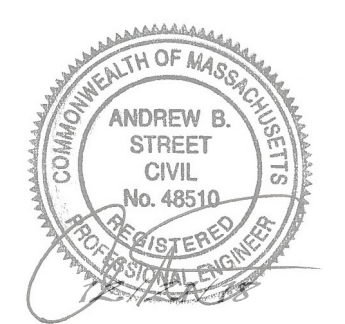
ENGINEER	DATE
APPROVED BY THE TOWN OF READING COMMUNITY PLANNING AND DEVELOPMENT COMMISSION	
CERTIFICATE OF ACTION	
DATE OF ENDORSEMENT	

DATE	DESCRIPTION

OWNER / APPLICANT:
INFRASTRUCTURE HOLDINGS, LLC
 122 BOSTON ROAD
 BILLERICA, MA 01862

PROJECT:
135, 139 & 149 HOWARD STREET
 READING, MA 01867

DATE ISSUED: DECEMBER 21, 2018
 PROJECT #: 18-10120
 PREPARED BY: WILLIAM HALL, P.E.



PROFESSIONAL ENGINEER FOR CIVIL DESIGN
 CONSULTANTS, INC.

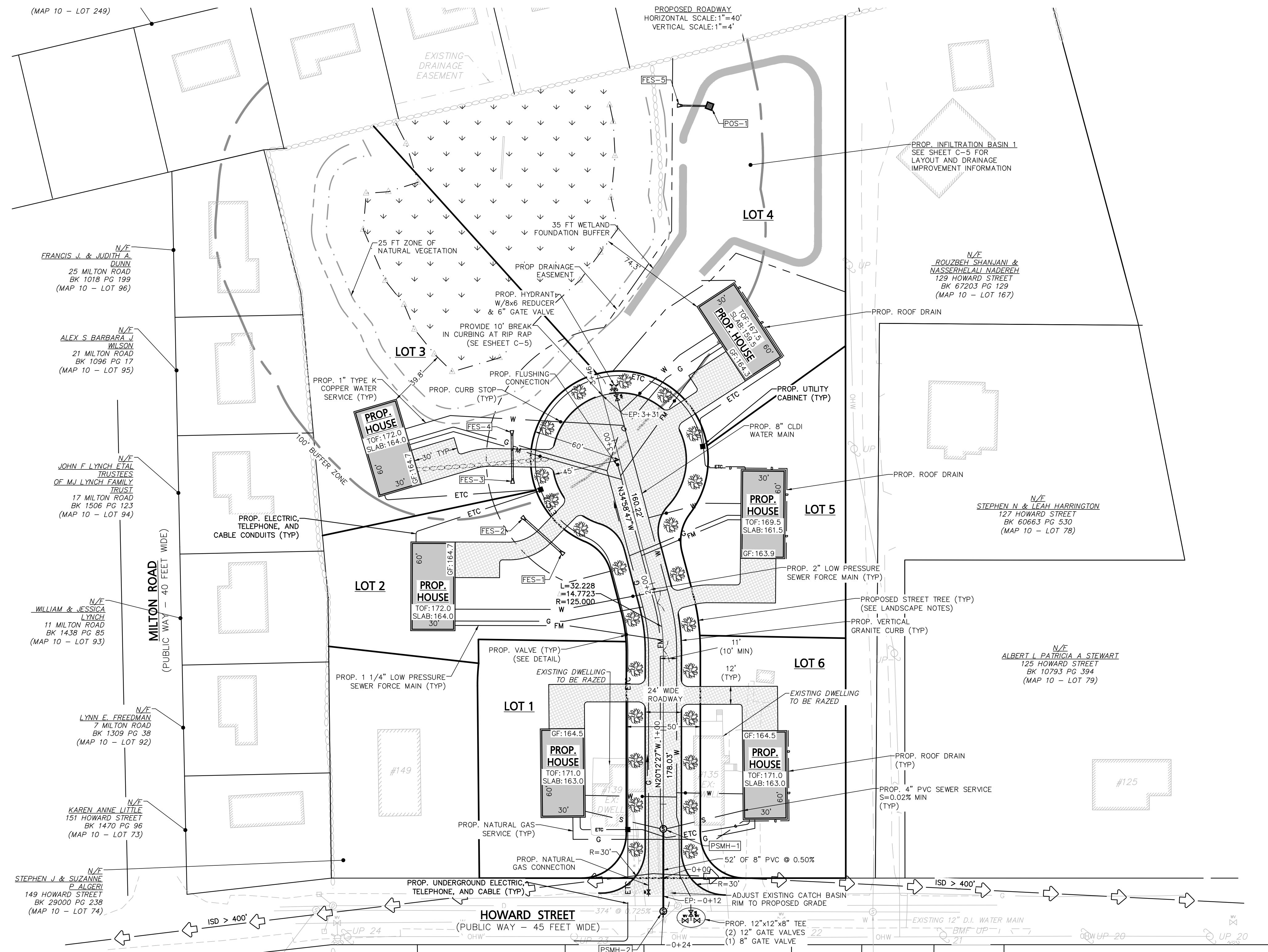
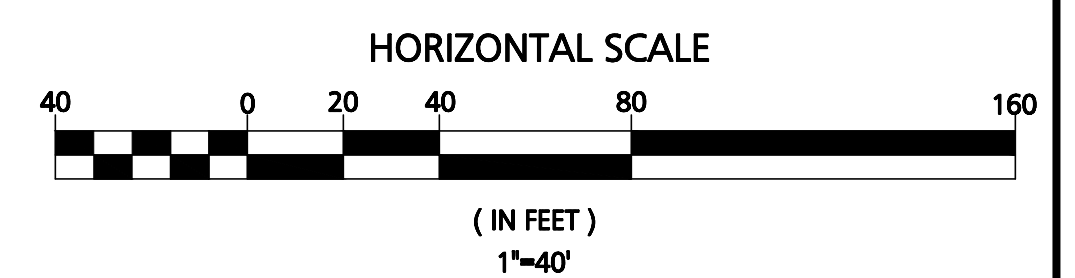
CIVIL DESIGN Consultants, Inc.
 SURVEY - DESIGN - PERMITTING - CONSTRUCTION ADMINISTRATION

30 River Street
 Methuen, MA 01844
 Tel: (978) 416-6920
 Fax: (978) 416-7865

DRAWING TITLE:
ROADWAY PLAN & CENTERLINE PROFILE

DRAWING #:

C-4



(MAP 10 - LOT 249)

N/E FRANCIS J. & JUDITH A. DUNN
 25 MILTON ROAD
 BK 1018 PG 199
 (MAP 10 - LOT 96)

N/E ALEX S. BARBARA J. WILSON
 21 MILTON ROAD
 BK 1096 PG 17
 (MAP 10 - LOT 95)

N/E JOHN F. LYNCH ET AL TRUSTEES OF M.J. LYNCH FAMILY TRUST
 17 MILTON ROAD
 BK 1506 PG 123
 (MAP 10 - LOT 94)

N/E WILLIAM & JESSICA LYNCH
 11 MILTON ROAD
 BK 1438 PG 85
 (MAP 10 - LOT 93)

N/E LYNN F. FREDMAN
 7 MILTON ROAD
 BK 1309 PG 38
 (MAP 10 - LOT 92)

N/E KAREN ANNE LITTLE
 151 HOWARD STREET
 BK 1470 PG 96
 (MAP 10 - LOT 73)

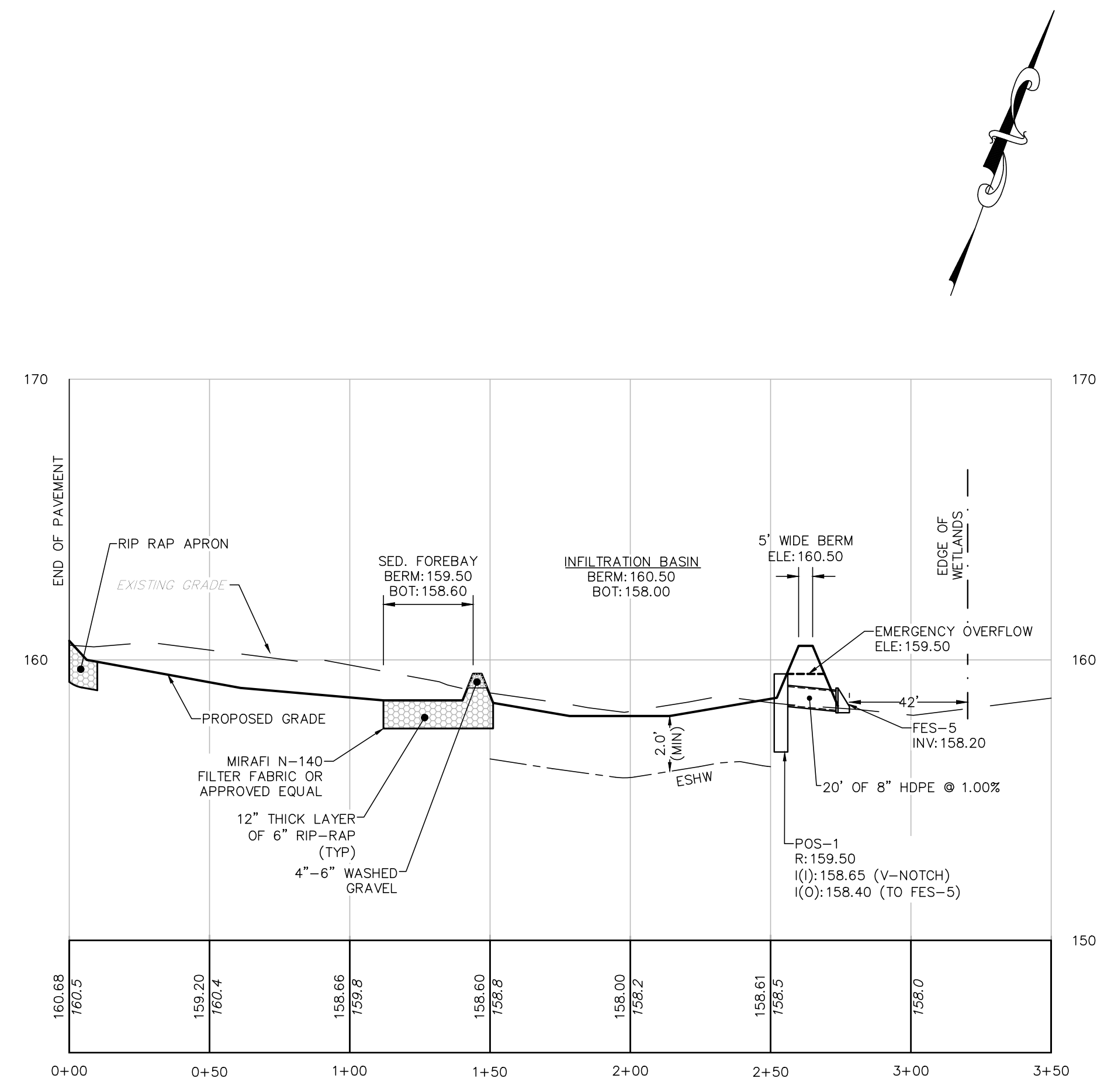
N/E STEPHEN J. & SUZANNE P. ALGERI
 149 HOWARD STREET
 BK 2900 PG 238
 (MAP 10 - LOT 74)

N/E ROUZBEH SHANJANI & MASSEHALLI NADEREH
 129 HOWARD STREET
 BK 67203 PG 129
 (MAP 10 - LOT 167)

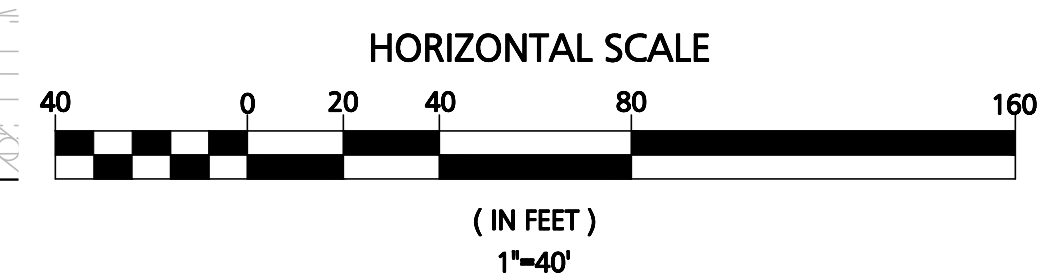
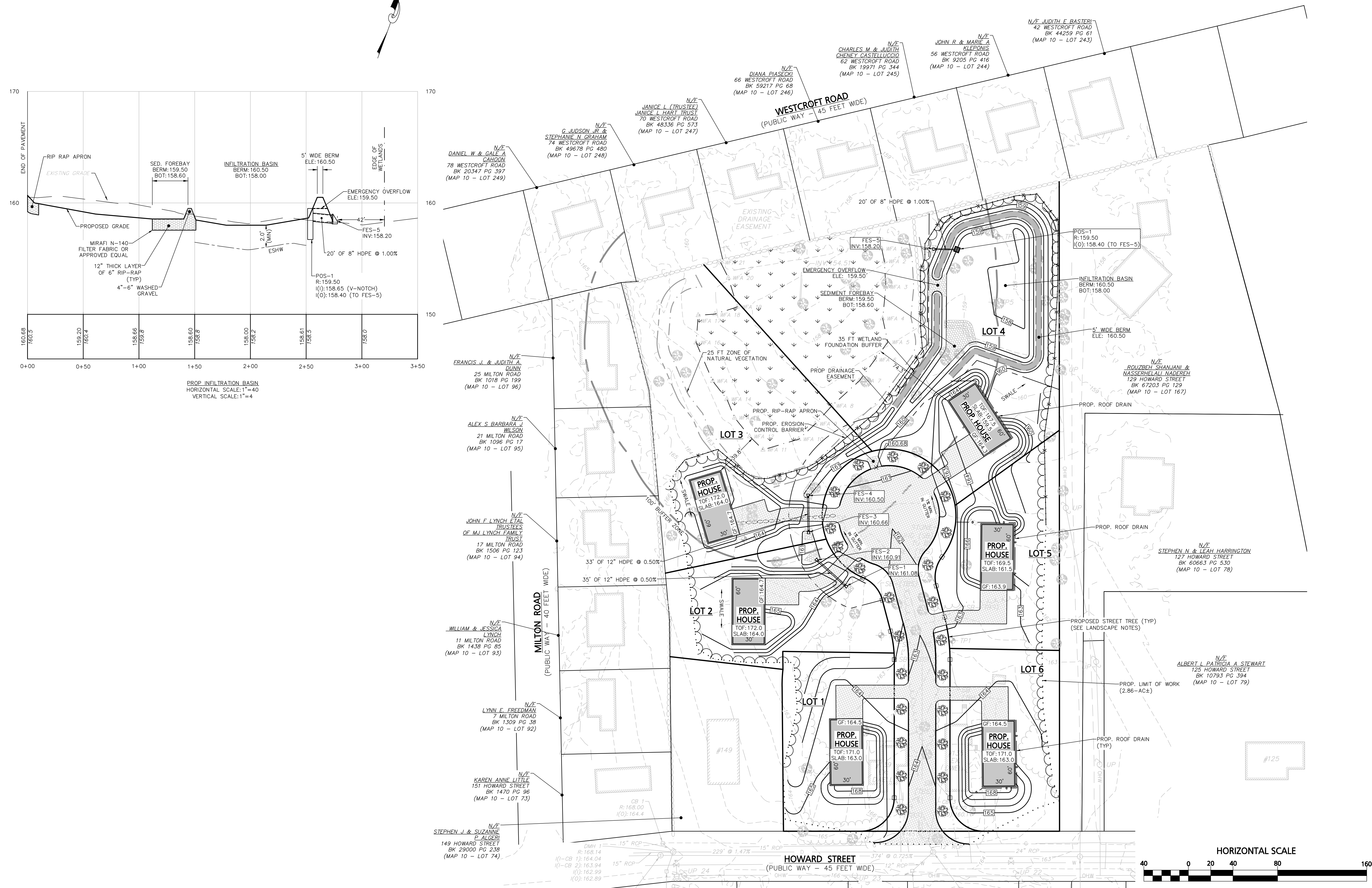
N/E STEPHEN N. & LEAH HARRINGTON
 127 HOWARD STREET
 BK 60663 PG 530
 (MAP 10 - LOT 78)

N/E ALBERT I. PATRICIA A. STEWART
 125 HOWARD STREET
 BK 10793 PG 394
 (MAP 10 - LOT 79)

- NOTES:
- SEE SHEET C-1 FOR COMPLETE PROJECT NOTES.
 - PLAN BEARINGS ARE BASED UPON THE MASSACHUSETTS STATE PLANE COORDINATE SYSTEM (NAD83) - MASSLAND ZONE PER GPS OBSERVATIONS.
 - ELEVATIONS ARE BASED UPON THE NORTH AMERICAN VERTICAL DATUM (NAVD88) PER GPS OBSERVATIONS.



PROP. INFILTRATION BASIN
HORIZONTAL SCALE: 1"=40'
VERTICAL SCALE: 1"=4'



FOR REGISTRY USE ONLY
THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE RULES AND REGULATIONS FOR RECORDING ADOPTED BY THE REGISTERS OF DEEDS IN 1978 AND AMENDED JANUARY 12, 1988.

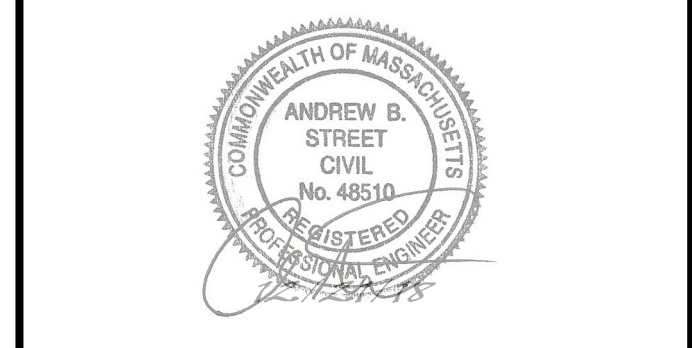
ENGINEER	DATE
APPROVED BY THE TOWN OF READING COMMUNITY PLANNING AND DEVELOPMENT COMMISSION	
CERTIFICATE OF ACTION	
DATE OF ENDORSEMENT	

DATE	DESCRIPTION

OWNER / APPLICANT:
INFRASTRUCTURE HOLDINGS, LLC
122 BOSTON ROAD
BILLERICA, MA 01862

PROJECT:
135, 139 & 149R HOWARD STREET
READING, MA 01867

DATE ISSUED:	DECEMBER 21, 2018
PROJECT #:	18-10120
PREPARED BY:	WILLIAM HALL, P.E.



PROFESSIONAL ENGINEER FOR CIVIL DESIGN
CONSULTANTS, INC.

CIVIL DESIGN
Consultants, Inc.
SURVEY - DESIGN - PERMITTING - CONSTRUCTION ADMINISTRATION

30 River Street Methuen, MA 01844 Tel: (978) 416-6920 Fax: (978) 416-7865

DRAWING TITLE:
GRADING, DRAINAGE & LANDSCAPING

DRAWING #:

C-5

GENERAL UTILITY NOTES:

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHING AND MAINTAINING ALL CONTROL POINTS AND BENCHMARKS NECESSARY FOR THE WORK.
2. WHERE SANITARY SEWERS CROSS WATER MAINS, THE SEWER SHALL BE LAID AT SUCH AN ELEVATION THAT THE CROWN OF THE SEWER IS AT LEAST 18 INCHES BELOW THE INVERT OF THE WATER MAIN. IF THE ELEVATION OF THE SEWER CANNOT BE VARIED TO MEET THIS REQUIREMENT, THE WATER MAIN SHALL BE RELOCATED TO PROVIDE THIS SEPARATION OR CONSTRUCTED WITH MECHANICAL-JOINT PIPE FOR A DISTANCE OF 10 FEET ON 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. WHENEVER IT IS IMPOSSIBLE TO OBTAIN VERTICAL SEPARATION AS STIPULATED ABOVE, BOTH THE WATER MAIN AND THE SEWER MAIN SHALL BE ENCASED IN CONCRETE FOR A MINIMUM DISTANCE OF 10 FEET FROM THE CROSSING POINT OF THE OTHER PIPE AS MEASURED NORMALLY FROM ALL POINTS ALONG THE PIPE.
3. ALL UTILITY WORK PERFORMED WITHIN RIGHT-OF-WAY SHALL BE PERFORMED BY A CONTRACTOR LICENSED BY THE DPW AND OBTAIN A PERMIT FOR SUCH WORK FROM THE DPW, IF NEEDED.
4. ALL DEBRIS SHALL BE REMOVED FROM THE SITE AND DISPOSED OF IN ACCORDANCE WITH ALL APPLICABLE LOCAL, STATE AND FEDERAL REGULATIONS.
5. A DUST EMISSION CONTROL PLAN SHALL BE DEVELOPED AND IMPLEMENTED BY THE CONTRACTOR IF CONDITIONS WARRANT.
6. CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING ALL UTILITIES AS SHOWN ON THESE PLANS IN ACCORDANCE WITH THE APPROPRIATE UTILITY COMPANY STANDARDS FOR CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING SPECIFICATIONS OF MATERIALS AND INSTALLATION PROCEDURES AND INSTALL IN ACCORDANCE WITH APPLICABLE REGULATIONS.
7. THE CONTRACTOR IS RESPONSIBLE TO CONTACT AND DETERMINE, COORDINATE AND SCHEDULE ALL NECESSARY INSPECTIONS AND MONITORING WITH ALL APPROPRIATE UTILITY COMPANIES.
8. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING AND PAYING FOR ANY PERMITS AND/OR CONNECTION FEES REQUIRED TO PERFORM THE WORK.
9. ALL ELEVATIONS SHOWN ARE IN REFERENCE TO THE PROJECT BENCHMARK AND MUST BE VERIFIED BY THE GENERAL CONTRACTOR PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SITE RESTORATION AND CLEAN UP UPON COMPLETION OF THE PROJECT.
11. WATER AND SEWER TESTING TO CONFORM TO LOCAL DPW REGULATIONS.
12. ALL MECHANICAL JOINTS TO BE MEGALUG SERIES 1100 INSTALLED IN ACCORDING WITH MANUFACTURER RECOMMENDATIONS OR APPROVED EQUAL.

LANDSCAPE NOTES:

1. THE CONTRACTOR SHALL LOCATE AND VERIFY THE EXISTENCE OF ALL UTILITIES PRIOR TO STARTING AND LANDSCAPING WORK.
2. ALL MATERIAL SHALL CONFORM TO THE GUIDELINES ESTABLISHED BY THE CURRENT AMERICAN STANDARD FOR NURSERY STOCK, PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN.
3. PLANTS FURNISHED IN CONTAINERS SHALL HAVE THE ROOTS WELL ESTABLISHED IN THE SOIL MASS AND SHALL HAVE AT LEAST ONE (1) GROWING SEASON. ROOT-BOUND PLANTS OR INADEQUATELY SIZED CONTAINERS TO SUPPORT THE PLANT, MAY BE DEEMED UNACCEPTABLE.
4. NO PLANT SHALL BE PUT IN THE GROUND BEFORE GRADING HAS BEEN FINISHED.
5. ALL PLANTS SHALL BE INSTALLED AS DETAILED IN THE TOWN OF READING SUBDIVISION REGULATIONS, SECTION 7.6.
6. ALL PLANTS SHALL BE WATERED THOROUGHLY TWICE DURING THE FIRST 24-HOUR PERIOD AFTER PLANTING. ALL PLANTS SHALL BE WATERED WEEKLY OR MORE OFTEN, IF NECESSARY DURING THE FIRST GROWING SEASON.
7. ALL STREET TREES SHALL BE OF A SPECIES AND VARIETY SELECTED AND APPROVED BY THE TREE WARDEN. FINAL PLANTING LOCATIONS SUBJECT TO APPROVAL BY THE TREE WARDEN.

GENERAL CONSTRUCTION NOTES:

1. THE CONTRACTOR SHALL VERIFY THE PROPOSED LAYOUT WITH ITS RELATIONSHIP TO THE EXISTING SITE SURVEY. THE CONTRACTOR SHALL ALSO VERIFY ALL DIMENSIONS, SITE CONDITIONS, AND MATERIAL SPECIFICATIONS AND SHALL NOTIFY THE OWNER AND ENGINEER OF ANY ERRORS, OMISSIONS OR DISCREPANCIES BEFORE COMMENCING OR PROCEEDING WITH CONSTRUCTION.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS, INSPECTIONS, BONDS, ETC. AND OTHER APPROVAL RELATED ITEMS. NO CONSTRUCTION SHALL COMMENCE UNTIL SUCH PERMITS HAVE BEEN SECURED.
3. METHODS AND MATERIALS USED IN THE CONSTRUCTION OF IMPROVEMENTS FOR THIS PROJECT SHALL CONFORM TO THE CURRENT CONSTRUCTION STANDARDS AND SPECIFICATIONS OF THE MASSDOT AND THE LOCAL SUBDIVISION REGULATIONS.
4. CONTRACTOR TO CONFIRM AND VERIFY THE VALIDITY, LOCATION, MATERIAL, AND AVAILABILITY TO USE EXISTING UTILITIES ON OR NEAR THE PROJECT SITE PROPERTY. CONTRACTOR TO LOCATE EXISTING UTILITIES AND CONFIRM SAID UTILITIES WITH ALL APPLICABLE MUNICIPALITIES AND UTILITY COMPANIES PRIOR TO ANY CONSTRUCTION. ONCE UTILITIES HAVE BEEN CONFIRMED IN THE FIELD BY CONTRACTOR AND VERIFIED BY APPLICABLE MUNICIPALITY AND UTILITY COMPANY AND CONNECTION HAS BEEN APPROVED BY ENTITY, ONLY THEN SHALL THE CONTRACTOR CONSTRUCT AND UTILIZE THESE UTILITIES. CONTRACTOR TO IMMEDIATELY INFORM THE ENGINEER OF RECORD OF ANY DEVIATIONS TO PLANS.
5. THE CONTRACTOR SHALL MAKE EXPLORATORY EXCAVATIONS AND LOCATE ANY EXISTING UTILITIES SUFFICIENTLY AHEAD OF CONSTRUCTION TO PERMIT REVISIONS TO PLANS IF NECESSARY. THE EXISTENCE AND/OR LOCATION OF UTILITIES SHOWN ON THESE PLANS MAY BE ONLY APPROXIMATELY CORRECT AND THE CONTRACTOR IS REQUIRED TO TAKE PRECAUTIONARY MEASURES TO PROTECT THE UTILITIES SHOWN HEREON AND ANY OTHER EXISTING UTILITIES NOT OF RECORD OR NOT SHOWN ON THESE PLANS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING, AT HIS EXPENSE, ANY EXISTING UTILITIES DAMAGED DURING CONSTRUCTION.
6. THE CONTRACTOR SHALL NOTIFY OPERATORS WHO MAINTAIN UNDERGROUND UTILITY LINES IN THE AREA OF PROPOSED EXCAVATION AT LEAST THREE WORKING DAYS, BUT NOT MORE THAN TEN WORKING DAYS, PRIOR TO COMMENCEMENT OF EXCAVATION OR DEMOLITION. ALL WATER, GAS, SEWER AND OTHER UTILITIES SHALL BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION.
7. RELOCATION OF ANY UTILITIES SHALL BE AT THE OWNERS EXPENSE AND COMPLETED WITH THE UTILITY WORK. THE OWNER SHALL BE NOTIFIED AS TO THE RELOCATIONS REQUIRED PRIOR TO THE START OF CONSTRUCTION.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACING, WITH MATCHING MATERIALS, ANY PAVEMENT, WALKS, CURBS, ETC. THAT MUST BE CUT OR THAT ARE DAMAGED DURING CONSTRUCTION.
9. AN APPROVED SET OF PLANS AND ALL APPLICABLE PERMITS MUST BE AVAILABLE AT THE CONSTRUCTION SITE.
10. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THESE DOCUMENTS AND SUBSEQUENT ISSUED PLAN REVISIONS. ANY DEVIATIONS FROM THESE DOCUMENTS SHALL REQUIRE NOTIFICATION TO THE ENGINEER PRIOR TO THE COMMENCEMENT OF CONSTRUCTING ANY CHANGE. THE CONTRACTOR WILL BE WORKING AT HIS OR HER OWN RISK.
11. ALL WATER AND SEWER CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH THE TOWN OF READING RULES AND REGULATIONS

INFILTRATION BASIN CONSTRUCTION NOTES:

1. THE INFILTRATION BASIN MAY NOT RECEIVE RUN-OFF UNTIL THE ENTIRE CONTRIBUTING DRAINAGE AREA TO THE INFILTRATION SYSTEM HAS RECEIVED FINAL STABILIZATION.
2. HEAVY EQUIPMENT AND TRAFFIC SHALL BE RESTRICTED FROM TRAVELING OVER THE INFILTRATION BASIN TO MINIMIZE COMPACTION OF THE SOIL.
3. INITIAL BASIN EXCAVATION SHOULD BE CARRIED TO WITHIN 6 INCHES OF THE FINAL ELEVATION OF THE BASIN FLOOR. FINAL EXCAVATION TO THE FINISHED GRADE SHOULD BE DEFERRED UNTIL ALL DISTURBED AREAS ON THE WATERSHED HAVE BEEN STABILIZED OR PROTECTED.
4. THE FINAL PHASE EXCAVATION SHOULD REMOVE ALL ACCUMULATED SEDIMENT. THIS EXCAVATION SHALL BE PERFORMED WITH LIGHT TRACKED EQUIPMENT TO AVOID COMPACTION OF THE BASIN FLOOR.
5. THE BASIN FLOOR MIX SHALL INCLUDE COMPOST (PROPERLY AGED TO KILL ANY SEED CONTAINED IN THE COMPOST) AND NATIVE SOILS FROM THE ORIGINAL A AND B HORIZONS. THE MIX SHALL BE COMPOSTED INTO THE PARENT MATERIAL USING A CHISEL PLOW OR ROTARY DEVICE TO A DEPTH OF 12-INCHES. IT IS CRITICAL THAT THE BASIN FLOOR BE SCARIFIED PRIOR TO COMPOSTING OPERATIONS.

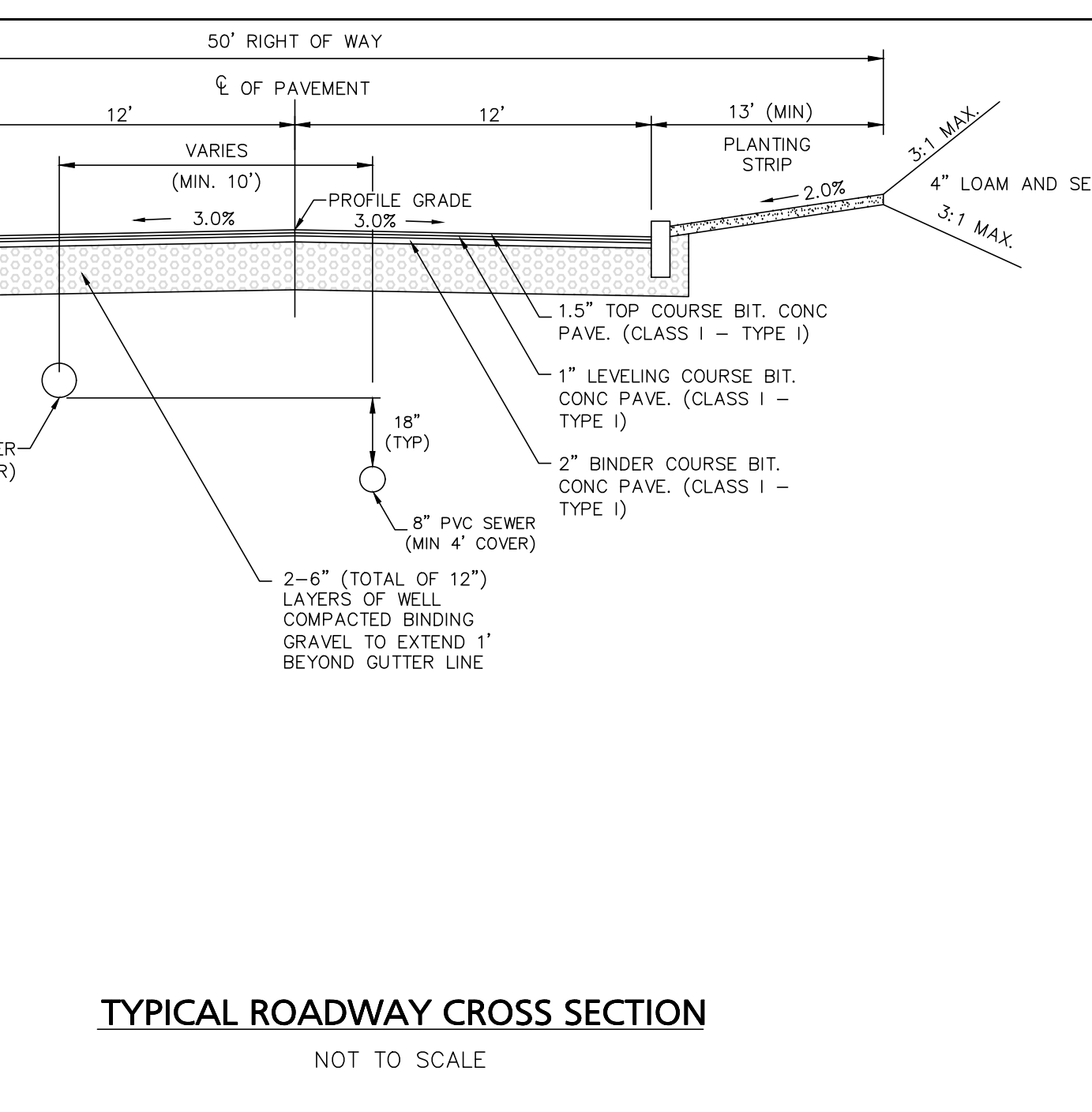
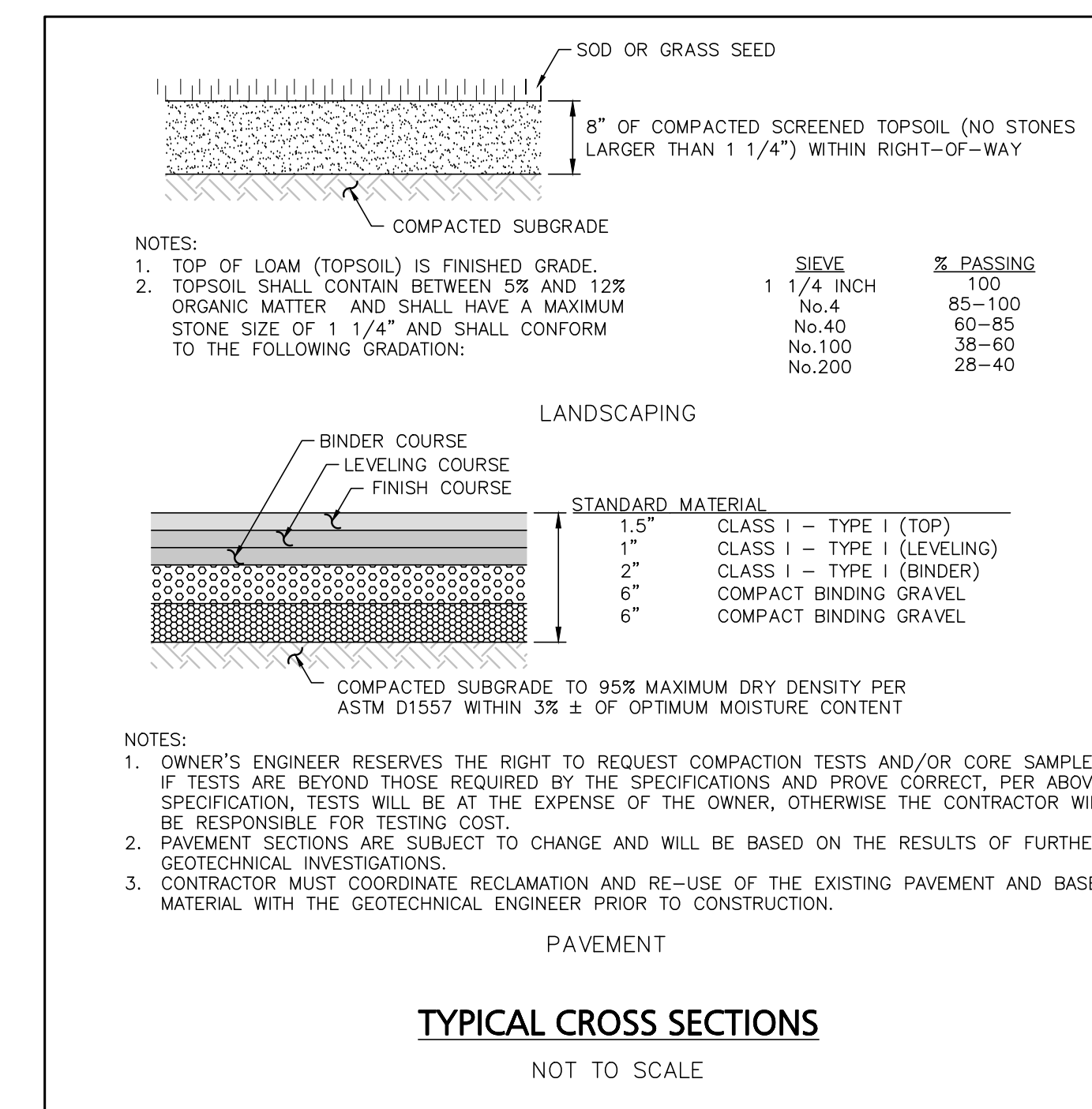
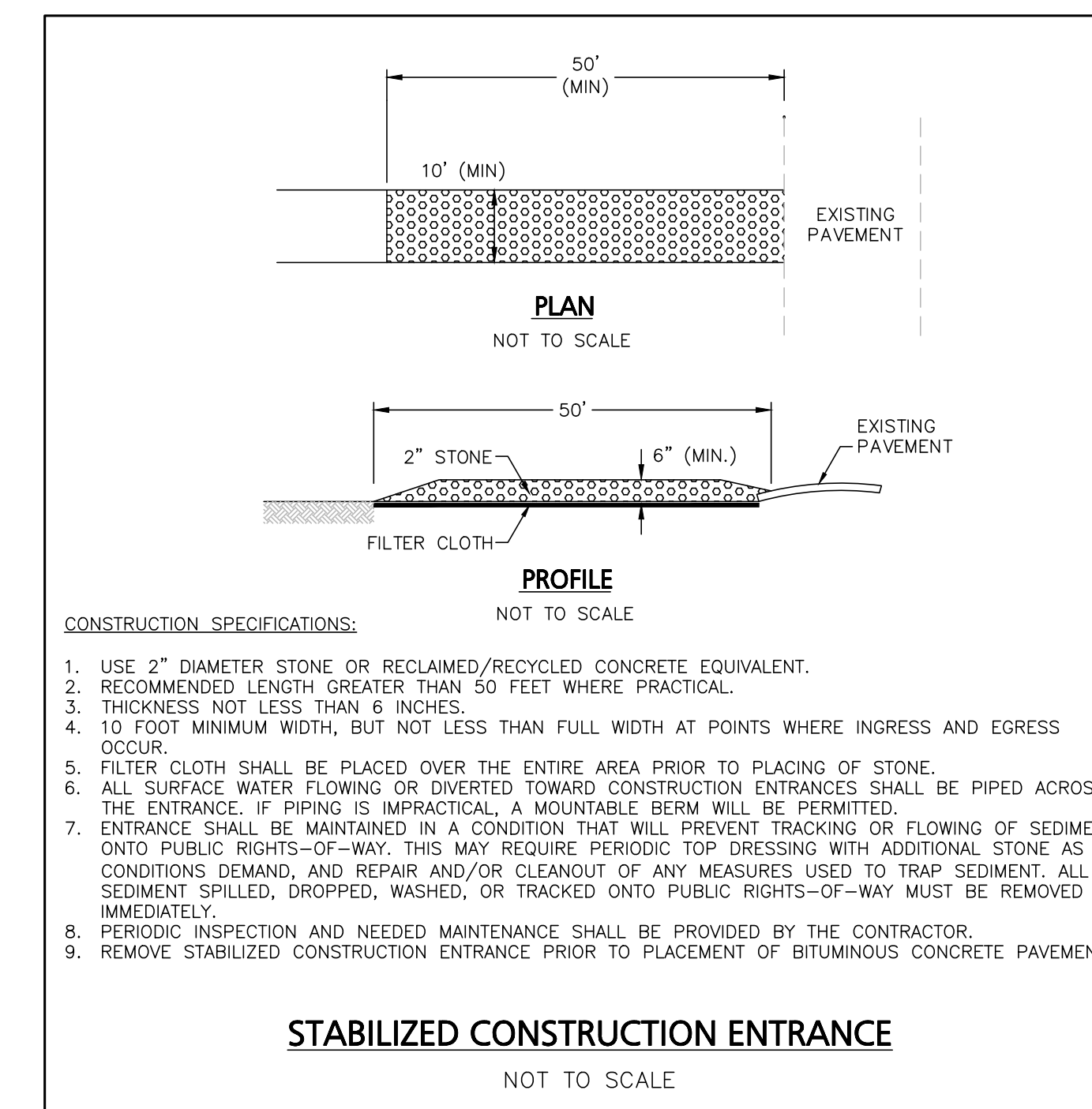
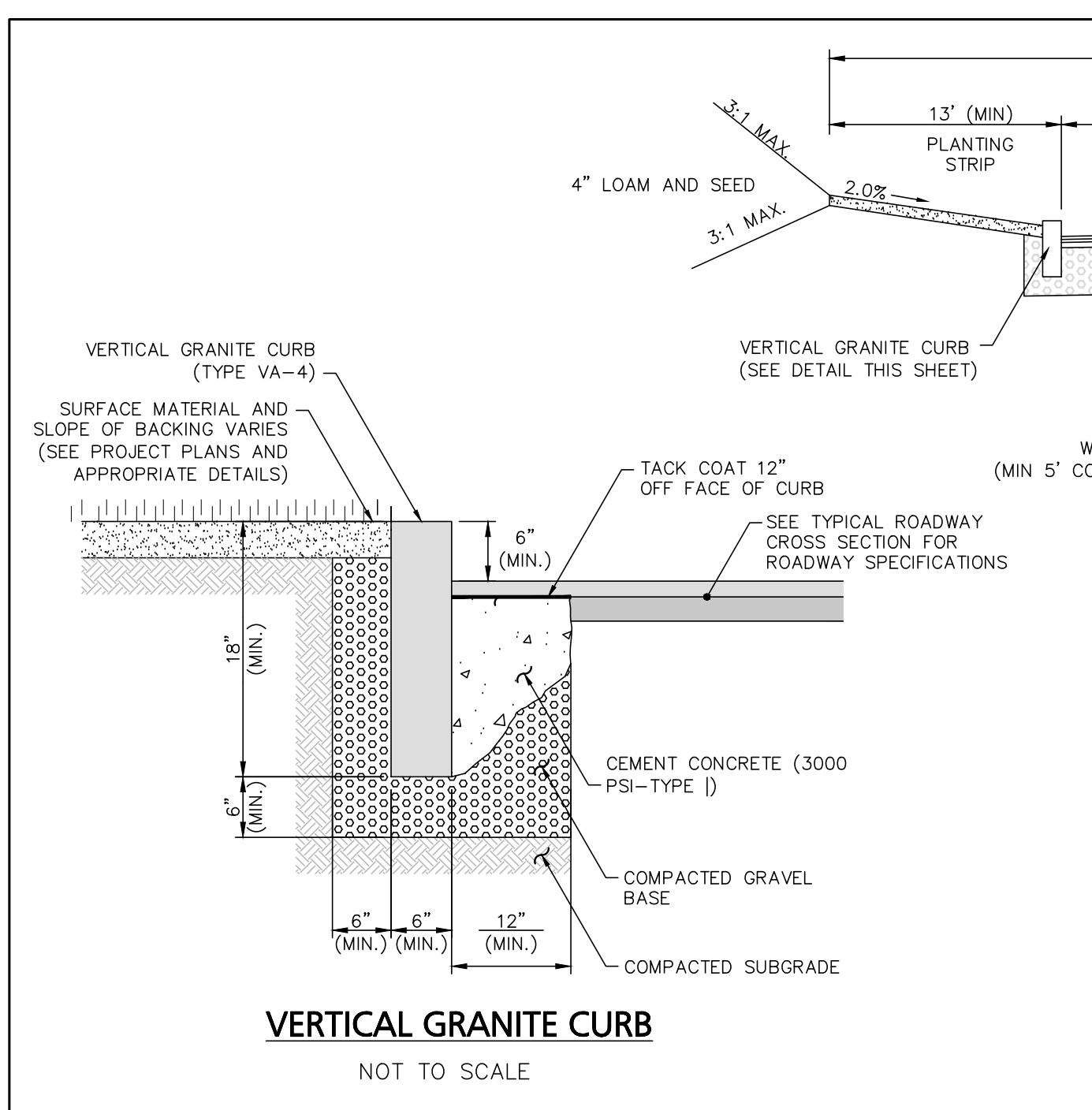
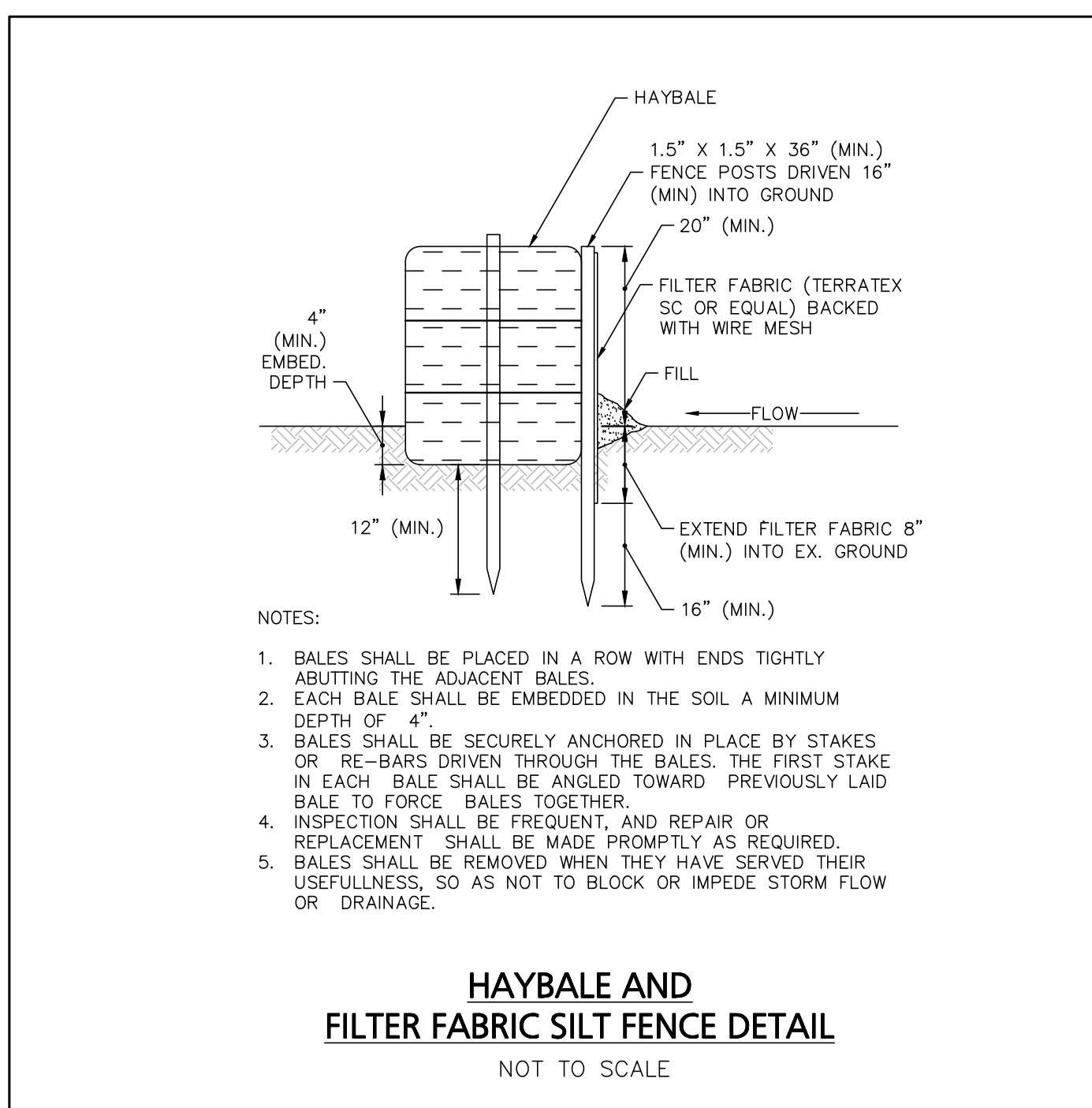
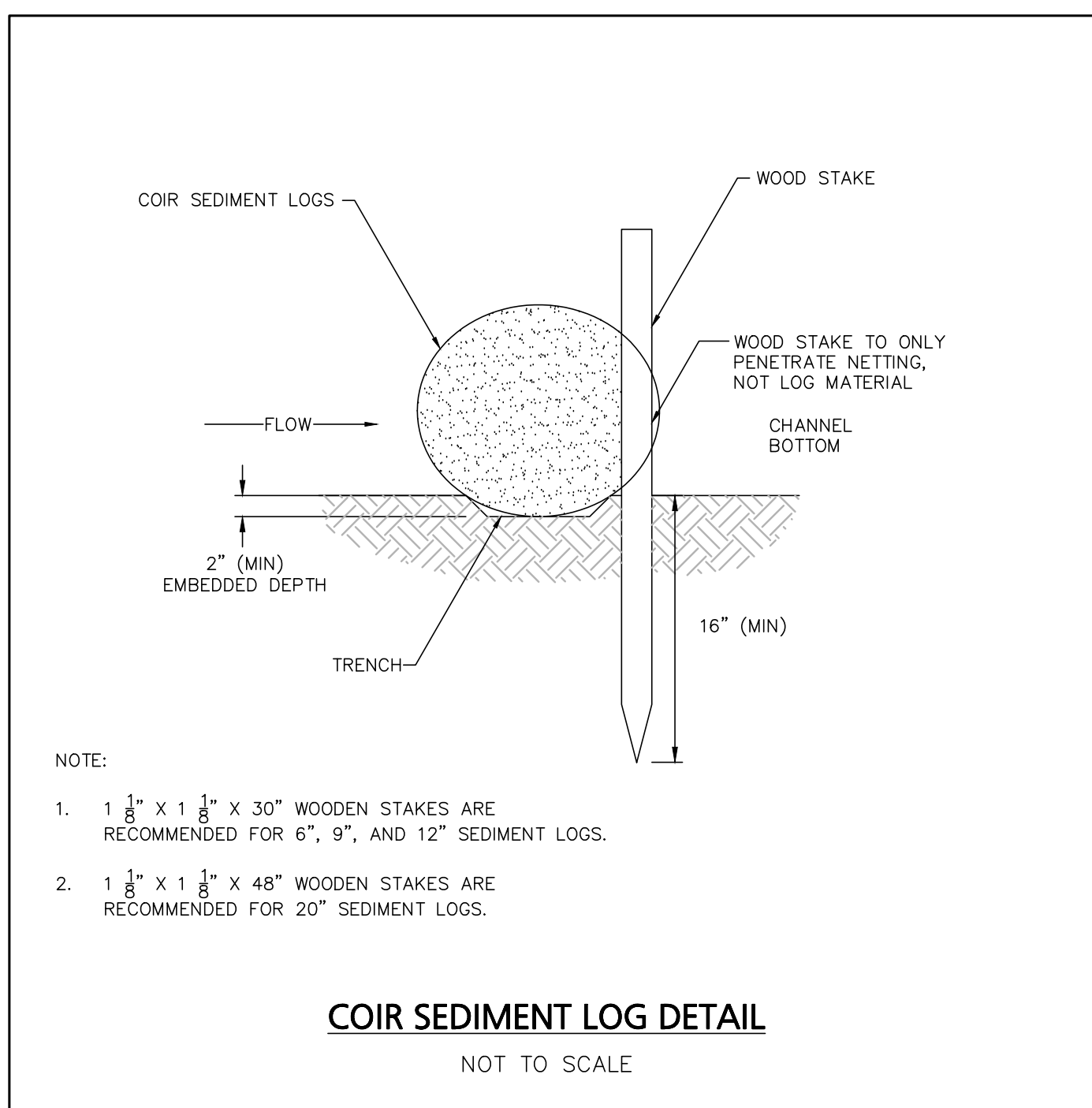
GENERAL EROSION CONTROL NOTES:

1. PRIOR TO THE COMMENCEMENT OF CONSTRUCTION ACTIVITIES, THE CONTRACTOR SHALL INSTALL ALL EROSION AND SEDIMENT CONTROL DEVICES AS SHOWN ON THE PLAN. ALL EROSION CONTROL DEVICES SHALL BE MAINTAINED IN EFFECTIVE CONDITION DURING CONSTRUCTION. CONTRACTOR IS RESPONSIBLE FOR COMPLYING WITH THE TERMS AND CONDITIONS OF THE CONSTRUCTION GENERAL PERMIT ISSUED BY THE EPA AND THE STORMWATER POLLUTION PREVENTION PLAN SUBMITTED WITH THE PERMIT DOCUMENTS.
2. THE CONTRACTOR IS RESPONSIBLE FOR THE TIMELY INSTALLATION, INSPECTION, MAINTENANCE, AND/OR REPLACEMENT OF ALL TEMPORARY AND PERMANENT EROSION CONTROL DEVICES TO ENSURE PROPER OPERATION THROUGHOUT THE LIFE OF THE PROJECT. THE CONTRACTOR IS RESPONSIBLE FOR MAINTENANCE OF PERMANENT MEASURES UNTIL CONSTRUCTION OF THE PROJECT IS COMPLETED OR UNTIL IT IS ACCEPTED BY THE OWNER. THE OWNER IS RESPONSIBLE THEREAFTER.
3. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CLEAN ROADS, CONTROL DUST, AND TAKE ALL NECESSARY MEASURES TO ENSURE THAT THE SURFACE OF ROADS BE MAINTAINED IN A MUD AND DUST-FREE CONDITION AT ALL TIMES THROUGHOUT THE LIFE OF THE CONTRACT. DUST CONTROL SHALL INCLUDE, BUT IS NOT LIMITED TO, WATER, CALCIUM CHLORIDE, AND/OR CRUSHED STONE OR COARSE GRAVEL.
4. ALL PROPOSED CONSTRUCTION ENTRANCES SHALL BE CONSTRUCTED AS SHOWN ON THE PLANS AND DETAILS. ALL VEHICLE TRAFFIC ENTERING OR EXITING THE WORK AREA SHALL PASS OVER THE CONSTRUCTION ENTRANCES TO REDUCE THE TRACKING OR FLOWING OF SEDIMENT ONTO THE SURROUNDING ROADWAYS.
5. THE CONTRACTOR SHALL INSTALL ALL PERIMETER SEDIMENT CONTROL BARRIERS AS SHOWN ON THE SITE DEVELOPMENT PLANS. SILT FENCE SHALL ALSO BE INSTALLED AROUND ANY SOIL STOCKPILE AREAS.
6. THE CONTRACTOR SHALL RESTORE DISTURBED AREAS AS CLOSELY AS POSSIBLE. AREAS DAMAGED DURING CONSTRUCTION SHALL BE RESODDED, RESEEDED, OR OTHERWISE RESTORED TO THEIR ORIGINAL STATE. TREES AND OTHER EXISTING VEGETATION SHALL BE RETAINED WHEREVER FEASIBLE.
7. TEMPORARY VEGETATIVE COVER SHALL BE APPLIED TO ANY DISTURBED AREAS (INCLUDING SOIL STOCKPILE AREAS) THAT HAVE NOT YET REACHED FINISHED GRADE AS SOON AS POSSIBLE, BUT NOT MORE THAN FOURTEEN (14) DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT AREA HAS TEMPORARILY CEASED, UNLESS THE ACTIVITY IS TO RESUME WITHIN TWENTY-ONE (21) DAYS. THE RECOMMENDED TEMPORARY SEEDING DATES ARE MARCH 1 TO JUNE 15 AND AUGUST 15 TO OCTOBER 1.
8. PERMANENT VEGETATIVE COVER SHALL BE APPLIED TO ALL DISTURBED AREAS THAT HAVE REACHED FINISHED GRADE AS SOON AS POSSIBLE, BUT NOT MORE THAN FOURTEEN (14) DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT AREA HAS PERMANENTLY CEASED. THE RECOMMENDED PERMANENT SEEDING DATES ARE APRIL 1 TO JUNE 15 AND AUGUST 15 TO OCTOBER 1.
9. AREAS WHICH HAVE BEEN TEMPORARILY OR PERMANENTLY SEEDED SHOULD BE MULCHED IMMEDIATELY FOLLOWING SEEDING IN ADDITION TO AREAS WHICH CANNOT BE SEEDED WITHIN THE RECOMMENDED SEEDING DATES AND ANY SOIL STOCKPILE AREAS. TEMPORARY MULCHING SHOULD BE PERFORMED AS SOON AS POSSIBLE, BUT NOT MORE THAN FOURTEEN (14) DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT AREA HAS TEMPORARILY CEASED UNLESS THE ACTIVITY IS TO RESUME WITHIN TWENTY-ONE (21) DAYS.
10. STRAW OR HAY MULCH, WOOD FIBER MULCH, AND HYDROMULCH ARE RECOMMENDED. THE MATERIALS USED IN MULCHING SHALL CONFORM TO THE REQUIREMENTS LISTED IN SECTION M6.04.0 OF THE MASSACHUSETTS HIGHWAY DEPARTMENT STANDARD SPECIFICATIONS FOR HIGHWAY AND BRIDGES.
11. IF SEEDING CANNOT BE COMPLETED IMMEDIATELY OR WITHIN THE RECOMMENDED SEEDING DATES, USE THE TEMPORARY MULCHING MEASURE TO PROTECT THE SITE AND DELAY SEEDING UNTIL THE NEXT RECOMMENDED SEEDING PERIOD.
12. ANY EXISTING OR PROPOSED CATCH BASINS THAT MAY BE SUBJECT TO SEDIMENTATION PROCESSES SHALL HAVE SILT SACKS INSTALLED TO PREVENT SEDIMENT FROM ENTERING THE PROPOSED STORM DRAINAGE SYSTEM PRIOR TO PERMANENT STABILIZATION OF THE DISTURBED SITE. THE PROPER INLET PROTECTION DEVICES SHALL BE INSTALLED WHERE STORM DRAIN INLETS ARE TO BE MADE OPERATIONAL BEFORE PERMANENT STABILIZATION OF ANY DISTURBED DRAINAGE AREA.
13. ALL EROSION AND SEDIMENT CONTROL MEASURES WILL BE CONSTRUCTED IN ACCORDANCE WITH THE MASSACHUSETTS HIGHWAY DEPARTMENT STANDARD SPECIFICATIONS FOR HIGHWAY AND BRIDGES AND VOLUME TWO OF THE MASSACHUSETTS STORM WATER MANAGEMENT HANDBOOK.
14. WASTE DISPOSAL: MATERIALS WHICH COULD BE A POTENTIAL SOURCE OF STORM WATER POLLUTION SUCH AS GASOLINE, DIESEL FUEL, HYDRAULIC OIL, ETC., SHALL BE STORED AT THE END OF EACH DAY IN A STORAGE TRAILER OR COVERED LOCATION AND TAKEN OFF-SITE AND PROPERLY DISPOSED OF. ALL TYPES OF WASTE GENERATED AT THIS SITE SHALL BE DISPOSED OF IN A MANNER CONSISTENT WITH STATE LAW AND/OR REGULATIONS.
15. GOOD HOUSEKEEPING: THE PROJECT SITE SHALL PROVIDE FOR THE MINIMIZATION OF EXPOSURE OF CONSTRUCTION DEBRIS (INCLUDING, BUT NOT LIMITED TO, INSULATION, WIRING, PAINTS AND PAINT CANS, SOLVENTS, WALL BOARD, ETC.) TO PRECIPITATION BY MEANS OF DISPOSAL AND/OR PROPER SHELTER OR COVER. IN ADDITION, CONSTRUCTION WASTE MUST BE PROPERLY DISPOSED OF IN ORDER TO AVOID EXPOSURE TO PRECIPITATION AT THE END OF EACH WORKING DAY.
16. NO DUST WILL BE ALLOWED ON OR OFF WORK SITE. CONTRACTOR MUST CONDUCT CONTINUOUS EFFORT TO CONTROL DUST. LACK OF DUST CONTROL COULD CAUSE THE PROJECT TO BE STOPPED UNTIL ISSUES ARE RESOLVED. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CONTROL DUST AND TAKE ALL NECESSARY MEASURES TO ENSURE ALL ROADS ARE MAINTAINED IN A DUST FREE CONDITION AT ALL TIMES THROUGHOUT THE LIFE OF THE CONTRACT. REPETITIVE TREATMENTS SHOULD BE APPLIED AS NECESSARY.
17. REPAIRS OR REPLACEMENT OF DRAINAGE STRUCTURES, RIP RAP CHANNELS, OR OTHER ELEMENTS OF THE FACILITY SHOULD BE DONE WITHIN 14 DAYS OF DEFICIENCY REPORTS. IF AN EMERGENCY SITUATION IS IMMINENT THEN REPAIR/REPLACEMENT MUST BE DONE IMMEDIATELY TO AVERT FAILURE OR DANGER TO NEARBY RESIDENTS.
18. IMMEDIATELY PRIOR TO THE END OF CONSTRUCTION OR ACCEPTANCE BY THE OWNER, THE CONTRACTOR SHALL INSPECT ALL ON-SITE STORMWATER MANAGEMENT FACILITIES AND CLEAN AND FLUSH AS NECESSARY.
19. THE GENERAL CONTRACTOR OR NOMINEE WILL BE THE PARTY RESPONSIBLE FOR THE INSPECTION, MAINTENANCE, AND REQUIRED DOCUMENTATION OF ALL STORM WATER STRUCTURES AS OUTLINED WITHIN.

GENERAL CONSTRUCTION SEQUENCING:

DESCRIBED BELOW ARE THE MAJOR CONSTRUCTION ACTIVITIES. THEY ARE PRESENTED IN THE ORDER (OR SEQUENCE) THEY ARE EXPECTED TO BEGIN, BUT EACH ACTIVITY WILL NOT NECESSARILY BE COMPLETED BEFORE THE NEXT BEGINS. ALSO, THESE ACTIVITIES COULD OCCUR IN A DIFFERENT ORDER IF NECESSARY TO MAINTAIN ADEQUATE EROSION AND SEDIMENTATION CONTROL. ALL ACTIVITIES AND THE TIMEFRAME (BEGINNING AND ENDING DATES) SHALL BE RECORDED BY THE GENERAL CONTRACTOR.

1. CONTRACTOR TO REVIEW ALL LOCAL, STATE AND FEDERAL PERMITS.
2. REVIEW AND CERTIFY THE STORMWATER POLLUTION PREVENTION PLAN.
3. DELINEATE THE LIMIT OF THE TREE CLEARING OPERATIONS.
4. INSTALL STABILIZED CONSTRUCTION ENTRANCE.
5. PLACE EROSION CONTROLS PRIOR TO TREE CLEARING.
6. CUT AND CLEAR TREES WITHIN THE AREA OF DISTURBANCE.
7. CONSTRUCT INFILTRATION POND. LIMIT INITIAL EXCAVATION TO WITHIN 6 INCHES OF THE FINAL ELEVATION. SEE INFILTRATION BASIN CONSTRUCTION NOTES FOR ADDITIONAL INFORMATION.
8. BEGIN ROUGH GRADING AND EARTHWORK OPERATIONS.
9. CONSTRUCT REMAINING DRAINAGE IMPROVEMENTS. ALL SLOPES SHALL BE STABILIZED IMMEDIATELY AFTER GRADING. ALL DISTURBED AREAS SHALL BE STABILIZED NO LATER THAN 72-HOURS AFTER CONSTRUCTION ACTIVITIES CEASE. IF EARTHWORK TEMPORARILY CEASES ON A PORTION OF OR ON THE ENTIRE SITE, AND WILL NOT RESUME WITHIN 21-DAYS, THE AREA SHALL BE STABILIZED. AN AREA SHALL BE CONSIDERED STABLE IF ONE OF THE FOLLOWING HAS OCCURRED:
 - A. BASE COURSE GRAVELS HAVE BEEN INSTALLED IN AREAS TO BE PAVED;
 - B. A MINIMUM OF 85% VEGETATED GROWTH HAS BEEN ESTABLISHED;
 - C. A MINIMUM OF 3" OF NON-EROSIVE MATERIAL SUCH AS STONE OR RIP-RAP HAS BEEN INSTALLED; OR
 - D. EROSION CONTROL BLANKETS HAVE BEEN PROPERLY INSTALLED.
10. INSTALL ALL UNDERGROUND UTILITIES.
11. CONSTRUCT ROADWAYS ACCORDING TO THE PLAN. ALL SLOPES SHALL BE STABILIZED IMMEDIATELY AFTER GRADING.
12. CONSTRUCT RESIDENCES AND ASSOCIATED INFRASTRUCTURE.
13. SURFACE TREATMENT OF ALL DISTURBED AREAS NOT PAVED OR OTHERWISE LANDSCAPED SHALL BE TREATED WITH 4" OF LOAM AND SEED.
14. INSPECT AND MAINTAIN ALL EROSION AND SEDIMENTATION CONTROL MEASURES CONSISTENT WITH THE PROCEDURE AND SCHEDULE OUTLINED IN THE STORMWATER POLLUTION PREVENTION PLAN.
15. COMPLETE PERMANENT SEEDING AND LANDSCAPING.
16. REMOVE TEMPORARY EROSION CONTROL MEASURES ONCE ALL AREAS ARE STABILIZED WITH A SUITABLE STAND OF GRASS, PAVEMENT OR COMPACTED GRAVELS.



FOR REGISTRY USE ONLY

THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE RULES AND REGULATIONS FOR RECORDING ADOPTED BY THE REGISTERS OF DEEDS IN 1978 AND AMENDED JANUARY 12, 1988.

ENGINEER _____ DATE _____

APPROVED BY THE TOWN OF READING

COMMUNITY PLANNING AND DEVELOPMENT COMMISSION

CERTIFICATE OF ACTION

DATE OF ENDORSEMENT _____

DATE	DESCRIPTION
REVISIONS	

OWNER / APPLICANT:

INFRASTRUCTURE HOLDINGS, LLC

122 BOSTON ROAD

BILLERICA, MA 01862

PROJECT:

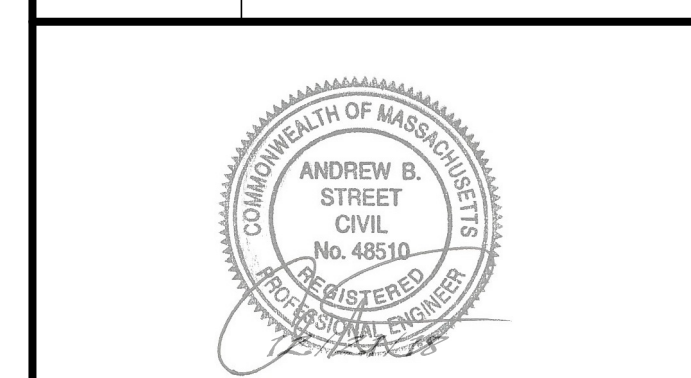
135, 139 & 149R HOWARD STREET

READING, MA 01867

DATE ISSUED: DECEMBER 21, 2018

PROJECT #: 18-10120

PREPARED BY: WILLIAM HALL, P.E.



PROFESSIONAL ENGINEER FOR CIVIL DESIGN CONSULTANTS, INC.

CIVIL DESIGN Consultants, Inc.

SURVEY - DESIGN - PERMITTING - CONSTRUCTION ADMINISTRATION

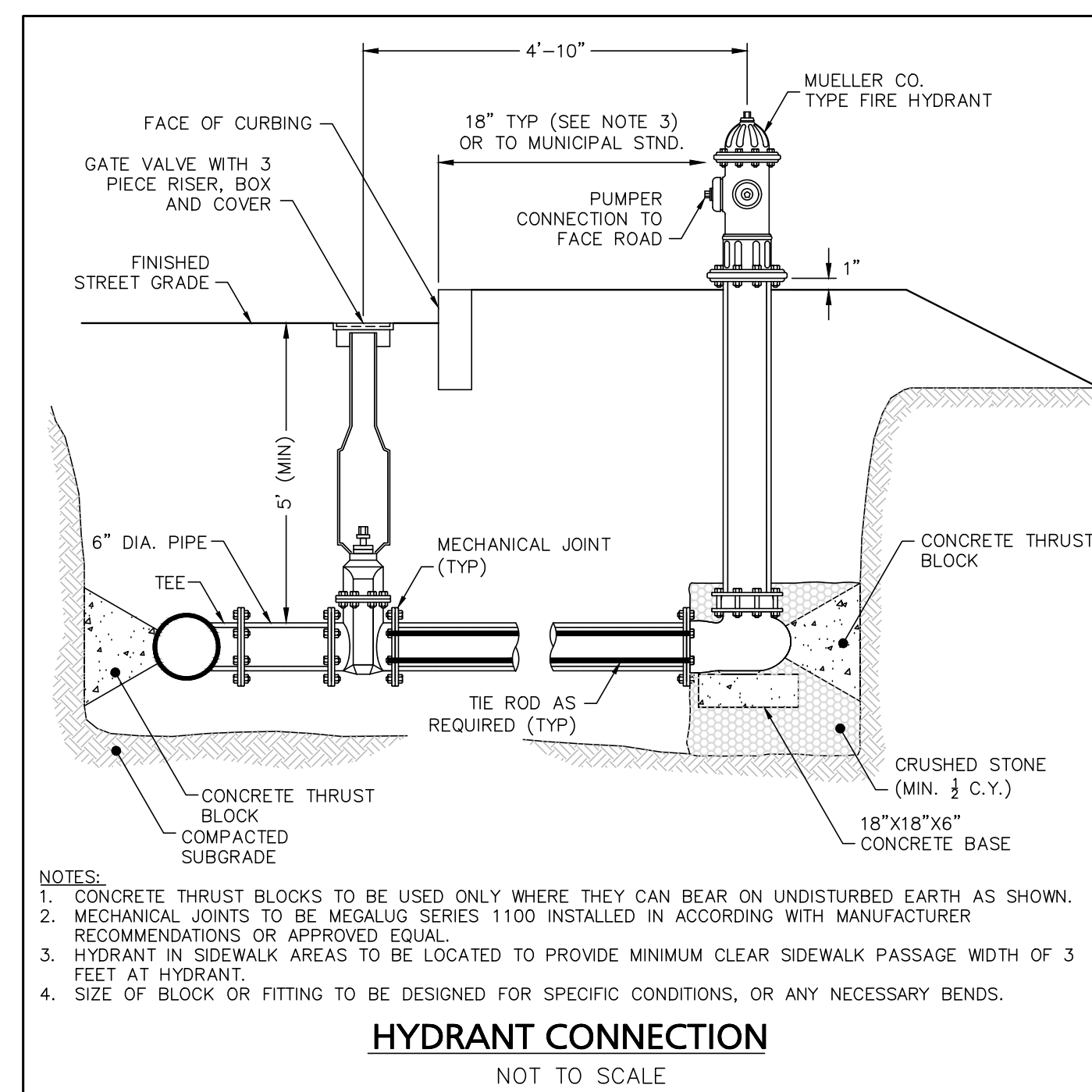
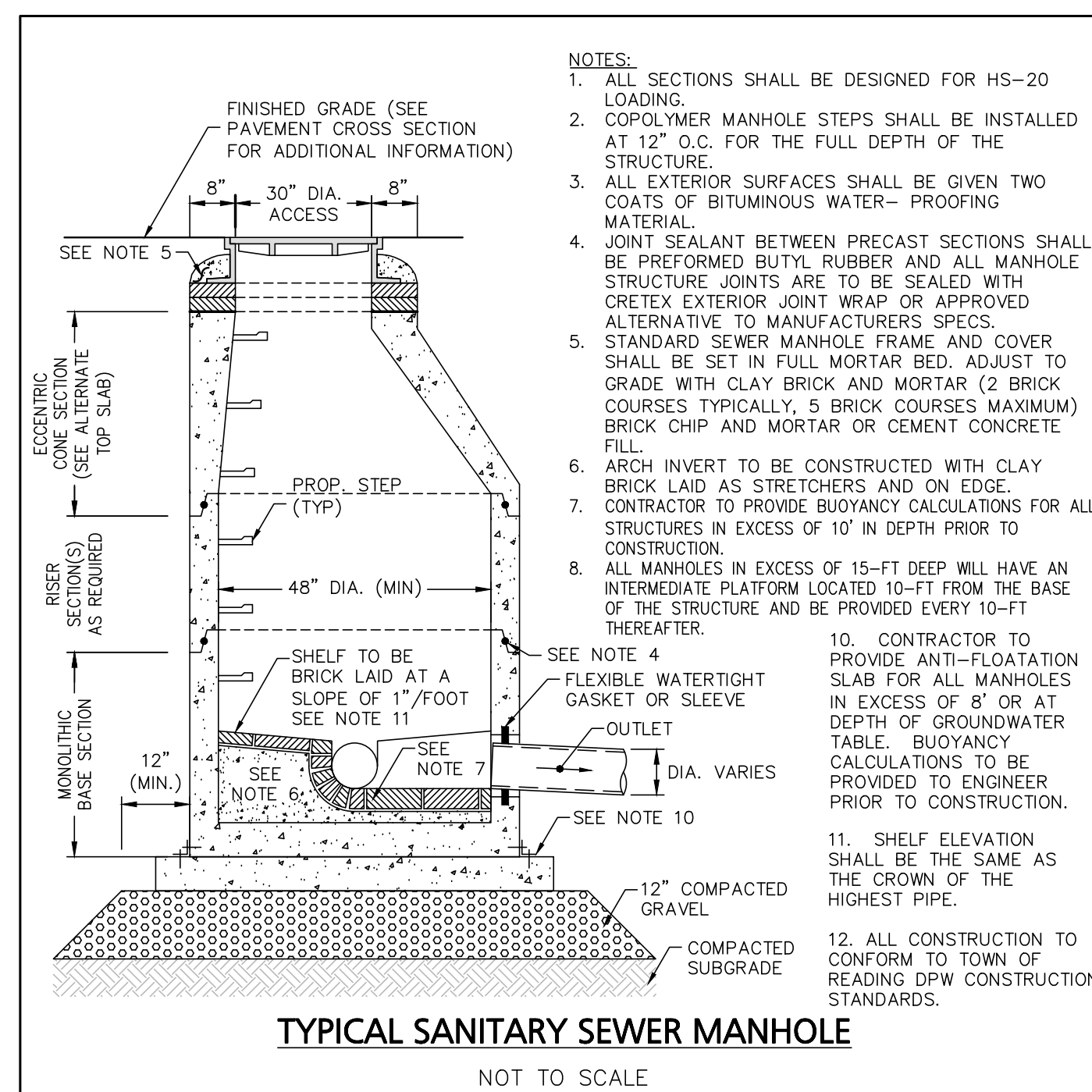
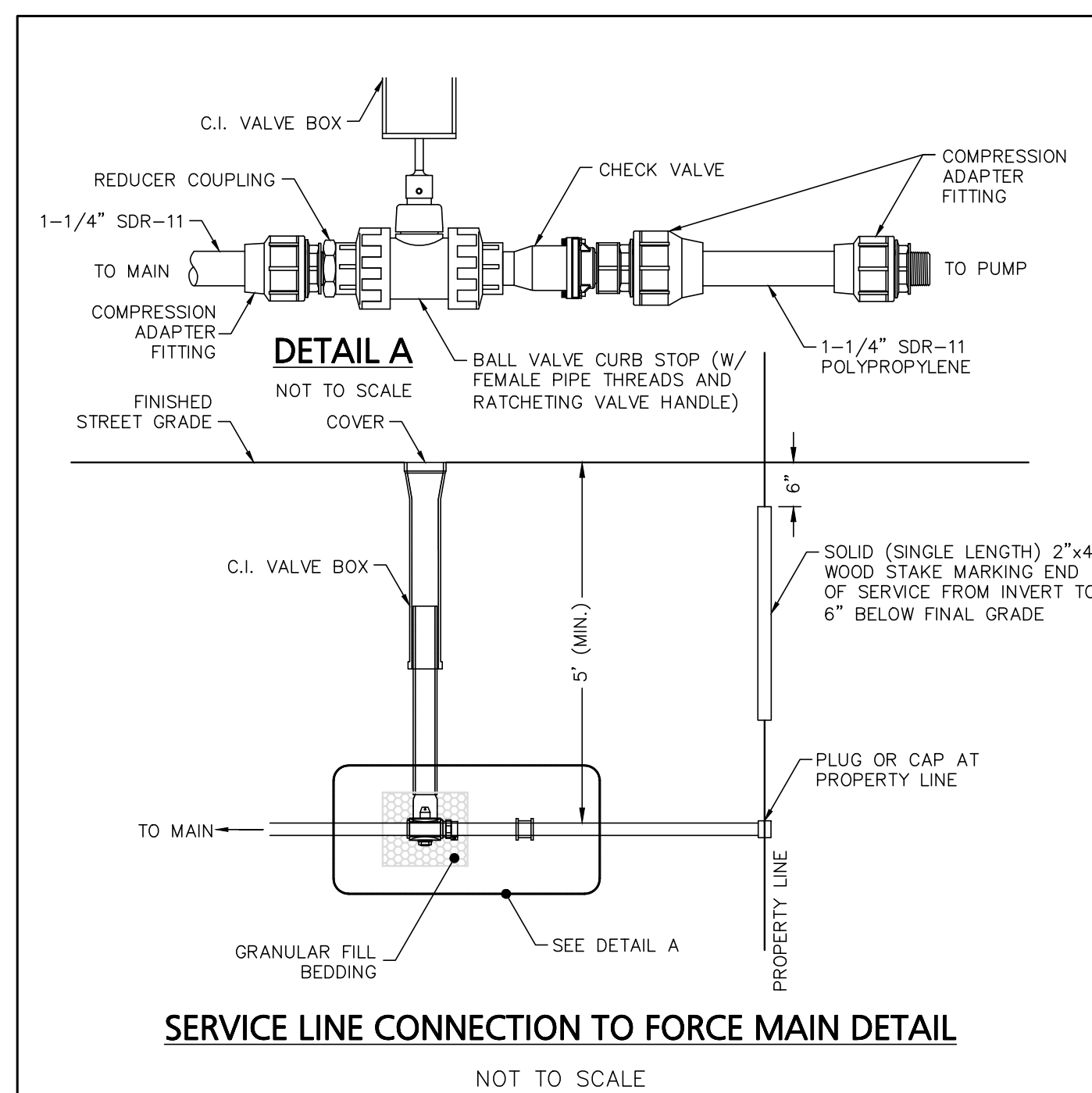
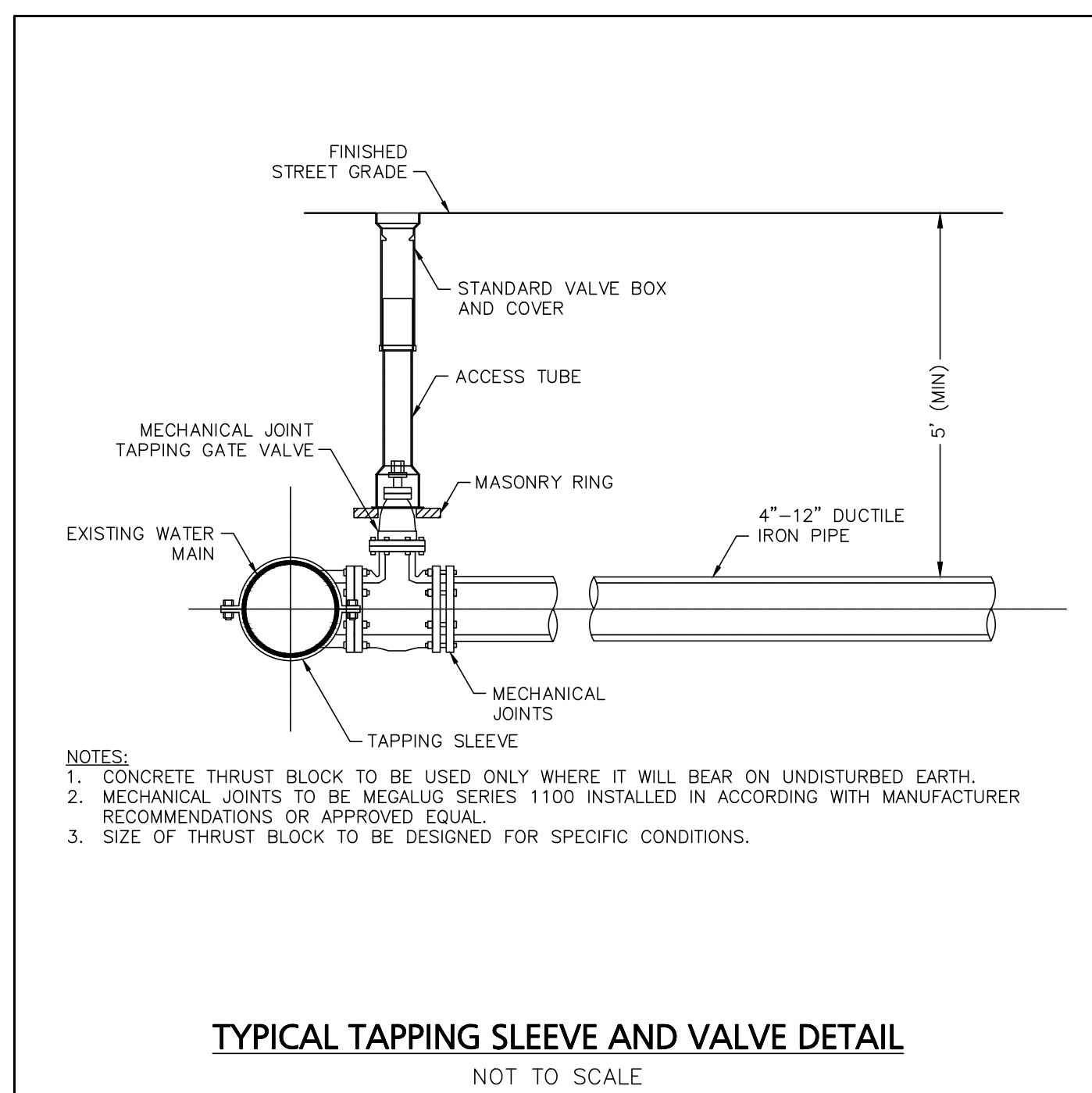
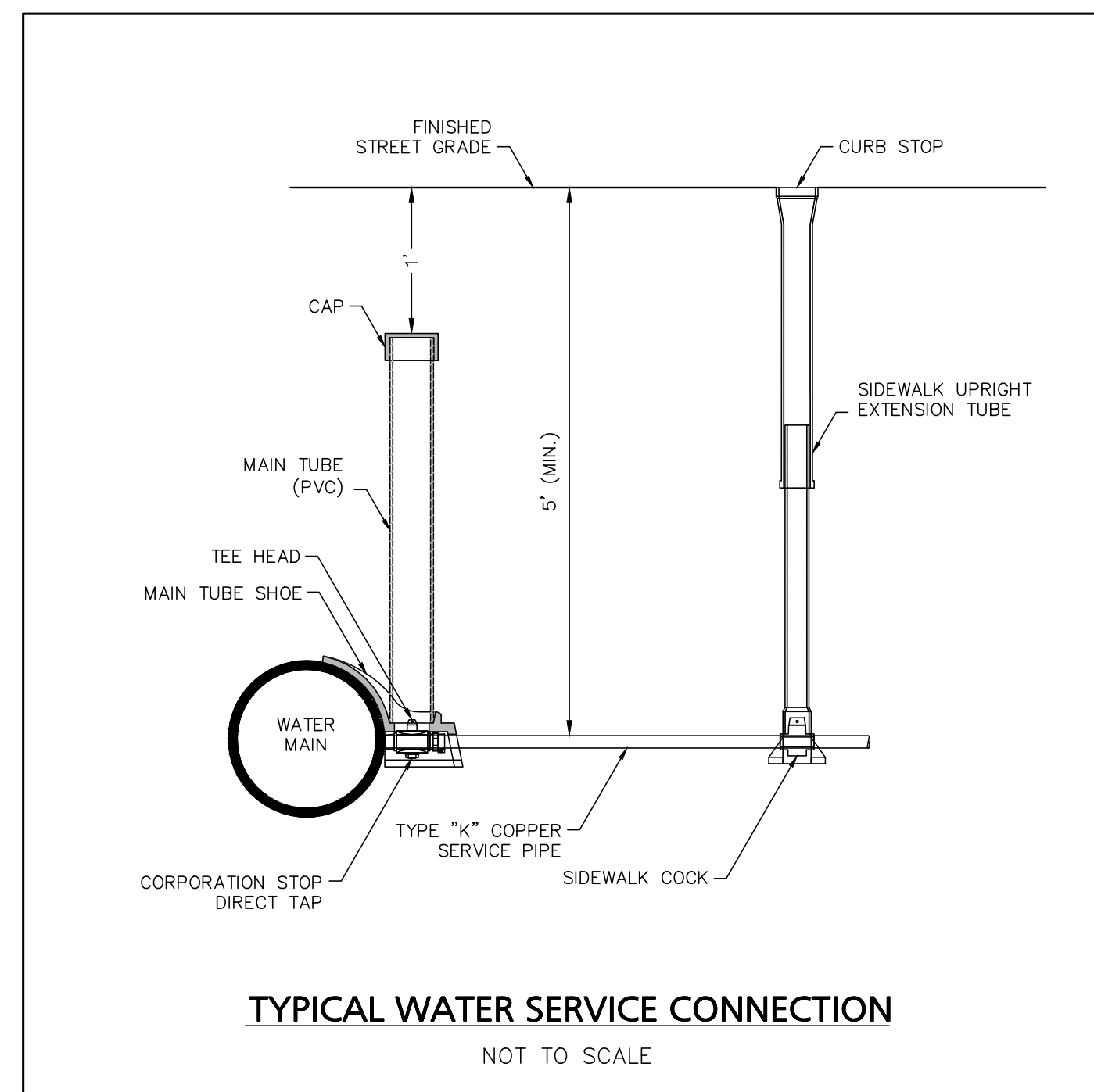
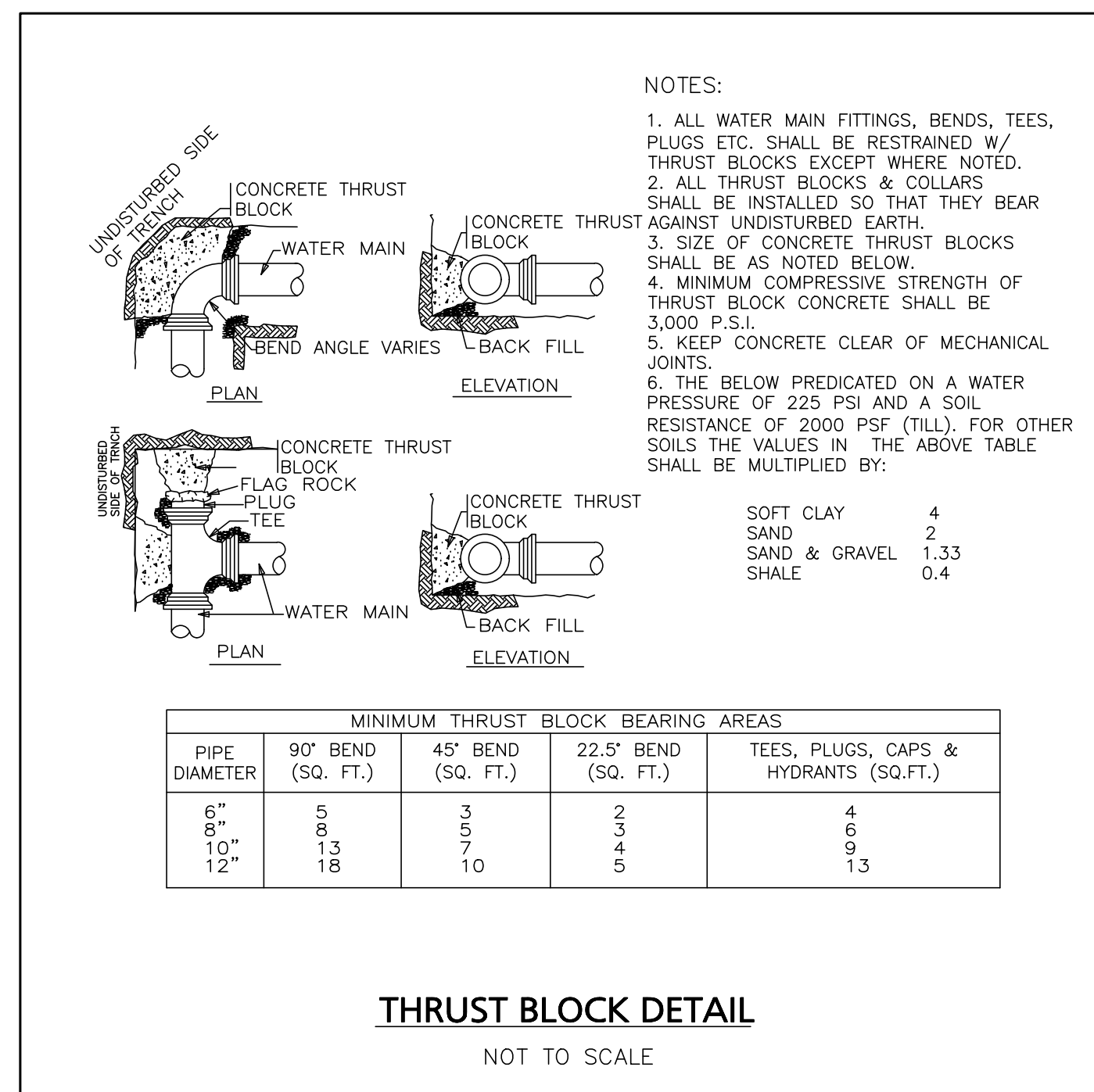
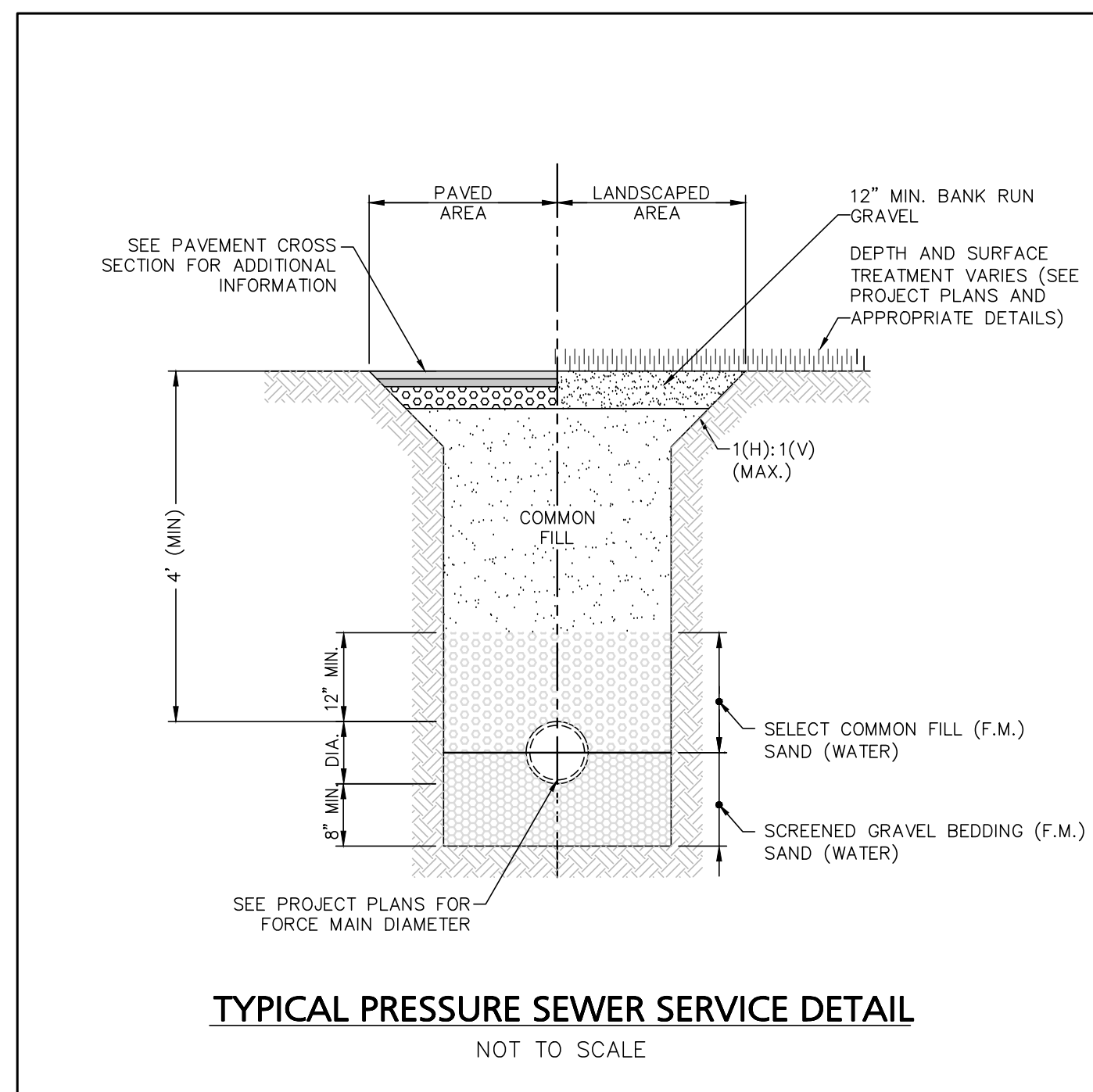
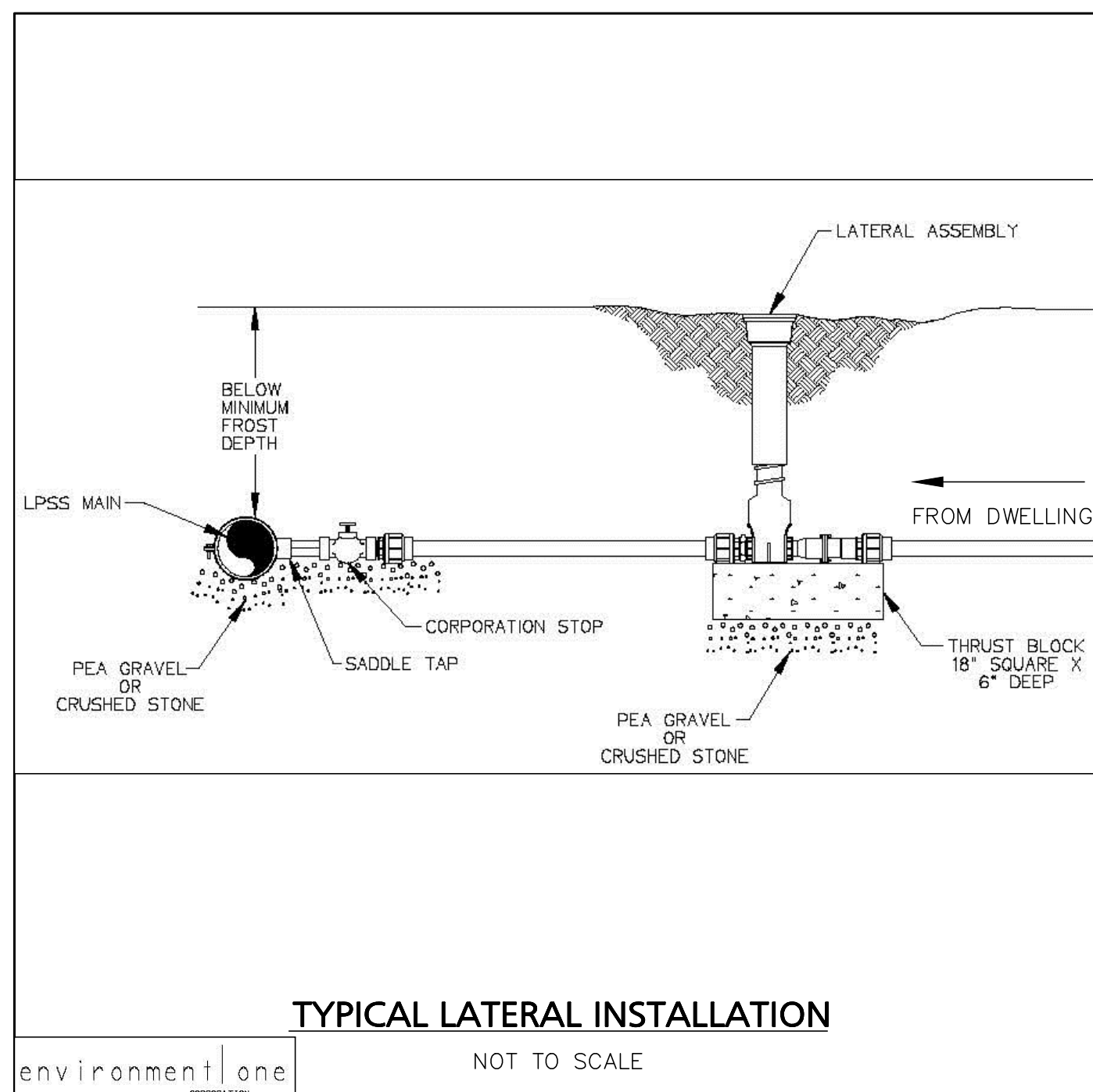
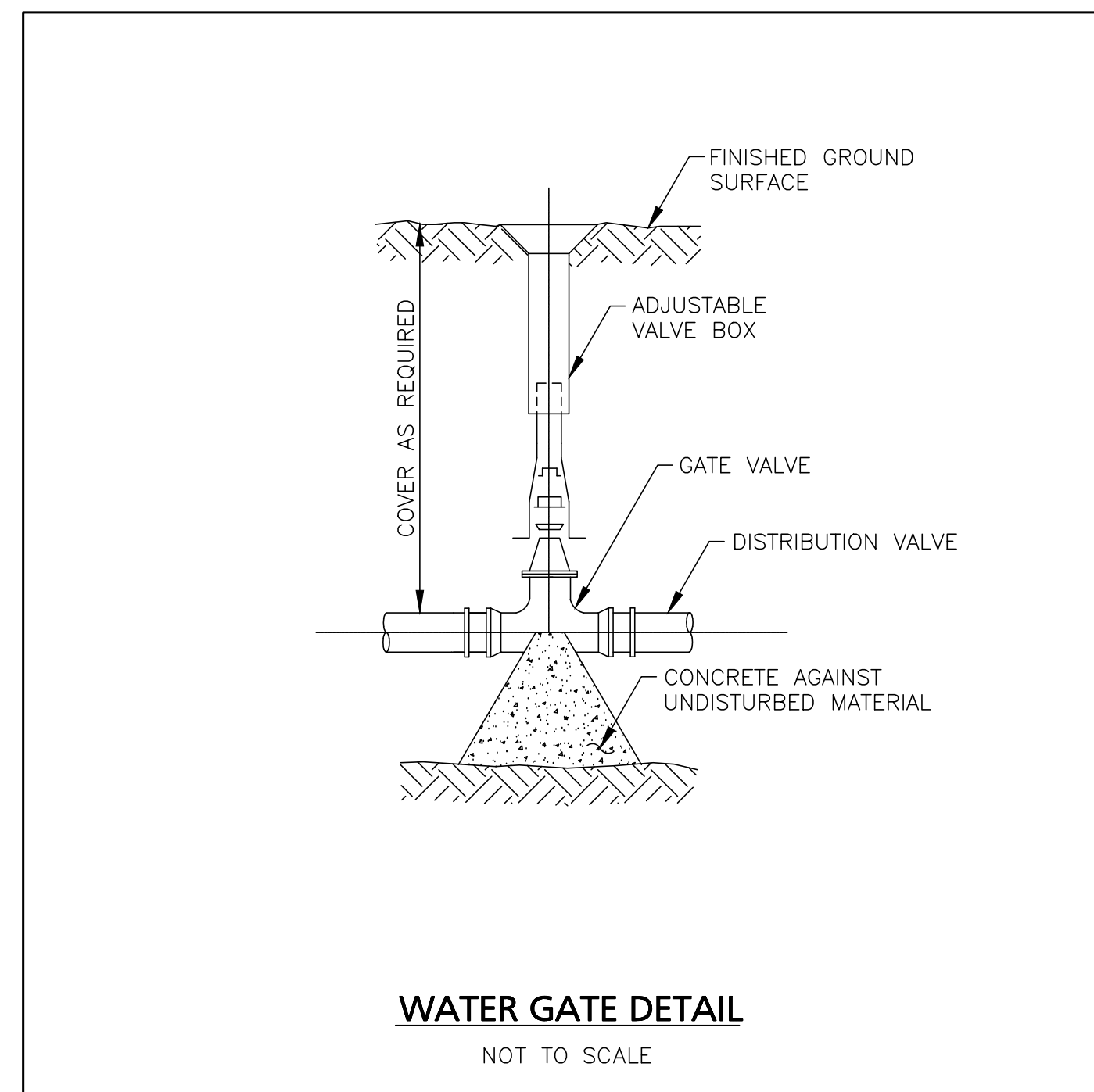
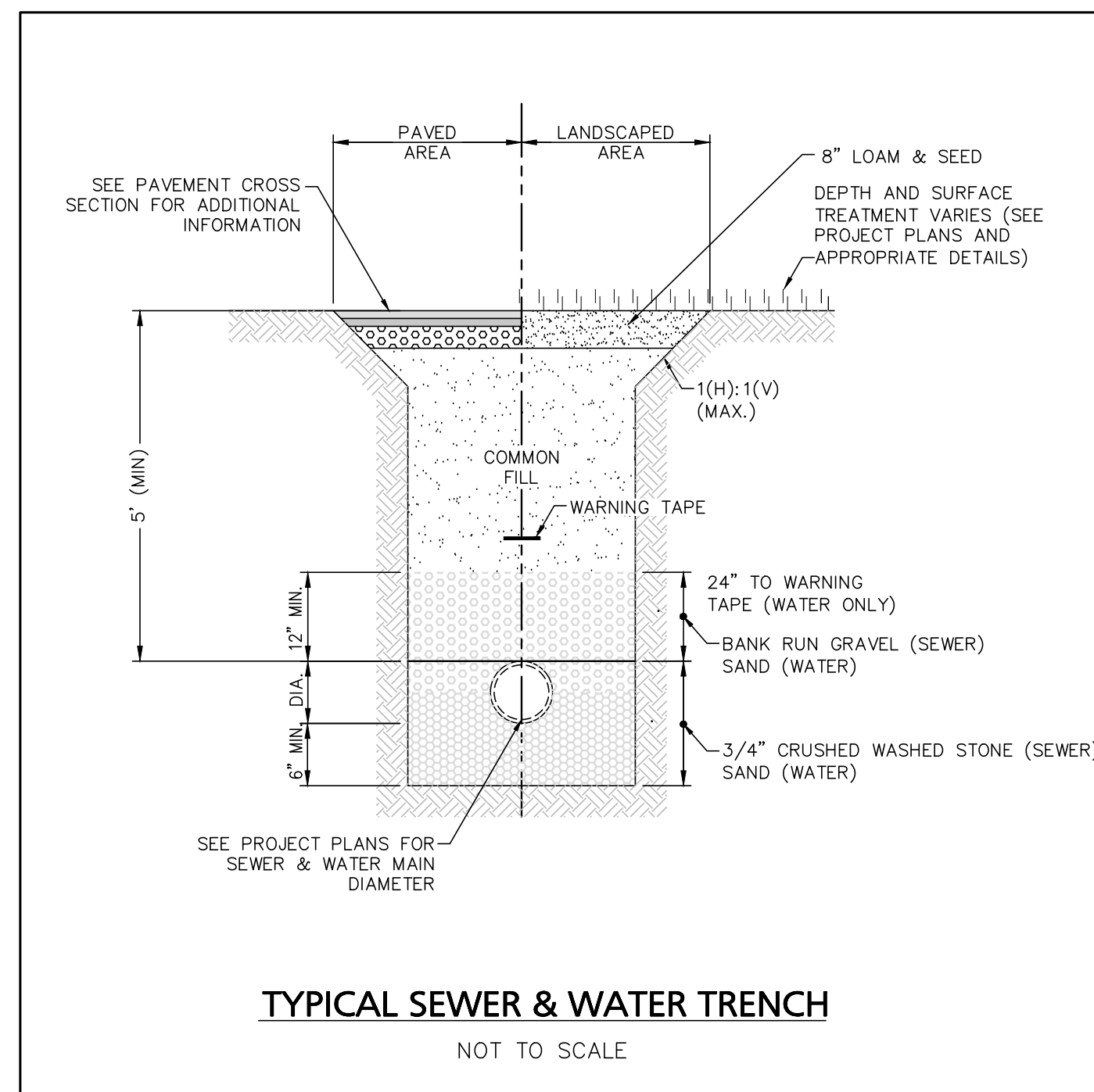
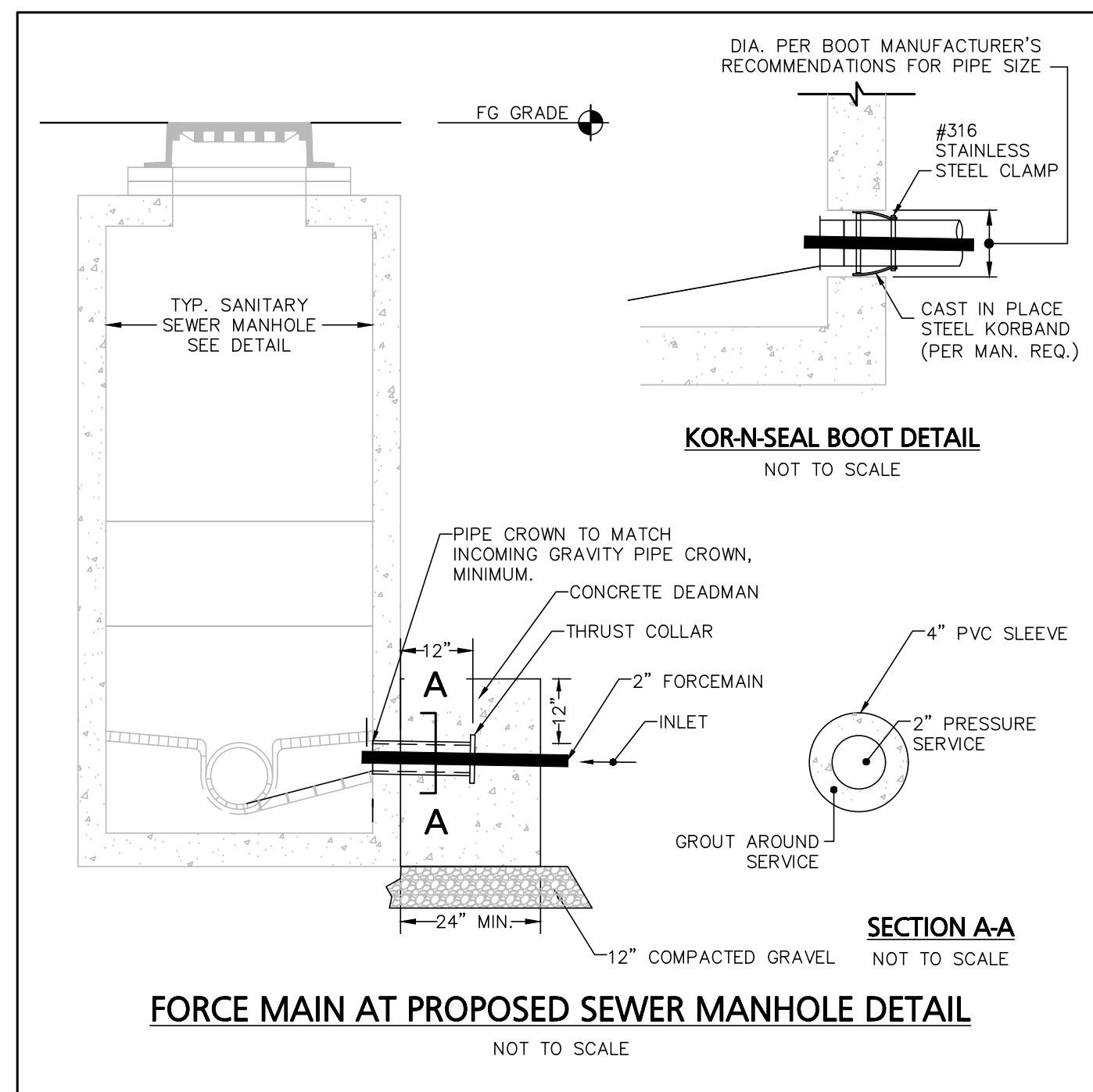
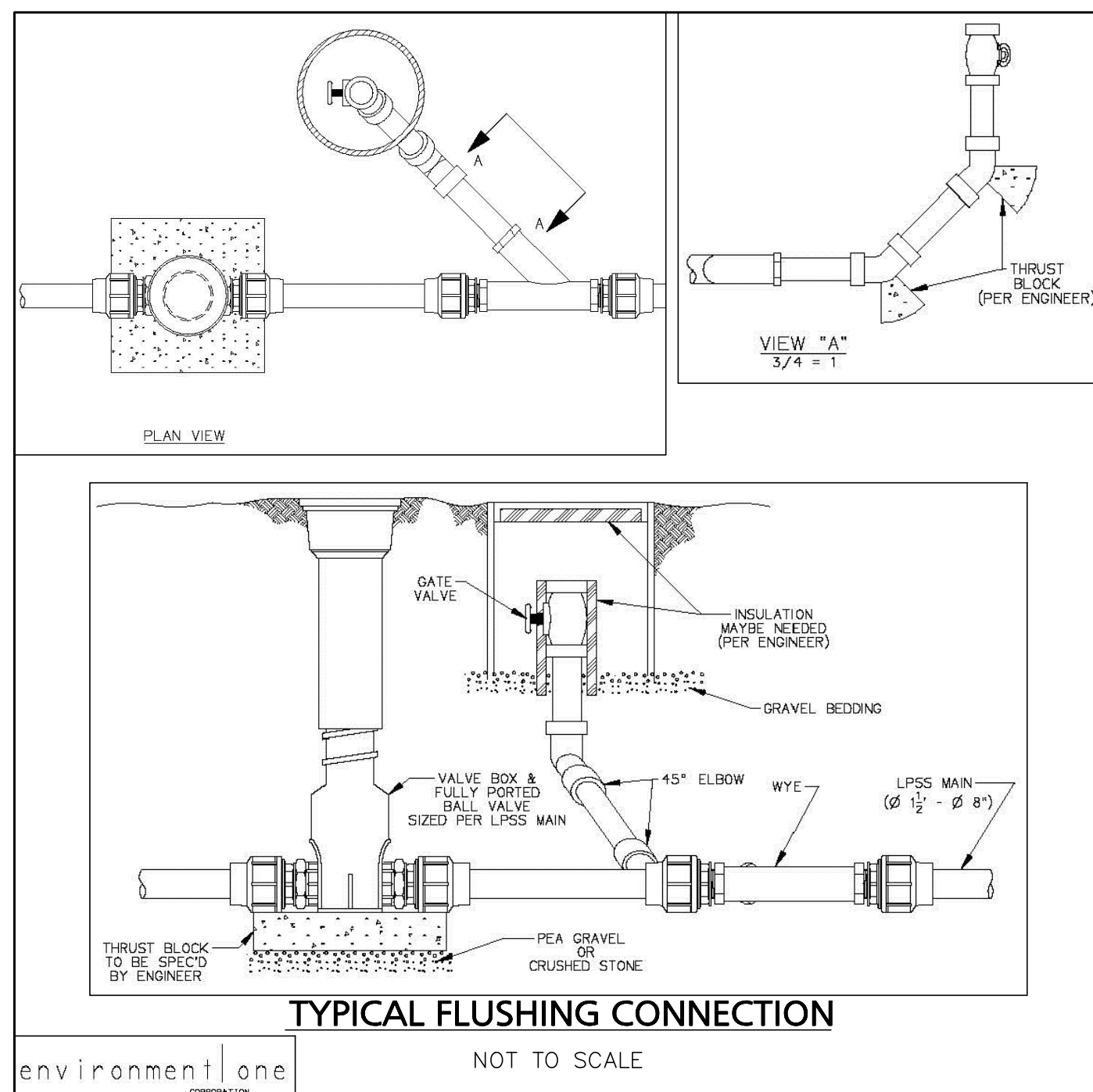
30 River Street Methuen, MA 01844 Tel: (978) 416-6920 Fax: (978) 416-7865

DRAWING TITLE:

CONSTRUCTION DETAILS

DRAWING #:

D-1



FOR REGISTRY USE ONLY
THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE RULES AND REGULATIONS FOR RECORDING ADOPTED BY THE REGISTERS OF DEEDS IN 1978 AND AMENDED JANUARY 12, 1986.

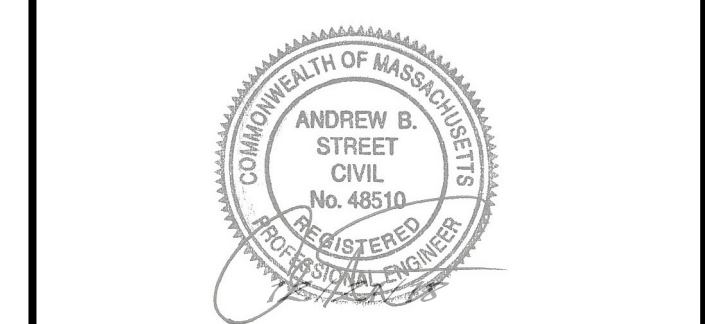
APPROVED BY THE TOWN OF READING
COMMUNITY PLANNING AND
DEVELOPMENT COMMISSION

CERTIFICATE OF ACTION
DATE OF ENDORSEMENT

OWNER / APPLICANT:
INFRASTRUCTURE HOLDINGS, LLC
122 BOSTON ROAD
BILLERICA, MA 01862

PROJECT:
135, 139 & 149R HOWARD STREET
READING, MA 01867

DATE ISSUED: DECEMBER 21, 2018
PROJECT #: 18-10120
PREPARED BY: WILLIAM HALL, P.E.



PROFESSIONAL ENGINEER FOR CIVIL DESIGN
CONSULTANTS, INC.

CIVIL DESIGN Consultants, Inc.
SURVEY - DESIGN - PERMITTING - CONSTRUCTION ADMINISTRATION

30 River Street Methuen, MA 01844 Tel: (978) 416-6920 Fax: (978) 416-7865

DRAWING TITLE:
CONSTRUCTION DETAILS

DRAWING #:

D-3