

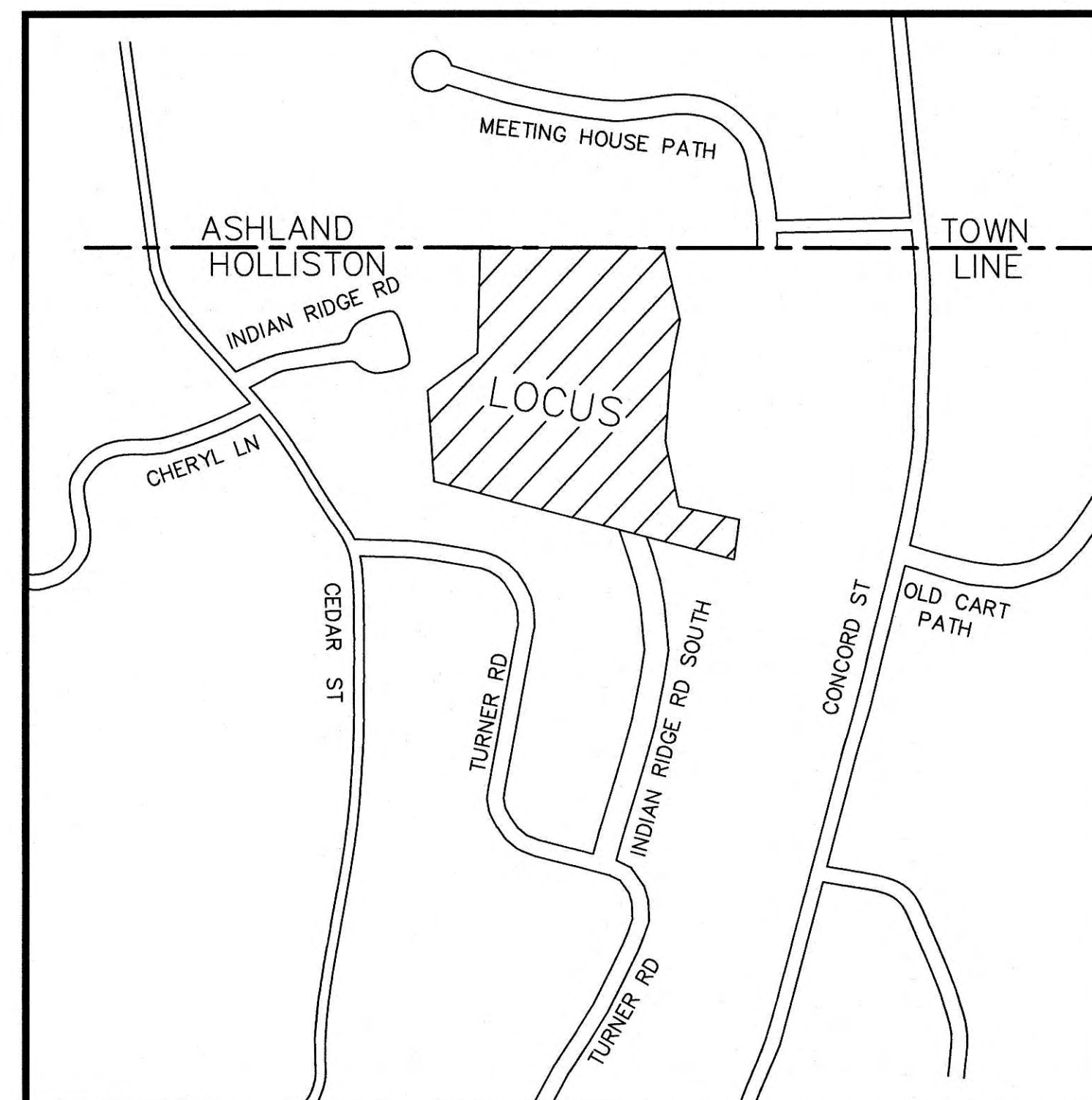
# ***SITE DEVELOPMENT PLAN OF LAND A 40B Comprehensive Permit Project "GEOFFREY PARK" HOLLISTON, MASSACHUSETTS***

DATE: FEB. 29, 2020

REVISED: MAY 14, 2020  
JULY 10, 2020

PREPARED BY:  
**GLM** ENGINEERING  
CONSULTANTS, INC.  
19 EXCHANGE STREET  
HOLLISTON, MASSACHUSETTS 01746  
(508)429-1100 fax:(508)429-7160

PREPARED FOR:  
INDIAN RIDGE REALTY TRUST  
223 COURTLAND STREET  
HOLLISTON, MA 01746



LOCUS MAP  
N.T.S.

ZONING CLASSIFICATION:  
AGRICULTURAL RESIDENCE B  
AREA: 40,000 S.F.  
FRONTAGE: 180 Feet  
DEPTH: 200 Feet  
SETBACKS:  
FRONT: 40'  
SIDE: 30'  
REAR: 40'

PROJECT SUMMARY:  
TOTAL LAND AREA: 12.67 ± ACRES  
UPLANDS AREA: 11.70 ± ACRES  
WETLAND AREA: 0.97 ± ACRES  
TOTAL LOTS: 23 LOTS  
SINGLE FAMILY DWELLINGS: 20 Dwellings  
DUPLEX STYLE DWELLINGS: 2 Bldgs - 4 Units  
TOTAL RESIDENTIAL UNITS: 24 UNITS

PROPOSED ROAD: 1655 Ft.  
(From Exist Indian Ridge Rd. South)

ASSESSOR'S REFERENCE:  
MAP 14, BLOCK 3, LOT 1

DEED REFERENCE:  
LAND COURT  
CERTIFICATE No. 206577  
DOCUMENT No. 1015755

PLAN REFERENCE:  
LAND COURT PLAN No. 36376C

OWNER OF RECORD:  
INDIAN RIDGE REALTY TRUST  
223 COURTLAND STREET  
HOLLISTON, MA 01746

APPROVED BY THE  
HOLLISTON ZONING BOARD  
OF APPEALS:

DATE APPROVED: \_\_\_\_\_

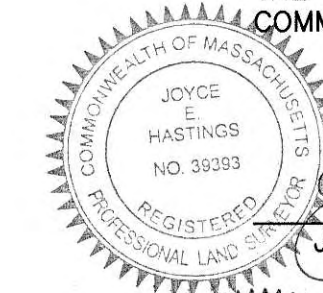
DATE ENDORSED: \_\_\_\_\_

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DAYS NEXT AFTER RECEIPT AND RECORDING OF  
SAME.

TOWN CLERK \_\_\_\_\_ DATE \_\_\_\_\_

I CERTIFY THAT THIS PLAN CONFORMS TO THE  
RULES & REGULATIONS OF THE REGISTER OF DEEDS.

THIS PLAN WAS PREPARED IN ACCORDANCE WITH  
THE PROCEDURAL AND TECHNICAL STANDARDS FOR  
THE PRACTICE OF LAND SURVEYING IN THE  
COMMONWEALTH OF MASSACHUSETTS.



JOYCE E. HASTINGS P.L.S.

7/15/2020  
DATE



7-15-2020

## SHEET INDEX

SHEET NO.	DESCRIPTION
1	COVER
2	LAYOUT PLAN
3	EXISTING CONDITIONS
4	EXISTING CONDITIONS
5	DRAINAGE & GRADING
6	DRAINAGE & GRADING
7	UTILITY LAYOUT
8	PLAN & PROFILE
9	PLAN & PROFILE
10	EROSION CONTROL PLAN
11	EROSION CONTROL PLAN
12	WETLAND REPLICATION
13-17	DETAILS

DATE: FEB. 29, 2020

SCALE: As Shown

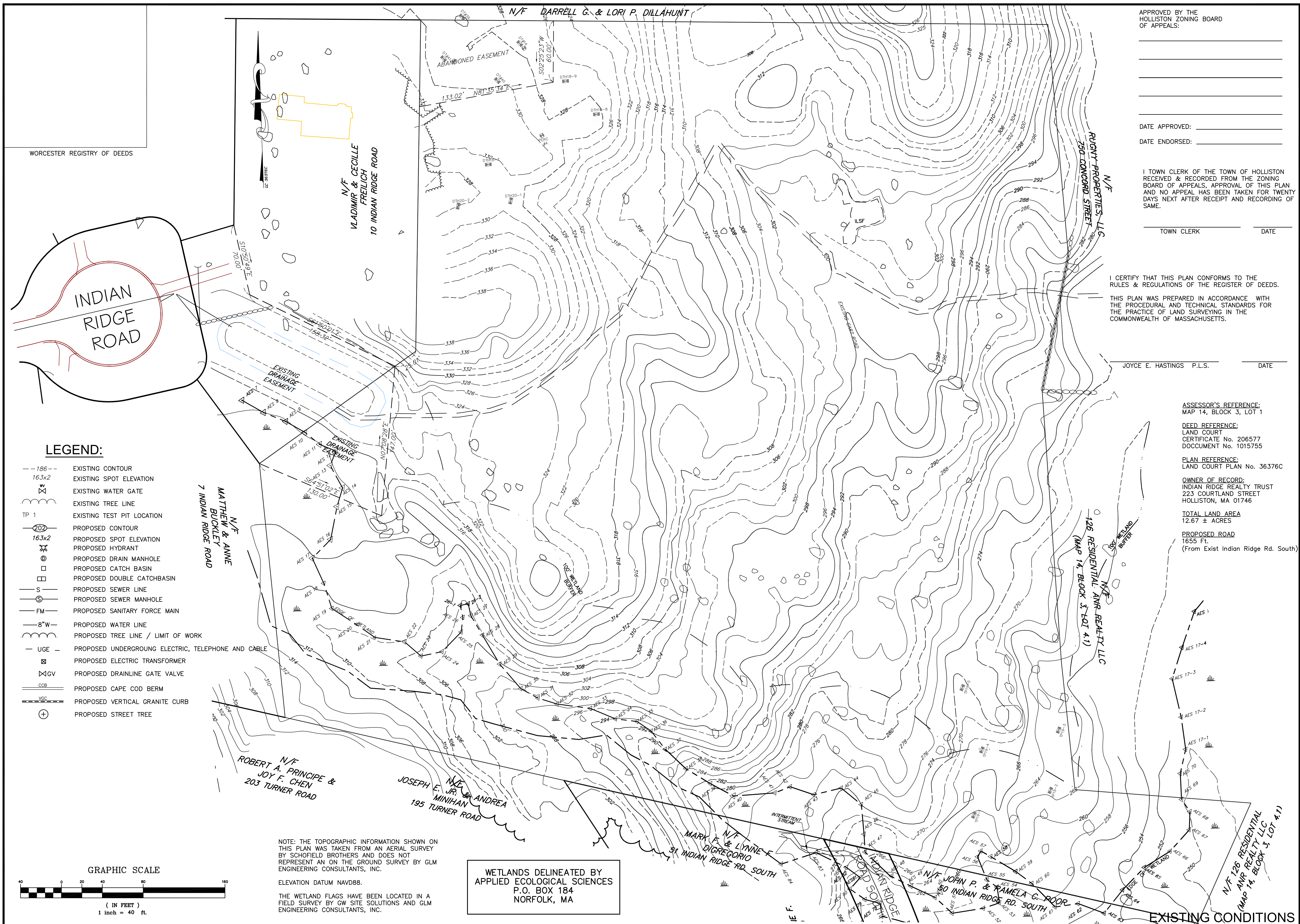
SHEET: 1 of 17

PLAN #: 27,337

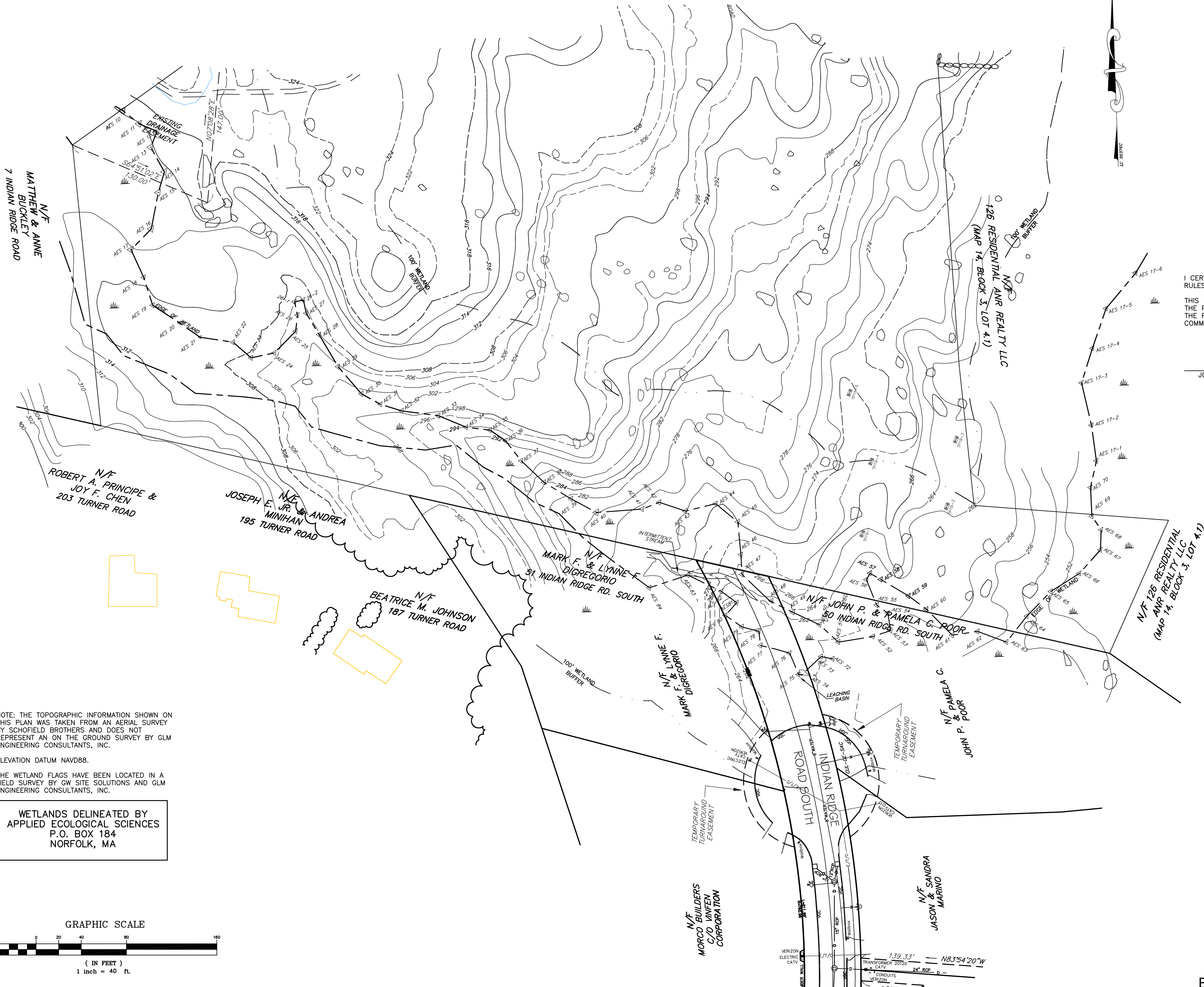






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TOTAL LAND AREA  
12.67 ± ACRES

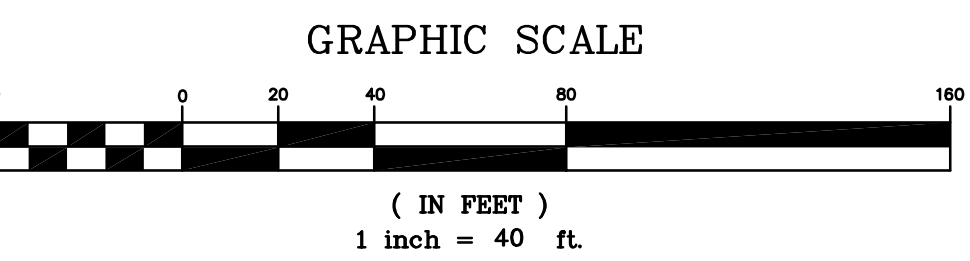
PROPOSED ROAD  
1655 FT.  
(From Exist Indian Ridge Rd. South)

NOTE: THE TOPOGRAPHIC INFORMATION SHOWN ON  
THIS PLAN WAS TAKEN FROM AN AERIAL SURVEY  
BY SCHOFIELD BROTHERS AND DOES NOT  
REPRESENT AN ON THE GROUND SURVEY BY GLM  
ENGINEERING CONSULTANTS, INC.

ELEVATION DATUM NAVD88.

THE WETLAND FLAGS HAVE BEEN LOCATED IN A  
FIELD SURVEY BY GW SITE SOLUTIONS AND GLM  
ENGINEERING CONSULTANTS, INC.

WETLANDS DELINEATED BY  
APPLIED ECOLOGICAL SCIENCES  
P.O. BOX 184  
NORFOLK, MA



REVISIONS		DESCRIPTION
No.	DATE	REVISED PER ZBA REVIEW COMMENTS
1	05/14/20	
2	07/10/20	

### SITE DEVELOPMENT PLAN OF LAND "GEOFFREY PARK"

#### A 40B Comprehensive Permit Project HOLLISTON, MASSACHUSETTS

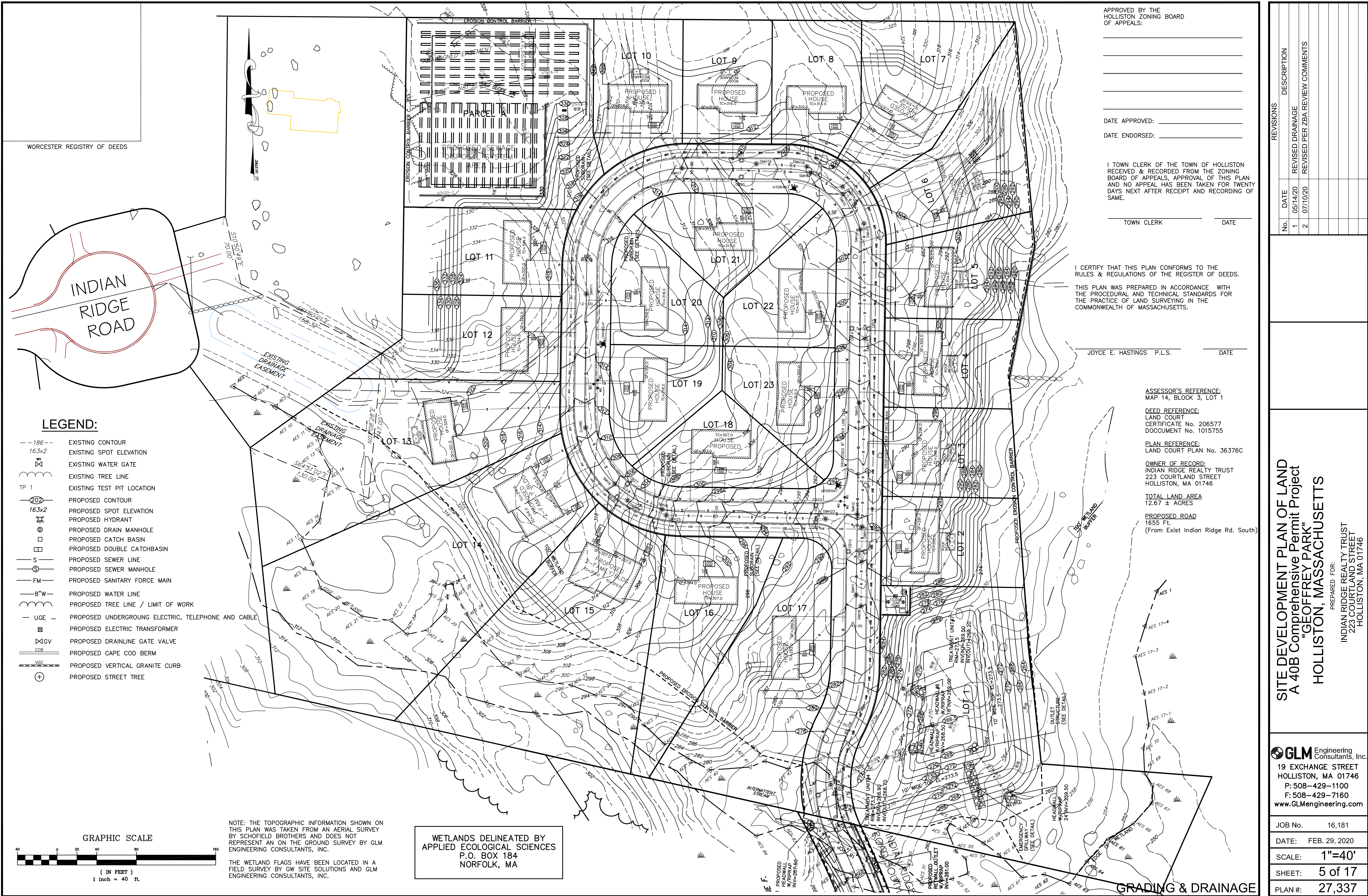
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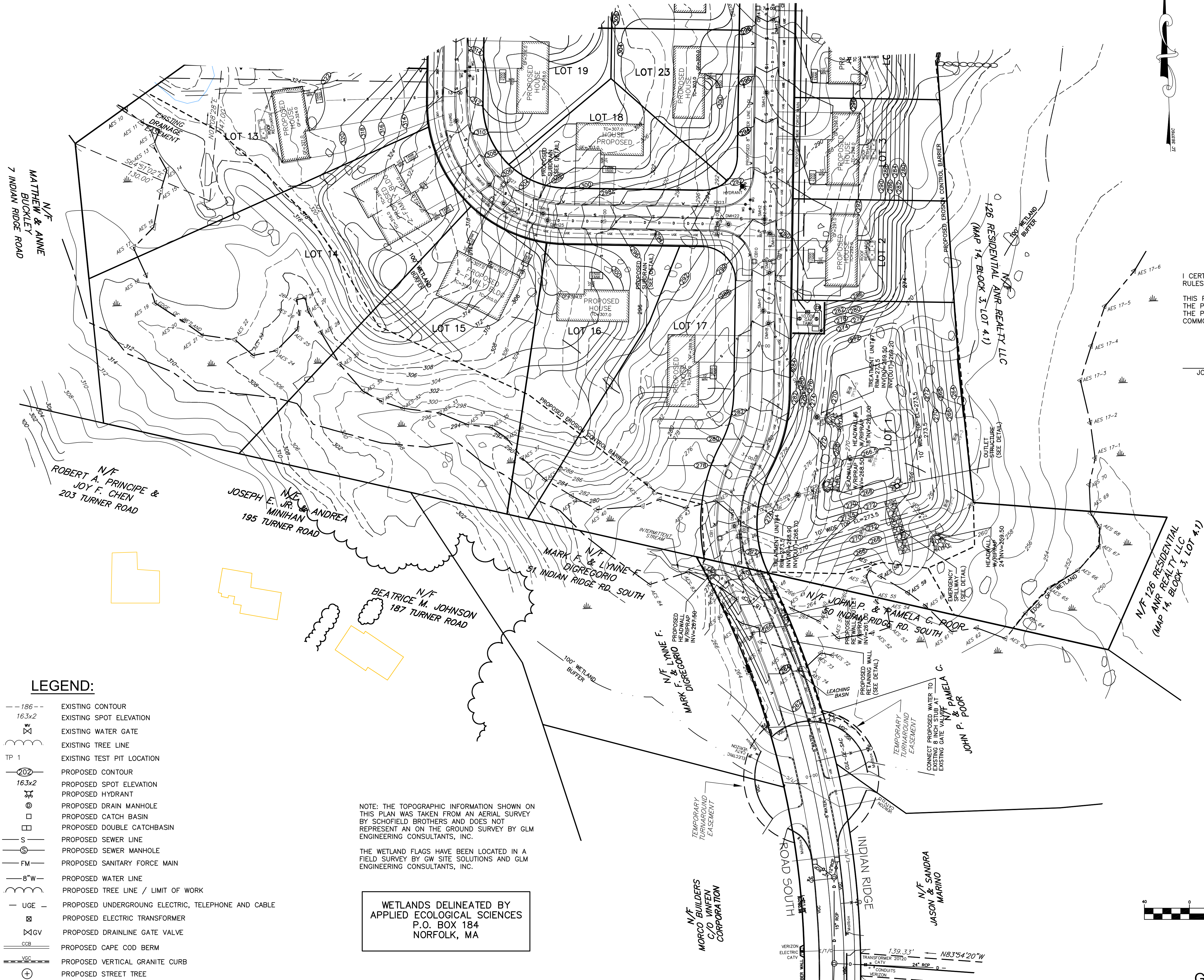
JOB No.	16,181
DATE:	FEB. 29, 2020
SCALE:	1"=40'
SHEET:	4 of 17
PLAN #:	27,337

EXISTING CONDITIONS









LEGEND:

- 186--- EXISTING CONTOUR
- 163x2 EXISTING SPOT ELEVATION
- EXISTING WATER GATE
- EXISTING TREE LINE
- EXISTING TEST PIT LOCATION
- PROPOSED CONTOUR
- 163x2 PROPOSED SPOT ELEVATION
- PROPOSED HYDRANT
- PROPOSED DRAIN MANHOLE
- PROPOSED CATCH BASIN
- PROPOSED DOUBLE CATCHBASIN
- PROPOSED SEWER LINE
- PROPOSED SEWER MANHOLE
- PROPOSED SANITARY FORCE MAIN
- PROPOSED WATER LINE
- PROPOSED TREE LINE / LIMIT OF WORK
- PROPOSED UNDERGROUND ELECTRIC, TELEPHONE AND CABLE
- PROPOSED ELECTRIC TRANSFORMER
- PROPOSED DRAINLINE GATE VALVE
- PROPOSED CAPE COD BERM
- PROPOSED VERTICAL GRANITE CURB
- PROPOSED STREET TREE

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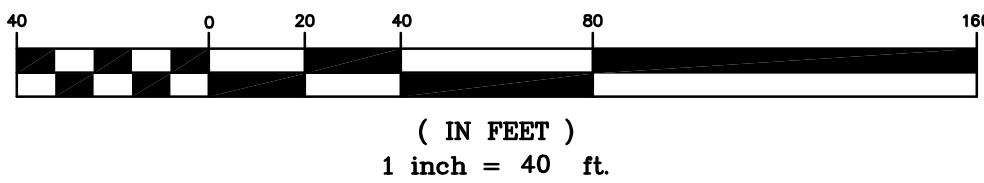
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HOLLISTON, MA 01746

TOTAL LAND AREA  
12.67 ± ACRES

PROPOSED ROAD  
1655 ft.  
(From Exist Indian Ridge Rd. South)

GRAPHIC SCALE



GRADING & DRAINAGE

SITE DEVELOPMENT PLAN OF LAND  
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DATE: FEB. 29, 2020

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SHEET: 6 of 17

PLAN #: 27,337

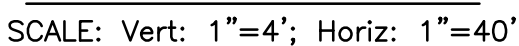
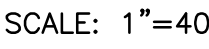


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- |         |               |
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| JOB No. | 16,181        |
| DATE:   | FEB. 29, 2020 |
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| SHEET:  | 7 of 17       |
| PLAN #: | 27,337        |

## UTILITY LAYOUT

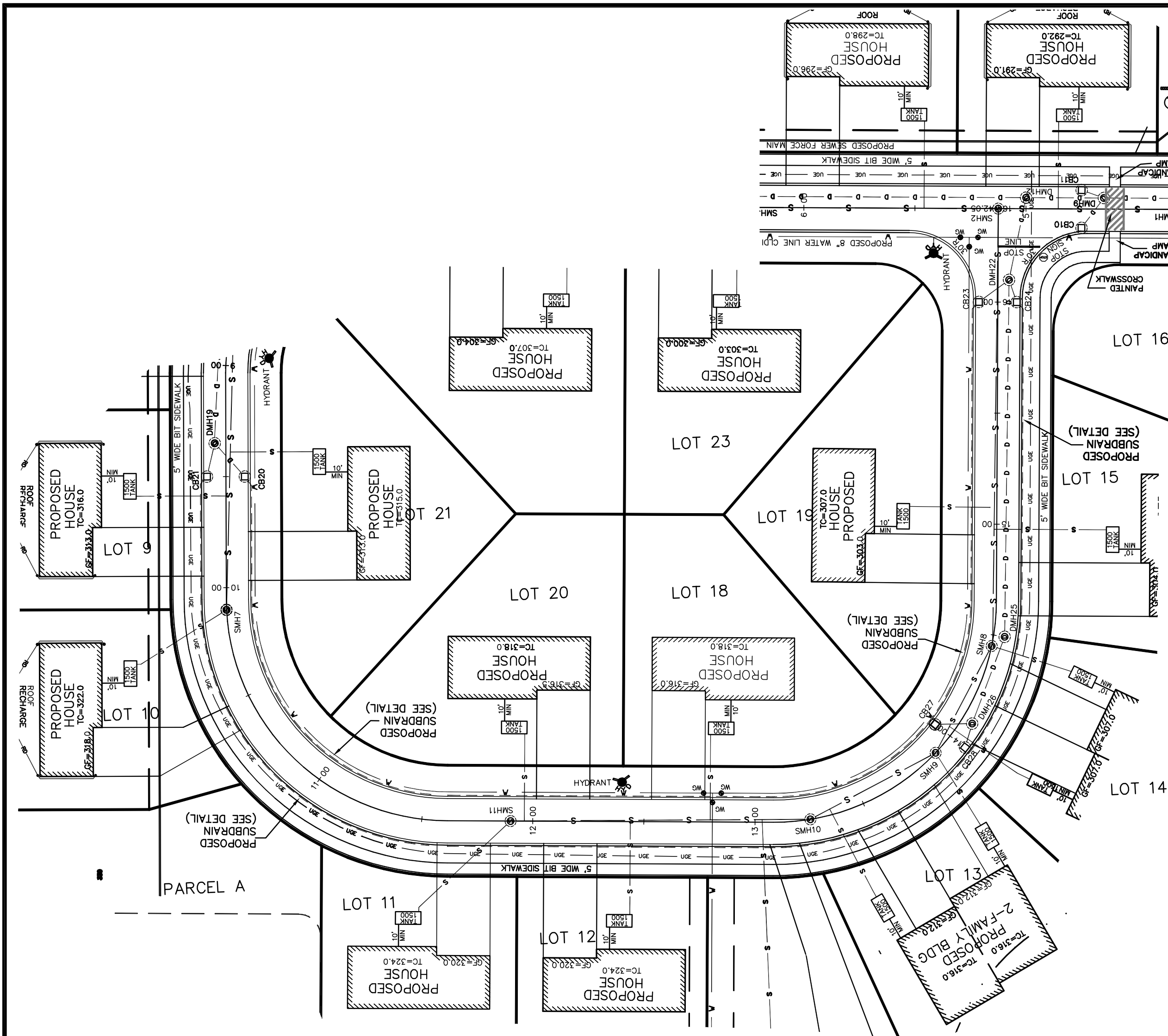




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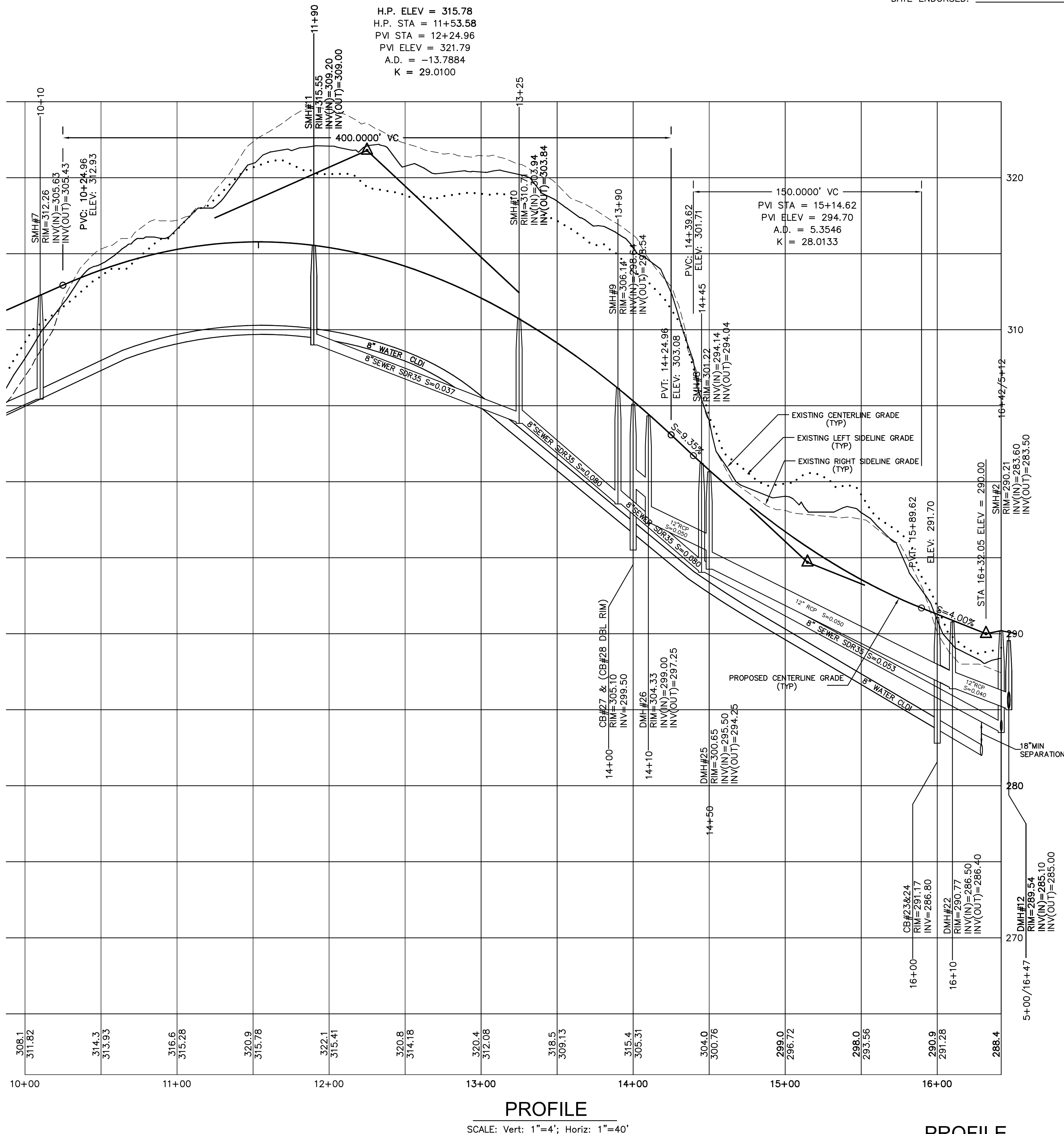


PLAN VIEW  
SCALE: 1"=40'

LEGEND:

- 186 --- EXISTING CONTOUR
- 16.3x2 EXISTING SPOT ELEVATION
- EXISTING WATER GATE
- EXISTING TREE LINE
- TP 1 EXISTING TEST PIT LOCATION
- 20.2 PROPOSED CONTOUR
- 16.3x2 PROPOSED SPOT ELEVATION
- PROPOSED HYDRANT
- PROPOSED DRAIN MANHOLE
- PROPOSED CATCH BASIN
- PROPOSED DOUBLE CATCHBASIN
- S PROPOSED SEWER LINE
- PROPOSED SEWER MANHOLE
- FM PROPOSED SANITARY FORCE MAIN
- 8"W PROPOSED WATER LINE
- PROPOSED TREE LINE / LIMIT OF WORK
- E/T/C- PROPOSED UNDERGROUND ELECTRIC, TELEPHONE AND CABLE
- PROPOSED ELECTRIC TRANSFORMER
- GV PROPOSED DRAINLINE GATE VALVE
- CCB PROPOSED CAPE COD BERM
- VCB PROPOSED VERTICAL GRANITE CURB
- PROPOSED STREET TREE



PROFILE

SCALE: Vert: 1"=4'; Horiz: 1"=40'

PROFILE

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SITE DEVELOPMENT PLAN OF LAND  
"GEOFFREY PARK"  
A 40B Comprehensive Permit Project  
HOLLISTON, MASSACHUSETTS

PREPARED FOR:  
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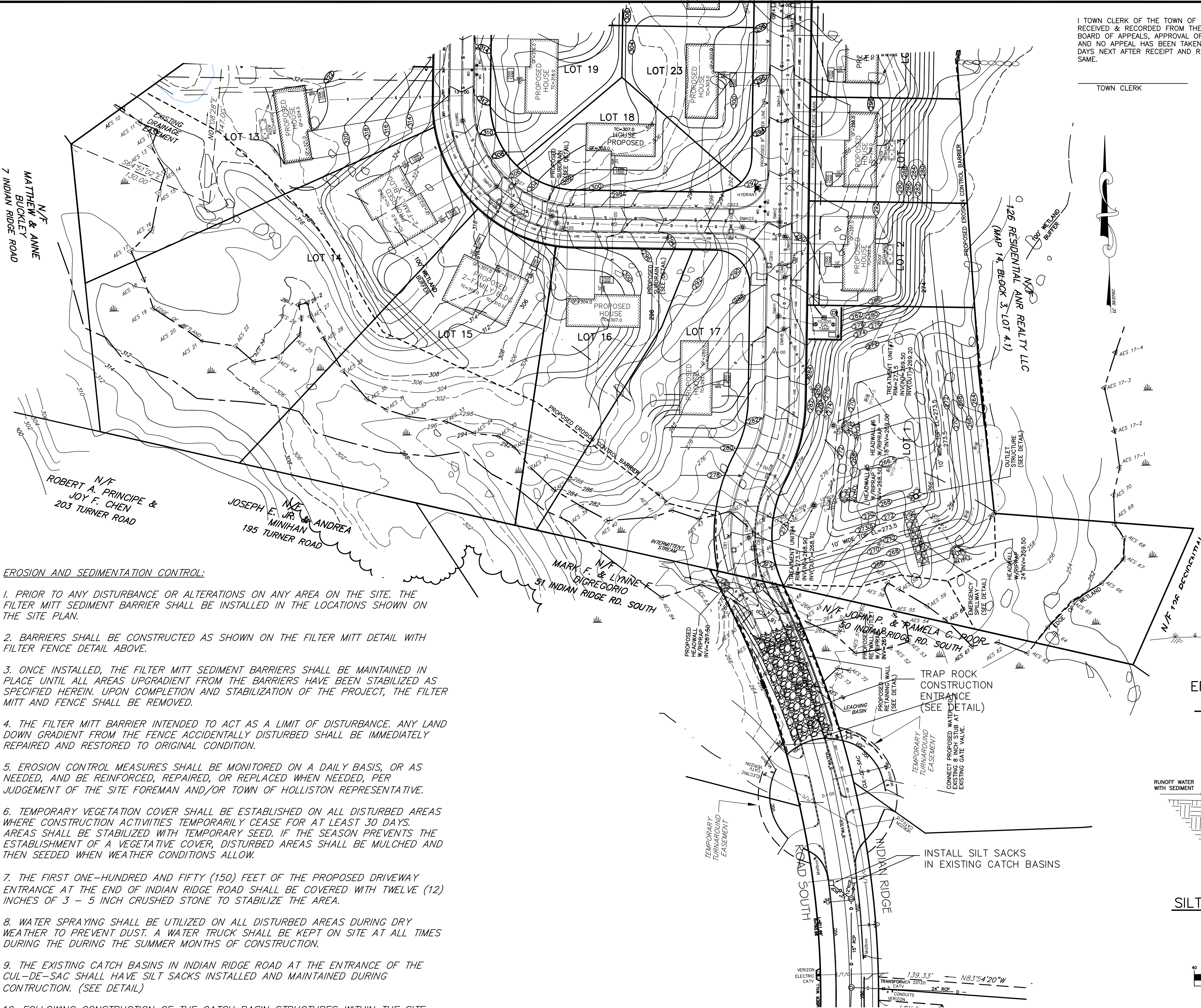
DATE: FEB. 29, 2020

SCALE: 1"=40'

SHEET: 9 of 17

PLAN #: 27,337





EROSION AND SEDIMENTATION CONTROL:

1. PRIOR TO ANY DISTURBANCE OR ALTERATIONS ON ANY AREA ON THE SITE, THE FILTER MITT SEDIMENT BARRIER SHALL BE INSTALLED IN THE LOCATIONS SHOWN ON THE SITE PLAN.
2. BARRIERS SHALL BE CONSTRUCTED AS SHOWN ON THE FILTER MITT DETAIL WITH FILTER FENCE DETAIL ABOVE.
3. ONCE INSTALLED, THE FILTER MITT SEDIMENT BARRIERS SHALL BE MAINTAINED IN PLACE UNTIL ALL AREAS UPGRADIENT FROM THE BARRIERS HAVE BEEN STABILIZED AS SPECIFIED HEREIN. UPON COMPLETION AND STABILIZATION OF THE PROJECT, THE FILTER MITT AND FENCE SHALL BE REMOVED.
4. THE FILTER MITT BARRIER INTENDED TO ACT AS A LIMIT OF DISTURBANCE. ANY LAND DOWN GRADIENT FROM THE FENCE ACCIDENTALLY DISTURBED SHALL BE IMMEDIATELY REPAIRED AND RESTORED TO ORIGINAL CONDITION.
5. EROSION CONTROL MEASURES SHALL BE MONITORED ON A DAILY BASIS, OR AS NEEDED, AND BE REINFORCED, REPAIRED, OR REPLACED WHEN NEEDED, PER JUDGEMENT OF THE SITE FOREMAN AND/OR TOWN OF HOLLISTON REPRESENTATIVE.
6. TEMPORARY VEGETATION COVER SHALL BE ESTABLISHED ON ALL DISTURBED AREAS WHERE CONSTRUCTION ACTIVITIES TEMPORARILY CEASE FOR AT LEAST 30 DAYS. AREAS SHALL BE STABILIZED WITH TEMPORARY SEED. IF THE SEASON PREVENTS THE ESTABLISHMENT OF A VEGETATIVE COVER, DISTURBED AREAS SHALL BE MULCHED AND THEN SEEDED WHEN WEATHER CONDITIONS ALLOW.
7. THE FIRST ONE-HUNDRED AND FIFTY (150) FEET OF THE PROPOSED DRIVEWAY ENTRANCE AT THE END OF INDIAN RIDGE ROAD SHALL BE COVERED WITH TWELVE (12) INCHES OF 3 - 5 INCH CRUSHED STONE TO STABILIZE THE AREA.
8. WATER SPRAYING SHALL BE UTILIZED ON ALL DISTURBED AREAS DURING DRY WEATHER TO PREVENT DUST. A WATER TRUCK SHALL BE KEPT ON SITE AT ALL TIMES DURING THE DURING THE SUMMER MONTHS OF CONSTRUCTION.
9. THE EXISTING CATCH BASINS IN INDIAN RIDGE ROAD AT THE ENTRANCE OF THE CUL-DE-SAC SHALL HAVE SILT SACKS INSTALLED AND MAINTAINED DURING CONSTRUCTION. (SEE DETAIL)
10. FOLLOWING CONSTRUCTION OF THE CATCH BASIN STRUCTURES WITHIN THE SITE, SILT SACKS SHALL BE INSTALLED AND MAINTAINED DURING CONSTRUCTION. (SEE DETAIL)

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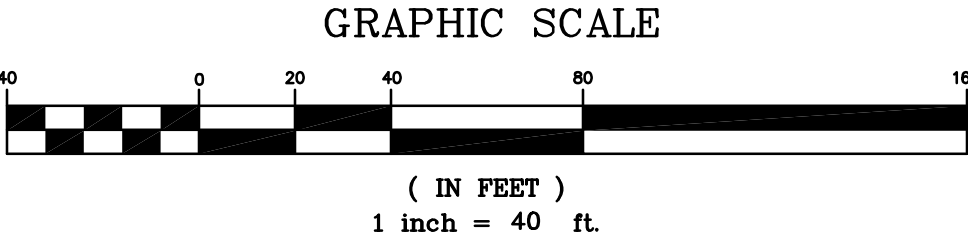
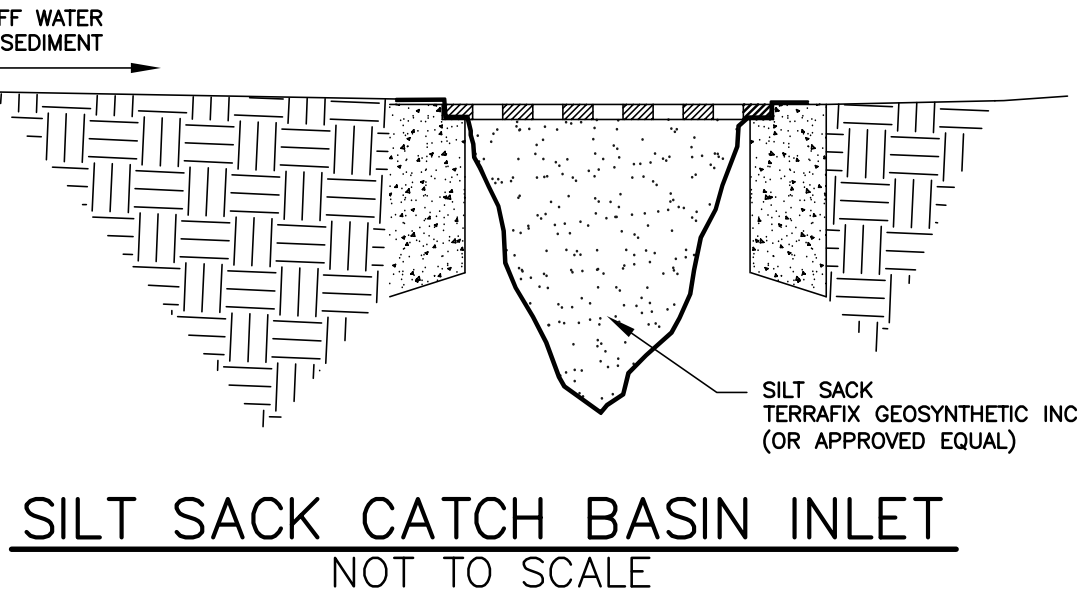
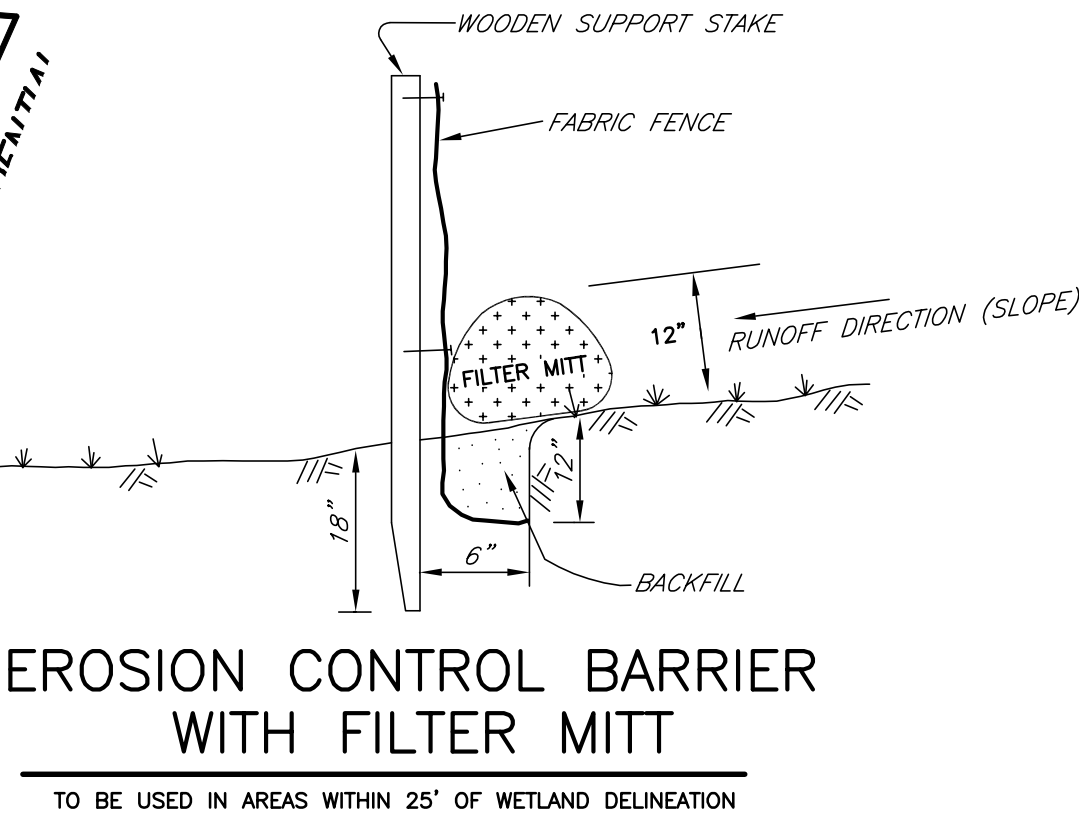
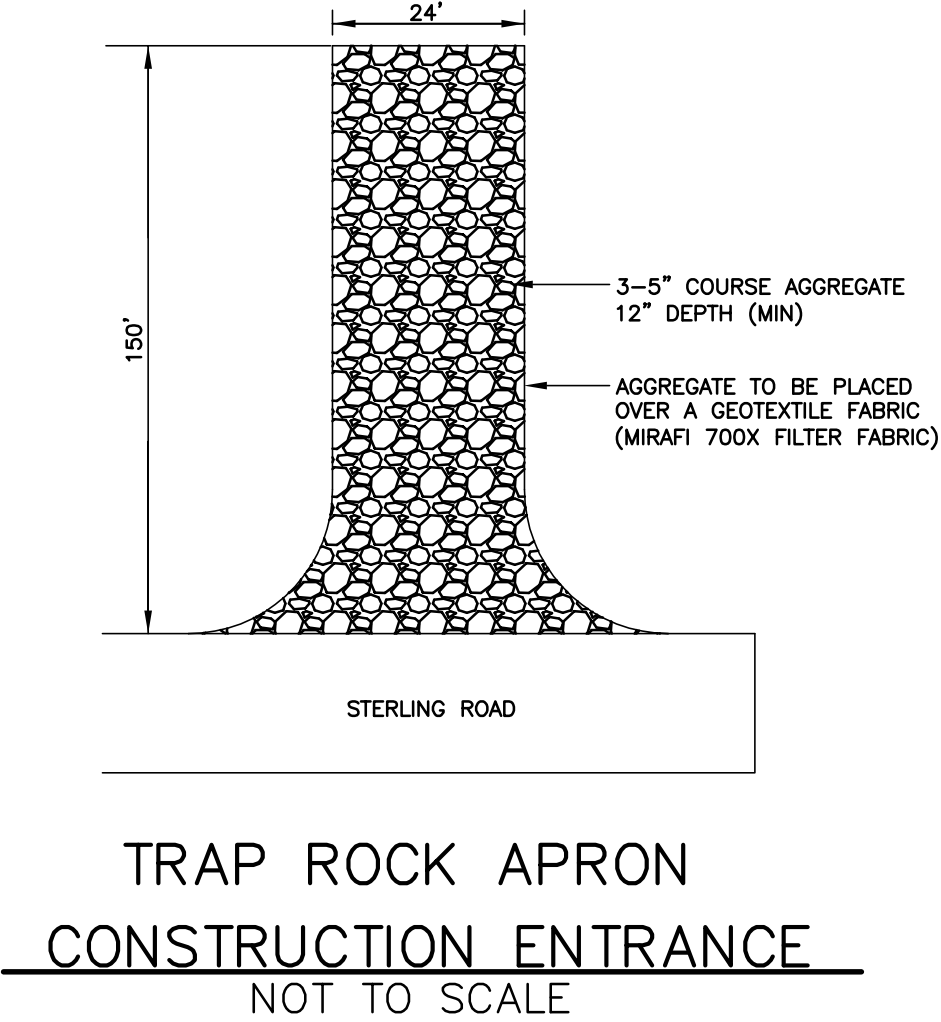
TOWN CLERK \_\_\_\_\_ DATE \_\_\_\_\_

APPROVED BY THE HOLLISTON ZONING BOARD OF APPEALS:

\_\_\_\_\_

DATE APPROVED: \_\_\_\_\_

DATE ENDORSED: \_\_\_\_\_



**EROSION CONTROL PLAN**

**SITE DEVELOPMENT PLAN OF LAND  
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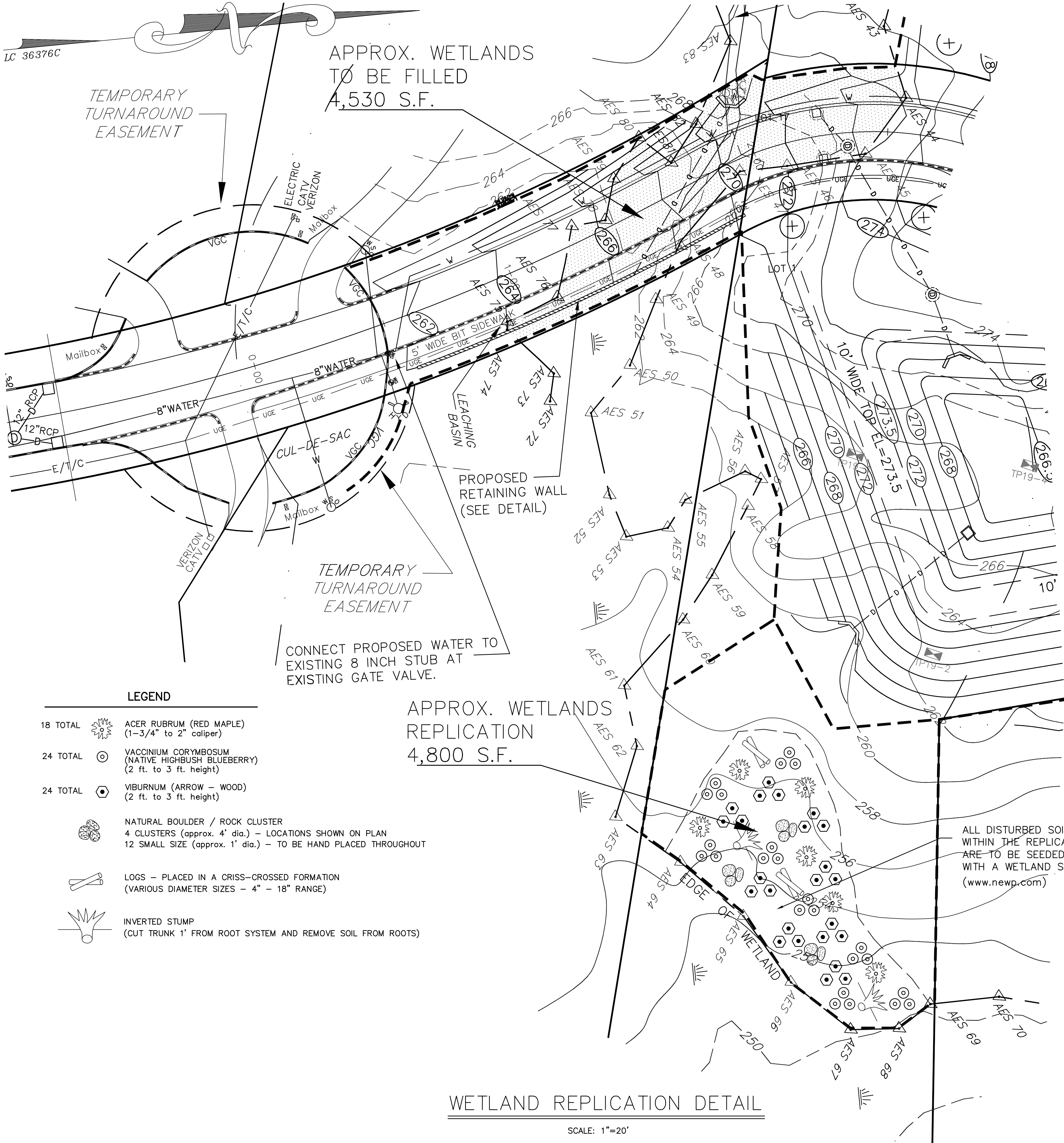
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DATE: FEB. 29, 2020  
SCALE: 1"=40'  
SHEET: 10 of 17  
PLAN #: 27,337

PREPARED FOR:  
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DATE

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CONSTRUCTION SPECIFICATIONS

1.1 STANDARD CONSTRUCTION PROCEDURES

Prior to commencement of work, the limit of the work area shall be clearly marked and siltation barriers shall be in place.

CLEARING

Clearing is confined to the minimum amount necessary for construction. When cutting and clearing trees, they shall be felled away from wetlands. All limbs and brush shall be chipped. In the resource areas, the dominant wetland plants shall be excavated, roots intact, balled and set aside in a protected area. The general clearing operation will consist of removing the trees, brush, rocks, etc. needed within the limits of construction. Various clearing methods will be employed depending on the tree size, contour of land and the ability of ground to support equipment. At no time shall any stumps, debris or other materials be disposed of in a resource area or buffer zone.

GRADING

Rock outcroppings, ridges, boulders and tree stumps will be removed from the work area and sharp topographical irregularities will be graded to ensure rapid and safe passage of work crews and equipment. During grading, effort shall be made not to alter existing drainage patterns.

DEWATERING

Pumping and dewatering the excavation areas shall be done in a manner which will not discharge any silt and sediment into a resource area. Discharges from a dewatering construction procedure will be filtered through a siltation basin constructed upland from the work site. The siltation basin area shall be a depression surrounded by a hay bale dike or silt fence. Overflow from the siltation basin shall be planned to be located over a thickly and naturally mulched upland area. All basins shall be located at least 100 feet upslope from any resource area.

1.2 CONSTRUCTION PROCEDURE FOR WETLAND FILLING

The proposed project involves filling of 4530 square feet of vegetated wetlands. The wetlands loss have been minimized by limiting the amount of fill in the area disturbed.

The limits of construction shall be clearly marked and siltation barriers in place prior to commencement of work. The area shall be cleared as described in Section 1.1.

Prior to removal of the organic soil, the proposed replication area shall be prepared. This will allow the organic soils to be placed directly into the replication area.

The area will be dredged, filled and embankments constructed until finish grade is achieved. The area shall be graded and slopes stabilized upon completion.

1.3 CONSTRUCTION WITHIN BUFFER ZONES

All construction within wetland buffer zones will incorporate all erosion and sediment controls deemed appropriate for the site. No construction will commence until erosion control barriers have been employed to protect siltation areas. Following construction, disturbed areas will be graded and seeded with a dense cover until such time as the natural vegetation of the area is re-established.

2.1 TECHNICAL SPECIFICATIONS FOR WETLAND REPLICATION

In an attempt to preserve the functions of a naturally occurring wetland, the replication area should mimic the natural wetlands physical characteristics as closely as possible. Before the vegetated wetland is disturbed, the replication area will be clearly marked to show the boundaries of the work area and siltation barriers will be placed along the limits. Prior to excavation, the dominant wetland plants from the disturbed area will be excavated, roots intact, balled and set aside for replanting in the replication area. The dominant plants to be transplanted shall be decided by a qualified wetland scientist prior to commencement of work in the resource area.

The replication area will be prepared by excavating the topsoil until an elevation of approximately 12 inches below the adjacent wetland and/or proposed elevations. The existing wetlands have approximately 8 to 10 inches of organic soil throughout. The proposal is to mimic this soil structure as closely as possible. The subgrade of the replication area will be excavated in some instances to a depth of below the existing topsoil and subsoil. In an effort to mimic the existing soil stratum, organic soil from the natural wetland area shall be placed throughout the replication area. Thence, the area will be covered with the organic soil from the natural wetland until finish grades are established. If additional organic soil is necessary, it shall comply with Mass. D.P.W. Spec. M1.06.0 peat borrow. When the organic soil is in place, transplanting will begin. Revegetation can be supplemented by purchasing plant species.

Under supervision of a qualified wetland scientist, the dominant plants selected from the disturbed area are then planted in the replication area. Upon completion, the wetland scientist will determine what additional plantings are necessary to complete the replication area. Reed Canary Grass and Perennial Rye Grass will be planted along the embankment to help stop erosion.

The plant stocks chosen should be of good quality. One or two year old deciduous seedlings properly handled may be selected from the disturbed wetland. Fertilizer with a low nitrogen content will be applied with each planting. The fertilizer can be thoroughly worked into the soil when planting or applied as a side dressing after planting. The plants should be planted at the approximate depth they were found at in nature or in a nursery. The roots should be uncrowded and the soil should be packed firmly around them. The shrubs should be mulched to a depth of 4 inches with wood chips, leaf litter or peat moss. Lime should not be applied to any wetland planting areas to allow acid soil conditions to develop.

2.2 WETLAND REPLICATION MONITORING/MAINTENANCE PLAN

The wetland replication area is to be inspected to assess the overall condition of the wetland in terms of general restoration to estimate the percent vegetative cover. The critical value in terms of vegetation as required by the State Performance Standards is that "...at least 75 percent of the surface of the replacement area be re-established with indigenous wetland plant species within two growing seasons following disturbance..." (310 CMR 10.55 (4)(b)).

Follow up inspections shall occur after the first and second growing season, normally 3 to 6 months and 12 to 15 months after plantings. Revegetation shall be considered successful if perennial vegetation attains 75 percent or more of each square yard of replication area, based on representative random sampling in the field. If vegetative cover is less, the judgment of the professional conducting the inspection shall be used to determine the need for replanting or fertilizing based on site conditions and these actions shall be undertaken.

The inspections shall be done in report form and submitted to the Conservation Commission and Department of Environmental Protection, Wetlands Division within two weeks following the field inspection.

3.1 EROSION AND SEDIMENTATION CONTROL

To control erosion and sedimentation during and after construction, it is advised to disturb only the areas needed for construction, remove only those trees and grasses that must be removed for construction and protect the remaining to preserve their aesthetic and erosion control values.

Backfill, compact and seed disturbed areas as soon as possible after they are opened.

Grasses used for slope stabilization are to be perennial, deep rooted and fast growing variety that will produce a dense uniform cover and can withstand small amounts of sedimentation. Seed mixture to be used is Crown Vetch 5 pounds and Perennial Rye Grass 25 pounds. All loamed (minimum depth of four inches) and newly seeded slopes shall be treated with hay mulch for stabilization.

The erosion control barriers must be periodically checked and replaced when clogging is such that they are no longer efficient in their purpose.

WETLAND REPLICATION PLAN

SITE DEVELOPMENT PLAN OF LAND "GEOFFREY PARK" A 40B Comprehensive Permit Project HOLLISTON, MASSACHUSETTS

PREPARED FOR: INDIAN RIDGE REALTY TRUST 223 COURTLAND STREET HOLLISTON, MA 01746

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JOB No. 16,181

DATE: FEB. 29, 2020

SCALE: 1"=40'

SHEET: 12 of 17

PLAN #: 27,337



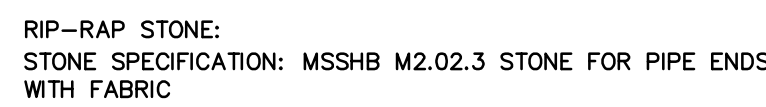


DEEP HOLE — 19-5		
HORIZ DEPTH	DATE: 9/16/19 SOIL DESCRIPTION	ELEV.
0"	A SANDY LOAM 10YR3/2	271.5
6"	Bw SANDY LOAM 10YR5/6	271.0
24"		269.5
	C1 LOAMY SAND 2.5Y6/4 MED-COARSE 20% GRAVEL Cobb's-Bldr	
64"	Large Boulders	266.2
None	GROUNDWATER OBSERVED	266.2
None	SOIL MOTTLING GROUNDWATER MONITORED ESTIMATED SEASONAL HIGH GROUNDWATER	

N.T.S.

DATE ENDORSED:

DATE \_\_\_\_\_



NOT TO SCALE

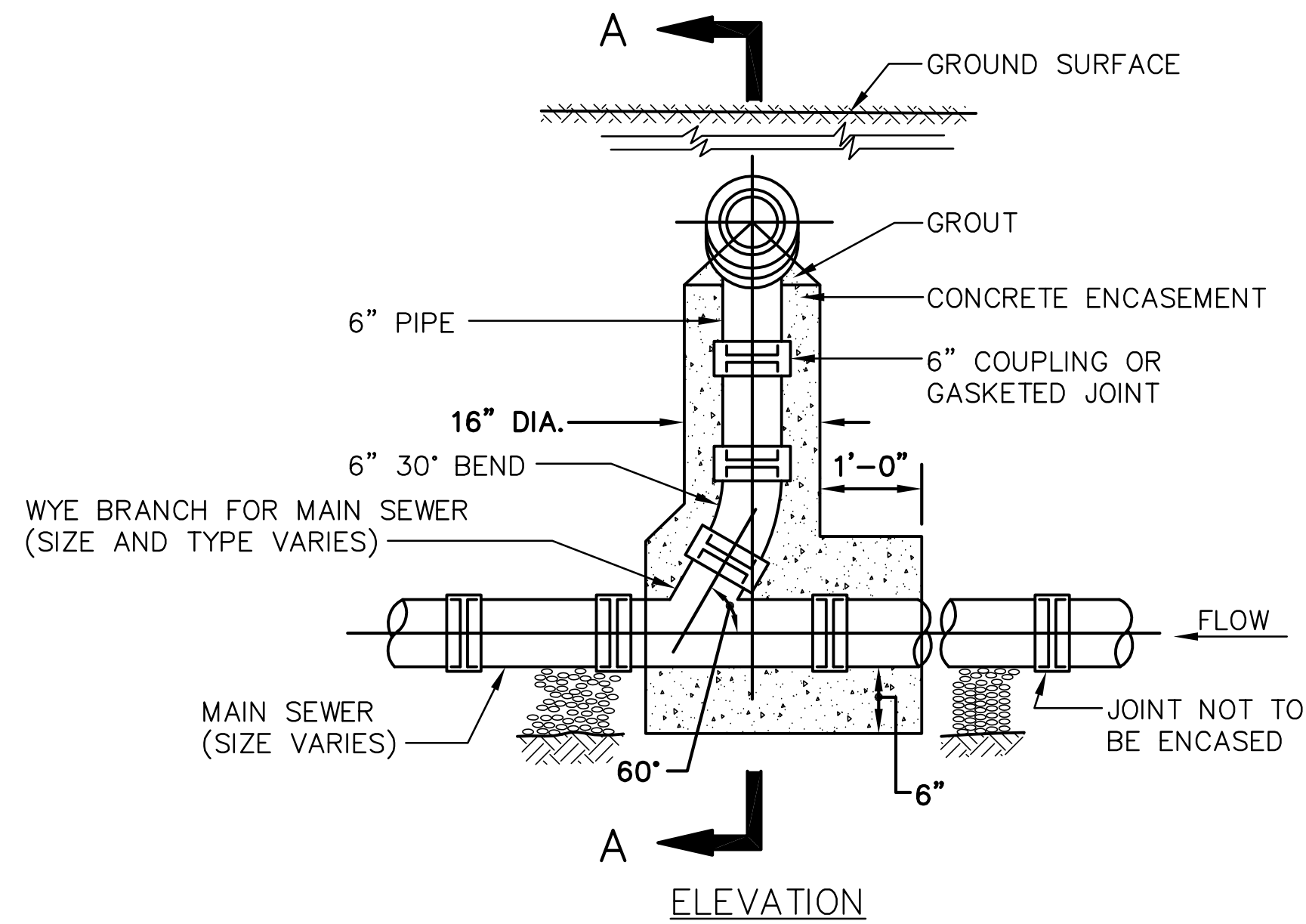


NOTE: IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY LOCATIONS AND ELEVATIONS OF EXISTING UTILITIES PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION.  
DIGSAFE IS TO BE NOTIFIED 72 WORKING HOURS IN ADVANCE OF CONSTRUCTION.  
DIGSAFE 1-888-344-7233

## DETAILS

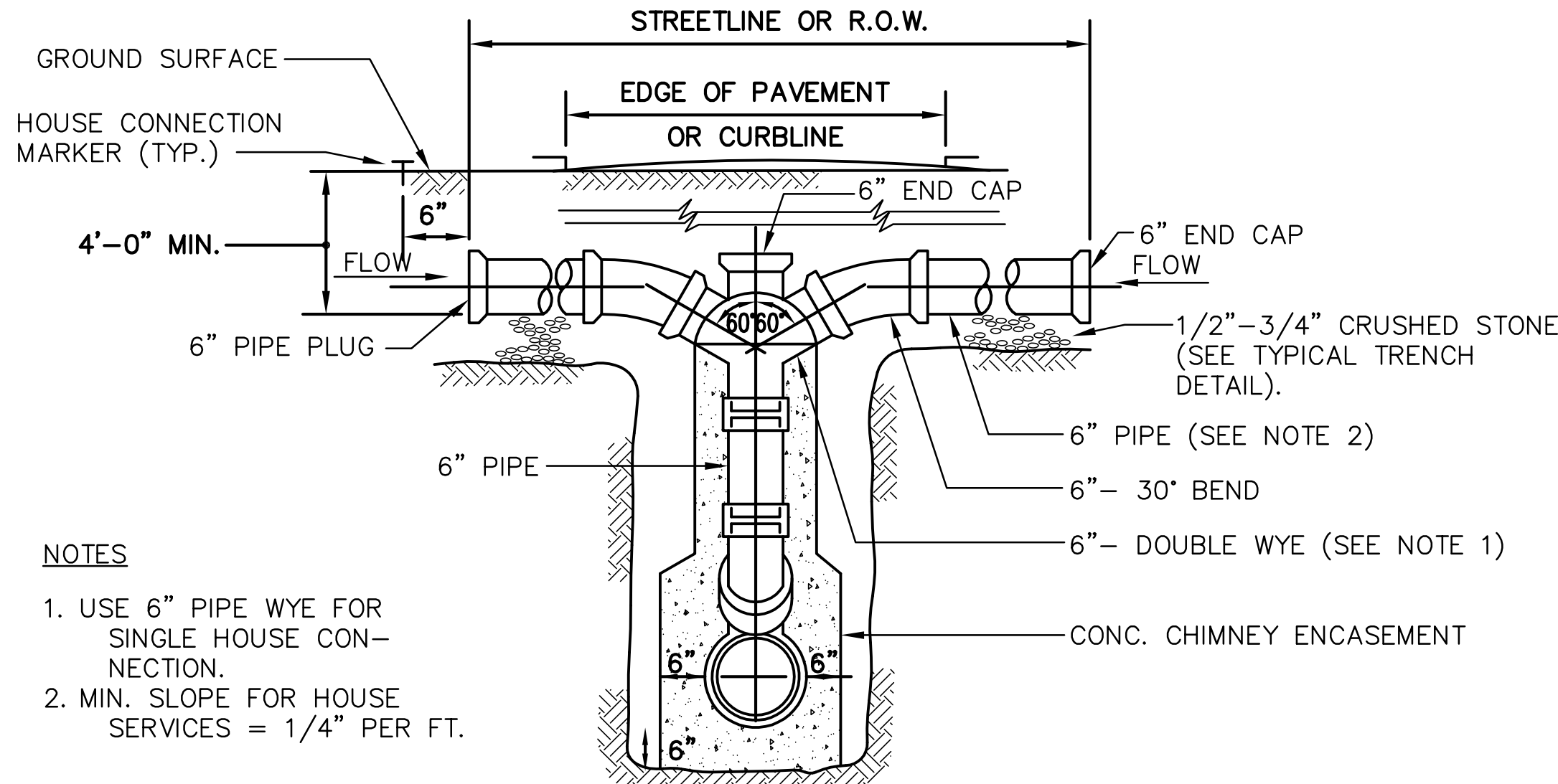
<p><b>SITE DEVELOPMENT PLAN OF LAND</b>  <b>"GEOFFREY PARK"</b>  <b>A 40B Comprehensive Permit Project</b>  <b>HOLLISTON, MASSACHUSETTS</b></p> <p>PREPARED FOR:  <b>INDIAN RIDGE REALTY TRUST</b>  <b>223 COURTLAND STREET</b>  <b>HOLLISTON, MA 01746</b></p>					
<p><b>GLM</b> Engineering Consultants, Inc.          19 EXCHANGE STREET          HOLLISTON, MA 01746          P: 508-429-1100          F: 508-429-7160  <a href="http://www.GLMengineering.com">www.GLMengineering.com</a></p>					
JOB No.		16,181			
DATE:		FEB. 29, 2020			
SCALE:		1"=40'			
SHEET:		13 of 17			
PLAN #:		27,337			





TYPICAL HOUSE SERVICE CONNECTION & CHIMNEY DETAIL

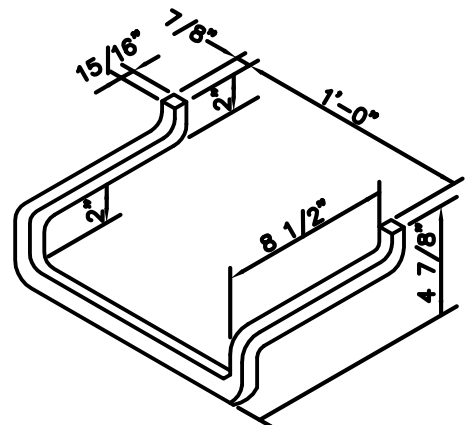
(FOR MAIN SEWER OVER 8'-0" DEEP)  
NOT TO SCALE



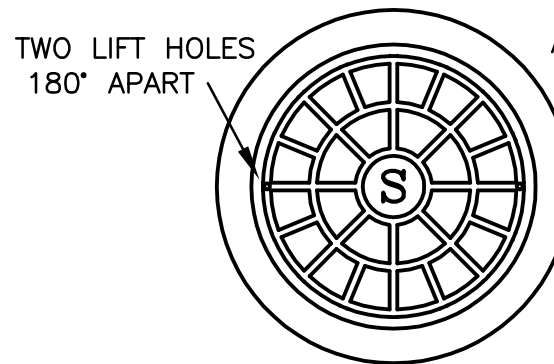
NOTES

1. USE 6" PIPE WYE FOR SINGLE HOUSE CONNECTION.
2. MIN. SLOPE FOR HOUSE SERVICES = 1/4" PER FT.

SECTION A-A



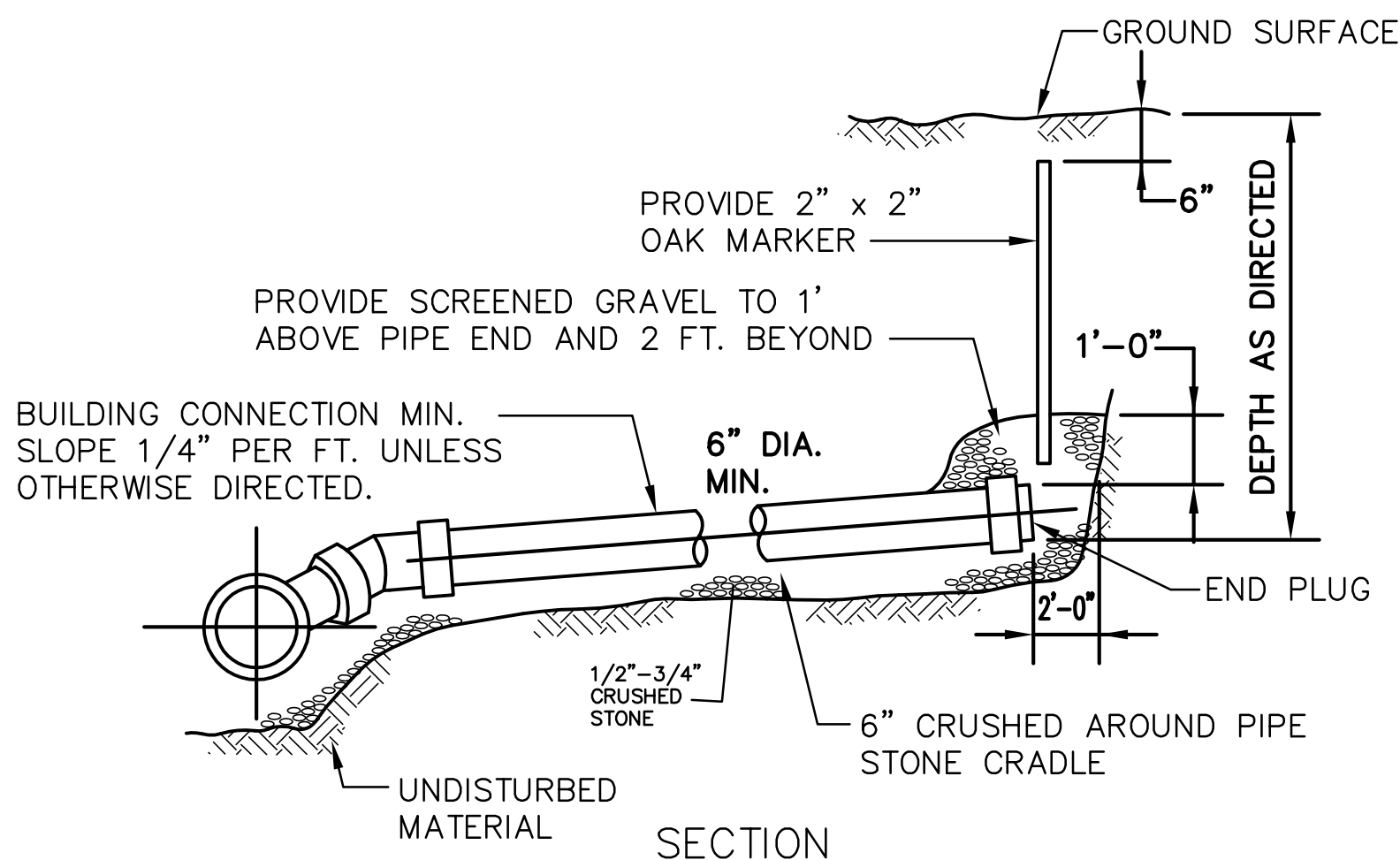
MANHOLE STEP DETAIL  
NOT TO SCALE



AS MANUFACTURED BY:  
LE BARON FONDRIY CO.  
BROCKTON, MA  
No. LT 101  
MECHANICS IRON FOUNDRY CO.  
BOSTON, MA  
No. K 6004  
C.M. WHITE IRON WORKS  
NORTH READING, MA  
No. R 258

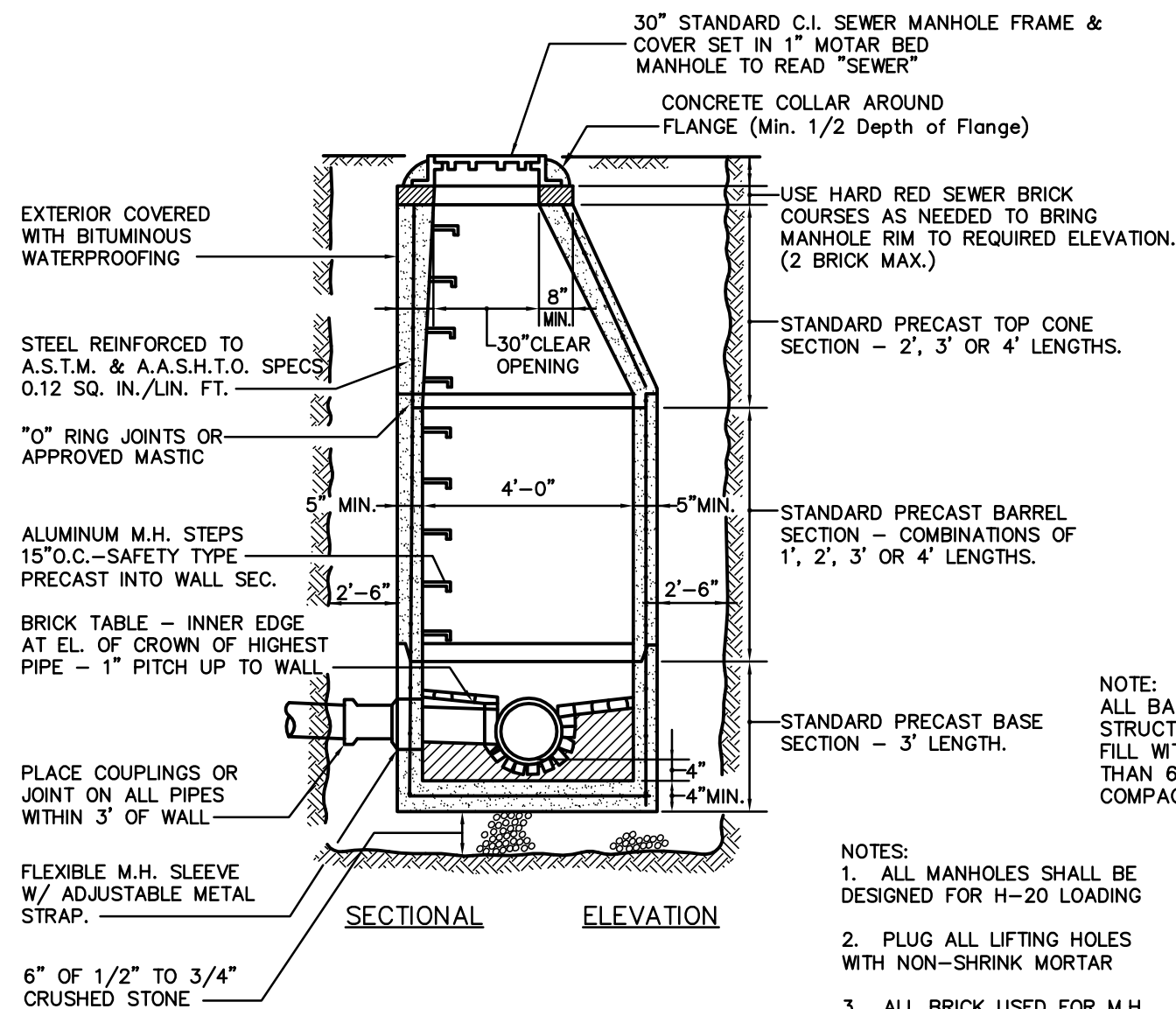
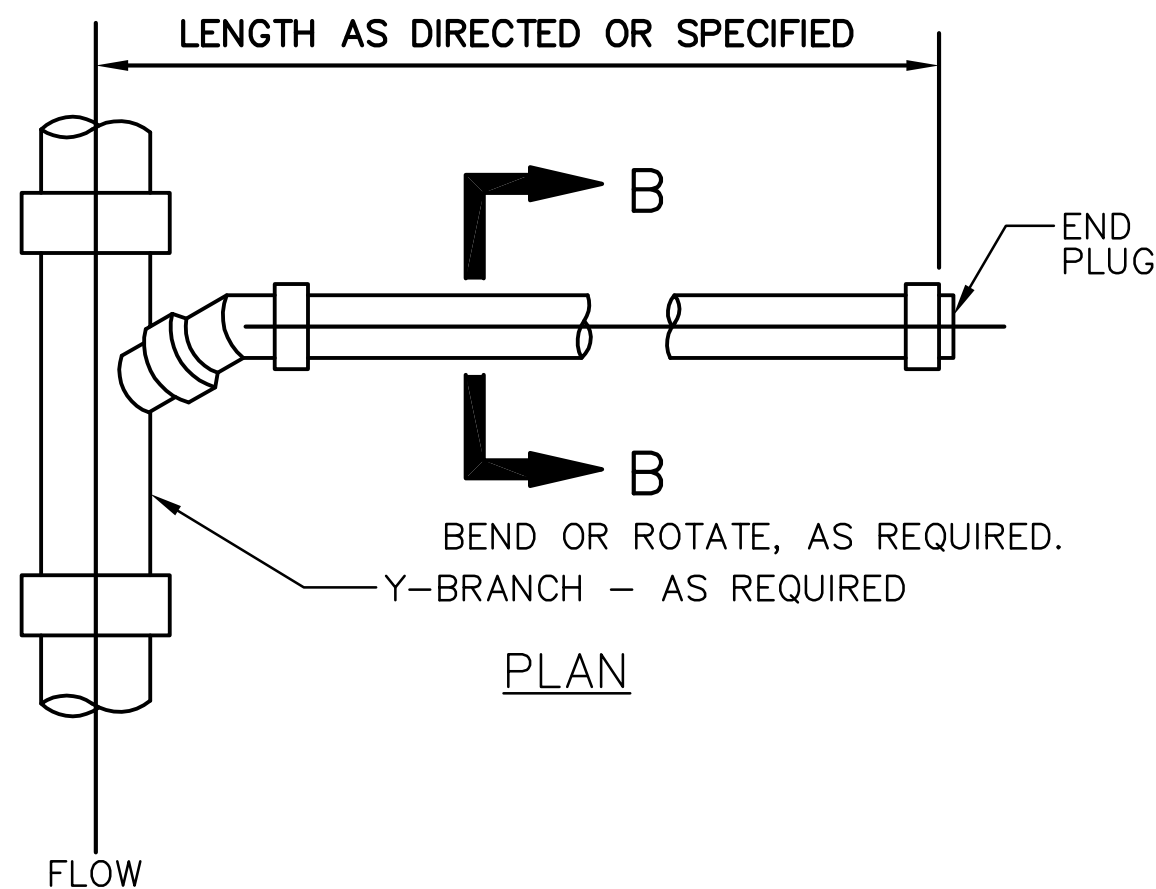
NOTE:  
FOR WATERTIGHT APPLICATIONS  
USE THE FOLLOWING CASTINGS:  
LE BARON FOUNDRY CO.  
WATERTIGHT M.H. FRAME & COVER  
No. LBW268-2  
OR  
LE BARON FOUNDRY CO.  
BOLTED & GASKETED FRAME & COVER  
No. LBB268-2  
OR APPROVED EQUAL

CAST IRON  
MANHOLE FRAME AND COVER  
MIN. WEIGHT=450# PER SET



TYPICAL BUILDING CONNECTION

NOT TO SCALE



TYPICAL SEWER MANHOLE DETAIL

NOT TO SCALE

APPROVED BY THE  
HOLLISTON ZONING BOARD  
OF APPEALS:

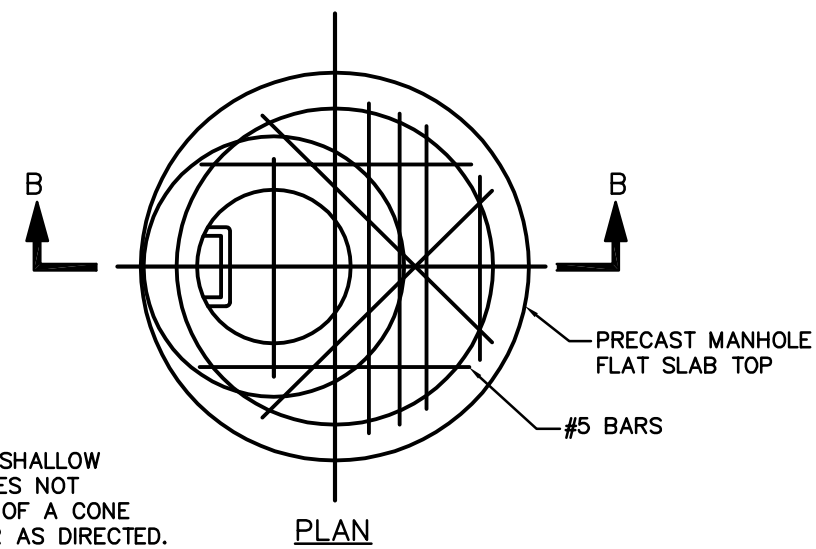
DATE APPROVED: \_\_\_\_\_

DATE ENDORSED: \_\_\_\_\_

I, TOWN CLERK OF THE TOWN OF HOLLISTON  
RECEIVED & RECORDED FROM THE ZONING  
BOARD OF APPEALS, APPROVAL OF THIS PLAN  
AND NO APPEAL HAS BEEN TAKEN FOR TWENTY  
DAYS NEXT AFTER RECEIPT AND RECORDING OF  
SAME.

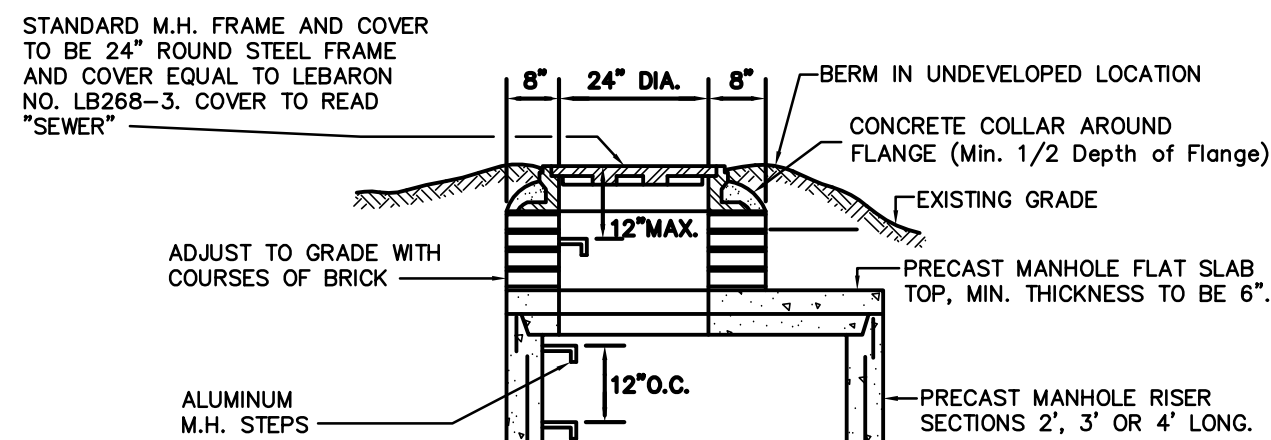
TOWN CLERK

DATE



NOTE

FOR USE WHERE SHALLOW  
INSTALLATION DOES NOT  
PERMIT THE USE OF A CONE  
TYPE SECTION OR AS DIRECTED.



SECTION B-B

FLAT TOP SECTION

NOT TO SCALE

SITE DEVELOPMENT PLAN OF LAND  
"GEOFFREY PARK"  
A 40B Comprehensive Permit Project  
HOLLISTON, MASSACHUSETTS

PREPARED FOR:

INDIAN RIDGE REALTY TRUST  
223 COURTLAND STREET  
HOLLISTON, MA 01746

**GLM** Engineering  
Consultants, Inc.  
19 EXCHANGE STREET  
HOLLISTON, MA 01746  
P: 508-429-1100  
F: 508-429-7160  
www.GLMengineering.com

JOB No. 16,181

DATE: FEB. 29, 2020

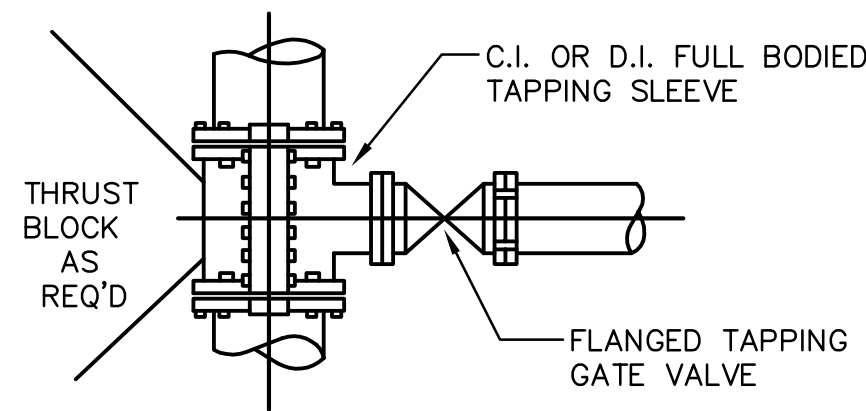
SCALE: 1"=40'

SHEET: 14 of 17

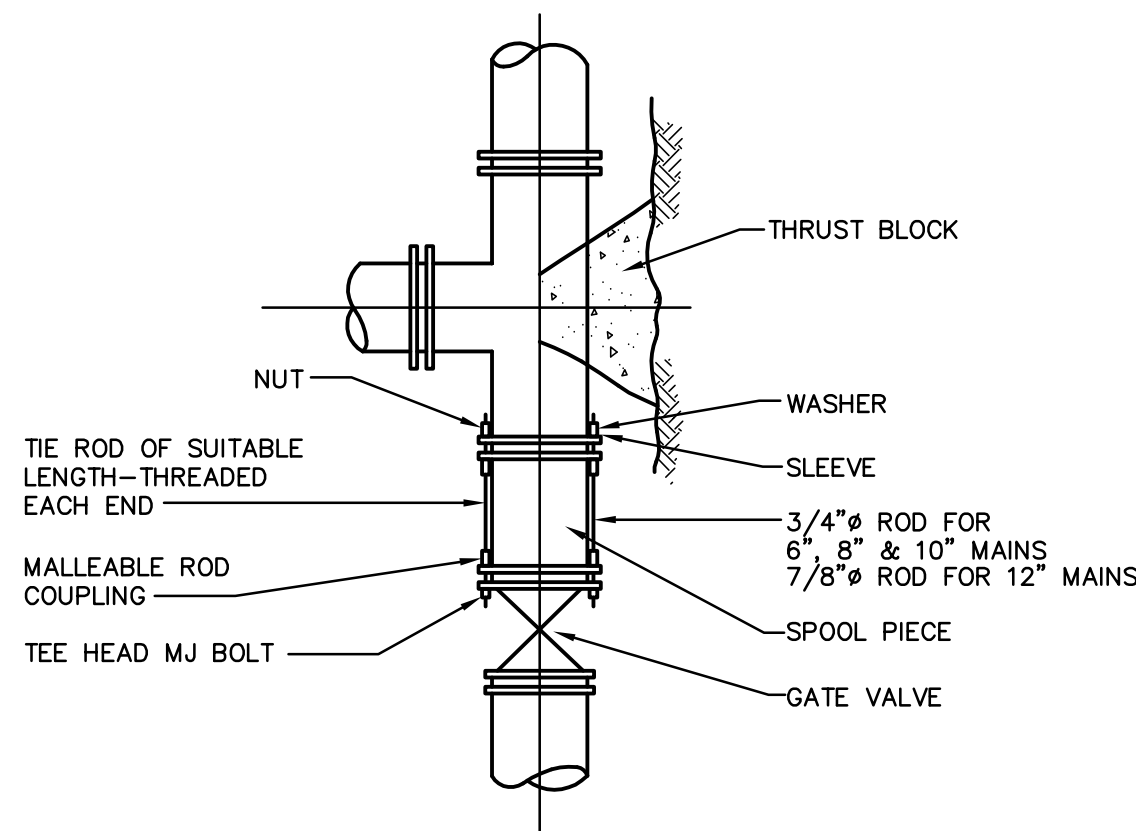
PLAN #: 27,337

DETAILS

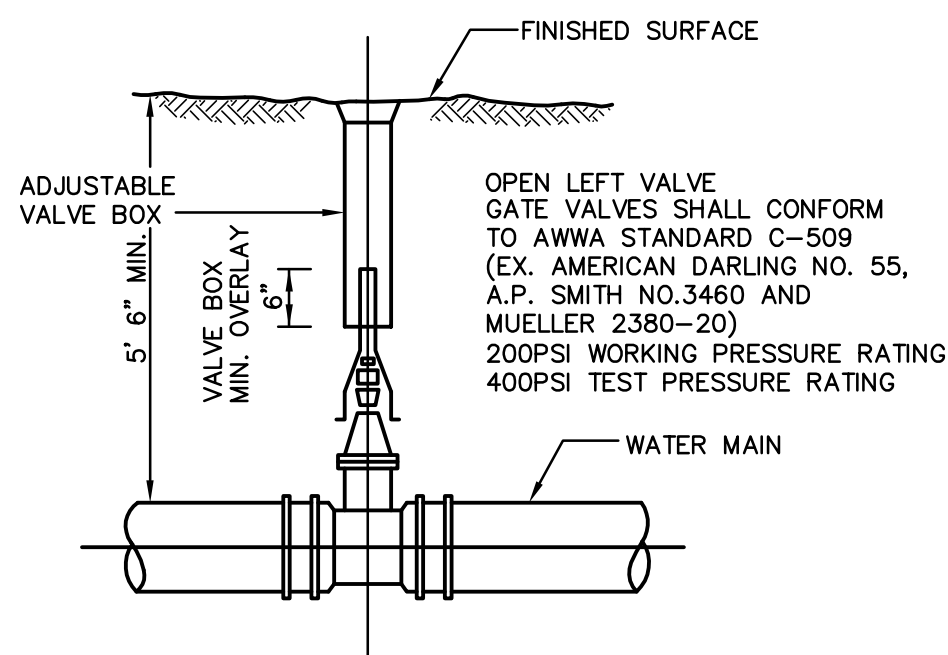




TAPPING SLEEVE AND VALVE DETAIL  
NOT TO SCALE



TYPICAL TIED MECHANICAL JOINT VALVE CONNECTION DETAILS  
NOT TO SCALE

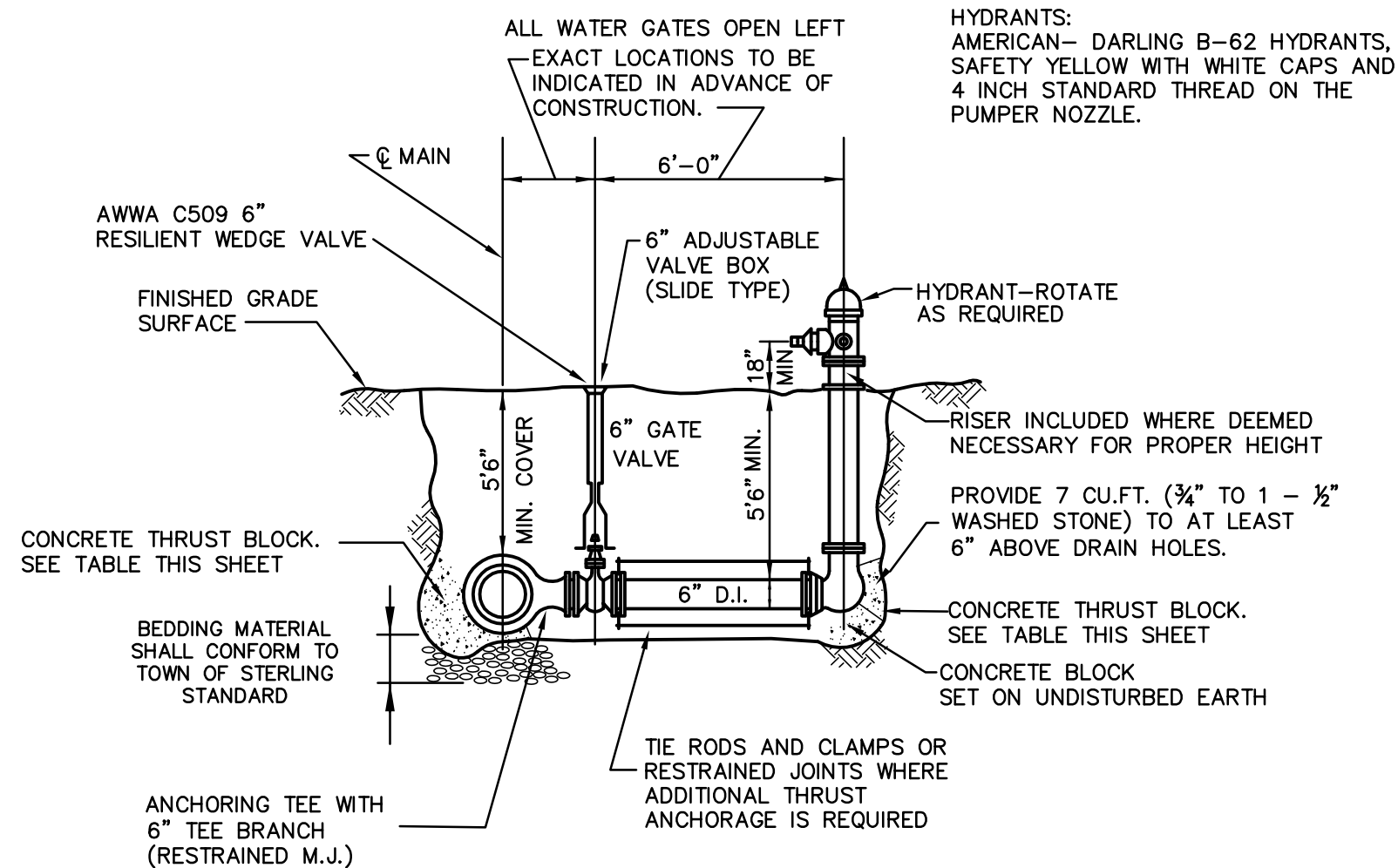


TYPICAL GATE VALVE  
NOT TO SCALE

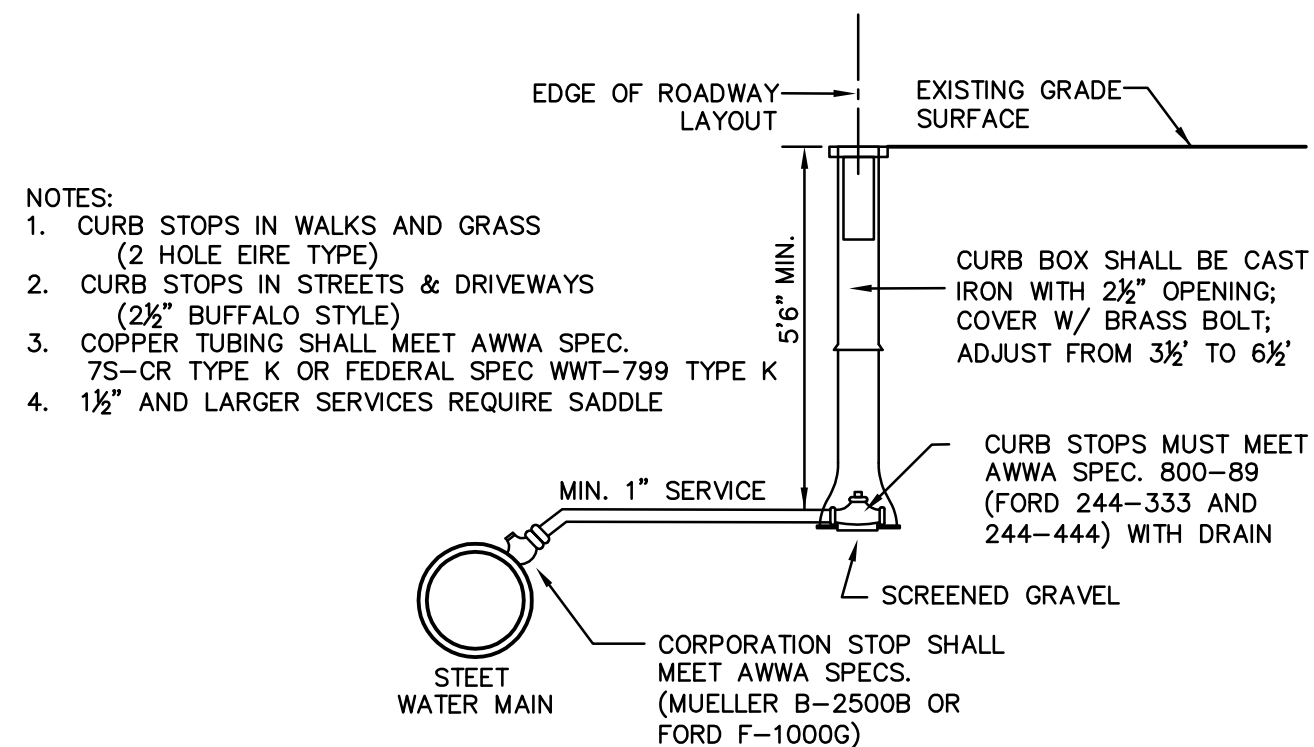
NOTE: CONCRETE FOR THRUST BLOCKS SHALL BE NO LONGER THAN THE RATIO OF 2 1/2 : 5 1/2 AND SHALL HAVE A MINIMUM COMPRESSION STRENGTH OF 2000 PSI (SO THAT FLANGES AND BOLTS ARE ACCESSIBLE.)

BEARING AREAS OF THRUST BLOCKS (BEARING AREA IN SQUARE FT.)				
PIPE SIZE INCHES	1/4 BEND	1/8 BEND	1/16 BEND OR LESS	PLUG TEES
6 AND 8	8	8		8
10 AND 12	22	13	8	16

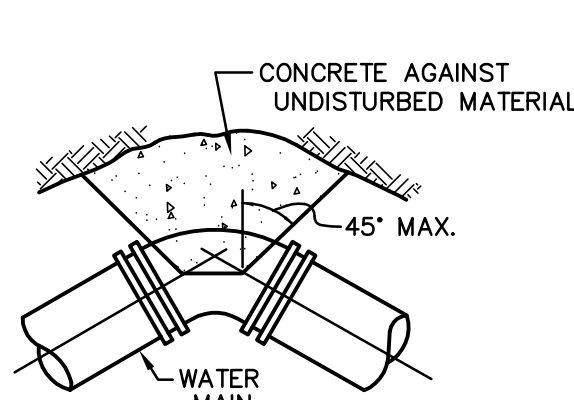
TYPICAL THRUST BLOCK DETAIL  
NOT TO SCALE



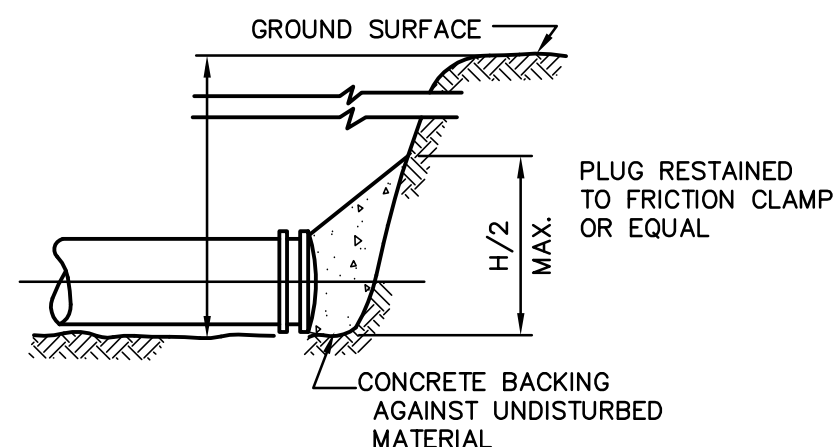
TYPICAL HYDRANT ASSEMBLY DETAIL  
NOT TO SCALE



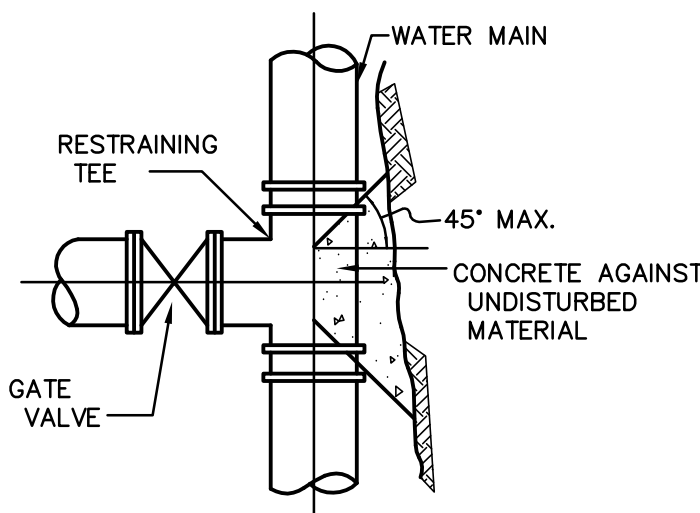
TYPICAL NEW WATER SERVICE CONNECTION DETAIL  
NOT TO SCALE



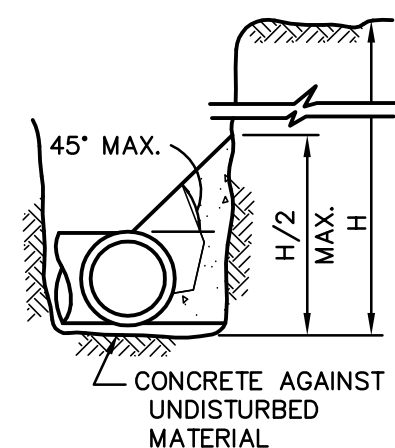
TYPICAL BEND



TYPICAL PLUG

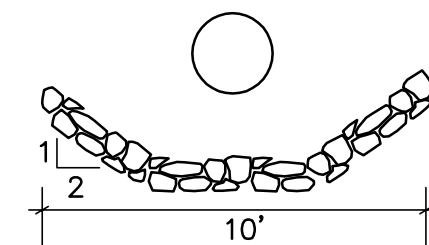


TYPICAL TEE

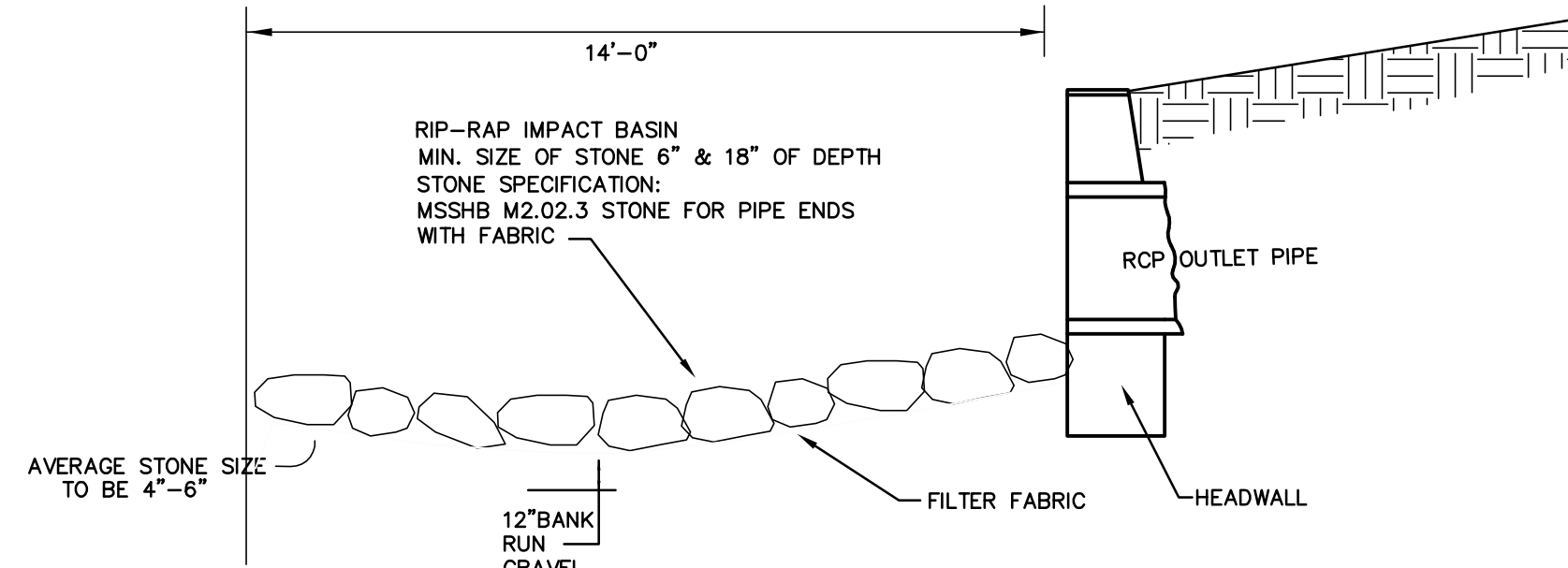


TYPICAL SECTION

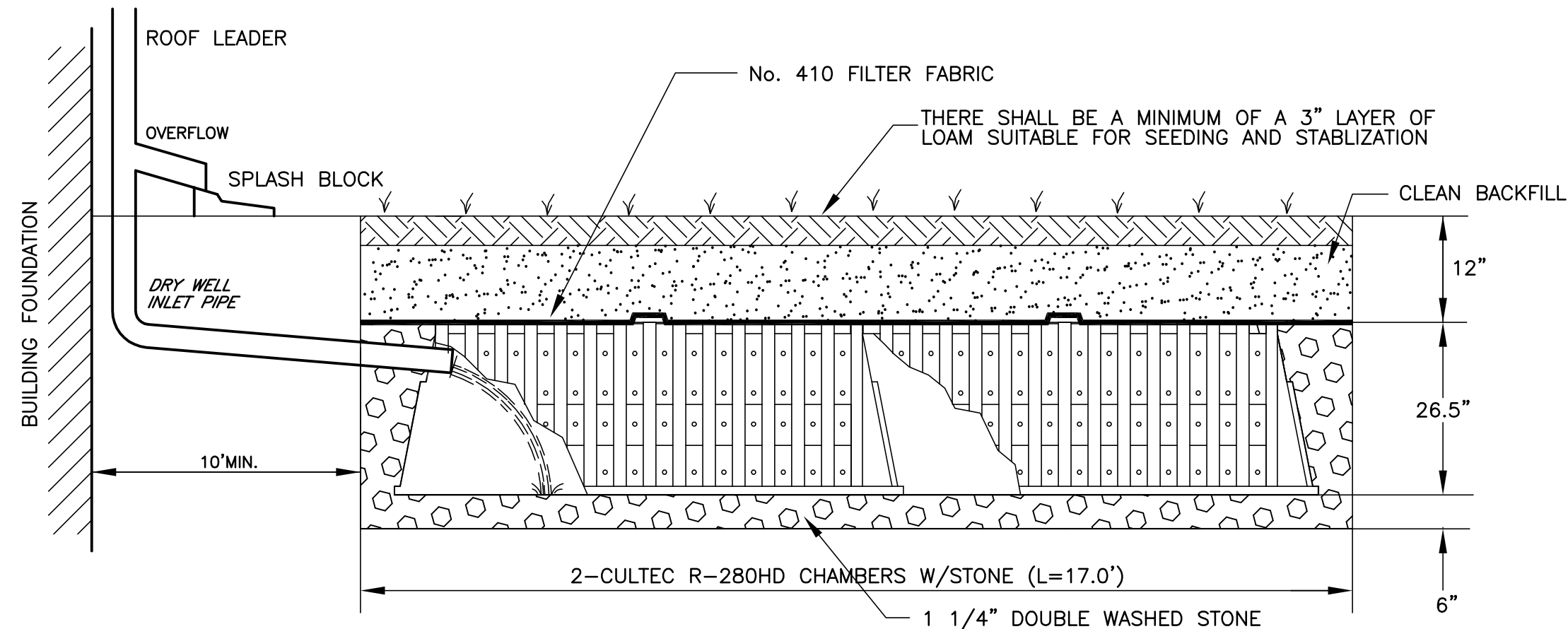
NOTES:  
1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE TOWN OF HOLLISTON CONSTRUCTION STANDARDS AND SPECIFICATIONS.  
2. ALL WATER DETAILS MANUFACTURERS & CONSTRUCTION STANDARDS SHALL CONFORM TO THE TOWN OF HOLLISTON STANDARDS,



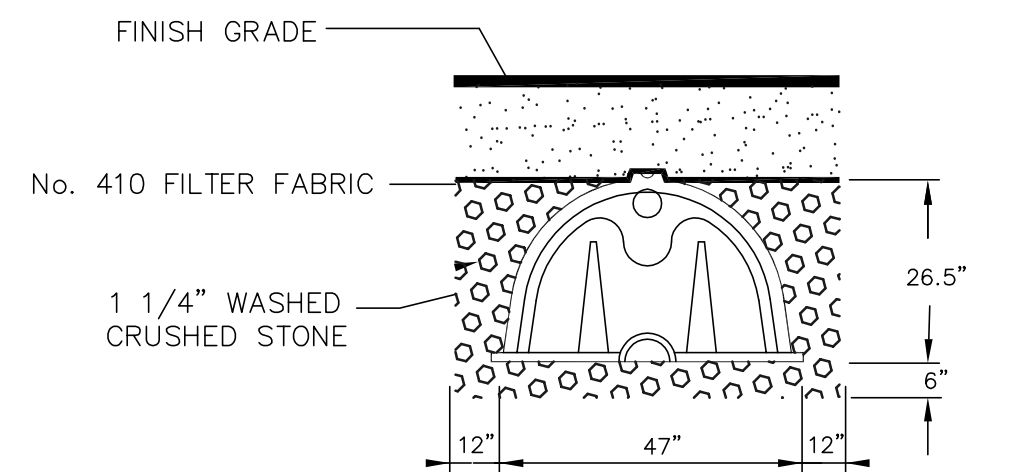
SECTION A



RIP-RAP DETAIL HEADWALLS  
NOT TO SCALE



LEACHING CHAMBER STORAGE REQUIRED:  
PROPOSED DWELLING IMPERVIOUS AREA = 1,700 sq.ft.  
STORAGE CAPACITY REQUIRED:  
1.0 inch rainfall x 1,700 s.f. = 141 cu. ft.  
PROVIDED LEACHING CAPACITY:  
2-CULTEC R-280HD CHAMBERS W/STONE: 163.6 cu.ft.  
PROVIDE SYSTEMS AS SHOWN ON PLAN.  
ALL DOWNSPOUTS TO BE DIRECTED TO CULTREC INFILTRATION SYSTEM.  
\*INSTALL LEACHING SYSTEMS ON LOTS 2, 3, 4, 5, 6, 9, 10 & 13 AS SHOWN ON THE SITE PLAN.



2-CULTEC CONTRACTOR C-100HD UNITS PER HOUSE

RESIDENTIAL ROOF RUNOFF CULTREC DRY WELL  
CULTREC CONTACTOR RECHARGER R-280HD

N.T.S.



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DETAILS

APPROVED BY THE  
HOLLISTON ZONING BOARD  
OF APPEALS:

DATE APPROVED: \_\_\_\_\_  
DATE ENDORSED: \_\_\_\_\_

I, TOWN CLERK OF THE TOWN OF HOLLISTON  
RECEIVED & RECORDED FROM THE ZONING  
BOARD OF APPEALS, APPROVAL OF THIS PLAN  
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DAYS NEXT AFTER RECEIPT AND RECORDING OF  
SAME.

TOWN CLERK \_\_\_\_\_ DATE \_\_\_\_\_

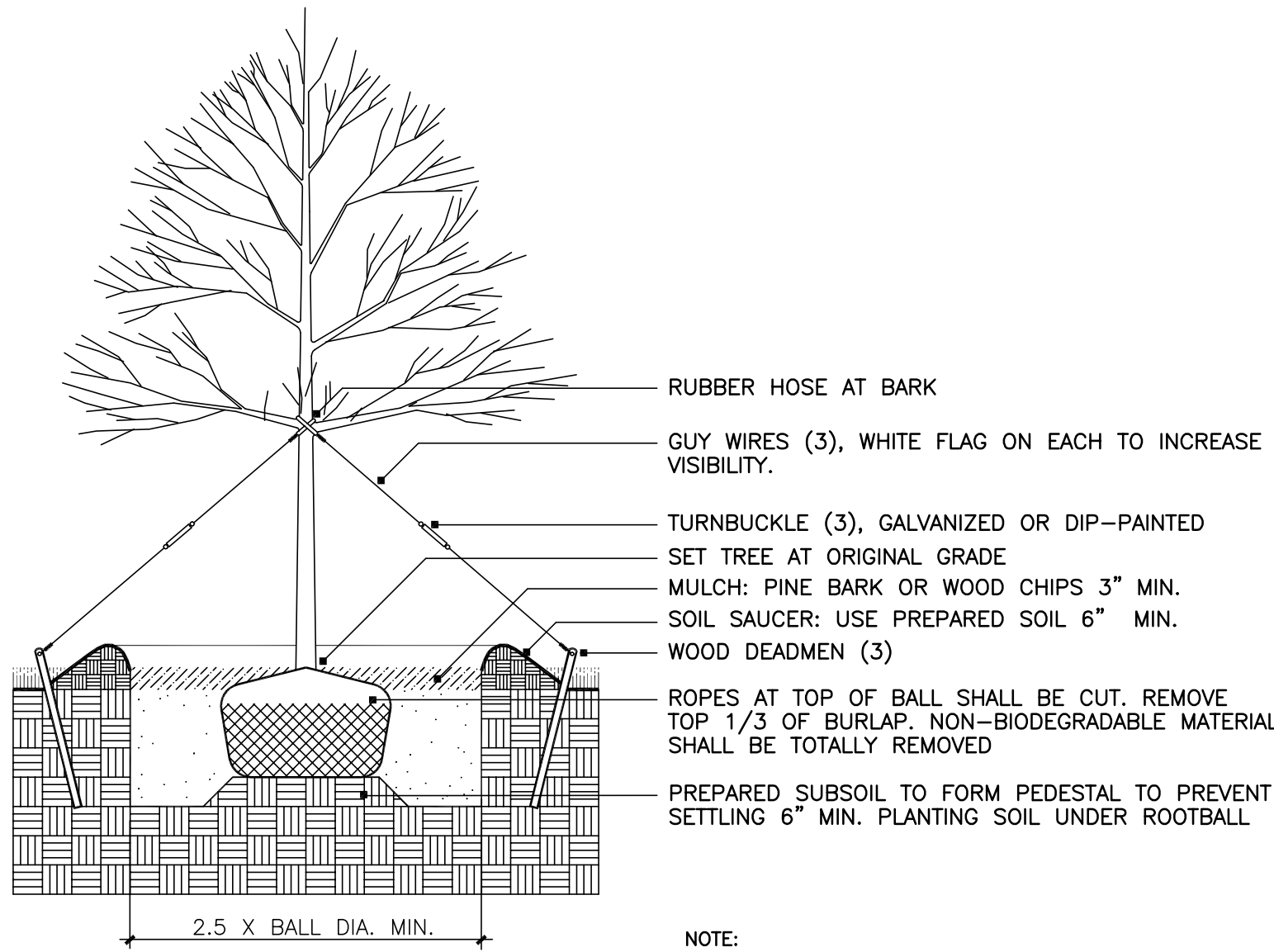
SITE DEVELOPMENT PLAN OF LAND  
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A 40B Comprehensive Permit Project  
HOLLISTON, MASSACHUSETTS

PREPARED FOR:  
INDIAN RIDGE REALTY TRUST  
223 COURTLAND STREET  
HOLLISTON, MA 01746

GLM Engineering  
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www.GLMengineering.com

JOB No. 16,181  
DATE: FEB. 29, 2020  
SCALE: 1"=40'  
SHEET: 15 of 17  
PLAN #: 27,337

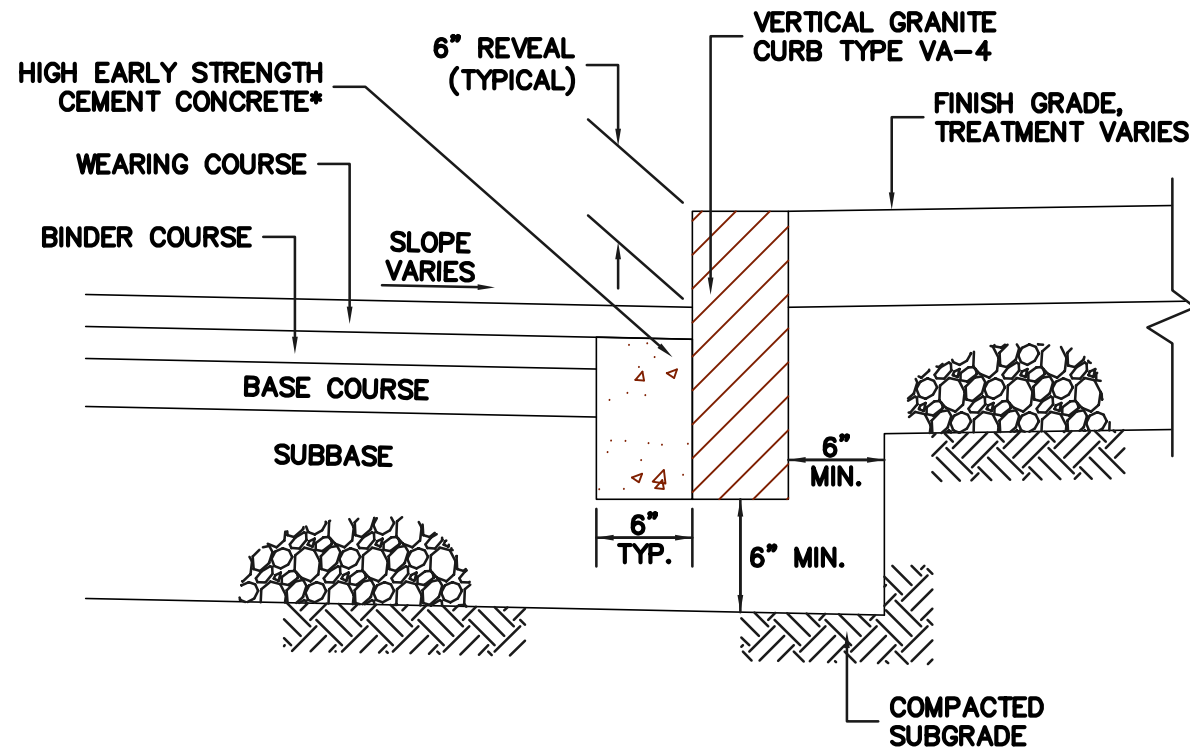




- NOTE:
1. STREET TREES SHLL BE PLANTED ON BOTH SIDES OF THE STREET AT 50 FOOT INTERVALS.
  2. TREES SHALL BE MIN. 8' HEIGHT.
  3. TREE PLANTING SHALL CONFORM TO TOWN OF HOLLISTON RULES AND REGULATIONS SECTION 5.5.5.3.

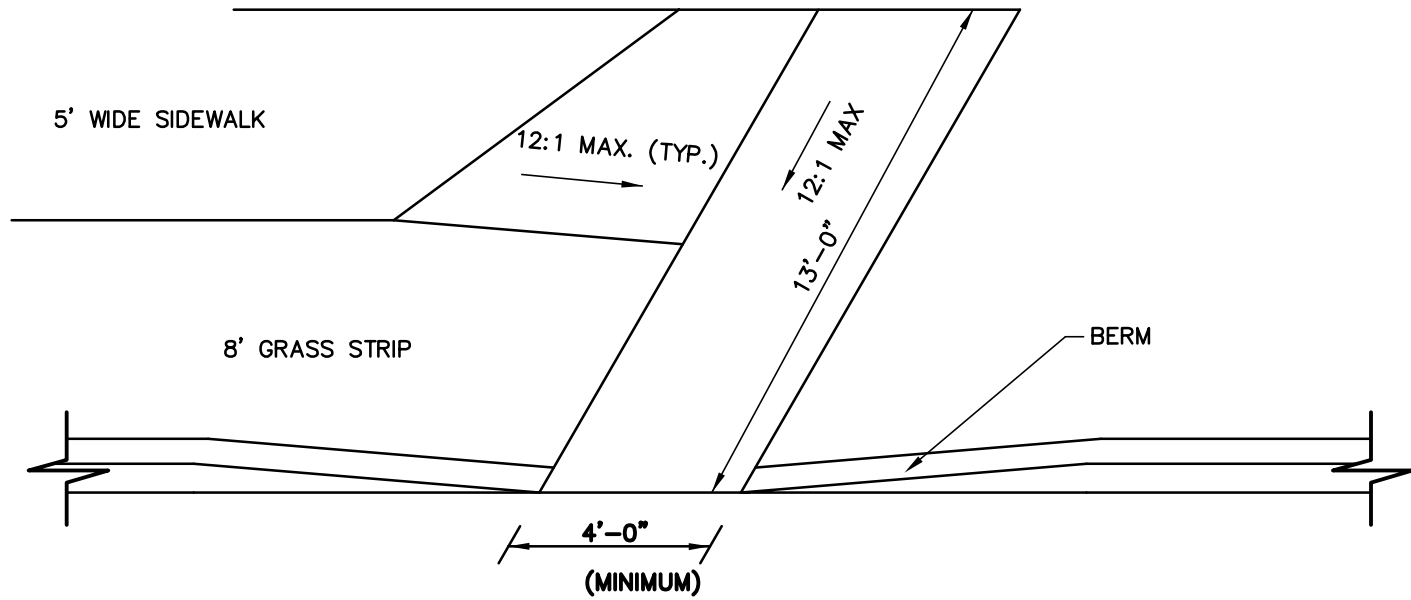
TREE PLANTING DETAIL

NOT TO SCALE



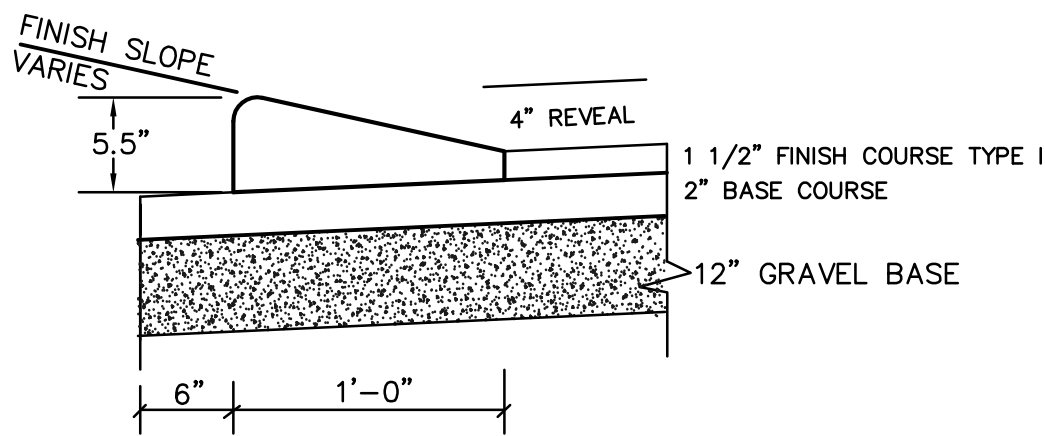
GRANITE CURB DETAIL

NOT TO SCALE



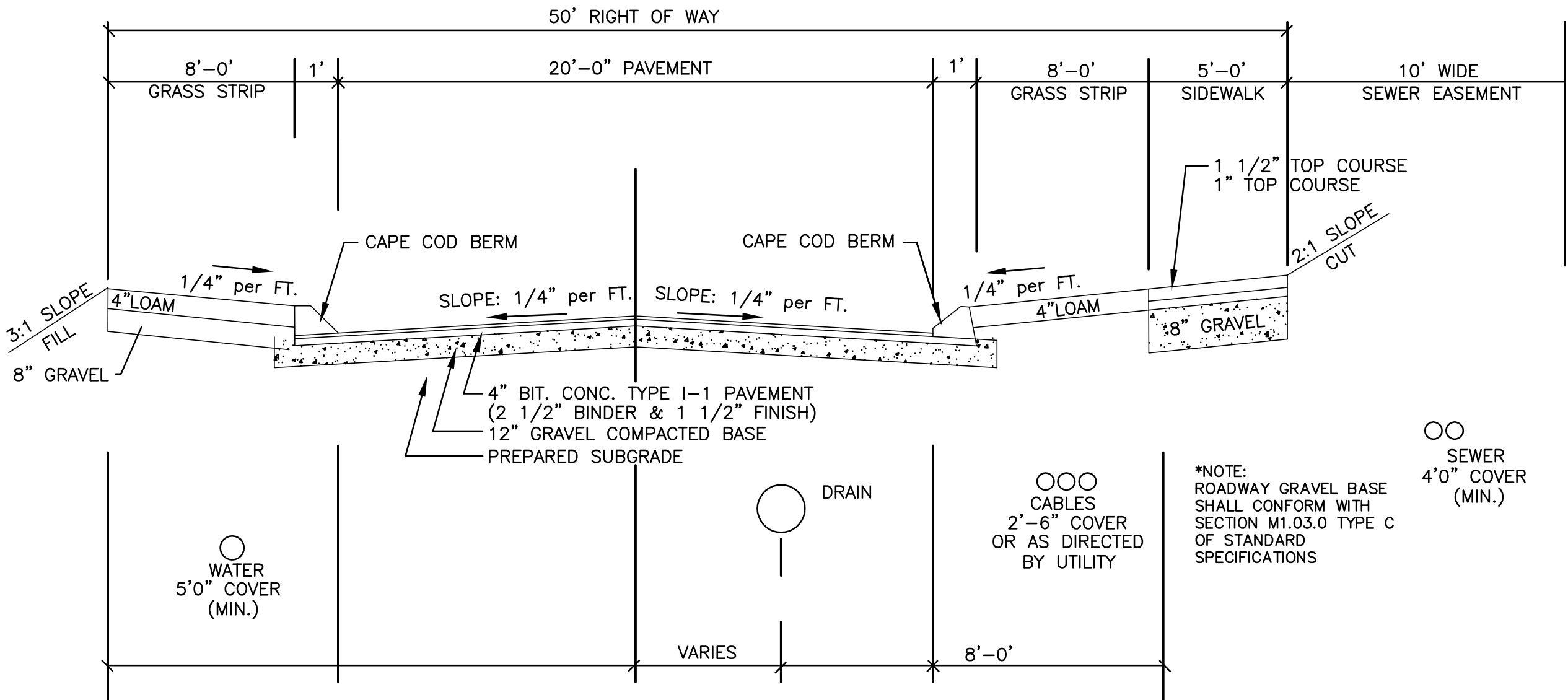
HANDICAP SIDEWALK RAMP

NOT TO SCALE



CAPE COD BERM DETAIL

NOT TO SCALE



TYPICAL RIGHT OF WAY CROSS SECTION

NOT TO SCALE

- NOTES:
1. ALL WORK SHALL CONFORM WITH THE TOWN OF HOLLISTON CONSTRUCTION OF ROADWAYS STANDARDS AND SPECIFICATIONS.



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APPROVED BY THE  
HOLLISTON ZONING BOARD  
OF APPEALS:

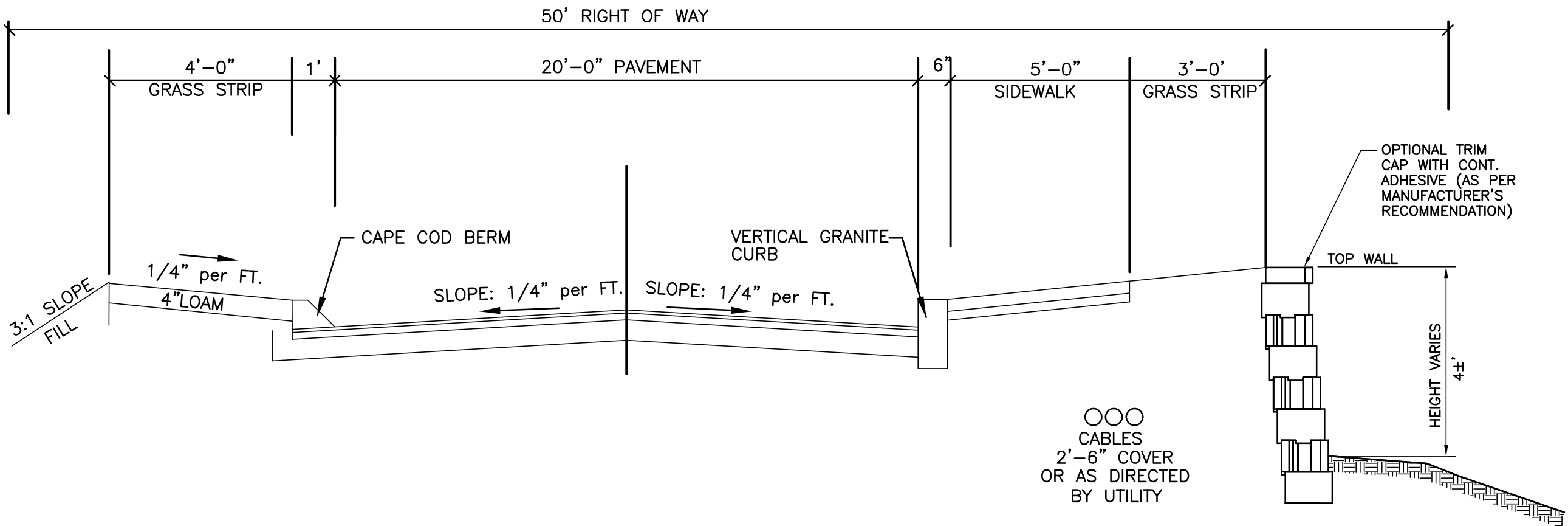
DATE APPROVED: \_\_\_\_\_

DATE ENDORSED: \_\_\_\_\_

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DAYS NEXT AFTER RECEIPT AND RECORDING OF  
SAME.

TOWN CLERK \_\_\_\_\_

DATE \_\_\_\_\_



WETLAND FILLING CROSS SECTION

NOT TO SCALE

SITE DEVELOPMENT PLAN OF LAND  
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A 40B Comprehensive Permit Project  
HOLLISTON, MASSACHUSETTS

PREPARED FOR:  
INDIAN RIDGE REALTY TRUST  
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HOLLISTON, MA 01746

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JOB No. 16,181

DATE: FEB. 29, 2020

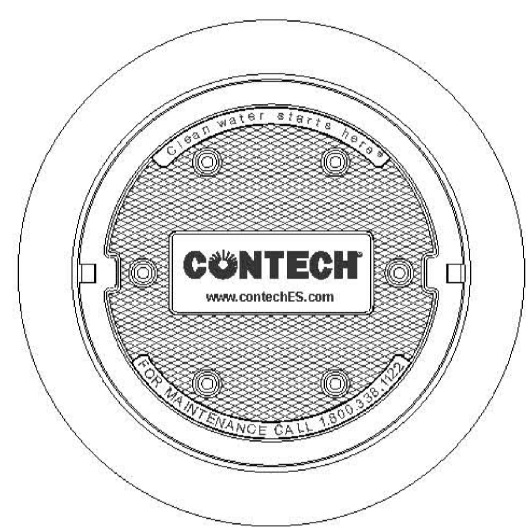
SCALE: 1"=40'

SHEET: 16 of 17

PLAN #: 27,337

DETAILS





FRAME AND COVER  
(DIAMETER VARIES)  
N.T.S.

- GENERAL NOTES
- CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
  - FOR SITE SPECIFIC DRAWINGS WITH DETAILED STRUCTURE DIMENSIONS AND WEIGHT, PLEASE CONTACT YOUR CONTECH ENGINEERED SOLUTIONS LLC REPRESENTATIVE. [www.ContechES.com](http://www.ContechES.com)
  - CDS WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING. CONTRACTOR TO CONFIRM STRUCTURE MEETS REQUIREMENTS OF PROJECT.
  - STRUCTURE SHALL MEET AASHTO HS20 LOAD RATING, ASSUMING EARTH COVER OF 0'-2' AND GROUNDWATER ELEVATION AT, OR BELOW, THE OUTLET PIPE INVERT ELEVATION. ENGINEER OF RECORD TO CONFIRM ACTUAL GROUNDWATER ELEVATION. CASTINGS SHALL MEET AASHTO M306 AND BE CAST WITH THE CONTECH LOGO.
  - IF REQUIRED, PVC HYDRAULIC SHEAR PLATE IS PLACED ON SHELF AT BOTTOM OF SCREEN CYLINDER. REMOVE AND REPLACE AS NECESSARY DURING MAINTENANCE CLEANING.
  - CDS STRUCTURE SHALL BE PRECAST CONCRETE CONFORMING TO ASTM C-478 AND AASHTO LOAD FACTOR DESIGN METHOD.

- INSTALLATION NOTES
- ANY SUB-BASE, BACKFILL DEPTH, AND/OR ANTI-FLOTATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD.
  - CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE CDS MANHOLE STRUCTURE.
  - CONTRACTOR TO INSTALL JOINT SEALANT BETWEEN ALL STRUCTURE SECTIONS AND ASSEMBLE STRUCTURE.
  - CONTRACTOR TO PROVIDE, INSTALL AND GROUT INLET AND OUTLET PIPE(S). MATCH PIPE INVERTS WITH ELEVATIONS SHOWN. ALL PIPE CENTERLINES TO MATCH PIPE OPENING CENTERLINES.
  - CONTRACTOR TO TAKE APPROPRIATE MEASURES TO ASSURE UNIT IS WATER TIGHT, HOLDING WATER TO FLOWLINE INVERT MINIMUM. IT IS SUGGESTED THAT ALL JOINTS BELOW PIPE INVERTS ARE GROUTED.

APPROVED BY THE  
HOLLISTON ZONING BOARD  
OF APPEALS:

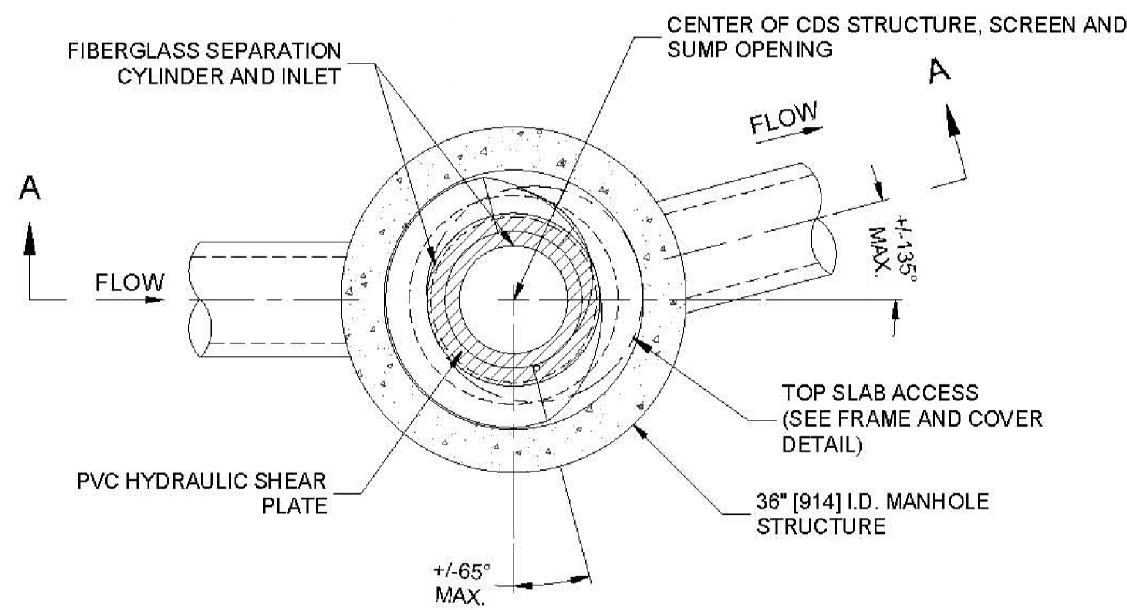
DATE APPROVED: \_\_\_\_\_

DATE ENDORSED: \_\_\_\_\_

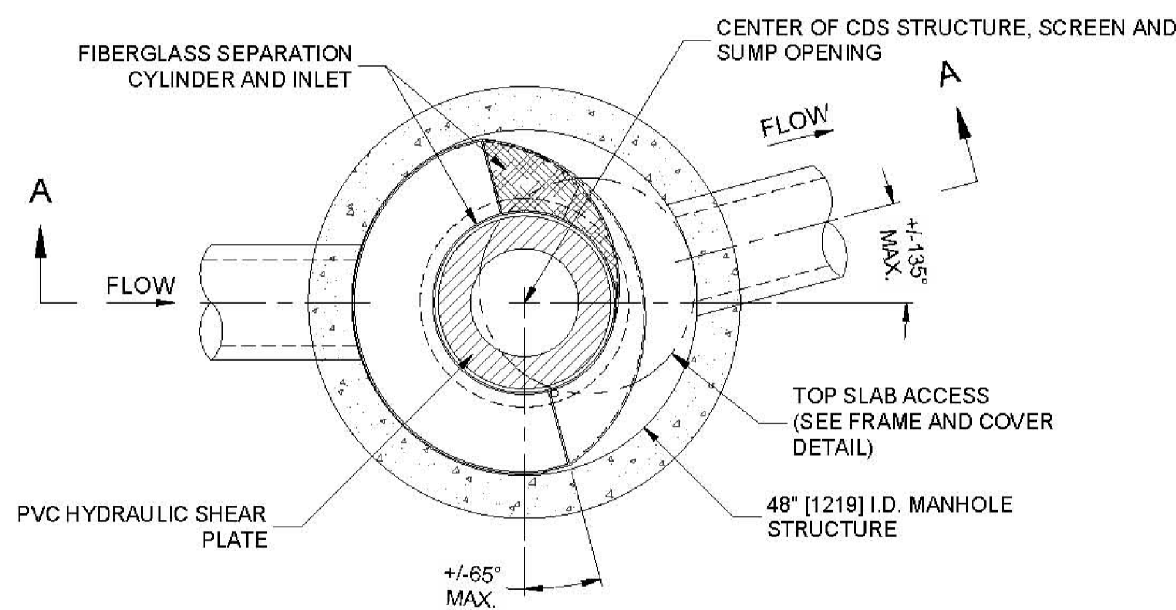
I TOWN CLERK OF THE TOWN OF HOLLISTON  
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BOARD OF APPEALS, APPROVAL OF THIS PLAN  
AND NO APPEAL HAS BEEN TAKEN FOR TWENTY  
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SAME.

TOWN CLERK \_\_\_\_\_

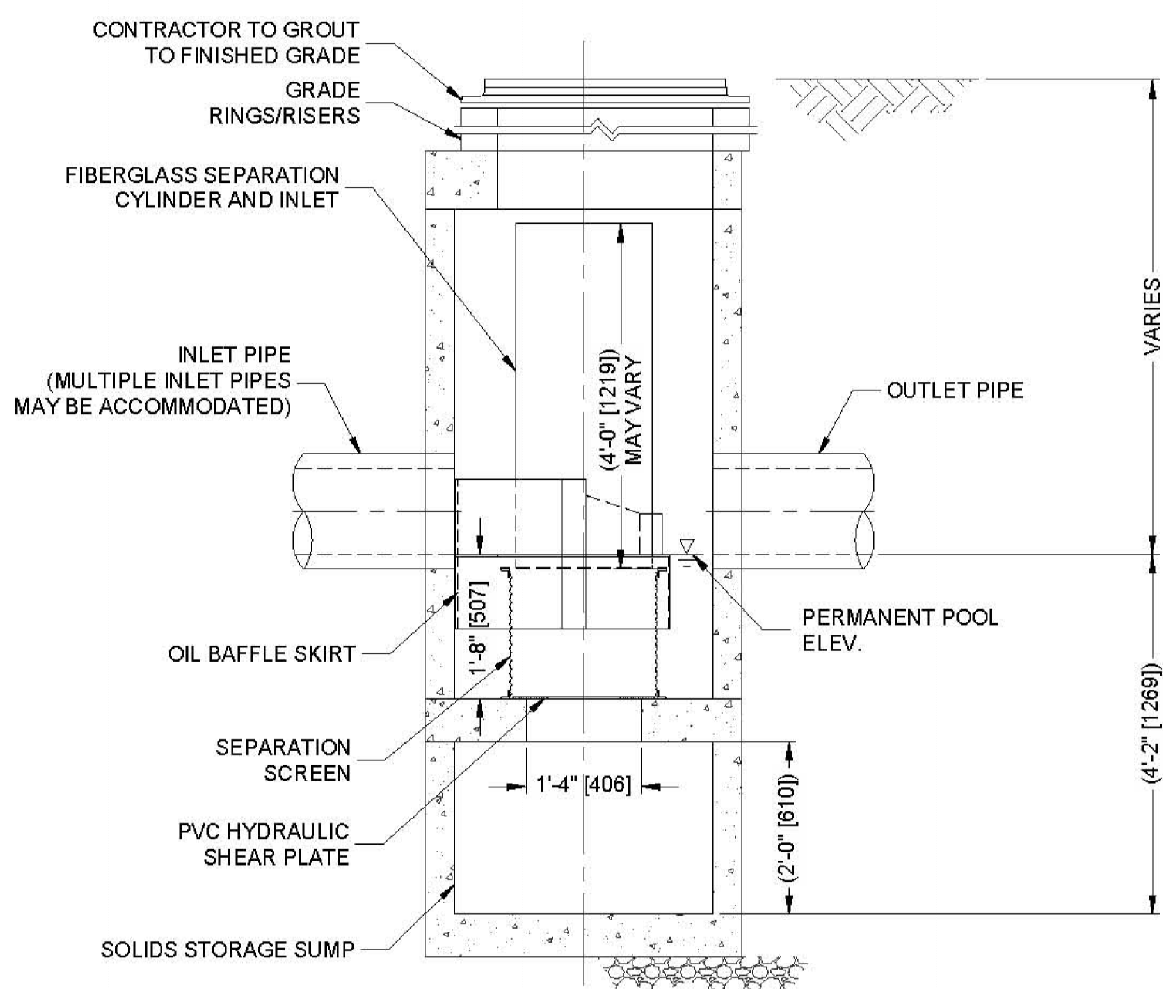
DATE \_\_\_\_\_



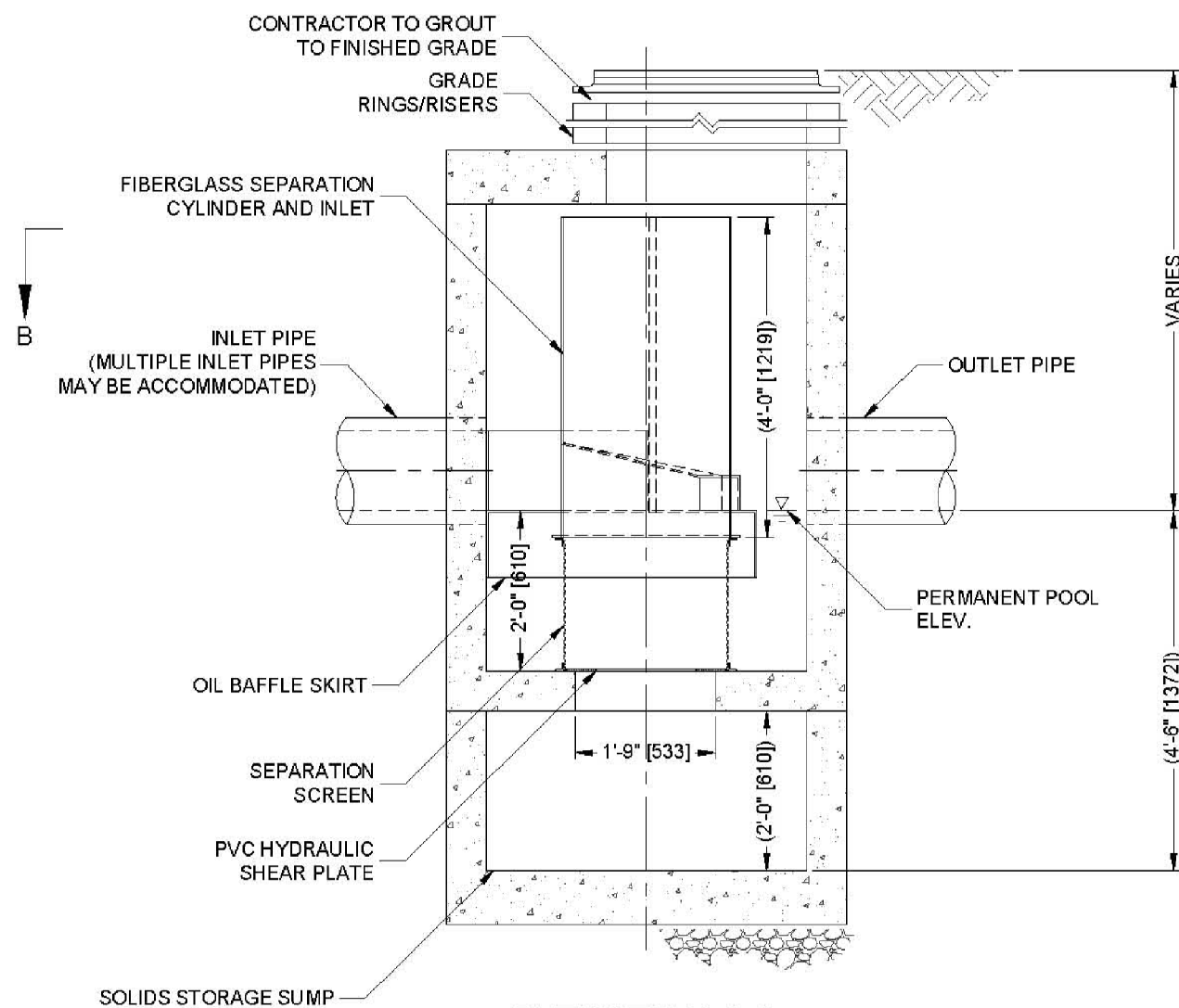
PLAN VIEW B-B  
N.T.S.



PLAN VIEW B-B  
N.T.S.



ELEVATION A-A  
N.T.S.



ELEVATION A-A  
N.T.S.



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DIGSAFE 1-888-344-7233

**CONTECH**  
ENGINEERED SOLUTIONS LLC  
[www.contechES.com](http://www.contechES.com)  
9025 Centre Pointe Dr., Suite 400, West Chester, OH 45069  
800-338-1122 513-645-7000 513-645-7993 FAX

N.T.S.

CDS1515-3-C  
ONLINE CDS  
STANDARD DETAIL

**CONTECH**  
ENGINEERED SOLUTIONS LLC  
[www.contechES.com](http://www.contechES.com)  
9025 Centre Pointe Dr., Suite 400, West Chester, OH 45069  
800-338-1122 513-645-7000 513-645-7993 FAX

N.T.S.

CDS2015-4-C  
ONLINE CDS  
STANDARD DETAIL

DETAILS (TREATMENT UNITS)

SITE DEVELOPMENT PLAN OF LAND  
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DATE: FEB. 29, 2020

SCALE: 1"=40'

SHEET: 17 of 17

PLAN #: 27,337