

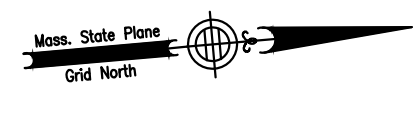
# ZONING DATA

DISTRICT: HIGHWAY COMMERCE (CH)  
 EXISTING USE: MINI-STORAGE WAREHOUSE FACILITY (UNDER CONSTRUCTION)  
 PROPOSED USE: MIXED USE (RETAIL/OFFICE) RESIDENTIAL

	REQUIRED	PROVIDED
LOT AREA	30,000 S.F.	378,381 S.F.
LOT FRONTAGE	150 FT	242.38 FT
LOT WIDTH	-	-
FRONT YARD	30 FT	30.1 FT
SIDE YARD	10 FT	10.5 FT
REAR YARD	30 FT	92 FT
HEIGHT	35 FT DWELLINGS	43.75 FT
	5 STORIES OTHERWISE	

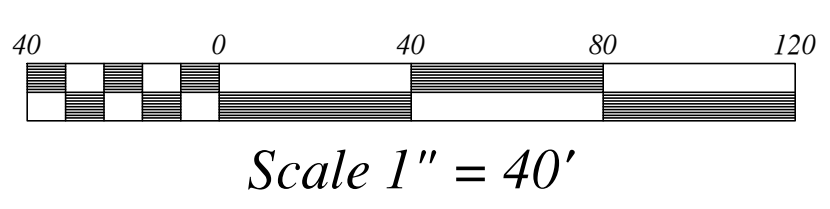
	REQUIRED	PROPOSED
MAX LOT COVERAGE (-%)	-	64,325 S.F. (17.0%)***
IMPERVIOUS COVERAGE	-	151,352 S.F. (40.0%)***

\*\*\* LOT COVERAGE AND IMPERVIOUS COVERAGE INCLUDE PHASE 1 STORAGE FACILITY AND PROPOSED STORAGE FACILITY.



**PARKING SUMMARY**  
 PROPOSED PARKING LOT DESIGN PROVIDES FOR:  
 (72) STANDARD PARKING SPACES: 9'-0" x 20'-0"  
 (5) HANDICAP SPACES: 9'-0" x 20'-0"

PROPOSED PARKING:	REQUIRED
RETAIL/OFFICE: 1 SPACE PER 180 S.F. LEASABLE FLOOR SPACE	
RESIDENTIAL UNITS: 2 SPACES PER UNIT	
GENERAL SERVICE: 1 SPACE PER 1.3 EMPLOYEES	
<b>MIXED USE</b>	
12 RESIDENTIAL UNITS	= 24 SPACES
5,961 SF RETAIL/OFFICE	= 33 SPACES
GENERAL SERVICE 37 EMPLOYEES	= 28 SPACES
<b>TOTALS</b>	
	86 REQUIRED SPACES
	87 SPACES PROVIDED



TOWN OF ASHLAND PLANNING BOARD

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

SIGNATURES

APPROVAL DATE \_\_\_\_\_

ENDORSEMENT DATE \_\_\_\_\_

**SHEET INDEX**

SHEET	COVER
SHEET 1	COVER
SHEET 2	EXISTING CONDITIONS
SHEET 2A	EXISTING CONDITIONS & TEST HOLES
SHEET 3	LAYOUT
SHEET 4	GRADING
SHEET 5	UTILITIES & DRAINAGE
SHEET 6	LANDSCAPE & LIGHTING
SHEET 7	DETAILS
SHEET 8	DETAILS
SHEET 9	DETAILS
SHEET 10	DETAILS
SHEET 11	DETAILS

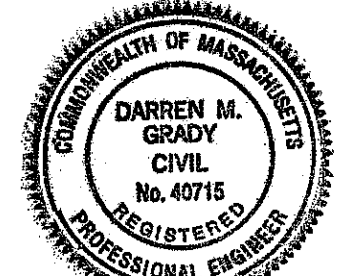
**RECORD OWNER:**  
 ASSESSOR MAP 19 LOT 67

81 WEST UNION STREET LLC  
 70 BARTZAK DR.  
 HOLLISTON, MA 01746  
 DEED BOOK 64487 PAGE 299  
 PORTION OF LOT B  
 BOOK 7348 PAGE 139

- PLAN REFERENCES:**
- 1892 COUNTY LAYOUT OF UNION STREET
  - PLAN No. 1411 OF 1948
  - PLAN No. 1019 OF 1963
  - PLAN No. 1078 OF 1975
  - PLAN No. 286 OF 1993

**REVISIONS**

DATE	REVISIONS
9/9/19	PLANNING, CON COM, TEC. REVIEW COMMENTS
12/16/19	PLANNING BOARD COMMENTS - MIXED USE
1/27/20	PEER REVIEW COMMENTS
2/27/20	PLANNING BOARD COMMENTS



Darren M. Grady



## PHASE 2 SITE PLAN

#81 WEST UNION STREET  
 ASHLAND, MASSACHUSETTS

PREPARED FOR:  
 81 WEST UNION STREET LLC  
 C/O WILLIAM J. RODENHISER  
 70 BARTZAK DRIVE  
 HOLLISTON, MA 01746

JUNE 13, 2019  
 SCALE: 1"=40'  
 JOB No. 18-284

**GRADY CONSULTING, L.L.C.**  
 Civil Engineers and Land Surveyors  
 71 Evergreen Street, Suite 1, Kingston, MA 02364  
 Phone (781) 585-2300 Fax (781) 585-2378

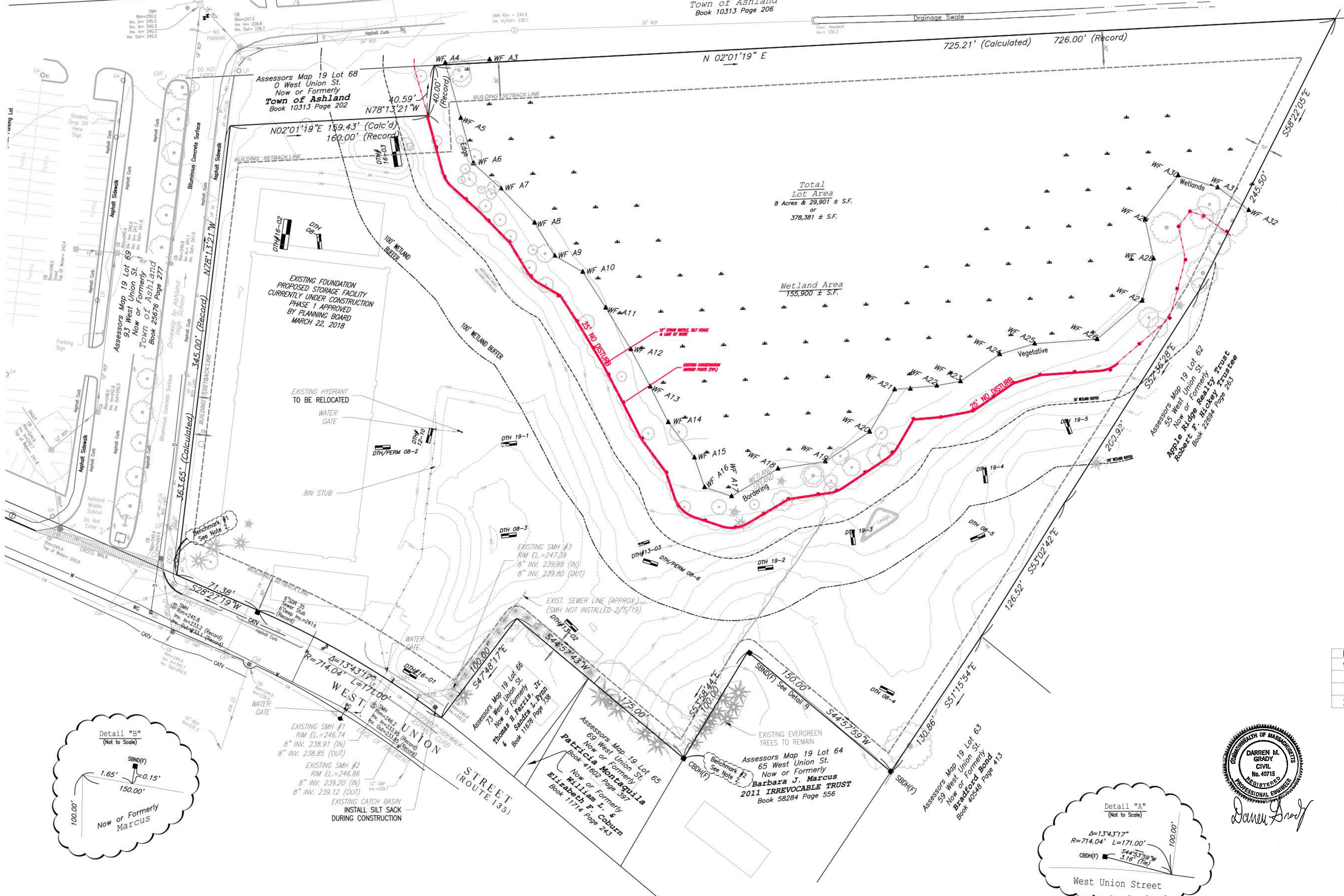
**Legend**

Symbols and Abbreviations Shown on This Plan

- |      |                                |          |                                       |              |              |          |                           |
|------|--------------------------------|----------|---------------------------------------|--------------|--------------|----------|---------------------------|
| 132  | EXISTING CONTOUR               | OW       | OVERHEAD WIRES                        | WG           | WATER GATE   | CMP      | CORRUGATED METAL PIPE     |
| CATV | UNDERGROUND CABLE & TELEVISION | —        | STONE WALL                            | LP           | LIGHT POLE   | RCP      | REINFORCED CONCRETE PIPE  |
| G    | UNDERGROUND GAS LINE           | UP       | UTILITY POLE                          | Hyd.         | HYDRANT      | WF 22    | WETLAND FLAG WITH NUMBER  |
| W    | UNDERGROUND WATER LINE         | CB       | CATCH BASIN                           | +139.7       | SPOT GRADE   | (F)      | FOUND                     |
| E    | UNDERGROUND ELECTRIC LINE      | DMH      | DRAIN MANHOLE                         | RET.         | RETAINING    | CTR. BK. | CENTER BACK               |
| D    | UNDERGROUND DRAIN LINE         | SMH      | SEWER MANHOLE                         | GC           | GRANITE CURB | SBDH     | STONE BOUND NO DRILL HOLE |
| S    | UNDERGROUND SEWER LINE         | DTH/PERM | DEEP TEST HOLE WITH PERMEABILITY TEST | Wetland Area | WETLAND AREA | CBDH     | CONCRETE BOUND DRILL HOLE |
|      |                                | GG       | GAS GATE                              |              |              |          |                           |



Town of Ashland  
Book 10313 Page 206



**Notes**

- 1.) RECORD OWNER IS 81 WEST UNION STREET, LLC SEE DEED BOOK 64487 PAGE 299.
- 2.) ELEVATIONS REFER TO NGVD OF 1929. BENCHMARK #1 : CHISELED SQUARE ON LIGHT POLE BASE. ELEVATION = 247.16. BENCHMARK #2 : TOP OF CBDH(F). ELEVATION = 259.00.
- 3.) SEE ASHLAND ASSESSORS MAP 19, PARCEL 67.
- 4.) PARCEL FALLS WITHIN THE HIGHWAY COMMERCE (HC) ZONING DISTRICT.
- 5.) PARCEL FALLS IN ZONE X AS SHOWN ON FIRM COMMUNITY PANEL 25017C 0513F DATED JULY 7, 2014.
- 6.) THE CERTIFICATIONS SHOWN HEREON ARE INTENDED TO MEETS REGISTRY OF DEEDS REQUIREMENTS AND ARE NOT A CERTIFICATION TO TITLE OR OWNERSHIP OF THE PROPERTY DEPICTED HEREON. OWNERS OF ADJOINING PROPERTIES ARE ACCORDING TO CURRENT ASSESSORS RECORDS.
- 7.) SEE MIDDLESEX SOUTH DISTRICT REGISTRY OF DEEDS FOR RECORD DOCUMENTS.
- 8.) PROPERTY LINE INFORMATION WAS COMPILED FROM VIRGINIA'S GREEN SITE PLAN DATED NOVEMBER 2008 BY SCHOFIELD BROTHERS OF NEW ENGLAND, INC.
- 9.) SITE IS CURRENTLY UNDER CONSTRUCTION. TOPOGRAPHIC FEATURES SHOWN WERE COMPILED FROM A FIELD SURVEY BY SCHOFIELD BROTHERS OF NEW ENGLAND ON OR BETWEEN FEBRUARY 19 & 26, 2008.
- 10.) WETLANDS WERE DELINEATED AND FIELD LOCATED BY SCHOFIELD BROTHERS OF NEW ENGLAND IN FEBRUARY 2008 AND APPROVED BY ASHLAND CONSERVATION COMMISSION ORDER OF RESOURCE AREA DELINEATION DATED JUNE 23, 2008. ORDER OF RESOURCE DELINEATION EXTENDED 6/23/2018 BY EXTENSION ISSUED BY THE ASHLAND CONSERVATION COMMISSION DATED 6/22/2015, SAID BEING EXTENSION RECORDED IN THE MIDDLESEX REGISTRY OF DEEDS IN BOOK 66705, PAGE 156. AN ORDER OF CONDITIONS WAS ISSUED FOR PHASE 1 ON JANUARY 12, 2017, AND AN AMENDMENT WAS ISSUED ON FEBRUARY 26, 2018.
- 11.) THIS TOPOGRAPHIC SURVEY WAS PREPARED TO MEET NATIONAL MAP ACCURACY STANDARDS AT A SCALE OF 1"=40' HORIZONTALLY AND A 1 FOOT CONTOUR INTERVAL VERTICALLY. ANY REPRODUCTIONS OR RESCALING MAY EFFECT THE MAP ACCURACY.
- 12.) LOCATION OF UNDERGROUND UTILITIES SHOWN HEREON ARE BASED ON FIELD LOCATION OF VISIBLE STRUCTURES SUCH AS CATCH BASINS, MANHOLES, WATER GATES, ETC., AND COMPILING INFORMATION FROM PLANS SUPPLIED BY VARIOUS UTILITY COMPANIES AND GOVERNMENT AGENCIES AND MEET ASCE QUALITY LEVEL C PER C138-02. THE LOCATION SHOWN SHALL BE CONSIDERED APPROXIMATE. BEFORE CONSTRUCTION, THE LOCATION OF UNDERGROUND UTILITIES SHALL BE VERIFIED BY THE CONTRACTOR. IN ACCORDANCE WITH CH. 82, SEC. 40 AS AMENDED, ALL UTILITY COMPANIES AND APPLICABLE GOVERNMENT AGENCIES MUST BE CONTACTED. CONTACT "DIG-SAFE" AT 1-888-344-7233.
- 13.) LEGAL STATUS OF EASEMENTS, WAYS, AND RESTRICTIONS NOT DETERMINED BY THIS SURVEY.

REVISIONS	
9/9/19	PLANNING, CON COM, TEC. REVIEW COMMENTS
12/16/19	PLANNING BOARD COMMENTS - MIXED USE
1/27/20	PEER REVIEW COMMENTS
2/27/20	PLANNING BOARD COMMENTS

**PHASE 2  
SITE PLAN**  
#81 WEST UNION STREET  
ASHLAND, MASSACHUSETTS

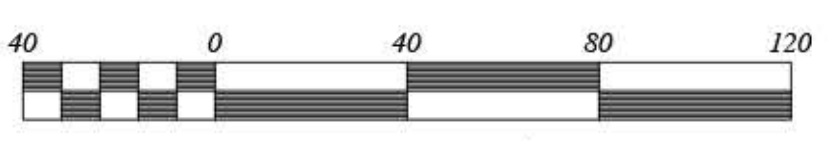
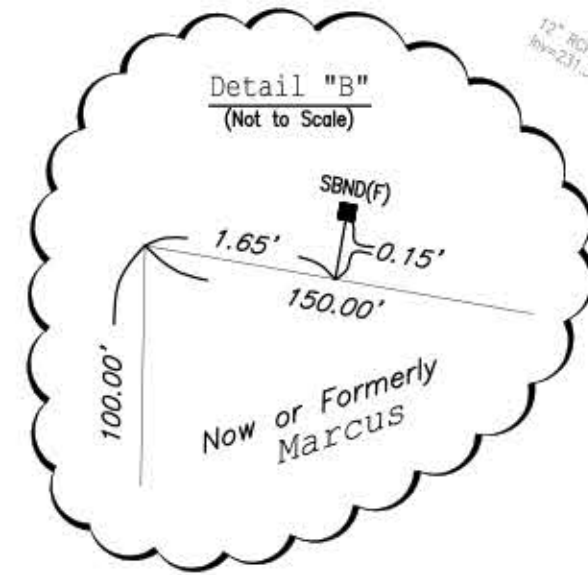
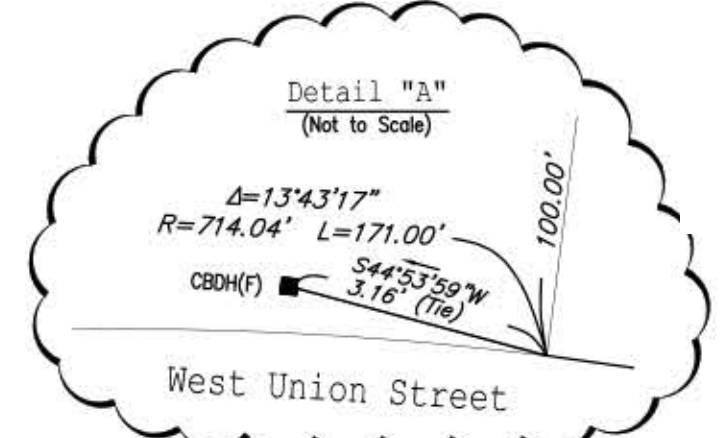
PREPARED FOR:  
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C/O WILLIAM J. RODENHISER  
70 BARTZAK DRIVE  
HOLLISTON, MA 01746

JUNE 13, 2019  
SCALE: 1"=40'  
JOB No. 18-284

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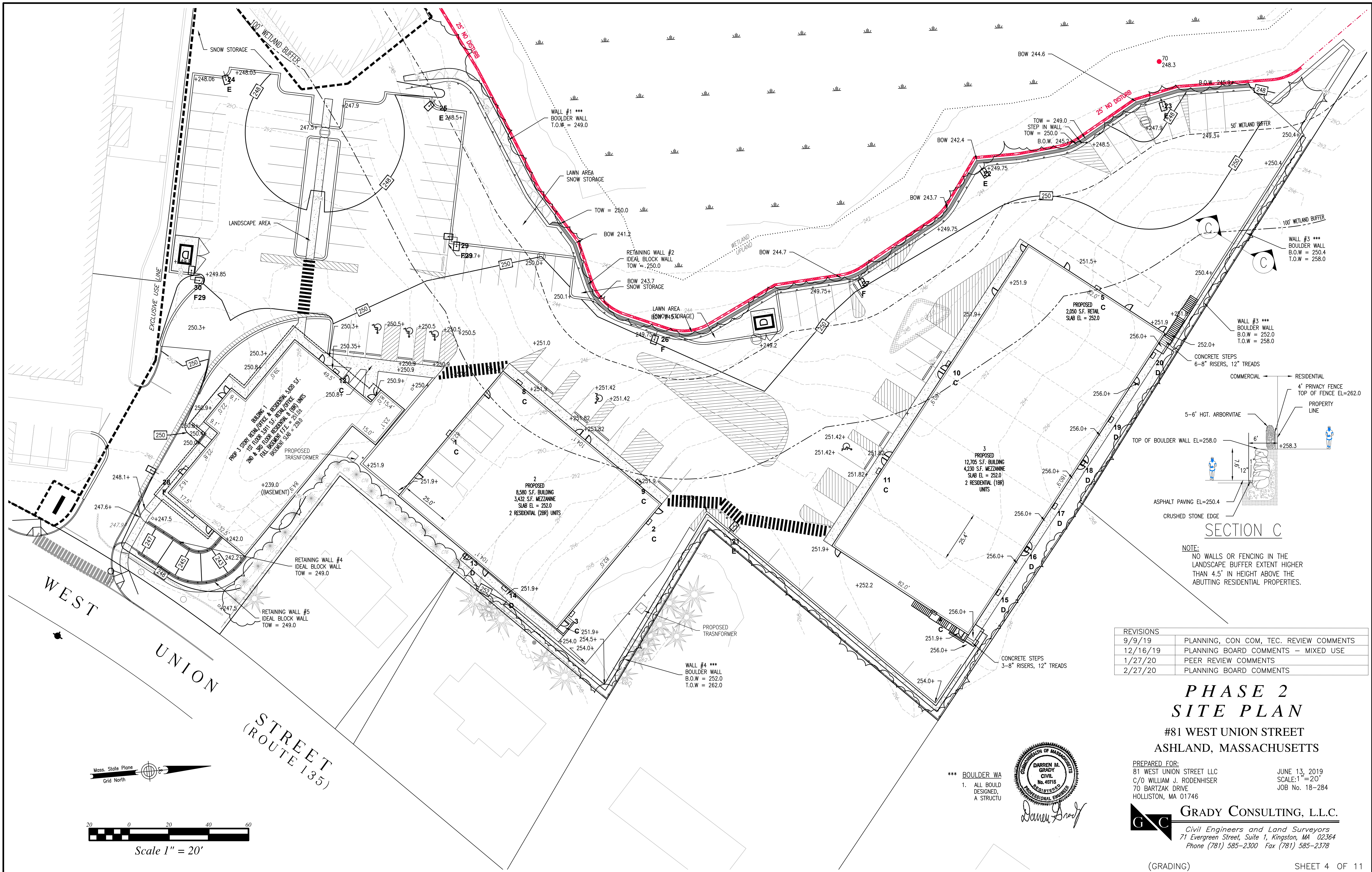


*Darren Grady*



Scale 1" = 40'





**SECTION C**

NOTE:  
NO WALLS OR FENCING IN THE LANDSCAPE BUFFER EXTENT HIGHER THAN 4.5' IN HEIGHT ABOVE THE ABUTTING RESIDENTIAL PROPERTIES.

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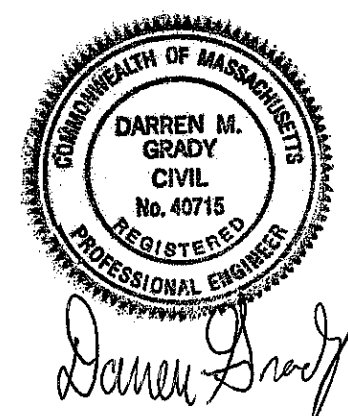
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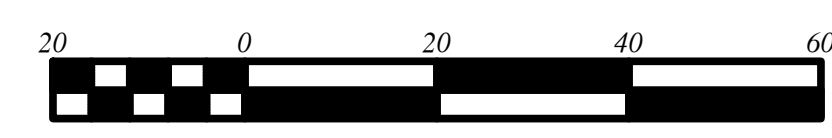
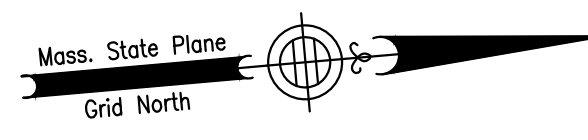
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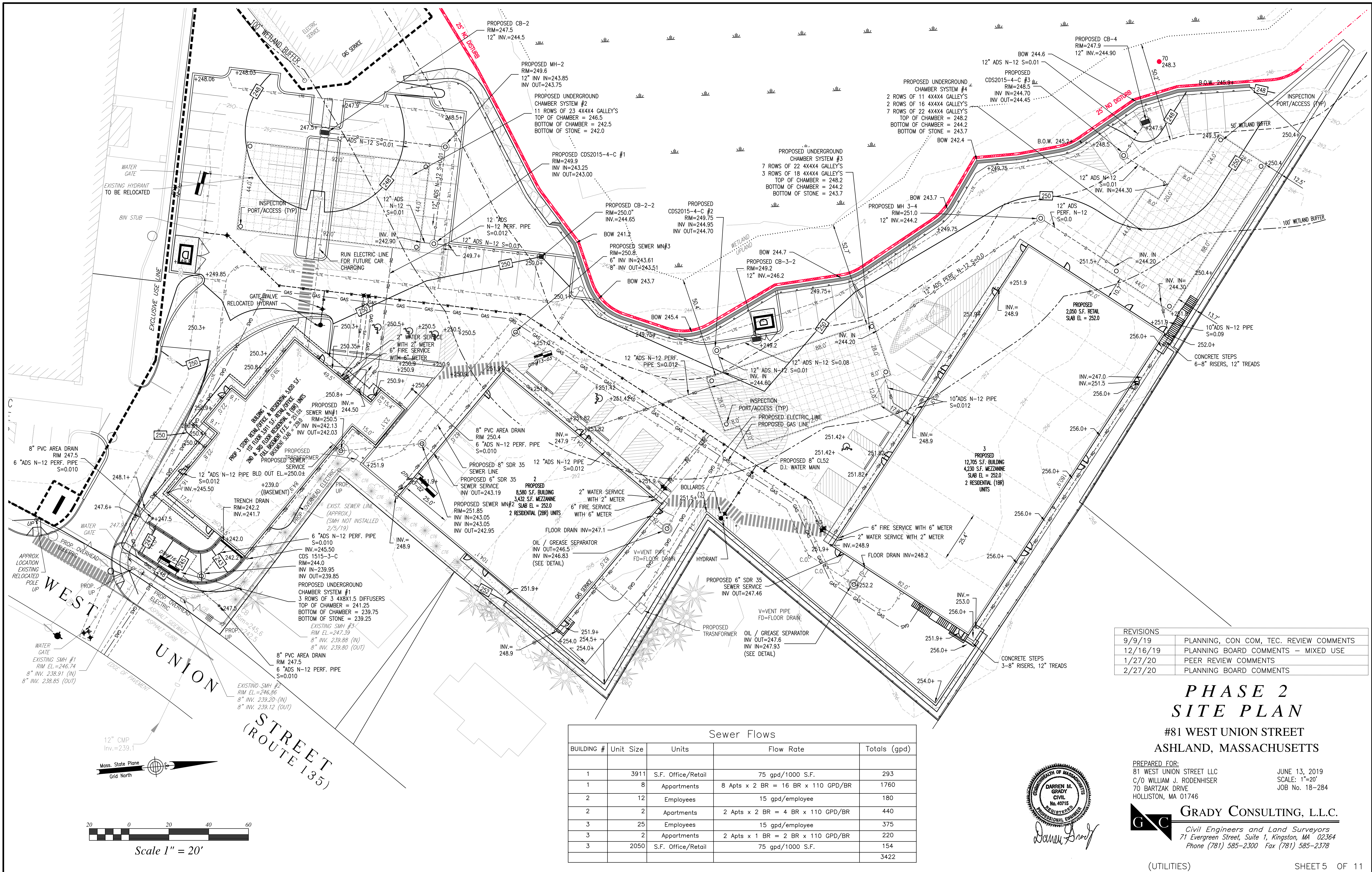
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\*\*\* BOULDER WA  
1. ALL BOULD DESIGNED, A STRUCTURE



Scale 1" = 20'



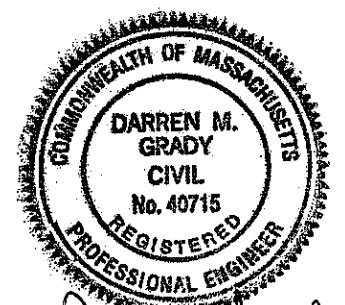
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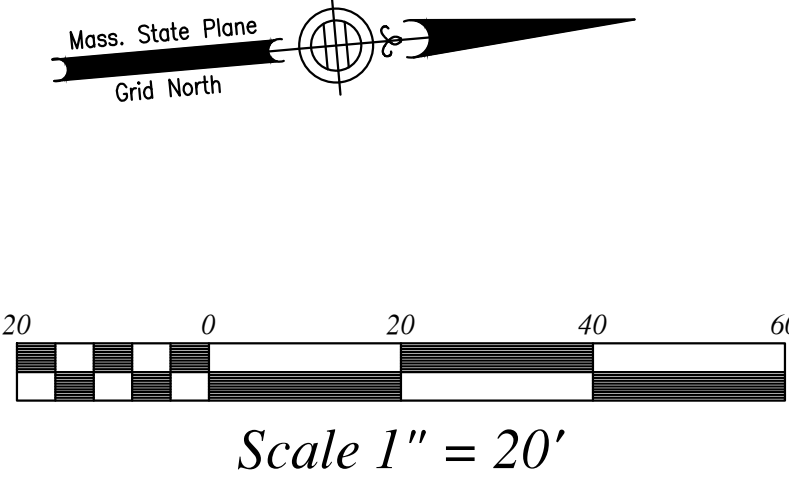
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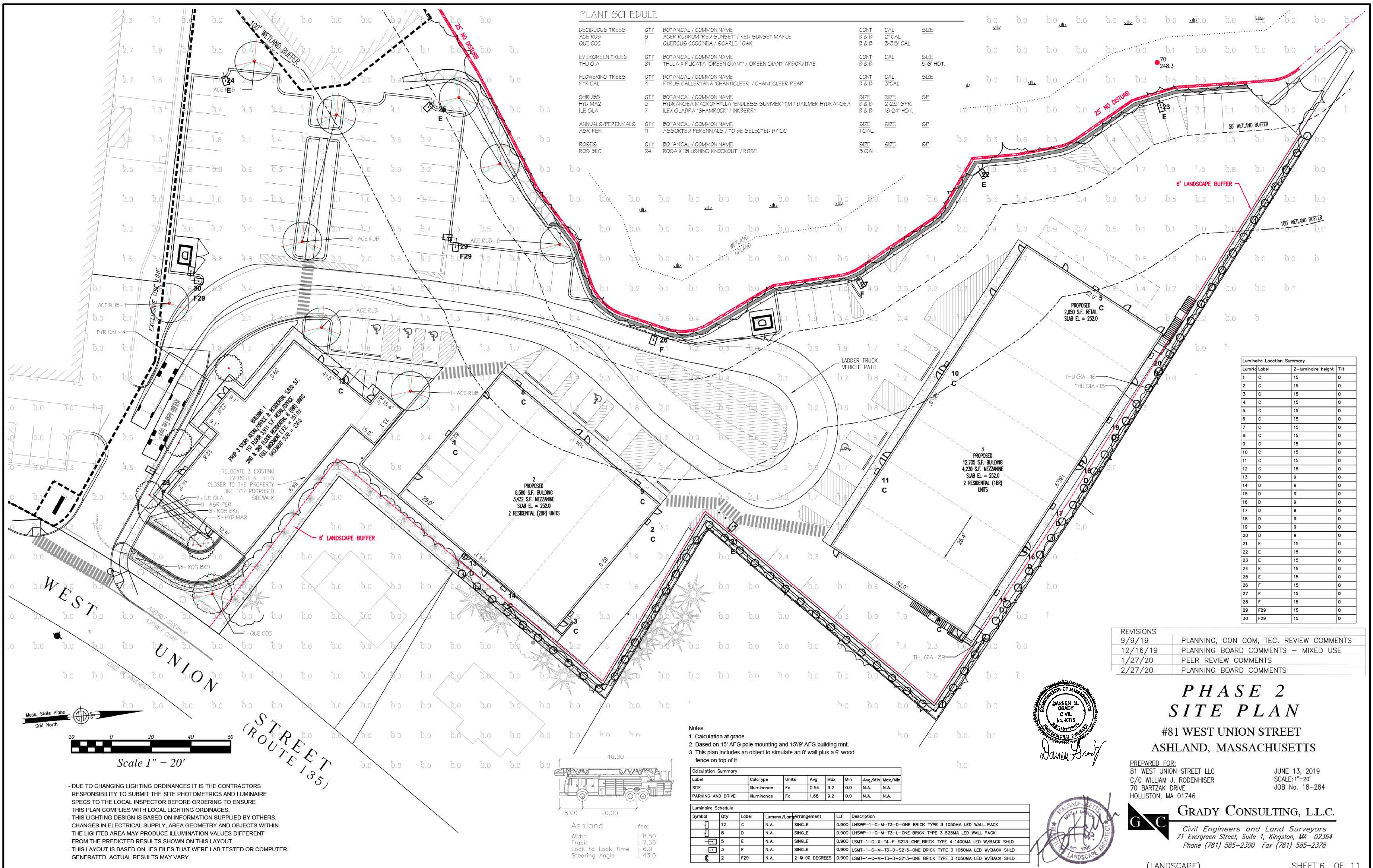
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Sewer Flows				
BUILDING #	Unit Size	Units	Flow Rate	Totals (gpd)
1	3911	S.F. Office/Retail	75 gpd/1000 S.F.	293
1	8	Apartments	8 Apts x 2 BR = 16 BR x 110 GPD/BR	1760
2	12	Employees	15 gpd/employee	180
2	2	Apartments	2 Apts x 2 BR = 4 BR x 110 GPD/BR	440
3	25	Employees	15 gpd/employee	375
3	2	Apartments	2 Apts x 1 BR = 2 BR x 110 GPD/BR	220
3	2050	S.F. Office/Retail	75 gpd/1000 S.F.	154
				3422





### PLANT SCHEDULE

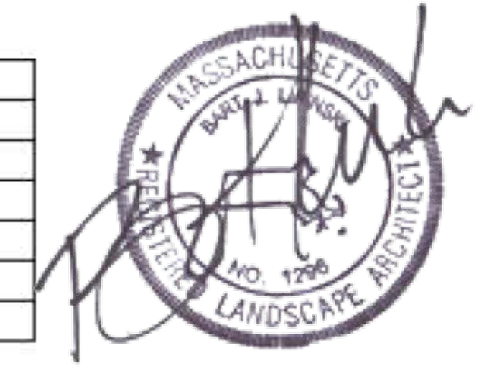
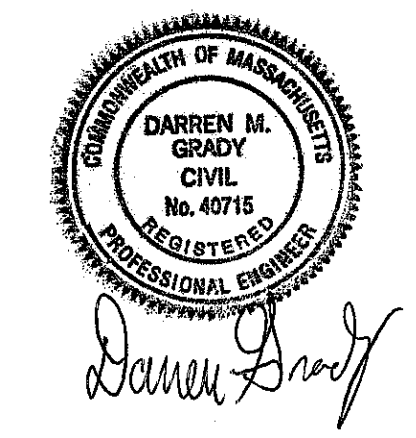
DECIDUOUS TREES	QTY	BOTANICAL / COMMON NAME	CONT	CAL	SIZE
ACE RUB	9	ACER RUBRUM 'RED SUNSET' / RED SUNSET MAPLE	P & B	2' GAL	
QUE COC	1	QUERCUS COCCINEA / SCARLET OAK	P & B	3-3.5' CAL	
EVERGREEN TREES	QTY	BOTANICAL / COMMON NAME	CONT	CAL	SIZE
THU GIA	81	THUJA X PLICATA 'GREEN GIANT' / GREEN GIANT ARBORVITAE	P & B	5-6' HGT.	
FLOWERING TREES	QTY	BOTANICAL / COMMON NAME	CONT	CAL	SIZE
PYR CAL	4	PIRUS CALLERYANA 'CHANTICLEER' / CHANTICLEER PEAR	P & B	3' CAL	
SHRUBS	QTY	BOTANICAL / COMMON NAME	CONT	CAL	SIZE
HYD MAZ	3	HYDRANGEA MACROPHYLLA 'ENDLESS SUMMER' TM / BAILMER HYDRANGEA	P & B	2-2.5' SFR.	SP
ILE GLA	7	ILEX GLABRA 'SHAMROCK' / INK BERRY	P & B	18-24" HGT.	
ANNUALS/PERENNIALS	QTY	BOTANICAL / COMMON NAME	CONT	CAL	SIZE
ASR PER	11	ASSORTED PERENNIALS / TO BE SELECTED BY GC		1 GAL	SP
ROSES	QTY	BOTANICAL / COMMON NAME	CONT	CAL	SIZE
ROS BKO	24	ROSA X 'BLUSHING KNOCKOUT' / ROSE		3 GAL	SP

#### Luminaire Location Summary

LumNo	Label	Z-luminaire height	Tilt
1	C	15	0
2	C	15	0
3	C	15	0
4	C	15	0
5	C	15	0
6	C	15	0
7	C	15	0
8	C	15	0
9	C	15	0
10	C	15	0
11	C	15	0
12	C	15	0
13	D	9	0
14	D	9	0
15	D	9	0
16	D	9	0
17	D	9	0
18	D	9	0
19	D	9	0
20	D	9	0
21	E	15	0
22	E	15	0
23	E	15	0
24	E	15	0
25	E	15	0
26	F	15	0
27	F	15	0
28	F	15	0
29	F29	15	0
30	F29	15	0

#### REVISIONS

DATE	DESCRIPTION
9/9/19	PLANNING, CON COM, TEC. REVIEW COMMENTS
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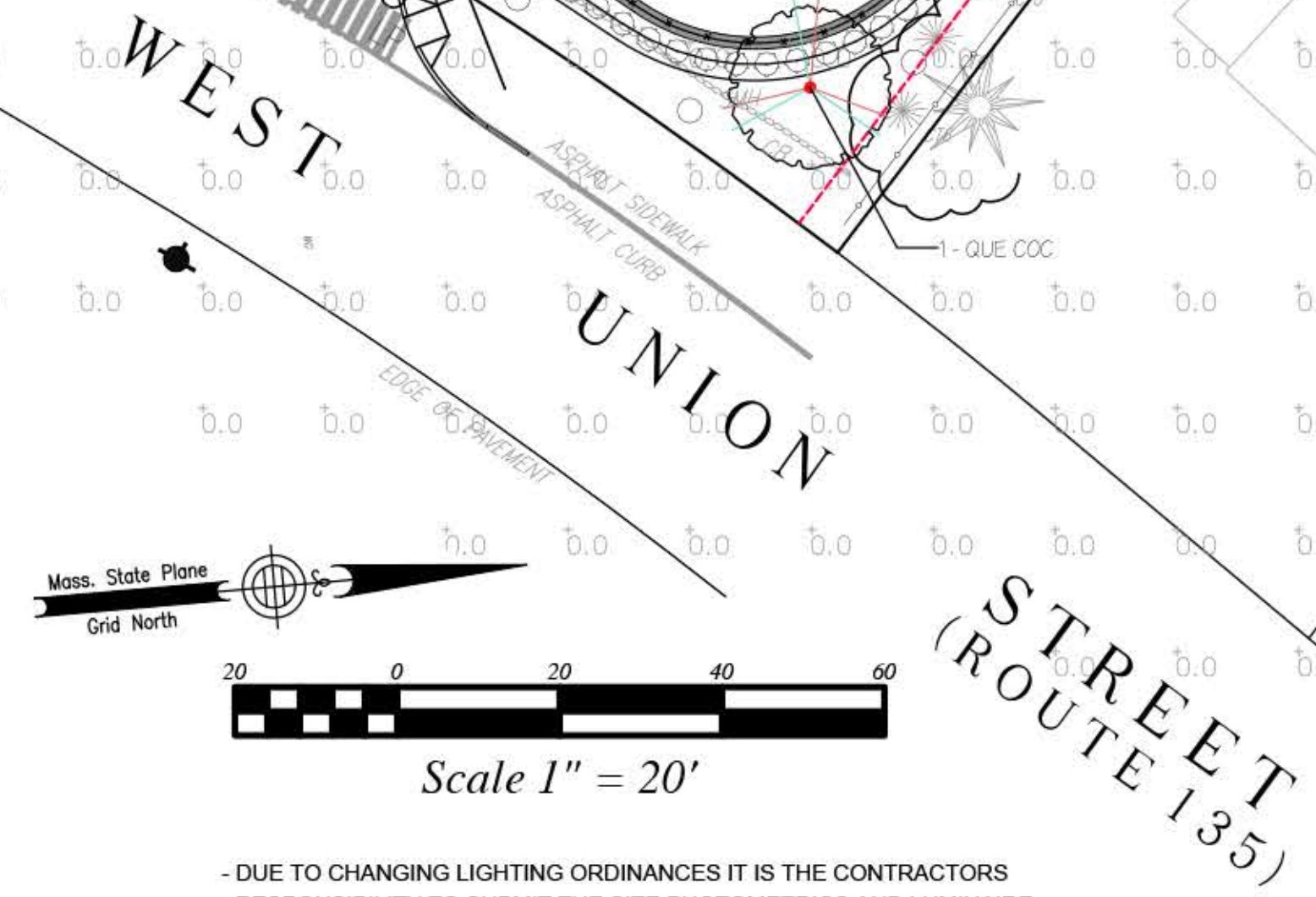
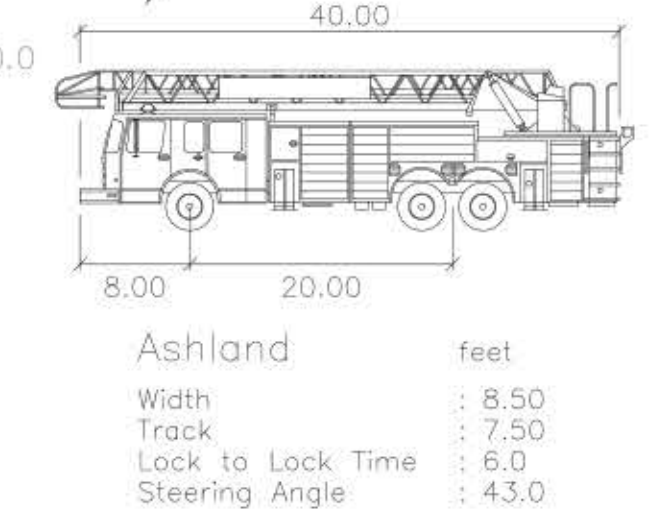
- #### Notes:
1. Calculation at grade.
  2. Based on 15' AFG pole mounting and 15/19' AFG building mnt.
  3. This plan includes an object to simulate an 8' wall plus a 6' wood fence on top of it.

#### Calculation Summary

Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
SITE	Illuminance	Fc	0.54	9.2	0.0	N.A.	N.A.
PARKING AND DRIVE	Illuminance	Fc	1.68	9.2	0.0	N.A.	N.A.

#### Luminaire Schedule

Symbol	Qty	Label	Lumens/Lamp	Arrangement	LLF	Description
□	12	C	N.A.	SINGLE	0.900	LH5WP-1-C-M-T3-D-ONE BRICK TYPE 3 1050MA LED WALL PACK
□	8	D	N.A.	SINGLE	0.900	LH5WP-1-C-M-T3-L-ONE BRICK TYPE 3 525MA LED WALL PACK
□	5	E	N.A.	SINGLE	0.900	LSMT-1-C-X-T4-F-S213-ONE BRICK TYPE 4 1400MA LED W/BACK SHLD
□	3	F	N.A.	SINGLE	0.900	LSMT-1-C-M-T3-D-S213-ONE BRICK TYPE 3 1050MA LED W/BACK SHLD
□	2	F29	N.A.	2 @ 90 DEGREES	0.900	LSMT-1-C-M-T3-D-S213-ONE BRICK TYPE 3 1050MA LED W/BACK SHLD



- DUE TO CHANGING LIGHTING ORDINANCES IT IS THE CONTRACTORS RESPONSIBILITY TO SUBMIT THE SITE PHOTOMETRICS AND LUMINAIRE SPECS TO THE LOCAL INSPECTOR BEFORE ORDERING TO ENSURE THIS PLAN COMPLIES WITH LOCAL LIGHTING ORDINANCES.  
- THIS LIGHTING DESIGN IS BASED ON INFORMATION SUPPLIED BY OTHERS. CHANGES IN ELECTRICAL SUPPLY, AREA GEOMETRY AND OBJECTS WITHIN THE LIGHTED AREA MAY PRODUCE ILLUMINATION VALUES DIFFERENT FROM THE PREDICTED RESULTS SHOWN ON THIS LAYOUT.  
- THIS LAYOUT IS BASED ON .IES FILES THAT WERE LAB TESTED OR COMPUTER GENERATED. ACTUAL RESULTS MAY VARY.

# CONSTRUCTION NOTES

## GENERAL:

1. THE ACCURACY OF EXISTING UTILITY LOCATIONS, DIMENSIONS AND LINES IS FROM EXISTING INFORMATION OF RECORD AND IS NOT WARRANTED. CONTRACTOR TO VERIFY PRIOR TO INITIATING CONSTRUCTION.
2. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL SECURE ALL NECESSARY STATE, MUNICIPAL AND OTHER UTILITY PERMITS AND VERIFY THE PROPOSED LOCATIONS OF UTILITIES WITH UTILITY COMPANIES.
3. CONTRACTOR SHALL NOTIFY "DIG SAFE" (1-800-322-4844) AT LEAST 4 DAYS PRIOR TO CONSTRUCTION.
4. UNDERGROUND UTILITIES SHALL BE INSTALLED IN ACCORDANCE WITH THE SPECIFICATIONS OF THE APPROPRIATE DEPARTMENT OR COMPANY. THE CONTRACTOR SHALL NOTIFY THE ASHLAND D.P.W. (834-5589) AT LEAST 4 DAYS PRIOR TO CONSTRUCTION OF DRAINAGE & WATER SYSTEMS.
5. SEWAGE DISPOSAL TO CONSIST OF SEWER CONNECTIONS.
6. ALL CONSTRUCTION SHALL CONFORM TO TOWN OF ASHLAND PLANNING BOARD RULES AND REGULATIONS, DPW SPECIFICATIONS, WATER, SEWER, CONSERVATION COMMISSION REGULATIONS AND ALL OTHER APPLICABLE CODES.
7. ALL STUMPS SHALL BE DISPOSED OFF SITE.
8. ALL WORK WITHIN THE TOWN RIGHT OF WAY SHALL REQUIRE A ROAD OPENING PERMIT. EXCAVATIONS SHALL BE BACKFILLED WITH FLOWABLE FILL AND INSPECTED BY THE TOWN PER THE ROAD OPENING PERMIT.
9. THE CONSTRUCTION AT THE SITE SHALL BE SECURED WITH FENCING.

## WATER SYSTEM NOTES:

1. ALL MAINS SHALL BE 8" CEMENT LINED DUCTILE IRON PIPE, CLASS 52.
2. ALL WATER SERVICES SHALL BE 2" POLYETHYLENE PIPE.
3. ALL CONSTRUCTION MATERIALS AND METHODS SHALL CONFORM TO TOWN OF ASHLAND WATER DEPARTMENT REQUIREMENTS.
4. PROVIDE THRUST BLOCKS AT ALL WATER MAIN FITTINGS.
5. HYDRANTS SHALL BE THE WATEROUS PACER-WB-67 OR U.S. PIPE METROPOLITAN.

## EROSION CONTROL:

1. ALL ROADWAY AREAS, CUT AND FILL AREAS, AND DISTURBED DRAINAGE EASEMENT AREAS ARE TO BE BROUGHT TO FINISHED GRADE WITH A MIN. OF 4" OF LOAM, SEEDED WITH A MIXTURE OF ANNUAL RYEGRASS AND PERENNIAL GRASSES, AND MAINTAINED UNTIL VEGETATION STABILIZES THESE AREAS.
2. MULCH OR OTHER SUITABLE EROSION PROTECTION, SHALL BE UTILIZED ON ALL EXPOSED

## CONSTRUCTION SEQUENCE:

CLEAR AND GRUB ROADWAY AND EASEMENT AREAS

CONSTRUCT UNDERGROUND DETENTION BASINS

PRIOR TO ALL OTHER ACTIVITY EXCEPT TREE CLEARING AND ACCESS ROAD (SEED TO BE NRCS PERMANENT SEEDING MIX #6 OR APPROVED EQUAL)

(LIMIT USE OF HEAVY EQUIPMENT ON BASIN BOTTOMS)

BRING CUT AREAS TO SUBGRADE, INSTALL STRUCTURAL FILL BELOW BUILDING SLABS

INSPECT STORMCEPTOR/VORSENTRY UNITS AND UNDERGROUND CHAMBER SYSTEMS AFTER ALL STORMS AND AT LEAST MONTHLY DURING CONSTRUCTION AND REMOVE SEDIMENT

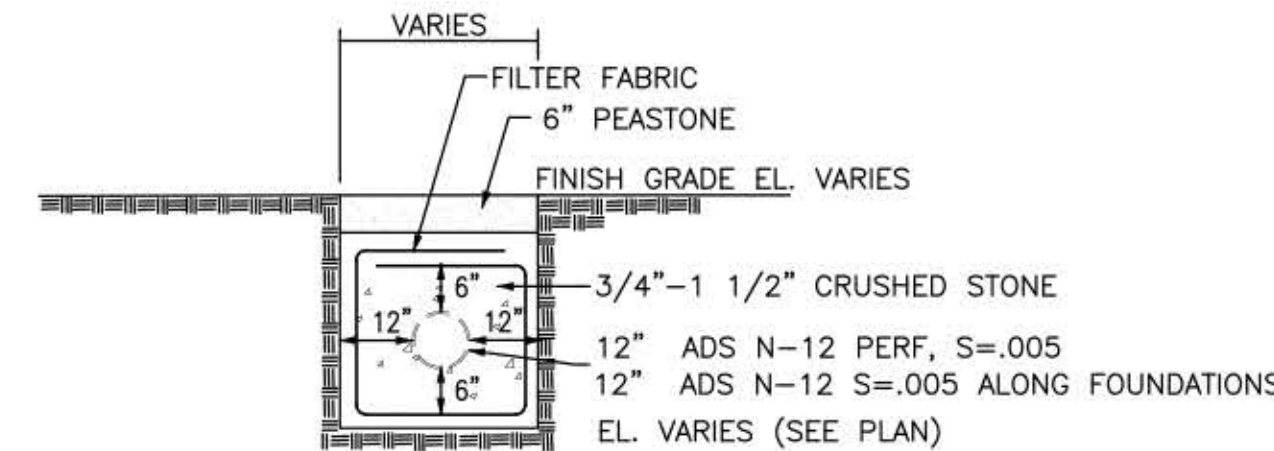
INSTALL UTILITIES (ie, DRAIN, WATER, ELECTRIC, INFILTRATION SYSTEMS etc.)

CATCH BASIN GRATES ARE TO BE SET AT BINDER GRADE

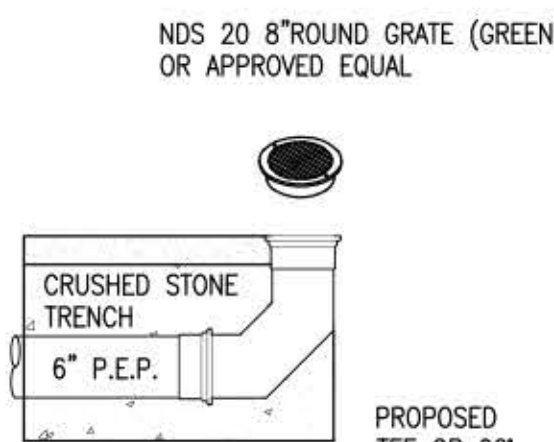
INSTALL EROSION CONTROLS ON EXPOSED SLOPES

PLACE BASE COURSE OF PAVEMENT / LOAM AND SEED GRASS AREAS

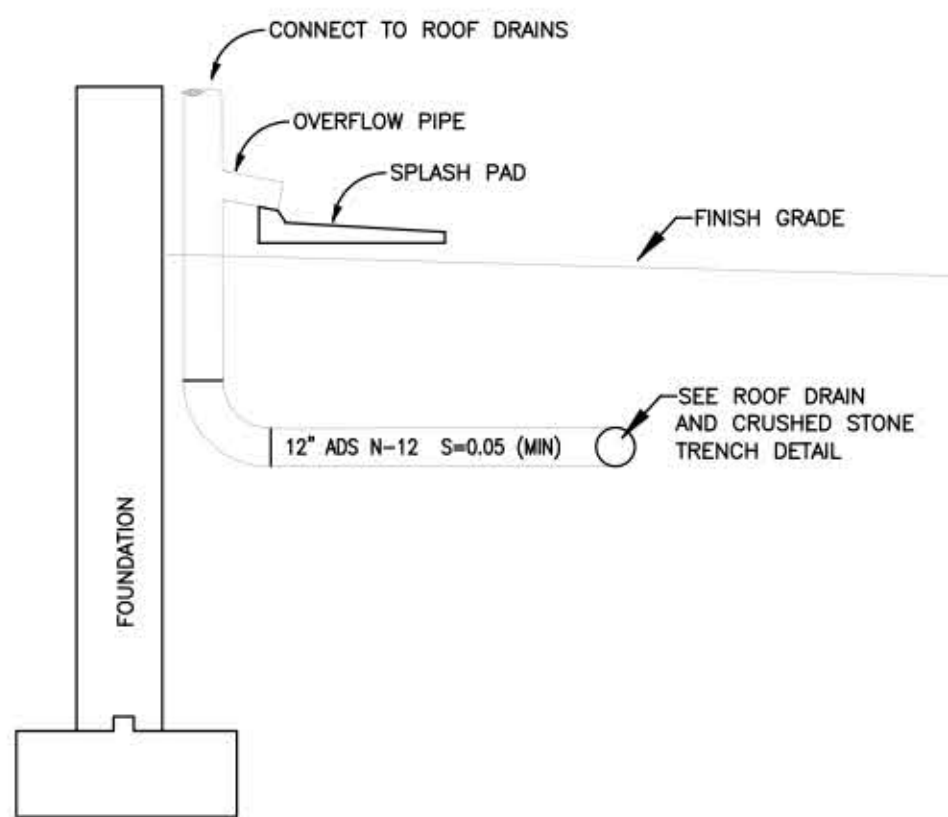
UNCOVER TEMPORARY DRAINAGE SEALS / FINISH PAVING ON ROADWAY



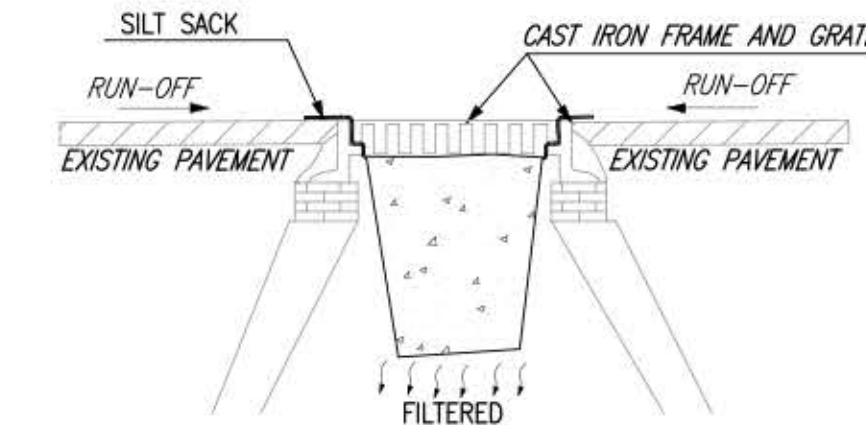
**ROOF DRAIN AND CRUSHED STONE TRENCH**  
(NOT TO SCALE)



**YARD DRAIN**  
NOT TO SCALE



**ROOF DRAIN CONNECTION DETAIL**  
(NOT TO SCALE)



NOTE: SILT SACKS SHALL BE INSPECTED DAILY AND SILT SHALL BE REMOVED WHEN ACCUMULATED TO ALLOW CATCH BASIN TO FUNCTION PROPERLY. REMOVE PERMANENTLY WHEN SITE STABILIZATION HAS OCCURRED.

**SILT SACK**  
(NOT TO SCALE)

CDS 2015-4C / 1515-3C UNIT(S)

RESPONSIBILITY FOR MAINTENANCE: OWNER

## NEW INSTALLATIONS

THE CONDITION OF EACH UNIT SHALL BE CHECKED AFTER EVERY RUNOFF EVENT FOR THE FIRST 30 DAYS. THE VISUAL INSPECTION SHALL ASCERTAIN THAT THE UNIT IS FUNCTIONING PROPERLY AND SHALL MEASURE THE AMOUNT OF SEDIMENT THAT HAS ACCUMULATED IN THE SUMP AND FLOATING TRASH AND DEBRIS IN THE SEPARATION CHAMBER. THIS CAN BE DONE WITH A CALIBRATED "DIP STICK" OR STADIA ROD SO THAT THE DEPTH OF DEPOSITION CAN BE TRACKED. SCHEDULES FOR INSPECTIONS AND CLEANOUT SHALL BE BASED ON STORM EVENTS AND POLLUTANT ACCUMULATION.

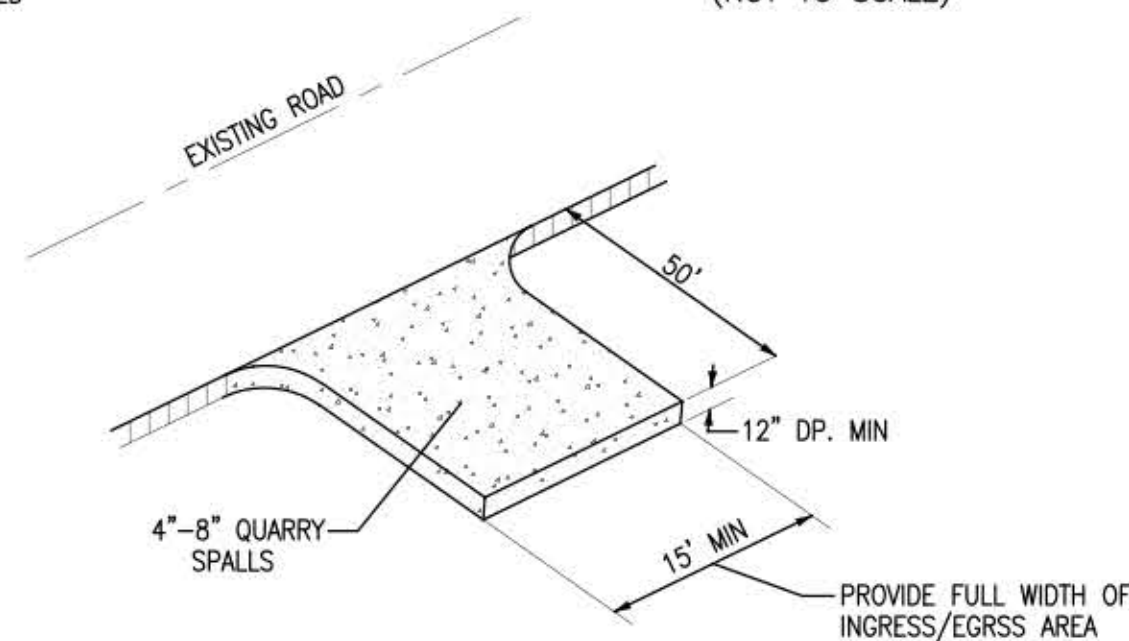
## ONGOING OPERATION

DURING THE RAINFALL SEASON, THE UNIT SHALL BE INSPECTED AT LEAST ONCE EVERY 30 DAYS. THE FLOATABLES SHALL BE REMOVED AND THE SUMP CLEANED WHEN THE SUMP IS AT A DEPTH OF 2 FEET. IF FLOATABLES ACCUMULATE MORE RAPIDLY THAN THE SETTLEABLE SOLIDS, THE FLOATABLES SHALL BE REMOVED USING A VACUUM TRUCK OR DIP NET WHEN THE LAYER IS TWO FEET THICK.

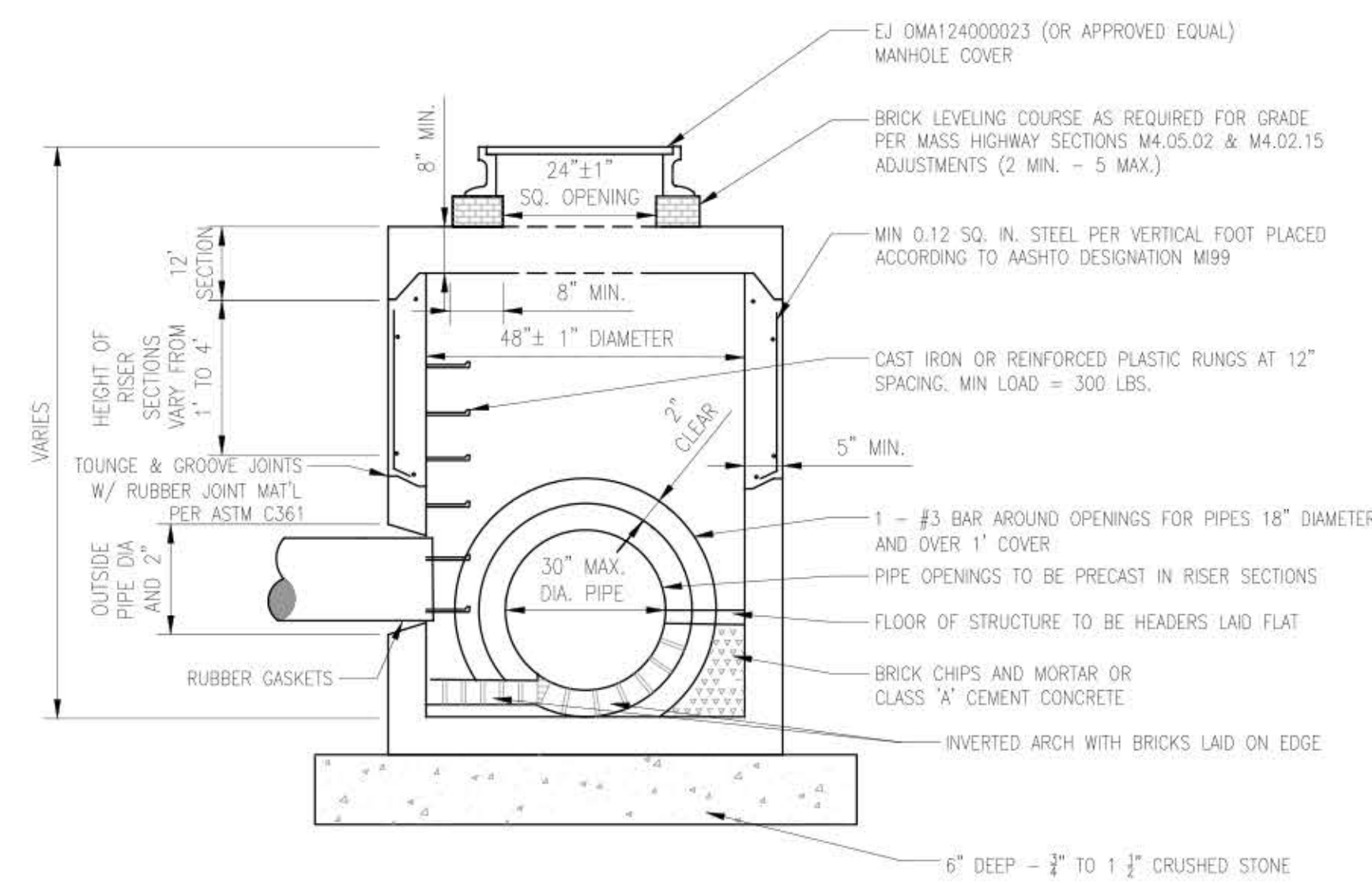
CLEANOUT OF THE UNITS SHALL BE PERFORMED NO LATER THAN MAY 1ST BECAUSE OF THE NATURE OF POLLUTANTS COLLECTED AND THE POTENTIAL FOR ODOR GENERATION FROM THE DECOMPOSITION OF MATERIAL COLLECTED AND RETAINED. THIS END OF SEASON CLEANOUT WILL ASSIST IN PREVENTING THE DISCHARGE OF PORE WATER FOR THE UNITS DURING PERIODS OF LOW RAINFALL. THE UNITS SHALL BE CLEANED AT LEAST TWICE YEARLY.

## CLEANOUT AND DISPOSAL

STANDARD VACUUMING OPERATIONS SHALL BE EMPLOYED IN THE CLEANOUT OF THE UNITS. DISPOSAL OF MATERIAL FROM THE UNITS SHALL BE IN ACCORDANCE WITH APPLICABLE LOCAL, STATE, AND FEDERAL REGULATIONS. DISPOSAL OF THE DECANT MATERIAL TO A POTW IS RECOMMENDED. FIELD DECANTING TO THE STORM DRAINAGE SYSTEM SHALL NOT BE PERMITTED. SOLIDS CAN BE DISPOSED SIMILAR TO NORMAL PRACTICES FOR MATERIALS COLLECTED FROM CATCH BASIN CLEANING.



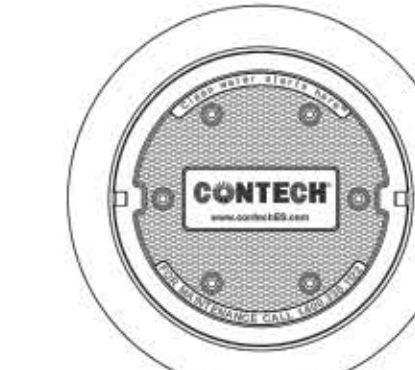
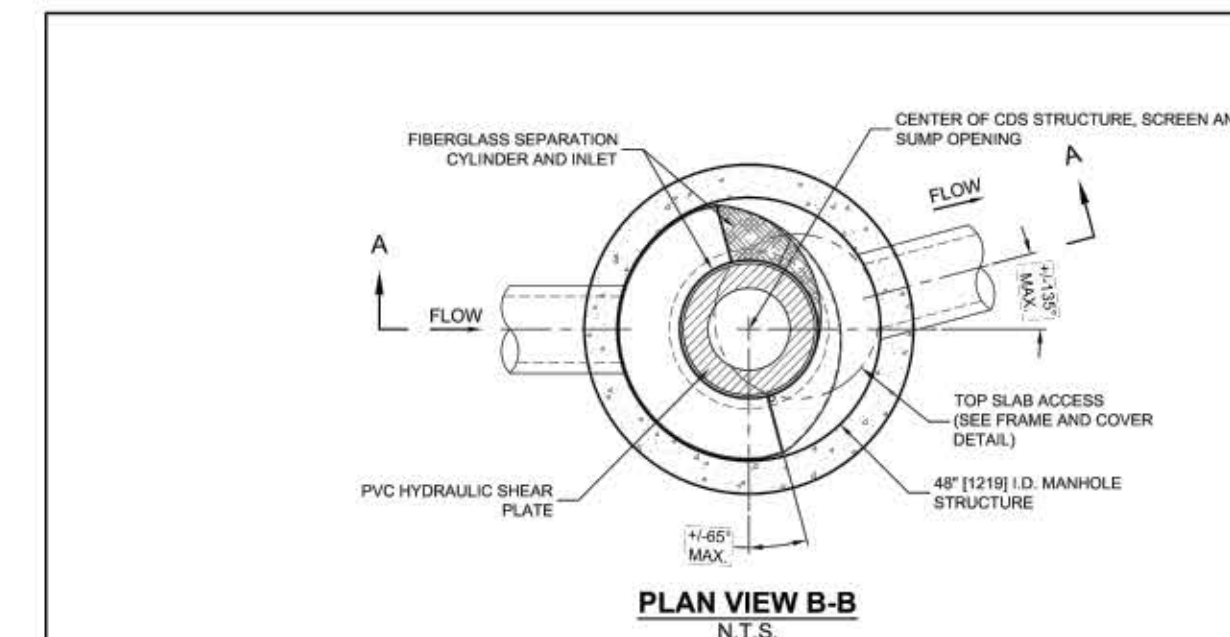
**CRUSHED STONE CONSTRUCTION ENTRANCE**  
(NOT TO SCALE)



**PRECAST CONCRETE MANHOLE**

1/2" = 1'-0"

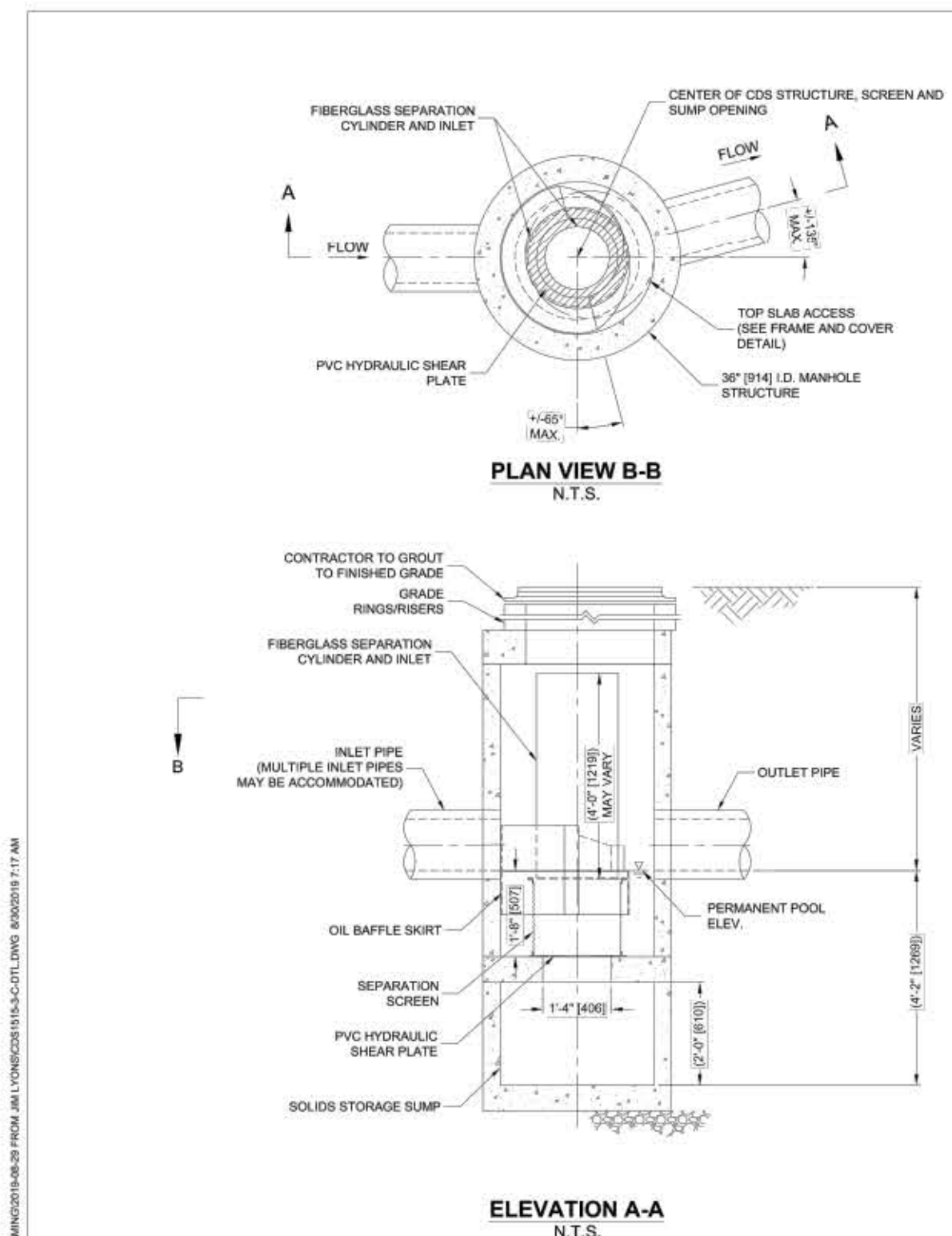
334913.01-01



- GENERAL NOTES**
1. CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
  2. DIMENSIONS MARKED WITH L ARE REFERENCE DIMENSIONS. ACTUAL DIMENSIONS MAY VARY.
  3. FOR FABRICATION DRAWINGS WITH DETAILED STRUCTURE DIMENSIONS AND WEIGHTS, PLEASE CONTACT YOUR CONTECH ENGINEERED SOLUTIONS LLC REPRESENTATIVE. [www.conteches.com](http://www.conteches.com)
  4. CDS WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING.
  5. STRUCTURE SHALL MEET AASHTO H20D AND CASTINGS SHALL MEET H20D (AASHTO M 300) LOAD RATING, ASSUMING GROUNDWATER ELEVATION AT, OR BELOW, THE OUTLET PIPE INVERT ELEVATION. ENGINEER OF RECORD TO CONFIRM ACTUAL GROUNDWATER ELEVATION.
  6. PVC HYDRAULIC SHEAR PLATE IS PLACED ON SHELF AT BOTTOM OF SCREEN CYLINDER. REMOVE AND REPLACE AS NECESSARY DURING MAINTENANCE CLEANING.
- INSTALLATION NOTES**
- A. ANY SUB-BASE BACKFILL DEPTH, AND/OR ANTI-FLOTATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD.
  - B. CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE CDS MANHOLE STRUCTURE (LIFTING CLUTCH PROVIDED).
  - C. CONTRACTOR TO ADD JOINT SEALANT BETWEEN ALL STRUCTURE SECTIONS AND ASSEMBLE STRUCTURE.
  - D. CONTRACTOR TO PROVIDE, INSTALL AND GROUT INLETS AND OUTLET PIPES. MATCH PIPE INVERTS WITH ELEVATIONS SHOWN.
  - E. 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.

**CONTECH**  
ENGINEERED SOLUTIONS LLC  
www.conteches.com  
8025 Centre Pointe Dr., Suite 400, West Chester, OH 45399  
937-338-1122 937-645-7900 937-645-7903 FAX

CDS2015-4-C  
INLINE CDS  
STANDARD DETAIL



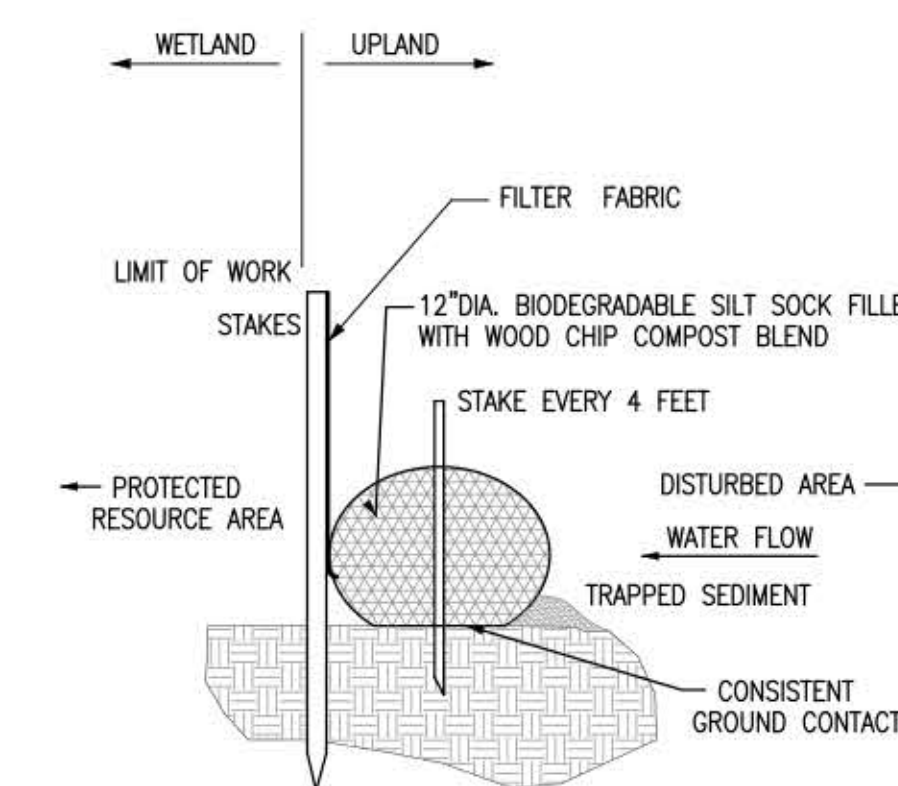
**CDS1515-3-C DESIGN NOTES**

THE STANDARD CDS1515-3-C CONFIGURATION IS SHOWN. ALTERNATE CONFIGURATIONS ARE AVAILABLE AND ARE LISTED BELOW. SOME CONFIGURATIONS MAY BE COMBINED TO SUIT SITE REQUIREMENTS.

- GENERAL NOTES**
1. CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
  2. 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)
  3. 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.
  4. STRUCTURE SHALL MEET AASHTO H20D 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 M300 AND BE CAST WITH THE CONTECH LOGO.
  5. IF REQUIRED, PVC HYDRAULIC SHEAR PLATE IS PLACED ON SHELF AT BOTTOM OF SCREEN CYLINDER. REMOVE AND REPLACE AS NECESSARY DURING MAINTENANCE CLEANING.
  6. CDS STRUCTURE SHALL BE PRECAST CONCRETE CONFORMING TO ASTM C-478 AND AASHTO LOAD FACTOR DESIGN METHOD.
- INSTALLATION NOTES**
- A. ANY SUB-BASE BACKFILL DEPTH, AND/OR ANTI-FLOTATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD.
  - B. CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE CDS MANHOLE STRUCTURE.
  - C. CONTRACTOR TO INSTALL JOINT SEALANT BETWEEN ALL STRUCTURE SECTIONS AND ASSEMBLE STRUCTURE.
  - D. CONTRACTOR TO PROVIDE, INSTALL AND GROUT INLETS AND OUTLET PIPES. MATCH PIPE INVERTS WITH ELEVATIONS SHOWN. ALL PIPE CENTERS LINES TO MATCH PIPE OPENING CENTER LINES.
  - E. 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.

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CDS1515-3-C  
ONLINE CDS  
STANDARD DETAIL



**SILT FENCE/SOCK DETAIL**  
NOT TO SCALE

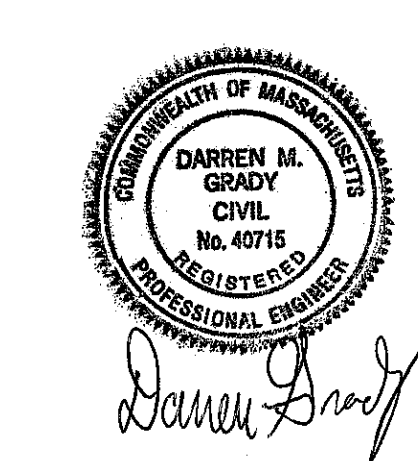
REVISIONS	
9/9/19	PLANNING, CON COM, TEC. REVIEW COMMENTS
12/16/19	PLANNING BOARD COMMENTS - MIXED USE
1/27/20	PEER REVIEW COMMENTS
2/27/20	PLANNING BOARD COMMENTS

# PHASE 2 SITE PLAN

#81 WEST UNION STREET  
ASHLAND, MASSACHUSETTS

PREPARED FOR:  
81 WEST UNION STREET LLC  
C/O WILLIAM J. RODENHISER  
70 BARTZAK DRIVE  
HOLLISTON, MA 01746

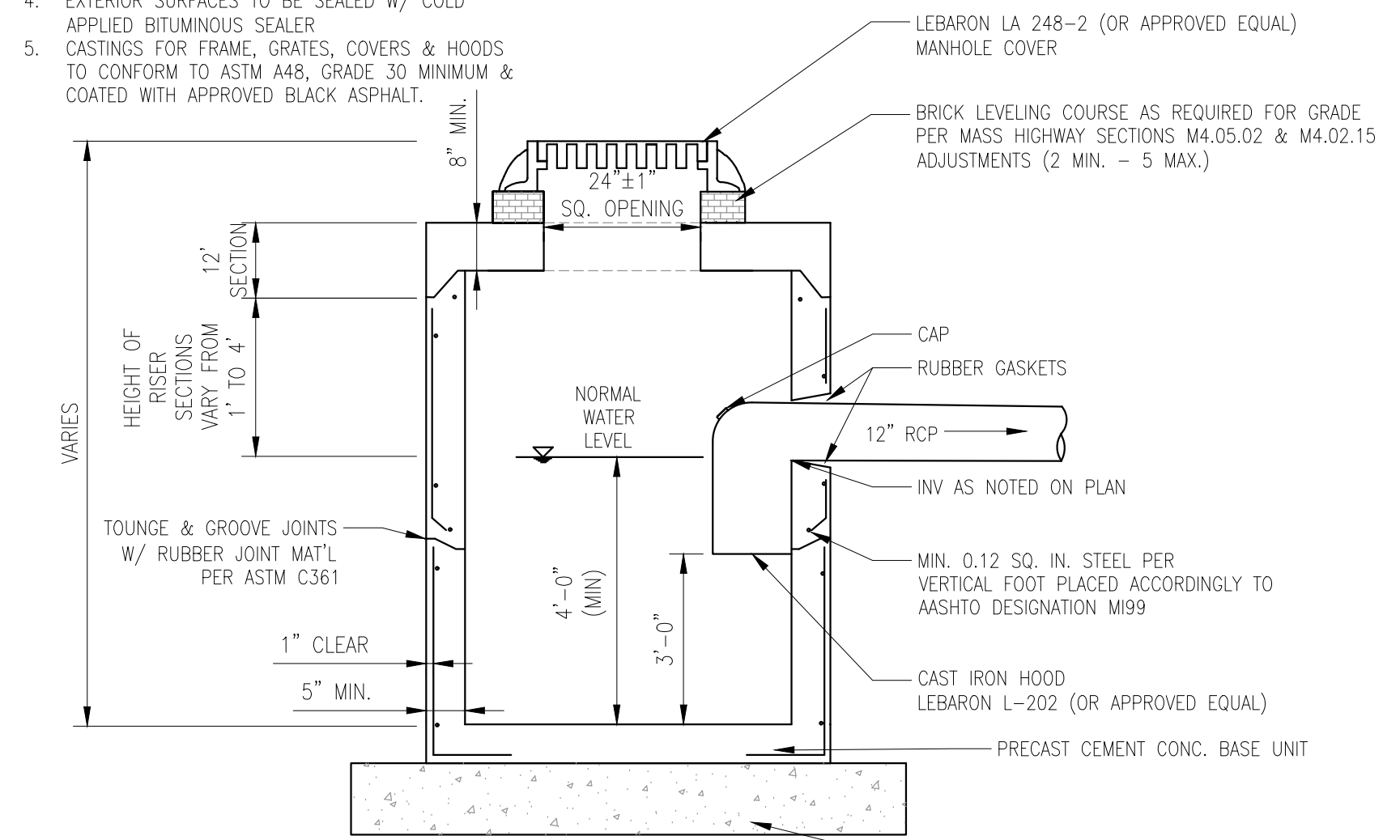
JUNE 13, 2019  
SCALE: AS SHOWN  
JOB No. 18-284



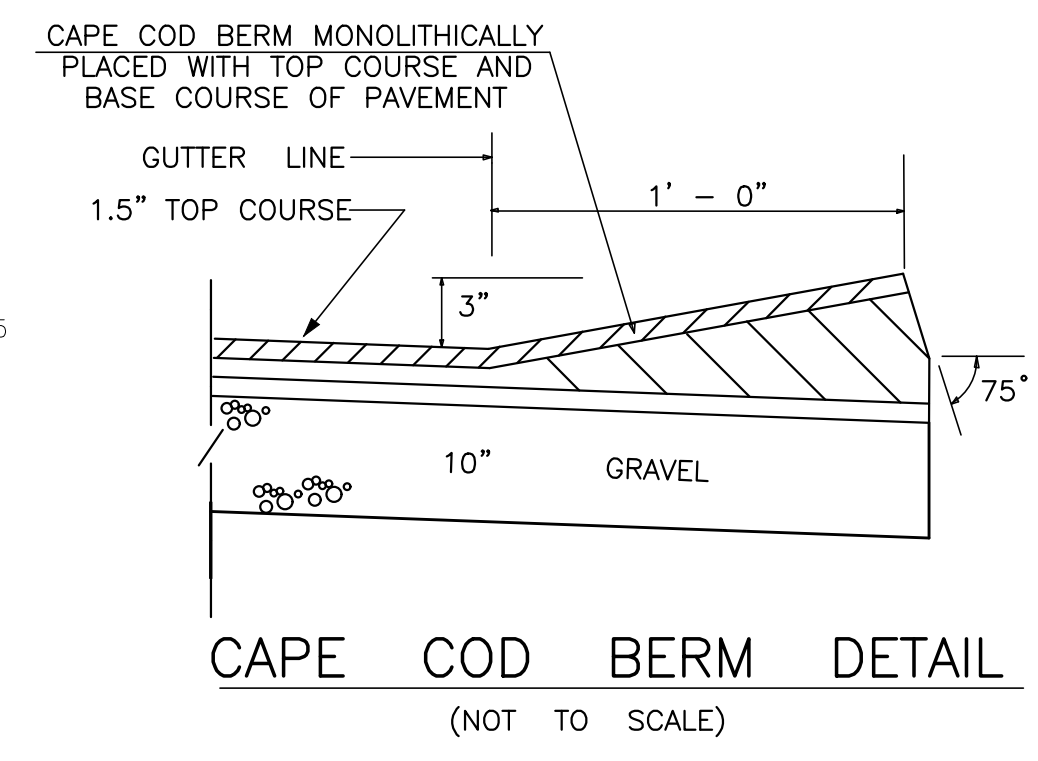
**GRADY CONSULTING, L.L.C.**  
Civil Engineers and Land Surveyors  
71 Evergreen Street, Suite 1, Kingston, MA 02364  
Phone (781) 585-2300 Fax (781) 585-2378



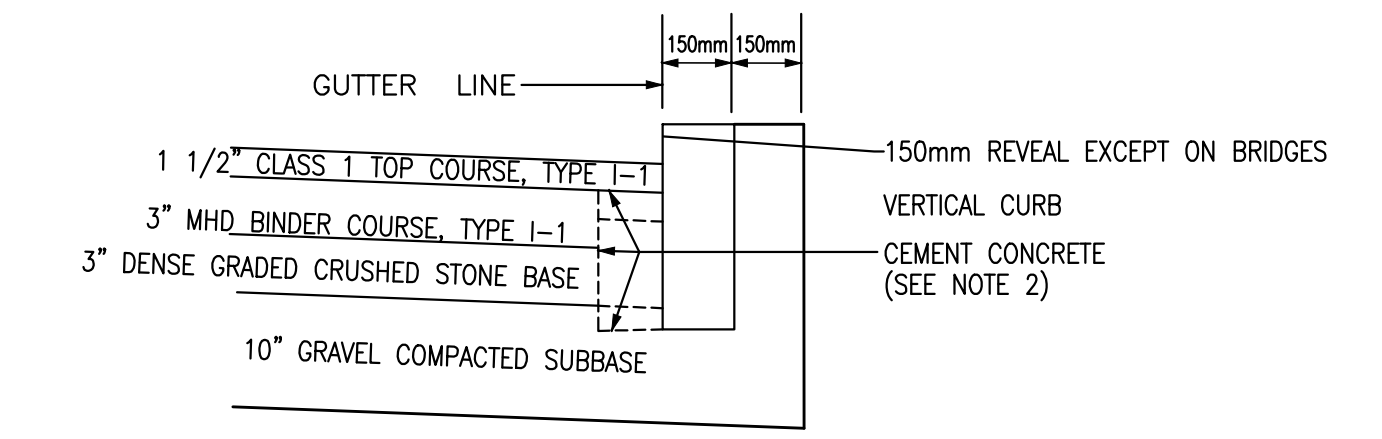
- NOTES:
1. PRECAST CONCRETE UNITS TO CONFORM TO THE MASS HIGHWAY SECTION M.4.01.14
  2. 4000 PSI MINIMUM COMPRESSIVE STRENGTH
  3. PRECAST UNITS TO BE HS-20 LOADING
  4. EXTERIOR SURFACES TO BE SEALED W/ COLD APPLIED BITUMINOUS SEALER
  5. CASTINGS FOR FRAME, GRATES, COVERS & HOODS TO CONFORM TO ASTM A48, GRADE 30 MINIMUM & COATED WITH APPROVED BLACK ASPHALT.



**PRECAST GASOLINE TRAP CATCH BASIN**  
 1/2" = 1'-0" 334913.02-01



**CAPE COD BERM DETAIL**  
 (NOT TO SCALE)

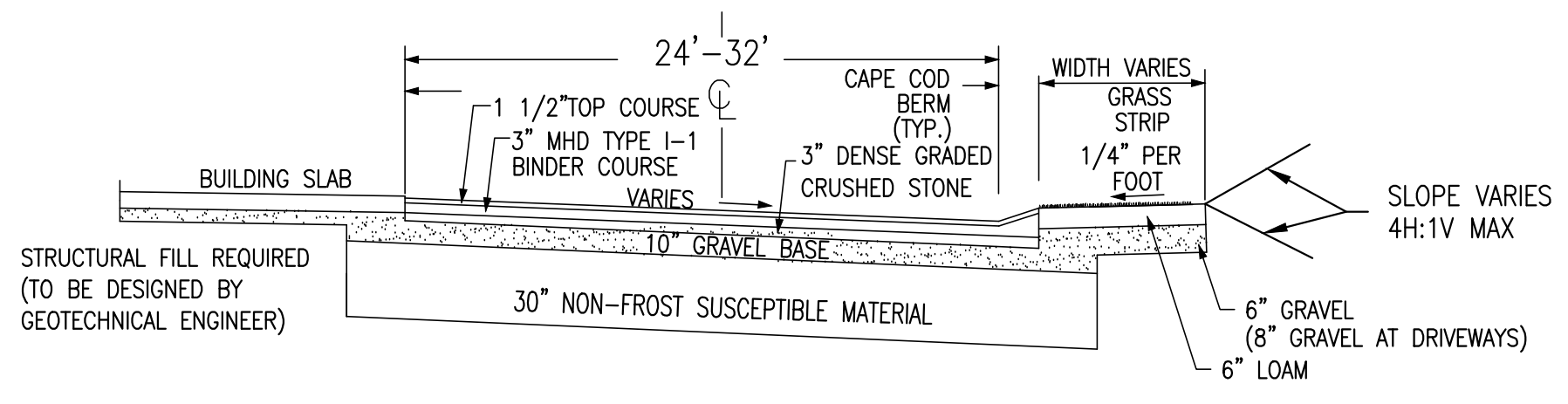


ALL MATERIALS AND CONSTRUCTION METHODOLOGY SHALL CONFORM TO THE MASSACHUSETTS HIGHWAY DEPARTMENT'S STANDARD SPECIFICATIONS.

PROCEDURE DESCRIBED HEREIN IS APPLICABLE ONLY IF CURB IS TO BE SET AFTER BASE AND/OR BINDER COURSES ARE IN PLACE OTHERWISE CEMENT CONC. WILL BE ELIMINATED AND GRAVEL BROUGHT UP TO BOTTOM OF BASE COURSE. FOR DESCRIPTION, MATERIALS AND CONSTRUCTION METHOD, SEE STANDARD SPECIFICATIONS

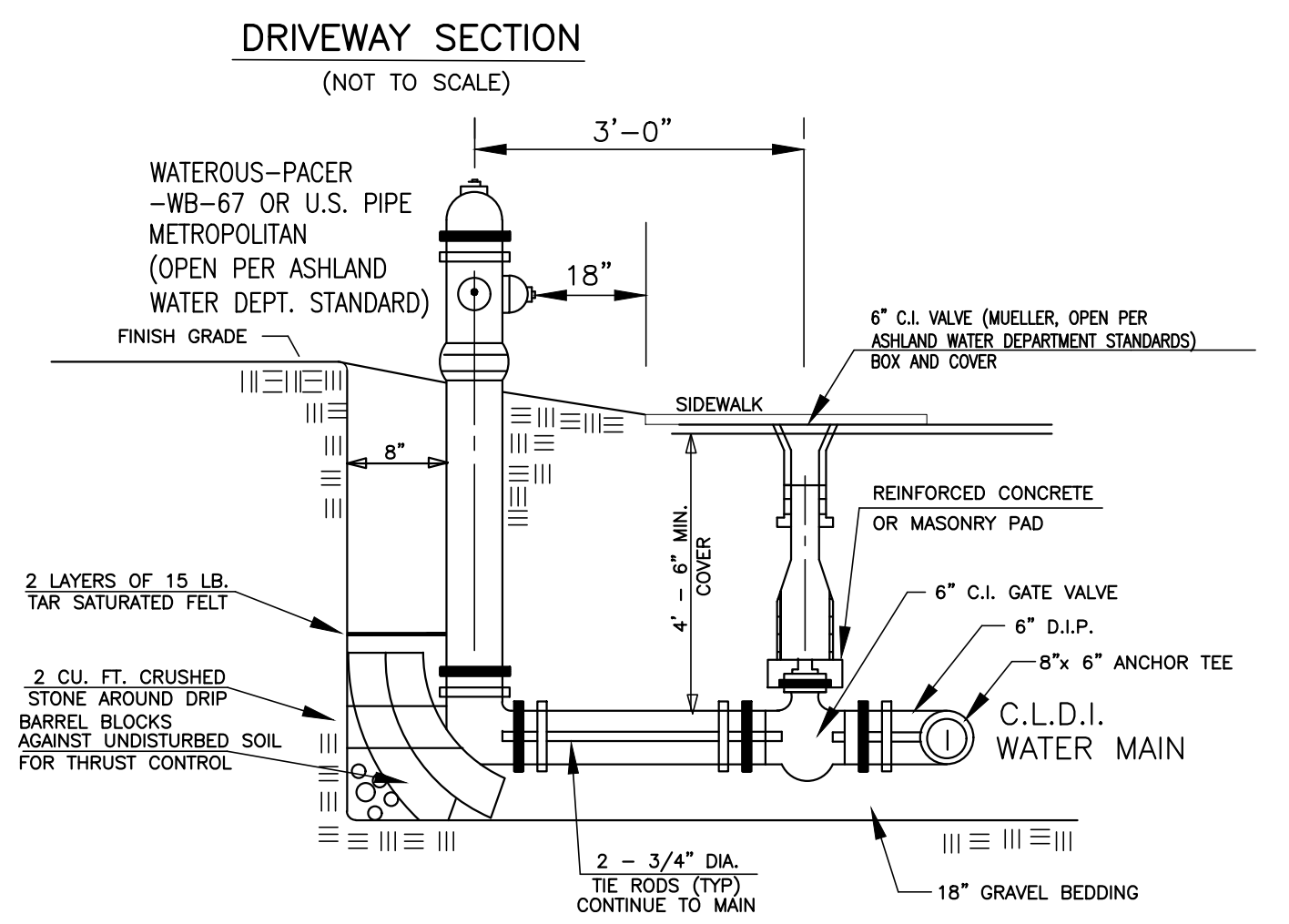
NOTES:

1. CUT NEAT LINE 150mm FROM CURB LINE AND REMOVE BINDER, BASE AND STONE REPLACE WITH CEMENT CONCRETE.
2. ANY DESIGNATED CEMENT CONCRETE THAT IS ACCEPTABLE TO THE DEPT. UNDER SECTION M4 OF THE STANDARD SPECIFICATIONS, ALL TEST REQUIREMENTS ARE WAIVED. BITUMINOUS CONCRETE IS NOT TO BE USED AS A SUBSTITUTE.



NOTE:

1. FILL BELOW THE ROADWAY SHALL BE PLACED IN LIFTS HAVING A COMPACTED THICKNESS OF 6-INCHES AND BE COMPACTED TO A MINIMUM OF 95 PERCENT OF ITS MAXIMUM MODIFIED PROCTOR DRY DENSITY.
2. PAVEMENT SHALL HAVE A DENSITY EQUAL TO OR GREATER THAN 95 PERCENT MAXIMUM DENSITY (NUCLEAR IN PLACE TEST).



**TYPICAL HYDRANT DETAIL**  
 (NOT TO SCALE)

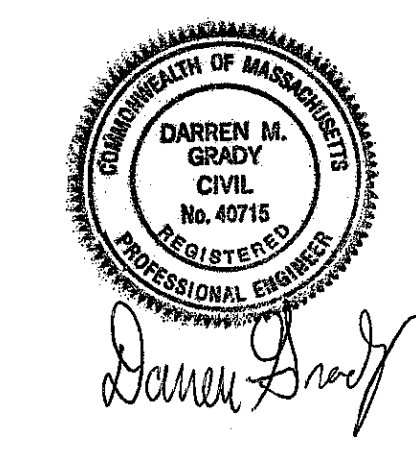
REVISIONS	
9/9/19	PLANNING, CON COM, TEC. REVIEW COMMENTS
12/16/19	PLANNING BOARD COMMENTS - MIXED USE
1/27/20	PEER REVIEW COMMENTS
2/27/20	PLANNING BOARD COMMENTS

## PHASE 2 SITE PLAN

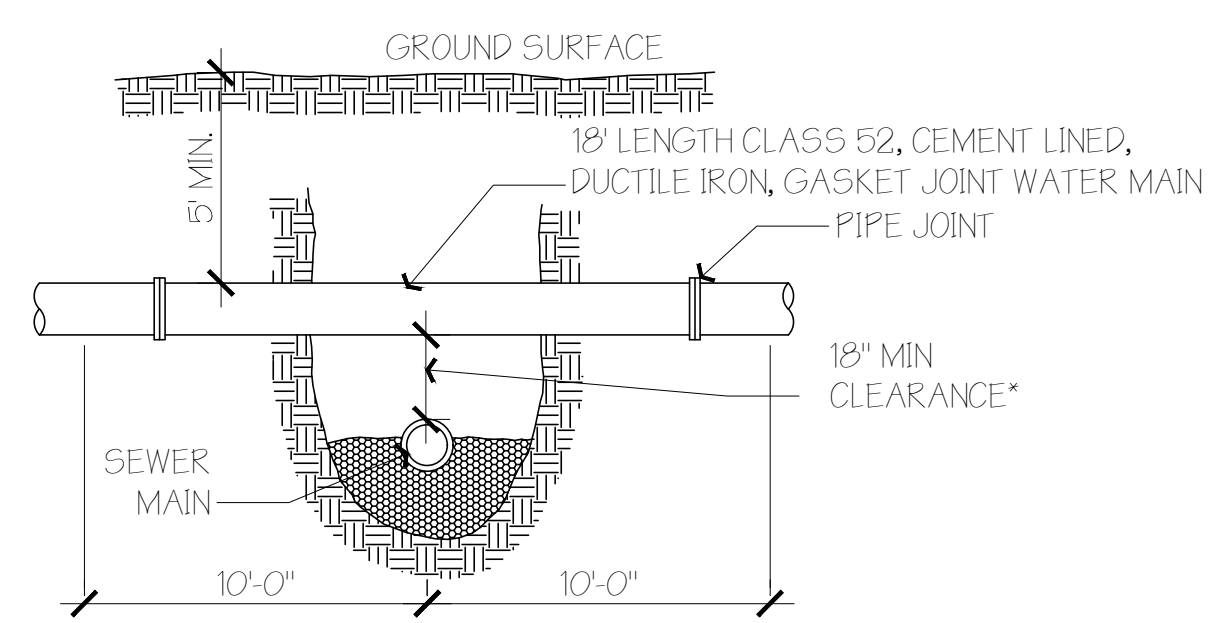
#81 WEST UNION STREET  
 ASHLAND, MASSACHUSETTS

PREPARED FOR:  
 81 WEST UNION STREET LLC  
 C/O WILLIAM J. RODENHISER  
 70 BARTZAK DRIVE  
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JUNE 13, 2019  
 SCALE: AS SHOWN  
 JOB No. 18-284

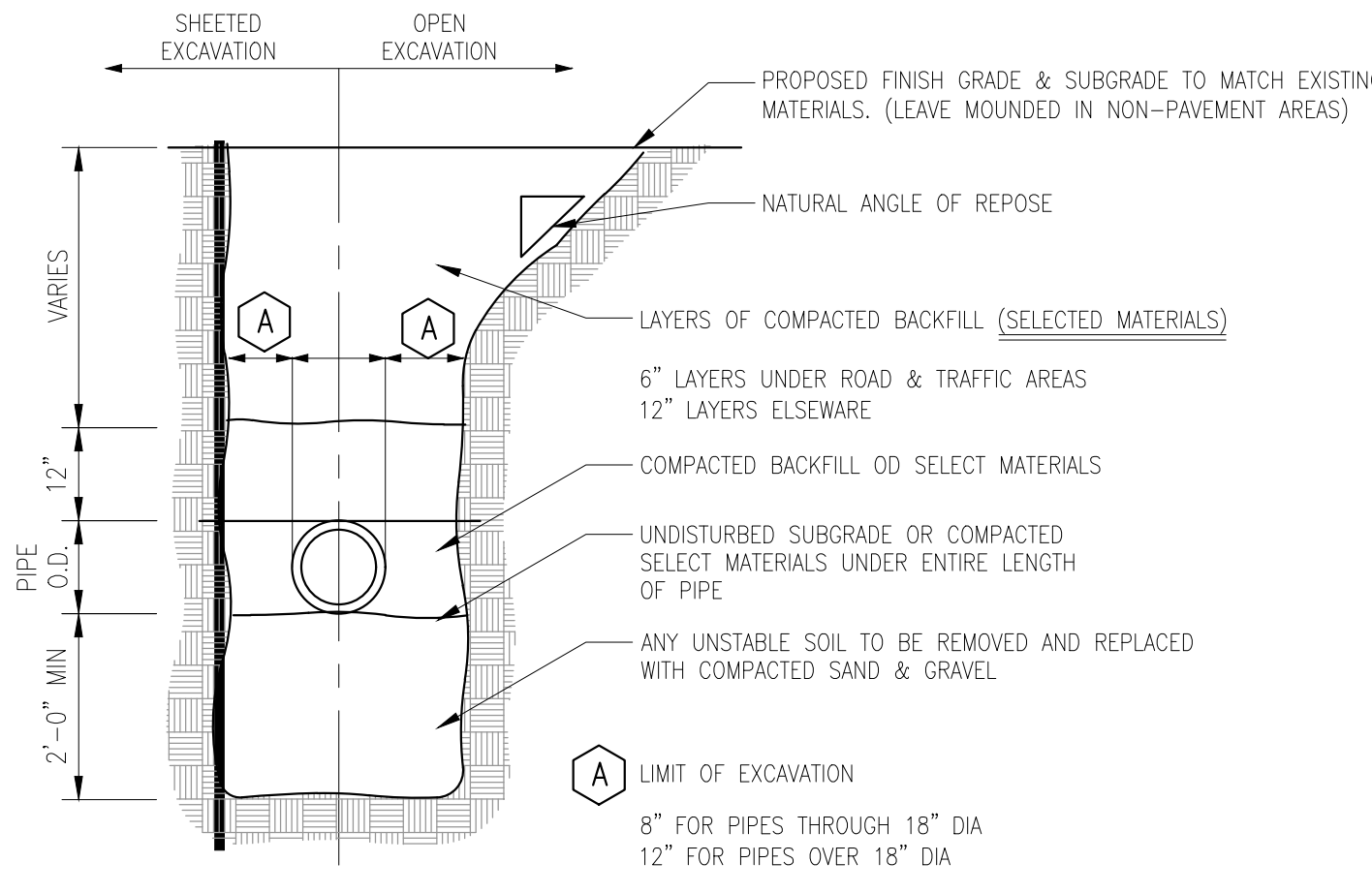


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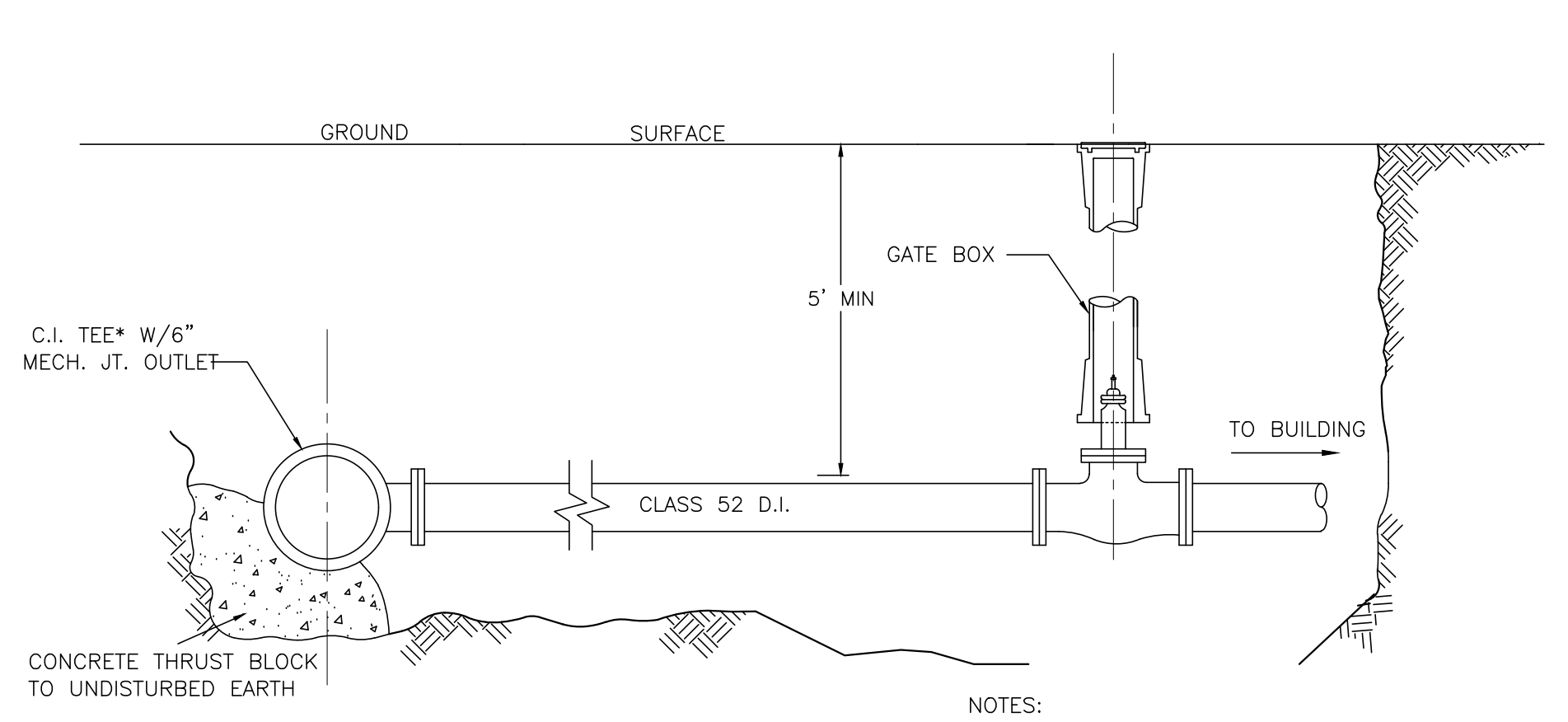
WHEN THE CROSSING AS SHOWN IS LESS THAN 18\"/>

**TYPICAL WATER CROSSING DETAIL**  
 N.T.S. DRAWING 331102-01



NOTE:  
 WATER MAIN SHALL HAVE A MINIMUM OF 5 FEET OF COVER

**TRENCH EXCAVATION DETAIL**  
 1/2" = 1'-0" 334913.03-01



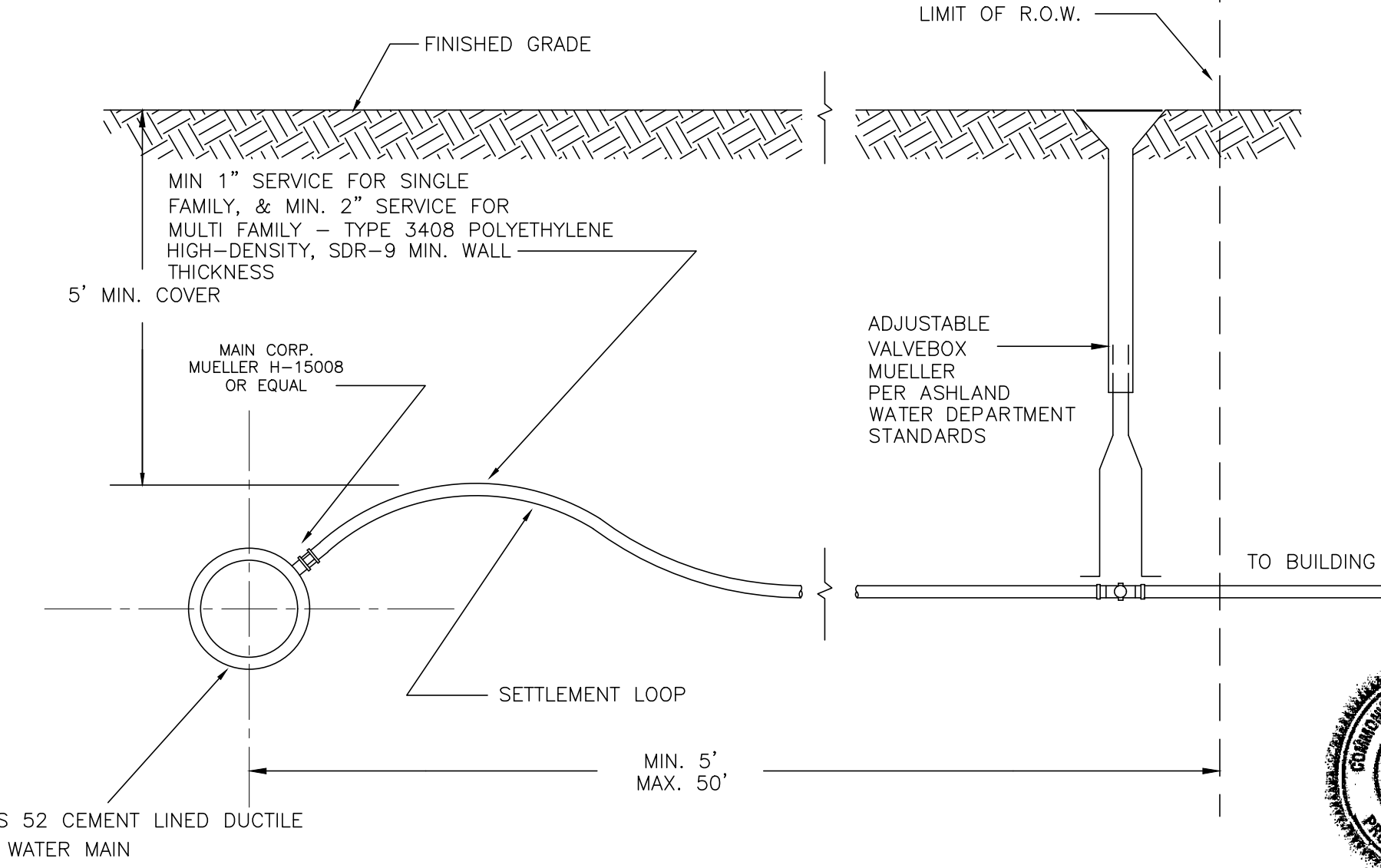
NOTES:

- ALL VALVES AND FITTINGS ARE TO BE MECHANICAL JOINTS
- VALVE BOXES SHALL BE CAST IRON, ADJUSTABLE, SLIP AND MANUFACTURED IN NORTH AMERICA.
- VALVES SHALL BE IN ACCORDANCE WITH ASHLAND WATER DEPARTMENT STANDARDS

SEE PLAN FOR FIRE SERVICE SIZES

FIRE SERVICE SHALL BE INSTALLED IN ACCORDANCE WITH ASHLAND WATER DEPARTMENT AND FIRE DEPARTMENT STANDARDS

**FIRE SERVICE DETAIL**  
 (CONNECTION TO PROPOSED WATER MAIN)  
 (NOT TO SCALE)



**TYPICAL PERMANENT SERVICE CONNECTION**  
 2\"/>
 (NOT TO SCALE)



