

**ZONING DATA**

DISTRICT: HIGHWAY COMMERCE (C1)  
 EXISTING USE: MIXED STORAGE WAREHOUSE FACILITY (UNDER CONSTRUCTION)  
 PROPOSED USE: MIXED USE (RETAIL/OFFICE) RESIDENTIAL

REQUIRED	PROPOSED
LOT AREA: 30,000 SF	378,381 SF
LOT FRONTAGE: 150 FT	242.38 FT
LOT WIDTH: 150 FT	242.38 FT
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	
MAX LOT COVERAGE: (-2)	64.325 SF (17.08%)*
IMPERVIOUS COVERAGE	151,352 SF (40.02%)*

\*\* LOT COVERAGE AND IMPERVIOUS COVERAGE INCLUDE FACILITY.  
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**PARKING SUMMARY**  
 PROPOSED PARKING LOT DESIGN PROVIDES FOR:  
 (7) STANDARD PARKING SPACES: 9'-0" x 20'-0"  
 (5) HANDICAP SPACES: 9'-0" x 20'-0"  
**PROPOSED PARKING:**

RETAIL/OFFICE: 1 SPACE PER 180 SF LEASABLE FLOOR SPACE	REQUIRED
RESIDENTIAL UNITS: 2 SPACES PER UNIT	
GENERAL SERVICE: 1 SPACE PER 1.3 EMPLOYEES	

**MIXED USE:**

12 RESIDENTIAL UNITS	= 24 SPACES
5,961 SF RETAIL/OFFICE	= 31 SPACES
GENERAL SERVICE 37 EMPLOYEES	= 28 SPACES
<b>TOTALS</b>	<b>86 REQUIRED SPACES</b>
	<b>87 SPACES PROVIDED</b>



**PLAN REFERENCES:**

1. 1982 COUNTY LAYOUT OF UNION STREET
2. PLAN No. 1411 OF 1948
3. PLAN No. 1019 OF 1953
4. PLAN No. 1078 OF 1975
5. PLAN No. 286 OF 1993

**REVISIONS:**

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

**RECORD OWNER:**

ASSESSOR MAP 19 LOT 67  
 81 WEST UNION STREET LLC  
 70 BARTZAK DR  
 HOLISTON, MA 01746  
 DEED BOOK 6498 PAGE 299  
 PORTION OF LOT 9  
 BOOK 7348 PAGE 139

**SHEET INDEX**

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

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

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

JUNE 13, 2019  
 SCALE: 1"=40'  
 JOB NO. 18-204

**GRADY CONSULTING, L.L.C.**  
 Civil Engineers and Land Surveyors  
 71 Engeman Street, Suite 1, Kingston, MA 02364  
 Phone (781) 565-2300 Fax (781) 565-2378



**SOIL LOGS**

(NOT TO SCALE)

DEEP TEST HOLE#08-8 (September 2008)			
Depth	Soil Horizon	Soil Texture	Soil Color
0'-12"	A	Sandy Loam	10R8/3
12'-27"	Bw	Sandy Loam	10R8/8
27'-50"	C1	Fine Sandy Loam	9Y3/2
50'-120"	C2	Sand (medium)	10R8/3
Monitoring 42"	Washing 80"	Standing 80"	Refused Above
E.S.H.C.W. = 42" EL.=238.82 MGD Datum			

DEEP TEST HOLE#12-09 (May 2012)			
Depth	Soil Horizon	Soil Texture	Soil Color
0'-12"	A	Loam	10R8/3
6'-42"	B	Sandy Loam	10R8/8
42'-188"	C	Fine Sandy Loam	2.5Y3/3
Monitoring 188"	Washing 188"	Standing 188"	Refused Above
E.S.H.C.W. = 188" EL.=237.52 MGD Datum			

DEEP TEST HOLE#13-05 (January 2014)			
Depth	Soil Horizon	Soil Texture	Soil Color
0'-17"	A	Loam	10R8/8
17'-38"	B	Sandy Loam	10R8/8
38'-122"	C	Sand	2.5Y3/3
Monitoring 122"	Washing 122"	Standing 122"	Refused Above
E.S.H.C.W. > 122" EL.=238.42 MGD Datum			

DEEP TEST HOLE#13-01 (January 2014)			
Depth	Soil Horizon	Soil Texture	Soil Color
0'-8"	A	Loam	10R8/2
8'-24"	B	Sandy Loam	10R8/8
24'-54"	C1	Sandy Loam	9Y3/3
54'-102"	C2	Sand (medium)	2.5Y3/4
Monitoring 102"	Washing 102"	Standing 102"	Refused Above
E.S.H.C.W. = 28" EL.=237.82 MGD Datum			

MONITORING WELL #12-09 READINGS			
BOTTOM DEPTH = 13.8' (EL.=237.72 MGD)			
Date	Water Depth	Elevation	Datum
May 2012	>13.8'	<237.72	MGD
January 2014	>13.8'	<237.72	MGD

MONITORING WELL #13-01 READINGS			
BOTTOM DEPTH = 8.5' (EL.=235.82 MGD)			
Date	Water Depth	Elevation	Datum
January 2014	8.5'	237.82	MGD

MONITORING WELL #13-03 READINGS			
BOTTOM DEPTH = 11.0' (EL.=238.42 MGD)			
Date	Water Depth	Elevation	Datum
January 2014	>11'	238.42	MGD

DEEP TEST HOLE#16-01 (NOVEMBER 2016)			
Depth	Soil Horizon	Soil Texture	Soil Color
0'-12"	A	Sandy Loam	10R8/2
12'-32"	Bw	Sandy Loam	10R8/8
32'-72"	C1	Sand	2.5Y3/3
72'-120"	C2	Gravelly Loamy Sand	2.5Y3/4
Monitoring 120"	Washing 120"	Standing 120"	Refused Above
E.S.H.C.W. 210" EL.=237.22 MGD Datum			

DEEP TEST HOLE#16-02 (NOVEMBER 2016)			
Depth	Soil Horizon	Soil Texture	Soil Color
0'-12"	A	Sandy Loam	10R8/3
12'-36"	Bw	Sandy Loam	10R8/8
36'-94"	C1	Sandy Loam	2.5Y3/4
84'-108"	C2	Loamy Sand	2.5Y3/4
108'-114"	C3	Coarse Loamy Sand	2.5Y3/4
Monitoring 114"	Washing 108"	Standing 108"	Refused Above
E.S.H.C.W. 40" EL.=238.52 MGD Datum			

DEEP TEST HOLE#16-03 (NOVEMBER 2016)			
Depth	Soil Horizon	Soil Texture	Soil Color
0'-12"	A	Sandy Loam	10R8/3
12'-38"	Bw	Sandy Loam	10R8/8
38'-72"	C1	Sandy Loam	2.5Y3/4
72'-96"	C2	Loamy Sand	2.5Y3/4
Monitoring 96"	Washing 80"	Standing 80"	Refused Above
E.S.H.C.W. 40" EL.=240.92 MGD Datum			

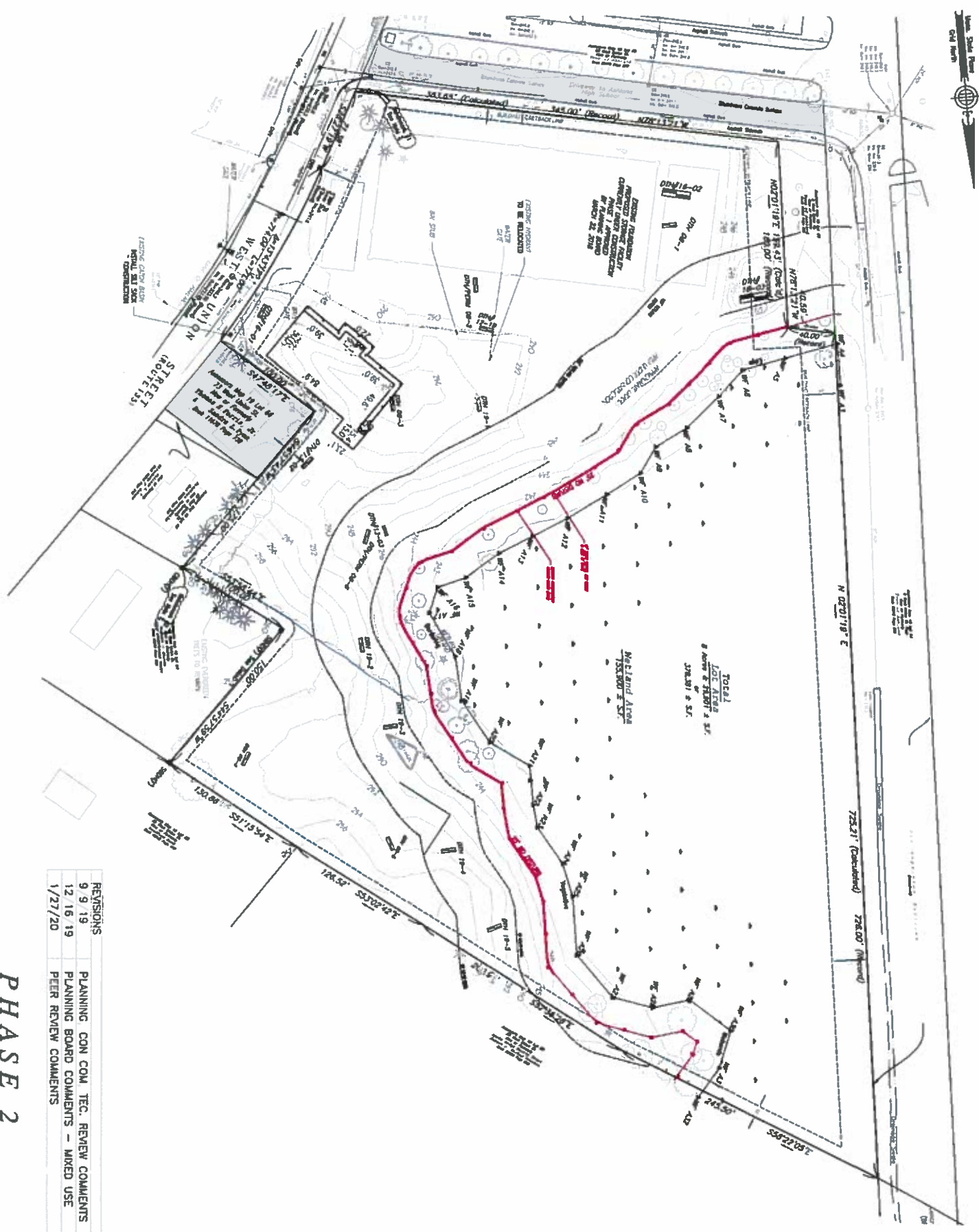
DEEP TEST HOLE#19-01 (JULY 2019)			
Depth	Soil Horizon	Soil Texture	Soil Color
0'-24"	C	Loamy Sand	2.5Y3/2
Monitoring 24"	Washing 24"	Standing 24"	Refused Above
E.S.H.C.W. 2120" EL.=238.92 MGD Datum			

DEEP TEST HOLE#19-02 (JULY 2019)			
Depth	Soil Horizon	Soil Texture	Soil Color
0'-12"	C	Loamy Sand	2.5Y3/2
Monitoring 12"	Washing 12"	Standing 12"	Refused Above
E.S.H.C.W. 2182" EL.=238.42 MGD Datum			

DEEP TEST HOLE#19-03 (AUGUST 2019)			
Depth	Soil Horizon	Soil Texture	Soil Color
0'-6"	A	Sandy Loam	10R8/3
6'-32"	Bw	Sandy Loam	10R8/8
32'-148"	C	Loamy Sand	2.5Y3/4
Monitoring 148"	Washing 140"	Standing 140"	Refused Above
E.S.H.C.W. 2158" EL.=238.82 MGD Datum			

DEEP TEST HOLE#19-04 (AUGUST 2019)			
Depth	Soil Horizon	Soil Texture	Soil Color
0'-6"	A	Sandy Loam	10R8/3
6'-38"	Bw	Sandy Loam	10R8/8
38'-192"	C	Loamy Sand	2.5Y3/4
Monitoring 192"	Washing 180"	Standing 180"	Refused Above
E.S.H.C.W. 2192" EL.=238.62 MGD Datum			

DEEP TEST HOLE#19-05 (AUGUST 2019)			
Depth	Soil Horizon	Soil Texture	Soil Color
0'-6"	A	Sandy Loam	10R8/3
6'-24"	Bw	Sandy Loam	10R8/8
24'-188"	C	Loamy Sand	2.5Y3/4
Monitoring 188"	Washing 180"	Standing 180"	Refused Above
E.S.H.C.W. 2188" EL.=239.82 MGD Datum			



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

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

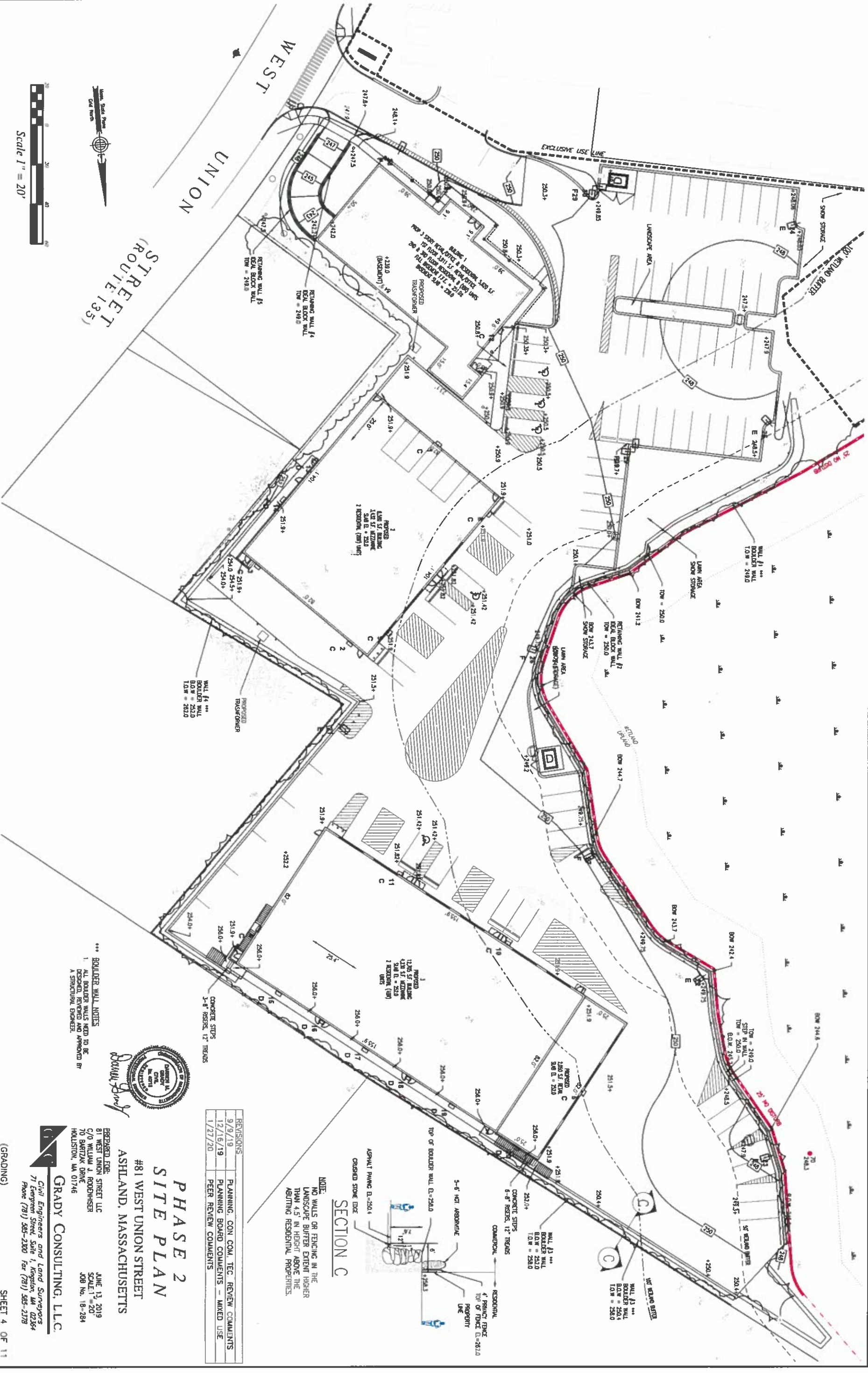


PREPARED FOR:  
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C/O WILLIAM L. RODEHISER  
70 BARTZAK DRIVE  
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SCALE: 1"=40'  
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Scale 1" = 20'

WEST UNION STREET  
(ROUTE 135)

\*\*\* BOULDER WALL NOTES  
1. ALL BOULDER WALLS NEED TO BE DESIGNED, REVIEWED AND APPROVED BY A STRUCTURAL ENGINEER.



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

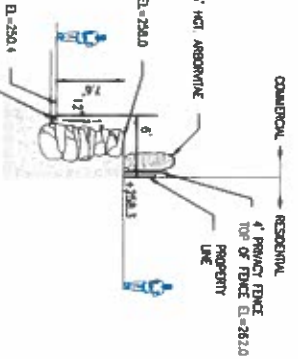
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BY WEST UNION STREET LLC  
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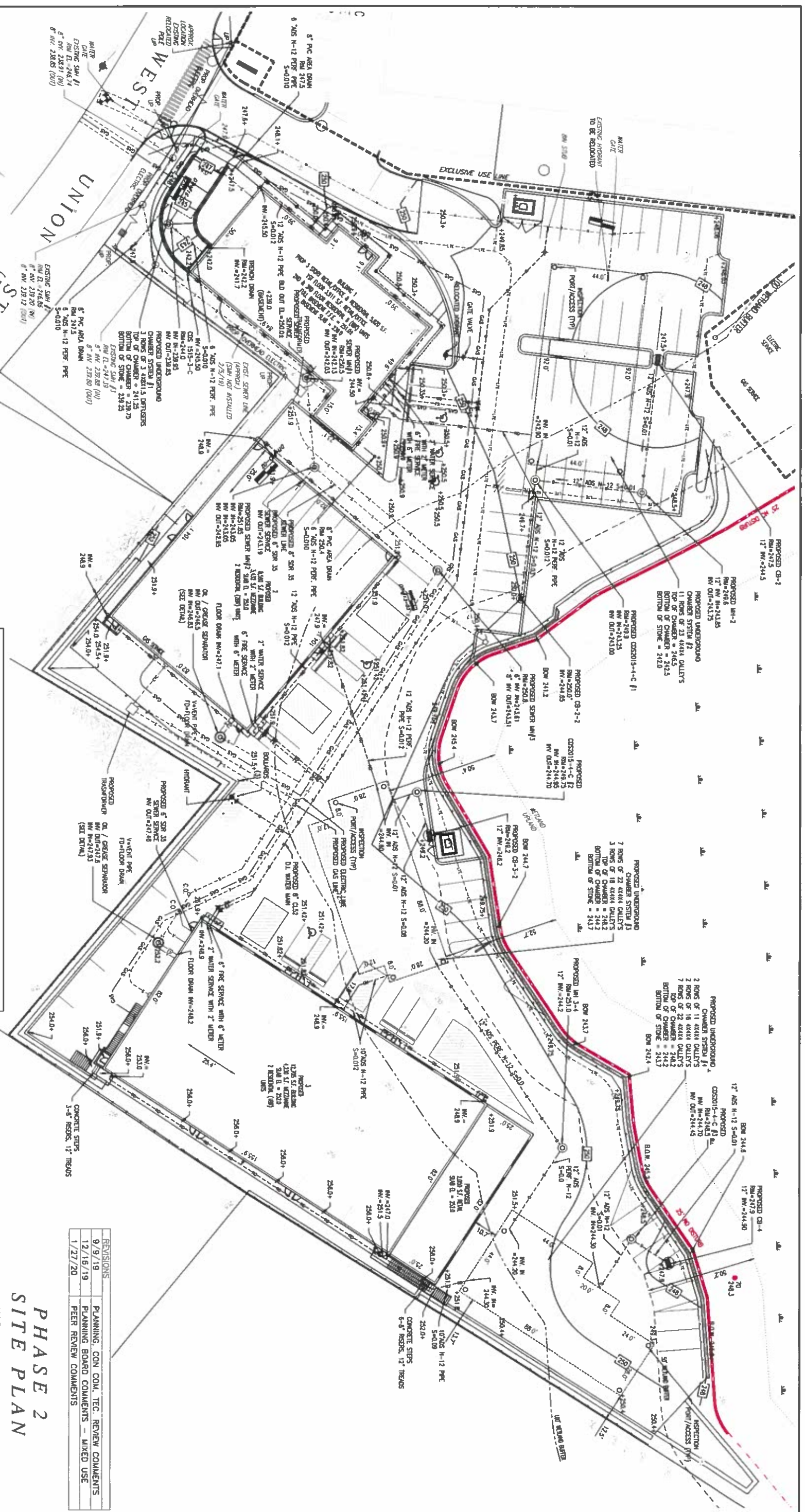
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2	12/16/19	PLANNING BOARD COMMENTS - MIXED USE
3	1/27/20	PEER REVIEW COMMENTS

**NOTE:**  
NO WALLS OR FENCING IN THE LANDSCAPE BUTTER EXIST HIGHER THAN 4.5' IN HEIGHT ABOVE THE ADJUTING RESIDENTIAL PROPERTIES.

**SECTION C**



(GRADING)



Scale 1" = 20'

Sewer Flows			
Building #	Unit Size	Units	Flow Rate
1	3911	S.F. Office/Retail	75 gpd/1000 S.F.
1	8	Apartments	8 Apts x 2 BR = 16 BR x 110 GPD/BR
2	12	Employees	15 gpd/employee
2	2	Apartments	2 Apts x 2 BR = 4 BR x 110 GPD/BR
3	25	Employees	15 gpd/employee
3	2	Apartments	2 Apts x 1 BR = 2 BR x 110 GPD/BR
3	2050	S.F. Office/Retail	75 gpd/1000 S.F.
			<b>Totals (gpd)</b>
			283
			1760
			180
			440
			375
			220
			154
			<b>3422</b>

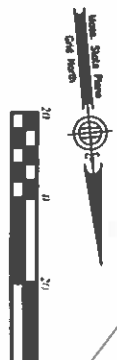
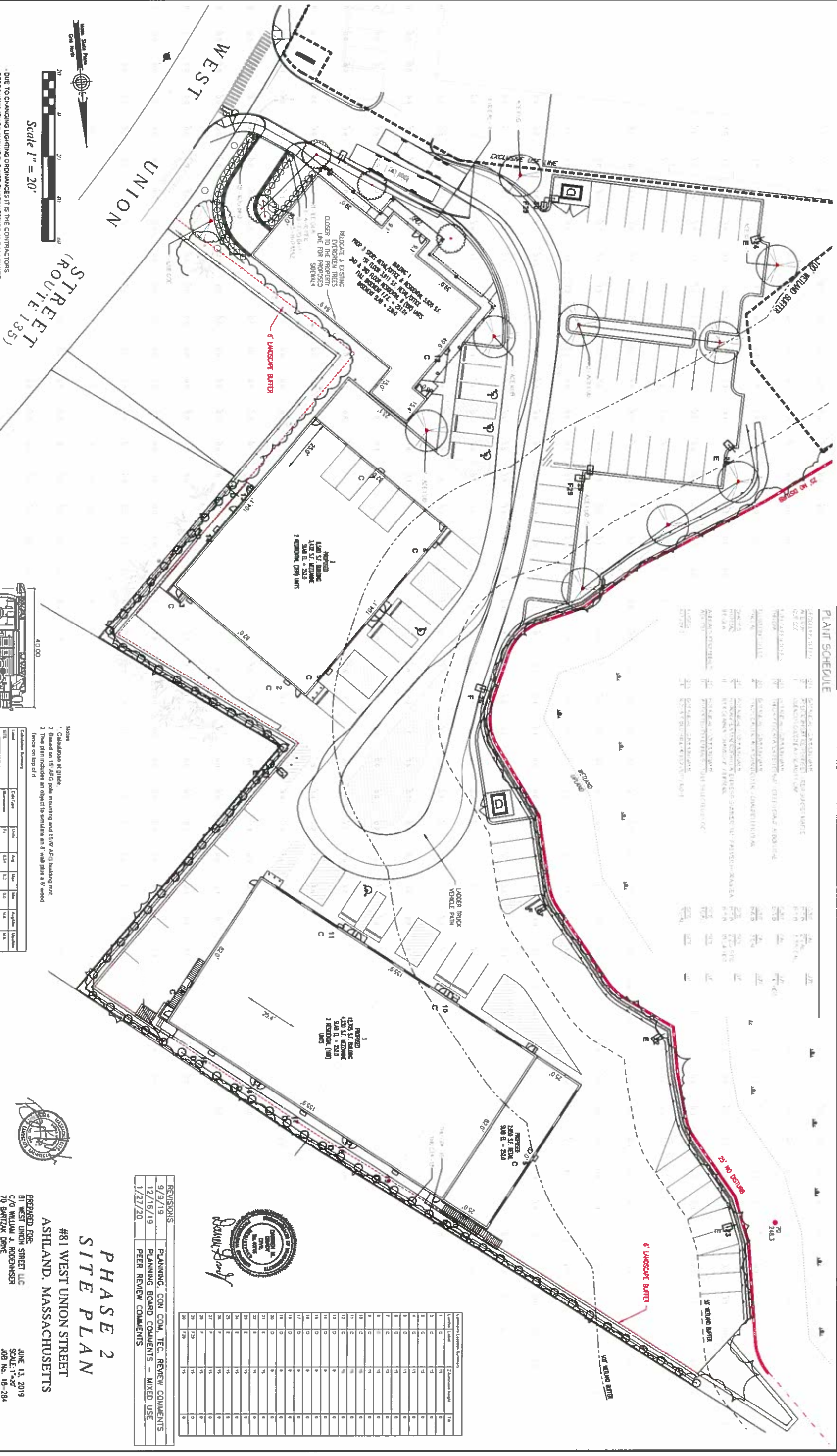
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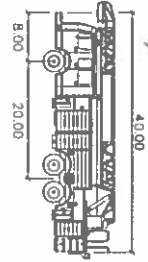
**PLANT SCHEDULE**

SYMBOL	DESCRIPTION	QUANTITY	UNIT	DATE
1	15' AFG POLE MOUNTING AND 15' AFG BUILDING MOUNT	1	EA	1/27/20
2	15' AFG POLE MOUNTING AND 15' AFG BUILDING MOUNT	1	EA	1/27/20
3	15' AFG POLE MOUNTING AND 15' AFG BUILDING MOUNT	1	EA	1/27/20
4	15' AFG POLE MOUNTING AND 15' AFG BUILDING MOUNT	1	EA	1/27/20
5	15' AFG POLE MOUNTING AND 15' AFG BUILDING MOUNT	1	EA	1/27/20
6	15' AFG POLE MOUNTING AND 15' AFG BUILDING MOUNT	1	EA	1/27/20
7	15' AFG POLE MOUNTING AND 15' AFG BUILDING MOUNT	1	EA	1/27/20
8	15' AFG POLE MOUNTING AND 15' AFG BUILDING MOUNT	1	EA	1/27/20
9	15' AFG POLE MOUNTING AND 15' AFG BUILDING MOUNT	1	EA	1/27/20
10	15' AFG POLE MOUNTING AND 15' AFG BUILDING MOUNT	1	EA	1/27/20
11	15' AFG POLE MOUNTING AND 15' AFG BUILDING MOUNT	1	EA	1/27/20
12	15' AFG POLE MOUNTING AND 15' AFG BUILDING MOUNT	1	EA	1/27/20
13	15' AFG POLE MOUNTING AND 15' AFG BUILDING MOUNT	1	EA	1/27/20
14	15' AFG POLE MOUNTING AND 15' AFG BUILDING MOUNT	1	EA	1/27/20
15	15' AFG POLE MOUNTING AND 15' AFG BUILDING MOUNT	1	EA	1/27/20
16	15' AFG POLE MOUNTING AND 15' AFG BUILDING MOUNT	1	EA	1/27/20
17	15' AFG POLE MOUNTING AND 15' AFG BUILDING MOUNT	1	EA	1/27/20
18	15' AFG POLE MOUNTING AND 15' AFG BUILDING MOUNT	1	EA	1/27/20
19	15' AFG POLE MOUNTING AND 15' AFG BUILDING MOUNT	1	EA	1/27/20
20	15' AFG POLE MOUNTING AND 15' AFG BUILDING MOUNT	1	EA	1/27/20
21	15' AFG POLE MOUNTING AND 15' AFG BUILDING MOUNT	1	EA	1/27/20
22	15' AFG POLE MOUNTING AND 15' AFG BUILDING MOUNT	1	EA	1/27/20
23	15' AFG POLE MOUNTING AND 15' AFG BUILDING MOUNT	1	EA	1/27/20
24	15' AFG POLE MOUNTING AND 15' AFG BUILDING MOUNT	1	EA	1/27/20
25	15' AFG POLE MOUNTING AND 15' AFG BUILDING MOUNT	1	EA	1/27/20
26	15' AFG POLE MOUNTING AND 15' AFG BUILDING MOUNT	1	EA	1/27/20
27	15' AFG POLE MOUNTING AND 15' AFG BUILDING MOUNT	1	EA	1/27/20
28	15' AFG POLE MOUNTING AND 15' AFG BUILDING MOUNT	1	EA	1/27/20
29	15' AFG POLE MOUNTING AND 15' AFG BUILDING MOUNT	1	EA	1/27/20
30	15' AFG POLE MOUNTING AND 15' AFG BUILDING MOUNT	1	EA	1/27/20



**Scale 1" = 20'**

DUE TO CHANGING LIGHTING ORGANIZATIONS IT IS THE CONTRACTORS RESPONSIBILITY TO SUBMIT THE SITE PHOTO METRICS AND LUMINAIRE SPECS TO THE LOCAL INSPECTOR BEFORE ORDERING TO ENSURE THIS PLAN COMPLES 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 RULES THAT WERE LAB TESTED OR COMPUTER GENERATED ACTUAL RESULTS MAY VARY



**Notes**

1. Calculation at grade.
2. Based on 15' AFG pole mounting and 15' AFG building mount.
3. The plan includes an object to simulate an 8' wall plus a 6' wood fence on top of it.

Symbol	Label	Quantity	Unit	Notes
1	15' AFG POLE MOUNTING AND 15' AFG BUILDING MOUNT	1	EA	
2	15' AFG POLE MOUNTING AND 15' AFG BUILDING MOUNT	1	EA	
3	15' AFG POLE MOUNTING AND 15' AFG BUILDING MOUNT	1	EA	
4	15' AFG POLE MOUNTING AND 15' AFG BUILDING MOUNT	1	EA	
5	15' AFG POLE MOUNTING AND 15' AFG BUILDING MOUNT	1	EA	
6	15' AFG POLE MOUNTING AND 15' AFG BUILDING MOUNT	1	EA	
7	15' AFG POLE MOUNTING AND 15' AFG BUILDING MOUNT	1	EA	
8	15' AFG POLE MOUNTING AND 15' AFG BUILDING MOUNT	1	EA	
9	15' AFG POLE MOUNTING AND 15' AFG BUILDING MOUNT	1	EA	
10	15' AFG POLE MOUNTING AND 15' AFG BUILDING MOUNT	1	EA	
11	15' AFG POLE MOUNTING AND 15' AFG BUILDING MOUNT	1	EA	
12	15' AFG POLE MOUNTING AND 15' AFG BUILDING MOUNT	1	EA	
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16	15' AFG POLE MOUNTING AND 15' AFG BUILDING MOUNT	1	EA	
17	15' AFG POLE MOUNTING AND 15' AFG BUILDING MOUNT	1	EA	
18	15' AFG POLE MOUNTING AND 15' AFG BUILDING MOUNT	1	EA	
19	15' AFG POLE MOUNTING AND 15' AFG BUILDING MOUNT	1	EA	
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24	15' AFG POLE MOUNTING AND 15' AFG BUILDING MOUNT	1	EA	
25	15' AFG POLE MOUNTING AND 15' AFG BUILDING MOUNT	1	EA	
26	15' AFG POLE MOUNTING AND 15' AFG BUILDING MOUNT	1	EA	
27	15' AFG POLE MOUNTING AND 15' AFG BUILDING MOUNT	1	EA	
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**REVISIONS**

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**PHASE 2  
SITE PLAN**

**#81 WEST UNION STREET  
ASHLAND, MASSACHUSETTS**

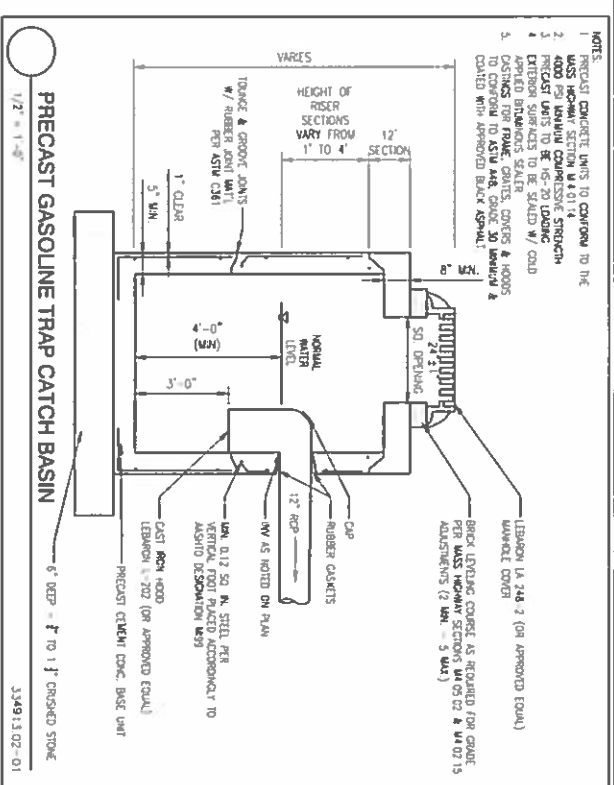
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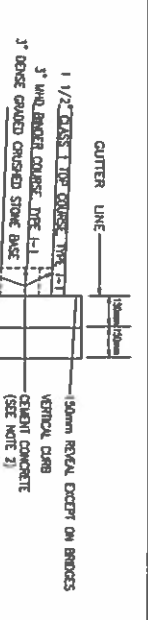
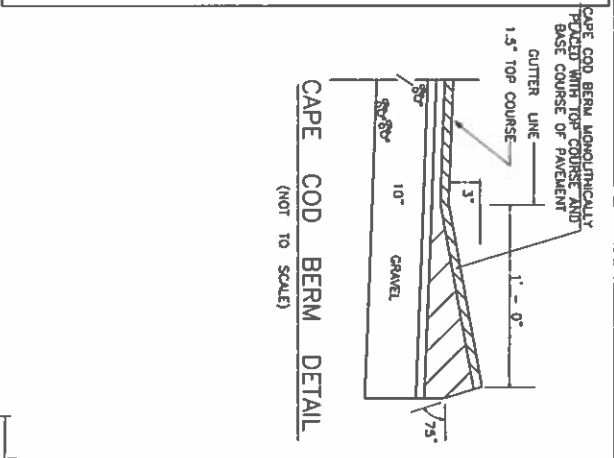
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Phone (781) 585-2300 Fax (781) 585-2378



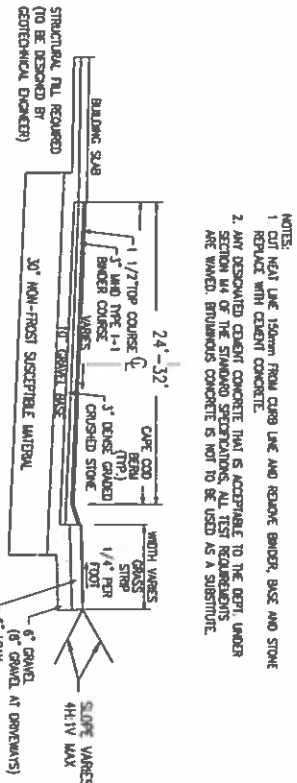




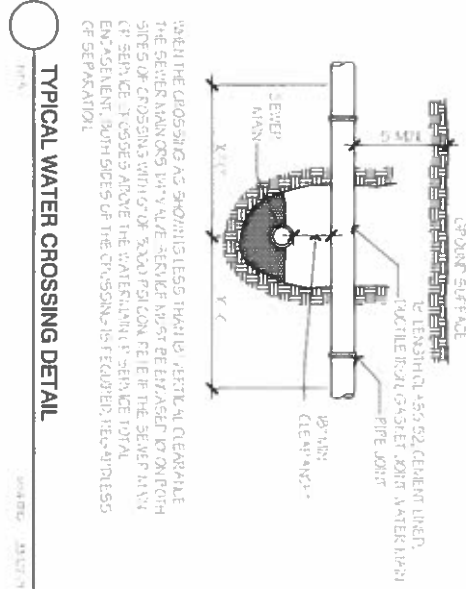
- NOTES:
1. PRECAST CONCRETE UNITS TO CONFORM TO THE MASS HIGHWAY SECTION M 4.014.
  2. ALL UNITS SHALL BE CAST TO A MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI.
  3. EXTERIOR SURFACES TO BE SMOOTH W/ GROUND FINISH.
  4. APPLIED BRICKWORK SHALL BE CAST IN PLACE TO CONFORM TO ASH AND CONCRETE STANDARDS.
  5. CAST WITH APPROVED BACK-SUPPORT.



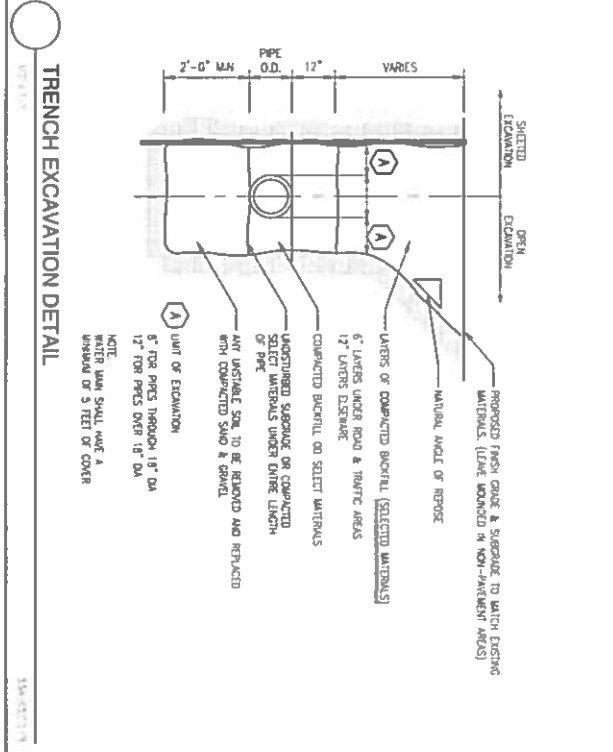
- PROCEDURE DESCRIBED HEREIN IS APPLICABLE ONLY IF CURB IS TO BE SET AFTER BASE AND/OR BRICK COURSE ARE IN PLACE OTHERWISE CEMENT CONC. WILL BE DAMAGED AND GRANT BROUGHT UP TO BOTTOM OF BASE COURSE FOR REDESCRIPTION, MATERIALS AND CONSTRUCTION METHOD. SEE STANDARD SPECIFICATIONS.
- NOTES:
1. CUT NEAR LINE 150MM FROM CURB LINE AND REMOVE BRICK, BASE AND STONE.
  2. ANY DISQUALIFIED CEMENT CONCRETE THAT IS ACCEPTABLE TO THE DEPT. UNDER SECTION 14 OF THE STANDARD SPECIFICATIONS, ALL TEST REQUIREMENTS ARE MET. BRICKWORK CONCRETE IS NOT TO BE USED AS A SUBSTITUTE.



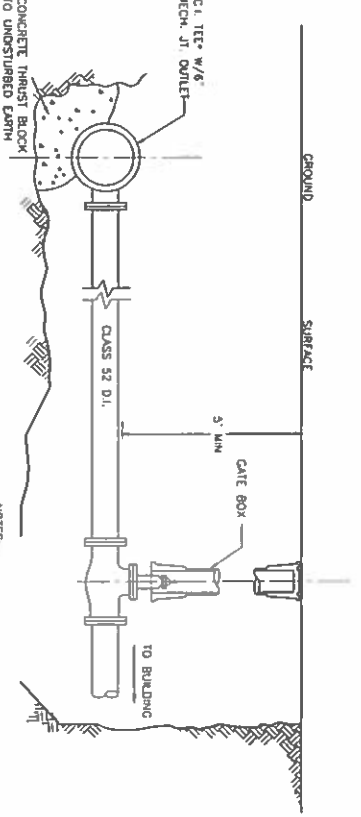
- NOTE:
1. THE BELOW THE ROADWAY SHALL BE PLACED IN LOTS HAVING A COMPACTED SUBGRADE OF 15% MOISTURE CONTENT OR LESS.
  2. PRECAST UNITS SHALL HAVE A DENSITY EQUAL TO OR GREATER THAN 95 PERCENT MAXIMUM DENSITY (MODULUS IN PLACE TEST).



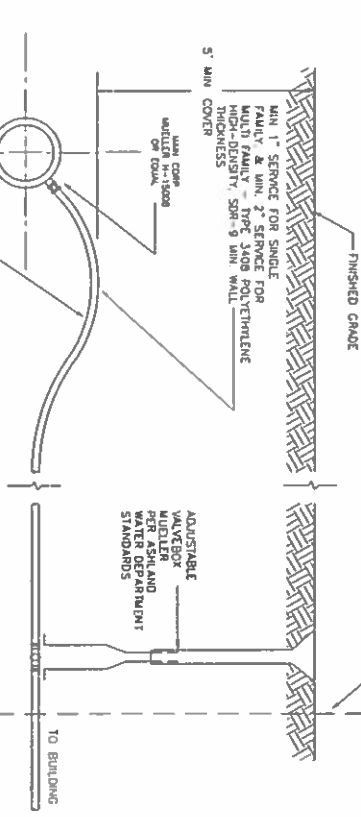
MAINTAIN THE CROSSING AS SHOWN UNLESS THERE IS CLEARANCE THE CENTER MARKERS WITH A 1/4\"/>



- UNDISTURBED SUBGRADE OR COMPACTED SELECT MATERIALS UNDER DRAIN LENGTH OF PIPE.
- ANY INSTALLED SOIL TO BE REMOVED AND REPLACED WITH COMPACTED SAND & GRAVEL.
- NOTE: WRITE UNIT SHALL HAVE A MINIMUM OF 5 FEET OF COVER.



- ALL VALVES AND FITTINGS ARE TO BE MECHANICAL JOINTS VALVE BODIES SHALL BE CAST IRON. ADJUSTABLE SIZES AND MANUFACTURED 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.



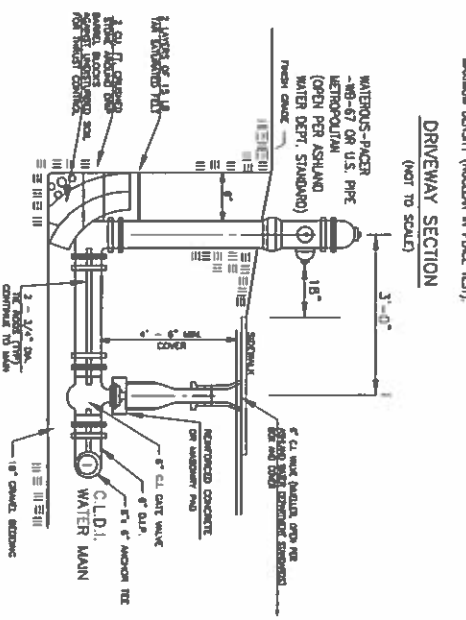
- MIN. 1\"/>

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

TYPICAL PERMANENT SERVICE CONNECTION (NOT TO SCALE)

TYPICAL HYDRANT DETAIL (NOT TO SCALE)

REVISIONS	DATE	DESCRIPTION
9/9/19	12/15/19	PLANNING, CON. COM., TEC. REVIEW COMMENTS
12/15/19	1/27/20	PLANNING BOARD COMMENTS - MIXED USE
1/27/20		PEER REVIEW COMMENTS



# PHASE 2 SITE PLAN

## #81 WEST UNION STREET ASHLAND, MASSACHUSETTS

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

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

**GRADY CONSULTING, L.L.C.**  
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