

F:\Projects\CAD\378715\APARTMENTS\3787PH-2-APT-CVR.dwg CVR 4/06/17 9:42am ccc

INDEX TO DRAWINGS

1. TITLE SHEET
2. EXISTING CONDITIONS PLAN
3. NORTH VILLAGE OVERVIEW PLAN
4. SITE OVERVIEW PLAN
- 5-7. SITE PLAN
8. GRADING & DRAINAGE OVERVIEW PLAN
- 9-11. GRADING & DRAINAGE PLAN
12. UTILITY PLAN
13. STORMWATER MANAGEMENT PLAN
- 14-18. CONSTRUCTION DETAILS
- LANDSCAPE & LIGHTING PLANS (BY OTHERS)
- BUILDING ELEVATION PLANS (BY OTHERS)

ABUTTERS

MAP/LOT #	NAME & ADDRESS
(SUBJECT PARCEL)	
98/12502	OMJ REALTY, LLC
89/11106	63 MAIN STREET SALEM, NH 03079
98/7887	ROCKINGHAM VENTURE P.O. BOX 47 SALEM, NH 03079
98/11094	ROCKSAL MALL LLC C/O SIMON PROPERTY GROUP P.O. BOX 6120 INDIANAPOLIS, IN 46207
98/4079	DAVID K. & BRENDA J. DIETRICH 46 PLEASANT STREET SALEM, NH 03079
98/4080	MESTI REAL ESTATE INC. 99 CLINTON STREET CONCORD, NH 03301

SALEM PLANNING BOARD

- 1) ON FEBRUARY 21, 2017 THE SALEM PLANNING BOARD GRANTED A WAIVER OF THE HYDRAULIC GRADE LINE REQUIREMENT UNDER SECTION 278-6:11.5.3.
- 2) ON FEBRUARY 21, 2017 THE SALEM PLANNING BOARD GRANTED THE FOLLOWING CONDITIONAL USE PERMITS:
 - A. 490-501 B. USE - RESIDENTIAL USE IS NOT ALLOWED IN THE COMMERCIAL-INDUSTRIAL C DISTRICT.
 - B. 490-501 C. BUILDING SETBACK - A MAINTENANCE SHED IS PROPOSED WITHIN TWO (2) FEET OF THE REAR PROPERTY LINE WHERE A MINIMUM SETBACK OF 20 FEET IS REQUIRED IN THE COMMERCIAL-INDUSTRIAL C DISTRICT.
 - C. 490-501 C. BUILDING HEIGHT - A BUILDING HEIGHT OF 54 FEET, FOUR (4) STORIES IS PROPOSED WHERE A MAXIMUM HEIGHT OF 35 FEET, THREE (3) STORIES IS PERMITTED IN THE COMMERCIAL-INDUSTRIAL C DISTRICT.
 - D. 490-501 C. LOT COVERAGE - A LOT COVERAGE OF 70.9% IS PROPOSED WHERE A MAXIMUM LOT COVERAGE OF 70% IS PERMITTED IN THE COMMERCIAL-INDUSTRIAL C DISTRICT.
 - E. 490-701 C. (2) PARKING SETBACK - A PARKING SETBACK OF FIVE (5) FEET IN THE FRONT YARD AND FOUR (4) FEET IN THE SIDE OR REAR YARD IS PROPOSED WHERE A MINIMUM FRONT YARD SETBACK OF 20 FEET AND A MINIMUM SIDE AND REAR YARD SETBACK OF 10 FEET IS REQUIRED.
 - F. 490-701 E. NUMBER OF PARKING SPACES - A TOTAL OF 435 PARKING SPACES, 1.7 SPACES PER UNIT, IS PROPOSED WHERE A MINIMUM OF 512 SPACES, 2 SPACES PER UNIT IS REQUIRED.
- 3) ON FEBRUARY 21, 2017 THE SALEM PLANNING BOARD VOTED TO APPROVE THIS SITE PLAN SUBJECT TO THE FOLLOWING CONDITIONS:

PRIOR TO BUILDING PERMIT:

1. PAY FOR OUTSIDE INSPECTIONS PER DIRECTION OF ENGINEERING DEPT.;
2. SUBMIT STATE PERMITS/APPROVALS (SEWER EXTENSION, ALTERATION OF TERRAIN, NHDOT-CONCEPTUAL);
3. SUBMIT STATE PERMIT FOR REMOVAL OF EXISTING 48" POLICY BROOK CULVERT AND REPLACE CULVERT PRIOR TO CONSTRUCTION OF BUILDING 4;
4. NOTE CONDITIONAL USE PERMITS AND WAIVER ON PLAN;
5. SUBMIT APPROVAL FROM DESIGN GUIDELINES CONSULTANT;
6. SUBMIT CONSTRUCTION ACCESS PLAN;
7. NO USE OF CENTRAL STREET (BEYOND EXISTING LIMIT) UNTIL CENTRAL/MAIN STREET IMPROVEMENT IS COMPLETED;
8. SUBMIT MASTER LIST OF DRAINAGE, FLOODING, WATER, SEWER, AND TRAFFIC IMPROVEMENTS;

PRIOR TO OCCUPANCY:

9. PAY ROAD (\$254,720), SCHOOL (\$714,752), AND RECREATION (\$164,750) IMPACT FEES;
10. SUBMIT CERTIFICATION THAT POROUS PAVEMENT WAS CONSTRUCTED PER APPROVED PLAN, MAINTENANCE CONTRACT AND YEARLY MAINTENANCE LOGS, AND PERFORMANCE GUARANTY TO COVER COST OF MAINTENANCE FOR 5 YEARS FROM DATE OF OCCUPANCY;
11. CONSTRUCT ALL SITE IMPROVEMENTS (INCLUDING BUILDING LOCATION, DIMENSIONS, SETBACKS, ARCHITECTURE, SITE GRADING, UTILITIES, DRAINAGE, LANDSCAPING, LIGHTING, PARKING, SIGNAGE, FLOODPLAIN MITIGATION AREA) IN ACCORDANCE WITH APPROVED PLAN;
12. COMPLETE IMPROVEMENTS NOTED IN TRAFFIC MITIGATION TABLE;
13. PROVIDE CERTIFIED AS-BUILT SITE PLAN;

OTHER:

14. ALL REPRESENTATIONS MADE BY APPLICANT OR AGENTS AND ALL NOTES ON PLANS ARE INCORPORATED.

TUSCAN VILLAGE APARTMENTS

SALEM PROPERTY MAP 98 LOT 12543

39 PLEASANT STREET

SALEM, NEW HAMPSHIRE

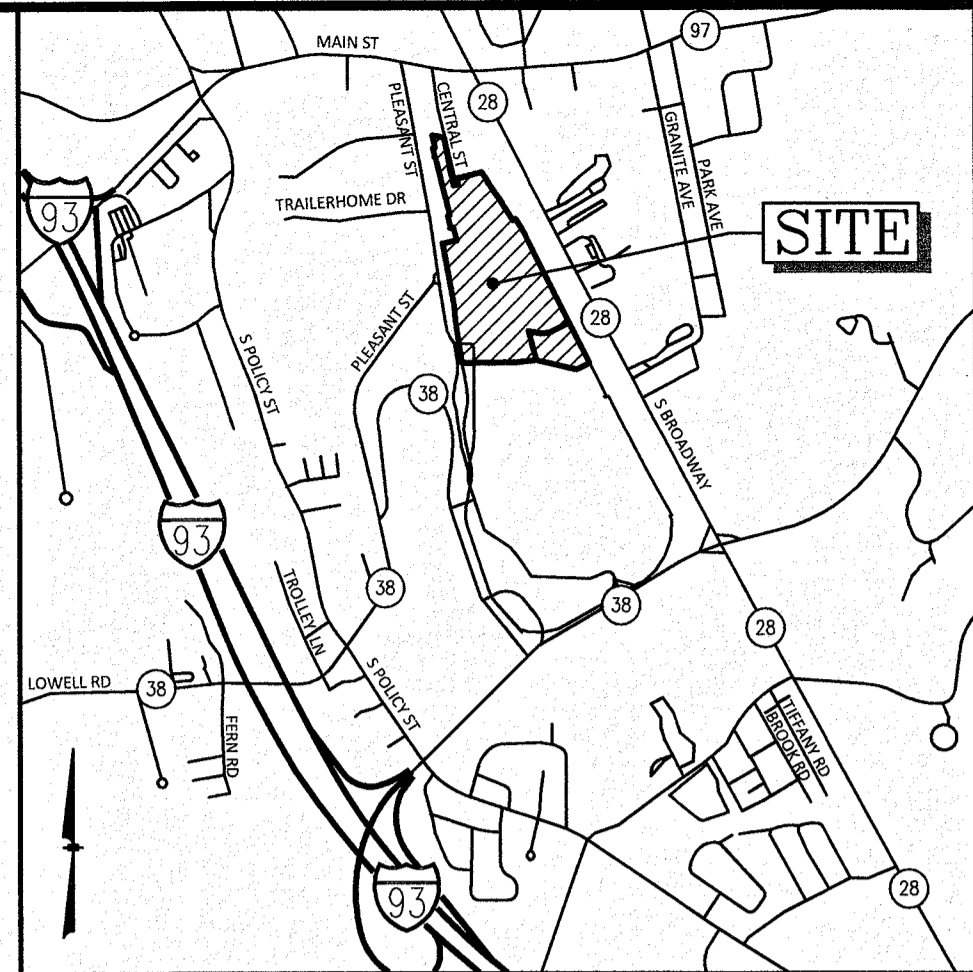


Prepared for:

OMJ REALTY, LLC

63 MAIN STREET

SALEM, NEW HAMPSHIRE 03079



LOCATION MAP
(NOT TO SCALE)

PERMITS & APPROVALS

TYPE	PERMIT NUMBER	APPROVED
NHDES ALTERATION OF TERRAIN		
NHDES SEWER CONNECTION	D2017-0302	4/3/17

ZONING VARIANCES

- 1) SEE VARIANCE GRANTED BY THE SALEM ZONING BOARD OF ADJUSTMENT ON SEPTEMBER 6, 2016, PETITION #8, TO ALLOW THE PROVISIONS OF THE LARGE SCALE REDEVELOPMENT ORDINANCE (SECTION 490-710, SUBSECTIONS A THROUGH E) TO APPLY TO THE PORTION OF MAP 98 LOT 12502 THAT IS IN THE RESIDENTIAL DISTRICT. NOTE: MAP 98 LOT 12502 HAS SINCE BEEN SUBDIVIDED.
- 2) SEE VARIANCE GRANTED BY THE SALEM ZONING BOARD OF ADJUSTMENT ON DECEMBER 6, 2016, PETITION #6, TO ALLOW UP TO 256 MULTI-FAMILY APARTMENT UNITS TO BE BUILT IN ONE YEAR WHERE A MAXIMUM OF 50 UNITS ARE ALLOWED IN ANY ONE PROJECT PER YEAR.

8	ADD SEWER PERMIT, REVISE SHEETS 12 & 13	DRJ	4/6/17
7	REVISE SHEETS 2, 3, 4, 6, 8, 10, 12, 15, 16	DRJ	3/27/17
6	ADD PLANNING BOARD APPROVAL	DRJ	3/22/17
5	REV. SHEETS 4-15, 17	DRJ	3/16/17
4	REV. SHEETS 3-12, 14, 15, 17	DRJ	2/23/17
3	REVISE SHEETS 8, 9, 10, 11, 18	DRJ	2/13/17
2	REVISIONS PER REVIEW COMMENTS	DRJ	2/6/17
1	REVISE SHEETS 4, 7, 8-11, 13-15	DRJ	10/11/16
NO.	DESCRIPTION	BY	DATE

TITLE SHEET

TUSCAN VILLAGE APARTMENTS
SALEM PROPERTY MAP 98 - LOT 12543
PROPERTY ADDRESS - 39 PLEASANT STREET

PREPARED FOR:
OMJ REALTY, LLC
63 MAIN STREET
SALEM, NH 03079

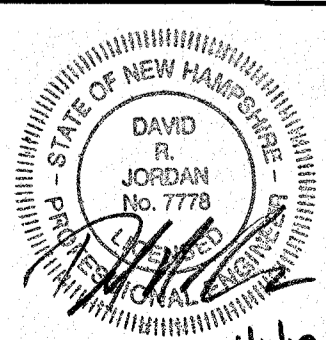


44 Stiles Road, Suite One
Salem, New Hampshire 03079
(603) 893-0720
ENGINEERS • PLANNERS • SURVEYORS
www.mhfdesign.com



SCALE: NONE

DATE: OCTOBER 7, 2016



OWNER OF RECORD

OMJ REALTY, LLC
63 MAIN STREET
SALEM, NH 03079

BOOK 5595-PAGE 2560

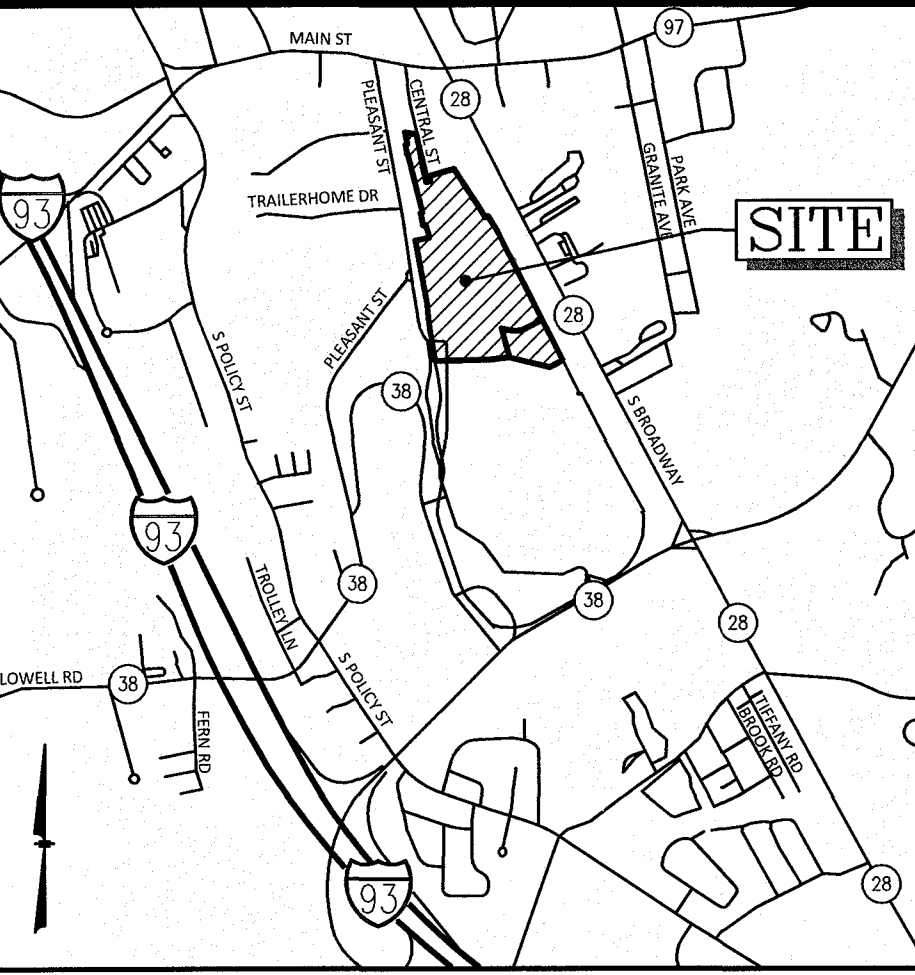
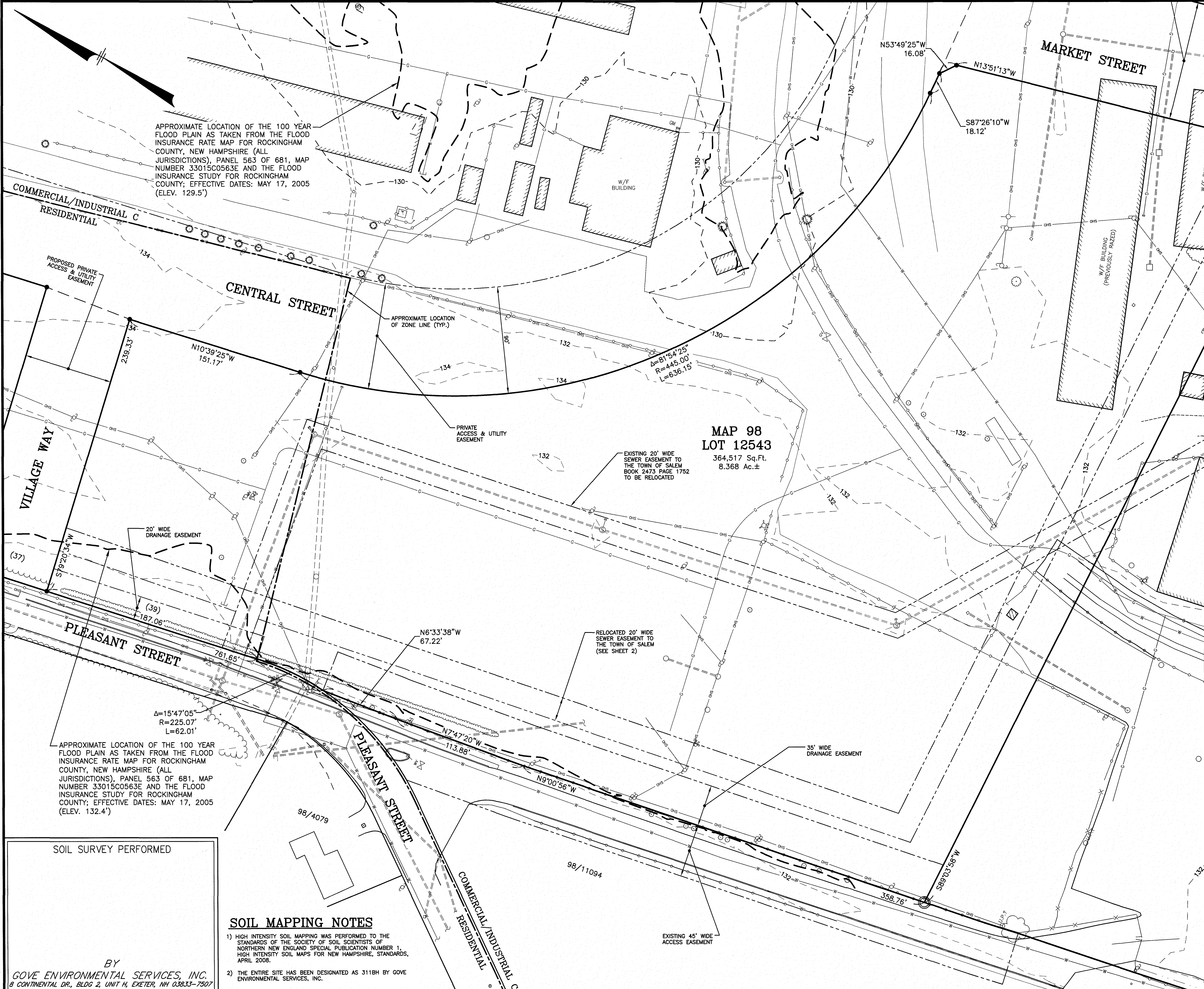
SALEM PLANNING BOARD

APPROVAL

Ross A. McLaughlin
Approved 2/24/17
Signed 4/6/17

ZONE: COMMERCIAL - INDUSTRIAL 'C' & RESIDENTIAL

DESIGNED BY:	DRAWN/CHECKED	DWG. NAME	PROJECT No.	SHEET No.
DRJ	CCC/DRJ	3787CVR-APT.DWG	378715	1 OF 18



LOCATION MAP
(NOT TO SCALE)

NOTES:

- 1) THE PURPOSE OF THIS PLAN IS TO SHOW THE EXISTING CONDITIONS OF MAP 98 LOT 12543.
- 2) OWNER OF RECORD:
OMJ REALTY
63 MAIN STREET
SALEM, NH 03079
DEED REFERENCE TO PARCEL IS BOOK 5595 PAGE 2560
AREA OF PARCEL = 1,159,087 S.F.± OR 44.270 ACRES±
- 3) THE INFORMATION SHOWN ON THIS PLAN IS BASED IN PART ON SURVEY WORK PERFORMED BY MHF DESIGN CONSULTANTS, INC. ALONG WITH INFORMATION FROM RECORD PLANS AND AERIAL MAPPING.
- 4) EXAMINATION OF THE FLOOD INSURANCE RATE MAP FOR ROCKINGHAM COUNTY, NEW HAMPSHIRE, MAP NUMBER 33015C0563E, EFFECTIVE DATE: MAY 17, 2005, INDICATES THAT THE SUBJECT PARCEL IS LOCATED WITHIN ZONE AE FLOOD AREA (BASE FLOOD ELEVATIONS DETERMINED).
- 5) BENCHMARK: RM 15 - DISK STAMPED "F-2" LOCATED IN THE WEST END OF THE NORTH ABUTMENT OF THE BOSTON & MAINE RAILROAD BRIDGE OVER POLICY BROOK NEAR ROCKINGHAM PARK. ELEVATION = 124.12 (NGVD29).
- 6) CURRENT ZONING IS COMMERCIAL INDUSTRIAL "C" & RESIDENTIAL. BUILDING SETBACKS ARE AS FOLLOWS: CI-C 30' FRONT, 20' SIDE, 20' REAR, RESIDENTIAL 30' FRONT, 15' SIDE, 30' REAR.
- 7) EASEMENTS, RIGHTS AND RESTRICTIONS SHOWN OR IDENTIFIED ARE THOSE WHICH WERE FOUND DURING RESEARCH COMPLETED AT THE ROCKINGHAM COUNTY REGISTRY OF DEEDS. OTHER RIGHTS, RESTRICTIONS AND EASEMENTS MAY EXIST WHICH A TITLE EXAMINATION OF THE SUBJECT PARCEL(S) WOULD DETERMINE.
- 8) NUMBER IN () INDICATES STREET ADDRESS.
- 9) ALL EXISTING BUILDINGS ON SUBJECT PARCEL ARE TO BE RAZED.

CERTIFICATION:

I CERTIFY THAT THIS SURVEY AND PLAN WAS PREPARED BY ME OR THOSE UNDER MY DIRECT SUPERVISION AND THAT THIS PLAN IS THE RESULT OF AN ACTUAL SURVEY PERFORMED ON THE GROUND DURING OCTOBER/NOVEMBER 2014 AND JUNE 2015 AND HAS AN ERROR OF CLOSURE OF NOT MORE THAN ONE PART IN TEN THOUSAND.

[Signature] 3/29/17
LICENSED LAND SURVEYOR DATE

NO.	DESCRIPTION	BY	DATE
1	UPDATE EASEMENTS	DRJ	3/27/17
REVISIONS			

EXISTING CONDITIONS PLAN

TUSCAN VILLAGE APARTMENTS
SALEM PROPERTY MAP 98 - LOT 12543
PROPERTY ADDRESS - 39 PLEASANT STREET

PREPARED FOR:
OMJ REALTY, LLC
63 MAIN STREET
SALEM, NH 03079

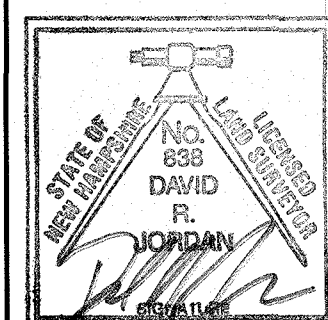


44 Stiles Road, Suite One
Salem, New Hampshire 03079
(603) 893-0720
ENGINEERS • PLANNERS • SURVEYORS
www.mhfdesign.com



SCALE: 1"=40'

DATE: OCTOBER 7, 2016



OWNER OF RECORD
OMJ REALTY, LLC
63 MAIN STREET
SALEM, NH 03079

SALEM PLANNING BOARD
APPROVAL

BOOK 5595-PAGE 2560

ZONE: COMMERCIAL - INDUSTRIAL "C" & RESIDENTIAL

DESIGNED BY:	DRAWN/CHECKED	DWG. NAME	PROJECT No.	SHEET No.
DRJ	CCC/DRJ	3787PH2-APT-ECF	378715	2 OF 18

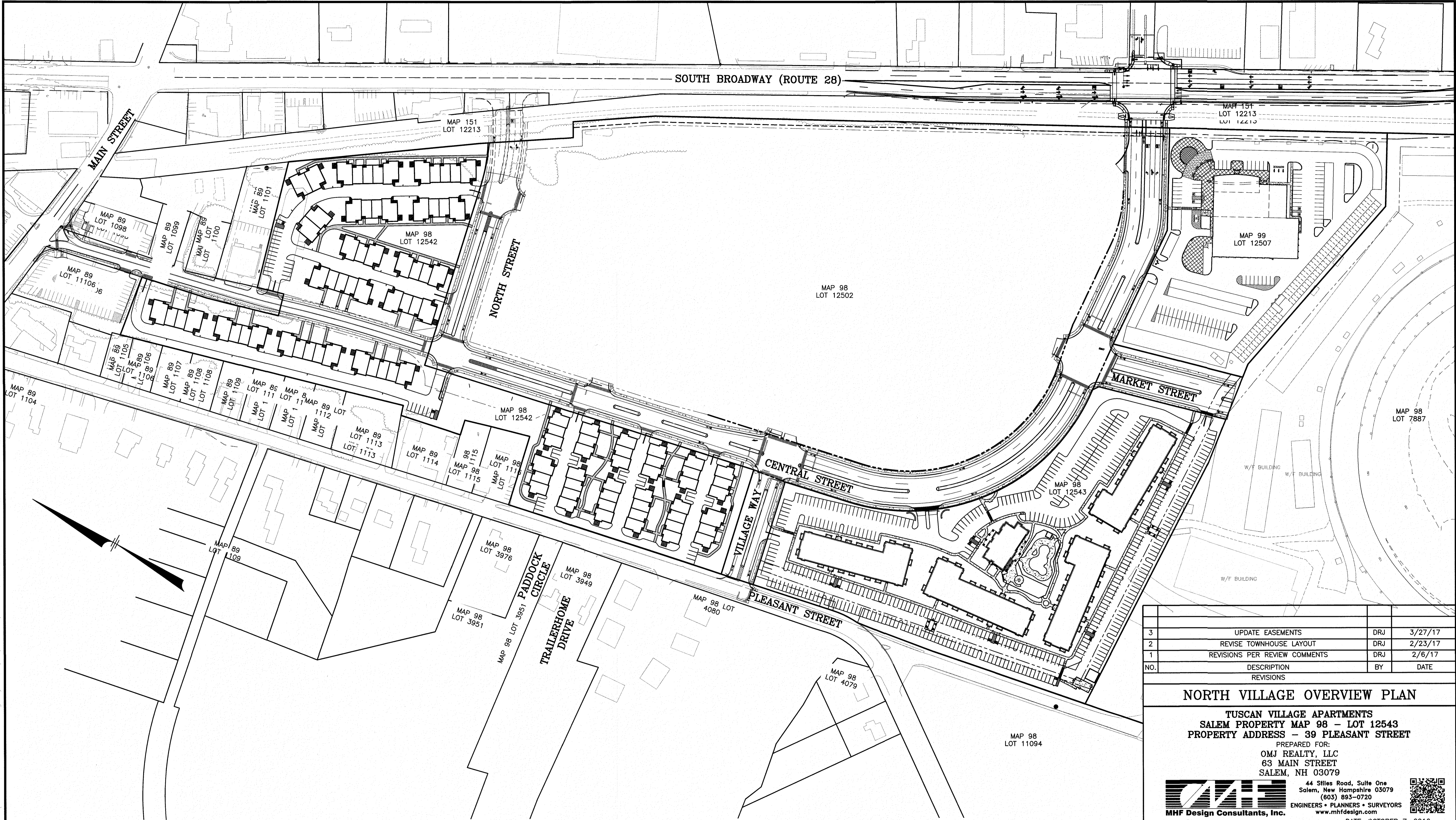
SOIL SURVEY PERFORMED

SOIL MAPPING NOTES

- 1) HIGH INTENSITY SOIL MAPPING WAS PERFORMED TO THE STANDARDS OF THE SOCIETY OF SOIL SCIENTISTS OF NORTHERN NEW ENGLAND SPECIAL PUBLICATION NUMBER 1, HIGH INTENSITY SOIL MAPS FOR NEW HAMPSHIRE, STANDARDS, APRIL 2008.
- 2) THE ENTIRE SITE HAS BEEN DESIGNATED AS 311BH BY GOVE ENVIRONMENTAL SERVICES, INC.

BY
GOVE ENVIRONMENTAL SERVICES, INC.
9 CONTINENTAL DR., BLDG 2, UNIT H, EXETER, NH 03833-7507

F:\Projects\CAD\378715\APARTMENTS\3787PH-2-APT-ECF.dwg ECP 3/27/17 1:53pm ccc




NO.	DESCRIPTION	BY	DATE
3	UPDATE EASEMENTS	DRJ	3/27/17
2	REVISE TOWNHOUSE LAYOUT	DRJ	2/23/17
1	REVISIONS PER REVIEW COMMENTS	DRJ	2/6/17
NO.	DESCRIPTION	BY	DATE
	REVISIONS		


NORTH VILLAGE OVERVIEW PLAN

TUSCAN VILLAGE APARTMENTS
SALEM PROPERTY MAP 98 - LOT 12543
PROPERTY ADDRESS - 39 PLEASANT STREET

PREPARED FOR:
OMJ REALTY, LLC
63 MAIN STREET
SALEM, NH 03079

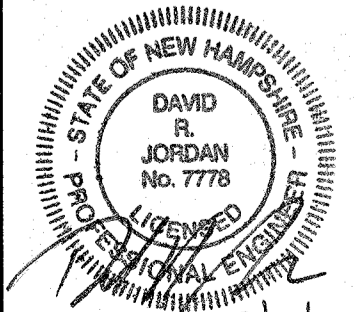


44 Stiles Road, Suite One
Salem, New Hampshire 03079
(603) 893-0720
ENGINEERS • PLANNERS • SURVEYORS
www.mhfdesign.com

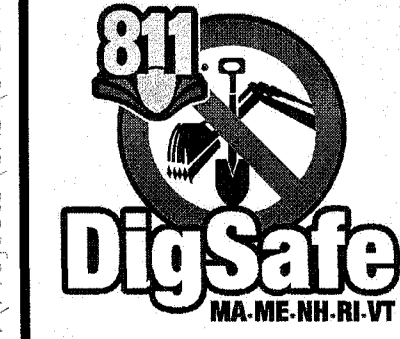
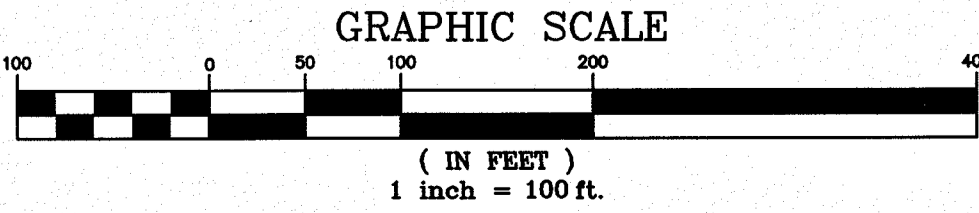


SCALE: 1" = 100'

DATE: OCTOBER 7, 2016

	OWNER OF RECORD OMJ REALTY, LLC 63 MAIN STREET SALEM, NH 03079 BOOK 5595-PAGE 2560	SALEM PLANNING BOARD APPROVAL
	ZONE: COMMERCIAL - INDUSTRIAL 'C' & RESIDENTIAL	

DESIGNED BY:	DRAWN/CHECKED	DWG. NAME	PROJECT No.	SHEET No.
DRJ	CCC/DRJ	PH-2-APT-Over.	378715	3 OF 18



SEE PLANS ENTITLED "TUSCAN VILLAGE, NORTH VILLAGE ROADWAY DESIGN PLANS, SALEM PROPERTY MAP 98 LOT 12502, 56 SOUTH BROADWAY, SALEM, NH" DATED OCTOBER 6, 2016

APPROX. LOCATION OF 100 YEAR FLOOD PLAIN





MAP 98 LOT 12502

CENTRAL STREET

MARKET STREET

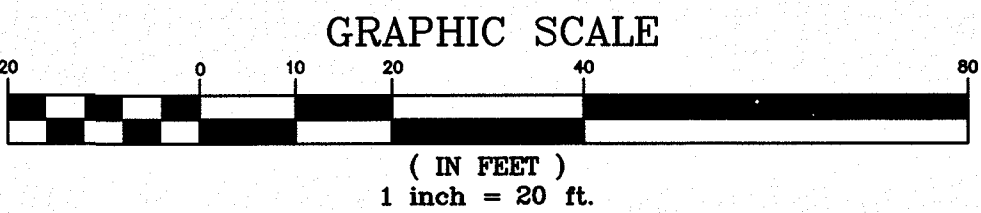
18" PAINTED STOP BAR

R1-1 "STOP"

SIGN KEY			
SIGN I.D. NUMBER	TEXT/COLOR	SIZE/REMARKS	
R1-1	 R/W	30" x 30" NEW SIGN WITH POST	
R7-B	 G/B/W	12" x 18" NEW SIGN WITH POST	
R7-BA	 G/W	6" x 12"	
W17-1	 B/Y	24" x 24" NEW SIGN WITH POST	

CURB LEGEND

- VERTICAL GRANITE CURB (VGC)
SLOPED GRANITE CURB (SGC)
BITUMINOUS CONCRETE CURB (BCC)



NO.	DESCRIPTION	BY	DATE
3	MISC. REVISIONS	DRJ	3/13/17
2	ADD SIGN LEGEND	DRJ	2/23/17
1	REVISIONS PER REVIEW COMMENTS	DRJ	2/6/17

SITE PLAN

TUSCAN VILLAGE APARTMENTS
SALEM PROPERTY MAP 98 - LOT 12543
PROPERTY ADDRESS - 39 PLEASANT STREET

PREPARED FOR:
OMJ REALTY, LLC
63 MAIN STREET
SALEM, NH 03079

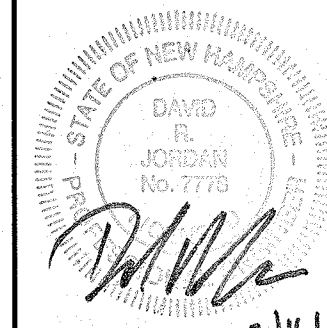


44 Stiles Road, Suite One
Salem, New Hampshire 03079
(603) 893-0720
ENGINEERS • PLANNERS • SURVEYORS
www.mhfdesign.com



SCALE: 1" = 20'

DATE: OCTOBER 7, 2016



OWNER OF RECORD
OMJ REALTY, LLC
63 MAIN STREET
SALEM, NH 03079

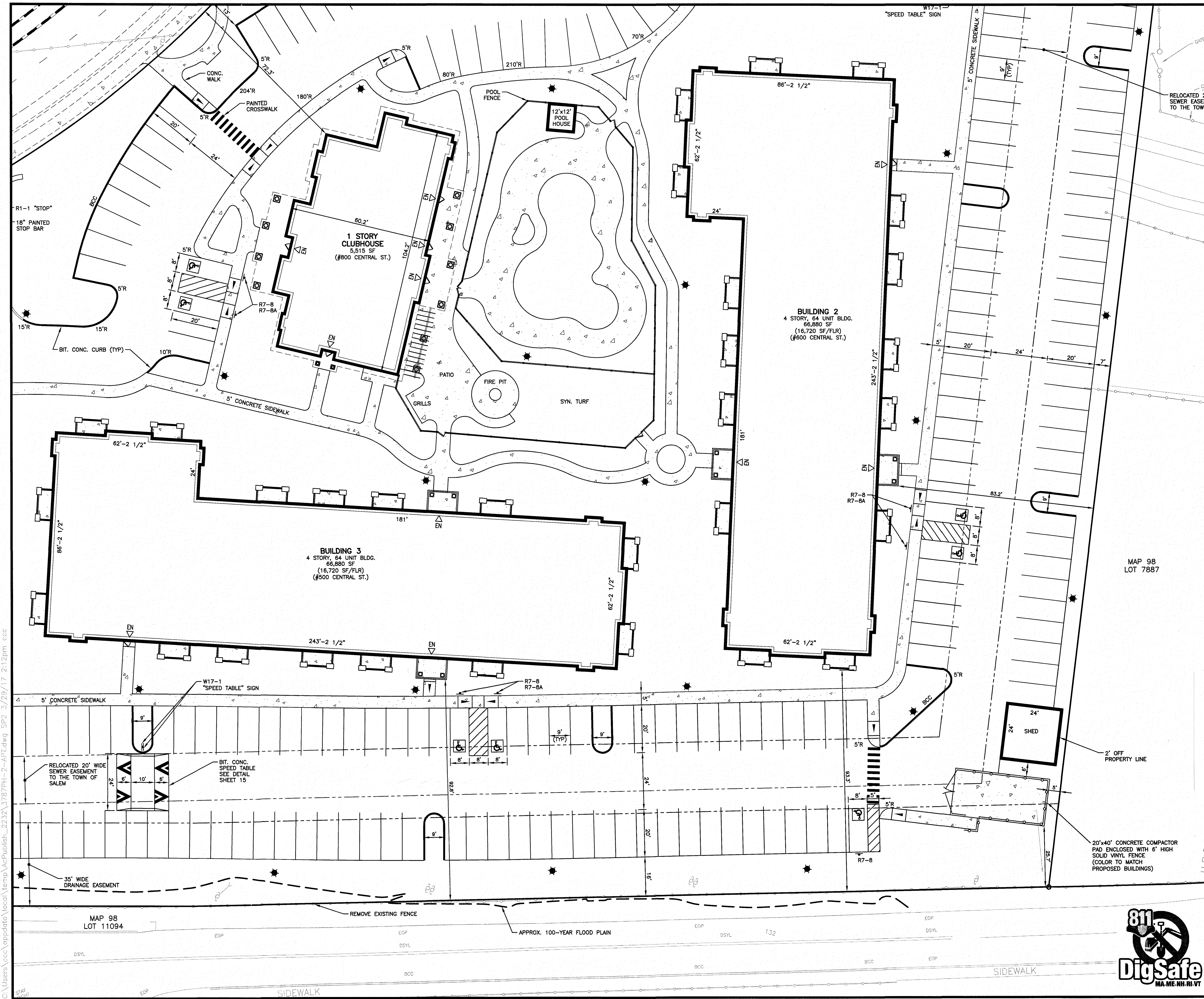
BOOK 5595-PAGE 2560

SALEM PLANNING BOARD
APPROVAL

ZONE: COMMERCIAL - INDUSTRIAL 'C' & RESIDENTIAL

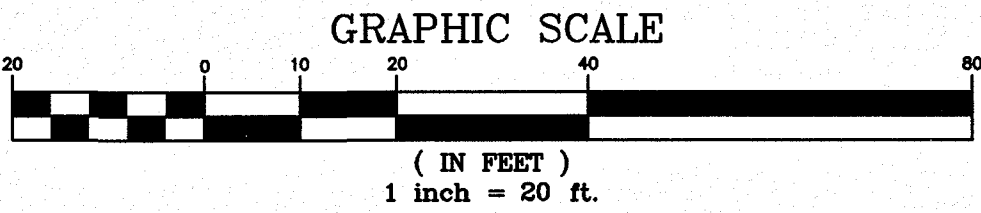
DESIGNED BY:	DRAWN/CHECKED	DWG. NAME	PROJECT No.	SHEET No.
DRJ	CCC/DRJ	3787PH-2 APT	378715	5 OF 18

C:\Users\ccc\appdata\local\temp\AcPublish_8636\3787PH-2-APT.dwg SP1 3/17/17 1:36pm ccc



SIGN KEY		
SIGN I.D. NUMBER	TEXT/COLOR	SIZE/REMARKS
R1-1	STOP R/W	30" x 30" NEW SIGN WITH POST
R7-8	G/B/W	12" x 18" NEW SIGN WITH POST
R7-8A	G/W	6" x 12"
W17-1	B/Y	24" x 24" NEW SIGN WITH POST

CURB LEGEND	
	VERTICAL GRANITE CURB (VGC)
	SLOPED GRANITE CURB (SGC)
	BITUMINOUS CONCRETE CURB (BCC)



NO.	DESCRIPTION	BY	DATE
4	ADD WALKWAY AT CLUBHOUSE	DRJ	3/27/17
3	MISC. REVISIONS	DRJ	3/13/17
2	ADD LIGHT AT POOL, NOTE FENCE REMOVAL, REV. FENCE AT COMPACTOR, ADD SIGN LEGEND	DRJ	2/23/17
1	REVISIONS PER REVIEW COMMENTS	DRJ	2/6/17

SITE PLAN

TUSCAN VILLAGE APARTMENTS
SALEM PROPERTY MAP 98 - LOT 12543
PROPERTY ADDRESS - 39 PLEASANT STREET

PREPARED FOR:
OMJ REALTY, LLC
 63 MAIN STREET
 SALEM, NH 03079

44 Siles Road, Suite One
 Salem, New Hampshire 03079
 (603) 893-0720
ENGINEERS • PLANNERS • SURVEYORS
www.mhfdesign.com

SCALE: 1" = 20' **DATE: OCTOBER 7, 2016**

OWNER OF RECORD
 OMJ REALTY, LLC
 63 MAIN STREET
 SALEM, NH 03079
 BOOK 5595-PAGE 2560

SALEM PLANNING BOARD
 APPROVAL

ZONE: COMMERCIAL - INDUSTRIAL 'C' & RESIDENTIAL

DESIGNED BY: DRJ
DRAWN/CHECKED: CCC/DRJ
DWG. NAME: 3787PH-2 APT
PROJECT No.: 378715
SHEET No.: 6 OF 18

C:\Users\ccc\appdata\local\temp\AcPublish_2232\3787PH-2-APT.dwg SP2: 3/29/17 2:12pm ccc

SEE PLANS ENTITLED "TUSCAN VILLAGE, NORTH VILLAGE ROADWAY DESIGN PLANS, SALEM PROPERTY MAP 98 LOT 12502, 56 SOUTH BROADWAY, SALEM, NH" DATED OCTOBER 6, 2016

MAP 98
LOT 12502

CENTRAL STREET

ACCESS & UTILITY EASEMENT

FUTURE MONUMENT SIGNAGE

R1-1 "STOP"

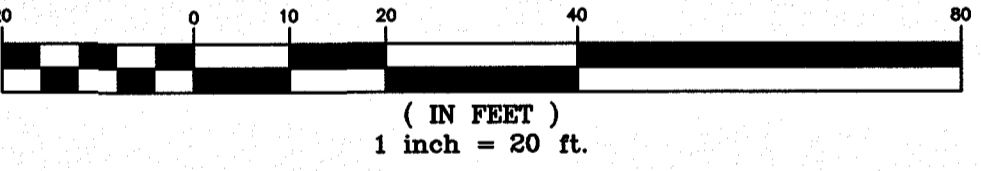
18" PAINTED STOP BAR

BIT. CONC. CURB (TYP)

VILLAGE WAY

BUILDING 4
4 STORY, 64 UNIT BLDG.
66,880 SF
(16,720 SF/FLR)
(#400 CENTRAL ST.)

GRAPHIC SCALE



4	MISC. REVISIONS	DRJ	3/13/17
3	NOTE FENCE REMOVAL & ADD SIGN LEGEND	DRJ	2/23/17
2	REVISIONS PER REVIEW COMMENTS	DRJ	2/6/17
1	ADD FUTURE MONUMENT SIGNAGE	DRJ	10/11/16
NO.	DESCRIPTION	BY	DATE

SITE PLAN

TUSCAN VILLAGE APARTMENTS
SALEM PROPERTY MAP 98 - LOT 12543
PROPERTY ADDRESS - 39 PLEASANT STREET

PREPARED FOR:
OMJ REALTY, LLC
63 MAIN STREET
SALEM, NH 03079



44 Stiles Road, Suite One
Salem, New Hampshire 03079
(603) 893-0720
ENGINEERS • PLANNERS • SURVEYORS
www.mhfdesign.com



SCALE: 1" = 20'

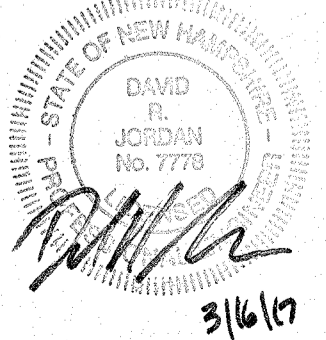
DATE: OCTOBER 7, 2016

OWNER OF RECORD
OMJ REALTY, LLC
63 MAIN STREET
SALEM, NH 03079

BOOK 5595-PAGE 2560

SALEM PLANNING BOARD
APPROVAL

ZONE: COMMERCIAL - INDUSTRIAL 'C' & RESIDENTIAL



DESIGNED BY:	DRAWN/CHECKED	DWG. NAME	PROJECT No.	SHEET No.
DRJ	CCC/DRJ	3787PH-2 APT	378715	7 OF 18



DRAINAGE PIPE SCHEDULE					
FROM STRUCTURE NUMBER	PIPE SIZE (inches)	TYPE OF PIPE	APPROX. PIPE LENGTH (feet)	SLOPE OF PIPE (ft./ft.)	TO STRUCTURE NUMBER
CB-101	12	HDPE	87	0.006	CB-102
CB-102	12	HDPE	15	0.007	DMH-107
CB-107	12	HDPE	20	0.025	DMH-101
DMH-102	12	HDPE	3	0.000	U/G DET-101
CB-103	12	HDPE	16	0.006	U/G DET-101
CB-103	15	HDPE	27	0.050	DMH-103
DMH-103	15	HDPE	10	0.040	DMH-102
U/G DET-101	4	PVC	2	0.025	BF-101
BF-101	6	PVC	5	0.020	DMH-102
DMH-101	12	HDPE	200	0.010	DMH-102
DMH-102	18	HDPE	26	0.012	CB-8(ROAD)
CB-104	12	HDPE	110	0.005	CB-105
CB-105	18	HDPE	112	0.005	CB-106
CB-106	12	HDPE	12	0.008	DMH-106
DMH-106	24	HDPE	3	0.000	U/G DET-102
CB-107	12	HDPE	5	0.020	U/G DET-102
U/G DET-102	4	PVC	16	0.006	BF-102
BF-102	6	PVC	26	0.006	DMH-104
CB-106	18	HDPE	170	0.026	DMH-104
CB-107	12	HDPE	16	0.063	DMH-104
DMH-104	18	HDPE	22	0.007	CB-3(ROAD)
YD-101A	8	HDPE	120	0.005	YD-101
YD-101	8	HDPE	43	0.006	YD-102
YD-102	8	HDPE	101	0.005	CB-103
YD-103	8	HDPE	123	0.007	YD-103A
YD-103A	8	HDPE	24	0.006	YD-104
YD-104	8	HDPE	120	0.018	CB-104
YD-105	8	HDPE	58	0.005	YD-106
YD-106	8	HDPE	48	0.005	YD-107
YD-107	8	HDPE	41	0.006	YD-108
YD-108	8	HDPE	42	0.006	DMH-105
YD-109	8	HDPE	50	0.016	YD-108
YD-110	8	HDPE	73	0.014	DMH-105
DMH-105	12	HDPE	82	0.020	CB-105

DRAINAGE STRUCTURES

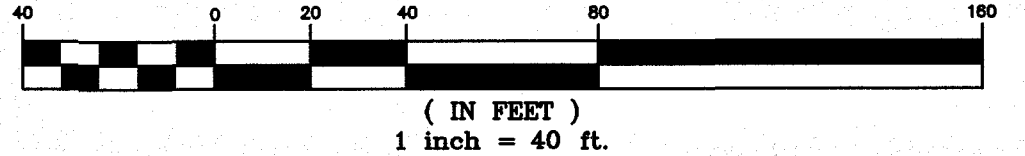
CB-101 RIM=131.25 INV.OUT=128.20	DMH-103 RIM=132.50 INV.IN=127.00(CB-103) INV.OUT=125.90	YD-103 (YARD DRAIN #103) RIM=134.00 INV.OUT=131.00	YD-110 (YARD DRAIN #111) RIM=130.00 INV.OUT=130.00
CB-102 RIM=132.20 INV.IN=127.70(CB-101) INV.OUT=127.60 INV.OUT=128.35(BYPASS)	DMH-104 RIM=130.80 INV.IN=126.00(CB-107) INV.IN=125.50(6" LINER U/D) INV.IN=122.65(CB-106) INV.IN=122.50(BF-102) INV.OUT=122.15	YD-103A (YARD DRAIN #103A) RIM=133.50 INV.IN=130.14(YD-103) INV.OUT=130.14	BAYFILTER TREATMENT UNIT #101 (BF-101) (10) BAYFILTER 545L CARTRIDGES RIM=131.60 INV.IN=126.95 INV.OUT=125.20 (SEE DETAIL SHEET 17)
CB-103 RIM=131.40 INV.IN=127.93(YD-102) INV.OUT=127.60 INV.OUT=126.35(BYPASS)	DMH-105 RIM=133.00 INV.IN=128.95(YD-106) INV.IN=128.95(YD-110) INV.OUT=128.62	YD-104 (YARD DRAIN #104) RIM=133.00 INV.IN=130.00(YD-103A) INV.OUT=130.00	BAYFILTER TREATMENT UNIT #102 (BF-102) (6) BAYFILTER 545L CARTRIDGES RIM=131.60 INV.IN=126.95 INV.OUT=122.65 (SEE DETAIL SHEET 17)
CB-104 RIM=131.35 INV.IN=127.88(YD-104) INV.OUT=127.55	DMH-106 RIM=130.15 INV.IN=125.75(CB-106) INV.OUT=125.75	YD-105 (YARD DRAIN #105) RIM=133.00 INV.IN=130.25 INV.OUT=122.65 (SEE DETAIL SHEET 17)	PROPOSED STORMTECH DETENTION SYSTEM #101 (U/G DET-101) (104) SC-310 CHAMBERS BOTTOM STONE=127.00 INV. CHAMBERS=127.50 INV. LINER U/D=126.40 (SEE DETAIL SHEET 17)
CB-105 RIM=130.85 INV.IN=127.00(CB-104) INV.IN=127.00(DMH-105) INV.OUT=126.50	DMH-107 RIM=132.20 INV.IN=127.50(CB-102) INV.OUT=127.50	YD-106 (YARD DRAIN #106) RIM=133.00 INV.IN=129.70(YD-105) INV.OUT=129.70	PROPOSED STORMTECH DETENTION SYSTEM #102 (U/G DET-102) (105) SC-740 CHAMBERS BOTTOM STONE=125.25 INV. CHAMBERS=125.75 INV. LINER U/D=124.65 (SEE DETAIL SHEET 17)
CB-106 RIM=130.00 INV.IN=125.95(CB-105) INV.OUT=125.85 INV.OUT=127.00(BYPASS)	YD-101 (YARD DRAIN #101) RIM=133.00 INV.IN=129.70 INV.OUT=129.70	YD-107 (YARD DRAIN #107) RIM=133.00 INV.IN=129.45(YD-106) INV.OUT=129.45	
CB-107 RIM=130.00 INV.IN=125.85 INV.OUT=127.00(BYPASS)	DMH-101 RIM=133.00 INV.IN=127.85(CB-102) INV.OUT=127.75	YD-108 (YARD DRAIN #108) RIM=133.00 INV.IN=129.20(YD-107) INV.OUT=129.20	
DMH-101 RIM=133.00 INV.IN=125.50(CB-103) INV.IN=125.10(BF-101) INV.OUT=125.00	YD-101A (YARD DRAIN #101A) RIM=133.30 INV.IN=129.20(YD-109) INV.OUT=129.20	YD-109 (YARD DRAIN #109) RIM=133.00 INV.OUT=130.00	

SEE PLANS ENTITLED "TUSCAN VILLAGE, NORTH VILLAGE ROADWAY DESIGN PLANS, SALEM PROPERTY MAP 98 LOT 12502, 56 SOUTH BROADWAY, SALEM, NH" DATED OCTOBER 6, 2016

NOTES

- ALL WORK SHALL CONFORM TO THE APPLICABLE REGULATIONS AND STANDARDS OF THE TOWN OF SALEM, AND SHALL BE BUILT IN A WORKMANLIKE MANNER IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS.
- THE CONTRACTOR SHALL CONTACT ALL UTILITY COMPANIES OWNING UTILITIES, EITHER OVERHEAD OR UNDERGROUND, WITHIN THE CONSTRUCTION AREA AND SHALL COORDINATE WITH THE OWNER OF SAID UTILITIES. THE PROTECTION OR RELOCATION OF UTILITIES IS ULTIMATELY THE RESPONSIBILITY OF THE CONTRACTOR.
- THE CONTRACTOR SHALL MAINTAIN EMERGENCY ACCESS TO ALL AREAS AFFECTED BY HIS WORK AT ALL TIMES.
- ALL EXCAVATIONS SHALL BE THOROUGHLY SECURED ON A DAILY BASIS BY THE CONTRACTOR AT THE COMPLETION OF CONSTRUCTION OPERATIONS IN THE IMMEDIATE AREA.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL EROSION AND SEDIMENT CONTROL DEVICES AS SHOWN IN THE PLANS THROUGHOUT THE DURATION OF THE PROJECT IN ACCORDANCE WITH APPLICABLE NHDES STANDARDS. THE DETAILS PROVIDED SHALL SERVE AS A GUIDE ONLY.
- CONTRACTOR SHALL VERIFY TBM ELEVATIONS PRIOR TO CONSTRUCTION.
- THE CONTRACTOR SHALL COORDINATE MATERIALS AND INSTALLATION SPECIFICATIONS WITH THE INDIVIDUAL UTILITY AGENCIES/COMPANIES, AND ARRANGE FOR ALL INSPECTIONS.
- THE CONTRACTOR SHALL STABILIZE ALL DITCHES, SWALES, AND PONDS PRIOR TO DIRECTING STORMWATER RUN-OFF TO THEM.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING AND DETERMINING THE LOCATION, SIZE, AND DEPTH OF ALL EXISTING UTILITIES, SHOWN OR NOT SHOWN ON THESE PLANS, PRIOR TO THE START OF ANY CONSTRUCTION. THE ENGINEER SHALL BE NOTIFIED IN WRITING OF ANY UTILITIES FOUND INTERFERING WITH THE PROPOSED CONSTRUCTION AND APPROPRIATE REMEDIAL ACTION SHALL BE AGREED TO BY THE ENGINEER BEFORE PROCEEDING WITH THE WORK. THE CONTRACTOR SHALL BE RESPONSIBLE TO CONTACT "DIG SAFE" (1-888-344-7233) AT LEAST 72 HOURS BEFORE DIGGING.
- CONTRACTOR SHALL DISPOSE OF ANY UNSUITABLE MATERIAL FOUND ONSITE (I.E. TRASH, STUMPS, ETC.) IN ACCORDANCE WITH STATE AND LOCAL REGULATIONS. CONTRACTOR SHALL COORDINATE ALL WORK WITH SUBCONTRACTORS, UTILITY COMPANIES, AND THE TOWN OF SALEM, AND SHALL BE RESPONSIBLE FOR COORDINATION OF ALL PERMITS, INSPECTIONS, AND MAINTENANCE AND PROTECTION OF ALL TRAFFIC AND PEDESTRIANS. ANY DISCREPANCIES FOUND OR SHOWN SHALL BE RESOLVED BY THE CONTRACTOR.
- PRIOR TO CONSTRUCTION THE CONTRACTOR SHALL CONFIRM WITH THE ENGINEER THAT HE HAS THE MOST RECENT SET OF PLANS. SITE WORK SHALL BE CONSTRUCTED FROM A COMPLETE SET OF PLANS, NOT ALL FEATURES ARE DETAILED ON EVERY PLAN. THE ENGINEER IS TO BE NOTIFIED OF ANY CONFLICT WITHIN THIS PLAN SET.
- CONTRACTOR SHALL CONFIRM WITH ENGINEER ALL LAYOUT ITEMS NOT SHOWN OR ANNOTATED. THE LOCATION OF ALL STRUCTURES AND UTILITIES SHALL BE CONFIRMED PRIOR TO LAYOUT OF PAVED AREAS. EXACT LOCATION OF PAVEMENT SHALL BE CONFIRMED WITH ENGINEER PRIOR TO PLACEMENT OF BINDER COURSE PAVEMENT.
- IF DURING CONSTRUCTION IT BECOMES APPARENT THAT DEFICIENCIES EXIST IN THE APPROVED DESIGN DRAWINGS, THE CONTRACTOR SHALL BE REQUIRED TO CORRECT THE DEFICIENCIES TO MEET THE REQUIREMENTS OF THE REGULATIONS AT NO EXPENSE TO THE TOWN.
- SEE CONSTRUCTION DETAIL SHEETS FOR ADDITIONAL INFORMATION.
- ALL UTILITIES SHALL BE UNDERGROUND, PER TOWN OF SALEM AND UTILITY COMPANY STANDARDS.
- ALL DRAINAGE PIPE DATA CALCULATED TO STRUCTURE CENTERS, TYP.
- ALL DRAINAGE PIPE SHALL CONFORM TO ADS N12 MINIMUM STANDARDS (OR EQUAL).
- ALL YARD DRAINS SHALL BE 8" NYLOPLAST DRAIN BASINS WITH DOMED GRATE AS MANUFACTURED BY ADS, INC. (OR EQUAL).
- CONTRACTOR TO SUBMIT SHOP DRAWINGS FOR ALL UNDERGROUND DETENTION SYSTEMS AND BAYFILTER SYSTEMS PRIOR TO CONSTRUCTION.
- ALL UNDERGROUND DETENTION SYSTEMS SHALL HAVE A THERMOPLASTIC (IMPERMEABLE) LINER.
- GUTTERS AND DOWNSPOUTS TO BE PROVIDED ON ALL BUILDINGS. GUTTERS SHALL DISCHARGE TO THE STONE DRIP EDGE AROUND EACH BUILDING.
- AN OPERATION AND MAINTENANCE MANUAL HAS BEEN PREPARED FOR THE ON-SITE STORMWATER MANAGEMENT SYSTEMS AND IS CONSIDERED PART OF THIS PLAN SET. THE PROPERTY OWNER SHALL COMPLY WITH THE INSPECTION AND MAINTENANCE SCHEDULE AND RECORD KEEPING REQUIREMENTS CONTAINED THEREIN.

GRAPHIC SCALE



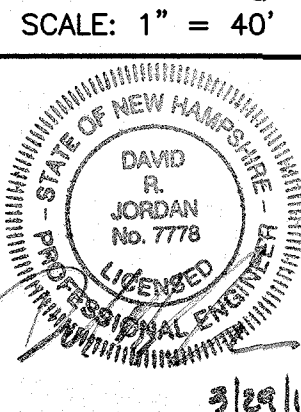
6	ADD WALKWAY AT CLUBHOUSE	DRJ	3/27/17
5	MISC. REVISIONS	DRJ	3/13/17
4	ADD LIGHT AT POOL	DRJ	2/23/17
3	MISC. REVISIONS	DRJ	2/13/17
2	REVISIONS PER REVIEW COMMENTS	DRJ	2/6/17
1	ADD NOTES 21, 22, FLOOD PLAIN CALCS	DRJ	10/11/16
NO.	DESCRIPTION	BY	DATE
	REVISIONS		

GRADING & DRAINAGE OVERVIEW PLAN

TUSCAN VILLAGE APARTMENTS
SALEM PROPERTY MAP 98 - LOT 12543
PROPERTY ADDRESS - 39 PLEASANT STREET

PREPARED FOR:
OMJ REALTY, LLC
63 MAIN STREET
SALEM, NH 03079

44 Stiles Road, Suite One
Salem, New Hampshire 03079
(603) 893-0720
ENGINEERS • PLANNERS • SURVEYORS
www.mhfdesign.com



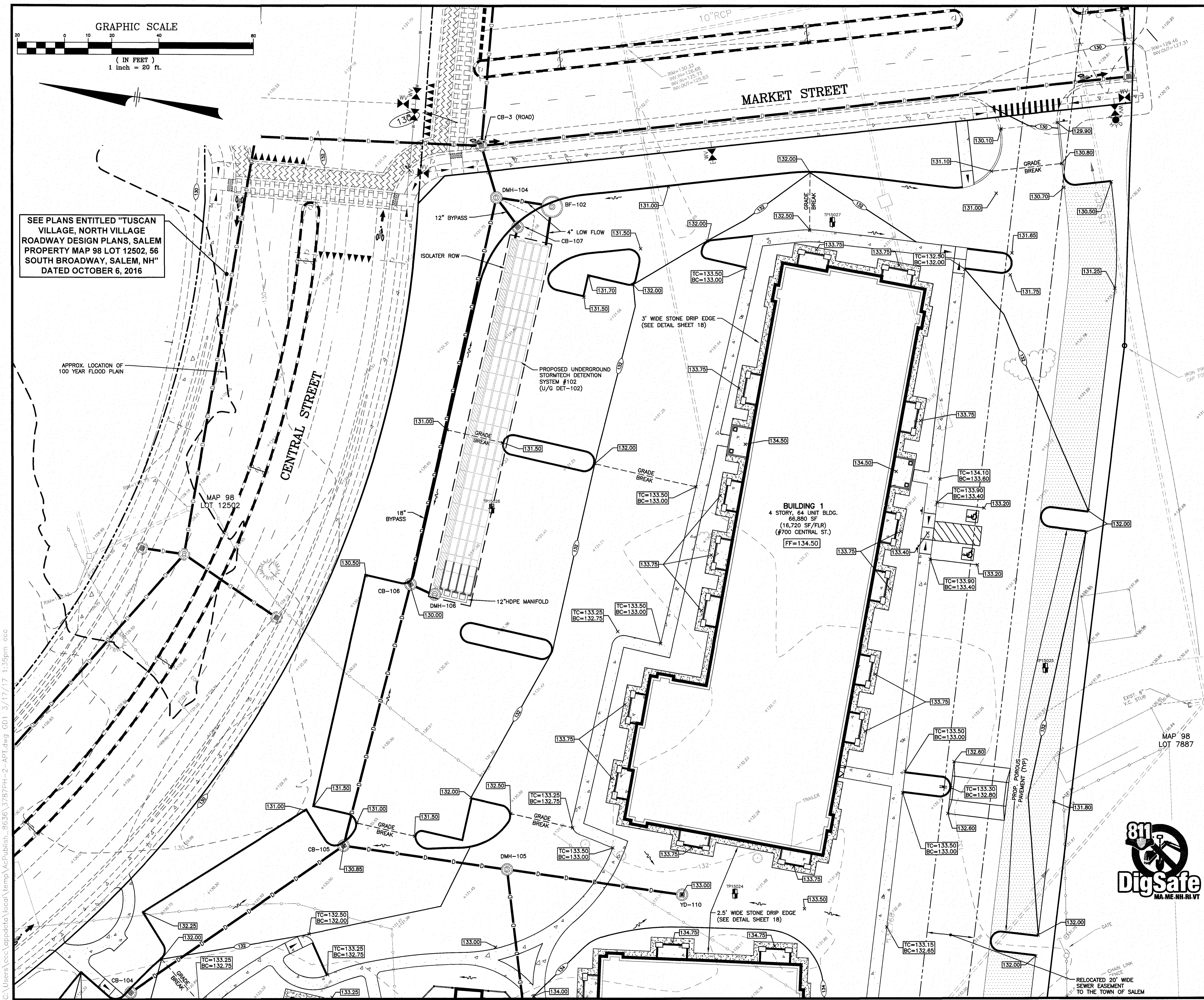
OWNER OF RECORD
OMJ REALTY, LLC
63 MAIN STREET
SALEM, NH 03079

SALEM PLANNING BOARD
APPROVAL

BOOK 5595-PAGE 2560

ZONE: COMMERCIAL - INDUSTRIAL 'C' & RESIDENTIAL

DESIGNED BY:	DRAWN/CHECKED	DWG. NAME	PROJECT No.	SHEET No.
DRJ	CCC/DRJ	3787PH-2 APT	378715	8 OF 18



SEE PLANS ENTITLED "TUSCAN VILLAGE, NORTH VILLAGE ROADWAY DESIGN PLANS, SALEM PROPERTY MAP 98 LOT 12502, 56 SOUTH BROADWAY, SALEM, NH" DATED OCTOBER 6, 2016

DRAINAGE PIPE SCHEDULE					
FROM: STRUCTURE NUMBER	PIPE SIZE (inches)	TYPE OF PIPE	APPROX. PIPE LENGTH (feet)	SLOPE OF PIPE (ft./ft.)	TO: STRUCTURE NUMBER
CB-101	12	HDPE	87	0.006	CB-102
CB-102	12	HDPE	15	0.007	DMH-107
CB-102	12	HDPE	20	0.025	DMH-101
DMH-107	12	HDPE	3	0.000	U/G DET-101
CB-103	12	HDPE	16	0.006	U/G DET-101
CB-103	15	HDPE	27	0.050	DMH-103
DMH-103	15	HDPE	10	0.040	DMH-102
U/G DET-101	4	PVC	2	0.025	BF-101
BF-101	6	PVC	5	0.020	DMH-102
DMH-101	12	HDPE	200	0.010	DMH-102
DMH-102	18	HDPE	26	0.012	CB-8(ROAD)
CB-104	12	HDPE	110	0.005	CB-105
CB-105	18	HDPE	112	0.005	CB-106
CB-106	12	HDPE	12	0.008	DMH-106
DMH-106	24	HDPE	3	0.000	U/G DET-102
CB-107	12	HDPE	5	0.020	U/G DET-102
U/G DET-102	4	PVC	16	0.006	BF-102
BF-102	6	PVC	26	0.008	DMH-104
CB-108	18	HDPE	20	0.026	DMH-104
CB-107	12	HDPE	16	0.063	DMH-104
DMH-104	18	HDPE	22	0.007	CB-3(ROAD)
YD-101A	8	HDPE	120	0.005	YD-101
YD-101	8	HDPE	43	0.006	YD-102
YD-102	8	HDPE	101	0.005	CB-103
YD-103	8	HDPE	123	0.007	YD-103A
YD-103A	8	HDPE	24	0.006	YD-104
YD-104	8	HDPE	120	0.018	CB-104
YD-105	8	HDPE	58	0.005	YD-106
YD-106	8	HDPE	48	0.005	YD-107
YD-107	8	HDPE	41	0.006	YD-108
YD-108	8	HDPE	42	0.006	DMH-105
YD-109	8	HDPE	50	0.016	YD-108
YD-110	8	HDPE	73	0.014	DMH-105
DMH-105	12	HDPE	82	0.020	CB-105

DRAINAGE STRUCTURES

CB-101 RIM=131.25 INV.IN=127.00(CB-103) INV.OUT=128.20	DMH-103 RIM=132.50 INV.IN=127.00(CB-103) INV.OUT=125.90	YD-103 (YARD DRAIN #103) RIM=134.00 INV.OUT=131.00	YD-110 (YARD DRAIN #111) RIM=133.00 INV.OUT=130.00
CB-102 RIM=132.20 INV.IN=127.70(CB-101) INV.OUT=127.50 INV.IN=126.50(6" LINER U/D) INV.OUT=128.35(BYPASS)	DMH-104 RIM=130.80 INV.IN=126.00(CB-107) INV.IN=126.50(6" LINER U/D) INV.IN=130.14(YD-103) INV.IN=122.65(CB-106) INV.IN=122.50(BF-102) INV.OUT=122.15	YD-103A (YARD DRAIN #103A) RIM=133.50 INV.IN=130.14(YD-103) INV.OUT=130.14	BAYFILTER TREATMENT UNIT #101 (BF-101) (10) BAYFILTER 545L CARTRIDGES RIM=131.60 INV.IN=126.95 INV.OUT=125.20 (SEE DETAIL SHEET 17)
CB-103 RIM=131.40 INV.IN=127.93(YD-102) INV.OUT=127.60 INV.OUT=128.35(BYPASS)	DMH-105 RIM=133.00 INV.IN=128.95(YD-108) INV.IN=128.85(YD-110) INV.OUT=128.62	YD-104 (YARD DRAIN #104) RIM=133.00 INV.IN=130.00(YD-103A) INV.OUT=130.00	BAYFILTER TREATMENT UNIT #102 (BF-102) (6) BAYFILTER 545 CARTRIDGES RIM=130.25 INV.IN=125.15 INV.OUT=122.65 (SEE DETAIL SHEET 17)
CB-104 RIM=131.35 INV.IN=127.88(YD-104) INV.OUT=127.55	DMH-106 RIM=130.15 INV.IN=125.75(CB-106) INV.IN=127.00(CB-104) INV.IN=127.00(DMH-105) INV.OUT=126.50	YD-105 (YARD DRAIN #105) RIM=133.00 INV.OUT=127.50	PROPOSED STORMTECH DETENTION SYSTEM #101 (U/G DET-101) (104) SC-310 CHAMBERS BOTTOM STONE=127.00 INV. CHAMBERS=127.50 INV.'S IN=127.50 INV.IN=127.00(4" SYSTEM U/D) INV.IN=128.45(YD-106) INV.OUT=129.45 (SEE DETAIL SHEET 17)
CB-105 RIM=130.85 INV.IN=127.00(CB-104) INV.IN=127.00(DMH-105) INV.OUT=126.50	DMH-107 RIM=132.20 INV.IN=127.50(CB-102) INV.OUT=127.50 INV.OUT=128.00(MANFOLD)	YD-106 (YARD DRAIN #106) RIM=133.00 INV.IN=129.70(YD-105) INV.OUT=129.70	PROPOSED STORMTECH DETENTION SYSTEM #102 (U/G DET-102) (105) SC-740 CHAMBERS BOTTOM STONE=125.25 INV. CHAMBERS=125.75 INV.'S IN=125.75 INV.OUT=125.25(4" SYSTEM U/D) INV. LINER U/D=124.65 (SEE DETAIL SHEET 17)
CB-106 RIM=130.00 INV.IN=125.95(CB-105) INV.IN=125.85 INV.OUT=127.00(BYPASS)	DMH-108 RIM=130.00 INV.IN=127.85(CB-102) INV.OUT=127.75	YD-107 (YARD DRAIN #107) RIM=133.00 INV.IN=129.20(YD-109) INV.OUT=129.20	
CB-107 RIM=130.00 INV.IN=125.85 INV.OUT=127.00(BYPASS)	YD-101 (YARD DRAIN #101) RIM=133.00 INV.IN=129.70 INV.OUT=129.70	YD-108 (YARD DRAIN #108) RIM=133.00 INV.IN=129.20(YD-107) INV.IN=129.20(YD-109) INV.OUT=129.20	
DMH-101 RIM=133.00 INV.IN=127.85(CB-102) INV.OUT=127.75	YD-101A (YARD DRAIN #101A) RIM=133.30 INV.IN=130.30	YD-109 (YARD DRAIN #109) RIM=133.00 INV.OUT=130.00	
DMH-102 RIM=132.80 INV.IN=126.25(6" LINER U/D) INV.IN=125.75(DMH-101) INV.IN=125.50(DMH-103) INV.IN=125.10(BF-101) INV.OUT=125.00	YD-102 (YARD DRAIN #102) RIM=133.00 INV.IN=129.45(YD-101) INV.OUT=129.45		

5	MISC. REVISIONS	DRJ	3/13/17
4	UPDATE DRAINAGE STRUCTURE TABLE	DRJ	2/23/17
3	MISC. REVISIONS	DRJ	2/13/17
2	REVISIONS PER REVIEW COMMENTS	DRJ	2/6/17
1	ADD STONE DRIP EDGE	DRJ	10/11/16
NO.	DESCRIPTION	BY	DATE

GRADING & DRAINAGE PLAN

TUSCAN VILLAGE APARTMENTS
SALEM PROPERTY MAP 98 - LOT 12543
PROPERTY ADDRESS - 39 PLEASANT STREET

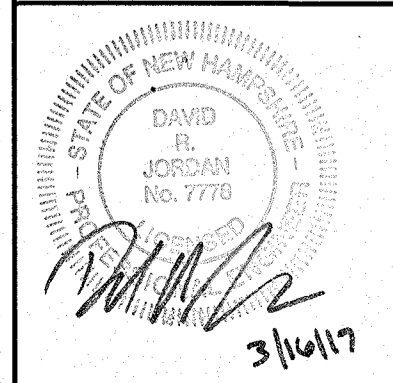
PREPARED FOR:
OMJ REALTY, LLC
63 MAIN STREET
SALEM, NH 03079



44 Shiles Road, Suite One
Salem, New Hampshire 03079
(603) 893-0720
ENGINEERS • PLANNERS • SURVEYORS
www.mhfdesign.com

SCALE: 1" = 20'

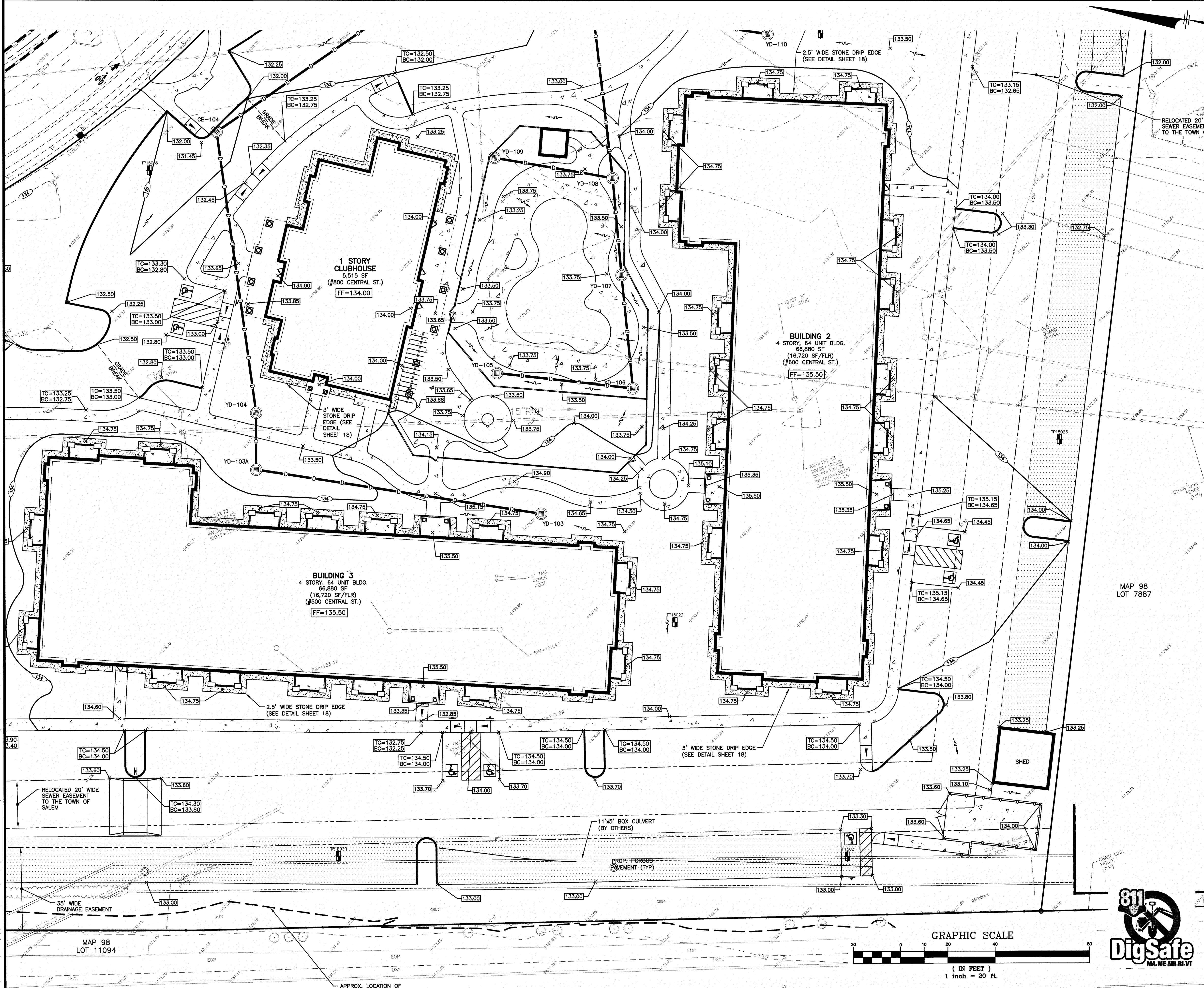
DATE: OCTOBER 7, 2016



OWNER OF RECORD OMJ REALTY, LLC 63 MAIN STREET SALEM, NH 03079 BOOK 5595-PAGE 2560	SALEM PLANNING BOARD APPROVAL
--	----------------------------------

DESIGNED BY: DRJ	DRAWN/CHECKED CCC/DRJ	DWG. NAME 3787PH-2 APT	PROJECT No. 378715	SHEET No. 9 OF 18
---------------------	--------------------------	---------------------------	-----------------------	----------------------

C:\Users\ccca\AppData\Local\Temp\AcPublish_8636\3787PH-2-APT.dwg GD1 3/17/17 1:35pm ccc



DRAINAGE PIPE SCHEDULE					
FROM STRUCTURE NUMBER	PIPE SIZE (inches)	TYPE OF PIPE	APPROX. PIPE LENGTH (feet)	SLOPE OF PIPE (ft./ft.)	TO STRUCTURE NUMBER
CB-101	12	HDPE	87	0.005	CB-102
CB-102	12	HDPE	15	0.007	DMH-101
DMH-101	12	HDPE	20	0.025	DMH-101
DMH-101	12	HDPE	3	0.000	U/G DET-101
CB-103	12	HDPE	16	0.008	U/G DET-101
CB-103	15	HDPE	27	0.050	DMH-103
DMH-103	15	HDPE	10	0.040	DMH-102
U/G DET-101	4	PVC	2	0.025	BF-101
BF-101	6	PVC	5	0.020	DMH-102
DMH-101	12	HDPE	200	0.010	DMH-102
DMH-102	18	HDPE	26	0.012	CB-8(ROAD)
CB-104	12	HDPE	110	0.005	CB-105
CB-105	18	HDPE	112	0.005	CB-106
CB-106	12	HDPE	12	0.008	DMH-106
DMH-106	24	HDPE	3	0.000	U/G DET-102
CB-107	12	HDPE	4	0.020	U/G DET-102
U/G DET-102	4	PVC	16	0.006	BF-102
BF-102	6	PVC	26	0.006	DMH-104
CB-106	18	HDPE	170	0.026	DMH-104
CB-107	12	HDPE	16	0.063	DMH-104
DMH-104	18	HDPE	22	0.007	CB-3(ROAD)
YD-101A	8	HDPE	20	0.005	YD-101
YD-101	8	HDPE	43	0.006	YD-102
YD-102	8	HDPE	101	0.005	CB-103
YD-103	8	HDPE	123	0.007	YD-103A
YD-103A	8	HDPE	24	0.006	YD-104
YD-104	8	HDPE	120	0.018	CB-104
YD-105	8	HDPE	58	0.005	YD-106
YD-106	8	HDPE	48	0.005	YD-107
YD-107	8	HDPE	41	0.006	YD-108
YD-108	8	HDPE	42	0.006	DMH-105
YD-109	8	HDPE	50	0.016	YD-108
YD-110	8	HDPE	73	0.014	DMH-105
DMH-105	12	HDPE	82	0.020	CB-105

DRAINAGE STRUCTURES

CB-101 RIM=131.25 INV.OUT=128.20	DMH-103 RIM=130.80 INV.IN=127.00(CB-103) INV.OUT=125.90	YD-103 (YARD DRAIN #103) RIM=134.00 INV.OUT=131.00	YD-110 (YARD DRAIN #111) RIM=133.00 INV.OUT=130.00
CB-102 RIM=132.20 INV.IN=127.70(CB-101) INV.OUT=127.60 INV.OUT=128.35(BYPASS)	DMH-104 RIM=130.80 INV.IN=126.00(CB-107) INV.IN=125.50(6" LINER U/D) INV.IN=122.65(CB-106) INV.OUT=122.15	YD-103A (YARD DRAIN #103A) RIM=133.50 INV.IN=130.14(YD-103) INV.OUT=130.14	BAYFILTER TREATMENT UNIT #101 (BF-101) (10) BAYFILTER 545L CARTRIDGES RIM=131.60 INV.IN=126.95 INV.OUT=125.20 (SEE DETAIL SHEET 17)
CB-103 RIM=131.40 INV.IN=127.93(YD-102) INV.OUT=127.80 INV.OUT=128.35(BYPASS)	DMH-105 RIM=133.00 INV.IN=130.00(YD-108) INV.IN=128.95(YD-108) INV.IN=128.95(YD-110) INV.OUT=128.62	YD-104 (YARD DRAIN #104) RIM=133.00 INV.IN=130.00(YD-103A) INV.OUT=130.00	BAYFILTER TREATMENT UNIT #102 (BF-102) (6) BAYFILTER 545L CARTRIDGES RIM=130.25 INV.IN=125.15 INV.OUT=122.65 (SEE DETAIL SHEET 17)
CB-104 RIM=131.35 INV.IN=127.88(YD-104) INV.OUT=127.55	DMH-106 RIM=130.15 INV.IN=125.75(CB-106) INV.OUT=125.75 INV.OUT=126.80(MANIFOLD)	YD-105 (YARD DRAIN #105) RIM=133.00 INV.OUT=130.00	PROPOSED STORMTECH DETENTION SYSTEM #101 (U/G DET-101) (104) SC-310 CHAMBERS BOTTOM STONE=127.00 INV. CHAMBERS=127.50 INV.'S IN=127.50 INV.OUT=127.00(*SYSTEM U/D) (SEE DETAIL SHEET 17)
CB-105 RIM=130.85 INV.IN=127.00(CB-104) INV.IN=127.00(DMH-105) INV.OUT=126.50	DMH-107 RIM=132.20 INV.IN=127.50(CB-102) INV.OUT=127.50 INV.OUT=128.00(MANIFOLD)	YD-106 (YARD DRAIN #106) RIM=133.00 INV.IN=129.70(YD-105) INV.OUT=129.70	PROPOSED STORMTECH DETENTION SYSTEM #102 (U/G DET-102) (105) SC-740 CHAMBERS BOTTOM STONE=125.25 INV. CHAMBERS=125.75 INV.'S IN=125.75 INV.OUT=125.25(*SYSTEM U/D) (SEE DETAIL SHEET 17)
CB-107 RIM=130.00 INV.IN=125.85 INV.OUT=125.85 INV.OUT=127.00(BYPASS)	YD-101 (YARD DRAIN #101) RIM=133.00 INV.IN=129.70 INV.OUT=129.45	YD-107 (YARD DRAIN #107) RIM=133.00 INV.IN=129.45(YD-106) INV.OUT=129.45	
DMH-101 RIM=133.00 INV.IN=126.25(6" LINER U/D) INV.IN=125.75(DMH-101) INV.IN=125.50(DMH-103) INV.IN=125.10(BF-101) INV.IN=125.00	YD-101A (YARD DRAIN #101A) RIM=133.30 INV.IN=125.75 INV.OUT=130.30	YD-108 (YARD DRAIN #108) RIM=133.00 INV.IN=129.20(YD-107) INV.IN=129.20(YD-109) INV.OUT=129.20	
	YD-102 (YARD DRAIN #102) RIM=133.00 INV.IN=129.45(YD-101) INV.OUT=129.45	YD-109 (YARD DRAIN #109) RIM=133.00 INV.OUT=130.00	

6	ADD WALKWAY AT CLUBHOUSE	DRJ	3/27/17
5	MISC. REVISIONS	DRJ	3/13/17
4	UPDATE DRAINAGE STRUCTURE TABLE	DRJ	2/23/17
3	MISC. REVISIONS	DRJ	2/13/17
2	REVISIONS PER REVIEW COMMENTS	DRJ	2/6/17
1	ADD STONE DRIP EDGE	DRJ	10/11/16
NO.	DESCRIPTION	BY	DATE

GRADING & DRAINAGE PLAN

TUSCAN VILLAGE APARTMENTS
SALEM PROPERTY MAP 98 - LOT 12543
PROPERTY ADDRESS - 39 PLEASANT STREET

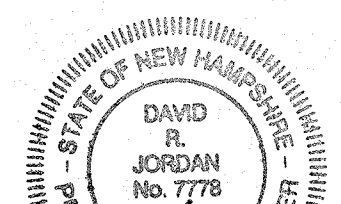
PREPARED FOR:
OMJ REALTY, LLC
63 MAIN STREET
SALEM, NH 03079

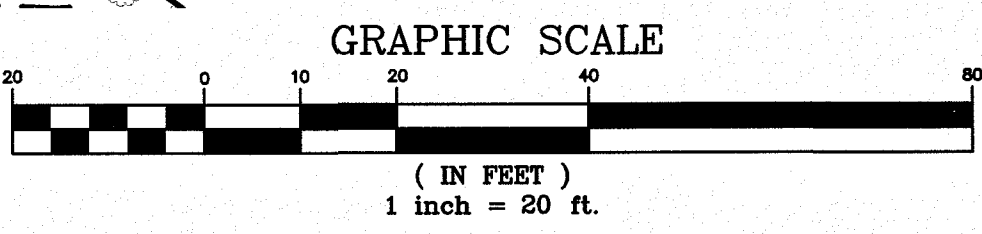


44 Silas Road, Suite One
Salem, New Hampshire 03079
(603) 893-0720
ENGINEERS • PLANNERS • SURVEYORS
www.mhfdesign.com

SCALE: 1" = 20'

DATE: OCTOBER 7, 2016

	<u>OWNER OF RECORD</u> OMJ REALTY, LLC 63 MAIN STREET SALEM, NH 03079 BOOK 5595-PAGE 2560		<u>SALEM PLANNING BOARD</u> <u>APPROVAL</u>	
	ZONE: COMMERCIAL - INDUSTRIAL 'C' & RESIDENTIAL			
	DESIGNED BY:	DRAWN/CHECKED	DWG. NAME	PROJECT No.
DRJ	CCC/DRJ	3787PH-2 APT	378715	10 OF 18



SEE PLANS ENTITLED "TUSCAN VILLAGE, NORTH VILLAGE ROADWAY DESIGN PLANS, SALEM PROPERTY MAP 98 LOT 12502, 56 SOUTH BROADWAY, SALEM, NH" DATED OCTOBER 6, 2016

MAP 98 LOT 12502

CENTRAL STREET

VILLAGE WAY

PLEASANT STREET

BUILDING 4
4 STORY, 64 UNIT BLDG.
66,880 SF
(16,720 SF/FLR)
#400 CENTRAL ST.
FF=134.50

DRAINAGE PIPE SCHEDULE						
FROM STRUCTURE NUMBER	PIPE SIZE (INCHES)	TYPE OF PIPE	APPROX. LENGTH (FEET)	SLOPE OF PIPE (FT./FT.)	TO STRUCTURE NUMBER	
CB-101	12	HDPE	87	0.006	CB-102	
CB-102	12	HDPE	15	0.007	DMH-107	
DMH-107	12	HDPE	20	0.025	DMH-101	
CB-103	12	HDPE	3	0.000	U/G DET-101	
CB-103	15	HDPE	16	0.006	U/G DET-101	
DMH-103	15	HDPE	27	0.050	DMH-103	
DMH-103	15	HDPE	10	0.040	DMH-102	
U/G DET-101	4	PVC	2	0.025	BF-101	
BF-101	6	PVC	5	0.020	DMH-102	
DMH-101	12	HDPE	200	0.010	DMH-102	
DMH-102	18	HDPE	28	0.012	CB-8(ROAD)	
CB-104	12	HDPE	110	0.005	CB-105	
CB-105	18	HDPE	112	0.005	CB-106	
CB-106	12	HDPE	12	0.008	DMH-106	
DMH-106	24	HDPE	3	0.000	U/G DET-102	
CB-107	12	HDPE	5	0.020	U/G DET-102	
U/G DET-102	4	PVC	16	0.006	BF-102	
BF-102	6	PVC	28	0.006	DMH-104	
CB-106	18	HDPE	170	0.026	DMH-104	
DMH-104	18	HDPE	16	0.063	DMH-104	
DMH-104	18	HDPE	22	0.007	CB-3(ROAD)	
YD-101A	8	HDPE	120	0.005	YD-101	
YD-101	8	HDPE	43	0.006	YD-102	
YD-102	8	HDPE	101	0.005	CB-103	
YD-103	8	HDPE	123	0.007	YD-103A	
YD-103A	8	HDPE	24	0.006	YD-104	
YD-104	8	HDPE	120	0.018	CB-104	
YD-105	8	HDPE	58	0.005	YD-106	
YD-106	8	HDPE	48	0.005	YD-107	
YD-107	8	HDPE	41	0.008	YD-108	
YD-108	8	HDPE	42	0.006	DMH-105	
YD-109	8	HDPE	50	0.016	YD-108	
YD-110	8	HDPE	73	0.014	DMH-105	
DMH-105	12	HDPE	82	0.020	CB-105	

DRAINAGE STRUCTURES

CB-101 RIM=131.25 INV.OUT=128.20	DMH-103 RIM=132.50 INV.IN=127.00(CB-103) INV.OUT=125.90	YD-103 (YARD DRAIN #103) RIM=134.00 INV.OUT=131.00	YD-110 (YARD DRAIN #111) RIM=133.00 INV.OUT=130.00
CB-102 RIM=132.20 INV.IN=127.70(CB-101) INV.OUT=127.60	DMH-104 RIM=130.80 INV.IN=125.00(CB-107) INV.IN=125.50(6"LINER U/D) INV.IN=122.65(CB-106) INV.IN=122.50(BF-102) INV.OUT=122.15	YD-103A (YARD DRAIN #103A) RIM=133.50 INV.IN=130.14(YD-103) INV.OUT=130.14	YD-104 (YARD DRAIN #104) RIM=133.00 INV.IN=130.00(YD-103A) INV.OUT=130.00
CB-103 RIM=131.40 INV.IN=127.93(YD-102) INV.OUT=127.60	DMH-105 RIM=133.00 INV.IN=128.95(YD-108) INV.IN=128.95(YD-110) INV.OUT=128.62	YD-105 (YARD DRAIN #105) RIM=133.00 INV.IN=125.15 INV.OUT=122.65	YD-106 (YARD DRAIN #106) RIM=133.00 INV.IN=129.70(YD-105) INV.OUT=129.70
CB-104 RIM=131.35 INV.IN=127.88(YD-104) INV.OUT=127.35	CB-105 RIM=130.85 INV.IN=127.00(CB-104) INV.IN=127.00(DMH-105) INV.OUT=126.50	YD-107 (YARD DRAIN #107) RIM=133.00 INV.IN=129.45(YD-106) INV.OUT=129.45	YD-108 (YARD DRAIN #108) RIM=133.00 INV.IN=129.20(YD-107) INV.IN=129.20(YD-109) INV.OUT=128.20
CB-106 RIM=130.00 INV.IN=125.95(CB-105) INV.OUT=125.85	CB-107 RIM=130.00 INV.IN=125.85 INV.OUT=127.00(BYPASS)	YD-109 (YARD DRAIN #109) RIM=133.00 INV.IN=129.45(YD-101) INV.OUT=129.45	YD-110 (YARD DRAIN #110) RIM=133.00 INV.IN=129.45(YD-101) INV.OUT=129.45
DMH-101 RIM=133.00 INV.IN=127.85(CB-102) INV.OUT=127.75	DMH-102 RIM=132.80 INV.IN=126.25(6"LINER U/D) INV.IN=125.75(DMH-101) INV.IN=125.50(DMH-103) INV.OUT=125.00		

NO.	DESCRIPTION	BY	DATE
5	MISC. REVISIONS	DRJ	3/13/17
4	UPDATE DRAINAGE STRUCTURE TABLE	DRJ	2/23/17
3	MISC. REVISIONS	DRJ	2/13/17
2	REVISIONS PER REVIEW COMMENTS	DRJ	2/6/17
1	ADD STONE DRIP EDGE	DRJ	10/11/16

GRADING & DRAINAGE PLAN

TUSCAN VILLAGE APARTMENTS
SALEM PROPERTY MAP 98 - LOT 12543
PROPERTY ADDRESS - 39 PLEASANT STREET

PREPARED FOR:
OMJ REALTY, LLC
63 MAIN STREET
SALEM, NH 03079



44 Stiles Road, Suite One
Salem, New Hampshire 03079
(603) 893-0720
ENGINEERS • PLANNERS • SURVEYORS
www.mhfdesign.com

SCALE: 1" = 20'

DATE: OCTOBER 7, 2016

OWNER OF RECORD

OMJ REALTY, LLC
63 MAIN STREET
SALEM, NH 03079

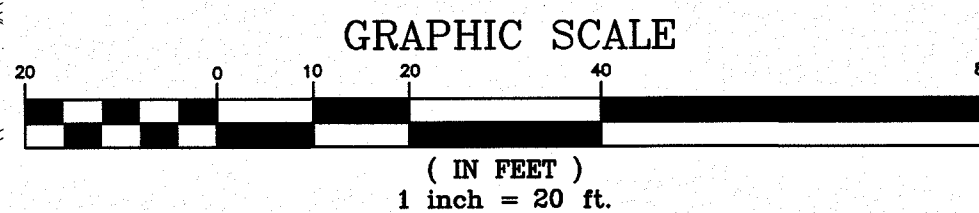
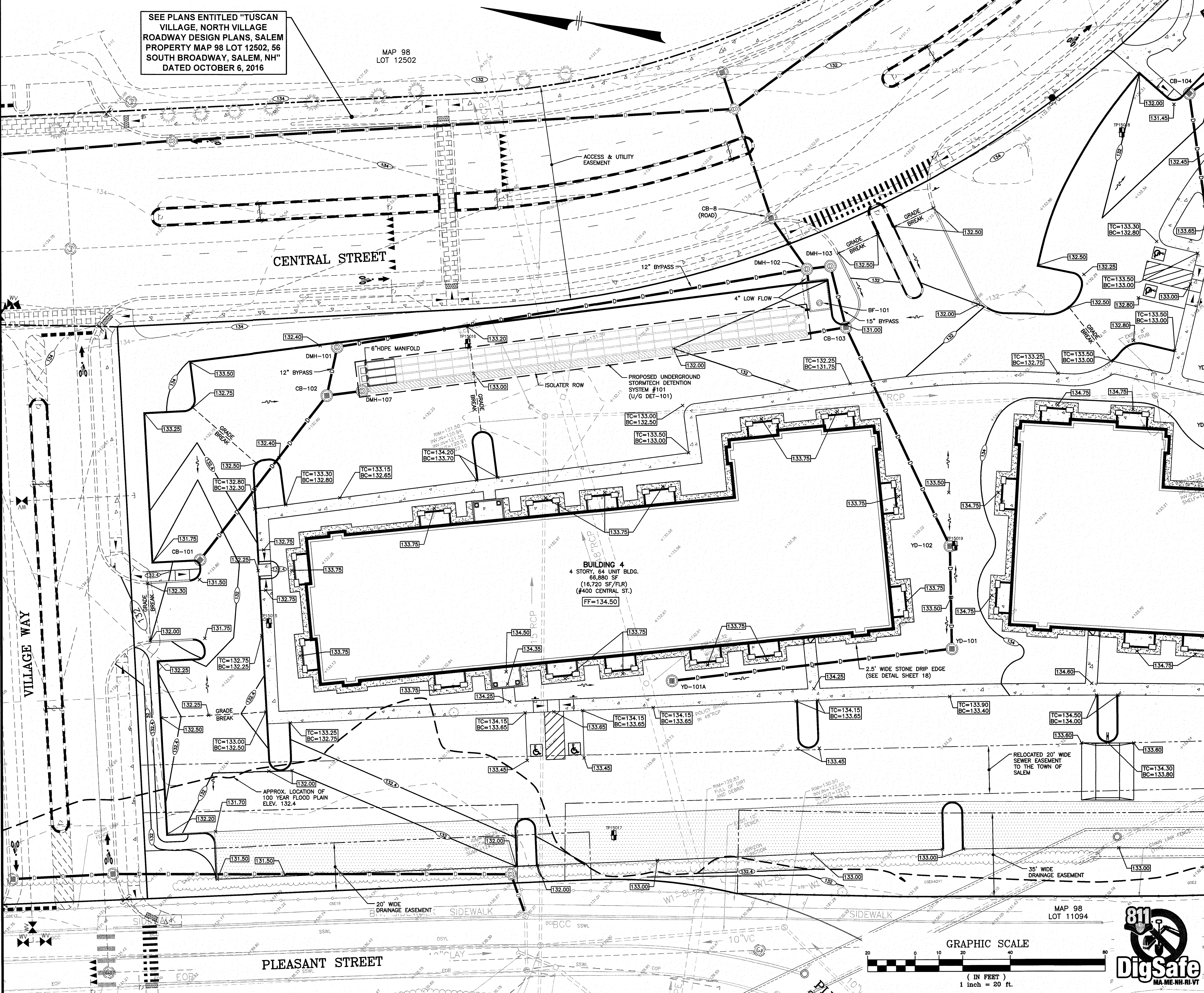
BOOK 5595-PAGE 2560

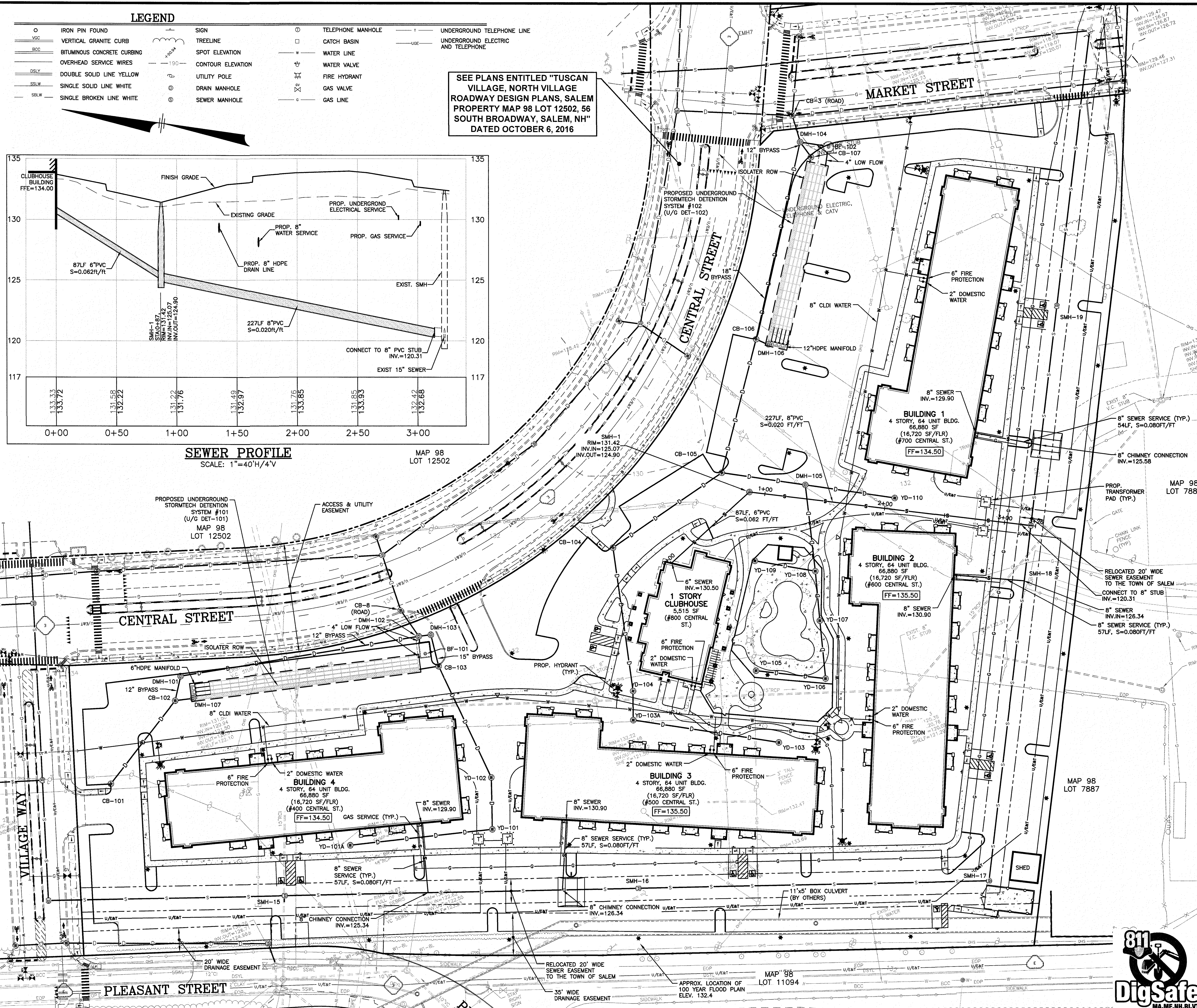
SALEM PLANNING BOARD

APPROVAL

ZONE: COMMERCIAL - INDUSTRIAL 'C' & RESIDENTIAL

DESIGNED BY:	DRAWN/CHECKED	DWG. NAME	PROJECT No.	SHEET No.
DRJ	CCC/DRJ	3787PH-2 APT	378715	11 OF 18





NOTES:

- ALL SITE DRAINAGE PIPE SHALL BE CORRUGATED HIGH-DENSITY POLYETHYLENE PIPE WITH STANDARD JOINTS, DUAL-WALL, SMOOTH INTERIOR AS MANUFACTURED BY ADS, INC., OR APPROVED EQUAL, UNLESS OTHERWISE NOTED ON PLAN.
- ALL ROOF DRAIN PIPE (RD) SHALL BE 12" HDPE. INFORMATION SHOWN IS SCHEMATIC ONLY. SEE ARCHITECTURAL PLANS FOR ROOF DRAIN LOCATIONS.
- ALL SANITARY SEWER PIPE SHALL BE PVC (SDR-35), UNLESS OTHERWISE NOTED.
- ALL WATER PIPE SHALL BE CEMENT LINED DUCTILE IRON, UNLESS OTHERWISE NOTED.
- ELEVATIONS ARE BASED ON NGVD 1929 DATUM.
- ALL PROPOSED ELEVATIONS AS SHOWN ARE BOTTOM OF CURB ELEVATIONS, UNLESS OTHERWISE NOTED.
- ANY UTILITY FIELD ADJUSTMENTS SHALL BE APPROVED BY THE LOCAL AUTHORITIES AND THE DEVELOPER PRIOR TO INSTALLATION.
- THE LOCATIONS OF UNDERGROUND UTILITIES ARE APPROXIMATE ONLY. THE CONTRACTOR IS TO VERIFY EXACT LOCATION PRIOR TO CONSTRUCTION. THE CONTRACTOR IS TO NOTIFY THE DESIGN ENGINEER OF ANY DISCREPANCIES. CONSTRUCTION SHALL COMMENCE BEGINNING AT THE LOWEST INVERT (POINT OF CONNECTION) AND PROGRESS UP GRADIENT. PROPOSED INTERFACE POINTS (CROSSINGS) WITH EXISTING UNDERGROUND INSTALLATIONS SHALL BE FIELD VERIFIED BY TEST PIT PRIOR TO COMMENCEMENT OF CONSTRUCTION.
- ALL CONSTRUCTION SHALL CONFORM TO APPLICABLE TOWN, STATE AND FEDERAL STANDARDS.
- THE CONTRACTOR SHALL CALL AND COORDINATE WITH DIG-SAFE (1-888-344-7233) PRIOR TO COMMENCING ANY EXCAVATION.
- ALL WATER AND SEWER CONSTRUCTION SHALL CONFORM TO APPLICABLE MUNICIPAL SERVICES DEPARTMENT AND NHDES SPECIFICATIONS.
- ALL ELECTRIC, TELEPHONE AND CABLE TV LINES ARE TO BE INSTALLED IN CONFORMANCE WITH APPLICABLE UTILITY CO. SPECIFICATIONS.
- ANY UTILITIES TO BE TAKEN OUT OF SERVICE SHALL BE DISCONNECTED AS DIRECTED BY UTILITY COMPANY AND LOCAL MSD.
- ALL TRAFFIC CONTROL AND TEMPORARY CONSTRUCTION SIGNAGE ARRANGEMENTS, ACCEPTABLE TO NHDOT AND SALEM MUNICIPAL SERVICES DEPARTMENT, SHALL BE EMPLOYED DURING OPERATIONS WITHIN THE PUBLIC RIGHT-OF-WAY.
- THE LOCATION AND ELEVATION OF ALL PROPOSED BUILDING UTILITY CONNECTIONS SHALL BE VERIFIED WITH THE ARCHITECTURAL PLANS.
- SEWERS SHALL BE LOCATED AT LEAST 10 FEET HORIZONTALLY FROM ANY EXISTING OR PROPOSED WATER MAINS.
- ALL EXISTING ON-SITE UTILITIES TO BE TAKEN OUT OF SERVICE SHALL BE REMOVED.

SALEM MUNICIPAL SERVICES DEPARTMENT NOTES:

- REQUIRED METERING AND BACKFLOW PREVENTION DEVICES WILL BE INSTALLED ON WATER SERVICES. THESE DEVICES WILL BE LOCATED AT THE POINT SERVICE LINES ENTER THE BUILDING. SERVICE LINES ARE NOT ALLOWED TO RUN THROUGH THE BUILDING, UNDER FLOORS, OVERHEAD OR OTHERWISE.
- ALL EXISTING WATER AND SEWER SERVICES FOR BUILDINGS TO BE RAZED MUST BE CUT AND CAPPED PRIOR TO A RAZE PERMIT BEING ISSUED.
- DOMESTIC WATER SERVICES MAY BE TAPPED OFF FIRE SPRINKLER SERVICES, PROVIDED THE DOMESTIC SERVICE IS TAPPED A MINIMUM OF TEN FEET OUTSIDE THE BUILDING. VALVES ARE REQUIRED ON BOTH SERVICE LINES, WITH A VALVE IN THE FIRE SERVICE DOWNSTREAM OF THE DOMESTIC SERVICE TAP. THESE VALVES SHOULD BE LOCATED A MINIMUM FIVE FEET FROM THE BUILDING.

SALEM FIRE DEPARTMENT NOTES:

- BUILDING SHALL BE PROVIDED WITH AN AUTOMATIC FIRE ALARM SYSTEM DESIGNED AND INSTALLED IN ACCORDANCE WITH NFPA 72, 2002 EDITION AND SALEM FIRE DEPARTMENT REGULATIONS.
- ALL SITE AND CONSTRUCTION PLANS MAY BE REVIEWED BY A THIRD PARTY CONSULTANT OF THE TOWNS CHOOSING. ALL COST ASSOCIATED WITH THIRD PARTY REVIEWS AND INSPECTION SHALL BE PAID BY THE DEVELOPER.
- UNDERGROUND WATER MAINS AND HYDRANTS SHALL BE DESIGNED AND INSTALLED IN ACCORDANCE WITH THE INTERNATIONAL FIRE CODE 2000 EDITION, APPENDIX B AND C, AND SALEM WATER DEPARTMENT REGULATIONS. FLOW CALCULATIONS AND BUILDING CONSTRUCTION CLASSIFICATION SHALL BE INCLUDED WITH THE SITE PLAN.
- PLANS FOR CONSTRUCTION OF BUILDINGS AND FIRE PROTECTION SYSTEMS SHALL BE SUBMITTED TO THE SALEM FIRE DEPARTMENT AND RELEASED FOR CONSTRUCTION PRIOR TO STARTING WORK. ALL CONTRACTORS INSTALLING FIRE PROTECTION SYSTEMS SHALL HOLD A CERTIFICATE OF FITNESS FROM THE SALEM FIRE DEPARTMENT.
- ALL UNDERGROUND WATER MAINS SERVING SPRINKLER OR STANDPIPE SYSTEM SHALL BE FLUSHED IN ACCORDANCE WITH NFPA 24 AND SHALL BE WITNESSED BY SALEM FIRE DEPARTMENT PERSONNEL.
- ALL BUILDINGS THREE OR MORE STORIES IN HEIGHT ABOVE THE LEVEL OF FIRE DEPARTMENT ACCESS AS DETERMINED BY THE FIRE DEPARTMENT SHALL BE PROVIDED WITH CLASS I STANDPIPES DESIGNED AND INSTALLED IN ACCORDANCE WITH NFPA 14, 2003 EDITION.

GRAPHIC SCALE
1 inch = 40 ft.

NO.	DESCRIPTION	BY	DATE
4	UPDATE SEWER INFORMATION, ADD WALKWAY AT CLUBHOUSE	DRJ	3/27/17
3	MISC. REVISIONS	DRJ	3/13/17
2	ADD LIGHT AT POOL, NOTE 17	DRJ	2/23/17
1	REVISIONS PER REVIEW COMMENTS	DRJ	2/6/17

UTILITIES PLAN

TUSCAN VILLAGE APARTMENTS
SALEM PROPERTY MAP 98 - LOT 12543
PROPERTY ADDRESS - 39 PLEASANT STREET

PREPARED FOR:
OMJ REALTY, LLC
63 MAIN STREET
SALEM, NH 03079

44 Stiles Road, Suite One
Salem, New Hampshire 03079
(603) 893-0720
ENGINEERS • PLANNERS • SURVEYORS
www.mhfdesign.com

MHF Design Consultants, Inc.

SCALE: 1" = 40' DATE: OCTOBER 7, 2016

OWNER OF RECORD
OMJ REALTY, LLC
63 MAIN STREET
SALEM, NH 03079
BOOK 5595-PAGE 2560

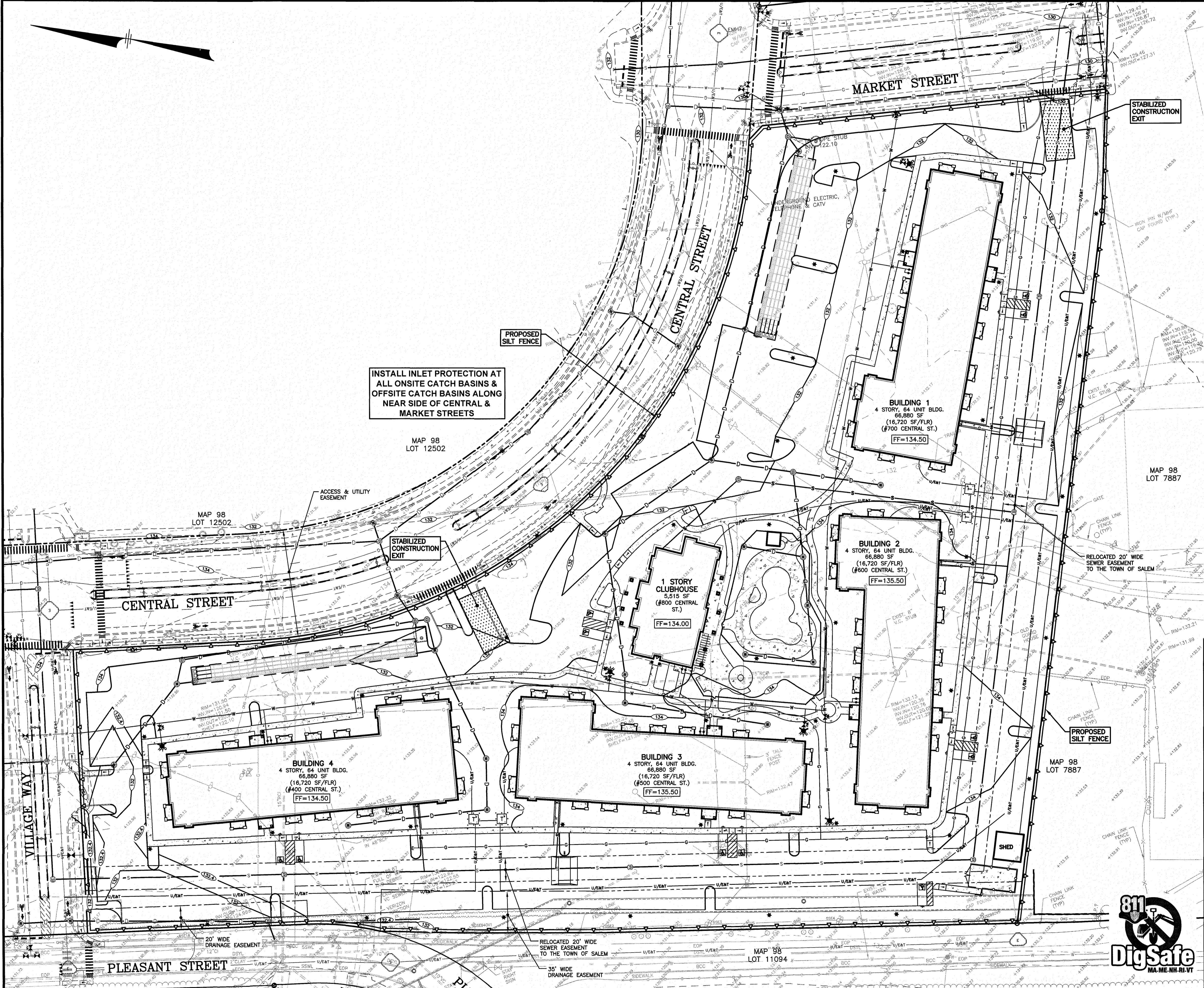
SALEM PLANNING BOARD
APPROVAL

DAVID A. JORDAN
No. 7778
3/29/17

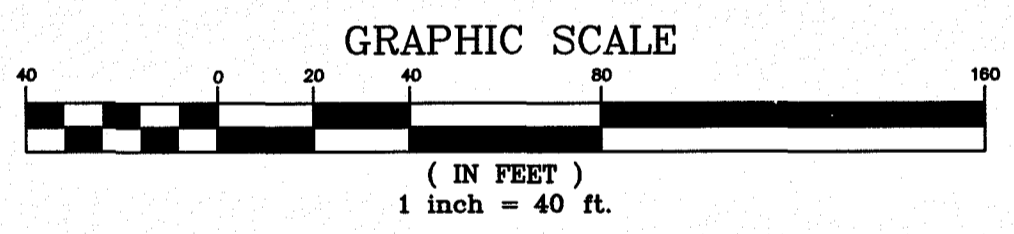
ZONE: COMMERCIAL - INDUSTRIAL 'C' & RESIDENTIAL

DESIGNED BY:	DRAWN/CHECKED	DWG. NAME	PROJECT No.	SHEET No.
DRJ	CCC/DRJ	3787PH-2 APT	378715	12 OF 18

C:\Users\ccv\AppData\Local\Temp\AcPublish_2232\3787PH-2-APT.dwg UT 3/29/17 2:11pm ccc



- NOTES:**
- 1) ALL SITE DRAINAGE PIPE SHALL BE CORRUGATED HIGH-DENSITY POLYETHYLENE PIPE WITH STANDARD JOINTS, DUAL-WALL, SMOOTH INTERIOR AS MANUFACTURED BY ADS, INC., OR APPROVED EQUAL, UNLESS OTHERWISE NOTED ON PLAN.
 - 2) ELEVATIONS ARE BASED ON NGVD 1929 DATUM.
 - 3) ALL PROPOSED ELEVATIONS AS SHOWN ARE BOTTOM OF CURB ELEVATIONS, UNLESS OTHERWISE NOTED.
 - 4) ANY UTILITY FIELD ADJUSTMENTS SHALL BE APPROVED BY THE LOCAL AUTHORITIES AND THE DEVELOPER PRIOR TO INSTALLATION.
 - 5) THE LOCATIONS OF UNDERGROUND UTILITIES ARE APPROXIMATE ONLY. THE CONTRACTOR IS TO VERIFY EXACT LOCATION PRIOR TO CONSTRUCTION. THE CONTRACTOR IS TO NOTIFY THE DESIGN ENGINEER OF ANY DISCREPANCIES. CONSTRUCTION SHALL COMMENCE BEGINNING AT THE LOWEST INVERT (POINT OF CONNECTION) AND PROGRESS UP GRADIENT. PROPOSED INTERFACE POINTS (CROSSINGS) WITH EXISTING UNDERGROUND INSTALLATIONS SHALL BE FIELD VERIFIED BY TEST PIT PRIOR TO COMMENCEMENT OF CONSTRUCTION.
 - 6) ALL CONSTRUCTION SHALL CONFORM TO APPLICABLE TOWN, STATE AND FEDERAL STANDARDS.
 - 7) THE CONTRACTOR SHALL CALL AND COORDINATE WITH DIG-SAFE (1-888-344-7233) PRIOR TO COMMENCING ANY EXCAVATION.
 - 8) THIS SITE WILL REQUIRE A USEPA NPDES PERMIT FOR STORMWATER DISCHARGE FOR THE SITE CONSTRUCTION SINCE THE DISTURBANCE DOES EXCEED ONE ACRE (ACTUAL DISTURBANCE = 365,000 SF).
 - 9) ALL TRAFFIC CONTROL AND TEMPORARY CONSTRUCTION SIGNAGE ARRANGEMENTS, ACCEPTABLE TO SALEM POLICE DEPARTMENT AND SALEM MUNICIPAL SERVICES DEPARTMENT, SHALL BE EMPLOYED DURING OPERATIONS WITHIN THE PUBLIC RIGHT-OF-WAY.
 - 10) ALL ADA ACCESSIBLE WALKWAYS CANNOT EXCEED 5% RUNNING SLOPE AND 2% CROSS SLOPE, RAMP CANNOT EXCEED 8.33% RUNNING SLOPE AND 2% CROSS SLOPE, AND ACCESSIBLE PARKING STALLS AND ACCESS AISLES CANNOT EXCEED 2% SLOPE IN ANY DIRECTION. PRIOR TO CONSTRUCTION, CONTRACTOR SHALL NOTIFY ENGINEER OF ANY DISCREPANCIES.
 - 11) GUTTERS AND DOWNSPOUTS TO BE PROVIDED ON ALL BUILDINGS. GUTTERS SHALL DISCHARGE TO THE STONE DRIP EDGE AROUND EACH BUILDING.
 - 12) AN OPERATION AND MAINTENANCE MANUAL HAS BEEN PREPARED FOR THE ON-SITE STORMWATER MANAGEMENT SYSTEMS AND IS CONSIDERED PART OF THIS PLAN SET. THE PROPERTY OWNER SHALL COMPLY WITH THE INSPECTION AND MAINTENANCE SCHEDULE AND RECORD KEEPING REQUIREMENTS CONTAINED THEREIN.



5	REVISE WATER LINE	DRJ	4/5/17
4	ADD WALKWAY AT CLUBHOUSE	DRJ	3/27/17
3	MISC. REVISIONS	DRJ	2/13/17
2	REVISIONS PER REVIEW COMMENTS	DRJ	2/6/17
1	REVISE NOTE 11, ADD NOTE 12	DRJ	10/11/16
NO.	DESCRIPTION	BY	DATE

EROSION & SEDIMENT CONTROL PLAN

TUSCAN VILLAGE APARTMENTS
SALEM PROPERTY MAP 98 - LOT 12543
PROPERTY ADDRESS - 39 PLEASANT STREET

PREPARED FOR:
OMJ REALTY, LLC
63 MAIN STREET
SALEM, NH 03079

MHF Design Consultants, Inc.
44 Stiles Road, Suite One
Salem, New Hampshire 03079
(603) 893-0720
ENGINEERS • PLANNERS • SURVEYORS
www.mhfdesign.com

SCALE: 1" = 40' DATE: OCTOBER 7, 2016

OWNER OF RECORD
OMJ REALTY, LLC
63 MAIN STREET
SALEM, NH 03079
BOOK 5595-PAGE 2560

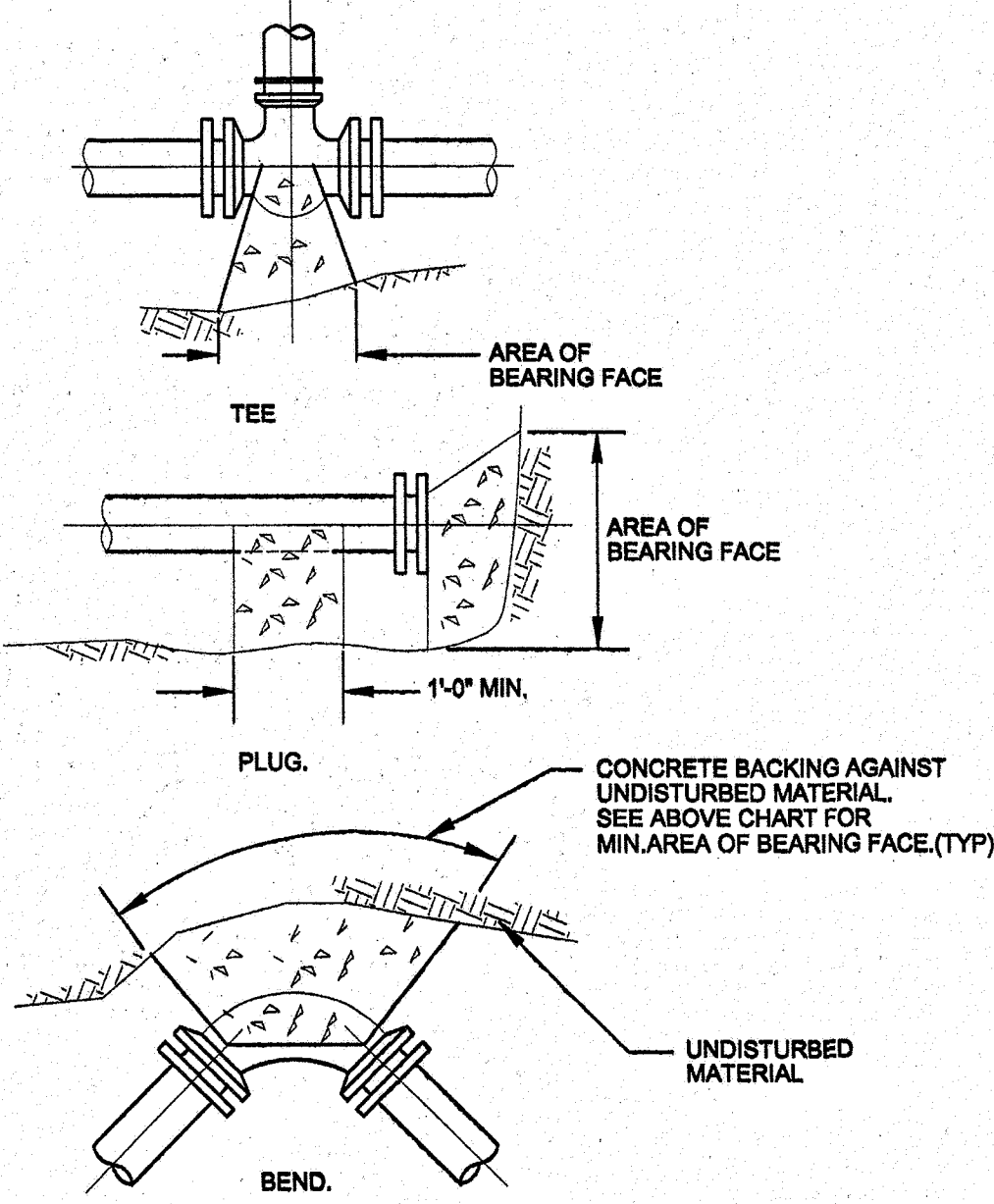
SALEM PLANNING BOARD
APPROVAL

ZONE: COMMERCIAL - INDUSTRIAL 'C' & RESIDENTIAL

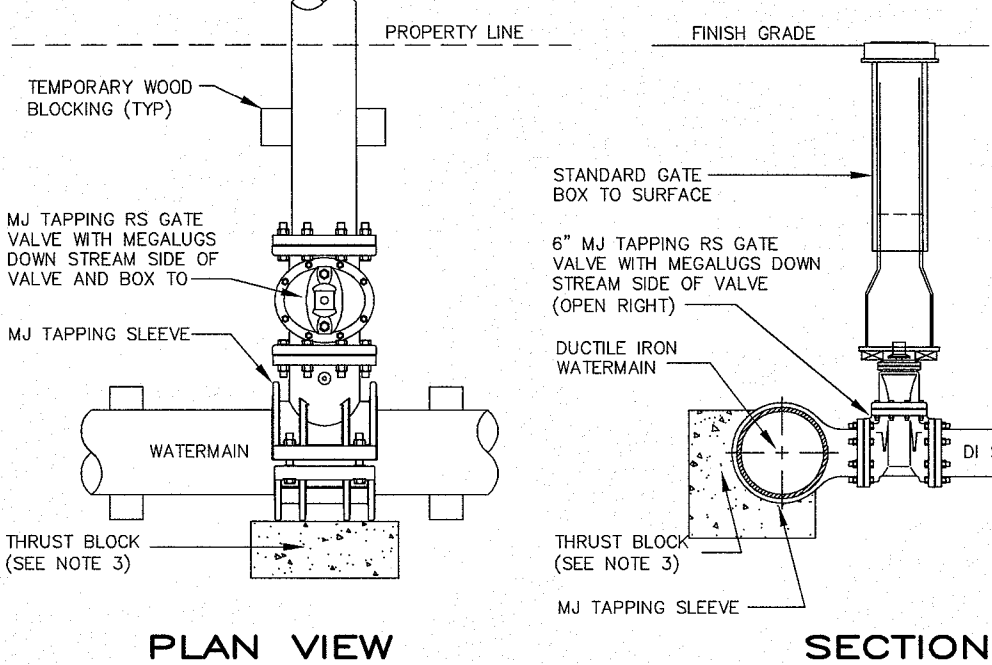
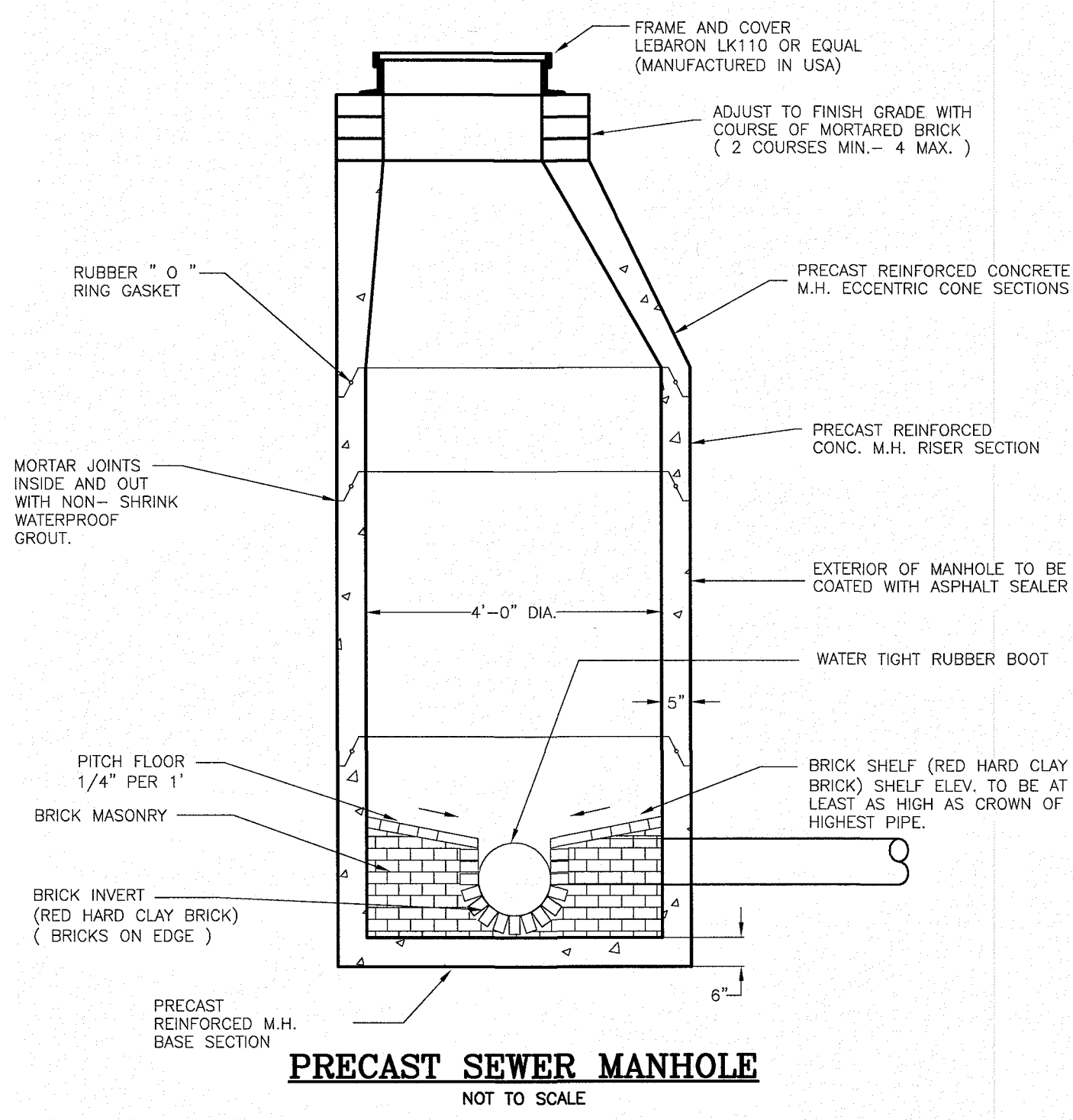
DESIGNED BY:	DRAWN/CHECKED	DWG. NAME	PROJECT No.	SHEET No.
DRJ	CCC/DRJ	3787PH-2 APT	378715	13 OF 18



AREA OF BEARING FACE OF CONCRETE THRUST BLOCKS IN SQUARE FEET BASED ON 450 P.S.I. & TONS.F. ALLOWABLE SOIL BEARING CAPACITY				
PIPE SIZE IN.	1/4 BEND	1/8 BEND	PLUG & TEE	
8	9	4	6	
10	13	6	9	
12	18	9	13	
16	32	16	23	

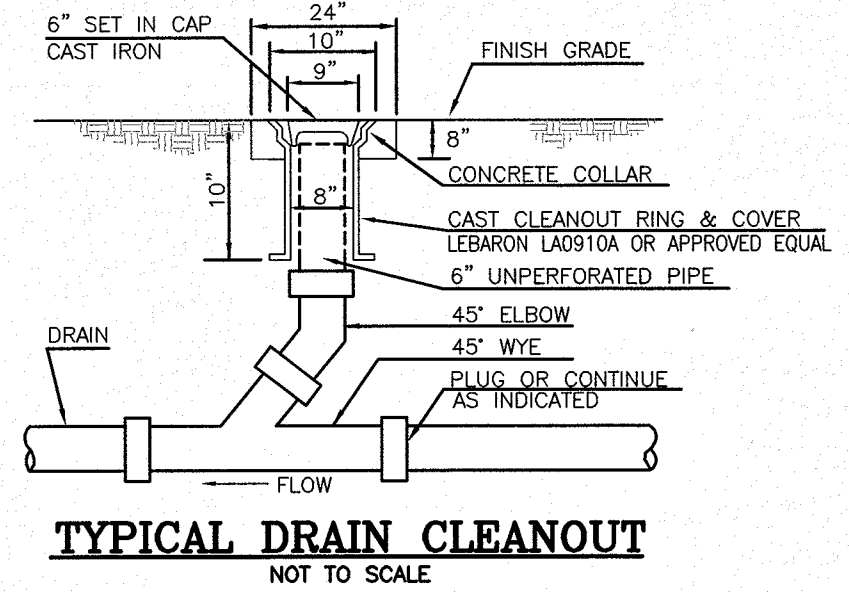
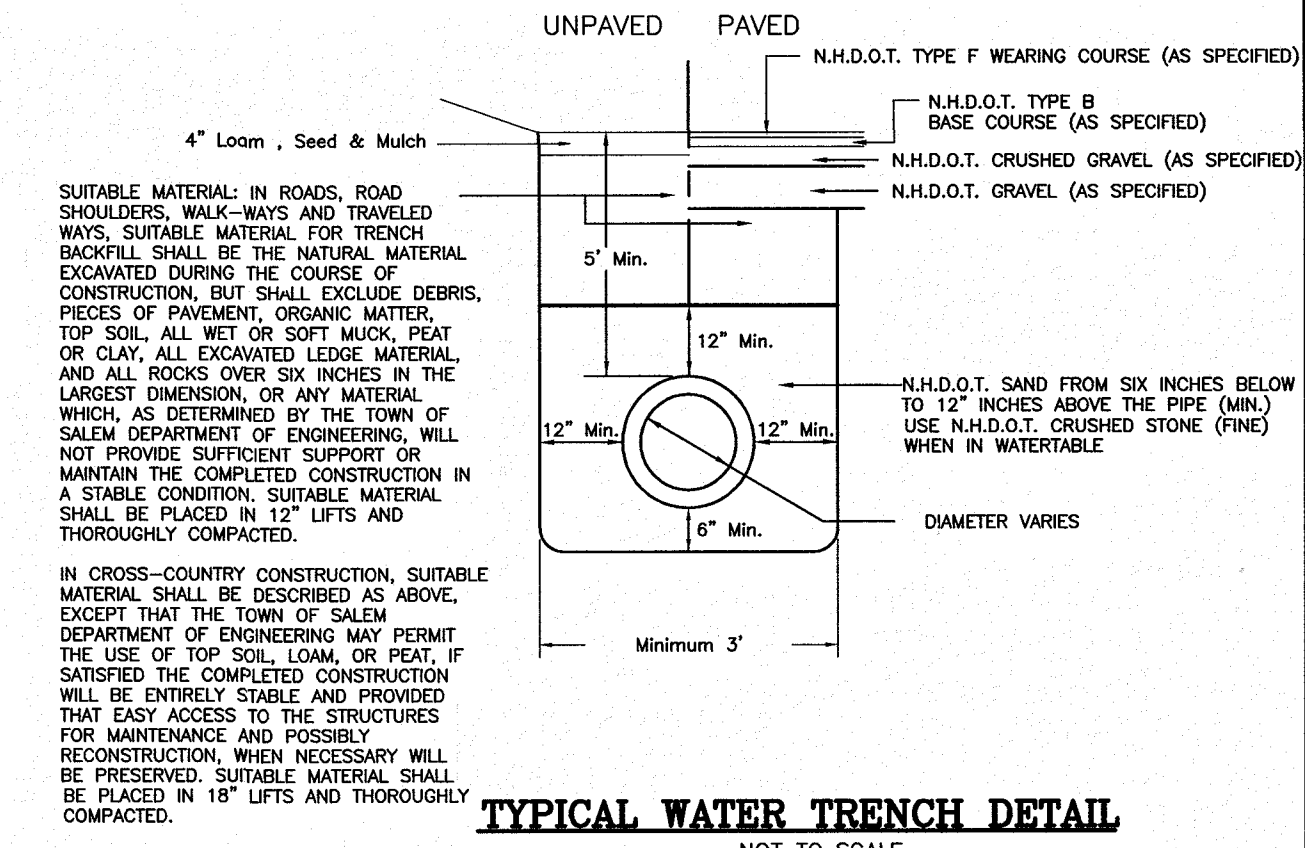
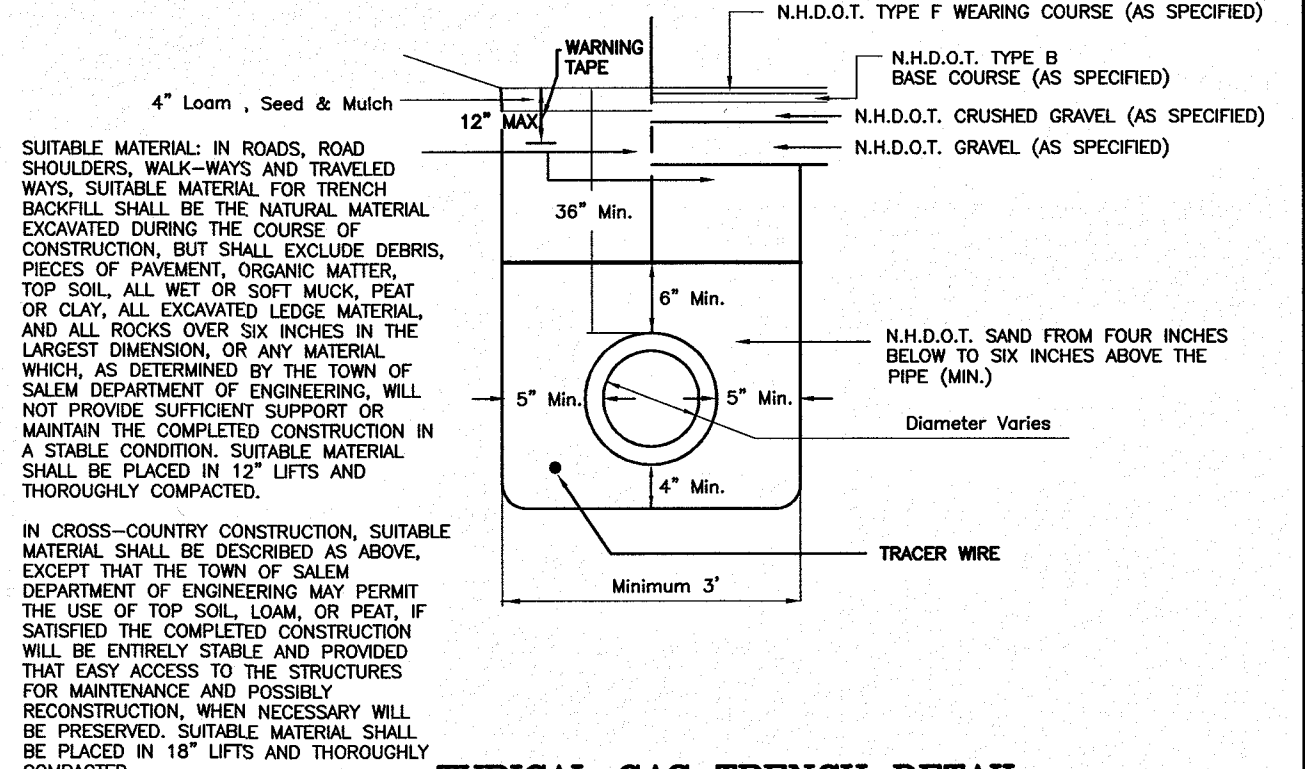
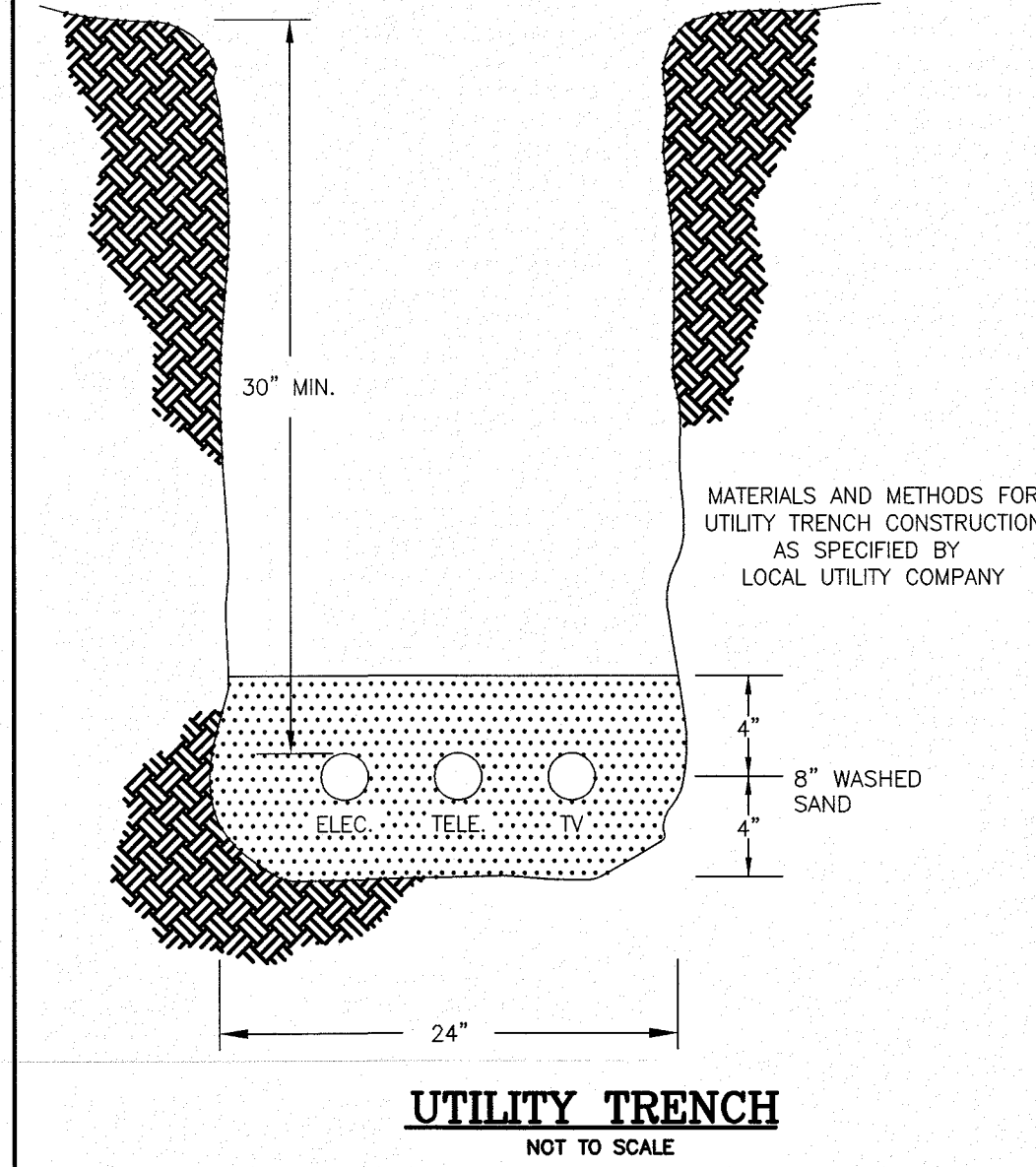
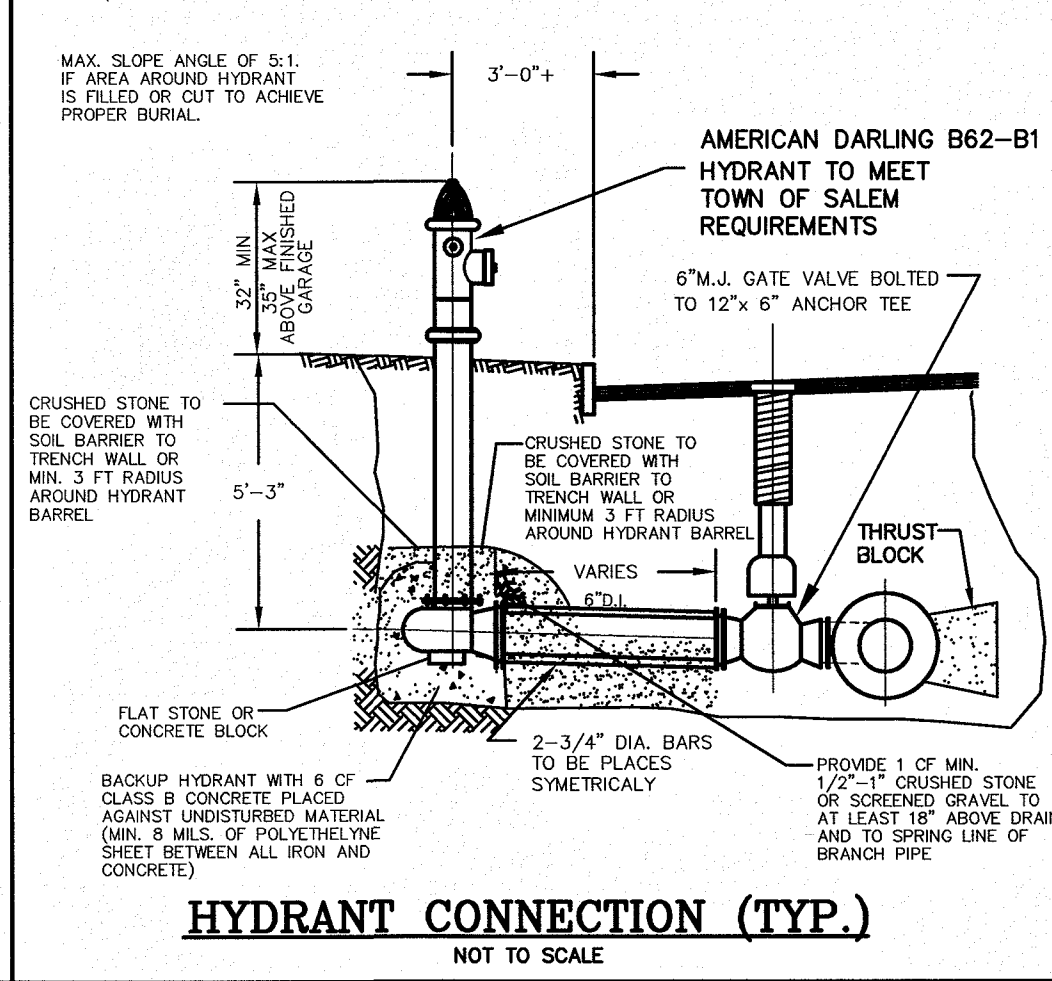
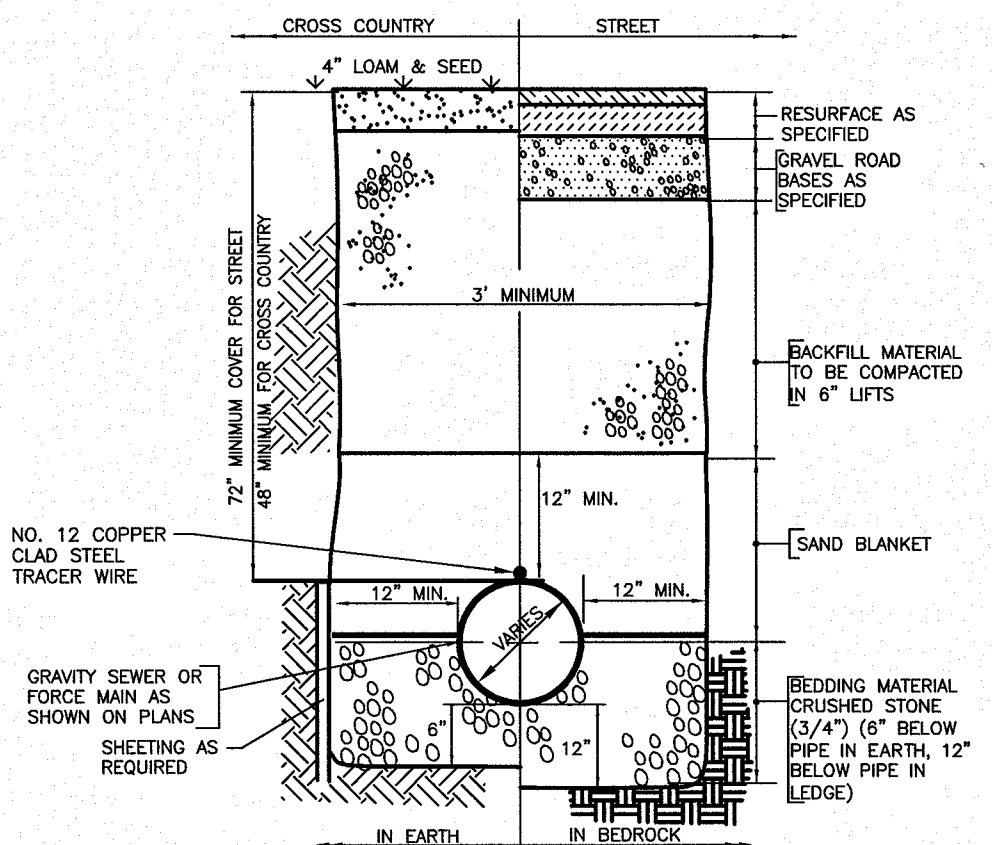


TYPICAL CONCRETE BACKING
NOT TO SCALE



- NOTE:**
1. ALL MATERIAL AND INSTALLATION PROCEDURES WILL CONFORM TO D.P.W. TECHNICAL SPECIFICATIONS.
 2. ALL PIPE SHOULD HAVE A MINIMUM DEPTHS OF 5' FROM TOP OF PIPE TO FINISH GRADE.
 3. MIN 2'x2'x4' PRECAST CONCRETE THRUST BLOCK MAY BE USED WITH D.P.W. APPROVAL OR CONCRETE THRUST BLOCK POURED AGAINST UNDISTURBED EARTH - SIZE TO BE BASED ON SIZE OF FITTING AND PRESSURE IN WATERMAIN.

WET TAP TEE INSTALLATION
NOT TO SCALE



5	REVISE SANITARY SEWER TRENCH SECTION	DRJ	3/27/17
4	MOVE POROUS PAVEMENT DETAIL TO SHEET 14	DRJ	3/16/17
3	ADD SEWER CHIMNEY	DRJ	2/23/17
2	REVISIONS PER REVIEW COMMENTS	DRJ	2/6/17
1	MISC. REVISIONS	DRJ	10/10/16
NO.	DESCRIPTION	BY	DATE
	REVISIONS		

CONSTRUCTION DETAILS


TUSCAN VILLAGE APARTMENTS
SALEM PROPERTY MAP 98 - LOT 12543
PROPERTY ADDRESS - 39 PLEASANT STREET

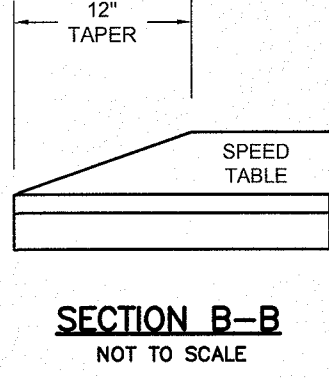
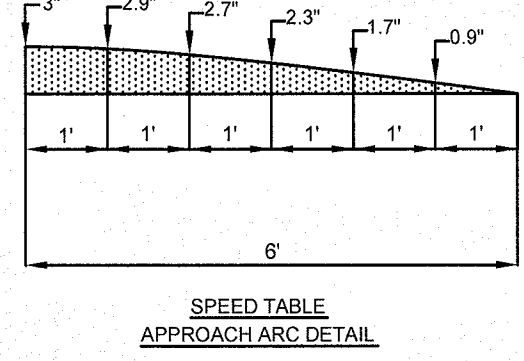
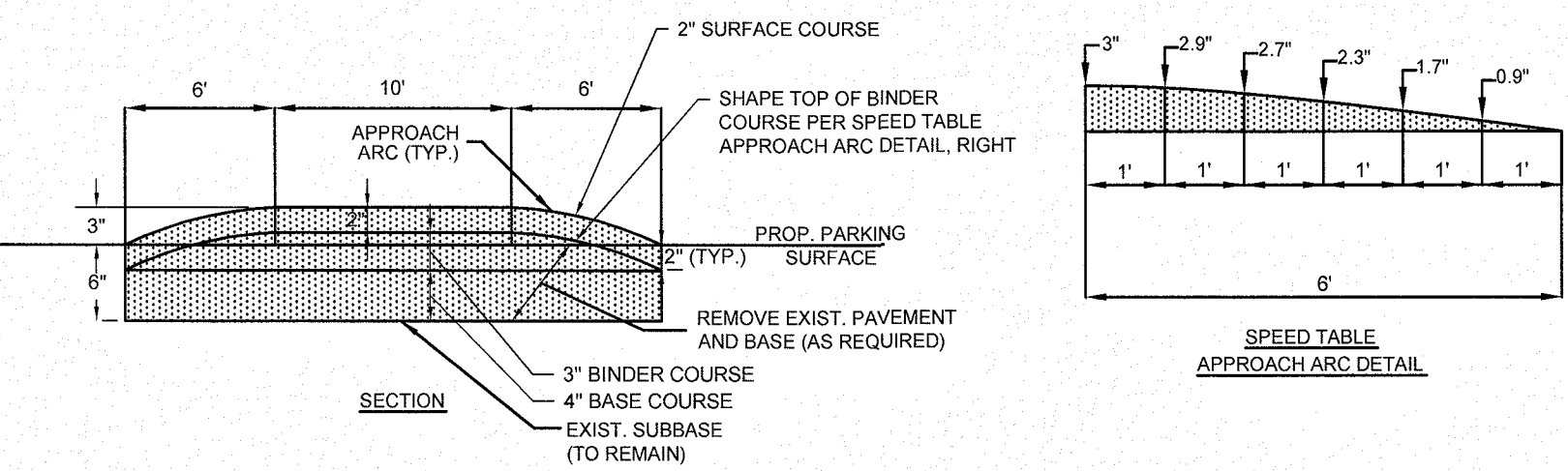
PREPARED FOR:
OMJ REALTY, LLC
63 MAIN STREET
SALEM, NH 03079



44 Shiles Road, Suite One
Salem, New Hampshire 03079
(603) 893-0720
ENGINEERS • PLANNERS • SURVEYORS
www.mhfdesign.com



SCALE: N.T.S.		DATE: OCTOBER 7, 2016		
	OWNER OF RECORD OMJ REALTY, LLC 63 MAIN STREET SALEM, NH 03079 BOOK 5595—PAGE 2560		<u>SALEM PLANNING BOARD</u> <u>APPROVAL</u>	
	ZONE: COMMERCIAL – INDUSTRIAL 'C' & RESIDENTIAL			
	DESIGNED BY:	DRAWN/CHECKED	DWG. NAME	PROJECT No.
	DRJ	CCC/DRJ	3787PH-2-APT-DET.DWG	378715
			SHEET No.	
			15 OF 18	

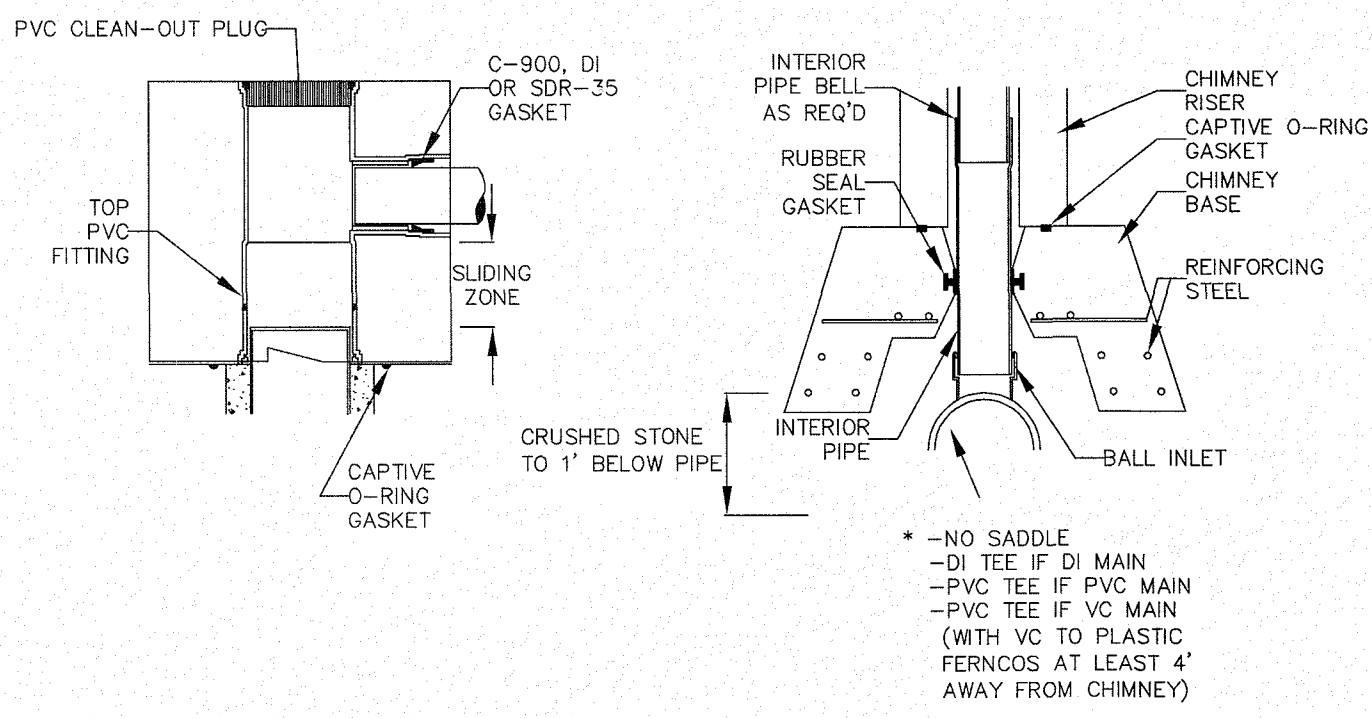
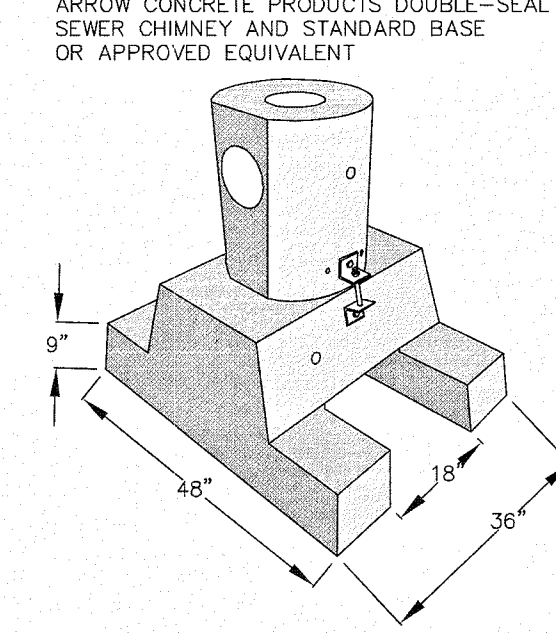
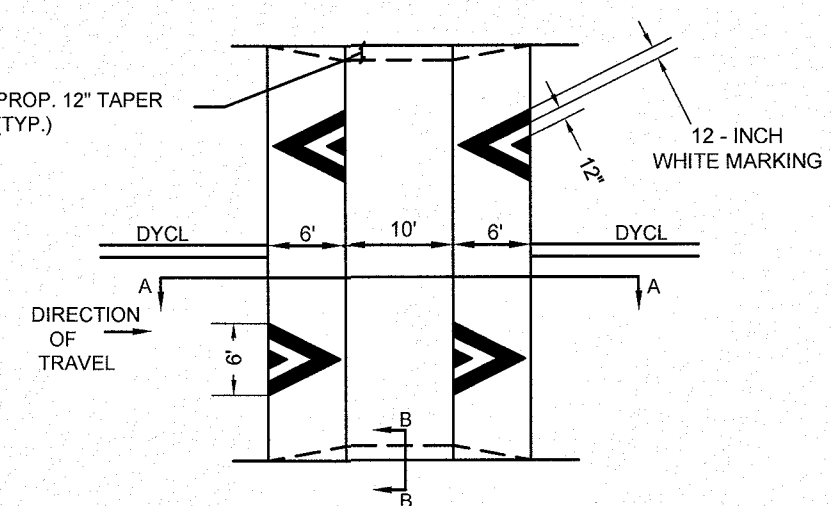


PAVEMENT NOTES

PROP. SPEED TABLE:

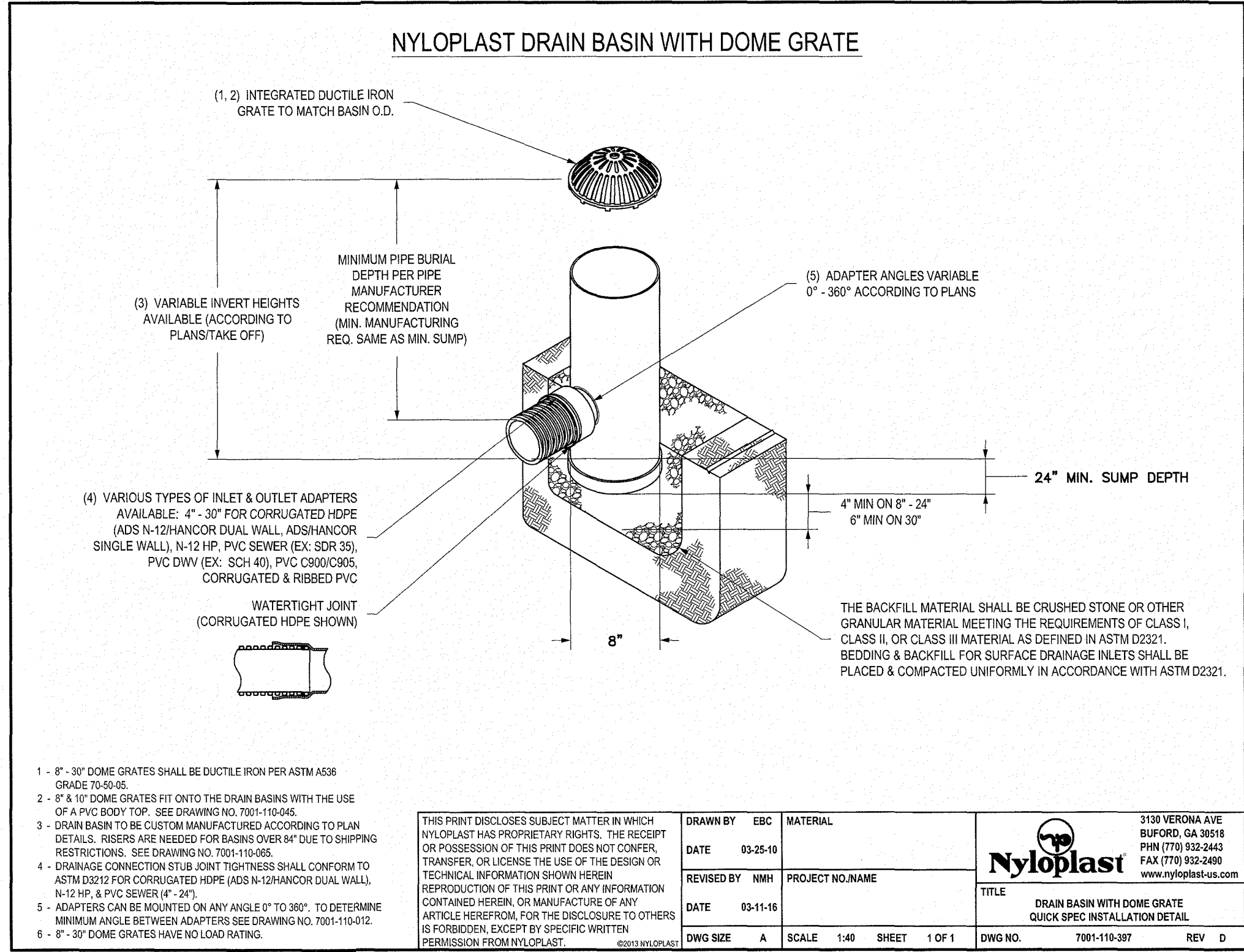
- SURFACE COURSE:** 2" HMA SURFACE COURSE TYPE B PLACED LEVEL WITH ADJACENT PAVEMENT TO REMAIN
- BINDER COURSE:** VARIABLE DEPTH (UP TO 3") HMA INTERMEDIATE COURSE MATERIAL TYPE B
- BASE COURSE:** 4" HMA INTERMEDIATE COURSE TYPE B MATERIAL PLACED IN ONE LAYER
- SUBBASE:** EXISTING SUBBASE MATERIAL TO BE GRADED AND COMPACTED TO PROP. GRADE AND SLOPE (ADD GRAVEL BORROW AS NEEDED)

SPEED TABLE & STRIPING DETAIL
NOT TO SCALE

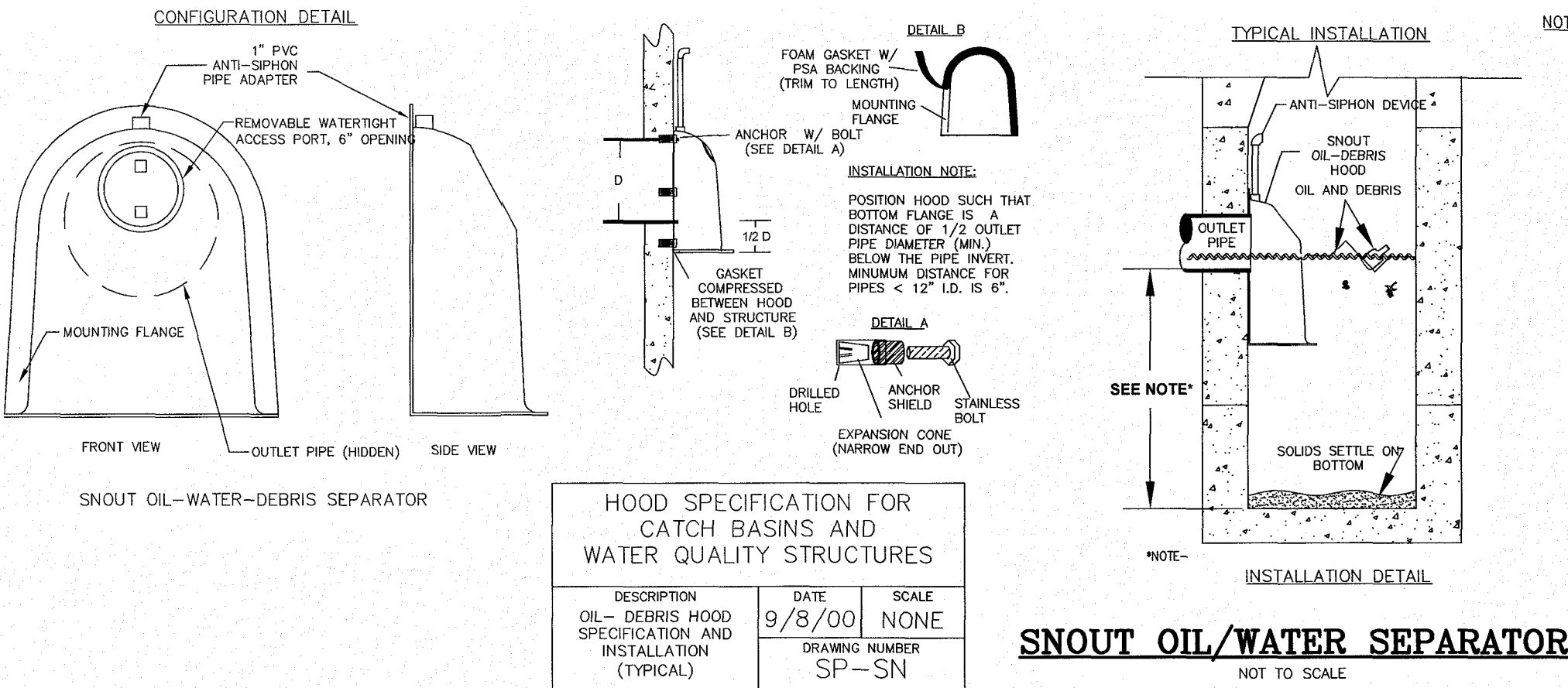
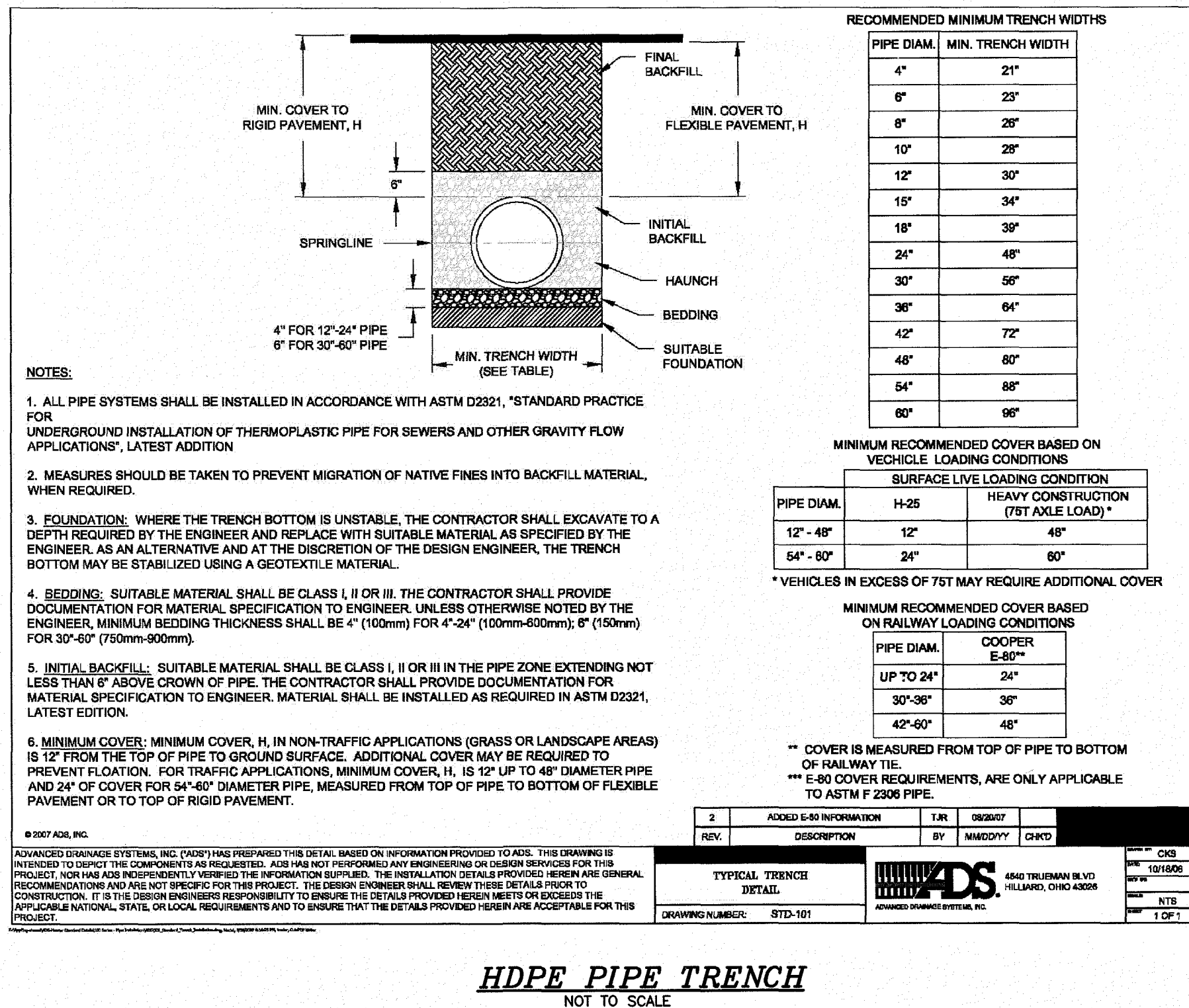
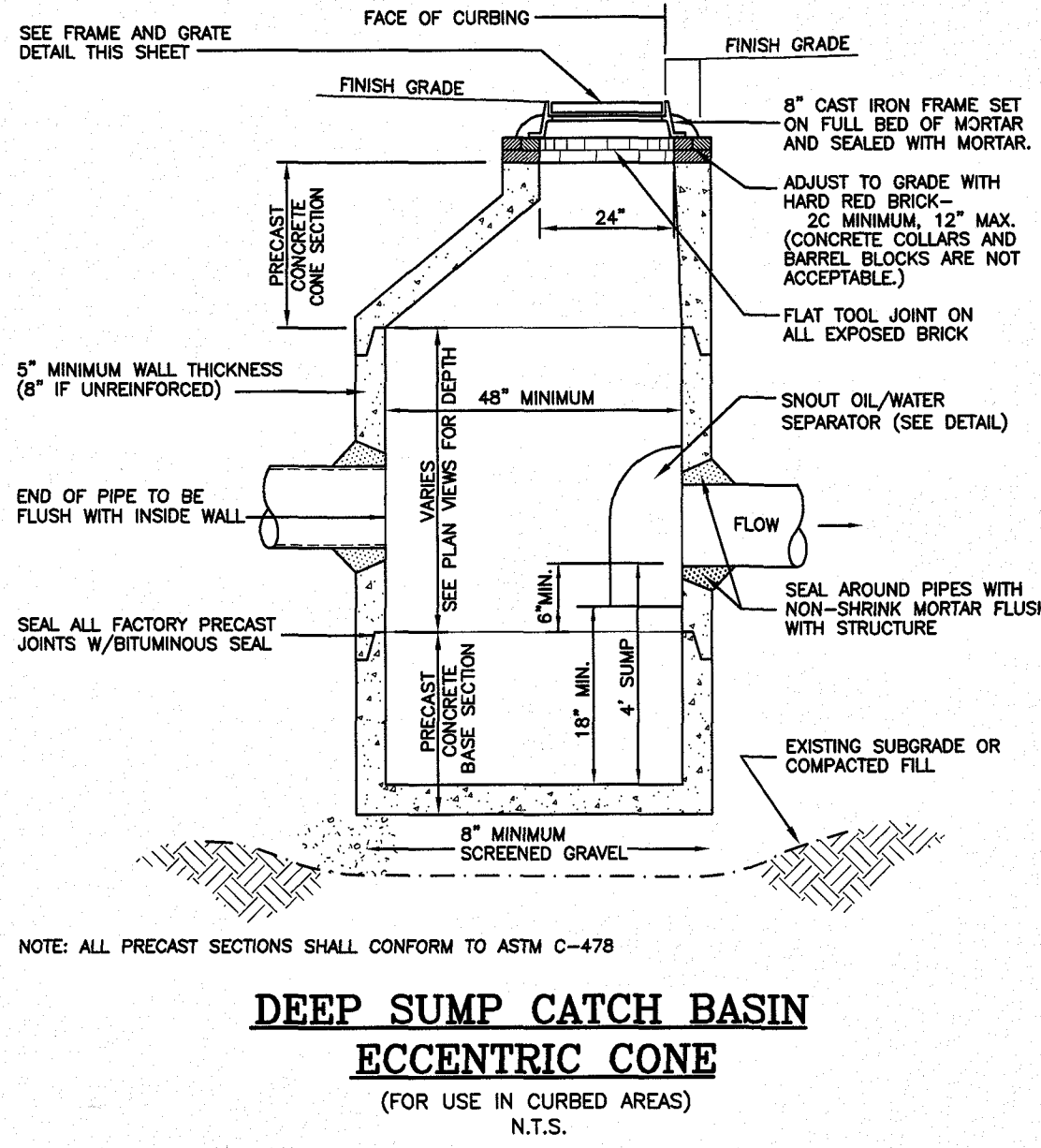
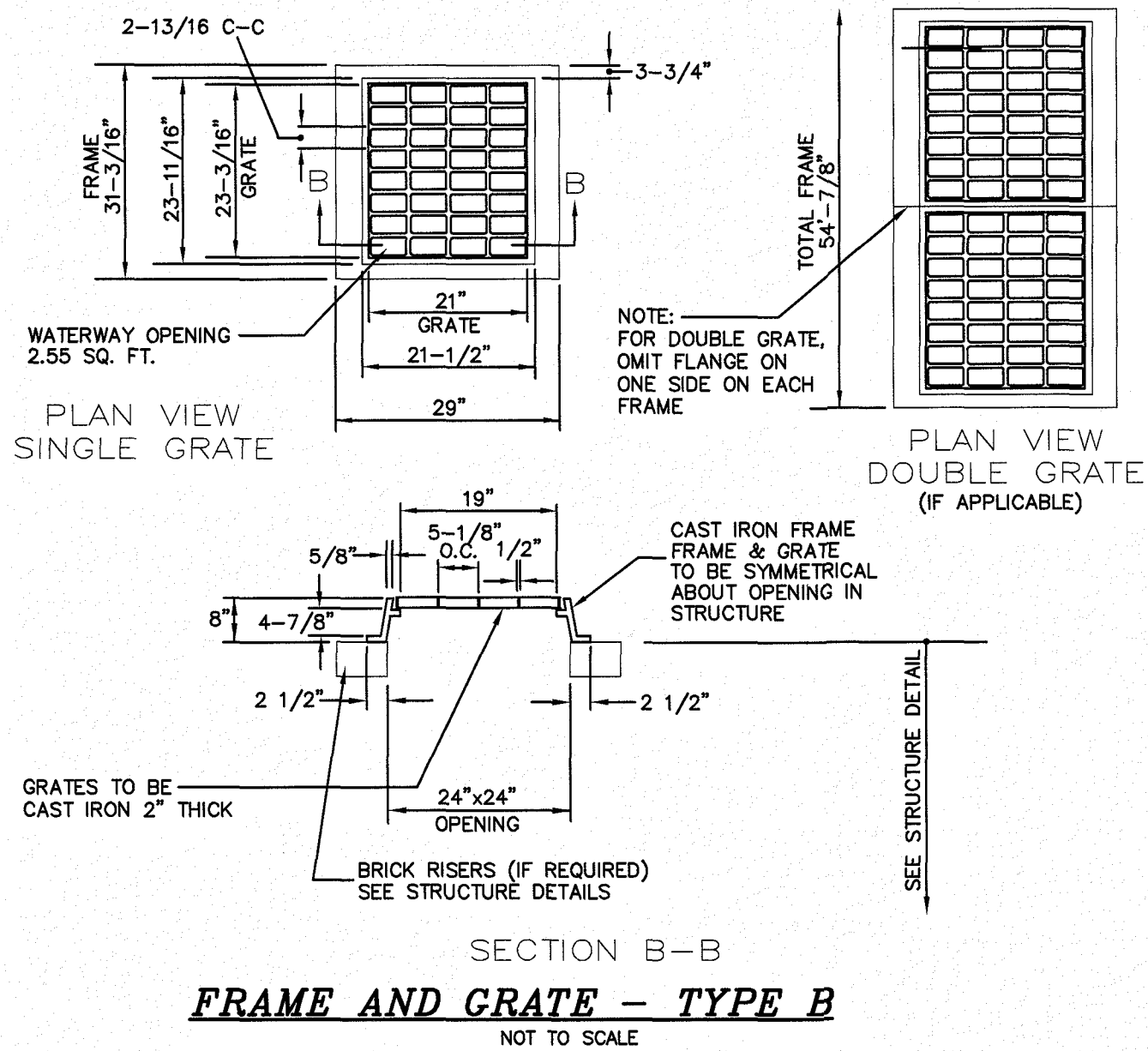


SANITARY SEWER CHIMNEY DETAIL
NOT TO SCALE

- DESIGN NOTES:**
1. CONCRETE - 5000 PSI, 28 DAYS
 2. REINFORCING STEEL CONFORMS TO LATEST ASTM A615
 3. H-20 DESIGN LOADING PER AASHTO HS-20-44
 4. FILL VOID UNDER BRIDGE SECTION WITH CRUSHED STONE TO HEIGHT & DEPTH NOTED ABOVE



YARD DRAIN DETAIL
NOT TO SCALE



- NOTES:
1. ALL HOODS AND TRAPS FOR CATCH BASINS AND WATER QUALITY STRUCTURES SHALL BE AS MANUFACTURED BY: BEST MANAGEMENT PRODUCTS, INC. 53 MT. ARCHER RD. LYME, CT 06371 (860) 434-0277, (860) 434-3195 FAX TOLL FREE: (800) 504-8008 OR (860) 354-7585 WEB SITE: www.bestmg.com OR PSE-APPROVED EQUAL
 2. ALL HOODS SHALL BE CONSTRUCTED OF A GLASS REINFORCED RESIN COMPOSITE WITH ISO GEL COAT EXTERIOR FINISH WITH A MINIMUM 0.125" LAMINATE THICKNESS.
 3. ALL HOODS SHALL BE EQUIPPED WITH A WATER TIGHT ACCESS PORT, A MOUNTING FLANGE, AND AN ANTI-SIPHON VENT AS DRAWN. (SEE CONFIGURATION DETAIL)
 4. THE SIZE AND POSITION OF THE HOOD SHALL BE DETERMINED BY OUTLET PIPE SIZE AS PER MANUFACTURER'S RECOMMENDATION.
 5. THE BOTTOM OF THE HOOD SHALL EXTEND DOWNWARD A DISTANCE EQUAL TO 1/2 THE OUTLET PIPE DIAMETER WITH A MINIMUM DISTANCE OF 6" FOR PIPES < 12" I.D.
 6. THE ANTI-SIPHON VENT SHALL EXTEND ABOVE HOOD BY MINIMUM OF 3" AND A MAXIMUM OF 24" ACCORDING TO STRUCTURE CONFIGURATION.
 7. THE SURFACE OF THE STRUCTURE WHERE THE HOOD IS MOUNTED SHALL BE FINISHED SMOOTH AND FREE OF LOOSE MATERIAL.
 8. THE HOOD SHALL BE SECURELY ATTACHED TO STRUCTURE WALL WITH 3/8" STAINLESS STEEL BOLTS AND OIL-RESISTANT GASKET AS SUPPLIED BY MANUFACTURER. (SEE INSTALLATION DETAIL)
 9. INSTALLATION INSTRUCTIONS SHALL BE FURNISHED WITH MANUFACTURER SUPPLIED INSTALLATION KIT. INSTALLATION KIT SHALL INCLUDE:
A. INSTALLATION INSTRUCTIONS
B. PVC ANTI-SIPHON VENT PIPE AND ADAPTER
C. OIL-RESISTANT CRUSHED CELL FOAM GASKET WITH PSA BACKING
D. 3/8" STAINLESS STEEL BOLTS
E. ANCHOR SHIELDS
- US Patent # 6126817

TYPICAL WATER AND DRAIN TRENCH
NOT TO SCALE

NO.	REVISIONS	DESCRIPTION	BY	DATE
1	REVISE YARD DRAIN DETAIL (SUMP)	DRJ	3/27/17	

CONSTRUCTION DETAILS

TUSCAN VILLAGE APARTMENTS
SALEM PROPERTY MAP 98 - LOT 12543
PROPERTY ADDRESS - 39 PLEASANT STREET

PREPARED FOR:
OMJ REALTY, LLC
63 MAIN STREET
SALEM, NH 03079

44 Stiles Road, Suite One
Salem, New Hampshire 03079
(603) 893-0720
ENGINEERS • PLANNERS • SURVEYORS
www.mhfdesign.com

MHF Design Consultants, Inc.

SCALE: N.T.S.

DATE: OCTOBER 7, 2016

OWNER OF RECORD
OMJ REALTY, LLC
63 MAIN STREET
SALEM, NH 03079
BOOK 5595-PAGE 2560

SALEM PLANNING BOARD
APPROVAL

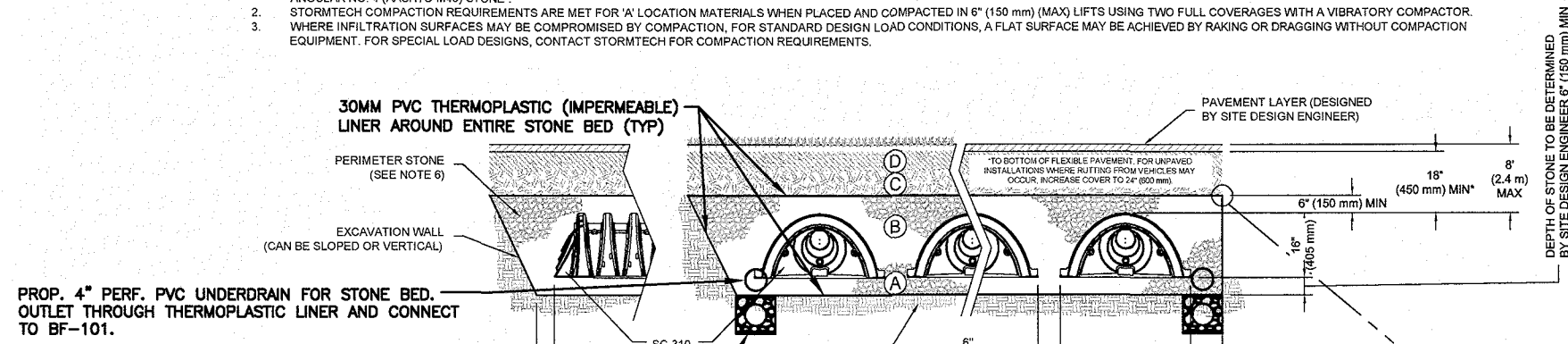
ZONE: COMMERCIAL - INDUSTRIAL 'C' & RESIDENTIAL

DESIGNED BY: DRJ
DRAWN/CHECKED: CCC/DRJ
DWG. NAME: 3787PH-2-APT-DET.DWG
PROJECT No.: 378715
SHEET No.: 16 OF 18

ACCEPTABLE FILL MATERIALS: STORMTECH SC-310 CHAMBER SYSTEMS

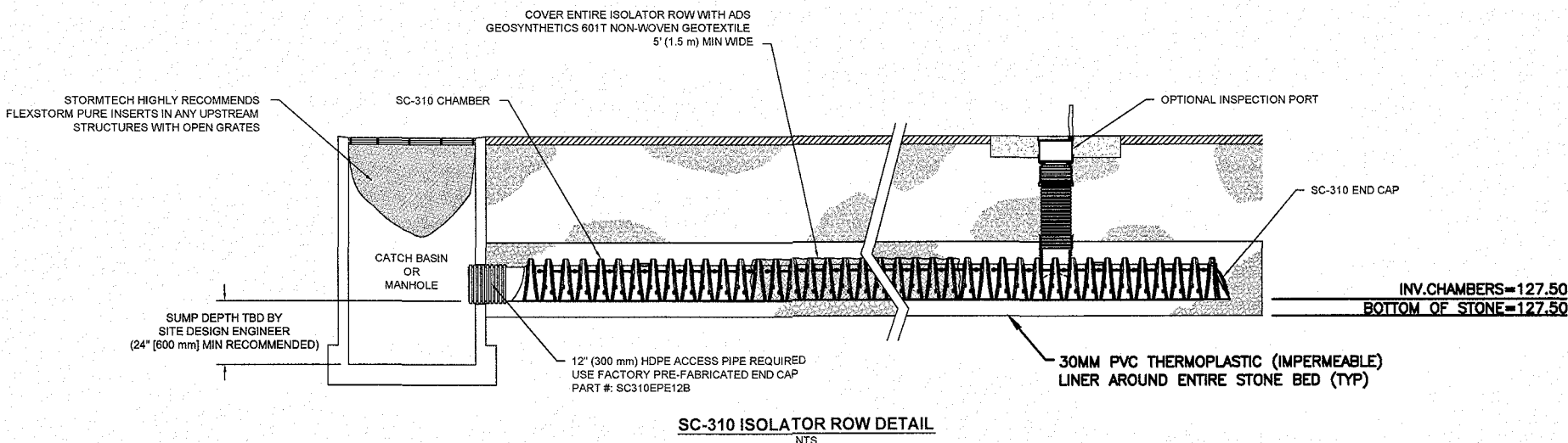
MATERIAL LOCATION	DESCRIPTION	AASHTO MATERIAL CLASSIFICATIONS	COMPACTION / DENSITY REQUIREMENT
D. FINAL FILL: FILL MATERIAL FOR LAYER 'D' STARTS FROM THE TOP OF THE 'C' LAYER TO THE BOTTOM OF FLEXIBLE PAVEMENT OR UNPAVED FINISHED GRADE ABOVE. NOTE THAT PAVEMENT SUBGRADE MAY BE PART OF THE 'C' LAYER.	ANY SOLID ROCK MATERIALS, NATIVE SOILS, OR PER ENGINEER'S PLANS. CHECK PLANS FOR PAVEMENT SUBGRADE REQUIREMENTS.	N/A	PREPARE PER SITE DESIGN ENGINEER'S PLANS. PAVEMENT INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS.
C. INITIAL FILL: FILL MATERIAL FOR LAYER 'C' STARTS FROM THE TOP OF THE EMBEDED STONE (C LAYER) TO 18" (450 mm) ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUBGRADE MAY BE A PART OF THE 'C' LAYER.	GRANULAR WELL-GRADED SOIL/AGGREGATE MIXTURES, <5% FINES OR PROCESSED AGGREGATE. MOST PAVEMENT SUBGRADE MATERIALS CAN BE USED IN LIEU OF THIS LAYER.	AASHTO M451 A1, A2, A3 OR AASHTO M431 3, 357, 4, 467, 5, 58, 6, 67, 68, 7, 78, 8, 89, 9, 10	BEGIN COMPACTION AFTER 12" (300 mm) OF MATERIAL OVER THE CHAMBERS IS REACHED. COMPACT ADDITIONAL LAYERS IN 6" (150 mm) MAX LIFTS TO A MIN. 95% PROCTOR DENSITY FOR WELL-GRADED MATERIAL, AND 90% RELATIVE DENSITY FOR PROCESSED AGGREGATE. MATERIALS ROLLER CROSSES VEHICLE WEIGHT NOT TO EXCEED 12,000 LB (53 kN) DYNAMIC FORCE NOT TO EXCEED 20,000 LB (89 kN).
B. EMBEDED STONE: FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE (A LAYER) TO THE 'C' LAYER ABOVE.	CLEAN, CRUSHED, ANGULAR STONE.	AASHTO M431 3, 357, 4, 467, 5, 58, 57	NO COMPACTION REQUIRED.
A. FOUNDATION STONE: FILL ON CHAMBERS FROM THE SUBGRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER.	CLEAN, CRUSHED, ANGULAR STONE.	AASHTO M431 3, 357, 4, 467, 5, 58, 57	PLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE. **

PLEASE NOTE:
 1. THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR A STONE WOULD STATE: "CLEAN, CRUSHED, ANGULAR NO. 4 (AASHTO M43) STONE."
 2. STORMTECH COMPACTION REQUIREMENTS ARE MET FOR 'A' LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 6" (150 mm) MAX LIFTS USING TWO FULL COVERS WITH A VIBRATORY COMPACTOR.
 3. WHERE INFILTRATION SURFACES MAY BE COMPROMISED BY COMPACTION, FOR STANDARD DESIGN LOAD CONDITIONS, A FLAT SURFACE MAY BE ACHIEVED BY RAKING OR BRAGGING WITHOUT COMPACTION EQUIPMENT. FOR SPECIAL LOAD DESIGN, CONTACT STORMTECH FOR COMPACTION REQUIREMENTS.



NOTES:

- SC-310 CHAMBERS SHALL CONFORM TO THE REQUIREMENTS OF ASTM F2418 "STANDARD SPECIFICATION FOR POLYETHYLENE (PE) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
- SC-310 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
- "ACCEPTABLE FILL MATERIALS" TABLE ABOVE PROVIDES MATERIAL LOCATIONS, DESCRIPTIONS, GRADATIONS, AND COMPACTION REQUIREMENTS FOR FOUNDATION, EMBEDEDMENT, AND FILL MATERIALS.
- THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR ASSESSING THE BEARING RESISTANCE (ALLOWABLE BEARING CAPACITY) OF THE SUBGRADE SOILS AND THE DEPTH OF FOUNDATION STONE WITH CONSIDERATION FOR THE RANGE OF EXPECTED SOIL MOISTURE CONDITIONS.
- PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.
- ONCE LAYER 'C' IS PLACED, ANY SOLID MATERIAL CAN BE PLACED IN LAYER 'D' UP TO THE FINISHED GRADE. MOST PAVEMENT SUBGRADE SOILS CAN BE USED TO REPLACE THE MATERIAL REQUIREMENTS OF LAYER 'D' ON 12" AT THE SITE DESIGN ENGINEER'S DISCRETION.



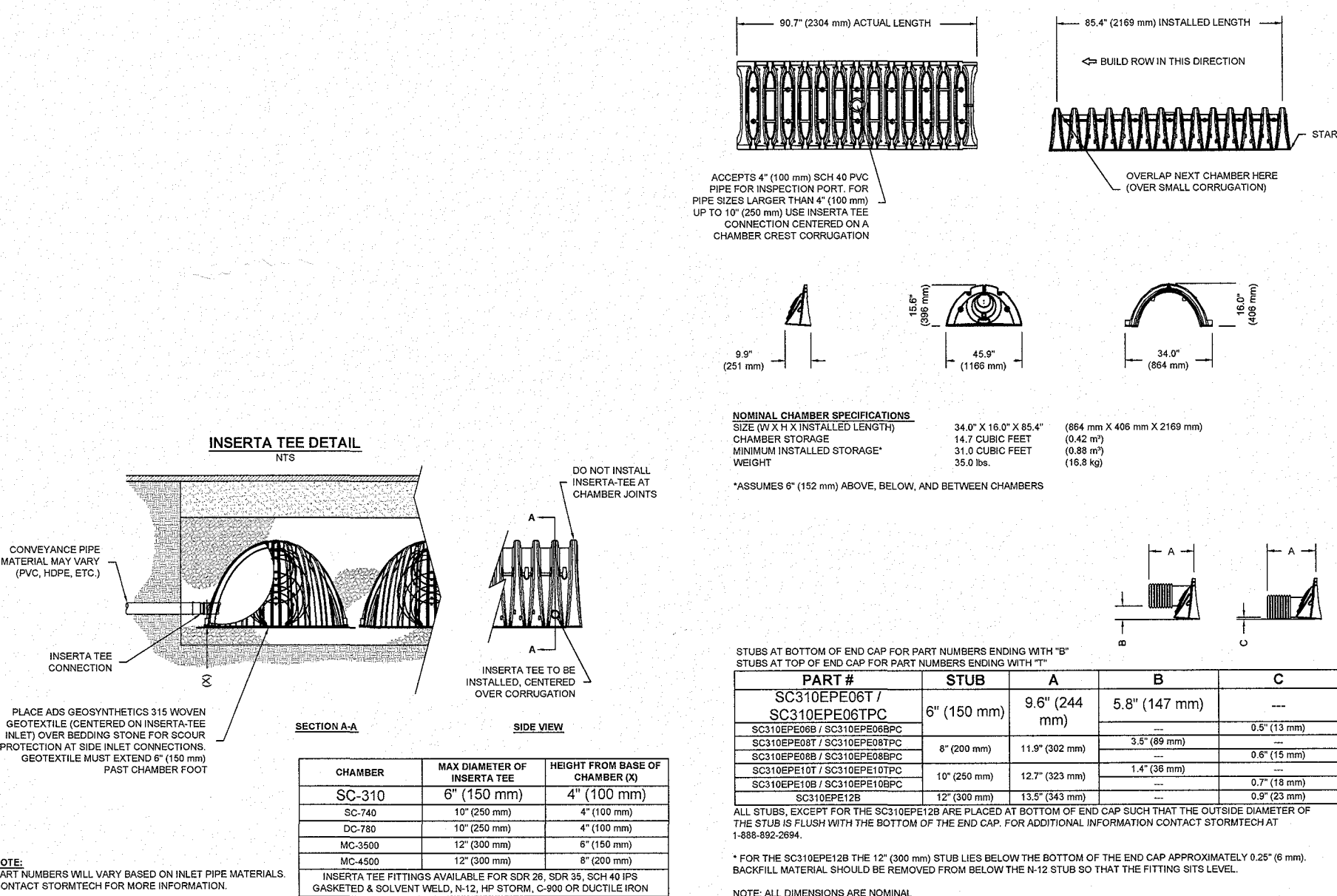
INSPECTION & MAINTENANCE

- STEP 1) INSPECT ISOLATOR ROW FOR SEDIMENT
- INSPECTION PORTS (IF PRESENT)
 - REMOVING SEDIMENT ON VULCANIZABLE INSULATION
 - USING A FLASHLIGHT AND MEASURING TAPE, MEASURE DEPTH OF SEDIMENT AND RECORD ON MAINTENANCE LOG
 - LOWER A CAMERA INTO ISOLATOR ROW FOR VISUAL INSPECTION OF SEDIMENT LEVELS (OPTIONAL)
 - IF SEDIMENT IS AT, OR ABOVE, 3" (75 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 1.
- B. ALL ISOLATOR ROWS
- REMOVE COVER FROM STRUCTURE AT UPSTREAM END OF ISOLATOR ROW
 - USING A FLASHLIGHT, INSPECT DOWN THE ISOLATOR ROW THROUGH OUTLET PIPE(S). MIRRORS OR PIPES OR CAMERAS MAY BE USED TO AVOID A CONFINED SPACE ENTRY** FOLLOW OSHA REGULATIONS FOR CONFINED SPACE ENTRY IF ENTERING MANHOLE.
 - IF SEDIMENT IS AT, OR ABOVE, 3" (75 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 1.
- STEP 2) CLEAN OUT ISOLATOR ROW USING THE JET/VAC PROCESS
- A FIXED CULVERT CLEANING NOZZLE WITH REAR FACING SPREAD OF 40° (1.1 m) OR MORE IS PREFERRED
 - APPLY MULTIPLE PASSES OF JET/VAC UNTIL BACKFLOOD WATER IS CLEAN
 - VACUUM STRUCTURE SUMP AS REQUIRED
- STEP 3) REPLACE ALL COVERS, GRATES, FILTERS, AND LIDS, RECORD OBSERVATIONS AND ACTIONS.
- STEP 4) INSPECT AND CLEAN BASINS AND MANHOLES UPSTREAM OF THE STORMTECH SYSTEM.

NOTES

- INSPECT EVERY 6 MONTHS DURING THE FIRST YEAR OF OPERATION, ADJUST THE INSPECTION INTERVAL BASED ON PREVIOUS OBSERVATIONS OF SEDIMENT ACCUMULATION AND HIGH WATER ELEVATIONS. **
- CONDUCT JETTING AND VACUATING ANNUALLY OR WHEN INSPECTION SHOWS THAT MAINTENANCE IS NECESSARY.

SC-310 TECHNICAL SPECIFICATION



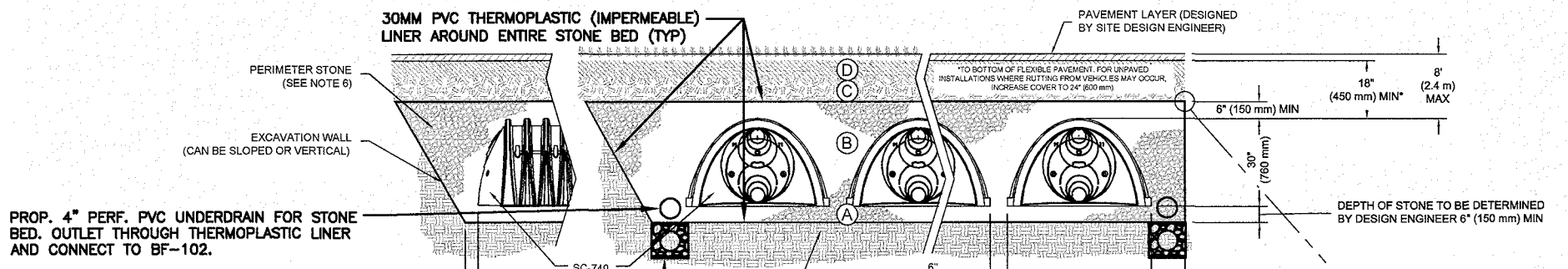
UNDERGROUND DETENTION SYSTEM #1 DETAILS

NOTE: UNDERGROUND SYSTEM TO INCLUDE THERMOPLASTIC (IMPERMEABLE) LINER

ACCEPTABLE FILL MATERIALS: STORMTECH SC-740 CHAMBER SYSTEMS

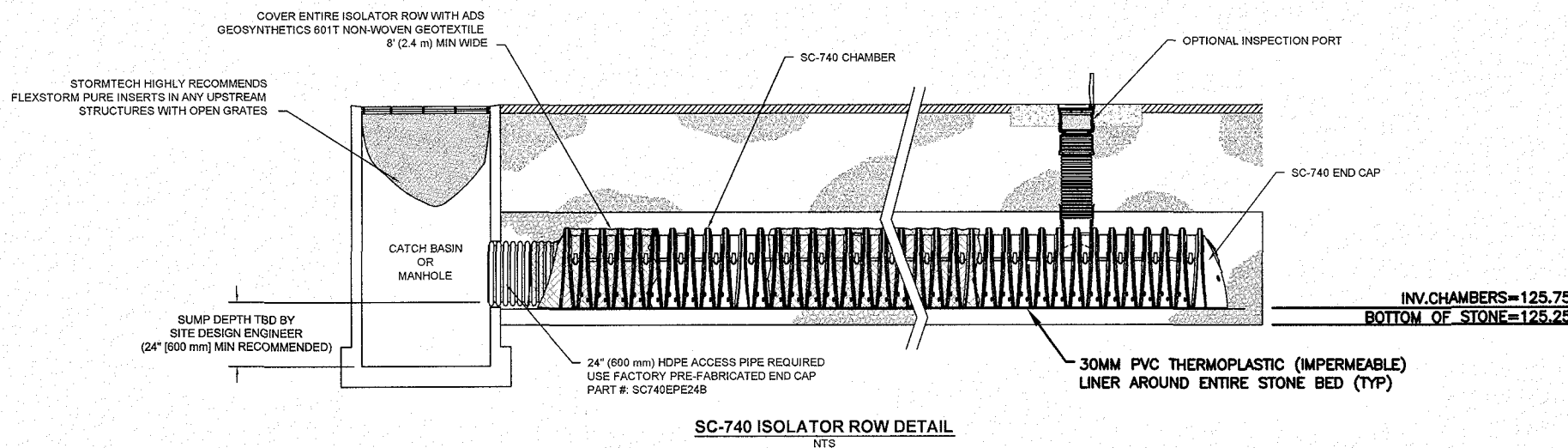
MATERIAL LOCATION	DESCRIPTION	AASHTO MATERIAL CLASSIFICATIONS	COMPACTION / DENSITY REQUIREMENT
D. FINAL FILL: FILL MATERIAL FOR LAYER 'D' STARTS FROM THE TOP OF THE 'C' LAYER TO THE BOTTOM OF FLEXIBLE PAVEMENT OR UNPAVED FINISHED GRADE ABOVE. NOTE THAT PAVEMENT SUBGRADE MAY BE PART OF THE 'C' LAYER.	ANY SOLID ROCK MATERIALS, NATIVE SOILS, OR PER ENGINEER'S PLANS. CHECK PLANS FOR PAVEMENT SUBGRADE REQUIREMENTS.	N/A	PREPARE PER SITE DESIGN ENGINEER'S PLANS. PAVEMENT INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS.
C. INITIAL FILL: FILL MATERIAL FOR LAYER 'C' STARTS FROM THE TOP OF THE EMBEDED STONE (C LAYER) TO 18" (450 mm) ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUBGRADE MAY BE A PART OF THE 'C' LAYER.	GRANULAR WELL-GRADED SOIL/AGGREGATE MIXTURES, <5% FINES OR PROCESSED AGGREGATE. MOST PAVEMENT SUBGRADE MATERIALS CAN BE USED IN LIEU OF THIS LAYER.	AASHTO M451 A1, A2, A3 OR AASHTO M431 3, 357, 4, 467, 5, 58, 6, 67, 68, 7, 78, 8, 89, 9, 10	BEGIN COMPACTION AFTER 12" (300 mm) OF MATERIAL OVER THE CHAMBERS IS REACHED. COMPACT ADDITIONAL LAYERS IN 6" (150 mm) MAX LIFTS TO A MIN. 95% PROCTOR DENSITY FOR WELL-GRADED MATERIAL, AND 90% RELATIVE DENSITY FOR PROCESSED AGGREGATE. MATERIALS ROLLER CROSSES VEHICLE WEIGHT NOT TO EXCEED 12,000 LB (53 kN) DYNAMIC FORCE NOT TO EXCEED 20,000 LB (89 kN).
B. EMBEDED STONE: FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE (A LAYER) TO THE 'C' LAYER ABOVE.	CLEAN, CRUSHED, ANGULAR STONE, NOMINAL SIZE DISTRIBUTION BETWEEN 3/4" (20-50 mm)	AASHTO M431 3, 357, 4, 467, 5, 58, 57	NO COMPACTION REQUIRED.
A. FOUNDATION STONE: FILL BELOW CHAMBERS FROM THE SUBGRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER.	CLEAN, CRUSHED, ANGULAR STONE, NOMINAL SIZE DISTRIBUTION BETWEEN 3/4" (20-50 mm)	AASHTO M431 3, 357, 4, 467, 5, 58, 57	PLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE. **

PLEASE NOTE:
 1. THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR A STONE WOULD STATE: "CLEAN, CRUSHED, ANGULAR NO. 4 (AASHTO M43) STONE."
 2. STORMTECH COMPACTION REQUIREMENTS ARE MET FOR 'A' LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 6" (150 mm) MAX LIFTS USING TWO FULL COVERS WITH A VIBRATORY COMPACTOR.
 3. WHERE INFILTRATION SURFACES MAY BE COMPROMISED BY COMPACTION, FOR STANDARD DESIGN LOAD CONDITIONS, A FLAT SURFACE MAY BE ACHIEVED BY RAKING OR BRAGGING WITHOUT COMPACTION EQUIPMENT. FOR SPECIAL LOAD DESIGN, CONTACT STORMTECH FOR COMPACTION REQUIREMENTS.



NOTES:

- SC-740 CHAMBERS SHALL CONFORM TO THE REQUIREMENTS OF ASTM F2418 "STANDARD SPECIFICATION FOR POLYETHYLENE (PE) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
- SC-740 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
- "ACCEPTABLE FILL MATERIALS" TABLE ABOVE PROVIDES MATERIAL LOCATIONS, DESCRIPTIONS, GRADATIONS, AND COMPACTION REQUIREMENTS FOR FOUNDATION, EMBEDEDMENT, AND FILL MATERIALS.
- THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR ASSESSING THE BEARING RESISTANCE (ALLOWABLE BEARING CAPACITY) OF THE SUBGRADE SOILS AND THE DEPTH OF FOUNDATION STONE WITH CONSIDERATION FOR THE RANGE OF EXPECTED SOIL MOISTURE CONDITIONS.
- PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.
- ONCE LAYER 'C' IS PLACED, ANY SOLID MATERIAL CAN BE PLACED IN LAYER 'D' UP TO THE FINISHED GRADE. MOST PAVEMENT SUBGRADE SOILS CAN BE USED TO REPLACE THE MATERIAL REQUIREMENTS OF LAYER 'D' ON 12" AT THE SITE DESIGN ENGINEER'S DISCRETION.



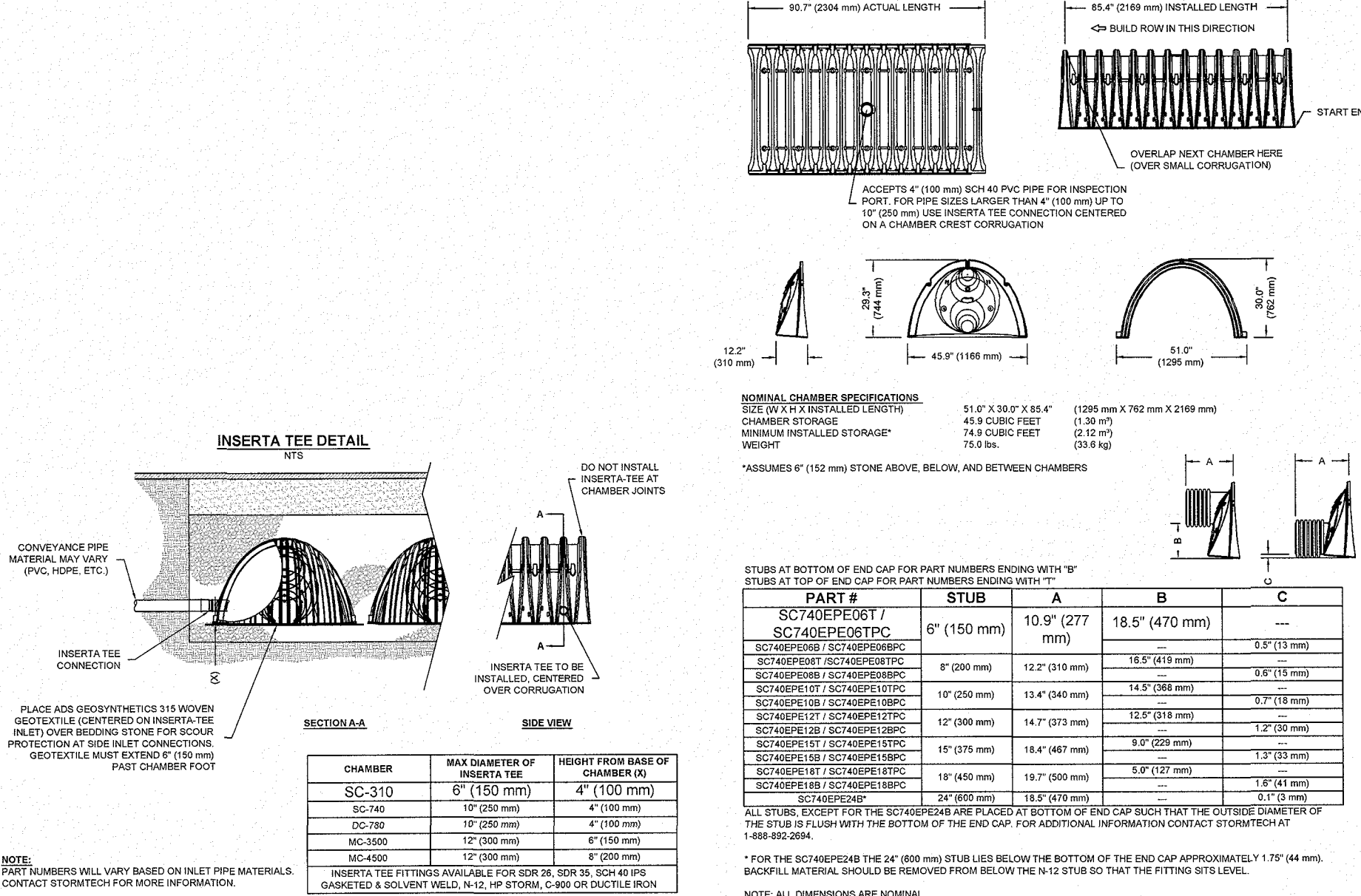
INSPECTION & MAINTENANCE

- STEP 1) INSPECT ISOLATOR ROW FOR SEDIMENT
- INSPECTION PORTS (IF PRESENT)
 - REMOVING SEDIMENT ON VULCANIZABLE INSULATION
 - USING A FLASHLIGHT AND MEASURING TAPE, MEASURE DEPTH OF SEDIMENT AND RECORD ON MAINTENANCE LOG
 - LOWER A CAMERA INTO ISOLATOR ROW FOR VISUAL INSPECTION OF SEDIMENT LEVELS (OPTIONAL)
 - IF SEDIMENT IS AT, OR ABOVE, 3" (75 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 1.
- B. ALL ISOLATOR ROWS
- REMOVE COVER FROM STRUCTURE AT UPSTREAM END OF ISOLATOR ROW
 - USING A FLASHLIGHT, INSPECT DOWN THE ISOLATOR ROW THROUGH OUTLET PIPE(S). MIRRORS OR PIPES OR CAMERAS MAY BE USED TO AVOID A CONFINED SPACE ENTRY** FOLLOW OSHA REGULATIONS FOR CONFINED SPACE ENTRY IF ENTERING MANHOLE.
 - IF SEDIMENT IS AT, OR ABOVE, 3" (75 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 1.
- STEP 2) CLEAN OUT ISOLATOR ROW USING THE JET/VAC PROCESS
- A FIXED CULVERT CLEANING NOZZLE WITH REAR FACING SPREAD OF 40° (1.1 m) OR MORE IS PREFERRED
 - APPLY MULTIPLE PASSES OF JET/VAC UNTIL BACKFLOOD WATER IS CLEAN
 - VACUUM STRUCTURE SUMP AS REQUIRED
- STEP 3) REPLACE ALL COVERS, GRATES, FILTERS, AND LIDS, RECORD OBSERVATIONS AND ACTIONS.
- STEP 4) INSPECT AND CLEAN BASINS AND MANHOLES UPSTREAM OF THE STORMTECH SYSTEM.

NOTES

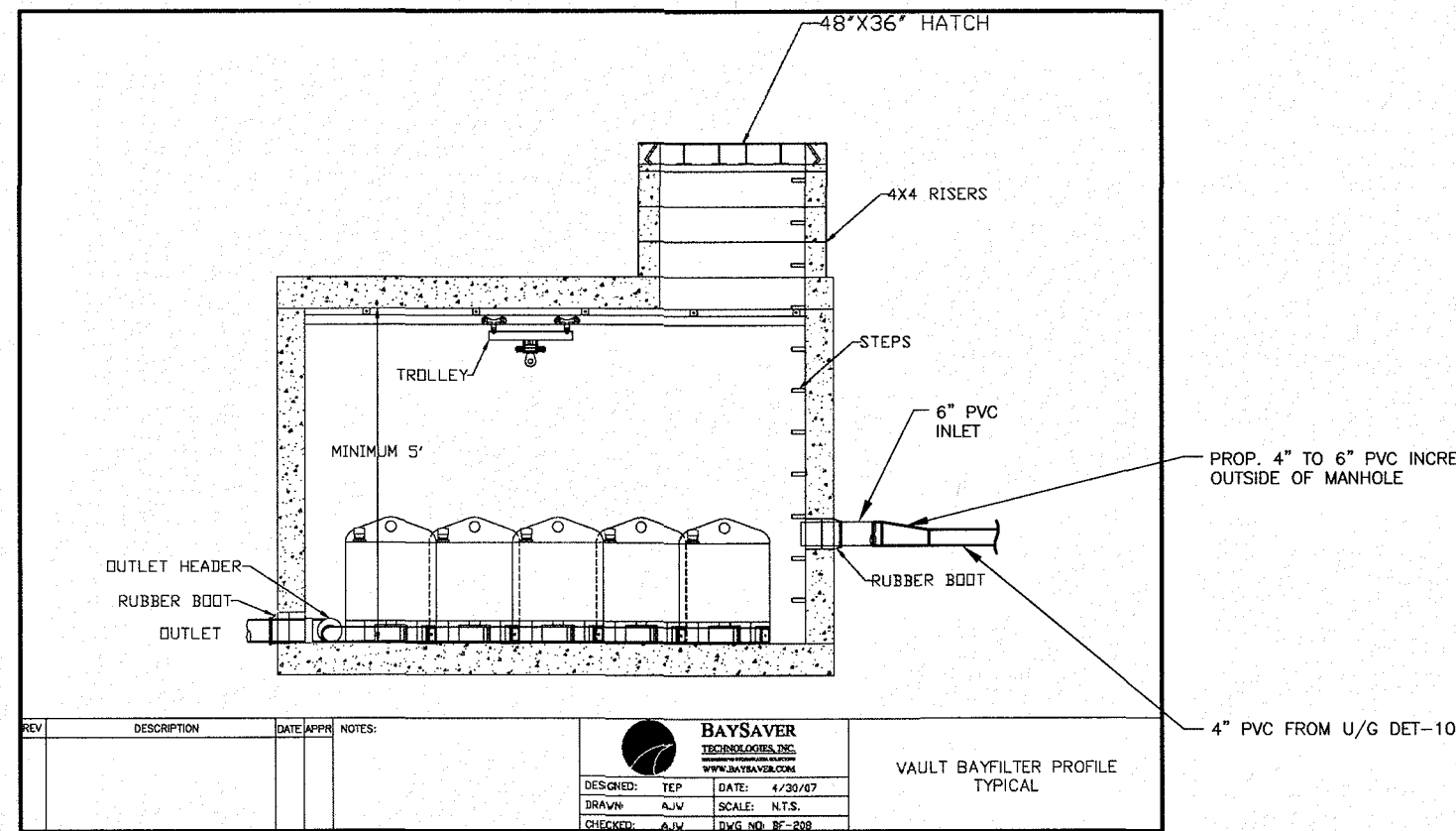
- INSPECT EVERY 6 MONTHS DURING THE FIRST YEAR OF OPERATION, ADJUST THE INSPECTION INTERVAL BASED ON PREVIOUS OBSERVATIONS OF SEDIMENT ACCUMULATION AND HIGH WATER ELEVATIONS. **
- CONDUCT JETTING AND VACUATING ANNUALLY OR WHEN INSPECTION SHOWS THAT MAINTENANCE IS NECESSARY.

SC-740 TECHNICAL SPECIFICATION



UNDERGROUND DETENTION SYSTEM #2 DETAILS

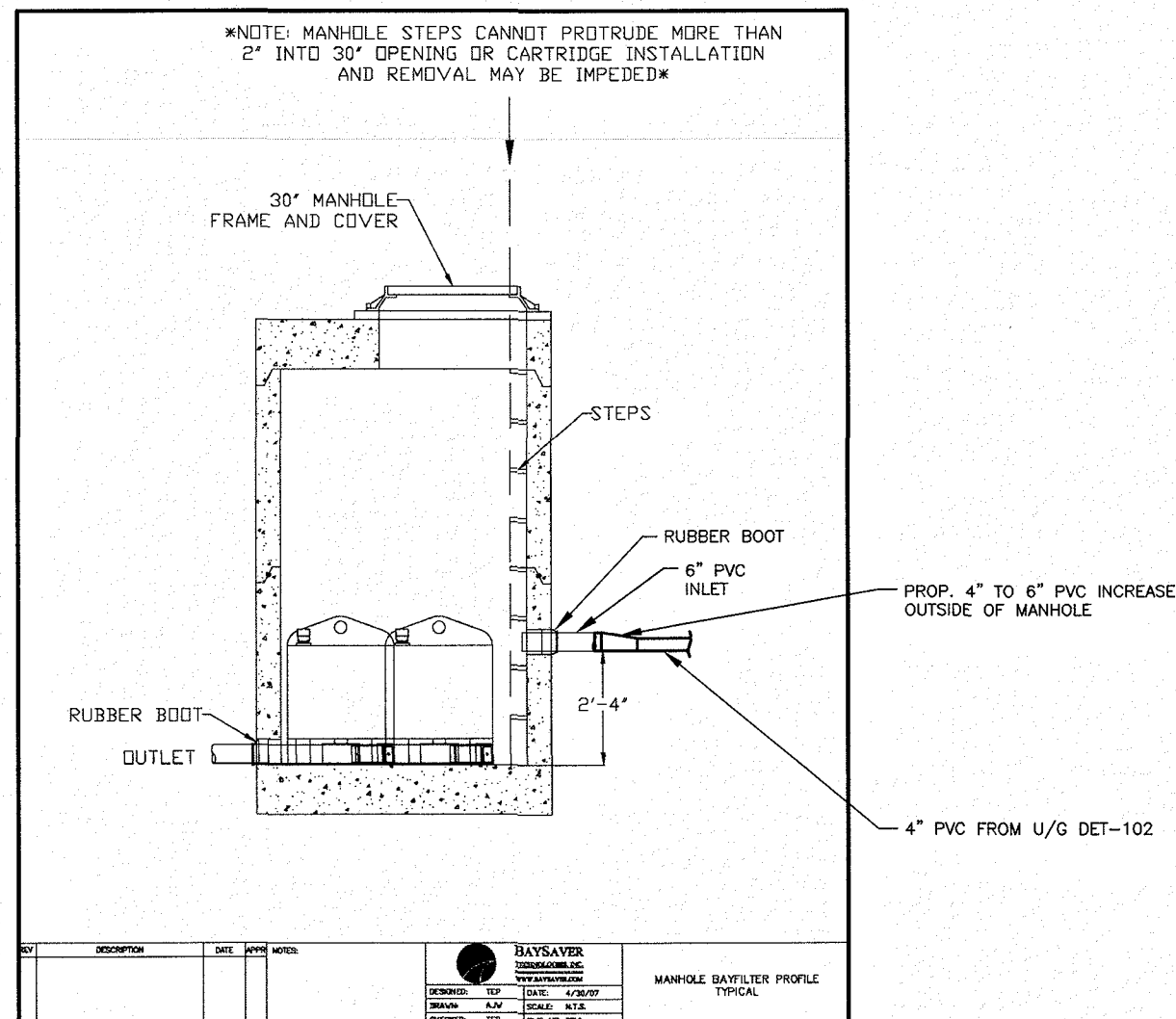
NOTE: UNDERGROUND SYSTEM TO INCLUDE THERMOPLASTIC (IMPERMEABLE) LINER



TYPICAL BAYFILTER VAULT CONFIGURATION (BF-1)

NOT TO SCALE

NOTE: CONTRACTOR SHOULD CONFIRM SYSTEM PARTS AND OBTAIN SHOP DRAWINGS FROM MANUFACTURER PRIOR TO CONSTRUCTION.



TYPICAL BAYFILTER MANHOLE CONFIGURATION (BF-2)

NOT TO SCALE

NOTE: CONTRACTOR SHOULD CONFIRM SYSTEM PARTS AND OBTAIN SHOP DRAWINGS FROM MANUFACTURER PRIOR TO CONSTRUCTION.

NOTES

- THERMOPLASTIC LINER SHALL BE 30 MIL PVC, SOLVENT WELDED, WITH 8 OUNCE AASHTO M288 CLASS 2 NON-WOVEN GEOTEXTILE UNDERLAYMENT AND OVERLAYMENT. INSTALL 6" PERF. PVC UNDERDRAIN BELOW IMPERMEABLE LINER TO INTERCEPT GROUNDWATER.

CONSTRUCTION DETAILS

TUSCAN VILLAGE APARTMENTS
 SALEM PROPERTY MAP 98 - LOT 12543
 PROPERTY ADDRESS - 39 PLEASANT STREET

PREPARED FOR:

OMJ REALTY, LLC
 63 MAIN STREET
 SALEM, NH 03079

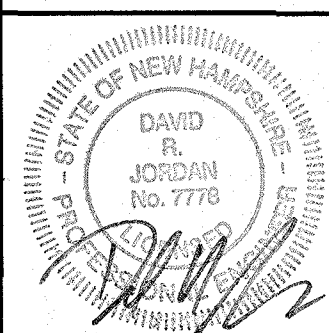


44 Stiles Road, Suite One
 Salem, New Hampshire 03079
 (603) 893-0720
 ENGINEERS • PLANNERS • SURVEYORS
 www.mhfdesign.com



SCALE: N.T.S.

DATE: OCTOBER 7, 2016



OWNER OF RECORD

OMJ REALTY, LLC

63 MAIN STREET

SALEM, NH 03079

BOOK 5595-PAGE 2560

SALEM PLANNING BOARD

APPROVAL

ZONE: COMMERCIAL - INDUSTRIAL 'C' & RESIDENTIAL

DESIGNED BY:	DRAWN/CHECKED	DWG. NAME	PROJECT No.	SHEET No.
DRJ	CCC/DRJ	3787PH-2-APT-DET.DWG	378715	17 OF 18



GOVE ENVIRONMENTAL SERVICES, INC.

Memorandum

Date: Monday, October 03, 2016
To: David Jordan
Company: MHF Design
From: Jim Gove
Re: Tuscan Village
Subject: Test Pit Logs

Logged: 9-20-2016, by JPG. GES # 2016027

Test Pit 15010 (off set 24 feet north due to sewer line)
0-37" 10YR4/4 sand, massive, friable
37-47" 10YR3/2 sand, massive, friable, 5% redox concentrations
47-79" 2.5Y5/3, very fine sand, massive, friable, 20% redox features
ESHWT = 37", Terminated at 79", no refusal.

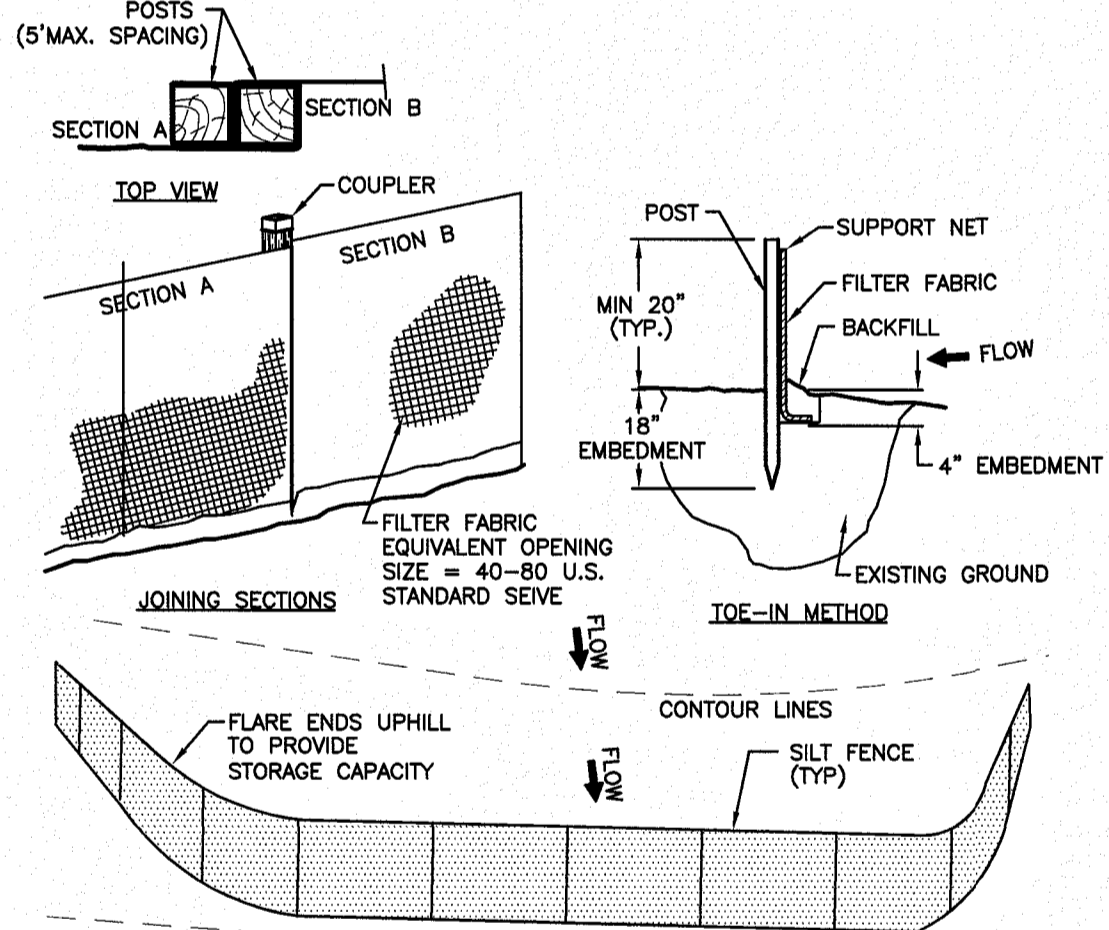
Test Pit 15011
0-43" 10YR4/3, sand, massive, friable
43-52" 10YR3/2, mucky sand, massive, friable
52-75" 10YR4/3, sand, massive, friable, 20% redox features
ESHWT = 43", Terminated at 75", no refusal

Test Pit 15012
0-30" 10YR3/6, sand, massive, friable
30-39" 10YR3/2, mucky sand, massive, friable
39-67" 10YR4/4, very fine sand, massive, friable, 10% redox features
ESHWT = 30", Terminated at 67", no refusal

Test Pit 15013
0-26" 10YR4/4, sand, massive, friable
26-31" 10YR3/2, sand, massive, friable
31-45" 10YR5/6, sand, massive, friable
45-66" 10YR4/4, sand, massive, friable, 20% redox features
66-85" 2.5Y5/2, very fine sand, massive, friable, 20% redox features
ESHWT = 45", Terminated at 85", no refusal

Test Pit 15014
0-34" 10YR4/4, sand, massive, friable
34-46" 10YR3/2, sand, massive, friable
46-58" 10YR5/6 sand, massive, friable
58-82" 10YR4/4, sand, massive, friable, 20% redox features
ESHWT = 58", Terminated at 82", no refusal

8 Continental Dr Bldg 2 Unit H, Exeter, NH 03833-7526
Ph (603) 778 0644 / Fax (603) 778 0654
www.gesinc.biz
info@gesinc.biz



CRITERIA FOR SILT FENCES:

1) SILT FENCE FILTER CLOTH: THE FABRIC FOR THE SILT FENCE SHALL MEET THE FOLLOWING SPECIFICATIONS:	
FABRIC PROPERTIES:	MINIMUM ACCEPTABLE
GRAB TENSILE STRENGTH (lbs)	80
ELONGATION AT FAILURE (%)	50
MULLEN BURST STRENGTH (PSI)	190
PUNCTURE STRENGTH (lbs)	40
EQUIVALENT OPENING SIZE	40-80 US STD SIEVE

- 2) FENCE POSTS (FOR FABRICATED UNITS) - THE POSTS SHALL BE A MINIMUM OF 36 INCHES LONG. WOOD POSTS WILL BE OF SOUND QUALITY HARDWOOD WITH A MINIMUM CROSS SECTIONAL AREA OF 3.0 SQUARE INCHES. STEEL POSTS WILL BE STANDARD T OR U SECTIONS WEIGHING NOT LESS THAN 1 POUND PER LINEAR FOOT. MAXIMUM SPACING SHALL BE 6 LINEAR FEET.
- 3) WIRE FENCE (FOR FABRICATED UNITS) - WIRE FENCING SHALL BE A MINIMUM 14.5 GAUGE WITH A MINIMUM 6 INCH MESH OPENING.
- 4) PREFABRICATED UNITS - PREFABRICATED UNITS MAY BE USED IN LIEU OF THE ABOVE METHOD PROVIDING: (1) THE FILTER CLOTH AND FENCE POSTS MEET THE ABOVE CRITERIA; AND (2) THE UNIT IS INSTALLED ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS.

- MAINTENANCE:
- 1) SILT FENCES SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REPAIRS THAT ARE REQUIRED SHALL BE MADE IMMEDIATELY.
- 2) IF THE FABRIC ON A SILT FENCE SHOULD DECOMPOSE OR BECOME INEFFECTIVE DURING THE EXPECTED LIFE OF THE FENCE, THE FABRIC SHALL BE REPLACED PROMPTLY.
- 3) SEDIMENT DEPOSITS SHOULD BE INSPECTED AFTER EVERY STORM EVENT. THE DEPOSITS SHOULD BE REMOVED WHEN THEY REACH APPROXIMATELY ONE-HALF THE HEIGHT OF THE BARRIER.
- 4) SEDIMENT DEPOSITS THAT ARE REMOVED OR LEFT IN PLACE AFTER THE FABRIC HAS BEEN REMOVED SHALL BE GRADED TO CONFORM WITH THE EXISTING TOPOGRAPHY AND VEGETATED.

- CONSTRUCTION SPECIFICATIONS:
- 1) THE GEOTEXTILE FABRIC SHALL MEET THE DESIGN CRITERIA FOR SILT FENCES.
- 2) THE FABRIC SHALL BE EMBEDDED A MINIMUM OF 8 INCHES INTO THE GROUND (4" DEEP & 4" WIDE) AND THE SOIL COMPACTED OVER THE EMBEDDED FABRIC.
- 3) WOVEN WIRE FENCE SHALL BE FASTENED SECURELY TO THE FENCE POSTS WITH WIRE TIES OR STAPLES.
- 4) FILTER CLOTH SHALL BE FASTENED SECURELY TO THE WOVEN WIRE FENCE WITH TIES SPACED EVERY 24 INCHES AT THE TOP, MID-SECTION AND BOTTOM.
- 5) WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER, THEY SHALL BE OVERLAPPED BY 6 INCHES (24" IS PREFERRED), FOLDED, AND STAPLED.
- 6) POSTS TO BE SPACED AT A MAXIMUM OF 6' ON CENTER.

SEDIMENT CONTROL FENCE
NOT TO SCALE

Test Pit 15015
0-27" 10YR4/4, sand, massive, friable
27-41" 2.5Y5/3 sand, massive, friable, 10% redox concentrations
41-48" 10YR3/2, mucky sand, massive, friable, 20% redox features
48-77" 2.5Y5/3, sand, massive, friable, 20% redox features
ESHWT = 27", Terminated at 77", no refusal

Test Pit 15016
0-39" 10YR4/4, sand, massive, friable
39-51" 2.5Y5/2, sand, massive, friable, 10% redox features
51-58" 10YR3/2, sand, massive, friable, 2% redox features
58-84" 10YR4/4, sand, massive, friable, 20% redox features
ESHWT = 39", Terminated at 84", no refusal

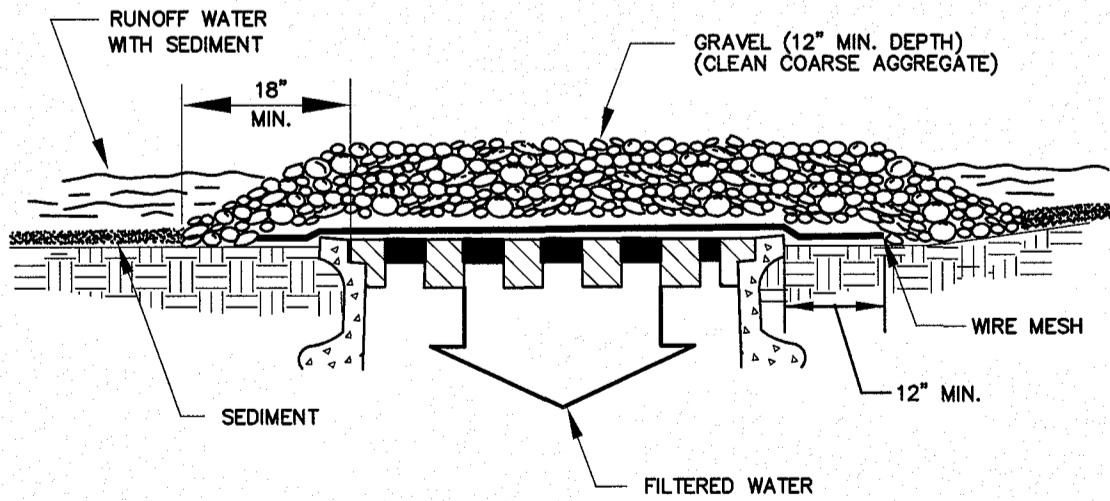
Test Pit 15017
0-31" 10YR4/4, sand, massive, friable
31-36" 10YR3/2, sand, massive, friable, 5% redox features
36-64" 2.5Y5/3, sand, massive, friable, 20% redox features
64-80" 10YR3/2, mucky sand, massive, friable
ESHWT = 31", Terminated at 80", no refusal, observed water 75"

Test Pit 15018
0-38" 10YR4/4, sand, massive, friable
38-46" 10YR3/2, mucky sand, massive, friable
46-58" 7.5YR4/3, sand, massive, friable, 10% redox concentrations
58-75" 10YR4/6, sand, massive, friable, 20% redox concentrations
ESHWT = 38", Terminated at 75", no refusal

Test Pit 15019
0-48" 10YR4/4, sand, massive, friable
48-59" 10YR3/2, mucky sand, massive, friable
59-84" 2.5Y5/3, sand, massive, friable, 20% redox features
ESHWT = 48", Terminated at 84", no refusal

Test Pit 15020
0-41" 10YR4/4, sand, massive, friable
41-55" 10YR3/2, mucky sand, massive, friable
55-78" 2.5Y5/3, sand, massive, friable, 20% redox features
ESHWT = 41", Terminated at 78", no refusal

Test Pit 15021
0-48" 10YR4/4, sand, massive, friable
48-64" 10YR3/2, mucky sand, massive, friable
64-75" 10YR4/3, sand, massive, friable, 20% redox features
ESHWT = 48", Terminated at 75", no refusal



INLET PROTECTION
NOT TO SCALE

1. ALL STRUCTURES SHOULD BE INSPECTED AFTER EVERY RAIN STORM AND REPAIRS MADE AS NECESSARY.
2. SEDIMENT SHOULD BE REMOVED FROM THE TRAPPING DEVICES AFTER THE SEDIMENT HAS REACHED A MAXIMUM OF ONE HALF OF THE DEPTH OF THE TRAP. THE SEDIMENT SHOULD BE DISPOSED OF IN A SUITABLE AREA AND PROTECTED FROM EROSION BY EITHER STRUCTURAL OR VEGETATIVE MEANS.
3. THE TEMPORARY TRAPS SHOULD BE REMOVED AND THE AREA REPAIRED AS SOON AS THE CONTRIBUTING DRAINAGE AREA TO THE INLET HAS BEEN COMPLETELY STABILIZED.
4. ALL STRUCTURES WITH INLET PROTECTION MUST BE CLEANED AT THE END OF CONSTRUCTION AND WHEN THE SITE IS FULLY STABILIZED.

*NOTE: FIELD MEASUREMENT OF THE INFILTRATION RATE OF THE SOIL USED AS BACKFILL IS REQUIRED AFTER CONSTRUCTION PURSUANT TO ENV-WQ 1054.14. THE KSAT VALUE OF THE FILL SHALL BE DETERMINED USING TEST METHODS DESCRIBED IN ASTM D-2434 OR ASTM D-5856 AND THEN A SAFETY FACTOR APPLIED BY MULTIPLYING THE KSAT VALUE BY 0.5. THE RESULTANT KSAT VALUE SHALL BE NO LESS THAN 10 INCHES/HOUR. THIS TESTING SHALL BE PERFORMED BY A CERTIFIED SOIL SCIENTIST, PROFESSIONAL GEOLOGIST OR PROFESSIONAL ENGINEER.



Test Pit 15022
0-42" 10YR4/4, sand, massive, friable
42-63" 10YR3/2, mucky sand, massive, friable
63-75" 2.5Y5/3, sand, massive, friable, 20% redox features
ESHWT = 42", Terminated at 75", no refusal

Test Pit 15023
0-27" 10YR4/4, sand, massive, friable
27-42" 10YR3/2, mucky sand, massive, friable
42-70" 2.5Y5/3, sand, massive, friable, 20% redox features
ESHWT = 27", Terminated at 70", no refusal

Test Pit 15024
0-14" 10YR3/4, sand, massive, friable
14-22" 10YR3/2, sand, massive, friable
22-30", 10YR5/6, sand, massive, friable
30-62" 2.5Y5/3, sand, massive, friable, 5% redox concentrations
ESHWT = 30", Terminated at 62", no refusal

Test Pit 15025
0-39" 10YR4/3, sand, massive, friable
39-67" 10YR4/4, sand, massive, friable, 10% redox concentrations
67-80" 2.5Y2/1, muck, massive, friable
ESHWT = 39", Terminated at 80", no refusal

Test Pit 15026 (Off set 10 feet south out of pavement)
0-36" 10YR4/4, sand, massive, friable
36-42" 10YR3/2, sand, massive, friable, 20% redox concentrations
42-73" 10YR3/4, very fine sand, massive, friable, 20% redox features
ESHWT = 36", Terminated at 73", no refusal

Test Pit 15027
0-21" 10YR4/3, sand, massive, friable
21-38" 10YR4/6, sand, massive, friable
38-66" 10YR4/6, sand, massive, friable, 20% redox features
ESHWT = 38", Terminated at 66", refusal at 66"



TEMPORARY EROSION CONTROL MEASURES:

- THE SMALLEST PRACTICAL AREA OF LAND SHALL BE EXPOSED AT ANY ONE TIME. ALL AREAS SHALL BE STABILIZED WITHIN 45 DAYS OF INITIAL DISTURBANCE. NO SOIL SHALL BE EXPOSED DURING THE WINTER MONTHS.
- HAY BALE BARRIERS AND SEDIMENT TRAPS SHALL BE INSTALLED AS REQUIRED. BARRIERS AND TRAPS ARE TO BE MAINTAINED AND CLEANED UNTIL ALL SLOPES HAVE A HEALTHY STAND OF GRASS.
- BALED HAY AND MULCH SHALL BE MOWINGS OF ACCEPTABLE HERBACEOUS GROWTH, FREE FROM NOXIOUS WEEDS OR WOODY STEMS, AND SHALL BE DRY. NO SALT HAY SHALL BE USED.
- FILL MATERIAL SHALL BE FREE FROM STUMPS, WOOD, ROOTS, ETC.
- STOCKPILED MATERIALS SHALL BE PLACED ONLY IN AREAS SHOWN ON THE PLANS. STOCKPILES SHALL BE PROTECTED BY SILTATION FENCE AND SEEDING TO PREVENT EROSION. THESE MEASURES SHALL REMAIN UNTIL ALL MATERIAL HAS BEEN PLACED OR DISPOSED OFF SITE.
- ALL DISTURBED AREAS SHALL BE LOADED AND SEEDING A MINIMUM OF 4 INCHES OF LOAM SHALL BE INSTALLED AND SEEDING AS SPECIFIED.
- AFTER ALL DISTURBED AREAS HAVE BEEN STABILIZED THE TEMPORARY EROSION CONTROL MEASURES ARE TO BE REMOVED.
- PAVED ROADWAYS MUST BE KEPT CLEAN AT ALL TIMES.
- ALL CATCH BASIN INLETS WILL BE PROTECTED WITH LOW POINT SEDIMENTATION BARRIER.
- ALL STORM DRAINAGE OUTLETS WILL BE STABILIZED AND CLEANED AS REQUIRED, BEFORE THE DISCHARGE POINTS BECOME OPERATIONAL.
- ALL Dewatering OPERATIONS MUST DISCHARGE DIRECTLY INTO A SEDIMENT FILL AREA.
- JUTE MATTING OR APPROVED EQUIVALENT SHALL BE PROVIDED ON ALL SLOPES GREATER THAN 3:1.

CONSTRUCTION SEQUENCE NOTES:

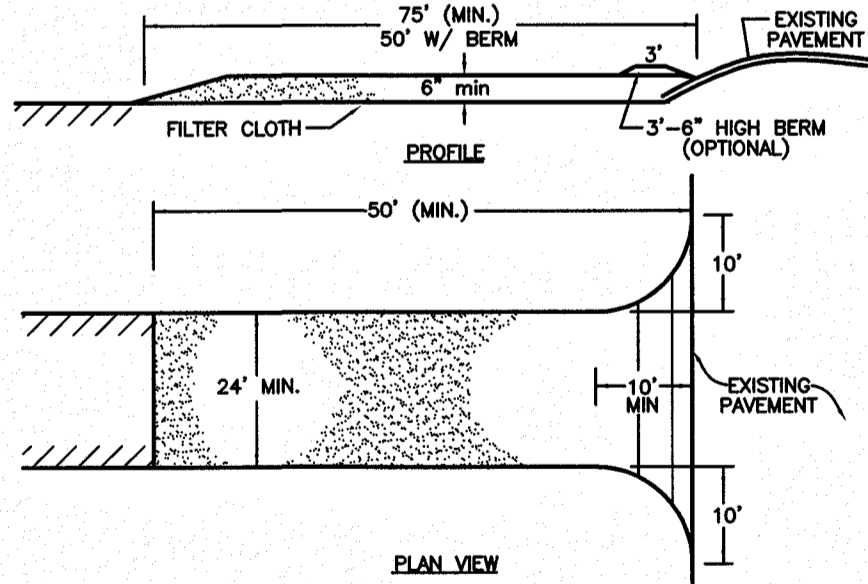
- SEDIMENT AND EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO ANY ON-SITE CONSTRUCTION AS SHOWN. ADDITIONAL TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES SHALL BE INSTALLED AS SOON AS PRACTICAL.
- CONSTRUCT TEMPORARY STABILIZED CONSTRUCTION ENTRANCE AS SHOWN ON THIS SHEET.
- CUT AND STUMP AREAS OF PROPOSED CONSTRUCTION.
- REMOVE AND STOCKPILE TOPSOIL. STOCKPILE SHALL BE SEEDDED TO PREVENT EROSION.
- CONSTRUCT PONDS, SWALES & LEVEL SPREADERS & STABILIZE PRIOR TO DIRECTING ANY RUNOFF TO THEM.
- CONSTRUCT ROADWAYS AND PERFORM SITE GRADING, PLACING HAY BALES AND SILTATION FENCES AS REQUIRED TO CONTROL SOIL EROSION. STABILIZE ROADS, PARKING LOTS AND CUT/FILL SLOPES WITHIN 72-HOURS OF ACHIEVING FINISH GRADES.
- INSTALL UNDERGROUND UTILITIES AND DRAINAGE SYSTEM.
- BEGIN TEMPORARY AND PERMANENT SEEDING AND MULCHING. ALL CUT AND FILL SLOPES SHALL BE SEEDDED OR MULCHED WITHIN 72-HOURS OF ACHIEVING FINISHED GRADES.
- DAILY, OR AS REQUIRED, CONSTRUCT, INSPECT, AND IF NECESSARY, RECONSTRUCT TEMPORARY BERMS, DRAINS, DITCHES, SILT FENCES AND SEDIMENT TRAPS INCLUDING MULCHING AND SEEDING. AT A MINIMUM, INSPECT EROSION CONTROLS WEEKLY AND AFTER EVERY 1/2" OF RAINFALL.
- BEGIN EXCAVATION FOR CONSTRUCTION OF BUILDINGS.
- FINISH PAVING ALL ROADWAYS AND DRIVEWAYS.
- COMPLETE PERMANENT SEEDING AND LANDSCAPING.
- AFTER GRASS HAS BEEN FULLY GERMINATED IN ALL SEEDDED AREAS, REMOVE ALL TEMPORARY EROSION CONTROL MEASURES.
- APPLICATION OF GRASS SEED, FERTILIZERS AND MULCH SHALL BE ACCOMPLISHED BY BROADCAST SEEDING OR HYDROSEEDING AT THE RATES OUTLINED BELOW:
Limestone: 138 lbs./1,000 square feet.
Fertilizer: 13.8 lbs./1,000 SF.
Mulch: hay mulch approximately 3 tons/acre unless erosion control matting is used.
Permanent Seed Mix
Creeping Red Fescue 20 LBS./ACRE
Tall Fescue 20 LBS./ACRE
Redtop 2 LBS./ACRE
TOTAL 42 LBS./ACRE
Temporary Seed Mix:
Winter Rye (Aug. 15-Sept. 15) 112 LBS./ACRE
Oats (No later than May 15) 80 LBS./ACRE
- NEWLY GRADED AREAS REQUIRING SLOPE PROTECTION OUTSIDE OF NORMAL SEEDING SEASON SHALL RECEIVE HAY MULCH AT THE APPROXIMATE RATE OF NO MORE THAN 2 TONS PER ACRE.
- THE CONTRACTOR AND DEVELOPER MUST MANAGE THE PROJECT TO MEET THE REQUIREMENTS AND INTENT OF RSA 430:53 AND AGR 3800 RELATIVE TO INVASIVE SPECIES.
- FUGITIVE DUST MUST BE CONTROLLED IN ACCORDANCE WITH ENV-A 1000.

EROSION CONTROL NOTES:

- THE EROSION CONTROL PROCEDURES SHALL CONFORM TO THE NH Stormwater Manual, Volume 3, EROSION & SEDIMENT CONTROLS DURING CONSTRUCTION, DECEMBER 2008.
- DURING CONSTRUCTION AND THEREAFTER, EROSION CONTROL MEASURES ARE TO BE IMPLEMENTED AS NOTED. THE SMALLEST PRACTICAL AREA OF LAND SHOULD BE EXPOSED AT ANY ONE TIME DURING DEVELOPMENT. WHEN LAND IS EXPOSED DURING DEVELOPMENT, THE EXPOSURE SHOULD BE KEPT TO THE SHORTEST PRACTICAL PERIOD OF TIME, AS APPROVED BY THE ENGINEER. LAND SHOULD NOT BE LEFT EXPOSED DURING THE WINTER MONTHS.
- LIMIT OF MAXIMUM AREA OF EXPOSED SOIL AT ANY ONE TIME TO LESS THAN 5 ACRES. THE EXPOSED AREA THAT IS BEING ACTIVELY WORKED DURING WINTER IS TO BE LESS THAN 3 ACRES DURING THE WINTER SEASON.
- ALL PERMANENT STORM WATER STRUCTURES SHALL BE STABILIZED PRIOR TO DIRECTING FLOW INTO THEM. 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 PERCENT VEGETATED GROWTH HAS BEEN ESTABLISHED.
C) A MINIMUM OF 3 INCHES OF NON-EROSIVE MATERIAL SUCH AS STONE OR RIP-RAP HAS BEEN INSTALLED.
D) OR, EROSION CONTROL BLANKETS HAVE BEEN PROPERLY INSTALLED.
- SILT FENCE SHALL BE INSTALLED AND MAINTAINED DURING AND AFTER DEVELOPMENT TO REMOVE SEDIMENT FROM RUNOFF WATER AND FROM LAND DURING DEVELOPMENT. WHERE POSSIBLE, NATURAL DRAINAGEWAYS SHOULD BE UTILIZED AND LEFT OPEN TO REMOVE EXCESS SURFACE WATER. SILT FENCE TO BE MAINTAINED AND CLEANED UNTIL ALL SLOPES HAVE A HEALTHY STAND OF GRASS.
- ALL DISTURBED AREAS AND SIDE SLOPES WHICH ARE FINISHED GRADED, WITH NO FURTHER CONSTRUCTION TO TAKE PLACE, SHALL BE LOADED AND SEEDDED WITHIN 72 HOURS AFTER FINAL GRADING. A MINIMUM OF 4" OF LOAM SHALL BE INSTALLED WITH LESS THAN ONE POUND OF SEED PER 50 SQUARE YARDS OF AREA. THE SEED MIX SHALL BE AS DESIGNATED BELOW.
- ANY DISTURBED AREAS WHICH ARE TO BE LEFT TEMPORARILY, AND WHICH WILL BE REGRADED LATER DURING CONSTRUCTION SHALL BE MACHINE HAY MULCHED AND SEEDDED WITH RYE GRASS TO PREVENT EROSION. THE MAXIMUM LENGTH OF TIME FOR THE EXPOSURE OF DISTURBED SOILS SHALL BE 45 DAYS. HAY OR STRAW MULCH SHALL BE APPLIED TO ALL FRESHLY SEEDDED AREAS AT THE RATE OF 2 TONS PER ACRE. BALES SHALL BE UNPOOLED, AIR DRIED, AND FREE FROM WEED SEEDS AND ANY COARSE MATERIAL.
- DURING GRADING OPERATIONS INSTALL HAY BALE BARRIERS ALONG TOE OF SLOPE OF FILL AREAS WHERE SHOWN. BARRIERS ARE TO BE MAINTAINED UNTIL DISTURBED AREAS ARE PAVED OR GRASSED.
- THE FILL MATERIAL SHALL BE OF APPROVED SOIL TYPE FREE FROM STUMPS, ROOTS, WOOD, ETC. TO BE PLACED IN 12" LIFTS OR AS SPECIFIED. BULLDOZERS, TRUCKS, TRACTORS, OR ROLLERS MAY BE USED FOR COMPACTION BY ROUTING THE EQUIPMENT TO ALL AREAS OR EACH LAYER.
- AVOID THE USE OF FUTURE OPEN SPACES (LOAM & SEED) WHEREVER POSSIBLE DURING CONSTRUCTION. CONSTRUCTION TRAFFIC SHALL USE THE ROADBEDS OF FUTURE ROADS.

WINTER STABILIZATION NOTES:

- MAINTENANCE REQUIREMENTS:
- Maintenance measures should continue as needed throughout construction, including the over-winter period. After each rainfall, snowstorm, or period of thawing and runoff, the contractor should conduct an inspection of all installed erosion control measures and perform repairs as needed to insure their continuing function.
- For any area stabilized by temporary or permanent seeding prior to the onset of the winter season, the contractor should conduct an inspection in the spring to ascertain the condition of vegetation cover, and repair any damage areas or bare spots and reseed as required to achieve an established vegetative cover (at least 85% of area vegetated with healthy, vigorous growth).
- SPECIFICATIONS:
- To adequately protect water quality during cold weather and during spring runoff, the following stabilization techniques should be employed during the period of October 15th through May 15th.
- The area of exposed, unstabilized soil should be limited to one acre and should be protected against erosion by the methods described in this section prior to any thaw or spring melt event. Subject to applicable regulations, the allowable area of exposed soil may be increased if activities are conducted according to a winter construction plan, developed by a professional engineer licensed to practice in the state of New Hampshire or a Certified Professional in Erosion and Sediment Control as certified by the CSPESC Council of EnviroCert International, Inc.
 - Stabilization as follows should be completed within a day of establishing the grade that is final or that otherwise will exist for more than 5 days:
A. All proposed vegetated areas having a slope of less than 15% which do not exhibit a minimum of 85% vegetative growth by October 15th, or which are disturbed after October 15th, should be seeded and covered with 3 to 4 tons of hay or straw mulch per acre secured with anchored netting, or 2 inches of erosion control mix (see description of erosion control mix berms for material specification).
B. All proposed vegetated areas having a slope of greater than 15% which do not exhibit a minimum of 85% vegetative growth by October 15th, or which are disturbed after October 15th, should be seeded and covered with a properly installed and anchored erosion control blanket or with a minimum 4 inch thickness of erosion control mix, unless otherwise specified by the manufacturer. Note that compost blankets should not exceed 2 inches in thickness or they may overheat.
C. All stone-covered slopes must be constructed and stabilized by October 15.
D. Installation of anchored hay mulch or erosion control mix should not occur over snow of greater than one inch in depth.
E. All mulch applied during winter should be anchored (e.g., by netting, tracking, wood cellulose fiber).
 - Stockpiles of soil materials should be mulched for over winter. protection with hay or straw at twice the normal rate or with a four-inch layer of erosion control mix. Mulching should be done within 24 hours of stocking, and re-established prior to any rainfall or snowfall. No soil stockpile should be placed (even covered with mulch) within 100 feet from any wetland or other water resource area.
 - Frozen materials, (e.g., frost layer that is removed during winter construction), should be stockpiled separately and in a location that is away from any area needing to be protected. Stockpiles of frozen material can melt in the spring and become unworkable and difficult to transport due to the high moisture content in the soil.
 - Installation of erosion control blankets should not occur over snow of greater than one inch in depth or on frozen ground.
 - All grass-lined ditches and channels should be constructed and stabilized by September 1. All ditches or swales which do not exhibit a minimum of 85% vegetative growth by October 15th, or which are disturbed after October 15th, should be stabilized temporarily with stone or erosion control blankets appropriate for the design flow conditions, as determined by a qualified Professional Engineer or a Certified Professional in Erosion and Sediment Control as certified by the CSPESC Council of EnviroCert International, Inc. If a stone lining is necessary, the contractor may need to re-grade the ditch as required to provide adequate cross-section after allowing for placement of the stone.
 - All stone-lined ditches and channels must be constructed and stabilized by October 15.
 - After November 15, incomplete road or parking surfaces, where work has stopped for the winter season, shall be protected with a minimum of 3 inches of crushed gravel per NHDOT item 304.3.
 - Sediment barriers that are installed during frozen conditions should consist of erosion control mix berms, or continuous contained berms. Silt fences and hay bales should not be installed when frozen conditions prevent proper embankment of these barriers.



- STONE FOR A STABILIZED CONSTRUCTION EXIT SHALL BE 3 INCH COARSE AGGREGATE, RECLAIMED STONE, OR RECYCLED CONCRETE EQUIVALENT.
- THE LENGTH OF THE STABILIZED EXIT SHALL NOT BE LESS THAN 50 FEET.
- THE THICKNESS OF THE STONE FOR THE STABILIZED EXIT SHALL NOT BE LESS THAN 6 INCHES.
- THE WIDTH OF THE EXIT SHALL NOT BE LESS THAN 24" WHERE INGRESS OCCURS.
- GEOTEXTILE FILTER CLOTH SHALL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING THE STONE.
- ALL SURFACE WATER THAT IS FLOWING TO OR DIVERTED TOWARD THE CONSTRUCTION EXIT SHALL BE PIPED BENEATH THE EXIT. IF PIPING IS IMPRACTICAL, A BERM WITH 5:1 SLOPES THAT CAN BE CROSSED BY VEHICLES MAY BE SUBSTITUTED FOR THE PIPE.
- THE EXIT SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOPDRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, WASHED OR TRACKED ONTO PUBLIC RIGHT-OF-WAY MUST BE REMOVED PROMPTLY.
- WHEELS SHALL BE CLEANED TO REMOVE MUD PRIOR TO EXIT ONTO PUBLIC RIGHTS-OF-WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.

STABILIZED CONSTRUCTION EXIT DETAIL
NOT TO SCALE

2	REVISE STONE DRIP EDGE DETAIL	DRJ	2/13/17
1	REVISIONS PER REVIEW COMMENTS	DRJ	2/6/17
NO.	DESCRIPTION	BY	DATE
REVISIONS			
CONSTRUCTION DETAILS			
TUSCAN VILLAGE APARTMENTS			
SALEM PROPERTY MAP 98 - LOT 12543			
PROPERTY ADDRESS - 39 PLEASANT STREET			
PREPARED FOR:			
OMJ REALTY, LLC			
63 MAIN STREET			
SALEM, NH 03079			
44 Stiles Road, Suite One			
SALEM, New Hampshire 03079			
(603) 893-0720			
ENGINEERS • PLANNERS • SURVEYORS			
www.mhfdesign.com			
SCALE: N.T.S.		DATE: OCTOBER 7, 2016	
OWNER OF RECORD		SALEM PLANNING BOARD	
OMJ REALTY, LLC		APPROVAL	
63 MAIN STREET			
SALEM, NH 03079			
BOOK 5595--PAGE 2560			
ZONE: COMMERCIAL - INDUSTRIAL 'C' & RESIDENTIAL			
DESIGNED BY:	DRAWN/CHECKED	DWG. NAME	PROJECT No.
DRJ	CCC/DRJ	3787PH-2-APT-DET.DWG	378715
		SHEET No.	18 OF 18

F:\Projects\CAD\378715\APARTMENTS\3787PH-2-APT-DET.dwg DET5 2/28/17 9:10am ccc

TUSCAN VILLAGE

SALEM, NEW HAMPSHIRE

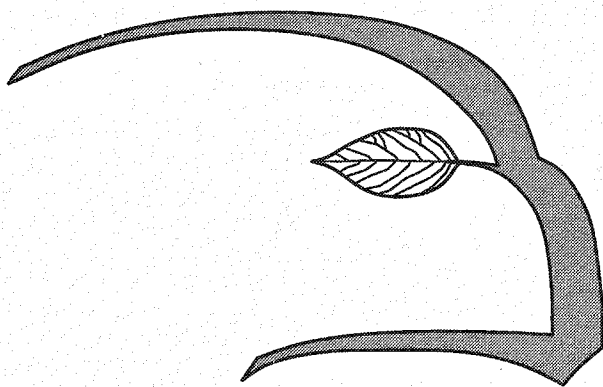
PREPARED FOR:
THE DOLBEN COMPANY
150 PRESIDENTIAL WAY
WOBURN, MASSACHUSETTS

LANDSCAPE PLANS PERMIT SUBMITTAL SET

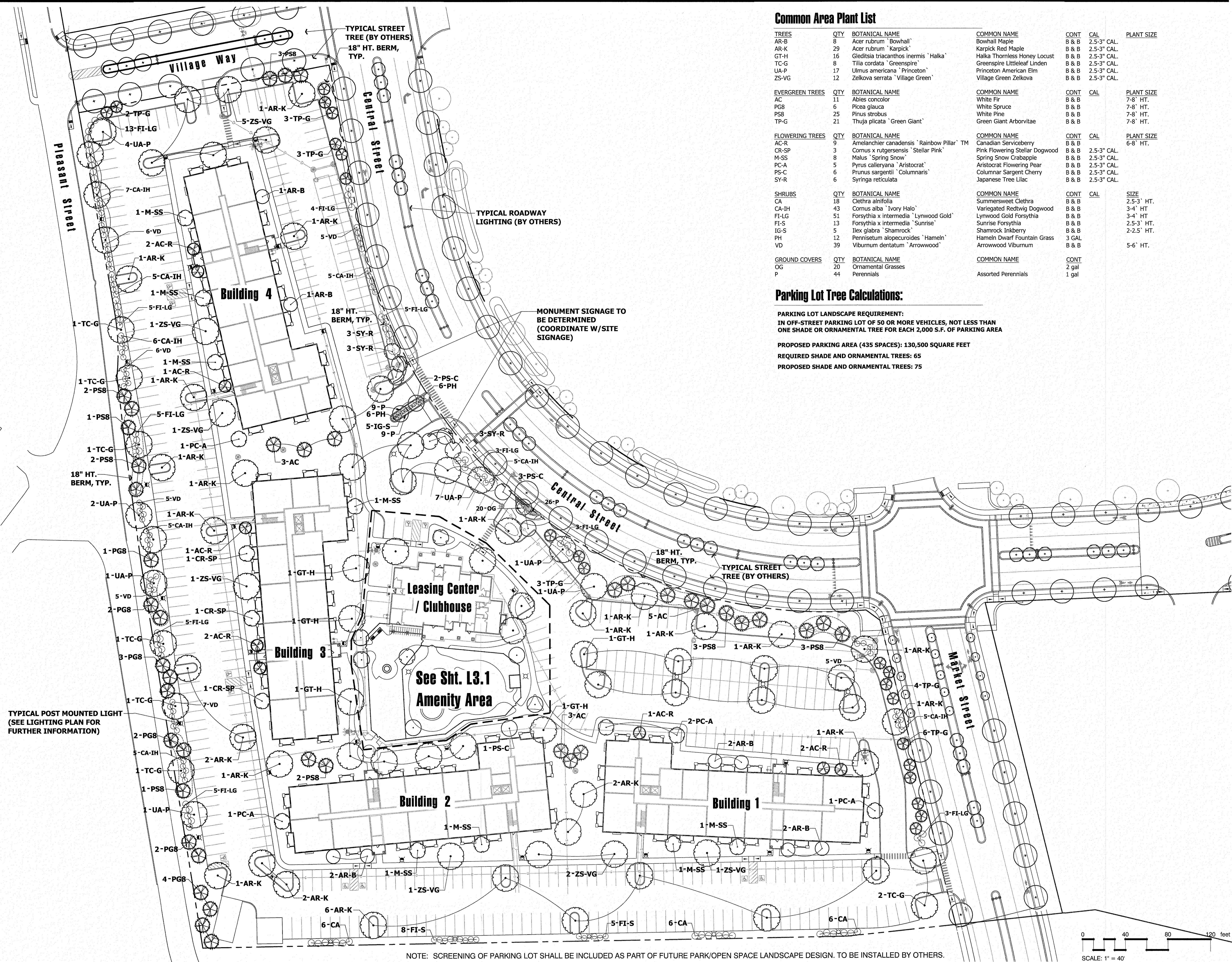
LIST OF DRAWINGS:

		SET ISSUE DATE
L1.1	SITE PLANTING PLAN	10/7/16
L2.1	TYPICAL BUILDING PLANTING PLAN	10/7/16
L3.1	AMENITY AREA PLANTING PLAN	10/7/16
L4.1	SITE LIGHTING PLAN	10/7/16
D1	PLANTING DETAILS	10/7/16
D2	PLANTING NOTES	10/7/16

LANDSCAPE ARCHITECT:



Hawk Design, Inc.
Landscape Architecture
Land Planning
Sagamore, MA
508-833-8800
info@hawkdesigninc.com



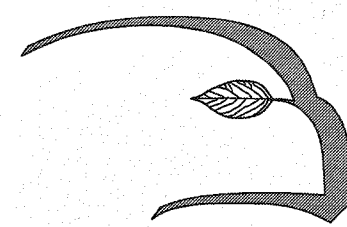
Common Area Plant List

TREES	QTY	BOTANICAL NAME	COMMON NAME	CONT	CAL	PLANT SIZE
AR-B	8	Acer rubrum 'Bowhall'	Bowhall Maple	B & B	2.5-3"	CAL.
AR-K	29	Acer rubrum 'Karpick'	Karpick Red Maple	B & B	2.5-3"	CAL.
GT-H	16	Gleditsia triacanthos inermis 'Halka'	Halka Thornless Honey Locust	B & B	2.5-3"	CAL.
TC-G	8	Tilia cordata 'Greenspire'	Greenspire Littleleaf Linden	B & B	2.5-3"	CAL.
UA-P	17	Ulmus americana 'Princeton'	Princeton American Elm	B & B	2.5-3"	CAL.
ZS-VG	12	Zelkova serrata 'Village Green'	Village Green Zelkova	B & B	2.5-3"	CAL.
EVERGREEN TREES	QTY	BOTANICAL NAME	COMMON NAME	CONT	CAL	PLANT SIZE
AC	11	Abies concolor	White Fir	B & B	7-8'	HT.
PG8	6	Picea glauca	White Spruce	B & B	7-8'	HT.
PS8	25	Pinus strobus	White Pine	B & B	7-8'	HT.
TP-G	21	Thuja plicata 'Green Giant'	Green Giant Arborvitae	B & B	7-8'	HT.
FLOWERING TREES	QTY	BOTANICAL NAME	COMMON NAME	CONT	CAL	PLANT SIZE
AC-R	9	Amelanchier canadensis 'Rainbow Pillar' TM	Canadian Serviceberry	B & B	2.5-3"	CAL.
CR-SP	3	Cornus x rutgersensis 'Stellar Pink'	Pink Flowering Stellar Dogwood	B & B	2.5-3"	CAL.
M-SS	8	Malus 'Spring Snow'	Spring Snow Crabapple	B & B	2.5-3"	CAL.
PC-A	5	Pyrus calleryana 'Aristocrat'	Aristocrat Flowering Pear	B & B	2.5-3"	CAL.
PS-C	6	Prunus sargentii 'Columnaris'	Columnar Sargent Cherry	B & B	2.5-3"	CAL.
SY-R	6	Syringa reticulata	Japanese Tree Lilac	B & B	2.5-3"	CAL.
SHRUBS	QTY	BOTANICAL NAME	COMMON NAME	CONT	CAL	SIZE
CA	18	Clethra alnifolia	Summersweet Clethra	B & B	2.5-3'	HT.
CA-IH	43	Cornus alba 'Tuxy Halo'	Variegated Redtwig Dogwood	B & B	3-4'	HT.
FI-LG	51	Forsythia x intermedia 'Lynwood Gold'	Lynwood Gold Forsythia	B & B	3-4'	HT.
FI-S	13	Forsythia x intermedia 'Sunrise'	Sunrise Forsythia	B & B	2.5-3'	HT.
IG-S	5	Ilex glabra 'Shamrock'	Shamrock Inkberry	B & B	2-2.5'	HT.
PH	12	Pennisetum alopecuroides 'Hameln'	Hameln Dwarf Fountain Grass	3 GAL		
VD	39	Viburnum dentatum 'Arrowwood'	Arrowwood Viburnum	B & B	5-6'	HT.
GROUND COVERS	QTY	BOTANICAL NAME	COMMON NAME	CONT		
OG	20	Ornamental Grasses		2 gal		
P	44	Perennials	Assorted Perennials	1 gal		

Parking Lot Tree Calculations:

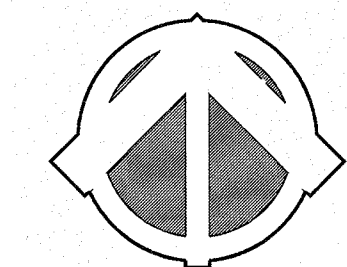
PARKING LOT LANDSCAPE REQUIREMENT:
IN OFF-STREET PARKING LOT OF 50 OR MORE VEHICLES, NOT LESS THAN
ONE SHADE OR ORNAMENTAL TREE FOR EACH 2,000 S.F. OF PARKING AREA

PROPOSED PARKING AREA (435 SPACES): 130,500 SQUARE FEET
REQUIRED SHADE AND ORNAMENTAL TREES: 65
PROPOSED SHADE AND ORNAMENTAL TREES: 75



Hawk Design, Inc.
Landscape Architecture
Land Planning
Sagamore, MA
508-833-8800
info@hawkdesigninc.com
www.hawkdesigninc.com

HAWK DESIGN, INC. 2016
THIS DRAWING AND ALL INFORMATION CONTAINED
HEREON IS PROPRIETARY INFORMATION OF HAWK
DESIGN, INC. AND MAY NOT BE COPIED OR
REPRODUCED, EITHER IN WHOLE OR IN PART, BY
ANY METHOD, WITHOUT WRITTEN PERMISSION OF
HAWK DESIGN, INC.



Date: 10/7/16

Revisions:

Num.	Date	Description
1	01/23/17	Site Planting Plan Revision
2	03/17/17	Note Revision

Tuscan Village Apartments

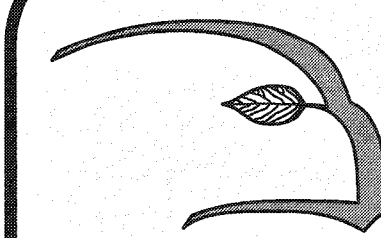
Salem, New Hampshire
Prepared for: The Doherty Company, Woburn, Massachusetts

Drawn By: JP Checked By: TM

Site Planting Plan

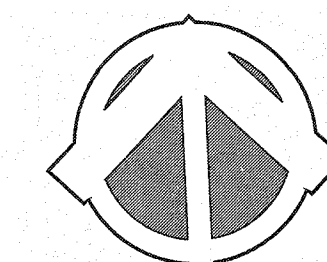
Scale: 1" = 40'-0"

Sheet: L1.1



Hawk Design, Inc.
Landscape Architecture
Land Planning
Sagamore, MA
508-833-8800
info@hawkdesigninc.com
www.hawkdesigninc.com

HAWK DESIGN, INC. 2016
THIS DRAWING AND ALL INFORMATION CONTAINED
HEREON IS PROPRIETARY INFORMATION OF HAWK
DESIGN, INC. AND MAY NOT BE COPIED OR
REPRODUCED, EITHER IN WHOLE OR IN PART, BY
ANY METHOD, WITHOUT WRITTEN PERMISSION OF
HAWK DESIGN, INC.



Date: 10/7/16

Revisions:
Num. Date Description

Tuscan Village Apartments

Salem, New Hampshire

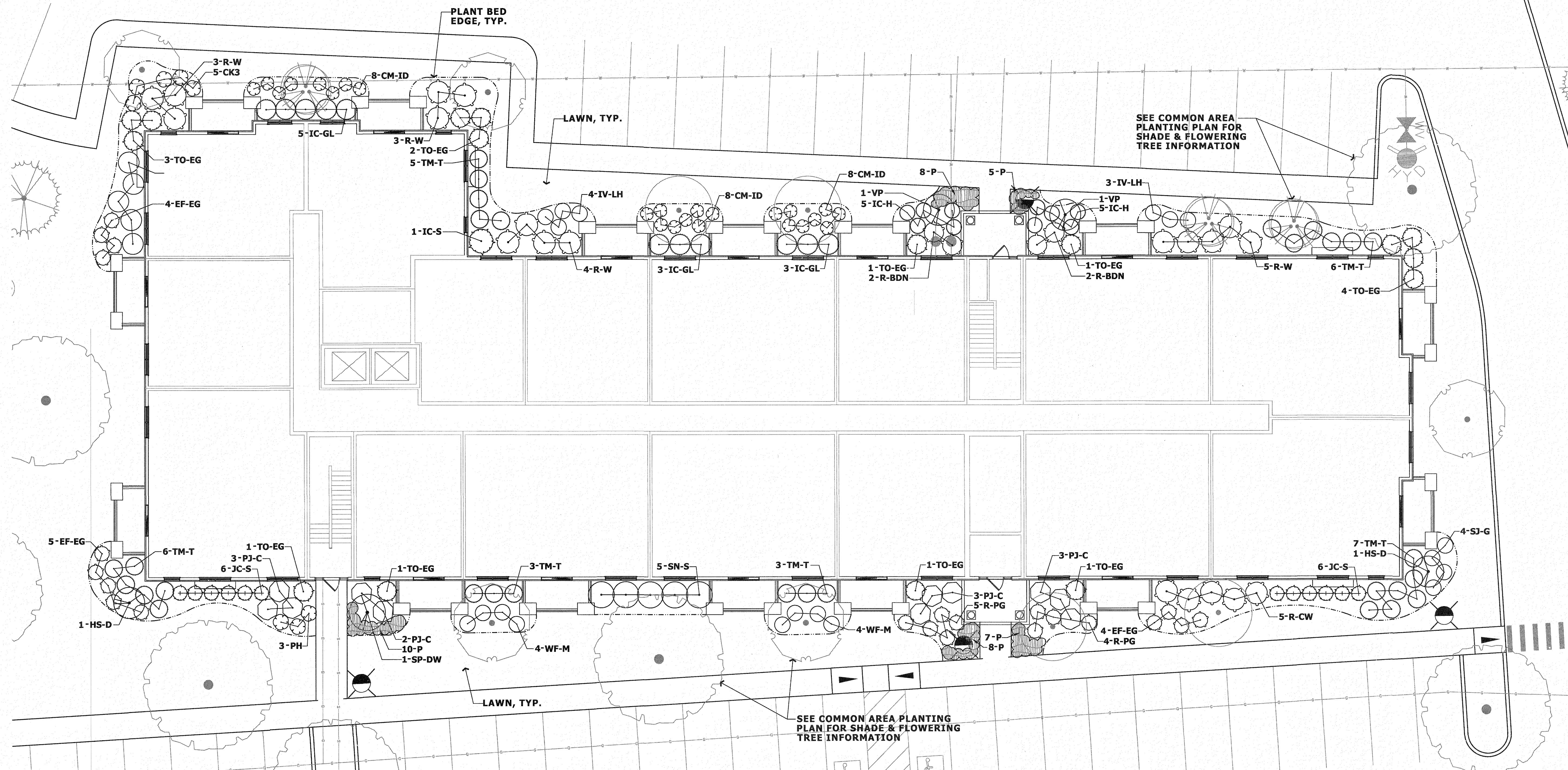
Prepared for: The Dolhen Company, Woburn, Massachusetts

Drawn By: J.P. Checked By: T.M.

Typical Building Planting Plan

Scale: 1" = 10'-0"

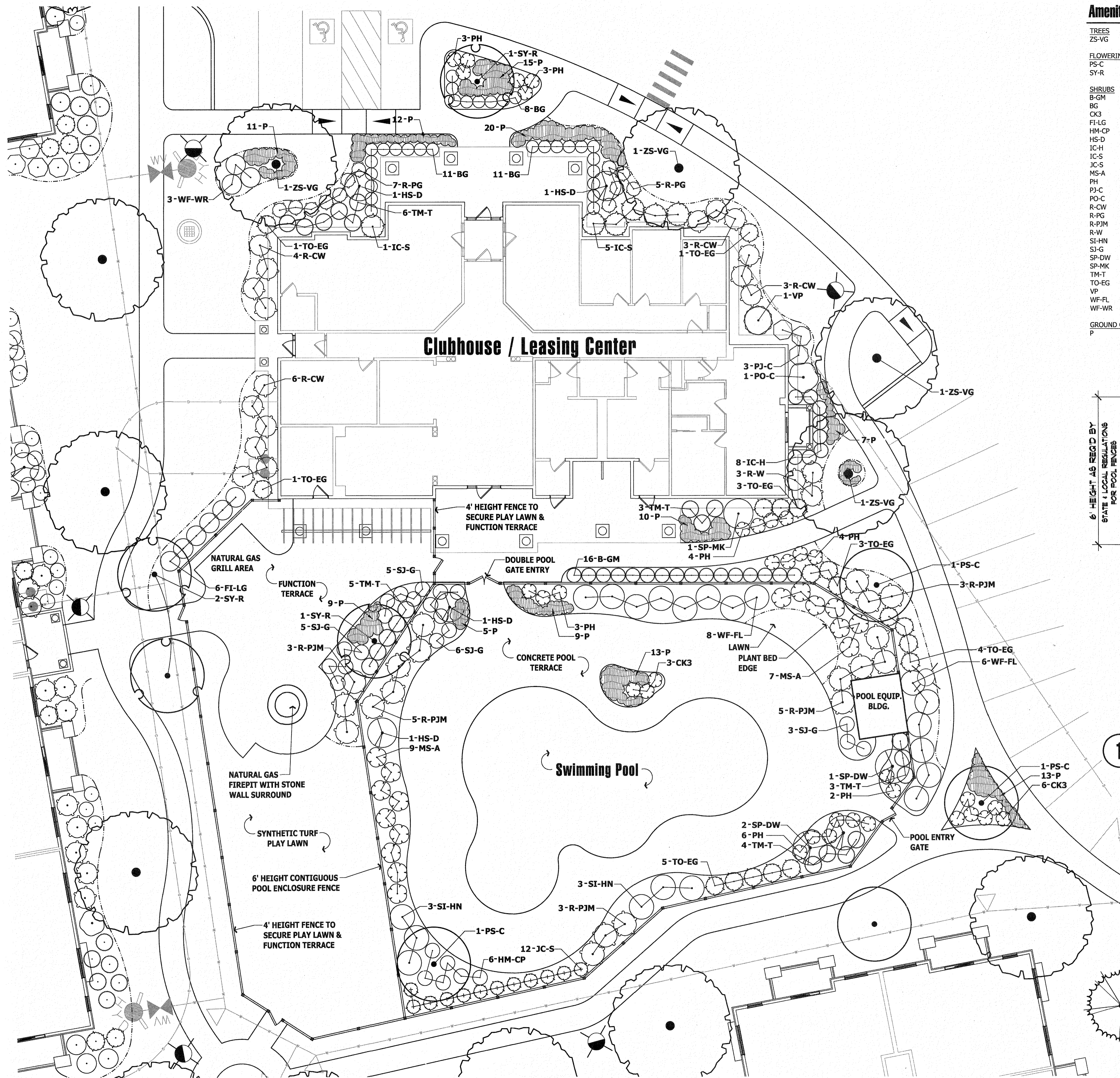
Sheet: **L2.1**



Typical Building Plant List

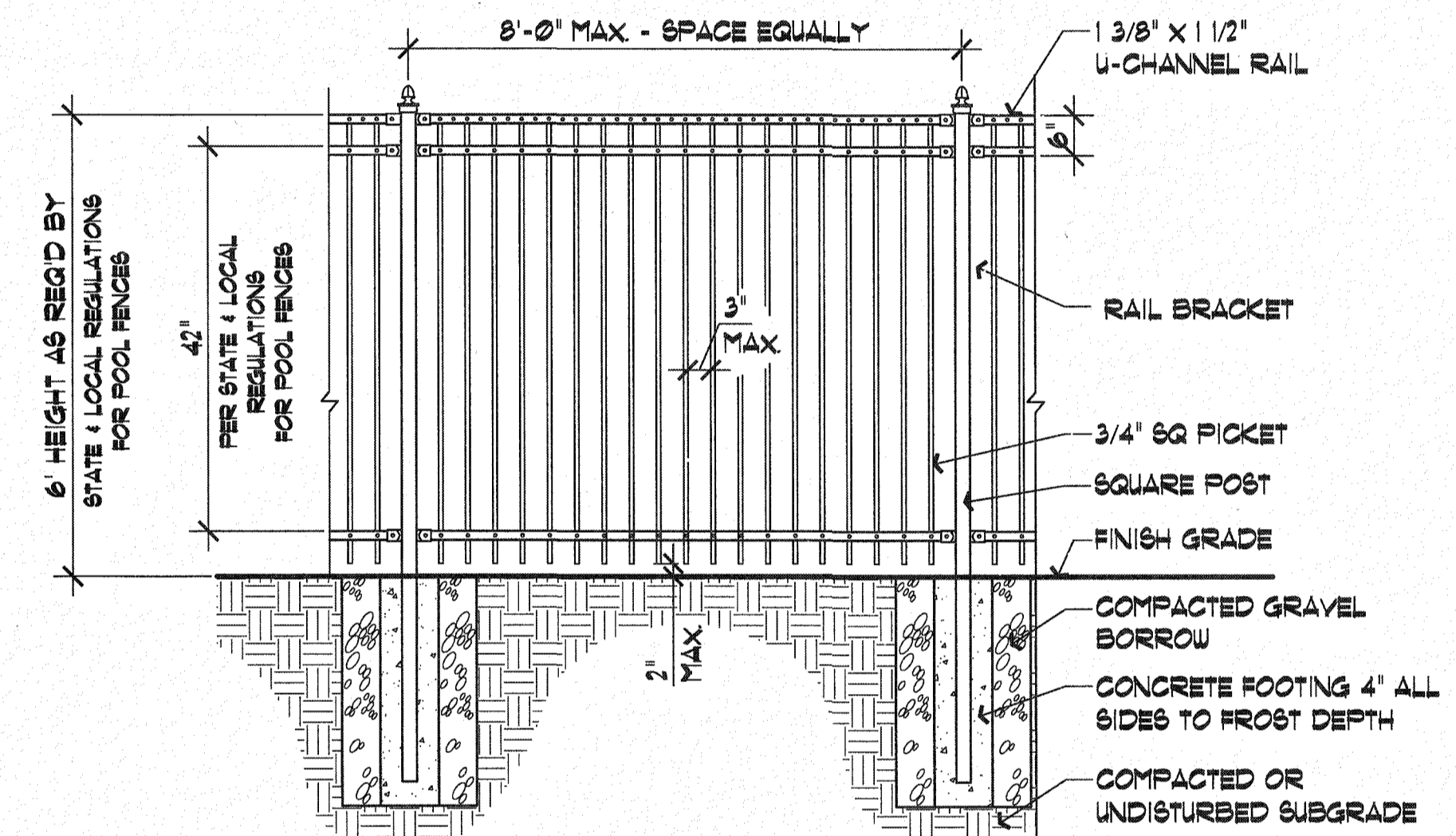
SHRUBS	QTY	BOTANICAL NAME	COMMON NAME	CONT	SIZE
CK3	5	Calamagrostis x acutiflora 'Karl Foerster'	Feather Reed Grass	3 GAL	
CM-ID	24	Carex morrowii 'Ice Dance'	Ice Dance Japanese Sedge	2 GAL	
EF-EG	13	Euonymus fortunei 'Emerald Gaiety'	Emerald Gaiety Euonymus	Cont.	18-24" HT.
HS-D	2	Hibiscus syriacus 'Diana'	Diana Rose of Sharon	B & B	5-6' HT.
IC-GL	11	Ilex crenata 'Green Lustre'	Green Lustre Japanese Holly	B & B	2-2.5' HT.
IC-H	10	Ilex crenata 'Helleri'	Heller Japanese Holly	Cont.	18-24" HT.
IC-S	1	Ilex crenata 'Steeds'	Steeds Japanese Holly	B & B	5-6' HT.
IV-LH	5	Itea virginica 'Henry's Garnet'	Henry's Garnet Sweetspire	B & B	2-2.5' HT.
IV-LH	7	Itea virginica 'Little Henry'	Little Henry Sweetspire	Cont.	15-18' HT.
JC-S	12	Juniperus chinensis 'Spartan'	Spartan Juniper	B & B	6-8' HT.
PH	3	Pennisetum alopecuroides 'Hameln'	Hameln Dwarf Fountain Grass	3 GAL	
PJ-C	11	Pieris japonica 'Cavatine'	Cavatine Andromeda	B & B	2-2.5' HT.
R-BDN	4	Rhododendron 'Boule de Neige'	Boule de Neige Rhododendron	B & B	2-2.5' HT.
R-CW	5	Rhododendron 'Cunningham's White'	Cunningham White Rhododendron	B & B	3-3.5' HT.
R-PG	9	Rhododendron 'Purple Gem'	Purple Gem Rhododendron	Cont.	18-24" HT.
R-W	15	Rhododendron 'Wilsoni'	Wilson Rhododendron	Cont.	2-2.5' HT.
SJ-G	4	Spiraea japonica 'Goldflame'	Goldflame Spirea	Cont.	18-24" HT.
SN-S	5	Spiraea nipponica 'Snowmound'	Snowmound Spirea	B & B	2-2.5' HT.
SP-DW	1	Syringa x prestoniae 'Donald Wyman'	Donald Wyman Lilac	B & B	5-6' HT.
TM-T	30	Taxus x media 'Taunttoni'	Tauntton Yew	B & B	2-2.5' HT.
TO-EG	16	Thuja occidentalis 'Emerald Green'	Emerald Green Arborvitae	B & B	6-8' HT.
VP	2	Viburnum plicatum 'Popcorn'	Popcorn Japanese Snowball	B & B	5-6' HT.
WF-M	8	Weigela florida 'Minuet'	Minuet Weigela	Cont.	15-18" HT.
GROUND COVERS	QTY	BOTANICAL NAME	COMMON NAME	CONT	
P	38	Perennials	Assorted Perennials	1 gal	

0 10 20 30 feet
SCALE: 1" = 10'



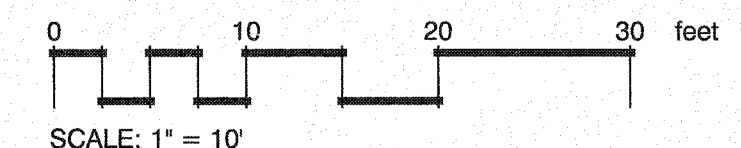
Amenity Area Plant List

TREES	QTY	BOTANICAL NAME	COMMON NAME	CONT	CAL	SIZE
ZS-VG	4	Zelkova serrata 'Village Green'	Village Green Zelkova	B & B	2.5-3" CAL.	
FLOWERING TREES	QTY	BOTANICAL NAME	COMMON NAME	CONT	CAL	SIZE
PS-C	3	Prunus sargentii 'Columnaris'	Columnar Sargent Cherry	B & B	2.5-3" CAL.	
SY-R	4	Syringa reticulata	Japanese Tree Lilac	B & B	2.5-3" CAL.	
SHRUBS	QTY	BOTANICAL NAME	COMMON NAME	CONT	CAL	SIZE
B-GM	16	Buxus x 'Green Mountain'	Green Mountain Boxwood	B & B		2-2.5' HT.
BG	30	Buxus x 'Green Gem'	Green Gem Boxwood	B & B		2-2.5' HT.
CK3	9	Calamagrostis x acutiflora 'Karl Foerster'	Feather Reed Grass	3 GAL		
FT-LG	6	Forsythia x intermedia 'Lynwood Gold'	Lynwood Gold Forsythia	B & B		3-3.5' HT.
HM-CP	6	Hydrangea macrophylla 'Cityline Paris'	Cityline Paris Hydrangea	B & B		18-24" HT.
HS-D	4	Hibiscus syriacus 'Diana'	Diana Rose of Sharon	B & B		5-6' HT.
IC-H	8	Ilex crenata 'Helleri'	Heller Japanese Holly	Cont.		18-24" HT.
IC-S	6	Ilex crenata 'Steeds'	Steeds Japanese Holly	B & B		5-6' HT.
JC-S	12	Juniperus chinensis 'Spartan'	Spartan Juniper	B & B		6-8' HT.
MS-A	16	Miscanthus sinensis 'Adagio'	Adagio Eulalia Grass	5 GAL		
PH	25	Pennisetum alopecuroides 'Hameln'	Hameln Dwarf Fountain Grass	3 GAL		
PJ-C	3	Pieris japonica 'Cavatine'	Cavatine Andromeda	B & B		2-2.5' HT.
PO-C	1	Physocarpus opulifolius 'Coppertina'	Coppertina Ninebark	B & B		3-3.5' HT.
R-CW	16	Rhododendron 'Cunningham's White'	Cunningham White Rhododendron	B & B		3-3.5' HT.
R-PG	12	Rhododendron 'Purple Gem'	Purple Gem Rhododendron	Cont.		18-24" HT.
R-PJM	19	Rhododendron 'PJM'	PJM Rhododendron	B & B		3-3.5' HT.
R-W	3	Rhododendron 'Wilson'	Wilson Rhododendron	Cont.		2-2.5' HT.
SI-HN	6	Salix integra 'Hakura Nishiki'	Nishiki Willow	B & B		3-3.5' HT.
SJ-G	19	Spiraea japonica 'Goldflame'	Goldflame Spirea	Cont.		18-24" HT.
SP-DW	3	Syringa x prestoniae 'Donald Wyman'	Donald Wyman Lilac	B & B		5-6' HT.
SP-MK	1	Syringa patula 'Miss Kim'	Miss Kim Lilac	B & B		3-3.5' HT.
TM-T	21	Taxus x media 'Tauntoni'	Tauntoni Yew	B & B		2-2.5' HT.
TO-EG	18	Thuja occidentalis 'Emerald Green'	Emerald Green Arborvitae	B & B		6-8' HT.
VP	1	Viburnum plicatum 'Popcorn'	Popcorn Japanese Snowball	B & B		5-6' HT.
WF-FL	14	Weigela florida 'French Lace'	French Lace Weigela	B & B		3-3.5' HT.
WF-WR	3	Weigela florida 'Wine & Roses'	Wine & Roses Weigela	B & B		3-3.5' HT.
GROUND COVERS	QTY	BOTANICAL NAME	COMMON NAME	CONT		
P	128	Perennials	Assorted Perennials	1 gal		



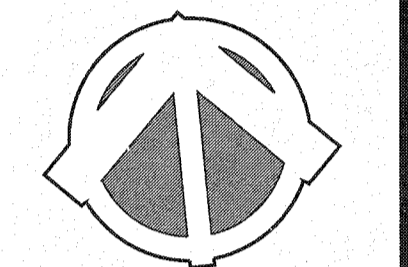
1 Pool Enclosure Fence

Scale: 1/2" = 1'-0"



Hawk Design, Inc.
Landscape Architecture
Land Planning
Sagamore, MA
508-833-8800
info@hawkdesigninc.com
www.hawkdesigninc.com

HAWK DESIGN, INC. 2016
THIS DRAWING AND ALL INFORMATION CONTAINED HEREON IS PROPRIETARY INFORMATION OF HAWK DESIGN, INC. AND MAY NOT BE COPIED OR REPRODUCED, EITHER IN WHOLE OR IN PART, BY ANY METHOD, WITHOUT WRITTEN PERMISSION OF HAWK DESIGN, INC.



Date: 10/7/16

Revisions:
Num. Date Description

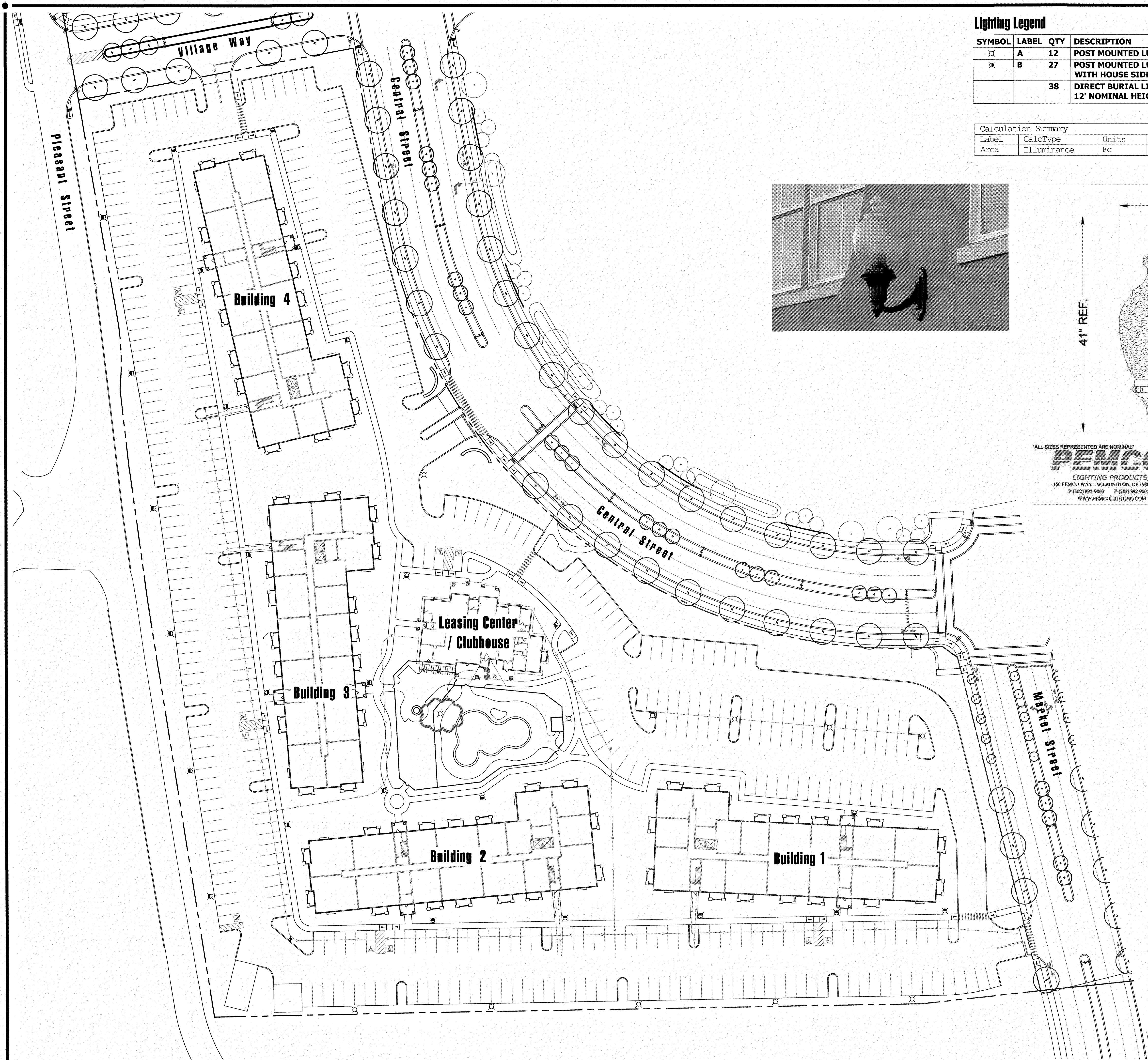
Tuscan Village Apartments
Salem, New Hampshire
Prepared for: The Dolben Company, Woburn, Massachusetts

Drawn By: JP Checked By: TM

**Amenity Area
Planting Plan**

Scale: 1" = 10'-0"

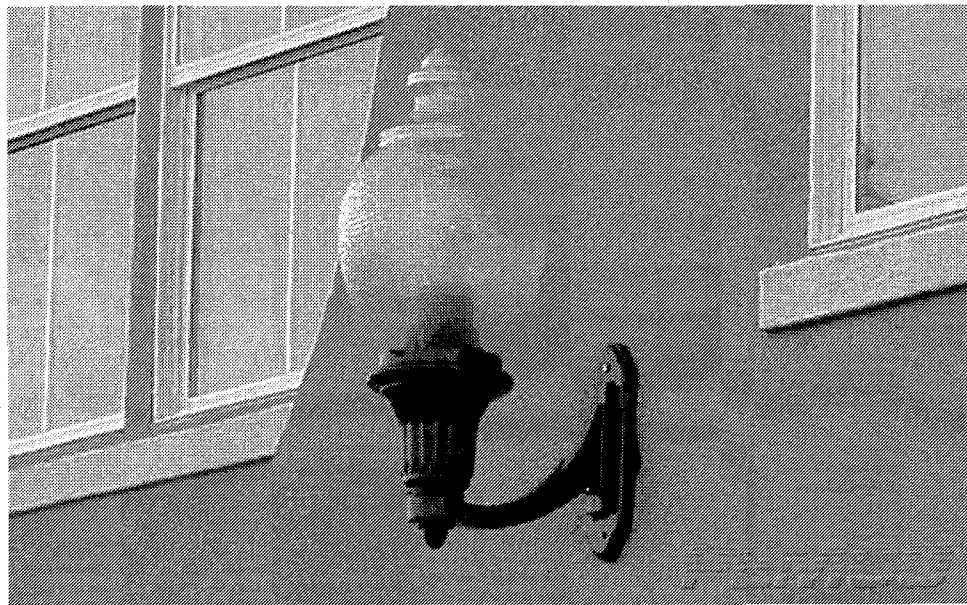
Sheet: **L3.1**



Lighting Legend

SYMBOL	LABEL	QTY	DESCRIPTION	MANUFACTURER	SPECIFICATION
⊗	A	12	POST MOUNTED LUMINAIRE	PEMCO	LEX-PA101-PLC1-100WMH-PS-MT-IC-BK
⊗	B	27	POST MOUNTED LUMINAIRE WITH HOUSE SIDE SHIELD	PEMCO	LEX-PA101-PLC1-100WMH-PS-MT-IC-BK W/HOUSE SIDE SHIELD
		38	DIRECT BURIAL LIGHT POLE 12' NOMINAL HEIGHT	PLP	D212

Calculation Summary							
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
Area	Illuminance	Fc	0.43	1.9	0.0	N.A.	N.A.



16"

41" REF.

PEMCO
LIGHTING PRODUCTS, INC.
150 PEMCO WAY - WILMINGTON, DE 19804-3535
P-(302) 892-9003 F-(302) 892-9005
WWW.PEMCOLIGHTING.COM

FULL SPECIFICATION DRAWING

LUMINAIRE:	LEX-STIPPLE-PLC 1
LUMINAIRE:	LEX-STIPPLE-PLC 1
GLOWING:	STIPPLE
DISTRIBUTION:	
LIGHT SOURCE:	
VOLTAGE:	
FINISH:	
OPTIONS:	

PEMCO LIGHTING proudly meets and exceeds LEVEL 70000 requirements for even the most stringent of AIAA-2008 "BUY AMERICAN" legislation. "BUY AMERICAN"

JOB NAME:

DRAWN BY:	TYPE:	REVISION:
EWJ CS0869		
DATE:	REP:	PAGE:
10-5-16		

PLP Direct Burial
Composite Light Poles
200 Series | 100 mph

200 SERIES DIRECT BURIAL LIGHT POLES TOP MOUNT

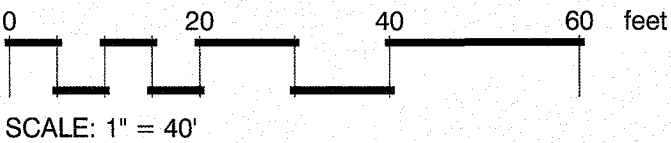
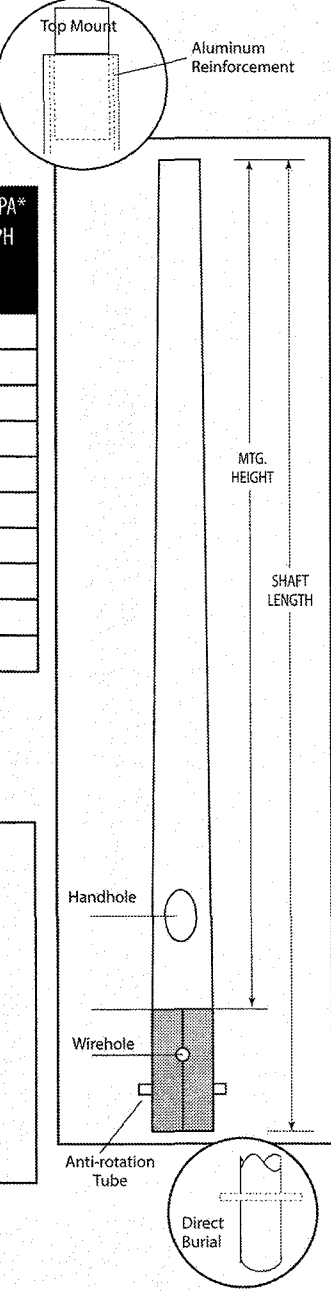
MODEL NO.	NOMINAL HGT.	BURIAL DEPTH	SHAFT LENGTH	NOMINAL POLE WEIGHT	TIP O.D. (IN)	NOMINAL GROUND LEVEL O.D. (IN)	MAXIMUM ALLOWABLE WEIGHT	MAX. EPA* 100 MPH
D207	7	2	9	15	3.3	4.75	25	2
D208	8	2	10	16	3.3	4.75	25	2
D209	9	2	11	17	3.3	5.00	25	2
D210	10	3	13	20	3.3	5.00	25	2
D211	11	3	14	21	3.3	5.25	30	2
D212	12	3	15	26	3.3	5.25	30	2
D213	13	3	16	27	3.3	5.25	30	2
D214	14	3	17	29	3.3	5.40	35	2
D215	15	3	18	31	3.3	5.40	35	2
D216	16	3	19	33	3.3	5.50	35	2

D = Direct Burial
NOTES:
* EPA recommendations are calculated per AASHTO standards and include a 30% gust factor.

- STANDARD FEATURES**

 - 3" tenon for top mounted luminaire
 - 2 1/2" x 5" handhole with door to match light pole
 - 1 3/8" nylon gronomated conductor hole below ground
 - Anti-rotation tube
 - standard colors include dark bronze, gray, black and white
- OPTIONAL FEATURES**

 - 2 3/8" tenon for top mounted luminaire
 - custom colors
 - contact PLP for additional options



Hawk Design, Inc.
Landscape Architecture
Land Planning
Sagamore, MA
508-833-8800
info@hawkdesigninc.com
www.hawkdesigninc.com

HAWK DESIGN, INC. 2016
THIS DRAWING AND ALL INFORMATION CONTAINED HEREON IS PROPRIETARY INFORMATION OF HAWK DESIGN, INC. AND MAY NOT BE COPIED OR REPRODUCED, EITHER IN WHOLE OR IN PART, BY ANY METHOD, WITHOUT WRITTEN PERMISSION OF HAWK DESIGN, INC.

Date: 10/7/16

Revisions:

Num.	Date	Description
1.	01/10/17	Plan Revision
2.	02/16/17	Lighting Revision
3.	02/21/17	Lighting Revision

Tuscan Village Apartments
Salem, New Hampshire
Prepared for: The Dolben Company, Woburn, Massachusetts

Drawn By: TRM Checked By: TM

Site Lighting Plan

Scale: 1" = 40'-0"

Sheet: **L4.1**

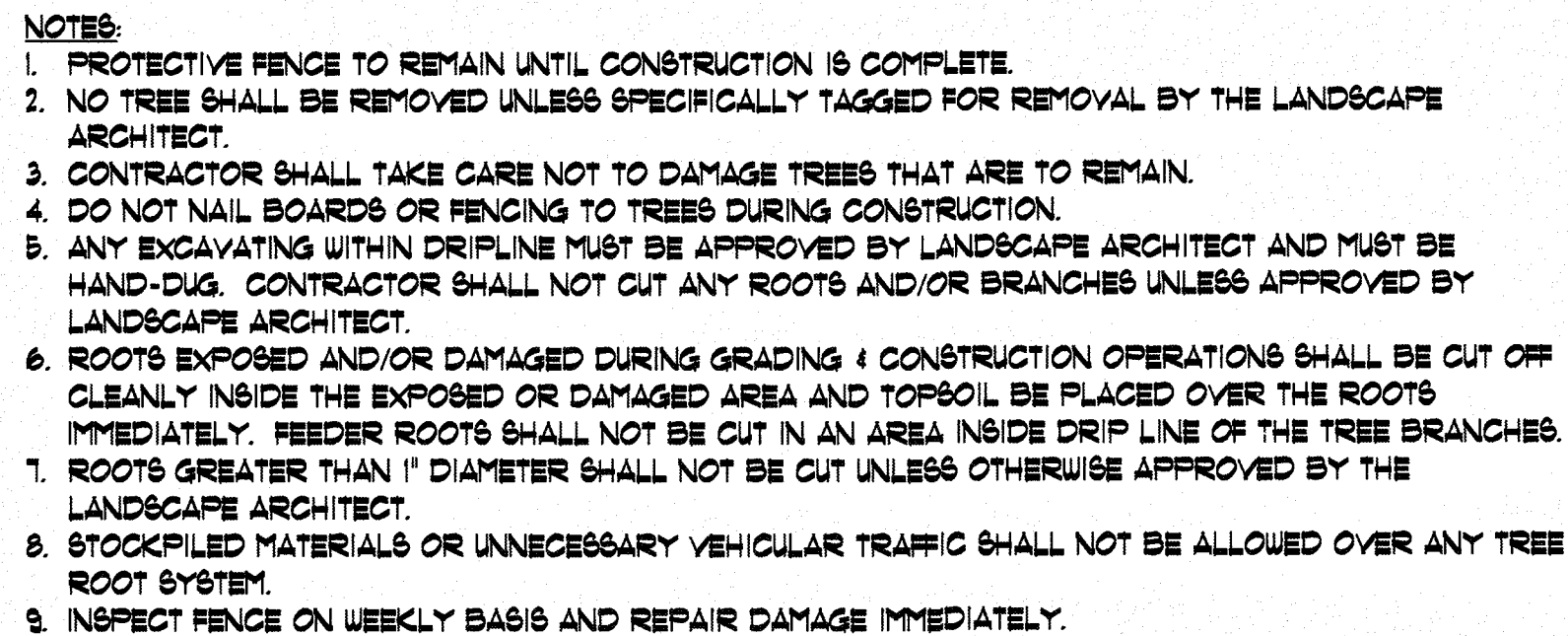


THIS DRAWING AND ALL INFORMATION CONTAINED HEREON IS PROPRIETARY INFORMATION OF HAWK DESIGN, INC. AND MAY NOT BE COPIED OR REPRODUCED, EITHER IN WHOLE OR IN PART, BY ANY METHOD, WITHOUT WRITTEN PERMISSION OF HAWK DESIGN, INC.

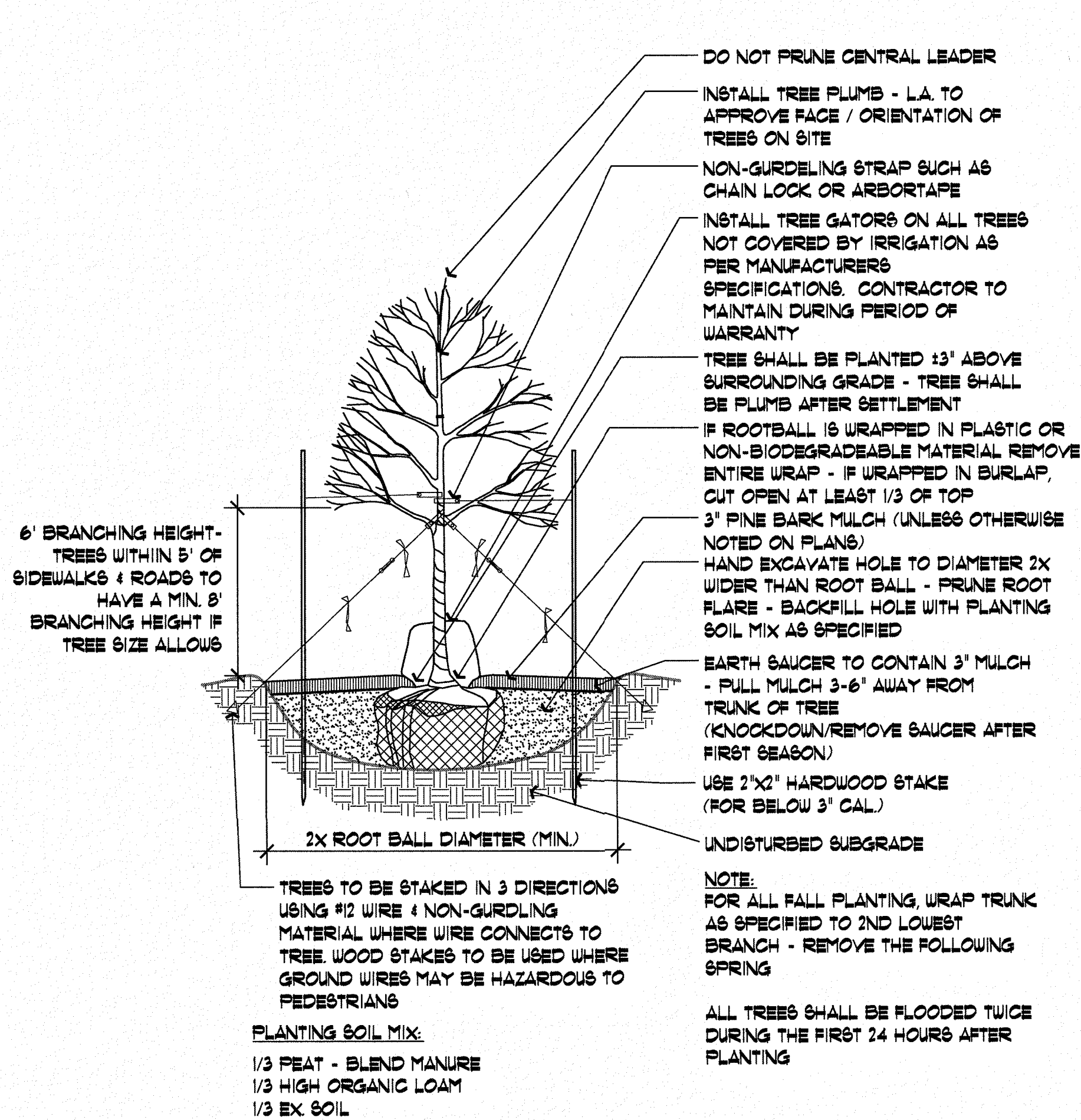
Revisions:		
Num.	Date	Description
1.	01/25/17	Detail Revision

Salem, New Hampshire
Prepared for: The Dolben Company, Woburn, Massachusetts

Planting Details

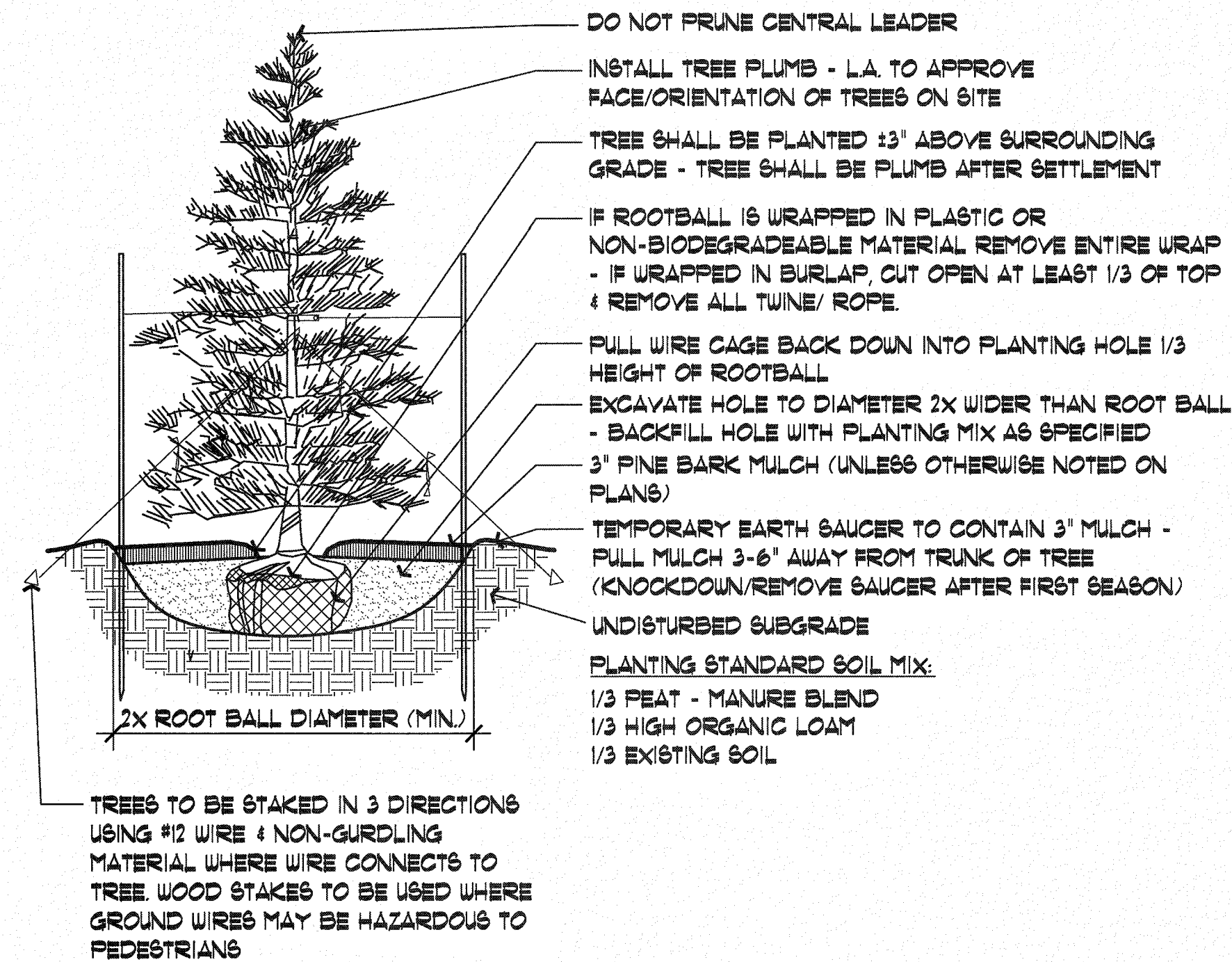
Sheet: **D1**

1 Tree Protection

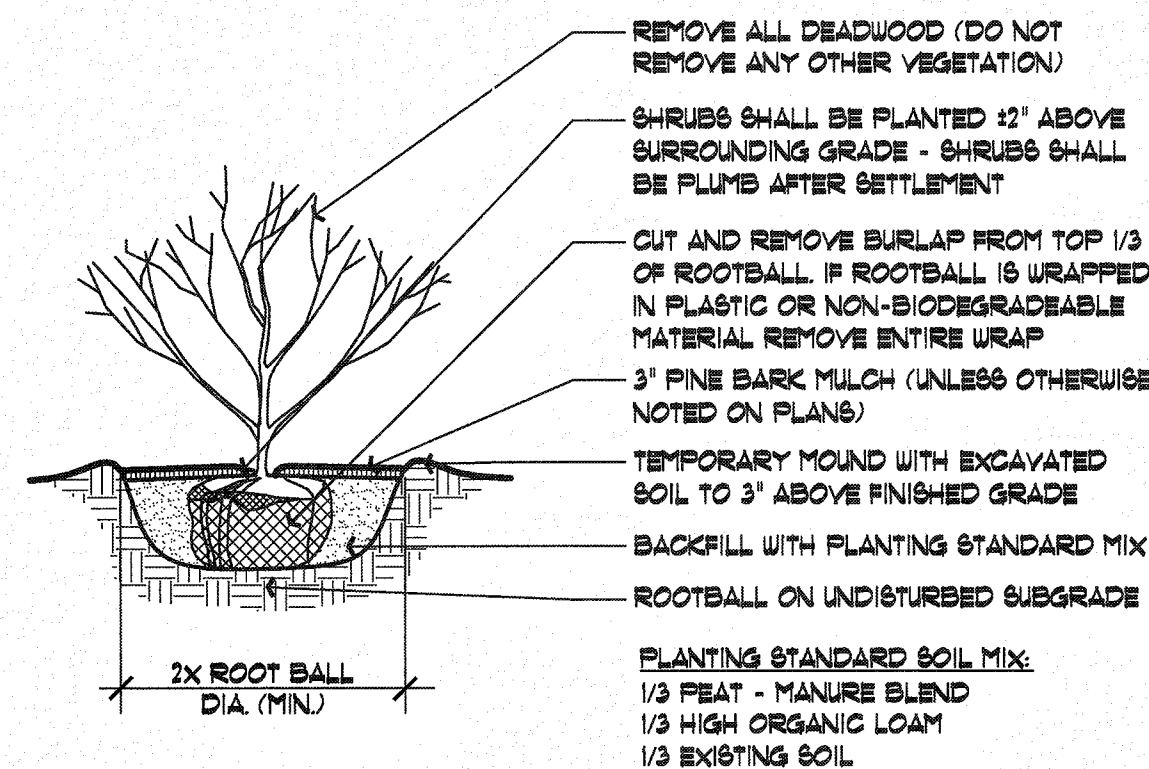


2 Deciduous Tree Detail

Not to Scale

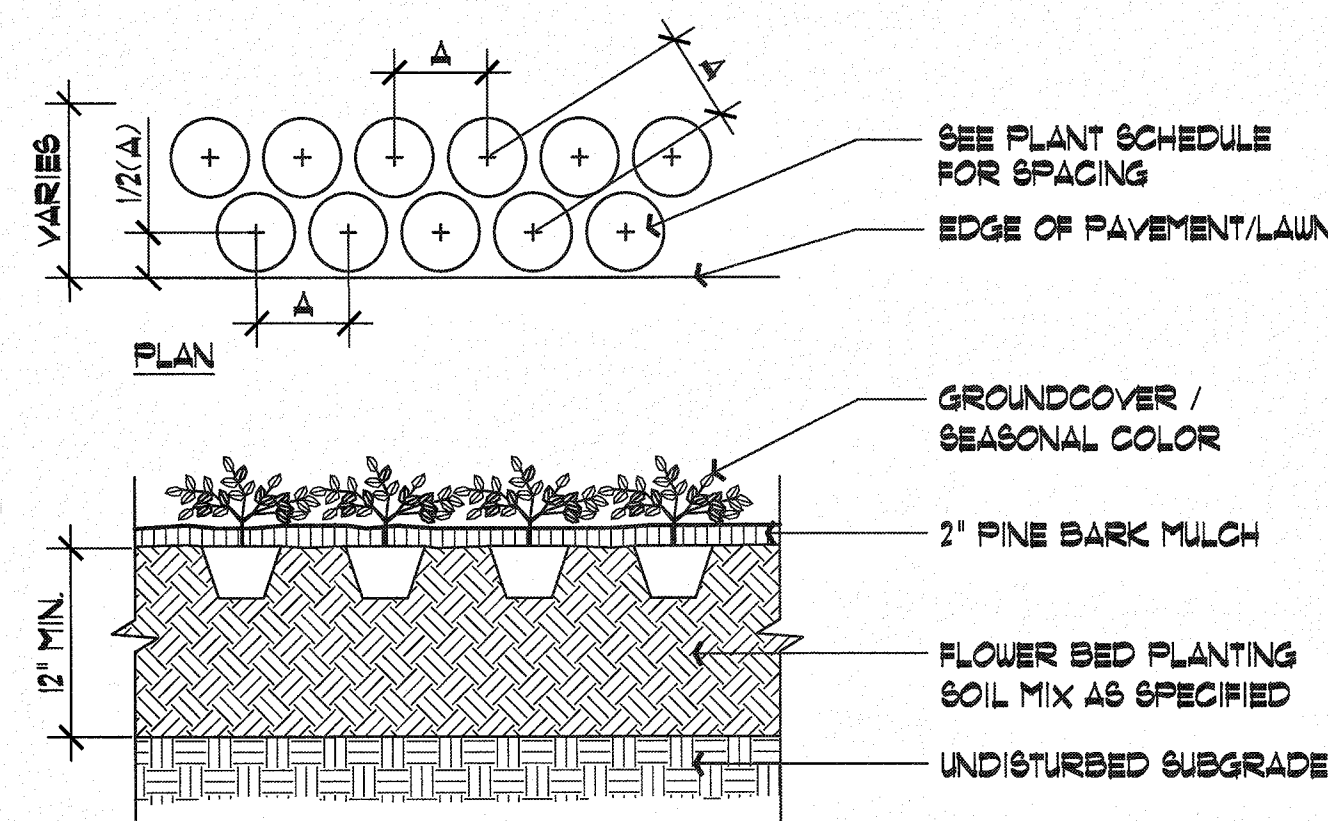


3 Coniferous Tree Detail



4 Shrub Detail

Not to Scale



5 Perennial & Seasonal Color Detail

SCHEDULE OF TOPSOILS & ADDITIVES

LOCATION	DEPTH	DESCRIPTION
GENERAL PLANTING BEDS	6"	1/3 PEAT - MANURE BLEND 1/3 HIGH ORGANIC LOAM 1/3 EXISTING SOIL
FLOWER BEDS	6"	SCREENED LOAM 1/3 PEAT - MANURE BLEND LIME - PELATIZED OR GROUND (50 LB. PER 100 SF.) GROUND BONE MEAL (50 LB. PER 100 SF.) 10-10-10 INORGANIC FERTILIZER (50 LB. PER 5000 SF.)
LAWNS - SOG & SEED	6"	6" SCREENED LOAM
PITS/TREE WELLS 'STANDARD MIX' FOR BACKFILL	12"	SOIL MIX 'A' - 1/3 PEAT - MANURE BLEND 1/3 HIGH ORGANIC LOAM 1/3 EXISTING SOIL
PITS/TREE WELLS 'LITE WEIGHT MIX'	12"	70% LIGHT WEIGHT SHALE SOIL MIX 'B' - 20% SAND 10% COMPOST
PITS/TREE WELLS 'STRUCTURAL MIX'	12"	SOIL MIX 'C' - MIX COMPOSITION TO BE SUPPLIED BY LANDSCAPE ARCHITECT.

1.0 GENERAL LANDSCAPE NOTES

1.1) CONTRACTOR REQUIREMENTS:

A) ALL WORK SHALL COMPLY WITH APPLICABLE CODES AND REGULATIONS, FROM ALL FEDERAL, STATE AND LOCAL AUTHORITIES.

B) THE CONTRACTOR SHALL ARRANGE FOR AND OBTAIN ALL PERMITS AND LICENSES REQUIRED FOR THE COMPLETE WORK SPECIFIED HEREIN AND SHOWN ON ALL THE DRAWINGS. THE CONTRACTOR SHALL PAY FOR ANY FEES NOT WAIVED.

1.2) UTILITIES:

A) LANDSCAPE CONTRACTOR IS REQUIRED TO CONTACT THE RELEVANT UTILITY COMPANIES PRIOR TO DOING ANY EXCAVATION ON THE SITE. IF ANY WORK IS TO BE DONE AROUND UNDERGROUND UTILITIES, THE APPROPRIATE AUTHORITY OF THAT UTILITY MUST BE NOTIFIED OF THE IMPENDING WORK.

B) UTILITIES SHALL BE LOCATED AND MARKED PRIOR TO ANY INSTALLATION. ADJUSTMENTS MAY BE NECESSARY IN THE FIELD TO ACCOMMODATE UTILITY LOCATIONS. REPORT ANY CONFLICTS TO THE LANDSCAPE ARCHITECT PRIOR TO INSTALLATION.

C) THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGES DONE TO EXISTING UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COST OF SATISFACTORY REPAIR OF ALL DAMAGE IN KIND RESULTING FROM THEIR FAILURE TO COMPLY.

D) PROTECTION OF EXISTING WORK: IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PERFORM ALL WORK IN A MANNER THAT PROTECTS WORK COMPLETED BY OTHERS, SUCH AS CURBS, UTILITIES, STORM DRAINAGE, FENCES, DRIVEWAY APRONS, DRIVES, VEGETATION, ETC. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COST OF SATISFACTORY REPAIR OF ALL DAMAGE IN KIND RESULTING FROM THEIR FAILURE TO COMPLY.

E) QUANTITIES: A COMPLETE LIST OF PLANTS INCLUDING A SCHEDULE OF QUANTITIES, SIZES, TYPES, AND NAMES IS INCLUDED IN THIS SET OF DRAWINGS. IN THE EVENT OF DISCREPANCIES BETWEEN QUANTITIES OF PLANT IN THE PLANT LIST AND THE QUANTITIES SHOWN ON THE DRAWINGS, THE PLAN SHALL GOVERN. THE LANDSCAPE CONTRACTOR SHALL NOTIFY THE LANDSCAPE ARCHITECT OF UNLABELED PLANTS IN PLAN FOR CLARIFICATION. THE LANDSCAPE ARCHITECT SHALL BE ALERTED BY THE CONTRACTOR OF ANY DISCREPANCIES PRIOR TO FINAL BID NEGOTIATION.

F) APPLICABLE PLANT MATERIALS STANDARDS: ALL PLANT MATERIALS ARE TO COMPLY WITH THE LATEST EDITION OF THE AMERICAN STANDARD FOR NURSERY STOCK AS PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN. PLANTING METHODS WILL BE IN ACCORDANCE WITH SITE-SPECIFIC REQUIREMENTS.

G) PLANT HARDINESS: ALL TREES AND SHRUBS SHALL BE NURSERY GROWN WITHIN A USDA PLANT HARDINESS ZONE, WHICH IS THE SAME AS, OR COLDER THAN, THE ZONE IN WHICH THE PROJECT IS LOCATED.

H) PLANTING SEASONS: PLANTING SHALL ONLY OCCUR DURING SPECIFIED SEASONS. SPRING SEASON SHALL BE FROM MARCH 1 TO JUNE 15. FALL PLANTING SEASON SHALL BE FROM SEPTEMBER 15 THROUGH NOVEMBER 15. NO PLANTING SHALL OCCUR WHEN THE GROUND IS FROZEN.

I) PLANT SUBSTITUTIONS: NO SUBSTITUTIONS OF PRODUCTS, PLANT TYPES OR SIZES SHALL BE MADE WITHOUT THE WRITTEN APPROVAL OF THE LANDSCAPE ARCHITECT. REQUESTS FOR SUBSTITUTION SHALL BE IN WRITING, AND SHALL STATE THE REASON FOR THE SUBSTITUTION REQUEST, THE SUGGESTED ALTERNATIVE AND THE CHANGES IN COST. REQUESTS FOR SUBSTITUTION IN PLANT MATERIALS SHALL STATE THE NAMES OF NURSERIES THAT HAVE BEEN UNABLE TO SUPPLY THE ORIGINALLY SPECIFIED MATERIAL.

J) THE LANDSCAPE ARCHITECT SHALL INSPECT AND TAG ALL TREES. OTHER PLANT MATERIALS SHALL BE INSPECTED UPON SITE DELIVERY AND DURING INSTALLATION TO INSURE SPECIFICATIONS AND PROCEDURES ARE ADHERED TO.

K) MINIMUM SIZES: ALL PLANTS 3' OR GREATER IN HEIGHT OR SPREAD SHALL BE BALLED AND BURLAPED. SIZES SPECIFIED IN THE PLANT LIST ARE MINIMUMS ON WHICH THE PLANTS ARE TO BE JUDGED.

L) DEAD PLANTS: DEAD PLANTS ARE TO BE REMOVED FROM THE SITE IMMEDIATELY, AND REPLACED WITH THE SAME PLANT & SIZE REGARDLESS OF SEASON, WEEKLY FROM THE JOB BY THE CONTRACTOR. THE CONTRACTOR SHALL MAINTAIN AN UPDATED COMPREHENSIVE LIST OF ALL DEAD MATERIALS REMOVED AND PRESENT A COPY OF THE LIST TO THE OWNER AND LANDSCAPE ARCHITECT AT THE END OF EVERY MONTH DURING THE CONTRACT PERIOD.

M) PLANT MATERIAL REMOVAL: NO EXISTING TREES SHALL BE REMOVED WITHOUT THE WRITTEN AUTHORIZATION FROM THE LANDSCAPE ARCHITECT EXCEPT WHERE NOTED ON THE PLANS. CONTRACTORS WHO REMOVE EXISTING TREES WITHOUT WRITTEN APPROVAL WILL BE REQUIRED TO MAKE REMEDIES DETERMINED BY THE GOVERNING URBAN FORESTER OR EQUIVALENT AUTHORITY. NO GRUBBING SHALL OCCUR WITHIN EXISTING TREE AREAS UNLESS SPECIFICALLY NOTED ON THE PLANS.

N) ALL DISTURBED AREAS NOT TO RECEIVE PLANT MATERIALS ARE TO BE LOAMED AND SEEDED AND BLENDED INTO EXISTING GRADE AND CONDITIONS. SEE SECTION 4.0.

O) LEDGE BOULDERS: IF DURING SITE EXCAVATION, LEDGE BOULDERS ARE AVAILABLE, THESE ARE TO BE STOCKPILED FOR USE IN EARTH BERMS IF APPLICABLE, WITH HAWK DESIGN, INC. PRIOR TO INSTALLATION. THIS ITEM WILL ONLY APPLY IF SO SPECIFIED ON DRAWINGS. BOULDERS SIZES TO BE STOCKPILED WILL RANGE FROM TWO TO FIVE FEET IN DIAMETER. SEE APPROPRIATE DETAIL FOR INSTALLATION COORDINATION.

P) SLEEVES: LANDSCAPE OR SITE CONTRACTOR SHALL PLACE INDIVIDUAL SLEEVES FOR LIGHTING AND IRRIGATION UNDER ANY PROPOSED WALKWAY OR VEHICULAR ROADWAY PRIOR TO INSTALLATION. COORDINATE SLEEVE LOCATIONS WITH IRRIGATION AND LIGHTING CONTRACTORS PRIOR TO INSTALLATION.

Q) DO NOT CLOSE OR OBSTRUCT ANY STREET, SIDEWALK, ALLEY OR PASSAGEWAY WITHOUT PRIOR NOTIFICATION AND PERMISSION. CONDUCT OPERATIONS AS TO INTERFERE AS LITTLE AS POSSIBLE WITH THE USE ORDINARILY MADE OF ROADS, DRIVEWAYS, ALLEYS, SIDEWALKS OR OTHER FACILITIES NEAR ENOUGH TO THE WORK TO BE EFFECTED THEREBY.

2.0 PLANTING MATERIALS

A) PLANTING MATERIAL ITEMS IN SECTION 2.0 ARE TO BE INCORPORATED DURING PLANT INSTALLATION UNLESS OTHERWISE DEEMED UNNECESSARY IN ACCORDANCE WITH SOIL TEST RECOMMENDATIONS. SEE SECTION 3.1.

MULCH - MULCH WILL BE DOUBLE-SHREDDED PINE BARK MULCH.

- TREES AND SHRUBS SHALL RECEIVE AN EVEN 3" MULCH LAYER.
- GROUNDCOVERS, PERENNIALS AND ANNUALS SHALL RECEIVE AN EVEN 2" MULCH LAYER.

MANURE - TO BE WELL ROTTED, ODORLESS, UNLEACHED COW MANURE, CONTAINING NOT MORE THAN 15% BEDDED MATERIALS SUCH AS STRAW, WOOD CHIPS OR SHAVINGS, AGED NOT LESS THAN TWO YEARS OLD.

FERTILIZER - ORGANIC FERTILIZER TO BE APPLIED TO ALL VEGETATION PER THE RECOMMENDATIONS OF THE SOIL TESTING.

TOPSOIL - ACCEPTABLE TOPSOIL SHALL BE FERTILE, FRIABLE NATURAL LOAM, UNIFORM IN COMPOSITION, FREE OF STONES, LIMBS, PLANTS AND THEIR ROOTS, DEBRIS AND OTHER EXTRANEOUS MATTER OVER ONE INCH IN DIAMETER. THE SOIL SHALL BE CAPABLE OF SUSTAINED PLANT GROWTH AND HAVE A 5% MINIMUM ORGANIC CONTENT. IN SITUATIONS WHICH REQUIRE A CUSTOM TOPSOIL OR STRUCTURAL SOIL, THE SOIL MIXTURE SPECIFICATION WILL BE PROVIDED BY THE LANDSCAPE ARCHITECT.

SOIL AMENDMENTS: APPLY AS NECESSARY ACCORDING TO SOIL TEST RESULTS, AS PER MANUFACTURERS SPECIFICATIONS.

ANTI-DESICCANT - WILT PRUF NCF OR EQUAL APPLY AS PER MANUFACTURERS' SPECIFICATIONS.

3.0 INSTALLATION

A) SOIL TESTING: LANDSCAPE CONTRACTOR SHALL PROVIDE A CERTIFIED SOIL ANALYSIS PRIOR TO ANY PLANT INSTALLATION TO DETERMINE ANY NECESSARY AMENDMENTS TO THE EXISTING SOIL CONDITIONS FOR SEEDING AND PLANTING. THE SOIL TESTING SHALL INCLUDE TEXTURE, PH, BUFFER PH, EXTRACTABLE NUTRIENTS, EXTRACTABLE HEAVY METALS, CATION EXCHANGE CAPACITY AND PERCENT BASE EXCHANGE SATURATION, ORGANIC MATTER AND SOLUBLE SALTS. THE ANALYSIS WILL ALSO BE REQUIRED FOR ESTABLISHING THE FERTILIZER PROGRAM REQUIRED. COORDINATE RESULTS AND PROVIDE WRITTEN RECOMMENDATIONS TO HAWK DESIGN, INC. 15 DAYS PRIOR TO INSTALLATION.

B) ALL PLANTS SHALL BE TRANSPORTED TO THE SITE IN COVERED TRUCKS, TARPULIN COVERS SHALL BE UTILIZED TO PREVENT WIND DAMAGE OF LOAD.

C) DELIVER PLANT MATERIALS IMMEDIATELY PRIOR TO PLACEMENT. KEEP PLANT MATERIALS MOIST. DO NOT STORE PLANT MATERIAL ON PAVED AREAS. ROOTS OR BALLS SHALL BE PROTECTED FROM THE SUN OR DRYING WINDS. AS REQUIRED BY TEMPERATURE OR WIND CONDITIONS, APPLY ANTI-DESICCANT EMULSION TO PREVENT DRYING OUT OF PLANT MATERIALS.

3.1) CONDITIONS FOR PLANT REJECTION:

A) REJECT PLANTS WHEN BALL OF EARTH SURROUNDING ROOTS HAS BEEN CRACKED OR BROKEN PREPARATORY TO OR DURING THE PROCESS OF PLANTING.

B) WHEN BURLAP, STAVES AND ROPES REQUIRED IN CONNECTION WITH TRANSPLANTING HAVE BEEN DISPLACED PRIOR TO ACCEPTANCE.

C) WIND DAMAGED PLANT MATERIAL FROM POOR TARPULIN COVER PROCEDURES ARE SUBJECT TO REJECTION.

D) ALL PLANT MATERIAL, WHICH CANNOT BE PLANTED IMMEDIATELY ON DELIVERY, SHALL BE SET ON THE GROUND IN A SHADED LOCATION AND SHALL BE TEMPORARILY PROTECTED WITH SOIL OR OTHER ACCEPTABLE MATERIAL. TEMPORARY WATERING OR IRRIGATION SHALL BE INCORPORATED AND REGULARLY CONDUCTED ON PLANTINGS IN HOLD AREAS.

E) IN CASE OF CONFLICTS DURING CONSTRUCTION WITH UTILITIES, ROCK MATERIALS, TREE ROOTS OR OTHER OBSTRUCTIONS FOR THE EXCAVATION OF SHRUB BEDS AND TREE PITS, CONTACT LANDSCAPE ARCHITECT FOR APPROVED ALTERNATE LOCATIONS.

F) SOIL PERMEABILITY: TEST DRAINAGE OF PLANTING BEDS AND PITS BY FILLING WITH WATER TWICE IN SUCCESSION, CONDITIONS PERMITTING THE RETENTION OF WATER FOR MORE THAN 24 HOURS SHALL BE BROUGHT TO THE ATTENTION OF THE LANDSCAPE ARCHITECT.

3.2) SOIL EXCAVATIONS:

A) EXCAVATE TREE PITS AND SHRUB BEDS TO DEPTHS REQUIRED BY PLANTING DETAILS. ALL PITS SHALL BE CIRCULAR IN OUTLINE, EXCEPT FOR WHOLE BEDS. SEE APPROPRIATE PLANTING DETAILS.

B) SOIL EXCAVATIONS FOR BALLED & BURLAP AND CONTAINER PLANTINGS MUST BE NO LESS THAN 1X ROOT BALL DIAMETER. SEE PLANTING DETAILS. IF QUESTIONABLE SUBSURFACE SOIL CONDITIONS EXIST SUCH AS POOR DRAINAGE CONDITIONS, RUBBLE OR OBSTRUCTIONS, REPORT TO THE LANDSCAPE ARCHITECT AND CONSTRUCTION MANAGER BEFORE PLANTING.

3.3) GRADING:

A) VERIFY GRADES PRIOR TO PLANTING. THE CONTRACTOR SHALL VERIFY THAT CONSTRUCTED GRADES ARE AS INDICATED ON PLANS. THE CONTRACTOR SHALL NOTIFY THE LANDSCAPE ARCHITECT IF ADJUSTMENTS TO PLANT PLACEMENT MAY BE REQUIRED DUE TO FIELD CONDITIONS AND FINAL GRADING.

B) POSITIVE DRAINAGE SHALL BE MAINTAINED AWAY FROM AND AROUND BUILDINGS (REFER TO ENGINEERS GRADING PLANS). REPORT ANY CONFLICTS TO HAWK DESIGN, INC. PRIOR TO INSTALLATION.

C) FINISH GRADE OF PLANTINGS SHALL BE EQUIVALENT TO FORMER EXISTING GRADE OF PLANT IN THE NURSERY.

3.10) BALLED AND BURLAPED (B&B) MATERIALS:

A) REMOVE ROOT BASKETS (INCLUDING WIRE BASKETS), BURLAP, WRAPS AND TIES ENTIRELY AND DISCARD FROM SITE.

3.0 INSTALLATION CONT.

3.11) CONTAINER GROWN STOCK: SHALL BE REMOVED FROM CONTAINER BY CUTTING CONTAINER AWAY TO AVOID ROOT DAMAGE TO PLANT ROOT SYSTEM. IF PLANT ROOT IS BOUND, SLICE ROOT BALLS APPROXIMATELY 2" DEEP WITH KNIFE OR SHARP SPADE. 3.12) DO NOT USE MUDDY OR FROZEN SOIL TO BACKFILL PLANTINGS.

3.13) WATERING: THOROUGHLY WATER UNTIL SOIL IS SATURATED AROUND ALL TREES AND SHRUBS AFTER PLANTING AND THROUGHOUT THE TIME PERIOD UNTIL FINAL ACCEPTANCE FROM CLIENT. DURING DRY CONDITIONS, WATER AS REQUIRED TO MAINTAIN PLANTS IN A WILT-FREE CONDITION.

3.14) PRUNING: ONLY REMOVE DEAD OR BROKEN BRANCHES FROM PLANTS.

3.15) STAKING AND GUYING: ALL TREES TO BE STAKED AND GUYED WITHIN 48 HOURS OF PLANTING. METHODS AND MATERIALS FOR STAKING AND GUYING ARE ILLUSTRATED IN INDIVIDUAL PLANTING DETAILS. NEATLY FLAG ALL GUY WIRES WITH ROT RESISTANCE YELLOW TREE MARKING RIBBON.

3.16) STAKE OUT PLANT LOCATIONS: PRIOR TO PLANTING THE CONTRACTOR SHALL LAYOUT THE EXTENT OF THE PLANT BEDS AND PROPOSED LOCATIONS FOR B&B PLANTS FOR REVIEW BY THE OWNER AND LANDSCAPE ARCHITECT.

3.17) PLANTING FIELD ADJUSTMENTS:

A) THE CONTRACTOR IS TO SLIGHTLY ADJUST PLANT LOCATIONS IN THE FIELD AS NECESSARY TO BE CLEAR OF DRAINAGE SWALES AND UTILITIES.

B) LARGE GROWING PLANTS ARE NOT TO BE PLANTED IN FRONT OF WINDOWS OR UNDER BUILDING OVERHANGS. NOTIFY THE LANDSCAPE ARCHITECT OF DISCREPANCIES IN PLANTING PLAN VS. FIELD CONDITIONS.

C) SHRUBS PLANTED NEAR HVAC UNITS ARE TO BE LOCATED SO THAT SHRUBS AT MATURITY WILL MAINTAIN ONE FOOT (1') AIRSPACE BETWEEN THE UNIT AND THE PLANT. ANY PLANTING SHOWN ADJACENT TO CONDENSER UNITS SHALL BE PLANTED TO SCREEN THE UNITS. SHOULD THE CONDENSER UNITS BE INSTALLED IN LOCATIONS DIFFERENT FROM THOSE SHOWN ON THE PLAN, IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE LANDSCAPE ARCHITECT AND INSTALL THE MATERIAL AROUND THE CONDENSERS AND ADJUST THE OTHER PLANTING ACCORDINGLY.

3.18) PLANT BED EDGES/LINES: GROUPS OF SHRUBS, PERENNIALS AND GROUNDCOVERS SHALL BE PLACED IN A CONTINUOUS MULCH BED WITH SMOOTH CONTINUOUS LINES. ALL MULCHED BED EDGES SHALL BE CURVILINEAR IN SHAPE, FOLLOWING THE CONTOUR OF THE PLANT MASS. TREES LOCATED WITHIN 4 FEET OF PLANT BEDS SHALL SHARE THE SAME MULCH BEDS.

3.19) ADA - THE AMERICAN WITH DISABILITIES ACT STANDARDS REQUIRE THAT A 1 FOOT VERTICAL CLEARANCE BE MAINTAINED FROM TREE BRANCHES TO FINISHED GRADE WHERE PEDESTRIANS SIDEWALKS AND/OR TRAILS ARE LOCATED. THE CONTRACTOR IS TO ADJUST TREE PLANTINGS IN FIELD TO SLIGHTLY MINIMIZE BRANCH OVERHANG AND COMPLY WITH THE ADA ACT.

3.20) TREE SPACING MINIMUMS: TREES SHALL BE LOCATED A MINIMUM OF 4 FEET FROM WALLS AND WALKS WITHIN THE PROJECT. IF A CONFLICT ARISE BETWEEN ACTUAL SIZE OF AREA AND PLANS, THE CONTRACTOR SHALL CONTACT THE LANDSCAPE ARCHITECT FOR RESOLUTION. FAILURE TO MAKE SUCH CONFLICTS KNOWN TO LANDSCAPE ARCHITECT WILL RESULT IN CONTRACTOR'S LIABILITY TO RELOCATE MATERIALS.

3.21) WATERING: TREE PITS SHALL BE FLOODED 2 TIMES IN SUCCESSION WITH WATER AND EVALUATED FOR DRAINAGE CHARACTERISTICS AFTER A 24 HOUR PERIOD. AFTER PLANTING, PLANTS SHALL RECEIVE THE EQUIVALENT OF 2" OF WATER A WEEK ON AVERAGE UNLESS LOCAL RAINFALL IS ADEQUATE. PLANTS SHOULD BE WATERED UNTIL THE GROUND FREEZES.

4.0 SEEDING AND SODDING

4.1) SEEDING OF LAWN AREAS: GRASS SEED APPLICATION SHALL BE SPREAD AT THE RATE OF 5 LBS. PER 1,000 SQUARE FEET. SEEDING SHALL BE ACCOMPLISHED BY MEANS OF A HYDRO-SEEDING PROCESS. ALSO SEE SECTION 1.13.

4.2) WATERING OF SEEDED AREAS: 24 HOURS AFTER HYDRO SEEDING, THE CONTRACTOR SHALL WATER THE SEEDED AREA LIGHTLY AND SUFFICIENTLY TO A DEPTH OF TWO INCHES (2") 2 TIMES A DAY (BETWEEN THE HOURS OF 1 PM AND 1 AM), UNTIL THE SEEDS ARE ESTABLISHED.

4.3) SEEDED AREA PROTECTION: THE CONTRACTOR SHALL ERECT SUITABLE SIGNS AND BARRICADES NOTIFYING THE PUBLIC TO KEEP OFF THE SEEDED AREAS UNTIL WELL ESTABLISHED. ANY TRAFFIC DAMAGE AND VANDALISM THAT MAY OCCUR PRIOR TO FINAL ACCEPTANCE OF THE WORK SHALL BE REPAIRED AND RESEEDED AT THE OWNER'S EXPENSE. ANY DISTURBED OR DAMAGED BY THE CONTRACTOR SHALL BE REPAIRED IN ACCORDANCE WITH THE SPECIFICATIONS AT THE CONTRACTOR'S EXPENSE.

4.4) LAYING OF SOD: A KENTUCKY BLUEGRASS SOD MIX - BY LOCAL SOURCE AS SELECTED BY CONTRACTOR, SHALL BE FRESHLY CUT FROM THE SAME FIELD WITH 1/2 - 3/4 INCHES OF SOIL. SOD SHALL BE LAID IMMEDIATELY WITH ANY STORED SOD BEING UNROLLED GRASS SIDE UP AND KEPT WATERED. LAY COURSES TIGHTLY TOGETHER WITHOUT OVERLAPPING WITH THE JOINTS STAGGERED. AFTER SODDING IS COMPLETE, ROLL LIGHTLY. THE CONTRACTOR SHALL WATER THE SODDED AREAS TO A DEPTH OF AT LEAST SIX INCHES AFTER THE SODDING PROCESS. OWNER SHALL THEN BE RESPONSIBLE FOR WATERING. THE FREQUENCY SHALL BE DETERMINED BY RAIN FALL AND WINDS WITH THE UPPER TWO OR THREE INCHES OF SOIL NOT DRYING OUT MARKEDLY.

4.5) SODDED AREA: INSPECTION AND ACCEPTANCE: FOUR WEEKS AFTER CONTRACTOR COMPLETES INSTALLATION, LANDSCAPE ARCHITECT SHALL INSPECT THE LAWN TO DETERMINE THE ACCEPTABILITY OF THE INSTALLATION. SODDED AREAS FAILING TO SHOW ADEQUATE ROOTING INTO THE SUBSOIL, OVERLAPPING, COARSE SEPARATION, UNEVENNESS OF THE SURFACE, UNEVEN COURSE COLOR AND EXCESSIVE BROADLEAF WEED CONTENT SHALL BE REPLACED. THE COST SHALL BE BORNE BY THE CONTRACTOR EXCEPT WHERE VANDALISM OR NEGLECT ON THE PART OF OTHERS NOT UNDER THE CONTRACTOR'S CONTROL HAS RESULTED IN DAMAGE.

4.6) FINAL APPROVAL: SEEDED AND SODDED AREAS WILL RECEIVE FINAL APPROVAL IF COVERAGE IS FULL AND CONSISTENT, FREE OF BARE SPOTS AND WEED FREE WHEN GRASS IS CUT AT 2" HEIGHT NO SOIL SHOULD BE VISIBLE. SOD AREAS MUST HAVE RECEIVED A MINIMUM OF TWO MOUINGS. AREAS SODDED AFTER NOVEMBER 1ST WILL BE ACCEPTED THE FOLLOWING SPRING - ONE MONTH AFTER THE START OF THE GROWING SEASON, IF THE ABOVE CRITERIA HAS BEEN MET.

5.0 MAINTENANCE

5.1) MAINTENANCE DURING INSTALLATION: MAINTENANCE OPERATIONS SHALL BEGIN IMMEDIATELY AFTER EACH PLANT IS PLANTED AND SHALL CONTINUE AS REQUIRED UNTIL FINAL ACCEPTANCE AND THEN FOR THE GUARANTEE PERIOD. PLANTS SHALL BE KEPT IN A HEALTHY GROWING CONDITION BY WATERING, PRUNING, SPRAYING, WEEDING AND ANY OTHER NECESSARY OPERATIONS OF MAINTENANCE. PLANT SAUCERS AND BEDS SHALL BE KEPT FREE OF WEEDS, GRASS AND OTHER UNDESIRABLE VEGETATION. PLANTS SHALL BE INSPECTED AT LEAST ONCE PER WEEK BY THE CONTRACTOR DURING THE INSTALLATION PERIOD AND ANY NEEDED MAINTENANCE IS TO BE PERFORMED PROMPTLY.

5.2) GRASS AND WEED CONTROL: THE CONTRACTOR SHALL BE RESPONSIBLE FOR MOWING ALL GRASS AROUND LANDSCAPE BEDS AND INDIVIDUAL TREES AND SHRUBS UNTIL FINAL ACCEPTANCE. WEED CONTROL AREAS SHALL INCLUDE ALL LANDSCAPE BEDS AND THE AREA WITHIN 2 FEET OF THE OUTER EDGE OF THE MULCH AREA OR INDIVIDUAL TREE/SHRUBS.

5.3) THE CONTRACTOR SHALL WATER, FERTILIZE, WEED, CULTIVATE, REMULCH, SPRAY TO CONTROL INSECT INFESTATION AND DISEASE AND PERFORM ANY OTHER GOOD HORTICULTURAL PRACTICE NECESSARY TO MAINTAIN THE PLANTS IN A LIVING HEALTHY CONDITION UPON THE TIME FOR TERMINATION OF HIS RESPONSIBILITY FOR CARE AS SET OUT HEREIN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PLANTS THROUGHOUT LIFE OF THE CONTRACT.

5.4) ALL PLANTS STOLEN, DAMAGED OR DESTROYED BY FIRE, AUTOMOBILES, VANDALISM OR ANY OTHER CAUSE, WITH THE EXCEPTION OF PLANTS DAMAGED OR DESTROYED BY THE OWNER'S MAINTENANCE OPERATIONS, SHALL BE REPLACED BY THE OWNER PRIOR TO THE DATE OF FINAL ACCEPTANCE.

5.5) LANDSCAPE CONTRACTOR SHALL PREPARE MAINTENANCE SPECIFICATIONS AND SCHEDULE ANNUAL CARE OF ALL PLANTED AND LAWN AREAS INCLUDING FERTILIZING, WEEDING, MULCHING, BED EDGING, PRUNING AND PEST PREVENTION AND TREATMENT. SHRUBS SHALL NOT BE PRUNED FOR THE FIRST 3-5 YEARS UNLESS NECESSARY FOR SAFETY/STRUCTURAL CONCERNS. THE INTENT IS FOR THE PLANTINGS TO GROW INTO MASSES FOR SCREENING AND VISUAL INTEREST. SUBMIT MAINTENANCE SCHEDULE TO OWNER.

5.6) PLANTS SHALL RECEIVE THE EQUIVALENT OF 2" OF WATER A WEEK ON AVERAGE UNLESS LOCAL RAINFALL IS ADEQUATE. PLANTS SHOULD BE WATERED UNTIL THE GROUND FREEZES.

6.0 PLANT MATERIAL GUARANTEE

*CONTRACTOR SHALL GUARANTEE IN WRITING ALL PLANT MATERIAL AND LANDSCAPE IMPROVEMENTS FOR A PERIOD OF TWO YEARS. THE GUARANTEE IS TO INCLUDE THE FOLLOWING:

6.1) INSPECTIONS: PERFORM PERIODIC INSPECTIONS DURING GUARANTEE PERIOD WITH RESULTING WRITTEN REPORTS TO OWNER, PROJECT ADMINISTRATOR AND LANDSCAPE ARCHITECT STATING CONDITIONS AND RECOMMEND MAINTENANCE MODIFICATIONS. THE CONTRACTOR MUST CONTACT THE OWNER AND LANDSCAPE ARCHITECT AT LEAST 10 DAYS IN ADVANCE TO SCHEDULE ACCEPTANCE INSPECTIONS.

6.2) REMOVAL AND REPLACEMENT OF PLANTS PROVIDED BY CONTRACTOR TO BE DONE WITHIN THIRTY DAYS OF NOTIFICATION BY OWNER OF THEIR UNSATISFACTORY CONDITION DURING GROWING SEASONS. REPLACEMENT MATERIALS MUST BE EQUAL IN TYPE AND SIZE PER THE PROJECT'S PLANT LIST.

6.3) WHEN REPLACEMENT PLANT SPECIES IS EITHER NOT READILY AVAILABLE OR NO LONGER SUITABLE TO EXISTING SITE CONDITIONS WRITTEN NOTICE RECOMMENDATION OF SUBSTITUTION TO BE PROVIDED TO THE OWNER AND LANDSCAPE ARCHITECT WITHIN FIFTEEN DAYS FOR APPROVAL.

6.4) REMOVAL OF TREE'S SUPPORTS AND DEAD LIMBS PRIOR TO END OF GUARANTEE INSPECTION PERIOD.

6.5) CONTINUE WITH MAINTENANCE. SEE SECTION 5.0

6.6) GUARANTEE SHALL BEGIN UPON DATE OF FINAL ACCEPTANCE FROM OWNER AND WILL CONTINUE FOR TWO YEARS.

7.0 SITE CLEAN UP

7.1) SITE WORK CONDITIONS: EXCESS WASTE MATERIAL SHALL BE REMOVED DAILY WHEN PLANTING IN AN AREA HAS BEEN COMPLETED, THE AREA SHALL BE CLEARED OF ALL DEBRIS, SOIL PILES AND CONTAINERS DAILY. WHERE EXISTING GRASS AREAS HAVE BEEN DAMAGED OR SCARRED DURING PLANTING OPERATIONS, THE CONTRACTOR SHALL RESTORE DISTURBED AREAS TO THEIR ORIGINAL CONDITIONS AT HIS EXPENSE.

7.2) CLEAN PAVED AREAS UTILIZED FOR HAULING OR EQUIPMENT STORAGE AT END OF EACH WORKDAY.

7.3) MAINTAIN VEHICLES AND EQUIPMENT IN CLEAN CONDITION TO PREVENT SOILING OF ROADS, WALKS OR OTHER PAVED OR SURFACED AREAS.

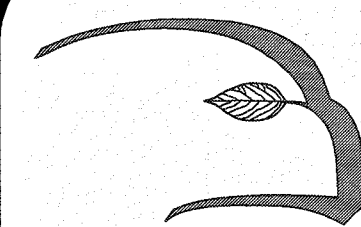
7.4) REMOVE PROTECTIVE BARRIERS AND WARNING SIGNS AT TERMINATION OF LAWN ESTABLISHMENT.

8.0 LANDSCAPE IRRIGATION

8.1) LANDSCAPE IRRIGATION TO BE PROVIDED FOR ALL MAINTAINED AREAS. IRRIGATION PLAN TO BE SUPPLIED BY IRRIGATION CONTRACTOR FOR CLIENT AND TOWN REVIEW PRIOR TO INSTALLATION.

8.2) SMART CONTROLLERS AND WATER SAVING IRRIGATION HEADS SHALL BE USED.

8.3) WATER FOR IRRIGATION SHALL BE FROM AN ON-SITE WELL.



Hawk Design, Inc.
Landscape Architecture
Land Planning

Sagamore, MA
508-833-8800
info@hawkdesigninc.com

HAWK DESIGN, INC. 2015

THIS DRAWING AND ALL INFORMATION CONTAINED HEREON IS PROPRIETARY INFORMATION OF HAWK DESIGN, INC. AND MAY NOT BE COPIED OR REPRODUCED, EITHER IN WHOLE OR IN PART, BY ANY METHOD, WITHOUT WRITTEN PERMISSION OF HAWK DESIGN, INC.

Date: 10/7/16

Revisions:

1 03/17/17 Note Revision

Tuscan Village Apartments

Salem, New Hampshire

Prepared for: The Doherty Company, Woburn, Massachusetts

Drawn By: BNL

Checked By: TM

**Site Planting
Plan**

Scale: As Noted

Sheet:

D2

No. :	Date :	Remarks :



ENTRY
TYPE B
CENTER STREET ELEVATION



END ELEVATION

- COLOR 1: CREME
- COLOR 1: LIGHT SEPIA BROWN
- COLOR 1: WHITE

Consultant :

Revisions :

No. :	Date :	Remarks :

Project :

**Tuscan Village
Apartments**

Salem, NH

Date : October 6, 2016
Scale :
Project Number :
Drawn By : MBD
Checked By : HDS

Drawing Title :

**Building 1 & 3
Elevations**

Seal :

Sheet No. :

A2.1



**ENTRY
TYPE B**
PLEASANT STREET / PARK ELEVATION



END ELEVATION

- COLOR 1: CREME
- COLOR 1: LIGHT SEPIA BROWN
- COLOR 1: WHITE

12-22-16

Consultant :

Revisions :		
No. :	Date :	Remarks :

Project :
**Tuscan Village
Apartments**

Salem, NH

Date : October 6, 2016
Scale :
Project Number :
Drawn By : MBD
Checked By : HDS

Drawing Title :

**Building 2 & 4
Elevations**

Seal :

Sheet No. :

A2.2



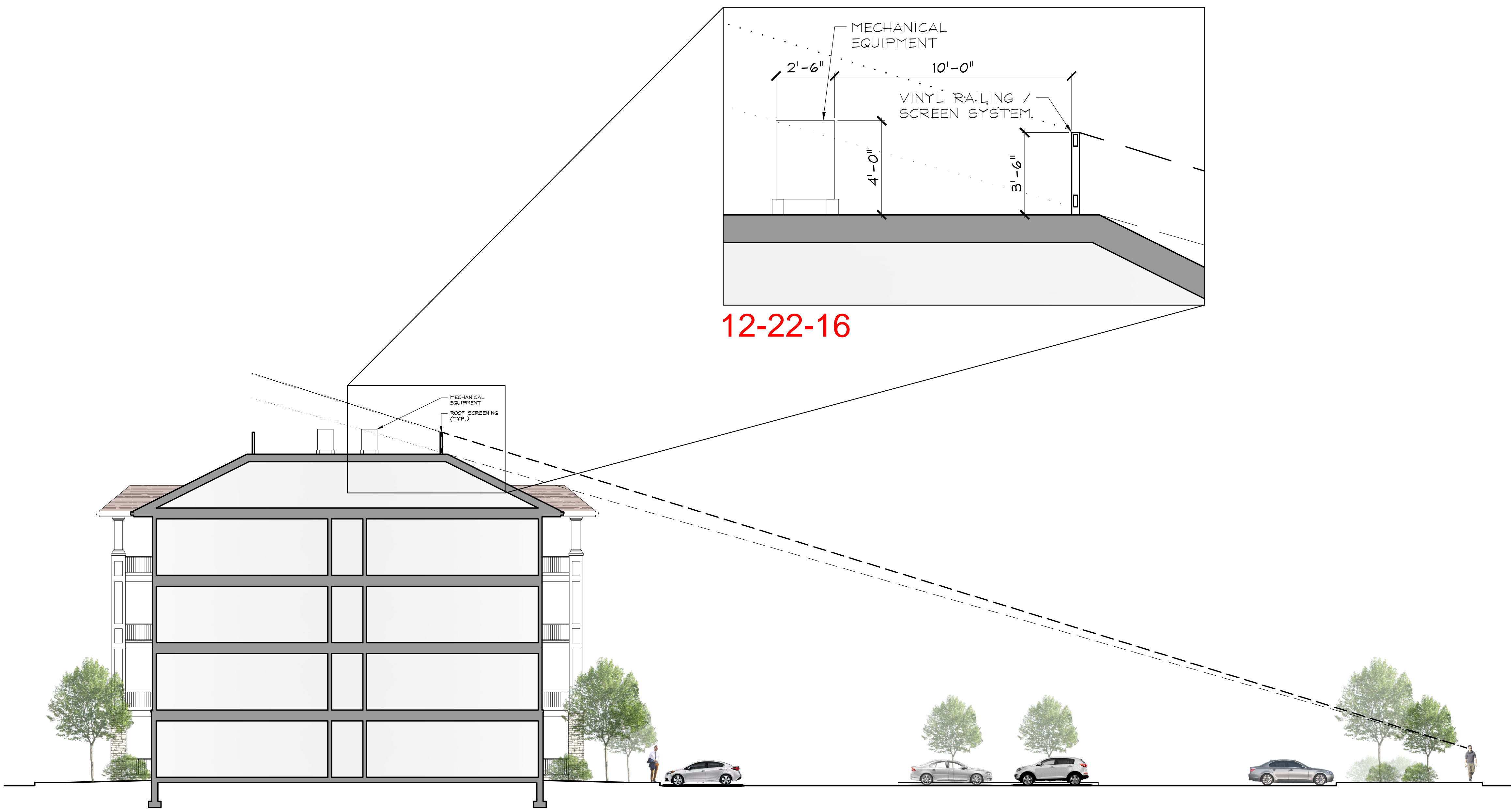
CENTER STREET ELEVATION



END ELEVATION

- COLOR 1: CREME
- COLOR 1: LIGHT SEPIA BROWN
- COLOR 1: WHITE

12-22-16



CROSS SECTION DIAGRAM

Consultant :

Revisions :		
No. :	Date :	Remarks :

Project :
Tuscan Village Apartments

Salem, NH

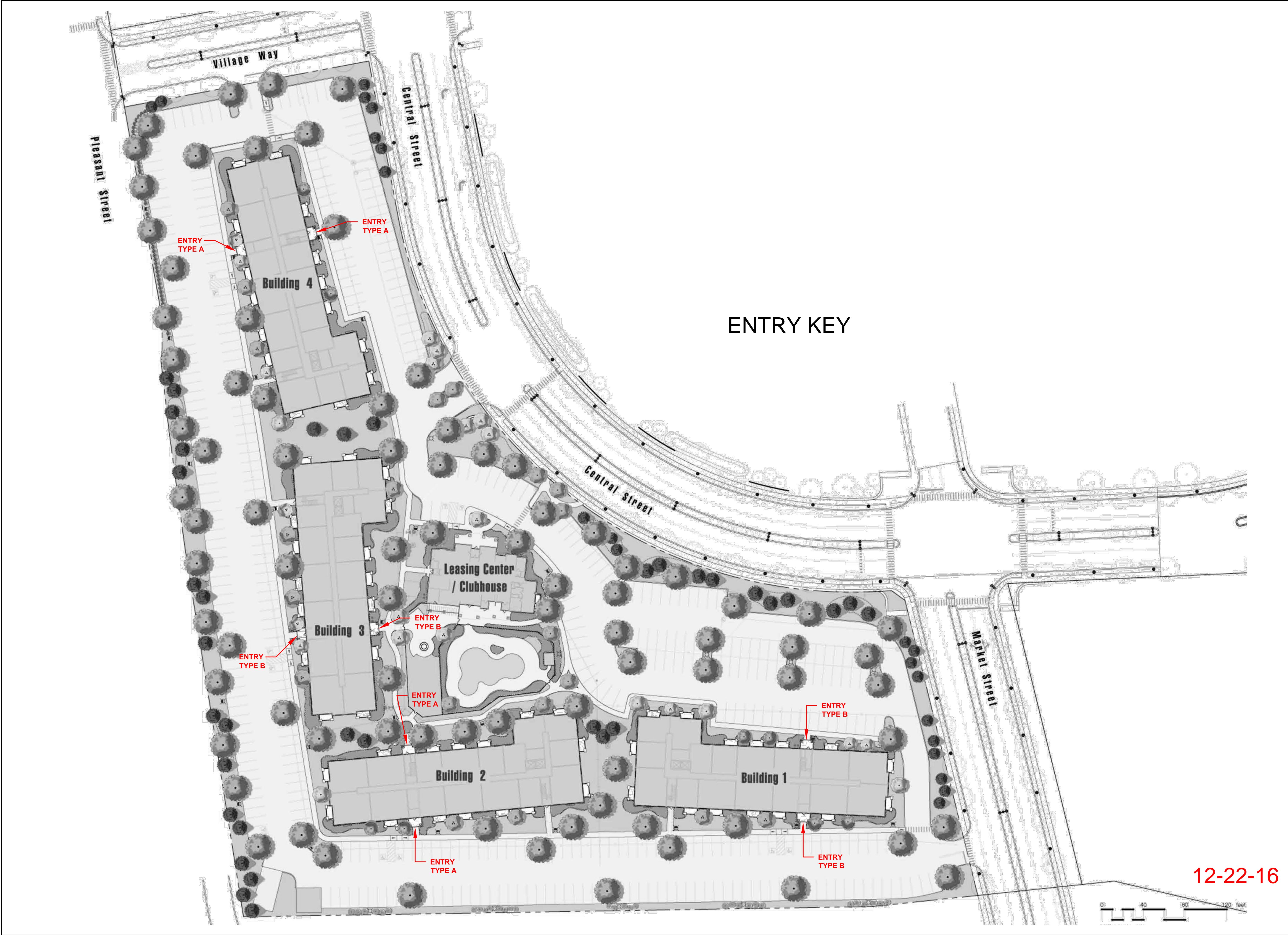
Date : October 6, 2016
Scale :
Project Number :
Drawn By : MBD
Checked By : HDS

Drawing Title :

Cross Section Diagram

Seal :

Sheet No. :



Consultant :

Revisions :		
No. :	Date :	Remarks :

Project :
Tuscan Village Apartments

Salem, NH

Date : October 6, 2016
Scale :
Project Number :
Drawn By : MBD
Checked By : HDS

Drawing Title :

Entry Key

Seal :

Sheet No. :

A2.5