

# Bridges at University Station - PDR Submittal Enabling Package

## University Station

### Westwood, Massachusetts

One Grant Street  
 Framingham, MA 01701  
 Phone: 508-903-2000 Fax: 508-903-2001

www.tetratech.com



**TETRA TECH**

**PROJECT LOCATION:**  
 University Avenue  
 Westwood, MA

**APPLICANT INFORMATION:**  
 NC Acquisitions, LLC  
 C/O National Development  
 2310 Washington Street  
 Newton, MA 02462

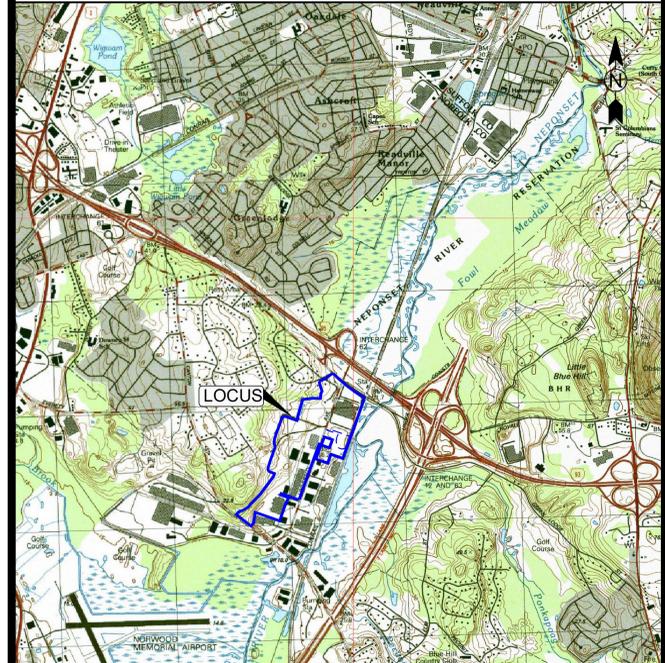
**Tt PROJECT No.:**  
 127-3659-12003

**PROPERTY OWNER INFORMATION:**  
 Westwood Marketplace Holdings LLC  
 1 Wells Avenue  
 Newton, MA 02459

**ISSUED:**

November 8, 2013 PDR Submittal

**VICINITY MAP:**



**USGS MAP**

0 1000' 2000' 4000'  
 SCALE: 1" = 2000'



**LOCUS PLAN**  
 SCALE: 1"=500'

**Drawing List**

Civil Drawings

- C-101 Key Sheet for Site Layout Plans
- V-101 Existing Conditions Plan
- C-111 Demolition Plan
- C-121 Site Layout Plan
- C-131 Grading & Drainage Plan
- C-141 Utility Plan
- C-501 - 503 Detail Sheets

Landscape Drawings

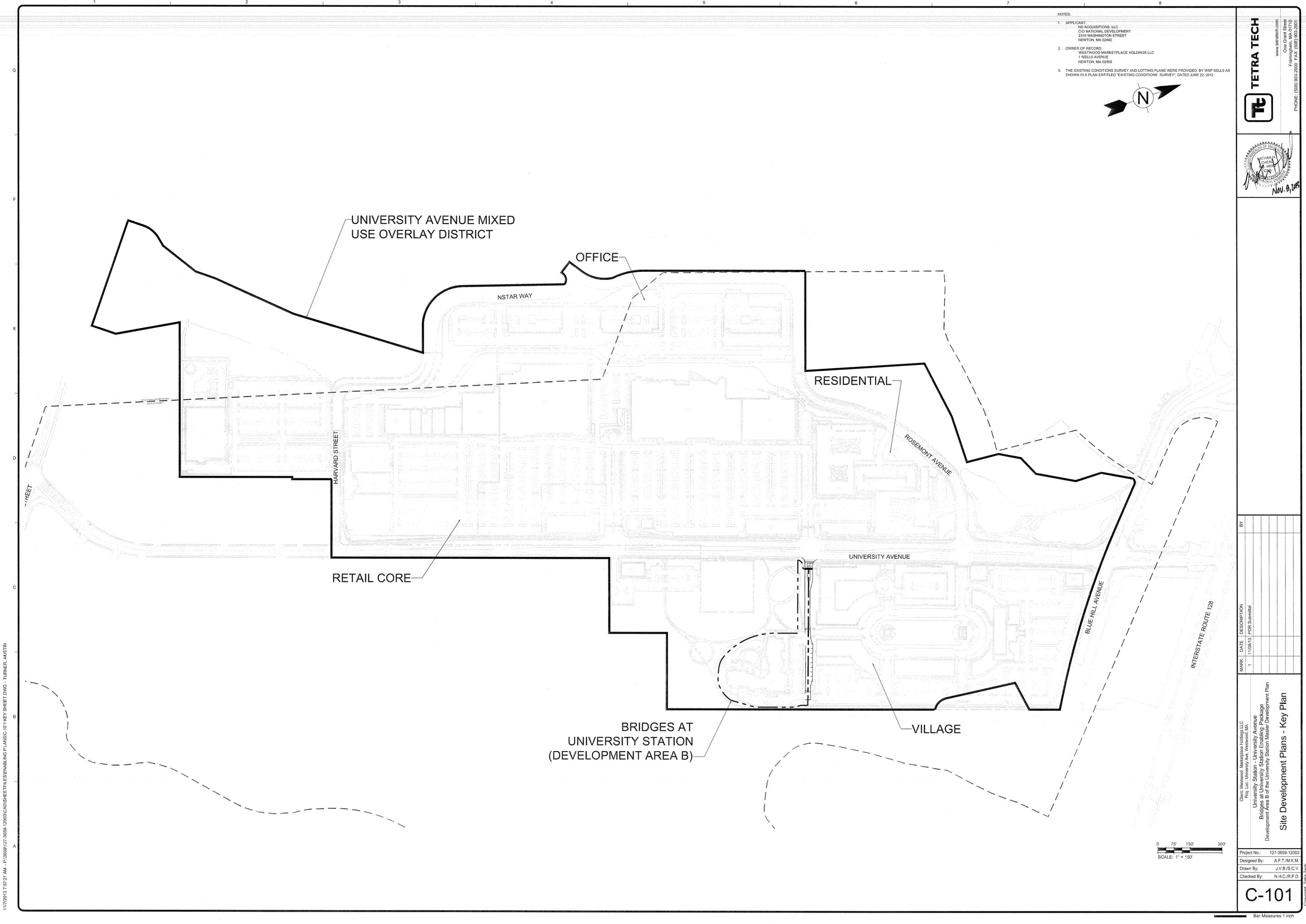
- L-106 The Meadow Overall Landscape Plan
- L-106.1 The Meadow Planting Plan West
- L-106.2 The Meadow Planting Plan East
- L-106.3 The Meadow Planting Plan West 2
- L-400 Landscape Details
- L-401 Landscape Details
- L-402 Landscape Details

Lighting Drawings

- E02 Photometric Site Plan

**PDR FILING SET CONTAINS 17 SHEETS TOTAL**

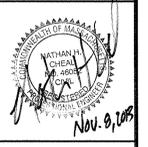
REFER TO THE PROJECT SWPPP FOR EROSION AND SEDIMENTATION CONTROL MEASURES.



- NOTES:
1. APPLICANT:  
ND ACQUISITIONS, LLC  
C/O NATIONAL DEVELOPMENT  
2310 WASHINGTON STREET  
NEWTON, MA 02462
  2. OWNER OF RECORD:  
WESTWOOD MARKETPLACE HOLDINGS LLC  
1 WELLS AVENUE  
NEWTON, MA 02459
  3. THE EXISTING CONDITIONS SURVEY AND LOTTING PLANS WERE PROVIDED BY WSP SELLS AS SHOWN IN A PLAN ENTITLED "EXISTING CONDITIONS SURVEY", DATED JUNE 22, 2012.



**TETRA TECH**  
www.tetra-tech.com  
One Grant Street  
Framingham, MA 01701  
PHONE: (508) 903-2000 FAX: (508) 903-2000



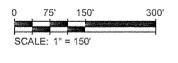
11/7/2013 7:57:21 AM - P:\3659-12003\CAD\BHEETFILES\BEMBLING PLANS\C-101 KEY SHEET.DWG - TURNER, AUSTIN

MARK	DATE	DESCRIPTION
1	11/08/13	PDF Submit

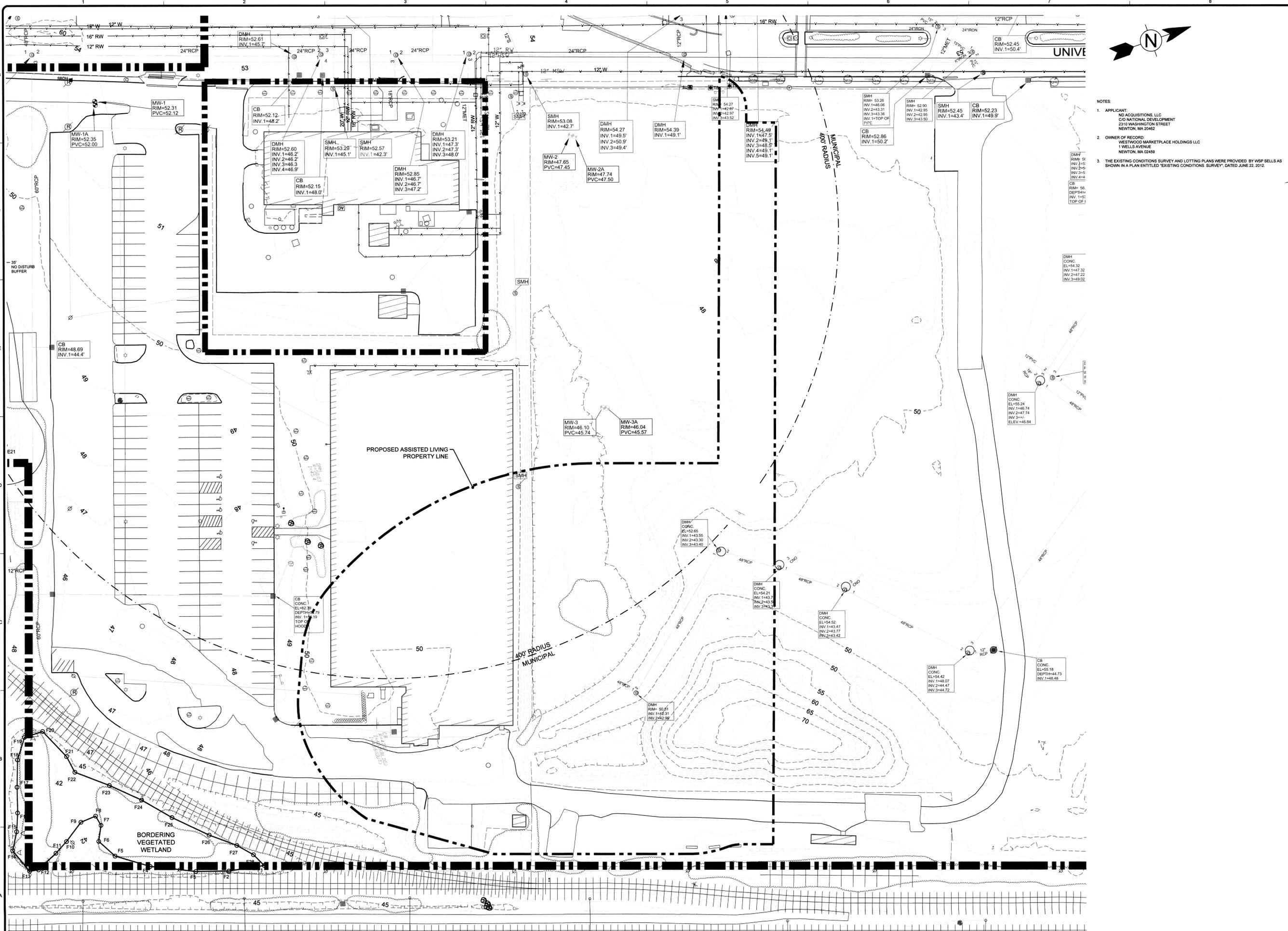
Client: Westwood Marketplace Holdings LLC  
 Proj: University Ave, Resonance, MA  
 University Station - University Avenue  
 Bridges at University Avenue  
 Development Area B of the University Station Master Development Plan  
**Site Development Plans - Key Plan**

Project No.: 127-3659-12003  
 Designed By: A.F.T./M.K.M.  
 Drawn By: J.V.B./S.C.V.  
 Checked By: N.H.C./R.F.D.

**C-101**  
 Copyright: Tetra Tech  
 Bar Measures 1 inch



11/02/2013 2:52:30 PM - L:\DRAWINGS\10135-00\DOCUMENTS\101-101-EXISTING CONDITIONS PLAN - STANDARD\101-EXISTING CONDITIONS PLANDWG - STOLL, ERIC L



- NOTES:
1. APPLICANT: ND ACQUISITIONS, LLC  
C/O NATIONAL DEVELOPMENT  
2310 WASHINGTON STREET  
NEWTON, MA 02459
  2. OWNER OF RECORD: WESTWOOD MARKETPLACE HOLDINGS LLC  
1 WELLS AVENUE  
NEWTON, MA 02459
  3. THE EXISTING CONDITIONS SURVEY AND LOTTING PLANS WERE PROVIDED BY WSP SELLAS AS SHOWN IN A PLAN ENTITLED 'EXISTING CONDITIONS SURVEY', DATED JUNE 22, 2012.

**TETRA TECH**  
www.tetrattech.com  
One Court Street  
Framingham, MA 01701  
PHONE: (978) 893-2000 FAX: (978) 893-2001



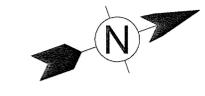
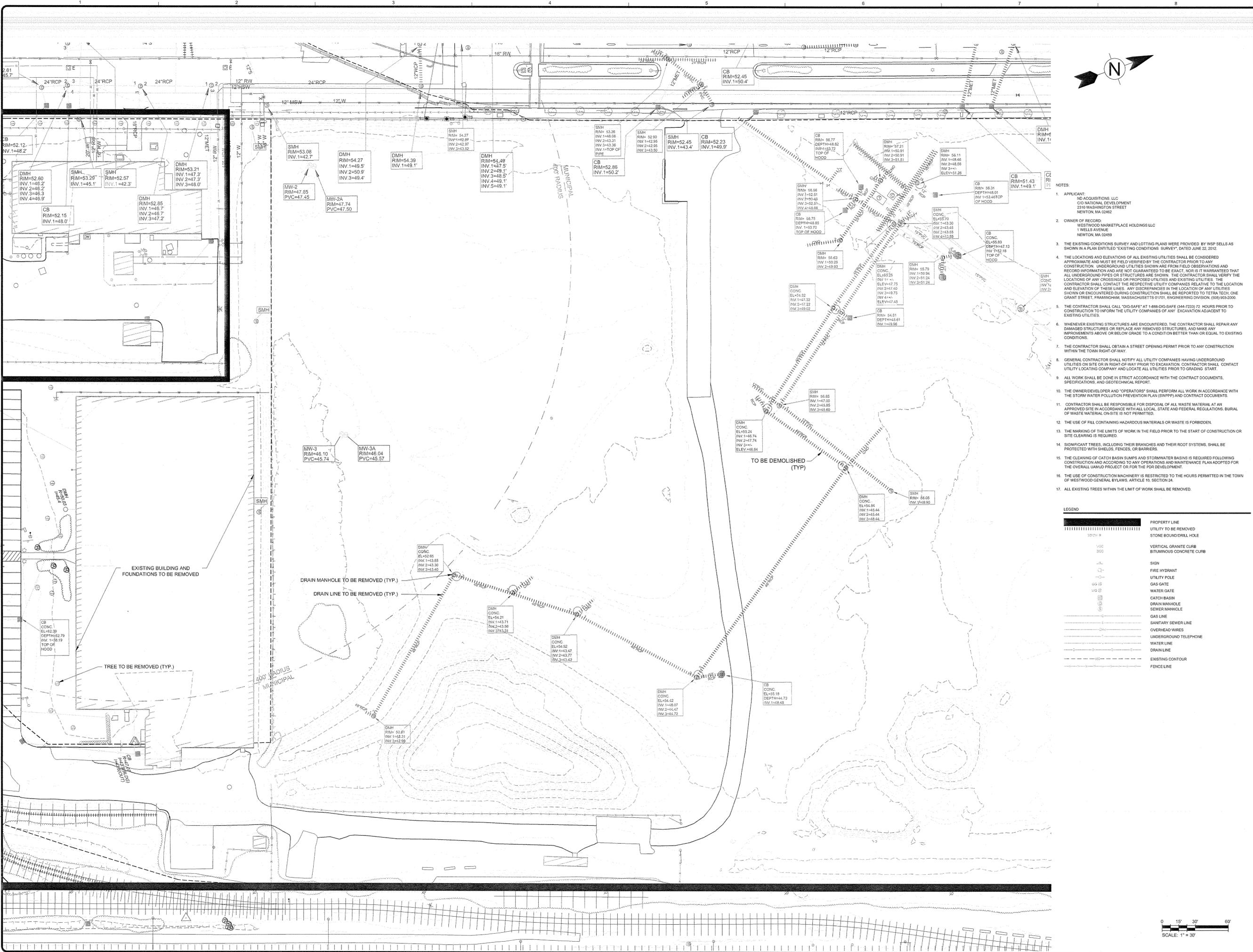
MARK	DATE	DESCRIPTION	BY
1	11/02/13	PKG Submittal	

Client: Westwood Marketplace Holdings LLC  
University Station - University Avenue  
Bridges at University Station Enabling Package  
Development Area B of the University Station Master Development Plan

**Site Development Plans  
Existing Conditions Plan**

Project No.: 127-3659-12003  
Designed By: A.F.T./M.K.M.  
Drawn By: J.V.B./S.C.V.  
Checked By: N.H.C./R.F.D.

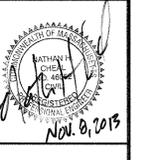
**V-101**  
Copyright Tetra Tech  
Bar Measures 1 inch



- NOTES:
1. APPLICANT: NO ACQUISITIONS, LLC  
CO NATIONAL DEVELOPMENT  
2310 WASHINGTON STREET  
NEWTON, MA 02459
  2. OWNER OF RECORD: WESTWOOD MARKETPLACE HOLDINGS LLC  
1 WELLS AVENUE  
NEWTON, MA 02459
  3. THE EXISTING CONDITIONS SURVEY AND LOTTING PLANS WERE PROVIDED BY WSP SELLS AS SHOWN IN A PLAN ENTITLED "EXISTING CONDITIONS SURVEY", DATED JUNE 22, 2012.
  4. THE LOCATIONS AND ELEVATIONS OF ALL EXISTING UTILITIES SHALL BE CONSIDERED APPROXIMATE AND MUST BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO ANY CONSTRUCTION. UNDERGROUND UTILITIES SHOWN ARE FROM FIELD OBSERVATIONS AND RECORD INFORMATION AND ARE NOT GUARANTEED TO BE EXACT. NOR IS IT WARRANTED THAT ALL UNDERGROUND PIPES OR STRUCTURES ARE SHOWN. THE CONTRACTOR SHALL VERIFY THE LOCATION OF ANY CROSSINGS OR PROPOSED UTILITIES AND EXISTING UTILITIES. THE CONTRACTOR SHALL CONTACT THE RESPECTIVE UTILITY COMPANIES RELATIVE TO THE LOCATION AND ELEVATION OF THESE LINES. ANY DISCREPANCIES IN THE LOCATION OF ANY UTILITIES SHOWN OR ENCOUNTERED DURING CONSTRUCTION SHALL BE REPORTED TO TETRA TECH, ONE GRANT STREET, FRAMINGHAM, MASSACHUSETTS 01701, ENGINEERING DIVISION, (508) 953-2000.
  5. THE CONTRACTOR SHALL CALL "DIG-SAFE" AT 1-888-DIG-SAFE (344-7233) 72 HOURS PRIOR TO CONSTRUCTION TO INFORM THE UTILITY COMPANIES OF ANY EXCAVATION ADJACENT TO EXISTING UTILITIES.
  6. WHENEVER EXISTING STRUCTURES ARE ENCOUNTERED, THE CONTRACTOR SHALL REPAIR ANY DAMAGED STRUCTURES OR REPLACE ANY REMOVED STRUCTURES, AND MAKE ANY IMPROVEMENTS ABOVE OR BELOW GRADE TO A CONDITION BETTER THAN OR EQUAL TO EXISTING CONDITIONS.
  7. THE CONTRACTOR SHALL OBTAIN A STREET OPENING PERMIT PRIOR TO ANY CONSTRUCTION WITHIN THE TOWN RIGHT-OF-WAY.
  8. GENERAL CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES HAVING UNDERGROUND UTILITIES ON SITE OR IN RIGHT-OF-WAY PRIOR TO EXCAVATION. CONTRACTOR SHALL CONTACT UTILITY LOCATING COMPANY AND LOCATE ALL UTILITIES PRIOR TO GRADING START.
  9. ALL WORK SHALL BE DONE IN STRICT ACCORDANCE WITH THE CONTRACT DOCUMENTS, SPECIFICATIONS, AND GEOTECHNICAL REPORT.
  10. THE OWNER/DEVELOPER AND "OPERATORS" SHALL PERFORM ALL WORK IN ACCORDANCE WITH THE STORM WATER POLLUTION PREVENTION PLAN (SWPPP) AND CONTRACT DOCUMENTS.
  11. CONTRACTOR SHALL BE RESPONSIBLE FOR DISPOSAL OF ALL WASTE MATERIAL AT AN APPROVED SITE IN ACCORDANCE WITH ALL LOCAL, STATE AND FEDERAL REGULATIONS. BURIAL OF WASTE MATERIAL ON-SITE IS NOT PERMITTED.
  12. THE USE OF FILL CONTAINING HAZARDOUS MATERIALS OR WASTE IS FORBIDDEN.
  13. THE MARKING OF THE LIMITS OF WORK IN THE FIELD PRIOR TO THE START OF CONSTRUCTION OR SITE CLEARING IS REQUIRED.
  14. SIGNIFICANT TREES, INCLUDING THEIR BRANCHES AND THEIR ROOT SYSTEMS, SHALL BE PROTECTED WITH SHELOS, FENCES, OR BARRIERS.
  15. THE CLEANING OF CATCH BASIN SLUMPS AND STORMWATER BASINS IS REQUIRED FOLLOWING CONSTRUCTION AND ACCORDING TO ANY OPERATIONS AND MAINTENANCE PLAN ADOPTED FOR THE OVERALL UAMUD PROJECT OR FOR THE PDR DEVELOPMENT.
  16. THE USE OF CONSTRUCTION MACHINERY IS RESTRICTED TO THE HOURS PERMITTED IN THE TOWN OF WESTWOOD GENERAL BYLAWS, ARTICLE 10, SECTION 24.
  17. ALL EXISTING TREES WITHIN THE LIMIT OF WORK SHALL BE REMOVED.

LEGEND

	PROPERTY LINE
	UTILITY TO BE REMOVED
	STONE BOUND/DRILL HOLE
	VERTICAL GRANITE CURB
	BITUMINOUS CONCRETE CURB
	SIGN
	FIRE HYDRANT
	UTILITY POLE
	GAS GATE
	WATER GATE
	CATCH BASIN
	DRAIN MANHOLE
	SEWER MANHOLE
	GAS LINE
	SANITARY SEWER LINE
	OVERHEAD WIRES
	UNDERGROUND TELEPHONE
	WATER LINE
	DRAIN LINE
	EXISTING CONTOUR
	FENCE LINE



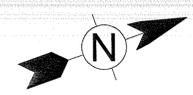
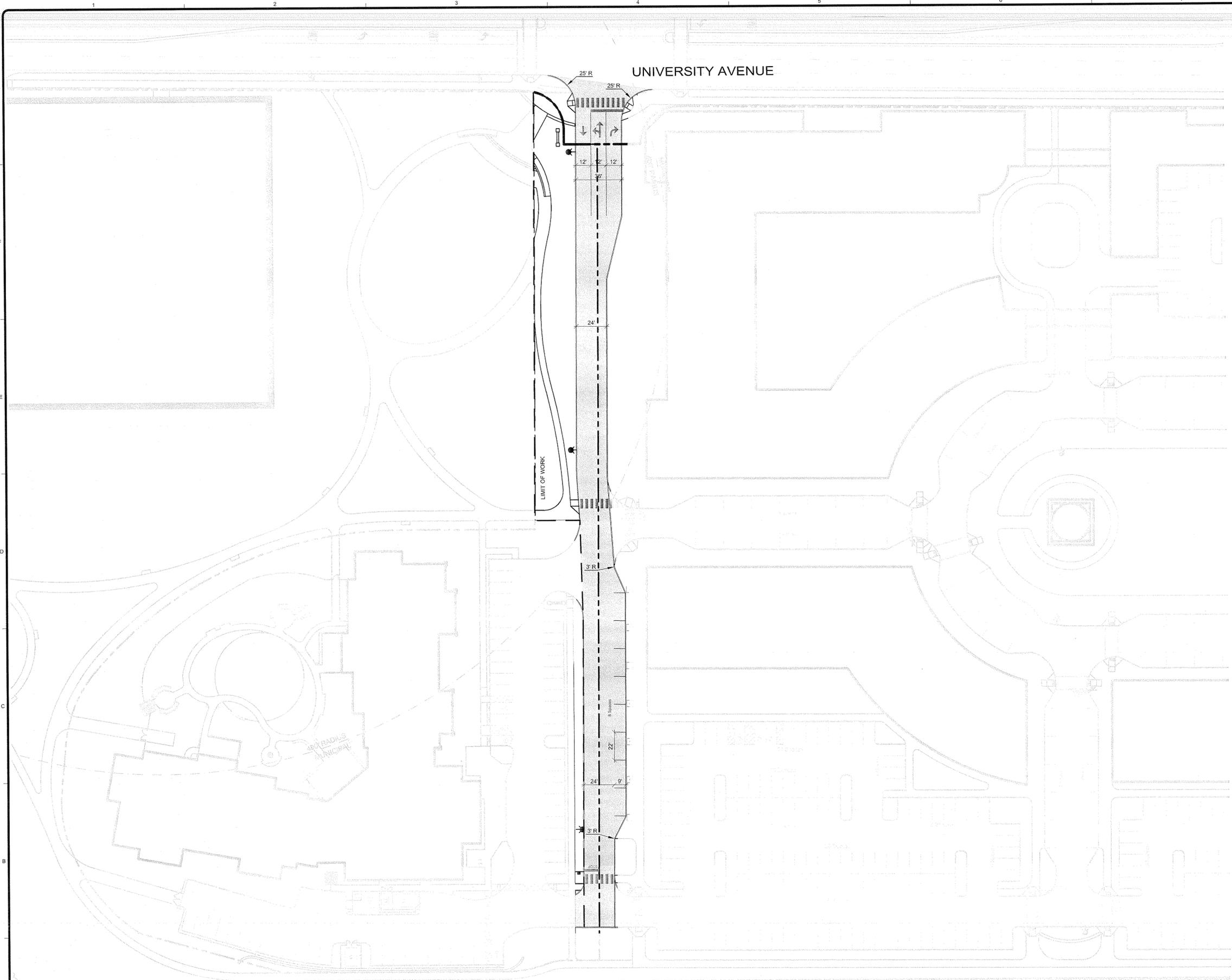
MARK	DATE	DESCRIPTION	BY
1	11/08/13	PDR Submit	

MARK	DATE	DESCRIPTION	BY
1	11/08/13	PDR Submit	

Client: Westwood Marketplaces Holdings, LLC  
Proj. Loc.: University Ave., Westwood, MA  
Project No.: 127-3659-12003  
Designed By: A.F.T./M.K.M.  
Drawn By: J.V.B./S.C.V.  
Checked By: N.H.C./R.F.D.  
Site Development Plans - Demolition Plan

11/7/2013 9:42:14 AM - P:\3659127-3659-12003\CAD SHEET FILES\REBELLING PLANS\C-111 DEMOLITION.DWG - BECKWITH, JOHN

11/7/2013 9:47:04 AM - P:\3659127-959-12003\CAD\SHEETFILES\ENABLING PLANS\C-121 SITE LAYOUT PLAN.DWG - BECKWITH, JOHN

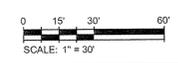


- NOTES:
1. APPLICANT:  
ND ACQUISITIONS, LLC  
210 NATIONAL DEVELOPMENT  
2310 WASHINGTON STREET  
NEWTON, MA 02462
  2. OWNER OF RECORD:  
WESTWOOD MARKETPLACE HOLDINGS LLC  
1 WELLS AVENUE  
NEWTON, MA 02459
  3. CURB RADI ARE 3' UNLESS OTHERWISE NOTED.
  4. ALL DISTANCES AND DIMENSIONS ARE TO THE FACE OF CURB OR BUILDING UNLESS OTHERWISE NOTED.
  5. SEE SITE PLANS FOR CURB TYPE AND LOCATION.
  6. HANDICAPPED PARKING SPACES ARE TO BE MARKED IN ACCORDANCE WITH THE CURRENT TOWN OF WESTWOOD SPECIFICATIONS, IF ANY, AND SHALL BE IN COMPLIANCE WITH THE CURRENT AMERICANS WITH DISABILITIES ACT (ADA) STANDARDS.
  7. ALL WORK SHALL BE DONE IN STRICT ACCORDANCE WITH THE STANDARD SITE SPECIFICATIONS AND THE LATEST EDITION OF THE TOWN OF WESTWOOD CONSTRUCTION SPECIFICATIONS.
  8. PARKING SPACES ARE 9'X22' UNLESS OTHERWISE NOTED.
  9. THE PROJECT SHALL OBTAIN NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT COVERAGE AS ISSUED BY THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY (EPA). THE OWNER/DEVELOPER AND "OPERATORS" SHALL PREPARE AND SUBMIT A NOTICE OF INTENT (NOI) TO THE EPA PRIOR TO THE START OF CONSTRUCTION AND SHALL PERFORM ALL WORK IN ACCORDANCE WITH THE STORM WATER POLLUTION PREVENTION PLAN (SWPPP) AND CONTRACT DOCUMENTS.
  10. CONTRACTOR SHALL NOTIFY THE ENGINEER OF RECORD IF ANY CONFLICTS ARISE PRIOR TO CONTINUATION OF CONSTRUCTION. NO FIELD MODIFICATIONS SHALL BE MADE WITHOUT WRITTEN AUTHORIZATION FROM THE ENGINEER OF RECORD.
  11. THE USE OF FILL CONTAINING HAZARDOUS MATERIALS OR WASTE IS FORBIDDEN.
  12. THE MARKING OF THE LIMITS OF WORK IN THE FIELD PRIOR TO THE START OF CONSTRUCTION OR SITE CLEARING IS REQUIRED.
  13. SIGNIFICANT TREES WHICH WILL REMAIN, INCLUDING THEIR BRANCHES AND THEIR ROOT SYSTEMS, SHALL BE PROTECTED WITH SHIELDS, FENCES, OR BARRIERS.
  14. THE CLEANING OF CATCH BASIN SUMPS AND STORMWATER BASINS IS REQUIRED FOLLOWING CONSTRUCTION AND ACCORDING TO ANY OPERATIONS AND MAINTENANCE PLAN ADOPTED FOR THE OVERALL UAMUD PROJECT OR FOR THE PDR DEVELOPMENT.
  15. THE USE OF CONSTRUCTION MACHINERY IS RESTRICTED TO THE HOURS PERMITTED IN THE TOWN OF WESTWOOD GENERAL BYLAWS, ARTICLE 10, SECTION 24.
  16. SEE BRIDGES AT UNIVERSITY STATION PLANS PREPARED BY STANTEC, DATED NOVEMBER 8, 2013 FOR SPECIFIC DETAILS REGARDING THE PROPOSED ASSISTED LIVING FACILITY.
  17. THE PURPOSE OF THIS PLAN IS TO SHOW THE PROPOSED ACCESS DRIVEWAY TO THE BRIDGES AT UNIVERSITY STATION PROJECT. SEE THE BRIDGES AT UNIVERSITY STATION PLANS, PREPARED BY STANTEC, DATED NOVEMBER 8, 2013, FOR SPECIFIC DETAILS REGARDING THE SITE WORK FOR THE PROPOSED ASSISTED LIVING FACILITY.

- PERMITTED USES:
- RETAIL/SERVICE
  - RESTAURANT/ENTERTAINMENT
  - HOTEL/COMMERCIAL LODGING
  - RESIDENTIAL
  - OFFICE/ROAD
- MAXIMUM BUILDING HEIGHT - 80'

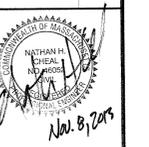
LEGEND

	PROPERTY LINE
	HEAVY DUTY PAVEMENT
	LIMIT OF WORK LINE
	CURBING
	VERTICAL GRANITE CURB
	CONCRETE CURB
	SIGN
	FIRE HYDRANT



**TETRA TECH**

www.tetrattech.com  
One Olin Circle  
Framingham, MA 01701  
PHONE: (508) 803-2000 FAX: (508) 803-2001



MARK	DATE	DESCRIPTION
1	11/08/13	PDR Submittal

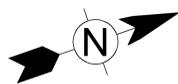
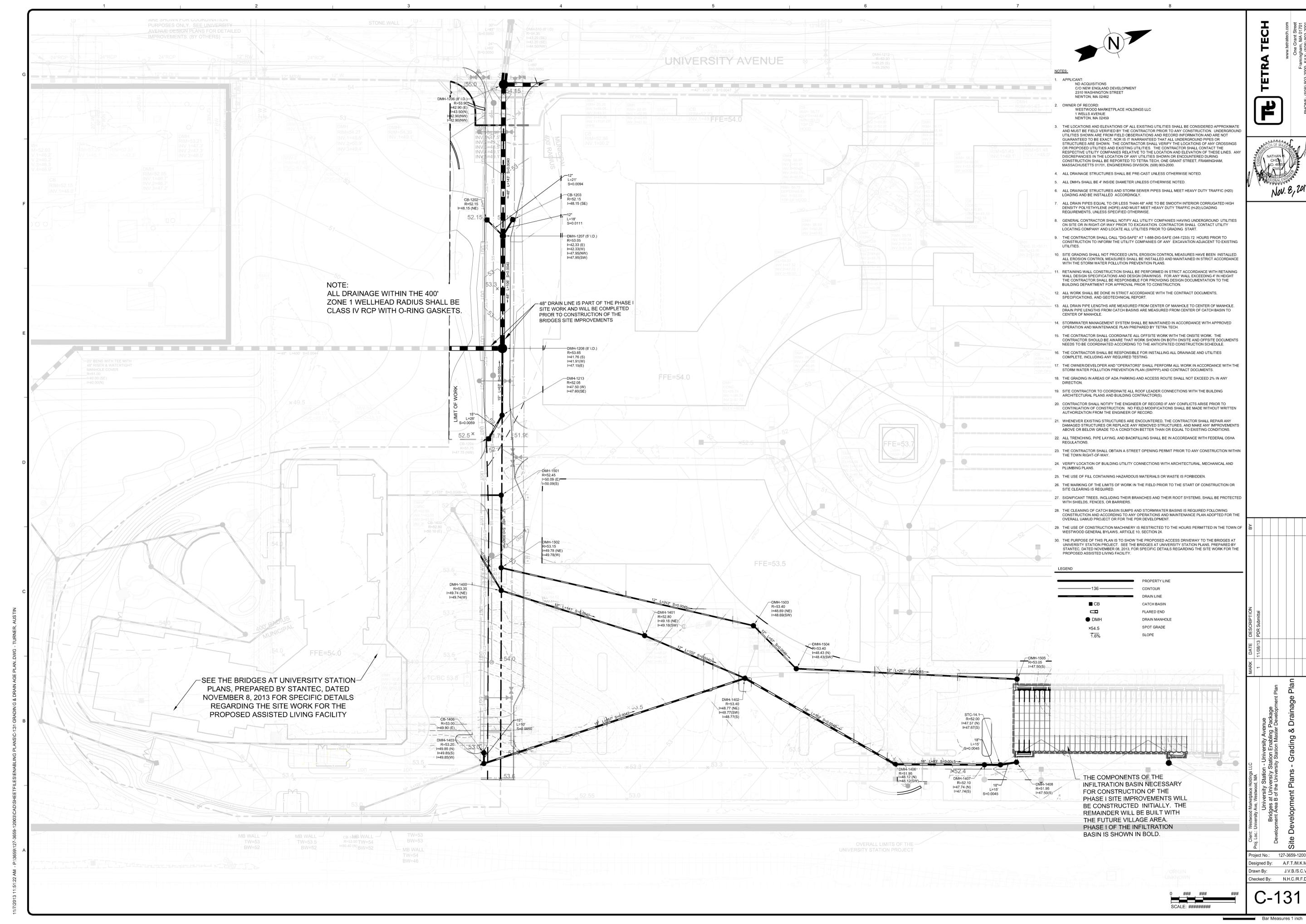
Client: Westwood Marketplace Holdings LLC  
Project: University Ave, Westwood, MA  
University Station - University Avenue  
Bridges at University Station Enabling Package  
Development Area B of the University Station Master Development Plan

**Site Development Plans - Site Layout Plan**

Project No.: 127-3659-12003  
Designed By: A.F.T./M.K.M.  
Drawn By: J.V.B./S.C.V.  
Checked By: N.H.C./R.F.D.

**C-121**

Copyright: Tetra Tech  
Bar Measures 1 Inch



- NOTES:**
1. APPLICANT: NO ACQUISITIONS  
CO NEW ENGLAND DEVELOPMENT  
2310 WASHINGTON STREET  
NEWTON, MA 02462
  2. OWNER OF RECORD: WESTWOOD MARKETPLACE HOLDINGS LLC  
1 WELLS AVENUE  
NEWTON, MA 02459
  3. THE LOCATIONS AND ELEVATIONS OF ALL EXISTING UTILITIES SHALL BE CONSIDERED APPROXIMATE AND MUST BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO ANY CONSTRUCTION. UNDERGROUND UTILITIES SHOWN ARE FROM FIELD OBSERVATIONS AND RECORD INFORMATION AND ARE NOT GUARANTEED TO BE EXACT. NOR IS IT WARRANTED THAT ALL UNDERGROUND PIPES OR STRUCTURES ARE SHOWN. THE CONTRACTOR SHALL VERIFY THE LOCATION OF ANY CROSSINGS OR PROPOSED UTILITIES AND EXISTING UTILITIES. THE CONTRACTOR SHALL CONTACT THE RESPECTIVE UTILITY COMPANIES RELATIVE TO THE LOCATION AND ELEVATION OF THESE LINES. ANY DISCREPANCIES IN THE LOCATION OF ANY UTILITIES SHOWN OR ENCOUNTERED DURING CONSTRUCTION SHALL BE REPORTED TO TETRA TECH, ONE GRANT STREET, FRAMINGHAM, MASSACHUSETTS 01701, ENGINEERING DIVISION, (508) 903-2000.
  4. ALL DRAINAGE STRUCTURES SHALL BE PRE-CAST UNLESS OTHERWISE NOTED.
  5. ALL DMH'S SHALL BE 4" INSIDE DIAMETER UNLESS OTHERWISE NOTED.
  6. ALL DRAINAGE STRUCTURES AND STORM SEWER PIPES SHALL MEET HEAVY DUTY TRAFFIC (H20) LOADING AND BE INSTALLED ACCORDINGLY.
  7. ALL DRAIN PIPES EQUAL TO OR LESS THAN 48" ARE TO BE SMOOTH INTERIOR CORRUGATED HIGH DENSITY POLYETHYLENE (HDPE) AND MUST MEET HEAVY DUTY TRAFFIC (H20) LOADING REQUIREMENTS, UNLESS SPECIFIED OTHERWISE.
  8. GENERAL CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES HAVING UNDERGROUND UTILITIES ON SITE OR RIGHT-OF-WAY PRIOR TO EXCAVATION. CONTRACTOR SHALL CONTACT UTILITY LOCATING COMPANY AND LOCATE ALL UTILITIES PRIOR TO GRADING START.
  9. THE CONTRACTOR SHALL CALL "DIG-SAFE" AT 1-888-DIG-SAFE (344-7233) 72 HOURS PRIOR TO CONSTRUCTION TO INFORM THE UTILITY COMPANIES OF ANY EXCAVATION ADJACENT TO EXISTING UTILITIES.
  10. SITE GRADING SHALL NOT PROCEED UNTIL EROSION CONTROL MEASURES HAVE BEEN INSTALLED. ALL EROSION CONTROL MEASURES SHALL BE INSTALLED AND MAINTAINED IN STRICT ACCORDANCE WITH THE STORM WATER POLLUTION PREVENTION PLANS.
  11. RETAINING WALL CONSTRUCTION SHALL BE PERFORMED IN STRICT ACCORDANCE WITH RETAINING WALL DESIGN SPECIFICATIONS AND DESIGN DRAWINGS. FOR ANY WALL EXCEEDING 4' IN HEIGHT THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING DESIGN DOCUMENTATION TO THE BUILDING DEPARTMENT FOR APPROVAL PRIOR TO CONSTRUCTION.
  12. ALL WORK SHALL BE DONE IN STRICT ACCORDANCE WITH THE CONTRACT DOCUMENTS, SPECIFICATIONS, AND GEOTECHNICAL REPORT.
  13. ALL DRAIN PIPE LENGTHS ARE MEASURED FROM CENTER OF MANHOLE TO CENTER OF MANHOLE. DRAIN PIPE LENGTHS FROM CATCH BASINS ARE MEASURED FROM CENTER OF CATCH BASIN TO CENTER OF MANHOLE.
  14. STORMWATER MANAGEMENT SYSTEM SHALL BE MAINTAINED IN ACCORDANCE WITH APPROVED OPERATION AND MAINTENANCE PLAN PREPARED BY TETRA TECH.
  15. THE CONTRACTOR SHALL COORDINATE ALL OFF-SITE WORK WITH THE ON-SITE WORK. THE CONTRACTOR SHOULD BE AWARE THAT WORK SHOWN ON BOTH ON-SITE AND OFF-SITE DOCUMENTS NEEDS TO BE COORDINATED ACCORDING TO THE ANTICIPATED CONSTRUCTION SCHEDULE.
  16. THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING ALL DRAINAGE AND UTILITIES COMPLETE, INCLUDING ANY REQUIRED TESTING.
  17. THE OWNER/DEVELOPER AND "OPERATORS" SHALL PERFORM ALL WORK IN ACCORDANCE WITH THE STORM WATER POLLUTION PREVENTION PLAN (SWPPP) AND CONTRACT DOCUMENTS.
  18. THE GRADING IN AREAS OF ADA PARKING AND ACCESS ROUTE SHALL NOT EXCEED 2% IN ANY DIRECTION.
  19. SITE CONTRACTOR TO COORDINATE ALL ROOF LEADER CONNECTIONS WITH THE BUILDING ARCHITECTURAL PLANS AND BUILDING CONTRACTORS.
  20. CONTRACTOR SHALL NOTIFY THE ENGINEER OF RECORD IF ANY CONFLICTS ARISE PRIOR TO CONTINUATION OF CONSTRUCTION. NO FIELD MODIFICATIONS SHALL BE MADE WITHOUT WRITTEN AUTHORIZATION FROM THE ENGINEER OF RECORD.
  21. WHENEVER EXISTING STRUCTURES ARE ENCOUNTERED, THE CONTRACTOR SHALL REPAIR ANY DAMAGED STRUCTURES OR REPLACE ANY REMOVED STRUCTURES, AND MAKE ANY IMPROVEMENTS ABOVE OR BELOW GRADE TO A CONDITION BETTER THAN OR EQUAL TO EXISTING CONDITIONS.
  22. ALL TRENCHING, PIPE LAYING, AND BACKFILLING SHALL BE IN ACCORDANCE WITH FEDERAL OSHA REGULATIONS.
  23. THE CONTRACTOR SHALL OBTAIN A STREET OPENING PERMIT PRIOR TO ANY CONSTRUCTION WITHIN THE TOWN RIGHT-OF-WAY.
  24. VERIFY LOCATION OF BUILDING UTILITY CONNECTIONS WITH ARCHITECTURAL, MECHANICAL AND PLUMBING PLANS.
  25. THE USE OF FILL CONTAINING HAZARDOUS MATERIALS OR WASTE IS FORBIDDEN.
  26. THE MARKING OF THE LIMITS OF WORK IN THE FIELD PRIOR TO THE START OF CONSTRUCTION OR SITE CLEARING IS REQUIRED.
  27. SIGNIFICANT TREES, INCLUDING THEIR BRANCHES AND THEIR ROOT SYSTEMS, SHALL BE PROTECTED WITH SHIELDS, FENCES, OR BARRIERS.
  28. THE CLEANING OF CATCH BASIN SLUMPS AND STORMWATER BASINS IS REQUIRED FOLLOWING CONSTRUCTION AND ACCORDING TO ANY OPERATIONS AND MAINTENANCE PLAN ADOPTED FOR THE OVERALL LIQUID PROJECT OR FOR THE PROJECT OPENING.
  29. THE USE OF CONSTRUCTION MACHINERY IS RESTRICTED TO THE HOURS PERMITTED IN THE TOWN OF WESTWOOD GENERAL BYLAWS, ARTICLE 10, SECTION 24.
  30. THE PURPOSE OF THIS PLAN IS TO SHOW THE PROPOSED ACCESS DRIVEWAY TO THE BRIDGES AT UNIVERSITY STATION PROJECT. SEE THE BRIDGES AT UNIVERSITY STATION PLANS, PREPARED BY STANTEC, DATED NOVEMBER 08, 2013, FOR SPECIFIC DETAILS REGARDING THE SITE WORK FOR THE PROPOSED ASSISTED LIVING FACILITY.

**LEGEND**

—	PROPERTY LINE
—	CONTOUR
—	DRAIN LINE
■	CATCH BASIN
▭	FLARED END
●	DRAIN MANHOLE
x54.5	SPOT GRADE
1.6%	SLOPE

**NOTE:**  
ALL DRAINAGE WITHIN THE 400' ZONE 1 WELLHEAD RADIUS SHALL BE CLASS IV RCP WITH O-RING GASKETS.

48" DRAIN LINE IS PART OF THE PHASE I SITE WORK AND WILL BE COMPLETED PRIOR TO CONSTRUCTION OF THE BRIDGES SITE IMPROVEMENTS

SEE THE BRIDGES AT UNIVERSITY STATION PLANS, PREPARED BY STANTEC, DATED NOVEMBER 8, 2013 FOR SPECIFIC DETAILS REGARDING THE SITE WORK FOR THE PROPOSED ASSISTED LIVING FACILITY

THE COMPONENTS OF THE INFILTRATION BASIN NECESSARY FOR CONSTRUCTION OF THE PHASE I SITE IMPROVEMENTS WILL BE CONSTRUCTED INITIALLY. THE REMAINDER WILL BE BUILT WITH THE FUTURE VILLAGE AREA. PHASE I OF THE INFILTRATION BASIN IS SHOWN IN BOLD.



www.tetrattech.com  
One Grant Street  
Framingham, MA 01701  
PHONE: (508) 903-2000 FAX: (508) 903-2001

NATHAN CHOU  
REGISTERED PROFESSIONAL ENGINEER  
NOV 8, 2013

MARK	DATE	DESCRIPTION	BY
1	11/08/13	IPDR Submittal	

Client: Westwood Marketplace Holdings LLC  
Proj. Loc.: University Ave., Westwood, MA

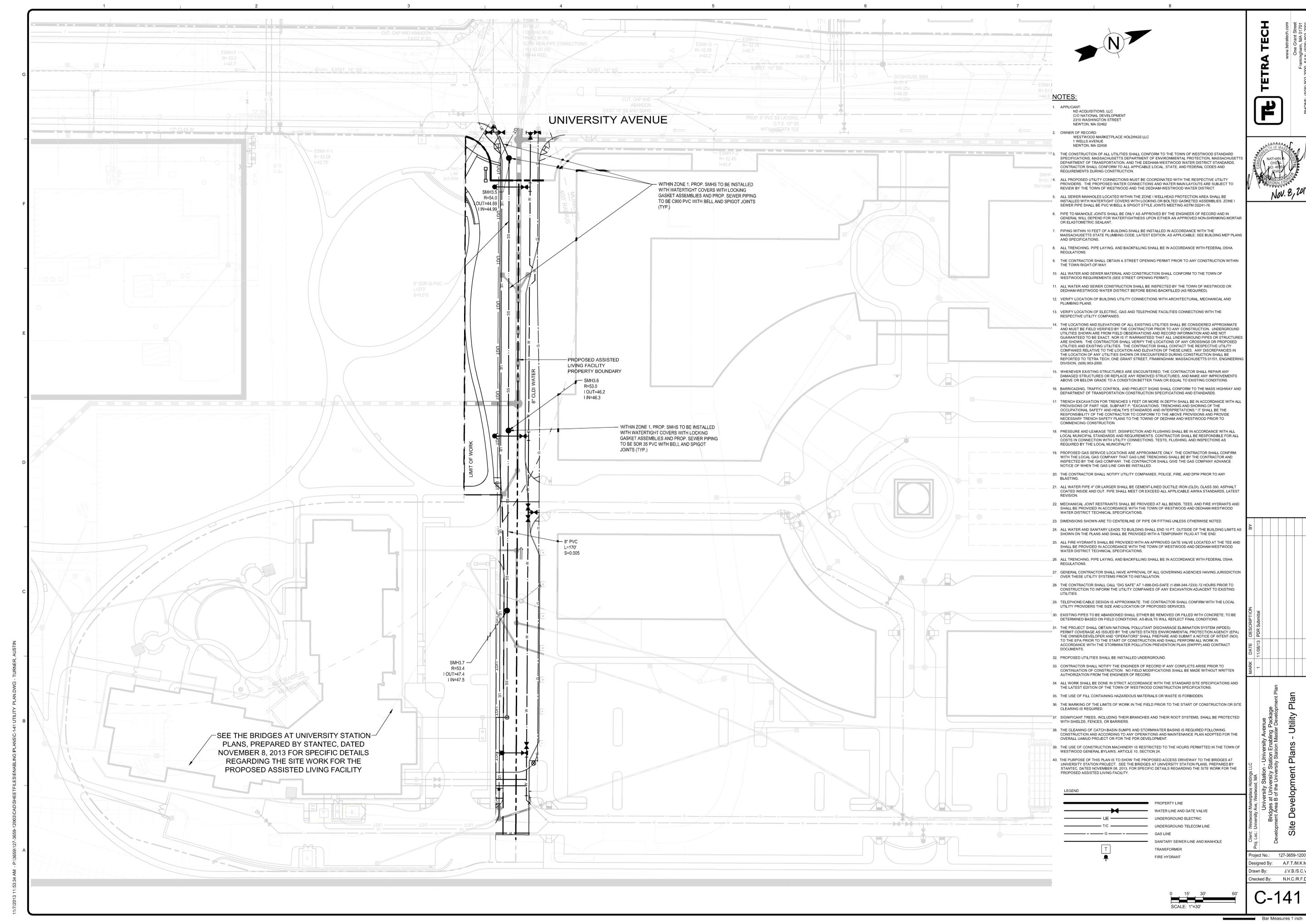
Project No.: 127-3659-12003  
University Station - University Avenue  
Bridges at University Station Enabling Package  
Development Area B of the University Station Master Development Plan

Site Development Plans - Grading & Drainage Plan

Designed By: A.F.T.M.K.M.  
Drawn By: J.V.B./S.C.V.  
Checked By: N.H.C./R.F.D.

C-131

Copyright: Tetra Tech  
Bar Measures 1 inch



11/7/2013 11:53:34 AM - P:\36591727-36591-2003\CAD\SHEETFILES\ENABLING PLANS\C-141 UTILITY PLAN.DWG - TURNER, AUSTIN

SEE THE BRIDGES AT UNIVERSITY STATION PLANS, PREPARED BY STANTEC, DATED NOVEMBER 8, 2013 FOR SPECIFIC DETAILS REGARDING THE SITE WORK FOR THE PROPOSED ASSISTED LIVING FACILITY

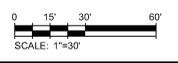
**UNIVERSITY AVENUE**

**NOTES:**

1. APPLICANT: ND ACQUISITIONS, LLC  
CO NATIONAL DEVELOPMENT  
2310 WASHINGTON STREET  
NEWTON, MA 02462
2. OWNER OF RECORD: WESTWOOD MARKETPLACE HOLDINGS LLC  
1 WELLS AVENUE  
NEWTON, MA 02459
3. THE CONSTRUCTION OF ALL UTILITIES SHALL CONFORM TO THE TOWN OF WESTWOOD STANDARD SPECIFICATIONS, MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION, MASSACHUSETTS DEPARTMENT OF TRANSPORTATION, AND THE DEDHAM-WESTWOOD WATER DISTRICT STANDARDS. CONTRACTOR SHALL CONFORM TO ALL APPLICABLE LOCAL, STATE, AND FEDERAL CODES AND REQUIREMENTS DURING CONSTRUCTION.
4. ALL PROPOSED UTILITY CONNECTIONS MUST BE COORDINATED WITH THE RESPECTIVE UTILITY PROVIDERS. THE PROPOSED WATER CONNECTIONS AND WATER MAIN LAYOUTS ARE SUBJECT TO REVIEW BY THE TOWN OF WESTWOOD AND THE DEDHAM-WESTWOOD WATER DISTRICT.
5. ALL SEWER MANHOLES LOCATED WITHIN THE ZONE 1 WELLHEAD PROTECTION AREA SHALL BE INSTALLED WITH WATER TIGHT COVERS WITH LOCKING OR BOLTED GASKET ASSEMBLIES. ZONE 1 SEWER PIPE SHALL BE PVC W/BELL & SPIGOT STYLE JOINTS MEETING ASTM D2241-76.
6. PIPE TO MANHOLE JOINTS SHALL BE ONLY AS APPROVED BY THE ENGINEER OF RECORD AND IN GENERAL WILL DEFEND FOR WATER TIGHTNESS UPON EITHER AN APPROVED NON-SHRINKING MORTAR OR ELASTOMETRIC SEALANT.
7. PIPING WITHIN 10 FEET OF A BUILDING SHALL BE INSTALLED IN ACCORDANCE WITH THE MASSACHUSETTS STATE PLUMBING CODE, LATEST EDITION, AS APPLICABLE. SEE BUILDING MEP PLANS AND SPECIFICATIONS.
8. ALL TRENCHING, PIPE LAYING, AND BACKFILLING SHALL BE IN ACCORDANCE WITH FEDERAL OSHA REGULATIONS.
9. THE CONTRACTOR SHALL OBTAIN A STREET OPENING PERMIT PRIOR TO ANY CONSTRUCTION WITHIN THE TOWN RIGHT-OF-WAY.
10. ALL WATER AND SEWER MATERIAL AND CONSTRUCTION SHALL CONFORM TO THE TOWN OF WESTWOOD REQUIREMENTS (SEE STREET OPENING PERMIT).
11. ALL WATER AND SEWER CONSTRUCTION SHALL BE INSPECTED BY THE TOWN OF WESTWOOD OR DEDHAM-WESTWOOD WATER DISTRICT BEFORE BEING BACKFILLED (AS REQUIRED).
12. VERIFY LOCATION OF BUILDING UTILITY CONNECTIONS WITH ARCHITECTURAL, MECHANICAL AND PLUMBING PLANS.
13. VERIFY LOCATION OF ELECTRIC, GAS AND TELEPHONE FACILITIES CONNECTIONS WITH THE RESPECTIVE UTILITY COMPANIES.
14. THE LOCATIONS AND ELEVATIONS OF ALL EXISTING UTILITIES SHALL BE CONSIDERED APPROXIMATE AND MUST BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO ANY CONSTRUCTION. UNDERGROUND UTILITIES SHOWN ARE FROM FIELD OBSERVATIONS AND RECORD INFORMATION AND ARE NOT GUARANTEED TO BE EXACT. NOR IS IT WARRANTED THAT ALL UNDERGROUND PIPES OR STRUCTURES ARE SHOWN. THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ANY CROSSINGS OR PROPOSED UTILITIES AND EXISTING UTILITIES. THE CONTRACTOR SHALL CONTACT THE RESPECTIVE UTILITY COMPANIES RELATIVE TO THE LOCATION AND ELEVATION OF THESE LINES. ANY DISCREPANCIES IN THE LOCATION OF ANY UTILITIES ENCOUNTERED DURING CONSTRUCTION SHALL BE REPORTED TO TETRA TECH, ONE GRANT STREET, FRAMMINGHAM, MASSACHUSETTS 01701, ENGINEERING DIVISION, (508) 903-2000.
15. WHENEVER EXISTING STRUCTURES ARE ENCOUNTERED, THE CONTRACTOR SHALL REPAIR ANY DAMAGED STRUCTURES OR REPLACE ANY REMOVED STRUCTURES, AND MAKE ANY IMPROVEMENTS ABOVE OR BELOW GRADE TO A CONDITION BETTER THAN OR EQUAL TO EXISTING CONDITIONS.
16. BARRICADING, TRAFFIC CONTROL AND PROJECT SIGNS SHALL CONFORM TO THE MASS HIGHWAY AND DEPARTMENT OF TRANSPORTATION CONSTRUCTION SPECIFICATIONS AND STANDARDS.
17. TRENCH EXCAVATION FOR TRENCHES 5 FEET OR MORE IN DEPTH SHALL BE IN ACCORDANCE WITH ALL PROVISIONS OF PART 1026, SUBPART P, "EXCAVATIONS, TRENCHING AND SHORING OF THE OCCUPATIONAL SAFETY AND HEALTH STANDARDS AND INTERPRETATIONS." IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO CONFORM TO THE ABOVE PROVISIONS AND PROVIDE NECESSARY TRENCH SAFETY PLANS TO THE TOWNS OF DEDHAM AND WESTWOOD PRIOR TO COMMENCING CONSTRUCTION.
18. PRESSURE AND LEAKAGE TEST, DISINFECTION AND FLUSHING SHALL BE IN ACCORDANCE WITH ALL LOCAL MUNICIPAL STANDARDS AND REQUIREMENTS. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS IN CONNECTION WITH UTILITY CONNECTIONS, TESTS, FLUSHING, AND INSPECTIONS AS REQUIRED BY THE LOCAL MUNICIPALITY.
19. PROPOSED GAS SERVICE LOCATIONS ARE APPROXIMATE ONLY. THE CONTRACTOR SHALL CONFIRM WITH THE LOCAL GAS COMPANY THAT GAS LINE TRENCHING SHALL BE BY THE CONTRACTOR AND INSPECTED BY THE GAS COMPANY. THE CONTRACTOR SHALL GIVE THE GAS COMPANY ADVANCE NOTICE OF WHEN THE GAS LINE CAN BE INSTALLED.
20. THE CONTRACTOR SHALL NOTIFY UTILITY COMPANIES, POLICE, FIRE, AND DPW PRIOR TO ANY BLASTING.
21. ALL WATER PIPE 4" OR LARGER SHALL BE CEMENT LINED DUCTILE IRON (CLD), CLASS 350, ASPHALT COATED INSIDE AND OUT. PIPE SHALL MEET OR EXCEED ALL APPLICABLE AWWA STANDARDS, LATEST REVISION.
22. MECHANICAL JOINT RESTRAINTS SHALL BE PROVIDED AT ALL BENDS, TEES, AND FIRE HYDRANTS AND SHALL BE PROVIDED IN ACCORDANCE WITH THE TOWN OF WESTWOOD AND DEDHAM-WESTWOOD WATER DISTRICT TECHNICAL SPECIFICATIONS.
23. DIMENSIONS SHOWN ARE TO CENTERLINE OF PIPE OR FITTING UNLESS OTHERWISE NOTED.
24. ALL WATER AND SANITARY LEADS TO BUILDING SHALL END 10 FT. OUTSIDE OF THE BUILDING LIMITS AS SHOWN ON THE PLANS AND SHALL BE PROVIDED WITH A "TEMPORARY PLUG" AT THE END.
25. ALL FIRE HYDRANTS SHALL BE PROVIDED WITH AN APPROVED GATE VALVE LOCATED AT THE TEE AND SHALL BE PROVIDED IN ACCORDANCE WITH THE TOWN OF WESTWOOD AND DEDHAM-WESTWOOD WATER DISTRICT TECHNICAL SPECIFICATIONS.
26. ALL TRENCHING, PIPE LAYING, AND BACKFILLING SHALL BE IN ACCORDANCE WITH FEDERAL OSHA REGULATIONS.
27. GENERAL CONTRACTOR SHALL HAVE APPROVAL OF ALL GOVERNING AGENCIES HAVING JURISDICTION OVER THESE UTILITY SYSTEMS PRIOR TO INSTALLATION.
28. THE CONTRACTOR SHALL CALL "DIG SAFE" AT 1-888-DIG-SAFE (1-888-344-2333) 72 HOURS PRIOR TO CONSTRUCTION TO INFORM THE UTILITY COMPANIES OF ANY EXCAVATION ADJACENT TO EXISTING UTILITIES.
29. TELEPHONE/CABLE DESIGN IS APPROXIMATE. THE CONTRACTOR SHALL CONFIRM WITH THE LOCAL UTILITY PROVIDERS THE SIZE AND LOCATION OF PROPOSED SERVICES.
30. EXISTING PIPES TO BE ABANDONED SHALL EITHER BE REMOVED OR FILLED WITH CONCRETE, TO BE DETERMINED BASED ON FIELD CONDITIONS. AS-BUILTS WILL REFLECT FINAL CONDITIONS.
31. THE PROJECT SHALL OBTAIN NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT COVERAGE AS ISSUED BY THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY (EPA). THE OWNER/DEVELOPER AND OPERATORS SHALL PREPARE AND SUBMIT A NOTICE OF INTENT (NOI) TO THE EPA PRIOR TO THE START OF CONSTRUCTION AND SHALL PERFORM ALL WORK IN ACCORDANCE WITH THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP) AND CONTRACT DOCUMENTS.
32. PROPOSED UTILITIES SHALL BE INSTALLED UNDERGROUND.
33. CONTRACTOR SHALL NOTIFY THE ENGINEER OF RECORD IF ANY CONFLICTS ARISE PRIOR TO CONTINUATION OF CONSTRUCTION. NO FIELD MODIFICATIONS SHALL BE MADE WITHOUT WRITTEN AUTHORIZATION FROM THE ENGINEER OF RECORD.
34. ALL WORK SHALL BE DONE IN STRICT ACCORDANCE WITH THE STANDARD SITE SPECIFICATIONS AND THE LATEST EDITION OF THE TOWN OF WESTWOOD CONSTRUCTION SPECIFICATIONS.
35. THE USE OF FILL CONTAINING HAZARDOUS MATERIALS OR WASTE IS FORBIDDEN.
36. THE MARKING OF THE LIMITS OF WORK IN THE FIELD PRIOR TO THE START OF CONSTRUCTION OR SITE CLEARING IS REQUIRED.
37. SIGNIFICANT TREES, INCLUDING THEIR BRANCHES AND THEIR ROOT SYSTEMS, SHALL BE PROTECTED WITH SHIELDS, FENCES, OR BARRIERS.
38. THE CLEANING OF CATCH BASIN SLUMPS AND STORMWATER BASINS IS REQUIRED FOLLOWING CONSTRUCTION AND ACCORDING TO ANY OPERATIONS AND MAINTENANCE PLAN ADOPTED FOR THE OVERALL UAMUD PROJECT OR FOR THE PDR DEVELOPMENT.
39. THE USE OF CONSTRUCTION MACHINERY IS RESTRICTED TO THE HOURS PERMITTED IN THE TOWN OF WESTWOOD GENERAL BYLAWS, ARTICLE 10, SECTION 24.
40. THE PURPOSE OF THIS PLAN IS TO SHOW THE PROPOSED ACCESS DRIVEWAY TO THE BRIDGES AT UNIVERSITY STATION PROJECT. SEE THE BRIDGES AT UNIVERSITY STATION PLANS, PREPARED BY STANTEC, DATED NOVEMBER 08, 2013, FOR SPECIFIC DETAILS REGARDING THE SITE WORK FOR THE PROPOSED ASSISTED LIVING FACILITY.

**LEGEND**

- PROPERTY LINE
- WATER LINE AND GATE VALVE
- UNDERGROUND ELECTRIC
- T/C — UNDERGROUND TELECOM LINE
- G — GAS LINE
- SANITARY SEWER LINE AND MANHOLE
- TRANSFORMER
- FIRE HYDRANT



www.tetrattech.com  
One Grant Street  
Frammingham, MA 01701  
PHONE: (508) 903-2000 FAX: (508) 903-2001

NATHAN CHIU  
P.E.  
NOV. 8, 2013

Client: Westwood Marketplace Holdings LLC  
Proj. Loc.: University Ave., Westwood, MA

University Avenue  
Bridges at University Station Enabling Package  
Development Area B of the University Station Master Development Plan

Project No.: 127-3659-12003  
Designed By: A.F.T./M.K.M.  
Drawn By: J.V.B./S.C.V.  
Checked By: N.H.C./R.F.D.

Site Development Plans - Utility Plan

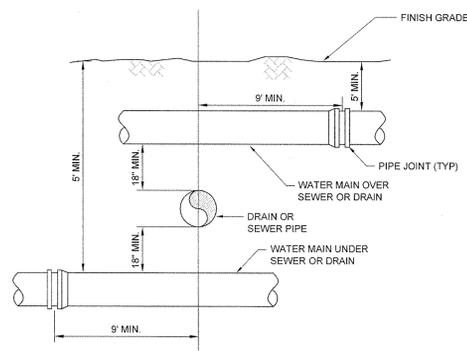
BY

MARK	DATE	DESCRIPTION
1	11/08/13	PDR Submittal

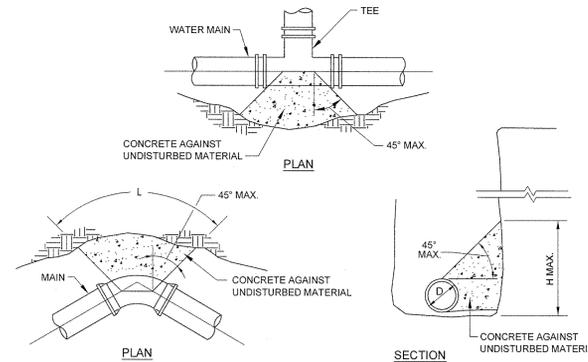
Copyright: Tetra Tech

Bar Measures 1 inch

C-141



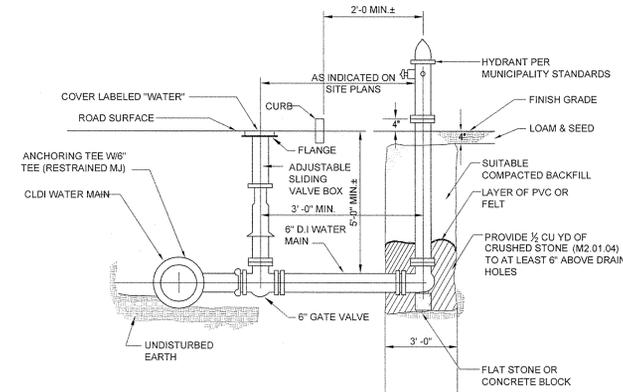
**SEWER OR DRAIN CROSSING DETAIL**  
N.T.S.  
(DWW STANDARD DETAIL)



- NOTES:**
- ALL ELBOWS, BENDS, AND CAPS SHALL BE BRACED WITH CONCRETE THRUST BLOCKS. JOINTS SHALL NOT BE ENCASED IN CONCRETE.
  - BEARING AREA IS AREA OF CONCRETE IN CONTACT WITH WALL OF TRENCH (H X L).
  - HEIGHT AND LENGTH AS REQUIRED TO OBTAIN BEARING AREA SHOWN IN THE TABLE WITH H APPROX. 1/2 L.
  - THRUST BLOCK SIZING BASED ON 150 PSI PRESSURE AND 2000 PSI SOIL BEARING CAPACITY.
  - THRUST BLOCKS SHALL BE USED ONLY IN LOCATIONS WHERE JOINT RESTRAINT METHODS ARE NOT FEASIBLE.

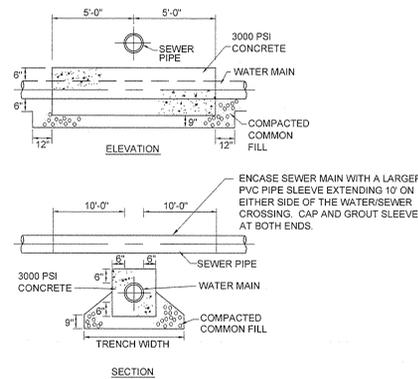
BEARING AREA FOR VARIOUS DIAMETERS						
FITTING	2'	4'	6'	8'	10'	12'
1/2 BEND (11 1/4')	2 S.F.	2 S.F.	2 S.F.	2 S.F.	3 S.F.	5 S.F.
1/16 BEND (22 1/2')	2 S.F.	2 S.F.	2 S.F.	3 S.F.	3 S.F.	4 S.F.
1/8 BEND (45')	2 S.F.	2 S.F.	2 S.F.	3 S.F.	5 S.F.	7 S.F.
1/4 BEND (90')	3 S.F.	3 S.F.	3 S.F.	6 S.F.	9 S.F.	12 S.F.
TEE/PLUG	2 S.F.	2 S.F.	3 S.F.	4 S.F.	6 S.F.	16 S.F.

**WATER MAIN THRUST BLOCK DETAIL**  
N.T.S.



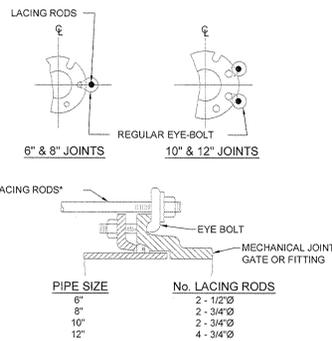
- NOTE:**
- ALL JOINTS TO BE MECHANICAL RESTRAINT MEGALUG OR APPROVED EQUAL.
  - VALVES SHALL BE LOCATED AT THE TEE.
  - ANCHOR TEES SHALL BE USED EXCEPT IN EXTENUATING CIRCUMSTANCES.

**HYDRANT AND VALVE DETAIL**  
N.T.S.  
(DWW STANDARD DETAIL)



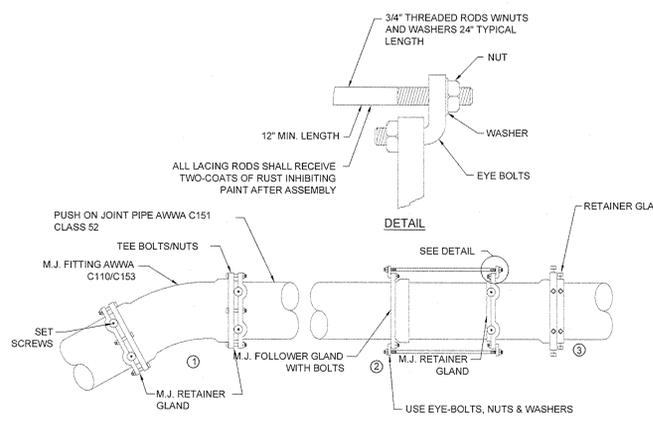
**CONCRETE ENCASEMENT DETAIL**  
N.T.S.

**THRUST RESTRAINT - LACING METHOD**



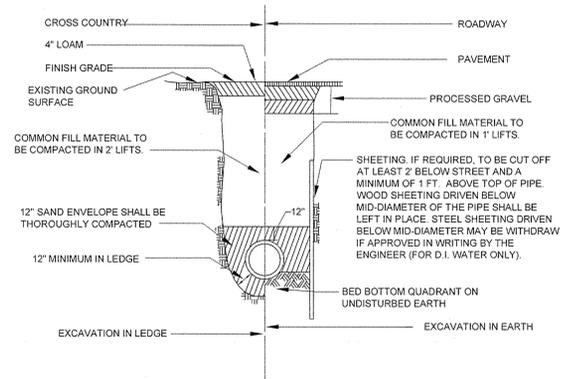
- NOTES:**
- TIE RODS MAY ONLY BE USED FOR 6-INCH, 8-INCH OR 12-INCH PIPE WHERE USE OF A JOINT RESTRAINT SYSTEM IS NOT FEASIBLE.
  - EYE-BOLTS AND LACING RODS ARE TO BE FABRICATED FROM A-36 STEEL.
  - STEEL LACING RODS SHALL HAVE A YIELD STRESS OF NOT LESS THAN 35,000 P.S.I.
  - EYE-BOLTS SHALL HAVE A MINIMUM TENSILE STRENGTH OF 7,000 LBS. EACH.

**MECHANICAL JOINT LACING DETAIL**  
N.T.S.

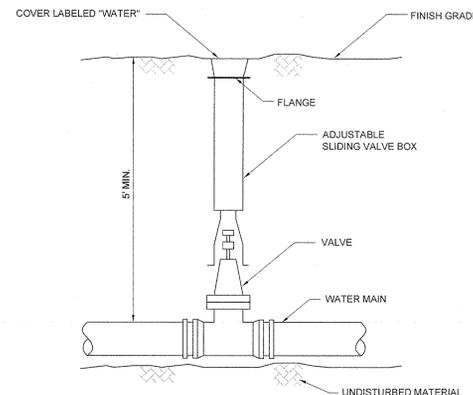


- NOTES:**
- ALL JOINTS TO BE MECHANICAL RESTRAINT MEGALUG OR APPROVED EQUAL.
  - RESTRAINING GASKETS SHALL BE USED ON PUSH-JOINT PIPE.

**TYPICAL RESTRAINED JOINTS DETAIL**  
N.T.S.



**DUCTILE IRON PIPE WATER MAIN TRENCH DETAIL**  
N.T.S.



- NOTE:**
- ALL GATE VALVES ON MAINLINE PIPE SHALL BE LOCATED A CONSISTENT DISTANCE OF THREE FEET FROM THE TEE, EXCEPT WHERE VALVES WOULD ALIGN UNDER OTHER PIPELINES.

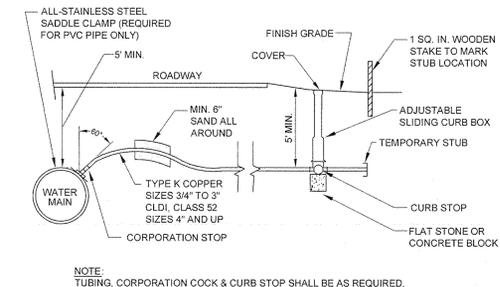
**BURIED GATE VALVE**  
N.T.S.  
(DWW STANDARD DETAIL)

PIPE SIZE	TABLE 1 - REQUIRED LENGTH OF RESTRAINED JOINTS FROM FITTINGS (FEET)					
	90° BEND	45° BEND OR WYE BRANCH	22 1/2° BEND	11 1/4° BEND	PLUG OR CAP	TEE (BRANCH)
6"	25 (30.5)	10.5 (12.5)	5 (6)	2.5 (3)	43 (64)	34 (51)
8"	33 (40)	13.5 (16.5)	6.5 (8)	3 (4)	55 (82)	47 (70)
10"	40 (48.5)	16.5 (20)	8 (9.5)	4 (5)	67 (100)	58 (87)
12"	47 (56.5)	19.5 (23.5)	9.5 (11.5)	4.5 (5.5)	79 (118)	70 (105)
16"	59.5 (72)	24.5 (30)	12 (14.5)	6 (7)	101 (152)	92 (139)
20"	72 (86.5)	30 (36)	14.5 (17)	7 (8.5)	123 (184)	114 (171)
24"	84 (100)	35 (41)	16.5 (20)	8 (10)	144 (216)	134 (202)
30"	100 (120)	41 (50)	20 (24)	10 (12)	174 (261)	165 (247)

- NOTE:**
- RESTRAINED LENGTHS LISTED IN PARENTHESES ARE FOR PIPE WRAPPED IN POLYETHYLENE. THE OTHER ASSOCIATED LENGTHS ARE FOR PLAIN UNWRAPPED DUCTILE IRON PIPE.
  - THE CONTRACTOR SHALL USE THIS TABLE IN CONJUNCTION WITH THE APPROPRIATE PIPE SPECIFICATION SECTION.
  - TABLE BASED ON 150 PSI TEST PRESSURE.
  - INDICATES THE REQUIRED RESTRAINED JOINT LENGTH (FT) IN EACH DIRECTION.

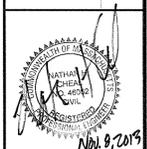
PIPE SIZE	TABLE 2 - REQUIRED LENGTH OF RESTRAINED JOINTS FROM FITTINGS (FEET)					
	90° BEND	45° BEND OR WYE BRANCH	22 1/2° BEND	11 1/4° BEND	PLUG OR CAP	TEE (BRANCH)
6"	40	16.8	8	4	68.8	54.4
8"	52.8	21.6	10.4	4.8	88	75.2
10"	64	26.4	12.8	6.4	107.2	92.8
12"	75.2	31.2	15.2	7.2	126.4	112

- NOTE:**
- RESTRAINED LENGTHS LISTED ARE FOR PLAIN UNWRAPPED DUCTILE IRON PIPE.
  - THE CONTRACTOR SHALL USE THIS TABLE IN CONJUNCTION WITH THE APPROPRIATE PIPE SPECIFICATION SECTION.
  - TABLE BASED ON 240 PSI TEST PRESSURE.
  - INDICATES THE REQUIRED RESTRAINED JOINT LENGTH (FT) IN EACH DIRECTION.



- NOTE:**
- TUBING, CORPORATION COCK & CURB STOP SHALL BE AS REQUIRED.

**WATER SERVICE DETAIL**  
N.T.S.  
(DWW STANDARD DETAIL)

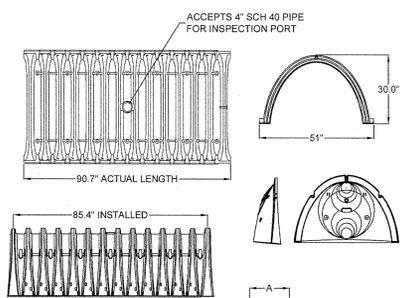


MARK	DATE	DESCRIPTION
1	11/08/13	FRP Summary

BY	DATE	DESCRIPTION

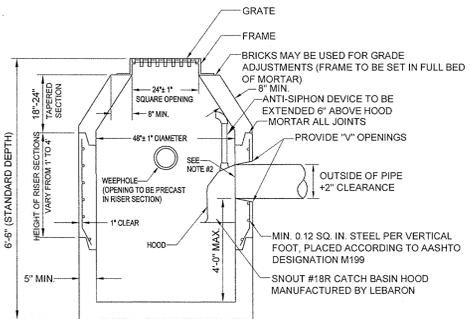
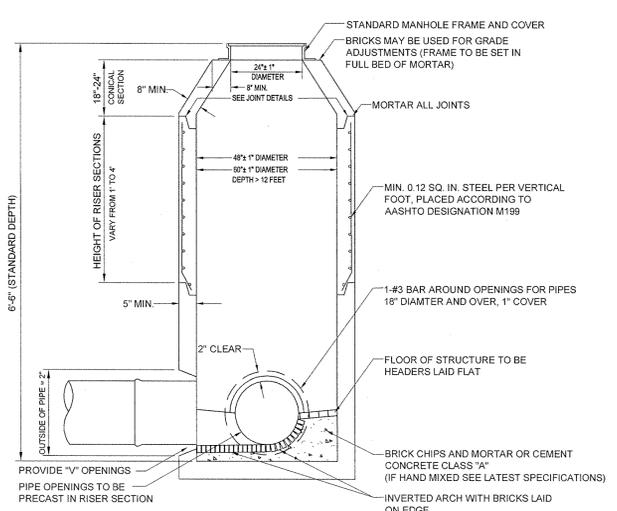
Client: Westwood Marketplace Holdings, LLC  
Project No.: 127-3659-12003  
University Station - University Avenue  
Bridges at University Station Enabling Package  
Development Area B of the University Station Master Development Plan  
Site Development Plans - Details

Designed By: A.F.T./M.K.M.  
Drawn By: J.V.B./S.C.V.  
Checked By: N.H.C./R.F.D.

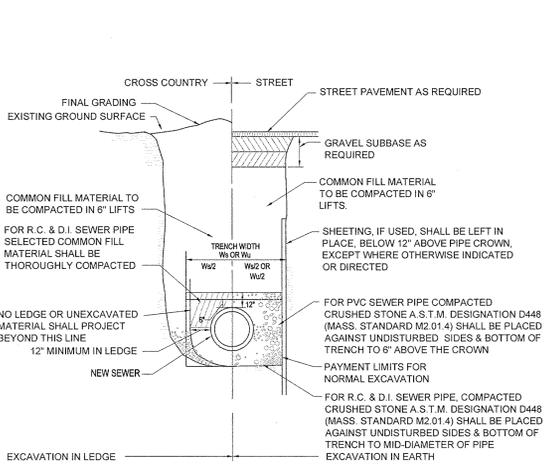


PART #	CHAMBER	PIPE SIZE	STUBS AT TOP OF END CAP FOR PARTS NUMBERS ENDING WITH "1"			STUBS AT BOTTOM OF END CAP FOR PARTS NUMBERS ENDING WITH "8"		
			A	B	C	A	B	C
SC740EP00T	SC-740	8 in (190 mm)	10.50 in (277 mm)	19.50 in (470 mm)	N/A	N/A	N/A	
SC740EP00B	SC-740	8 in (190 mm)	10.50 in (277 mm)	N/A	0.50 in (13 mm)	N/A	N/A	
SC740EP00T	SC-740	8 in (200 mm)	12.20 in (310 mm)	19.50 in (470 mm)	N/A	N/A	N/A	
SC740EP00B	SC-740	8 in (200 mm)	12.20 in (310 mm)	N/A	0.60 in (15 mm)	N/A	N/A	
SC740EP01T	SC-740	10 in (250 mm)	13.40 in (340 mm)	14.50 in (368 mm)	N/A	N/A	N/A	
SC740EP01B	SC-740	10 in (250 mm)	13.40 in (340 mm)	N/A	0.70 in (18 mm)	N/A	N/A	
SC740EP12T	SC-740	12 in (300 mm)	14.70 in (373 mm)	12.50 in (318 mm)	N/A	N/A	N/A	
SC740EP12B	SC-740	12 in (300 mm)	14.70 in (373 mm)	N/A	1.20 in (30 mm)	N/A	N/A	
SC740EP15T	SC-740	15 in (375 mm)	16.40 in (467 mm)	9.00 in (229 mm)	N/A	N/A	N/A	
SC740EP15B	SC-740	15 in (375 mm)	16.40 in (467 mm)	N/A	1.30 in (33 mm)	N/A	N/A	
SC740EP18T	SC-740	18 in (450 mm)	19.70 in (500 mm)	5.00 in (127 mm)	N/A	N/A	N/A	
SC740EP18B	SC-740	18 in (450 mm)	19.70 in (500 mm)	N/A	1.60 in (41 mm)	N/A	N/A	
SC740EP24B	SC-740	24 in (600 mm)	18.50 in (470 mm)	N/A	0.10 in (3 mm)	N/A	N/A	

NOTE: ALL DIMENSIONS ARE NOMINAL.  
ALL STUBS, EXCEPT FOR THE SC740EP24B ARE PLACED AT BOTTOM OF END CAP SUCH THAT THE OUTSIDE DIAMETER OF THE STUB IS FLUSH WITH THE BOTTOM OF THE END CAP. FOR ADDITIONAL INFORMATION CONTACT STORMTECH AT 1-888-892-2894.



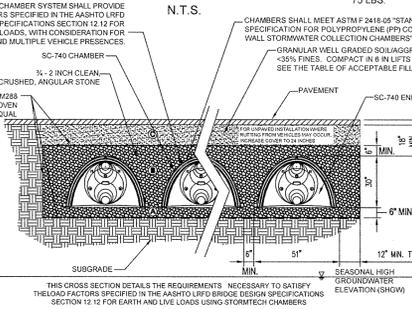
STRUCTURE BASE TO BE SOLID AND BASE AND SIDE TO BE WATER TIGHT.  
NOTES:  
1. DETAILS NOT INDICATED ABOVE ARE TO BE SIMILAR TO THOSE SHOWN IN DETAIL NUMBER 201.3.0.  
2. FACE OF PIPE FLUSH OR NOT TO PROJECT MORE THAN 4" FROM FACE OF WALL ALONG CENTERLINE OF PIPE.  
3. FOR DESCRIPTION, MATERIALS, AND CONSTRUCTION METHODS, SEE SPECIFICATIONS.  
4. MINIMUM DEPTH OF SUMP TO BE 2".  
5. WHEN A CURB INLET IS INSTALLED, THE OPENING IS TO BE 24"x18" X 27"x18"



NOTE: ALL NON-STRUCTURAL FILL TO BE COMPACTED TO 95% OF MAXIMUM DENSITY AS PER ASTM D1557

NOMINAL CHAMBER SPECIFICATIONS  
SIZE (W X H X INSTALLED LENGTH)  
CHAMBER STORAGE  
MINIMUM INSTALLED STORAGE  
WEIGHT

51.0" x 30.0" x 85.4"  
45.9 CUBIC FEET  
74.9 CUBIC FEET  
75 LBS.



CHAMBERS SHALL MEET ASTM F 2418 OR "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) COMPAGATED WALL STORMWATER COLLECTION CHAMBERS".  
\* FOR THE SC740EP24B THE 24" STUB LIES BELOW THE BOTTOM OF THE END CAP APPROXIMATELY 1.75" BACKFILL MATERIAL SHOULD BE REMOVED FROM BELOW THE N-12 STUB SO THAT THE FITTING SETS LEVEL.

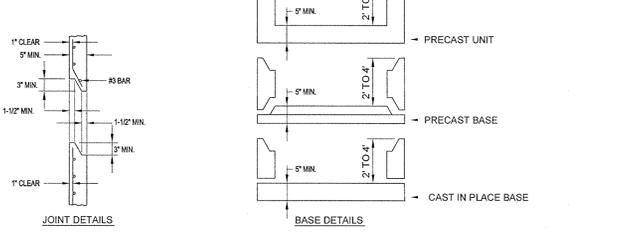
NOTE:  
1. ALL DESIGN SPECIFICATIONS FOR STORMTECH CHAMBERS SHALL BE IN ACCORDANCE WITH THE STORMTECH DESIGN MANUAL.  
2. THE INSTALLATION OF STORMTECH CHAMBERS SHALL BE IN ACCORDANCE WITH THE LATEST STORMTECH INSTALLATION INSTRUCTIONS.  
3. THE CONTRACTOR IS ADVISED TO REVIEW AND UNDERSTAND THE INSTALLATION INSTRUCTIONS PRIOR TO BEGINNING SYSTEM INSTALLATION. CALL 1-888-892-2894 OR VISIT WWW.STORMTECH.COM TO RECEIVE A COPY OF THE LATEST STORMTECH INSTALLATION INSTRUCTIONS.  
4. CHAMBERS SHALL MEET THE DESIGN REQUIREMENTS AND LOAD FACTORS SPECIFIED IN SECTION 12.12 OF THE LATEST EDITION OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS.

**ACCEPTABLE FILL MATERIALS  
STORMTECH SC-740 CHAMBER SYSTEMS**

MATERIAL LOCATION	DESCRIPTION	AASHTO M43 DESIGNATION	AASHTO M145 DESIGNATION	COMPACTION/DENSITY REQUIREMENT
FILL MATERIAL FROM 18" TO GRADE ABOVE CHAMBERS	PER GEOTECHNICAL ENGINEER'S RECOMMENDATION CHECK PLANS FOR PAVEMENT SUBGRADE REQUIREMENTS.	N/A	N/A	PREPARE PER GEOTECHNICAL ENGINEER'S RECOMMENDATIONS. PAVED INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS.
FILL MATERIAL FOR 6" TO 18" ELEVATION ABOVE CHAMBERS (24" FOR UNPAVED INSTALLATIONS)	GRANULAR WELL-GRADED SOIL/AGGREGATE MIXTURES, <35% FINES.	3, 357, 4, 467, 5, 56, 57, 6, 67, 68, 7, 76, 8, 89, 9, 10	A-1, A-2, A-3	COMPACT IN 6" LIFTS TO A MINIMUM 95% STANDARD PROCTOR DENSITY. ROLLER GROSS VEHICLE WEIGHT NOT TO EXCEED 12,000 LBS. DYNAMIC FORCE NOT TO EXCEED 20,000 LBS.
EMBEDMENT STONE SURROUNDING AND TO A 6" ELEVATION ABOVE CHAMBERS	CLEAN ANGULAR STONE WITH THE MAJORITY OF PARTICLES BETWEEN 1/4" - 2 INCH 35% VOID RATIO REQUIRED	3, 357, 4, 467, 5, 56, 57	N/A	NO COMPACTION REQUIRED 35% VOID RATIO REQUIRED
FOUNDATION STONE BELOW CHAMBERS	CLEAN ANGULAR STONE WITH THE MAJORITY OF PARTICLES BETWEEN 1/4" - 2 INCH	3, 357, 4, 467, 5, 56, 57	N/A	PLATE COMPACT OR ROLL TO ACHIEVE A 95% STANDARD PROCTOR DENSITY

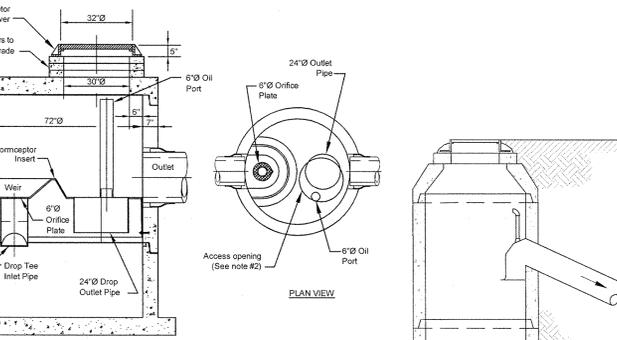
PLEASE NOTE: THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN CRUSHED ANGULAR. FOR EXAMPLE, THE STONE MUST BE SPECIFIED AS CLEAN, CRUSHED, ANGULAR NO. 4 STONE. STORMTECH RECOMMENDS HARDNESS AND DURABILITY CRITERIA FOR USE OF RECYCLED CONCRETE IN A AND B LOCATIONS. CONTACT STORMTECH FOR "TECH SHEET # 4" ON "RECYCLED CONCRETE STRUCTURAL BACKFILL".

NOTE:  
FOR DESCRIPTIONS, MATERIALS, AND CONSTRUCTION METHODS, SEE LATEST SPECIFICATIONS



**PRECAST CONCRETE DRAIN MANHOLE  
(TOWN OF WESTWOOD STANDARD DETAIL #202.4.0)**

N.T.S.

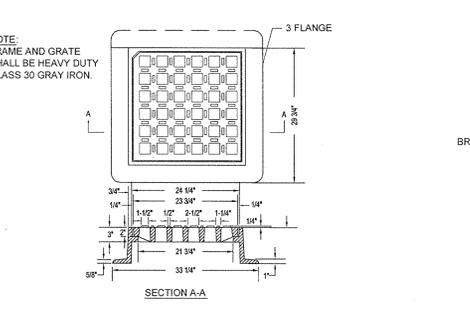


NOTES:  
1. THE USE OF FLEXIBLE CONNECTION IS RECOMMENDED AT THE INLET AND OUTLET WHERE APPLICABLE.  
2. THE COVER SHOULD BE POSITIONED OVER THE OUTLET DROP PIPE AND THE OIL PORT.  
3. THE STORMCEPTOR SYSTEM IS PROTECTED BY ONE OR MORE OF THE FOLLOWING U.S. PATENTS: #4985149, #5498331, #5725760, #5763115, #5849181, #6069765, #6371690.  
4. CONTACT A CONCRETE PIPE DIVISION REPRESENTATIVE FOR FURTHER DETAILS NOT LISTED ON THIS DRAWING.  
5. FOR USE WITH STC-6.2.

**STC 900 PRECAST CONCRETE STORMCEPTOR**

**PRECAST CONCRETE CATCH BASIN DETAIL  
(TOWN OF WESTWOOD STANDARD DETAIL #201.4.0)**

N.T.S.

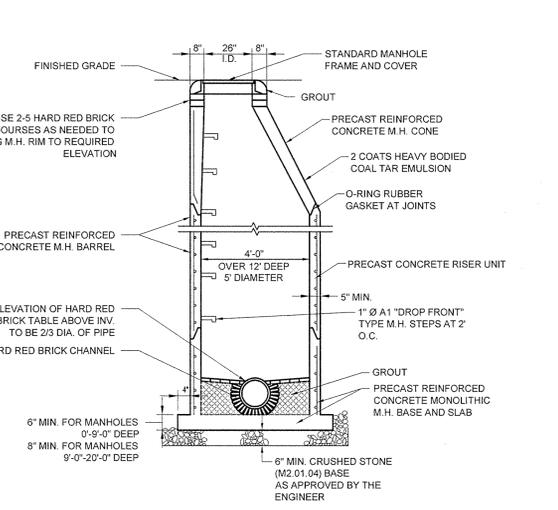


**CATCH BASIN FRAME AND GRATE DETAIL**

N.T.S.

**SEWER TRENCH SECTION DETAIL**

N.T.S.

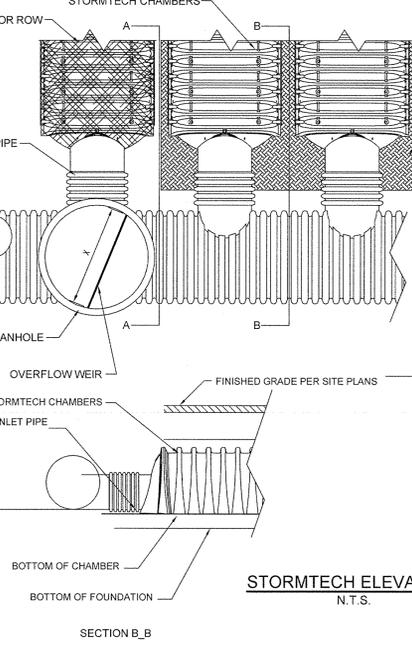


**TYPICAL SEWER MANHOLE  
(TOWN OF WESTWOOD STANDARD DETAIL #44)**

N.T.S.

**STORMTECH - TECHNICAL SECTION**

N.T.S.



PLACE MINIMUM 12.5' OF AASHTO M288 CLASS 1 WOVEN GEOTEXTILE OVER BEDDING STONE FOR SCOUR PROTECTION AT ALL CHAMBER INLET ROWS

SC-740 STORMTECH CHAMBERS

TO OUTLET CONTROL STRUCTURE

OUTLET PIPE

WEIR PLATE

ISOLATOR ROW

STORMTECH STUB PREFABRICATED END CAP

24" ISOLATOR ROW PIPE

MANIFOLD PIPE

SECTION A-A

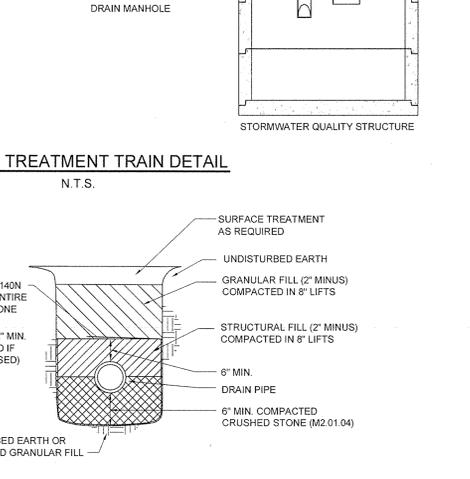
SECTION B-B

STORMTECH ELEVATIONS

N.T.S.

**TYPICAL TREATMENT TRAIN DETAIL**

N.T.S.



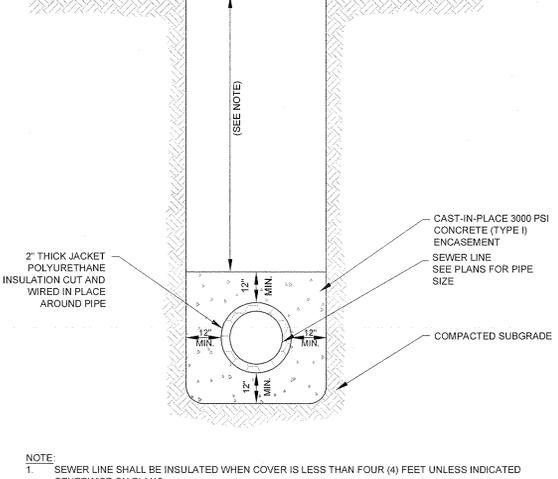
NOTES:  
1. IN CASES WHERE 3/4" STONE IS USED FILTER FABRIC MUST BE INSTALLED AROUND ENTIRE PERIMETER OF STONE MATERIAL.

**DRAIN PIPE BEDDING DETAIL**

N.T.S.

**INSULATED SEWER**

N.T.S.



NOTE:  
1. SEWER LINE SHALL BE INSULATED WHEN COVER IS LESS THAN FOUR (4) FEET UNLESS INDICATED OTHERWISE ON PLANS.  
2. PROVIDE CONCRETE ENCASEMENT IN VEHICULAR AREAS WHEN COVER IS LESS THAN THREE (3) FEET.

**INSULATED SEWER**

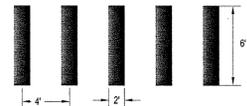
N.T.S.

MARK	DATE	DESCRIPTION
1	11/08/13	FOR SCHEDULE

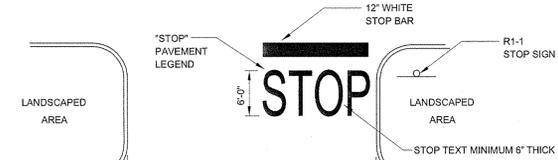
Client: Westwood Marketplace Holdings LLC  
University Station - University Avenue  
Bridges at University Station Enabling Package  
Development Area B of the University Station Master Development Plan

Project No.: 127-3659-12003  
Designed By: A.F.T./M.K.M.  
Drawn By: J.V.B./S.C.V.  
Checked By: N.H.C./R.D.F.

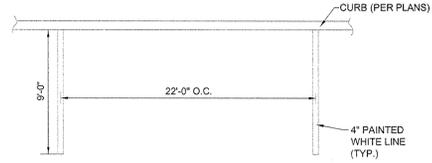
**Site Development Plans - Details**



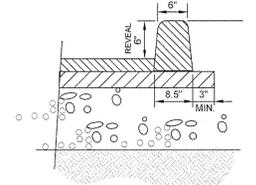
NOTE:  
ALL STRIPING SHALL BE 12" PAINTED WHITE LINE.  
**CROSSWALK STRIPING DETAIL**  
N.T.S.



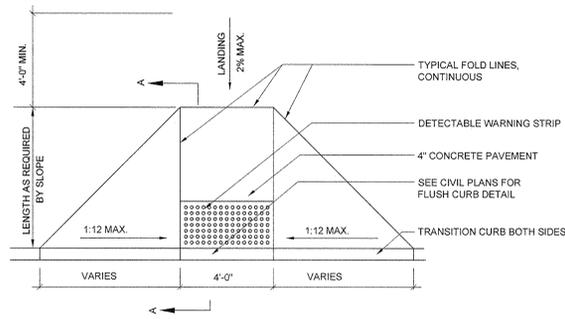
**STOP BAR AND LEGEND**  
N.T.S.



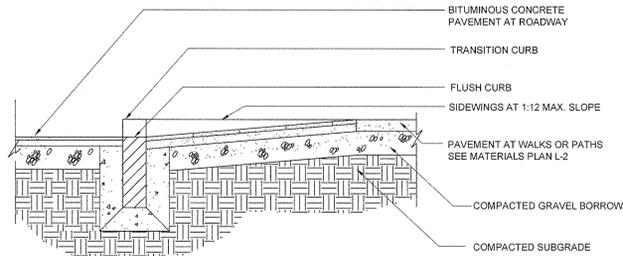
**PAVEMENT SPACE DETAIL**  
N.T.S.



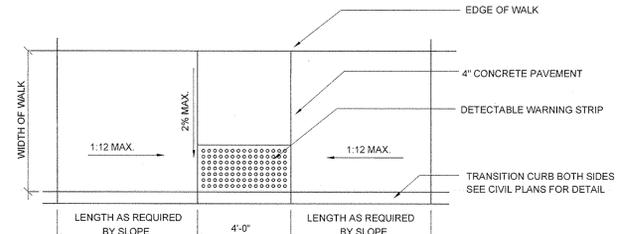
**EXTRUDED CONCRETE CURB**  
N.T.S.



**RAMP TYPE A: TYPICAL PLAN VIEW**



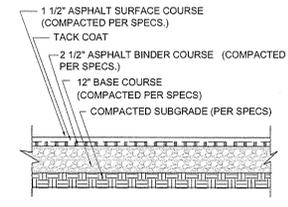
**RAMP TYPE A: TYPICAL CROSS SECTION A-A**



**RAMP TYPE B: TYPICAL PLAN VIEW**

**ADA HANDICAP ACCESSIBLE RAMPS**

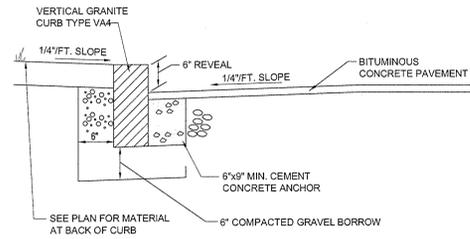
N.T.S.



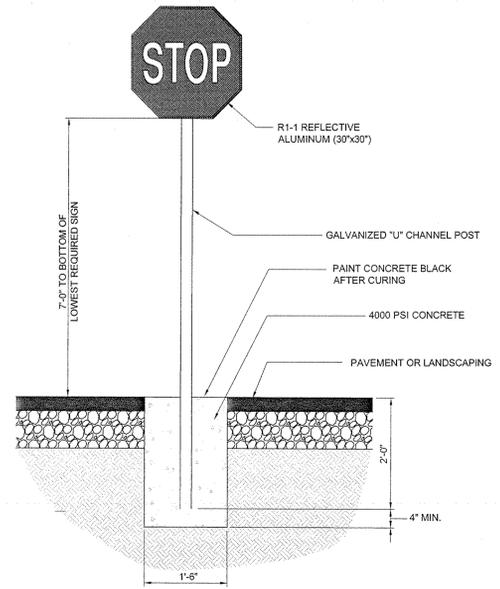
NOTE: BITUMINOUS CONCRETE TO MEET MHD M3.11.03  
NOTE: ALL PAVEMENT SECTION DETAILS ARE PER THE GEOTECH REPORT, SEE GEOTECH REPORT FOR MORE INFORMATION.

**HEAVY DUTY ASPHALT PAVEMENT SECTION**

N.T.S.

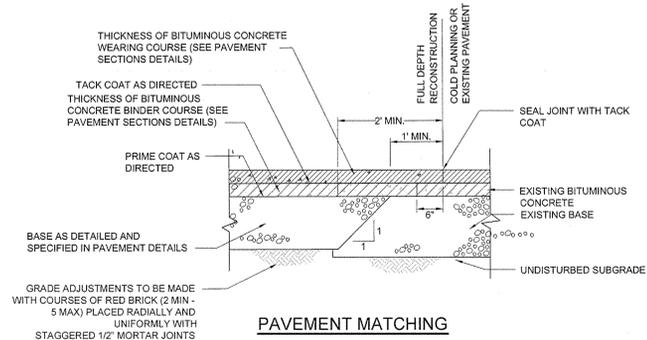


**GRANITE CURB DETAIL**  
N.T.S.



**STOP SIGN DETAIL**

N.T.S.



**PAVEMENT MATCHING**  
N.T.S.

IDENTIFICATION NUMBER	SIZE OF SIGN		TEXT	COLOR			POST SIZE AND NUMBER REQUIRED	UNIT AREA (sq ft)	AREA IN SQUARE METER
	WIDTH (mm)	HEIGHT (mm)		BACK-GROUND	LEGEND	BORDER			
R1-1	750	750	STOP	RED	WHITE	WHITE	P5-10	0.56	6.16

- NOTES:  
1. HIGH INTENSITY REFLECTIVE SHEETING TYPE III (CONFORMING TO SECTION M9.30.0) SHALL BE USED. SIGNS MUST MEET TOWN OF WESTWOOD SIGN STANDARDS AND/OR "STANDARD HIGHWAY SIGNS AS SPECIFIED IN THE 2003 M.U.T.C.D."  
2. FOR TEXT HEIGHT SEE TOWN OF WESTWOOD SIGN STANDARDS AND/OR "STANDARD HIGHWAY SIGNS AS SPECIFIED IN THE 2003 M.U.T.C.D."

**TRAFFIC SIGN SUMMARY**

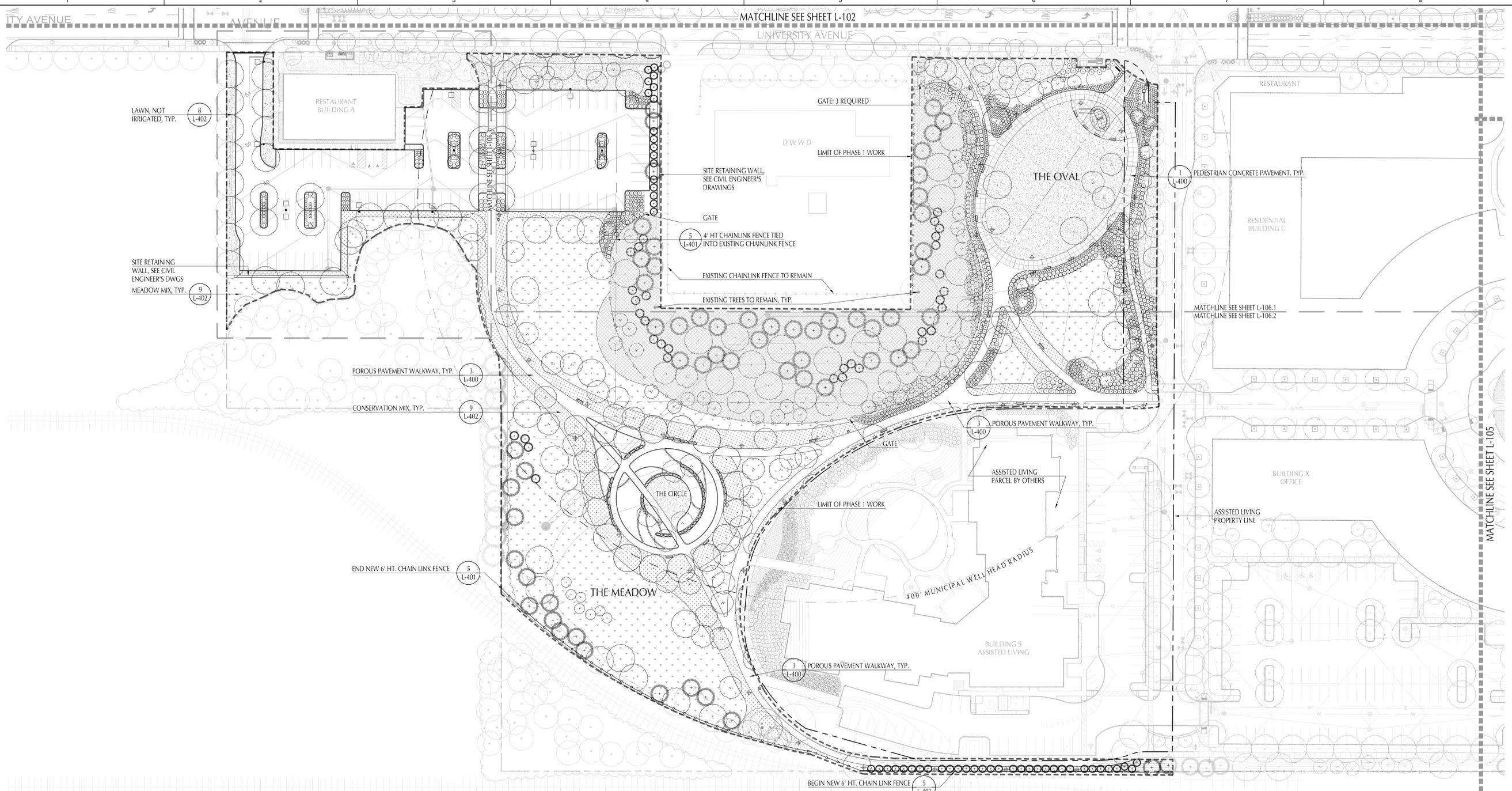


MARK	DATE	DESCRIPTION
1	11/08/13	TDR Started

Client: Westwood Marketplace Holdings LLC  
Prof. Loc.: University Ave, Westwood, MA  
Project No.: 127-3659-12003  
Designed By: A.F.T./M.K.M.  
Drawn By: J.V.B./S.C.V.  
Checked By: N.H.C./R.F.D.  
Bridges at University Station Enabling Package  
Development Area B of the University Station Master Development Plan  
Site Development Plans - Details

Project No.: 127-3659-12003  
Designed By: A.F.T./M.K.M.  
Drawn By: J.V.B./S.C.V.  
Checked By: N.H.C./R.F.D.

11/7/2013 12:24:48 PM - Z:\PROJECTS\UNIVERSITY STATION\CAD\PHASE 1\_CADD\CD-PLAN\_L-106\_Series\_Meadow.dwg - LUCY THAYER



**GENERAL NOTES**

- EXISTING CONDITIONS ARE TAKEN FROM A SURVEY PLAN ENTITLED "EXISTING CONDITIONS SURVEY", BY WSP SELLS DATED JUNE 22, 2012.
- CONTRACTOR TO VERIFY EXISTING CONDITIONS IN THE FIELD PRIOR TO BIDDING. REPORT ANY DISCREPANCY BETWEEN THE PLANS AND THE ACTUAL FIELD CONDITIONS TO THE LANDSCAPE ARCHITECT PRIOR TO COMMENCING WITH CONSTRUCTION.
- PRIOR TO COMMENCING ANY EXCAVATION WORK, THE CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES IN ACCORDANCE WITH NOTIFICATION PROCEDURES PROMOTED BY RESPECTIVE UTILITY COMPANIES.
- THE LOCATIONS OF ALL UNDERGROUND UTILITIES SHOWN ON THIS PLAN ARE DIAGRAMMATIC ONLY. CONTRACTOR SHALL COORDINATE LOCATION OF ALL UTILITIES LINES, DUCTS, CONDUITS, SLEEVES, FOOTINGS, ETC., WITH LOCATIONS OF PROPOSED LANDSCAPE ELEMENTS (FENCE, FOOTINGS, TREE ROOTBALLS, PROPOSED LIGHTING FOOTINGS, ETC.). EXCAVATION REQUIRED WITHIN PROXIMITY OF UTILITY LINES SHALL BE DONE BY HAND. ANY DAMAGE AND INCURRED COSTS DUE TO FAILURE OF THE CONTRACTOR TO CONTACT THE PROPER AUTHORITIES SHALL BE BORNE BY THE CONTRACTOR. CONTRACTOR IS RESPONSIBLE FOR ALL DAMAGE DUE TO HIS/HER OPERATIONS INSIDE AND OUTSIDE OF THE CONTRACT LIMIT LINE. ANY AREAS OUTSIDE THE LIMIT OF WORK THAT ARE DISTURBED SHALL BE RESTORED TO ITS ORIGINAL CONDITION AT NO ADDITIONAL COST TO THE OWNER. CONTRACTOR SHALL MEET LINE AND GRADE OF EXISTING CONDITIONS AT LIMIT OF WORK LINE.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING TREES AS SHOWN ON THE DRAWINGS DESIGNATED TO REMAIN, FOR THE LENGTH OF THE CONSTRUCTION PERIOD. VEHICLES SHALL NOT BE PARKED, NOR SHALL CONSTRUCTION MATERIALS BE STORED, BENEATH THE DRIP LINE OF THE TREES TO BE SAVED.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING TREES AS SHOWN ON THE DRAWINGS DESIGNATED TO REMAIN, FOR THE LENGTH OF THE CONSTRUCTION PERIOD. VEHICLES SHALL NOT BE PARKED, NOR SHALL CONSTRUCTION MATERIALS BE STORED, BENEATH THE DRIP LINE OF THE TREES TO BE SAVED.
- ALL ITEMS REQUIRING REMOVAL SHALL BE REMOVED TO FULL DEPTH TO INCLUDE BASE MATERIAL AND FOOTINGS OR FOUNDATIONS AS APPLICABLE, AND LEGALLY DISPOSED OF OFF-SITE BY CONTRACTOR OR REUSED AS DIRECTED BY THE OWNER.
- CONTRACTOR SHALL STRIP AND STOCKPILE EXISTING TOPSOIL TO FULL DEPTH WITHIN LIMIT OF WORK. LOAM OR TOPSOIL SHALL NOT BE REMOVED FROM THE SITE, UNLESS APPROVED BY THE LANDSCAPE ARCHITECT.
- AT ALL LOCATIONS WHERE EXISTING PAVEMENT ADJUTS NEW CONSTRUCTION, THE EDGE OF THE EXISTING PAVEMENT SHALL BE SAW CUT TO A CLEAN, SMOOTH EDGE. WHERE NEW PAVING MEETS EXISTING PAVING, MEET LINE AND GRADE OF EXISTING WITH NEW.
- PROVIDE EXPANSION JOINTS AT ALL CURBS, STEPS, LIGHT POLE BASES, AND MANHOLES, AND AS SHOWN ON PLAN.
- CONTRACTOR SHALL BLEND NEW EARTHWORK SMOOTHLY INTO EXISTING, PROVIDING VERTICAL CURVES OR ROUNDINGS AT ALL TOP AND BOTTOM OF SLOPES.
- FITCH EVENLY BETWEEN SPOT GRADES. ALL PEDESTRIAN PAVED AREAS MUST PITCH TO DRAIN AT A MINIMUM SLOPE OF ONE-EIGHTH INCH (1/8") PER FOOT. ANY SITE CONDITIONS OR ISSUES NOT ALLOWING THIS TO OCCUR SHALL BE REPORTED TO THE LANDSCAPE ARCHITECT PRIOR TO CONTINUING THE WORK.
- CONTRACTOR SHALL STAKE THE CENTER LINE AND EDGES OF ALL LANDSCAPE ELEMENTS IN THE FIELD FOR APPROVAL BY THE LANDSCAPE ARCHITECT PRIOR TO BEGINNING THE WORK.

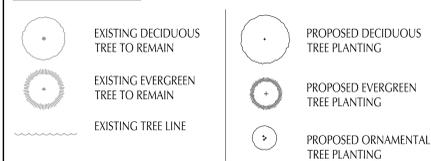
**LAYOUT AND MATERIALS NOTES:**

- CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS IN THE FIELD AND REPORT ANY DISCREPANCIES TO THE OWNER'S REPRESENTATIVE PRIOR TO STARTING WORK.
- ALL LINES AND DIMENSIONS ARE PARALLEL OR PERPENDICULAR TO THE LINES FROM WHICH THEY ARE MEASURED UNLESS OTHERWISE NOTED.
- ALL DIMENSIONS ARE FROM FACE OF CURB, WALL, OR BUILDING OR CENTERLINE OF PAVEMENT UNLESS OTHERWISE NOTED.
- ALL LINE AND GRADE WORK PER DRAWINGS AND SPECIFICATIONS SHALL BE LAID OUT BY A REGISTERED CIVIL ENGINEER OR SURVEYOR ENGAGED BY THE GENERAL CONTRACTOR.
- CONTRACTOR SHALL STAKE THE CENTER LINE OF ALL PATHS IN THE FIELD FOR APPROVAL BY THE OWNER'S REPRESENTATIVE PRIOR TO BEGINNING WORK.
- AT ALL LOCATIONS WHERE EXISTING PAVING ADJUTS NEW CONSTRUCTION, THE EDGE OF THE EXISTING PAVEMENT SHALL BE SAW CUT TO A CLEAN, SMOOTH EDGE.
- WHERE NEW PAVING OR EARTHWORK MEETS EXISTING PAVING OR EARTHWORK, SMOOTHLY BLEND LINE OF EXISTING WITH NEW.
- RESTORE EXISTING CONDITIONS AS NECESSARY IN ALL AREAS DISTURBED BY THE CONSTRUCTION OF THIS PROJECT, INCLUDING, BUT NOT LIMITED TO, RESETTING SITE IMPROVEMENTS, REPAVING AND SEEDING.

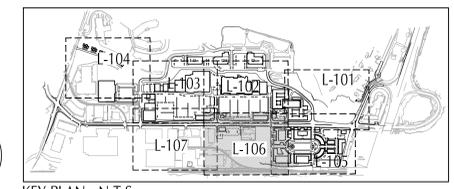
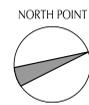
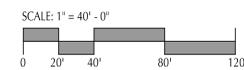
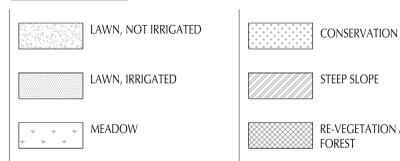
**PLANTING AND SEEDING NOTES:**

- THE CONTRACTOR SHALL SUPPLY ALL NEW PLANT MATERIAL IN QUANTITIES SUFFICIENT TO COMPLETE THE PLANTING SHOWN ON THE DRAWINGS. IF DISCREPANCIES EXIST BETWEEN THE NUMBER OF PLANTS DRAWN ON THE PLANTING PLAN AND THE NUMBER OF PLANTS IN THE PLANT LIST, THE PLANTING PLAN SHALL GOVERN.
- ALL NEW PLANT MATERIAL SHALL CONFORM TO THE MINIMUM QUALITY GUIDELINES ESTABLISHED FOR NURSERY STOCK PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN, INC. IN ADDITION, ALL NEW PLANT MATERIAL FOR THE PROJECT SHALL BE OF SPECIMEN QUALITY.
- ALL NEW PLANTS TO BE BALLED AND BURLAPPED OR CONTAINER-GROWN, UNLESS OTHERWISE NOTED ON THE PLANT LIST.
- ANY PROPOSED SUBSTITUTIONS OF PLANT SPECIES SHALL BE MADE WITH PLANTS OF EQUIVALENT OVERALL FORM, HEIGHT, BRANCHING HABIT, FLOWER, LEAF, COLOR, FRUIT AND CULTURE, AND ONLY AFTER WRITTEN APPROVAL OF THE LANDSCAPE ARCHITECT.
- ALL NEW PLANTS SHALL BE TAGGED AND APPROVED BY THE LANDSCAPE ARCHITECT AT THE NURSERY PRIOR TO DIGGING OR DELIVERY TO THE SITE.
- CONTRACTOR SHALL LOCATE AND VERIFY ALL EXISTING UTILITY LINES PRIOR TO PLANTING AND SHALL REPORT ANY CONFLICTS TO THE LANDSCAPE ARCHITECT.
- STAKE LOCATION OF ALL PROPOSED PLANTING FOR APPROVAL BY LANDSCAPE ARCHITECT.
- NEW SHRUBS AND GROUND COVER SHALL BEAR THE SAME RELATIONSHIP TO GRADE AS IT BORE TO PREVIOUS GRADE. TREES SHALL BE SET 3" HIGHER THAN PREVIOUS GRADE. NO TREES SHALL BE PLANTED BEFORE ACCEPTANCE OF ROUGH GRADING.
- ALL PLANT BEDS TO RECEIVE TWO INCHES (2") OF BARK MULCH. COORDINATE WITH FINISH GRADE.
- ALL EXISTING TREES TO REMAIN SHALL BE PROPERLY PROTECTED DURING CONSTRUCTION. PROTECTION TECHNIQUES SHALL BE REVIEWED AND APPROVED BY THE LANDSCAPE ARCHITECT.
- CONTRACTOR SHALL PROVIDE FULL DEPTHS OF LOAM AS NOTED ON DETAILS, FOR ALL PLANTING.
- THE DATE OF THE CERTIFICATE OF FINAL ACCEPTANCE SHALL ESTABLISH THE COMMENCEMENT OF THE REQUIRED ONE-YEAR GUARANTEE AND ESTABLISHMENT PERIOD FOR PLANTING WORK. AT THE END OF THE GUARANTEE AND ESTABLISHMENT PERIOD, A FINAL INSPECTION WILL BE HELD TO DETERMINE WHETHER ANY PLANT MATERIAL REPLACEMENTS ARE REQUIRED. ALL REPLACEMENTS SHALL BE PLANTS OF THE SAME KIND AND SIZE SPECIFIED IN THE PLANT LIST. THE COST SHALL BE BORNE BY THE CONTRACTOR, EXCEPT FOR POSSIBLE REPLACEMENTS DUE TO VANDALISM OR NEGLIGENCE ON THE PART OF OTHERS.
- EXISTING ON-SITE SOILS MAY BE SUITABLE FOR RE-USE AND SHALL BE TESTED FOR TEXTURE, CONSISTENCY, PH, NUTRIENTS AND CONTAMINANTS PRIOR TO SITE PREPARATION IN ACCORDANCE WITH SPECIFICATION SECTION 02001, PLANTING SOILS.
- IF IMPORTED OFF-SITE SOILS ARE NECESSARY, EFFORTS SHALL BE MADE TO OBTAIN AND SORT SOILS FROM THE GREATER PROJECT SITE BEFORE IMPORTING FROM ELSEWHERE.
- ALL EXISTING VEGETATION MUST BE REMOVED PRIOR TO PLANTING OR SEEDING.
- AFTER SEEDING, MULCH THE SEEDING AREA WITH APPROXIMATELY ONE-INCH OF WEED-FREE STRAW, SUCH AS WINTER WHEAT OR MARSH HAY TO CONTROL EROSION ON STEEP SLOPES AND KEEP THE SOIL MOIST DURING GERMINATION.
- WATERING AND FERTILIZATION:
  - WATER NEWLY SEEDD AREAS 2-3 TIMES PER WEEK FOR THE FIRST FOUR WEEKS. CONTINUE TO WATER 1-2 TIMES PER WEEK THROUGHOUT THE FIRST GROWING SEASON. THOROUGH SCORINGS ARE BETTER THAN LIGHT SPRINKLINGS TO ENCOURAGE DEEP ROOT GROWTH.
  - ONE DAY OF HEAVY RAIN CAN COMPENSATE FOR ONE TIME OF WATERING.
  - ONCE PLANTS ARE ESTABLISHED (2nd season), WATERING IS NOT ALLOWED IN THE MEADOW/ZONE ONE AREA.
  - FERTILIZER IS NOT ALLOWED IN THE MEADOW/ZONE ONE AREA.

**PLANTING LEGEND**



**SEEDING LEGEND**



**NOT FOR CONSTRUCTION**

PREPARED BY:  
**Shadley Associates**  
 Landscape Architecture / Site Planning Consultants  
 1730 Massachusetts Ave. • P 781.652.8809  
 Lexington, MA 02420 • F 781.862.2467  
 www.shadleyassociates.com



MARK	DATE	DESCRIPTION
1	11/08/13	PDF Submittal

Client: Westwood Marketplace Holdings, LLC  
 Proj. Loc.: University Avenue, Westwood, MA  
 University Station - University Avenue  
 Bridges at University Station Enabling Package  
 Development Area B of the University Station Master Development Plan  
 The Meadow  
 Overall Plan  
 Project No.: 127-3659-12003  
 Designed By: JPS / IR  
 Drawn By: LT  
 Checked By:  
**L-106**  
 Copyright: Terra Tech  
 Bar Measures 1 inch

SEED MIX SCHEDULE

MEADOW SEED MIX		
(SHOWY NORTHEAST NATIVE WILDFLOWER & GRASS MIX AS PROVIDED BY ERNST CONSERVATION SEEDS Ernst Conservation Seeds 8884 Mercer Pike, Meadville PA 16335 (800)873-3321 http://www.ernstseed.com)		
RATE: 20 LBS / ACRE		
SEED %	BOTANICAL NAME	COMMON NAME
37%	Andropogon gerardii 'Niagara'	Niagara Big Bluestem
10%	Elymus virginicus	Virginia Wildrye
10%	Bouteloua curtipendula 'Butte'	Butte Sidecoats Grama
9%	Sorghastrum nutans 'Southlow'	Southlow Indiangrass
4%	Chamaecrista fasciculata	Partridge Pea
3%	Penstemon digitalis	Tall White Beardtongue
3%	Liatris spicata	Spiked Gayfeather
3%	Tradescantia ohioensis	Ohio Spiderwort
3%	Rudbeckia hirta	Blackeyed Susan
2%	Penstemon hirsutus	Hairy Beardtongue
2%	Aster prenanthoides	Zigzag Aster
2%	Aster novae-angliae	New England Aster
2%	Senna hebecarpa	Wild Senna
2%	Helopsis helianthoides	Oxeye Sunflower
2%	Agrostis perennans	Autumn Bentgrass
1%	Baptisia australis	Blue False Indigo
1%	Senna marilandica	Maryland Senna
1%	Solidago juncea	Early Goldenrod
1%	Monarda fistulosa	Wild Bergamot
1%	Rudbeckia fulgida var. fulgida	Orange Coneflower
1%	Asclepias tuberosa	Butterfly Milkweed
Total 100%		

CONSERVATION SEED MIX		
(RECLAIM NATIVE SHORTGRASS MIXTURE AS PROVIDED BY PENNINGTON SEED INC. Pennington Seed, Inc. P.O. Box 290, Madison GA 30650 (800)873-3321 http://www.penningtonseed.com)		
RATE: 40 - 60 LBS / ACRE		
SEED %	BOTANICAL NAME	COMMON NAME
40%	Andropogon gerardii	Little Bluestem
30%	Festuca spp.	Hard Fescue
15%	Bouteloua gracilis	Blue Grama
15%	Bouteloua curtipendula	Sidecoats Grama
Total 100%		

PLANT SCHEDULE - NOTE THIS SCHEDULE INCLUDES ALL PLANTS REQUIRED FOR DRAWINGS L-106.1, L-106.2, L-106.3

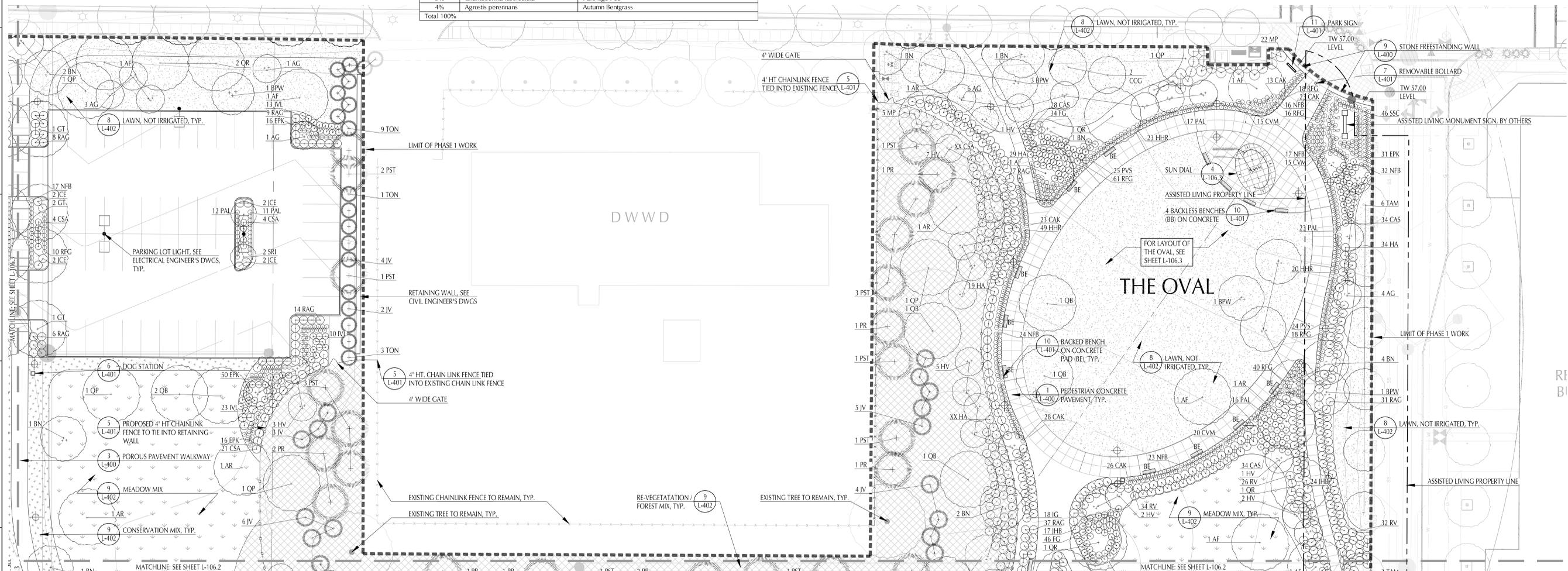
SYM	QTY	BOTANICAL NAME	COMMON NAME	INSTALL SIZE	MIN. ROOTBALL DIAMETER	ROOT	SPACING / COMMENTS	GROWTH RATE	MATURE SIZE* (HT. x SP.)	N**
DECIDUOUS SHADE TREES										
AF	21	Acer x freemanii 'Autumn Blaze'	Autumn Blaze Red Maple	2 1/2" - 3" CAL	28" DIA	B&B		MED.-FAST	50' x 40'	Yes
AR	15	Acer rubrum	Red Maple	1 1/2" - 2" CAL	20" DIA	B&B		MED.-FAST	40'-60' x 30'-50'	Yes
GT	12	Gleditsia triacanthos inermis 'Halka'	Halka Honey Locust	1 1/2" - 3" CAL	28" DIA	B&B		FAST	40' x 40'	Yes
PD	23	Populus deltoides	Eastern Cottonwood	1 1/2" - 3" CAL	28" DIA	B&B		FAST	70'-100' x 50'-75'	Yes
QB	13	Quercus bicolor	Swamp White Oak	2 1/2" - 3" CAL	28" DIA	B&B		MEDIUM	50'-60' x 50'-60'	Yes
QR	12	Quercus rubra	Red Northern Oak	2 1/2" - 3" CAL	28" DIA	B&B		FAST	60'-70' x 60'-70'	Yes
QP	13	Quercus palustris	Pin Oak	1 1/2" - 3" CAL	28" DIA	B&B		FAST	60'-70' x 25'-40'	Yes
TAM	9	Tilia americana 'McSentry'	McSentry Linden	2 1/2" - 3" CAL	28" DIA	B&B		MEDIUM	40'-45' x 25'-30'	Yes
EVERGREEN SHADE TREES										
JV	47	Juniperus virginiana	Eastern Redcedar	6'-8' HT	20" DIA	B&B	Single leader	MEDIUM	40'-50' x 8'-20'	Yes
PR	26	Pinus resinosa	Red Pine	8'-10' HT	28" DIA	B&B	Single leader	MEDIUM	50'-80' x 20'-40'	Yes
PST	30	Pinus strobus	Eastern White Pine	8'-10' HT	28" DIA	B&B	Single leader	FAST	50'-80' x 20'-40'	Yes
TOH	16	Thuja occidentalis 'Hetz Wintergreen'	Hetz Wintergreen Arborvitae	6'-8' HT	20" DIA	B&B	Single leader	SLOW-MED.	20'-30' x 5'-10'	Yes
TON	21	Thuja occidentalis 'Nigra'	Dark American Arborvitae	6'-8' HT	20" DIA	B&B	Single leader	SLOW-MED.	20'-30' x 4'-7'	Yes
TOB	9	Thuja occidentalis 'Brabant'	Brabant Arborvitae	6'-8' HT	20" DIA	B&B	Single leader	SLOW-MED.	12'-15' x 5'-7'	Yes
ORNAMENTAL TREES										
AG	17	Amelanchier x grandifolia 'Autumn Brilliance'	Autumn Brilliance Apple Serviceberry	8'-10' HT	28" DIA	B&B	3 - 5 Trunks	MED.-FAST	20'-25' x 20'-25'	Yes
BN	34	Betula nigra 'Heritage'	Heritage River Birch	8'-10' HT	28" DIA	B&B	4 - 5 Trunks	MED.-FAST	40'-40' x 40'-60'	Yes
BPW	32	Betula populifolia 'Whitespire Senior'	Whitespire Senior Birch	8'-10' HT	28" DIA	B&B	5 - 5 Trunks	MED.-FAST	40'-40' x 10'-20'	Yes
CC	9	Carpinus caroliniana	American Hornbeam	8'-10' HT	28" DIA	B&B	Single leader	SLOW	20'-30' x 20'-30'	Yes
CCG	2	Crataegus crus-galli inermis 'Crusader'	Crusader Thornless Cockspur Hawthorn	1 1/2" - 2" CAL	28" DIA	B&B	Single leader	MED.-FAST	20'-35' x 20'-35'	Yes
HV	44	Hamamelis virginiana	Witchhazel	8'-10' HT	28" DIA	B&B	3 Trunks	MEDIUM	15'-20' x 15'-20'	Yes
SRI	4	Syringa reticulata 'Ivory Silk'	Ivory Silk Japanese Tree Lilac	1 1/2" - 2" CAL	28" DIA	B&B	Single leader	MEDIUM	20'-25' x 15'-20'	No

SEED MIX SCHEDULE

RE-VEGETATION / FOREST SEED MIX		
(SHOWY NORTHEAST NATIVE WILDFLOWER & GRASS MIX AS PROVIDED BY ERNST CONSERVATION SEEDS Ernst Conservation Seeds 8884 Mercer Pike, Meadville PA 16335 (800)873-3321 http://www.ernstseed.com)		
RATE: 30 LBS / ACRE		
SEED %	BOTANICAL NAME	COMMON NAME
25%	Elymus virginicus	Virginia Wildrye
21%	Panicum clandestinum 'Tioga'	Tioga Deertongue
20%	Lolium multiflorum	Annual Ryegrass
10%	Festuca rubra 'Pernilawn'	Creeeping Red Fescue
10%	Panicum virgatum 'Shawnee'	Shawnee Switchgrass
5%	Carex vulpinoidea	Fox Sedge
5%	Chamaecrista fasciculata	Partridge Pea
4%	Agrostis perennans	Autumn Bentgrass
Total 100%		

SYM	QTY	BOTANICAL NAME	COMMON NAME	INSTALL SIZE	MIN. ROOTBALL DIAMETER	ROOT	SPACING / COMMENTS	GROWTH RATE	MATURE SIZE* (HT. x SP.)	N**	
SHRUBS											
AP	7	Aesculus parviflora	Bottlebrush Buckeye	2'-3" HT	-	-	#3 CONT	MEDIUM	8'-12' x 8'-15'	Yes	
CAS	100	Clethra alnifolia 'Sixteen Candles'	Sixteen Candles Summersweet Clethra	18"-24" HT	-	-	#2 CONT	SLOW-MED.	30'-36' x 30'-36'	No	
CAI	25	Cornus alba 'Ivory Halo'	Ivory Halo Tartarian Dogwood	18"-24" HT	-	-	#2 CONT	FAST	5'-6' x 5'-6'	No	
CSA	48	Cornus sericea 'Arctic Fire'	Arctic Fire Redosier Dogwood	18"-24" HT	-	-	#2 CONT	FAST	3'-4' x 3'-4'	Yes	
CP	61	Comptonia peregrina	Sweetfern	15"-18" HT	-	-	#2 CONT	SLOW-MED.	2'-4' x 4'-8'	Yes	
FG	191	Fothergilla gardenii	Dwarf Fothergilla	15"-18" HT	-	-	#2 CONT	SLOW	2'-3' x 2'-3'	Yes	
HA	74	Hydrangea arborescens 'Annabelle'	Annabelle Hydrangea	18"-24" HT	-	-	#2 CONT	FAST	3'-5' x 3'-5'	Yes	
IG	18	Ilex glabra 'Shamrock'	Shamrock Inkberry	18"-24" HT	-	-	#2 CONT	SLOW-MED.	3'-5' x 3'-4'	Yes	
IVF	25	Ilex verticillata	Winterberry	18"-24" HT	-	-	#2 CONT	Provide XX males	SLOW	3'-5' x 3'-5'	Yes
IVL	46	Itea virginica 'Little Henry'	Little Henry Sweetpire	15"-18" HT	-	-	#2 CONT	MEDIUM	3'-4' x 4'-6'	Yes	
JVG	16	Juniperus virginiana 'Grey Owl'	Grey Owl Juniper	18"-24" HT	-	-	#2 CONT	4' o.c. spacing	MEDIUM	3' x 6'	Yes
MP	27	Myrica pensylvanica	Northern Bayberry	18"-24" HT	-	-	#2 CONT	MEDIUM	5'-12' x 5'-12'	Yes	
RAG	169	Rhus aromatica 'Gro-Low'	Gro-Low Fragrant Sumac	12"-18" HT	-	-	#2 CONT	SLOW-MED.	3' x 6'-8'	Yes	
RV	126	Rosa virginiana	Virginia Rose	12"-18" HT	-	-	#2 CONT	FAST	4'-6' x 4'-6'	Yes	
TCG	25	Taxus cuspidata 'Greenwave'	Greenwave Japanese Yew	18"-24" HT	-	-	#2 CONT	MEDIUM	3'-4' x 6'-8'	No	
VT	25	Viburnum trilobum 'Bailey's Compact'	Bailey's Compact Am. Cranberrybush	18"-24" HT	-	-	#2 CONT	MEDIUM	5'-6' x 5'-6'	Yes	
GROUNDCOVERS											
AU	360	Arctostaphylos uva-ursi	Bearberry	-	-	-	#1 CONT	30' o.c. spacing	SLOW	6"-12" x 2'-4'	No
JCE	18	Juniperus conferta 'Emerald Sea'	Emerald Sea Shore Juniper	15"-18" SP	-	-	#2 CONT	4' o.c. spacing	SLOW-MED.	1'-2' x 6'-8'	Yes
JHB	299	Juniperus horizontalis 'Bar Harbor'	Bar Harbor Juniper	15"-18" SP	-	-	#2 CONT	4' o.c. spacing	SLOW-MED.	12" x 6'-8'	Yes
JHC	50	Juniperus horizontalis 'Blue Chip'	Blue Chip Juniper	15"-18" SP	-	-	#2 CONT	4' o.c. spacing	SLOW-MED.	8"-10" x 8'-10'	Yes
PERENNIALS											
AMS	370	Achillea millefolium 'Summer Pastels'	Summer Pastels Yarrow	-	-	-	#1 CONT	24" o.c. spacing		24"	No
CVM	50	Coreopsis verticillata 'Moonbeam'	Moonbeam Thread-leaved Coreopsis	-	-	-	#1 CONT	24" o.c. spacing		12"-18"	Yes
EPK	135	Echinacea purpurea 'Kim's Knee High'	Kim's Knee High Purple Coneflower	-	-	-	#1 CONT	24" o.c. spacing		18" - 24"	Yes
HHR	92	Hemerocallis x 'Happy Returns'	Happy Returns Daylily	-	-	-	#1 CONT	24" o.c. spacing		18"	No
NFB	134	Nepeta x faassenii 'Blue Wonder'	Blue Wonder Catmint	-	-	-	#1 CONT	24" o.c. spacing		10"	No
PAL	104	Perovskia atriplicifolia 'Little Spire'	Little Spire Russian Sage	-	-	-	#1 CONT	24" o.c. spacing		18"	No
RFG	173	Rudbeckia fulgida 'Goldsturm'	Goldsturm Black-eyed Susan	-	-	-	#1 CONT	24" o.c. spacing		2' - 3'	Yes
TVC	250	Tradescantia virginiana 'Concord Grape'	Concord Grape Spiderwort	-	-	-	#1 CONT	18" o.c. spacing		18"	Yes
ORNAMENTAL GRASSES & SEDGES											
AGN	50	Andropogon gerardii 'New Wave'	New Wave Big Bluestem	-	-	-	#1 CONT			4' - 8'	Yes
CAK	113	Calamagrostis x acutiflora 'Karl Foerster'	Karl Foerster Feather Reed Grass	-	-	-	#1 CONT	18" o.c. spacing		4' - 5'	No
PVS	49	Panicum virgatum 'Shenandoah'	Shenandoah Switch Grass	-	-	-	#1 CONT	24" o.c. spacing		4'	Yes
SSC	271	Schizachyrium scoparium	Little Bluestem	-	-	-	#1 CONT	24" o.c. spacing		24" - 36"	Yes

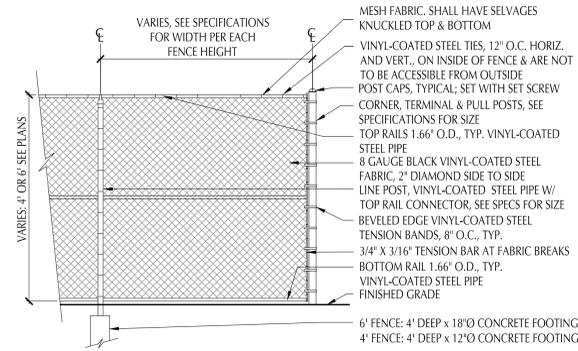
MATURE SIZE \* - INDICATES AVERAGE GROWTH UNDER OPTIMAL GROWING CONDITIONS  
N \*\* - NATIVE TO NEW ENGLAND OR EASTERN UNITED STATES







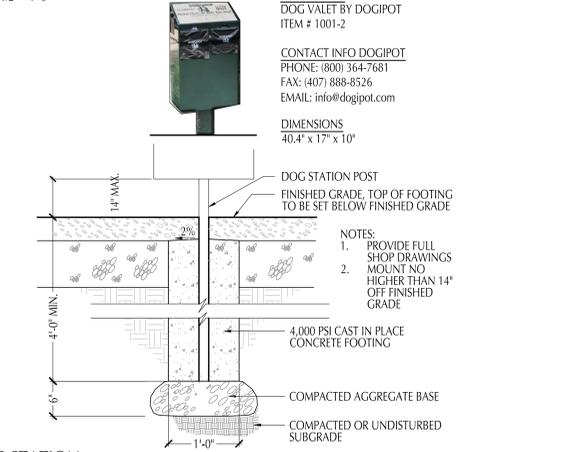




NOTE:  
 1. TOPS & BOTTOMS OF ALL FABRIC TO BE KNUCKLED DOWN. ALL FENCE FABRIC SHALL BE VINYL-COATED GALVANIZED STEEL AS SPECIFIED.  
 2. ALL HARDWARE SHALL BE GALVANIZED AND VINYL-COATED.  
 3. PROVIDE SHOP DRAWINGS.

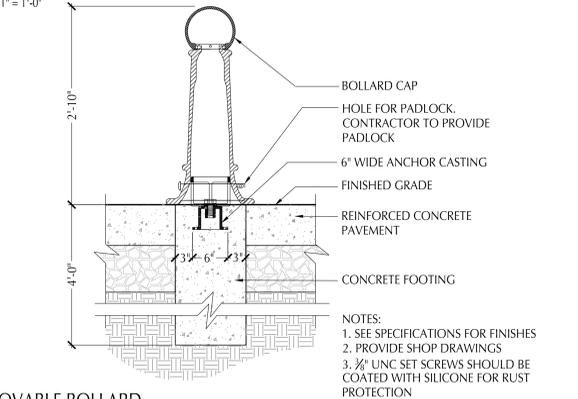
**5 CHAINLINK FENCE**

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



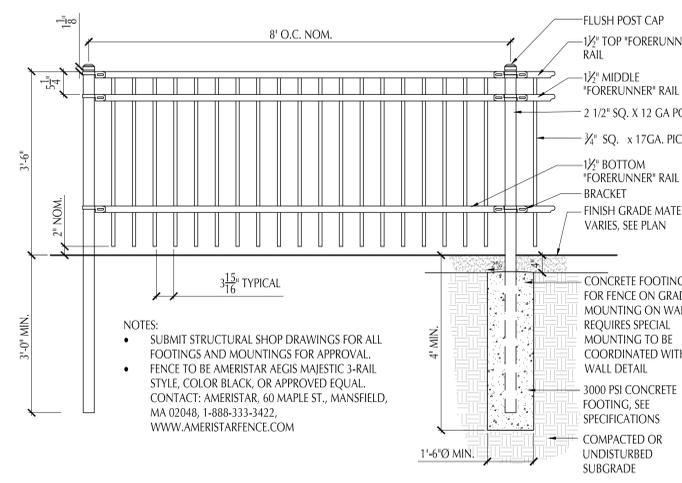
**6 DOG STATION**

SCALE: 1" = 1'-0"



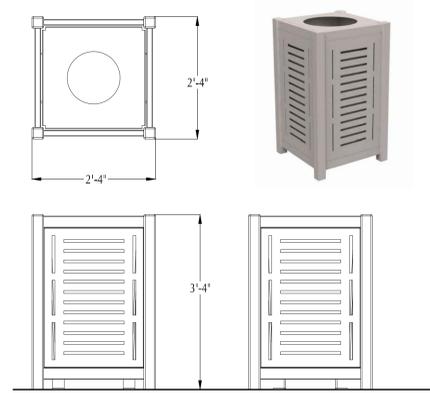
**7 REMOVABLE BOLLARD**

SCALE: 1" = 1'-0"



**8 42\"/>**

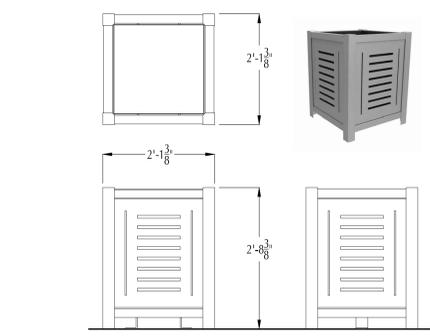
SCALE: 3/4" = 1'-0"



NOTE: SURFACE MOUNT RECEPTACLE TO 4\"/>

**1 LITTER RECEPTACLE**

SCALE: 3/4" = 1'-0"



NOTE: SURFACE MOUNT PLANTER TO 4\"/>

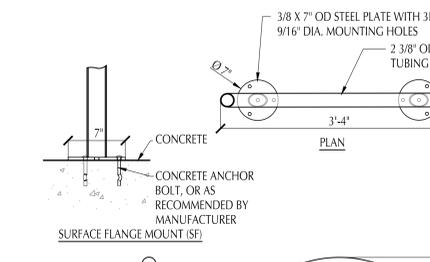
**2 PLANTER**

SCALE: 3/4" = 1'-0"



**3 ASH URN**

SCALE: N.T.S.

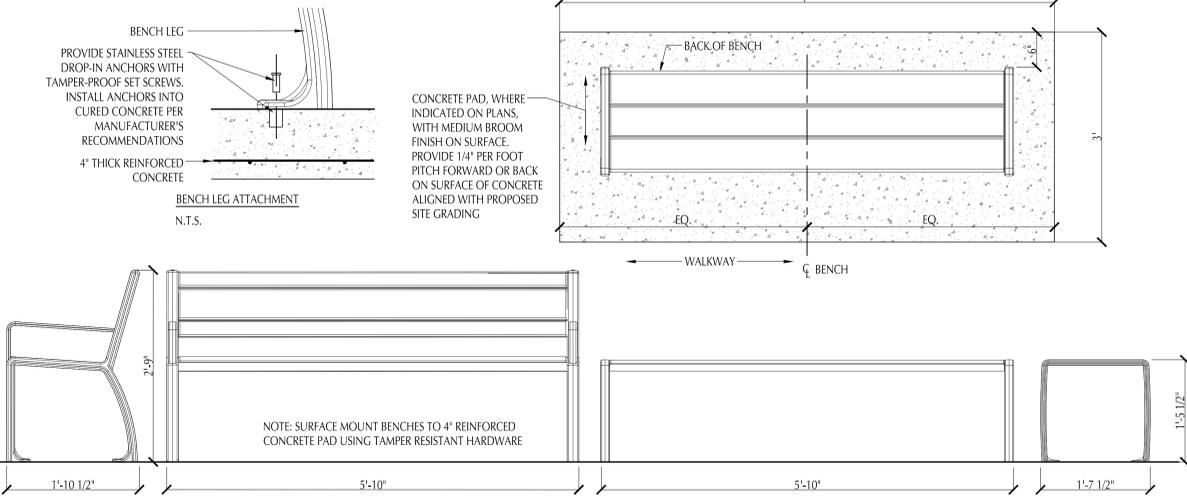


**4 BIKE RACK**

SCALE: 1" = 1'-0"

**9 42\"/>**

SCALE: 3/4" = 1'-0"



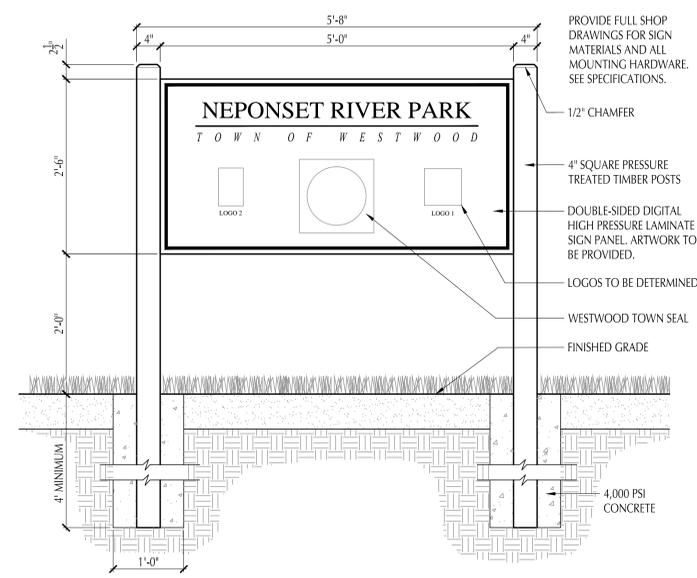
BACKED BENCH MODEL NO. MLB970W  
 SOLID CAST ALUMINUM BENCH ENDS AND ARM RESTS WITH HDPC SEAT AND BACK SLATS  
 MANUFACTURER: MAGLIN SITE FURNITURE  
 CONTACT: JILL ROBERTS, REGIONAL SALES MANAGER, JROBERTS@MAGLIN.COM, T:800.716.5506, F:877.260.9393



BACKLESS BENCH MODEL NO. MLB700W  
 SOLID CAST ALUMINUM BENCH ENDS WITH HDPC SEAT SLATS  
 MANUFACTURER: MAGLIN SITE FURNITURE  
 CONTACT: JILL ROBERTS, REGIONAL SALES MANAGER, JROBERTS@MAGLIN.COM, T:800.716.5506, F:877.260.9393

**10 BENCHES**

SCALE: 1" = 1'-0"



**11 PARK SIGN**

SCALE: 1" = 1'-0"

PREPARED BY:  
**Shadley Associates**  
 Landscape Architects / Site Planning Consultants  
 1730 Massachusetts Ave. • P 781.652.8809  
 Lexington, MA 02420 • F 781.862.2807  
 www.shadleyassociates.com

NOT FOR CONSTRUCTION

MARK	DATE	DESCRIPTION
1	11/08/13	IFDC Submittal

Client: Westwood Marketplace Holdings, LLC  
 Proj. Loc.: University Avenue, Westwood, MA  
 University Station - University Avenue  
 Bridges at University Station Enabling Package  
 Development Area B of the University Station Master Development Plan  
 Landscape Details

Project No.: 127-3659-12003  
 Designed By: JPS / IR  
 Drawn By: LT  
 Checked By:

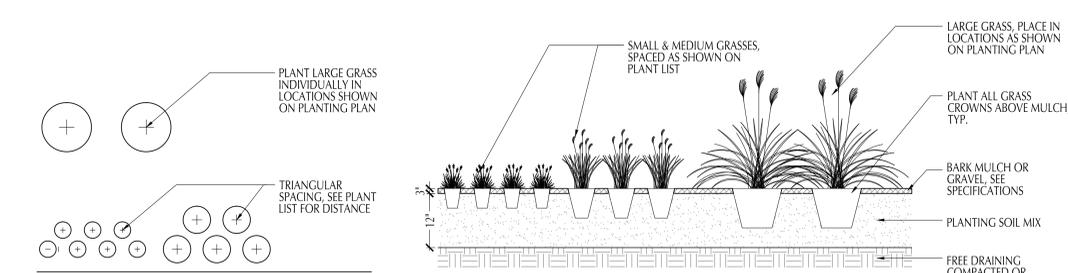
**L-401**

Bar Measures 1 inch

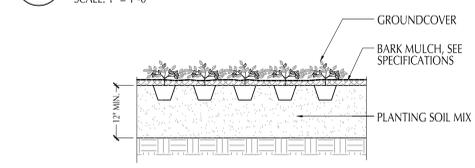
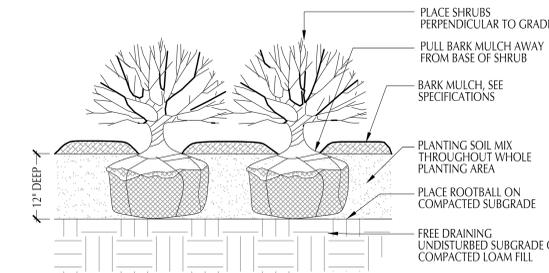
11/7/2013 10:48:03 AM - Z:\PROJECTS\UNIVERSITY STATION\CAD\PHASE 1\_CSD\DCD-DETAILS.DWG - IAN RAMEY

11/7/2013 10:48:26 AM - Z:\PROJECTS\UNIVERSITY STATION\CAD\PHASE 1\_CADD\DETAILS.DWG - IAN RAMEY

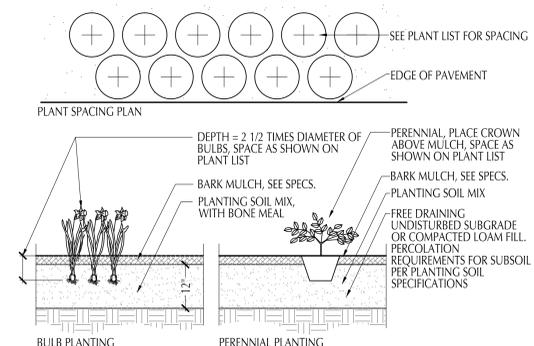
**10 ORNAMENTAL GRASS PLANTING**  
SCALE: 1/2" = 1'-0"



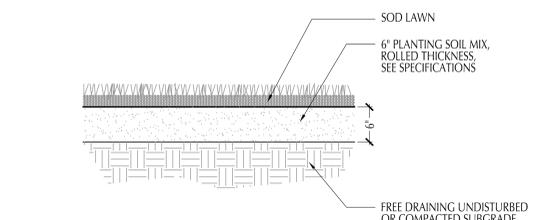
**4 SHRUB PLANTING**  
SCALE: 1" = 1'-0"



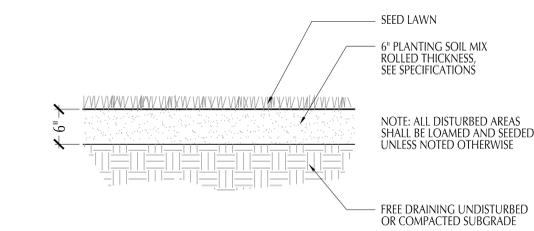
**5 GROUND COVER PLANTING**  
SCALE: 1" = 1'-0"



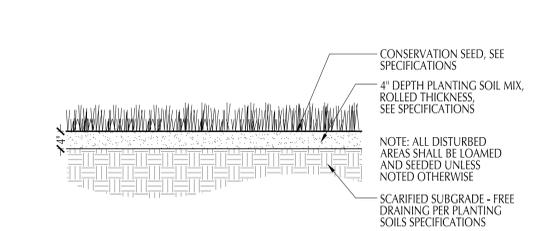
**6 BULB AND PERENNIAL PLANTING**  
SCALE: 3/4" = 1'-0"



**7 SOD LAWN**  
SCALE: 3/4" = 1'-0"

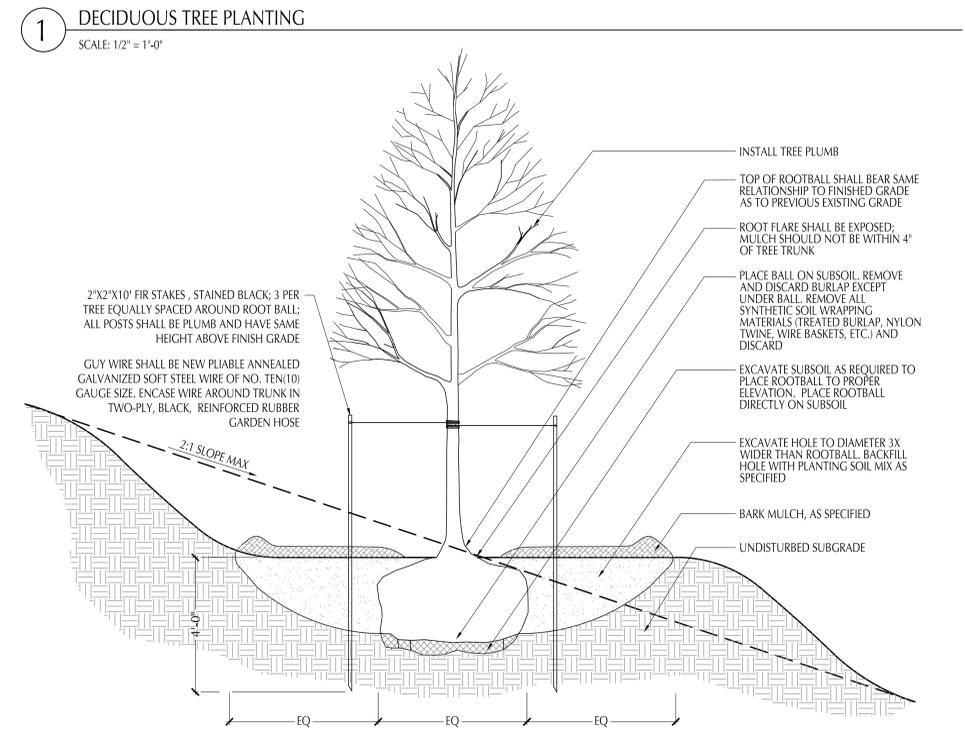
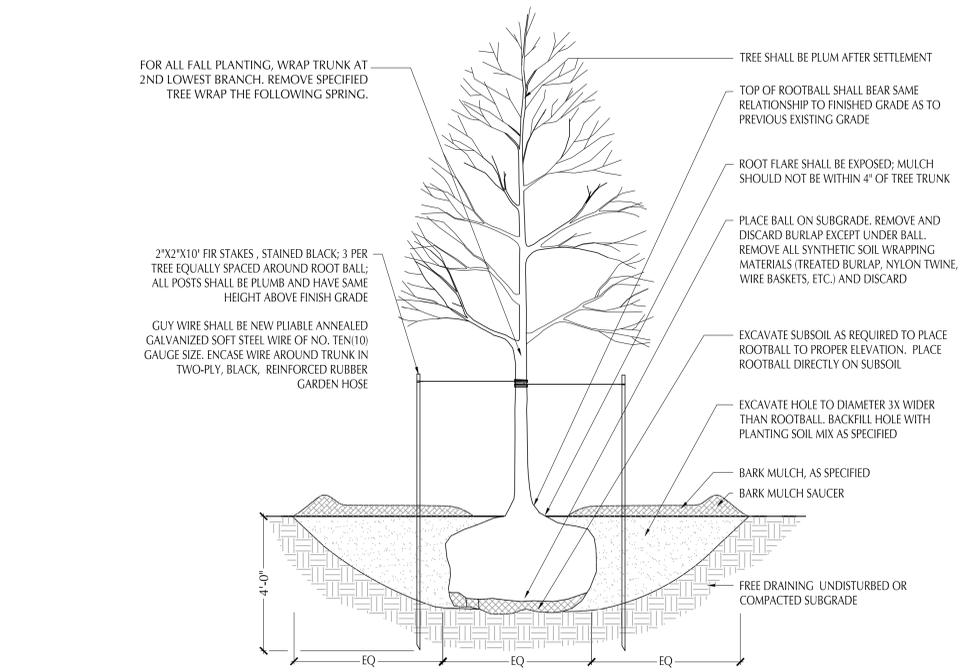


**8 SEEDED LAWN**  
SCALE: 3/4" = 1'-0"

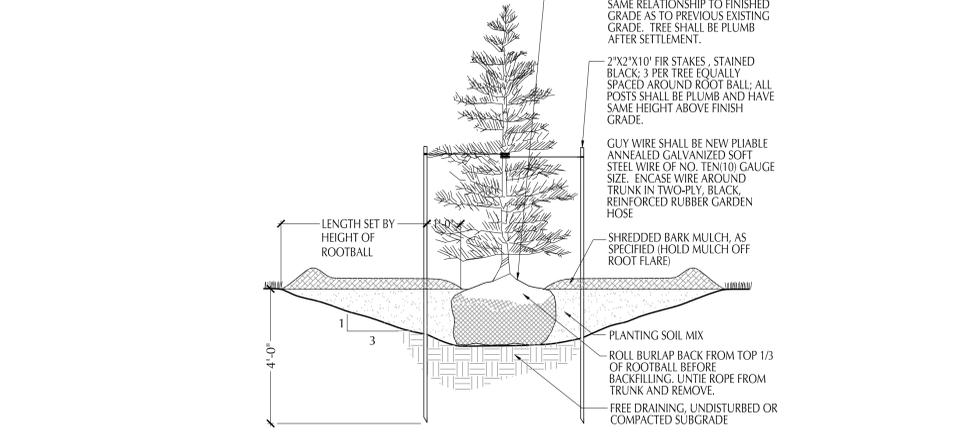


**9 CONSERVATION SEEDING**  
SCALE: 3/4" = 1'-0"

**1 DECIDUOUS TREE PLANTING**  
SCALE: 1/2" = 1'-0"



**2 DECIDUOUS TREE PLANTING ON SLOPE**  
SCALE: 1/2" = 1'-0"



**3 EVERGREEN TREE PLANTING**  
SCALE: 1/2" = 1'-0"

PREPARED BY: **Shadley Associates**  
Landscape Architects / Site Planning Consultants  
1730 Massachusetts Ave. • P 781.652.8809  
Levittown, MA 02420 • F 781.862.2467  
www.shadleyassociates.com

**NOT FOR CONSTRUCTION**

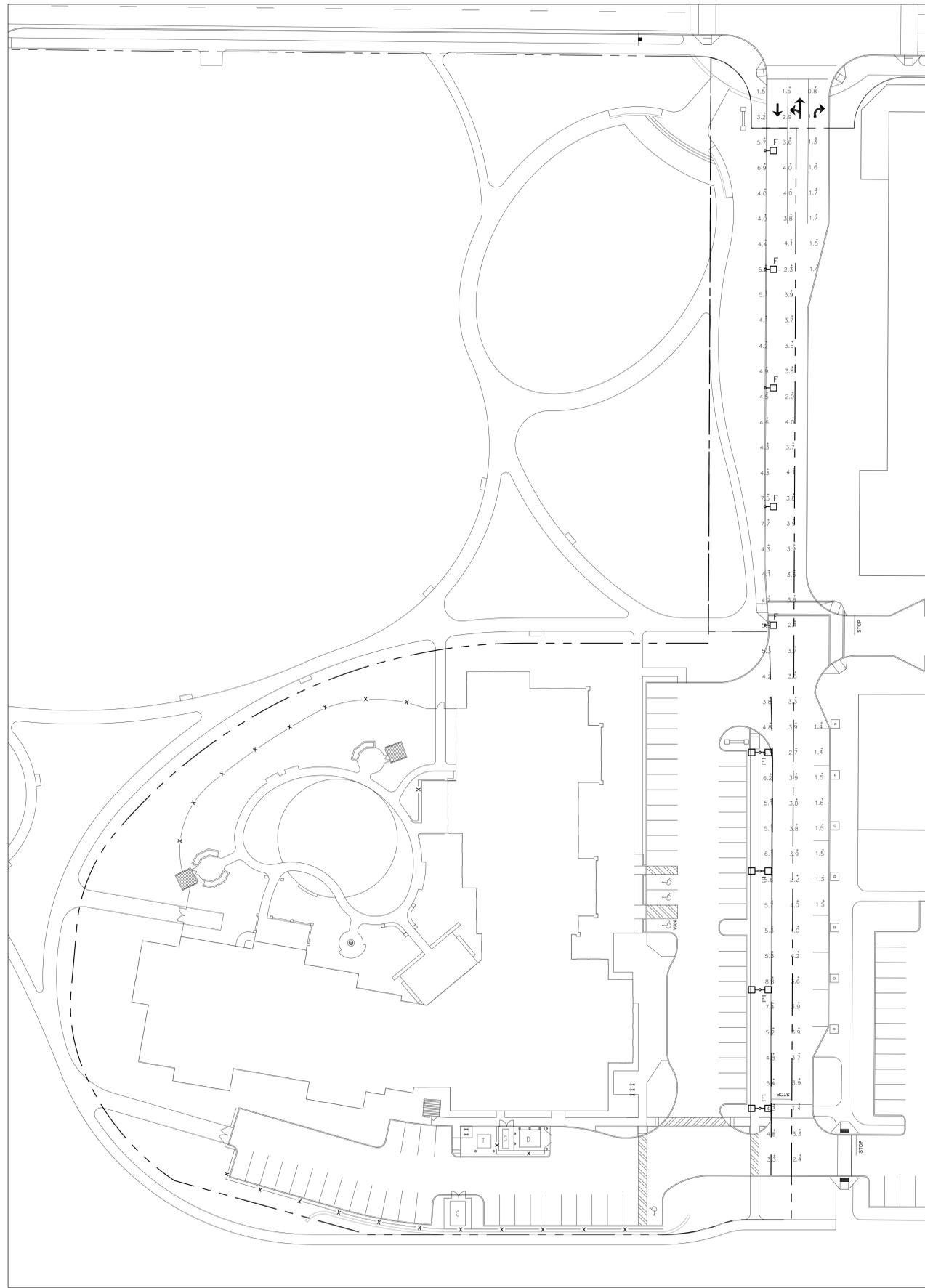
MARK	DATE	DESCRIPTION
1	11/08/13	IFDK Submittal

Client: Westwood Marketplace Holdings, LLC  
University Avenue  
University Station - University Avenue  
Bridges at University Station Enabling Package  
Development Area B of the University Station Master Development Plan  
Landscape Details

Project No.: 127-3659-12003  
Designed By: JPS / IR  
Drawn By: LT  
Checked By:

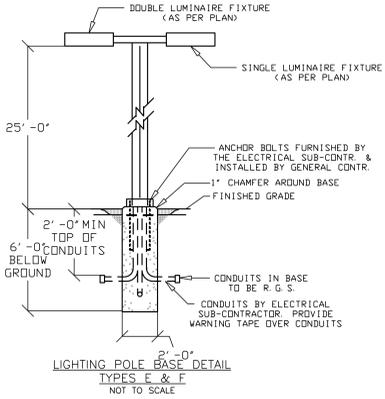
**L-402**

Copyright: Terra Tech  
Bar Measures 1 inch



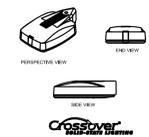
NOTE:  
1) FIXTURES SHALL BE FURNISHED WITH FACTORY INSTALLED PHOTOCELLS. FURNISH & INSTALL TWO IN-LINE WP FUSE HOLDERS WITH 3 AMP 250 VOLT FUSES.

SITE LIGHTING SCHEDULE ALL EQUIPMENT TO BE LSI INDUSTRIES.		
	TYPE E	TYPE F
ADAPTER	NONE	NONE
NO. FIXTURES PER POLE	2	1
FIXTURE CAT. NUMBER	XPT3-3-LED-128-450-CW-UE	XPT3-3-LED-128-450-CW-UE
FIXTURE DIST. TYPE	TYPE 3	TYPE 3
POLE	RTPB5-A156-25-D180-BLK ALUMINUM W/NUT COVERS	RTPB5-A156-25-S-BLK ALUMINUM W/NUT COVERS



NOTE:  
SIZE, DEPTH & REINFORCING STEEL IN BASE TO BE DETERMINED BY GED. TECH. & STRUCTURAL ENGINEER

XPT3  
LED Crossover Area Light



Lighting Proposal LO-114010-11  
UNIVERSITY STATION II  
WESTWOOD, MA  
BY: S.W.M. DATE: REV: SHEET 1 OF 1  
SCALE:

Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
FULL ROADWAY SUMMARY							
	Illuminance	Fc	3.30	8.8	0.2	16.50	44.00
SHORT ROADWAY SUMMARY							
	Illuminance	Fc	3.18	8.1	0.6	5.30	13.50

Symbol	Qty	Label	Arrangement	Description	LLF	Lumens/Lamp	Arr. Lum.	Lumens	Arr. Watts
■	4	E	TWIN 180	XPT3-3-LED-128-450-CW-UE 25' POLE	0.900	N.A.	29178	360	360
■	10	F	SINGLE	XPT3-3-LED-128-450-CW-UE 25' POLE	0.900	N.A.	14589	180	180

MARK	DATE	DESCRIPTION
1	11/08/13	PDR Submittal

Client: Westwood Marketplace Holdings LLC  
Proj. Loc.: University Ave., Westwood, MA  
University Station - University Avenue  
Bridges at University Station Enabling Package  
Development Area B of the University Station Master Development Plan  
**Site Photometric Plan**

Project No.: 127-3659-12003  
Designed By: LAF  
Drawn By: CJC  
Checked By: LAF