Plan 1

MUNJOY HEIGHTS

79 WALNUT STREET
PORTLAND, MAINE

LEGEND:

EXISTING | PROPOSED

REFER TO THE EXISTING CONDITIONS PLAN FOR ADDITIONAL INFORMATION

- PAVEMENT
- HEAVY DUTY CONCRETE
- STORM DRAIN
- UNDERDRAIN
- SEDIMENTATION BARRIER
- EDGE OF PAVEMENT
- CURB
- SIGN
- LAMP OR LIGHT POLE
- UTILITY POLE
- GUY WIRE
- WATER VALVE
- FIRE HYDRANT
- SEWER MANHOLE
- CATCH BASIN
- DRAIN MANHOLE
- OVERHEAD UTILITY LINE
- UNDERGROUND ELECTRIC LINE
- UNDERGROUND WATER LINE
- MINOR CONTOURS (1FT)
- MAJOR CONTOURS (5FT)
- TREE LINE
- DECIDUOUS TREE
- CONIFEROUS TREE
- EXISTING BUILDING
- PROPERTY LINE

ABBREVIATIONS:

PARTIAL LIST OF ABBREVIATIONS AND THERE CORRESPONDING MEANING. PLEASE CONTACT THE ENGINEER FOR ANY CLARIFICATION:

EX = EXISTING
PROP = PROPOSED
PVC = POLYVINYL CHLORIDE
SDR = STANDARD DIMENSION RATIO
PE = PROFESSIONAL ENGINEER
PLS = PROFESSIONAL LAND SURVEYOR
TYP = TYPICAL
ELEV. = ELEVATION
INV. = INVERT
H.P. = HORSEPOWER
BOT. = BOTTOM
MAX. = MAXIMUM
CB = CATCH BASIN
MH = MANHOLE
S = SLOPE
L = LENGTH
ID = INNER DIMENSION
DIA. = DIAMETER
IN. = INCH
FT. = FEET
PSI = POUNDS PER SQUARE INCH
OHE/T/C = OVERHEAD ELECTRIC/TELEPHONE/CABLE
RD= ROOF DRAIN
UD = UNDERDRAIN
PERF. SD = PERFORATED STORMDRAIN

UTILITIES

SEWER:

PUBLIC SERVICES ENGINEERING DEPARTMENT
55 PORTLAND STREET
PORTLAND, MAINE 04101
CONTACT: DAVID MARGOLIS-PINEO, P.E.
(207) 874-8850

WATER:

PORTLAND WATER DISTRICT
225 DOUGLAS STREET
PO BOX 3553
PORTLAND, MAINE 04104
ATTN: RICO SPUGNARDI, PE
(207) 761-8310

ELECTRIC:

CENTRAL MAINE POWER COMPANY (CMP)
162 CANCO ROAD
PORTLAND, MAINE 04103
CONTACT: JAMIE COUGH
(207) 842-2367

TELEPHONE:

FAIRPOINT COMMUNICATIONS
45 FOREST AVE
PORTLAND MAINE 04101
CONTACT: SUE SERRETTE
(207) 797-1842

CABLE:

TIME WARNER CABLE
118 JOHNSON ROAD
PORTLAND, MAINE04102
(877)546-0962

NATURAL GAS:

UNITIL SERVICE CORP
PO BOX 3586
PORTLAND, MAINE 04104
CONTACT: BRIDGET MATHERS
(207) 541-2536

PROJECT TEAM

DEVELOPER:

REDFERN PROPERTIES, LLC
PORTLAND, MAINE
CONTACT: JONATHAN CULLEY
(207) 776-9715

ARCHITECT:

RYAN SENATORE ARCHITECTURE
PORTLAND, MAINE
CONTACT: RYAN SENATORE
(207) 650-6414

SURVEYOR:

NADEAU LAND SURVEYS
PORTLAND, MAINE
CONTACT: JAMES NADEAU
(207) 878-7870

LANDSCAPE DESIGNER:

SOREN DENIORD DESIGN STUDIO
PORTLAND MAINE
CONTACT: SOREN DENIORD
(207) 400-2450

GEOTECHNICAL ENGINEER:

SUMMIT GEOENGINEERING SERVICES, INC.
LEWISTON, MAINE
CONTACT: BILL PETERLEIN
(207) 576-3313

STRUCTURAL ENGINEER:

STRUCTURAL INTEGRITY CONSULTING ENGINEERS, INC.
PORTLAND, MAINE
CONTACT: AARON JONES
(207) 774-4614

CONSTRUCTION MANAGEMENT CO.:

WRIGHT-RYAN CONSTRUCTION, INC.
PORTLAND, MAINE
CONTACT: MIKE BARTON
(207) 773-3625

TRAFFIC ENGINEER:

TRAFFIC SOLUTIONS
PORTLAND, MAINE
CONTACT: BILL BRAY
(207) 774-3603

SOIL SCIENTIST:

MARK HAMPTON ASSOCIATES, INC.
PORTLAND, MAINE
CONTACT: MARK HAMPTON
(207)-756-2900

INDEX:

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1-888-344-7233

PERMIT DRAWINGS
NOT FOR CONSTRUCTION

ISSUED FOR	BY / DATE
WORKSHOP #2	WHS 11/12/13
FINAL SUBMISSION	WHS 12/2/13

REVISION	REV. / DATE
STAFF COMMENTS	WHS 12/6/13

DRAWING NAME: COVER SHEET
PROJECT NAME: MUNJOY HEIGHTS
CLIENT: REDFERN PROPERTIES, LLC
P.O. BOX 8816, PORTLAND, MAINE 04104

ACORN ENGINEERING, INC.
ACORN ENGINEERING, INC.
P.O. BOX 3372 PORTLAND, MAINE 04104
(207) 775-2655

FILE: 1047 COVER
DATE: 9/24/13
JN: 1047
SCALE: NTS
DESIGN BY: WHS
DRAWN BY: ZRJ
CHECKED BY: HPS

STATE OF MAINE
WILLIAM H. SAVAGE
No. 11419
11-12-13
PROFESSIONAL ENGINEER

DRAWING NO.
C-01

MUNJOY HEIGHTS

Plan 2

79 WALNUT STREET

PORTLAND, MAINE

GENERAL NOTES:

1. THE CONTRACTOR SHALL CALL THE APPROPRIATE UTILITY COMPANIES AND DIG SAFE AT LEAST 4 DAYS PRIOR TO ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION FOR UTILITIES. OTHERWISE IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE LOCATION OF UNDERGROUND UTILITIES AND LOCATE ANY POTENTIAL CONFLICTS WITH THE APPROVED PLANS PRIOR TO CONSTRUCTION.
2. THE CONTRACTOR IS RESPONSIBLE FOR MAINTENANCE OF ALL EROSION CONTROL MEASURES SHOWN ON THE PLAN. IF DEEMED NECESSARY BY THE OWNER OR OWNER'S REPRESENTATIVE, ADDITIONAL EROSION CONTROL MEASURES SHALL BE INSTALLED AT NO ADDITIONAL COST TO THE OWNER.
3. THE CONTRACTOR SHALL PREPARE THEIR OWN MATERIAL SCHEDULE BASED ON THE PLANS AND FIELD VERIFICATION BY THE CONTRACTOR. ALL MATERIAL SCHEDULES SHOWN WITHIN THE PLAN SET ARE FOR GENERAL INFORMATION ONLY.
4. ALL CONSTRUCTION METHODS, TESTING AND MATERIALS SHALL CONFORM TO THE MAINE DEPARTMENT OF TRANSPORTATION SPECIFICATIONS, THE CITY OF PORTLAND AND SERVICING UTILITY REQUIREMENTS, IF ANY. IN CASES WERE THESE CONFLICT THE MOST STRINGENT SPECIFICATION SHALL APPLY AT NO ADDITIONAL COST TO THE OWNER.
5. THE SITE CONTRACTOR SHALL MAINTAIN A SET OF DRAWINGS WHICH SHALL RECORD THE ACTUAL LOCATION, DIMENSIONS, ELEVATIONS, MATERIALS OF THEIR WORK, INDICATING THEREON ALL VARIATIONS FROM THE CONTRACT DRAWINGS. THE CONTRACTOR SHALL PROVIDE THE OWNER WITH ONE COMPLETE SET OF REPRODUCIBLE RECORD DRAWINGS STAMPED "AS-BUILT".
6. THE CONTRACTOR WILL REMAIN SOLELY AND COMPLETELY RESPONSIBLE FOR ENFORCEMENT OF AND COMPLIANCE WITH 1) ALL CONTRACT PLANS AND SPECIFICATIONS AND 2) ALL SITE WORKING CONDITIONS AND SAFETY REQUIREMENTS, DAY AND NIGHT, FOR BOTH PERSONS AND PROPERTY, IN EACH CASE BOTH BY THE CONTRACTOR AND ITS SUBCONTRACTORS. THESE INCLUDE ALL OSHA, NIOSH, U.S. EPA AND ANY OTHER APPLICABLE GOVERNMENTAL REGULATIONS.
7. EXISTING CONDITIONS, BOUNDARY SURVEY AND PROPOSED BOUNDARY FROM THE PLAN TITLED "REDFERN PROPERTIES LLC, SHERIDAN STREET AND EAST COVE STREET, PORTLAND, MAINE" BY NADEAU LAND SURVEYS DATED AUGUST 9, 2013.
8. SUBSURFACE DATA HAVE BEEN OBTAINED BY SUMMIT GEOENGINEERING SERVICES, INC. AND SHALL BE INCLUDED IN THE CONTRACT DOCUMENTS.
9. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING ACCESS TO THE SITE AND ALL ADJACENT PROPERTIES AT ALL TIMES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TEMPORARY MARKINGS, SIGNAGE AND INCIDENTALS TO MAINTAIN A SAFE VEHICLE AND PEDESTRIAN ACCESS THOUGH THE LIFE OF THE PROJECT. THE CONTRACTOR SHALL NOTIFY THE PORTLAND PUBLIC SAFETY DIVISION ROUTINELY REGARDING TEMPORARY IMPACTS OR CHANGES TO SITE ACCESS CONDITIONS.

LAYOUT NOTES:

1. MONUMENTS DELINEATING PROPERTY LINES OR RIGHT OF WAYS SHALL NOT BE DISTURBED DURING CONSTRUCTION OPERATIONS. IN THE CASE A MONUMENT IS DISTURBED, AT THE CONTRACTOR'S EXPENSE, THE MONUMENT SHALL BE RESET TO THEIR ORIGINAL LOCATION BY A REGISTERED LAND SURVEYOR.
2. ALL DIMENSIONS ON THE FOLLOWING SHEETS TAKE PRECEDENT OVER SCALED DIMENSIONS. EACH DRAWING WITH A BAR SCALE MEANS THAT THE DRAWING/DETAIL HAS BEEN SCALED AS ACCURATELY AS POSSIBLE, AND THE BAR SCALE IS FOR GENERAL REFERENCE ONLY. IF NO BAR SCALE IS PRESENT, THEN THERE IS NO SCALE TO THAT DRAWING/DETAIL. AT NO TIME SHOULD DRAWINGS BE SCALED FROM.
3. SIGNAGE, STRIPING AND PAVEMENT MARKINGS SHALL BE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
4. THE CONTRACTOR SHALL OBTAIN THE SERVICES OF A LICENSED PROFESSIONAL LAND SURVEYOR TO PROVIDE A MINIMUM OF TWO TEMPORARY BENCHMARKS WITHIN THE SITE.
5. CONTRACTOR TO ENSURE THAT DRIVEWAYS AND MAILBOXES REMAIN FUNCTIONAL AND IN USE AT ALL TIMES.
6. ALL TRAFFIC CONTROL SIGNS INDICATED ON THE SITE LAYOUT PLAN ARE TO MEET ALL REQUIREMENTS & CONDITIONS OF THE CITY OF PORTLAND, MAINE DEPARTMENT OF TRANSPORTATION AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION.

PERMITTING NOTES

1. THIS PROJECT IS SUBJECT TO THE TERMS AND CONDITIONS OF SITE PLAN – LEVEL III AND SUBDIVISION PERMIT FROM THE CITY OF PORTLAND.
2. THIS PROJECT IS SUBJECT TO THE TERMS AND CONDITIONS OF A MAINE CONSTRUCTION GENERAL PERMIT FROM THE MAINE DEP.
3. THE CONTRACTOR SHALL REVIEW THE ABOVE REFERENCED PERMITS PRIOR TO SUBMITTING A BID FOR THIS PROJECT, AND INCLUDE COSTS AS NECESSARY TO COMPLY WITH THE CONDITIONS OF THESE PERMITS.

GRADING AND DRAINAGE NOTES:

1. TOPSOIL STRIPPED FROM THE SITE THAT IS SUITABLE FOR REUSE AS LOAM SHALL BE STOCKPILED WITHIN THE PROPOSED LIMIT OF WORK AREA. THE CONTRACTOR SHALL NOT ASSUME THAT ANY LOAM WILL BE ACCEPTABLE FOR REUSE WITH THEIR ESTIMATE.
2. THE CONTRACTOR SHALL ANTICIPATE THAT GROUNDWATER WILL BE ENCOUNTERED DURING CONSTRUCTION AND SHALL INCLUDE SUFFICIENT COSTS WITHIN THEIR BID TO PROVIDE DEWATERING AS NECESSARY; NO SEPARATE PAYMENT SHALL BE MADE TO THE CONTRACTOR FOR DEWATERING.
3. THE OWNER SHALL BE RESPONSIBLE FOR OBTAINING ANY EASEMENT OR TEMPORARY CONSTRUCTION RIGHTS AS NECESSARY BY ADJACENT LAND OWNERS. THE CONTRACTOR SHALL NOT DISTURB ANY SOIL BEYOND THE PROPERTY LINE WITHOUT NOTIFYING AND OBTAINING SUCH EASEMENT OR TEMPORARY CONSTRUCTION RIGHT FROM THE OWNER.
4. THE CONTRACTOR SHALL PROVIDE A FINISH PAVEMENT SURFACE FREE OF LOW SPOTS AND PONDING AREAS. THE MINIMUM SLOPE SHALL MEET OR EXCEED 0.5% IN ALL CASES. ALL SLOPES SHALL BE AWAY FROM BUILDINGS AND TOP OF PAVEMENT SHALL BE AT OR BELOW EXISTING FINISH FLOOR ELEVATIONS.
5. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE FINAL GEOTECHNICAL REPORT PREPARED BY SUMMIT GEOENGINEERING SERVICES FOR REDFERN PROPERTIES, LLC.
6. EXCAVATED SOILS THAT ARE SUITABLE SHALL BE ACCEPTED FOR BACKFILL IF THEY ARE DEEMED SUITABLE IN ACCORDANCE WITH MAINEDOT GENERAL CONDITIONS, DATED FEBRUARY 2001 OR MOST RECENT EDITION, SECTION 104.3.13.
7. NO ADDITIONAL PAYMENT FOR UNSUITABLE MATERIALS.
8. ALL STORM DRAIN PIPE SHALL BE SMOOTH BORE INTERIOR PROVIDING A MANNINGS ROUGHNESS COEFFICIENT OF N=0.012 OR LESS.
9. A POST CONSTRUCTION – STORMWATER INSPECTION & MAINTENANCE PLAN IS FILED WITH THE CITY OF PORTLAND.

EROSION CONTROL NOTES:

1. ALL ROUTINE MAINTENANCE ACTIVITIES SHALL BE CONDUCTED IN SUCH A WAY TO LIMIT THE AMOUNT OF DISTURBED AREA AT ONE TIME TO THE EXTENT PRACTICABLE.
2. PRIOR TO THE START OF ANY CLEARING/LAND DISTURBING ACTIVITIES, THE CONTRACTOR SHALL INSTALL APPLICABLE EROSION CONTROL DEVICES SUCH AS PERIMETER SILT FENCE, AND OTHER APPLICABLE MEASURES. IN THE EVENT THE CONTRACTOR IS NOT SURE A EROSION CONTROL MEASURE SHOULD BE IMPLEMENTED, THE CONTRACTOR SHALL CONTACT THE ENGINEER OF RECORD TO CONFIRM IMPLEMENTATION OF ANY EROSION CONTROL DEVICES.
3. ALL GROUND AREAS GRADED FOR CONSTRUCTION SHALL BE GRADED, LOAMED, SEEDED AND MULCH SHALL BE APPLIED AS SOON AS POSSIBLE WITHIN 7 DAYS FOLLOWING THE COMPLETION OF ANY SOIL DISTURBANCE, AND PRIOR TO ANY STORM EVENT.
4. EROSION AND SEDIMENTATION CONTROL MEASURES SHALL SHALL BE INSTALLED TO THE SATISFACTION OF THE CITY. THE CONTRACTOR SHALL REFERENCE THE APPROVED EROSION AND SEDIMENTATION CONTROL REPORT FOR TEMPORARY AND PERMANENT EROSION AND SEDIMENTATION CONTROL DEVICES IN ADDITION TO THE PLAN SET. THE CONTRACTOR SHALL ALSO REFER TO THE MAINE D.E.P.'S PERMIT CONDITIONS, FINDINGS OF FACT AND ORDER (IF ANY), AND THE CURRENT MAINE EROSION AND SEDIMENT CONTROL BMP MANUAL FOR ADDITIONAL INFORMATION.

UTILITY NOTES:

1. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND ELEVATION OF THE EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED UPON RECORDS OF VARIOUS UTILITY COMPANIES AND WHERE POSSIBLE MEASUREMENTS TAKEN IN THE FIELD. THIS INFORMATION IS NOT TO BE RELIED UPON AS BEING EXACT OR COMPLETE. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO TEST PIT TO DETERMINE THE EXACT LOCATION AND ELEVATION OF UTILITIES TO COORDINATE WITH THE PROPOSED CONNECTIONS OR CROSSING. ANY DISCREPANCIES SHALL BE IMMEDIATELY REPORTED TO THE CIVIL ENGINEER FOR FURTHER DIRECTIONS BEFORE ANY ADDITIONAL WORK PROCEEDS.
2. CONTRACTOR TO BYPASS EXISTING SEWER FLOW CONTROL AT CONNECTION TO EXISTING SYSTEM AT NO ADDITIONAL COST.
3. CONTRACTOR SHALL, AT NO ADDITIONAL COST TO THE OWNER, CONDUCT EXPLORATORY EXCAVATIONS AT LOCATIONS WHERE PROPOSED EXCAVATION WILL INTERSECT WITH EXISTING UTILITIES.
4. SEWER MANHOLES SHALL BE 4' ID UNLESS OTHERWISE STATED ON THE PLANS.
5. CONTRACTOR TO PROVIDE 5' OF COVER FROM TOP OF PIPE TO FINISH GRADE FOR WATER MAINS.
6. THRUST BLOCKS SHALL BE USED FOR THRUST RESTRAIN ON WATER MAINS. LIMITS FOR THRUST BLOCKS ARE SHOWN ON SHEET C45.
7. ALL REQUIRED FITTINGS FOR THE WATER MAIN ARE NOT SHOWN ON DRAWINGS. CONTRACTOR SHALL FURNISH AND INSTALL ALL NECESSARY FITTINGS REQUIRED TO CONSTRUCT THE WATER MAIN IN ACCORDANCE WITH CITY OF PORTLAND, STATE OF MAINE, AND AMERICAN WATER WORKS ASSOCIATION STANDARDS AND REGULATIONS.
8. CONTRACTOR SHALL COORDINATE WORK REGARDING ANY WATER MAIN CONNECTION AND WATER MAIN SHUTDOWN WITH THE PORTLAND WATER DISTRICT AT LEAST SEVEN (7) DAYS PRIOR TO CONSTRUCTION.
9. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.
10. SEWER, GAS, TELEPHONE, CABLE, WATER AND ANY OTHER UTILITY CONNECTIONS SHALL BE COMPLETED IN ACCORDANCE WITH PLUMBING, ELECTRICAL, AND MECHANICAL CONTRACTS.
11. CONTRACTOR SHALL BE RESPONSIBLE FOR DISTURBING ANY SURVEY MONUMENTS DISTURBED DURING CONSTRUCTION VIA LICENSED SURVEYOR.
12. LIMITS OF CLEARING AND CONSTRUCTION SHALL BE LIMITED TO PROJECT SITE.
13. DO NOT SCALE THESE DRAWINGS. ANY DISCREPANCIES BETWEEN DRAWINGS, DETAILS, SPECIFICATIONS, AND THE FIELD CONDITION SHALL BE IMMEDIATELY REPORTED TO THE CIVIL ENGINEER FOR FURTHER DIRECTIONS BEFORE ANY ADDITIONAL WORK PROCEEDS.
14. COORDINATE EXIT POINT FOR SECONDARY SERVICE WITH THE ARCHITECT/ELECTRICAL ENGINEER. SECONDARY LINE LOCATIONS NOT PROVIDED BY ACORN ENGINEERING WITHIN THE UTILITY PLAN.
15. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN ALL THE NECESSARY PERMITS FOR THE INSTALLATION OF THE UTILITIES AND STORMDRAINS WITHIN THE PUBLIC RIGHT OF WAY. THE CONTRACTOR SHALL SUBMIT A MAINTENANCE OF TRAFFIC PLAN TO THE CITY IN ACCORDANCE WITH THE CITY OF PORTLAND TECHNICAL MANUAL PRIOR TO ANY WORK.

DEMOLITION NOTES:

1. THE EXISTING ASPHALT SHOULD BE STRIPPED AND EITHER PROCESSED ONSITE, REMOVED FROM THE SITE OR DISPOSED OF ONSITE.
2. REFER TO THE FINAL GEOTECHNICAL REPORT PREPARED BY SUMMIT GEOENGINEERING SERVICES FOR REDFERN PROPERTIES, LLC. FOR BORING LOG INFORMATION.
3. ALL DISPOSAL OF DEMOLITION DEBRIS OR WASTE SHALL BE IN ACCORDANCE WITH ALL LOCAL, STATE, & FEDERAL REGULATIONS. CONTRACTORS SHALL PROVIDE OWNER WITH APPROPRIATE "BILLS OF LADING" DEMONSTRATING PROPER DISPOSAL OF ALL MATERIALS.
4. SITE DEMOLITION SHALL NOT OCCUR UNTIL PROPER ABATEMENT PROCEDURES HAVE OCCURRED. ABATEMENT, IF NECESSARY SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

PERMIT DRAWINGS
NOT FOR CONSTRUCTION

ISSUED FOR	BY / DATE
WORKSHOP #2	WHS 11/12/13
FINAL SUBMISSION	WHS 12/2/13

REVISION	REV. / DATE
STAFF COMMENTS	WHS 12/6/13

DRAWING NAME: NOTES SHEET

PROJECT NAME: MUNJOY HEIGHTS

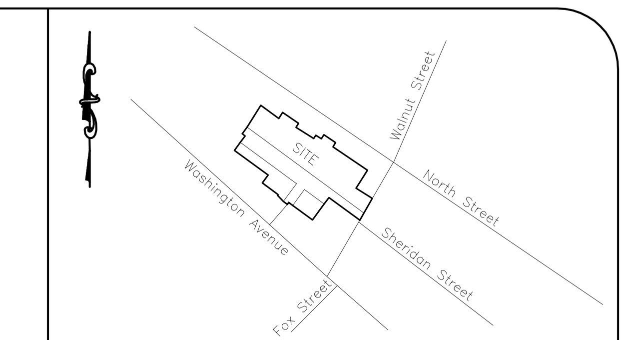
CLIENT: REDFERN PROPERTIES, LLC
P.O. BOX 8816, PORTLAND, MAINE 04104

ACORN ENGINEERING, INC.
ACORN ENGINEERING, INC.
P.O. BOX 3372 PORTLAND, MAINE 04104
(207) 775-2655

FILE: 1047 COVER
DATE: 9/24/13
JN: 1047
SCALE: NTS
DESIGN BY: WHS
DRAWN BY: ZRJ
CHECKED BY: HPS

STATE OF MAINE
SAVAGE
No. 11419
11-12-13
PROFESSIONAL ENGINEER

DRAWING NO.
C-02



Plan References:

1. Subdivision Of Lot #1 On Mountjoy's Neck For Little, Weeks, And Moody, dated February 17, 1802 and recorded March 24, 1802 in CCRD Book 36, Page 247.
2. Re-Survey Of Plan Reference 1, dated June 1876 by E.C. Jordan, C.E., City Plan 370/6 and 386/28.
3. Subdivision Of Elijah Kellogg Lot, dated April 10, 1802 and recorded February 18, 1807 in CCRD Book 51, Page 297, and traced June 1925 for City Plan 406/78.
4. City Of Portland Revaluation Plans, Sheets 10 & 12, dated 1882 by William A. Goodwin, City Engineer, recorded October 24, 1884 in CCRD Plan Book 5, Pages 10 & 12.
5. Plan Of Lot At Terminus Of Sheridan Street, dated 1928 on file at Owen Haskell, Inc.
6. "Property In Portland Me. Surveyed For The Jewish Home For Aged", dated August 1928 by E.C. Jordan & Co. on file at Owen Haskell, Inc.
7. "General Plan And Profile, Department Of Parks And Public Works, City Of Portland, Maine, Reconstruction Of Walnut St., North St. To Washington Ave.", dated May 17, 1984 by Herbert P. Gray, Consulting Engineer, Portland, Maine, City Plan 502/7.
8. "Standard Boundary Survey, Plan Of Property In County Of Cumberland, City Of Portland, Maine For Jewish Home For Aged", dated December 20, 1985 (Working Plan) by Morton & Rose Associates, Limerick, Maine on file at Maine Boundary Consultants.
9. "City Of Portland, Maine Parks And Public Works Department Engineering Division, North Street Plan And Profile Sta. 11+00 To 16+50", Sheet 8 of 14, dated August 1985 by Woodard & Curran Inc. Consulting Engineers, Gorham, Maine, City Plan 925/1.
10. "City Of Portland, Maine Parks And Public Works Department Engineering Division, Sheridan Street Plan And Profile Sta. 9+00N To 13+50N", Sheet 5 of 25, dated June 1987 by Woodard & Curran Inc. Consulting Engineers, Portland, Maine, City Plan 913/10.
11. "Plan Of Property In Portland, Maine Made For Nicole D'Entremont (Standard Boundary Survey)", dated July 15, 1991 by Robert J. Cyr, RLS 955, South Portland, Maine, recorded July 16, 1991 in CCRD Plan Book 191, Page 43.
12. "Division Of Land For Nicki Lee Green & Katherine P. Richmond, 79 Walnut Street, Portland, Maine", dated April 2006 by Andrew E. Bradford Land Surveying, Inc., Kennebunk, Maine.
13. "Plan Of Property Of W.H. Baxter, Esq.", dated July 1866 by Anderson Bonnell & Co., recorded July 1, 1866 in CCRD Plan Book 2, Page 54.
14. Richards Standard Atlas Of The City Of Portland, Plate 2, dated 1914.
15. Insurance Maps Of Portland, Maine, Volume One, Published By The Sanborn Map Company, Plate 1, dated 1909, last corrected April 1952.
16. City Of Portland Atlas, Plate 48A, dated 1873.
17. Exhibit Sketch For Proposed Conveyance, Raymond H. & Alina Waterhouse To Redfern Properties, LLC, Sheridan Street, Portland, Maine", dated July 31, 2013 by Nadeau Land Surveys, Portland, Maine.

Locus Deed References:

Leonard J. Regan and Francis J. Regan
To
Daniel W. Hourihan - Trustee of
North Street Realty Trust
dated September 8, 1987 and recorded September 9, 1987 at the Cumberland County Registry of Deeds in Book 7962, Page 7.
Locus A

Estate of Earl Maxwell
To
Raymond C. Maxwell
dated July 12, 2013 and recorded July 17, 2013 at the Cumberland County Registry of Deeds in Book 30842, Page 114.
Locus B

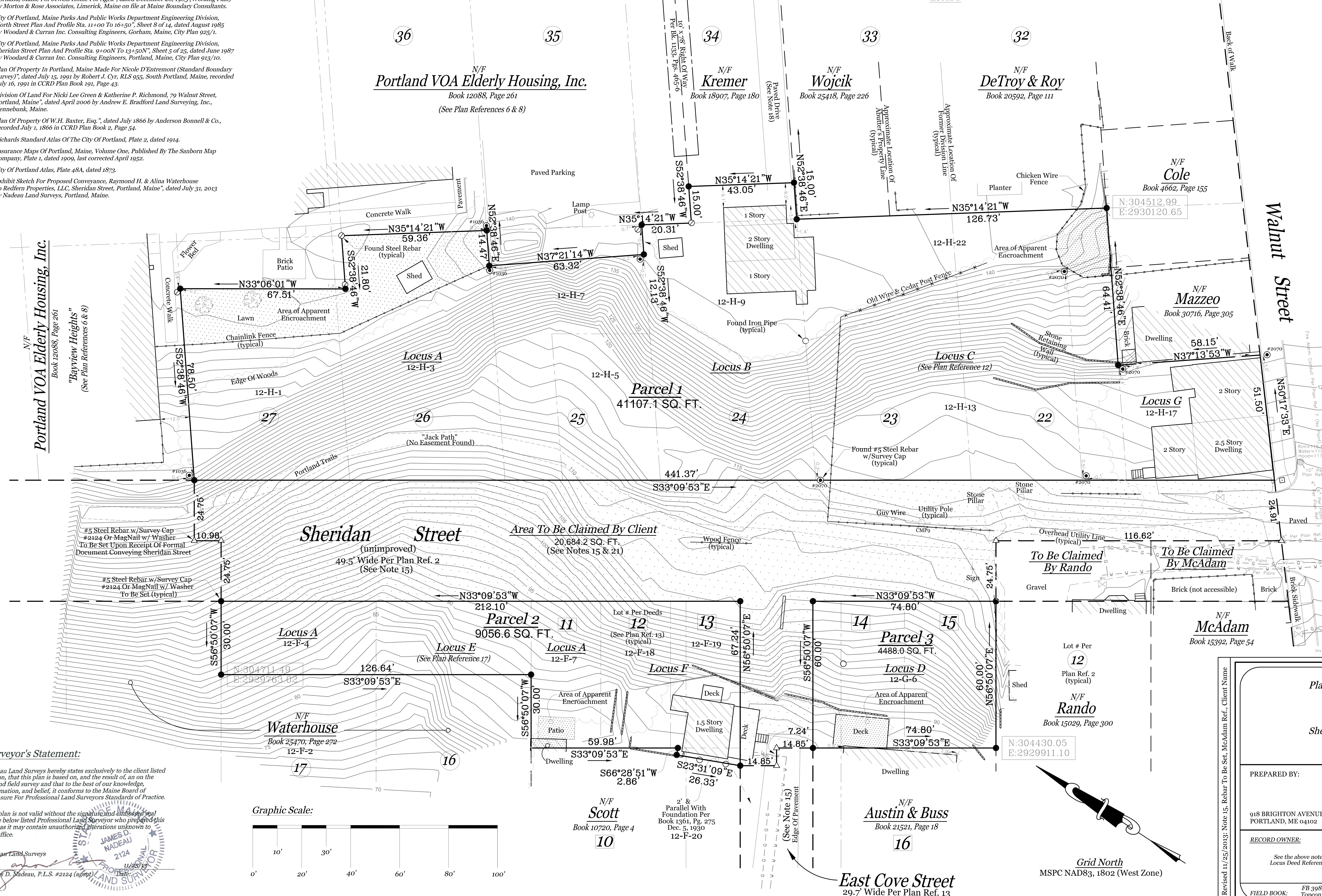
Katherine P. Richman and Nikki Lee Green
To
Four Sills, LLC
dated July 19, 2006 and recorded July 20, 2006 at the Cumberland County Registry of Deeds in Book 24188, Page 65.
Locus C

Estate of Maybelle E. Haley
To
Maybelle H. Norton - Personal Representative of
Nelson Nadeau and Francis O'Connor
dated June 15, 1986 and recorded July 17, 1986 at the Cumberland County Registry of Deeds in Book 7274, Page 26.
Locus D

Raymond H. Waterhouse and Alina Waterhouse
To
Raymond H. Waterhouse and Alina Waterhouse
dated September 14, 2007 and recorded September 17, 2007 at the Cumberland County Registry of Deeds in Book 25470, Page 272.
Locus E

Richard J. Cantin and Cathy J. Cantin
To
Dennis E. Lovejoy and Gladys A. Lovejoy
dated April 1, 1977 and recorded April 4, 1977 at the Cumberland County Registry of Deeds in Book 3993, Page 100.
Locus F

Charlotte E. Henry
To
Katherine P. Richman and Nikki Lee Green
dated August 1, 2000 and recorded August 4, 2000 at the Cumberland County Registry of Deeds in Book 15638, Page 275.
Locus G



General Notes:

1. This plan is not intended to depict limits or extent of fee title ownership. An opinion of title should be rendered by a title attorney.
2. This office reserves the right to be held harmless by all 3rd party claims.
3. This survey does not purport to reflect any of the following:
   a. easements other than those that are visible or specifically stated in the referenced documents.
   b. building setback compliance or restrictive covenants.
   c. zoning or other land use regulations.
   d. the location of any underground utilities or structures.
4. This office reserves the right to be held harmless for unknown or unobtainable private records which could affect the results of this survey.
5. Reference is made to "Letter Of Agreement" dated March 11, 2013 between Nadeau Land Surveys and the below listed client(s), which shall be considered an integral part of this survey.
6. N/F is an abbreviation for Now or Formerly.
7. All deeds referenced on this plan are recorded at the Cumberland County Registry of Deeds (CCRD).
8. This office does not accept any liability for errors in the Plan References listed hereon.
9. Locus Parcel is shown on the City of Portland Assessor's Map 12, Block H, as Lots 1, 3, 5, 7, 9, 13, 17, and 22, Block G as Lot 6, and Block F as Lots 4, 7, 18, 19, 20, and part of 2.
10. Total area of Locus Parcels are 54,651.7 square feet (1.25 acres).
11. The apparent right of way lines depicted on this plan are based on the Plan References listed hereon and monumentation found in the field, and City of Portland Engineering Street Notes.
12. The Locus Parcel does not scale in a Special Flood Hazard Area per FEMA Flood Insurance Rate Map Community-Panel Number 230051 0013B & 0014B, index dated December 8, 1998. The parcel scales in Zone C.
13. All building corner offsets to boundary lines are from cornerboards and not building foundation, unless noted.
14. Call 1-888-DIGSAFE at least three business days before performing ANY excavation.
15. Poplar Street was renamed Sheridan Street on August 1, 1881. Poplar Street is listed as "Continued" on the City of Portland City Council Order #84 titled "Order Excepting Streets From Deemed Vacation", as passed on September 3, 1997 and recorded in CCRD Book 13326, Page 19. Order #84 referenced a subdivision plan in Deed Book 51, Page 297 for properties and Poplar Street on the south side of Walnut Street thus referencing the wrong portion of Sheridan Street. Sheridan Street is not listed on Order #84. Since the portion of Sheridan Street northerly of Walnut Street, as well as East Cove Street, were not listed on City Council Order #84 they may be considered as Statutorily Vacated by Omission from the City Council Order #84 in 1997 where all paper streets were required to be addressed or be deemed vacated. A Title Attorney should be consulted regarding the subject of title and any claims of title to Sheridan Street and East Cove Street.
16. Vertical Datum is NGVD29. Benchmark is City Monument T112-18-107, elevation = 145.08'.
17. The underground utilities shown have been located from field survey information and existing drawings. This office make no guarantees that the underground utilities shown comprise all such utilities in the area, either in-service or abandoned. The underground utilities shown are approximate location and are located as accurately as possible from information available. This office has not physically located the underground utilities.
18. See CCRD Book 1143, Page 307, dated July 25, 1923, from Elmore W. Ramsdell to Claire Bowden, for right of way to North Street.
19. See CCRD Book 556, Page 216, dated April 8, 1889, from Daniel Hardy to Mariam F. Batchelder, for well and water rights, and rights to a 10-foot wide passageway from his "park" to North Street.
20. See CCRD Book 878, Page 202, dated July 7, 1911, to Abraham J. & Herman Bernstein, for sewer and drain rights in Upper Cove Street (n/k/a East Cove Street).
21. Boundary lines depicted on this plan within the existing rights of way for Area To Be Claimed are perpendicular or parallel to each right of way sideline.
22. See CCRD Book 14149, Page 281, dated September 10, 1998, for City of Portland's License to erect a fence across Poplar Street partially intruding on land N/F Maxwell.

Surveyor's Statement:

Nadeau Land Surveys hereby states exclusively to the client listed hereon, that this plan is based on, and the result of, an on the ground field survey and that to the best of our knowledge, information, and belief, it conforms to the Maine Board of Licensure For Professional Land Surveyors Standards of Practice.

This plan is not valid without the signature and embossed seal of the below listed Professional Land Surveyor who prepared this plan as it may contain unauthorized alterations unknown to this office.

Nadeau Land Surveys

James D. Nadeau, P.L.S. #2124 (agent) Date: 11/25/13

STATE OF MAINE JAMES D. NADEAU 2124 PROFESSIONAL LAND SURVEYOR

Revised 11/25/2013: Note 15, Rebar To Be Set, McAdam Ref., Client Name

Plan Depicting The Results Of A Boundary Survey & Existing Conditions Survey Made For
Redfern Munjoy LLC
Sheridan Street, East Cove Street, And Walnut Street
Portland, Maine

PREPARED BY:

Nadeau Land Surveys

918 BRIGHTON AVENUE
PORTLAND, ME 04102

Professional Land Surveyors
Certified Floodplain Managers

PH. (207) 878-7870
FAX (207) 878-7871

RECORD OWNER:		DRAWN BY:	TPB	PLAN DATE:	11/11/2013
See the above noted Locus Deed References		CHECKED BY:	JDN/MLC	SURVEY DATE:	April-Aug. 2013
		INSTR.	Topcon GPT-3003W & Topcon Hyper II GPS	SCALE:	1" = 20'
FIELD BOOK:	FB 398, 399 & Topcon Ranger	JOB No:	2121381BTR1	SHEET No:	1 of 1

SPACE AND BULK STANDARDS			
ZONE: R-6 RESIDENTIAL	REQUIRED	PROVIDED	PROVIDED - MAXWELL LOT
MINIMUM LOT SIZE	4,500 S.F.	66,624 S.F.	5,202 S.F.
MINIMUM FRONTAGE	40'	76.4'	0***
MINIMUM YARD DIMENSIONS			
FRONT YARD	10'*	10'*	<10'****
REAR YARD	20'	20'	20'****
SIDE YARD	10' - 3 STORY BUILDING 12' - 4 STORY BUILDING	10' - 3 STORY BUILDING 12' - 4 STORY BUILDING	10'****
MAXIMUM LOT COVERAGE	40% (50% MAXWELL)	34%	24%
MINIMUM LOT WIDTH	40'	71.8'	41'
MAXIMUM BUILDING HEIGHT	45'	≤ 45'**	< 45'
OPEN SPACE RATIO	30% (20% MAXWELL LOT)	41%	74%
PARKING REQUIREMENTS	1 SPACE PER UNIT (29)	34	1

* A FRONT YARD NEED NOT EXCEED THE AVERAGE DEPTH OF FRONT YARDS ON EITHER SIDE OF THE LOT
** REFER TO ARCHITECTURAL PLANS FOR BUILDING ELEVATIONS
***DEEDED ACCESS EASEMENT TO NORTH STREET
**** ALL AREAS BELOW REQUIREMENTS ARE EXISTING AREAS OF NON-CONFORMENCE.

NOTE:

REFER TO SOREN DENIORD DESIGN STUDIO PLAN FOR TREES, LANDSCAPING AND WOONERF DESIGN.
REFER TO ACORN ENGINEERING PLANS FOR GRADING, UTILITY, RETAINING WALLS, WATER QUALITY, ROAD PROFILE, AND SITE PLAN.

Approved By The City Of Portland Planning Board:

Name: ____________ Date: ____________

Locus Deed References:

Leonard J. Regan and Francis J. Regan
To
Daniel W. Hourihan - Trustee of
North Street Realty Trust
dated September 8, 1987 and recorded September 9, 1987 at the Cumberland County Registry of Deeds in Book 7962, Page 7.
Locus A

Estate of Earl Maxwell
To
Raymond C. Maxwell
dated July 12, 2013 and recorded July 17, 2013 at the Cumberland County Registry of Deeds in Book 30842, Page 114.
Locus B

Katherine P. Richman and Nikki Lee Green
To
Four Sills, LLC
dated July 19, 2006 and recorded July 20, 2006 at the Cumberland County Registry of Deeds in Book 24188, Page 65.
Locus C

Estate of Maybelle E. Haley
To
Maybelle H. Norton - Personal Representative of
Nelson Nadeau and Francis O'Connor
dated June 15, 1986 and recorded July 17, 1986 at the Cumberland County Registry of Deeds in Book 7274, Page 26.
Locus D

Raymond H. Waterhouse and Alina Waterhouse
To
Raymond H. Waterhouse and Alina Waterhouse
dated September 14, 2007 and recorded September 17, 2007 at the Cumberland County Registry of Deeds in Book 25470, Page 272.
Locus E

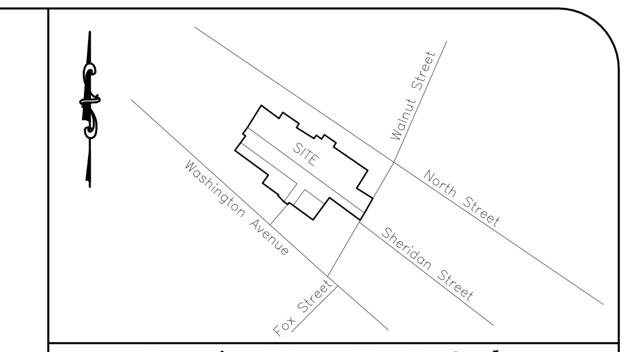
Richard J. Cantin and Cathy J. Cantin
To
Dennis E. Lovejoy and Gladys A. Lovejoy
dated April 1, 1977 and recorded April 4, 1977 at the Cumberland County Registry of Deeds in Book 3993, Page 100.
Locus F

Charlotte E. Henry
To
Katherine P. Richman and Nikki Lee Green
dated August 1, 2000 and recorded August 4, 2000 at the Cumberland County Registry of Deeds in Book 15638, Page 275.
Locus G

Easements:

1. Access & Utility Easement serving land N/F Rando over northeasterly half of Sheridan Street between Walnut Street and projection of northwesterly line of Rando (1,620 S.F.) Book ________, Page _____. Access & Utility Easement over land claimed by Rando (823 S.F.) Book ________, Page _____.
2. Access & Utility Easement serving land N/F McAdam over northeasterly half of Sheridan Street between Walnut Street and projection of northwesterly line of McAdam (736 S.F.) Book ________, Page _____. Access & Utility Easement over land claimed by McAdam (702 S.F.) Book ________, Page _____.
3. Use Easement serving land N/F Austin & Buss for existing dwelling encroachment and area between northeasterly sideline of Austin & Buss and southwesterly side of proposed retaining wall (752 S.F.) Book ________, Page _____.
4. Pedestrian Easement serving Portland Trails for proposed paths and traveled ways to connect the existing "Jack Path" to Walnut Street and East Cove Street. Book ________, Page _____.
5. Retaining Wall Maintenance Easement over land "To Be Conveyed To Upright Properties, LLC" (1,803 S.F.) Book ________, Page _____.
6. Utility Easements serving Locus Parcel from Walnut Street and East Cove Street. Book ________, Page _____.

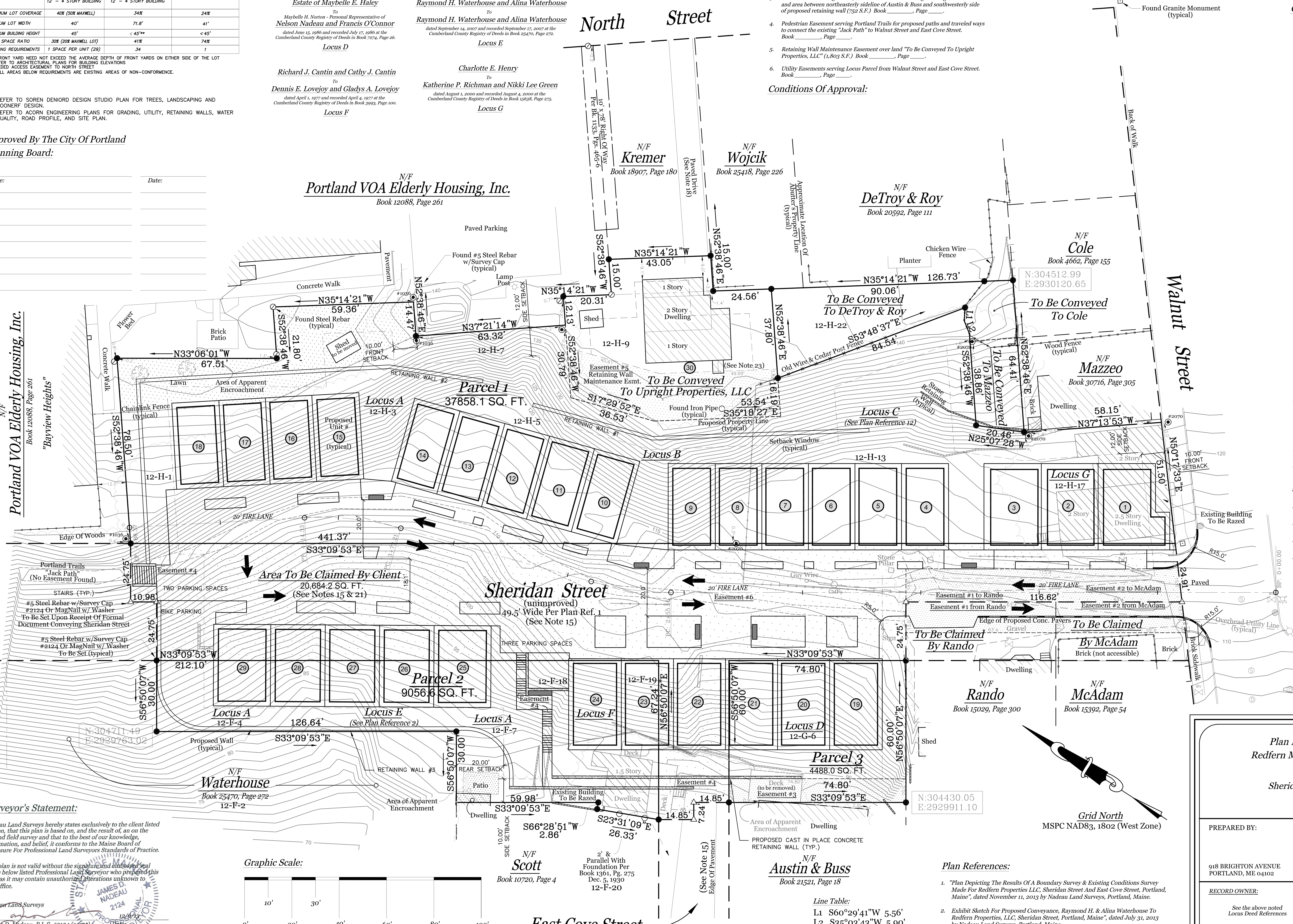
Conditions Of Approval:



Location Map: Not To Scale

General Notes:

1. This plan is not intended to depict limits or extent of fee title ownership. An opinion of title should be rendered by a title attorney.
2. This office reserves the right to be held harmless by all 3rd party claims.
3. This survey does not purport to reflect any of the following:
   a. easements other than those that are visible or specifically stated in the referenced documents.
   b. building setback compliance or restrictive covenants.
   c. zoning or other land use regulations.
   d. the location of any underground utilities or structures.
4. This office reserves the right to be held harmless for unknown or unobtainable private records which could affect the results of this survey.
5. Reference is made to "Letter Of Agreement" dated March 11, 2013 between Nadeau Land Surveys and the below listed client(s), which shall be considered an integral part of this survey.
6. N/F is an abbreviation for Now or Formerly.
7. All deeds referenced on this plan are recorded at the Cumberland County Registry of Deeds (CCRD).
8. Locus Parcel is located in the R-6 Residential Zone. There are 6 proposed buildings containing 29 townhomes, and an existing dwelling to be conveyed.
9. Locus Parcel is shown on the City of Portland Assessor's Map 12, Block H, as Lots 1, 3, 5, 7, 9, 13, 17, and 22, Block G as Lot 6, and Block F as Lots 4, 7, 18, 19, 20, and part of 2.
10. Total area of Locus Parcels are 51,402.7 square feet (1.18 acres). Area to be claimed is 20,684.2 square feet, which would result in a total of 72,086.9 S.F.
11. The apparent right of way lines depicted on this plan are based on the Plan References listed hereon and monumentation found in the field, and City of Portland Engineering Street Notes.
12. The Locus Parcel does not scale in a Special Flood Hazard Area per FEMA Flood Insurance Rate Map Community-Panel Number 230051 0013B & 0014B, index dated December 8, 1998. The parcel scales in Zone C.
13. All building corner offsets to boundary lines are from cornerboards and not building foundation, unless noted.
14. Call 1-888-DIGSAFE at least three business days before performing ANY excavation.
15. Poplar Street was renamed Sheridan Street on August 1, 1881. Poplar Street is listed as "Continued" on the City of Portland City Council Order #84 titled "Order Excepting Streets From Deemed Vacation", as passed on September 3, 1997 and recorded in CCRD Book 13326, Page 19. Order #84 referenced a subdivision plan in Deed Book 51, Page 297 for properties and Poplar Street on the south side of Walnut Street thus referencing the wrong portion of Sheridan Street. Sheridan Street is not listed on Order #84. Since the portion of Sheridan Street northerly of Walnut Street, as well as East Cove Street, were not listed on City Council Order #84 they may be considered as Statutorily Vacated by Omission from the City Council Order #84 in 1997 where all paper streets were required to be addressed or be deemed vacated. A Title Attorney should be consulted regarding the subject of title and any claims of title to Sheridan Street and East Cove Street.
16. Vertical Datum is NGVD29. Benchmark is City Monument T112-18-107, elevation = 145.08'.
17. The underground utilities shown have been located from field survey information and existing drawings. This office make no guarantees that the underground utilities shown comprise all such utilities in the area, either in-service or abandoned. The underground utilities shown are approximate location and are located as accurately as possible from information available. This office has not physically located the underground utilities.
18. See CCRD Book 1143, Page 307, dated July 25, 1923, from Elmore W. Ramsdell to Claire Bowden, for right of way to North Street.
19. See CCRD Book 556, Page 216, dated April 8, 1889, from Daniel Hardy to Mariam F. Batchelder, for well and water rights, and rights to a 10-foot wide passageway from his "park" to North Street.
20. See CCRD Book 878, Page 202, dated July 7, 1911, to Abraham J. & Herman Bernstein, for sewer and drain rights in Upper Cove Street (n/k/a East Cove Street).
21. Boundary lines depicted on this plan within the existing rights of way for Area To Be Claimed are perpendicular or parallel to each right of way sideline.
22. See CCRD Book 14149, Page 281, dated September 10, 1998, for City of Portland's License to erect a fence across Poplar Street partially intruding on land N/F Maxwell.
23. Existing bulkhead is allowed to encroach setback window per City of Portland Zoning Ordinance Section 14-425.
24. Area depicted as Easements 1 & 2 from Rando & McAdam over land claimed by them shall be considered part of this subdivision.



Surveyor's Statement:

Nadeau Land Surveys hereby states exclusively to the client listed hereon, that this plan is based on, and the result of, an on the ground field survey and that to the best of our knowledge, information, and belief, it conforms to the Maine Board of Licensure For Professional Land Surveyors Standards of Practice.

This plan is not valid without the signature and embossed seal of the below listed Professional Land Surveyor who prepared this plan as it may contain unauthorized alterations unknown to this office.

Nadeau Land Surveys

STATE OF MAINE
JAMES D. NADEAU
2124
PROFESSIONAL LAND SURVEYOR

12/6/13

James D. Nadeau, P.L.S. #2124 (agent) Date:

Graphic Scale:

0' 10' 20' 30' 40' 60' 80' 100'

Line Table:

L1	S60°29'41"W	5.56'
L2	S35°03'43"W	5.90'

Plan References:

1. "Plan Depicting The Results Of A Boundary Survey & Existing Conditions Survey Made For Redfern Properties LLC, Sheridan Street And East Cove Street, Portland, Maine", dated November 11, 2013 by Nadeau Land Surveys, Portland, Maine.
2. Exhibit Sketch For Proposed Conveyance, Raymond H. & Alina Waterhouse To Redfern Properties, LLC, Sheridan Street, Portland, Maine", dated July 31, 2013 by Nadeau Land Surveys, Portland, Maine.

Plan Depicting A Proposed Subdivision Made For
Redfern Munjoy LLC, P.O. Box 8816, Portland, ME 04104

Munjoy Heights
Sheridan Street, East Cove Street, And Walnut Street

Portland, Maine

PREPARED BY:

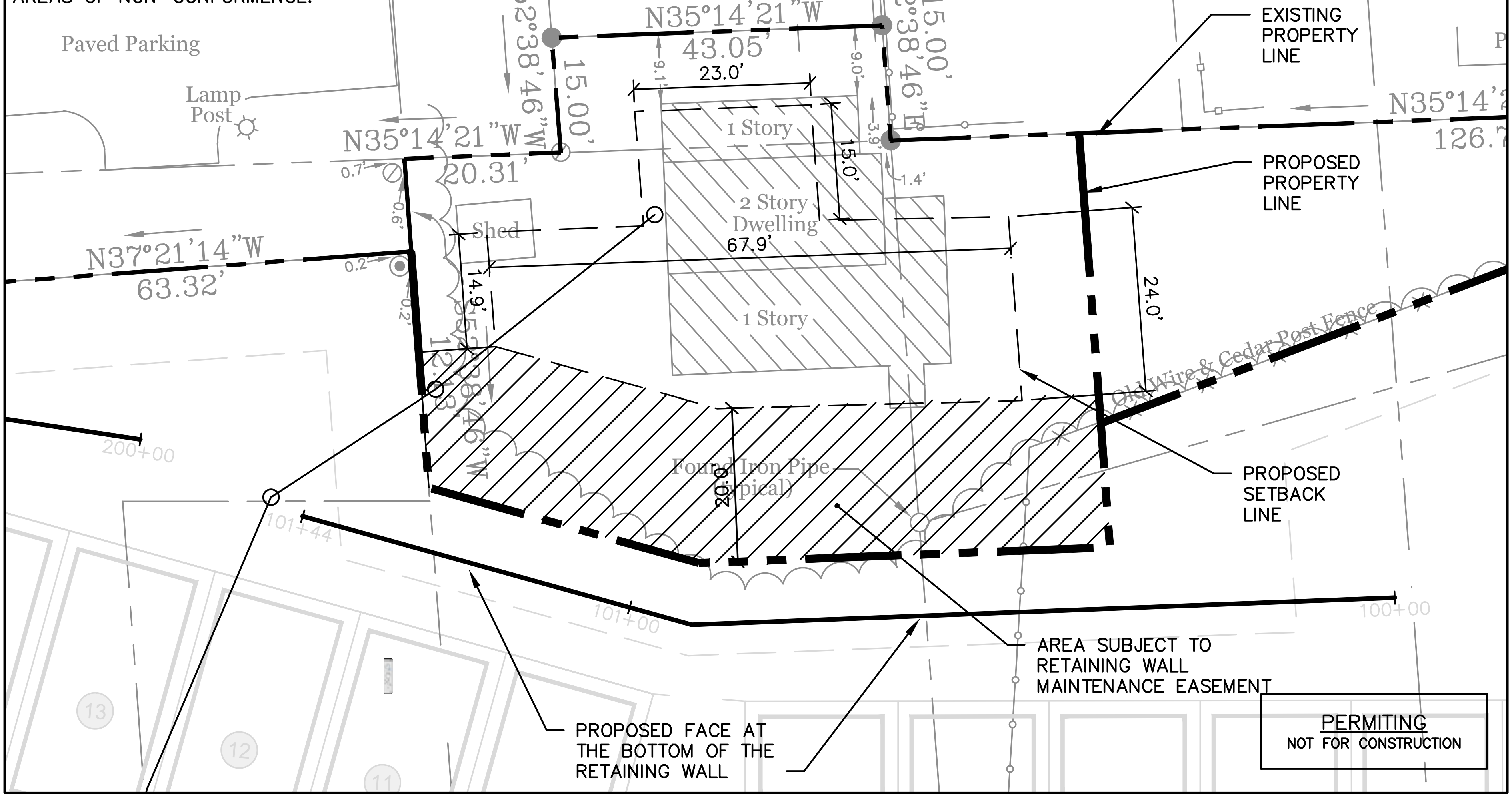
Nadeau Land Surveys
918 BRIGHTON AVENUE
PORTLAND, ME 04102
Professional Land Surveyors
Certified Floodplain Managers
PH. (207) 878-7870
FAX (207) 878-7871

RECORD OWNER:	See the above noted Locus Deed References	DRAWN BY:	TPB	PLAN DATE:	12/6/2013
		CHECKED BY:	JDN/MLC	SURVEY DATE:	April-Aug. 2013
		INSTR.	Topcon GPT-3003W & Topcon Hyper II GPS	SCALE:	1" = 20'
FIELD BOOK:	FB 398, 399 & Topcon Ranger	JOB No:	2131381SUB	SHEET No:	1 of 1

Plan 5

SPACE AND BULK STANDARDS		
ZONE: R6 RESIDENTIAL	REQUIRED	PROVIDED
MINIMUM LOT SIZE	4,500 S.F.	5,202 S.F.
MINIMUM FRONTAGE	40'	0*
MINIMUM YARD DIMENSIONS		
FRONT YARD	10'	<10'**
REAR YARD	20'	20'**
SIDE YARD	10'	10'**
MAXIMUM LOT COVERAGE	50%	24%
MINIMUM LOT WIDTH	40'	41'
MAXIMUM BUILDING HEIGHT	45'	<45'
OPEN SPACE RATIO	20%	74%
PARKING REQUIREMENTS	1	1

* DEEDED ACCESS EASEMENT TO NORTH STREET
** ALL AREAS BELOW REQUIREMENTS ARE EXISTING AREAS OF NON-CONFORMENCE.



PERMITING
NOT FOR CONSTRUCTION

ISSUED FOR	BY / DATE
CONCEPT	WHS 10/30/13
FINAL SUBMISSION	WHS 12/2/13
REVISION	REV. DATE

DRAWING NAME: Maxwell Property Site Plan
PROJECT NAME: MUNJOY HEIGHTS
CLIENT: REDFERN PROPERTIES PORTLAND, MAINE

ACORN ENGINEERING, INC.
ACORN ENGINEERING, INC. P.O. BOX 3372 PORTLAND, MAINE 04104 (207) 775-2655

FILE: 1047_maxwell
DATE: 10/21/13
JN: 1047
SCALE: 1"=20'
DESIGN BY: WHS
DRAWN BY: ZRJ
CHECKED BY: WHS

DRAWING NO.
SK-2

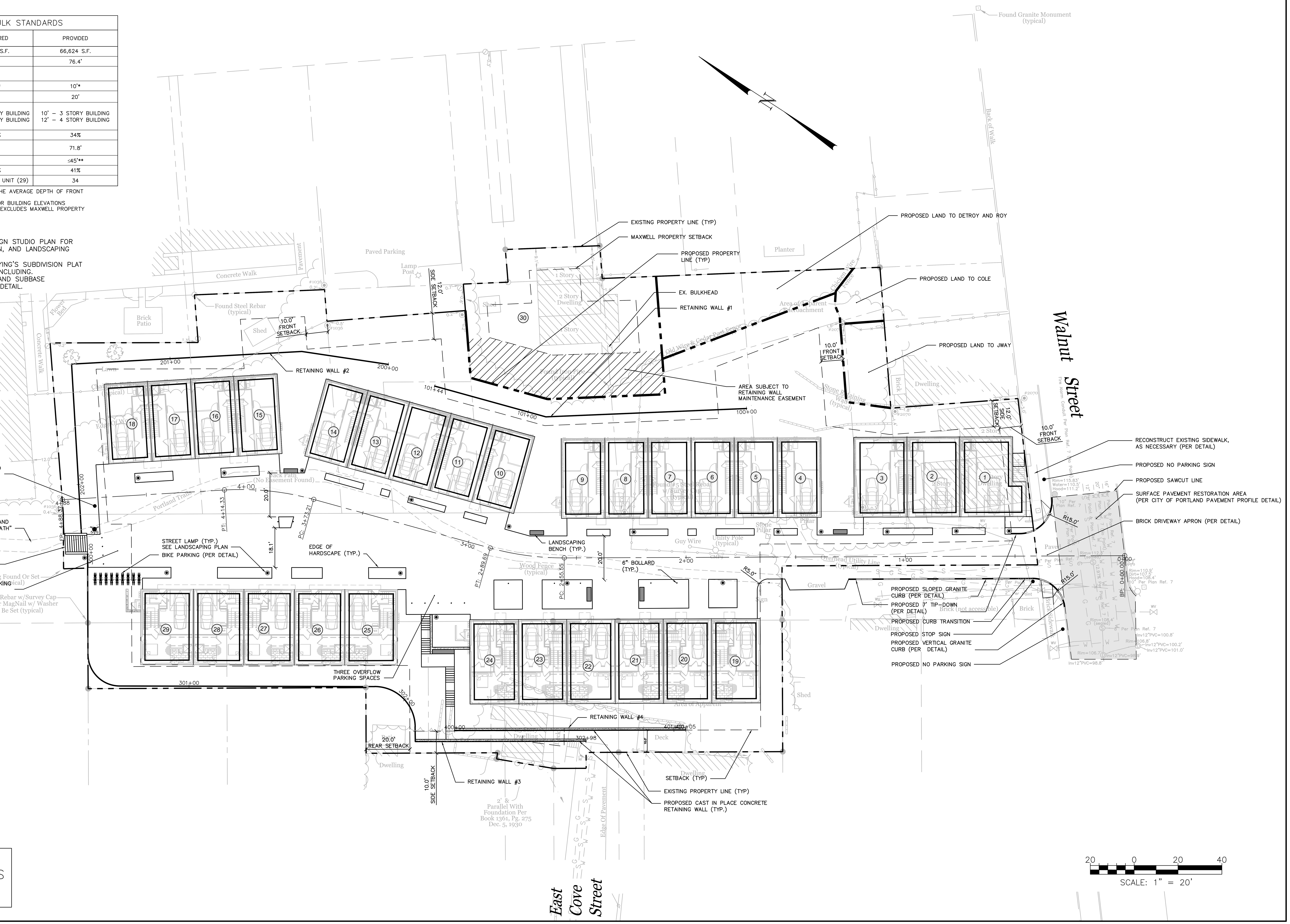
Plan 6

SPACE AND BULK STANDARDS		
ZONE: R6 RESIDENTIAL	REQUIRED	PROVIDED
MINIMUM LOT SIZE	4,500 S.F.	66,624 S.F.
MINIMUM FRONTAGE	40'	76.4'
MINIMUM YARD DIMENSIONS		
FRONT YARD	10'*	10'*
REAR YARD	20'	20'
SIDE YARD	10' – 3 STORY BUILDING 12' – 4 STORY BUILDING	10' – 3 STORY BUILDING 12' – 4 STORY BUILDING
MAXIMUM LOT COVERAGE	40%	34%
MINIMUM LOT WIDTH	40'	71.8'
MAXIMUM BUILDING HEIGHT	45'	≤45'**
OPEN SPACE RATIO	30%	41%
PARKING REQUIREMENTS	1 SPACE PER UNIT (29)	34

* A FRONT YARD NEET NOT EXCEED THE AVERAGE DEPTH OF FRONT YARDS ON EITHER SIDE OF THE LOT
** REFER TO ARCHITECTURAL PLANS FOR BUILDING ELEVATIONS
*** LAND AREA USED IN CALCULATIONS EXCLUDES MAXWELL PROPERTY AND LAND CONVEYANCES.

NOTES:

1. REFER TO SOREN DENIOD DESIGN STUDIO PLAN FOR LANDSCAPING, WOONERF DESIGN, AND LANDSCAPING PLAN.
2. REFER TO NADEU LAND SURVEYING'S SUBDIVISION PLAT FOR ADDITIONAL INFORMATION INCLUDING.
3. CONCRETE BRICK PAVER BASE AND SUBBASE CONSTRUCTION ACCORDING TO DETAIL.



PERMIT DRAWINGS
NOT FOR CONSTRUCTION

ISSUED FOR	BY / DATE
CITY SUBMISSION	WHS 9/23/13
WORKSHOP #2	WHS 11/12/13
FINAL SUBMISSION	WHS 12/2/13

REVISION	REV. / DATE
STAFF COMMENTS	WHS 12/6/13

DRAWING NAME: SITE LAYOUT PLAN

PROJECT NAME: MUNJOY HEIGHTS

CLIENT: REDFERN MUNJOY, LLC.
P.O. BOX 8816, PORTLAND, MAINE 04104

ACORN ENGINEERING, INC.
ACORN ENGINEERING, INC.
P.O. BOX 3372 PORTLAND, MAINE 04104
(207) 775-2655

FILE: 1047_CIVIL
DATE: 9/23/13
JN: 1047
SCALE: 1"=20'
DESIGN BY: WHS
DRAWN BY: ZRJ
CHECKED BY: WHS

STATE OF MAINE
WILLIAM T. SAVAGE
No 11418
12-2-13
LICENSED
PROFESSIONAL ENGINEER

DRAWING NO.
C-10

NOTES:

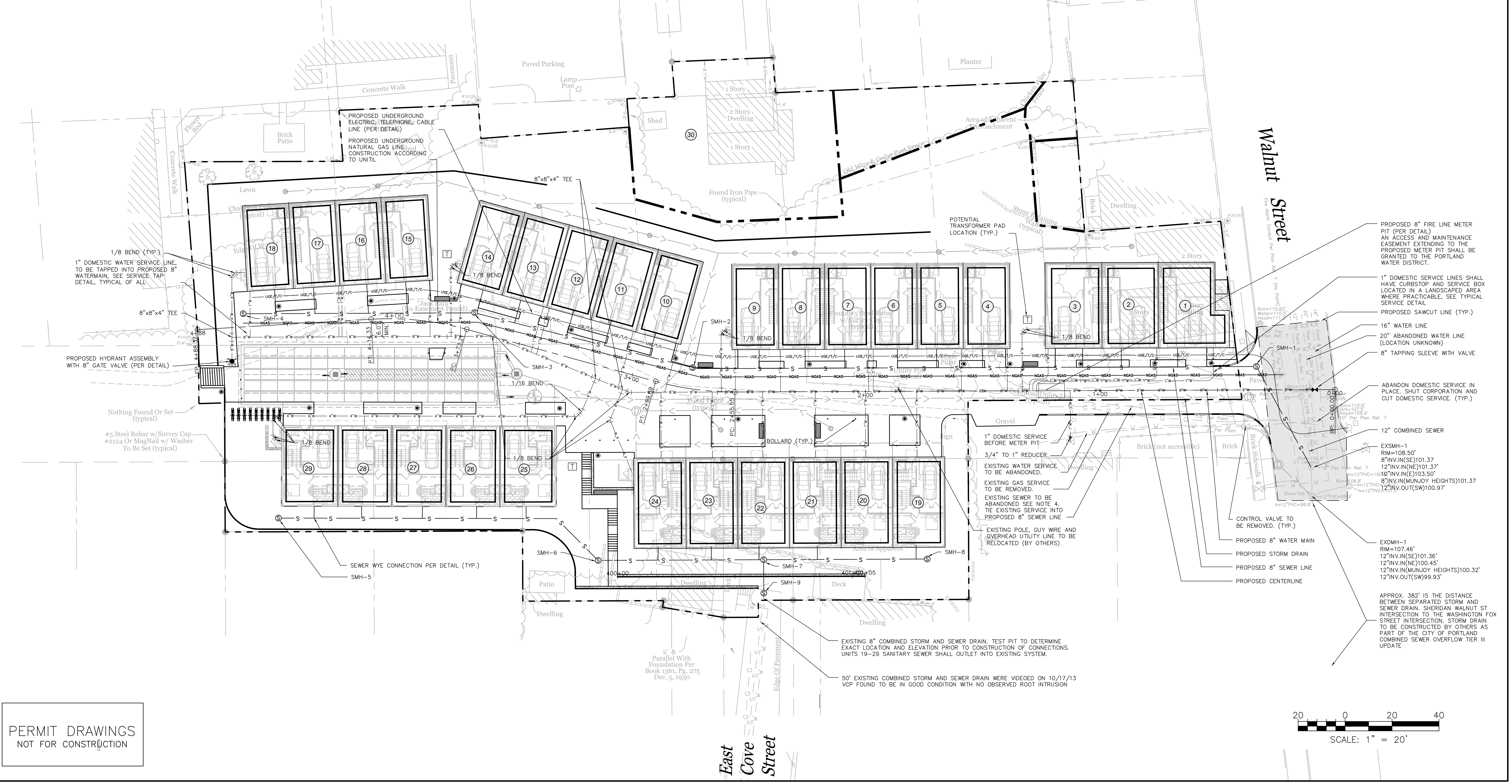
1. UTILITY NOTES WITHIN WALNUT STREET FROM PLAN TITLED SHERIDAN STREET SANITARY SEWER AND STREET RECONSTRUCTION BY WOODARD & CURRAN CONSULTING ENGINEERS, SHEET 5, STAMPED AS-BUILTS 6-20-89.
2. COORDINATE ALL UTILITY ENTRY POINTS WITH ARCHITECTURAL PLANS PRIOR TO START OF CONSTRUCTION.
3. THE CONDOMINIUM ASSOCIATION DOCUMENTS SHALL PROVIDE A HYDRANT MAINTENANCE AGREEMENT IN ACCORDANCE WITH CITY OF PORTLAND TECHNICAL MANUAL SECTION 3.2.3 REVISED 6/17/11.
4. PLUGGING OF ABANDONED SEWER LATERALS SHALL BE IN ACCORDANCE WITH CITY OF PORTLAND TECHNICAL MANUAL SECTION 2.6.11 REVISED 6/7/11.
5. POTENTIAL TRANSFORMER PAD LOCATIONS ARE APPROXIMATE PENDING CONFIRMATION BY CENTRAL MAINE POWER COMPANY AND FUTURE REVIEW/APPROVAL BY THE CITY.
6. IF NECESSARY, ELECTRIC AND TELEPHONE PULL BOXES LOCATIONS TO BE DETERMINED BY THE CENTRAL MAINE POWER AND VERIZON PRIOR TO CONSTRUCTION. CONTRACTOR TO COORDINATE.
7. CONTRACTOR TO COORDINATE THE RELOCATION OF THE EXISTING GUY WIRE AND UTILITY POLE WITH CENTRAL MAINE POWER COMPANY.
8. MAINTAIN MINIMUM 10' HORIZONTAL SEPARATION BETWEEN SANITARY SEWER AND WATERMAIN. DEFLECT WATER MAIN JOINT UP TO 3° TO MAINTAIN ALIGNMENT. THE CONTRACTOR MAY REDUCE THE HORIZONTAL SEPARATION TO 5', PROVIDED THE INSTALLATION MEETS THE PORTLAND WATER DISTRICT SPECIFICATION AND PROCEDURES SECTION 1: GENERAL INFORMATION, D. 2. CONTRACTOR SHALL OBTAIN APPROVAL IN WRITING FROM THE PORTLAND WATER DISTRICT PRIOR TO ANY WATER AND SEWER LINE CONSTRUCTION.
9. THE EXACT LOCATION OF THE INDIVIDUAL GAS AND UGE/T/C LOCATIONS SHALL BE PROVIDED BY WRIGHT-RYAN TO THE RESPONSIBLE CONTRACTOR.

SEWER STRUCTURE SCHEDULE

STRUCTURE	SIZE	RIM	INV. IN	INV. OUT
EXSMH-1	EXIST.	108.50'	8"INV.IN(SE)101.37' 12"INV.IN(NE)101.37' 10"INV.IN(E)103.50' 8"INV.IN(MUNJOY HEIGHTS)101.37	12"INV.OUT(SW)100.97'
SMH-1	4'	113.35'	102.52'	102.42'
SMH-2	4'	112.23'	105.00'	104.90'
SMH-3	4'	111.75'	105.71'	105.61'
SMH-4	4'	112.41'	–	106.08'
SMH-5	4'	93.00'	–	87.50'
SMH-6	4'	90.00'	84.50'	84.40'
SMH-7*	4'	91.50'	8"/83.04' 8"/83.04'	TBD
SMH-8	4'	91.50'	–	84.40'
SMH-9**	4'	TBD/85.75'	TBD	TBD

* IF THE DROP IS GREATER THAN 2 FEET BETWEEN THE INVERT IN & OUT, BASED UPON THE DATA RECIEVIED FROM THE TEST PIT, THEN A DROP MANHOLE SHALL BE REQUIRED. PROVIDE TEST PIT INFORMATION TO THE ENGINEER FOR VERIFICATION.

** INVERTS IN & OUT TO BE DETERMINED BASED UPON TEST PIT DATA.



PERMIT DRAWINGS
NOT FOR CONSTRUCTION

20 0 20 40
SCALE: 1" = 20'

ISSUED FOR	BY / DATE
CITY SUBMISSION	WHS 9/23/13
WORKSHOP #2	WHS 11/12/13
FINAL SUBMISSION	WHS 12/2/13

REVISION	REV. / DATE
STAFF COMMENTS	WHS 12/6/13

DRAWING NAME: UTILITY PLAN

PROJECT NAME: MUNJOY HEIGHTS

CLIENT: REDFERN MUNJOY, LLC.
P.O. BOX 8816, PORTLAND, MAINE 04104

ACORN ENGINEERING, INC.
ACORN ENGINEERING, INC.
P.O. BOX 3372 PORTLAND, MAINE 04104
(207) 775-2655

FILE: 1047_CIVIL
DATE: 9/23/13
JN: 1047
SCALE: 1"=20'
DESIGN BY: WHS
DRAWN BY: ZRJ
CHECKED BY: WHS

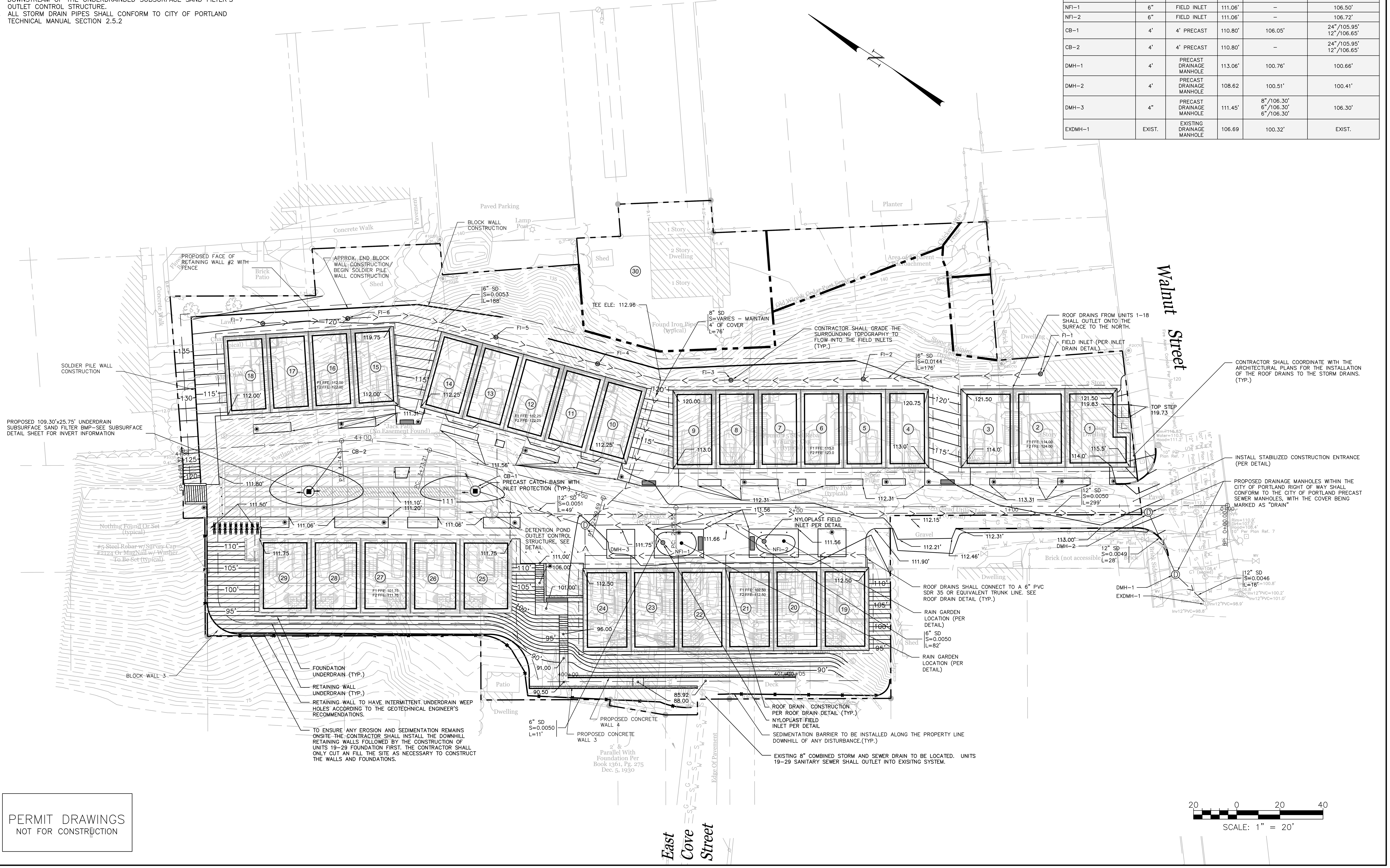
STATE OF MAINE
WILLIAM F. SAVAGE
No 11415
LICENSED PROFESSIONAL ENGINEER

DRAWING NO.
C-20

NOTE:
1. ALL DISTURBED AND PROPOSED SLOPES NOT COVERED WITH MULCH AND GREATER THAN 3:1 SHALL BE STABILIZED WITH 4" OF LOAM SEED AND EROSION CONTROL BLANKETS SC150BN BY NORTH AMERICAN GREEN OR APPROVED EQUAL.
2. ALL DISTURBED AND PROPOSED SLOPES TO BE COVERED WITH MULCH AND GREATER THAN 3:1 SHALL BE TEMPORARILY STABILIZED WITH EROSION CONTROL BLANKETS SC150BN BY NORTH AMERICAN GREEN OR APPROVED EQUAL.
3.
4. THE UNDERDRAIN ASSOCIATED WITH THE UPHILL RETAINING WALLS AND FOUNDATION UNDERDRAIN FOR UNITS 1–18 SHALL OUTLET DOWNSTREAM OF THE UNDERDRAINDED SUBSURFACE SAND FILTER'S OUTLET CONTROL STRUCTURE.
5. ALL STORM DRAIN PIPES SHALL CONFORM TO CITY OF PORTLAND TECHNICAL MANUAL SECTION 2.5.2

DRAINAGE STRUCTURE SCHEDULE

STRUCTURE	SIZE	TYPE	RIM	INV. IN	INV. OUT
FI–1	–	FIELD INLET	121.00'	–	115.50'
FI–2	–	FIELD INLET	120.40'	114.90'	114.90'
FI–3	–	FIELD INLET	120.40'	114.30'	114.30'
FI–4	–	FIELD INLET	121.90'	113.16'	113.16'
FI–5	–	FIELD INLET	121.90'	113.32'	113.32'
FI–6	–	FIELD INLET	119.40'	113.70'	113.70'
FI–7	–	FIELD INLET	119.40'	–	113.90'
NFI–1	6"	FIELD INLET	111.06'	–	106.50'
NFI–2	6"	FIELD INLET	111.06'	–	106.72'
CB–1	4'	4' PRECAST	110.80'	106.05'	24"/105.95' 12"/106.65'
CB–2	4'	4' PRECAST	110.80'	–	24"/105.95' 12"/106.65'
DMH–1	4'	PRECAST DRAINAGE MANHOLE	113.06'	100.76'	100.66'
DMH–2	4'	PRECAST DRAINAGE MANHOLE	108.62	100.51'	100.41'
DMH–3	4"	PRECAST DRAINAGE MANHOLE	111.45'	8"/106.30' 6"/106.30' 6"/106.30'	106.30'
EXDMH–1	EXIST.	EXISTING DRAINAGE MANHOLE	106.69	100.32'	EXIST.



PERMIT DRAWINGS
NOT FOR CONSTRUCTION

ISSUED FOR	BY / DATE
CITY SUBMISSION	WHS 9/23/13
WORKSHOP #2	WHS 11/12/13
FINAL SUBMISSION	WHS 12/2/13
REVISION	REV. DATE
STAFF COMMENTS	WHS 12/6/13

DRAWING NAME: GRADING, DRAINAGE & EROSION CONTROL PLAN

PROJECT NAME: MUNJOY HEIGHTS

CLIENT: REDFERN MUNJOY, LLC. P.O. BOX 8816, PORTLAND, MAINE 04104

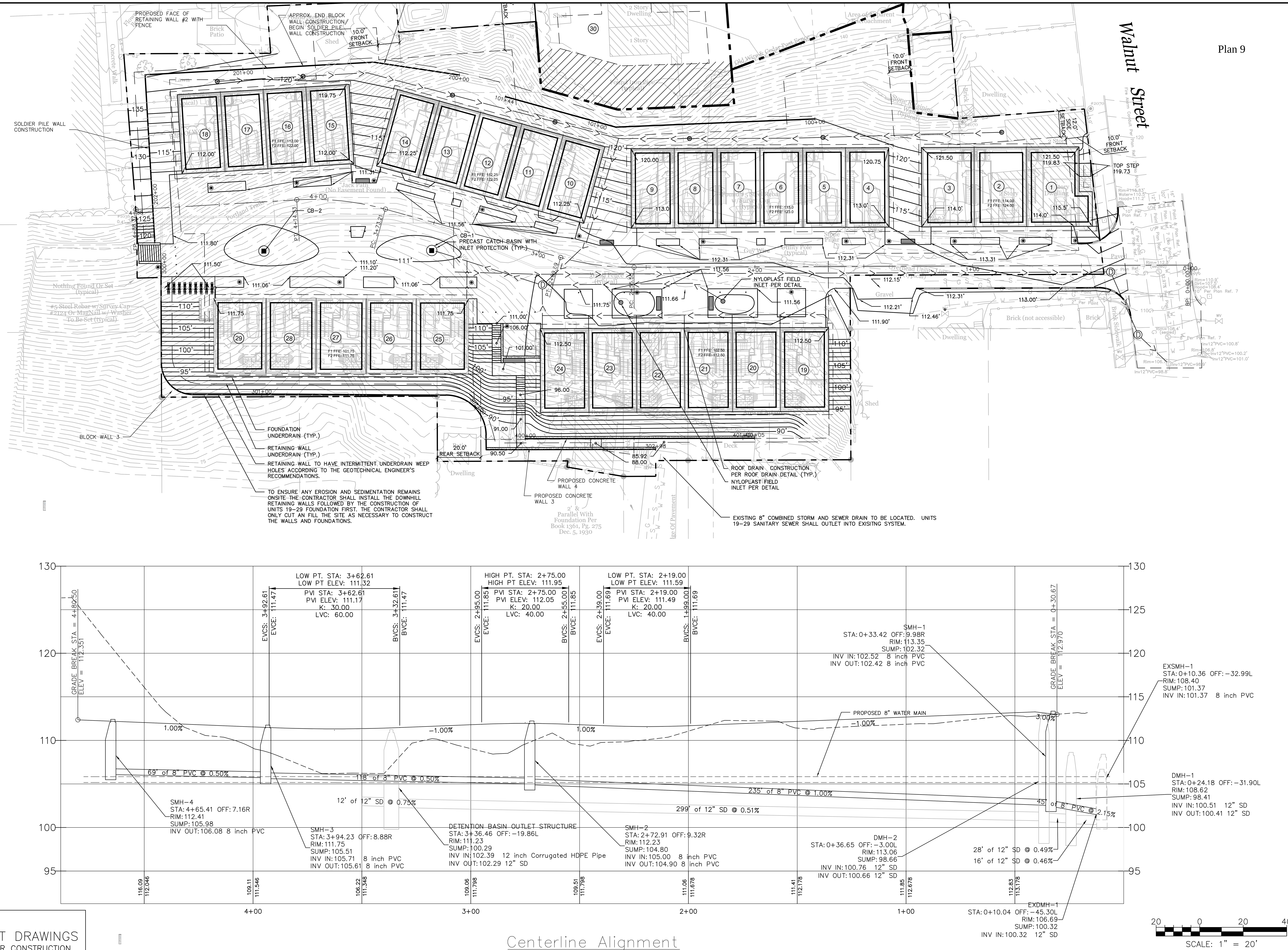
ACORN ENGINEERING, INC.
ACORN ENGINEERING, INC. P.O. BOX 3372 PORTLAND, MAINE 04104 (207) 775-2655

FILE: 1047_CIVIL
DATE: 11/05/13
JN: 1047
SCALE: 1"=20'
DESIGN BY: WHS
DRAWN BY: ZRJ
CHECKED BY: WHS

STATE OF MAINE WILLIAM H. SAVAGE No. 11413 LICENSED PROFESSIONAL ENGINEER

DRAWING NO.
C-30

Plan 9



PERMIT DRAWINGS
NOT FOR CONSTRUCTION

ISSUED FOR	BY / DATE
CITY SUBMISSION	WHS 9/23/13
WORKSHOP #2	WHS 11/12/13
FINAL SUBMISSION	WHS 12/2/13

REVISION	REV. / DATE
STAFF COMMENTS	WHS 12/6/13

DRAWING NAME: GRADING AND ROADWAY PROFILE PLAN

PROJECT NAME: MUNJOY HEIGHTS

CLIENT: REDFERN MUNJOY, LLC.
P.O. BOX 8816, PORTLAND, MAINE 04104

A C O R N ENGINEERING, INC.
ACORN ENGINEERING, INC.
P.O. BOX 3372 PORTLAND, MAINE 04104
(207) 775-2655

FILE: 1047_CIVIL
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JN: 1047
SCALE: 1"=20'
DESIGN BY: WHS
DRAWN BY: ZRJ
CHECKED BY: WHS

STATE OF MAINE
WILLIAM H. SAVAGE
No. 11413
LICENSED PROFESSIONAL ENGINEER

DRAWING NO.
C-31

Plan 10

NOTES:

1) BICYCLE RACK SHALL HAVE CAPACITY FOR TWO BICYCLES.

2) BICYCLE RACK PARTS SHALL BE OF UNIFORM COLOR AND SHALL BE FINISHED IN ACCORDANCE WITH PRODUCT SPECIFICATION.

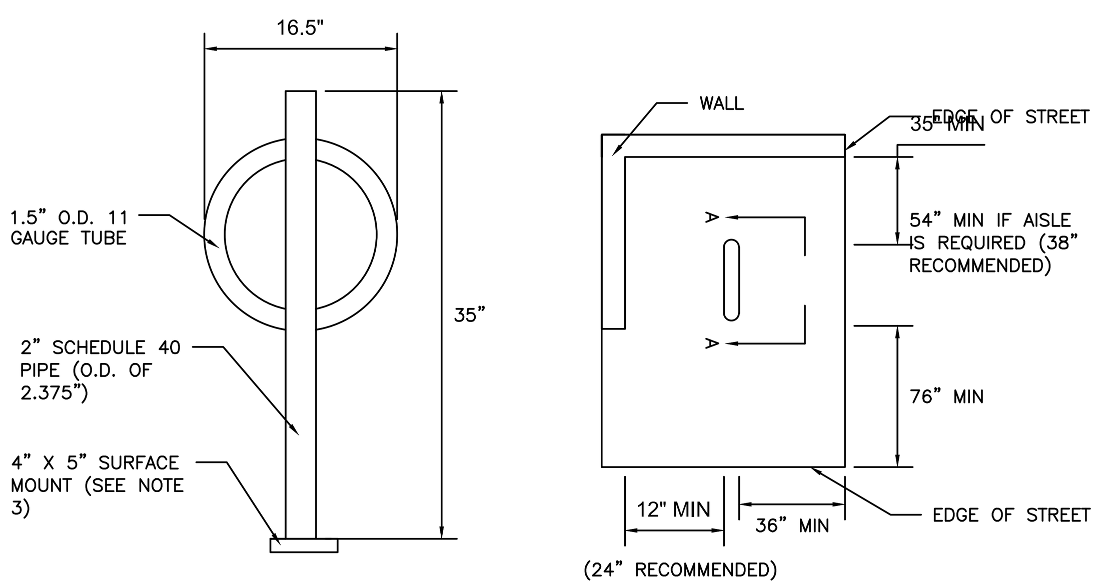
3) BICYCLE RACK SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S MOST RECENT INSTALLATION RECOMMENDATIONS, AND SHALL BE INSTALLED WITH A SURFACE MOUNT UNLESS OTHERWISE APPROVED BY ENGINEER.

4) BICYCLE RACK SHALL BE "DERO BIKE HITCH", AS MANUFACTURED BY DERO BIKE RACKS.

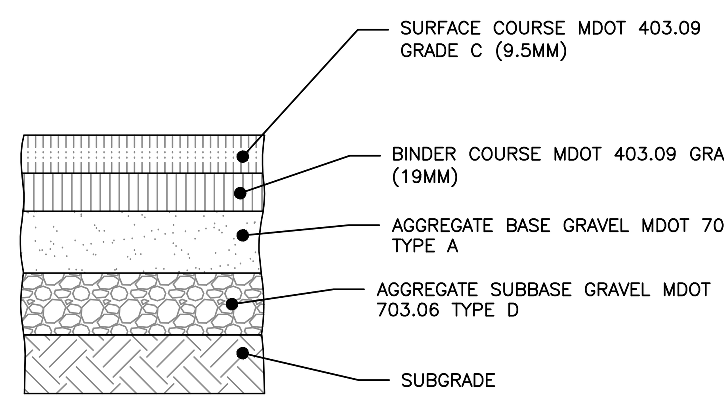
5) MINIMUM OFFSETS SHOWN. MANUFACTURER'S RECOMMENDED OFFSETS SHALL BE ENFORCED WHERE POSSIBLE.

6) MINIMUM DISTANCE BETWEEN BICYCLE RACKS SHALL BE 24". RECOMMENDED DISTANCE BETWEEN BICYCLE RACKS SHALL BE 38".

7) ALL OFFSETS ARE FROM OUTSIDE EDGES OF ITEMS.



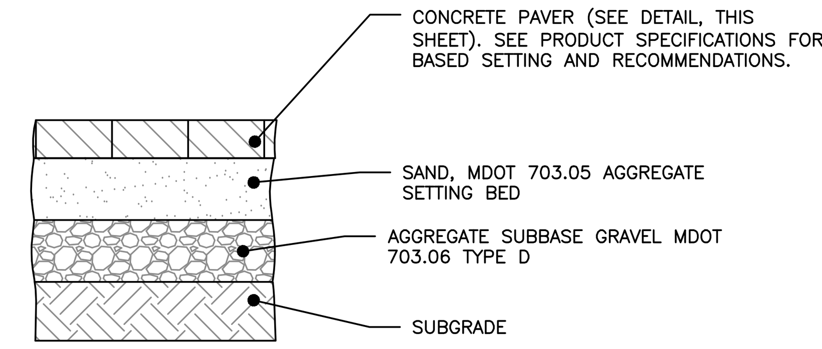
BICYCLE RACK DETAIL
NOT TO SCALE



NOTE:
COMPACT SUBGRADE TO 95% MAXIMUM DRY DENSITY IN ACCORDANCE WITH ASTM D-1557

	THICKNESS OF LAYERS
STANDARD	LAYERS
2"	SURFACE COURSE MDOT 403.09 GRADE C (12.5mm)
3"	BINDER COURSE MDOT 403.09 GRADE B (19mm)
6"	AGGREGATE BASE GRAVEL MDOT 703.06 TYPE B
18"	AGGREGATE SUBBASE GRAVEL MDOT 703.06 TYPE D

CITY OF PORTLAND ARTERIAL BITUMINOUS PAVEMENT PROFILE
NOT TO SCALE

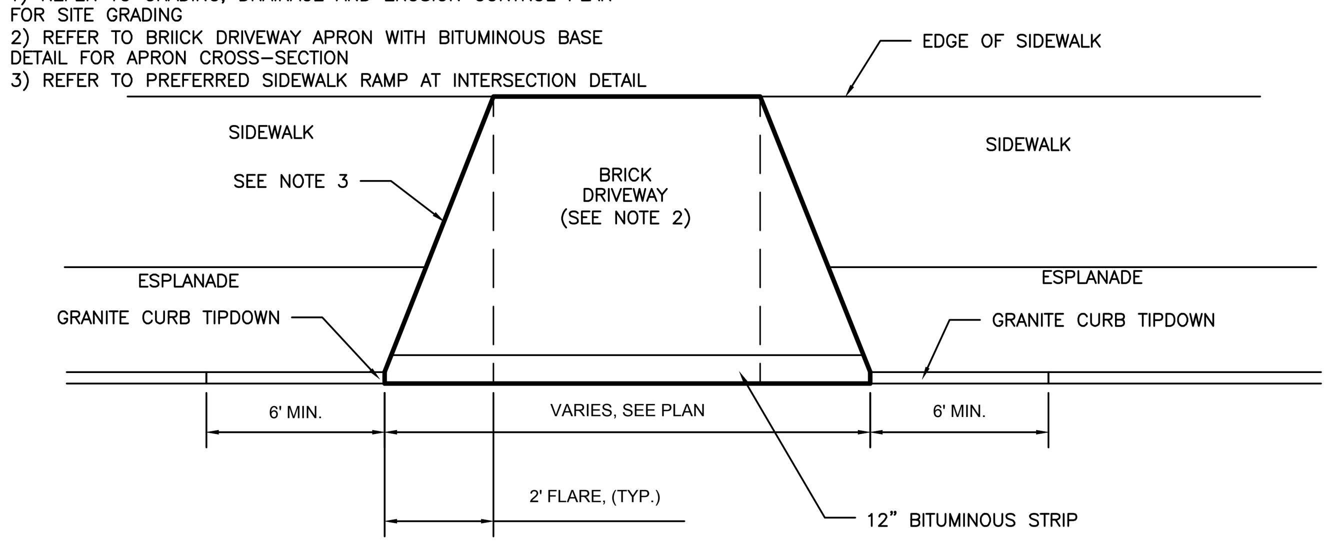


NOTE:
1. COMPACT AGGREGATE MATERIALS AND SUBGRADE TO 95% MAXIMUM DRY DENSITY IN ACCORDANCE WITH ASTM D-1557

	THICKNESS OF LAYERS
STANDARD	LAYERS
2-3/4"	CONCRETE PAVER (DEPTH TBD BASED UPON THE MANUFACTURER)
4"	AGGREGATE BASE SAND MDOT 703.05
15"	AGGREGATE SUBBASE GRAVEL MDOT 703.06 TYPE D

CONCRETE BRICK PAVER PROFILE
NOT TO SCALE

NOTE:
1) REFER TO GRADING, DRAINAGE AND EROSION CONTROL PLAN FOR SITE GRADING
2) REFER TO BRIICK DRIVEWAY APRON WITH BITUMINOUS BASE DETAIL FOR APRON CROSS-SECTION
3) REFER TO PREFERRED SIDEWALK RAMP AT INTERSECTION DETAIL

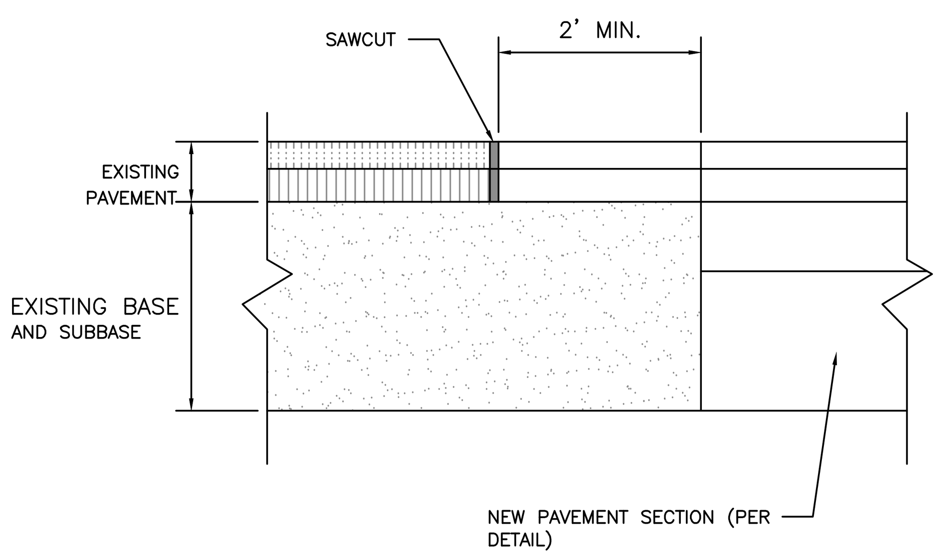


DRIVEWAY APRON LAYOUT DETAIL
NOT TO SCALE

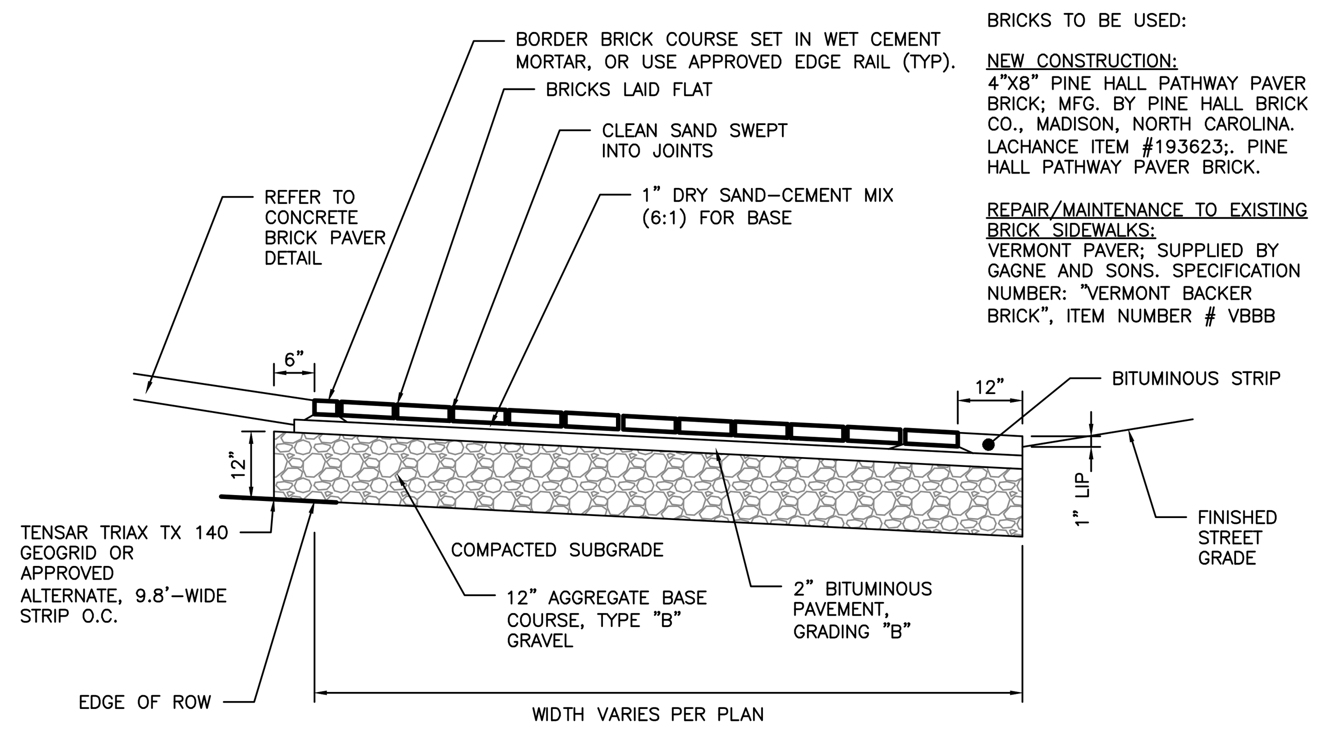
NOTES:

1. SAWCUT EXISTING PAVEMENT AND REMOVE 2' STRIP OF EXISTING PAVEMENT. APPLY BITUMINOUS TACK COAT PRIOR TO PLACEMENT OF NEW BITUMINOUS PAVEMENT.

2. THE NEW PAVEMENT SECTION SHALL MEET THE CITY OF PORTLAND ARTERIAL BITUMINOUS PAVEMENT SECTION DETAIL AT A MINIMUM OR THE THE EXISTING PAVEMENT AND AGGREGATE BASE AND SUBBASE DEPTH WHICHEVER IS GREATER.



PAVEMENT SAWCUT DETAIL
NOT TO SCALE



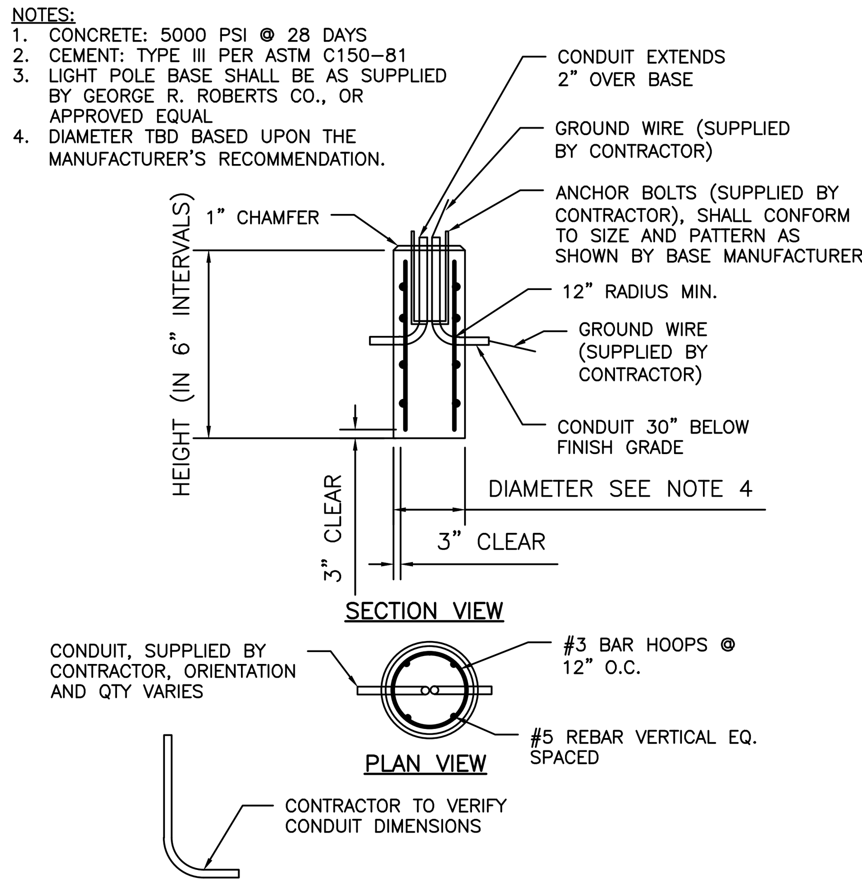
BRICKS TO BE USED:

NEW CONSTRUCTION:
4"X8" PINE HALL PATHWAY PAVER BRICK; MFG. BY PINE HALL BRICK CO., MADISON, NORTH CAROLINA. LACHANCE ITEM #193623;. PINE HALL PATHWAY PAVER BRICK.

REPAIR/MAINTENANCE TO EXISTING BRICK SIDEWALKS:
VERMONT PAVER; SUPPLIED BY GAGNE AND SONS. SPECIFICATION NUMBER: "VERMONT BACKER BRICK", ITEM NUMBER # VBBB

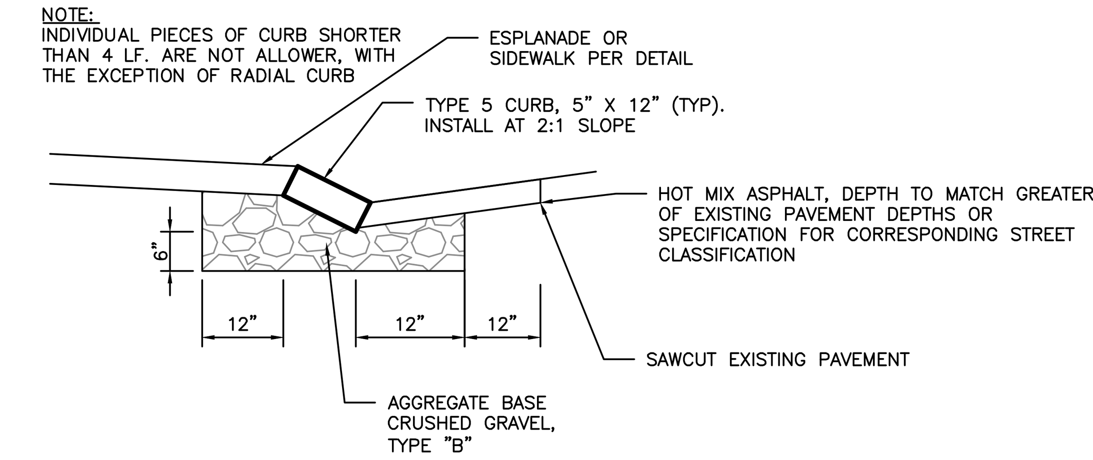
BRICK DRIVEWAY APRON WITH BITUMINOUS BASE DETAIL
NOT TO SCALE

NOTES:
1. CONCRETE: 5000 PSI @ 28 DAYS
2. CEMENT: TYPE III PER ASTM C150-81
3. LIGHT POLE BASE SHALL BE AS SUPPLIED BY GEORGE R. ROBERTS CO., OR APPROVED EQUAL
4. DIAMETER TBD BASED UPON THE MANUFACTURER'S RECOMMENDATION.

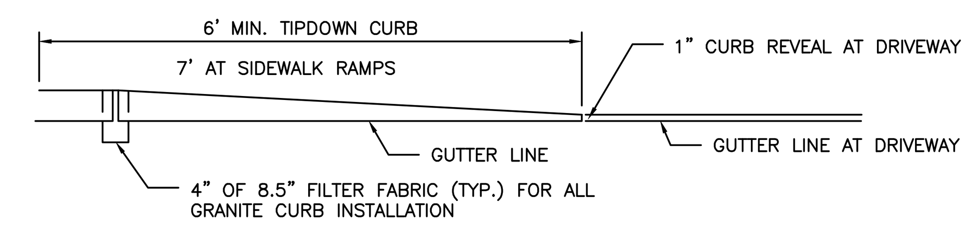


LIGHT POLE BASE
NOT TO SCALE

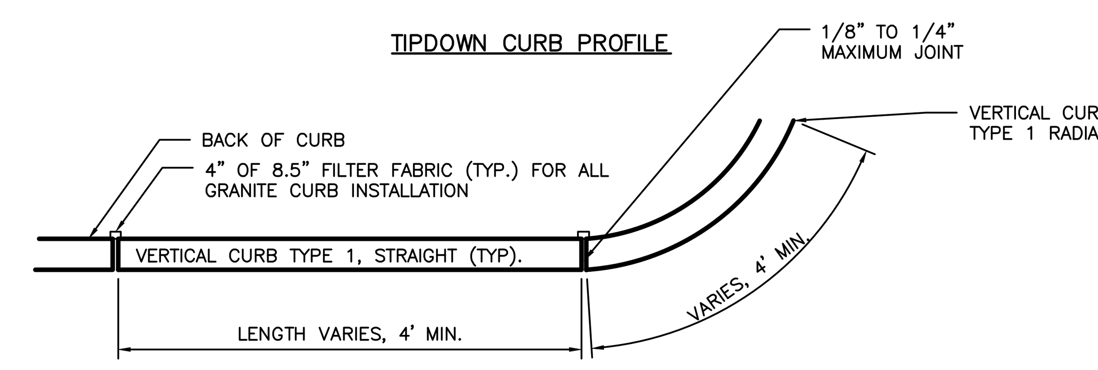
NOTE:
INDIVIDUAL PIECES OF CURB SHORTER THAN 4 LF. ARE NOT ALLOWER, WITH THE EXCEPTION OF RADIAL CURB



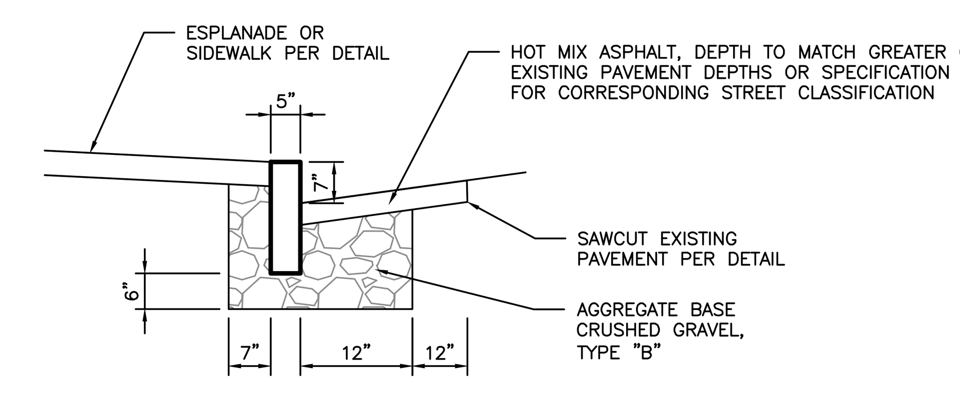
SLOPED GRANITE CURB



TIPDOWN CURB PROFILE

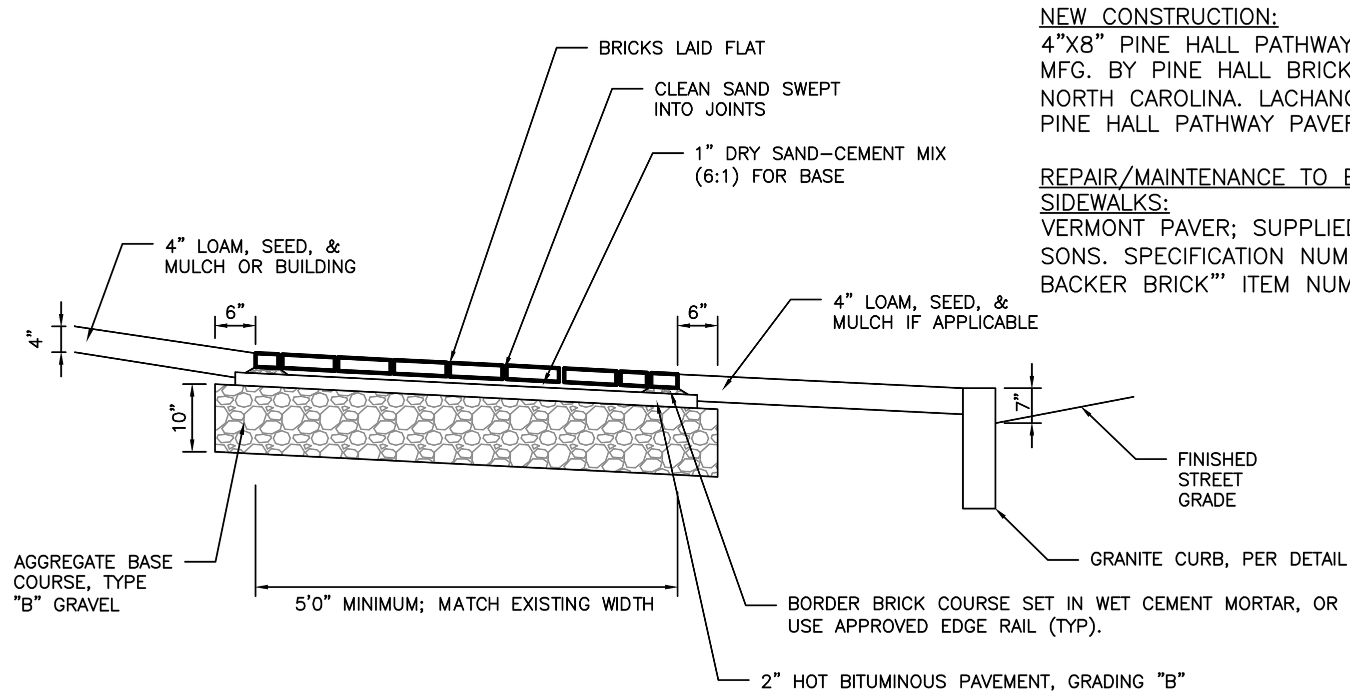


VERTICAL GRANITE CURB PLAN VIEW



VERTICAL GRANITE CURB CROSS SECTION

VERTICAL GRANITE CURB INSTALLATION IN EXISTING STREETS DETAIL
NOT TO SCALE



BRICKS TO BE USED:

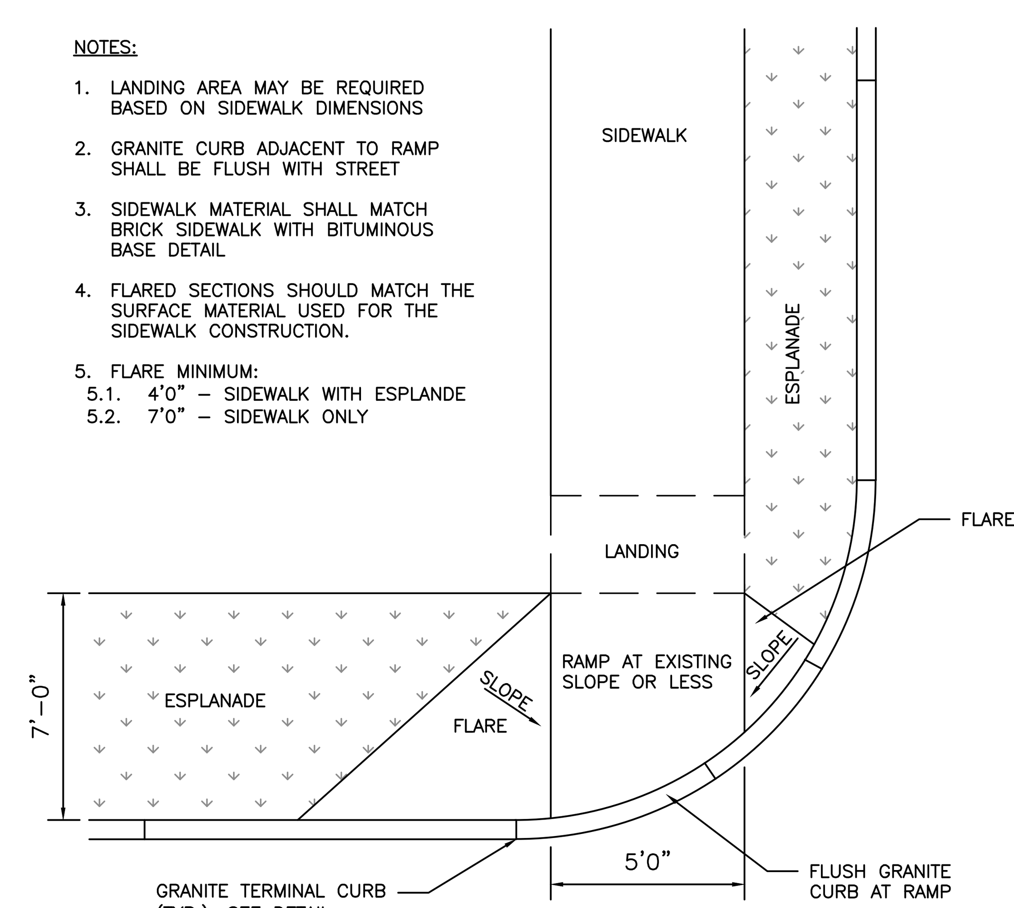
NEW CONSTRUCTION:
4"X8" PINE HALL PATHWAY PAVER BRICK; MFG. BY PINE HALL BRICK CO., MADISON, NORTH CAROLINA. LACHANCE ITEM #193623;. PINE HALL PATHWAY PAVER BRICK.

REPAIR/MAINTENANCE TO EXISTING BRICK SIDEWALKS:
VERMONT PAVER; SUPPLIED BY GAGNE AND SONS. SPECIFICATION NUMBER: "VERMONT BACKER BRICK"" ITEM NUMBER # VBBB

BRICK SIDEWALK WITH BITUMINOUS BASE DETAIL
NOT TO SCALE

NOTES:

1. LANDING AREA MAY BE REQUIRED BASED ON SIDEWALK DIMENSIONS
2. GRANITE CURB ADJACENT TO RAMP SHALL BE FLUSH WITH STREET
3. SIDEWALK MATERIAL SHALL MATCH BRICK SIDEWALK WITH BITUMINOUS BASE DETAIL
4. FLARED SECTIONS SHOULD MATCH THE SURFACE MATERIAL USED FOR THE SIDEWALK CONSTRUCTION.
5. FLARE MINIMUM:
 5.1. 4'0" - SIDEWALK WITH ESPLANDE
 5.2. 7'0" - SIDEWALK ONLY



PREFERRED SIDEWALK RAMP AT INTERSECTION
NOT TO SCALE

PERMIT DRAWINGS
NOT FOR CONSTRUCTION

ISSUED FOR	BY / DATE
WORKSHOP #2	WHS 11/12/13
FINAL SUBMISSION	WHS 12/2/13

REVISION	REV. DATE
REV. STANDARD DETAIL	WHS 12/4/13
STAFF COMMENTS	WHS 12/6/13

DRAWING NAME: SITE DETAILS

PROJECT NAME: MUNJOY HEIGHTS

CLIENT: REDFERN MUNJOY, LLC. P.O. BOX 8816, PORTLAND, MAINE 04104

A C O R N ENGINEERING, INC.

THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM ACORN ENGINEERING, INC. ANY ALTERATIONS, AUTHORIZED OR OTHERWISE, SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO ACORN ENGINEERING, INC.

ACORN ENGINEERING, INC. P.O. BOX 3372 PORTLAND, MAINE 04104 (207) 775-2655

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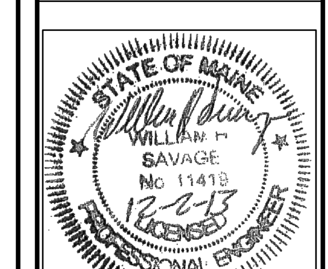
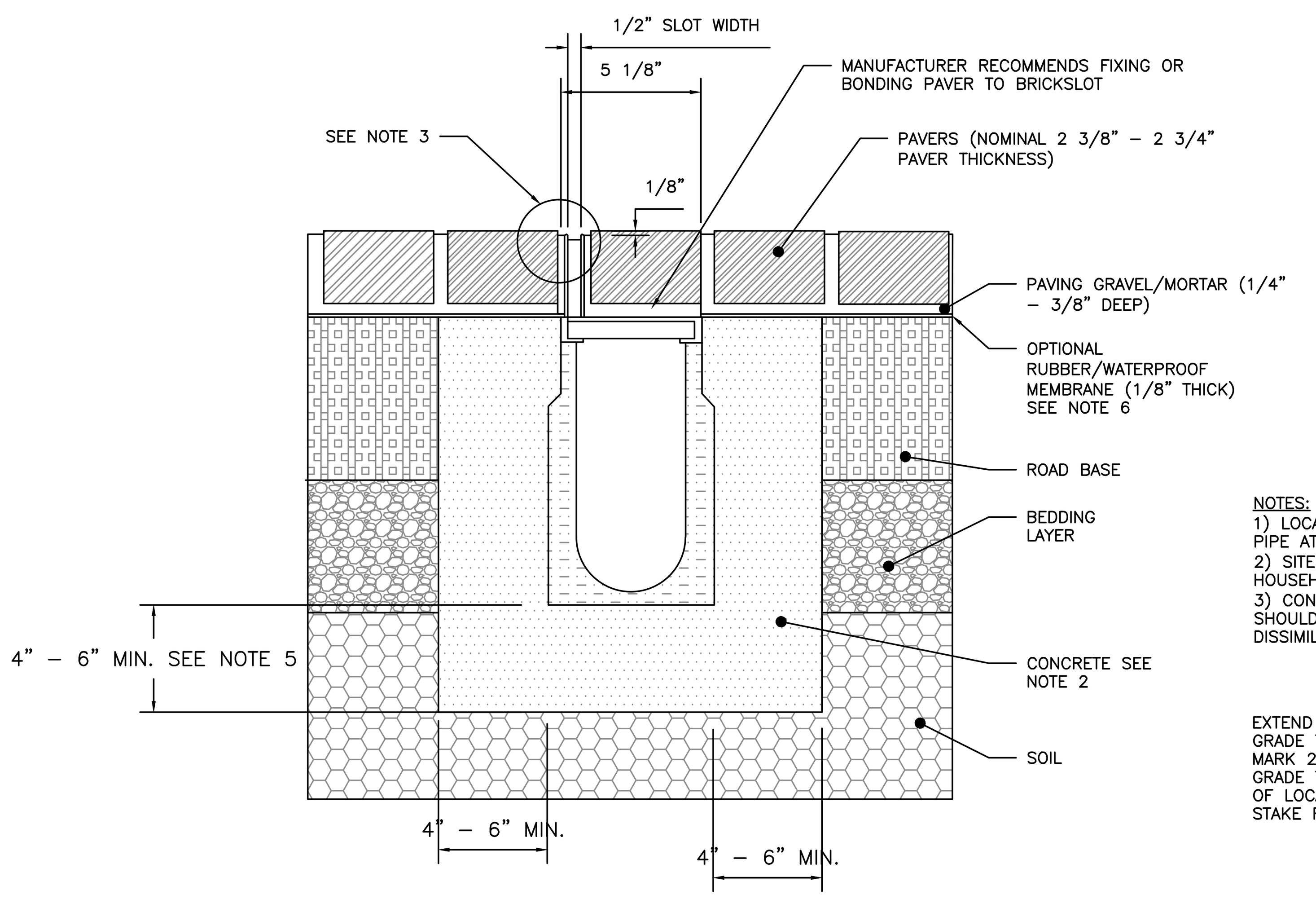
CHECKED BY: WHS



DRAWING NO.
C-40

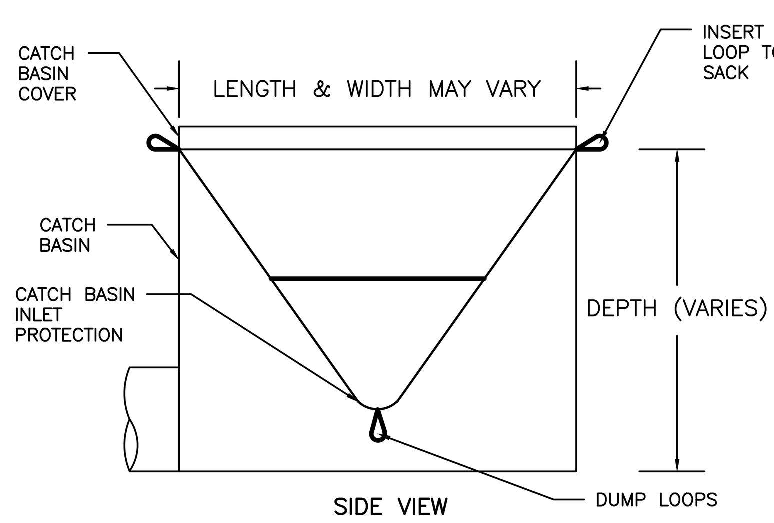
NOTES:

1. REFER TO THE CRICK PAVING DETAIL FOR CONSTRUCTION OF THE BASE AND SUBBASE MATERIALS
2. A MINIMUM CONCRETE STRENGTH OF 3000 PSI IS RECOMMENDED. THE CONCRETE SHOULD BE VIBRATED TO ELIMINATE AIR POCKETS.
3. PAVERS TO BE 1/8" ABOVE CHANNEL EDGE. A BEAD OF SEALANT CAN BE USED BETWEEN THE RAIL & CONCRETE.
4. REFER TO ACO'S LATEST INSTALLATION INSTRUCTIONS FOR COMPLETE DETAILS.
5. CONCRETE BASE THICKNESS SHOULD MATCH SLAB THICKNESS.
6. CONTACT ACO FOR RECOMMENDATIONS ON DRAINING WHEN USING MEMBRANE MATERIAL WITH BRICKSLOT.
7. PAVERS SHALL BE ACO DRAIN, K1000S BRICKSLOT, LOAD CLASS A–C: PAVERS.



ACO BRICK SLOT DETAIL

NOT TO SCALE



NOTES:

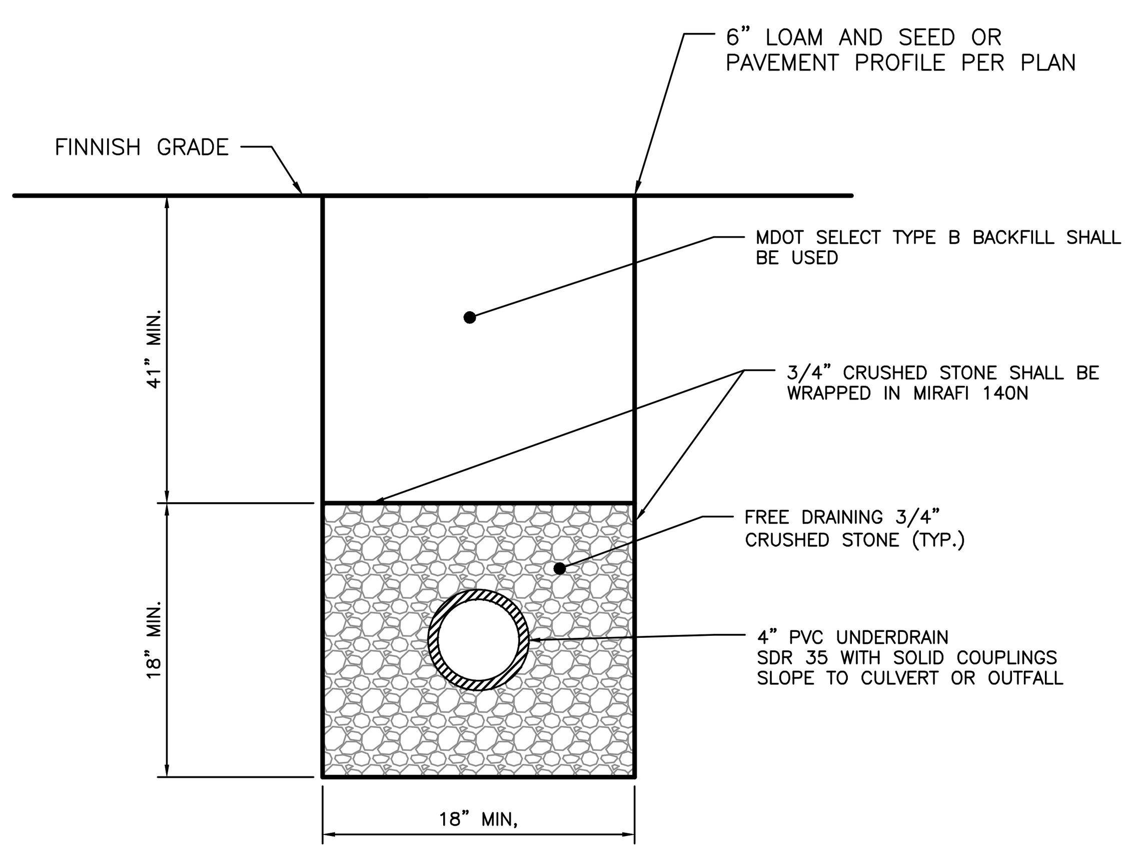
1) CATCH BASIN INLET PROTECTION SHALL BE INSTALLED DOWNGRADIENT OF PROPOSED PROJECT AND ROUTINELY MAINTAINED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS

2) CATCH BASIN SIZE VARIES. CONTRACTOR TO ENSURE CATCH BASIN INLET PROTECTION MATCHES CATCH BASIN DIMENSIONS.

3) SILT SACK SHALL BE ACF ENVIRONMENTAL SILT SACK, TYPE A, OR APPROVED EQUAL.

CATCH BASIN INLET PROTECTION

NOT TO SCALE

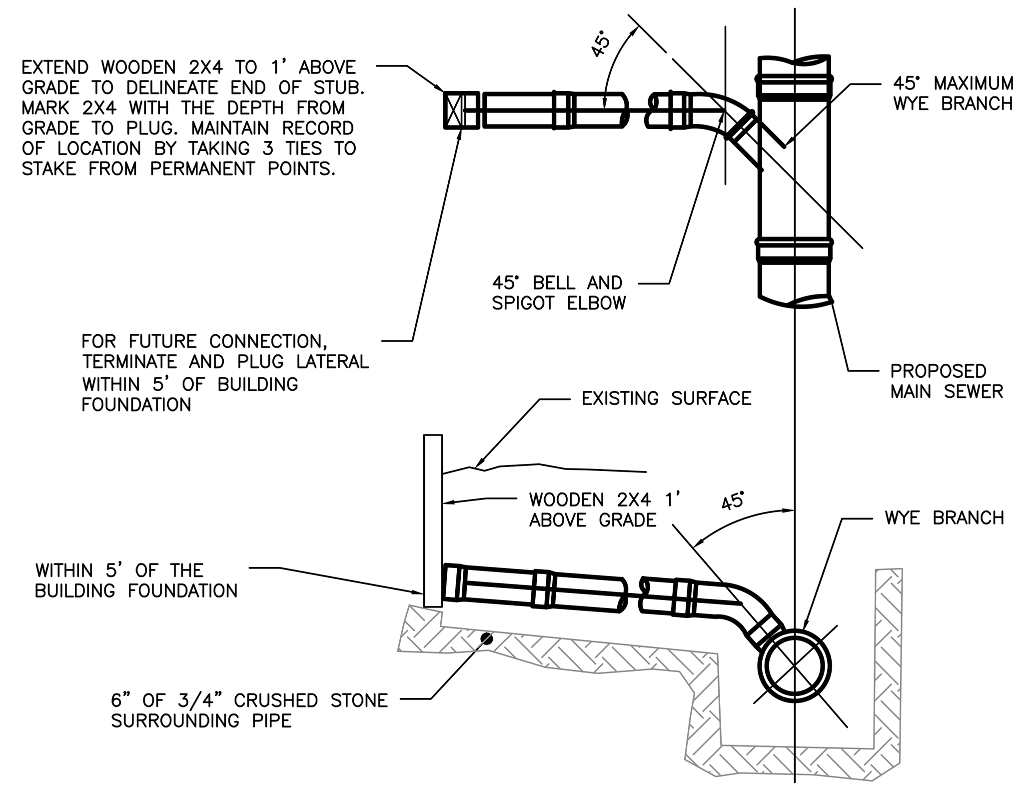


NOTES:
1. MINIMUM UNDERDRAIN SLOPE 0.0025 (0.25%)
2. PERFORATIONS IN UNDERDRAIN PIPE SHALL BE ORIENTED DOWN.

UNDERDRAIN DETAIL

NOT TO SCALE

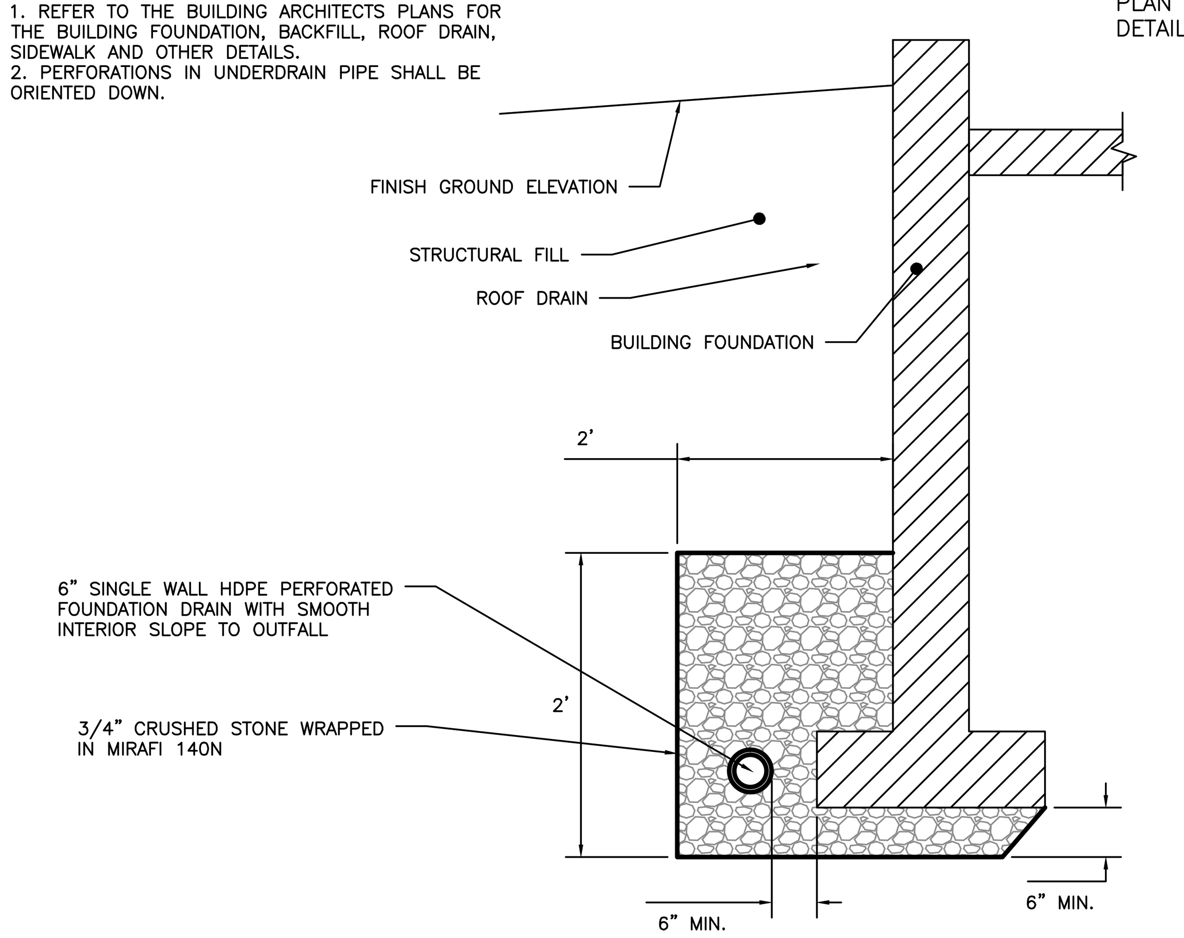
NOTES:
1) LOCATION WITH WARNING TAPE SHALL BE INSTALLED OVER CENTERLINE OF PIPE AT A MAXIMUM OF 24 INCHES BELOW FINISH GRADE.
2) SITE CONTRACTOR TO COORDINATE CONNECTION OF SEWER LATERAL TO HOUSEHOLD PLUMBING WITH ARCHITECTURAL CONTRACTOR
3) CONNECTION OF PROPOSED SEWER LATERAL TO HOUSEHOLD PLUMBING SHOULD INCORPORATE USE OF SIMILAR PIPE MATERIALS. IN THE CASE OF DISSIMILAR PIPES BEING USED, A FERNCO FLEXIBLE COUPLING SHALL BE USED.



SEWER TEE/WYE CONNECTION DETAIL

NOT TO SCALE

NOTES:
1. REFER TO THE BUILDING ARCHITECTS PLANS FOR THE BUILDING FOUNDATION, BACKFILL, ROOF DRAIN, SIDEWALK AND OTHER DETAILS.
2. PERFORATIONS IN UNDERDRAIN PIPE SHALL BE ORIENTED DOWN.



FOUNDATION DRAIN DETAIL

NOT TO SCALE

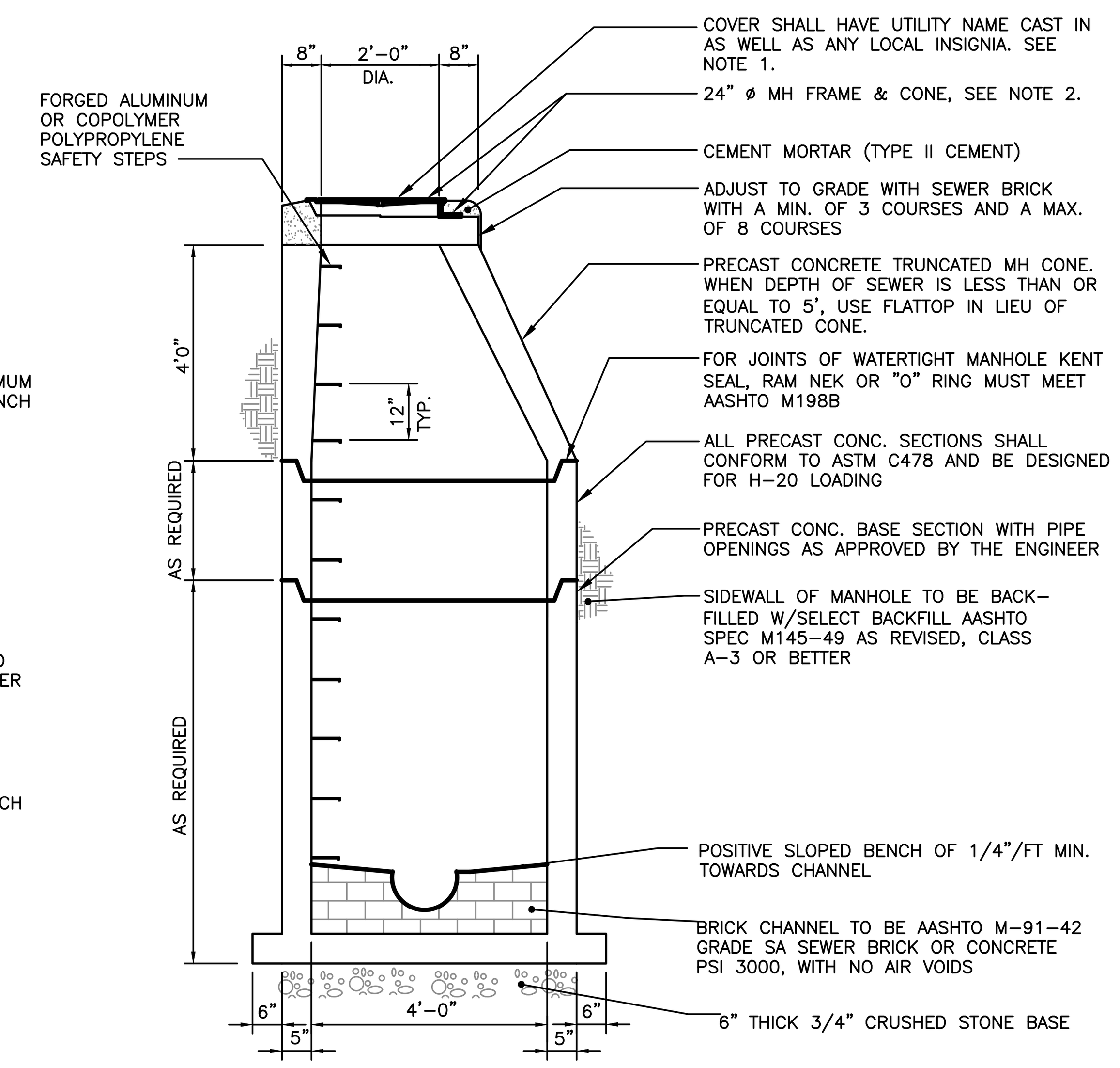
NOTES:

1). MANHOLE COVER FOR SEWER MANHOLE SHALL BE ENGRAVED "SEWER", AND SHALL BE EITHER ITEM # 2160A AS MANUFACTURED BY EAST JORDAN CO. OR ITEM # 14960002 AS MANUFACTURED BY NEENAH FOUNDRY. MANHOLE COVER FOR STORM SEWER SHALL BE ENGRAVED "DRAIN", AND SHALL BE EITHER ITEM # 2160A AS MANUFACTURED BY EAST JORDAN CO. OR ITEM # 14960003 AS MANUFACTURED BY NEENAH FOUNDRY.

2). MANHOLE FRAME SHALL BE EITHER ITEM # 14960001, AS MANUFACTURED BY NEENAH FOUNDRY, OR ITEM # 1960Z, AS MANUFACTURED BY EAST JORDAN CO.

3) WITHIN CITY OF PORTLAND ROW, STORM DRAIN MANHOLE SHALL CONFORM WITH "STANDARD PRECAST SEWER MANHOLE DETAIL", WITH THE EXCEPTION THAT THE COVER SHALL BE MARKED AS "DRAIN". REFER TO CITY OF PORTLAND TECHNICAL MANUAL, SECTION 2 – SANITARY SEWER AND STORM DRAIN, FIGURE II–1

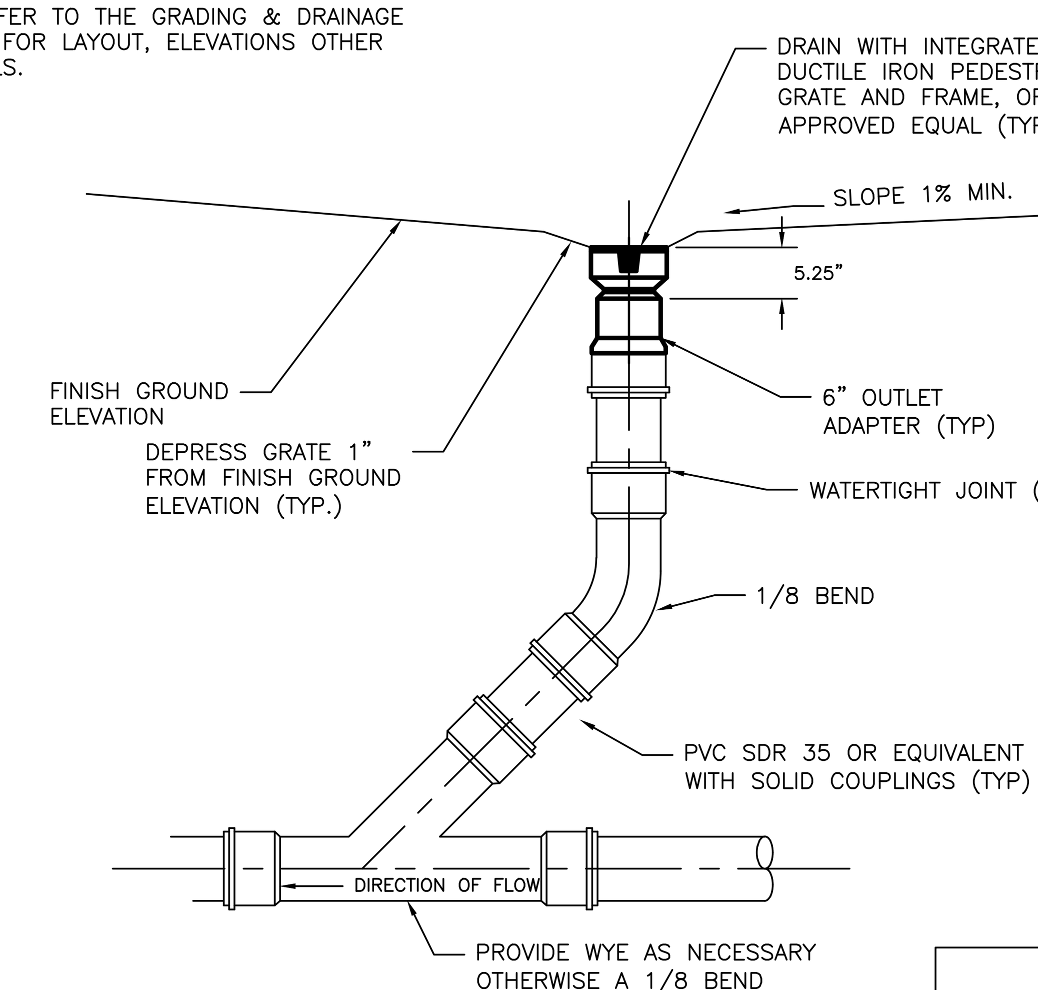
4). SUBMITTAL REQUIRED FOR MANHOLES, MANHOLE FRAMES & MANHOLE COVERS



STANDARD PRECAST SEWER MANHOLE

NOT TO SCALE

NOTES:
1. REFER TO THE GRADING & DRAINAGE PLAN FOR LAYOUT, ELEVATIONS OTHER DETAILS.



INLINE DRAIN DETAIL

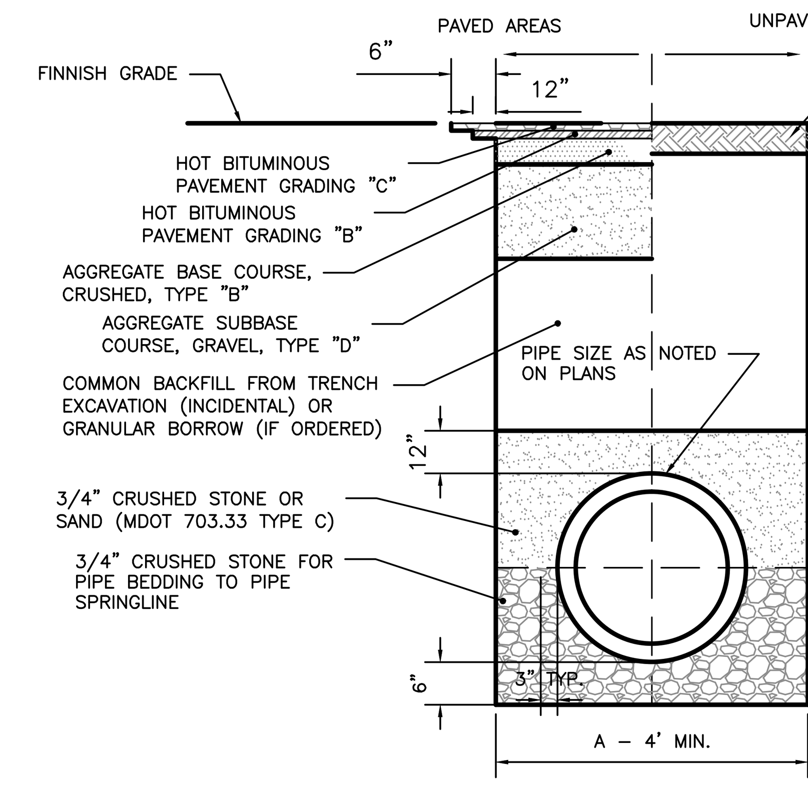
NOT TO SCALE

PERMIT DRAWINGS
NOT FOR CONSTRUCTION

DESIGN NOTES:

Plan 11

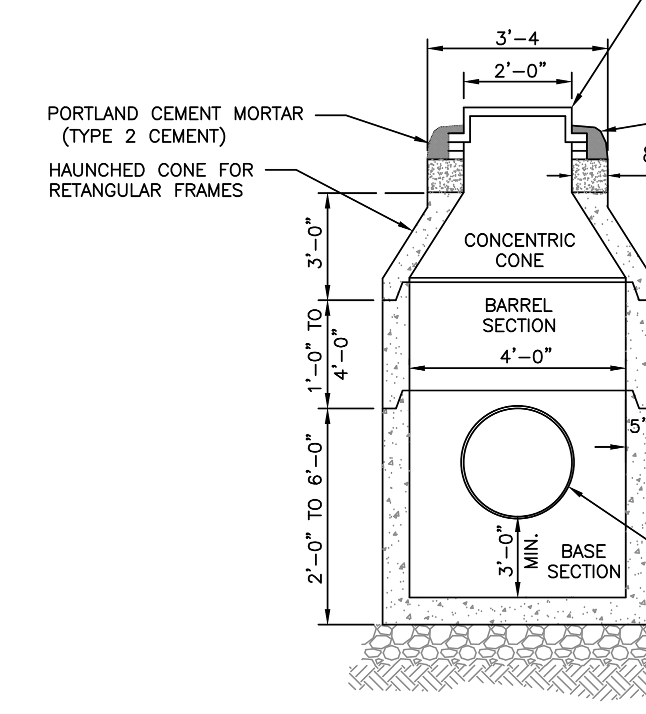
1) ANY ALTERNATE TRENCHING METHODS SHALL BE APPROVED IN ADVANCE BY THE CITY.
2) ALL CONSTRUCTION METHODS SHALL CONFORM TO THE CITY OF PORTLAND TECHNICAL STANDARDS FIGURE II–2.
3) BRACING & SHEETING OR OTHER TRENCH PROTECTION TO BE PROVIDED TO MEET APPLICABLE STATE AND O.S.H.A SAFETY STANDARDS. ALL SUCH TRENCH PROTECTION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
4) WHERE APPLICABLE, PERFORATIONS IN STORM DRAIN (PERF.SD) SHALL BE ORIENTED UP.
5) ALL STORM DRAINS SHALL BE PVC SDR 35 MIN PS–46 RATING OR OR IN ACCORDANCE WITH CITY OF PORTLAND TECHNICAL MANUAL , SECTION 2 – SANITARY SEWER AND STORM DRAIN – PART 2.5.2
6) IN PAVED AREAS, DEPTHS OF GRAVEL AND HOT MIX ASPHALT PAVEMENT SHALL MATCH THE GREATER OF EXISTING CONDITIONS OR THE REQUIREMENTS FOR THE CORRESPONDING STREET CLASSIFICATION.



TRENCH WIDTH	
PIPE DIAMETER (IN)	MAX. TRENCH WIDTH, A (FT)
4	4
6	4
8	4
10	4
12	5
15	5
18	5
24	6
36	6
48	7

CITY OF PORTLAND TYPICAL PIPE TRENCH DETAIL

NOT TO SCALE



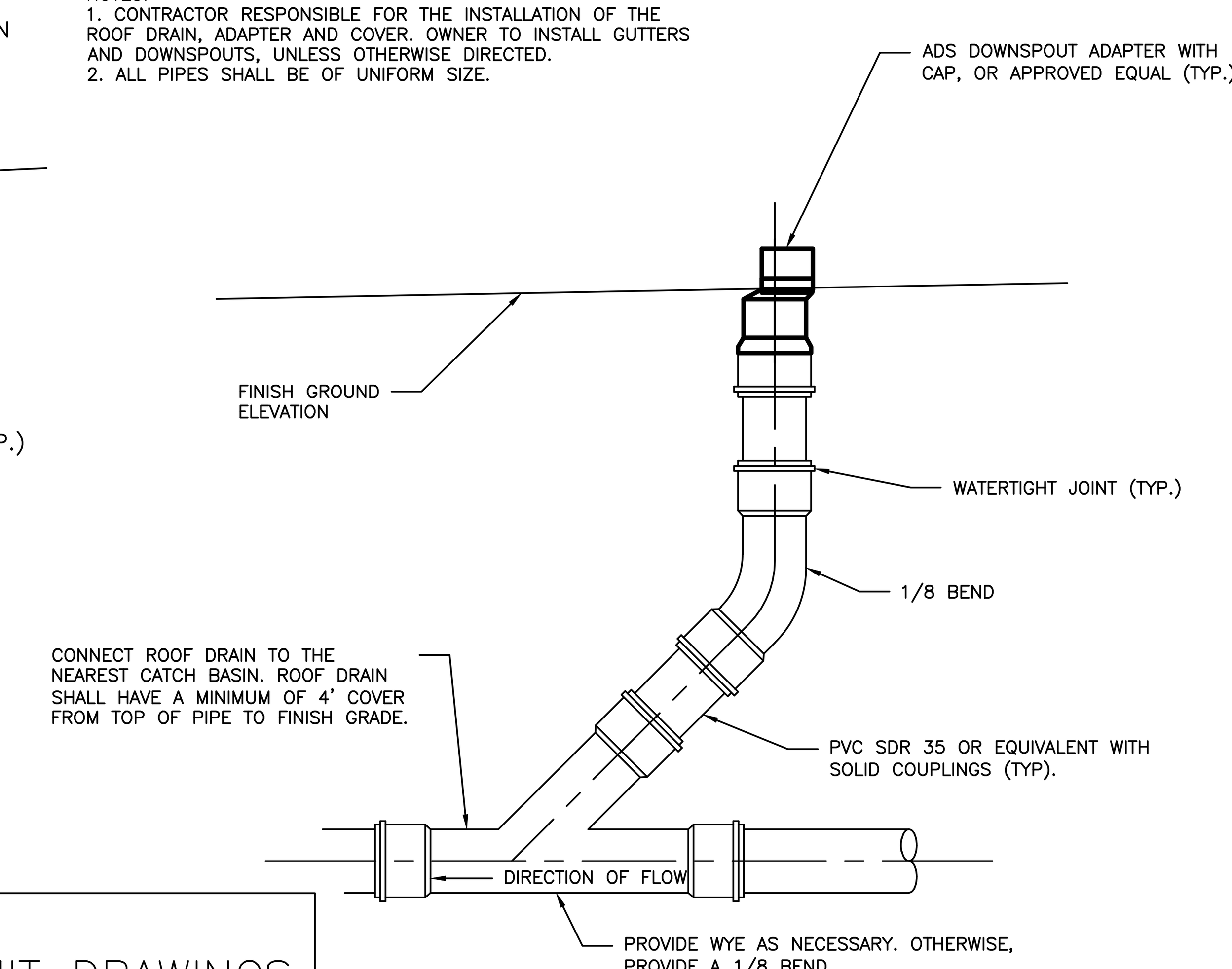
DESIGN NOTES:

1. ALL CONCRETE TO HAVE A MIN. OF 4,000 PSI COMPRESSIVE STRENGTH AT 28 DAYS.
2. DESIGN LOAD FOR H–20 WHEEL LOAD.
3. CATCH BASIN TO CONFORM TO ASTM–C478 SPECIFICATIONS.
4. REINFORCE TO 0.15 IN SQ./LF. JOINTS SEALED WITH RAM–NEK GASKET OR EQUAL.
5. POLYPROPYLENE STEPS 12" O.C.
6. EXTERIOR WATERPROOFING.
7. CASCO TRAPS SHALL BE PROVIDED ON ALL PIPES 15" OR LESS.
8. ALL CATCH BASINS AND MANHOLES SHALL MEET THE APPLICABLE CITY OF PORTLAND – SECTION 2 SANITARY AND STORM DRAIN DESIGN STANDARDS.
9. STEPS SHALL BE OFFSET AT NO MORE THAN 12" ON CENTER, STARTING FROM THE TOP OF THE MANHOLE FRAME AND SHALL BE FORGED ALUMINUM OR COPOLYMER POLYPROPYLENE STEPS

4'–0" DIAMETER PRECAST CATCH BASIN/MANHOLE

NOT TO SCALE

NOTES:
1. CONTRACTOR RESPONSIBLE FOR THE INSTALLATION OF THE ROOF DRAIN, ADAPTER AND COVER. OWNER TO INSTALL GUTTERS AND DOWNSPOUTS, UNLESS OTHERWISE DIRECTED.
2. ALL PIPES SHALL BE OF UNIFORM SIZE.



ROOF DRAIN DETAIL

NOT TO SCALE

ISSUED FOR	BY DATE
WORKSHOP #2	WHS 11/12/13
FINAL SUBMISSION	WHS 12/2/13
REVISION	REV. DATE
REV. STANDARD DETAIL	WHS 12/4/13
STAFF COMMENTS	WHS 12/6/13

DRAWING NAME: DRAINAGE DETAILS – 1

PROJECT NAME: MUNJOY HEIGHTS

CLIENT: REDFERN MUNJOY, LLC.
P.O. BOX 8816, PORTLAND, MAINE 04104

ACORN ENGINEERING, INC.
ACORN ENGINEERING, INC.
P.O. BOX 3372 PORTLAND, MAINE 04104
(207) 775-2655

FILE: 1047_details 11-27-2013.dwg
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JN: 302-001
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DESIGN BY: WHS
DRAWN BY: ZRJ
CHECKED BY: WHS

STATE OF MAINE
WILLIAM H. SAVAGE
No. 11419
12-2-13
LICENSED
PROFESSIONAL ENGINEER

DRAWING NO.
C-41

Plan 12

NOTES:

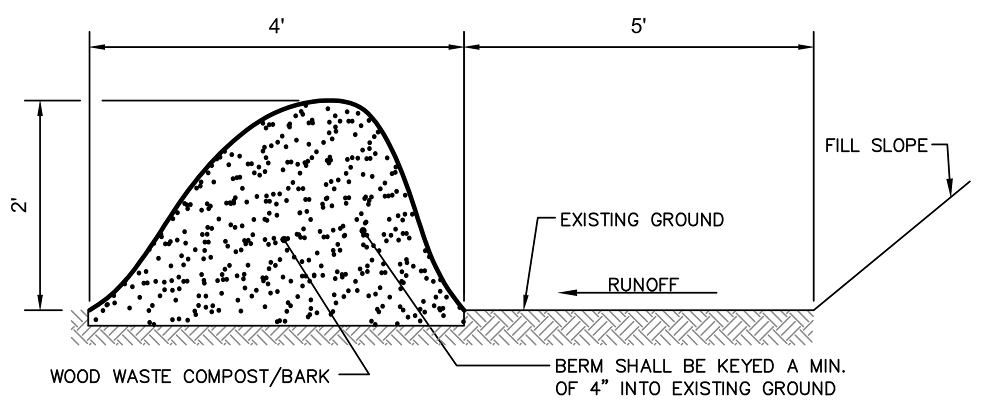
1. THE EROSION CONTROL MIX SHALL CONFORM TO THE FOLLOWING STANDARDS AND IN ACCORDANCE WITH THE MAINE DEP'S EROSION AND SEDIMENT CONTROL BMPS SECTION B-1:

A. THE ORGANIC PORTIONS SHALL BE FIBROUS AND ELONGATED TO ALLOW FOR THE INTERLOCKING OF MATERIAL
B. pH – 5.0 – 8.0.
C. PARTICLE SIZE BY WEIGHT SHALL BE 100% PASSING A 6" SCREEN AND A MINIMUM OF 70% TO A MAXIMUM 85% PASSING A 0.75" (3/4") SCREEN.
D. THE ORGANIC MATTER CONTENT SHALL BE BETWEEN 80 AND 100% DRY WEIGHT BASIS
E. NO STONES LARGER THAN 4" IN DIAMETER.
F. LARGE PORTIONS OF SILTS, CLAYS OR FINE SANDS ARE NOT ACCEPTABLE IN THE MIX.

2. THE BERM SHOULD BE PLACED, UNCOMPACTED, ALONG A RELATIVELY LEVEL CONTOUR, WHEN NECESSARY THE BERM MAY BE PLACED PERPENDICULAR TO THE SLOPE ALONG THE PROPERTY LINE TO CONTAIN THE SEDIMENT PROVIDED A BERM IS LOCATED AT THE BASE OF THE SLOPE.

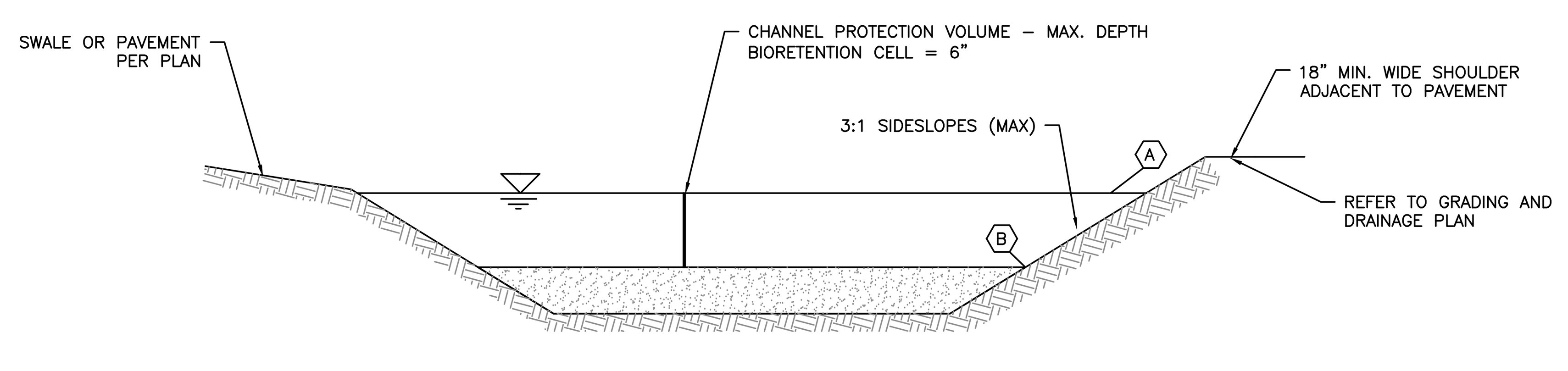
3. THE BERM MAY BE USED IN LIEU OF SILTATION FENCE, AT THE TOE OF SHALLOW SLOPES, ON FROZEN GROUND, LEDGE OUT CROPS, VERY ROOTED FORESTED AREA OR AT THE EDGE OF GRAVEL PARKING AREAS.

4. BERMS SHALL REMAIN IN PLACE UNTIL UPSTREAM AREA IS STABILIZED OR 90% CATCH OF VEGETATION IS ATTAINED. BERMS SHALL BE REMOVED OFFSITE OR BY SPREADING SUCH THAT NATIVE EARTH CAN BE SEEN BELOW.

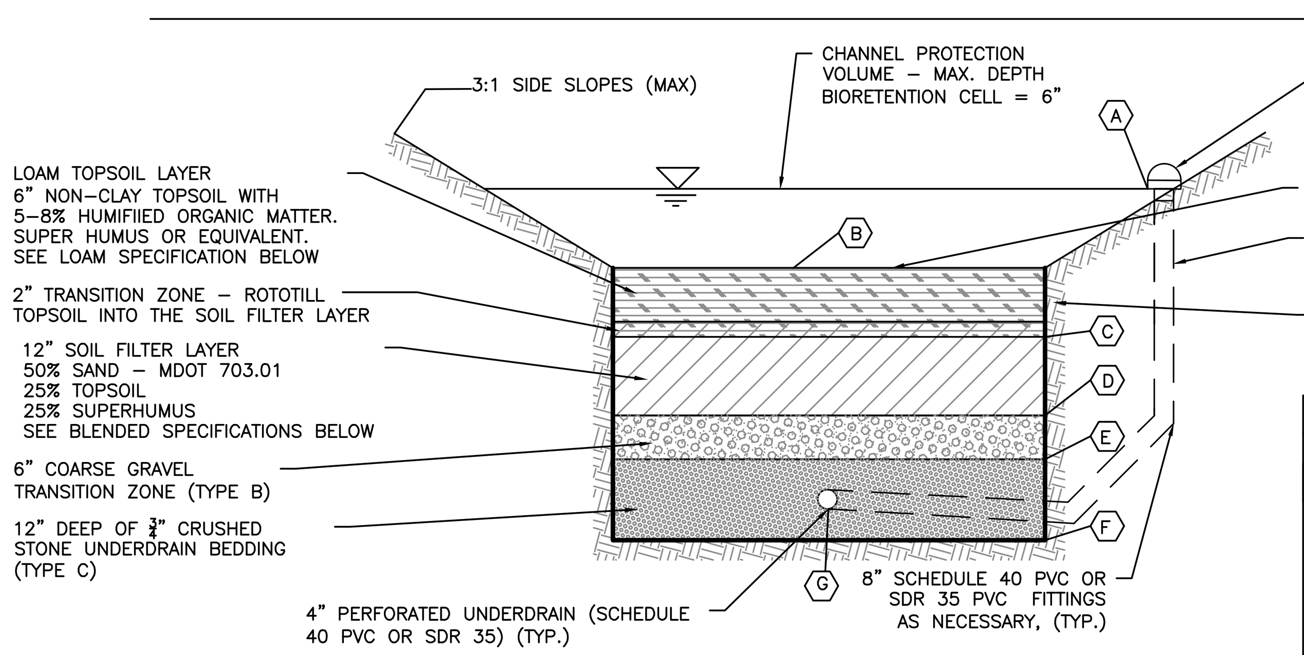


EROSION CONTROL MIX BERM DETAIL

NOT TO SCALE



SOIL FILTER CROSS SECTION



SOIL FILTER SIDE VIEW

SCHEDULE	
ITEM	BIOCELL
(A) PROPOSED OVERFLOW RIM	111.06
(B) TOP OF LOAM TOPSOIL LAYER	110.56
(C) TOP OF SOIL FILTER	109.89
(D) TOP OF GRAVEL	107.89
(E) TOP OF STONE	107.39
(F) BOTTOM OF STONE	106.39
(G) UNDERDRAIN INVERT	106.72

NOTES:
1. THE SIDESLOPES SHALL BE STABILIZED WITH A MIN. OF 4" LOAM, EROSION CONTROL BLANKETS SC150BN BY NORTH AMERICAN GREEN OR APPROVED EQUAL AND A CONSERVATION SEED MIX. THE BOTTOM OF THE VEGETATED UNDERDRAIN SHALL BE STABILIZED WITH EROSION CONTROL BLANKETS SC150BN BY NORTH AMERICAN GREEN OR APPROVED EQUAL AND A CONSERVATION SEED MIX

2. LIGHT COMPACTION SOIL FILTER AND PIPE BEDDING MATERIAL. (90 TO 92% STANDARD PROCTOR). TESTING SHALL BE PERFORMED BY A QUALIFIED MATERIAL TESTING FIRM.

3. THE SOIL FILTER MEDIA SHALL NOT BE CONSTRUCTED UNTIL THE AREA DRAINING TO THE BASIN HAS BEEN PERMANENTLY STABILIZED.

4. A LANDSCAPE DESIGNER OR ARCHITECT SHALL SELECT THE APPROPRIATE PLANTS FOR THE BIORETENTION CELL FOR THE SITE CONDITIONS. PLANTING PLAN BY OTHERS.

5. MINIMUM UNDERDRAIN SLOPE 0.0025.

6. TESTING: SIEVE ANALYSIS INCLUDING HYDROMETER TESTING FOR CLAY CONTENT FOR EACH LAYER SHALL BE PERFORMED BY A QUALIFIED SOIL TESTING LABORATORY AND SUBMITTED TO THE PROJECT ENGINEER FOR APPROVAL 2 WEEKS PRIOR TO CONSTRUCTION. ALL TESTING AND SUBMITTALS SHALL BE IN ACCORDANCE WITH THE MOST RECENT VERSION OF THE MAINE DEP – TECHNICAL DESIGN MANUAL SECTION 7.2.5 TESTING AND SUBMITTALS.

7. ACORN ENGINEERING, INC., RECOMMENDS THE SOIL FILTER LAYER BE SUPPLIED BY JONES ASSOCIATES, INC., AUBURN, ME.

6" LOAM TOPSOIL LAYER SPECIFICATION	
SIEVE SIZE	% PASSING BY WEIGHT
#4	75–95
#10	60–90
#40	35–85
#200	20–70

1. CLAY FRACTION <10% PASSING THE #200 SIEVE.*

2. LOAM SHALL BE LOOSE AND FRIABLE AND SHALL BE FREE FROM ADMIXTURE OF SUBSOIL, REFUSE, LARGE STONES, CLODS OR ROOTS OR RHIZOMES OR "WITCH GRASS" OR OTHER UNDESIRABLE GRASSES.

*<10% CLAY PASSING THE #200 SIEVE ALLOWED PER EMAIL FROM MARIANNE HUBERT – MDEP TO WILL SAVAGE DATED 9/20/13

SOIL FILTER BED – SUPERHUMUS OR EQUIV. SPECIFICATION	
SIEVE SIZE	% PASSING BY WEIGHT
1"	100
#200	0–5

MINIMAL CLAY CONTENT, NO MORE THAN 3–5% PASSING #200 SIEVE

12" SOIL FILTER BED – BLENDED SAND, LOAM, SUPERHUMUS SIEVE ANALYSIS	
SIEVE SIZE	% PASSING BY WEIGHT
#10	85–100
#20	70–100
#60	15–40
#200	8–15

1. CLAY FRACTION <2% PASSING THE #200 SIEVE.
2. SUPERHUMUS OR EQUIVALENT

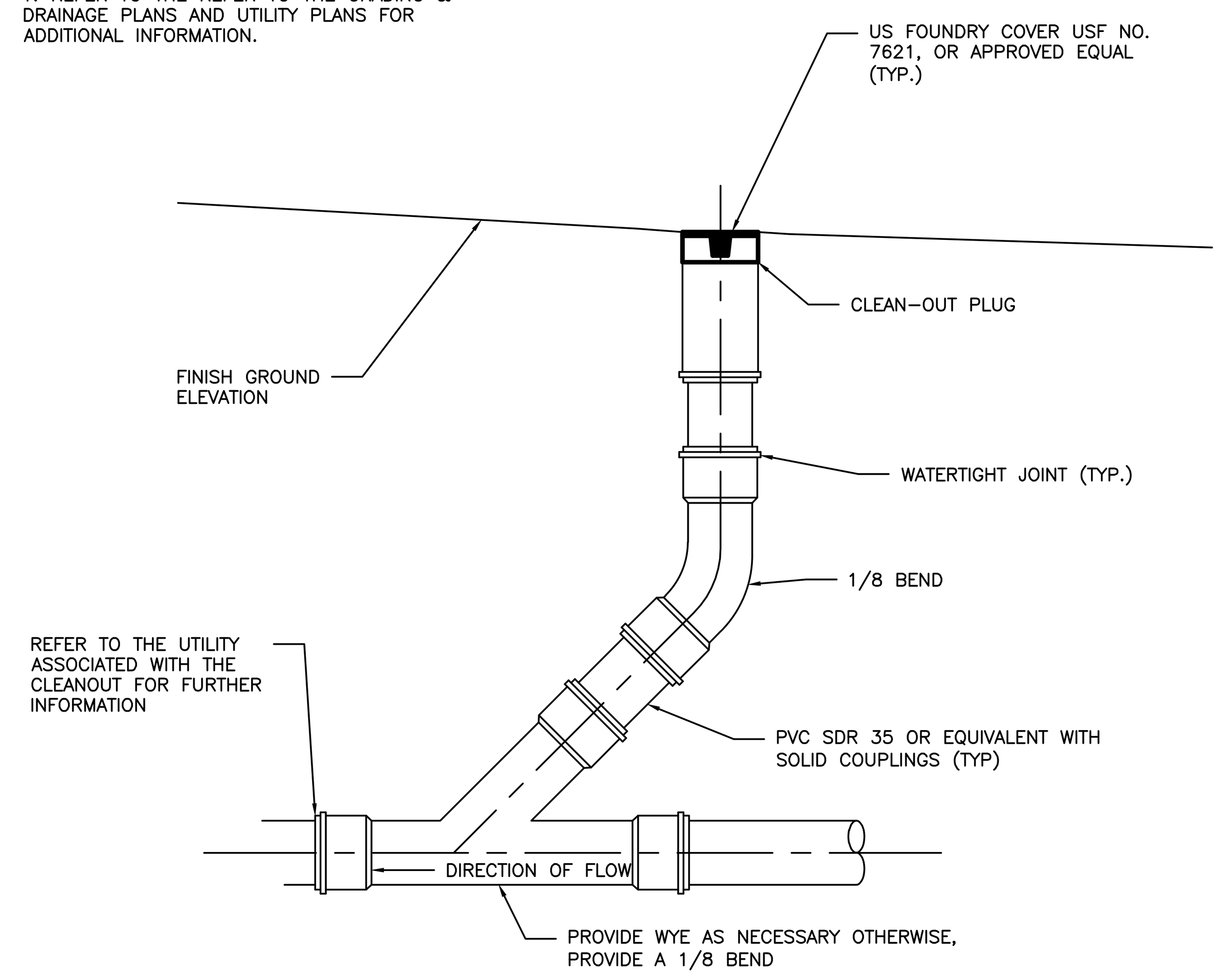
SOIL FILTER BED – TRANSISTION ZONE (TYPE B)	
SIEVE SIZE	% PASSING BY WEIGHT
1"	90–100
1/2"	75–100
#4	50–100
#20	15–80
#50	0–15
#200	0–5

SOIL FILTER BED – UNDERDRAIN BEDDING (TYPE C)	
SIEVE SIZE	% PASSING BY WEIGHT
1"	100
3/4"	90–100
3/8"	0–75
#4	0–25
#10	0–5

RAIN GARDEN OR BIORETENTION CELL DETAIL

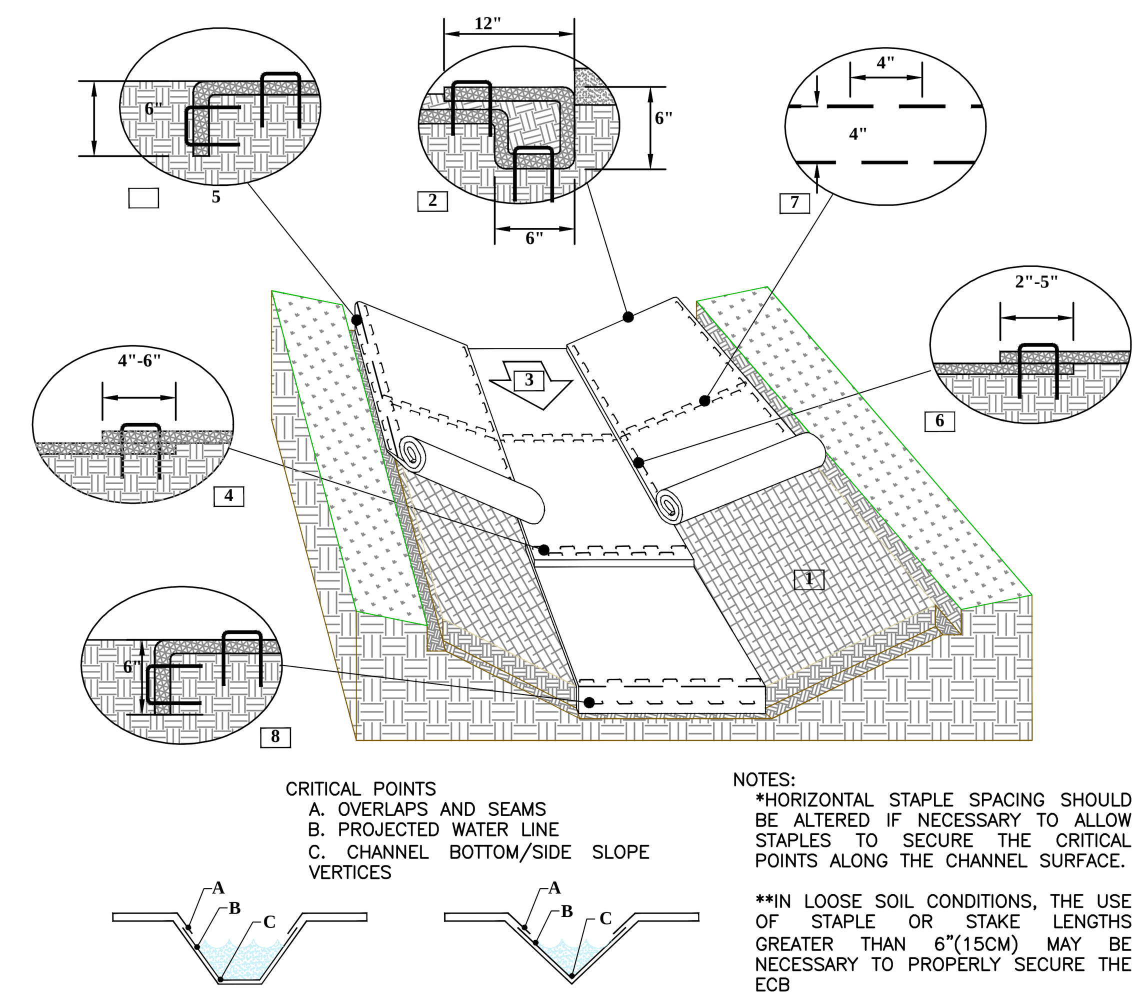
NOT TO SCALE

NOTES:
1. REFER TO THE REFER TO THE GRADING & DRAINAGE PLANS AND UTILITY PLANS FOR ADDITIONAL INFORMATION.



CLEANOUT DETAIL

NOT TO SCALE



NOTES:
*HORIZONTAL STAPLE SPACING SHOULD BE ALTERED IF NECESSARY TO ALLOW STAPLES TO SECURE THE CRITICAL POINTS ALONG THE CHANNEL SURFACE.

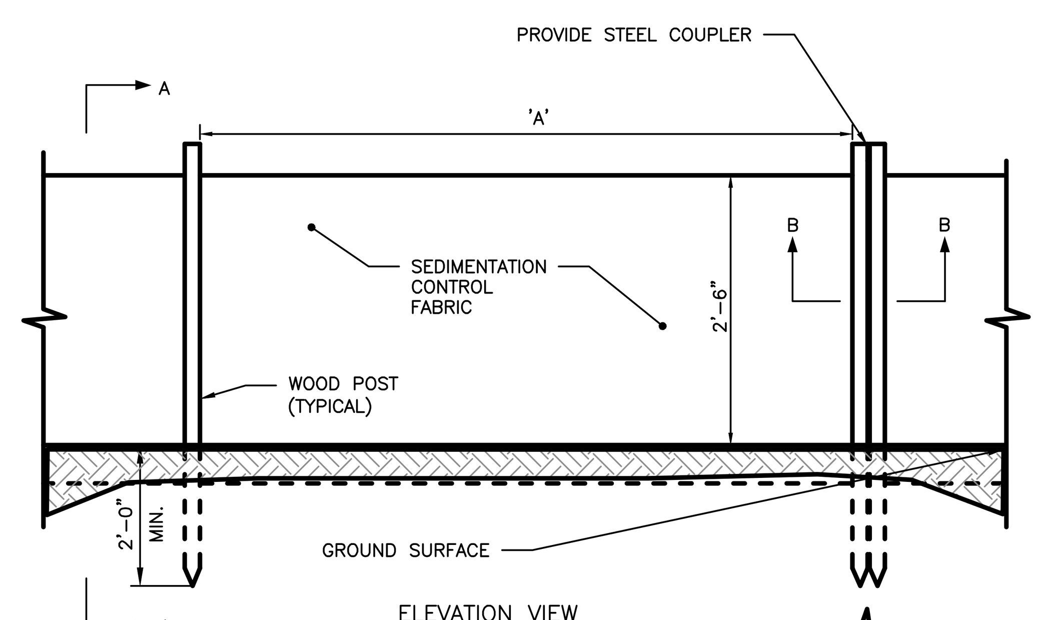
**IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6"(15CM) MAY BE NECESSARY TO PROPERLY SECURE THE ECB

EROSION CONTROL BLANKET CHANNEL INSTALLATION

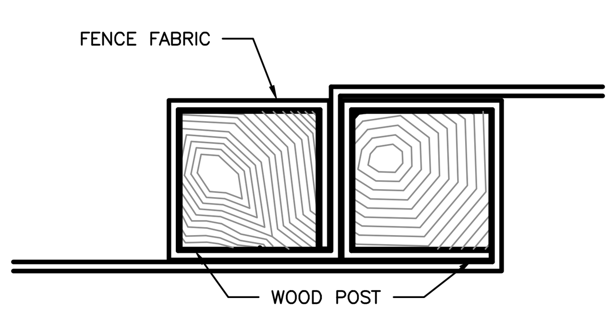
NOT TO SCALE

CHANNEL INSTALLATION DETAIL

1. PREPARE SOIL BEFORE INSTALLING ROLLED EROSION CONTROL BLANKET (ECB), INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED.
2. BEGIN AT THE TOP OF THE CHANNEL BY ANCHORING THE ECB IN A 6"(15CM) DEEP X 6"(15CM) WIDE TRENCH WITH APPROXIMATELY 12"(30CM) OF ECB EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. USE SHOREMAX MAT AT THE CHANNEL/CULVERT OUTLET AS SUPPLEMENTAL SCOUR PROTECTION AS NEEDED. ANCHOR THE ECB WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12"(30CM) APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO THE COMPACTED SOIL AND FOLD THE REMAINING 12"(30CM) PORTION OF ECB BACK OVER THE SEED AND COMPACTED SOIL. SECURE ECB OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" APART ACROSS THE WIDTH OF THE ECB.
3. ROLL CENTER ECB IN DIRECTION OF WATER FLOW IN BOTTOM OF CHANNEL. ECB WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL ECB MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE.
4. PLACE CONSECUTIVE ECB END-OVER-END (SHINGLE STYLE) WITH A 4"-6" OVERLAP. USE A DOUBLE ROW OF STAPLES STAGGERED 4" APART AND 4" ON CENTER TO SECURE ECB. THE TOP LAYER SHALL GO OVER THE DOWNSTREAM LAYER.
5. FULL LENGTH EDGE OF ECB AT TOP OF SIDE SLOPES MUST BE ANCHORED WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12"(30CM) APART IN A 6"(15CM) DEEP X 6"(15CM) WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.
6. ADJACENT ECB MUST BE OVERLAPPED APPROXIMATELY 2"-5" (5-12.5CM) (DEPENDING ON ECB TYPE) AND STAPLED.
7. IN HIGH FLOW CHANNEL APPLICATIONS A STAPLE CHECK SLOT IS RECOMMENDED AT 30 TO 40 FOOT (9 -12M) INTERVALS. USE A DOUBLE ROW OF STAPLES STAGGERED 4"(10CM) APART AND 4"(10CM) ON CENTER OVER ENTIRE WIDTH OF THE CHANNEL.
8. THE TERMINAL END OF THE ECB MUST BE ANCHORED WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" (30CM) APART IN A 6"(15CM) DEEP X 6"(15CM) WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.

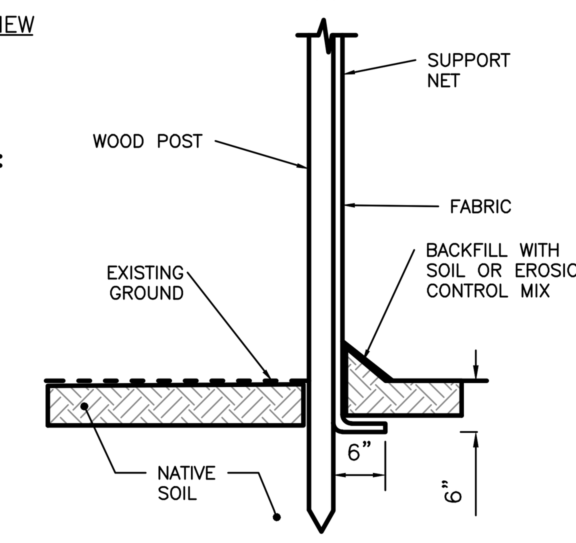


ELEVATION VIEW



SECTION B-B

SILT FENCE REINFORCEMENT	MAX. SPACING "A"
NONE	6'
WIRE REINFORCEMENT 14 GAUGE, 6" MESH	10'

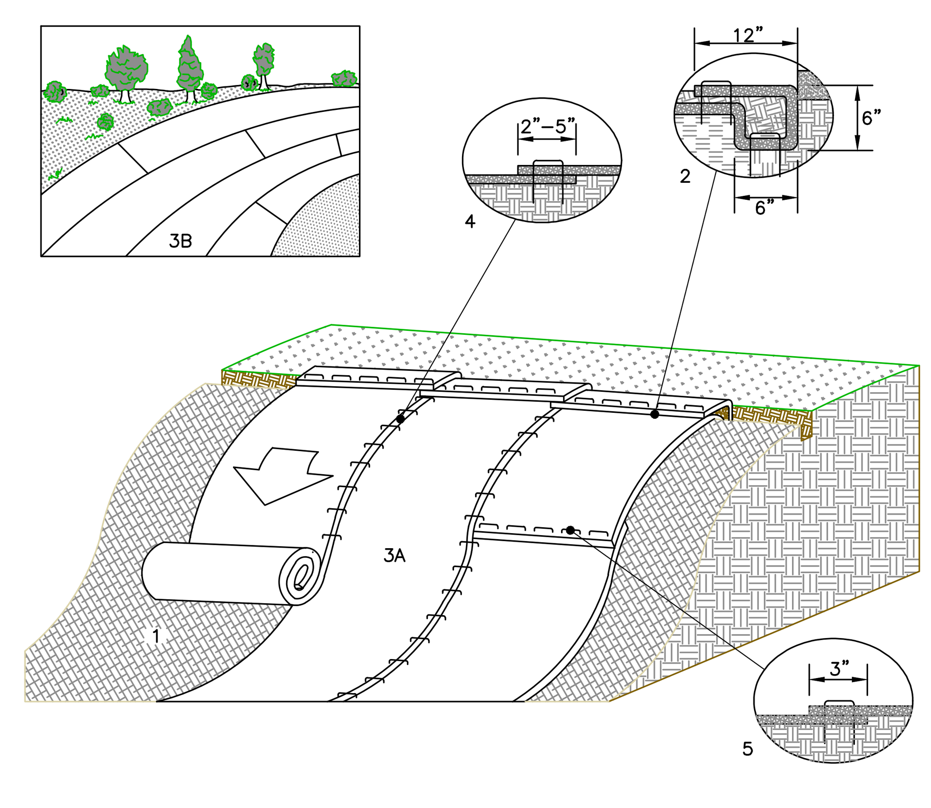


SECTION A-A

SILTATION FENCE DETAIL

NOT TO SCALE

SLOPE INSTALLATION DETAIL



1. PREPARE SOIL BEFORE INSTALLING ROLLED EROSION CONTROL PRODUCTS (ECB), INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED.

2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE ECB IN A 6" DEEP X 6" WIDE TRENCH WITH APPROXIMATELY 12" OF ECB EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE ECB WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO THE COMPACTED SOIL AND FOLD THE REMAINING 12" PORTION OF ECB BACK OVER THE SEED AND COMPACTED SOIL. SECURE ECB OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" APART ACROSS THE WIDTH OF THE ECB.

3. ROLL THE ECB (A) DOWN OR (B) HORIZONTALLY ACROSS THE SLOPE. ECB WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL ECB MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE.

4. THE EDGES OF PARALLEL ECB MUST BE STAPLED WITH APPROXIMATELY 2" – 5" OVERLAP DEPENDING ON THE ECB TYPE.

5. CONSECUTIVE ECB SPLICED DOWN THE SLOPE MUST BE END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 3" OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" APART ACROSS ENTIRE ECB WIDTH.

*NOTE:
IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" MAY BE NECESSARY TO PROPERLY SECURE THE ECB.

EROSION CONTROL BLANKET SLOPE INSTALLATION

NOT TO SCALE

PERMIT DRAWINGS
NOT FOR CONSTRUCTION

ISSUED FOR	BY / DATE
WORKSHOP #2	WHS 11/12/13
FINAL SUBMISSION	WHS 12/2/13

REVISION	REV. / DATE
REV. STANDARD DETAIL	WHS 12/4/13
STAFF COMMENTS	WHS 12/6/13

DRAWING NAME: DRAINAGE DETAILS – 2

PROJECT NAME: MUNJOY HEIGHTS

CLIENT: REDFERN MUNJOY, LLC. P.O. BOX 8816, PORTLAND, MAINE 04104

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ACORN ENGINEERING, INC.
P.O. BOX 3372 PORTLAND, MAINE 04104
(207) 775-2655

FILE: CIVIL DRAWINGS 11-27-2013.dwg
DATE: 7/11/13
JN: 302-001
SCALE: NTS
DESIGN BY: WHS
DRAWN BY: ZRJ
CHECKED BY: WHS

STATE OF MAINE WILLIAM H. SAVAGE No 11419 12-2-13 LICENSED PROFESSIONAL ENGINEER

DRAWING NO.
C-42

1.0 EROSION CONTROL MEASURES AND SITE STABILIZATION

AS PART OF THE SITE DEVELOPMENT, THE FOLLOWING TEMPORARY AND PERMANENT EROSION AND SEDIMENTATION CONTROL DEVICES SHALL BE IMPLEMENTED. DEVICES SHALL BE INSTALLED AS DESCRIBED IN THIS REPORT OR WITHIN THE PLAN SET. SEE THE MAINE EROSION AND SEDIMENT CONTROL HANDBOOK FOR CONSTRUCTION: BEST MANAGEMENT PRACTICES FOR FURTHER REFERENCE.

1.1 TEMPORARY EROSION CONTROL MEASURES

THE FOLLOWING TEMPORARY EROSION AND SEDIMENTATION CONTROL MEASURES ARE PLANNED FOR THE PROJECT'S CONSTRUCTION PERIOD.

1.1.1 CRUSHED STONE STABILIZED CONSTRUCTION ENTRANCES SHALL BE PLACED AT ALL ACCESS POINTS TO THE PROJECT SITE WHERE THERE ARE DISTURBED AREAS. THE FOLLOWING SPECIFICATIONS SHALL BE FOLLOWED AT A MINIMUM:
- STONE SIZE SHALL BE 2–3 INCHES, OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
- THE THICKNESS OF THE ENTRANCE SHALL BE NO LESS THAN 6 INCHES.
- THE ENTRANCE SHALL NOT BE LESS THAN 10 FEET WIDE, HOWEVER NOT LESS THAN THE FULL WIDTH OF POINTS WHERE INGRESS OR EGRESS OCCURS. THE LENGTH SHALL NOT BE LESS THAN 50 FEET IN LENGTH.
- GEOTEXTILE FABRIC (WOVEN OR NON WOVEN) SHALL BE PLACED OVER THE ENTIRE ENTRANCE AREA. PIPING FOR SURFACE WATER DRAINAGE SHALL BE PROVIDED UNDER THE ENTRANCE; HOWEVER A MOUNTABLE BERM WITH 5:1 SLOPES SHALL BE PERMITTED.
- THE ENTRANCE/EXIT SHALL BE MAINTAINED TO THE EXTENT THAT IT WILL PREVENT THE TRACKING OF SEDIMENT ONTO PUBLIC ROAD WAYS.

1.1.2 SILTATION FENCE OR EROSION CONTROL BERM SHALL BE INSTALLED DOWN GRADIENT OF ANY DISTURBED AREAS TO TRAP RUNOFF BORNE SEDIMENTS UNTIL PERMANENT STABILIZATION IS ACHIEVED. THE SILT FENCE OR EROSION CONTROL BERM SHALL BE INSTALLED PER THE DETAILS PROVIDED IN THE PLAN SET AND INSPECTED BEFORE AND IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. REPAIRS SHALL BE MADE IF THERE ARE ANY SIGNS OF EROSION OR SEDIMENTATION BELOW THE FENCE LINE OR BERM. IF THERE ARE SIGNS OF UNDERCUTTING AT THE CENTER OR THE EDGES, OR IMPOUNDING OF LARGE VOLUMES OF WATER BEHIND THE FENCE OR BERM, THE BARRIER SHALL BE REPLACED WITH A STONE CHECK DAM.

1.1.3 HAY MULCH INCLUDING HYDRO SEEDING IS INTENDED TO PROVIDE COVER FOR DENUDED OR SEEDED AREAS UNTIL REVEGETATION IS ESTABLISHED. MULCH PLACED BETWEEN APRIL 15TH AND NOVEMBER 1ST ON SLOPES OF LESS THAN 15 PERCENT SHALL BE COVERED BY FABRIC NETTING AND ANCHORED WITH STAPLES IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATION. MULCH PLACED BETWEEN NOVEMBER 1ST AND APRIL 15TH ON SLOPES EQUAL TO OR STEEPER THAN 8 PERCENT AND EQUAL TO OR FLATTER THAN 2:1 SHALL USE MATS OR FABRIC NETTING AND ANCHORED WITH STAPLES IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATION.

1.1.4 AT ANY TIME OF THE YEAR, ALL SLOPES GREATER THAN 3:1 SHALL BE STABILIZED WITH DOUBLE NET EROSION CONTROL BLANKET BIONET SC150BN BY NORTH AMERICAN GREEN OR APPROVED EQUAL, OR EROSION CONTROL MIX SLOPE PROTECTION AS DETAILED WITHIN THE PLANS.

1.1.5 WALNUT STREET SHALL BE SWEPT TO CONTROL MUD AND DUST AS NECESSARY. ADD ADDITIONAL STONE TO THE STABILIZED CONSTRUCTION ENTRANCE TO MINIMIZE THE TRACKING OF MATERIAL OFF THE SITE AND ONTO THE SURROUNDING ROADWAYS.

1.1.6 DURING CLEARING AND GRUBBING OPERATIONS, STONE CHECK DAMS SHALL BE INSTALLED AT ANY AREAS OF CONCENTRATED FLOW. THE MAXIMUM HEIGHT OF THE CHECK DAM SHALL NOT EXCEED 2 FEET. THE CENTER OF THE CHECK DAM SHALL BE 6 INCHES BELOW THE OUTER EDGES OF THE DAM. THE CONTRACTOR SHALL MULCH THE SIDE SLOPES AND INSTALL STONE CHECK DAMS FOR ALL NEWLY EXCAVATED DITCH LINES WITHIN 24 HOURS OF THEIR CREATION.

1.1.7 SILT FENCE STAKE SPACING SHALL NOT EXCEED 6 FEET UNLESS THE FENCE IS SUPPORTED WITH 14 GAUGE WIRE IN WHICH CASE THE MAXIMUM SPACING SHALL NOT EXCEED 10 FEET. THE SILT FENCE SHALL BE □TOED□ INTO THE GROUND.

1.1.8 STORMDRAIN INLET PROTECTION SHALL BE PROVIDED THROUGH THE USE OF ANY OF THE FOLLOWING: HAY BALE DROP INLET STRUCTURES, SILT FENCE DROP INLET SEDIMENT FILTER, GRAVEL AND WIRE MESH DROP INLET SEDIMENT FILTER, OR CURB INLET SEDIMENT FILTER. BARRIERS SHALL BE INSPECTED AFTER EVERY RAINFALL EVENT AND REPAIRED AS NECESSARY. SEDIMENTS SHALL BE REMOVED WHEN ACCUMULATION HAS REACHED ½ THE DESIGN HEIGHT.

1.1.9 DUST CONTROL SHALL BE ACCOMPLISHED BY THE USE OF ANY OF THE FOLLOWING: WATER, CALCIUM CHLORIDE, STONE, OR AN APPROVED MDEP PRODUCT. DUST CONTROL SHALL BE APPLIED AS NEEDED TO ACCOMPLISH DUST CONTROL.

1.1.10 TEMPORARY LOAM, SEED, AND MULCHING SHALL BE USED IN AREAS WHERE NO OTHER EROSION CONTROL MEASURE IS USED. APPLICATION RATES FOR SEEDING ARE PROVIDED AT THE END OF THIS REPORT.

1.1.11 STOCKPILES SHALL BE STABILIZED WITHIN 7 DAYS OF FORMATION UNLESS A SCHEDULED RAIN EVENT OCCURS PRIOR TO THE 7 DAY WINDOW, IN WHICH CASE THE STOCKPILE SHALL BE STABILIZED PRIOR TO THE RAIN EVENT. METHODS OF STABILIZATION SHALL BE MULCH, EROSION CONTROL MIX, OR EROSION CONTROL BLANKETS/MATS. SILT FENCE OR A WOOD WASTE COMPOST FILTER BERM SHALL BE PLACED DOWNHILL OF ANY SOIL STOCKPILE LOCATION.

1.1.12 FOR DISTURBANCE BETWEEN NOVEMBER 1 AND APRIL 15, PLEASE REFER TO WINTER STABILIZATION PLAN IN THIS REPORT AND THE MAINE EROSION AND SEDIMENT CONTROL BMP MANUAL FOR FURTHER INFORMATION.

1.1.13 IT IS OF THE UTMOST IMPORTANCE THAT STORMWATER RUNOFF AND POTENTIAL SEDIMENT FROM THE CONSTRUCTION SITE BE DIVERTED AROUND THE PROPOSED UNDERDRAINS UNTIL THE TRENCH IS BACKFILLED.

1.2 PERMANENT EROSION CONTROL MEASURES

THE FOLLOWING PERMANENT EROSION CONTROL MEASURES ARE INTENDED FOR POST DISTURBANCE AREAS OF THE PROJECT.

1.2.1 ALL DISTURBED AREAS DURING CONSTRUCTION, NOT SUBJECT TO OTHER PROPOSED CONDITIONS, SHALL RECEIVE A MINIMUM 4□ OF LOAM, LIMED, FERTILIZED, SEEDED, AND MULCHED. EROSION CONTROL BLANKETS OR MATS SHALL BE PLACED OVER THE MULCH IN AREAS NOTED IN PARAGRAPH 4.1 OF THIS REPORT.
1.2.2 ALL STORMDRAIN OUTLETS SHALL HAVE RIPRAP APRONS OR STABILIZED SWALES AS DEPICTED ON THE PLANS. THE RIPRAP APRONS OR STABILIZED APRONS SHALL BE CONSTRUCTED WITHIN 48 HOURS OF THE CONSTRUCTION OF THE STORMDRAIN OUTLET.
1.2.3 ALL STORMWATER DEVICES SHALL BE INSTALLED AND STABILIZED PRIOR RECEIVING STORMWATER.
1.2.4 REFER TO THE MAINE EROSION AND SEDIMENT CONTROL BMP MANUAL FOR ADDITIONAL INFORMATION.

2.0 EROSION AND SEDIMENTATION CONTROL PLAN

2.1 THE EROSION AND SEDIMENTATION CONTROL PLAN IS INCLUDED WITHIN THE PLAN SET.

3.0 DETAILS AND SPECIFICATIONS

3.1 EROSION CONTROL DETAILS AND SPECIFICATION ARE INCLUDED IN THE PLAN SET.

4.0 STABILIZATION PLAN FOR WINTER CONSTRUCTION

WINTER CONSTRUCTION CONSISTS OF EARTHWORK DISTURBANCE BETWEEN THE DATES OF NOVEMBER 1 AND APRIL 15. IF A CONSTRUCTION SITE IS NOT STABILIZED WITH PAVEMENT, A ROAD GRAVEL BASE, 75% MATURE VEGETATION COVER OR RIPRAP BY NOVEMBER 15, THEN THE SITE SHALL BE PROTECTED WITH OVER–WINTER STABILIZATION. ANY AREA NOT STABILIZED WITH PAVEMENT, VEGETATION, MULCHING, EROSION CONTROL MIX, EROSION CONTROL MATS, RIPRAP OR GRAVEL BASE ON A ROAD SHALL BE CONSIDERED OPEN.

THE CONTRACTOR SHALL LIMIT THE WORK AREA TO AREAS THAT WORK WILL OCCUR IN DURING THE SUBSEQUENT 15 DAYS AND SO THAT IT CAN BE MULCHED ONE DAY PRIOR TO A SNOW EVENT. THE CONTRACTOR SHALL STABILIZE WORK AREAS PRIOR TO OPENING ADDITIONAL WORK AREAS TO MINIMIZE AREAS WITHOUT EROSION CONTROL MEASURES.

THE FOLLOWING MEASURES SHALL BE IMPLEMENTED DURING WINTER CONSTRUCTION PERIODS:

4.1 SEDIMENT BARRIERS

DURING FROZEN CONDITIONS, SEDIMENT BARRIERS MAY CONSIST OF EROSION CONTROL MIX BERMS OR ANY OTHER RECOGNIZED SEDIMENT BARRIERS AS FROZEN SOIL PREVENTS THE PROPER INSTALLATION OF HAY BALES OR SILT FENCES.

4.2 MULCHING

ALL AREAS SHALL BE CONSIDERED TO BE DENUDED UNTIL SEEDED AND MULCHED. HAY AND STRAW MULCH SHALL BE APPLIED AT A RATE OF 150 LB. PER 1,000 SQUARE FEET OR 3 TONS/ACRE (TWICE THE NORMAL ACCEPTED RATE OF 75–LBS./1,000 S.F. OR 1.5 TONS/ACRE) AND SHALL BE PROPERLY ANCHORED. EROSION CONTROL MIX MUST BE APPLIED WITH A MINIMUM 4 INCH THICKNESS. MULCH SHALL NOT BE SPREAD ON TOP OF SNOW. THE SNOW SHALL BE REMOVED DOWN TO A ONE–INCH DEPTH OR LESS PRIOR TO APPLICATION. AFTER EACH DAY OF FINAL GRADING, THE AREA SHALL BE PROPERLY STABILIZED WITH ANCHORED HAY OR STRAW OR EROSION CONTROL MATTING. AN AREA SHALL BE CONSIDERED TO HAVE BEEN STABILIZED WHEN EXPOSED SURFACES HAVE BEEN EITHER MULCHED OR ADEQUATELY ANCHORED SO THAT GROUND SURFACE IS NOT VISIBLE THROUGH THE MULCH. BETWEEN THE DATES OF NOVEMBER 1 AND APRIL 15, ALL MULCH SHALL BE ANCHORED BY EITHER MULCH NETTING, TRACKING OR WOOD CELLULOSE FIBER. THE COVER WILL BE CONSIDERED SUFFICIENT WHEN THE GROUND SURFACE IS NOT VISIBLE THROUGH THE MULCH. AFTER NOVEMBER 1ST, MULCH AND ANCHORING OF ALL EXPOSED SOIL SHALL OCCUR AT THE END OF EACH FINAL GRADING WORKDAY.

4.3 SOIL STOCKPILING

STOCKPILES OF SOIL OR SUBSOIL SHALL 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. THIS SHALL BE DONE WITHIN 24 HOURS OF STOCKING AND RE–ESTABLISHED PRIOR TO ANY RAINFALL OR SNOWFALL.

4.4 SEEDING

BETWEEN THE DATES OF OCTOBER 15TH AND APRIL 1ST, LOAM OR SEED SHALL NOT BE REQUIRED. DURING PERIODS OF ABOVE FREEZING TEMPERATURES FINISHED AREAS SHALL BE FINE GRADED AND EITHER PROTECTED WITH MULCH OR TEMPORARILY SEEDED AND MULCHED UNTIL SUCH TIME AS THE FINAL TREATMENT CAN BE APPLIED. IF THE DATE IS AFTER NOVEMBER 1ST AND IF THE EXPOSED AREA HAS NOT BEEN LOAMED, FINAL GRADING WITH A UNIFORM SURFACE, THEN THE AREA MAY BE DORMANT SEEDED AT A RATE OF 3 TIMES HIGHER THAN SPECIFIED FOR PERMANENT SEED AND THEN MULCHED.

DORMANT SEEDING MAY BE PLACED PRIOR TO THE PLACEMENT OF MULCH OR EROSION CONTROL BLANKETS. IF DORMANT SEEDING IS USED FOR THE SITE, ALL DISTURBED AREAS SHALL RECEIVE 4□ OF LOAM AND SEED AT AN APPLICATION RATE OF 5 LBS/1,000 S.F. ALL AREAS SEEDED DURING THE WINTER SHALL BE INSPECTED IN THE SPRING FOR ADEQUATE CATCH. ALL AREAS INSUFFICIENTLY VEGETATED (LESS THAN 75% CATCH) SHALL BE REVEGETATED BY REPLACING LOAM, SEED AND MULCH. IF DORMANT SEEDING IS NOT USED FOR THE SITE, ALL DISTURBED AREAS SHALL BE REVEGETATED IN THE SPRING.

4.5 OVER WINTER STABILIZATION OF DISTURBED SOILS

BY SEPTEMBER 15TH, ALL DISTURBED SOILS ON AREAS HAVING A SLOPE LESS THAN 15% SHALL BE SEEDED AND MULCHED. IF THE DISTURBED AREAS ARE NOT STABILIZED BY THIS DATE, THEN ONE OF THE FOLLOWING ACTIONS SHALL BE TAKEN TO STABILIZE THE SOIL FOR LATE FALL AND WINTER:

- STABILIZE THE SOIL WITH TEMPORARY VEGETATION – BY OCTOBER 1ST, SEED THE DISTURBED SOIL WITH WINTER RYE AT A SEEDING RATE OF 3LBS PER 1,000 S.F., LIGHTLY MULCH THE SEEDED SOIL WITH HAY OR STRAW AT 75 LBS PER 1,000 S.F., AND ANCHOR THE MULCH WITH PLASTIC NETTING. MONITOR GROWTH OF THE RYE OVER THE NEXT 30 DAYS. IF THE RYE FAILS TO GROW AT LEAST THREE INCHES OR FAILS TO COVER AT LEAST 75% OF THE DISTURBED SOIL BEFORE NOVEMBER 1ST, THEN MULCH THE AREA FOR OVER–WINTER PROTECTION.

- STABILIZE THE SOIL WITH SOD – STABILIZE THE DISTURBED SOIL WITH PROPERLY INSTALLED SOD BY OCTOBER 1ST. PROPER INSTALLATION INCLUDES PINNING THE SOD ONTO THE SOIL WITH WIRE PINS, ROLLING THE SOD TO GUARANTEE CONTACT BETWEEN THE SOD AND UNDERLYING SOIL, AND WATERING THE SOD TO PROMOTE ROOT GROWTH INTO THE DISTURBED SOIL.

- STABILIZE THE SOIL WITH MULCH – BY NOVEMBER 15TH, MULCH THE DISTURBED SOIL BY SPREADING HAY OR STRAW AT A RATE OF AT LEAST 150 LBS PER 1,000 S.F. ON THE AREA SO THAT NO SOIL IS VISIBLE THROUGH THE MULCH. IMMEDIATELY AFTER APPLYING THE MULCH, ANCHOR THE MULCH WITH PLASTIC NETTING TO PREVENT WIND FROM MOVING THE MULCH OFF THE DISTURBED SOIL.

4.6 OVER WINTER STABILIZATION OF DISTURBED SLOPES

ALL STONE–COVERED SLOPES SHALL BE CONSTRUCTED AND STABILIZED BY NOVEMBER 15TH. ALL SLOPES TO BE VEGETATED SHALL BE SEEDED AND MULCHED BY SEPTEMBER 1ST. A SLOPE IS CONSIDERED A GRADE GREATER THAN 15%. IF A SLOPE TO BE VEGETATED IS NOT STABILIZED BY SEPTEMBER 1ST, THEN ONE OF THE FOLLOWING ACTION SHALL BE TAKEN TO STABILIZE THE SLOPE FOR LATE FALL AND WINTER:

- STABILIZE THE SOIL WITH TEMPORARY VEGETATION AND EROSION CONTROL MATS – BY OCTOBER 1ST THE DISTURBED SLOPE SHALL BE SEEDED WITH WINTER RYE AT A SEEDING RATE OF 3 LBS PER 1,000 S.F. AND THEN INSTALL EROSION CONTROL MATS OR ANCHORED MULCH OVER THE SEEDING. IF THE RYE FAILS TO GROW AT LEAST THREE INCHES OR FAILS TO COVER AT LEAST 75% F THE SLOPE BY NOVEMBER 1ST, THEN THE CONTRACTOR SHALL COVER THE SLOPE WITH A LAYER OF EROSION CONTROL MIX OR WITH STONE RIPRAP.

- STABILIZE THE SOIL WITH SOD – THE DISTURBED SLOPE SHALL BE STABILIZED WITH PROPERLY INSTALLED SOD BY OCTOBER 1ST. PROPER INSTALLATION INCLUDES THE CONTRACTOR PINNING THE SOD ONTO THE SLOPE WITH WIRE PINS, ROLLING THE SOD TO GUARANTEE CONTACT BETWEEN THE SOD AND UNDERLYING SOIL, AND WATERING THE SOD TO PROMOTE ROOT GROWTH INTO THE DISTURBED SOIL. THE CONTRACTOR SHALL NOT USE LATE–SEASON SOD INSTALLATION TO STABILIZE SLOPES HAVING A GRADE GREATER THAN 3H:1V OR HAVING GROUNDWATER SEEPS ON THE SLOPE FACE.

- STABILIZE THE SOIL WITH EROSION CONTROL MIX – EROSION CONTROL MIX SHALL BE PROPERLY INSTALLED BY NOVEMBER 15TH. THE CONTRACTOR SHALL NOT USE EROSION CONTROL MIX TO STABILIZE SLOPES HAVING GRADES GREATER THAN 2H:1V OR HAVING GROUNDWATER SEEPS ON THE SLOPE FACE.

- STABILIZE THE SOIL WITH STONE RIPRAP – PLACE A LAYER OF STONE RIPRAP ON THE SLOPE BY NOVEMBER 15TH. A REGISTERED PROFESSIONAL ENGINEER SHALL BE HIRED TO DETERMINE THE STONE SIZE NEEDED FOR STABILITY ON THE SLOPE AND TO DESIGN A FILTER LAYER FOR UNDERNEATH THE RIPRAP.

5.0 INSPECTION AND MAINTENANCE

A PERSON WITH KNOWLEDGE OF EROSION AND STORMWATER CONTROL, INCLUDING THE STANDARDS AND CONDITIONS IN THE PERMIT, SHALL CONDUCT PERIODIC VISUAL INSPECTIONS OF INSTALLED EROSION CONTROL MEASURES. THE FREQUENCY OF INSPECTION SHALL OCCUR AT LEAST ONCE EVERY TWO WEEKS, PRIOR TO COMPLETING PERMANENT STABILIZATION MEASURES, AS WELL AS AFTER A □STORM EVENT□. A □STORM EVENT□ SHALL CONSIST 0.5 INCHES OF RAIN WITHIN A 24 HOUR PERIOD. THE FOLLOWING EROSION AND SEDIMENT CONTROL – BEST MANAGEMENT PRACTICES (BMP'S) SHALL INSPECTED IN THE MANNER AS DESCRIBED.

SEDIMENT BARRIERS: HAY BALE BARRIERS, SILT FENCES AND FILTER BERMS SHALL BE INSPECTED AND REPAIRED FOR THE FOLLOWING IF THERE ARE ANY SIGNS OF EROSION OR SEDIMENTATION BELOW THEM. IF THERE ARE SIGNS OF UNDERCUTTING AT THE CENTER OR THE EDGES OF THE BARRIER, OR IMPOUNDING OF LARGE VOLUMES OF WATER BEHIND THEM, SEDIMENT BARRIERS SHALL BE REPLACED WITH A TEMPORARY CHECK DAM. SHOULD THE FABRIC ON A SILT FENCE OR FILTER BARRIER DECOMPOSE OR BECOME INEFFECTIVE PRIOR TO THE END OF THE EXPECTED USABLE LIFE AND THE BARRIER IS STILL NECESSARY, THE FABRIC SHALL BE REPLACED PROMPTLY. SEDIMENT DEPOSITS SHOULD BE REMOVED WHEN DEPOSITS REACH APPROXIMATELY ONE–HALF THE HEIGHT OF THE BARRIER. FILTER BERMS SHOULD BE RESHAPED AS NEEDED. ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE SILT FENCE OR FILTER BARRIER IS NO LONGER REQUIRED SHOULD BE DRESSED TO CONFORM TO THE EXISTING GRADE, PREPARED AND SEEDED.

STABILIZED STONE CONSTRUCTION ENTRANCES THE EXIT SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OF SEDIMENT ONTO PUBLIC RIGHTS–OF–WAY. WHEN THE CONTROL PAD BECOMES INEFFECTIVE, THE STONE SHALL BE REMOVED ALONG WITH THE COLLECTED SOIL MATERIAL AND REDISTRIBUTED ON SITE IN A STABLE MANNER. THE ENTRANCE SHOULD THEN BE RECONSTRUCTED. THE CONTRACTOR SHALL SWEEP OR WASH PAVEMENT AT EXITS, WHICH HAVE EXPERIENCED MUD–TRACKING ON TO THE PAVEMENT OR TRAVELED WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH AGGREGATE, WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING STORM DRAINS, DITCHES, OR WATERWAYS.

MULCHED AREAS ALL MULCHES MUST BE INSPECTED PERIODICALLY, IN PARTICULAR AFTER RAINSTORMS, TO CHECK FOR RILL EROSION. IF LESS THAN 90% OF THE SOIL SURFACE IS COVERED BY MULCH, ADDITIONAL MULCH SHALL BE IMMEDIATELY APPLIED. NETS MUST BE INSPECTED AFTER RAIN EVENTS FOR DISLOCATION OR FAILURE. IF WASHOUTS OR BREAKAGE OCCUR, RE–INSTALL THE NETS AS NECESSARY AFTER REPAIRING DAMAGE TO THE SLOPE. INSPECTIONS SHALL TAKE PLACE UNTIL GRASSES ARE FIRMLY ESTABLISHED (95% SOIL SURFACE COVERED WITH GRASS).WHERE MULCH IS USED IN CONJUNCTION WITH ORNAMENTAL PLANTINGS, INSPECT PERIODICALLY THROUGHOUT THE YEAR TO DETERMINE IF MULCH IS MAINTAINING COVERAGE OF THE SOIL SURFACE. REPAIR AS NEEDED.

DUST CONTROL WHEN TEMPORARY DUST CONTROL MEASURES ARE USED, REPETITIVE TREATMENT SHALL BE APPLIED AS NEEDED TO ACCOMPLISH CONTROL.

STORMWATER APPURTENANCES INCLUDING THE UNDERDRAINS, STORM DRAINS, AND CATCH BASINS.

EROSION AND SEDIMENTATION CONTROL INSPECTIONS:

ACORN ENGINEERING HAS PERSONNEL QUALIFIED TO CONDUCT EROSION AND SEDIMENTATION CONTROL INSPECTIONS. FOR FURTHER INFORMATION CONTACT:

CONTACT: WILL SAVAGE, PE
TELEPHONE: (207) 775–2655

QUALIFICATIONS:

- MAINE PROFESSIONAL ENGINEERING LICENSE #11419
- MAINE DEP – CERTIFIED IN MAINTENANCE & INSPECTION OF STORMWATER BMP'S CERT #14
- CERTIFIED EROSION, SEDIMENT AND STORM WATER INSPECTOR (CESSWI) CERT #0293
- CERTIFIED PROFESSIONAL IN EROSION AND SEDIMENT CONTROL (CPESC) CERT. #4620

THE CONTRACTOR HAS SOLE RESPONSIBILITY FOR COMPLYING WITH THE EROSION AND SEDIMENTATION REPORT/PLAN, INCLUDING CONTROL OF FUGITIVE DUST. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY MONETARY PENALTIES RESULTING FROM FAILURE TO COMPLY WITH THESE STANDARDS.

6.0 IMPLEMENTATION SCHEDULE

THE FOLLOWING IMPLEMENTATION SEQUENCE IS INTENDED TO MAXIMIZE THE EFFECTIVENESS OF THE ABOVE DESCRIBED EROSION CONTROL MEASURES. CONTRACTORS SHOULD AVOID OVEREXPOSING DISTURBED AREAS AND LIMIT THE AMOUNT OF STABILIZATION AREA.

1. INSTALL A STABILIZED CONSTRUCTION ENTRANCE IN ALL LOCATIONS WHERE CONSTRUCTION TRAFFIC WILL ENTER AND EXIT THE SITE.
2. INSTALL PERIMETER SILT FENCE OR EROSION CONTROL BERM.
3. INSTALL ALL OTHER EROSION CONTROL DEVICES AS NECESSARY THROUGHOUT THE REMAINDER OF THIS SCHEDULE
4. COMMENCE THE INSTALLATION OF THE DOWNHILL RETAINING WALL(S).
5. COMMENCE THE INSTALLATION OF THE DOWN GRADIENT FOUNDATION AND WALL FOR UNITS 19–29. CUT AND FILL ONLY AS NECESSARY TO BACKFILL THE RETAINING WALL AND FOUNDATION WALL AS DESIGNED WITHIN THE APPROPRIATE PLAN(S).
6. COMMENCE REMAINING EARTHWORK OPERATIONS, WALL AND FOUNDATION INSTALLATION.
7. COMMENCE INSTALLATION OF DRAINAGE INFRASTRUCTURE
8. CONTINUE EARTHWORK AND GRADING TO SUBGRADE AS NECESSARY FOR CONSTRUCTION
9. COMPLETE INSTALLATION OF DRAINAGE INFRASTRUCTURE
10. COMPLETE REMAINING EARTHWORK OPERATIONS
11. INSTALL SUB–BASE AND BASE GRAVELS IN PAVED AREAS.
12. INSTALL PAVING AND BRICK PAVING.
13. LOAM, LIME, FERTILIZE, SEED AND MULCH DISTURBED AREAS AND COMPLETE ALL LANDSCAPING.
14. ONCE THE SITE IS STABILIZED AND 90% CATCH OF VEGETATION HAS BEEN OBTAINED, REMOVE ALL TEMPORARY EROSION CONTROL MEASURES.
15. TOUCH UP AREAS WITHOUT A VIGOROUS CATCH OF GRASS WITH LOAM AND SEED.
16. EXECUTE PROPER MAINTENANCE OF ALL TEMPORARY AND PERMANENT EROSION CONTROL MEASURES THROUGHOUT THE PROJECT.

THE ABOVE IMPLEMENTATION SEQUENCE SHOULD BE GENERALLY FOLLOWED BY THE SITE CONTRACTOR. HOWEVER, THE CONTRACTOR MAY CONSTRUCT SEVERAL ITEMS SIMULTANEOUSLY. THE CONTRACTOR SHALL SUBMIT TO THE OWNER A SCHEDULE OF THE COMPLETION OF THE WORK. IF THE CONTRACTOR IS TO COMMENCE THE CONSTRUCTION OF MORE THAN ONE ITEM ABOVE, THEY SHALL LIMIT THE AMOUNT OF EXPOSED ARE TO THOSE AREAS IN WHICH WORK IS EXPECTED TO BE UNDERTAKEN DURING THE FOLLOWING 30 DAYS.

THE CONTRACTOR SHALL REVEGETATE DISTURBED AREAS AS RAPIDLY AS POSSIBLE. ALL AREAS SHALL BE PERMANENTLY STABILIZED WITHIN 7 DAYS OF FINAL GRADING OR BEFORE A STORM EVENT. THE CONTRACTOR SHALL INCORPORATE PLANNED INLETS AND DRAINAGE SYSTEMS AS EARLY AS POSSIBLE INTO THE CONSTRUCTION PHASE.

7.0 CONCLUSION

THE ABOVE EROSION CONTROL NARRATIVE IS INTENDED TO MINIMIZE THE DEVELOPMENT IMPACT BY IMPLEMENTING TEMPORARY AND PERMANENT EROSION CONTROL MEASURES. THE CONTRACTOR SHALL ALSO REFER TO THE MAINE EROSION AND SEDIMENT CONTROL BMP MANUAL FOR ADDITIONAL INFORMATION.

TEMPORARY SEEDING PLAN

SITE PREPARATION

THE SEEDED AREAS SHALL BE FEASIBLY GRADED OUT TO PROVIDE THE USE OF EQUIPMENT FOR SEEDBED PREPARATION, SEEDING, MULCH APPLICATION, AND MULCH ANCHORING. IF NECESSARY, THE SITE MAY REQUIRE ADDITIONAL TEMPORARY EROSION CONTROL MEASURES OUTLINED IN THE EROSION CONTROL REPORT.

SEEDBED PREPARATION

FERTILIZER SHALL BE APPLIED TO THE SITE AT A RATE OF 13.8 POUNDS PER 1,000 SQUARE FEET. THE COMPOSITION OF THE FERTILIZER SHALL BE 10–10–10 (N–P2O5–K2O) OR EQUIVALENT.

LIMESTONE SHALL BE APPLIED TO THE SITE AT A RATE OF 138 POUNDS PER 1,000 SQUARE FEET.

SEEDING

THE COMPOSITION AND AMOUNT OF TEMPORARY SEED APPLIED TO A SITE SHALL BE DETERMINED BY THE FOLLOWING TABLE:

SEEDPOUNDS / 1,000 S.F.RECOMMENDED SEEDING DATESWINTER RYE2.57AUG–15 TO OCT–1OATS1.84APR–1 TO JUL–1
AUG–15 TO SEP–15ANNUAL RYEGRASS0.92APR–1 TO JUL–1SUDANGRASS0.92MAY–15 TO AUG–15PERENNIAL0.92AUG–15 TO SEP–15
MULCHING

MULCH SHALL BE APPLIED AT A RATE OF 70 LBS – 90 LBS PER 1,000 SQUARE FEET. THE MULCH SHALL BE INSTALLED AT A MINIMUM DEPTH OF 4 INCHES. THE SEEDED AREA SHALL BE MULCHED IMMEDIATELY AFTER SEED IS APPLIED. MULCHING DURING THE WINTER SEASON SHALL BE DOUBLE THE NORMAL AMOUNT.

CONCLUSION

PLEASE REFER TO THE MAINE EROSION AND SEDIMENT CONTROL BMP MANUAL FOR ADDITIONAL INFORMATION PERTAINING TO TEMPORARY SEEDING AND MULCHING.

PERMANENT SEEDING PLAN

SITE PREPARATION

THE SEEDED AREAS SHALL BE FEASIBLY GRADED OUT TO PROVIDE THE USE OF EQUIPMENT FOR SEEDBED PREPARATION, SEEDING, MULCH APPLICATION, AND MULCH ANCHORING. IF NECESSARY, THE SITE MAY REQUIRE ADDITIONAL TEMPORARY EROSION CONTROL MEASURES OUTLINED IN THE EROSION CONTROL REPORT.

SEEDBED PREPARATION

FERTILIZER SHALL BE APPLIED TO THE SITE AT A RATE OF 13.8 POUNDS PER 1,000 SQUARE FEET. THE COMPOSITION OF THE FERTILIZER SHALL BE 10–10–10 (N–P2O5–K2O) OR EQUIVALENT.

LIMESTONE SHALL BE APPLIED TO THE SITE AT A RATE OF 138 POUNDS PER 1,000 SQUARE FEET.

SEEDING

THE COMPOSITION AND AMOUNT OF PERMANENT SEED APPLIED TO A SITE SHALL BE DETERMINED BY THE FOLLOWING TABLE:

SEEDPOUNDS / 1,000 S.F.KENTUCKY BLUEGRASS0.46CREEPING RED FESCUE0.46PERENNIAL RYEGRASS0.11TOTAL1.03
MULCHING

MULCH SHALL BE APPLIED AT A RATE OF 70 LBS – 90 LBS PER 1,000 SQUARE FEET. THE MULCH SHALL BE INSTALLED AT A MINIMUM DEPTH OF 4 INCHES. THE SEEDED AREA SHALL BE MULCHED IMMEDIATELY AFTER SEED IS APPLIED. MULCHING DURING THE WINTER SEASON SHALL BE DOUBLE THE NORMAL AMOUNT.

RECOMMENDATIONS

PERMANENT SEEDING IS RECOMMENDED TO BE COMPLETED IN THE SPRING. LATER SUMMER SEEDING IS ALLOWED IF COMPLETED PRIOR TO SEPTEMBER 1ST. IF SEEDING CANNOT BE ACCOMPLISHED DURING THE PERIODS RECOMMENDED FOR PERMANENT SEEDING, THEN THE CONTRACTOR SHALL PERFORM TEMPORARY SEEDING PER THE TEMPORARY SEEDING PLAN.

CONCLUSION

PLEASE REFER TO THE MAINE EROSION AND SEDIMENT CONTROL BMP MANUAL FOR ADDITIONAL INFORMATION PERTAINING TO PERMANENT SEEDING AND MULCHING.

Plan 13

TEMPORARY SEED APPLICATION RATES		
SEED	LBS / ACRE	RECOMMENDED SEEDING DATES
WINTER RYE	2.57	8/15 TO 10/1
OATS	1.84	4/1 TO 7/1 8/15 TO 9/15
ANNUAL RYGRASS	0.92	4/1 TO 7/1
SUDANGRASS	0.92	5/15 TO 8/15
PERENNIAL	0.92	8/15 TO 9/15
TOTAL	7.17 LBS/ACRE	

PERMANENT SEED APPLICATION RATES – OUTSIDE THE VEGETATED UNDERDRAIN SOIL FILTER	
SEED	LBS / ACRE
KENTUCKY BLUEGRASS	20.00
CREEPING RED FESCUE	20.00
PERENNIAL RYEGRASS	4.80
TOTAL	44.8 LBS/ACRE

NOTES:

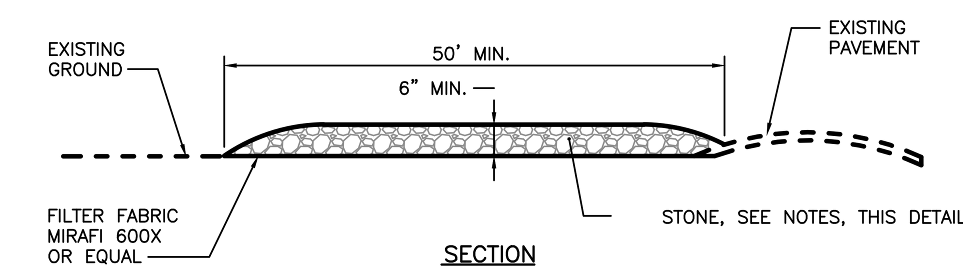
1) CONTRACTOR SHALL ADD STONE TO ENTRANCE AS MUD/SILT MATERIAL ACCUMULATES

2) STONE SHALL BE 2"–3" COARSE AGGREGATE

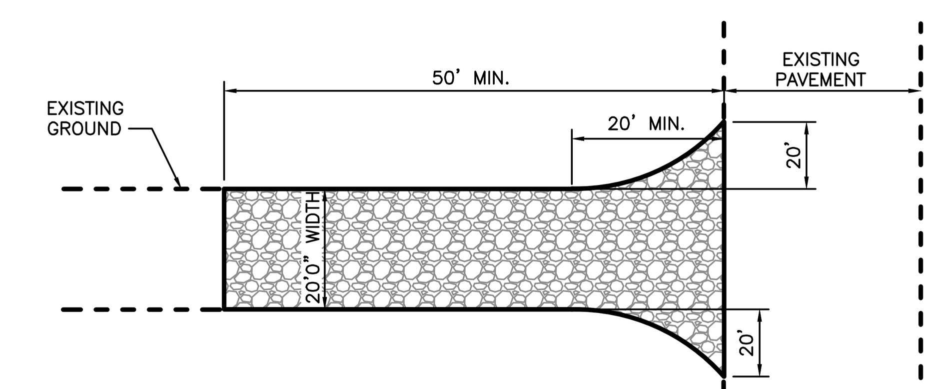
3) CONSTRUCTION ENTRANCE SHALL BE GRADED TO NOT ALLOW ANY STORMWATER TO BE CONVEYED OFF SITE. IN SITUATIONS WHERE THIS IS NOT POSSIBLE, ANY STORMWATER CONVEYED OFFSITE SHALL BE TREATED OR RETAINED IN A MANNER APPROVED BY ENGINEER.

4) WHEN NECESSARY, ON–SITE VEHICLES SHALL HAVE THEIR WHEELS CLEANED PRIOR TO LEAVING SITE.

5) CONSTRUCTION ENTRANCE SHALL BE GRADED IN A MANNER THAT PREVENTS TRACKING OF SEDIMENTS ONTO PUBLIC RIGHT–OF–WAY

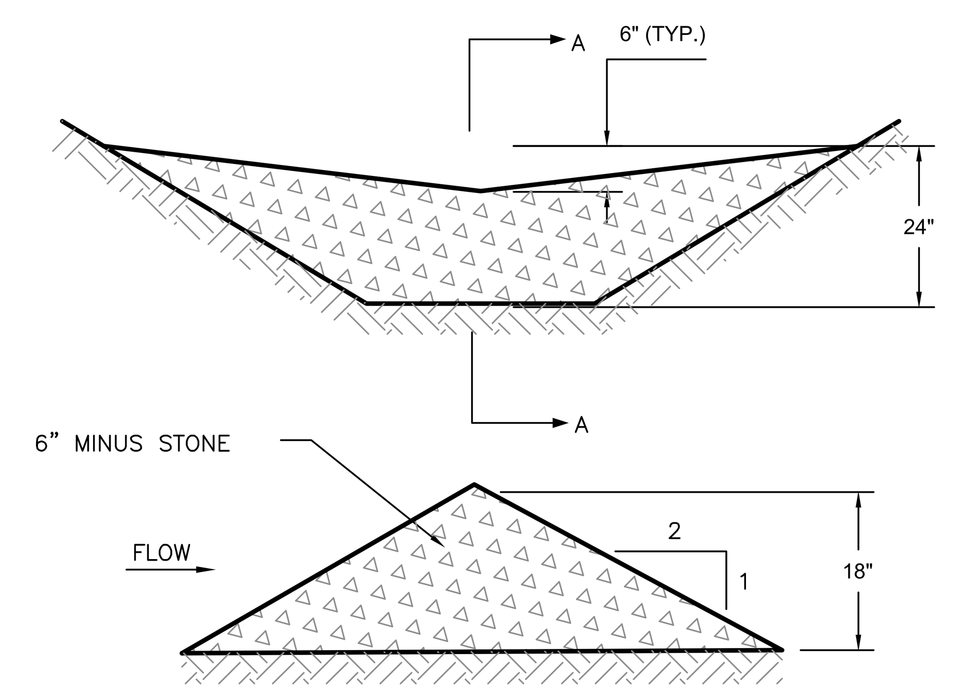


SECTION



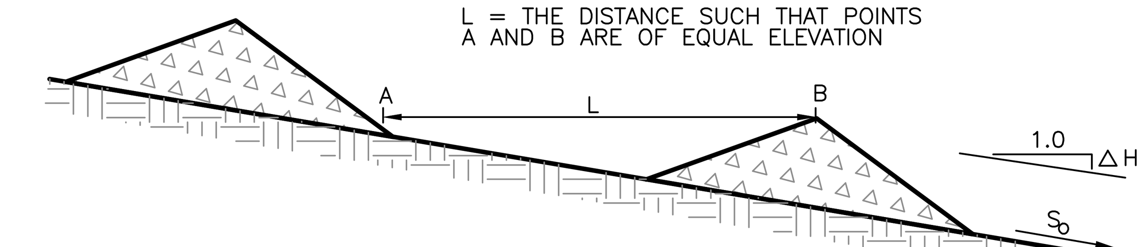
PLAN VIEW

STABILIZED CONSTRUCTION ENTRANCE
NOT TO SCALE



SECTION A–A

L = THE DISTANCE SUCH THAT POINTS A AND B ARE OF EQUAL ELEVATION



SPACING BETWEEN CHECK DAMS

S_O (FT./FT.)	L (FT.)
0.020	75
0.030	50
0.040	40
0.050	30
0.080	20
0.100	10

STONE CHECK DAM
NOT TO SCALE

PERMIT DRAWINGS
NOT FOR CONSTRUCTION

ISSUED FOR	BY / DATE
WORKSHOP #2	WHS 11/12/13
FINAL SUBMISSION	WHS 12/2/13

REVISION	REV. / DATE
REV. STANDARD DETAIL	WHS 12/4/13
STAFF COMMENTS	WHS 12/6/13

DRAWING NAME: EROSION CONTROL DETAILS & NOTES

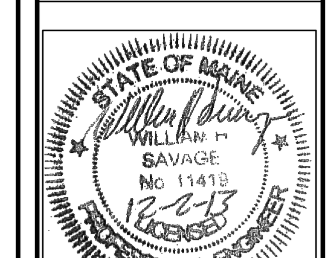
PROJECT NAME: MUNJOY HEIGHTS

CLIENT: REDFERN MUNJOY, LLC.
P.O. BOX 8816, PORTLAND, MAINE 04104

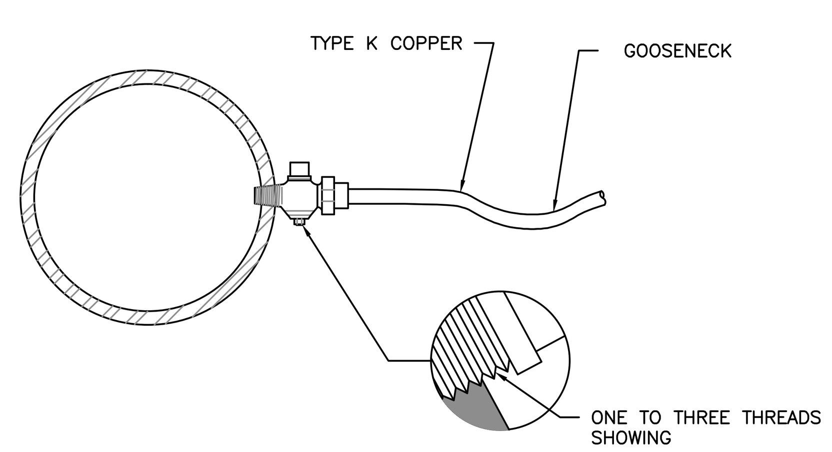
ACORN ENGINEERING, INC.

ACORN ENGINEERING, INC.
P.O. BOX 3372 PORTLAND, MAINE 04104
(207) 775–2655

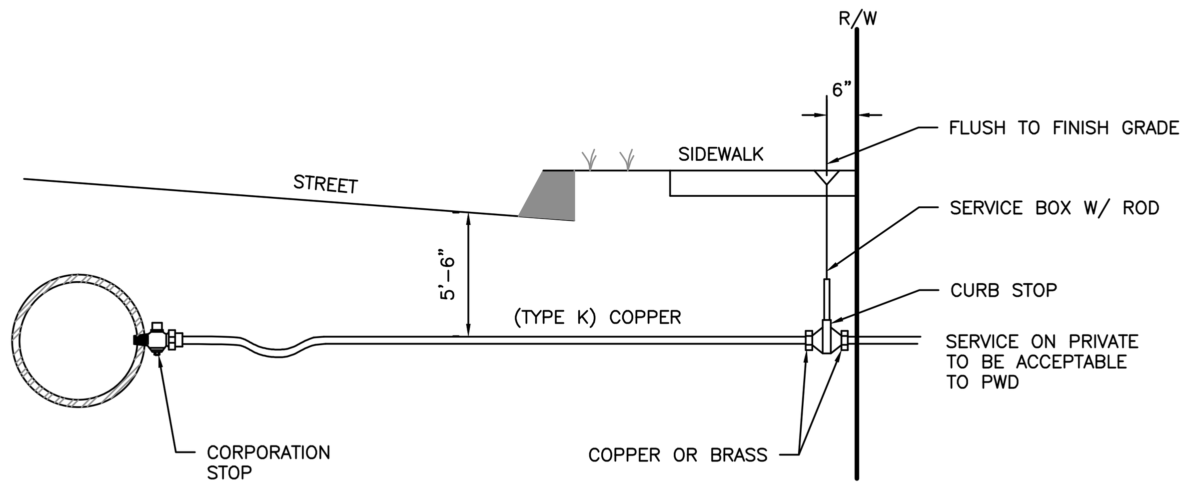
FILE: 1047_details 11–27–2013.dwg
DATE: 7/11/13
JN: 302–001
SCALE: NTS
DESIGN BY: WHS
DRAWN BY: ZRJ
CHECKED BY: WHS



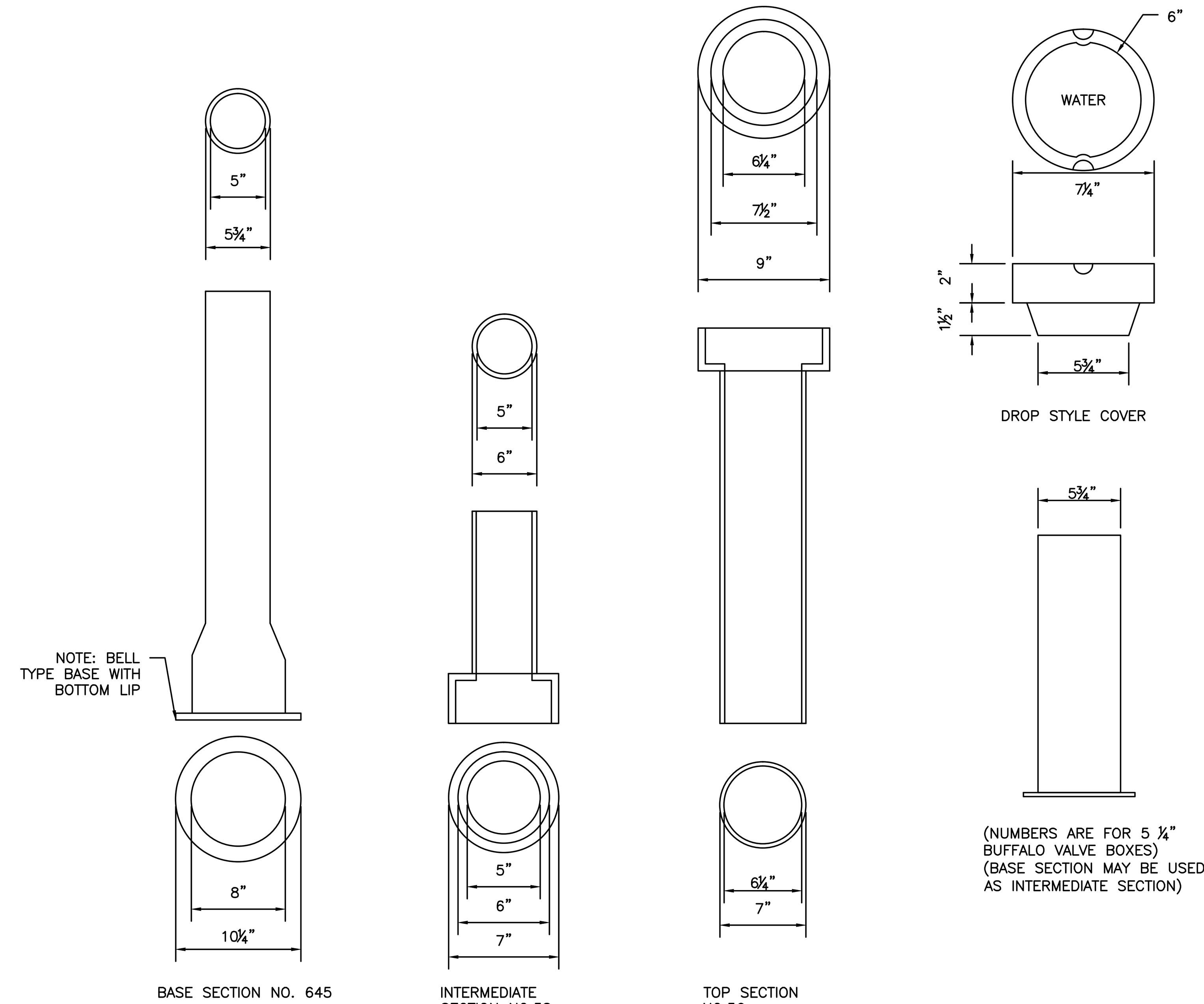
DRAWING NO.
C-43



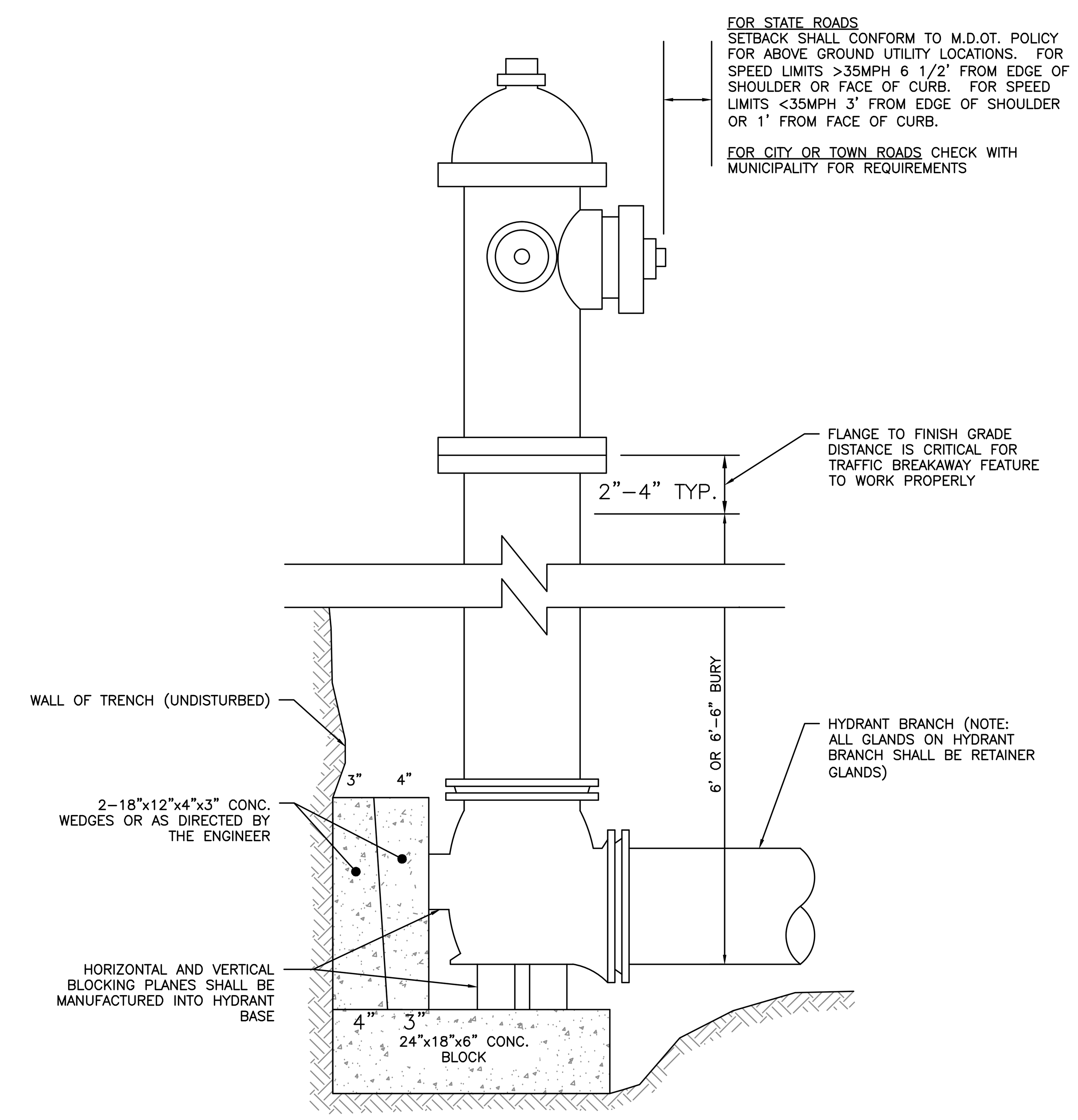
SERVICE TAP
(3/4" AND 1" C.C. THREAD)



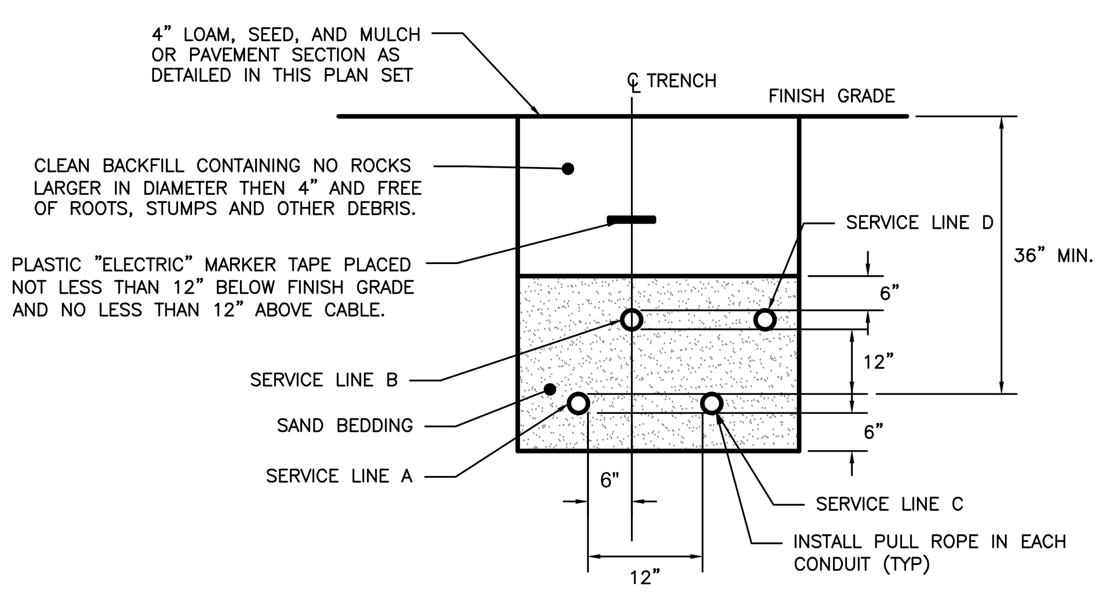
TYPICAL SERVICE CONNECTION
N.T.S.



VALVE BOX & COVER
N.T.S.



TYPICAL HYDRANT INSTALLATION DETAIL



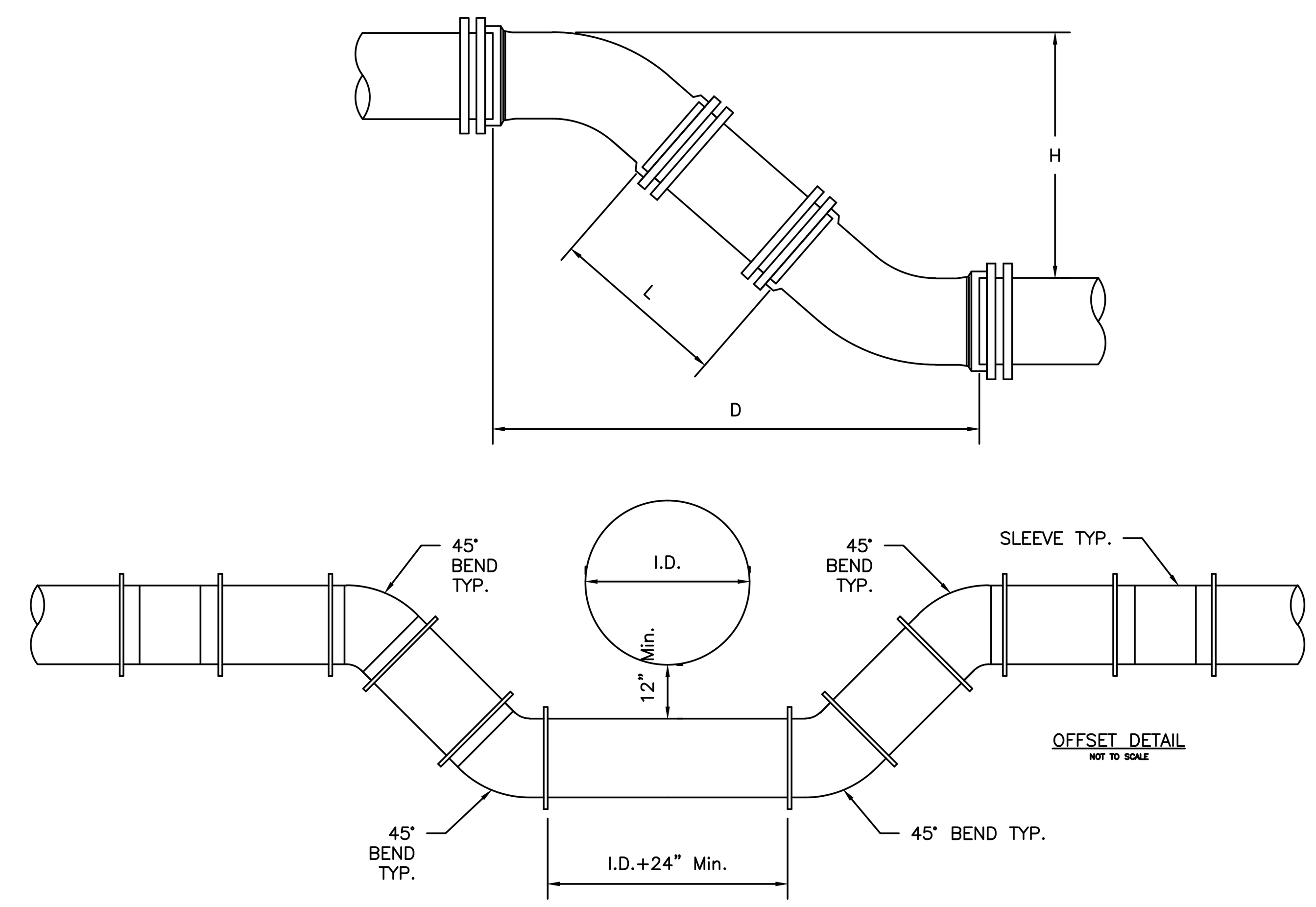
CONDUIT TYPE				
SERVICE	CONDUIT SIZE	GRASS AND PAVED AREAS	UTILITY	REMARKS
A	2-5"	SCHEDULE 40 PVC ELECTRICAL GRADE	PRIMARY POWER	SEE NOTE 1
B	2-4"	SCHEDULE 40 PVC	COMMUNICATION	–
C	2-4"	SCHEDULE 40 PVC ELECTRICAL GRADE	SPARE	IF REQUIRED
D	2-4"	SCHEDULE 40 PVC	CABLE	–

NOTE:

1. ONE CONDUIT CAPPED FOR SPARE, PROVIDE GALVANIZED STEEL LONG SWEEP AT RISER POLE AND EXTEND GALVANIZED CONDUIT TO 10" ABOVE GRADE AT POLE WITH STAND-OFF BRACKETS.

2. MINIMUM SEPARATION OF 24 INCHES BETWEEN PRIMARY CABLE/CONDUIT AND GAS LINES SHALL BE MAINTAINED.

UTILITY TRENCH – PRIMARY AND SECONDARY POWER, TELEPHONE, AND CABLE
NOT TO SCALE



	6" PIPE		8" PIPE		12" PIPE	
H	D	L	D	L	D	L
12"	1' 6-1/2"	0' 10-1/2"	1' 7-1/2"	0' 9-1/2"	1' 11-1/2"	0' 5-1/2"
13"	1' 7-1/2"	0' 11-7/8"	1' 8-1/2"	0' 10-7/8"	2' 0-1/2"	0' 6-7/8"
14"	1' 8-1/2"	1' 1-5/16"	1' 9-1/2"	1' 0-5/16"	2' 1-1/2"	0' 8-5/16"
15"	1' 9-1/2"	1' 2-11/16"	1' 10-1/2"	1' 1-11/16"	2' 2-1/2"	0' 9-11/16"
16"	1' 10-1/2"	1' 4-1/8"	1' 11-1/2"	1' 3-1/8"	2' 3-1/2"	0' 11-1/8"
17"	1' 11-1/2"	1' 5-9/16"	2' 0-1/2"	1' 4-9/16"	2' 4-1/2"	1' 0-9/16"
18"	2' 0-1/2"	1' 6-15/16"	2' 1-1/2"	1' 5-15/16"	2' 5-1/2"	1' 1-15/16"
19"	2' 1-1/2"	1' 8-3/8"	2' 2-1/2"	1' 7-3/8"	2' 6-1/2"	1' 3-3/8"
20"	2' 2-1/2"	1' 9-13/16"	2' 3-1/2"	1' 8-13/16"	2' 7-1/2"	1' 4-13/16"
21"	2' 3-1/2"	1' 11-3/16"	2' 4-1/2"	1' 10-3/16"	2' 8-1/2"	1' 6-3/16"
22"	2' 4-1/2"	2' 0-5/8"	2' 5-1/2"	1' 11-5/8"	2' 9-1/2"	1' 7-5/8"
23"	2' 5-1/2"	2' 2"	2' 6-1/2"	2' 1"	2' 10-1/2"	1' 9"
24"	2' 6-1/2"	2' 3-7/16"	2' 7-1/2"	2' 2-7/16"	2' 11-1/2"	1' 10-7/16"
25"	2' 7-1/2"	2' 4-7/8"	2' 8-1/2"	2' 3-7/8"	3' 0-1/2"	1' 11-7/8"
26"	2' 8-1/2"	2' 6-1/4"	2' 9-1/2"	2' 5-1/4"	3' 1-1/2"	2' 1-1/4"
27"	2' 9-1/2"	2' 7-11/16"	2' 10-1/2"	2' 6-11/16"	3' 2-1/2"	2' 2-11/16"
28"	2' 10-1/2"	2' 9-1/8"	2' 11-1/2"	2' 8-1/8"	3' 3-1/2"	2' 4-1/8"
29"	2' 11-1/2"	2' 10-1/2"	3' 0-1/2"	2' 9-1/2"	3' 4-1/2"	2' 5-1/2"
30"	3' 0-1/2"	2' 11-15/16"	3' 1-1/2"	2' 10-15/16"	3' 5-1/2"	2' 6-15/16"
31"	3' 1-1/2"	3' 1-5/16"	3' 2-1/2"	3' 0-5/16"	3' 6-1/2"	2' 8-5/16"
32"	3' 2-1/2"	3' 2-3/4"	3' 3-1/2"	3' 1-3/4"	3' 7-1/2"	2' 9-3/4"
33"	3' 3-1/2"	3' 4-3/16"	3' 4-1/2"	3' 3-3/16"	3' 8-1/2"	2' 11-3/16"
34"	3' 4-1/2"	3' 5-9/16"	3' 5-1/2"	3' 4-9/16"	3' 9-1/2"	3' 0-9/16"
35"	3' 5-1/2"	3' 7"	3' 6-1/2"	3' 6"	3' 10-1/2"	3' 2"
36"	3' 6-1/2"	3' 8-7/16"	3' 7-1/2"	3' 7-7/16"	3' 11-1/2"	3' 3-7/16"
37"	3' 7-1/2"	3' 9-13/16"	3' 8-1/2"	3' 8-13/16"	4' 0-1/2"	3' 4-13/16"
38"	3' 8-1/2"	3' 11-1/4"	3' 9-1/2"	3' 10-1/4"	4' 1-1/2"	3' 6-1/4"
39"	3' 9-1/2"	4' 0-11/16"	3' 10-1/2"	3' 11-11/16"	4' 2-1/2"	3' 7-11/16"
40"	3' 10-1/2"	4' 2-1/16"	3' 11-1/2"	4' 1-1/16"	4' 3-1/2"	3' 9-1/16"
41"	3' 11-1/2"	4' 3-1/2"	4' 0-1/2"	4' 2-1/2"	4' 4-1/2"	3' 10-1/2"
42"	4' 0-1/2"	4' 4-7/8"	4' 1-1/2"	4' 3-7/8"	4' 5-1/2"	3' 11-7/8"
43"	4' 1-1/2"	4' 6-5/16"	4' 2-1/2"	4' 5-5/16"	4' 6-1/2"	4' 1-5/16"
44"	4' 2-1/2"	4' 7-3/4"	4' 3-1/2"	4' 6-3/4"	4' 7-1/2"	4' 2-3/4"
45"	4' 3-1/2"	4' 9-1/8"	4' 4-1/2"	4' 8-1/8"	4' 8-1/2"	4' 4-1/8"
46"	4' 4-1/2"	4' 10-9/16"	4' 5-1/2"	4' 9-9/16"	4' 9-1/2"	4' 5-9/16"
47"	4' 5-1/2"	4' 11-15/16"	4' 6-1/2"	4' 10-15/16"	4' 10-1/2"	4' 6-15/16"
48"	4' 6-1/2"	5' 1-3/8"	4' 7-1/2"	5' 0-3/8"	4' 11-1/2"	4' 8-3/8"
49"	4' 7-1/2"	5' 2-13/16"	4' 8-1/2"	5' 1-13/16"	5' 0-1/2"	4' 9-13/16"
50"	4' 8-1/2"	5' 4-3/16"	4' 9-1/2"	5' 3-3/16"	5' 1-1/2"	4' 11-3/16"
51"	4' 9-1/2"	5' 5-5/8"	4' 10-1/2"	5' 4-5/8"	5' 2-1/2"	5' 0-5/8"
52"	4' 10-1/2"	5' 7-1/16"	4' 11-1/2"	5' 6-1/16"	5' 3-1/2"	5' 2-1/16"
53"	4' 11-1/2"	5' 8-7/16"	5' 0-1/2"	5' 7-7/16"	5' 4-1/2"	5' 3-7/16"
54"	5' 0-1/2"	5' 9-7/8"	5' 1-1/2"	5' 8-7/8"	5' 5-1/2"	5' 4-7/8"
55"	5' 1-1/2"	5' 11-5/16"	5' 2-1/2"	5' 10-5/16"	5' 6-1/2"	5' 6-5/16"

NOTE: DIMENSIONS APPLICABLE FOR SIGMA COMPACT BENDS. FOR TYLER COMPACT BENDS, ADD 1/2" TO "D" DIMENSION AND SUBTRACT 1/2" FROM "L" DIMENSION. FOR OTHER FITTINGS REFER TO MANUFACTURER'S RECOMMENDATIONS.

TYPICAL MAIN OFFSET
NOT TO SCALE

PERMIT DRAWINGS
NOT FOR CONSTRUCTION

ISSUED FOR	BY / DATE
CITY SUBMISSION	WHS 11/12/13
FINAL SUBMISSION	WHS 12/2/13

REVISION	REV. / DATE
REV. STANDARD DETAIL	WHS 12/4/13
STAFF COMMENTS	WHS 12/6/13

DRAWING NAME: PORTLAND WATER DISTRICT DETAILS – 1

PROJECT NAME: MUNJOY HEIGHTS

CLIENT: REDFERN MUNJOY, LLC.
P.O. BOX 8816, PORTLAND, MAINE 04104

A C O R N ENGINEERING, INC.
ACORN ENGINEERING, INC.
P.O. BOX 3372 PORTLAND, MAINE 04104
(207) 775-2655

FILE: 1047_details 11-27-2013.dwg
DATE: 7/11/13
JN: 302-001
SCALE: NTS
DESIGN BY: WHS
DRAWN BY: ZRJ
CHECKED BY: WHS

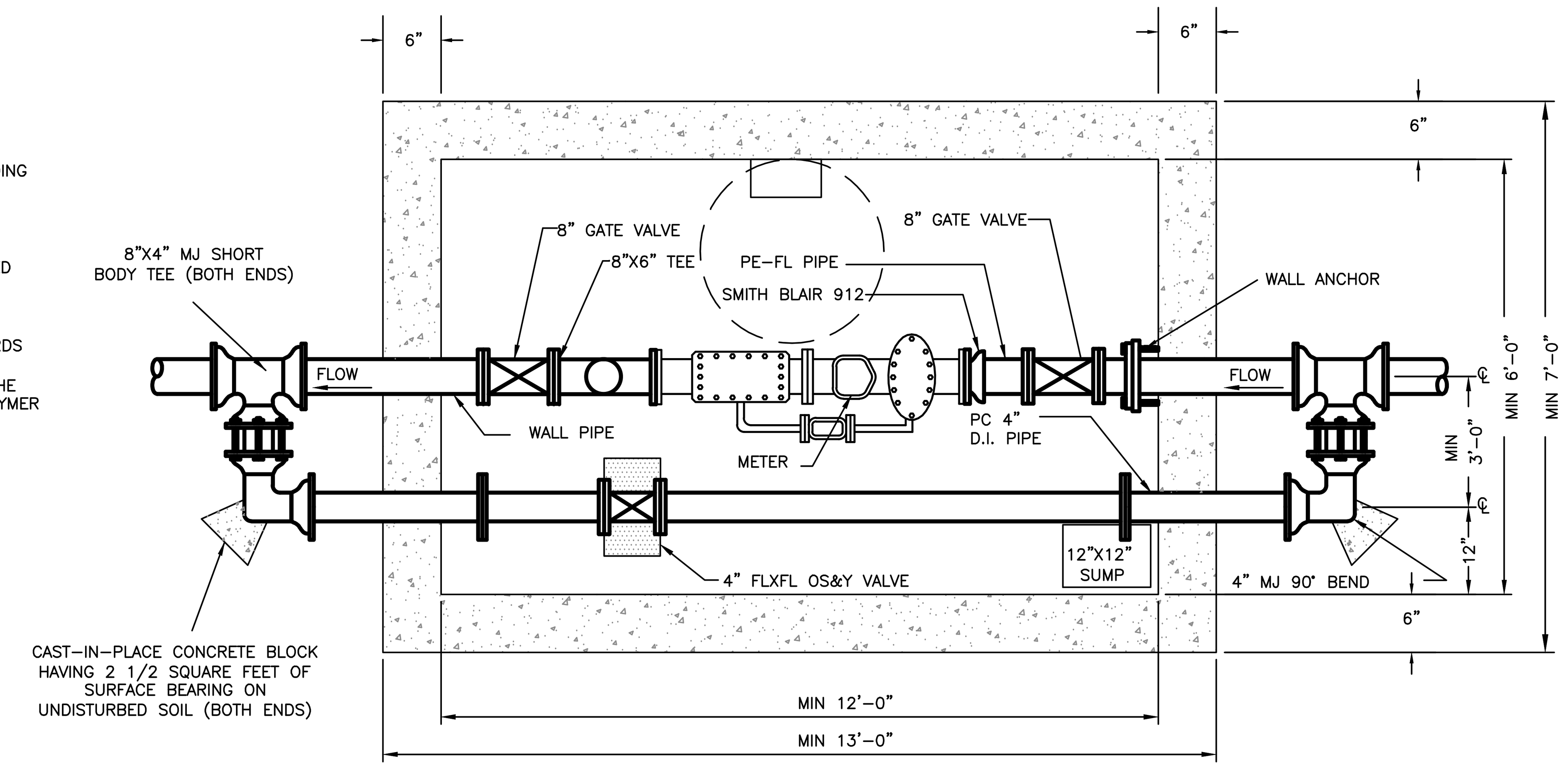
STATE OF MAINE
WILLIAM H. SAVAGE
No. 11418
LICENSED PROFESSIONAL ENGINEER

DRAWING NO.
C-44

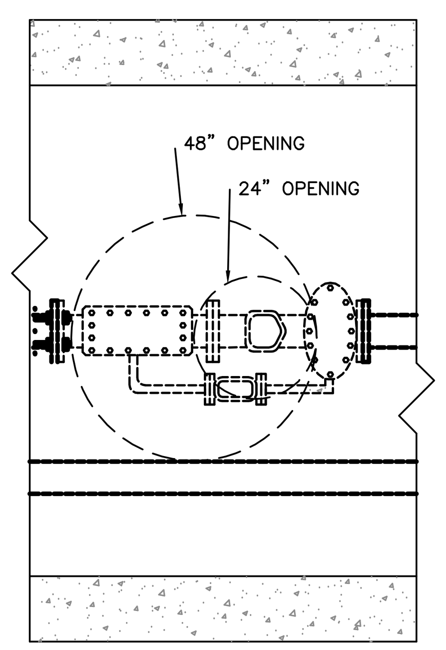
Plan 15

NOTES:

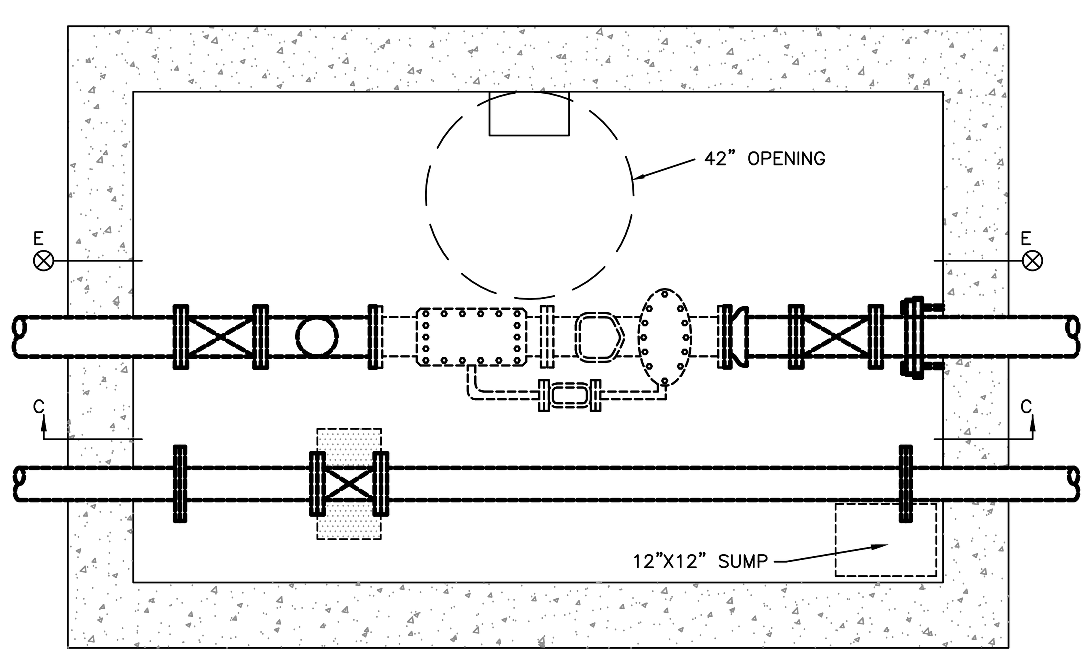
1.) SHOP DRAWING SUBMITTAL REQUIRED
2.) ALL JOINTS TO BE WATERTIGHT WITH USE OF TWO (2) STRIPS OF CONSEAL
3.) COVER AND STRUCTURE LOADING SHALL BE FOR H20
4.) STRUCTURAL DESIGN OF THE VAULT TO BE APPLICABLE FOR THE ANTICIPATED LOADING AND A MIN. OF H20 LOADING
5.) WATER METER SHALL BE 8-INCH "OMNI F^2 METER" AS MANUFACTURED BY SENSUS. WATER METER SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS
6.) PRE-CAST CONCRETE METER PIT AND APPURTENANCES SHALL BE AS MANUFACTURED BY GEORGE R. ROBERTS CO., OR APPROVED EQUAL.
7.) 5,000 PSI @ 28 DAYS
8.) CEMENT SHALL BE TYPE III PER ASTM C150-81
9.) SHALL BE CONSTRUCTED IN ACCORDANCE WITH PORTLAND WATER DISTRICT STANDARDS
10.) 12" HOLES SHALL BE CONSTRUCTED FOR 8" PIPE
11.) STEPS SHALL BE OFFSET AT NO MORE THAN 12" ON CENTER, STARTING FROM THE TOP OF THE MANHOLE FRAME AND SHALL BE FORGED ALUMINUM OR COPOLYMER POLYPROPYLENE STEPS



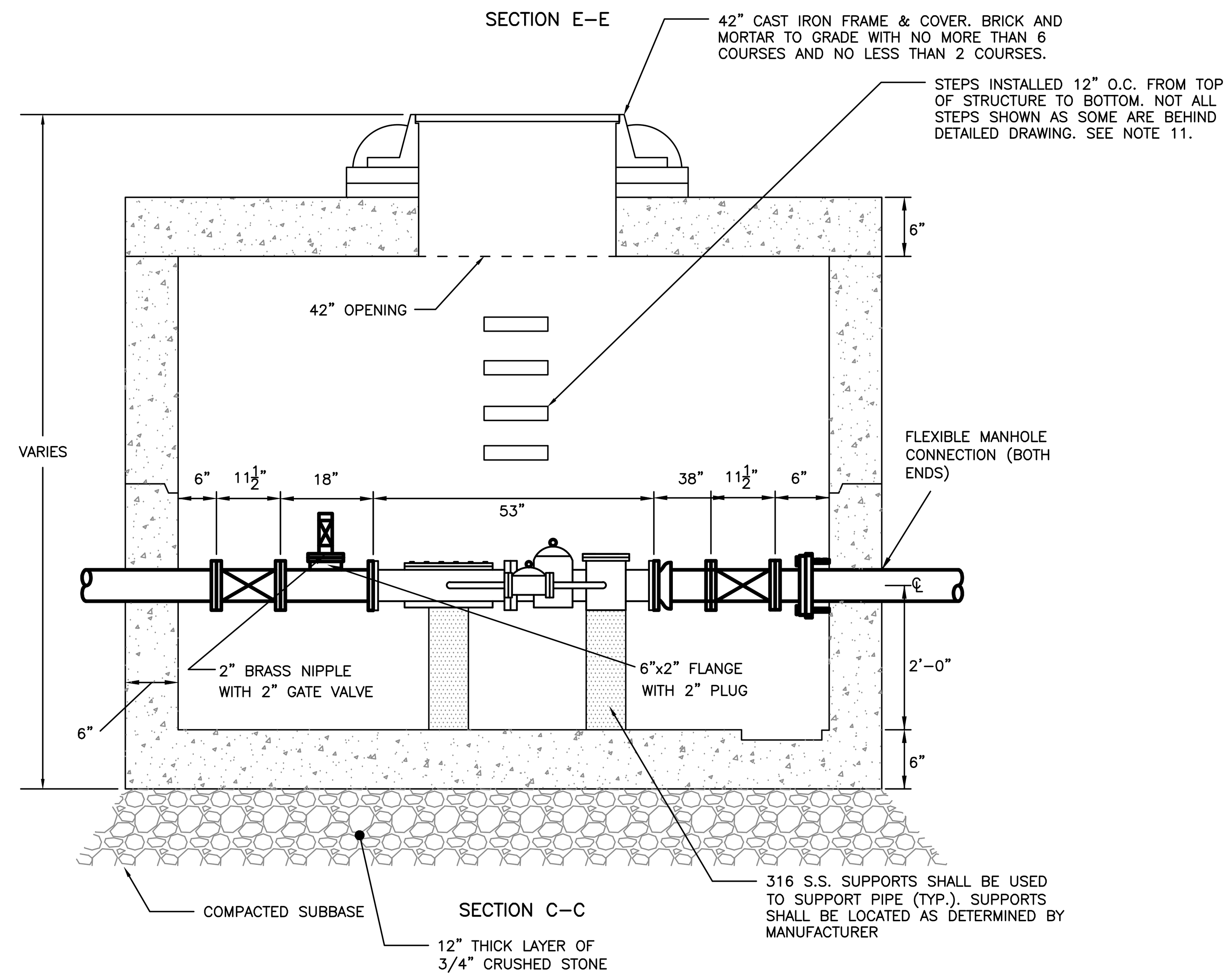
SECTION E-E



PLAN - TRAFFIC-RATED COVER



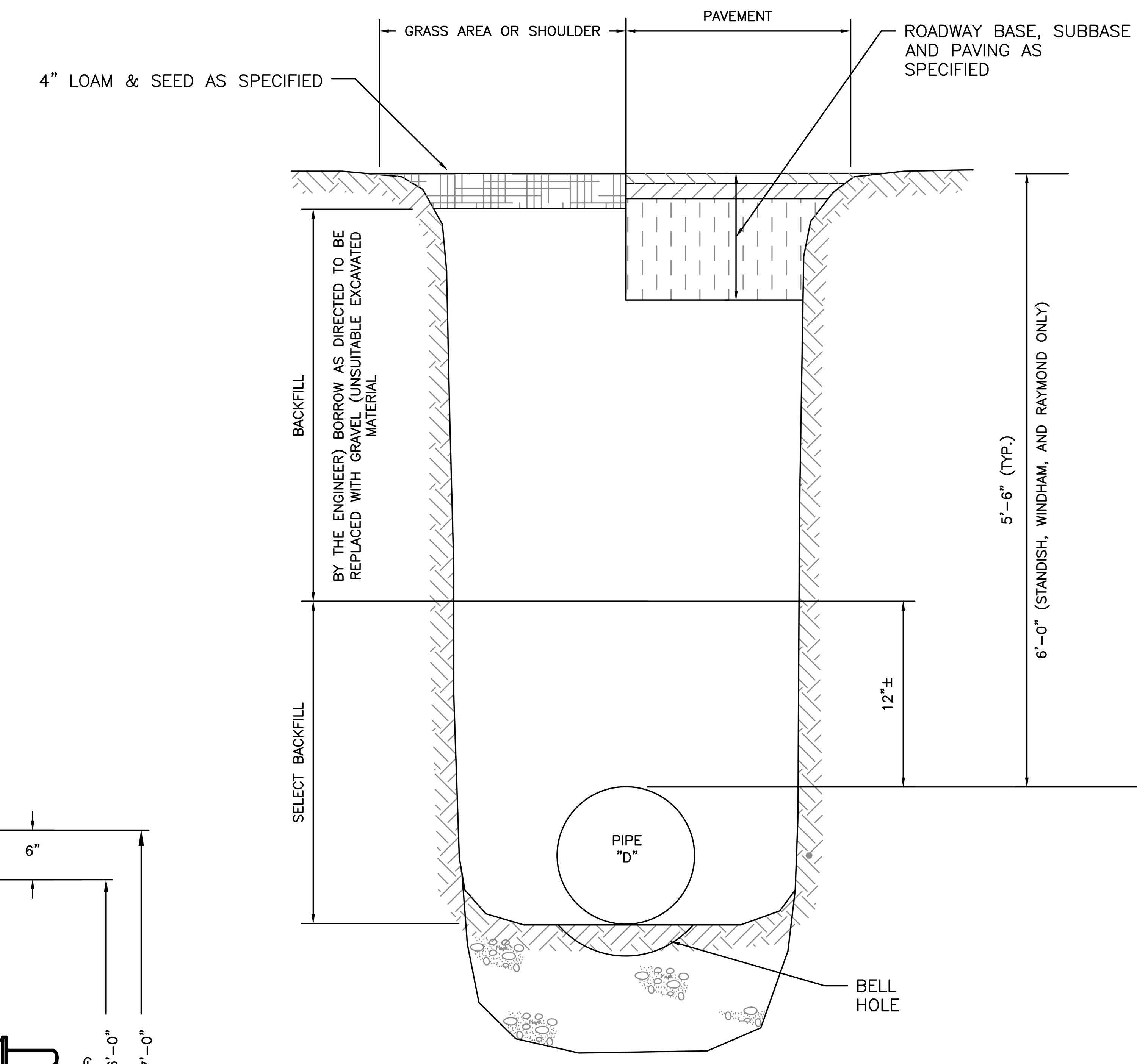
PLAN



SECTION C-C

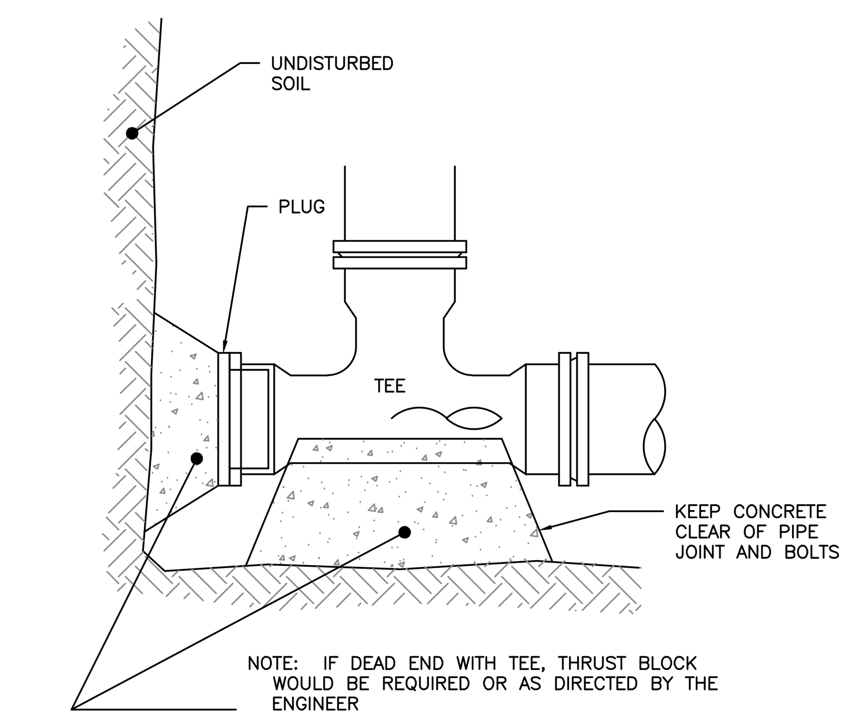
8-IN FIRE LINE METER DETAIL

NOT TO SCALE



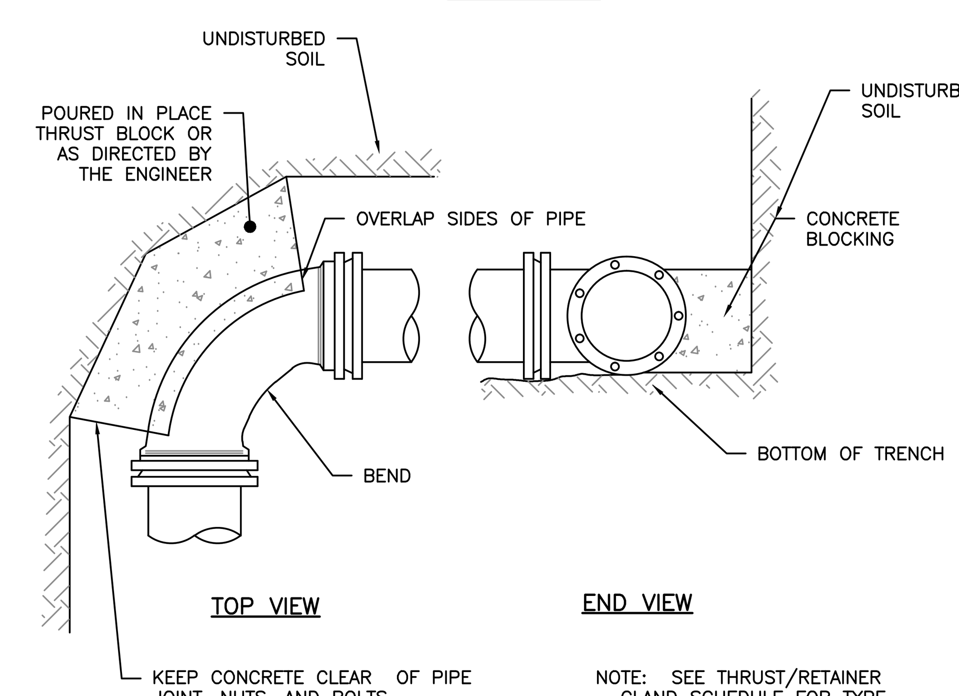
WATER PIPE THRU EARTH TRENCH

NOT TO SCALE



END SECTION

BEARING SURFACE REQUIRED FOR WATER PIPES (VALUES IN SF)					
PIPE SIZE	1/32 BEND	1/16 BEND	1/8 BEND	1/4 BEND	TEES/ CAPS
8"	2.0	3.0	6.0	10.0	16.0



TOP VIEW

END VIEW

KEEP CONCRETE CLEAR OF PIPE JOINT, NUTS, AND BOLTS

NOTE: SEE THRUST/RETAINER GLAND SCHEDULE FOR TYPE OF BLOCKING TO BE USED ON BENDS

REGULAR BEND

THRUST BLOCKING

NOT TO SCALE

PERMIT DRAWINGS
NOT FOR CONSTRUCTION

ISSUED FOR	BY DATE
WORKSHOP #2	WHS 11/12/13
FINAL SUBMISSION	WHS 12/2/13

REVISION	REV. DATE
REV. STANDARD DETAIL	WHS 12/4/13
STAFF COMMENTS	WHS 12/6/13

DRAWING NAME: PORTLAND WATER DISTRICT DETAILS - 2

PROJECT NAME: MUNJOY HEIGHTS

CLIENT: REDFERN MUNJOY, LLC.
P.O. BOX 8816, PORTLAND, MAINE 04104

ACORN ENGINEERING, INC.
ACORN ENGINEERING, INC.
P.O. BOX 3372 PORTLAND, MAINE 04104
(207) 775-2655

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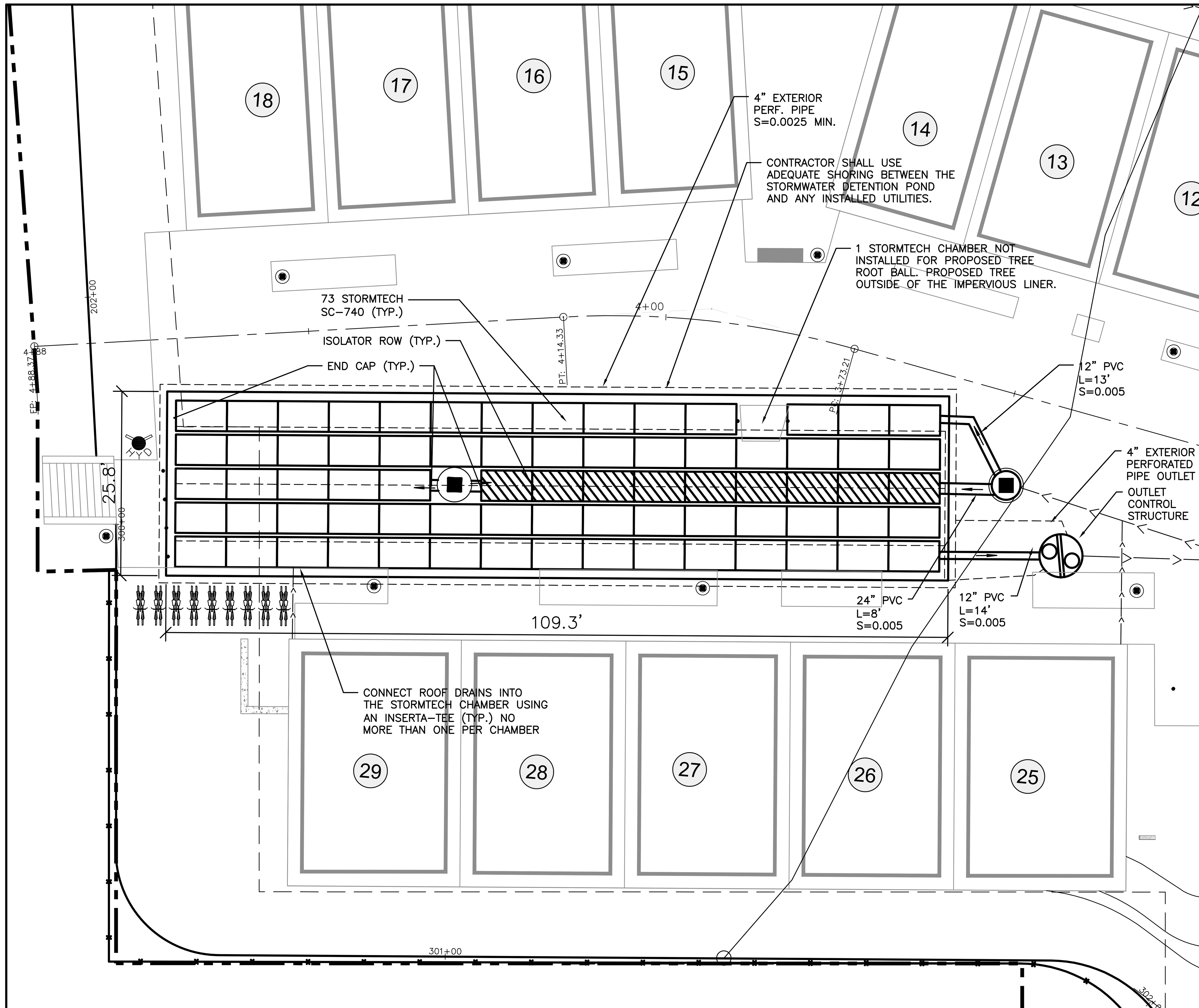
DESIGN BY: WHS
DRAWN BY: ZRJ
CHECKED BY: WHS

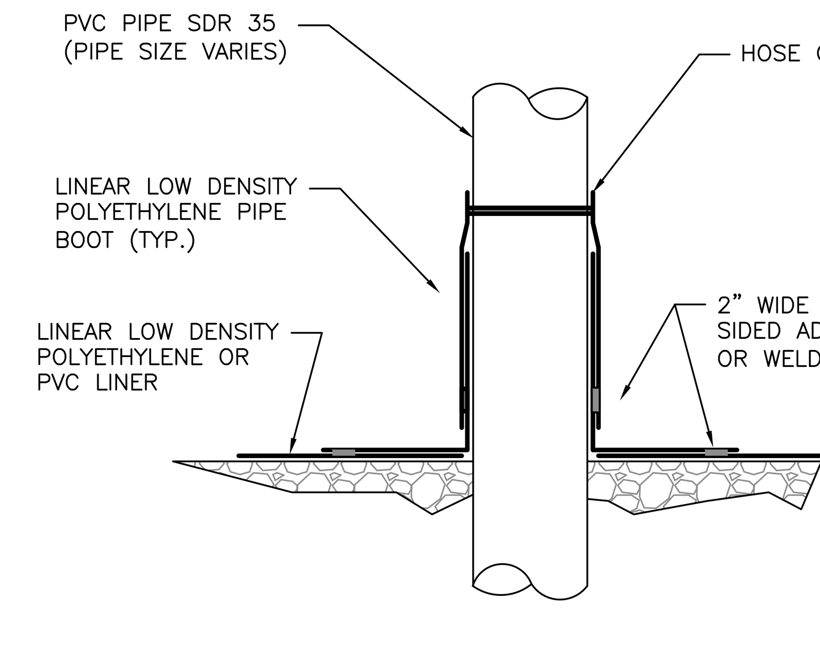
STATE OF MAINE
WILLIAM P. SAVAGE
No 11419
12-2-13
PROFESSIONAL ENGINEER

DRAWING NO.
C-45



PLAN VIEW LAYOUT

1"=10'



TYPICAL PIPE PENETRATION DETAIL

NOT TO SCALE

MANUFACTURERS NOTES:

1. ALL DESIGN SPECIFICATIONS FOR STORMTECH SC-740 CHAMBERS SHALL BE IN ACCORDANCE WITH THE STORMTECH DESIGN MANUAL
2. THE INSTALLATION OF STORMTECH SC-740 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 INSTALLTION. CALL 1-888-892-2694 OR VISIT WWW.STORMTECH.COM TO RECIEVE 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

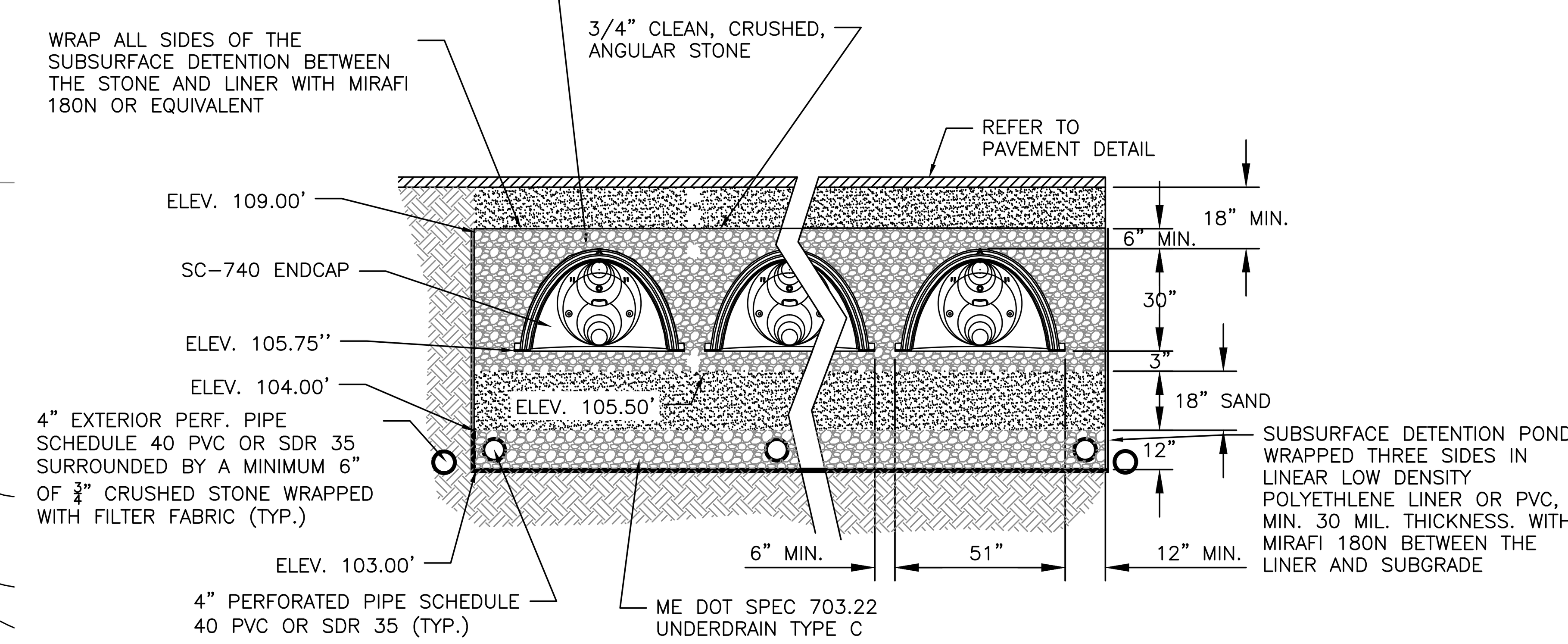
ENGINEERS NOTES:

1. THE LAYOUT AND DIMENSION OF THE SUBSURFACE DETENTION MAY BE MODIFIED WITH AN ENGINEER APPROVED EQUAL WHICH PROVIDES EQUAL DETENTION STORAGE AND WATER QUALITY TREATMENT.
2. THE SUBSURFACE DETENTION SHALL BE INSPECTED BY THE DESIGN ENGINEER AT THE FOLLOWING INTERVALS:
   - AFTER PRELIMINARY CONSTRUCTION OF THE SUBSURFACE DETENTION GRADES
   - DURING THE CONSTRUCTION OF THE SAND FILTER LAYER
   - DURING THE INSTALLATION OF THE STORMTECH ISOLATOR ROW.
   - BEFORE BACKFILLING THE STORMTECH UNITS.

PERMIT DRAWINGS
NOT FOR CONSTRUCTION

SC-740 CHAMBER
CHAMBERS SHALL MEET ASTM F 2418-09 "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".

NOTES:
1. REFER TO THE MAINE DEP TECHNICAL DESIGN MANUAL SECTION 7.3 FOR ADDITIONAL DESIGN DETAILS.
2. SAND LAYER COMPACT IN 6" LIFTS TO 92% MAXIMUM DRY DENSITY IN ACCORDANCE WITH ASTM D-1557

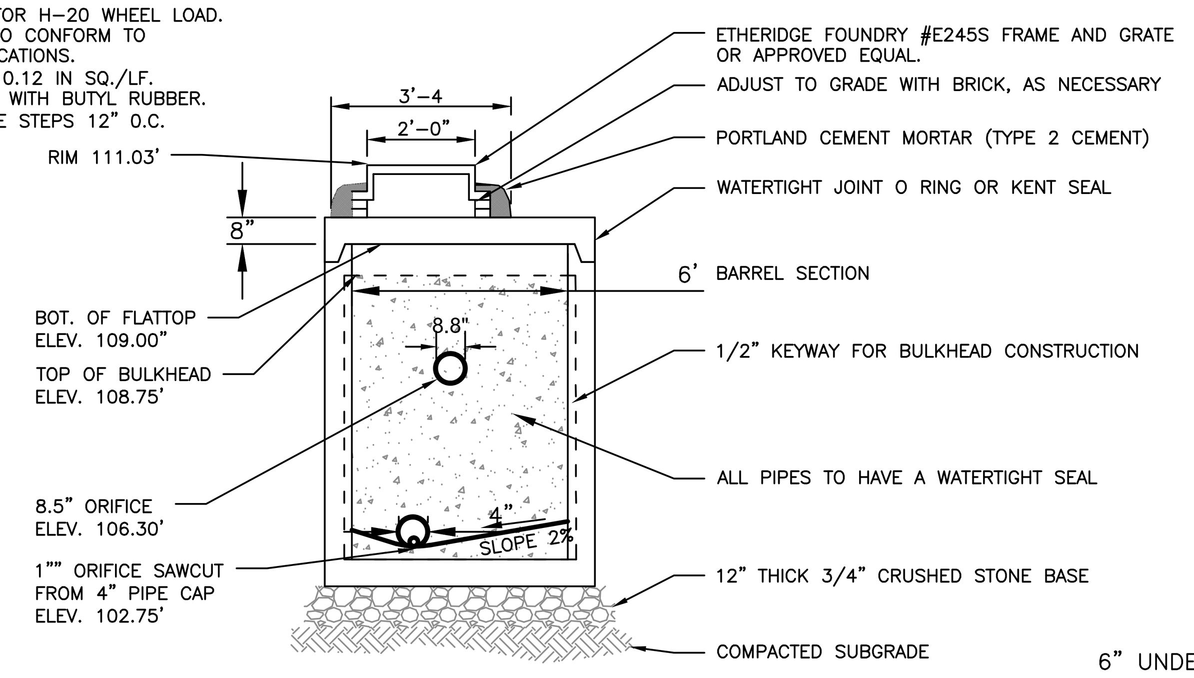


UNDERDRAINED SUB-SURFACE SAND FILTER TYPICAL CROSS SECTION

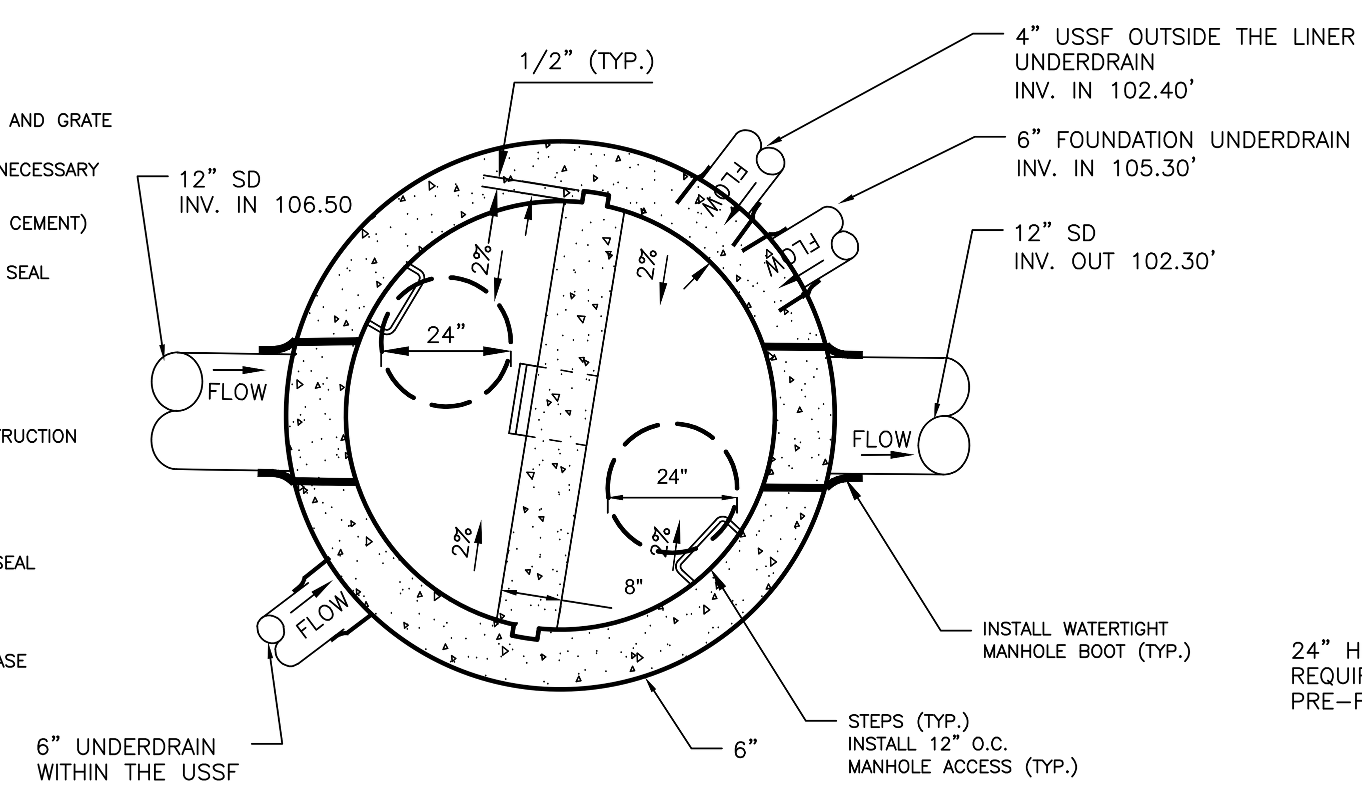
NOT TO SCALE

DESIGN NOTES:

1. ALL CONCRETE TO HAVE A MIN. OF 4,000 PSI COMPRESSIVE STRENGTH AT 28 DAYS.
2. DESIGN LOAD FOR H-20 WHEEL LOAD.
3. CATCH BASIN TO CONFORM TO ASTM-C478 SPECIFICATIONS.
4. REINFORCE TO 0.12 IN SQ./LF.
5. JOINTS SEALED WITH BUTYL RUBBER.
6. POLYPROPYLENE STEPS 12" O.C.



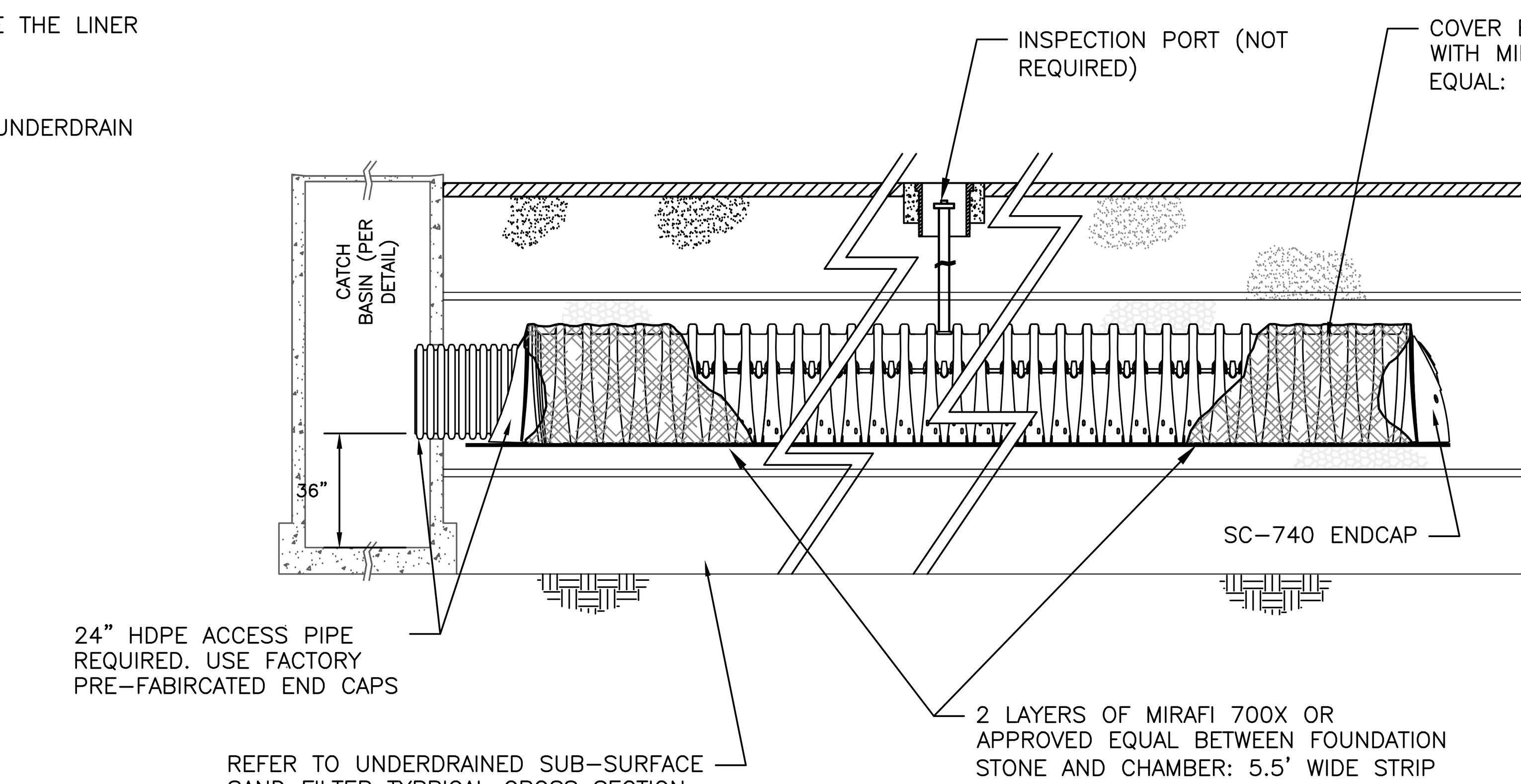
SIDE PROFILE



PLAN VIEW

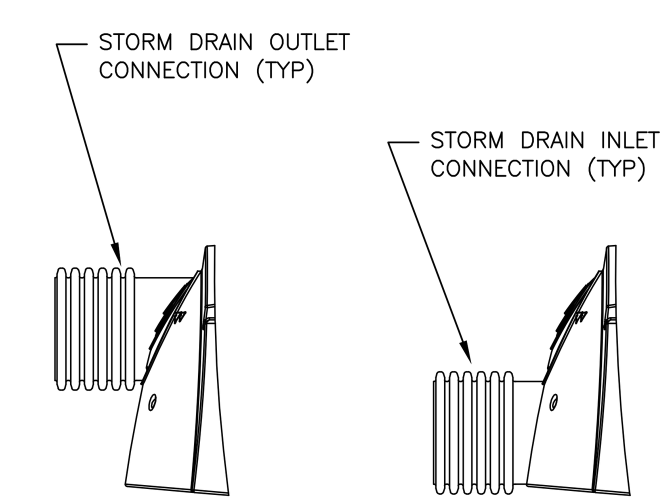
OUTLET CONTROL STRUCTURE

NOT TO SCALE



ISOLATOR ROW – PROFILE VIEW

NOT TO SCALE



STORMTECH-CONNECTION

NOT TO SCALE

ISSUED FOR	BY DATE
WORKSHOP #2	WHS 11/12/13
FINAL SUBMISSION	WHS 12/2/13

REVISION	REV. DATE
REV. STANDARD DETAIL	WHS 12/4/13
STAFF COMMENTS	WHS 12/6/13

DRAWING NAME: UNDERDRAIN SUB-SURFACE SAND FILTER

PROJECT NAME: MUNJOY HEIGHTS

CLIENT: REDFERN MUNJOY, LLC. P.O. BOX 8816, PORTLAND, MAINE 04104

ACORN ENGINEERING, INC.
ACORN ENGINEERING, INC. P.O. BOX 3372 PORTLAND, MAINE 04104 (207) 775-2655

FILE: 1047_details 11-27-2013.dwg
DATE: 7/11/13
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SCALE: NTS
DESIGN BY: WHS
DRAWN BY: ZRJ
CHECKED BY: WHS

STATE OF MAINE WILLIAM H. SAVAGE No. 11419 12-6-13 PROFESSIONAL ENGINEER

DRAWING NO.
C-46

POURED IN PLACE CONCRETE WALL

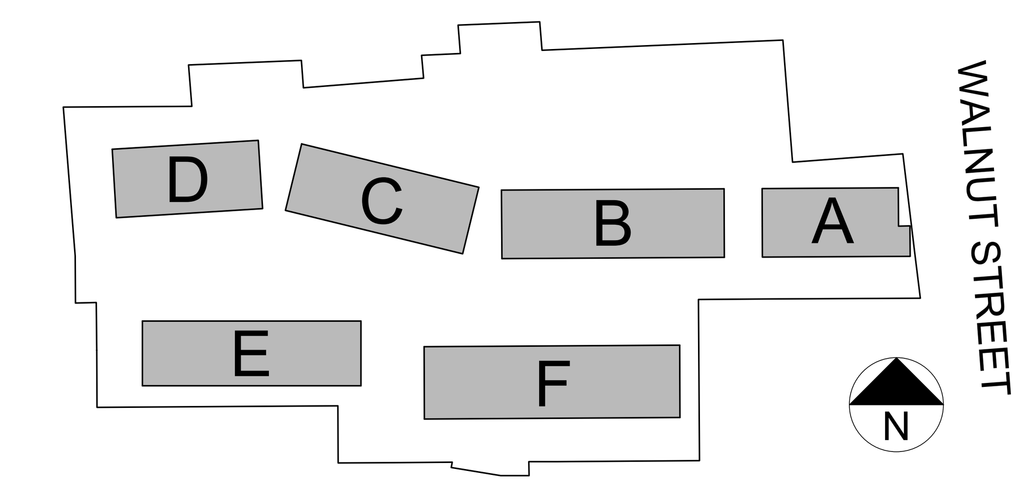
PRECAST CONCRETE BLOCKS

BOSTON IVY

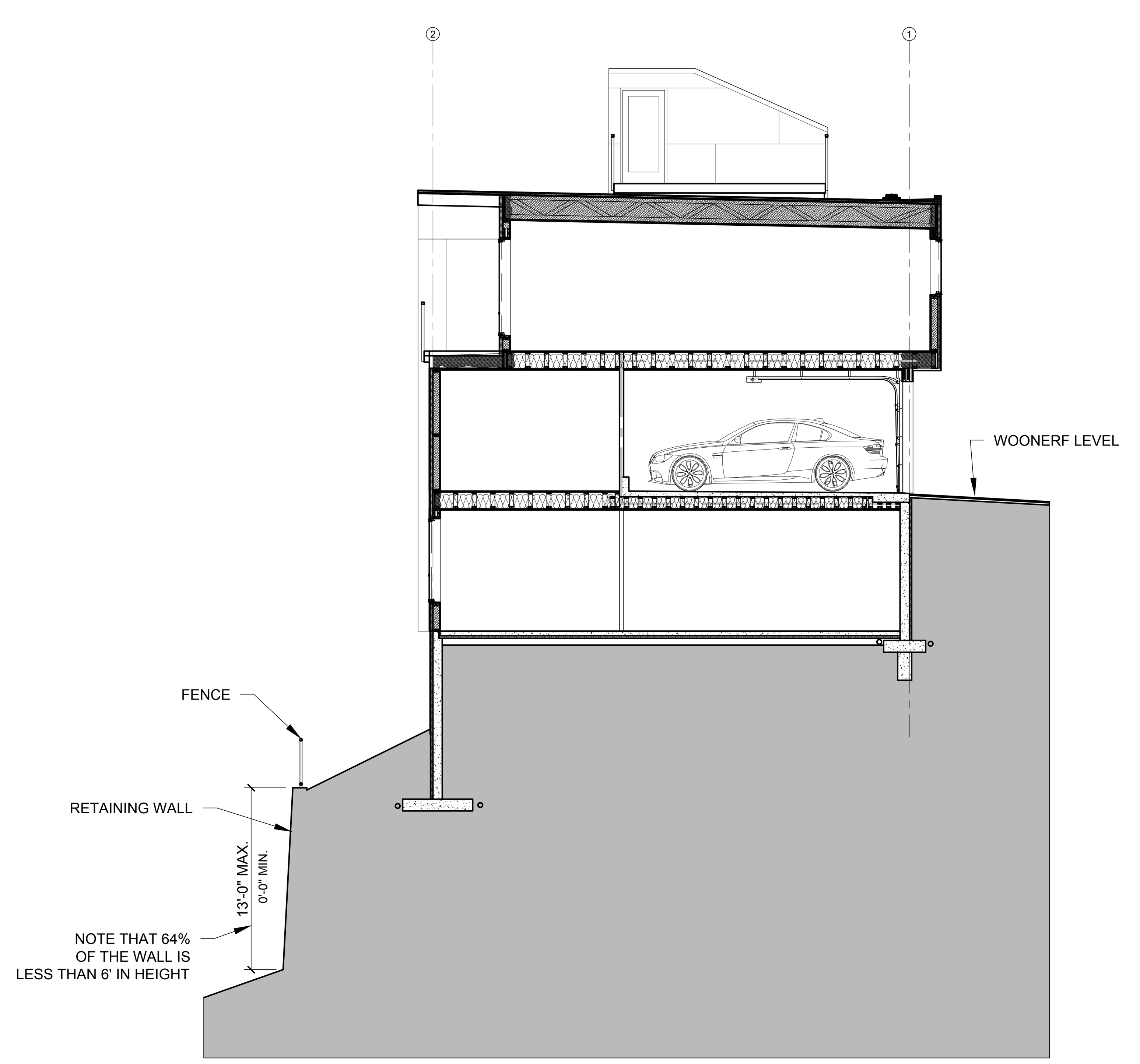
RETAINING WALL TYPES

MUNJOY HEIGHTS

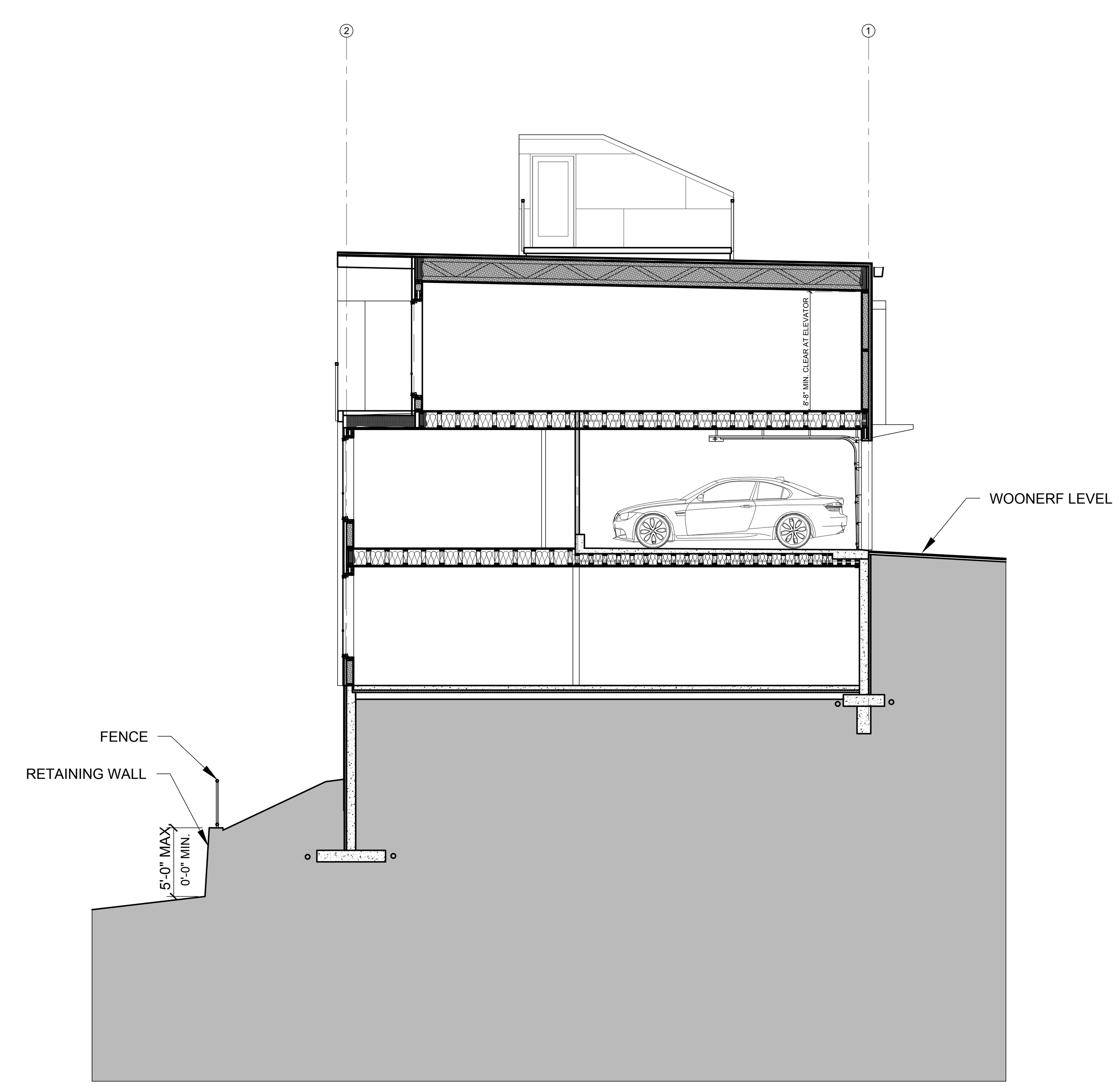
NOVEMBER 18, 2013



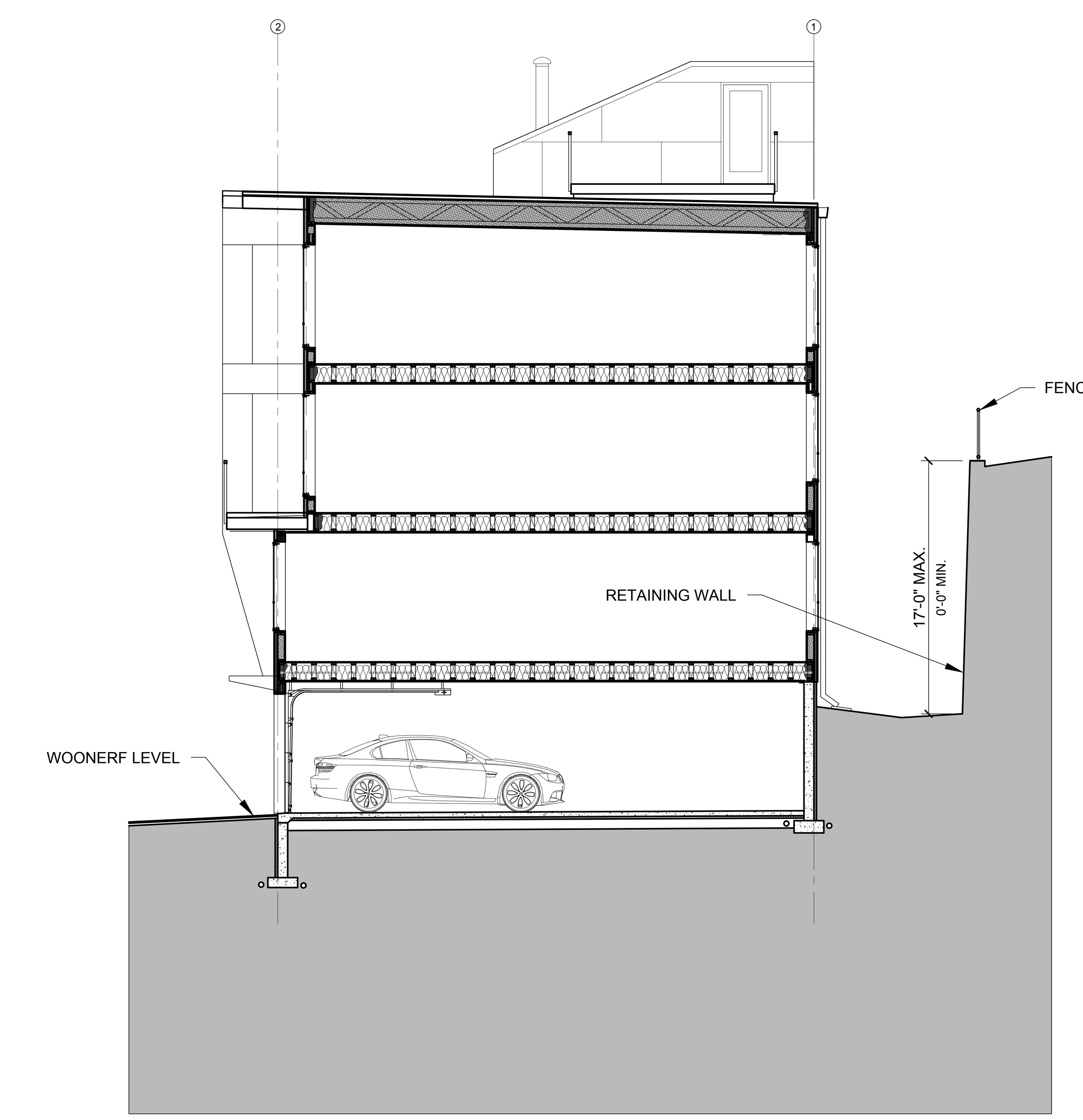
SITE KEY PLAN



SECTION AT BUILDING E



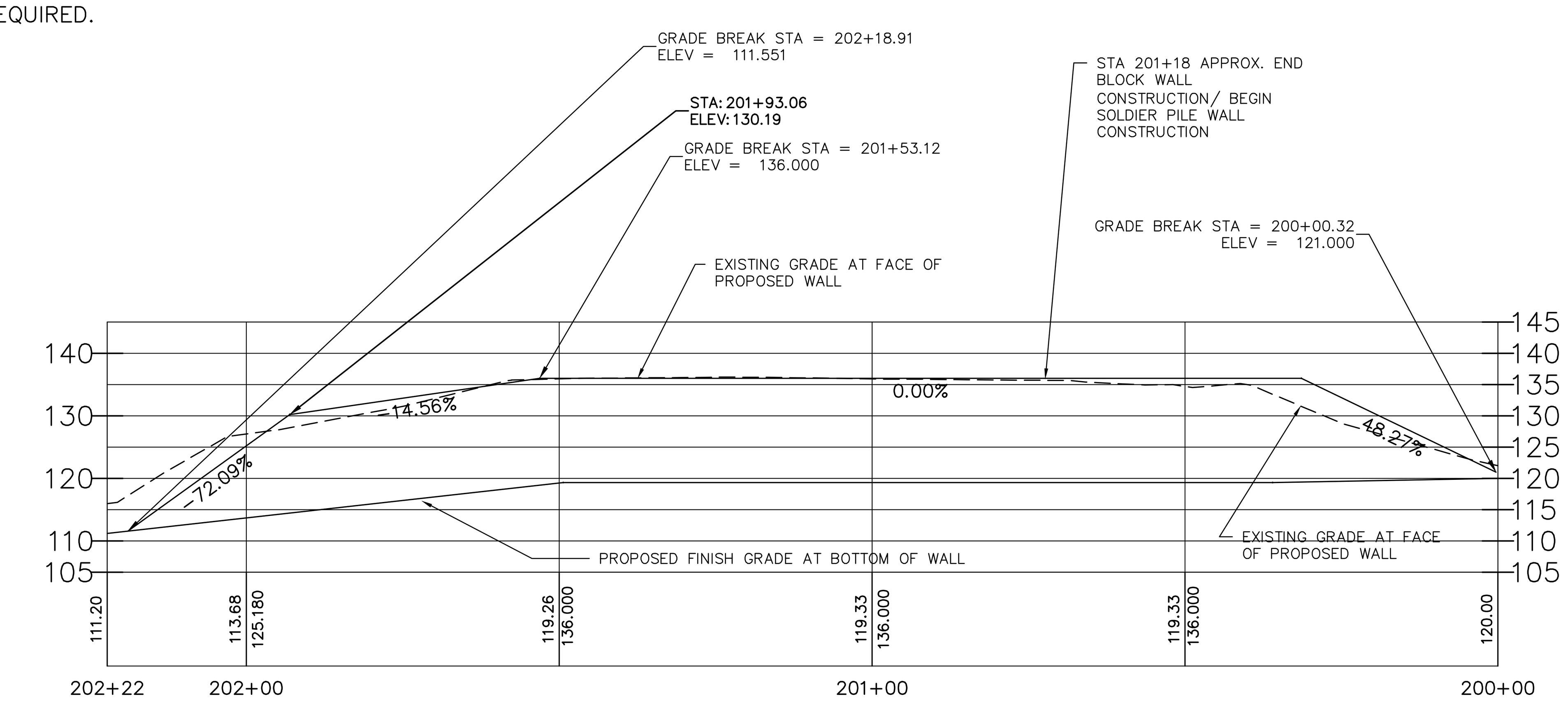
SECTION AT BUILDING F



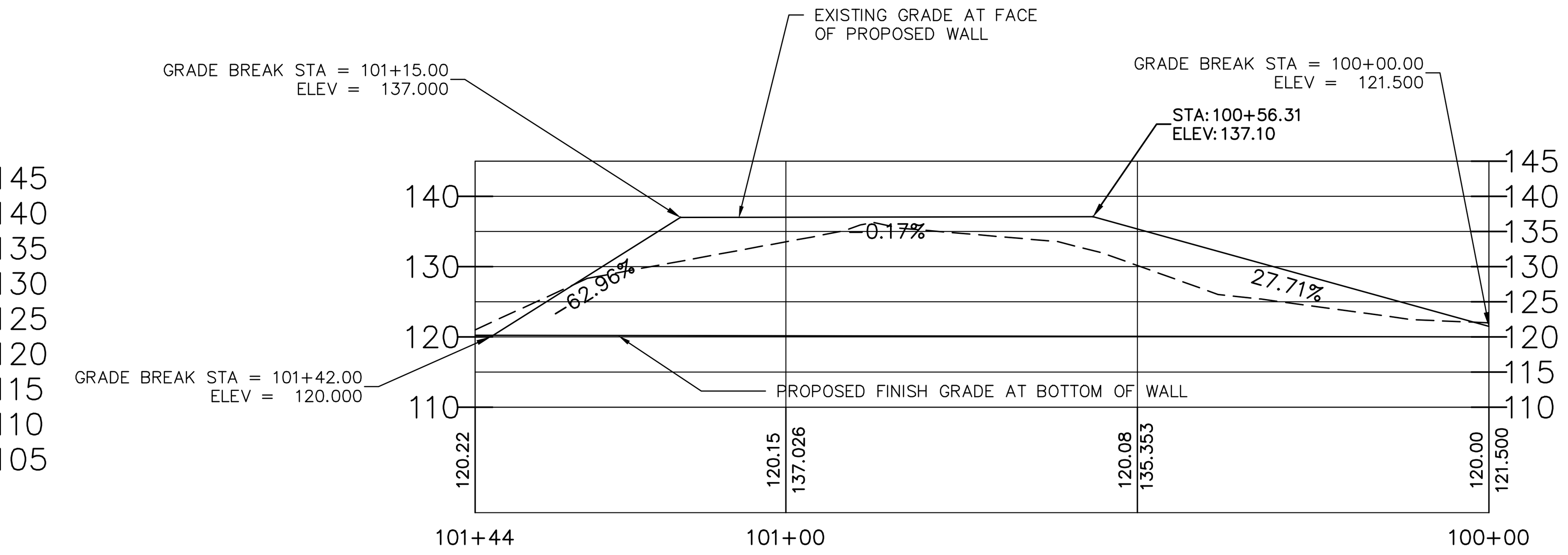
SECTION AT BUILDINGS B, C AND D

NOTES:
1. SUMMIT GEOENGINEERING SERVICES IN COORDINATION WITH STRUCTURAL INTEGRITY CONSULTING ENGINEERS, INC. SHALL PROVIDE THE RETAINING WALL DESIGN, GLOBAL STABILITY ANALYSIS, AND THE DESIGN OF THE TEMPORARY SOIL RESTRAINT MEASURES, AS REQUIRED.

Plan 19

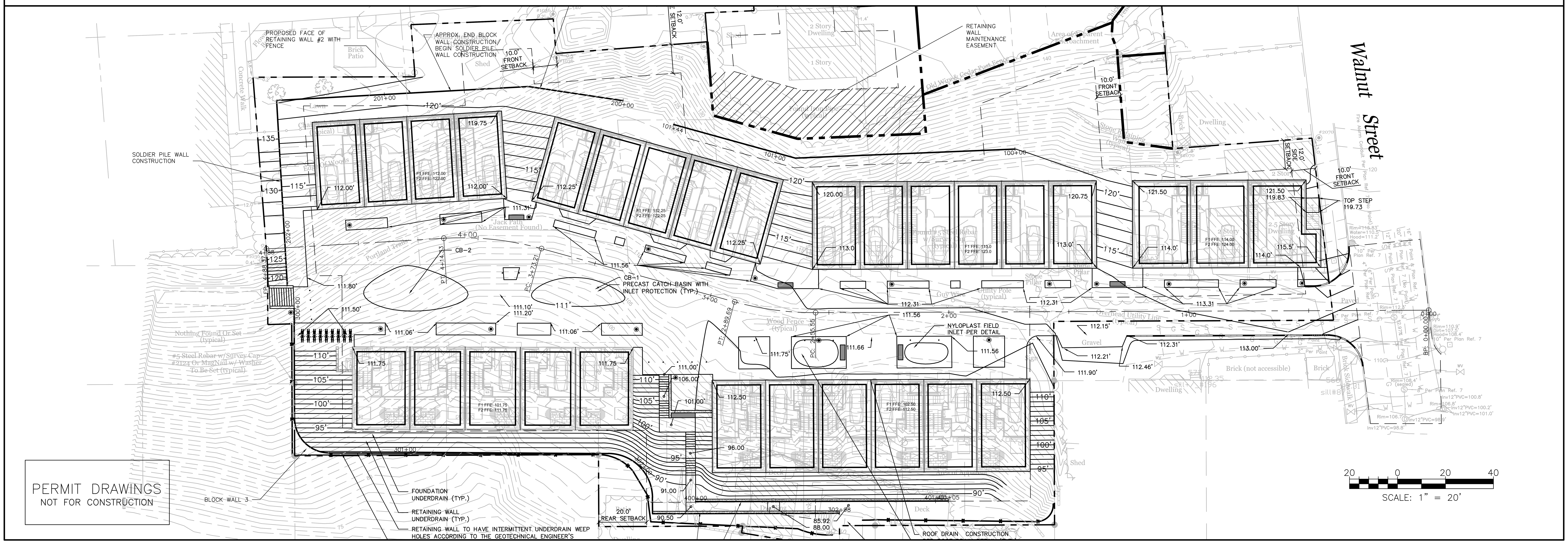


FACE OF WALL 2



FACE OF WALL 1

SCALE: 1" = 20'



PERMIT DRAWINGS
NOT FOR CONSTRUCTION

SCALE: 1" = 20'

ISSUED FOR	BY / DATE
CITY SUBMISSION	WHS 9/23/13
WORKSHOP #2	WHS 11/12/13
FINAL SUBMISSION	WHS 12/2/13

REVISION	REV. DATE
STAFF COMMENTS	WHS 12/6/13

DRAWING NAME: WALL 1 & 2 PROFILE PLAN

PROJECT NAME: MUNJOY HEIGHTS

CLIENT: REDFERN MUNJOY, LLC.
P.O. BOX 8816, PORTLAND, MAINE 04104

ACORN ENGINEERING, INC.
ACORN ENGINEERING, INC
P.O. BOX 3372 PORTLAND, MAINE 04104
(207) 775-2655

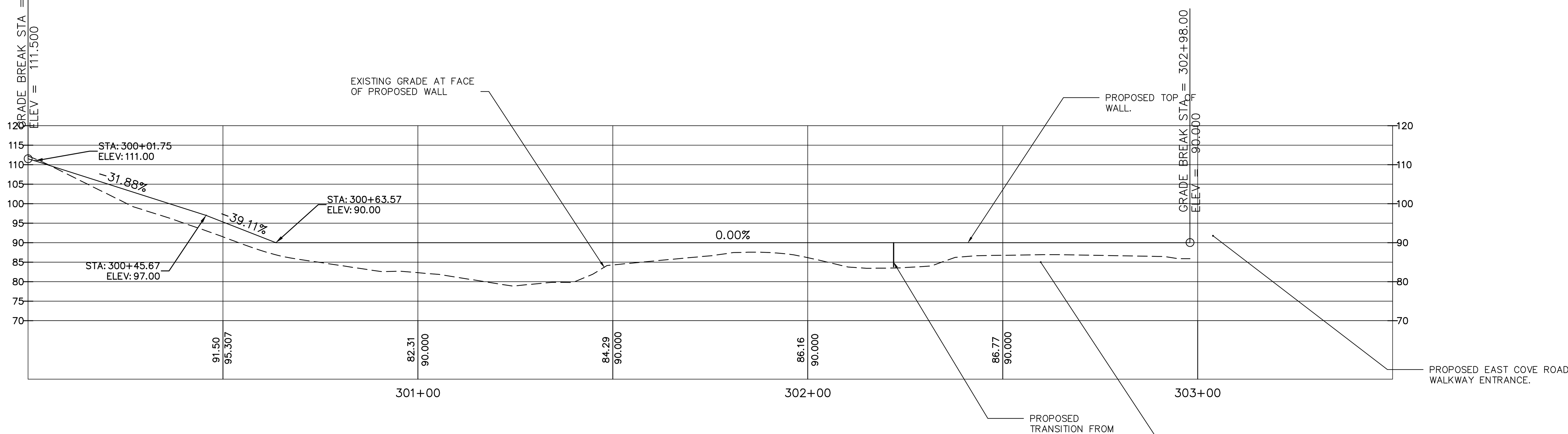
FILE: 1047_CIVIL
DATE: 9/23/13
JN: 1047
SCALE: 1"=20'
DESIGN BY: WHS
DRAWN BY: ZRJ
CHECKED BY: WHS

STATE OF MAINE
WILLIAM SAVAGE
No 11413
LICENSED
PROFESSIONAL ENGINEER

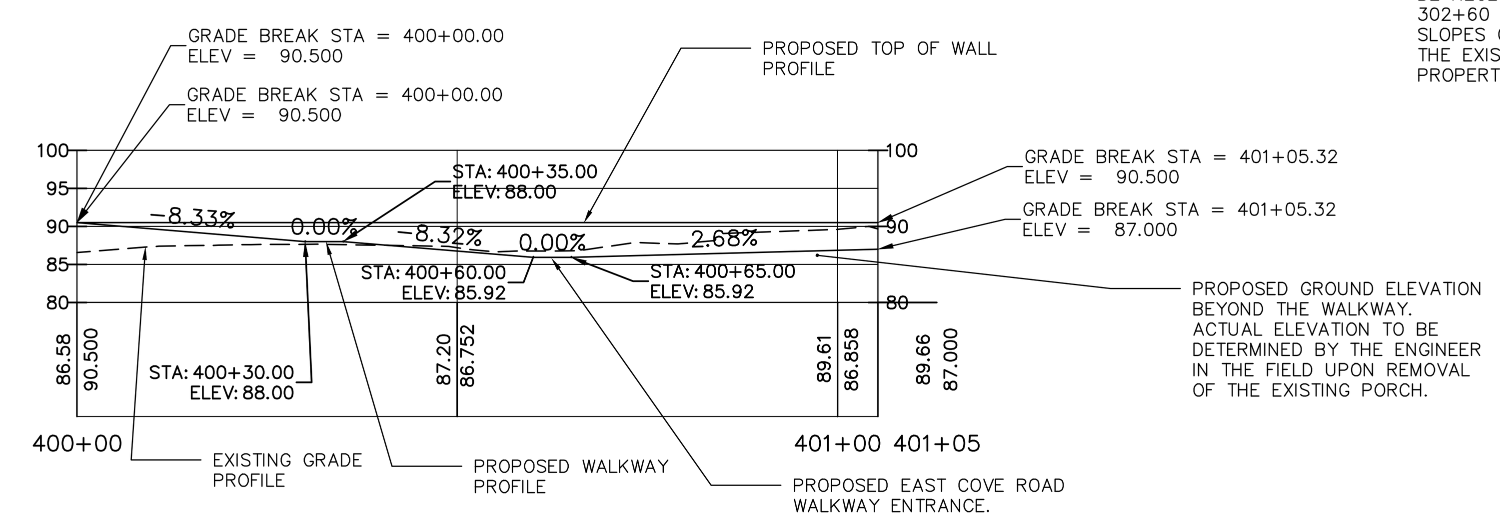
DRAWING NO.
C-32

NOTES:
1. SUMMIT GEOENGINEERING SERVICES IN COORDINATION WITH STRUCTURAL INTEGRITY CONSULTING ENGINEERS, INC. SHALL PROVIDE THE RETAINING WALL DESIGN, GLOBAL STABILITY ANALYSIS, AND THE DESIGN OF THE TEMPORARY SOIL RESTRAINT MEASURES, AS REQUIRED.

Plan 20

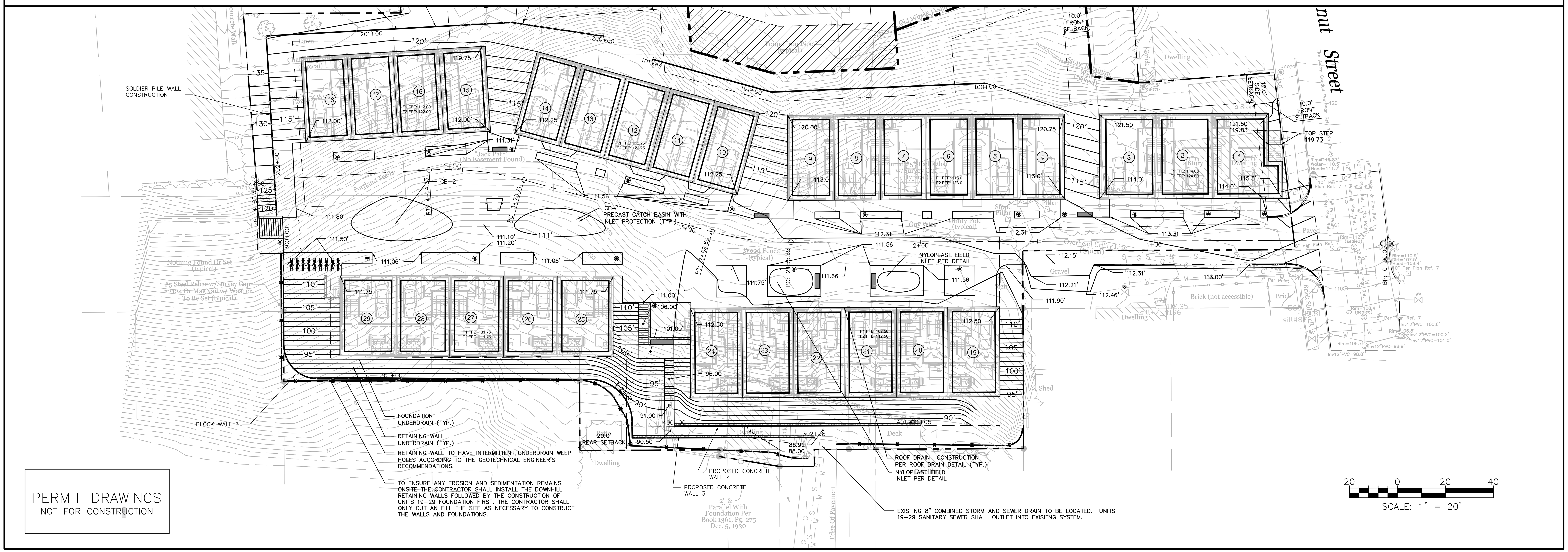


FACE OF WALL 3



WALL 4

SCALE: 1" = 20'



PERMIT DRAWINGS
NOT FOR CONSTRUCTION

SCALE: 1" = 20'

ISSUED FOR	BY DATE
CITY SUBMISSION	WHS 9/23/13
WORKSHOP #2	WHS 11/12/13
FINAL SUBMISSION	WHS 12/2/13

REVISION	REV. DATE
STAFF COMMENTS	WHS 12/6/13

DRAWING NAME: WALL 3 PROFILE PLAN

PROJECT NAME: MUNJOY HEIGHTS

CLIENT: REDFERN MUNJOY, LLC.
P.O. BOX 8816, PORTLAND, MAINE 04104

ACORN ENGINEERING, INC.
ACORN ENGINEERING, INC.
P.O. BOX 3372 PORTLAND, MAINE 04104
(207) 775-2655

FILE: 1047_CIVIL
DATE: 9/23/13
JN: 1047
SCALE: 1"=20'
DESIGN BY: WHS
DRAWN BY: ZRJ
CHECKED BY: WHS

STATE OF MAINE
WILLIAM SAVAGE
No. 11413
LICENSED
PROFESSIONAL ENGINEER

DRAWING NO.
C-33

NOTES:

1. SNOW MAY BE STORED WITHIN THE TEMPORARY SNOW STORAGE AREAS ONLY.

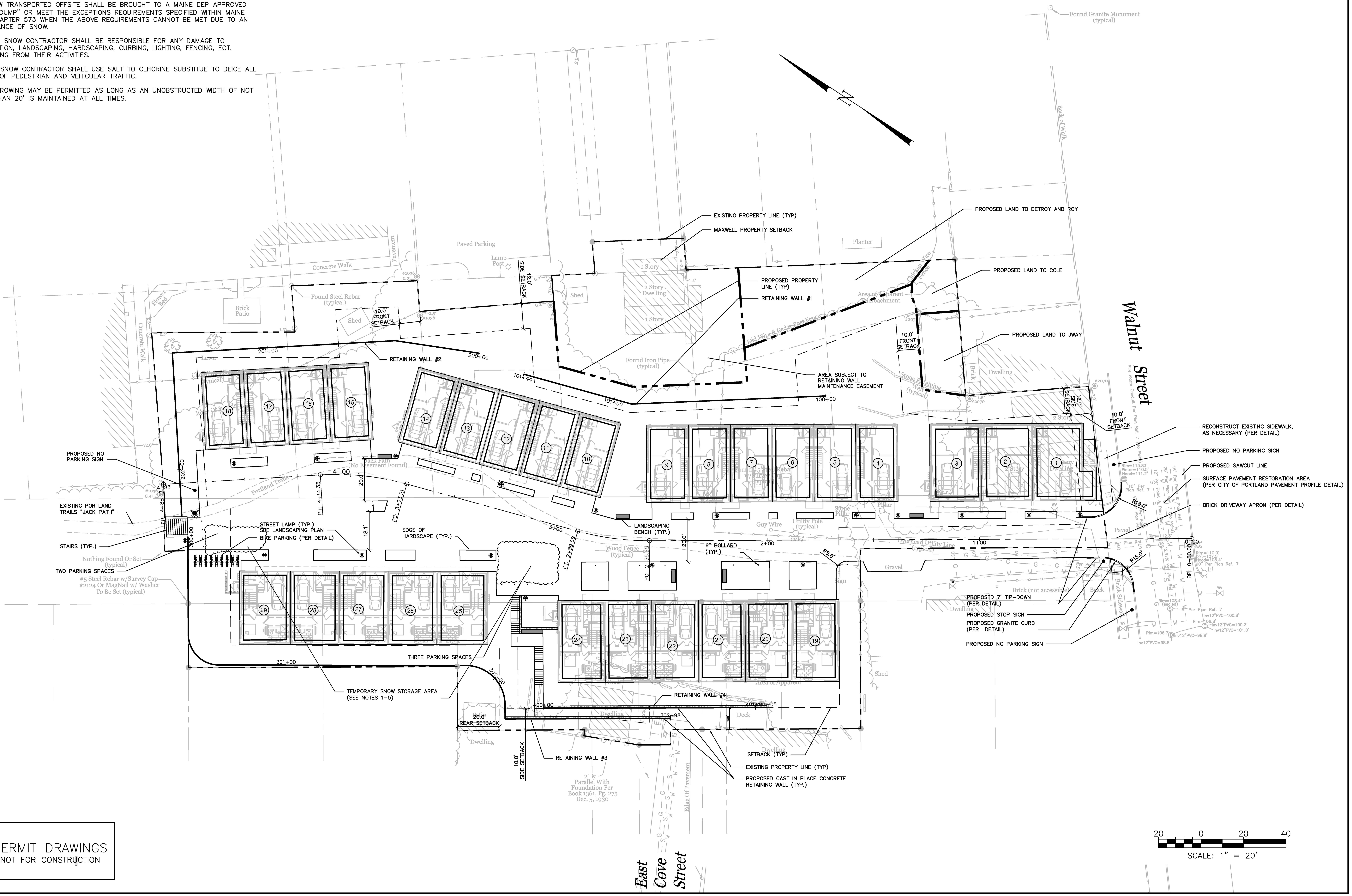
2. SNOW SHALL BE PHYSICALLY REMOVED AND TRANSPORTED OFFSITE WITHIN 24 TO 48 HOURS FOLLOWING A SNOW STORAGE.

3. SNOW TRANSPORTED OFFSITE SHALL BE BROUGHT TO A MAINE DEP APPROVED "SNOW DUMP" OR MEET THE EXCEPTIONS REQUIREMENTS SPECIFIED WITHIN MAINE DEP CHAPTER 573 WHEN THE ABOVE REQUIREMENTS CANNOT BE MET DUE TO AN ABUNDANCE OF SNOW.

4. THE SNOW CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO VEGETATION, LANDSCAPING, HARDSCAPING, CURBING, LIGHTING, FENCING, ECT. RESULTING FROM THEIR ACTIVITIES.

5. THE SNOW CONTRACTOR SHALL USE SALT TO CLHORINE SUBSTITUE TO DEICE ALL AREAS OF PEDESTRIAN AND VEHICULAR TRAFFIC.

6. WINDROWING MAY BE PERMITTED AS LONG AS AN UNOBSTRUCTED WIDTH OF NOT LESS THAN 20' IS MAINTAINED AT ALL TIMES.



ISSUED FOR	BY / DATE
WORKSHOP #2	WHS 11/12/13
FINAL SUBMISSION	WHS 12/2/13

REVISION	REV. DATE

DRAWING NAME: SITE LAYOUT PLAN

PROJECT NAME: MUNJOY HEIGHTS

CLIENT: REDFERN MUNJOY, LLC. P.O. BOX 8816, PORTLAND, MAINE 04104

A C O R N ENGINEERING, INC.

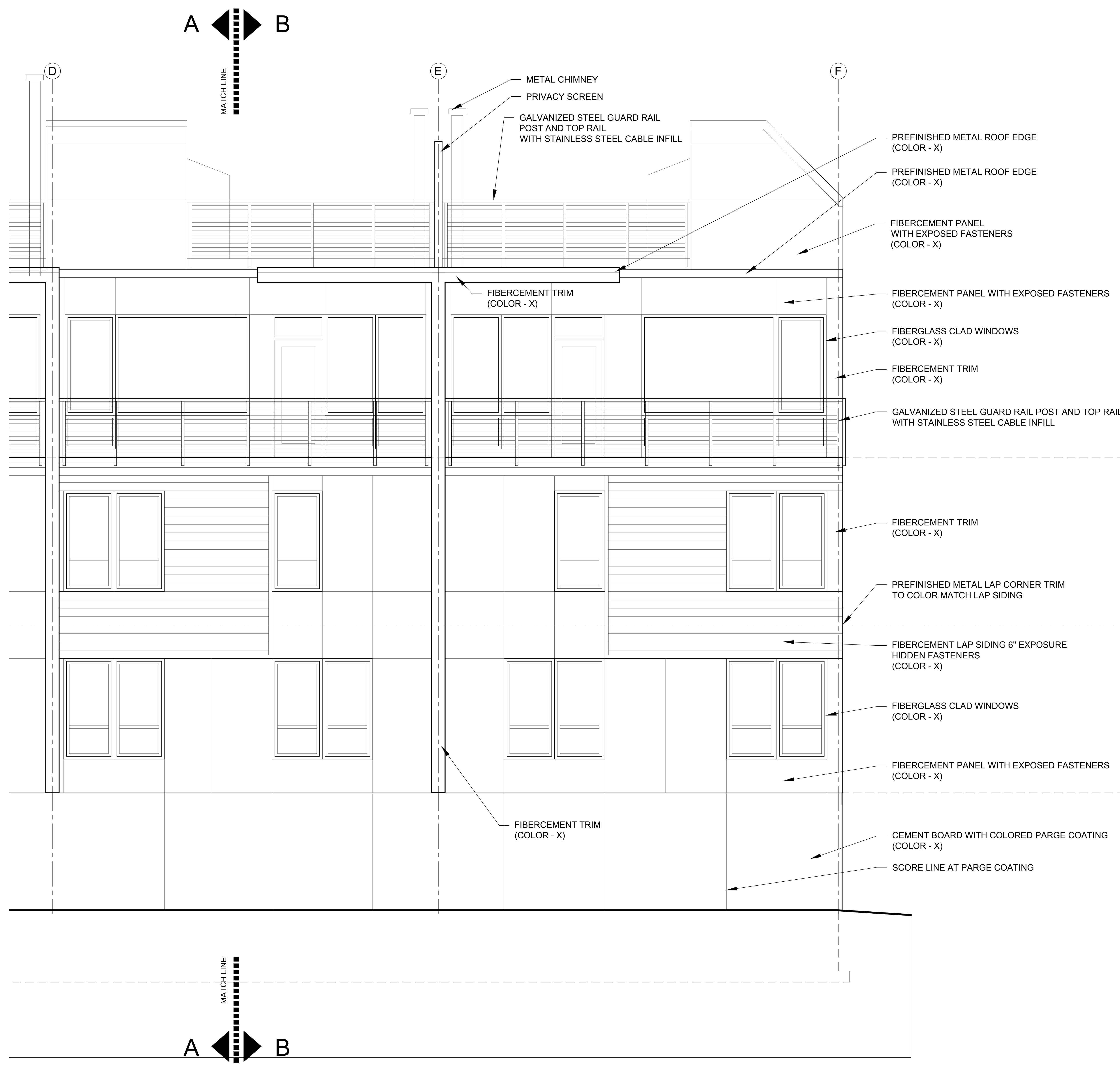
THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM ACORN ENGINEERING, INC. ANY ALTERATIONS, AUTHORIZED OR OTHERWISE, SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO ACORN ENGINEERING, INC.

ACORN ENGINEERING, INC. P.O. BOX 3372 PORTLAND, MAINE 04104 (207) 775-2655

FILE: 1047_CIVIL
DATE: 9/23/13
JN: 1047
SCALE: 1"=20'
DESIGN BY: WHS
DRAWN BY: ZRJ
CHECKED BY: WHS

STATE OF MAINE WILLIAM H. SAVAGE No. 11413 LICENSED PROFESSIONAL ENGINEER 12-2-13

DRAWING NO.
SN-1



1 SOUTH ELEVATION - PART B
1/4"=1'-0"

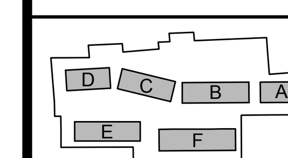
PROGRESS PRINT ONLY
Not for Construction
SEPTEMBER 5, 2013

MUNJOY HEIGHTS
79 WALNUT STREET
PORTLAND, MAINE

RSA
RYAN SENATORE
ARCHITECTURE
565 CONGRESS ST. SUITE 304
PORTLAND, MAINE 04101
207-650-6414
senatorearchitecture.com

CONSULTANTS:

STRUCTURAL:
Structural Integrity
77 Oak Street
Portland, ME 04101
207-774-4614



SITE KEY PLAN

REVISIONS:

DATE:	
PROJECT No.	1303
DRAWN BY:	
CHECKED BY:	RJS
SCALE:	AS NOTED

SHEET TITLE:
SOUTH ELEVATION - PART B

A2-2EB

1 SOUTH ELEVATION - PART A
1/4"=1'-0"

MUNJOY HEIGHTS
79 WALNUT STREET
PORTLAND, MAINE

RSA
RYAN SENATORE
ARCHITECTURE
565 CONGRESS ST. SUITE 304
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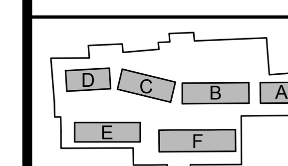


SITE KEY PLAN

REVISIONS:

DATE:

PROJECT No. 1303

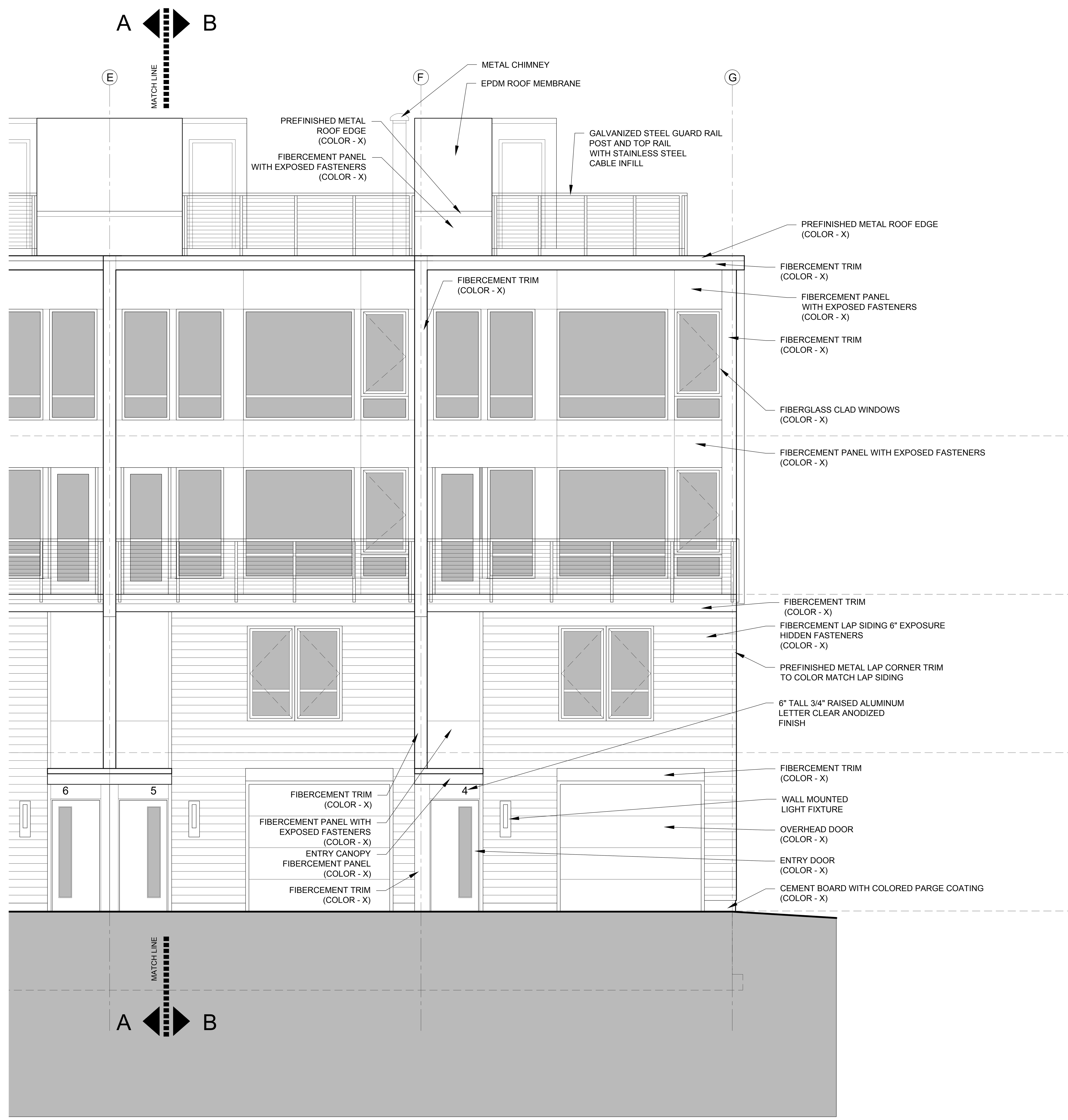
DRAWN BY:

CHECKED BY: RJS

SCALE: AS NOTED

SHEET TITLE:
SOUTH ELEVATION - PART A

A2-2E



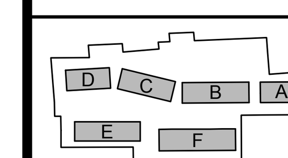
1 SOUTH ELEVATION - PART B
1/4"=1'-0"

MUNJOY HEIGHTS
79 WALNUT STREET
PORTLAND, MAINE

RSA
RYAN SENATORE
ARCHITECTURE
565 CONGRESS ST. SUITE 304
PORTLAND, MAINE 04101
207-650-6414
senatorearchitecture.com

CONSULTANTS:

STRUCTURAL:
Structural Integrity
77 Oak Street
Portland, ME 04101
207-774-4614



SITE KEY PLAN

REVISIONS:

DATE:	
PROJECT No.	1303
DRAWN BY:	
CHECKED BY:	RJS
SCALE:	AS NOTED

SHEET TITLE:
SOUTH ELEVATION - PART B

A2-2B
B

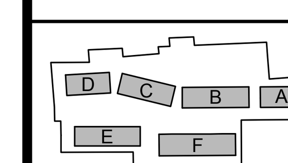
1 SOUTH ELEVATION - PART A
1/4"=1'-0"

MUNJOY HEIGHTS
79 WALNUT STREET
PORTLAND, MAINE

RSA
RYAN SENATORE
ARCHITECTURE
565 CONGRESS ST. SUITE 304
PORTLAND, MAINE 04101
207-650-6414
senatorearchitecture.com

CONSULTANTS:

STRUCTURAL:
Structural Integrity
77 Oak Street
Portland, ME 04101
207-774-4614



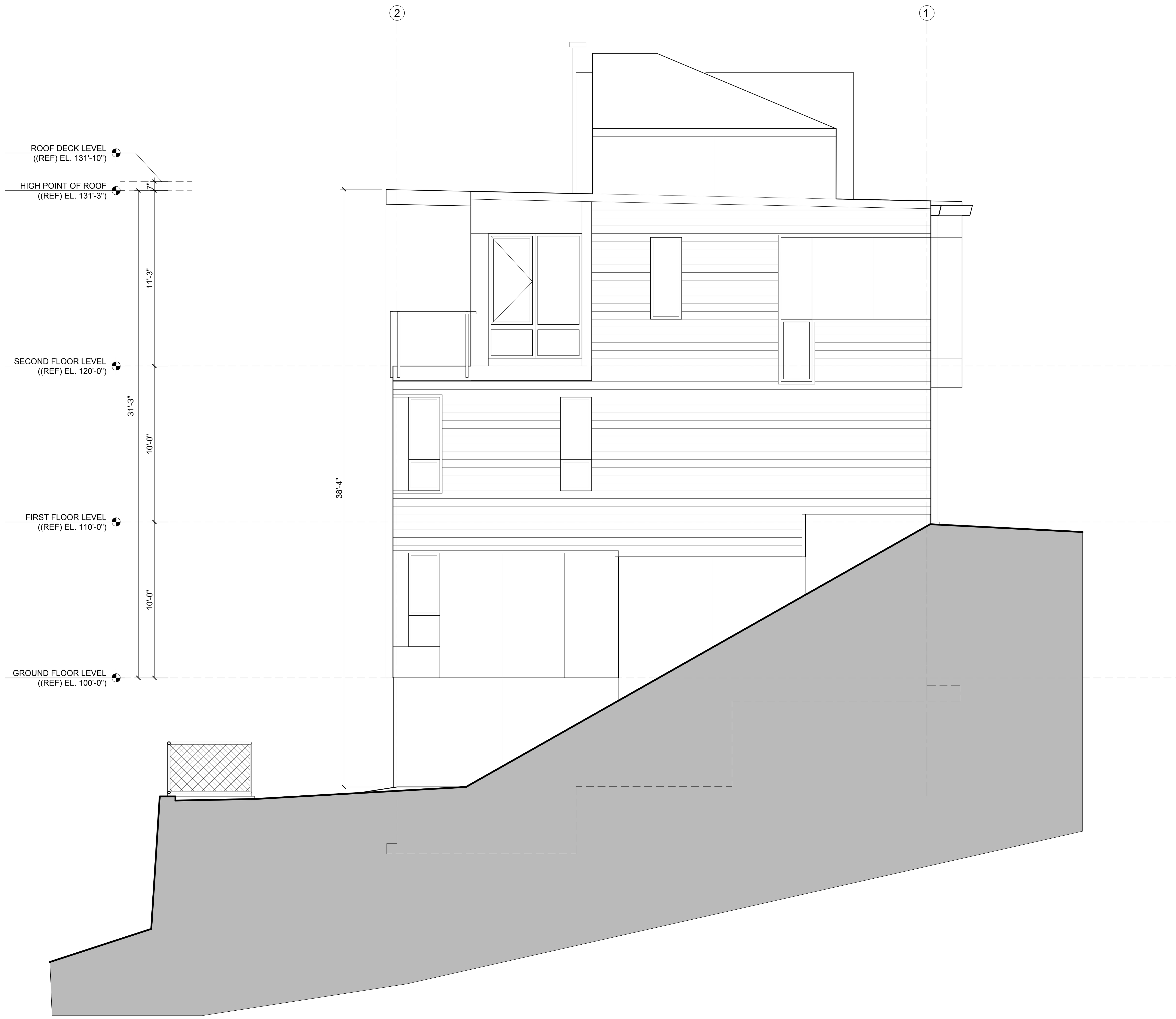
SITE KEY PLAN

REVISIONS:

DATE:
PROJECT No. 1303
DRAWN BY:
CHECKED BY: RJS
SCALE: AS NOTED

SHEET TITLE:
SOUTH ELEVATION - PART A

A2-2B



1 EAST ELEVATION
1/4"=1'-0"

PROGRESS PRINT ONLY
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SEPTEMBER 5, 2013

MUNJOY HEIGHTS
79 WALNUT STREET
PORTLAND, MAINE

RYAN SENATORE
ARCHITECTURE
565 CONGRESS ST. SUITE 304
PORTLAND, MAINE 04101
207-650-6414
senatorearchitecture.com

CONSULTANTS:

STRUCTURAL:
Structural Integrity
77 Oak Street
Portland, ME 04101
207-774-4614

SITE KEY PLAN
D C B A E F

REVISIONS:

DATE:	
PROJECT No.	1303
DRAWN BY:	
CHECKED BY:	RJS
SCALE:	AS NOTED

SHEET TITLE:
EAST ELEVATION

A2-0E

1 EAST ELEVATION
1/4"=1'-0"

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SEPTEMBER 5, 2013

MUNJOY HEIGHTS
79 WALNUT STREET
PORTLAND, MAINE

RSA
RYAN SENATORE
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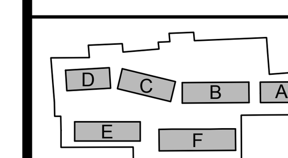

SITE KEY PLAN

REVISIONS:

DATE:	
PROJECT No.	1303
DRAWN BY:	
CHECKED BY:	RJS
SCALE:	AS NOTED

SHEET TITLE:
EAST ELEVATION

A2-0B

MUNJOY HEIGHTS

JUNE 7, 2013

XXXXXXX

Plan 28

UNIT A

CORNER

ROOF PLAN

FOURTH FLOOR PLAN

THIRD FLOOR PLAN

SECOND FLOOR PLAN

FIRST FLOOR PLAN

SQUARE FOOTAGE UNIT A - CORNER	
LIVING	2,315 SF
GARAGE	451 SF
DECKS	268 SF

FLOOR PLANS

SCALE 1/8" = 1'-0"

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N

redfern properties

RYAN SENATORE **ARCHITECTURE**

MUNJOY HEIGHTS

JUNE 7, 2013

XXXXXXX

Plan 29

UNIT B

CORNER

SQUARE FOOTAGE UNIT B - CORNER	
LIVING	2,134 SF
GARAGE	277 SF
DECKS	295 SF

FLOOR PLANS

SCALE 1/8" = 1'-0"

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RYAN SENATORE **ARCHITECTURE**

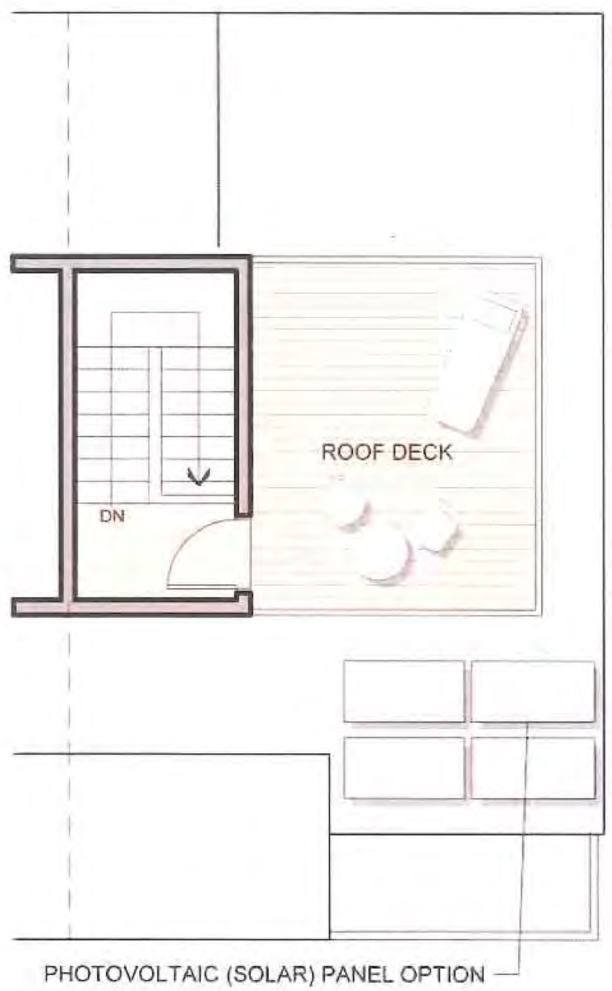
MUNJOY HEIGHTS

JUNE 7, 2013

UNIT C

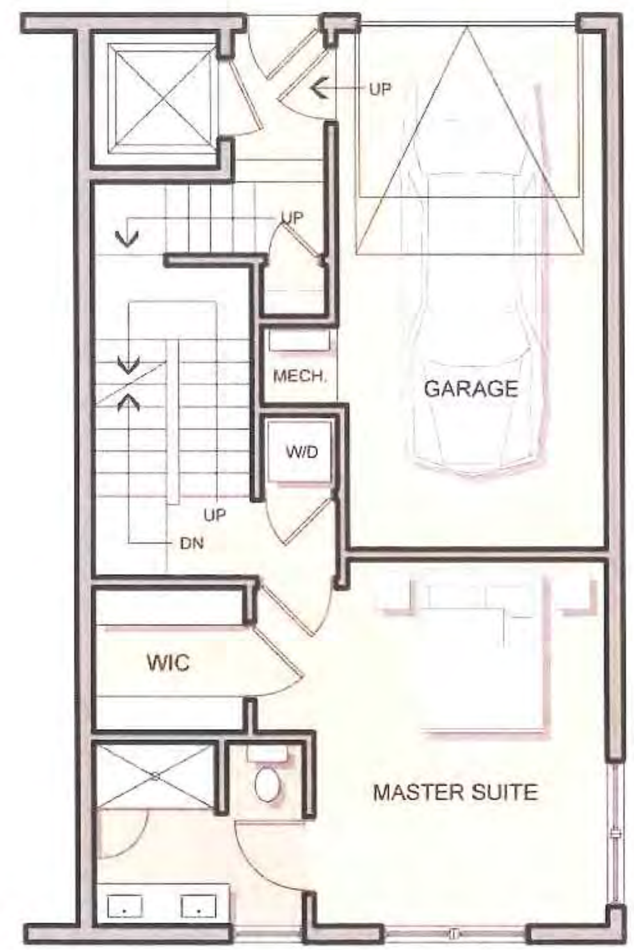
XXXXXXX

Plan 30

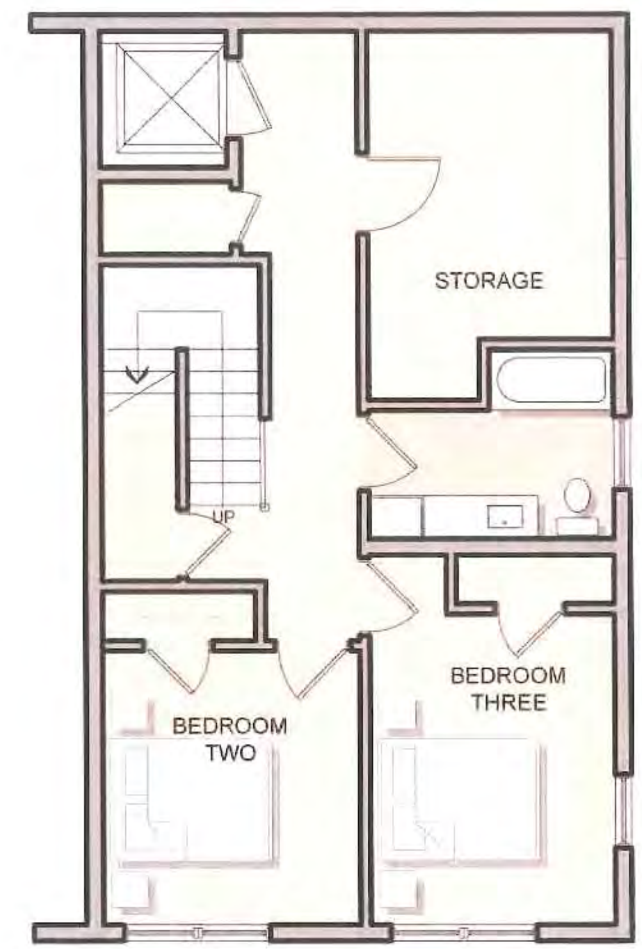


ROOF PLAN

SECOND FLOOR PLAN



FIRST FLOOR PLAN



GROUND FLOOR PLAN

SQUARE FOOTAGE	
UNIT C	
LIVING	2,255 SF
GARAGE	272 SF
DECKS	286 SF

FLOOR PLANS

SCALE 1/8" = 1'-0"

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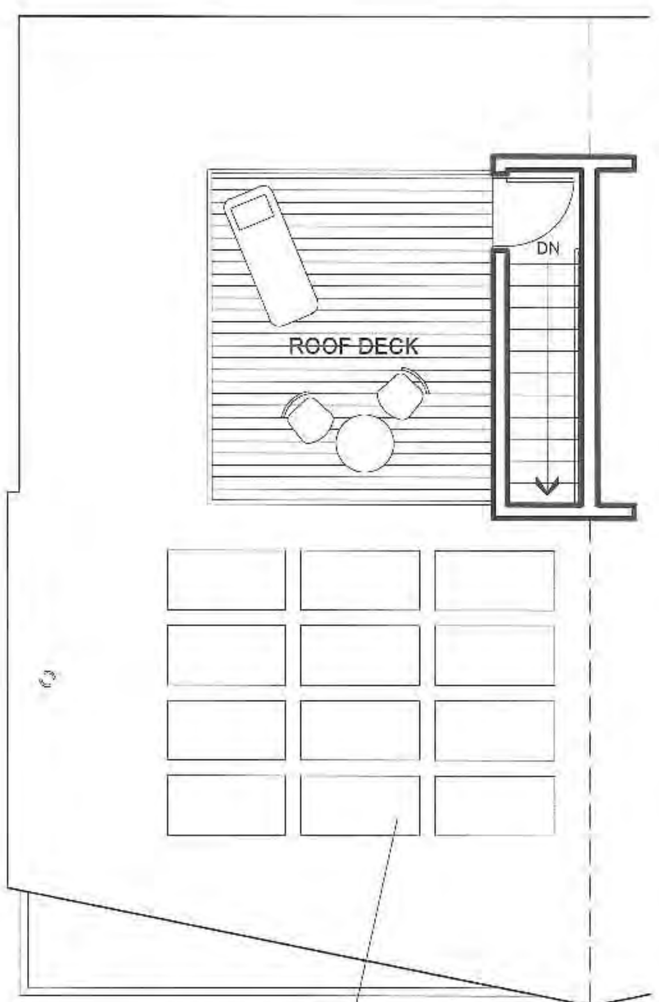
RYAN SENATORE **ARCHITECTURE**

MUNJOY HEIGHTS

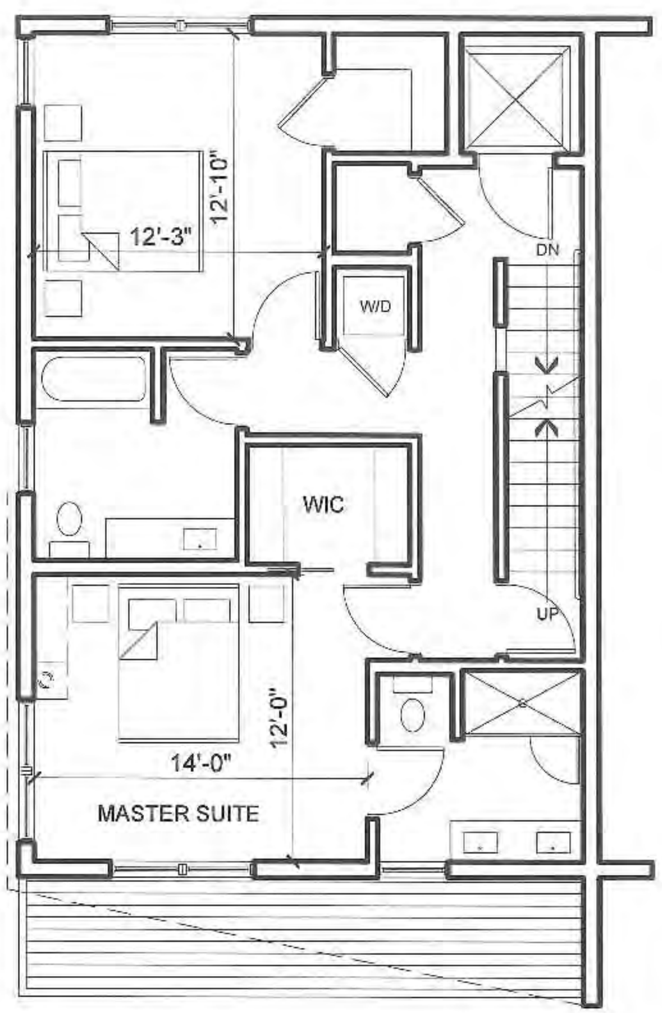
JULY 25, 2013

XXXXXXX

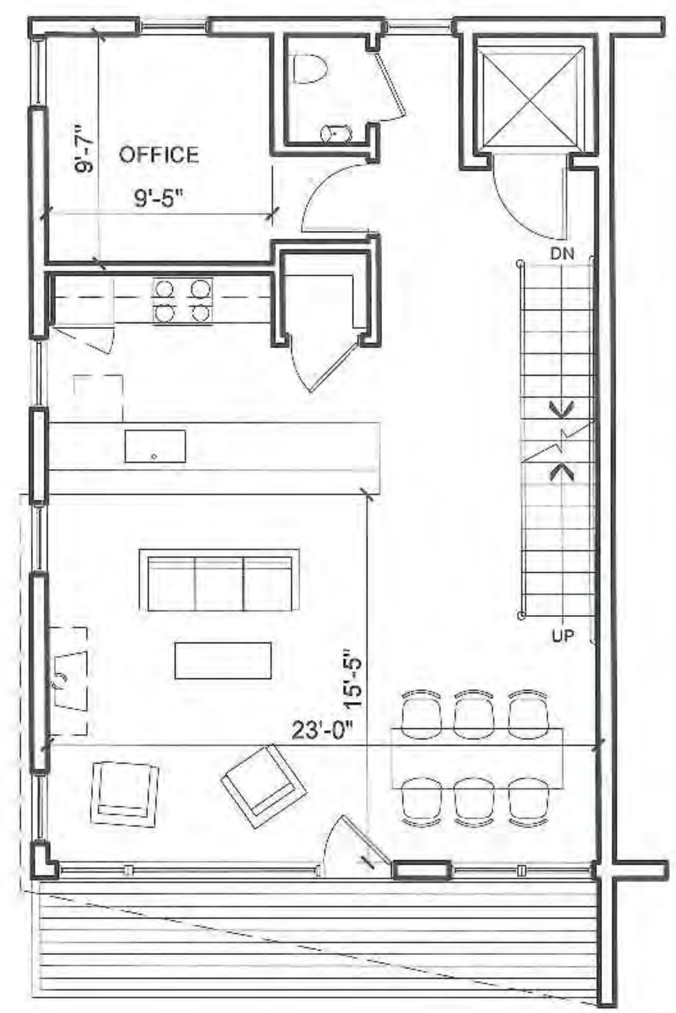
Plan 31



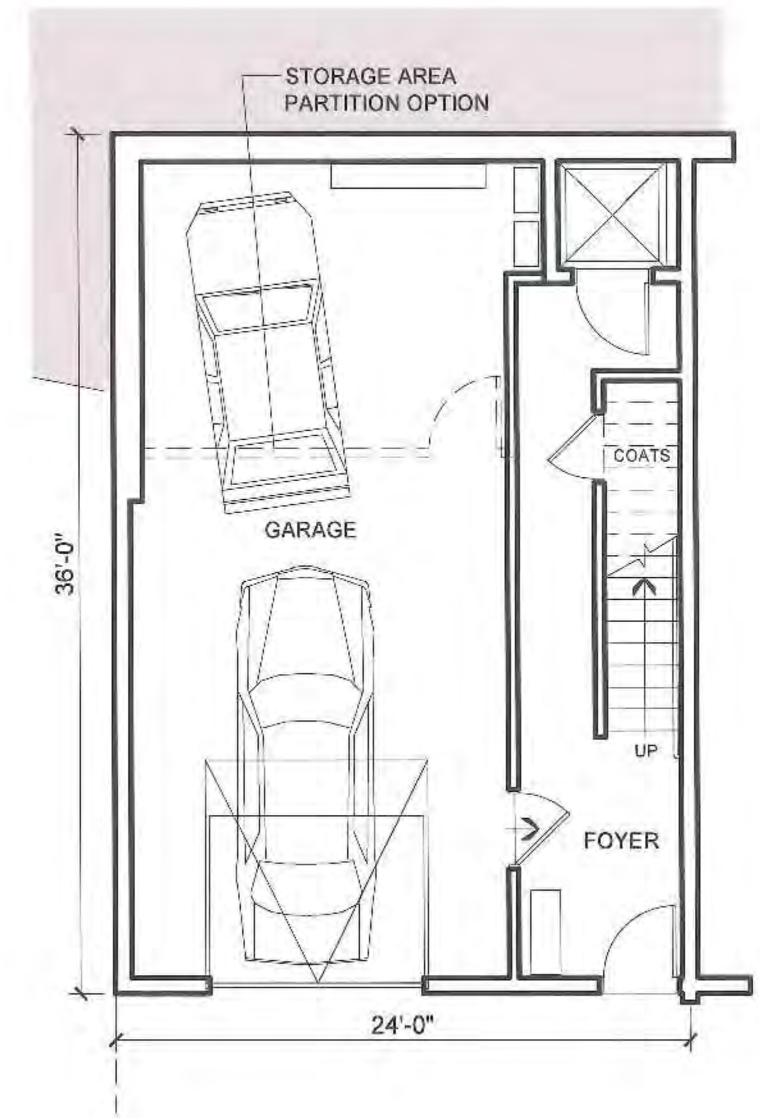
ROOF PLAN



THIRD FLOOR PLAN



SECOND FLOOR PLAN



FIRST FLOOR PLAN

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Not for Construction

SQUARE FOOTAGE	
UNIT D - WEST	
LIVING	1,981 SF
GARAGE	611 SF
DECKS	286 SF

UNIT D (WEST) FLOOR PLANS
SCALE 1/8" = 1'-0"

redfern properties

RYAN SENATORE **ARCHITECTURE**

08.12.2013 - Construciton Management Plan:
General Note 1: Extended Sidewalk Closures on Walnut Street are not anticipated at this time.
Short term sidewalk and lane closures in Walnut are to be expected during utility tie-in periods.
Appropriate flagging and signage measures will be utilized during these activities.
General Note 2: All subcontractors will be responsible for their own parking. The owner
and contractor are not providing off site parking for the subcontractors. They will be encouraged
to carpool and take vans from their main offices to the site. Otherwise subcontractors will park
in legal, City of Portland parking spots.
Other Dates for Consideration:
Anticipated Project Start Date - Winter 2013/2014
Anticipated Project Completion Date - Winter 2014/2015
Anticipated Street Interruption - Spring/Summer 2014
Jobsite Hours - In compliance with City of Portland Noise Ordinance
Wright-Ryan Construction Project Personnel Contacts to be provided at Site Preconstruction Meeting

Plan 32

SPACE AND BULK STANDARDS

ZONE: R6 RESIDENTIAL	REQUIRED	PROVIDED
MINIMUM LOT SIZE	4,500 S.F.	67,288 S.F.
MINIMUM FRONTAGE	40'	76.4'
MINIMUM YARD DIMENSIONS		
FRONT YARD	10'*	10'*
REAR YARD	20'	20'
SIDE YARD	10' – 3 STORY BUILDING 12' – 4 STORY BUILDING	10' – 3 STORY BUILDING 12' – 4 STORY BUILDING
MAXIMUM LOT COVERAGE	40%	33%
MINIMUM LOT WIDTH	40'	71.8'
MAXIMUM BUILDING HEIGHT	45'	≤45'**
OPEN SPACE RATIO	30%	48%
PARKING REQUIREMENTS	1 SPACE PER UNIT (29)	34

* A FRONT YARD NEET NOT EXCEED THE AVERAGE DEPTH OF FRONT YARDS ON EITHER SIDE OF THE LOT
** REFER TO ARCHITECTURAL PLANS FOR BUILDING ELEVATIONS

(1) Denotes Free Standing "PEDESTRIAN CROSSING HERE" sign
(2) Denotes Free Standing "JACK PATH CLOSED DUE TO CONSTRUCTION, REOPENING SPRING 2015" sign
(3) Denotes Free Standing "DO NOT ENTER, CONSTRUCTION SITE" sign

PRELIMINARY DRAWING

WR
Wright-Ryan

ISSUED FOR	BY DATE
CITY SUBMISSION	WHS 9/23/13

REVISION	REV. DATE

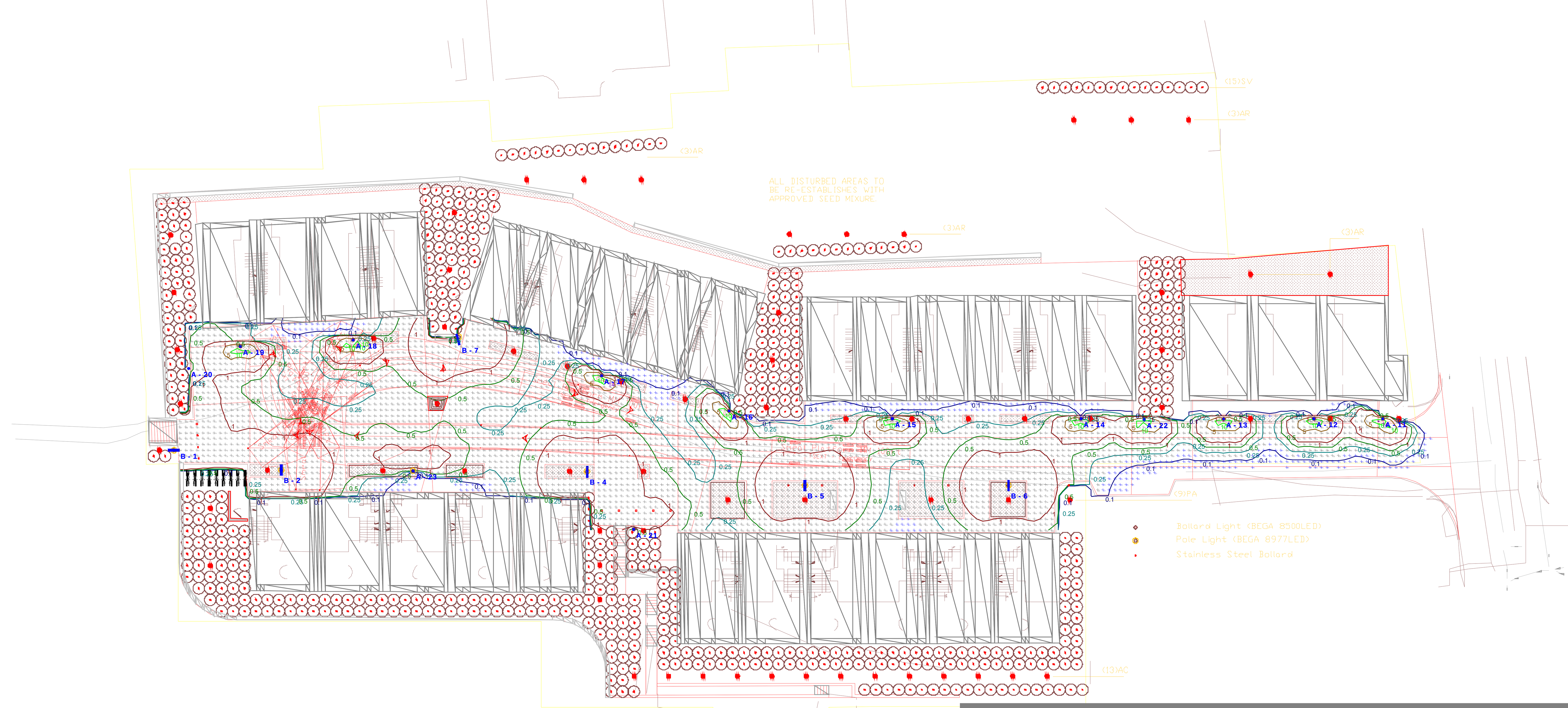
DRAWING NAME: SITE LAYOUT PLAN
PROJECT NAME: MUNJOY HEIGHTS
CLIENT: REDFERN PROPERTIES, LLC
P.O. BOX 8816, PORTLAND, MAINE 04104

ACORN ENGINEERING, INC.
ACORN ENGINEERING, INC. P.O. BOX 3372 PORTLAND, MAINE 04104 (207) 775-2655

FILE: 1047_CIVIL
DATE: 9/23/13
JN: 1047
SCALE: 1"=20'
DESIGN BY: WHS
DRAWN BY: ZRJ
CHECKED BY: WHS

DRAWING NO.
C-10

Plan 33



Statistics

Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min	Avg/Max
Woonerf	+	1.0 fc	14.1 fc	0.1 fc	141.0:1	10.0:1	0.1:1

Luminaire Schedule

Symbol	Label	Quantity	Manufacturer	Catalog Number	Description	Lamp	Number Lamps	Filename	Lumens Per Lamp	Wattage
	A	13	BEGA-US	8659LED	Bollard	LED	1	8659LED.IES	729.1475	16
	B	6	BEGA-US	8977LED	Pole Light	LED	1	8977LED.ies	2388.096	42.4

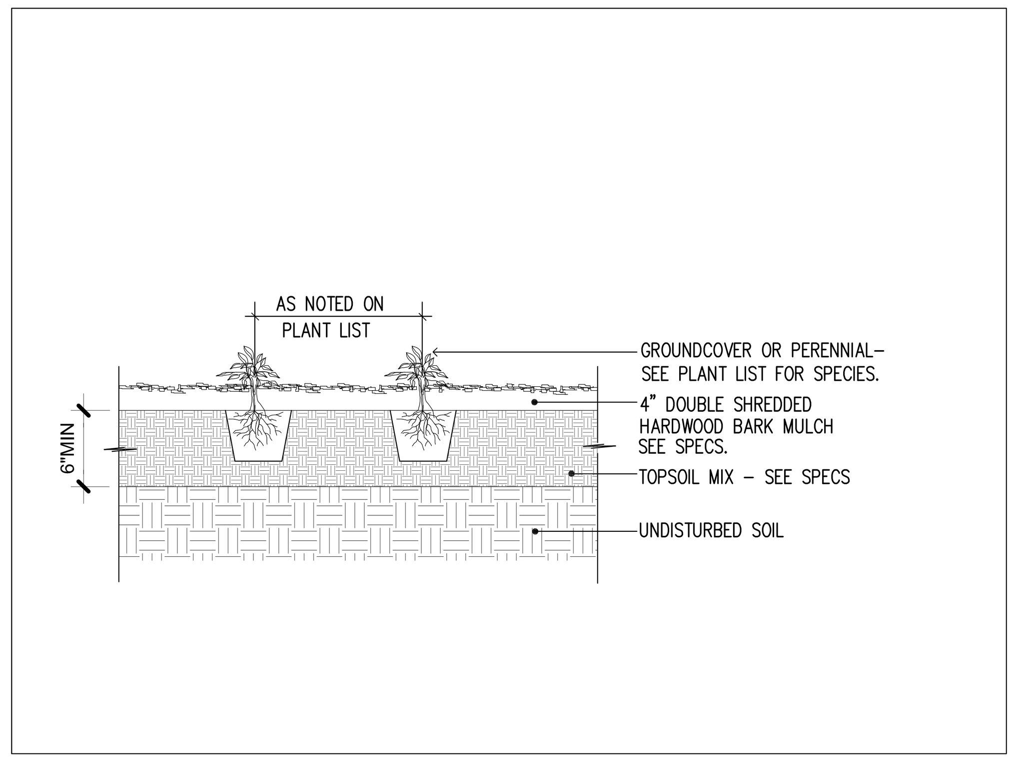
Plan View
Scale - 1" = 25'

CHARRON

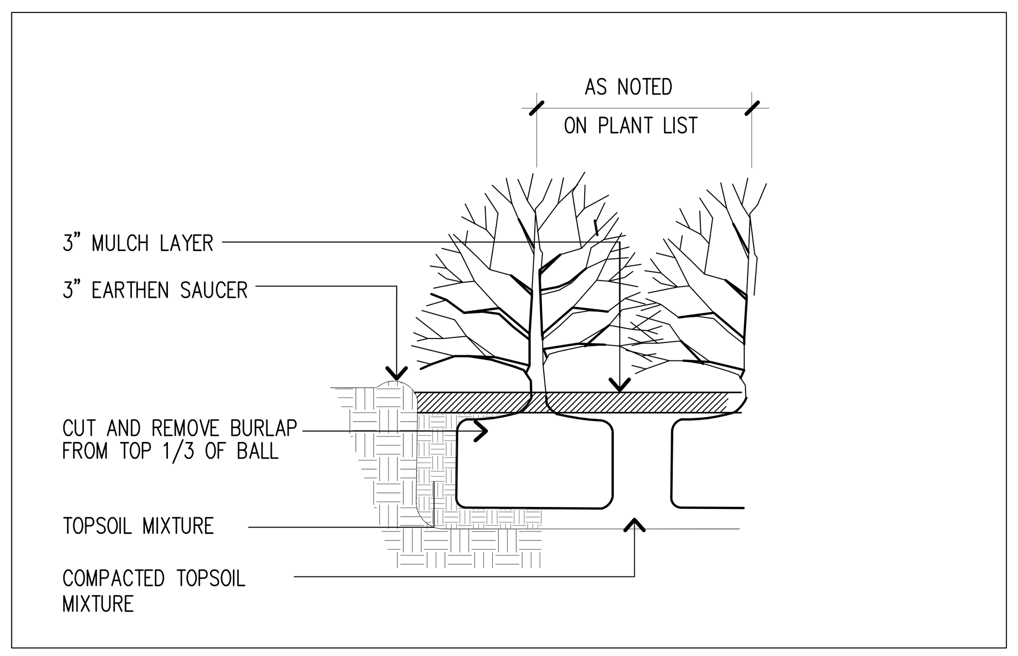
MUNJOY HEIGHTS
Walnut Street
Portland, ME 04102

Designer
MKC
Date
11/15/2013
Scale
1" = 25'
Drawing No.
1
Summary

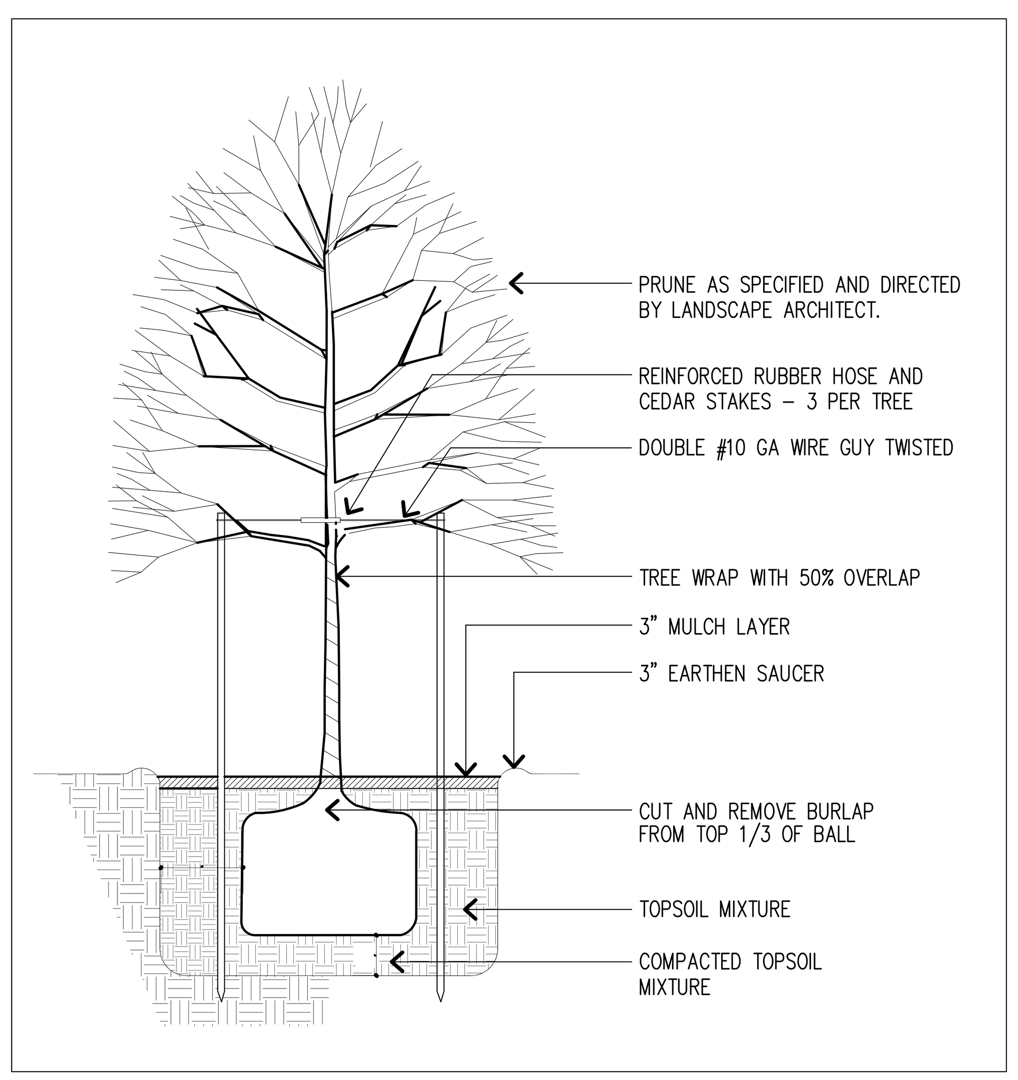
1 of 1



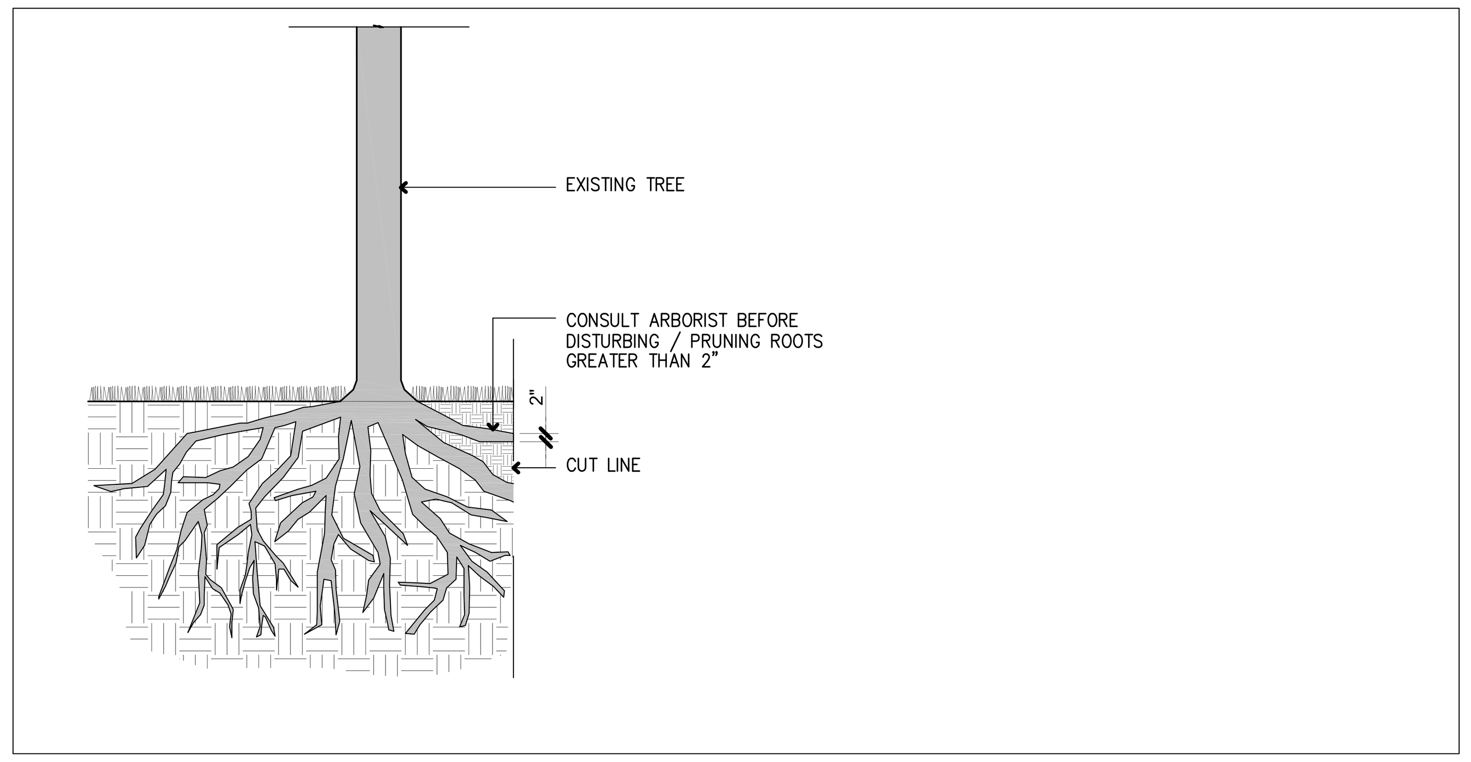
1 L3.0 GROUND COVER PLANTING
SCALE: 1" = 1'-0"



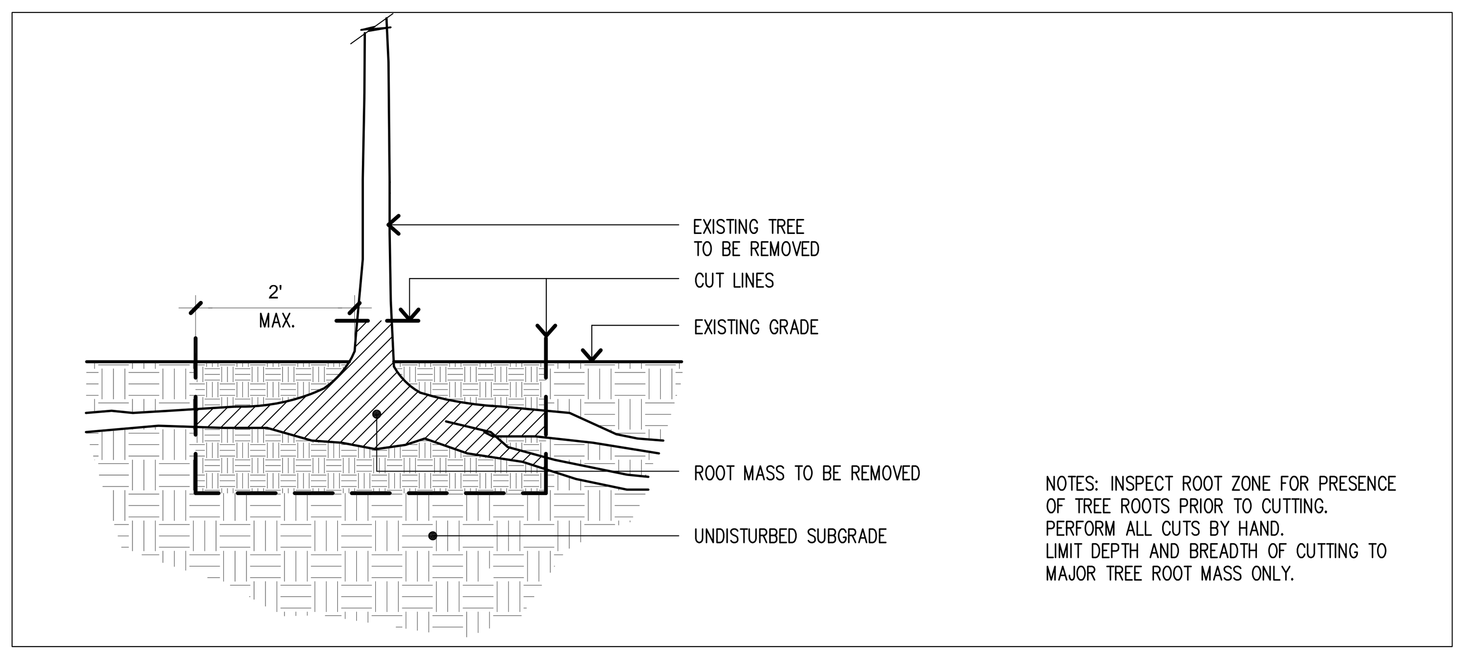
2 L3.0 SHRUB PLANTING
SCALE: 1" = 1'-0"



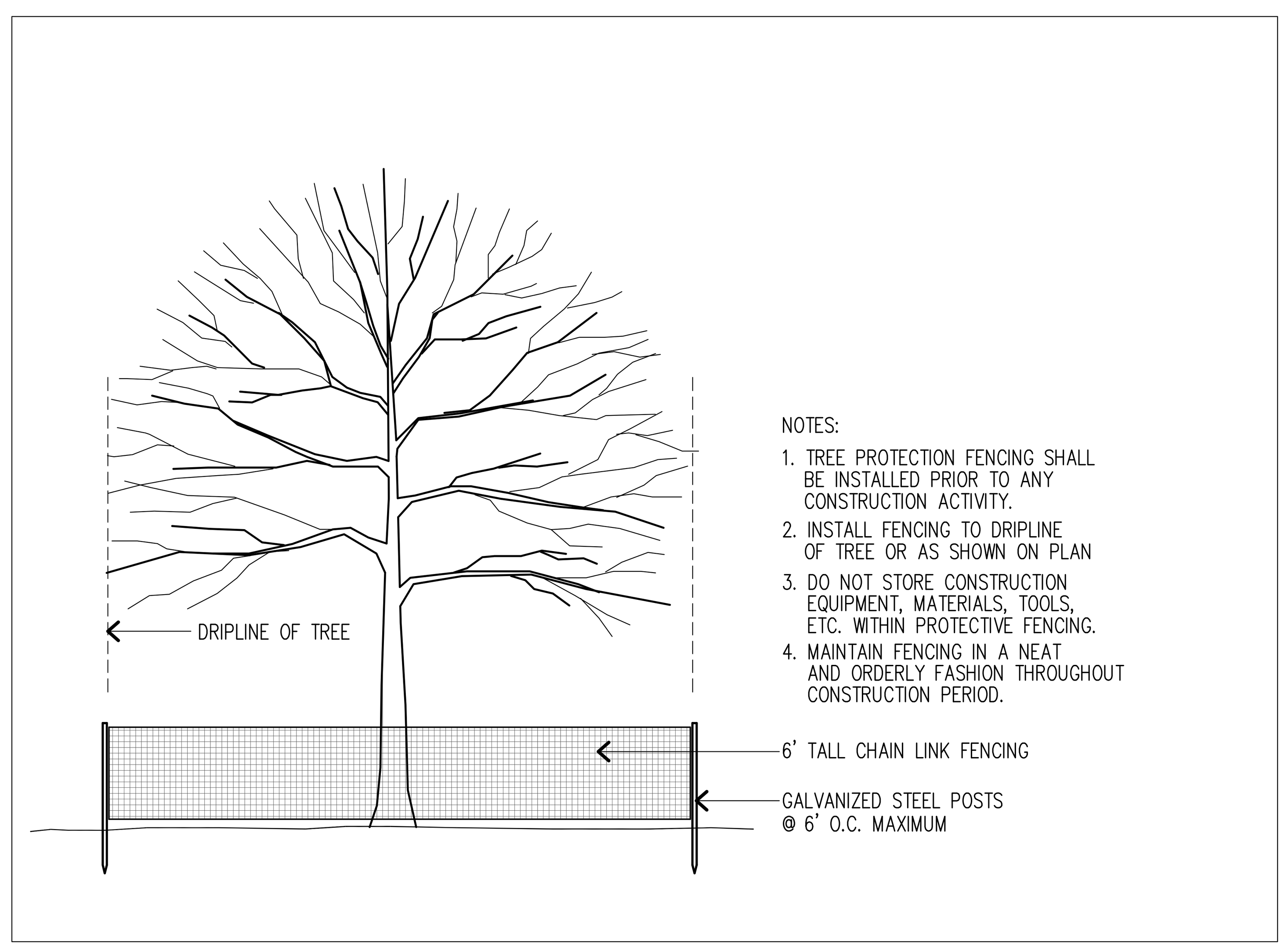
3 L3.0 TREE PLANTING
SCALE: 3/4" = 1'-0"



4 L3.0 ROOT PRUNING
SCALE: 1" = 1'-0"



5 L3.0 TREE REMOVAL (AT PROPERTY LINE)
SCALE: 1/2" = 1'-0"



6 L3.0 TREE PROTECTION
NOT TO SCALE

SOREN DENIORD DESIGN STUDIO
43 Wellwood Road
Portland, ME
04103
T: 207-400-2450
E: soren@sorendeniord.com

Munjoy Heights
Walnut Street
Portland Maine

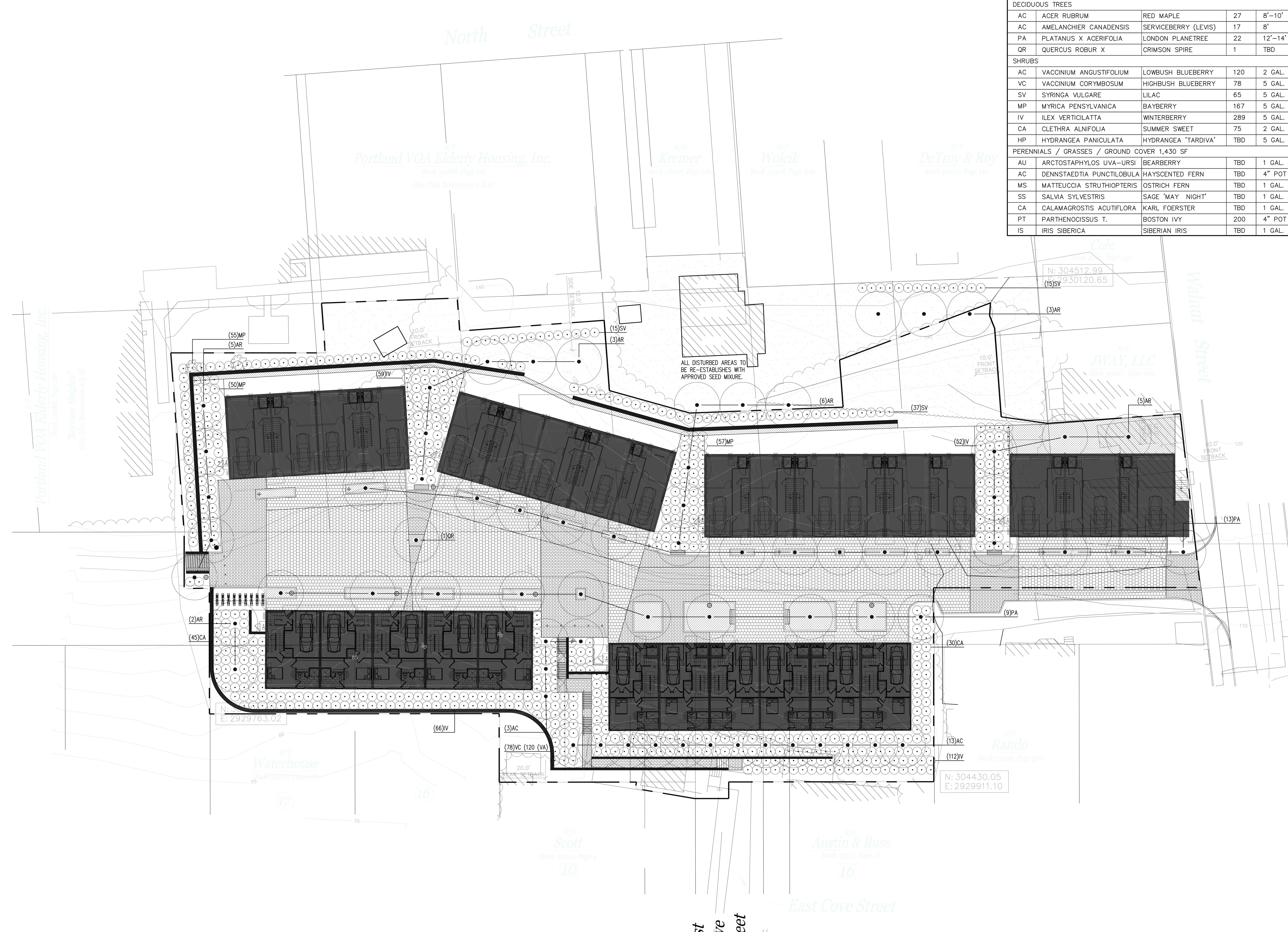
100% PLANNING BOARD
SUBMITTAL
NOT FOR CONSTRUCTION

Revision	Date:

revisions:
date: November 15, 2013
scale: As Noted
drawn: SD
checked: SD

L3.0

PLANTING DETAILS



PROPOSED PLANT LIST

ID	BOTANICAL NAME	COMMON NAME	QTY	SIZE
DECIDUOUS TREES				
AC	ACER RUBRUM	RED MAPLE	27	8'–10'
AC	AMELANCHIER CANADENSIS	SERVICEBERRY (LEVIS)	17	8'
PA	PLATANUS X ACERIFOLIA	LONDON PLANETREE	22	12'–14'
QR	QUERCUS ROBUR X	CRIMSON SPIRE	1	TBD
SHRUBS				
AC	VACCINIUM ANGUSTIFOLIUM	LOWBUSH BLUEBERRY	120	2 GAL.
VC	VACCINIUM CORYMBOSUM	HIGHBUSH BLUEBERRY	78	5 GAL.
SV	SYRINGA VULGARE	LILAC	65	5 GAL.
MP	MYRICA PENSYLVANICA	BAYBERRY	167	5 GAL.
IV	ILEX VERTICILATTA	WINTERBERRY	289	5 GAL.
CA	CLETHRA ALNIFOLIA	SUMMER SWEET	75	2 GAL.
HP	HYDRANGEA PANICULATA	HYDRANGEA 'TARDIVA'	TBD	5 GAL.
PERENNIALS / GRASSES / GROUND COVER 1,430 SF				
AU	ARCTOSTAPHYLOS UVA-URSI	BEARBERRY	TBD	1 GAL.
AC	DENNSTAEDTIA PUNCTILOBULA	HAYSCENTED FERN	TBD	4" POT
MS	MATTEUCCIA STRUTHIOPTERIS	OSTRICH FERN	TBD	1 GAL.
SS	SALVIA SYLVESTRIS	SAGE 'MAY NIGHT'	TBD	1 GAL.
CA	CALAMAGROSTIS ACUTIFLORA	KARL FOERSTER	TBD	1 GAL.
PT	PARTHENOCISSUS T.	BOSTON IVY	200	4" POT
IS	IRIS SIBERICA	SIBERIAN IRIS	TBD	1 GAL.

SYMBOLS LEGEND

- Proposed Shrub (Detail 2, L3.0)
- Proposed Street Tree (Detail 3, L3.0)
- Native Seed Mix
- Perennial Plantings (Detail 1, L3.0)
- Unit Paving (A)
- Unit Paving (B)
- Bench
- Steps
- Bicycle Parking
- Bollard Light (BEGA 8500LED)
- Pole Light (BEGA 8977LED)
- Stainless Steel Bollard

SOREN DENIORD DESIGN STUDIO
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Portland, ME
04103
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E: soren@sorendeniord.com

Plan 35

PLANTING NOTES

1. All plant selection and installation will be in compliance will the City of Portland Technical Manual (Section 4).

2. No planting will be installed until all grading and construction has been completed in immediate area.

3. Contractor to verify all utilities on property and to protect all utilities during excavation for plants.

4. If there is a discrepancy between the number of plants shown on the plan and the number of plants shown in plant list, the number of plants shown on plan will take precedence.

5. All container material to be grown in container a minimum of 6 months.

6. All material shall comply with the latest edition of the American Standard for Nursery Stock, American Association of Nurseryman.

7. Contractor shall repair all damage to property from planting operations at no cost to the owner.

8. Contractor shall guarantee new plant material through one calendar year from time of provisional acceptance.

9. The Landscape Architect will tag all plants at the nursery and inspect them after delivery to the site. All plant materials shall be inspected by the Landscape Architect on site prior to installation.

10. All proposed plants shall be located carefully as shown on the plans and the placements shall be approved by Landscape Architect before the plants are installed.

11. All disturbed areas not to be paved or planted shall be loamed and seeded as shown. The seed mix specifications are as follows: LESCO Fine Fescue Links Blend of 35% hard fescue, 35% creeping red fescue, 20% chewings fescue and 10% sheep fescue. Add 5% Little Bluestem and 5% Northeast Wildflower seed mixture by weight to the Links Blend.

12. Staking and guying shall be determined by the Landscape Architect on a tree by tree basis. For pricing purposes, provide a per tree unit cost for staking and guying. If staking and guying is required, remove tree wrap, stakes, and guy wires at end of first growing season.

13. For tree planting in lawn areas, any disturbed lawn shall be loamed and seeded as necessary.

14. Landscape Architect to flag trees to be protected on site.

Munjoy Heights

Walnut Street
Portland Maine

100% PLANNING BOARD SUBMITTAL
NOT FOR CONSTRUCTION

Revision		Date:
1	Comment Response	13/12/06

revisions:
date: November 15, 2013
scale: As Noted
drawn: SD
checked: SD

IRRIGATION NOTES

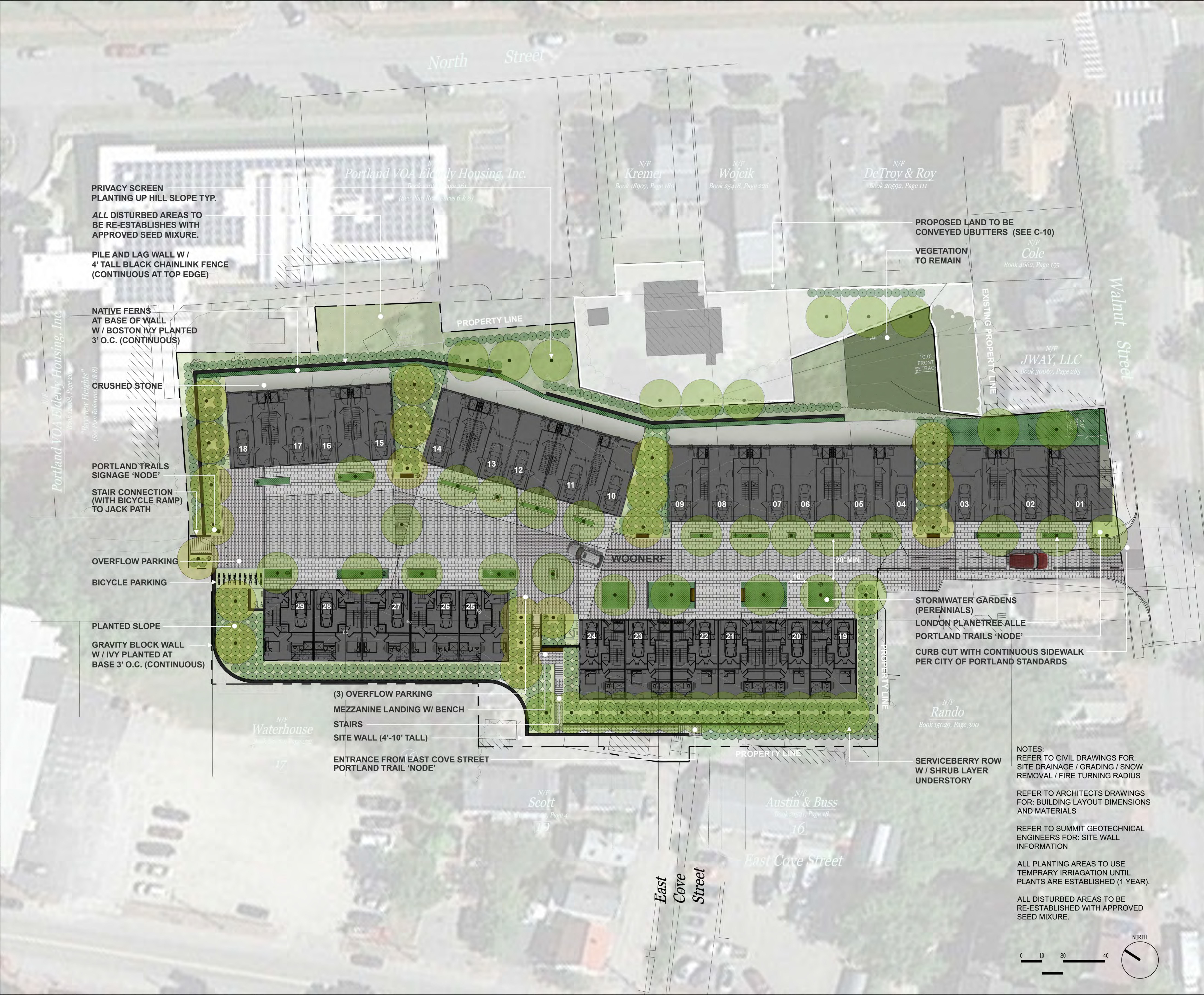
1. AUTOMATIC IRRIGATION SYSTEM WITH SMART CONTROLLER TO BE PROVIDED FOR ALL SHRUB AND TREE PLANTINGS, GROUNDCOVERS, PERENNIAL BEDS AND LAWN AREAS.
2. PROVIDE DRIP SYSTEM FOR SHRUB AND PERENNIAL BEDS.
3. PROVIDE 2 BUBBLERS PER TREE.
4. CONTRACTOR TO PROVIDE SHOP DRAWINGS SHOWING ALL EQUIPMENT SUCH AS SPRAY HEADS, DRIP LINES, PIPING, VALVES, ETC. AND CATALOGUE CUTS FOR APPROVAL. INDICATE COVERAGE DIAMETER FOR ALL SPRAY HEADS.
5. CONTRACTOR TO COODINATE WITH ARCHITECT AND LANDSCAPE ARCHITECT ON LOCATION OF CONTROLLER
6. ALL VALVE BOXES TO BE SET PERPENDICULAR OR PARALLEL TO CLOSEST EDGE OF BUILT STRUCTURE. COORDINATE LOCATIONS WITH LANDSCAPE ARCHITECT.

0 10 20 40

NORTH

L2.0

PLANTING PLAN



NOTES:
REFER TO CIVIL DRAWINGS FOR: SITE DRAINAGE / GRADING / SNOW REMOVAL / FIRE TURNING RADIUS

REFER TO ARCHITECTS DRAWINGS FOR: BUILDING LAYOUT DIMENSIONS AND MATERIALS

REFER TO SUMMIT GEOTECHNICAL ENGINEERS FOR: SITE WALL INFORMATION

ALL PLANTING AREAS TO USE TEMPRARY IRRIAGATION UNTIL PLANTS ARE ESTABLISHED (1 YEAR).

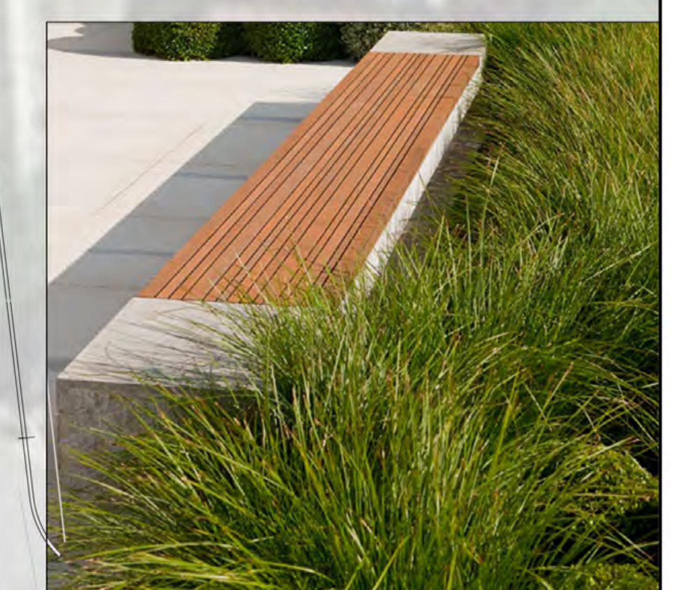
ALL DISTURBED AREAS TO BE RE-ESTABLISHED WITH APPROVED SEED MIXURE.

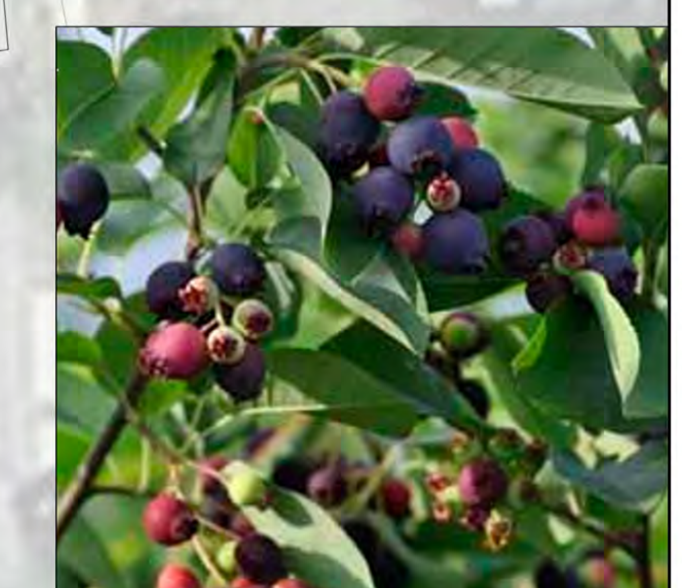
SYMBOLS LEGEND

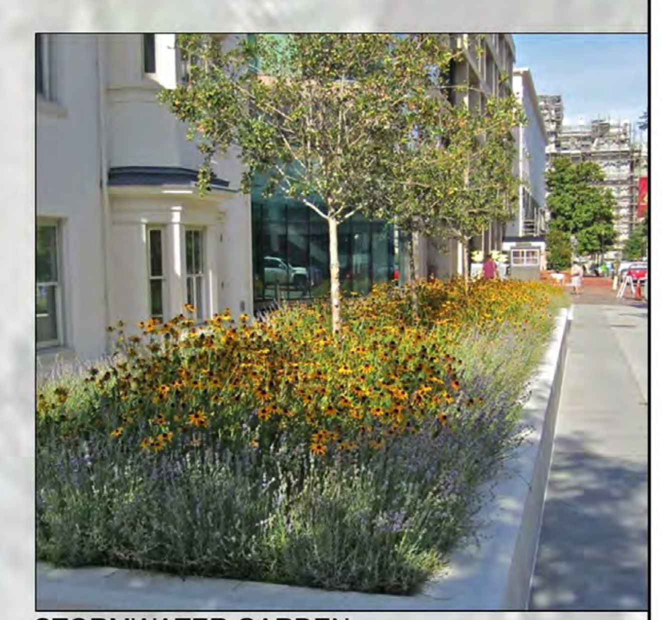
- Proposed Shrub (Detail 2, L3.0)
- Proposed Street Tree (Detail 3, L3.0)
- Native Seed Mix
- Perennial Plantings (Detail 1, L3.0)
- Unit Paving (A)
- Unit Paving (B)
- Bench
- Steps
- Bicycle Parking
- Bollard Light (BEGA 8500LED)
- Pole Light (BEGA 8977LED)
- Stainless Steel Bollard

PRECEDENT IMAGES


WOONERF / COMPLETE STREET


GARDEN BENCH


NATIVE PLANTS


STORMWATER GARDEN

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Plan 36

Munjoy Heights
Walnut Street
Portland Maine

100% PLANNING BOARD SUBMITTAL
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Revision		Date:
1	Comment Response	13/12/06

revisions:
date: November 15, 2013
scale: As Noted
drawn: SD
checked: SD

L1.0

LANDCAPE PLAN


Plan 37

Plan 38

POURED IN PLACE CONCRETE WALL

PRECAST CONCRETE BLOCKS

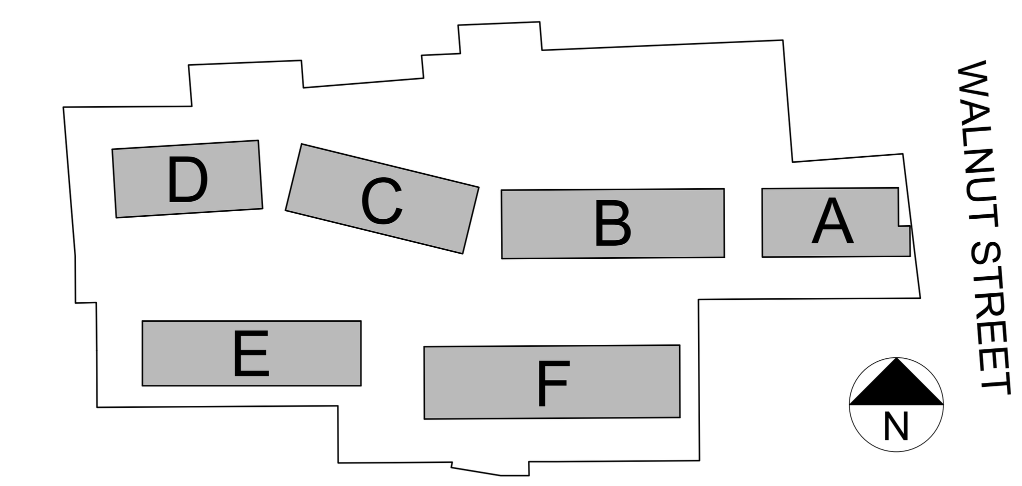
BOSTON IVY

Plan 39

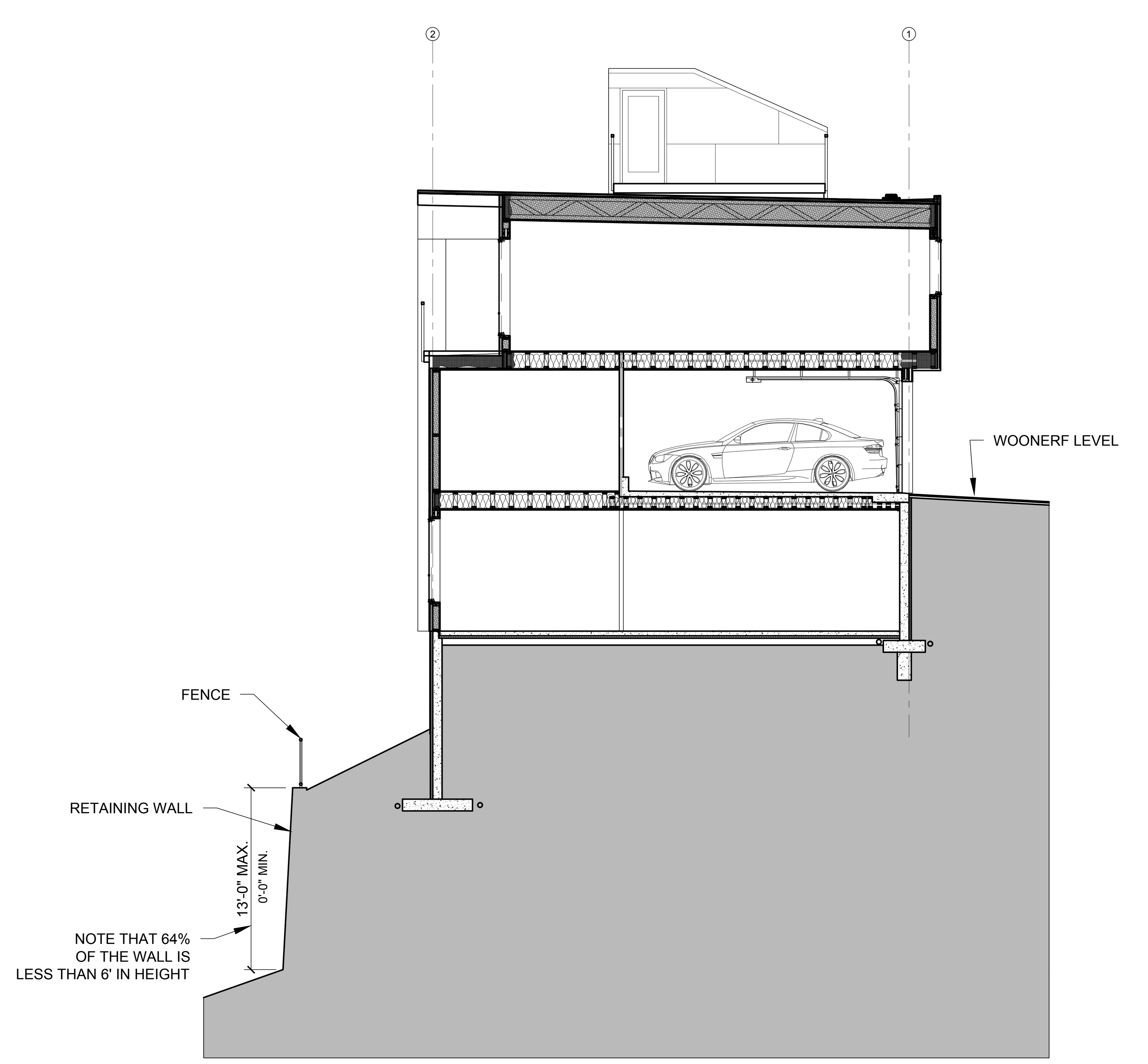
RETAINING WALL TYPES

MUNJOY HEIGHTS

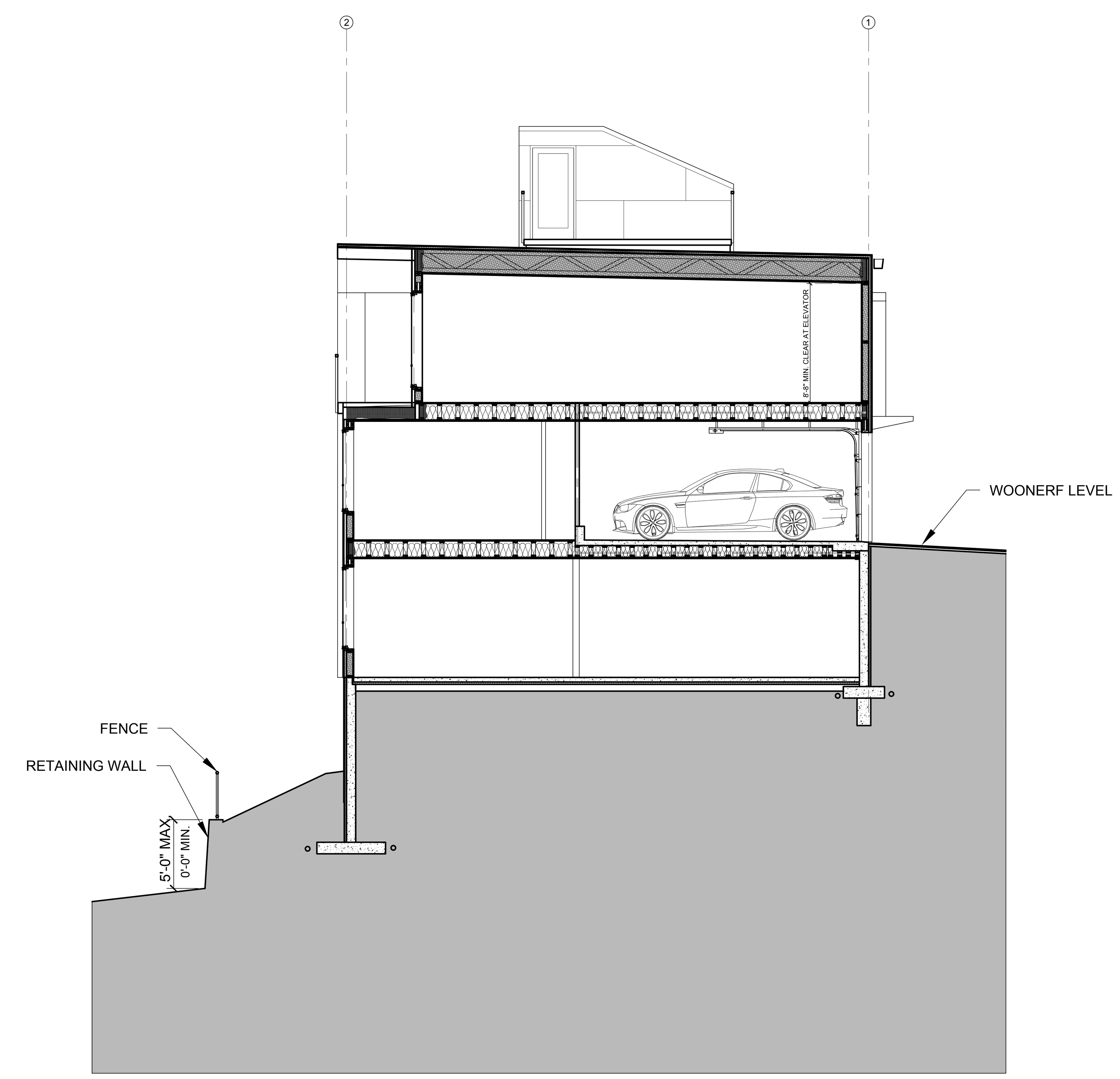
NOVEMBER 18, 2013



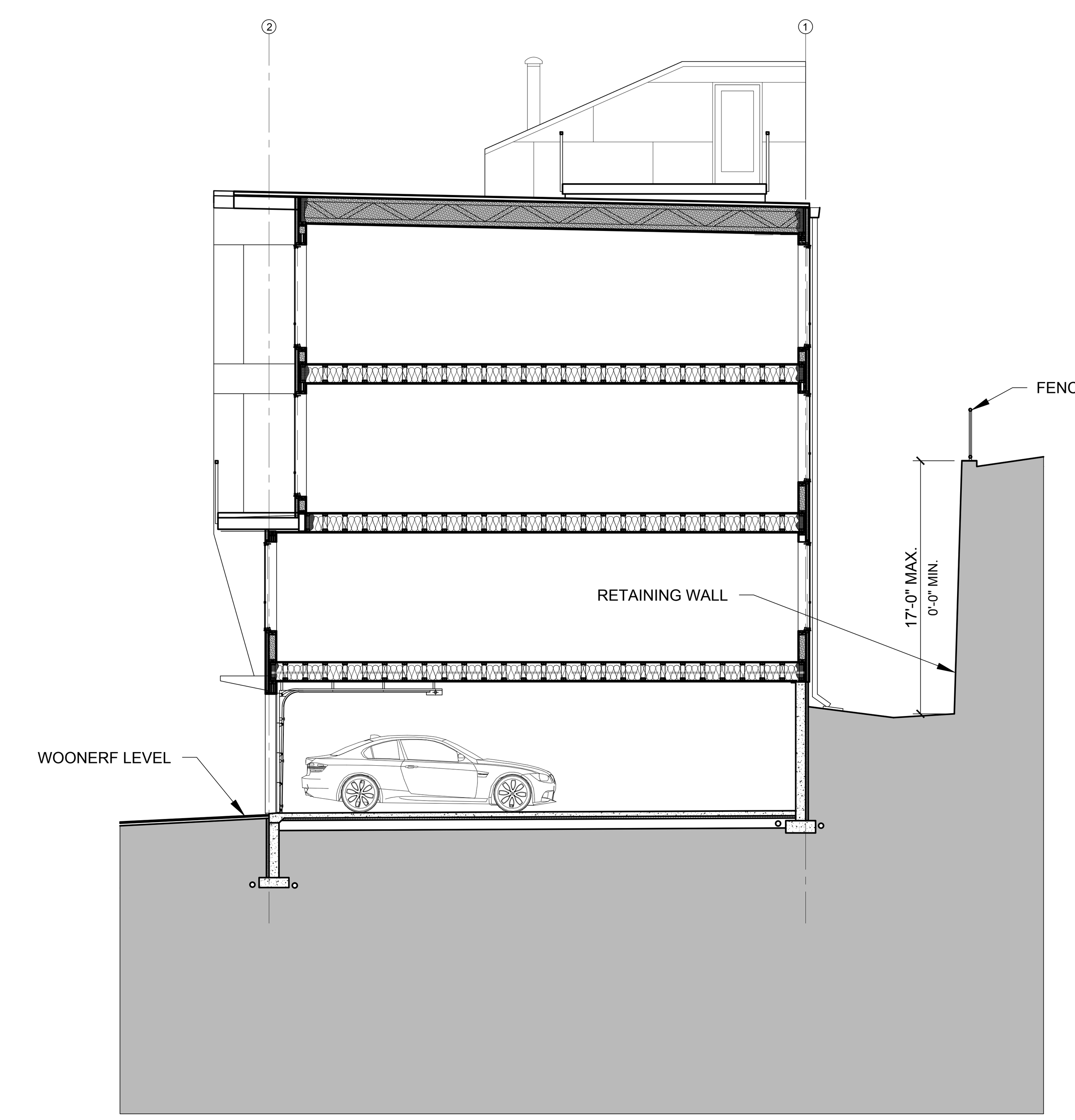
SITE KEY PLAN



SECTION AT BUILDING E



SECTION AT BUILDING F



PROGRESS PRINT ONLY
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SECTION AT BUILDINGS B, C AND D

redfern munjoy, llc

RYAN SENATORE **ARCHITECTURE**


Plan 41


Plan 42


Plan 43

Plan 44

Plan 45

Plan 47


Plan 48


Plan 49


Plan 50