VICINITY MAP
NTS
PART OF CITY OF TRAVERSE CITY & GARFIELD TOWNSHIP,
GRAND TRAVERSE COUNTY, MICHIGAN

MICHIGAN STATE MAP

CONSTRUCTION PLANS & SPECIFICATIONS FOR

SLOPE STABILITY & ACCESS IMPROVEMENTS

BOARDMAN PLACE CONDOMINIUMS
234 WASHINGTON STREET
TRAVERSE CITY, MICHIGAN

PROJECT I.D. NO. R1634

PROJECT SYNOPSIS:

BOARDMAN PLACE CONDOMINIUMS HAS EXPERIENCED SLOPE SUBSIDENCE TO THE BOARDMAN RIVER SINCE ITS DEVELOPMENT IN 1981. THE GRADUAL STEEPENING OF THE SLOPE HAS INCREASED SOIL EROSION AND LOSS OF TREES IN MORE RECENT YEARS. EVIDENCE FROM SURVEYS SHOW THAT THE RIVER HAS EXPANDED ITS NORTHERLY SHORELINE TOWARD THE BOARDMAN PLACE CONDOMINIUM BUILDING 5 TO 7 FEET SINCE THE BUILDING'S CONSTRUCTION. THIS PROJECT PROPOSES TO STABILIZE THE SLOPE BY INSTALLING A SHEET PILE RETAINING WALL GENERALLY ALONG THE EXISTING SHORELINE AND TERRACE THE RIVER-FACING SLOPE USING RETAINING WALLS TO ASSIST TREE AND LANDSCAPE ESTABLISHMENT AND TO REDUCE FUTURE SOIL EROSION.

THE PROJECT GENERALLY CONSISTS OF THE CONSTRUCTION OF TIE-BACK SHEET PILE RETAINING WALL, WOOD ACCESS STAIR, RIVER DOCK, SEGMENTAL RETAINING WALLS, SUBSURFACE AND SURFACE DRAINAGE IMPROVEMENTS, LANDSCAPING, AND APPURTENANCES

ABBREVIATIONS

ACP	ASBESTOS CONCRETE PIPE
AG OR AGG	AGGREGATE
BC	BEGINNING OF CURVE
BEG	BEGINNING
BIT	BITUMINOUS
BOT	BOTTOM
BP	BOTTOM OF PIPE
BTWN	BETWEEN
BW	BACK OF WALK
CB	CATCH BASIN
CF	CURB FACE
CL	CLASS
C/L	CENTERLINE'
CONC	CONCRETE
CPE	AASHTO M294 TYPE S PE PIPE
CPVC	CHLORINATED PVC
DIP	DUCTILE IRON PIPE
DIST	DISTANCE OR DISTRICT
DR	DRIVE
DRVWY	DRIVEWAY
E	EAST
(E) OR EX	EXISTING'
EC	END OF CURVE
ELEC	ELECTRIC
EG	EDGE OF GUTTER
ESMT	EASEMENT
FH	FIRE HYDRANT
FS	FINISHED SURFACE
GB	GRADE BREAK
GS	GROUND SURFACE
HMA	HOT MIX ASPHALT PVMT
HP	HIGH POINT OR HIGH PRESSURE
INV	INVERT
LAT	LATERAL OR LATITUDE
MH	MANHOLE
N	NORTH
N.I.C.	NOT IN CONTRACT
NAT	NATURAL
N'LY	NORTHERLY'
NTS	NOT TO SCALE
PE	PLAIN END OR POLYETHYLENE
POB	POINT OF BEGINNING
POC	POINT OF COMMENCEMENT
PP	POWER POLE
PROT	PROTECT
PVC	POLYVINYL CHLORIDE
PVMT OR PAV'T	PAVEMENT'
RCP	REINFORCED CONCRETE PIPE
R/W OR ROW	RIGHT OF WAY'
S	SOUTH OR SANITARY
SHT	SHEET
S'LY	SOUTHERLY'
SRW	SEGMENTAL RETAINING WALL
ST	STREET
TBC	TOP, BACK OF CURB
TELEPH	TELEPHONE
TP	TOP OF PIPE
TA	TOP OF HMA
TBC	TOP BACK OF CURB
TC	TOP OF CONCRETE
TYP	TYPICAL
VAR	VARIABLE OR VARIES
VERT	VERTICAL
W	WEST
W/	WITH
W/O	WITHOUT
X	CROSS

PLAN SUBMITTAL — DATE

ISSUED FOR CITY PERMITS	11/9/2016
ISSUED FOR BIDDING	3/5/2017
ADDED WORK ITEMS FOR ADDENDUM 1	3/12/2017

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9.1 SEGMENTAL RETAINING WALL PLAN & PROFILE

GENERAL PROVISIONS

1. THE LOCATION OF ALL PUBLIC UTILITIES SHOWN ON THESE PLANS IS TAKEN FROM AVAILABLE DATA. PRINCE-LUND ENGINEERING, PLC WILL NOT BE RESPONSIBLE FOR ANY OMISSIONS OR VARIATIONS FROM THE LOCATIONS SHOWN ON THE PLANS. PURSUANT TO ACT 53 OF THE PA OF 1974 AND AS A CONDITION OF THIS CONTRACT NOTICE SHALL BE GIVEN TO MISS DIG PRIOR TO UNDERGROUND WORK PERFORMED.

2. THESE PLANS WERE PREPARED USING INFORMATION AND/OR DRAWINGS PREPARED BY OTHERS AND GIVEN TO PRINCE-LUND ENGINEERING, PLC FOR THE PURPOSE OF DEVELOPING THIS PROJECT. PRINCE-LUND ENGINEERING, PLC RELIED ON THE ACCURACY OF THE INFORMATION AND/OR DRAWINGS FOR THE PREPARATION OF DESIGN DRAWINGS FOR THIS PROJECT

REVISIONS		
DESCRIPTION	DATE	BY

TITLE SHEET
SLOPE STABILITY & ACCESS IMPROVEMENTS
BOARDMAN PLACE CONDOMINIUMS
TRAVERSE CITY, MICHIGAN

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SCALE: SHOWN
DATE: 3/12/17
PROJECT I.D. R1512
DRAWING: BOARDMANPL1
SHEET NUMBER 1.0

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(a) 'PRINCE–LUND' means PRINCE–LUND ENGINEERING, PLC and its partners, employees, members and agents, if any.

(b) 'Plans' means the drawings, notes, specifications for construction and other information, prepared by PRINCE–LUND herewith, and corresponding documentation, associated media, printed materials, and online or electronic documentation, and all updates of the above that have been provided to you.

(c) 'Project' means a single, organized, undertaking for the design, construction, repair, improvement, and/or expansion of structures or facilities as described and illustrated in the Plans.

2. License Grants

(a) Unless restricted as described below, you may use the Plans to construct the items depicted on them for the intended Project only. The plans are not intended to by used, and you may not use the plans, on any other project or an extension or other derivative of the Project.

(b) Your license rights under this EULA are non–exclusive.

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(a) You shall require that only persons trained and experienced with projects of a similar nature and complexity may construct the items depicted on the Plans.

(b) You shall require that excavations, slopes, and trenching meet the requirements of 29 CFR 1926 Subpart P and that a "Competent Person," as defined by the Occupational, Safety and Health Administration (OSHA), familiar with, but not limited to, excavations, trench safety, sheeting and shoring, shall be on site at all times when these work items are being performed.

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(d) You may not alter, merge, modify, adapt or translate the Plans.

(e) You may not sell, rent, lease, or sublicense the Plans.

(f) You may not modify the Plans or create derivative works based upon the Plans.

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(a) PRINCE–LUND ENGINEERING, PLC WARRANTS THAT THE PLANS WERE PREPARED IN A MANNER CONSISTENT WITH THE LEVEL OF CARE AND SKILL ORDINARILY EXERCISED BY MEMBERS OF THE ENGINEERING PROFESSION CURRENTLY PRACTICING IN THE SAME LOCALITY UNDER SIMILAR CONDITIONS.

(b) NO OTHER WARRANTY OF ANY KIND, EXPRESSED OR IMPLIED, IS MADE, OR INTENDED BY PROVIDING THESE PLANS OR BY FURNISHING ITS FINDINGS, OPINIONS, RECOMMENDATIONS, PROFESSIONAL ADVICE, OR ORAL OR WRITTEN REPORTS OF FINDINGS MADE.

(c) FURTHERMORE, PRINCE–LUND ENGINEERING, PLC AND ITS SUPPLIERS AND PARTNERS DISCLAIM ALL OTHER WARRANTIES AND REPRESENTATIONS, WHETHER EXPRESS, IMPLIED, OR OTHERWISE, INCLUDING THE WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

(d) NO ORAL OR WRITTEN INFORMATION OR ADVICE GIVEN BY PRINCE–LUND ENGINEERING, PLC, ITS DEALERS, DISTRIBUTORS, AGENTS OR EMPLOYEES SHALL CREATE A WARRANTY OR IN ANY WAY INCREASE THE SCOPE OF ANY WARRANTY PROVIDED HEREIN.

(e) PRINCE–LUND ENGINEERING, PLC shall have no responsibility or liability if the Plans have been altered in any way, or if construction deviates from the Plans without express consent given by PRINCE–LUND in a writing.

6. LIMITATION OF LIABILITY

(a) PRINCE–LUND'S TOTAL LIABILITY TO YOU FOR ACTUAL DAMAGES FOR ANY CAUSE WHATSOEVER SHALL BE LIMITED TO THE TOTAL MONIES PRINCE–LUND RECEIVED FROM YOU IN EXCHANGE FOR THE PLANS.

(b) NEITHER PRINCE–LUND ENGINEERING, PLC NOR ITS SUPPLIERS AND PARTNERS SHALL BE LIABLE TO YOU OR ANY THIRD PARTY FOR ANY INDIRECT, SPECIAL, INCIDENTAL, PUNITIVE, COVER OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OF, OR INABILITY TO USE, THE PLANS AND BASED ON ANY THEORY OF LIABILITY INCLUDING BREACH OF CONTRACT, BREACH OF WARRANTY, TORT (INCLUDING NEGLIGENCE), PRODUCT LIABILITY OR OTHERWISE, EVEN IF PRINCE–LUND OR ITS REPRESENTATIVES HAVE BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES AND EVEN IF A REMEDY SET FORTH HEREIN IS FOUND TO HAVE FAILED OF ITS ESSENTIAL PURPOSE.

(c) SOME STATES DO NOT ALLOW THE LIMITATION OR EXCLUSION OF LIABILITY FOR INCIDENTAL OF CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATION OR EXCLUSION MAY NOT APPLY TO YOU AND YOU MAY ALSO HAVE OTHER LEGAL RIGHTS THAT VARY FROM STATE TO STATE.

(d) THE FOREGOING LIMITATIONS ON LIABILITY APPLY TO ALL ASPECTS OF THIS EULA.

7. Indemnification

You shall, at your own expense, indemnify and hold PRINCE–LUND, and its subconsultants, and all officers, directors, members, and employees thereof, harmless from and against any and all claims, actions, liabilities, losses, damages, judgments, grants, costs, and expenses, including reasonable attorneys' fees (collectively, "Claims"), arising out of any use of the Plans by you, any party related to you, or any party acting upon your authorization in a manner that is not expressly authorized by this Agreement.

8. Basis of Bargain

The Warranty Disclaimer and Limited Liability set forth above are fundamental elements of the basis of the agreement between PRINCE–LUND and you. PRINCE–LUND would not be able to provide the Plans on an economic basis without such limitations. Such Warranty Disclaimer and Limited Liability inure to the benefit of PRINCE–LUND's licensors.

Plans prepared by: PRINCE–LUND ENGINEERING, PLC, PO Box 1268, Traverse City, MI 49685

9. General

This EULA shall be governed by the internal laws of the State of MICHIGAN, without giving effect to principles of conflict of laws. You hereby consent to the exclusive jurisdiction and venue of the state courts sitting in GRAND TRAVERSE County MICHIGAN to resolve any disputes arising under this EULA.

This EULA contains the complete agreement between the parties with respect to the subject matter hereof, and supersedes all prior or contemporaneous agreements or understandings, whether oral or written. You agree that any varying or additional terms contained in any purchase order or other written notification or document issued by you in relation to the Plans licensed hereunder shall be of no effect. The failure or delay of PRINCE–LUND ENGINEERING, PLC to exercise any of its rights under this EULA or upon any breach of this EULA shall not be deemed a waiver of those rights or of the breach.

No PRINCE–LUND ENGINEERING, PLC dealer, agent or employee is authorized to make any amendment to this EULA.

If any provision of this EULA shall be held by a court of competent jurisdiction to be contrary to law, that provision will be enforced to the maximum extent permissible, and the remaining provisions of this EULA will remain in full force and effect.

All questions concerning this EULA shall be directed to: PRINCE–LUND ENGINEERING, PLC, EULA@build–on–prince.com, Attention: Richard E. Prince

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GENERAL NOTES

1. VERIFY EXISTING CONDITIONS, DIMENSIONS, ELEVATIONS AND QUANTITIES IN THE FIELD PRIOR TO THE FABRICATION AND INSTALLATION OF ANY MATERIALS OR COMMENCEMENT OF ANY WORK. ANY DISCREPANCIES BETWEEN INFORMATION SHOWN ON THESE DRAWINGS AND ACTUAL FIELD CONDITIONS SHALL BE REPORTED IMMEDIATELY TO RICHARD E. PRINCE (ENGINEER) AT (231) 642–1099.

2. GENERAL REQUIREMENTS:

A. ALL MATERIAL INSTALLED ON THIS PROJECT SHALL CONFORM AND ALL WORK PERFORMED TO THE APPLICABLE SECTIONS OF MICHIGAN DEPARTMENT OF TRANSPORTATION (MDOT) STANDARD SPECIFICATIONS FOR CONSTRUCTION, 2012, AND SUPPLEMENTAL SPECIFICATIONS AND RECURRING PROVISIONS, WITH ANY EXCEPTIONS HEREIN NOTED OR PROVIDED TECHNICAL SPECIFICATIONS TO THE CONTRACT .

A. DEFINITIONS – THE FOLLOWING DEFINITIONS IN THE STANDARD SPECIFICATIONS SHALL BE MODIFIED TO HAVE THE FOLLOWING MEANINGS:

DEPARTMENT – OWNER

ENGINEER – PRINCE–LUND ENGINEERING, PLC

3. WORK SEQUENCE AND CONDITION:

A. ALL WORK SHALL BE COORDINATED WITH MR. RICHARD PRINCE OF PRINCE–LUND ENGINEERING, PLC AND/OR HIS DESIGNATED ON–SITE REPRESENTATIVE AT (231) 642–1099.

B. CONTRACTOR SHALL MARK ALL UNDERGROUND UTILITIES BY NOTIFYING MISS DIG, OTHER UTILITY CLEARANCE SERVICES AND ALL OTHER LOCAL UTILITY CONTACTS A MINIMUM OF 72 HOURS PRIOR TO CONSTRUCTION ACTIVITIES AND SHALL PROVIDE WRITTEN VERIFICATION TO OWNER REGARDING THE DATE OF THE NOTIFICATION AND THE DISPOSITION OF THE NOTIFICATION.

C. CONTRACTOR SHALL PROCURE A PERMIT, IMPLEMENT AND MAINTAIN ALL SOIL EROSION AND SEDIMENTATION CONTROL MEASURES IN CONFORMANCE WITH LOCAL AND STATE REQUIREMENTS.

D. CONTRACTOR SHALL VERIFY ALL QUANTITIES OF WORK TO BE PERFORMED PRIOR TO START OF WORK. SUBMISSION OF A BID SHALL CONSTITUTE ACCEPTANCE OF QUANTITIES INDICATED.

E. CONTRACTOR SHALL REMOVE AND DISPOSE OF ALL VEGETATION OFF–SITE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS.

F. CONTRACTOR SHALL REMOVE AND DISPOSE OFF–SITE ANY MISCELLANEOUS MATERIAL AND STRUCTURES ENCOUNTERED WITHIN THE GRADING LIMITS IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS.

G. CONTRACTOR SHALL REMOVE AND REUSE ALL TOPSOIL WITHIN THE GRADING LIMITS IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS. TOPSOIL STORED ON–SITE SHALL BE COVERED OR SURROUNDED BY SOIL EROSION & SEDIMENTATION CONTROLS TO MINIMIZE SOIL EROSION.

H. CONTRACTOR SHALL PLACE 4–INCH MINIMUM THICK TOPSOIL, CLASS A SEEDING AND MULCH OVER ALL DISTURBED, UNPAVED AREAS AND AS DIRECTED BY ENGINEER IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS. MULCH SHALL BE INSTALLED WITH ADHESIVE.

4. SAFETY AND PROTECTION:

A. CONTRACTOR IS SOLELY RESPONSIBLE FOR ON–SITE SAFETY AND SHALL CONTROL THE AREAS OF WORK SUFFICIENTLY TO PROTECT ALL PERSONS WITHIN THOSE AREAS. CONTRACTOR VOLUNTARILY AGREES THAT BY UTILIZING THESE DRAWINGS OR SPECIFICATIONS IN ANY MANNER, THE ENGINEER AND OWNER DO NOT HAVE CONTROL OVER THE WORK AREAS AND THEREFORE DO NOT HAVE THE ABILITY OR RESPONSIBILITY TO PROVIDE A SAFE ENVIRONMENT IN THE AREAS OF WORK.

B. CONTRACTOR SHALL TAKE NECESSARY PRECAUTIONS TO AVOID DAMAGING, AND IF DAMAGED, SHALL REPLACE TO THE SATISFACTION OF THE OWNER, EXISTING CONSTRUCTION, VEGETATION AND STRUCTURES NOT INDICATED TO BE REMOVED. ALL CONSTRUCTION MATERIAL SPILLS SHALL BE REMOVED AS WORK PROGRESSES.

C. CONTRACTOR SHALL SUITABLY PROTECT ALL MATERIALS, IN–PROGRESS WORK, AND FINISHED WORK FROM DAMAGE.

D. CONTRACTOR SHALL PROVIDE TRAFFIC CONTROLS DURING CONSTRUCTION TO PREVENT VEHICLES AND PEDESTRIANS FROM ENTERING THE AREAS OF WORK.

5. QUALITY ASSURANCE:

A. CONTRACTOR IS SOLELY RESPONSIBLE FOR QUALITY CONTROL OF THE WORK; INSPECTION AND TESTING BY THE ENGINEER OR THE OWNER'S TESTING AGENCY ARE SOLELY AT THE DISCRETION OF THE OWNER, AND IN NO WAY RELIEVE THE CONTRACTOR OF SOLE RESPONSIBILITY FOR MAINTAINING A QUALITY ASSURANCE PROGRAM.

B. CONTRACTOR SHALL USE ADEQUATE NUMBERS OF SKILLED WORKMEN WHO ARE THOROUGHLY TRAINED, QUALIFIED AND EXPERIENCED IN THE NECESSARY CRAFT, AND WHO ARE COMPLETELY FAMILIAR WITH THE SPECIFIED REQUIREMENTS AND METHODS NEEDED FOR PROPER PERFORMANCE OF THE WORK.

C. CONTRACTOR SHALL PROVIDE ALL NECESSARY SUPERVISION, PLANNING, SCHEDULING, COORDINATION, INSPECTION, TESTING AND CONTROL TO PERFORM THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.

6. TESTING LABORATORY SERVICES:

THE OWNER MAY EMPLOY AN INDEPENDENT TESTING AGENCY TO OBSERVE THE CONTRACTOR AND TEST MATERIALS DURING PERFORMANCE OF THE WORK. CONTRACTOR SHALL NOTIFY OWNER'S TESTING AGENCY A MINIMUM OF 24 HOURS IN ADVANCE OF OPERATIONS REQUIRING FIELD OBSERVATIONS AND TESTING BY OWNER'S TESTING AGENCY.

7. CLEANING:

A. CONTRACTOR SHALL MAINTAIN ALL AREAS FREE FROM ACCUMULATIONS OF WASTE MATERIALS, DEBRIS AND RUBBISH CAUSED BY CONTRACTOR OPERATIONS AND SHALL LEGALLY DISPOSE OF SAME.

B. CONTRACTOR SHALL REMOVE ALL CONSTRUCTION RELATED DEBRIS AND MATERIAL FROM AREAS OUTSIDE THE LIMITS OF THE CONTRACTOR'S WORK AREA ON A DAILY BASIS.

8. WARRANTY:

A. THE CONTRACTOR SHALL PROVIDE TO THE OWNER A ONE–YEAR MAINTENANCE FREE WARRANTY ON ALL WORK PERFORMED UNDER THIS CONTRACT. THE WARRANTY TIME SHALL BEGIN ON THE DATE OF FINAL ACCEPTANCE BY THE OWNER.

B. CONTRACTOR SHALL WATER NEWLY SEEDED AREAS SUFFICIENTLY TO ENCOURAGE AND SUSTAIN VIGOROUS GROWTH FOR A PERIODS OF THE FIRST TWO MOWINGS. WATER SHALL BE SPRINKLED TO AVOID WASHING AWAY SEED, MULCH OR SOIL, OR WILL BE CORRECTED AT NO COST TO OWNER.

C. CONTRACTOR SHALL CORRECT, AT NO COST TO THE OWNER, ANY WORK FOUND TO BE DEFECTIVE IN MATERIALS OR WORKMANSHIP, DISCOVERED AT ANY TIME, PRIOR TO OR AFTER FINAL ACCEPTANCE OF THE CONTRACT. CONTRACTOR VOLUNTARILY AGREES THAT BY UTILIZING THESE DRAWINGS OR SPECIFICATIONS IN ANY MANNER, THAT THIS PROVISION SHALL CONTINUE IN EFFECT AFTER TERMINATION OF THE CONTRACT.

REVISIONS		
DESCRIPTION	DATE	BY

GENERAL NOTES
SLOPE STABILITY & ACCESS IMPROVEMENTS
BOARDMAN PLACE CONDOMINIUMS
TRAVERSE CITY, MICHIGAN

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SCALE: SHOWN
DATE: 10/27/16
PROJECT I.D. R1512
DRAWING: BOARDMANPL1
SHEET NUMBER 2.0

EARTHWORK AND GRADING NOTES

1. ANY SURPLUS OR UNSUITABLE MATERIAL INCLUDING PEAT EXCAVATION UNABLE TO BE USED SHALL BECOME THE PROPERTY OF THE CONTRACTOR FOR OFF-SITE DISPOSAL AND SHALL BE INCLUDED IN THE COST OF THE PROJECT.
2. ALL NATURAL SOIL LEFT IN PLACE, IN CUT SECTIONS, AND FILL LOCATED WITHIN A 1:1 SLOPE BENEATH STRUCTURES AND PAVEMENTS SHALL BE COMPACTED TO 95% OF THE MAXIMUM DRY DENSITY.
3. ALL FILL LOCATED OUTSIDE OF A 1:1 SLOPE BENEATH STRUCTURES AND PAVEMENTS SHALL BE COMPACTED TO 80% OF THE MAXIMUM DRY DENSITY.
4. EARTH EXCAVATION: IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE TEMPORARY STORAGE AREAS FOR EARTH EXCAVATION WHICH MAY BE NEEDED AS FILL MATERIAL IN OTHER AREAS. ANY EXTRA HANDLING OF EXCAVATED MATERIAL IS CONSIDERED INCLUDED IN THE COST OF THE PROJECT.

RESTORATION NOTES

1. RESTORE AND STABILIZE ALL AREAS OF WORK.

2. ALL AREAS DISTURBED BY THE CONTRACTOR AND/OR HIS SUBCONTRACTOR BEYOND THE NORMAL CONSTRUCTION LIMITS OF THIS PROJECT SHALL BE RESTORED AS SPECIFIED OR DIRECTED BY THE ENGINEER. NO ADDITIONAL PAYMENT OR COMPENSATION WILL BE MADE FOR THIS ACTIVITY.

3. ALL FINAL GRADES SHALL SLOPE TO DRAIN TOWARD SWALES OR DRAINAGE WAYS. NO WATER SHALL BE ALLOWED TO POND. PONDING AREAS MUST BE REPAIRED AT THE CONTRACTORS EXPENSE.

PLAN INFORMATION

PLAN DIMENSIONS AND MEASUREMENTS ARE BASED ON FIELD TOPOGRAPHIC SURVEY BY: GRAND TRAVERSE SURVEY & MAPPING OF TRAVERSE CITY, MICHIGAN
VERTICAL DATUM IS BASED ON NAVD88

SOIL BORING INFORMATION

THE SOIL BORING LOGS DEPICT POINT LOCATIONS AND DO NOT INFER THAT THE SUBSURFACE CONDITIONS ARE THE SAME IN OTHER AREAS.

SOIL BORING LOGS BY: PRINCE-LUND ENGINEERING, PLC

SOIL EROSION & SEDIMENTATION CONTROL NOTES

IN ADDITION TO THE SOIL EROSION AND SEDIMENTATION CONTROL REQUIREMENTS DESCRIBED ELSEWHERE, THE FOLLOWING MEASURES SHALL BE INCORPORATED INTO THIS PROJECT:

1. THE CONTRACTOR SHALL CONDUCT ITS OPERATIONS IN SUCH A MANNER AS TO MINIMIZE THE AREAS LEFT BARREN DURING CONSTRUCTION AND TO DISTURB ONLY THOSE AREAS ABSOLUTELY REQUIRED FOR THE CONSTRUCTION OF THE PROJECT.

2. EROSION CONTROL ITEMS (CB INSERTS, SILT FENCE, ETC.) AS CALLED OUT ON THE PLANS AND/OR AS DIRECTED BY THE ENGINEER SHALL BE INSTALLED AND MAINTAINED, AND SHALL BE REMOVED WHEN THEY ARE NO LONGER EFFECTIVE AS DETERMINED BY THE ENGINEER. NO SEPARATE PAYMENT SHALL BE ALLOWED FOR EITHER MAINTENANCE OR REMOVAL OF THE EROSION CONTROL ITEMS.

3. THE CONTRACTOR SHALL REMOVE SEDIMENT COLLECTED IN CULVERTS, SEWERS, AND SUMPS OF ALL DRAINAGE STRUCTURES WITHIN THE PROJECT. THE CONTRACTOR SHALL INSPECT SUMPS, SEWERS AND CULVERTS AFTER STORMS AND CLEANOUT SUMPS AND CULVERTS WHERE SEDIMENT HAS COLLECTED. CLEARING SUMPS AND CULVERTS FOR SEDIMENTATION CONTROL SHALL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE COST OF THE CONSTRUCTION OF THE PROJECT.

4. THE CONTRACTOR SHALL FOLLOW LOCAL RULES AND REGULATIONS FOR SOIL EROSION AND SEDIMENTATION CONTROL FOR ALL MATERIALS THAT ARE DISPOSED OF OFF THE PROJECT SITE.

REVISIONS		
DESCRIPTION	DATE	BY

NOTES
SLOPE STABILITY & ACCESS IMPROVEMENTS
BOARDMAN PLACE CONDOMINIUMS
TRAVERSE CITY, MICHIGAN

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DRAWING: BOARDMANPL1
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REVISIONS

DESCRIPTION	DATE	BY
ADD STM & DOWNSPOUT	3/6/17	REP

EXISTING SITE CONDITIONS
SLOPE STABILITY & ACCESS IMPROVEMENTS
BOARDMAN PLACE CONDOMINIUMS
TRAVERSE CITY, MICHIGAN

Prince-Lund Engineering, PLC
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DATE: 11/8/16
PROJECT I.D. R1512
DRAWING: BOARDMANPL1
SHEET NUMBER 4.0

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DEMOLITION & REMOVAL NOTES

1. CLEAR AND GRUB ALL TREES AND VEGETATION IN THE WORK AREA.
2. PROTECT ALL EXISTING BUILDINGS, STRUCTURES, TREES, LANDSCAPING, AND/OR EQUIPMENT TO REMAIN.
3. THE WORK AREA HAS UNDERGROUND IRRIGATION INSTALLED. CONTRACTOR SHALL PROTECT IRRIGATION COMPONENTS, REPLACE, AND INSTALL NEW IRRIGATION BASED ON THE NEW LANDSCAPE PLANS.

LEGEND

X REMOVE TREE

REMOVE WOOD DECK & STAIR

REVISIONS			
DESCRIPTION	DATE	BY	

DEMOLITION & REMOVAL PLAN
SLOPE STABILITY & ACCESS IMPROVEMENTS
BOARDMAN PLACE CONDOMINIUMS
TRAVERSE CITY, MICHIGAN

Prince-Lund Engineering, PLC
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SCALE: SHOWN
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PROJECT I.D. R1512
DRAWING: BOARDMANPL1
SHEET NUMBER 5.0

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SOIL EROSION & SEDIMENTATION CONTROL NOTES

IN ADDITION TO THE SOIL EROSION AND SEDIMENTATION CONTROL REQUIREMENTS DESCRIBED ELSEWHERE, THE FOLLOWING MEASURES SHALL BE INCORPORATED INTO THIS PROJECT:

1. THE CONTRACTOR SHALL CONDUCT ITS OPERATIONS IN SUCH A MANNER AS TO MINIMIZE THE AREAS LEFT BARREN DURING CONSTRUCTION AND TO DISTURB ONLY THOSE AREAS ABSOLUTELY REQUIRED FOR THE CONSTRUCTION OF THE PROJECT.
2. EROSION CONTROL ITEMS AS CALLED OUT ON THE PLANS AND/OR AS DIRECTED BY THE ENGINEER SHALL BE INSTALLED AND MAINTAINED, AND SHALL BE REMOVED WHEN THEY ARE NO LONGER EFFECTIVE AS DETERMINED BY THE ENGINEER. NO SEPARATE PAYMENT SHALL BE ALLOWED FOR EITHER MAINTENANCE OR REMOVAL OF THE EROSION CONTROL ITEMS.
3. THE CONTRACTOR SHALL REMOVE SEDIMENT COLLECTED IN CULVERTS, SEWERS, AND SUMPS OF ALL DRAINAGE STRUCTURES WITHIN THE PROJECT. THE CONTRACTOR SHALL INSPECT SUMPS, SEWERS AND CULVERTS AFTER STORMS AND CLEANOUT SUMPS AND CULVERTS WHERE SEDIMENT HAS COLLECTED. CLEARING SUMPS AND CULVERTS FOR SEDIMENTATION CONTROL SHALL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE COST OF THE CONSTRUCTION OF THE PROJECT.
4. THE CONTRACTOR SHALL FOLLOW LOCAL RULES AND REGULATIONS FOR SOIL EROSION AND SEDIMENTATION CONTROL FOR ALL MATERIALS THAT ARE DISPOSED OF OFF THE PROJECT SITE.

REVISIONS			
DESCRIPTION	DATE	BY	

SESC PLAN
SLOPE STABILITY & ACCESS IMPROVEMENTS
BOARDMAN PLACE CONDOMINIUMS
TRAVERSE CITY, MICHIGAN

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SCALE: SHOWN
DATE: 3/5/17
PROJECT I.D. R1512
DRAWING: BOARDMANPL1
SHEET NUMBER 6.0

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SOIL EROSION AND SEDIMENTATION CONTROL AND MAINTENANCE NOTES

1. THIS PROJECT SHALL BE CONSTRUCTED IN COMPLIANCE WITH PART 91 OF 1994 P.A. 451, AS AMENDED, THE SOIL EROSION AND SEDIMENTATION CONTROL ACT.
2. ALL EROSION AND SEDIMENT CONTROL WORK SHALL CONFORM TO THE STANDARDS AND SPECIFICATIONS OF THE CITY OF TRAVERSE CITY..
3. EROSION AND ANY SEDIMENTATION FROM WORK ON THIS SITE SHALL BE CONTAINED ON THE SITE AND NOT ALLOWED TO COLLECT ON ANY OFF SITE AREAS OR IN WATERWAYS. WATERWAYS INCLUDE NATURAL AND MANMADE OPEN DITCHES, STREAMS, STORM DRAINS, LAKES AND PONDS.
4. STAGING THE WORK SHALL BE DONE BY THE CONTRACTOR OR CONTRACTOR'S REPRESENTATIVE AS DIRECTED IN THESE PLANS AND AS REQUIRED BY THE PROJECT ENGINEER TO ENSURE PROGRESSIVE STABILIZATION OF DISTURBED EARTH CHANGE.
5. THE CONTRACTOR OR CONTRACTOR'S REPRESENTATIVE SHALL BE RESPONSIBLE FOR INSTALLATION AND MAINTENANCE OF SOIL EROSION AND SEDIMENTATION CONTROL DEVICES.
6. THE CONTRACTOR OR CONTRACTOR'S REPRESENTATIVE SHALL IMPLEMENT AND MAINTAIN SOIL EROSION CONTROL MEASURES AS SHOWN ON THE PLANS BEFORE AND AT ALL TIMES DURING CONSTRUCTION ON THIS PROJECT. ANY MODIFICATIONS OR ADDITIONS TO SOIL EROSION CONTROL MEASURES DUE TO CONSTRUCTION OR CHANGED CONDITIONS SHALL BE COMPLIED WITH AS REQUIRED OR DIRECTED BY THE ENGINEER.
7. IF ANY OF THESE SESC MEASURES ON THE SITE ARE DEEMED INADEQUATE OR INEFFECTIVE, THE ENGINEER HAS THE RIGHT TO REQUIRE ADDITIONAL SESC MEASURES.
8. INSTALL SILT FENCE AS INDICATED ON PLAN AND AT ADDITIONAL AREAS AS NECESSARY.
   - A. SILT FENCE SHALL BE INSTALLED PER DETAIL.
   - B. BUILT-UP SEDIMENT SHALL BE REMOVED WHEN SEDIMENT ACCUMULATES TO 1/3 TO 1/2 OF THE HEIGHT OF THE FENCE.
   - C. IF SILT FENCE FABRIC DECOMPOSES OR BECOMES INEFFECTIVE PRIOR TO THE END OF THE EXPECTED USABLE LIFE AND BARRIER IS STILL REQUIRED, THE FABRIC SHALL BE REPLACED PROMPTLY.
   - D. SILT FENCE SHALL BE INSPECTED WEEKLY UNDER NORMAL CONDITIONS, WITHIN 24 HOURS OF RAINFALL AND DAILY DURING A PROLONGED RAIN EVENT. REQUIRED MAINTENANCE SHALL BE PROVIDED PROMPTLY.
9. INSTALL SILT CURTAIN. SILT CURTAIN SHALL BE INSPECTED WEEKLY.
   - A. UNDER NORMAL CONDITIONS, WITHIN 24 HOURS OF RAINFALL AND DAILY DURING A PROLONGED RAIN EVENT.
   - B. BUILDUP OF SEDIMENT SHALL BE REMOVED PROMPTLY.
10. ALL STOCKPILED SOILS SHALL BE MAINTAINED IN SUCH A WAY AS TO PREVENT EROSION FROM LEAVING THE SITE. IF THE STOCKPILE WILL BE ON SITE FOR MORE THAN 30 DAYS, THE STOCKPILE MUST BE SEEDED. SILT FENCE MUST BE INSTALLED AROUND THE PERIMETER OF THE STOCKPILE.
11. SPREAD TOPSOIL AND SEED GRADED AREAS WITHIN FIVE DAYS AFTER FINISH GRADE IS ESTABLISHED. IMMEDIATELY AFTER SEEDING, MULCH ALL SEEDED AREAS WITH UNWEATHERED SMALL GRAIN STRAW. SPREAD UNIFORMLY AT THE RATE OF 1/2 TO 2 TONS PER ACRE OR 100 POUNDS (2-3 BAILS) PER 1000 SQUARE FEET. THIS MULCH SHOULD BE ANCHORED WITH A DISC TYPE MULCH ANCHORING TOOL, ADHESIVE, OR OTHER MEANS AS APPROVED BY THE ENGINEER.
12. IF DEWATERING IS REQUIRED IN THE SCOPE OF WORK, IT SHALL BE DISCHARGED THROUGH A FILTER BAG OVER A WELL VEGETATED AREA. THE WATER SHALL DISCHARGE AT A NON-EROSIVE VELOCITY. IF NECESSARY, AN APPROVED ENERGY DISSIPATER MAY BE USED.
13. ALL SOIL OR DIRT ON ANY ROAD OR OTHER PAVEMENT SHALL BE REMOVED IMMEDIATELY.
14. STREETS AND OR PARKING AREAS WILL BE SCRAPED ON A DAILY BASIS AND SWEPT AT A MINIMUM OF ONCE PER WEEK BY THE CONTRACTOR OR CONTRACTOR'S REPRESENTATIVE.
15. DURING DRY PERIODS, ALL DISTURBED AREAS SHALL BE WATERED FOR DUST CONTROL.
16. PERMANENT SOIL EROSION CONTROL MEASURES FOR ALL SLOPES, CHANNELS, DITCHES OR ANY DISTURBED LAND AREAS SHALL BE COMPLETED WITHIN FIVE (5) CALENDAR DAYS AFTER FINAL GRADING OR FINAL EARTH CHANGE HAS BEEN COMPLETED. WHEN IT IS NOT POSSIBLE TO PERMANENTLY STABILIZE A DISTURBED AREA AFTER EARTH CHANGE HAS BEEN COMPLETED OR WHERE SIGNIFICANT EARTH CHANGE ACTIVITY CEASES, TEMPORARY SOIL EROSION MEASURES SHALL BE IMPLEMENTED IMMEDIATELY. ALL TEMPORARY SOIL EROSION CONTROL MEASURES SHALL BE MAINTAINED UNTIL PERMANENT SOIL EROSION CONTROL MEASURES ARE IMPLEMENTED. ALL PERMANENT SOIL EROSION CONTROL MEASURES SHALL BE IMPLEMENTED AND ESTABLISHED BEFORE SUBSTANTIAL COMPLETION WILL BE GRANTED.
17. GRADE, ESTABLISH VEGETATION AND/OR LANDSCAPE ALL DISTURBED AREAS NOT BUILT OR PAVED UPON.
18. REMOVE ALL TEMPORARY SOIL EROSION DEVICES AFTER PERMANENT STABILIZATION IS ESTABLISHED.

PLAN VIEW

FRONT VIEW

SECTION A-A

SECTION B-B

SILT FENCE DETAIL

NTS

SILT CURTAIN DETAIL

NTS

REVISIONS			
DESCRIPTION	DATE	BY	

SESC DETAILS
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BOARDMAN PLACE CONDOMINIUMS
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DATE: 11/9/16
PROJECT I.D. R1512
DRAWING: BOARDMANPL1
SHEET NUMBER 6.1

NOTES

1. THIS SITE PLAN INCLUDES TREE REPLACEMENT BUT IS NOT A COMPLETE LANDSCAPE PLAN. LANDSCAPE PLANS WILL BE SUBMITTED UNDER SEPARATE COVER.

REVISIONS		
DESCRIPTION	DATE	BY

SITE PLAN
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PROJECT I.D. R1512
DRAWING: BOARDMANPL4
SHEET NUMBER 7.0

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1 STAIR SECTION A–A'

SCALE: 1"=10'

2 SECTION B–B'

SCALE: 1"=10'

NOTES:

FLOOD ELEVATIONS BASED ON PANEL 02P, FLOOD INSURANCE STUDY, GRAND TRAVERSE COUNTY, MICHIGAN, PRELIMINARY, FEDERAL EMERGENCY MANAGEMENT AGENCY

REVISIONS			
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SHEET NUMBER 7.1

1

SECTION C–C'

SCALE: 1"=10'

2

SECTION D–D'

SCALE: 1"=10'

REVISIONS			
DESCRIPTION	DATE	BY	

SECTIONS

SLOPE STABILITY & ACCESS IMPROVEMENTS

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PROJECT I.D. R1512

DRAWING: BOARDMANPL1

SHEET NUMBER 7.2

NOTES

1. SEE DETAILS ON SHEETS 8.1, 8.2, & 8.3
2. MODIFYING AND ADDING STORM PIPING SHALL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE COST OF OTHER WORK.
3. RIP RAP TOE PROTECTION SHALL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE COST OF OTHER WORK.

REVISIONS		
ADD RIP RAP	3/6/17	REP
ADD STM & DOWNSPOUT		
DESCRIPTION	DATE	BY

SHEET PILE WALL PLAN & PROFILE

SLOPE STABILITY & ACCESS IMPROVEMENTS

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DATE: 3/1/17

PROJECT I.D. R1512

DRAWING: BOARDMANPL4

SHEET NUMBER 8.0

1 TYPICAL SECTION

SCALE: 1"=10'

2 WALL SECTION DETAIL

SCALE: 1/4"=1'

NOTES

1. SEE DETAILS ON SHEETS 8.1, 8.2, & 8.3
2. MODIFYING AND ADDING STORM PIPING SHALL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE COST OF OTHER WORK.
3. RIP RAP TOE PROTECTION SHALL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE COST OF OTHER WORK.

REVISIONS		
DESCRIPTION	DATE	BY

SECTION & DETAILS
SLOPE STABILITY & ACCESS IMPROVEMENTS
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DATE: 10/27/16
PROJECT I.D. R1512
DRAWING: BOARDMANPL1
SHEET NUMBER 8.1

PZ-22 STL SHEET PILING, HOT-ROLLED W/BALL & SOCKET JOINTS
ASTM A572 CARBON STL
WEIGHT = 22 LBS/SQ. FT.
SECTION MODULUS/LFT = 18.0 CUBIC INCHES

1 TYPICAL SHEET PILING
SCALE: NO SCALE

SPECIAL CORNER PIECES MAY BE USED AS APPROVED BY THE SHEET PILING MANUFACTURER FOR THE SHEETING TYPE SPECIFIED AND AS APPROVED BY THE ENGINEER.

2 TYPICAL WELDED CORNER
SCALE: NO SCALE

3 CHANNEL CAP PLAN
SCALE: NO SCALE

3A CHANNEL CAP SECTION
SCALE: NO SCALE

4 CHANNEL CAP ELEV VIEW AT ELEV CHANGE
SCALE: NO SCALE

REVISIONS			
DESCRIPTION	DATE	BY	

SHEET PILE WALL DETAILS
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DRAWING: BOARDMANPL4
SHEET NUMBER 8.2

1 CHANNEL CAP SPLICE PLAN
SCALE: NO SCALE

2 CHANNEL CAP SPLICE ELEVATION
SCALE: NO SCALE

3 CHANNEL CAP SPLICE SECTION
SCALE: NO SCALE

SHEET PILE & HARDWARE NOTE:

CONTRACTOR SHALL HAVE ANY NEEDED FABRICATED SPECIAL SIZE SHEET PILE PIECES FURNISHED, MADE & INSTALLED AS NEEDED AT ABUTMENTS, BULKHEAD TIE-INS, & AT ANY OTHER NON-TYPICAL LOCATIONS AS APPROVED BY THE ENGINEER.

PAINTING NOTES:

CONTRACTOR SHALL PRIME & FINISH PAINT THE FOLLOWING:

1. ALL BULKHEAD CAP CHANNELS

CONTRACTOR SHALL TOUCH UP PAINT IN A PROFESSIONAL MANNER ANY PAINTED ITEMS AFTER INSTALLATION TO FORM A CONTINUOUS COATING.

PAINTING OF SHEET PILE STEEL IS NOT REQUIRED.

4 CAP SPLICE BACKER PLATE DETAIL
SCALE: NO SCALE

REVISIONS

DESCRIPTION	DATE	BY

SHEET PILE WALL DETAILS
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DATE: 3/1/17
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DRAWING: BOARDMANPL4
SHEET NUMBER 8.3

NOTES

1. SEE SECTION ON SHEET 9.1
2. CONTRACTOR SHALL FIT SRW BLOCKS TO LINE AND LENGTH ±6" SUCH THAT CUTTING OF BLOCKS IS MINIMIZED
3. MODIFYING AND ADDING STORM PIPING SHALL NOT BE PAID FOR SEPERATELY BUT SHALL BE INCLUDED IN THE COST OF OFTHER WORK.

28" HALF TOP	1
28" HALF MIDDLE	0
28" HALF BOTTOM	3
COR GARDEN TOP	0
28" TOP	18
28" MIDDLE	27
28" BOTTOM	16

NOTE: COR = CORNER

28" HALF TOP	1
28" HALF MIDDLE	1
28" HALF BOTTOM	5
COR GARDEN TOP	3
28" TOP	15
28" MIDDLE	29
28" BOTTOM	15
COR CORNER TOP	1
COR CORNER MIDDLE	2
COR HALF BOTTOM	1

NOTE: COR = CORNER

REVISIONS		
ADD STM & DOWNSPOUT	3/6/17	REP
DESCRIPTION	DATE	BY

SEGMENTAL WALL PLAN & PROFILE
SLOPE STABILITY & ACCESS IMPROVEMENTS
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PROJECT I.D. R1512
DRAWING: BOARDMANPL4
SHEET NUMBER 9.0

NOTES

1. CONTRACTOR SHALL FIT SRW BLOCKS TO LINE AND LENGTH ±6" SUCH THAT CUTTING OF BLOCKS IS MINIMIZED
2. MODIFYING AND ADDING STORM PIPING SHALL NOT BE PAID FOR SEPERATELY BUT SHALL BE INCLUDED IN THE COST OF OFTHER WORK.

WEST SRW

HALF COR GARDEN TOP	3	41" MIDDLE	10
28" HALF TOP	1	41" BOTTOM	4
28" HALF MIDDLE	1	41" HALF BOTTOM	1
28" HALF BOTTOM	1	60" MIDDLE	4
COR GARDEN TOP	4	60" BOTTOM	8
28" TOP	13	60" HALF BOTTOM	2
28" MIDDLE	57		
28" BOTTOM	3		

NOTE: COR = CORNER

WEST SRW

REVISIONS		
ADD STM & DOWNSPOUT	3/6/17	REP
DESCRIPTION	DATE	BY

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DRAWING: BOARDMANPL4
SHEET NUMBER 9.1