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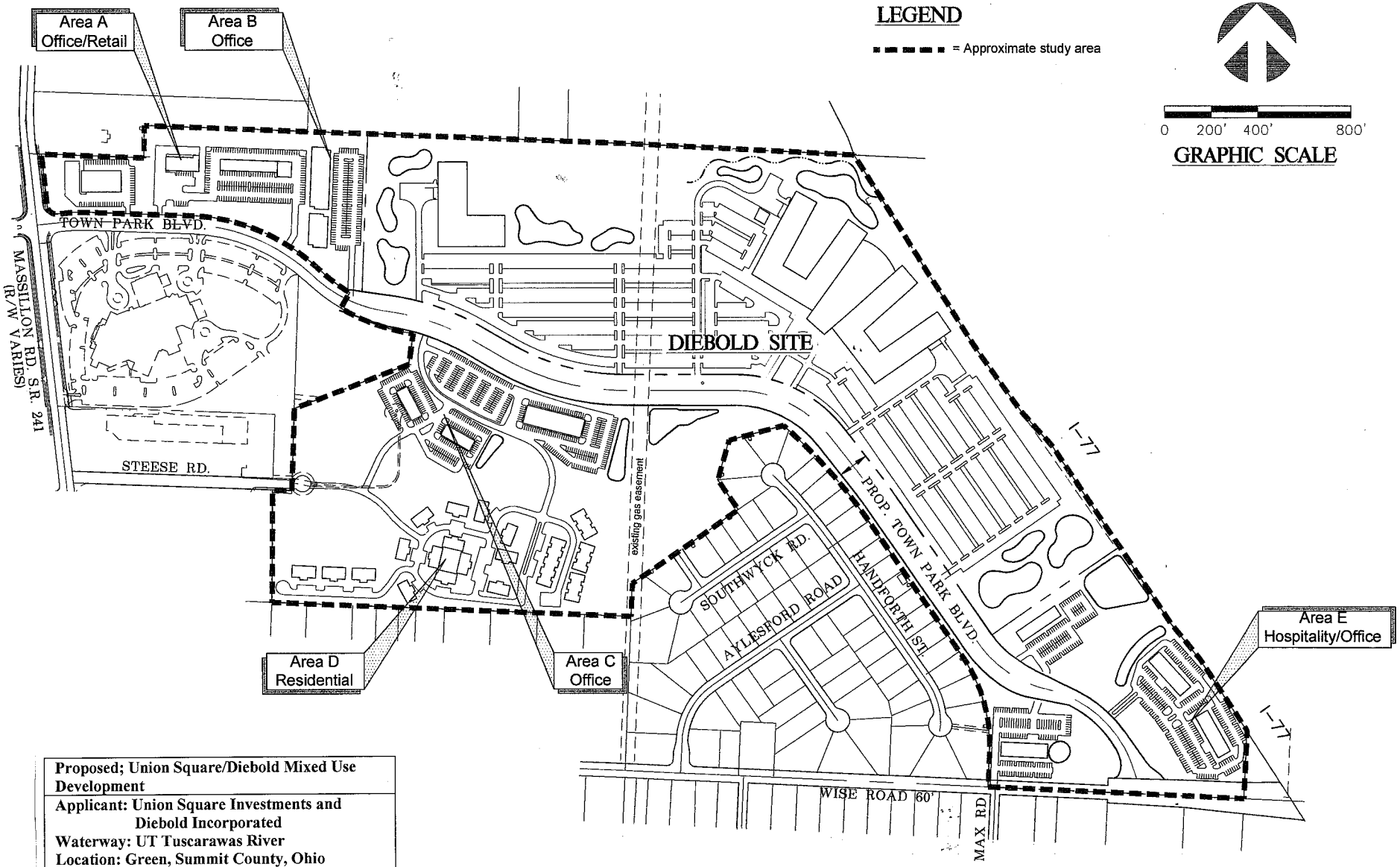
Proposed; Union Square/Diebold Mixed Use Development

Applicant: Union Square Investments and Diebold Incorporated
Waterway: UT Tuscarawas River
Location: Green, Summit County, Ohio
Location Map
Sheet 1 of 16

FIG. 1
SITE LOCATION MAP



Proposed; Union Square/Diebold Mixed Use Development
Applicant: Union Square Investments and Diebold Incorporated **Waterway: UT Tuscarawas River** **Location: Green, Summit County, Ohio** **Area Exhibit** **Sheet 2 of 16**

REVISED:
8/22/2012

AREA EXHIBIT
MINIMAL DEGRADATION ALTERNATIVE

LEGEND

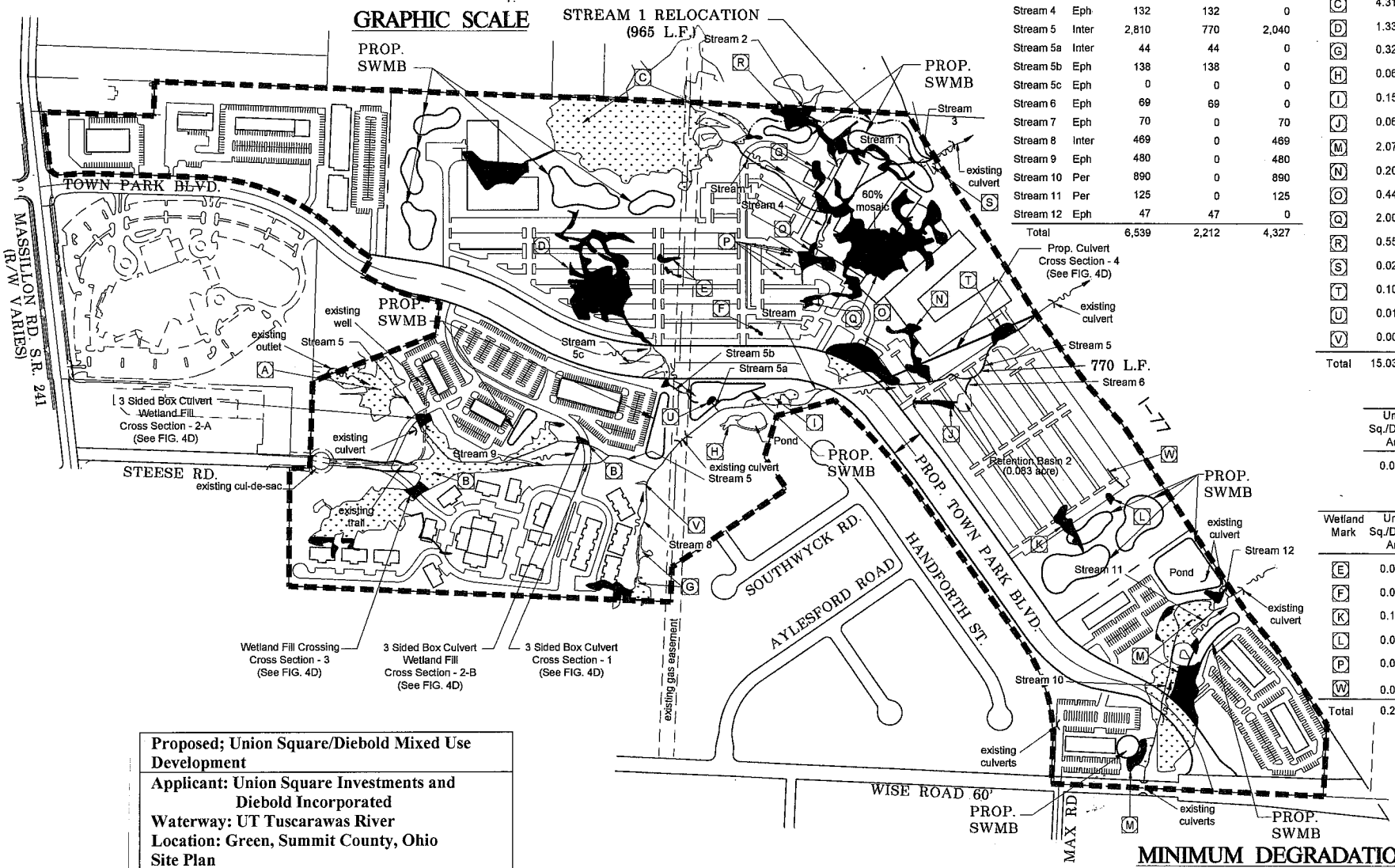
▬ ▬ ▬ ▬ = Approximate study area

SWMB = Storm Water Management Basin

0 200' 400' 800'

GRAPHIC SCALE

NOTE:
IMPACTED WETLAND AREAS SHOWN WITH SOLID SHADING. STREAMS ARE SHOWN WITH BOLD LINE & LENGTH IMPACTED.



Stream Data

Stream Mark		Union Sq./Diebold Stream (L.F.)	Union Sq./Diebold Impact (L.F.)	Preserved Stream (L.F.)
Stream 1	Inter	1,148	998	150
Stream 2	Eph	14	14	0
Stream 3	Inter	103	0	103
Stream 4	Eph	132	132	0
Stream 5	Inter	2,810	770	2,040
Stream 5a	Inter	44	44	0
Stream 5b	Eph	138	138	0
Stream 5c	Eph	0	0	0
Stream 6	Eph	69	69	0
Stream 7	Eph	70	0	70
Stream 8	Inter	469	0	469
Stream 9	Eph	480	0	480
Stream 10	Per	890	0	890
Stream 11	Per	125	0	125
Stream 12	Eph	47	47	0
Total		6,539	2,212	4,327

Wetland Data

Wetland Mark	Union Sq./Diebold Area	Union Sq./Diebold Impact	Preserved Wetland Area
A	0.784 ac.	0.000 ac.	0.784 ac.
B	2.548 ac.	0.328 ac.	2.220 ac.
C	4.318 ac.	0.480 ac.	3.838 ac.
D	1.338 ac.	1.338 ac.	0.000 ac.
G	0.329 ac.	0.149 ac.	0.180 ac.
H	0.069 ac.	0.000 ac.	0.069 ac.
I	0.150 ac.	0.000 ac.	0.150 ac.
J	0.065 ac.	0.065 ac.	0.000 ac.
M	2.076 ac.	0.638 ac.	1.438 ac.
N	0.204 ac.	0.204 ac.	0.000 ac.
O	0.442 ac.	0.442 ac.	0.000 ac.
Q	2.006 ac.	2.006 ac.	0.000 ac.
R	0.550 ac.	0.550 ac.	0.000 ac.
S	0.029 ac.	0.000 ac.	0.029 ac.
T	0.101 ac.	0.101 ac.	0.000 ac.
U	0.016 ac.	0.016 ac.	0.000 ac.
V	0.007 ac.	0.000 ac.	0.007 ac.
Total	15.032 ac.	6.317 ac.	8.715 ac.

Retention Basin 2

Union Sq./Diebold Area	Union Sq./Diebold Impact	Preserved Wetland Area
0.083 ac.	0.083 ac.	0.000 ac.

Isolated Wetland Data

Wetland Mark	Union Sq./Diebold Area	Union Sq./Diebold Impact	Preserved Wetland Area
E	0.038 ac.	0.038 ac.	0.000 ac.
F	0.007 ac.	0.007 ac.	0.000 ac.
K	0.147 ac.	0.147 ac.	0.000 ac.
L	0.019 ac.	0.019 ac.	0.000 ac.
P	0.005 ac.	0.005 ac.	0.000 ac.
W	0.005 ac.	0.005 ac.	0.000 ac.
Total	0.221 ac.	0.221 ac.	0.000 ac.

Proposed; Union Square/Diebold Mixed Use Development

Applicant: Union Square Investments and Diebold Incorporated
Waterway: UT Tuscarawas River
Location: Green, Summit County, Ohio
Site Plan
Sheet 3 of 16

REVISED:
8/22/2012

FIG 4A

MINIMUM DEGRADATION ALTERNATIVE SITE PLAN

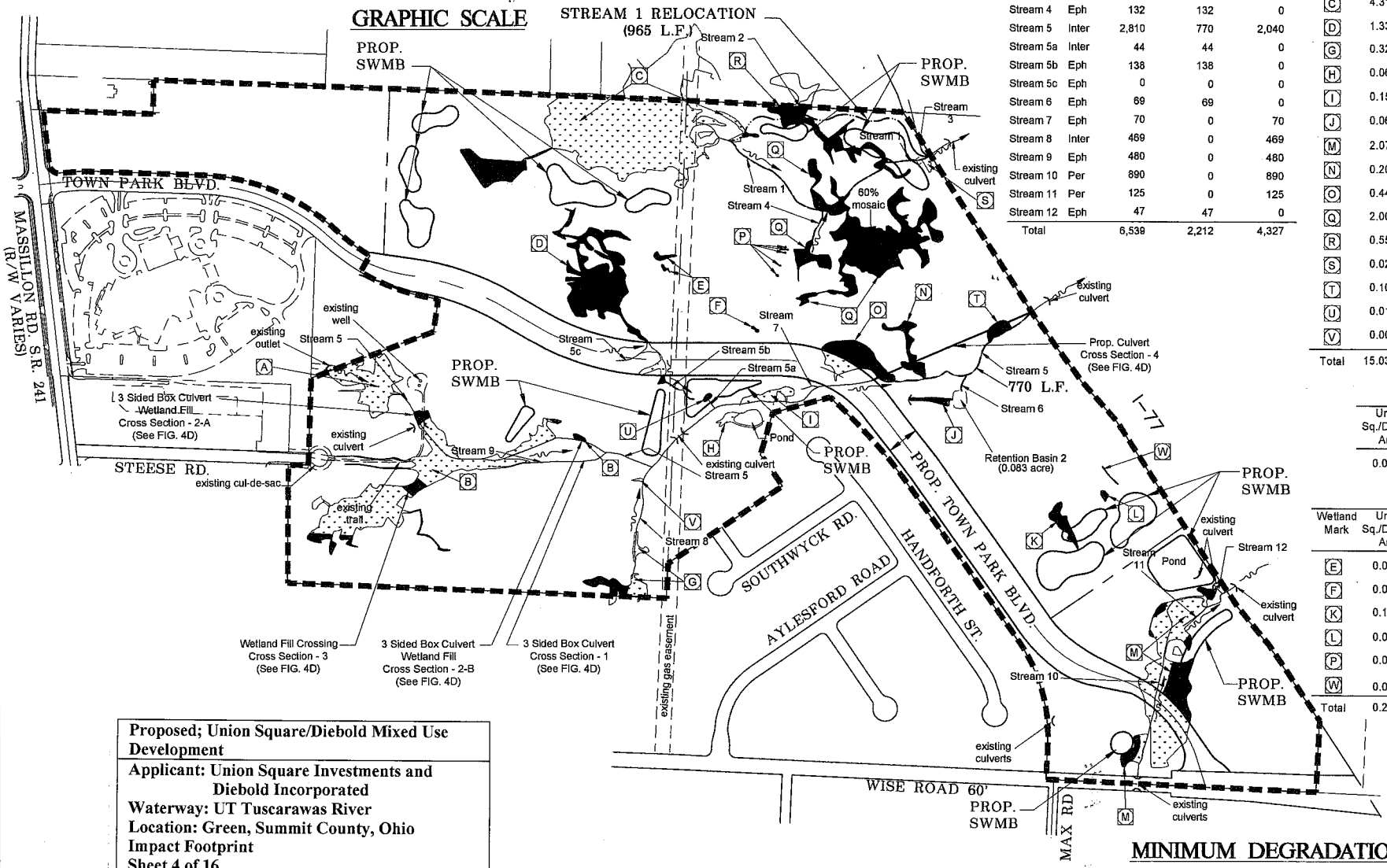
LEGEND

- = Approximate study area
- SWMB = Storm Water Management Basin
- OHWM = Ordinary High Water Mark

0 200' 400' 800'

GRAPHIC SCALE

NOTE:
IMPACTED WETLAND AREAS SHOWN WITH SOLID SHADING. STREAMS ARE SHOWN WITH BOLD LINE & LENGTH IMPACTED.



Stream Mark		Stream Data: Union Sq./Diebold Stream (L.F.)	Union Sq./Diebold Impact (L.F.)	Preserved Stream (L.F.)
Stream 1	Inter	1,148	998	150
Stream 2	Eph	14	14	0
Stream 3	Inter	103	0	103
Stream 4	Eph	132	132	0
Stream 5	Inter	2,810	770	2,040
Stream 5a	Inter	44	44	0
Stream 5b	Eph	138	138	0
Stream 5c	Eph	0	0	0
Stream 6	Eph	69	69	0
Stream 7	Eph	70	0	70
Stream 8	Inter	469	0	469
Stream 9	Eph	480	0	480
Stream 10	Per	890	0	890
Stream 11	Per	125	0	125
Stream 12	Eph	47	47	0
Total		6,539	2,212	4,327

Wetland Mark	Wetland Data: Union Sq./Diebold Area	Union Sq./Diebold Impact	Preserved Wetland Area
A	0.784 ac.	0.000 ac.	0.784 ac.
B	2.548 ac.	0.328 ac.	2.220 ac.
C	4.318 ac.	0.480 ac.	3.838 ac.
D	1.338 ac.	1.338 ac.	0.000 ac.
G	0.329 ac.	0.149 ac.	0.180 ac.
H	0.069 ac.	0.000 ac.	0.069 ac.
I	0.150 ac.	0.000 ac.	0.150 ac.
J	0.065 ac.	0.065 ac.	0.000 ac.
M	2.076 ac.	0.638 ac.	1.438 ac.
N	0.204 ac.	0.204 ac.	0.000 ac.
O	0.442 ac.	0.442 ac.	0.000 ac.
Q	2.006 ac.	2.006 ac.	0.000 ac.
R	0.550 ac.	0.550 ac.	0.000 ac.
S	0.029 ac.	0.000 ac.	0.029 ac.
T	0.101 ac.	0.101 ac.	0.000 ac.
U	0.016 ac.	0.016 ac.	0.000 ac.
V	0.007 ac.	0.000 ac.	0.007 ac.
Total	15.032 ac.	6.317 ac.	8.715 ac.

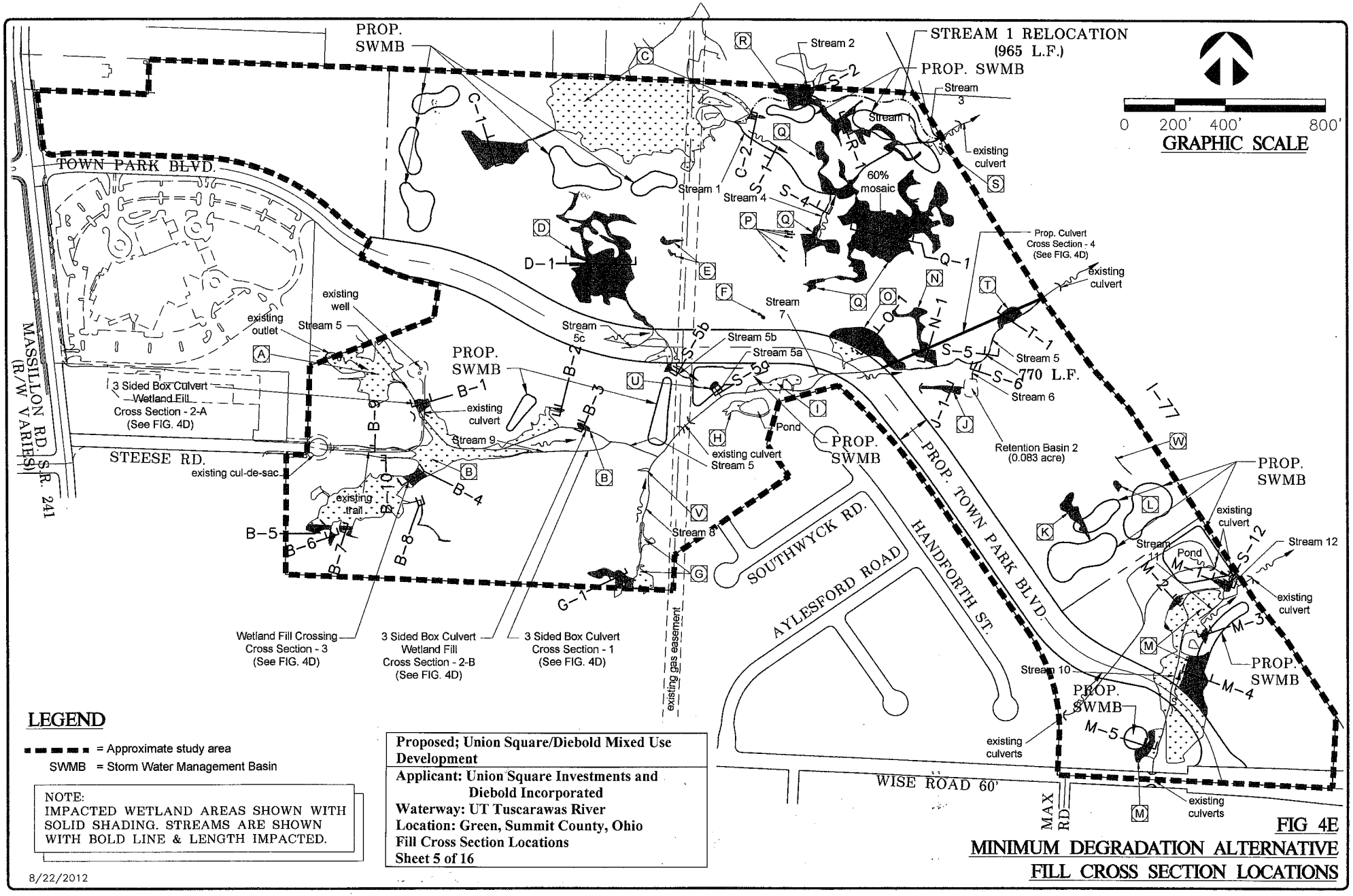
Retention Basin 2: Union Sq./Diebold Area	Union Sq./Diebold Impact	Preserved Wetland Area
0.083 ac.	0.083 ac.	0.000 ac.

Wetland Mark	Isolated Wetland Data: Union Sq./Diebold Area	Union Sq./Diebold Impact	Preserved Wetland Area
E	0.038 ac.	0.038 ac.	0.000 ac.
F	0.007 ac.	0.007 ac.	0.000 ac.
K	0.147 ac.	0.147 ac.	0.000 ac.
L	0.019 ac.	0.019 ac.	0.000 ac.
P	0.005 ac.	0.005 ac.	0.000 ac.
W	0.005 ac.	0.005 ac.	0.000 ac.
Total	0.221 ac.	0.221 ac.	0.000 ac.

Proposed; Union Square/Diebold Mixed Use Development
Applicant: Union Square Investments and Diebold Incorporated
Waterway: UT Tuscarawas River
Location: Green, Summit County, Ohio
Impact Footprint
Sheet 4 of 16

REVISED:
8/22/2012

FIG 4B
MINIMUM DEGRADATION ALTERNATIVE IMPACT FOOTPRINT



LEGEND

= Approximate study area

SWMB = Storm Water Management Basin

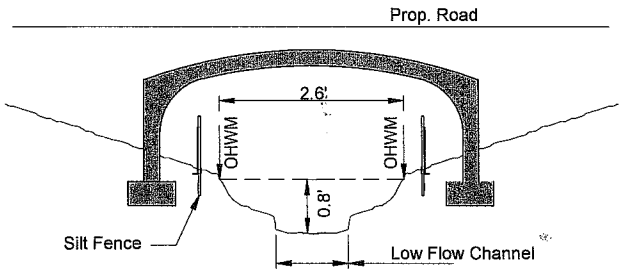
NOTE:
IMPACTED WETLAND AREAS SHOWN WITH SOLID SHADING. STREAMS ARE SHOWN WITH BOLD LINE & LENGTH IMPACTED.

Proposed; Union Square/Diebold Mixed Use Development

Applicant: Union Square Investments and Diebold Incorporated
Waterway: UT Tuscarawas River
Location: Green, Summit County, Ohio
Fill Cross Section Locations
Sheet 5 of 16

8/22/2012

FIG 4E
MINIMUM DEGRADATION ALTERNATIVE
FILL CROSS SECTION LOCATIONS



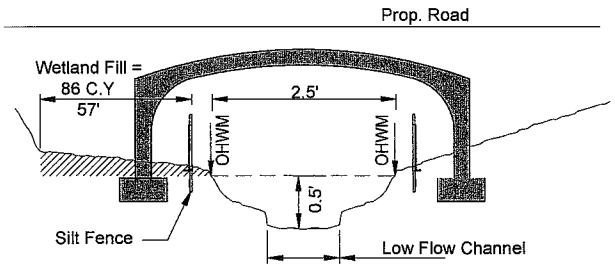
3 SIDED BOX CULVERT
STREAM 9 CROSS SECTION - 1

Not To Scale

LEGEND

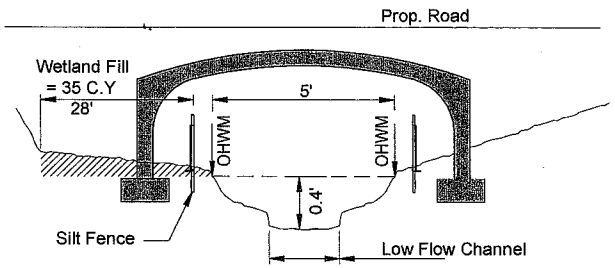
OHWM = Ordinary High Water Mark

Proposed; Union Square/Diebold Mixed Use Development
Applicant: Union Square Investments and Diebold Incorporated **Waterway: UT Tuscarawas River** **Location: Green, Summit County, Ohio** **Culvert Cross Sections** **Sheet 6 of 16**



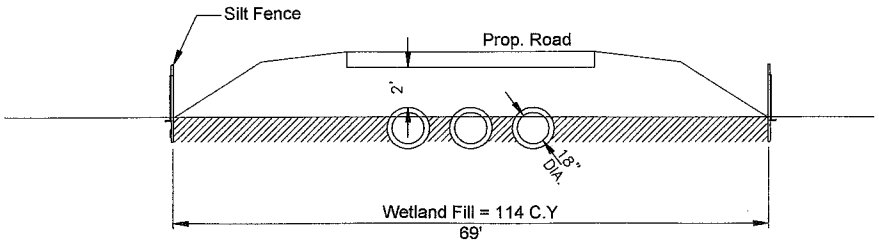
3 SIDED BOX CULVERT - WETLAND FILL
STREAM 5 CROSS SECTION - 2-A

Not To Scale



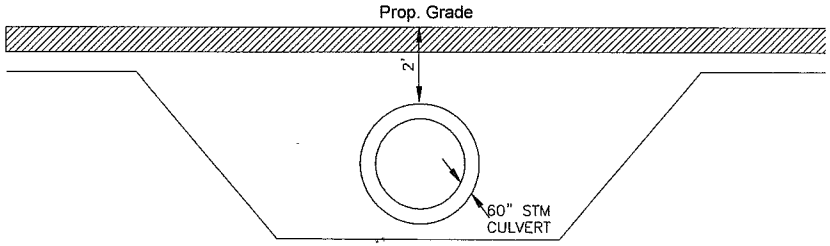
3 SIDED BOX CULVERT - WETLAND FILL
STREAM 5 CROSS SECTION - 2-B

Not To Scale



WETLAND FILL CROSSING
CROSS SECTION - 3

Not To Scale

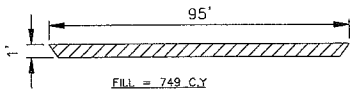


PROPOSED CULVERT REPLACING
STREAM 5 CROSS SECTION - 4

Not To Scale

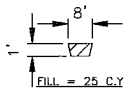
REVISED:
8/22/2012

FIG 4D
WETLAND CROSSING DETAILS



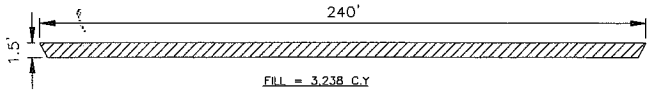
FILL = 749 C.Y

WETLAND C
SECTION C-1
NO SCALE



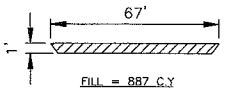
FILL = 25 C.Y

WETLAND C
SECTION C-2
NO SCALE



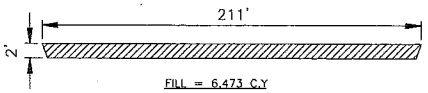
FILL = 3,238 C.Y

WETLAND D
SECTION D-1
NO SCALE



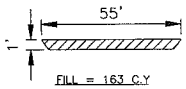
FILL = 887 C.Y

WETLAND R
SECTION R-1
NO SCALE



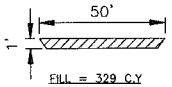
FILL = 6,473 C.Y

WETLAND Q
SECTION Q-1
NO SCALE



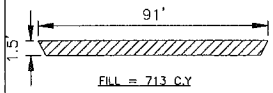
FILL = 163 C.Y

WETLAND T
SECTION T-1
NO SCALE



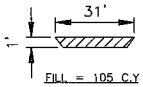
FILL = 329 C.Y

WETLAND N
SECTION N-1
NO SCALE



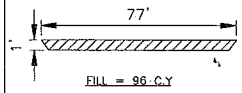
FILL = 713 C.Y

WETLAND O
SECTION O-1
NO SCALE



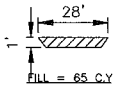
FILL = 105 C.Y

WETLAND J
SECTION J-1
NO SCALE



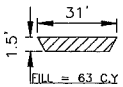
FILL = 96 C.Y

WETLAND M
SECTION M-1
NO SCALE



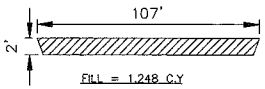
FILL = 65 C.Y

WETLAND M
SECTION M-2
NO SCALE



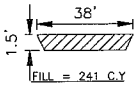
FILL = 63 C.Y

WETLAND M
SECTION M-3
NO SCALE



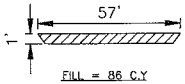
FILL = 1,248 C.Y

WETLAND M
SECTION M-4
NO SCALE



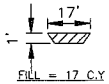
FILL = 241 C.Y

WETLAND M
SECTION M-5
NO SCALE



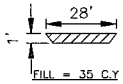
FILL = 86 C.Y

WETLAND B
SECTION B-1
NO SCALE



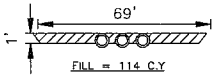
FILL = 17 C.Y

WETLAND B
SECTION B-2
NO SCALE



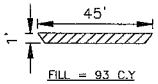
FILL = 35 C.Y

WETLAND B
SECTION B-3
NO SCALE



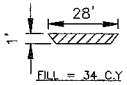
FILL = 114 C.Y

WETLAND B
SECTION B-4
NO SCALE



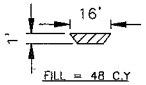
FILL = 93 C.Y

WETLAND B
SECTION B-5
NO SCALE



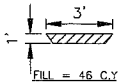
FILL = 34 C.Y

WETLAND B
SECTION B-6
NO SCALE



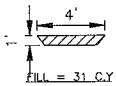
FILL = 48 C.Y

WETLAND B
SECTION B-7
NO SCALE



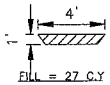
FILL = 46 C.Y

WETLAND B
SECTION B-8
NO SCALE



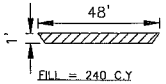
FILL = 31 C.Y

WETLAND B
SECTION B-9
NO SCALE



FILL = 27 C.Y

WETLAND B
SECTION B-10
NO SCALE



FILL = 240 C.Y

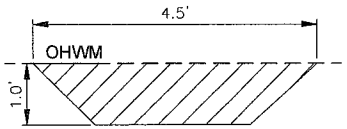
WETLAND G
SECTION G-1
NO SCALE

REVISED:
8/22/2012

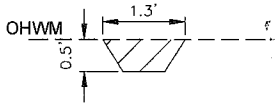
Proposed; Union Square/Diebold Mixed Use Development

Applicant: Union Square Investments and Diebold Incorporated
Waterway: UT Tuscarawas River
Location: Green, Summit County, Ohio
Wetland Fill Cross Sections
Sheet 7 of 16

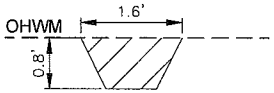
FIG 4F
WETLAND CROSSING DETAILS



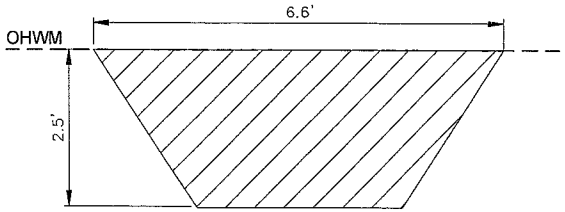
STREAM 1
FILL = 167 C.Y



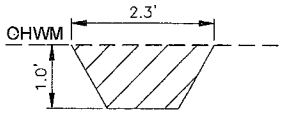
STREAM 2
FILL = 1 C.Y



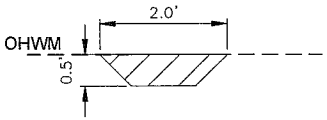
STREAM 4
FILL = 20 C.Y



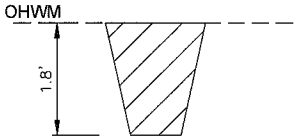
STREAM 5 LOWER
FILL = 453 C.Y



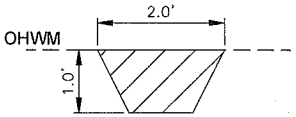
STREAM 5A
FILL = 2.8 C.Y



STREAM 5B
FILL = 4 C.Y



STREAM 6
FILL = 16 C.Y



STREAM 12
FILL = 3 C.Y

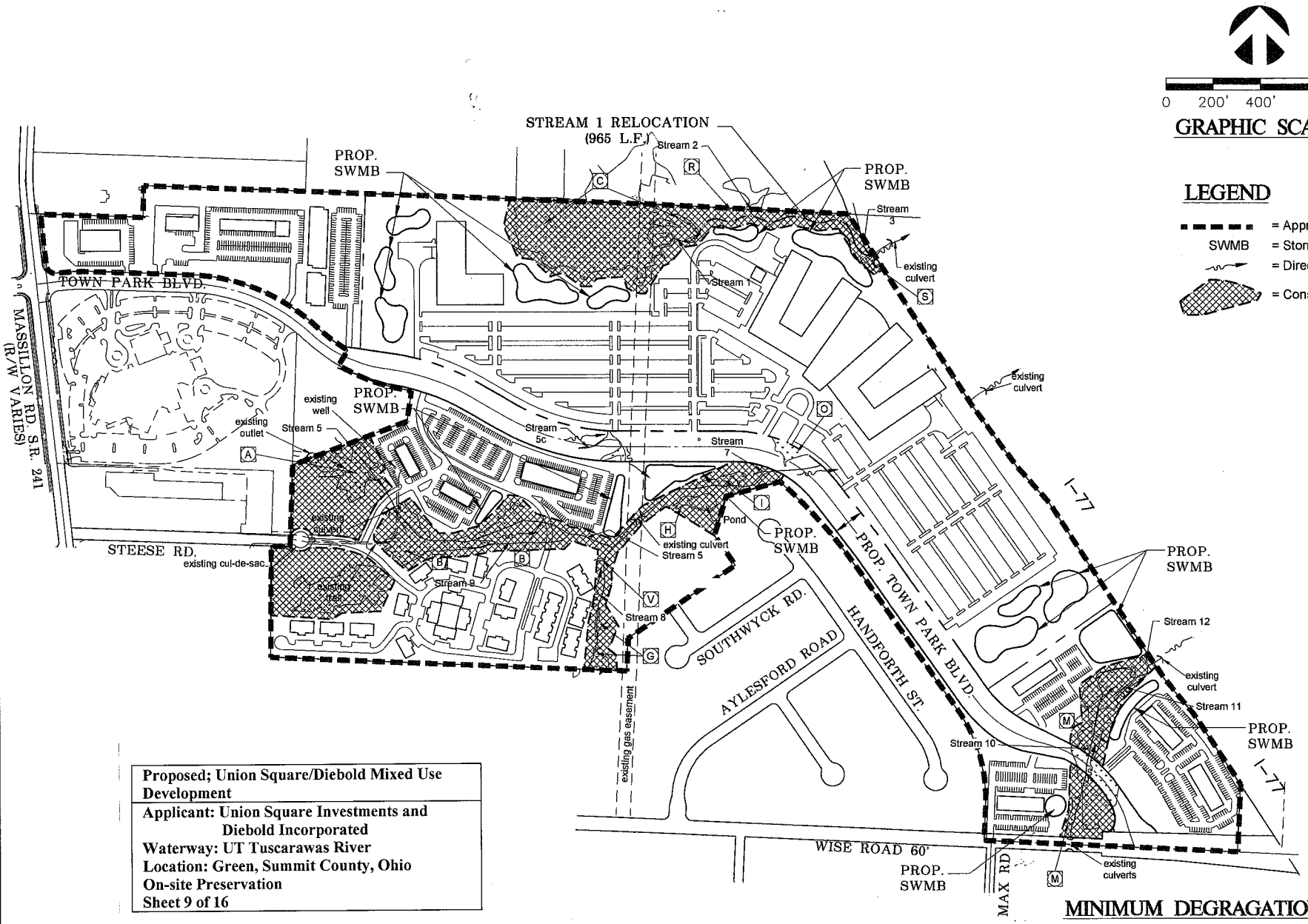
LEGEND

OHWM = Ordinary High Water Mark

Proposed; Union Square/Diebold Mixed Use Development
Applicant: Union Square Investments and Diebold Incorporated **Waterway: UT Tuscarawas River** **Location: Green, Summit County, Ohio** **Stream Fill Cross Sections** **Sheet 8 of 16**

REVISED:
8/22/2012

FIG 4G
STREAM FILL CROSSING SECTIONS



Proposed; Union Square/Diebold Mixed Use Development
Applicant: Union Square Investments and Diebold Incorporated **Waterway: UT Tuscarawas River** **Location: Green, Summit County, Ohio** **On-site Preservation** **Sheet 9 of 16**

CONSEVATION AREA:
22.660 AC.

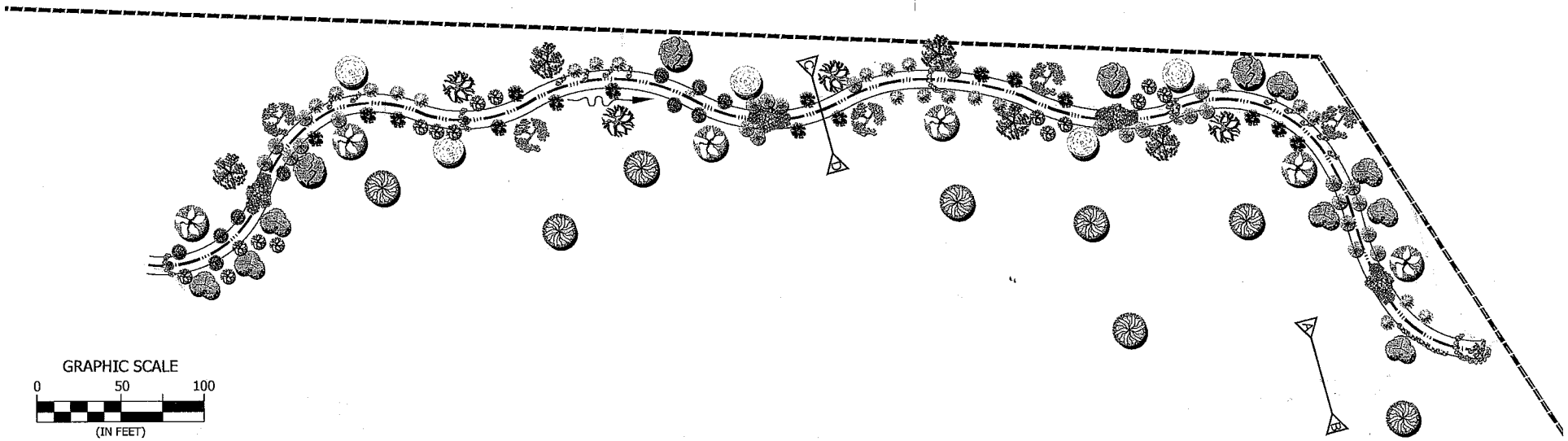
REVISED:
8/22/2012

FIG. 4C
MINIMUM DEGRAGATION ALTERNATIVE
ON-SITE PRESERVATION AREA

Proposed; Union Square/Diebold Mixed Use Development

Applicant: Union Square Investments and Diebold Incorporated
Waterway: UT Tuscarawas River
Location: Green, Summit County, Ohio
Stream 1 Relocation Drawing-1
Sheet 10 of 16

Realigned restored stream and riparian area



Study area

Proposed realigned stream and direction of flow (949 LF). Riparian area, seeded with native basin mix

Newbury riffle grade control structure

Rock riffle and plunge pool habitat

Bendway and/or partial weirs

Rock riffle and in-stream stone habitat

Trees/small trees

- *Acer rubrum* (red maple)
- *Amelanchier laevis* (Allegheny serviceberry)
- *Betula nigra* (river birch)
- *Nyssa sylvatica* (black gum)
- *Taxodium distichum* (bald cypress)
- *Quercus macrocarpa* (bur oak)
- *Quercus palustris* (pin oak)
- *Quercus rubra* (red oak)

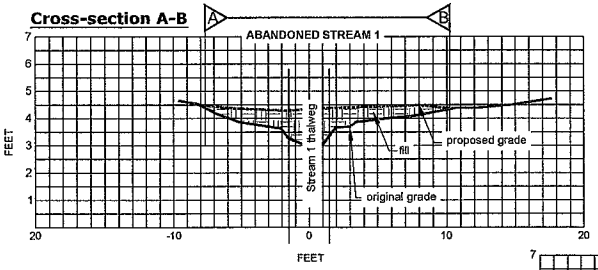
Shrubs

- *Aronia melanocarpa* (black chokeberry)
- *Cephalanthus occidentalis* (buttonbush)
- *Cornus amomum* (silky dogwood)
- *Ilex verticillata* (winterberry)
- *Morella pensylvanica* (northern bayberry)

811 Know what's below. Call before you dig.

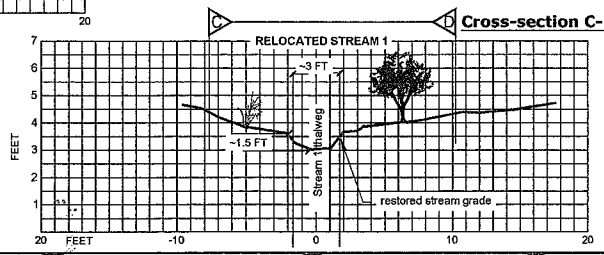
NOTE: Actual species, numbers, and locations will be dependent on availability and post-construction site conditions, including hydrology and projected light levels.

Cross-section A-B



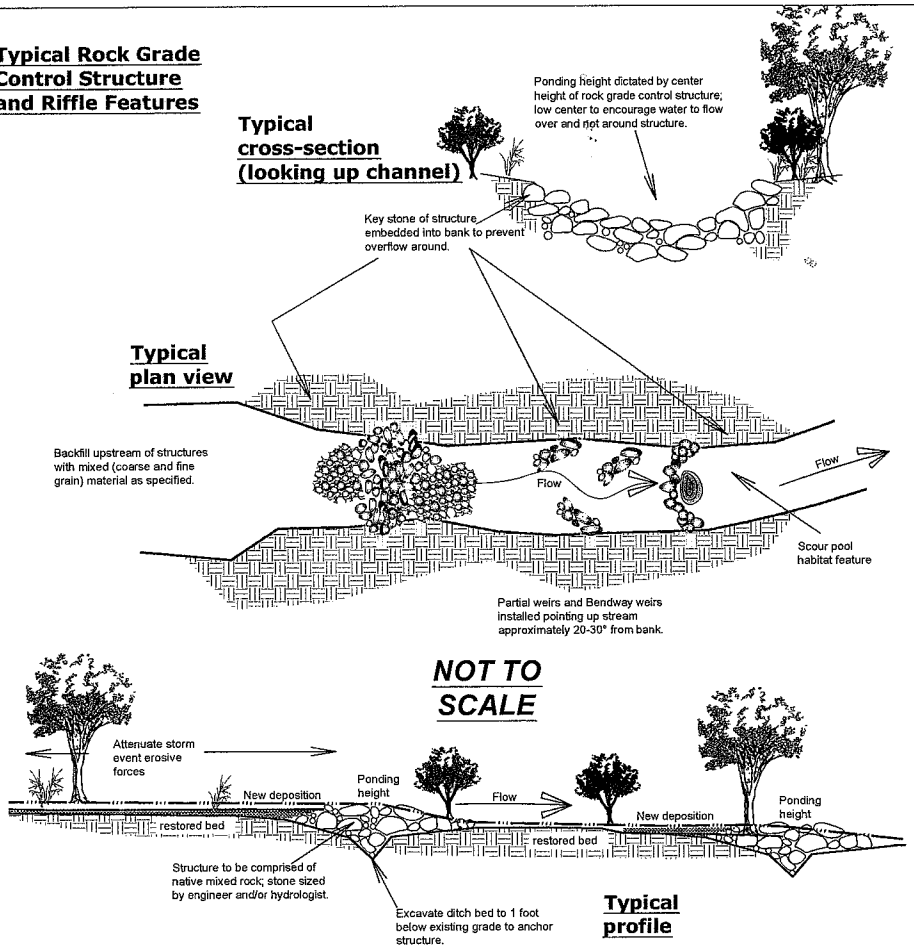
APPROXIMATELY 167 CUBIC YARDS OF FILL WILL BE PLACED IN 998 LINEAR FEET OF ABANDONED STREAM 1 CHANNEL.

Cross-section C-D



Prepared by	Prepared for			
DAVEY RESOURCE GROUP	Union Square Investment, LTD/ Diebold, Incorporated	Union Square Development Site 148.6 Acres, Massillon and Wise Roads Green, Ohio	Conceptional Stream Drawings June, 2012	Sheet 1 of 2

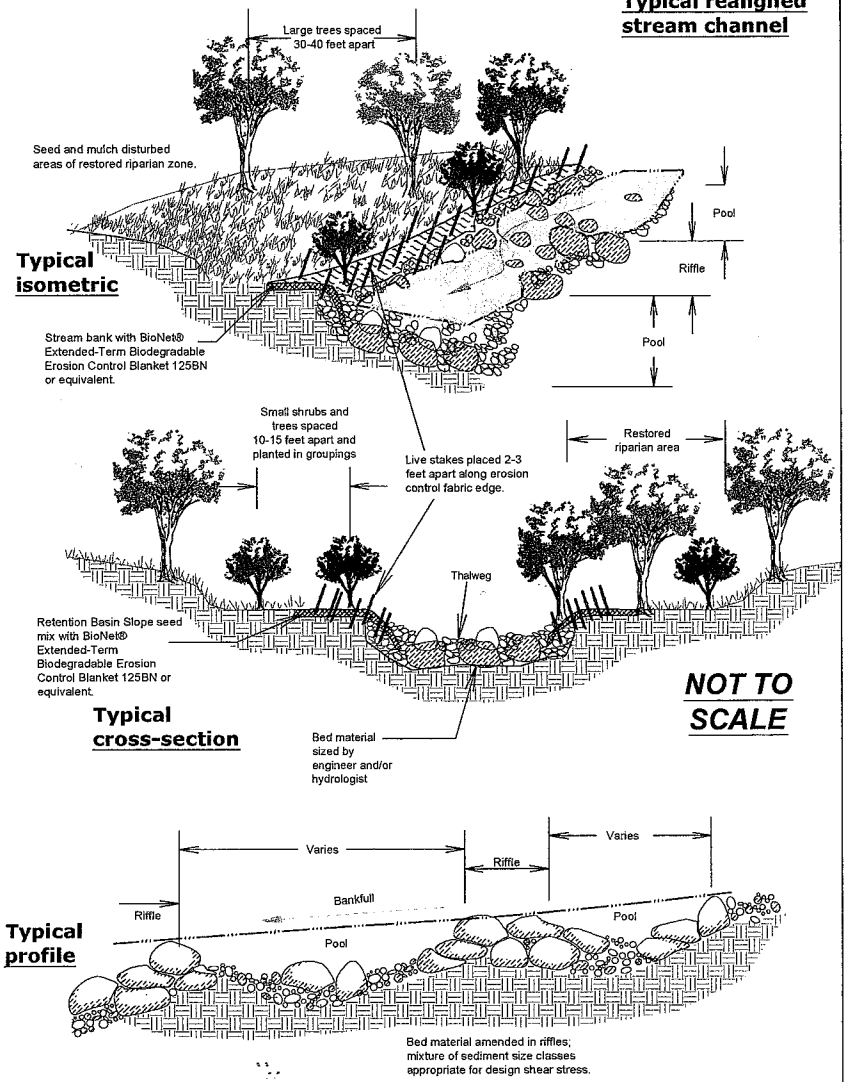
Typical Rock Grade Control Structure and Riffle Features



Ohio Prairie Nursery Retention Basin Slope Seed Mix (Dependent on Availability)

Botanical Name	Common Name
Actinomeris alternifolia	wingstem
Andropogon gerardii	big bluestem
Asclepias incarnata	swamp milkweed
Chamaecrista fasciculata	partridge pea
Coreopsis lanceolata	lanceleaf coreopsis
Echinacea purpurea	purple coneflower
Heliopsis helianthoides	ox eye sunflower
Liatris spicata	dense blazingstar
Monarda fistulosa	wild bergamot
Panicum virgatum	switch grass
Penstemon digitalis	foxglove beardtongue
Ratibida pinnata	grey-headed coneflower
Rudbeckia hirta	black-eyed susan
Rudbeckia triloba	brown-eyed susan
Sorghastrum nutans	indian grass

Typical realigned stream channel



Proposed; Union Square/Diebold Mixed Use Development

Applicant: Union Square Investments and Diebold Incorporated
Waterway: UT Tuscarawas River
Location: Green, Summit County, Ohio
Stream 1 Relocation Drawing-2
Sheet 11 of 16

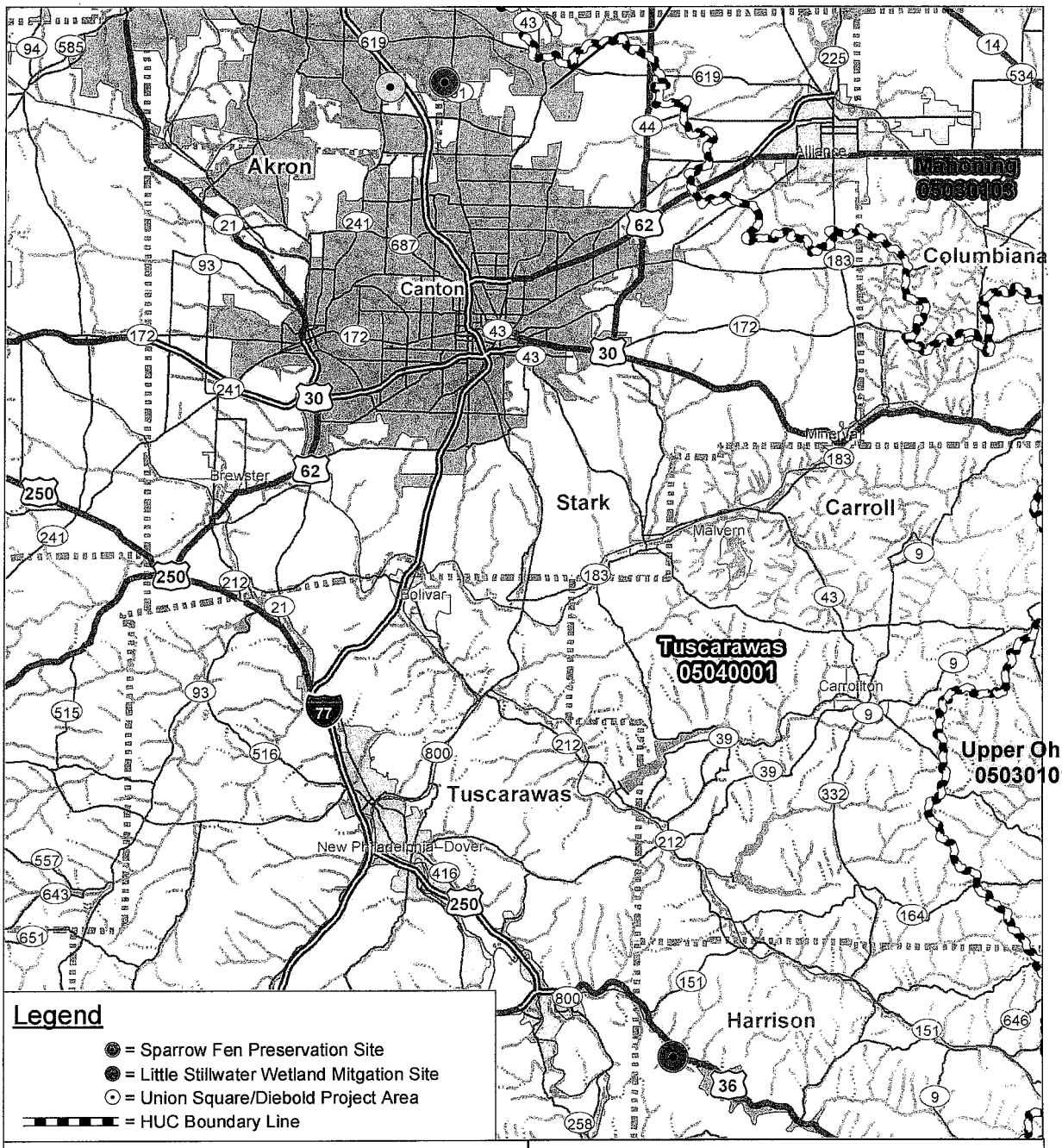
Union Square Development Site
148.6 Acres, Massillon and Wise Roads Green, Ohio

Conceptional Stream Drawings
June, 2012

Sheet 2 of 2

Proposed; Union Square/Diebold Mixed Use Development
Applicant: Union Square Investments and Diebold Incorporated **Waterway: UT Tuscarawas River** **Location: Green, Summit County, Ohio** **Mitigation Location Map** **Sheet 12 of 16**

Appendix A Figure 8
Off-site Mitigation Locations



N W E S

3 1.5 0 3 6
Miles

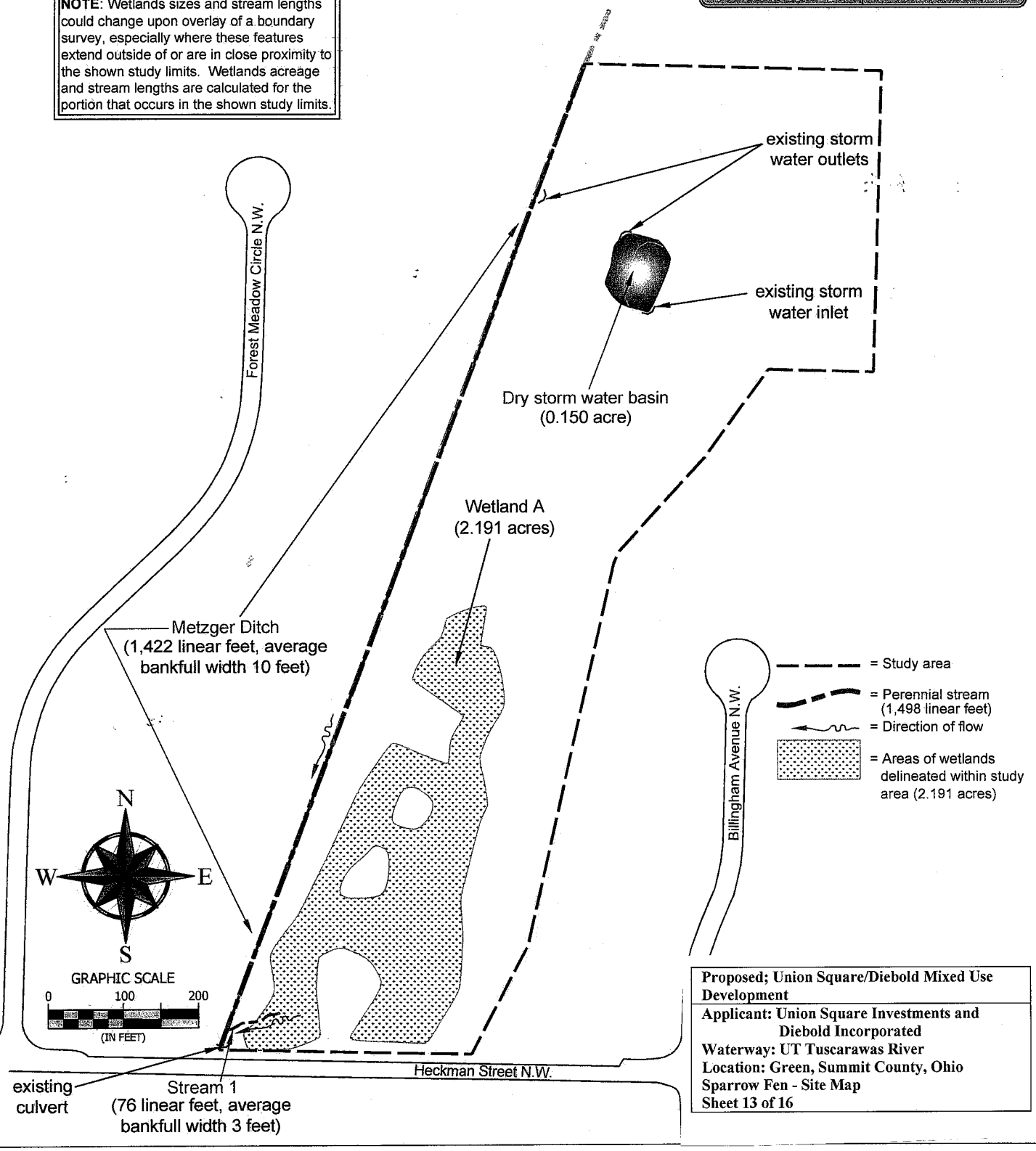
Site Location: Off-site Mitigation Locations for Sparrow Fen, Little Stillwater, and Union Square/Diebold Harrison, Summit & Stark Counties

Source: Esri Redlands, California

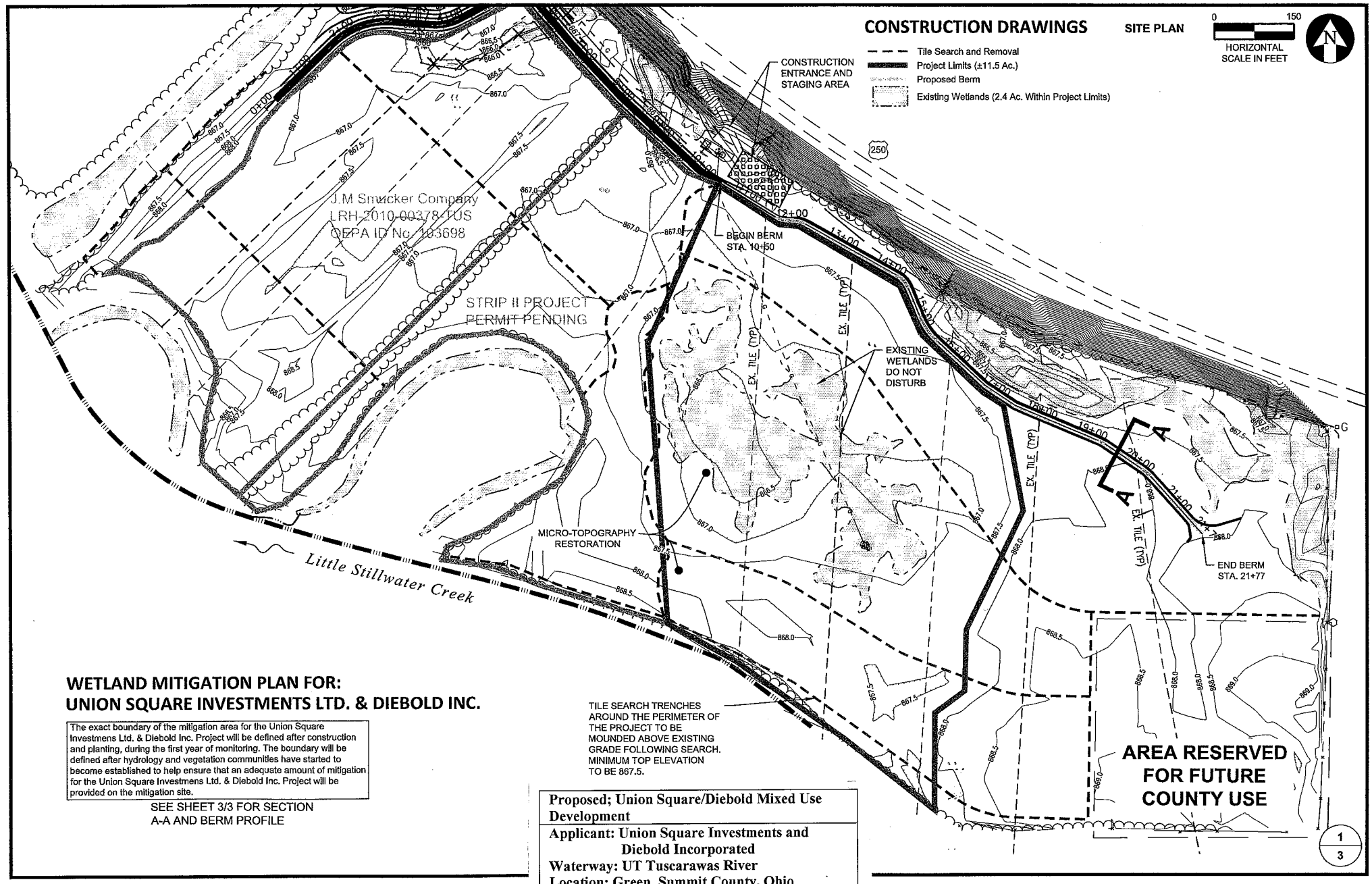
Sparrow Fen Site

Prepared for:
Union Square Investment, LTD/ Diebold, Incorporated
Sparrow Fen Site
11.7 Acres, Heckman Street N.W.
Lake Township, Stark County, Ohio
Prepared by:
DAVEY RESOURCE GROUP
Data used to produce this map were collected on June 21, 2012

NOTE: Wetlands sizes and stream lengths could change upon overlay of a boundary survey, especially where these features extend outside of or are in close proximity to the shown study limits. Wetlands acreage and stream lengths are calculated for the portion that occurs in the shown study limits.



Proposed; Union Square/Diebold Mixed Use Development
Applicant: Union Square Investments and Diebold Incorporated
Waterway: UT Tuscarawas River
Location: Green, Summit County, Ohio
Sparrow Fen - Site Map
Sheet 13 of 16



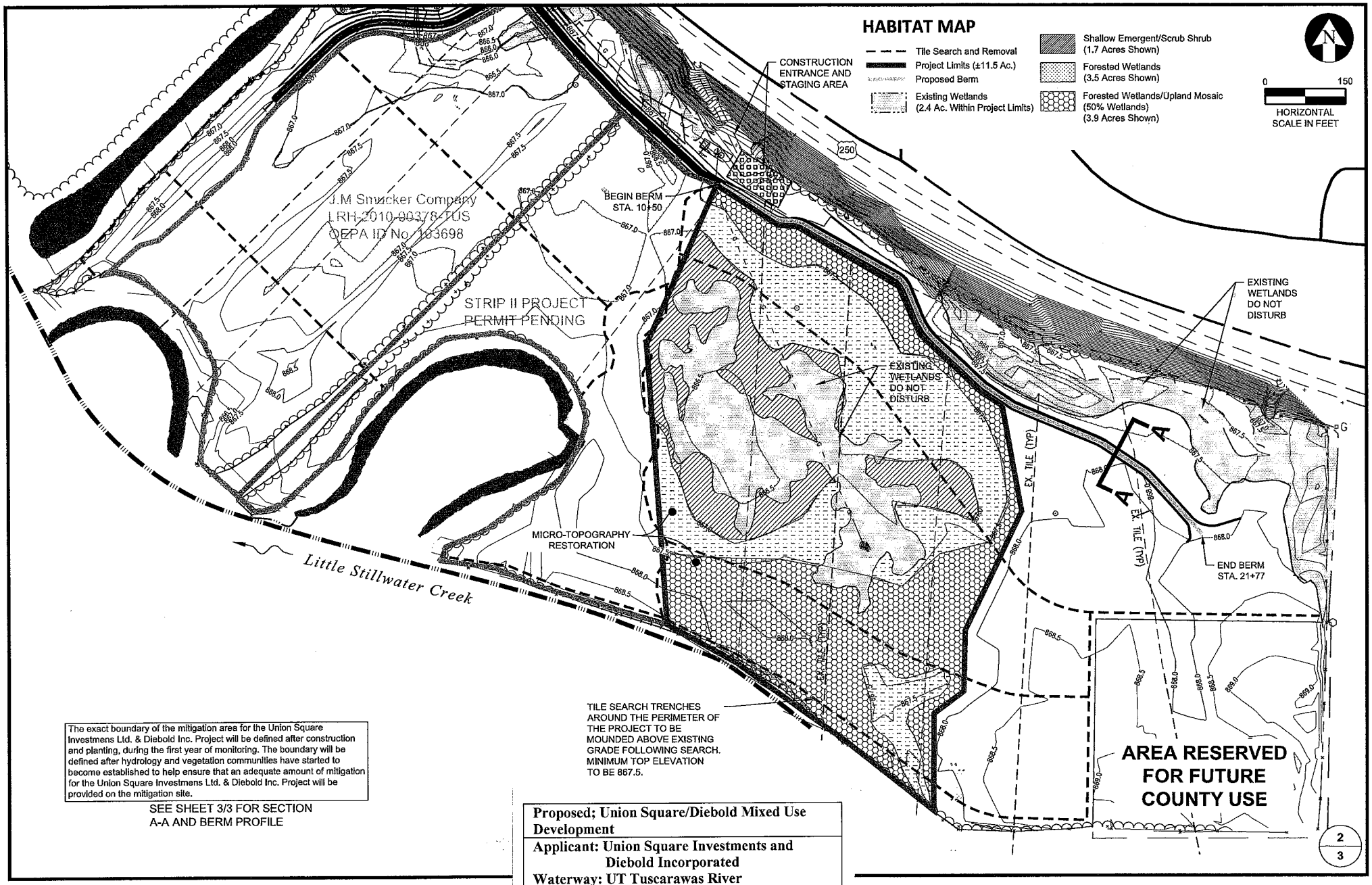
WETLAND MITIGATION PLAN FOR: UNION SQUARE INVESTMENTS LTD. & DIEBOLD INC.

The exact boundary of the mitigation area for the Union Square Investmens Ltd. & Diebold Inc. Project will be defined after construction and planting, during the first year of monitoring. The boundary will be defined after hydrology and vegetation communities have started to become established to help ensure that an adequate amount of mitigation for the Union Square Investmens Ltd. & Diebold Inc. Project will be provided on the mitigation site.

SEE SHEET 3/3 FOR SECTION A-A AND BERM PROFILE

Proposed; Union Square/Diebold Mixed Use Development

Applicant: Union Square Investments and Diebold Incorporated
Waterway: UT Tuscarawas River
Location: Green, Summit County, Ohio
Little Stillwater Creek Mitigation Site - Construction Drawing
Sheet 14 of 16



The exact boundary of the mitigation area for the Union Square Investmens Ltd. & Diebold Inc. Project will be defined after construction and planting, during the first year of monitoring. The boundary will be defined after hydrology and vegetation communities have started to become established to help ensure that an adequate amount of mitigation for the Union Square Investmens Ltd. & Diebold Inc. Project will be provided on the mitigation site.

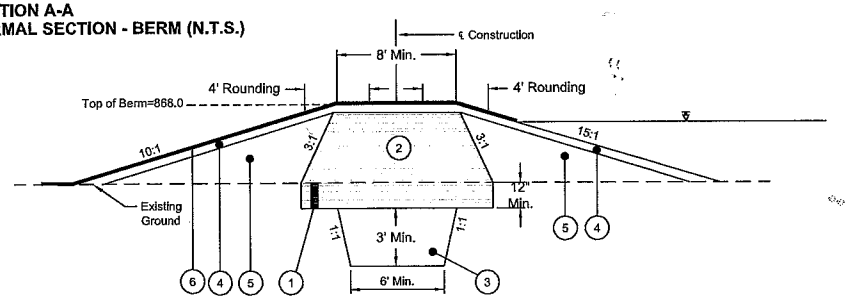
SEE SHEET 3/3 FOR SECTION A-A AND BERM PROFILE

Proposed; Union Square/Diebold Mixed Use Development

Applicant: Union Square Investments and Diebold Incorporated
Waterway: UT Tuscarawas River
Location: Green, Summit County, Ohio
Little Stillwater Creek Mitigation Site -Habitat Map
Sheet 15 of 16

PROFILES AND SECTIONS

SECTION A-A
NORMAL SECTION - BERM (N.T.S.)



LEGEND

1. Foundation Preparation
2. Compacted Clay Berm
3. Compacted Clay Core Trench
4. Min. 6" topsoil, shall be free of all sod, roots, frozen soil, stones larger than 4" diameter, and all other questionable material.
5. Compacted soil, shall be free of all sod, roots, frozen soil, stones Larger than 4" diameter, and all other questionable material.
6. Berm Seeding and Mulching

UNDERGROUND UTILITIES

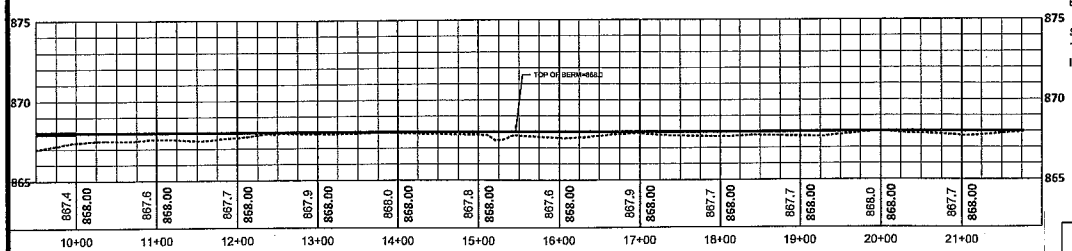
CONTACT BOTH SERVICES
CALL TWO WORKING DAYS BEFORE YOU DIG

CALL
1-800-362-2764
(TOLL FREE)
OHIO UTILITIES PROTECTION SERVICE
NON-MEMBERS
MUST BE CALLED DIRECTLY

OIL & GAS PRODUCERS PROTECTIVE
SERVICE CALL: 1-800-925-0988

PROFILE ALONG CENTERLINE OF BERM

0 150
HORIZONTAL
SCALE IN FEET



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WWW.OHIOWET

UTILITY LOCATIONS

LOCATIONS AND ELEVATIONS OF EXISTING UTILITIES AND STRUCTURES SHOWN IN THE PLANS ARE APPROXIMATE ONLY. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE THEIR EXACT LOCATION AND ELEVATION WHEN WORKING IN THEIR VICINITY.

WHERE POTENTIAL GRADE CONFLICTS MIGHT OCCUR WITH EXISTING UTILITIES, THE CONTRACTOR SHALL UNCOVER SUCH UTILITIES SUFFICIENTLY IN ADVANCE OF CONSTRUCTION IN ORDER THAT THE EXACT ELEVATION MAY BE DETERMINED AND THE NECESSARY ADJUSTMENTS MADE. COST OF THE ABOVE, IF ANY,WILL BE INCLUDED IN THE PRICE BID FOR THE PERTINENT ITEM.

LOCATION, SUPPORT, PROTECTION AND RESTORATION OF ALL UTILITY LINES, SERVICES AND APPURTENANCES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE COST OF THIS WORK SHALL BE INCLUDED WITH THE PRICE BID FOR THE PERTINENT ITEM, UNLESS OTHERWISE NOTED ON THE PLANS.

SITE PREPARATION

THE FOUNDATION AREA AND BORROW AREAS WILL BE CLEARED OF ALL TREES, STUMPS, ROOTS, BRUSH, ROCKS AND OTHER DEBRIS. THE DISPOSAL AREA FOR ALL CLEARED MATERIAL WILL BE SHOWN ON THE PLANS OR AT A LOCATION MUTUALLY ACCEPTABLE BY THE CONTRACTOR AND THE PROJECT OWNER.

THE FOUNDATION AREA WILL BE STRIPPED TO A MINIMUM OF 12 INCHES. AFTER STRIPPING, AN EXAMINATION OF THE FOUNDATION AREA WILL BE MADE BY THE PROJECT MANAGER AND ALL POCKETS OF ORGANIC SOIL, SAND AND GRAVELS, AND OTHER UNSUITABLE MATERIAL WILL BE REMOVED. ALL SLOPES WITHIN THE FOUNDATION AREA WILL BE NO STEEPER THAN 1:1 AND WILL BE SHAPED TO ACCOMMODATE COMPACTION EQUIPMENT.

BORROW AREAS WILL BE STRIPPED OF ALL VEGETATION, ORGANIC MATTER, AND OTHER UNSUITABLE MATERIALS.

TOPSOIL

THE TOPSOIL STOCKPILED DURING SITE PREPARATION SHALL BE PLACED AS A TOP DRESSING ON THE SURFACE OF THE EMERGENCY SPILLWAY, EARTH FILL, AND BORROW AREAS. TOPSOIL USED AS A TOP DRESSING SHALL BE FREE OF ALL SOD, ROOTS, STONES GREATER THAN 4 INCHES IN DIAMETER AND ALL OTHER DELETERIOUS MATERIALS. TOPSOIL SHALL BE SPREAD ON THE ABOVE-MENTIONED LOCATIONS AT A MINIMUM DEPTH OF 6 INCHES. TOPSOIL MAY BE PLACED MORE THAN 6 INCHES DEEP IN AREAS SHOWN ON THE ON THE TYPICAL CROSS SECTIONS. THE CONSTRUCTION SEQUENCE OF BERMS SHALL BE DONE SO AS TO LIMIT THE AMOUNT OF TIME THE TOPSOIL IS STOCKPILED TO LESS THAN 60 DAYS. TOPSOIL STOCKPILES SHALL HAVE TEMPORARY SEEDING APPLIED TO IT IF IT IS TO BE STOCKPILED FOR MORE THAN 14 DAYS.

RESTORED MICRO-TOPOGRAPHY

THE CONTRACTOR SHALL DISRUPT THE SURFACE DRAINAGE IN THE "RESTORED MICRO-TOPOGRAPHY" AREAS BY CREATING SMALL POCKETS OF WATER BY DISTURBING A MINIMUM OF 80% OF THE SURFACE AREA BY CREATING RUTS, GOUGES, DIVOTS, DEPRESSIONS, SURFACE DRAINAGE PLUGS, SMALL POOLS, AND SMALL IMPOUNDMENTS, ETC. THE WORK SHALL LEAVE A MINIMUM OF 6-INCHES OF TOPSOIL COVERAGE OVER THE ENTIRE AREA.

SLOPES IN AND AROUND SMALL POOLS, DEPRESSIONS, AND IMPOUNDMENTS SHALL TYPICALLY HAVE A MAXIMUM SLOPE OF 10:1 AND NO LESS THAN ½ OF THE PERIMETER SHALL HAVE SLOPES STEEPER THAN 15:1. FOLLOWING REPLACEMENT OF THE TOPSOIL AVERAGE POOL AND DEPRESSION DEPTH SHALL BE 18-INCHES BUT NO GREATER THAN 24-INCHES. POOL AND DEPRESSION BOTTOMS, ALONG WITH IMPONDMENTS WILL NOT BE SMOOTH GRADED, DEPTH CAN VARY WITHIN THE POOL, BUT MINIMUM TOPSOIL COVERAGE SHALL APPLY.

SIZE OF DEPRESSIONS, POOLS, AND IMPOUNDMENTS SHALL VARY FROM 0.10 ACRES TO 0.50 ACRES, WITH A GREATER DENSITY OF SMALLER POOLS. SHAPES SHALL BE IRREGULAR AND VARY FROM POOL TO POOL.

EARTH FILL

PRIOR TO BEGINNING PLACEMENT OF EARTH FILL, THE SURFACE OF THE FOUNDATION AREA WILL BE SCARIFIED TO A DEPTH OF 6 INCHES AND COMPACTED TO THE SAME REQUIREMENTS AS SPECIFIED FOR EARTH FILL.

FILL MATERIAL WILL BE OBTAINED FROM THE BORROW AREA(S) AND SHALL BE FREE OF ALL SOD, ROOTS, FROZEN SOIL, STONES LARGER THAN 6 INCHES DIAMETER, AND OTHER OBJECTIONABLE MATERIAL. THE BORROW MATERIAL SHALL BE TESTED BY THE ENGINEER PRIOR TO USING IT AS FILL IN THE BERM. THE PLACING AND SPREADING OF THE FILL MATERIAL SHALL BE AT THE LOWEST POINT IN THE FOUNDATION AREA AND SHALL BE PLACED IN HORIZONTAL LIFTS WITH A MAXIMUM THICKNESS OF 6 INCHES PRIOR TO COMPACTION. THE SOIL SHALL BE WITHIN -2% AND 3% OF OPTIMUM MOISTURE CONTENT AND COMPACTED TO 98% OF OPTIMUM DRY DENSITY AS PER ASTM D698. A SHEEPSFOOT ROLLER SHALL BE USED TO COMPACT EACH LIFT (200 PSI MINIMUM RATING). THE PLACED FILL SHALL BE TESTED A MINIMUM OF ONCE PER 1000 S.Y. OF PLACED MATERIAL.

THE DISTRIBUTION AND GRADATION OF MATERIALS THROUGHOUT THE FILL SHALL BE SUCH THAT THERE WILL BE NO LENSES, POCKETS, STREAKS, OR LAYERS OF MATERIAL DIFFERING SUBSTANTIALLY IN TEXTURE OR GRADATION FROM THE SURROUNDING MATERIAL. WHERE IT IS NECESSARY TO USE MATERIALS OF VARYING TEXTURE AND GRADATION, THE MORE IMPERVIOUS MATERIAL SHALL BE PLACED IN THE UPSTREAM AND CENTER PORTIONS OF THE FILL.

THE MOISTURE CONTENT OF THE FILL MATERIAL BEING PLACED MUST BE MAINTAINED WITHIN THE LIMITS REQUIRED TO PERMIT SATISFACTORY COMPACTION. IF BORROW MATERIAL IS DRY, WATER MUST BE ADDED BY IRRIGATING THE BORROW AREA OR BY SPRINKLING EACH FILL LAYER PRIOR TO COMPACTION. AFTER ADDING WATER, THE FILL MATERIAL MUST BE MIXED TO OBTAIN A UNIFORM MOISTURE CONTENT PRIOR TO COMPACTION. MATERIAL THAT IS TOO WET WHEN PLACED ON THE FILL SHALL BE RE- MOVED, OR DRIED BY DISKING PRIOR TO COMPACTION.

IF THE TOP SURFACE OF THE PRECEDING LAYER OF COMPACTED FILL, OR ABUTMENT SURFACE IN THE ZONE OF CONTACT WITH THE FILL BECOMES TOO DRY TO PERMIT A SUITABLE BOND, IT SHALL BE SCARIFIED AND MOISTENED BY SPRINKLING TO AN ACCEPTABLE MOISTURE CONTENT PRIOR TO PLACEMENT OF THE NEXT LAYER OF FILL. IF THE TOP SURFACE OF THE FILL BECOMES TOO WET OR FROZEN, THIS MATERIAL MUST BE REMOVED PRIOR TO PLACEMENT OF THE NEXT LAYER OF FILL.

THE FINISH GRADE (AFTER PLACEMENT OF TOPSOIL) SHALL BE TO THE ELEVATIONS PLUS 0.3 FEET TO COMPENSATE FOR SETTLEMENT.

TILE SEARCH & REMOVAL

AT THE LOCATIONS SHOWN ON THE PLANS, A TILE SEARCH TRENCH SHALL BE EXCAVATED WITH A BACKHOE OR OTHER APPROVED METHOD. THE TRENCH SHALL BE A MINIMUM OF 48" DEEP AND 24" WIDE. ALL TILES ENCOUNTERED ALONG THE COURSE OF THE TRENCH SHALL BE REMOVED 15-FEET LEFT AND RIGHT OF THE TRENCH FOR A TOTAL REMOVAL OF 30-FEET. IF FIFTEEN 15-FEET IN EITHER DIRECTION IS UNOBTAINABLE, A TOTAL OF THIRTY 30-FEET OF REMOVAL SHALL BE PERFORMED. THE TILE REMOVAL TRENCH SHALL BE TO THE SAME DIMENSIONS AND BACKFILL SPECIFICATIONS AS THE TILE SEARCH TRENCH.

ALL TILES ENCOUNTERED SERVING ADJACENT PROPERTIES SHALL BE RECONNECTED. SIZES SHALL BE DETERMINED IN THE FIELD. PAYMENT FOR TILE RECONNECTION SHALL BE PAID UNDER A SEPARATE ITEM.

WHEN TILE IS ENCOUNTERED TO BE REMOVED, THE CONTRACTOR SHALL MARK THE LOCATION WITH RIBBON AND LATHE. LATHE SHALL BE LABELED WITH THE SIZE, MATERIAL, AND APPROXIMATE DEPTH TO INVERT OF THE TILE ENCOUNTERED.

BACKFILL

THE TILE SEARCH TRENCH AND 30-FEET TILE REMOVAL TRENCH SHALL BE BACKFILLED WITH CLAY IN LIFTS WITH A MAXIMUM THICKNESS OF 6-INCHES USING A HOE-PACK OR OTHER PRIOR APPROVED METHOD. IN THE EVENT NO CLAY IS PRESENT ONSITE, TRENCHES SHALL BE BACKFILLED WITH AN ENGINEER APPROVED MATERIAL. MATERIAL SHALL BE FREE FROM ALL SOD, ROOTS, FROZEN SOIL, STONES LARGER THAN 6-INCHES DIAMETER, AND OTHER OBJECTIONABLE MATERIAL. A MINIMUM OF 4-INCHES OF TOPSOIL SHALL BE PLACED OVER THE TILE SEARCH AND REMOVAL TRENCHES.

WARRANTY

THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY TILE WORK FOR 12 MONTHS FOLLOWING CONSTRUCTION. IF WITHIN THIS TIME PERIOD IT IS DETERMINED THAT TILES WERE NOT REMOVED WITHIN THE TILE SEARCH PATH, OR TILES CONVEYING OFFSITE DRAINAGE WERE NOT RECONNECTED, THE CONTRACTOR SHALL RETURN TO THE SITE TO COMPLETE THE WORK. COST SHALL BE INCLUDED IN THE TILE SEARCH ITEM.

3
3

Proposed; Union Square/Diebold Mixed Use Development

Applicant: Union Square Investments and Diebold Incorporated
Waterway: UT Tuscarawas River
Location: Green, Summit County, Ohio
Little Stillwater Creek Mitigation Site – Profile and Section Views
Sheet 16 of 16