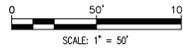
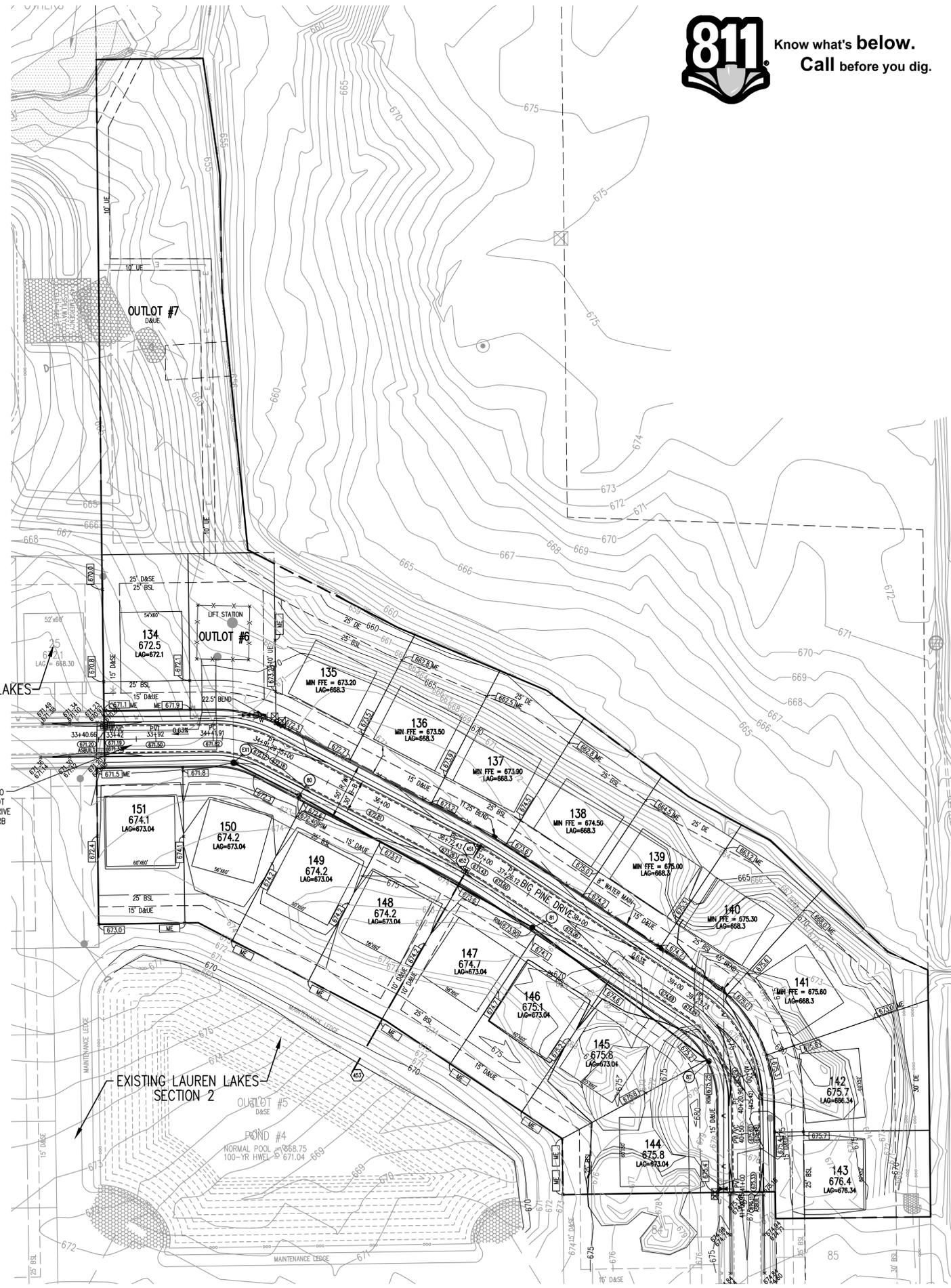


Plot Date: Nov 30, 2015 Plot Time: 1:44pm File Name: L:\4\4880\010\dwgs\4880010-C101.dwg, Layout: C101 By: jep



BENCHMARK

CONTROL BENCHMARK:
 "T-11" - IRON PIN AT THE INTERSECTION OF COUNTY ROAD 500 NORTH AND COUNTY ROAD 50 WEST. ELEVATION PER TIPPECANOE COUNTY GIS MAPPING PROJECT - GPS CONTROL DATA, PROVIDED BY THE TIPPECANOE COUNTY SURVEYOR. ELEVATION = 675.84 (NAVD 88)

TEMPORARY SITE BENCHMARKS:
 "TBM #4880001-1" - CUT "X" IN THE SOUTH BOLT OF THE FIRE HYDRANT NEAR THE ENTRANCE TO WINDING CREEK SUBDIVISION, AT THE SOUTHEAST CORNER OF GRAPEVINE BLVD. AND GARDENIA DRIVE. ELEVATION = 671.01 (NAVD 88)

"TBM #4880001-2" - BOAT SPIKE IN UTILITY POLE ON NORTH SIDE OF COUNTY ROAD 500 NORTH, FIRST POLE EAST OF BRIDGE, ±2.5 FEET UP. (POLE I.D. "CF123") ELEVATION = 654.96 (NAVD 88)

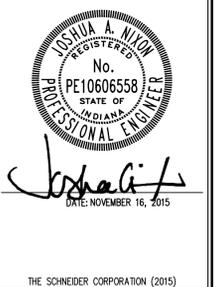
- EXISTING STORM SEWER
 - NEW STORM SEWER
 - EXISTING SANITARY SEWER
 - NEW SANITARY SEWER
 - EXISTING CONTOUR
 - EXISTING ELEVATION
 - NEW PAVEMENT GRADE
 - ALL OTHER FINISH GRADES
 - MATCH EXISTING GRADES
 - CORRECTED GRADES
 - STORM STRUCTURE NUMBER
 - SANITARY STRUCTURE NUMBER
- 000.0 DENOTES ELEVATION AND APPROXIMATE PAD SIZE
- 4" SUBSURFACE DRAIN SWALE (f)
- W WATER MAIN
- * DENOTES PAD WITH 2' OR MORE OF FILL AFTER STRIPPING
- EXISTING TREES
- EXISTING GAS MAIN
- EXISTING TELEPHONE
- EXISTING WATER MAIN
- EXISTING FLOWLINE
- EXISTING OVERHEAD UTILITIES
- B-B BACK OF CURB TO BACK OF CURB
- R/W RIGHT-OF-WAY
- D&UE DRAINAGE AND UTILITY EASEMENT
- DE DRAINAGE EASEMENT
- BSL BUILDING SETBACK LINE
- LAG LOWEST ADJACENT GRADE

GENERAL NOTES

1. ALL GRADES AT BOUNDARY SHALL MEET EXISTING GRADES.
2. IT SHALL BE THE RESPONSIBILITY OF EACH SUBCONTRACTOR TO VERIFY ALL EXISTING UTILITIES AND CONDITIONS PERTAINING TO THE PHASE OF WORK. IT SHALL ALSO BE THE SUBCONTRACTOR'S RESPONSIBILITY TO CONTACT THE OWNERS OF THE VARIOUS UTILITIES FOR PROPER STAKE LOCATION OF EACH UTILITY BEFORE WORK IS STARTED. THE SUBCONTRACTOR SHALL NOTIFY IN WRITING THE OWNER AND THE ENGINEER OF ANY CHANGES, OMISSIONS, OR ERRORS FOUND ON THESE PLANS OR IN FIELD BEFORE WORK IS STARTED OR RESUMED.
3. STANDARD SPECIFICATIONS (LATEST EDITION) FOR THE CITY OF WEST LAFAYETTE, INDIANA SHALL APPLY FOR ALL STREETS, STORM SEWERS AND SANITARY SEWERS. STANDARD SPECIFICATIONS (LATEST EDITION) FOR INDIANA-AMERICAN WATER COMPANY SHALL APPLY FOR ALL WATER MAINS.
4. ANY PART OF THE SANITARY OR STORM SEWER TRENCHES RUNNING UNDER PAVED AREAS TO BE BACKFILLED WITH GRANULAR MATERIAL. BACKFILL TO BE COMPACTED IN 6" LIFTS DURING INSTALLATION.
5. THE SIZE AND LOCATION OF EXISTING UTILITIES SHOWN ARE PER INFORMATION PROVIDED BY THE RESPECTIVE UTILITY COMPANIES. ALL UTILITY COMPANIES SHOULD BE NOTIFIED PRIOR TO ANY EXCAVATION FOR FIELD LOCATION OF SERVICES.
6. 5" CONCRETE WALK ACROSS FRONTAGE OF EACH LOT TO BE CONSTRUCTED BY OTHERS.
7. EXPANSION JOINTS ARE TO BE PLACED AT ALL WALK INTERSECTIONS AND BETWEEN WALKS AND PLATFORMS. SIDEWALK SPACES ARE TO BE EQUALLY SPACED BETWEEN EXPANSION JOINTS.
8. TEMPORARY TRAFFIC CONTROL DURING CONSTRUCTION TO CONFORM TO APPLICABLE LOCAL AND STATE STANDARDS.
9. ALL CONSTRUCTION ACTIVITY ON THIS SITE TO BE PERFORMED IN COMPLIANCE WITH APPLICABLE O.S.H.A. STANDARDS FOR WORKER SAFETY.
10. REMOVE AND BACKFILL ALL AREAS WHERE ANY FIELD TILE CROSSES PROPOSED BUILDING PADS. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PERPETUATE ANY SUBSURFACE DRAINAGE SYSTEMS (TILE NETWORKS) ENCOUNTERED IN THE DEVELOPMENT OF THE PROJECT. REMOVAL OF TILE NETWORKS SHOULD NOT OCCUR UNLESS THE SOURCE OF PIPE IS IDENTIFIED AND APPROVED BY THE ENGINEER.
11. LOWEST ADJACENT GRADE - THE ELEVATION OF THE LOWEST GRADE ADJACENT TO A STRUCTURE, WHERE THE SOIL MEETS THE FOUNDATION AROUND THE OUTSIDE OF THE STRUCTURE (INCLUDING STRUCTURAL MEMBERS SUCH AS BASEMENT WALKOUT, PATIOS, DECKS, PORCHES, SUPPORT POSTS OR PIERS, AND RIM OF THE WINDOW WELLS).

NOTE
 CONTINUOUS UNDERDRAINS ARE REQUIRED ALONG BOTH SIDES OF THE ROADWAY IN ITS ENTIRETY.

REVISIONS: 11/17/2015, JEP, ADJUST LOT 134 GRADES PER AGENCY REVIEW



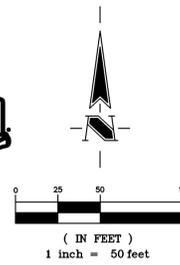
THE SCHNEIDER CORPORATION
 West Lafayette Office
 1330 Win Hentschel Blvd.
 Suite 260
 West Lafayette, IN 47906-4156
 Telephone: 765.448.6661
 Fax: 765.448.6665
 www.schneidercorp.com

Civil Engineering
 GIS + LIS
 Land Surveying
 Landscape Architecture

WINDING RIDGE SUBDIVISION
SECTION THREE
 WEST LAFAYETTE, INDIANA

TIPPECANOE DEVELOPMENT II, LLC
 PO BOX 811, LAFAYETTE, IN 47902

DATE: 11/16/15	PROJECT NO.: 4880.010
DRAWN BY: JEP	CHECKED BY: JAN
SHEET TITLE: DEVELOPMENT PLAN	
DRAWING FILE: L:\4\4880\010\dwgs\4880010-C101.dwg	
SHEET(S): L:\4\4880\010\dwgs\4880010-BS L:\4\4880\010\dwgs\4880_T0P0_081015	
SHEET NO.: C101	



- EXISTING STORM SEWER
 - NEW STORM SEWER
 - EXISTING SANITARY SEWER
 - NEW SANITARY SEWER
 - EXISTING CONTOUR
 - EXISTING ELEVATION
 - NEW PAVEMENT GRADE
 - ALL OTHER FINISH GRADES
 - MATCH EXISTING GRADES
 - CORRECTED GRADES
 - STORM STRUCTURE NUMBER
 - SANITARY STRUCTURE NUMBER
-
- 000.0 DENOTES ELEVATION AND APPROXIMATE PAD SIZE
 - FLOW ARROW
 - 4" SUBSURFACE DRAIN SWALE (f)
 - W WATER MAIN
 - * DENOTES PAD WITH 2' OR MORE OF FILL AFTER STRIPPING
 - EXISTING TREES
 - G --- G EXISTING GAS MAIN
 - T --- T EXISTING TELEPHONE
 - W --- W EXISTING WATER MAIN
 - EXISTING FLOWLINE
 - EXISTING OVERHEAD UTILITIES
 - B-B BACK OF CURB TO BACK OF CURB
 - R/W RIGHT-OF-WAY
 - D&SE DRAINAGE, UTILITY AND SEWER EASEMENT
 - DS&LE DRAINAGE, SEWER, AND LANDSCAPE EASEMENT
 - UE UTILITY EASEMENT
 - BSL BUILDING SETBACK LINE
 - LAG LOWEST ADJACENT GRADE

BENCHMARK

CONTROL BENCHMARK:
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"TBM #4880001-2" - BOAT SPIKE IN UTILITY POLE ON NORTH SIDE OF COUNTY ROAD 500 NORTH, FIRST POLE EAST OF BRIDGE, ±2.5 FEET UP. (POLE I.D. "CF123") ELEVATION = 654.96 (NAVD 88)

GENERAL NOTES

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4. ANY PART OF THE SANITARY OR STORM SEWER TRENCHES RUNNING UNDER PAVED AREAS TO BE BACKFILLED WITH GRANULAR MATERIAL BACKFILL TO BE COMPACTED IN 6" LIFTS DURING INSTALLATION.
5. THE SIZE AND LOCATION OF EXISTING UTILITIES SHOWN ARE PER INFORMATION PROVIDED BY THE RESPECTIVE UTILITY COMPANIES. ALL UTILITY COMPANIES SHOULD BE NOTIFIED PRIOR TO ANY EXCAVATION FOR FIELD LOCATION OF SERVICES.
6. 5' CONCRETE WALK ACROSS FRONTAGE OF EACH LOT TO BE CONSTRUCTED BY OTHERS.
7. EXPANSION JOINTS ARE TO BE PLACED AT ALL WALK INTERSECTIONS AND BETWEEN WALKS AND PLATFORMS. SIDEWALK SCORES ARE TO BE EQUALLY SPACED BETWEEN EXPANSION JOINTS.
8. TEMPORARY TRAFFIC CONTROL DURING CONSTRUCTION TO CONFORM TO APPLICABLE LOCAL AND STATE STANDARDS.
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11. THE FINISHED FLOOR OF THE HOME IS SIXTEEN (16) INCHES HIGHER THAN THE NOTED PAD ELEVATION.
12. LOWEST ADJACENT GRADE - THE ELEVATION OF THE LOWEST GRADE ADJACENT TO A STRUCTURE, WHERE THE SOIL MEETS THE FOUNDATION AROUND THE OUTSIDE OF THE STRUCTURE (INCLUDING STRUCTURAL MEMBERS SUCH AS BASEMENT WALKOUT, PATIOS, DECKS, PORCHES, SUPPORT POSTS OR PIERS, AND RIM OF THE WINDOW WELLS).

-NOTE-
 CONTINUOUS UNDERDRAINS ARE REQUIRED THROUGHOUT THE ENTIRE SITE.



EXISTING LAUREN LAKES SECTION 1

REMOVE EXISTING DRIVE TO BACK OF CURB ON OUTLOT #6. ADJUST REMAINING DRIVE TO MATCH PROPOSED CURB LINE.

EXISTING LAUREN LAKES SECTION 2

FUTURE DEVELOPMENT

FUTURE DEVELOPMENT

REVISIONS:



Brandon M. Felt
 DATE: OCTOBER 21, 2008

2008, THE SCHNEIDER CORPORATION

THE SCHNEIDER CORPORATION
 1330 Win Hentschel Blvd
 West Lafayette, IN 47906-4156
 Telephone: 765.448.6661
 Fax: 765.448.6665
 www.schneidercorp.com

Architecture
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 Environmental Engineering
 Geotechnical Services
 GIS * LIS
 Home Builder Services
 Interior Design
 Land Surveying
 Landscape Architecture
 Transportation Engineering

LAUREN LAKES PLANNED DEVELOPMENT SECTION THREE
 WEST LAFAYETTE, INDIANA
C.P. MORGAN COMMUNITIES, L.P.
 4670 HAVEN POINT BLVD, INDIANAPOLIS, IN 46280

DATE: 10/21/08 PROJECT NO: 4880.004
 DRAWN BY: JEP CHECKED BY: BMF
 SHEET TITLE: DEVELOPMENT PLAN
 DRAWING FILES: L:\4880\004\dwg\CD\CS\4880004C101.dwg
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 SHEET NO.: C101

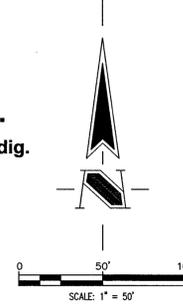
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UTILITY SIGN-OFF PLAN FOR WINDING RIDGE, SECTION 3 West Lafayette, Indiana

PART OF THE NE 1/4 OF SECTION 32, TOWNSHIP 24 NORTH,
RANGE 4 WEST, TIPPECANOE TOWNSHIP, TIPPECANOE COUNTY, INDIANA



Know what's below.
Call before you dig.



-WARNING-
THIS SHEET TO BE USED FOR UTILITY LOCATION
PURPOSES ONLY. FOR ANY OTHER INFORMATION
SEE DEVELOPMENT PLAN, SHEET C101.

GENERAL NOTES

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- THE SIZE AND LOCATION OF EXISTING UTILITIES SHOWN ARE PER INFORMATION PROVIDED BY THE RESPECTIVE UTILITY COMPANIES. ALL UTILITY COMPANIES SHALL BE NOTIFIED PRIOR TO ANY EXCAVATION FOR FIELD LOCATION OF SERVICES.
- ALL CONSTRUCTION ACTIVITY ON THIS SITE TO BE PERFORMED IN COMPLIANCE WITH APPLICABLE O.S.H.A. STANDARDS FOR WORKER SAFETY.
- ALL PERMITS WILL BE OBTAINED BY THE OWNER WITH ANY REQUIRED INSURANCE OR BONDS TO BE PROVIDED BY THE CONTRACTOR.
- WHEREVER PROPRIETARY EQUIPMENT IS SPECIFIED, "OR APPROVED EQUAL" IS INFERRED.
- DOMESTIC WATER METERS SHALL BE PER INDIANA-AMERICAN WATER SPECIFICATIONS AND DRAWINGS.
- 6" SANITARY SEWER LATERAL CLEANOUTS SHALL BE INSTALLED WITHIN 4' OF THE PROPOSED BUILDING PER CITY OF WEST LAFAYETTE.
- GAS, ELECTRIC AND TELEPHONE INSTALLATION AND LINE SIZES SHALL BE PER UTILITY COMPANY SPECIFICATIONS. ALL SERVICE LINES UNDER PAVED AREAS SHALL BE LOCATED WITHIN 4" PVC CONDUIT OR AS SPECIFIED BY THE RESPECTIVE UTILITY COMPANY. CONTRACTOR SHALL COORDINATE WITH UTILITY COMPANY.
- ALL AREAS DISTURBED BY THE CONSTRUCTION PROCESS SHALL BE FERTILIZED AND SEEDED IN ACCORDANCE TO PROJECT SPECIFICATIONS AND LOCAL NURSERY REQUIREMENTS.
- TRENCHES UNDER PAVED AREAS SHALL BE BACKFILLED WITH GRANULAR MATERIAL.
- INSTALLATION OF OR PROVISIONS FOR THE INSTALLATION OF ALL UNDERGROUND UTILITIES, INCLUDING SERVICE LATERALS, TO BE PLACED UNDER THE PAVEMENT AND SIDEWALKS SHALL BE ESTABLISHED PRIOR TO CONSTRUCTION OF THE PAVEMENT AND SIDEWALKS.
- REFER TO THE SITE DEVELOPMENT PLAN, SHEET C101 FOR GENERAL NOTES.
- THE UTILITY COORDINATION SHEET IS INCLUDED IN THE PLANS TO PROVIDE LAYOUT INFORMATION FOR THE CONTRACTOR AND UTILITY COMPANIES. IT IS NOT REVENUED IN DETAIL IN CONJUNCTION WITH STREET AND DRAINAGE DESIGN BY THE CHECKPOINT AGENCIES.

OPERATING AUTHORITIES

SANITARY/STORM SEWER:
OFFICE OF THE CITY ENGINEER
222 NORTH CHAUNCEY AVENUE
WEST LAFAYETTE, INDIANA 47906
(765) 775-5130

ELECTRIC:
TIPMONT REMC
P.O. BOX 20
LINDEN, INDIANA 47955
(765) 426-6170

GAS:
VECTREN
1250 SOUTH CREAMY LANE
LAFAYETTE, INDIANA 47903
(765) 449-5610
STEVE HANFON

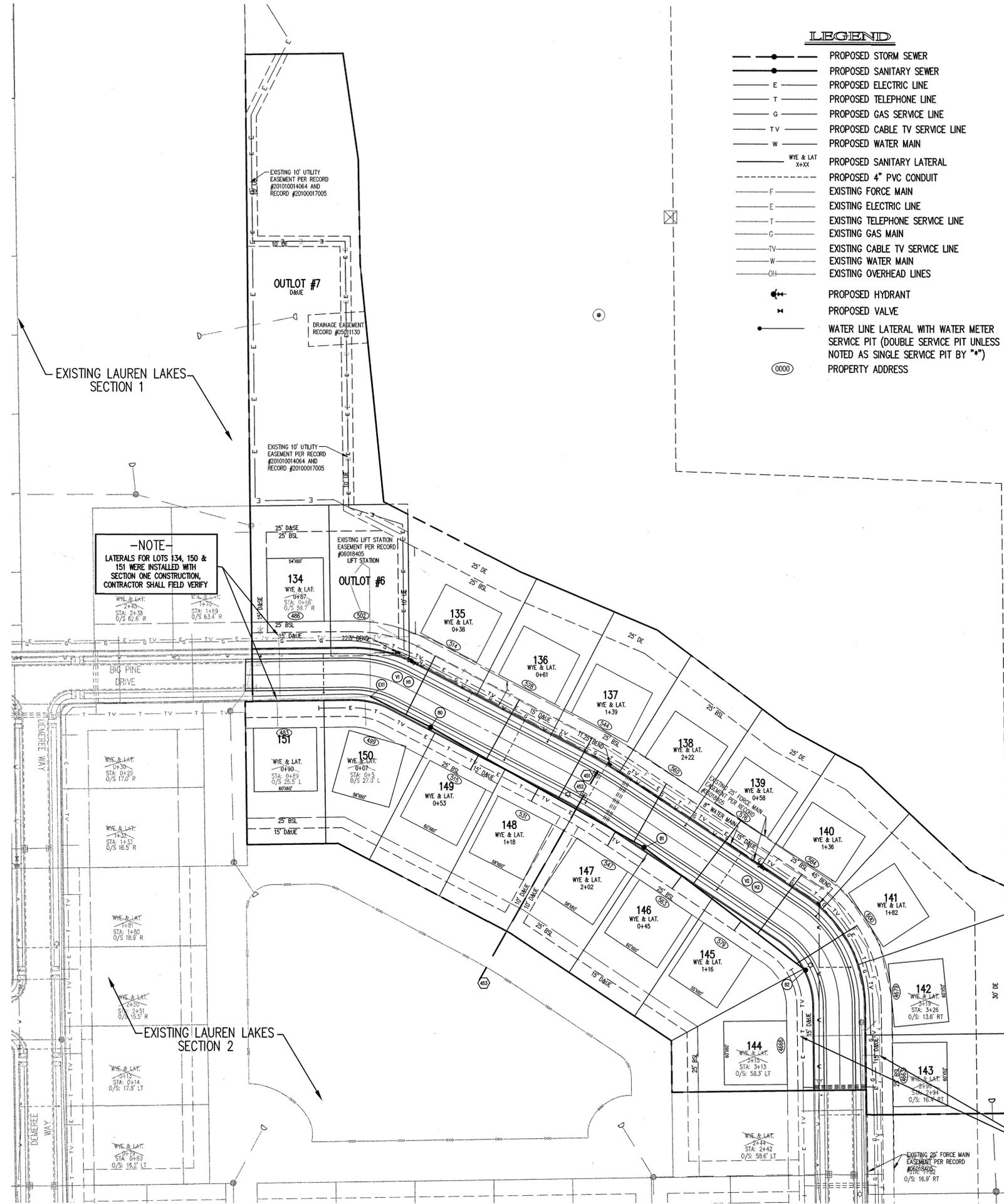
WATER:
INDIANA-AMERICAN WATER CORP.
1007 HAPPY HOLLOW ROAD
WEST LAFAYETTE, INDIANA 47906
(765) 743-7973

TELECOMMUNICATIONS:
COMCAST
1002 E. CENTER ROAD
KOKOMO, INDIANA 48909
(260) 458-6179

FIRE DEPARTMENT:
CITY OF WEST LAFAYETTE
FIRE DEPARTMENT
300 NORTH STREET
WEST LAFAYETTE, INDIANA 47906
(765) 775-5186
TOMY SCHÜTTER, DEPUTY CHIEF

LEGEND

- PROPOSED STORM SEWER
- PROPOSED SANITARY SEWER
- E— PROPOSED ELECTRIC LINE
- T— PROPOSED TELEPHONE LINE
- G— PROPOSED GAS SERVICE LINE
- TV— PROPOSED CABLE TV SERVICE LINE
- W— PROPOSED WATER MAIN
- WYE & LAT X+XX— PROPOSED SANITARY LATERAL
- F— PROPOSED 4" PVC CONDUIT
- E— EXISTING FORCE MAIN
- E— EXISTING ELECTRIC LINE
- T— EXISTING TELEPHONE SERVICE LINE
- G— EXISTING GAS MAIN
- TV— EXISTING CABLE TV SERVICE LINE
- W— EXISTING WATER MAIN
- OH— EXISTING OVERHEAD LINES
- H— PROPOSED HYDRANT
- V— PROPOSED VALVE
- WATER LINE LATERAL WITH WATER METER SERVICE PIT (DOUBLE SERVICE PIT UNLESS NOTED AS SINGLE SERVICE PIT BY *)
- (0000) PROPERTY ADDRESS



-NOTE-
LATERALS FOR LOTS 134, 150 & 151 WERE INSTALLED WITH SECTION ONE CONSTRUCTION, CONTRACTOR SHALL FIELD VERIFY

-NOTE-
LATERALS FOR LOTS 142-144 WERE INSTALLED WITH SECTION TWO CONSTRUCTION, CONTRACTOR TO FIELD VERIFY

REVISIONS:

THE SCHNEIDER CORPORATION (2015)

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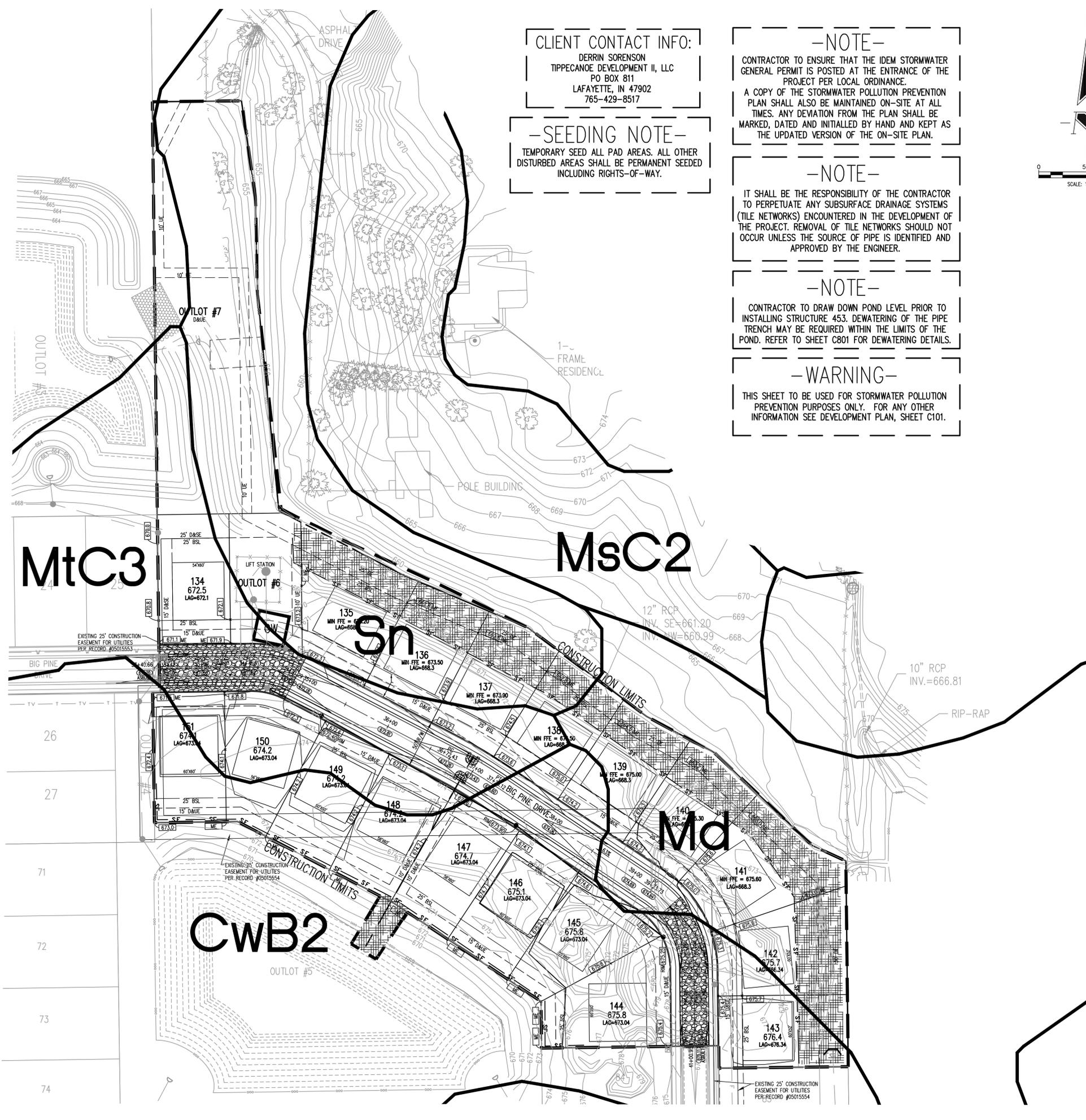
WINDING RIDGE SUBDIVISION
SECTION THREE
WEST LAFAYETTE, INDIANA

TIPPECANOE DEVELOPMENT II, LLC
PO BOX 811, LAFAYETTE, IN 47902

DATE: 11/16/15 PROJECT NO: 4880.010
DRAWN BY: JEP CHECKED BY: JAN
SHEET TITLE: UTILITY PLAN
DRAWING FILE: L:\V\4880\010\DWG\4880010-C102.DWG
XREF(S): L:\V\4880\010\DWG\4880010-C101.DWG
L:\V\4880\010\DWG\4880010-C103.DWG
SHEET NO: C102

Plot Date: Nov 23, 2015 Plot Time: 5:53pm File Name: L:\4\4880\010\dwg\4880010-C102.dwg Layout: C102 By: jep

Plot Date: Nov 30, 2015 Plot Time: 1:55pm File Name: L:\44\4880\010\dwg\4880010-C103-C104.dwg Layout: C103 By: jep



CLIENT CONTACT INFO:
 DERRIN SORENSON
 TIPPECANOE DEVELOPMENT II, LLC
 PO BOX 811
 LAFAYETTE, IN 47902
 765-429-8517

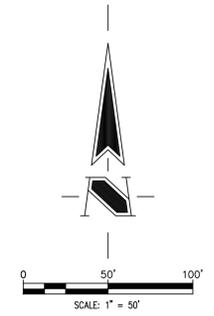
-SEEDING NOTE-
 TEMPORARY SEED ALL PAD AREAS. ALL OTHER DISTURBED AREAS SHALL BE PERMANENT SEEDED INCLUDING RIGHTS-OF-WAY.

-NOTE-
 CONTRACTOR TO ENSURE THAT THE IDEM STORMWATER GENERAL PERMIT IS POSTED AT THE ENTRANCE OF THE PROJECT PER LOCAL ORDINANCE.
 A COPY OF THE STORMWATER POLLUTION PREVENTION PLAN SHALL ALSO BE MAINTAINED ON-SITE AT ALL TIMES. ANY DEVIATION FROM THE PLAN SHALL BE MARKED, DATED AND INITIALED BY HAND AND KEPT AS THE UPDATED VERSION OF THE ON-SITE PLAN.

-NOTE-
 IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PERPETUATE ANY SUBSURFACE DRAINAGE SYSTEMS (TILE NETWORKS) ENCOUNTERED IN THE DEVELOPMENT OF THE PROJECT. REMOVAL OF TILE NETWORKS SHOULD NOT OCCUR UNLESS THE SOURCE OF PIPE IS IDENTIFIED AND APPROVED BY THE ENGINEER.

-NOTE-
 CONTRACTOR TO DRAW DOWN POND LEVEL PRIOR TO INSTALLING STRUCTURE 453. DEWATERING OF THE PIPE TRENCH MAY BE REQUIRED WITHIN THE LIMITS OF THE POND. REFER TO SHEET C801 FOR DEWATERING DETAILS.

-WARNING-
 THIS SHEET TO BE USED FOR STORMWATER POLLUTION PREVENTION PURPOSES ONLY. FOR ANY OTHER INFORMATION SEE DEVELOPMENT PLAN, SHEET C101.

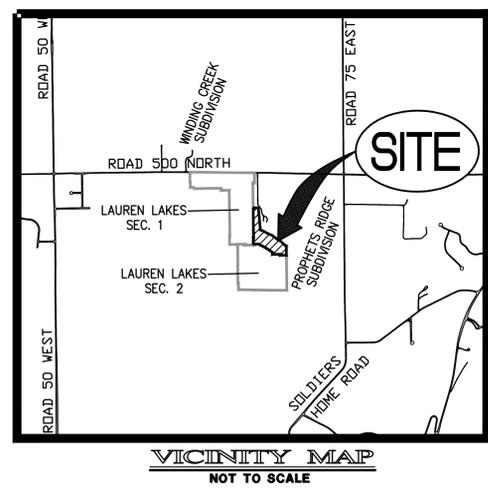


- LEGEND**
- NEW STORM SEWER
 - CONSTRUCTION LIMITS
 - TEMPORARY CONSTRUCTION ENTRANCE
 - PERMANENT SEEDING (REFER TO SHEET C801)
 - TEMPORARY SEEDING (REFER TO SHEET C801)
 - INLET SEDIMENT BARRIER
 - SILTY FENCE
 - EROSION CONTROL BLANKET
 - CONCRETE WASHOUT AREA

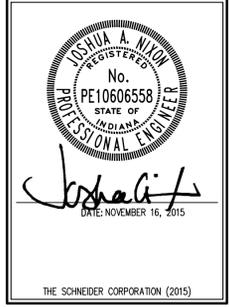
- STORMWATER POLLUTION PREVENTION PLAN SCHEDULE**
- CONTRACTOR SHALL INSTALL TEMPORARY STONE CONSTRUCTION ENTRANCES AND CONCRETE WASHOUT AREA PRIOR TO THE START OF EARTHWORK TO PREVENT SOIL FROM BEING TRACKED OR WASHED ONTO THE EXISTING ROADWAY. PLACE SILTY FENCE AS NOTED AROUND PERIMETER OF SITE.
 - OVERALL EARTHWORK SHALL BEGIN, INCLUDING STRIPPING TOPSOIL, PREPARING ROADWAY SUBGRADE, AND PREPARING BUILDING PADS. TEMPORARY SEED ALL DISTURBED AREAS IF CONSTRUCTION ACTIVITIES ARE NOT ANTICIPATED WITHIN FIFTEEN DAYS AFTER INITIAL DISTURBANCE. (THROUGHOUT THE DURATION OF THE PROJECT)
 - CONSTRUCTION OF STORM SEWER, SANITARY SEWER, WATERLINE, AND UTILITIES MAY BEGIN. INSTALL CURB INLET SEDIMENT BARRIERS UPON CONSTRUCTION OF INLETS. AN EXCAVATED DROP INLET SHALL BE PLACED UNTIL INLETS HAVE PAVEMENT AROUND THEM AND SEDIMENT BARRIERS CAN BE PLACED.
 - THE TEMPORARY STONE CONSTRUCTION ENTRANCES SHALL BE REMOVED AND CONSTRUCTION OF ROADWAYS SHALL BEGIN.
 - CONTRACTOR SHALL TEMPORARY SEED ANY DISTURBED AREAS DURING CONSTRUCTION OF STORM SEWER, SANITARY SEWER, WATERLINE, UTILITIES OR ROADWAYS. (THROUGHOUT THE DURATION OF THE PROJECT).
 - TEMPORARY SEED ALL PAD AREAS. ALL OTHER DISTURBED AREAS SHALL BE PERMANENT SEEDED.
 - UPON COMPLETION OF THE PROJECT AND STABILIZATION OF ALL EARTHWORK, SILTY FENCE AND SEDIMENT BARRIERS SHALL BE REMOVED. ACTIVELY MAINTAIN UNTIL SITE IS STABILIZED.
- *CONSTRUCTION SCHEDULE AND SEQUENCE IS AN ESTIMATE PROVIDED BY THE ENGINEER

SOIL LEGEND

SOIL SERIES	DWELLINGS	ROADS	SEPTICS	HYDRIC	PONDS
CwB2	SEVERE: WEIENESS FROST ACTION	SEVERE: LOW STRENGTH	SEVERE: WEIENESS, PERCS SLOWLY	N	MODERATE: SLOPE
Md	SEVERE: PONDING	SEVERE: LOW STRENGTH	SEVERE: PONDING, PERCS SLOWLY	Y	SEVERE: SEEPAGE
MtC3	MODERATE: SLOPE	SEVERE: LOW STRENGTH	SEVERE: PERCS SLOWLY	N	SEVERE: SLOPE
RdB	MODERATE: SHRINK SWELL	SEVERE: LOW STRENGTH FROST ACTION	SEVERE: WEIENESS, PERCS SLOWLY	N	MODERATE: SEEPAGE, SLOPE
Sn	SEVERE: FLOODING, PONDING	SEVERE: LOW STRENGTH PONDING, FLOODING	SEVERE: FLOODING, WEIENESS, PERCS SLOWLY	Y	MODERATE: SEEPAGE
SwA	SEVERE: WEIENESS	SEVERE: LOW STRENGTH FROST ACTION	SEVERE: WEIENESS, PERCS SLOWLY	N	MODERATE: SEEPAGE



REVISIONS:
 1-11/20/15 JEP ADJUST LOT 134 GRADES PER AGENCY REVIEW



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 SECTION THREE
 WEST LAFAYETTE, INDIANA

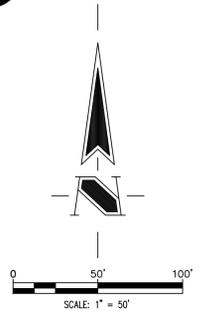
TIPPECANOE DEVELOPMENT II, LLC
 PO BOX 811, LAFAYETTE, IN 47902

DATE: 11/16/15 PROJECT NO.: 4880.010
 DRAWN BY: JEP CHECKED BY: JAN
 SHEET TITLE: STORMWATER POLLUTION PREVENTION PLAN
 DRAWING FILE: L:\44\4880\010\dwg\4880010-C103-C104.dwg
 SHEET(S): 1-1\44\4880\010\dwg\4880010-85
 SHEET NO.: C103

CLIENT CONTACT INFO:
 DERRIN SORENSON
 TIPPECANOE DEVELOPMENT II, LLC
 PO BOX 811
 LAFAYETTE, IN 47902
 765-429-8517



Know what's below.
 Call before you dig.



**POST-CONSTRUCTION STORMWATER
 POLLUTION PREVENTION PLAN INDEX AND DATA**

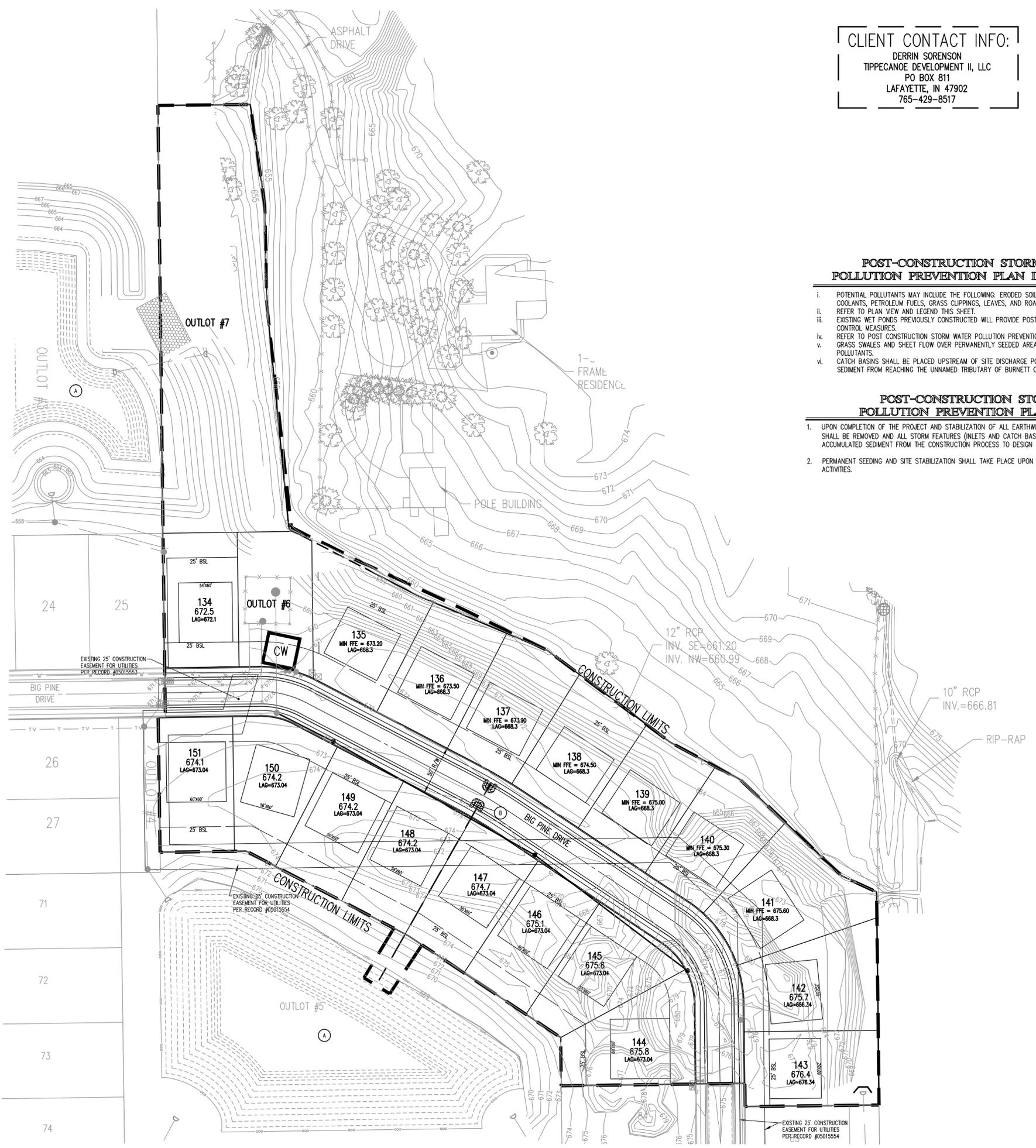
- i. POTENTIAL POLLUTANTS MAY INCLUDE THE FOLLOWING: ERODED SOILS AND SEDIMENTS, OILS, GREASES, COOLANTS, PETROLEUM FUELS, GRASS CLIPPINGS, LEAVES, AND ROAD SALT.
- ii. REFER TO PLAN VIEW AND LEGEND THIS SHEET.
- iii. EXISTING WET PONDS PREVIOUSLY CONSTRUCTED WILL PROVIDE POST CONSTRUCTION POLLUTION PREVENTION CONTROL MEASURES.
- iv. REFER TO POST CONSTRUCTION STORM WATER POLLUTION PREVENTION SCHEDULE ON THIS SHEET.
- v. GRASS SWALES AND SHEET FLOW OVER PERMANENTLY SEEDED AREAS WILL MINIMIZE STORMWATER RUNOFF POLLUTANTS.
- vi. CATCH BASINS SHALL BE PLACED UPSTREAM OF SITE DISCHARGE POINTS TO HELP PREVENT TRASH AND SEDIMENT FROM REACHING THE UNNAMED TRIBUTARY OF BURNETT CREEK.

**POST-CONSTRUCTION STORMWATER
 POLLUTION PREVENTION PLAN SCHEDULE**

- 1. UPON COMPLETION OF THE PROJECT AND STABILIZATION OF ALL EARTHWORK, SILT FENCE AND SEDIMENT BARRIERS SHALL BE REMOVED AND ALL STORM FEATURES (INLETS AND CATCH BASINS) SHOULD BE CLEARED OF ACCUMULATED SEDIMENT FROM THE CONSTRUCTION PROCESS TO DESIGN LEVELS OF ACCEPTANCE.
- 2. PERMANENT SEEDING AND SITE STABILIZATION SHALL TAKE PLACE UPON COMPLETION OF FINAL EARTHWORK ACTIVITIES.

LEGEND

- (A) EXISTING WET POND
- (B) PROPOSED CATCH BASIN



REVISIONS:
 1. 11/20/15. REF. ADJUST LOT 134 GRADES PER AGENCY REVIEW

Professional Engineer Seal for Joshua A. Nix, No. PE10606559, State of Indiana, dated November 16, 2015.

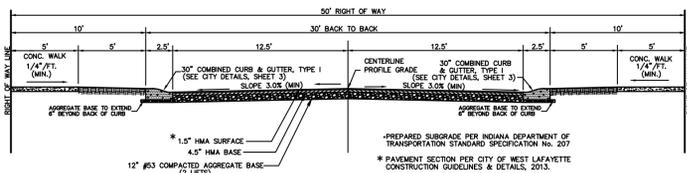
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 THE SCHNEIDER CORPORATION
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**WINDING RIDGE SUBDIVISION
 SECTION THREE**
 WEST LAFAYETTE, INDIANA
TIPPECANOE DEVELOPMENT II, LLC
 PO BOX 811, LAFAYETTE, IN 47902

DATE: 11/16/15	PROJECT NO.: 4880.010
DRAWN BY: JEP	CHECKED BY: JAN
SHEET TITLE: POST-CONSTRUCTION STORMWATER POLLUTION PREVENTION PLAN	
DRAWING FILE: L:\4880\010\DWG\4880010-C103-C104.DWG	
XREF(S): L:\4880\010\DWG\4880010-85	
SHEET NO.: C104	

Plot Date: Nov 30, 2015 Plot Time: 1:53pm File Name: L:\4880\010\dwg\4880010-C103-C104.dwg Layout: C104 By: jep



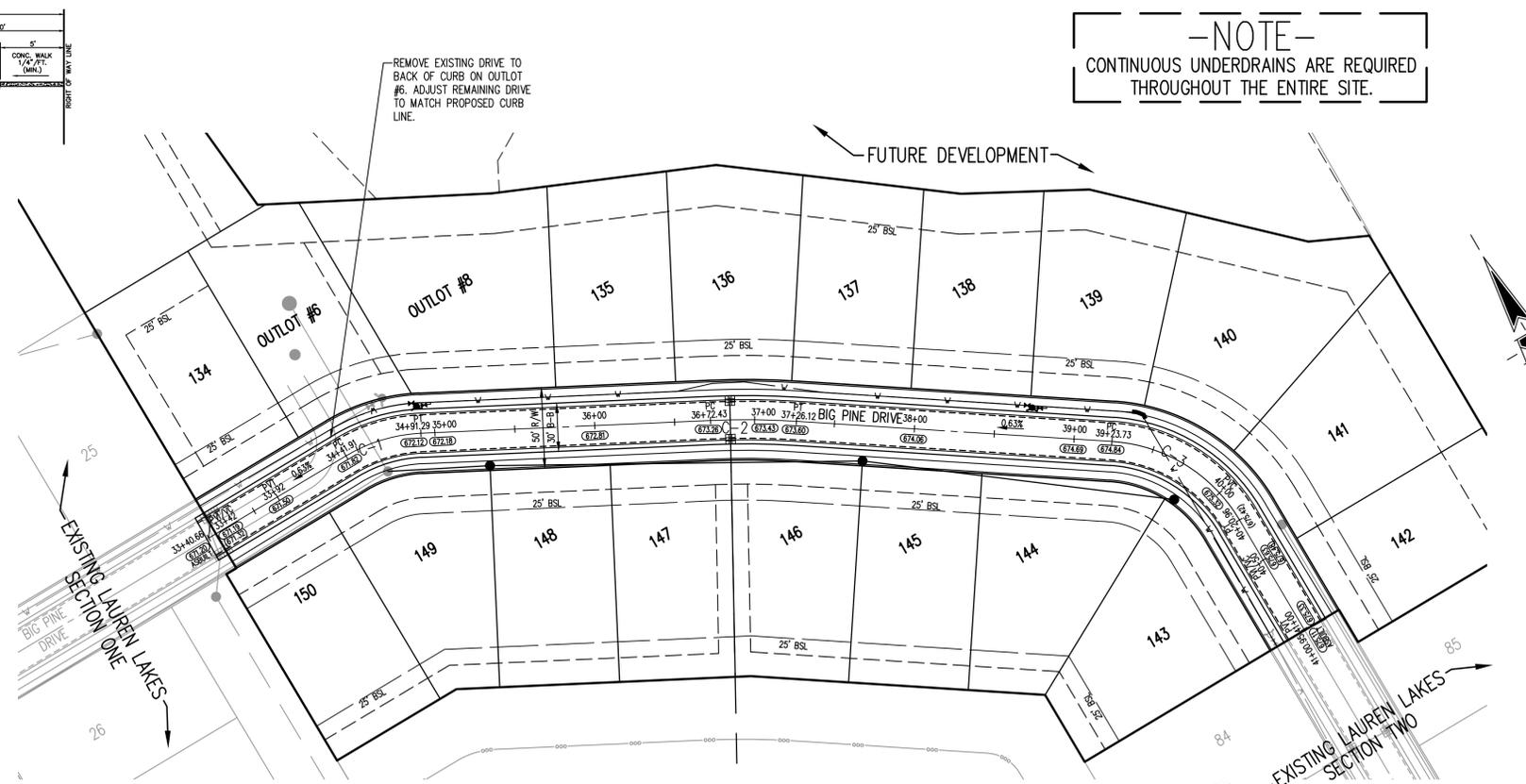
TYPICAL RESIDENTIAL STREET CROSS SECTION
NO SCALE

BENCHMARK

CONTROL BENCHMARK:
"T-11" - IRON PIN AT THE INTERSECTION OF COUNTY ROAD 500 NORTH AND COUNTY ROAD 50 WEST. ELEVATION PER TIPPECANOE COUNTY GIS MAPPING PROJECT - GPS CONTROL DATA, PROVIDED BY THE TIPPECANOE COUNTY SURVEYOR. ELEVATION = 675.84 (NAVD 88)

TEMPORARY SITE BENCHMARKS:
"TBM #4880001-1" - CUT "X" IN THE SOUTH BOLT OF THE FIRE HYDRANT NEAR THE ENTRANCE TO WINDING CREEK SUBDIVISION, AT THE SOUTHEAST CORNER OF GRAPEVINE BLVD. AND GARDENIA DRIVE. ELEVATION = 671.01 (NAVD 88)
"TBM #4880001-2" - BOAT SPIKE IN UTILITY POLE ON NORTH SIDE OF COUNTY ROAD 500 NORTH, FIRST POLE EAST OF BRIDGE, ±2.5 FEET UP. (POLE I.D. "CF123") ELEVATION = 654.96 (NAVD 88)

CURVE TABLE					
CURVE	LENGTH	RADIUS	DELTA	CHORD	CHORD DIRECTION
C-1	49.38'	100.00'	28°17'37"	48.88'	S76°39'53"E
C-2	53.69'	500.00'	6°09'08"	53.66'	S59°26'30"E
C-3	97.23'	100.00'	55°42'37"	93.45'	S28°30'38"E



DETAILS

Sheet Number	Description
C201 1	STREET CROSS SECTION DETAIL
W.LAF	CONCRETE SIDEWALK DETAIL
W.LAF	SIDEWALK RAMP FOR HANDICAPPED DETAIL
W.LAF	CURB DETAIL
CB01 2	PIPE UNDERDRAIN DETAIL

NOTE: All Streets to be 30' in width unless otherwise noted.
All Rights-of-way to be 50' in width unless otherwise noted.

W.LAF - REFER TO CITY OF WEST LAFAYETTE TYPICAL CONSTRUCTION GUIDELINES AND DETAILS 2013.

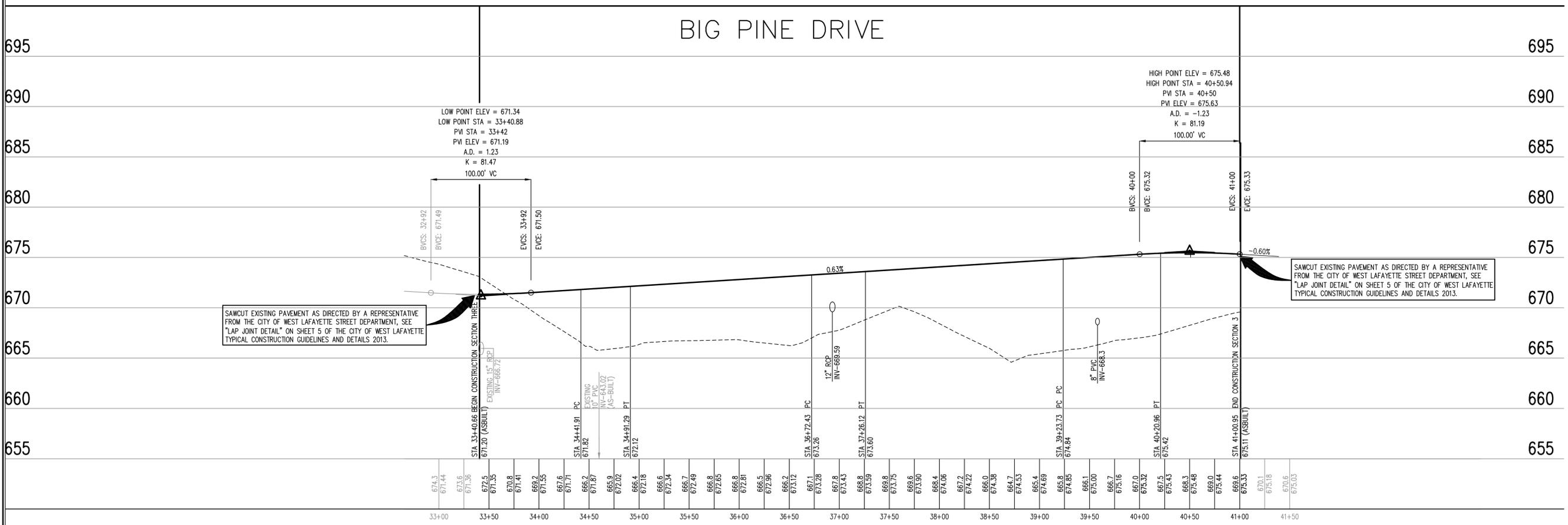
LEGEND

- TEMPORARY TRAFFIC CONTROL DURING CONSTRUCTION TO CONFORM TO APPLICABLE LOCAL AND STATE STANDARDS.
- ALL CONSTRUCTION ACTIVITY ON THIS SITE TO BE PERFORMED IN COMPLIANCE WITH APPLICABLE O.S.H.A. STANDARDS FOR WORKER SAFETY.
- IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO FIELD VERIFY ALL UTILITY LOCATIONS BEFORE CONSTRUCTION BEGINS.
- CONTRACTORS SHALL MINIMIZE DAMAGE TO EXISTING TREES.

STREET PLAN

SCALE: 1"=50'

BIG PINE DRIVE



STREET PROFILE

LEGEND

	Existing Grade
	New Grade

SCALE: HORZ.: 1"=50'
VERT.: 1"=5'

REVISIONS:

DATE: NOVEMBER 16, 2015

THE SCHNEIDER CORPORATION (2015)

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SECTION THREE
WEST LAFAYETTE, INDIANA

TIPPECANOE DEVELOPMENT II, LLC
PO BOX 811, LAFAYETTE, IN 47902

DATE: 11/16/15 PROJECT NO.: 4880.010
DRAWN BY: JEP CHECKED BY: JAN
SHEET TITLE: STREET PLAN AND PROFILE
DRAWING FILE: L:\4880\010\DWG\4880010-C201.DWG
SHEET(S): L:\4880\010\DWG\4880010-85
SHEET NO.: C201

Plot Date: Nov 23, 2015 Plot Time: 5:37pm File Name: L:\4880\010\DWG\4880010-C201.dwg, Layout: C201 By: jep

SANITARY SEWER DRAWINGS AND SPECIFICATIONS PER CITY OF WEST LAFAYETTE

THERE ARE NO DRINKING WATER WELLS WITHIN 100' RADIUS OF ANY GRAVITY SEWER LINES OR MANHOLES ON THIS PROJECT.

Sheet	Detail	Description
W.LAF.		Precast Reinforced Concrete Manhole
W.LAF.		Sanitary Sewer Bedding Detail
W.LAF.		Service Connection for Shallow Sewer
W.LAF.		Wye & Lateral Capping Detail
W.LAF.		Service Connection for Deep Sewer

NOTE
W.LAF. - REFER TO THE CITY OF WEST LAFAYETTE CONSTRUCTION GUIDELINES AND DETAILS 2013.
ALL SANITARY SEWER LATERALS TO HAVE FULL DEPTH GRANULAR BACKFILL FROM RIGHT OF WAY TO RIGHT OF WAY.

GENERAL NOTES

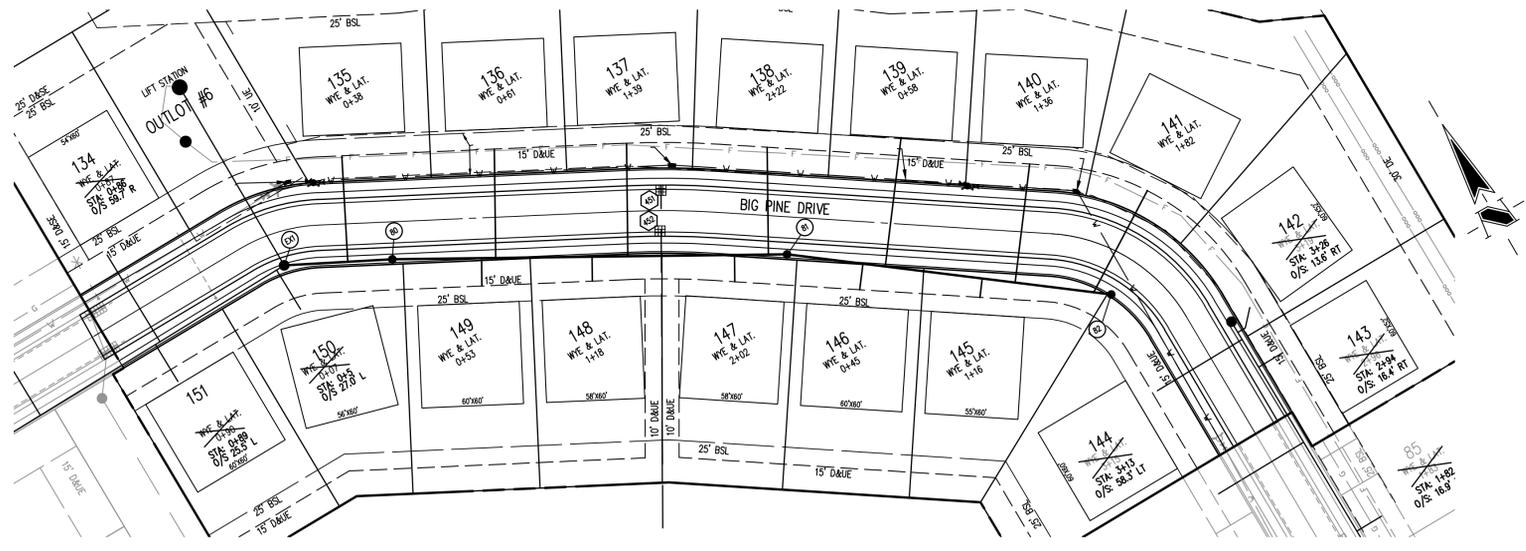
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- IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO FIELD VERIFY ALL UTILITY LOCATIONS BEFORE CONSTRUCTION BEGINS.
- CONTRACTORS SHALL MINIMIZE DAMAGE TO EXISTING TREES.
- ALL WYE, LATERAL AND PROFILE STATIONS ARE FROM THE NEAREST DOWNSTREAM MANHOLE (MH).
- WYES AND LATERALS TO BE 6" PIPE UNLESS OTHERWISE SPECIFIED.
- ALL WYE CONNECTIONS SHALL HAVE A MINIMUM OF FIVE (5) FOOT LATERAL EXTENSION CONNECTED TO THE WYE, OR EXTEND TO THE UTILITY AND DRAINAGE EASEMENT OF THE LOT, WHICHEVER IS GREATER, BUT IN NO CASE SHOULD THE END OF THE LATERALS BE CLOSER THAN FIVE (5) FEET TO THE BUILDING LINE, UNLESS NOTED OTHERWISE. THE END OF THE LATERAL SHALL BE PLUGGED OR CAPPED, UNLESS OTHERWISE NOTED.
- LATERALS RUNNING TO THE OPPOSITE SIDE OF THE STREET SHALL EXTEND TO THE UTILITY AND DRAINAGE EASEMENT OF THE LOT, BUT IN NO CASE SHOULD THE END OF THE LATERALS BE CLOSER THAN FIVE (5) FEET TO THE BUILDING LINE, UNLESS OTHERWISE NOTED.

BENCHMARK

CONTROL BENCHMARK:
"T-11" - IRON PIN AT THE INTERSECTION OF COUNTY ROAD 500 NORTH AND COUNTY ROAD 50 WEST. ELEVATION PER TIPPECANOE COUNTY GIS MAPPING PROJECT - GPS CONTROL DATA, PROVIDED BY THE TIPPECANOE COUNTY SURVEYOR. ELEVATION = 675.84 (NAVD 88)

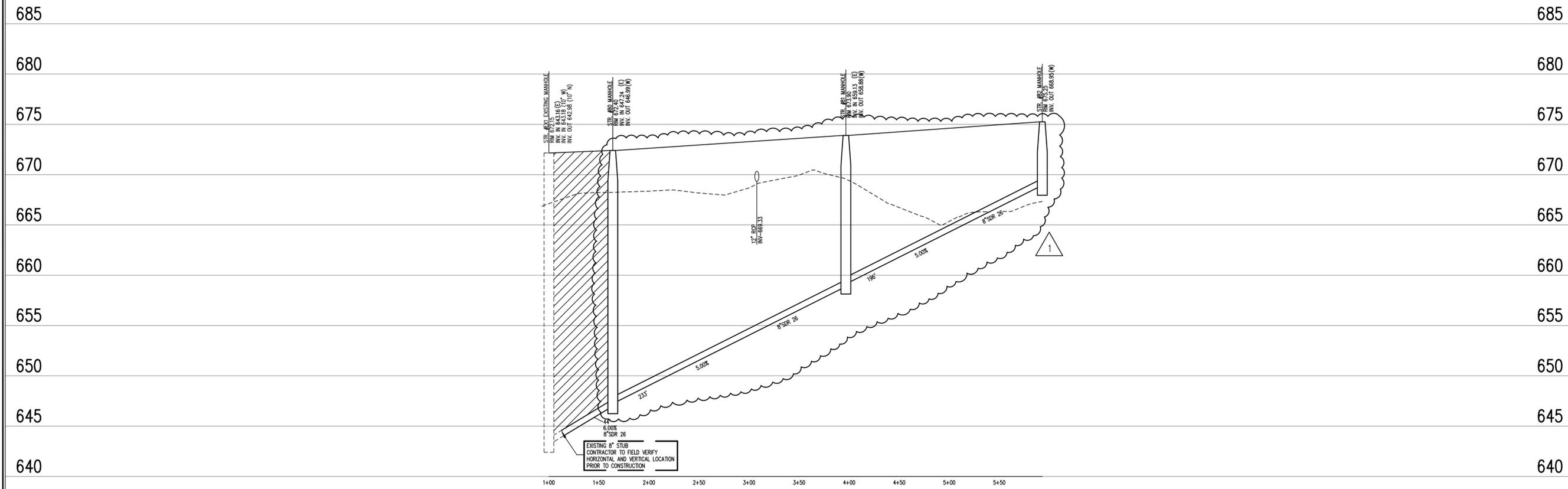
TEMPORARY SITE BENCHMARKS:
"TBM #4880001-1" - CUT "X" IN THE SOUTH BOLT OF THE FIRE HYDRANT NEAR THE ENTRANCE TO WINDING CREEK SUBDIVISION, AT THE SOUTHEAST CORNER OF GRAPEVINE BLVD. AND GARDENIA DRIVE. ELEVATION = 671.01 (NAVD 88)

"TBM #4880001-2" - BOAT SPIKE IN UTILITY POLE ON NORTH SIDE OF COUNTY ROAD 500 NORTH, FIRST POLE EAST OF BRIDGE, ±2.5 FEET UP. (POLE I.D. "CF123") ELEVATION = 654.96 (NAVD 88)



SANITARY SEWER PLAN

SCALE: 1"=50'



SANITARY SEWER PROFILE

LEGEND

	Existing Grade
	New Grade
	Granular Backfill

SCALE: $\frac{\text{HORZ.: 1"=50'}}{\text{VERT.: 1"=5'}}$

REVISIONS:
1. 12/16/15 REMOVE GRANULAR BACKFILL FROM MANHOLE #80 TO MANHOLE #82

JOHANNA A. NYLON
REGISTERED PROFESSIONAL ENGINEER
No. PE10606550
STATE OF INDIANA
DATE: NOVEMBER 16, 2015

THE SCHNEIDER CORPORATION (2015)

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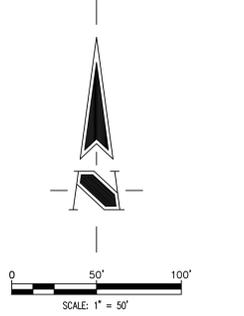
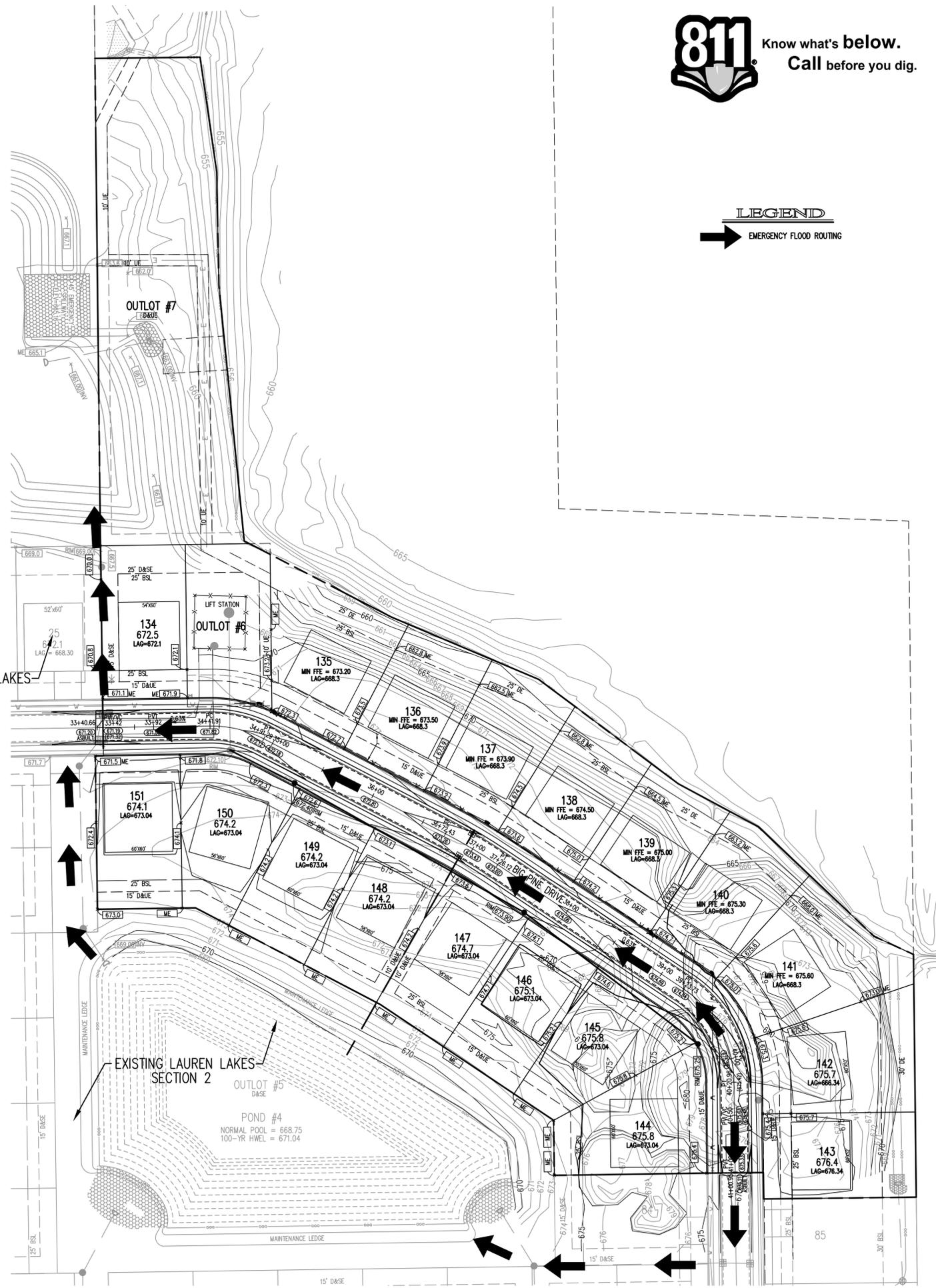
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SECTION THREE
WEST LAFAYETTE, INDIANA
TIPPECANOE DEVELOPMENT II, LLC
PO BOX 811, LAFAYETTE, IN 47902

DATE: 11/16/15	PROJECT NO.: 4880.010
DRAWN BY: JEP	CHECKED BY: JAN
SHEET TITLE: SANITARY SEWER PLAN AND PROFILE	
DRAWING FILE: L:\4880\010\DWG\4880010-C401.DWG	
XREF(S): L:\4880\010\DWG\4880010-85	
SHEET NO.: C401	

Plot Date: Dec 10, 2015 Plot Time: 6:00pm File Name: L:\4880\010\dwgs\4880010-C401.dwg, Layout: C401 By: jep

Plot Date: Nov 30, 2015 Plot Time: 1:58pm File Name: L:\44\4880\010\dwgs\4880010-C600.dwg, Layout: C600 By: jep



LEGEND
 EMERGENCY FLOOD ROUTING

BENCHMARK
CONTROL BENCHMARK:
 "T-11" - IRON PIN AT THE INTERSECTION OF COUNTY ROAD 500 NORTH AND COUNTY ROAD 50 WEST. ELEVATION PER TIPPECANOE COUNTY GIS MAPPING PROJECT - GPS CONTROL DATA, PROVIDED BY THE TIPPECANOE COUNTY SURVEYOR. ELEVATION = 675.84 (NAVD 88)
TEMPORARY SITE BENCHMARKS:
 "TBM #4880001-1" - CUT "X" IN THE SOUTH BOLT OF THE FIRE HYDRANT NEAR THE ENTRANCE TO WINDING CREEK SUBDIVISION, AT THE SOUTHEAST CORNER OF GRAPEVINE BLVD. AND GARDENIA DRIVE. ELEVATION = 671.01 (NAVD 88)
 "TBM #4880001-2" - BOAT SPIKE IN UTILITY POLE ON NORTH SIDE OF COUNTY ROAD 500 NORTH, FIRST POLE EAST OF BRIDGE, ±2.5 FEET UP. (POLE I.D. "CF123") ELEVATION = 654.96 (NAVD 88)

EXISTING LAUREN LAKES SECTION 1

EXISTING LAUREN LAKES SECTION 2

POND #4
 NORMAL POOL = 668.75
 100-YR HWEL = 671.04

REVISIONS:
 1. 11/20/15 JEP, ADJUST LOT 134 GRADES PER AGENCY REVIEW

THE SCHNEIDER CORPORATION (2015)

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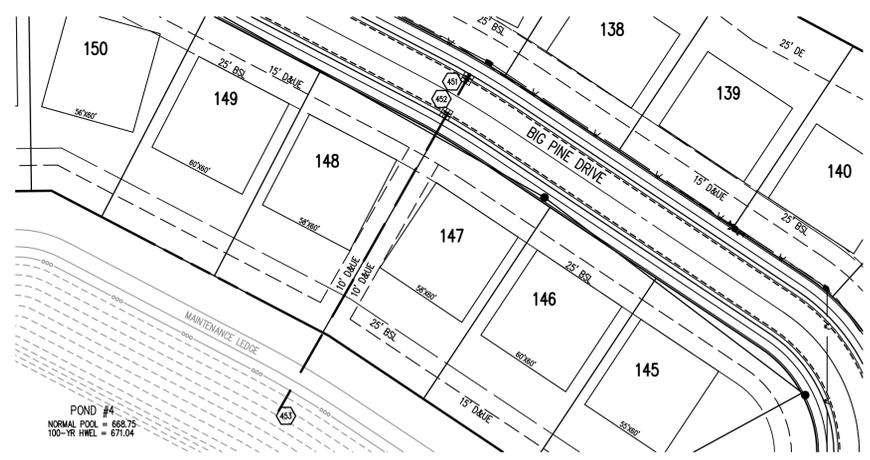
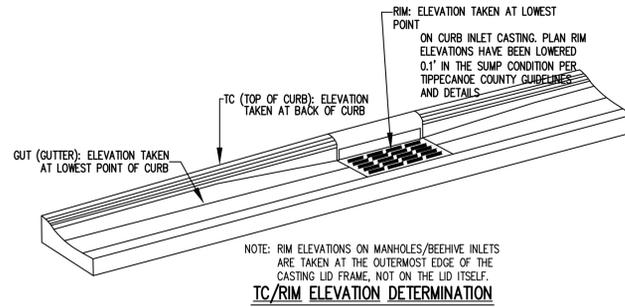
**WINDING RIDGE SUBDIVISION
 SECTION THREE**
 WEST LAFAYETTE, INDIANA
TIPPECANOE DEVELOPMENT II, LLC
 PO BOX 811, LAFAYETTE, IN 47902

DATE:	11/16/15	PROJECT NO.:	4880.010
DRAWN BY:	JEP	CHECKED BY:	JAN
SHEET TITLE:	EMERGENCY ROUTING PLAN		
DRAWING FILE:	L:\44\4880\010\DWGS\4880010-C600.DWG		
XREF(S):	L:\44\4880\010\DWGS\4880010-85 L:\44\4880\010\DWGS\4880 TOPO_081015		
SHEET NO.:	C600		



Sheet	Sheet Number	Description
W.LAF		Bedding Detail - Reinforced Concrete Pipe (RCP)
W.LAF		Roll Curb Inlet Detail
W.LAF		Beehive Inlet Detail
W.LAF		Storm Manhole Detail
W.LAF		Precast Concrete End Section
W.LAF		RigRap Detail @ End Section
W.LAF		Curb Inlet Catch Basin

NOTE
W.LAF - REFER TO CITY OF WEST LAFAYETTE TYPICAL CONSTRUCTION GUIDELINES AND DETAILS 2013, LATEST EDITION.



GENERAL NOTES

1. TEMPORARY TRAFFIC CONTROL DURING CONSTRUCTION TO CONFORM TO APPLICABLE LOCAL AND STATE STANDARDS.
2. ALL CONSTRUCTION ACTIVITY ON THIS SITE TO BE PERFORMED IN COMPLIANCE WITH APPLICABLE U.S.H.A. STANDARDS FOR WORKER SAFETY.
3. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO FIELD VERIFY ALL UTILITY LOCATIONS BEFORE CONSTRUCTION BEGINS.
4. CONTRACTORS SHALL MINIMIZE DAMAGE TO EXISTING TREES.
5. ALL STORM SEWER PIPE TO BE RCP CLASS III UNLESS OTHERWISE NOTED.

BENCHMARK

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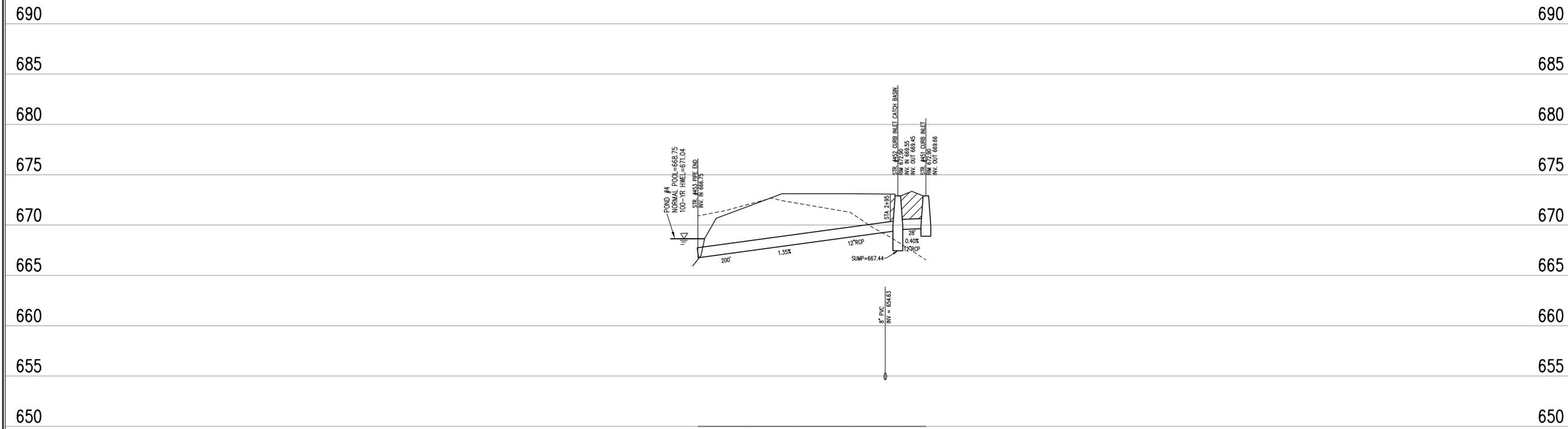
TEMPORARY SITE BENCHMARKS:
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STORM SEWER PLAN

SCALE: 1"=50'

Plot Date: Nov 23, 2015 Plot Time: 5:38pm File Name: L:\44\4880\010\dwgs\4880010-C601.dwg, Layout: C601 By: jep



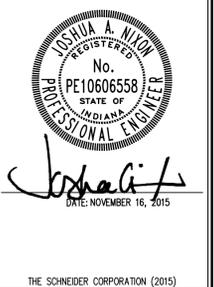
STORM SEWER PROFILE

LEGEND

	Existing Grade
	New Grade
	Granular Backfill

SCALE: HORZ.: 1"=50'
VERT.: 1"=5'

REVISIONS:



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TIPPECANOE DEVELOPMENT II, LLC
PO BOX 811, LAFAYETTE, IN 47902

DATE: 11/16/15	PROJECT NO.: 4880.010
DRAWN BY: JEP	CHECKED BY: JAN
SHEET TITLE: STORM SEWER PLAN AND PROFILE	
DRAWING FILE: L:\44\4880\010\DWGS\4880010-C601.DWG	
XREF(S): L:\44\4880\010\DWGS\4880010-85	
SHEET NO.: C601	

WATER MAIN DRAWINGS AND SPECIFICATIONS
PER INDIANA-AMERICAN WATER COMPANY



GENERAL NOTES

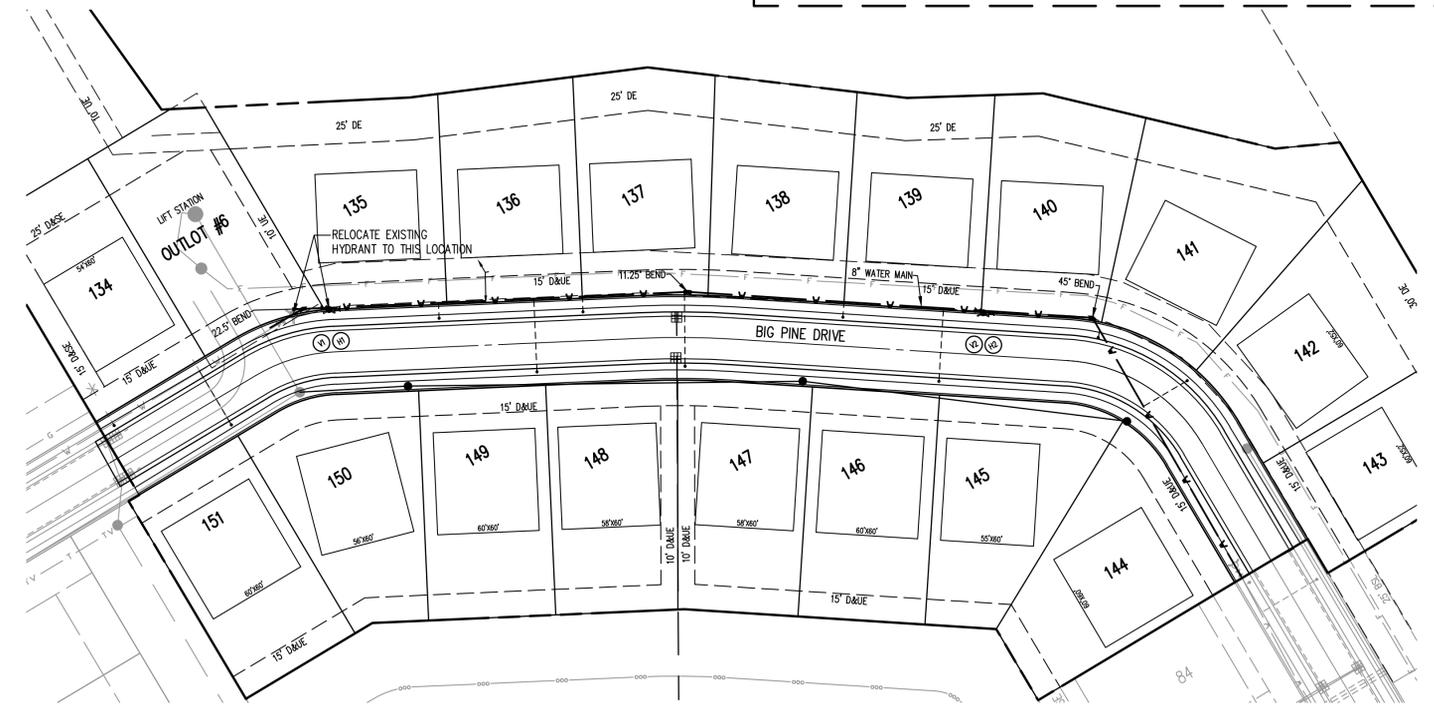
1. USE DEFLECTION IN THE WATER MAINS WHERE POSSIBLE TO AVOID THE EXCESSIVE USE OF MULTIPLE MECHANICAL JOINTS.
2. 5' MINIMUM COVER OVER WATER MAINS.

BENCHMARK

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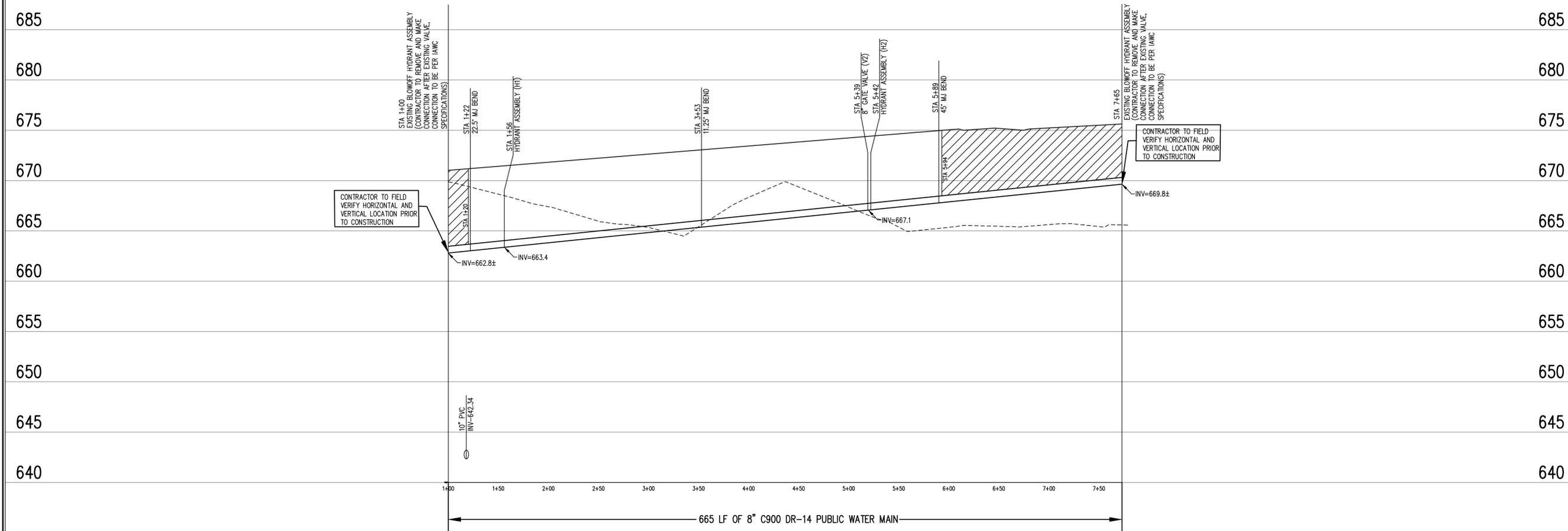
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ELEVATION = 654.96 (NAVD 88)



WATERLINE PLAN

SCALE: 1"=50'

Plot Date: Nov 23, 2015 Plot Time: 5:39pm File Name: L:\44\4880\010\dwg\4880010-C701.dwg, Layout: C701 By: jep



WATERLINE PROFILE

LEGEND

	Existing Grade
	New Grade
	Granular Backfill

SCALE: HORZ.: 1"=50'
VERT.: 1"=5'

REVISIONS:

DATE: NOVEMBER 16, 2015

THE SCHNEIDER CORPORATION (2015)

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SECTION THREE
WEST LAFAYETTE, INDIANA

TIPPECANOE DEVELOPMENT II, LLC
PO BOX 811, LAFAYETTE, IN 47902

DATE: 11/16/15	PROJECT NO.: 4880.010
DRAWN BY: JEP	CHECKED BY: JAN
SHEET TITLE: WATER MAIN PLAN AND PROFILE	
DRAWING FILE: L:\44\4880\010\dwg\4880010-C701.DWG	
XREF(S): L:\44\4880\010\dwg\4880010-BS	
SHEET NO.: C701	

Temporary Gravel Construction Entrance/Exit Pad

Requirements:
Material: 2-3 in. washed stone (NDOT CA No. 2) over a stable foundation.
Thickness: 8 in. minimum.
Width: 30 ft. minimum or full width of entrance/exit roadway, whichever is greater.
Length: 150 ft. minimum. The length can be shorter for small sites such as for an individual
Washing Facility (optional): Level area with 3 in. washed stone minimum or a commercial rock and waste water diverted to a sediment trap or basin.
Geotextile fabric underliner: May be used under wet conditions or with soils with a high seasonal water table to provide greater bearing strength.

Installation:
1. Avoid locating on steep slopes or at curves in public roads.
2. Remove all vegetation and other objectionable material from the foundation area, and grade and crown for positive drainage.
3. If slope towards the road exceeds 2%, construct a 6-8 in. high water bar (ridge) with 3:1 side slopes across the foundation area about 15 ft. from the entrance to divert runoff away from the road.
4. Install pipe under the pad if needed to maintain proper public road drainage.
5. If wet conditions are anticipated, place geotextile fabric on the graded foundation to improve stability.
6. Place stone to dimensions and grade shown in the erosion and sediment control plan, leaving the surface smooth and sloped for drainage.
7. Divert all surface runoff and drainage from the stone pad to a sediment trap or basin.

Maintenance:
*Inspect entrance pad and sediment disposal area weekly and after storm events or heavy
*Reshape pad as needed for drainage and runoff control.
*Top dress with clean stone as needed.
*Immediately remove mud and sediment tracked or washed onto public roads by brushing or sweeping. Flushing should only be used if the water is conveyed into a sediment trap or

*Repair any broken road pavement immediately.

Topsoil (Salvage and Utilization)

Requirements:
Material: Normally darker, friable, and loamy surface soil taken from areas that have not been stripped or graded.
Storage Area: Keep free of stumps, rock, and construction debris.
Preferred Site Conditions: Flatter than 2:1 and free of noxious weeds.
Removal/Storage/Re-spraying plan: Needed to assure these operations will be compatible with overall construction activities at the site.

Application:
SALVAGING AND STOCKPILING TOPSOIL
1. Determine depth and suitability of topsoil at the site.
2. Prior to stripping topsoil, install any site specific drainage practices needed to control runoff and sedimentation.
3. Remove the soil material no deeper than what the county soil survey describes as "surface soil".
4. Stockpile the material in accessible locations that neither interfere with other construction activities nor block the natural drainage; and install silt fences, straw bales, or other barriers to trap sediment.
5. If soil is stockpiled for more than 6 months, it should be temporarily seeded or covered with a tarp or surrounded by a sediment barrier.
SPREADING TOPSOIL
1. Prior to applying topsoil, grade the subsoil and roughen the top 3-4 in. by disking. This helps the topsoil bond with the subsoil.
2. Do not apply topsoil when the site is wet, muddy, or frozen, because it makes spreading difficult, inhibits bonding, and can cause compaction problems.
3. Apply topsoil evenly to a depth of at least 4 in. (8-12 in. if the underlying material is bedrock, loose sand, rock fragments gravel, or other unsuitable soil material), then compact slightly to improve contact with subsoil.
4. After spreading, grade and stabilize.

Maintenance:
*Inspect newly topsoiled areas frequently until vegetation is established.
*Repair eroded or damaged areas and revegetate.

Temporary Seeding Recommendations

Seed Species*	Rate/Acre	Planting depth	Optimum dates**
Wheat or rye	100 lbs.	1 to 1-1/2 in.	9/15 to 10/20
Spring oats	100 lbs.	1 to 1-1/2 in.	9/1 to 4/15
Annual ryegrass	40 lbs.	1/4 in.	3/1 to 5/1
			6/1 to 9/1
German millet	40 lbs.	1 to 2 in.	5/1 to 6/1
Sudangrass	35 lbs.	1 to 2 in.	5/1 to 7/30

*Perennial species may be used as a temporary cover, especially if the area to be seeded will remain idle for more than a year (Practice 3.12).
**Seeding dates outside the optimum dates increases the chances of seeding failure.

Permanent Seeding Recommendations

Vegetative Establishment
Vegetation will be established on all disturbed areas. Disturbed areas are to be seeded as soon as possible and as described in the construction sequence on Sheet C104.

Seedbed Preparation

Contractor shall bring the ground surface back to the proposed finish grade by placing stockpiled subsoils first and then topsoil into the disturbed area. Subsequently, the topsoil will be decomposed to a depth of 8 inches and prepared in order to ensure sufficient planting medium for seed installation. De-composition may consist of ripping, tilling, disking, or other method.
Apply lime to raise the pH to the level if needed for species being seeded. Apply 9 pounds of 12-0-12 analysis fertilizer (or equivalent) per 1000 sq. ft. (approximately 400 pounds per acre) or fertilizer according to test. If vegetation fails to grow, consider soil testing to determine soil pH or nutrient deficiency problem.
Work the fertilizer and lime into the soil to a depth of 2-3 inches with a harrow, disk or rake operated across the slope as possible.

Seeding

Select a seed mixture based on the specifications for permanent seed. Seed shall be applied with mechanical spreader at a rate of 250 pounds per acre. Apply seed 1/2 one direction and 1/2 perpendicular to the first. Lightly rake and roll with 200 lb. roller. Apply hydramulch or CRMPED in straw mulch after seeding.

Mulch

Unless otherwise specified, mulch shall be straw mulch applied at a rate of 2 tons/acre and at least 80 percent of the soil surface shall be covered. Mulch shall be installed within 24 hours of seeding. Mulch shall be punched in 4"-6" and anchored with Synthetic tackifier applied by IDEM. If punching in straw, straw strands shall be 6"-8" long on average. Do not apply straw mulch without tackifier if two methods described above.
Wood Fiber Hydramulch: Apply wood fiber at a rate of 1 ton/acre. Apply with a hydromulcher with tackifier agent used according to manufacturer's recommendations.

Species	Seeding Rate		Suitable pH	Site Suitability**	
	lbs/ac	lbs/1000 sq. ft.		Well Drained	Wet
1. Turf Type Tall Fescue	170	3.9	5.5-7.5	2	1
+Virginia Wild Rye	1.0	0.023			
+Kentucky Bluegrass	30	0.75			
+Common Oat	38	0.9			
+Annual Rye	19	0.45			

* Inoculate with specific inoculant.
** 1 - Preferred 2 - Will Tolerate

Gravity Bag Filter

Description:
A gravity bag filter, also referred to as a dewatering bag, is a square or rectangular bag made of non-woven geotextile fabric that collects sand, silt, and fines.
Appropriate Applications:
Effective for the removal of sediments (gravel, sand, and silt). Some metals are removed with the sediment.
Implementation:
Water is pumped into one side of the bag and seeps through the bottom and sides of the bag.
A secondary barrier, such as a rock filter bed or straw/hay bale barrier, is placed beneath and beyond the edges of the bag to capture sediments that escape the bag.
Maintenance:
Inspection of the flow conditions, bag condition, bag capacity, and the secondary barrier is required. Replace the bag when it no longer filters sediment or passes water at a reasonable rate. The bag is disposed of offsite.

Erosion Control Blanket (Surface-Applied)

Requirements:
Material: Either an organic (straw, excelsior, woven paper, coconut, fiber, etc.) or a synthetic mesh incorporated into a polypropylene or similar netting material. It may be biodegradable, photodegradable or permanent.
Expected Life: 2 yrs. Maximum
Anchoring: Use of staples or stakes to prevent movement or displacement.
Installation:
1. Select the type and weight of erosion control blanket to fit the site conditions (e.g. slope, channel, flow velocity).
2. Install any practices needed to control erosion and runoff, such as temporary or permanent diversion, sediment basin or trap, silt fence, and straw bale dam.
3. Grade the site as specified in the construction plans.
4. Add topsoil where appropriate.
5. Prepare the seedbed, fertilize (and lime, if needed), and seed the area immediately after grading.
6. Following manufacturer's directions, lay the blankets on the seeded area such that they are in continuous contact with the soil and that the upslope or upstream ones overlap the lower ones by at least 8 in.
7. Tuck the uppermost edge of the upper blankets into a check slot (silt trench), backfill with soil, and tamp down.
8. Anchor the blankets as specified by the manufacturer. This typically involves driving 6-8 in. metal stakes into the ground in a pattern determined by the site conditions.

Maintenance:
*During vegetative establishment, inspect after storm events for any erosion below the blanket.
*If any area shows erosion, pull back that portion of the blanket covering it, add soil, re-seed the area, and re-lay and staple the blanket.
*After vegetative establishment, check the treated area periodically.

Silt Fence (Sediment Fence)

Requirements:
Drainage area: Limited to 1/4 acre per 100 ft. of fence; further restricted by slope steepness (see Exhibit 3.74-B).
Location: Fence nearly level, approximately following the land contour, and at least 10 ft. from toe of slope to provide a broad, shallow sediment pool.
Trench: 8 in. minimum depth, flat-bottom or V-shaped, filled with compacted soil or gravel to bury lower portion of support wire and/or fence fabric.
Support posts: 2 x 2-in. hardwood posts (if used) or steel fence posts set at least 1 ft. deep.* (Steel posts should have projections for fastening fabric).
Spacing of posts: 8 ft. maximum if fence supported by wire, 6 ft. for extra-strength fabric without wire backing.
Fence height: High enough so depth of impounded water does not exceed 1 1/2 ft. at any point along fence line.
Support wire (optional): 14 gauge, 6-in. mesh wire fence (needed if using standard-strength fabric).
Fence fabric: Woven or non-woven geotextile fabric with specified filtering efficiency and tensile strength (see Exhibit 3.74-C) and containing UV inhibitors and stabilizers to ensure 6-mo. Minimum life at temperatures 9-120F.

Specifications Minimums for Silt Fence Fabric.

Physical property	Woven fabric	Non-woven fabric
Filtering efficiency	85%	85%
Tensile strength at 20% elongation		
Standard strength	30 lbs./linear in.	50 lbs./linear in.
Extra strength	50 lbs./linear in.	70 lbs./linear in.
Slurry flow rate	0.3 gal./min./sq.ft.	4.5 gal./min./sq.ft.
Water flow rate	15 gal./min./sq.ft.	220 gal./min./sq.ft.
UV resistance	70%	85%

Outlet (optional): To allow for safe storm flow bypass with-out overtopping fence. Placed along fence line to limit water depth to 1 1/2 ft. maximum; crest-1 ft. high maximum; weir width-4 ft. maximum; splash pad-5 ft. wide, 5 ft. long, 1 ft. thick minimum.

Installation:
SITE PREPARATION:
1. Plan for the fence to be at least 10 ft. from the toe of the slope to provide a sediment storage area.
2. Provide access to the area if sediment cleanup will be needed.
OUTLET CONSTRUCTION (OPTIONAL) (see Exhibit 3.74-D):
1. Determine the appropriate location for a reinforced, stabilized bypass flow outlet (unless the fence is designed to retain all runoff from a 2-yr. frequency, 24-hr. duration storm event).
2. Set the outlet elevation so that water depth cannot exceed 1 1/2 ft. at the lowest point along the fence line.
3. Locate the outlet weir support posts no more than 4 ft. apart, and install a horizontal brace between them. (Weir height should be no more than 1 ft. and water depth no more than 1 1/2 ft. anywhere else along the fence).
4. Excavate the foundation for the outlet splash pad to minimums of 1 ft. deep, 5 ft. wide, and 5 ft. long on level grade.
5. Fill the excavated foundation with INDOT CA No. 1 stone, being careful that the finished surface blends with the surrounding area, allowing no overlap.
6. Stabilize the area around the pad.
FENCE CONSTRUCTION (see Exhibit 3.74-E):
1. Along the entire intended fence line, dig an 8-in. deep flat-bottomed or V-shaped trench.
2. On the downslope side of the trench, drive the wood or steel support posts at least 1 ft. into the ground (the deeper the better), spacing them no more than 8 ft. apart if the fence is supported by wire or 6 ft. if extra-strength fabric is used without support wire. Adjust spacing, if necessary, to ensure that posts are set at the low points along the fence line. (NOTE: If the fence has pre-attached posts or stakes, drive them deep enough so the fabric is satisfactorily in the trench as described in Step 6.)
3. Fasten support wire fence (if the manufacturer recommends its use) to the upslope side of the posts, extending it 8 in. into the trench.
4. Run a continuous length of geotextile fabric in front (upslope) of the support wire and posts, avoiding joints, particularly at low points in the fence line.
5. If a joint is necessary, nail the overlap to the nearest post with lath (see Exhibit 3.74-F).
6. Place the bottom 1 ft. of fabric in the 8-in. deep trench, extending the remaining 4 in. toward the upslope side.
7. Backfill the trench with compacted earth or gravel.
NOTE: If using a pre-packed commercial silt fence rather than constructing one, follow manufacturer's installation instructions.

Maintenance:
* Inspect the silt fence periodically and after each storm event.
* If fence fabric tears, starts to decompose, or in any way becomes ineffective, replace the affected portion immediately.
* Remove deposited sediment when it reaches half the height of the fence at its lowest point or is causing the fabric to bulge.
* Take care to avoid undermining the fence during clean out.
* After the contributing drainage area has been stabilized, remove the fence and sediment deposits, bring the disturbed area to grade, and stabilize.

Concrete Washout
NOTE: The following steps will help reduce stormwater pollution from concrete wastes.
1. Concrete washout area shall be installed prior to any concrete placement on site.
2. Signs shall be placed at the construction entrance, at the washout area, and elsewhere as necessary to clearly identify the location of the concrete washout area to operators of concrete trucks and pump rigs.
3. The concrete washout area shall be repaired and enlarged or cleaned out as necessary to maintain capacity for washed concrete.
4. At the end of construction, all concrete shall be removed from the site and disposed of at an approved waste site.
5. When the concrete washout area is removed, the disturbed area shall be seeded and mulched or otherwise stabilized in a manner approved by the inspector.
Recommendations:
The following steps will help reduce stormwater pollution from concrete wastes.
- Discuss the concrete management techniques described in this BMP (such as handling of concrete waste and washout) with the ready-mix concrete supplier before any deliveries are made.
- Incorporate requirements for concrete waste management into material supplier and subcontractor agreements.
- Store dry and wet materials under cover, away from drainage areas.
- Avoid mixing excess amount of fresh concrete.
- Perform washout of concrete trucks into designated areas only.
- Do not wash out concrete trucks into storm drains, open ditches, streets, or streams.
- Do not allow excess concrete to be dumped onsite, except in designated areas.
FOR ONSITE WASHOUT:
- Locate washout area so that it is most practical for the construction sequence and does not adversely affect the stormwater runoff.
- Do not allow runoff from this area by constructing a temporary pit or bermed area large enough for liquid and solid waste.
- Wash out wastes into the temporary pit where the concrete can set, be broken up, and then disposed properly.
- Avoid creating runoff by draining water to a bermed or level area when washing concrete to remove fine particles and expose the aggregate.
- Do not wash sweepings from exposed aggregate concrete into the street or storm drain. Collect and return sweepings to aggregate base stockpile or dispose in the trash.

Dewatering and Pumping Operations

Description and Purpose:
Dewatering operations are practices that manage the discharge of pollutants when non-stormwater and accumulated precipitation must be removed from a work location so that construction work may be accomplished.
Suitable Applications:
These practices are implemented for discharges of nonstormwater from construction sites. Non-stormwaters include, but are not limited to, groundwater, water from cofferdams, water diversions, and water used during construction activities that must be removed from a work area. Practices identified in this section are also appropriate for implementation when managing the removal of accumulated precipitation(stormwater) from depressed areas at a construction site.
Limitations:
Site conditions will dictate design and use of dewatering operations. The controls discussed in this best management practice (BMP) address sediment only. The controls detailed in this BMP only allow for minimal settling time for sediment particles. Use only when site conditions restrict the use of the other control methods. Dewatering operations will require, and must comply with, applicable local permits.

Implementation:
Dewatering discharges must not cause erosion at the discharge point. A variety of methods can be used to treat water during dewatering operations. Several devices are presented below and provide options to achieve sediment removal. The size of particles present in the sediment and Permit or receiving water limitations on sediment are key considerations for selecting sediment treatment option(s); in some cases, the use of multiple devices may be appropriate.

CONCRETE WASHOUT

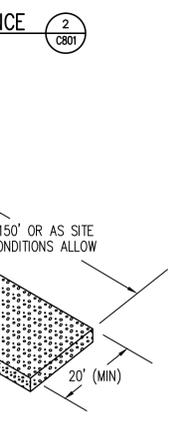
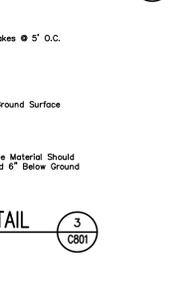
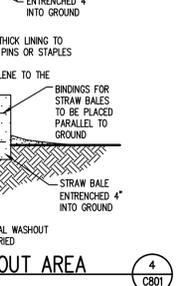
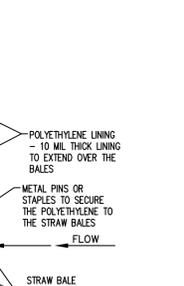
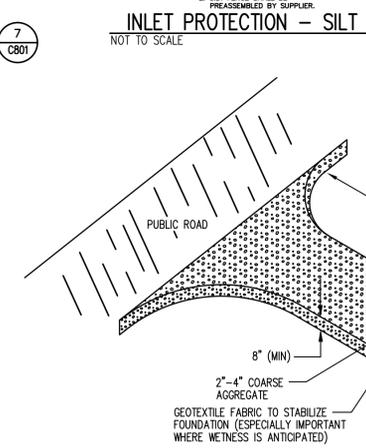
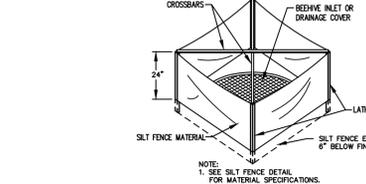
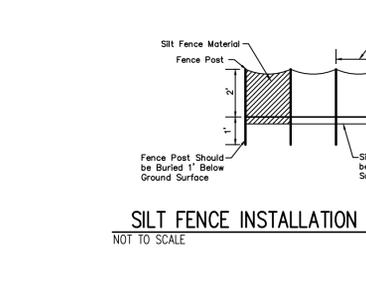
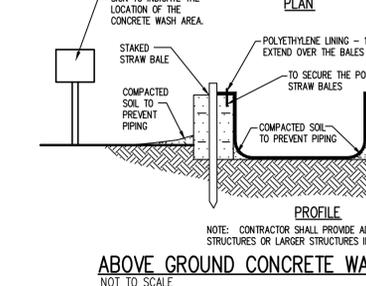
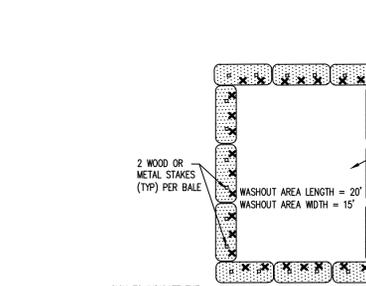
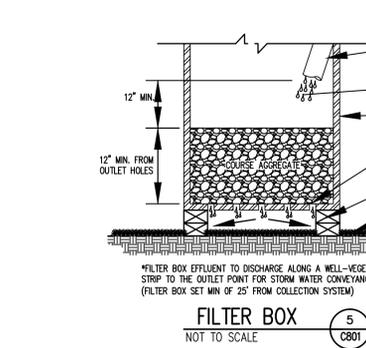
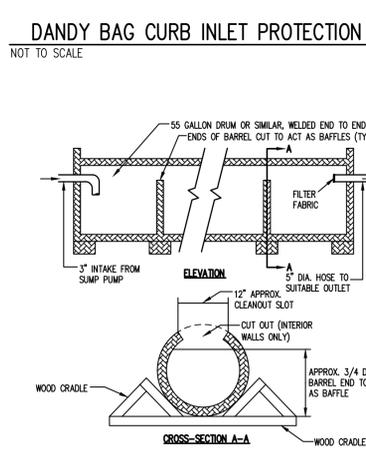
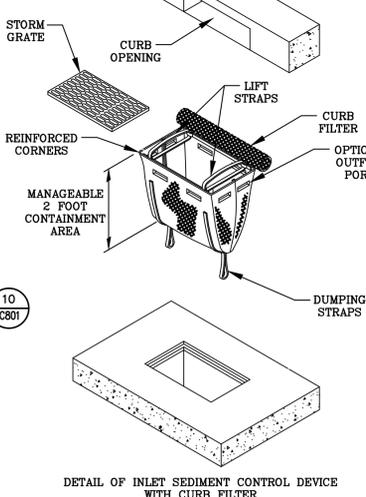
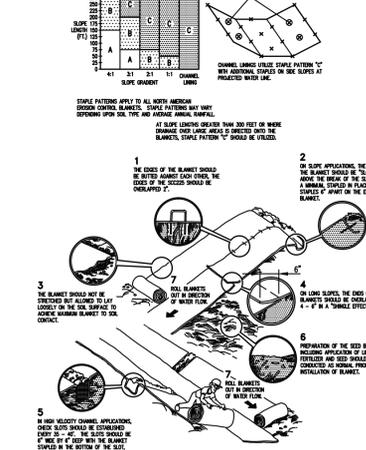
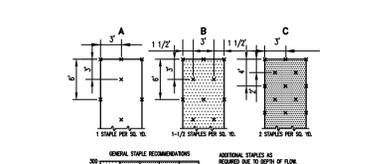
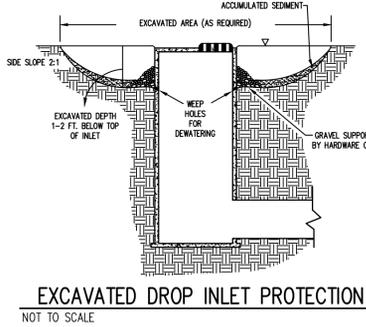
The following steps will help reduce stormwater pollution from concrete wastes:
Discuss the concrete management techniques described in this BMP (such as handling of concrete waste and washout) with the ready-mix concrete supplier before any deliveries are made.
Incorporate requirements for concrete waste management into material supplier and subcontractor agreements.
Store dry and wet materials under cover, away from drainage areas.
Inspect integrity of washout area daily and after each storm event. Inspect the lining for failure including tears.
Once concrete wastes harden, break up, remove and dispose of material in a legal manner.
Lining shall be replaced after each cleaning.
Avoid mixing excess amounts of fresh concrete.

Perform washout of concrete trucks offsite or in designated areas only.
Do not wash out concrete trucks into storm drains, open ditches, streets, or streams.
Do not allow excess concrete to be dumped onsite, except in designated areas.
For onsite washout:
- Do not allow runoff from this area by constructing a temporary pit or bermed area large enough for liquid and solid waste.
- Restrict washout area usage to washing concrete from mixers and pump trucks. Disposal of larger amounts of excess concrete may be done where runoff will not flow into protected areas and where the concrete can set, be broken up, and then disposed properly.
- Avoid creating runoff by draining water to a bermed or level area when washing concrete to remove fine particles and expose the aggregate.
- Do not wash sweepings from exposed aggregate concrete into the street or storm drain. Collect and return sweepings to aggregate base stockpile or dispose in the trash.

Dewatering Structure Recommendations
Requirements:
1. A dewatering structure must be sized (and operated) to allow pumped water to flow through the filtering device without overtopping the structure.
2. Material from any required excavation shall be stored in an area and protected in a manner that will prevent sediments from eroding and moving off-site.
3. A dewatering structure may not be needed if there is a well-stabilized, vegetated area onsite to which water may be discharged. The area must be stabilized so that it can filter sediment and at the same time withstand the velocity of the discharged water without eroding. A minimum filtering length of 75 feet must be available in order for such a method to be feasible.
4. The filtering devices must be inspected frequently and repaired or replaced once the sediment build-up prevents the structure from functioning as designed.
5. The accumulated sediment which is removed from a dewatering device must be spread on-site and stabilized or disposed of at an approved disposal site as per approved plan.

Portable Sediment Tank
- The structure may be constructed with steel drums, sturdy wood or other material suitable for handling the pressure exerted by the volume of water.
- Sediment tanks will have a minimum depth of 2 ft.
- The sediment tank shall be located for easy clean-out and disposal of the trapped sediment and to minimize the interference with construction activities.
- The following formula shall be used to determine the storage volume of the sediment tank: Pump discharge (gallons/min.) x 16 = cubic feet of storage required
- Once the water level nears the top of the tank, the pump must be shut off while the tank drains and additional capacity is made available.
- The tank shall be designed to allow for emergency flow over top of the tank. Clean-out of the tank is required once one-third of the original capacity is depleted due to sediment accumulation. The tank shall be clearly marked showing the clean-out point.

Filter Box
- The box selected should be made of steel, sturdy wood or other materials suitable to handle the pressure requirements imposed by the volume of water. Normally readily available 55 gallon drums welded top to bottom will suffice in most cases.
- Bottom of the box shall be made porous by drilling holes (or some other method).
- Coarse aggregate shall be placed over the holes at a minimum depth of 12 inches, metal "hardware" cloth may need to be placed between the aggregate and the holes if holes are drilled larger than the majority of the stone.
- As a result of the fast rate of flow of sediment-laden water through the aggregate, the effluent must be directed over a well-vegetated strip of at least 50 feet after leaving the base of the filter box.
- The box shall be sized as follows:
Pump discharge (gallons/min.) x 16 = cubic feet of storage required
- Once the water level nears the top of the box, the pump must be shut off while the box drains and additional capacity is made available. The box shall be designed/constructed to allow for emergency flow over top of this box.
- Clean-out of the box is required once one-third of the original capacity is depleted due to sediment accumulation. The tank shall be clearly marked showing the clean-out point.
- If the stone filter does become clogged with sediment so that it no longer adequately performs its function, the stones must be pulled away from the inlet, cleaned and replaced.
- Using a filter box only allows for minimal settling time for sediment particles; therefore, it should only be used when site conditions restrict the use of the other methods.



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Plot Date: Nov 23, 2015
Plot Time: 5:39pm

REVISIONS:

THE SCHNEIDER CORPORATION (2015)

Civil Engineering
GIS + LIS
Land Surveying
Landscape Architecture

WINDING RIDGE SUBDIVISION
SECTION THREE
WEST LAFAYETTE, INDIANA

DATE: 11/16/15
PROJECT NO.: 4880.010
DRAWN BY: JEP
CHECKED BY: JAN
SHEET TITLE: STORMWATER POLLUTION PREVENTION DETAILS AND SPECIFICATIONS
DRAWING FILE: L:\44\4680\010\DWG\4680010-C801-C802.DWG
XREF(S):
SHEET NO.:
C801

STORMWATER POLLUTION PREVENTION PLAN INDEX

Plan Index provided below
11"x17" Exhibit showing boundaries and streets is provided separately.
Project Type: Residential subdivision development.
Estimated Start of Construction - November 2015
Estimated Completion - November 2018
Vicinity Map: Denoted on sheet C103.
Legal Description of Project Site: Northeast Part of Sec. 31-124N-14W, Tippecanoe County, Indiana, LAT-4029'06"N, LONG-8653'53"W
Location of all proposed site improvements: See Sheets C101, C102, C103, C104, C105, C106, C107, C108, C109, C110, C111, C112, C113, C114, C115, C116, C117, C118, C119, C120, C121, C122, C123, C124, C125, C126, C127, C128, C129, C130, C131, C132, C133, C134, C135, C136, C137, C138, C139, C140, C141, C142, C143, C144, C145, C146, C147, C148, C149, C150, C151, C152, C153, C154, C155, C156, C157, C158, C159, C160, C161, C162, C163, C164, C165, C166, C167, C168, C169, C170, C171, C172, C173, C174, C175, C176, C177, C178, C179, C180, C181, C182, C183, C184, C185, C186, C187, C188, C189, C190, C191, C192, C193, C194, C195, C196, C197, C198, C199, C200, C201, C202, C203, C204, C205, C206, C207, C208, C209, C210, C211, C212, C213, C214, C215, C216, C217, C218, C219, C220, C221, C222, C223, C224, C225, C226, C227, C228, C229, C230, C231, C232, C233, C234, C235, C236, C237, C238, C239, C240, C241, C242, C243, C244, C245, C246, C247, C248, C249, C250, C251, C252, C253, C254, C255, C256, C257, 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1. Coordinate and monitor cleanup until the situation has been stabilized and all spills have been eliminated.
g) Cooperate with the IDEM-GER on procedures and reports involved with the event.
Cleanup Parameters:
1. The Project Owner shall be continually kept informed of and maintain lists of qualified contractors and available VOC-trucks, tank pumpers and other equipment readily accessible for clean-up operations.
2. All maintenance personnel will be made aware of techniques for prevention of spills.
3. When spills occur which could endanger human life and this becomes primary concern, the discharge of the life saving protection function will be carried out by the local police and fire departments.
4. Absorbent materials, which are used in the cleanup of spilled materials, will be disposed of in a manner subject to the approval of the Indiana Department of Environmental Management.
5. Flushing of spilled material with water will not be permitted unless so authorized by the Indiana Department of Environmental Management.
Tippecanoe County Cleanup Parameters:
Minor Spills:
1. Minor spills typically involve small quantities of oil, gasoline, paint, etc., which can be controlled by the first responder at the scene of the spill.
2. Use absorbent materials on small spills rather than hosing down or burying the spill.
3. Remove the absorbent materials promptly and dispose of properly.
4. The practice commonly followed for a minor spill is:
-Contain the spill
-Recover spilled materials.
-Clean the contaminated area and/or properly dispose of contaminated materials.
Semi-Significant Spills:
1. Semi-significant spills still can be controlled by the first responder along with the aid of other personnel such as laborers and the foreman, etc.
2. Clean up spills immediately.
3. Notify the project foreman immediately.
4. Contain spread of the spill.
5. If the spill occurs on paved or impermeable surfaces, clean up using "dry" methods (absorbent materials, cat litter and/or rags).
6. If the spill occurs in dirt areas, immediately contain the spill by constructing an earthen dike.
7. If the spill occurs during rain, cover spill with tarps or other material to prevent contaminating runoff.
Significant/Hazardous Spills:
1. For significant or hazardous spills that cannot be controlled by personnel in the immediate vicinity, notify the local emergency response by dialing 911.
2. For spills of federal reportable quantities, in conformance with the requirements in 40 CFR parts 110, 119, and 302, the contractor shall notify the National Response Center at (800) 424-8802.
3. Notification shall first be made by telephone and followed up with a written report.
4. The services of a spill contractor or a Haz-Mat team shall be obtained immediately.
5. Construction personnel shall not attempt to clean up the spill until the appropriate and qualified personnel have arrived at the job site.
Monitoring and maintenance guidelines for pollution prevention measures:
Silt Fence Maintenance Requirements:
1. Inspect the silt fence weekly and after each significant storm event.
2. If fence fabric tears, starts to decompose or in any way becomes ineffective, replace the affected portion immediately.
3. Remove deposited sediment when it reaches half the height of the fence at its lowest point or is causing the fabric to bulge.
4. Take care to avoid undermining the fence during cleanup.
5. After the contributing drainage area has been stabilized, remove the fence and sediment deposits, bring the disturbed area to grade and stabilize it.
Erosion Control Blanket (Surface Applied) Maintenance Requirements:
1. During vegetative establishment, inspect weekly and after each significant storm event for any erosion below the blanket.
2. If any area(s) shows erosion, pull back that portion of the blanket covering it, re-seed the area and re-apply and stabilize the blanket.
3. After vegetative establishment, check the treated area periodically.
Temporary Gravel Construction Entrance Maintenance Requirements:
1. Inspect entrance pad and sediment disposal area weekly and after significant storm events or heavy use.
2. Reshape as needed for drainage and runoff control.
3. Top dress with clean stone as needed.
4. Immediately remove mud and sediment tracked or washed onto streets by brushing or sweeping. Flushing should only be used if the water is conveyed into a sediment trap or basin.
5. Repair any broken road pavement immediately.
6. Replace the bag if it appears clean but will not pass water.
Erosion & sediment control specifications for individual building lots: See Detail on Sheet C801
Description of pollutants and their sources associated with the proposed land use: Silt and sediment from exposed soils, leaves, mulch, vehicular sources such as leaking fuel or oil, brake fluid, brake dust, grease, antifreeze, metals, rubber fragments, road grit, salts and sands, construction trash and debris, fertilizers, household items including but not limited to cleaning agents, chemicals, paint, miscellaneous home improvement materials, toys, clothing and animal waste, elevated storm runoff temperatures, acid rain, pesticides and pathogens.
Sequence describing stormwater quality measure implementation:
1. Inspect and maintain all temporary erosion control measures as detailed in the Stormwater Pollution Prevention Measures Maintenance Requirements beginning immediately after installation and continuing until vegetation has been sufficiently established and all construction activity is complete.
2. Remove all silt fences, etc. only after seeding and sufficient vegetative growth has been established in each area to a point where sediment/pollutants will not enter the storm sewer system or adjacent ditches.
3. Inspection and maintenance of all temporary and permanent BMP improvements is the responsibility of the Contractor or his designee until improvements are accepted for maintenance by the Owner, Tippecanoe Development II, LLC.
Description of proposed post construction storm water quality measures: Site and facility design for storm water quality protection on this site include wet ponds from previous sections. It is the intent of this plan that the implementation of the above described storm water quality measures be executed in accordance with the endorsed plans and details in order to meet the requirements of Rule 5 storm water quality.
Location, dimensions, specifications and construction details of post-construction stormwater quality measures: See Sheets C103-C104, C801-C802.
Description of maintenance guidelines for proposed post-construction water quality measures: On-going maintenance per the Operations and Maintenance Manual shall ensure that sufficient capacity within the on-site post-construction BMP's will prevent the export of trash and sediment off-site to the downstream water systems.

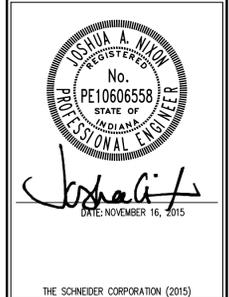
ADDITIONAL STORMWATER POLLUTION PREVENTION MEASURES

VEHICLE & EQUIPMENT MAINTENANCE
Description and Purpose:
Prevent or reduce the contamination of stormwater resulting from vehicle and equipment maintenance by running a "dry and clean site".
Suitable Applications:
These procedures are suitable on all construction projects where an onsite yard area is necessary for storage and maintenance of heavy equipment and vehicles.
Limitations:
Onsite vehicle and equipment maintenance should only be used where it is impractical to send vehicles and equipment offsite for maintenance and repair.
Implementation:
If maintenance must occur onsite, use designated areas, located away from drainage courses.
Drip pans or absorbent pads should be used during vehicle and equipment maintenance work that involves fluids, unless the maintenance work is performed over an impermeable surface in a dedicated maintenance area.
Place a stockpile of spill cleanup materials where it will be readily accessible.
All fueling trucks and fueling areas are required to have spill kits and/or use other spill protection devices.
Use absorbent materials on small spills.
Inspect onsite vehicles and equipment daily at startup for leaks, and repair immediately.
Keep vehicles and equipment clean; do not allow excessive build-up of oil and grease.
Segregate and recycle wastes, such as greases, used oil or oil filters, antifreeze, cleaning solutions, automotive batteries, hydraulic and transmission fluids.
Train employees and subcontractors in proper maintenance and spill cleanup procedures.
Drip pans or plastic sheeting should be placed under all vehicles and equipment placed on docks, barges, or other structures over water bodies when the vehicle or equipment is planned to be idle for more than 1 hour.
Properly dispose of used oils, fluids, lubricants, and spill cleanup materials.
Do not place used oil in a dumpster or pour into a storm drain or watercourse.
Properly dispose of or recycle used batteries.
Do not bury used tires.
Repair leaks of fluids and oil immediately.
Listed below is further information if you must perform vehicle or equipment maintenance onsite.
Inspection and Maintenance:
Inspect and verify that BMPs are in place prior to the commencement of associated activities.
Maintain waste fluid containers in leak proof condition.
Vehicles and equipment should be inspected on each day of use.
Inspection and Maintenance:
Inspect equipment for damaged hoses and leaky gaskets routinely.
VEHICLE AND EQUIPMENT FUELING
Description and Purpose:
Vehicle equipment fueling procedures and practices are designed to prevent fuel spills and leaks, and reduce or eliminate contamination of stormwater.
Limitations:
Onsite vehicle and equipment fueling should only be used where it is impractical to send vehicles and equipment offsite for fueling.
Implementation:
Use offsite fueling stations as much as possible.
Discourage "topping-off" of fuel tanks.
Absorbent spill cleanup materials and spill kits should be available in fueling areas and on fueling trucks.
Drip pans or absorbent pads should be used during vehicle and equipment fueling.
Use absorbent materials on small spills.
Avoid mobile fueling of mobile construction equipment around the site.
Train employees and subcontractors in proper fueling and cleanup procedures.
Dedicated fueling areas should be protected from stormwater runoff.
Protect fueling areas with berms and dikes to prevent runoff.
Nozzles used in vehicle and equipment fueling should be equipped with an automatic shutoff to control drips.
Inspection and Maintenance:
Vehicles and equipment should be inspected each day of use for leaks.
Keep ample supplies of spill cleanup materials onsite.
Immediately clean up spills and properly dispose of contaminated soil and cleanup materials.
SOLID WASTE MANAGEMENT
Description and Purpose:
Solid waste management procedures and practices are designed to prevent or reduce the discharge of pollutants to stormwater from solid or construction waste by providing designated waste collection areas and containers.
Suitable Applications:
This BMP is suitable for construction sites where the following wastes are generated or stored:
Packaging materials including wood, paper, and plastic.
Scrap or surplus building materials including scrap metals, rubber, plastic, glass pieces and masonry products.
Domestic wastes including food containers such as beverage cans, coffee cups, paper bags, plastic wrappers, and cigarettes.
Construction wastes including brick, mortar, timber, steel and metal scraps, pipe and electrical cuttings, nonhazardous equipment parts, styrofoam and other materials sent transport and package construction materials.

Implementation:
The following steps will help keep a clean site and reduce stormwater pollution:
Select designated waste collection areas onsite.
Inform trash-hauling contractors that you will accept only watertight dumpsters for onsite use.
Inspect dumpsters for leaks and repair any dumpster that is not watertight.
Provide an adequate number of containers with lids or covers that can be placed over the container to keep rain out or to prevent loss of wastes when it is windy.
Plan for additional containers and more frequent pickup during the demolition phase of construction.
Collect site trash daily, especially during rainy and windy conditions.
Remove this solid waste promptly since erosion and sediment control devices tend to collect litter.
Make sure that toxic liquid wastes (used oils, solvents, and paints) and chemicals (acids, pesticides, additives, curing compounds) are not disposed of in dumpsters designated for construction debris.
Do not hose out dumpsters on the construction site.
Arrange for regular waste collection before containers overflow.
Clean up immediately if a container does spill.
Make sure that construction waste is collected, removed, and disposed of only at authorized disposal areas.
Collection, Storage, and Disposal:
Littering on the project site should be prohibited.
To prevent clogging of the storm drainage system, litter and debris removal from drainage gates, trash racks, and ditch lines should be a priority.
Trash receptacles should be provided in the contractor's yard, field trailer areas, and at locations where workers congregate for lunch and break periods.
Litter from work areas within the construction limits of the project site should be collected and placed in watertight dumpsters at least weekly.
Dumpsters of sufficient size and number should be provided to contain the solid waste generated by the project.
Full dumpsters should be removed from the project site and the contents should be disposed of by the trash hauling contractor.
Construction debris and waste should be removed from the site biweekly or more frequently as needed.
Construction material visible to the public should be stored or stacked in an orderly manner.
Stormwater runoff should be prevented from contacting stored solid waste through the use of berms, dikes, or other temporary diversion structures or through the use of measures to elevate waste from site surfaces.
Solid waste storage areas should be located at least 50 ft from drainage facilities and watercourses and should not be located in areas prone to flooding or ponding.
Inspection and Maintenance:
Inspect and verify that activity-based BMPs are in place prior to the commencement of associated activities.
Inspect BMPs subject to non-stormwater discharge daily while non-stormwater discharges occur.
Inspect construction waste area regularly.
Arrange for regular waste collection.

Plot Name: L:\44\4880\010\Drawings\4880010-C801-C802.dwg, Layout: C802, Plot Date: Nov 23, 2015, Plot Time: 5:39pm, By: jep

REVISIONS:

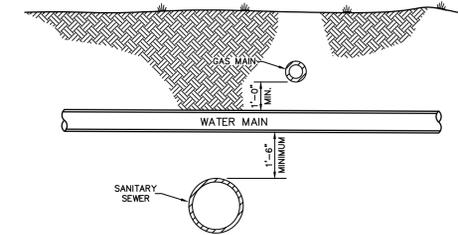


Schneider logo and contact information for The Schneider Corporation, West Lafayette Office, 1330 Win Hentschel Blvd, Suite 260, West Lafayette, IN 47906-4156.

WINDING RIDGE SUBDIVISION SECTION THREE WEST LAFAYETTE, INDIANA. TIPPECANOE DEVELOPMENT II, LLC PO BOX 811, LAFAYETTE, IN 47902

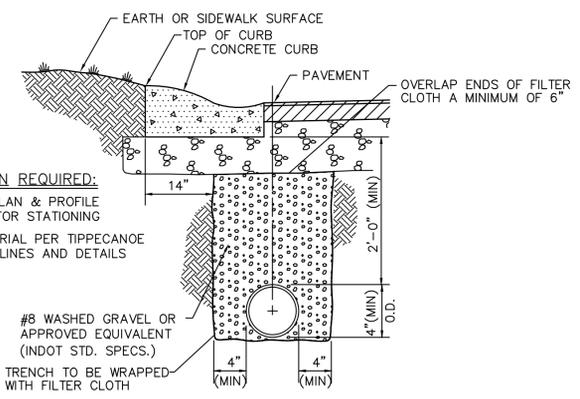
DATE: 11/16/15, PROJECT NO.: 4880.010, DRAWN BY: JEP, CHECKED BY: JAN, SHEET TITLE: STORMWATER POLLUTION PREVENTION DETAILS AND SPECIFICATIONS, SHEET NO.: C802

Plot Date: Nov 23, 2015 Plot Time: 5:39pm File Name: L:\44\4880\010\dwgs\4880010-C803.dwg, Layout: C803 By: jep



GENERAL NOTE:
10 FOOT HORIZONTAL AND 18 INCH VERTICAL SEPARATIONS SHALL BE MAINTAINED BETWEEN THE PROPOSED SANITARY SEWERS AND WATER MAINS.

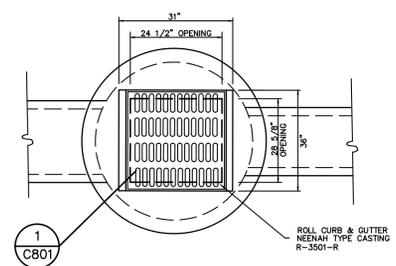
TYPICAL UTILITY CROSSING 3
NO SCALE C803



- INSTALLATION REQUIRED:**
- SEE STREET PLAN & PROFILE SHEET C201, FOR STATIONING
 - BEDDING MATERIAL PER TIPPECANOE COUNTY GUIDELINES AND DETAILS

#8 WASHED GRAVEL OR APPROVED EQUIVALENT (INDOT STD. SPECS.)
TRENCH TO BE WRAPPED WITH FILTER CLOTH

CURB UNDERDRAIN 2
NO SCALE C803



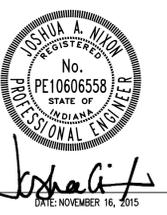
STORM STRUCTURE
NEENAH R-3501-R
451, 452

REFER TO THE CITY OF WEST LAFAYETTE STORM SEWER DETAILS, SHEET 13, FOR DETAIL INFORMATION PERTAINING TO FLOW-BY AND SUMP INLETS.

*REFER TO THE CITY OF WEST LAFAYETTE STORM SEWER DETAILS, SHEET 13, FOR DETAIL INFORMATION PERTAINING TO CURB INLET CATCH BASINS.

CURB INLET 1
NO SCALE C803

REVISIONS:



THE SCHNEIDER CORPORATION (2015)



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Land Surveying
Landscape Architecture

WINDING RIDGE SUBDIVISION
SECTION THREE
WEST LAFAYETTE, INDIANA
TIPPECANOE DEVELOPMENT II, LLC
PO BOX 811, LAFAYETTE, IN 47902

DATE: 11/16/15 PROJECT NO.: 4880.010
DRAWN BY: JEP CHECKED BY: JAN

SHEET TITLE: **GENERAL DETAILS**

DRAWING FILE: L:\44\4880\010\DWG\4880010-C803.DWG

XREF(S):

SHEET NO.:

C803

STORMWATER INLET PROTECTOR
 Details of inlet and outlet pipes, including side view and top view. Includes notes on grate placement and flow direction.

LOT DRAINAGE DETAIL (TYPICAL)
 Cross-section showing drainage slope, protective slope, and side weir or channel.

BACK TO BACK LOT SECTION DETAIL (TYPICAL)
 Plan view showing lot layout, drainage ditches, and protective slopes.

EROSION CONTROL MAT INSTALLATION GUIDE DETAIL
 Details of mat installation, including location of top of bar, dump waste, and logo detail.

General Notes:
 1. Refer to the Indiana Storm Water Quality Manual, latest edition for additional information and resources for planning purposes and standards for best management. The manual can be found at www.in.gov/inddema. The Indiana Storm Water Quality Manual is a book reference for the interpretation of various water quality standards and for the design, construction, and maintenance of stormwater management systems. The manual is available in the Indiana Handbook for Erosion Control in Developing Areas.

CITY OF WEST LAFAYETTE
 City Hall, 609 West Navajo West Lafayette, IN 47906
 Storm Sewer Structures, Drainage, and Erosion Control Details

Project Name: [] Sheet Number: []

RIPRAP DETAIL @ END SECTION
 Cross-section showing riprap structure, pipe, and concrete base.

CATCH BASIN
 Section view showing catch basin structure, inlet, and outlet.

CONCRETE TRUCK WASH OUT DETAIL
 Section view showing concrete washout structure with notes on concrete strength and curing.

ROCK CHECK DAM
 Section view showing rock check dam structure with notes on rock size and spacing.

General Notes:
 1. Refer to the Indiana Storm Water Quality Manual, latest edition for additional information and resources for planning purposes and standards for best management. The manual can be found at www.in.gov/inddema. The Indiana Storm Water Quality Manual is a book reference for the interpretation of various water quality standards and for the design, construction, and maintenance of stormwater management systems. The manual is available in the Indiana Handbook for Erosion Control in Developing Areas.

CITY OF WEST LAFAYETTE
 City Hall, 609 West Navajo West Lafayette, IN 47906
 Miscellaneous and Erosion Control Details

Project Name: [] Sheet Number: []

STORM SEWER MANHOLE SECTIONS
 Type A (Standard), Type B, and Type C, D, E, F, G, H, J, K, and L. Includes manhole selection tables for flow diameter, flow velocity, and manhole pipe size.

STANDARD BEDDING DETAIL
 Section view showing bedding structure, manhole base, and pipe.

STORM SEWER MANHOLE PLAN
 Plan view showing manhole structure, cover, and surrounding area.

General Notes:
 1. Storm sewer pipe and appurtenances shall conform to City of West Lafayette specifications for design and quality of materials, and City of West Lafayette Ordinance No. 28-02. The West Lafayette Stormwater Code for Stormwater Management, latest edition, shall apply to all stormwater management systems. The manual is available in the Indiana Handbook for Erosion Control in Developing Areas.

CITY OF WEST LAFAYETTE
 City Hall, 609 West Navajo West Lafayette, IN 47906
 Storm Sewer Details

Project Name: [] Sheet Number: []

SEWAGE FORCE MAIN AIR RELEASE MANHOLE
 Section view showing air release manhole structure with notes on pipe material and bedding.

PIPE CROSSING DETAIL
 Section view showing pipe crossing structure with notes on pipe material and bedding.

PIPE ENCASEMENT DETAIL
 Section view showing pipe encasement structure with notes on pipe material and bedding.

GREASE/GRIT TRAP (COMMERCIAL)
 Section view showing grease/ grit trap structure with notes on pipe material and bedding.

General Notes:
 1. Refer to the Indiana Storm Water Quality Manual, latest edition for additional information and resources for planning purposes and standards for best management. The manual can be found at www.in.gov/inddema. The Indiana Storm Water Quality Manual is a book reference for the interpretation of various water quality standards and for the design, construction, and maintenance of stormwater management systems. The manual is available in the Indiana Handbook for Erosion Control in Developing Areas.

CITY OF WEST LAFAYETTE
 City Hall, 609 West Navajo West Lafayette, IN 47906
 Sanitary Sewer and Misc. Utility Details

Project Name: [] Sheet Number: []

REVISIONS:

DATE: NOVEMBER 16, 2015

THE SCHNEIDER CORPORATION (2015)

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Civil Engineering
 GIS + LIS
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 Landscape Architecture

**WINDING RIDGE SUBDIVISION
 SECTION THREE
 WEST LAFAYETTE, INDIANA**

**TIPPECANOE DEVELOPMENT II, LLC
 PO BOX 811, LAFAYETTE, IN 47902**

DATE: 11/16/15 PROJECT NO: 4880.010
 DRAWN BY: JEP CHECKED BY: JAN
 SHEET TITLE: CITY OF WEST LAFAYETTE DETAILS & SPECIFICATIONS
 DRAWING FILE: L:\44\4880\010\dwg\4880010-C804-C806.dwg
 XREF(S):
 SHEET NO: C805

Landscaping Specifications

Part 1 - General

1.01 Description: This work shall consist of furnishing, transporting, and installing of plants or other materials required for: 1. The establishment of the landscape plantings, including hauling and spreading of topsoil and finished grading as indicated on the proposed drawings and specified herein.

1.02 Applicable Standards: A. American National Standards for Tree Care Operations, ANSI A300, American National Standards Institute, 17 West 42nd Street, New York, NY 10018. B. American Standards for Nursery Stock, ANSI Z601, American Nursery and Landscape Association, 1750 Eye Street, NW, Suite 505, Washington, D.C. 20005.

1.03 Plant Requirements: A. On the landscape plan, provide a schedule showing quantity, size, genus, species, variety, and condition (DBH or caliper) of trees and shrubs indicated, complying with applicable requirements of ANSI 2601 American Standard for Nursery Stock.

1.04 Quality Assurance: A. Source quality control: General: A certificate of nursery inspection from the state Department of Agriculture from which plants originate and/or a dated, current year Indiana Department of Natural Resources nursery dealer certificate must be available upon request.

1.05 Delivery, Storage And Handling: A. Soil: Deliver, store, and handle according to the requirements of the American Soil Producers Association's (ASPA) "Specifications for topsoils and materials and transportation".

1.06 Project Conditions: A. Utilities: Determine location of above ground and underground utilities and perform work in a manner which will avoid damage. Call Indiana (317) 232-1191. It is the contractor's responsibility to locate and mark all underground utilities within two working days before commencing work.

1.07 Coordination And Scheduling: A. Planting Time: Proceed with and complete landscape work as rapidly as portions of site become available, working within seasonal limitations for each kind of landscape work required.

Part 2 - Products 2.01 Plants: A. Plants shall be true to species and variety specified and nursery-grown in accordance with good horticultural practices and climatic conditions similar to those in the locality of the project for at least two years.

B. Unless specifically noted, all plants shall be of specimen quality, heavy, symmetrical, and superior in form, compactness and symmetry. They shall be sound, healthy, vigorous, well-branched, and evenly distributed when in leaf, free of disease and insects, eggs, or larvae, and shall have healthy, well-developed root systems. They shall be free from physical damage or other conditions that would prevent proper growth.

C. Plants Other Than Trees: The Measurements Specified: Except that Plants Larger Than Those Specified May Be Used If Approved By The Overseas Administrator. If Larger Plants Are Approved, The Root Ball Shall Be Measured To The Outer 12" Root.

D. Substitutions of plant materials will not be permitted unless authorized in writing by the Overseas Administrator. The Contractor is required to verify that a plant specified is not available; consideration will be given to the nearest available size or similar variety.

E. The contractor shall ensure that all plant materials shown on the drawings are included in his or her bid. F. Balled and burtopped (B&B) plant materials shall be properly bagged with firm, natural burlap or material as many times roots are possible, in a burlap and always on specified in the Drawing Standard for Nursery Stock.

H. Mechanized Tree Spade Operations: 1. Trees may be moved and planted with an approved mechanized tree spade. The tree spade shall have a maximum size for a similar DBH root-ball diameter, according to the American Standard for Nursery Stock or the manufacturer's maximum size recommendation for the tree spade being used.

I. Grass Materials: A. Upright Staking and Tying: Stake trees of less than 2 inch (50 mm) caliper only as required to prevent wind tip-over. Use a minimum of 2 stakes of length required to penetrate at least 18 inches (450 mm) below bottom of backfill excavation and to a minimum of 12 inches (300 mm) above grade.

J. Knot Instructions: The guying knot expands to allow for grade tree growth. Step 1: To a simple knot 18" x 24" (depending on the diameter of the tree) from either end of the tree.

K. Tree Staking Detail, Trees 3" Caliper Or Less: Notes: Staking and guying material is to be 1/2" x 1/2" x 1/2" flat wire, polyethylene material, 300 lb. tensile strength. Fasten to stakes in a manner which permits tree movement and supports the tree.

L. Tree Staking Detail, Trees 3" Caliper Or Larger: Notes: Staking and guying material is to be (see on pg. 2) Stake only when needed, i.e., overgrown or windy site or sandy soil or tree is crown-heavy.

M. Soil Improvement Detail: Notes: Loamy soils include the following soils based on classifications and have a clay content of between 15 to 27%, loam, sandy loam and all loam. Note that soils at the outer limits of the loam classifications may present special planting/planting problems not anticipated by this detail.

N. Tree Staking Detail, Trees 3" Caliper Or Larger: Notes: For detailed requirements related to the planting of the tree in the improved soil, see the "Planting Detail".

O. Shrub Detail: Notes: Remove all twigs, tags, and synthetic ties from shrub stake. Remove burlap from top 1/2 of rootball.

2.02 Mulch: Mulch shall be organic mulch, free from deleterious materials and suitable as a top dressing of trees and shrubs, consisting of shredded hardwood bark.

2.03 Stakes And Guying: A. Upright and guy stakes: rough-sawn, round, new hardwood, redwood, or pressure-treated treated southern pine. Use of plastic, bamboo, concrete, green grass, and other materials is prohibited.

2.04 Planting And Placement Of Topsoil: A. Spread topsoil to minimum depth required to meet trees, shrubs, and excavations shown, after light raking and natural settlement. Minimum depth of topsoil shall be 4 inches unless otherwise indicated.

2.05 Groundcover And Permanent Plant Preparation: A. Top soil in beds to a minimum depth of 8 inches (200 mm).

2.06 Planting Trees And Shrubs: A. Soil balled and burtopped stock plants and in center of pit or trench with top of ball raised above adjacent finish grade as indicated.

2.07 Tree And Shrub Guy Staking: A. Upright Staking and Tying: Stake trees of less than 2 inch (50 mm) caliper only as required to prevent wind tip-over. Use a minimum of 2 stakes of length required to penetrate at least 18 inches (450 mm) below bottom of backfill excavation and to a minimum of 12 inches (300 mm) above grade.

2.08 Planting Shrubs And And Herbaceous Plant Material: A. Preparation: Remove vegetation, liquid, solid, dead, and construction soil materials, obstructions, and deleterious materials from ground surface prior to planting fill.

2.09 Grading: A. General: Uniformly grade areas to a smooth surface, free from irregular surface changes. Comply with compact requirements and grade to cross sections, lines, and elevations indicated.

2.10 Site Grading And Placement Of Topsoil: A. Site grading: Place grade to prevent planting. (Include subgrade to required elevations within 1" tolerance.)

2.11 Reestablishment Lawn And Seeding Of Berms: A. Reestablishment seeding lawn areas or other Contractor work damaged by operations, including storage of materials or equipment and movement of vehicles.

2.12 Mulching: A. Match backfilled areas of paths, trenches, planted areas, and other areas indicated with a 3" (75 mm) thick layer of organic mulch and finish level with adjacent finish grade.

2.13 Disposal Of Surplus And Waste Material: A. Disposal: Remove surplus soil and waste materials, including excess subsoil, unsuitable soil, trash and debris, and legally dispose of it at the Owner's property.

Part 4 - Warranty And Maintenance 4.01 Warranty: A. Remove and replace dead planting materials immediately unless required to plant in the succeeding planting season.

4.02 Tree And Shrub Maintenance: A. Properly secure the following responsibilities for shrubs or trees planted in or near the public right-of-way.

4.03 Tree And Shrub Guying: A. Off-street parking areas require a warning area between the right-of-way and the parking area consisting of the above and below grade work. The warning area shall consist of a 6' x 6' x 6' concrete curb, 18" high, with the center of the curb side of the curb and right of way.

4.04 Tree And Shrub Guying: A. For this purpose, the warning height may be reduced to between 18"-30". Any tree required by the landscape plan shall be maintained in good condition as to appearance, health, and safety.

4.05 Tree And Shrub Guying: A. Tree Guying: Guy trees with 1/2" x 1/2" x 1/2" flat wire, polyethylene material, 300 lb. tensile strength. Fasten to stakes in a manner which permits tree movement and supports the tree.

4.06 Tree And Shrub Guying: A. Tree Guying: Guy trees with 1/2" x 1/2" x 1/2" flat wire, polyethylene material, 300 lb. tensile strength. Fasten to stakes in a manner which permits tree movement and supports the tree.

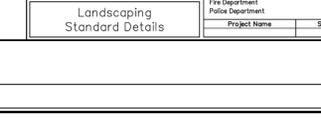
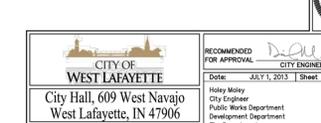
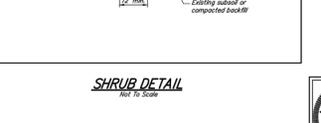
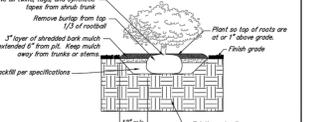
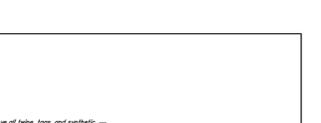
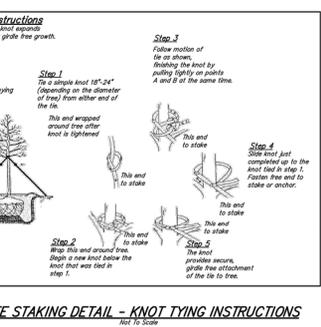
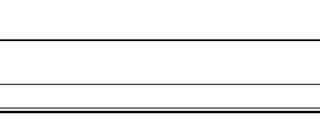
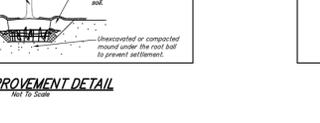
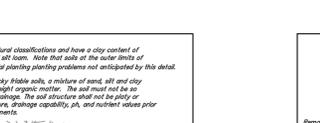
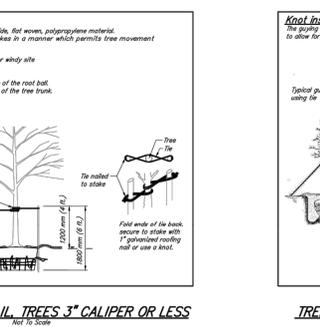
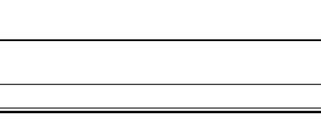
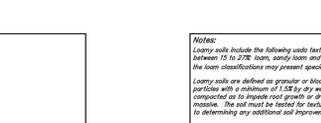
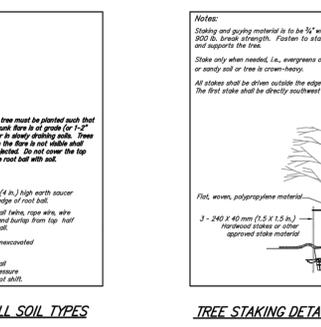
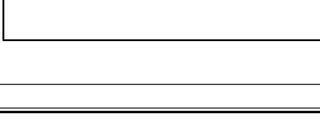
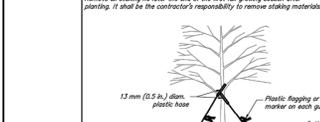
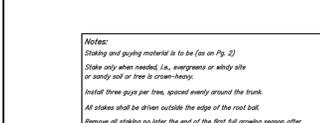
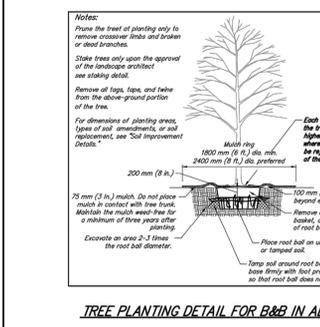
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4.09 Tree And Shrub Guying: A. Tree Guying: Guy trees with 1/2" x 1/2" x 1/2" flat wire, polyethylene material, 300 lb. tensile strength. Fasten to stakes in a manner which permits tree movement and supports the tree.

4.10 Tree And Shrub Guying: A. Tree Guying: Guy trees with 1/2" x 1/2" x 1/2" flat wire, polyethylene material, 300 lb. tensile strength. Fasten to stakes in a manner which permits tree movement and supports the tree.

4.11 Tree And Shrub Guying: A. Tree Guying: Guy trees with 1/2" x 1/2" x 1/2" flat wire, polyethylene material, 300 lb. tensile strength. Fasten to stakes in a manner which permits tree movement and supports the tree.



REVISIONS:

DATE: NOVEMBER 16, 2015 THE SCHNEIDER CORPORATION (2015)

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WINDING RIDGE SUBDIVISION SECTION THREE WEST LAFAYETTE, INDIANA TIPPECANOE DEVELOPMENT II, LLC PO BOX 811, LAFAYETTE, IN 47902

DATE: 11/16/15 PROJECT NO: 4880.010 DRAWN BY: JEP CHECKED BY: JAN SHEET TITLE: CITY OF WEST LAFAYETTE DETAILS & SPECIFICATIONS DRAWING FILE: L:\44\4880\010\dwg\4880010-C804-C806.dwg XREF(S): SHEET NO: C806

EARTHWORK

1. SCOPE OF WORK

A. Extent: The work required under this section consists of all excavating, filling, rough grading and related items necessary to complete the work indicated on the drawings and described in the specifications. The Contractor shall notify in writing the owners and the Engineer of any changes, errors or omissions found on the plans or in the field before work is started or resumed.

1. In general, the items of work to be performed under this section shall include: clearing and grubbing, removal of trees and stumps (where required), protection of trees to remain, stripping and storage of topsoil, fill compaction and rough grading of entire site.

2. Excavated material that is suitable may be used for fill. All unsuitable material and all surplus excavated material not required shall be removed from this section. The location of dump and length of haul shall be the Contractor's responsibility with the Owner's approval. Per the City of West Lafayette MS4 Area, prior to exporting fill from site, an additional erosion and sediment control plan must be submitted to the City of West Lafayette MS4 Area as an amendment/addition to this project.

3. Provide and place any additional fill material from off the site as may be necessary to produce the grades required. Fill obtained from off site shall be of kind and quality as specified for fills herein and the source approved by the Owner.

4. The Contractor shall accept the site as he finds it and shall remove all trash, rubbish and debris from the site prior to starting excavation.

B. Work not included: The following items of related work are specified and included in other sections of these specifications:

- 1. Excavation, grading and backfilling for utility lines
2. Storm drainage systems
3. Streets and paving

2. BENCH MARKS Maintain carefully all bench marks, monuments and other reference points; if disturbed or destroyed, Contractor shall contact engineer. Replacement shall be at Contractor's expense.

3. REMOVAL OF TREES

A. Remove all trees and stumps from area to be occupied by road and surfaced areas. Removal of trees outside these areas shall only be done as noted on drawings or approved by the Owner.

B. All brush, stumps, wood and other refuse from the trees shall be buried onsite or removed to disposal areas off of the site. Disposal by burning shall not be permitted unless proper permits are obtained (where applicable). The location of on site bury pits shall be designated by the owner or the Engineer.

4. PROTECTION OF TREES

A. General Protection: The Contractor shall be responsible for the protection of tops, trunks and roots of existing trees on the project site that are to remain. Existing trees subject to construction damage shall be boxed, fenced or otherwise protected before any work is started; do not stockpile within branch spread. Remove interfering branches without injury to trunks and cover scours with tree paint.

5. HANDLING OF TOPSOIL

A. Remove all organic material from the areas to be occupied by buildings, roads, walks and parking areas. Pile and store topsoil at a location where it will not interfere with construction operations. Topsoil shall be reasonably free from subsoil, debris, weeds, grass, stones, etc..

6. DISPOSITION OF UTILITIES:

A. Rules and regulations governing the respective utilities shall be observed in executing all work under this section.

B. If active utilities are encountered but not shown shown on the drawings, the Engineer shall be advised before work is continued.

C. Inactive and abandoned utilities encountered in excavating and grading operations shall be reported to the Engineer. They shall be removed, plugged or capped as directed by the Utility Company or the Engineer.

D. It shall be the responsibility of each contractor to verify all existing utilities and conditions pertaining to his phase of the work. It shall also be the contractor's responsibility to contact the owners of the various utilities before work is started.

7. SITE GRADING:

A. Grades: Contractor shall perform all cutting, filling, compacting of fills and rough grading required to bring entire project area to grade as shown on the drawings.

B. Rough Grading: the tolerance for paved areas shall not exceed 0.10 feet plus or minus above the established subgrade. All other areas shall not exceed 0.10 feet plus or minus the established grade. All banks and other breaks in grade shall be rounded at top and bottom.

C. Compaction Requirements:

- 1. All areas under building pads shall be compacted to 95% of standard proctor density.
2. All areas under pavements shall be compacted to City of West Lafayette Specifications.
3. All other fill areas shall be compacted to 85% of standard proctor density.

D. Offsite Work: All work to be performed in the City's right-of-way shall be performed per the City's standard details and specifications.

8. EARTH WORK BALANCE

A. The Contractor shall confirm all earthwork quantities prior to start of construction. If an excess or shortage of earth is encountered, the Contractor shall confirm with the Owner and Engineer the requirements for stockpiling, removal or importing of earth.

B. Minor adjustments to the grades may be required to earthwork balances when minor excess material or shortages are encountered. It is recognized by the parties hereto that the calculations of the Engineer in determining earthwork quantities shall be accomplished in accordance with the American Society of Civil Engineers Standards for such calculations. Further, that these calculations are subject to the interpretations of soil borings as the physical limits of the various soil types, the allowable variation in finish grade and compaction permitted the contractor, and that all of these parameters may cause either an excess or shortage of actual earthwork materials to complete the project. If such an actual minor excess or shortage of materials occurs, the contractor shall contact the Engineer to determine if adjustment can be made to correct the imbalance of earth.

STORM SEWER SYSTEMS

1. SCOPE OF WORK

The work under this section includes all storm sewers, storm water inlets, and related items, including excavating and backfilling, necessary to complete the work shown on the drawings. All work and materials shall be per City's details and specifications. Contractor shall coordinate this work with the City Engineer.

2. MATERIALS

A. Storm Sewers

1. Reinforced concrete sewer pipe shall be Class III and conform to ASTM C-76 latest revision, with joints conforming to ASTM C-443 latest revision when storm pipe is continuously submerged in water or is under the street at a minimum.

2. HDPE PIPE (ALTERNATE) High density polyethylene pipe (HDPE) (corrugated exterior, smooth interior) shall conform to AASHTO M294 for 12" to 36" diameters and AASHTO M252 for 4" to 10" diameters and have integral bell and spigot.

B. Manholes

1. Precast reinforced concrete manhole sections and steps shall conform to ASTM C-478 latest revision.

2. Casting shall be of uniform quality, free from blow holes, porosity, hard spots, shrinkage distortion or other defects. They shall be smooth and well cleaned by shot-blasting or by some other approved method. They shall be coated with asphalt paint which shall result in a smooth coating, tough and tenacious when cold, not tacky or brittle. They shall be gray iron meeting ASTM A-48 latest revision.

3. Joints - Manhole sections shall be jointed with "O"-Ring rubber type gaskets. The rubber type gaskets shall meet ASTM C-443 latest revision.

4. HDPE Pipe connections shall standard practice girth and seal.

3. APPLICATION

A. Permits and Codes - The intent of this section of the specifications is that the contractor's bid on the work covered herein shall be based upon the drawings and specifications but that the work shall comply with all applicable codes and regulations as amended by any waivers. Contractor shall furnish all bonds necessary to get permits for cuts and connections to existing sewers. Contractor shall notify the City Engineer's Office a minimum of 72 hours prior to the commencement of storm sewer construction.

B. Local Standards - the term "Local Standards" as used herein means the standards of design and construction of the respective municipal department or utility company.

C. Existing Improvements - Maintain in operating condition all active utilities, sewers and other drains encountered in the sewer installation. Repair to the satisfaction of the owner any damage to existing active improvements.

D. Workmanship - To conform to all local, state and national codes and to be approved by all local and state agencies having jurisdiction.

E. Trenching - Lay all pipe in open trenches, except when the local authority gives written permission for tunneling. Open the trench sufficiently ahead of pipe laying to reveal any obstructions. The width of the trench shall be the inside pipe diameter plus 24 inches for 12 inches above the pipe. Sheet and brace trench as necessary to protect workmen and adjacent structures. All trenching to comply with Occupational Safety and Health Administration Standards. Keep trenches free from water while construction is in progress. Under no circumstances lay pipe or appurtenances in standing water. Conduct the discharge from trench dewatering to drains or natural drainage channels. Effluent to be filtered before discharging.

F. Special Supports - Whenever in the opinion of the Engineer the soil at or below the pipe grade is unsuitable for supporting sewers and appurtenances specified in this section, such special support, in addition to those shown or specified, shall be provided as the Engineer may direct, and the contract will be adjusted.

G. Backfilling - Backfill requirements shall adhere to City of West Lafayette standards and specifications. Backfill under and within 5' of paved areas shall be granular material only and shall conform to City of West Lafayette standards - thoroughly compacted by approved methods.

H. Manhole Inverts - Construct manhole flow channels of concrete sewer pipe or brick, smoothly finished and of semicircular section conforming to the inside diameter of the connecting sewers. Make changes in size or grade gradually and changes in direction by true curves. Provide such channels for all connecting sewers at each manhole.

I. Utilities - It shall be the responsibility of each contractor to verify all existing utilities and conditions pertaining to his phase of the work. It shall also be the contractor's responsibility to contact the owners of the various utilities before work is started. The contractor shall notify in writing the owners or the engineer of any changes, errors or omissions found on these plans or in the field before work is started or resumed.

STREETS AND PAVING

1. SCOPE OF WORK

A. The work required under this section includes all concrete and bituminous paving and related items necessary to complete the work indicated on drawings and described in the specifications, including but not limited to:

All streets, curbs and gutters and sidewalks within the contract limits shall conform to City of West Lafayette Standards and Specifications.

2. MATERIALS

A. Concrete - Concrete shall be ready-mixed concrete and shall be a mix of proportioned fine and coarse aggregates with Portland cement and water. Minimum cement content shall be 6 bags per cubic yard of concrete and maximum water content shall be 5.5 U.S. gallons per sack of cement, including moisture in the aggregate. Slump for normal weight concrete shall be a maximum of 4 inches and a minimum of 2 inches. The slump of machine place concrete shall be no less than 1-1/4 inches nor more than 3 inches. Standard test ASTM C-143 shall be used to measure slump. Compressive strength of concrete at 28 days shall be 4000 psi. All exterior concrete shall have air entrainment of 4% to 6% by volume per ASTM C-260. Retempering delivered concrete will not be allowed. Concrete shall be composed of:

1. Portland cement - Conforming to ASTM C-150, Type IA or Type IIA.

2. Aggregates: Limestone Aggregate Conforming to ASTM C-33, Size shall be #8, per Indiana Department of Transportation Specifications, per latest revision. Fine aggregate percent total weight shall be between 35 to 45.

3. Water - Shall be clear and free from injurious amounts of oils, acids, alkalis, organic materials or other deleterious substances. B. Welded Steel Wire Fabric - Where required for concrete reinforcement shall conform to ASTM A185.

C. Premoulded Joint Filler - Shall be of non-extruding type meeting ASTM D-544 except that premoulded joint filler used in concrete walk construction may be either non-extruding or resilient.

D. Bituminous Pavement Materials - All materials proposed for the construction of bituminous pavements shall comply with the Indiana Department of Transportation specifications, per latest revision.

E. Compacted Aggregate Subbase: Shall be #53 crushed limestone per section 303 of Indiana Department of Transportation Specifications latest revision. Material shall be free from an excess of flat, elongated, thin, laminated, soft or disintegrated pieces; and shall be free from fragments coated with dirt. Compacted aggregate shall be graded as follows:

Table with 2 columns: SIEVE SIZE and % PASSING. Rows include 1-1/2", 1", 3/4", 1/2", #4, #8, #30, #200.

3. APPLICATION

A. Grading - Do any necessary grading in addition to that performed in accordance with Earthwork Section, to bring subgrade, after final compaction, to the required grades and sections for site improvement.

B. Preparation of Subgrade - Remove spongy and otherwise unsuitable material and replace with stable material. No traffic will be allowed on prepared subgrade prior to paving.

C. Compaction of Subgrade - The first 6 inches below the subgrade shall be compacted to at least 100% of the maximum dry density as determined by the provisions of AASHTO T-99. Water shall be prevented from standing on the compacted subgrade.

D. Utility Structures - Check for correct elevation of all manhole covers, valve boxes and similar structures located within areas to be paved, and make, or have made, any necessary adjustments in such structures.

E. Placing Concrete

1. Subgrade - Place concrete only on a moist, compacted subgrade or base free from loose material. Place no concrete on a muddy or frozen subgrade.

2. Forms - All forms shall be free from warp, tight enough to prevent leakage and substantial enough to maintain their shape and position without springing or settling, when concrete is placed. Forms shall be clean and smooth immediately before concreting.

3. Placing Concrete - Concrete shall be deposited so as to require as little rehandling as practicable. When concrete is to be placed at an atmospheric temperature of 35 degrees F. or less, paragraph 702.10 of the Indiana Department of Transportation Specifications latest revision shall be followed.

F. Concrete Curb

1. Expansion Joints - Shall be 1/2 inch thick premoulded at ends of all returns and at a maximum spacing of 50 feet. Expansion joints shall also be placed at all curb inlets.

2. Contraction Joints - Unless otherwise provided, contraction joints shall be sawed joints spaced 10 feet on center.

3. Finish - Tamp and screed concrete as soon as placed, and fill any honey combed places. Finish square corners to 1/4" radius and other corners to radii shown.

G. Concrete Walks.

1. Slopes - Provide 1/4 inch per foot cross slope. Make adjustments in slopes at walk intersections as necessary to provide proper drainage.

2. Dimensions - Walks shall be one course construction and of widths and details shown on the drawings.

3. Finish - Screed concrete and trowel with a steel trowel to a hard dense surface after surface water has disappeared. Apply medium broom finish and scribe control joints at 4 foot spacing. Provide 1/2" expansion joints where sidewalks intersect, and at a maximum spacing of 50 feet between expansion joints.

H. Curing Concrete - Except as otherwise specified, cure all concrete by one of the methods described in Section 501.17 of the Indiana Department of Transportation Specifications, latest revision.

I. Bituminous Pavement - Hot asphalt concrete pavement shall be as specified in Section 403 of the Indiana Department of Transportation Specifications latest revisions. Paving will not be permitted during unfavorable weather or when the temperature is 40 degrees F. and falling.

J. Compacted Aggregate Subbase - the thickness shown on the drawings is the minimum thickness of the fully compacted subbase. Compaction shall be accomplished by rolling with a smooth wheeled roller weighing 8 to 10 tons. Compact to 95% compaction using Standard Testing Procedures. Along curbs, headers and walls and at all places not accessible to the roller, the aggregate material shall be tamped with mechanical tampers or with approved hand tampers.

UTILITIES

1. ELECTRIC, TELEPHONE AND CABLE

A. Conduit shall be required for all crossings under pavement areas. Contractor shall supply and install all conduit including trenching and backfill. Size of conduit to be determined by the respective Utility Companies.

B. Granular backfill shall be required for all crossings under pavement areas.

REVISIONS:



THE SCHNEIDER CORPORATION (2015)



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Civil Engineering
GIS * LIS
Land Surveying
Landscape Architecture

WINDING RIDGE SUBDIVISION

SECTION THREE

WEST LAFAYETTE, INDIANA

TIPPECANOE DEVELOPMENT II, LLC
PO BOX 811, LAFAYETTE, IN 47902

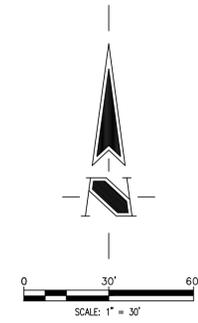
WATER MAIN SPECIFICATIONS PER
INDIANA-AMERICAN WATER COMPANY
DEVELOPER PACKET FOR WATER MAIN EXTENSION

STREET, STORM SEWER AND
SANITARY SEWER DRAWINGS AND
SPECIFICATIONS PER THE CITY OF
WEST LAFAYETTE SPECIFICATIONS

DATE: 11/16/15 PROJECT NO.: 4880.010
DRAWN BY: JEP CHECKED BY: JAN
SHEET TITLE: SPECIFICATIONS
DRAWING FILE: L:\44\4880\010\DWG\4880010-C901.DWG
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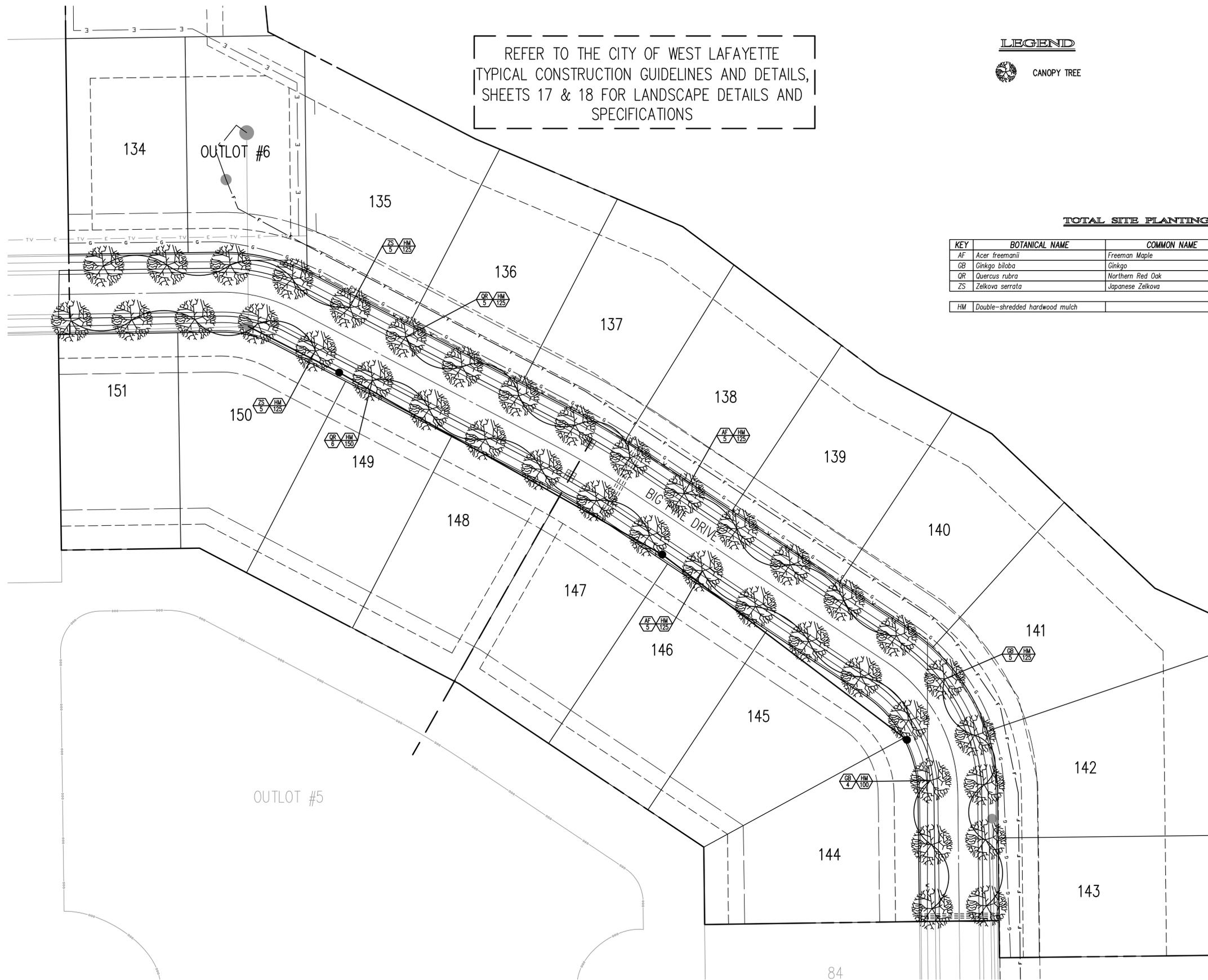
REFER TO THE CITY OF WEST LAFAYETTE
TYPICAL CONSTRUCTION GUIDELINES AND DETAILS,
SHEETS 17 & 18 FOR LANDSCAPE DETAILS AND
SPECIFICATIONS

LEGEND



TOTAL SITE PLANTING SCHEDULE

KEY	BOTANICAL NAME	COMMON NAME	QTY.	SIZE	COND.	REMARKS
AF	<i>Acer freemanii</i>	Freeman Maple	10	1.5"	B&B	
GB	<i>Ginkgo biloba</i>	Ginkgo	9	1.5"	B&B	Males Only
QR	<i>Quercus rubra</i>	Northern Red Oak	11	1.5"	B&B	
ZS	<i>Zelkova serrata</i>	Japanese Zelkova	10	1.5"	B&B	
HM	Double-shredded hardwood mulch		1,000	S.F.		3" depth



Plot Date: Nov 23, 2015 Plot Time: 5:40pm File Name: L:\4\4880\010\dwgs\4880010-L101.dwg, Layout: L101 By: jep

REVISIONS:

DATE: NOVEMBER 16, 2015

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DATE: 11/16/15 PROJECT NO.: 4880.010
DRAWN BY: CHECKED BY: JAN

SHEET TITLE:
LANDSCAPE PLAN

DRAWING FILE:
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L101