

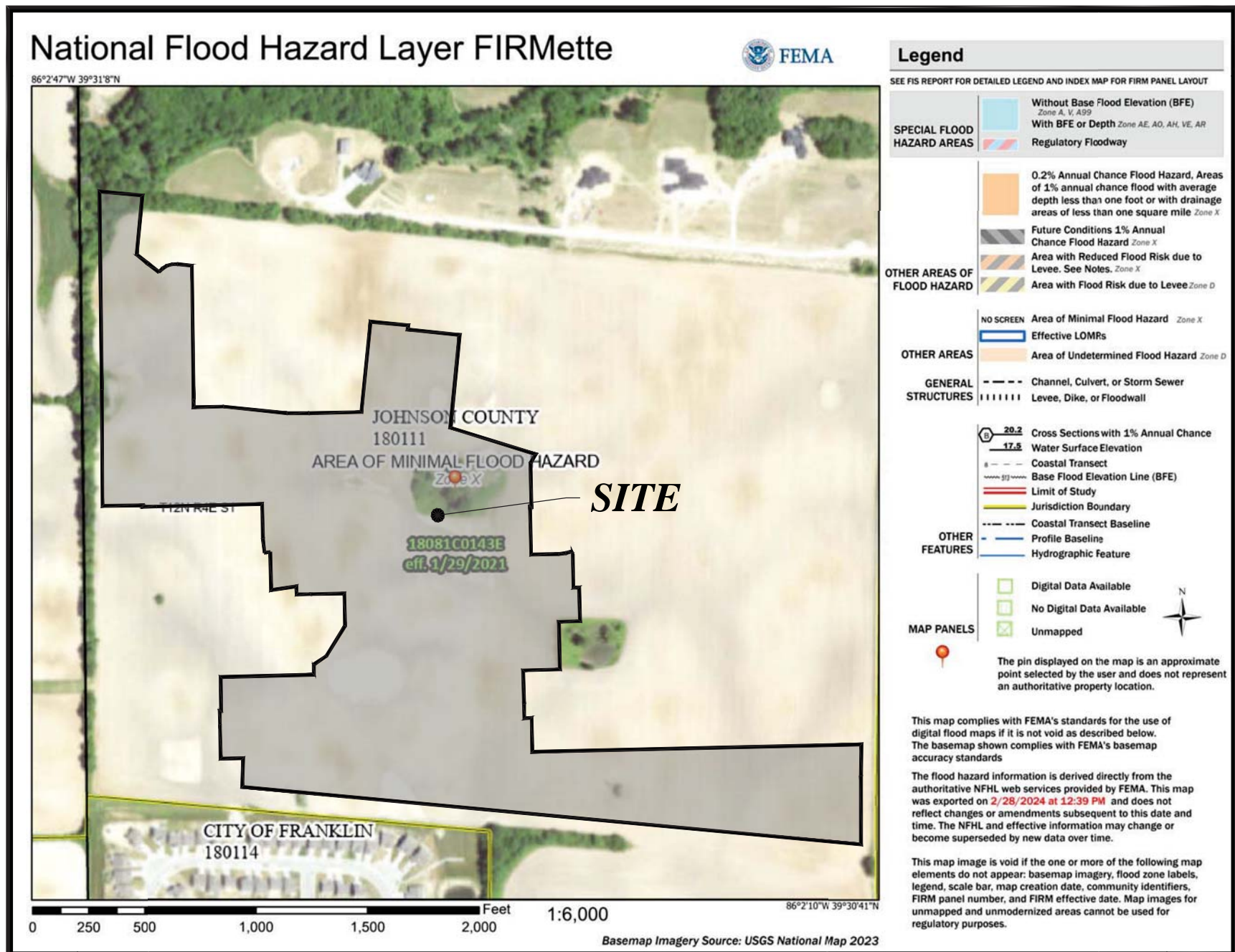
APPROVAL PENDING - NOT FOR CONSTRUCTION

# WINTERFIELD

## Section 3 RS2 & RS3 ZONING

350 East Hurricane Road  
Franklin, IN 46131

Developed By:  
**Forestar (USA) Real Estate Group**  
**9292 North Meridian Street, Ste 211**  
**Indianapolis, Indiana 46260**  
**Contact: Kempis Wilkerson**  
**Phone: (317) 903-7586**

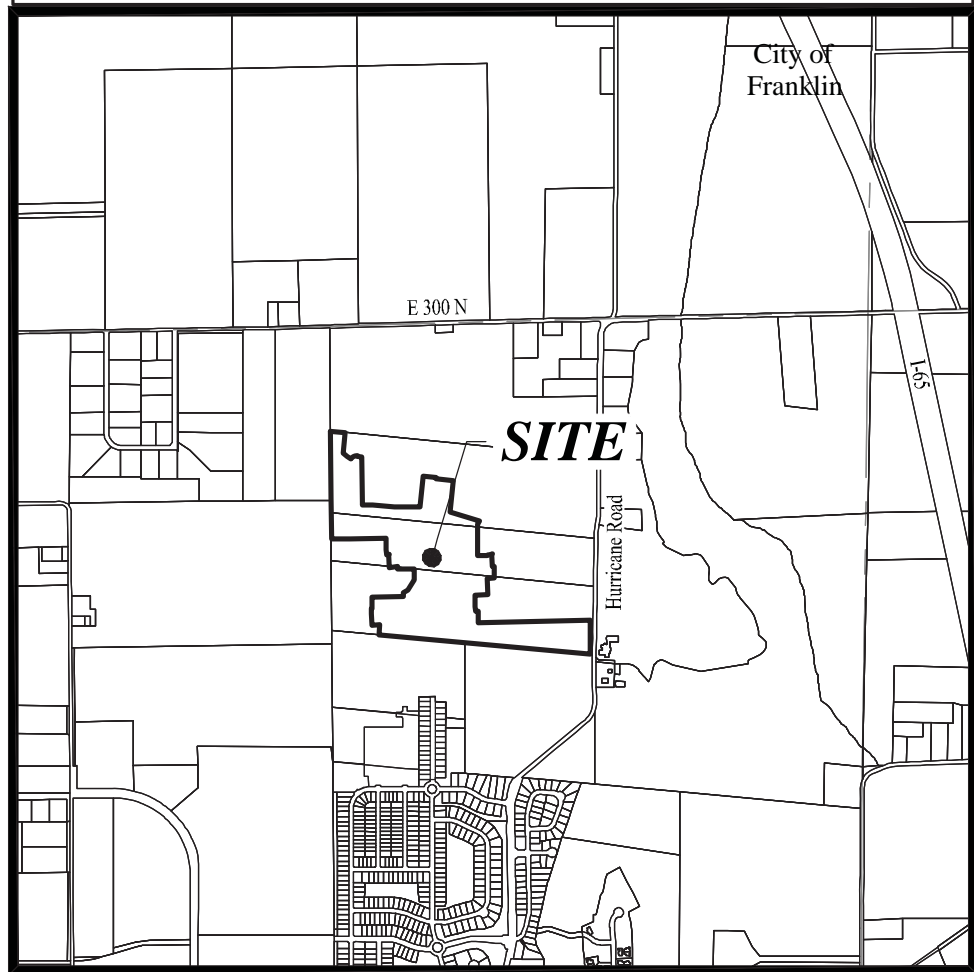


FLOOD MAP  
NOT TO SCALE

Panel 18081C0143E  
Effective January 29, 2021

FLOOD STATEMENT

THIS IS TO CERTIFY THAT THE PROPOSED DEVELOPED PORTION OF THIS PROPERTY IS NOT LOCATED IN A SPECIAL FLOOD HAZARD ZONE "A" AS SAID TRACT PLOTS BY SCALE ON COMMUNITY PANEL 18081C0143E OF THE FLOOD INSURANCE RATE MAPS DATED JANUARY 29, 2021.

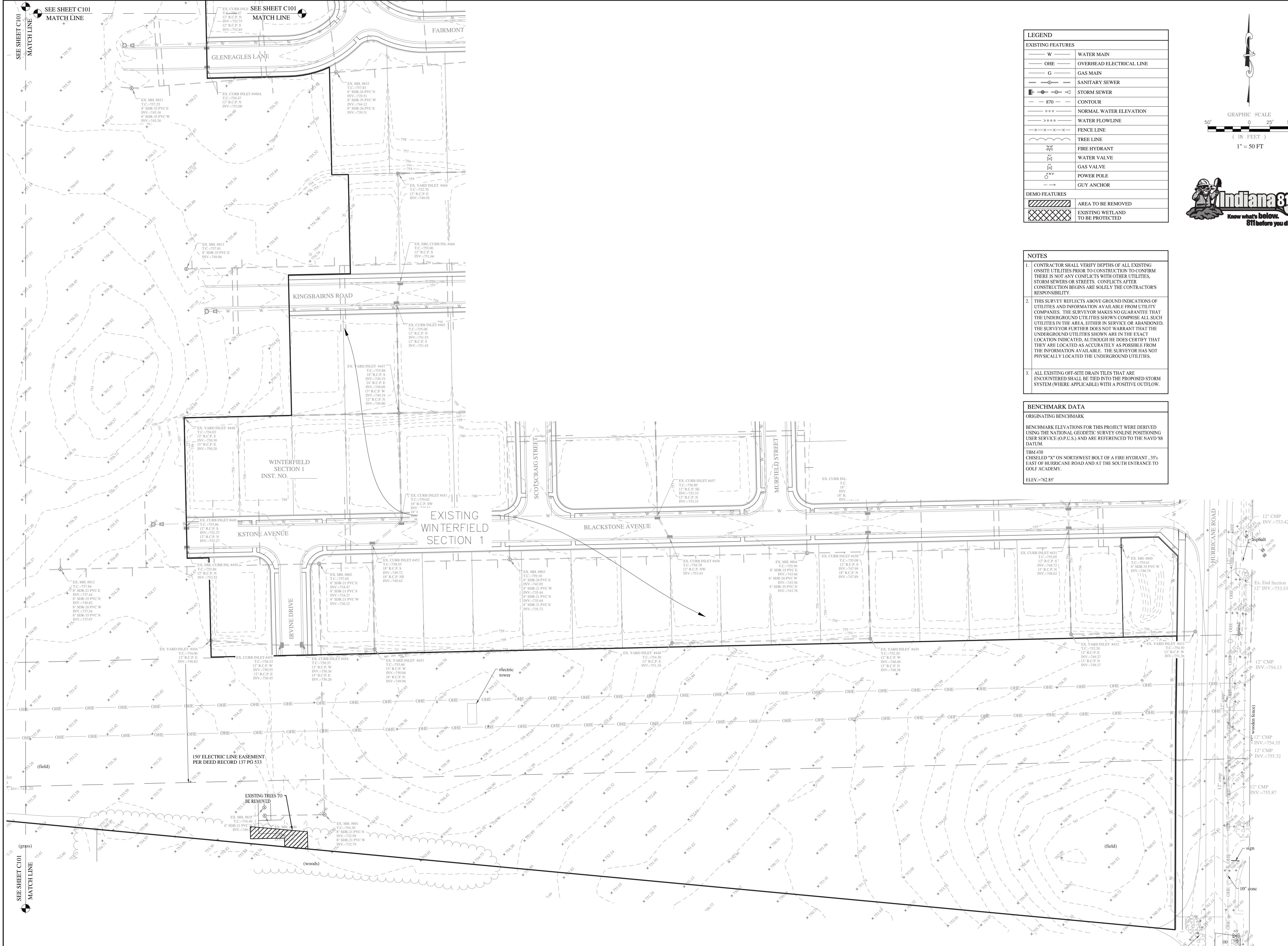


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SHT. NO.	DESCRIPTION
C001	COVER SHEET
C100 - C102	EXISTING CONDITIONS/DEMO PLAN
C200 - C207	SITE DEVELOPMENT PLAN/OFFSITE DEVELOPMENT PLAN EMERGENCY FLOOD ROUTE PLAN
C300 - C314	INITIAL STORM WATER POLLUTION & PREVENTION PLAN TEMPORARY STORM WATER POLLUTION & PREVENTION PLAN PERMANENT SEDIMENT & EROSION CONTROL PLAN STORM WATER POLLUTION & PREVENTION SPECIFICATIONS STORM WATER POLLUTION & PREVENTION DETAILS
C400 - C407	STREET PLAN & PROFILES INTERSECTION DETAILS STREET SIGN PLAN
C500 - C504	SANITARY SEWER PLAN & PROFILES
C600 - C605	STORM SEWER PLAN & PROFILES SUB-SURFACE DRAIN
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L1 - L3	TREE SURVEY STREET TREE / LANDSCAPE PLAN BUFFER & STREET TREE LANDSCAPE PLAN

REVISIONS				
SHT. NO.	DESCRIPTION	DATE	BY	



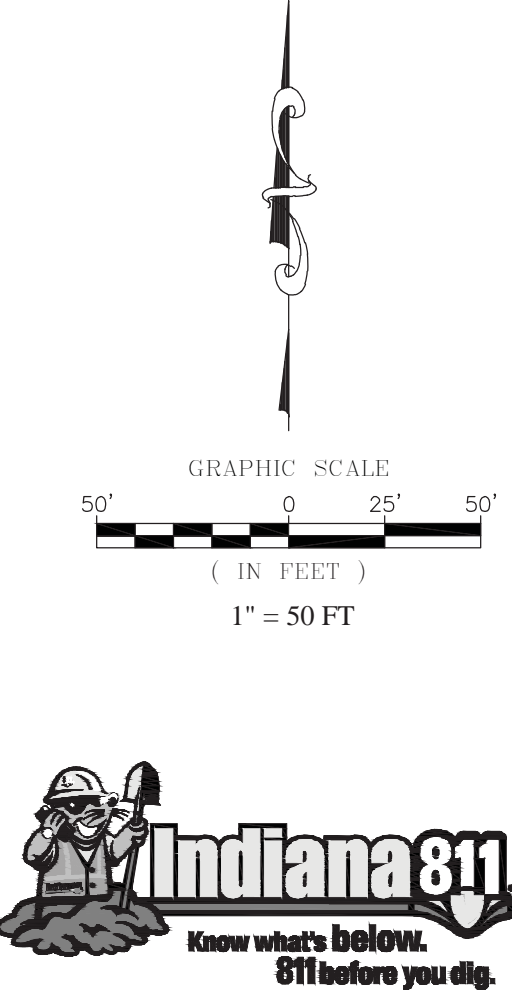




LEGEND	
EXISTING FEATURES	
W	WATER MAIN
OHE	OVERHEAD ELECTRICAL LINE
G	GAS MAIN
SS	SANITARY SEWER
SS	STORM SEWER
870	CONTOUR
o o o	NORMAL WATER ELEVATION
> o o o	WATER FLOWLINE
x x x x x	FENCE LINE
~ ~ ~	TREE LINE
⊕	FIRE HYDRANT
⊕	WATER VALVE
⊕	GAS VALVE
⊕	POWER POLE
⊕	GUY ANCHOR
DEMO FEATURES	
▨	AREA TO BE REMOVED
▩	EXISTING WETLAND TO BE PROTECTED

- NOTES**
- CONTRACTOR SHALL VERIFY DEPTHS OF ALL EXISTING ON-SITE UTILITIES PRIOR TO CONSTRUCTION TO CONFIRM THERE IS NOT ANY CONFLICTS WITH OTHER UTILITIES, STORM SEWERS OR STREETS. CONFLICTS AFTER CONSTRUCTION BEGINS ARE SOLELY THE CONTRACTOR'S RESPONSIBILITY.
  - THIS SURVEY REFLECTS ABOVE GROUND INDICATIONS OF UTILITIES AND INFORMATION AVAILABLE FROM UTILITY COMPANIES. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED, ALTHOUGH HE DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM THE INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES.
  - ALL EXISTING OFF-SITE DRAIN TILES THAT ARE ENCOUNTERED SHALL BE TIED INTO THE PROPOSED STORM SYSTEM (WHERE APPLICABLE) WITH A POSITIVE OUTFLOW.

BENCHMARK DATA	
ORIGINATING BENCHMARK	
BENCHMARK ELEVATIONS FOR THIS PROJECT WERE DERIVED USING THE NATIONAL GEODETIC SURVEY ONLINE POSITIONING USER SERVICE (O.P.U.S.) AND ARE REFERENCED TO THE NAVD 88 DATUM.	
BM450 CHISELED "X" ON NORTHWEST BOLT OF A FIRE HYDRANT, 35% EAST OF HURRICANE ROAD AND AT THE SOUTH ENTRANCE TO GOLF ACADEMY.	
ELEV.=762.85'	



APPROVAL PENDING/NOT FOR CONSTRUCTION

**STOEPPELWERTH**

ALWAYS ON

7965 East 106th Street, Fishers, IN 46038-2905  
phone: 317.846.5905 fax: 317.846.5942

EXISTING CONDITIONS / DEMO PLAN

**WINTERFIELD SECTION 3**

JOHNSON COUNTY, INDIANA

DRAWN BY: KJ/M/GEM  
CHECKED BY: KR/G  
SHEET NO: **C100**  
6.8 x 10.8 IN. NO. 100405FOR-S3

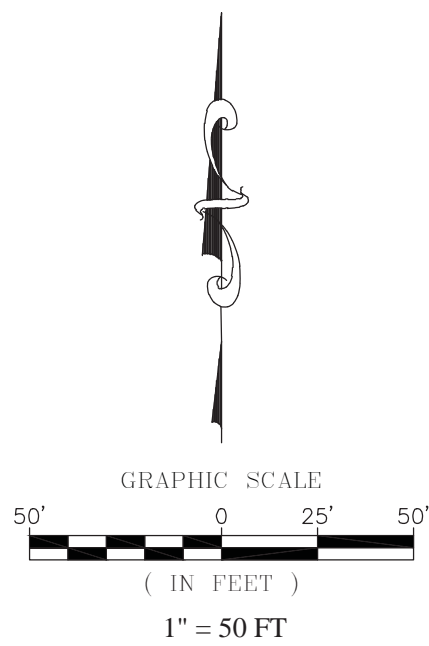
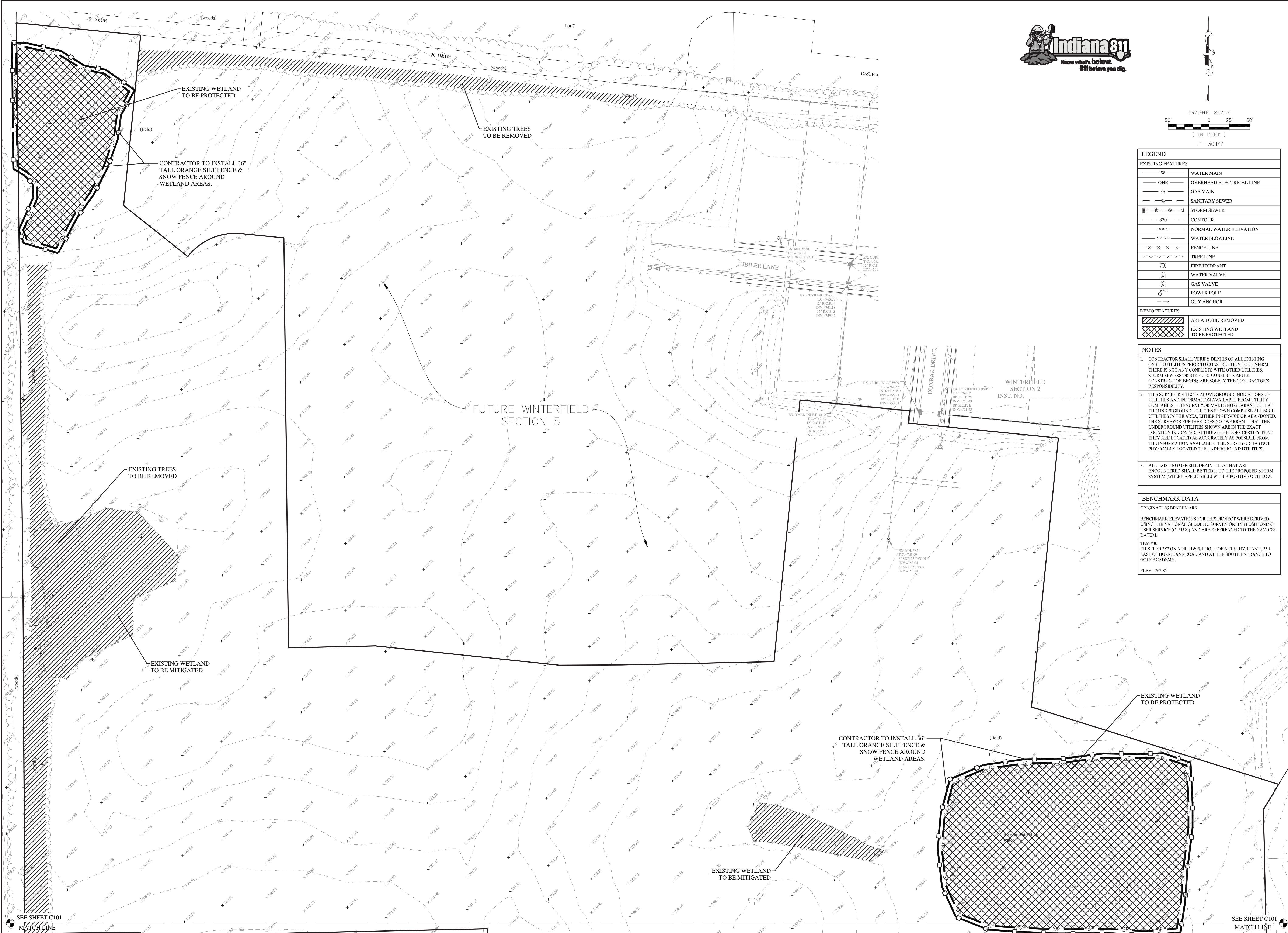
REVISIONS  
DATE  
MARK  
BY





DRAWN BY: <b>KJM/GEM</b>		CHECKED BY: <b>KRG</b>	
SHEET NO.			
<b>C101</b>		5 & A JOB NO. 100405FOR-S3	
EXISTING CONDITIONS / DEMO PLAN		JOHNSON COUNTY, INDIANA	
WINTERFIELD SECTION 3		FRANKLIN	





LEGEND	
EXISTING FEATURES	
— W —	WATER MAIN
— OHE —	OVERHEAD ELECTRICAL LINE
— G —	GAS MAIN
— S —	SANITARY SEWER
— SS —	STORM SEWER
— 870 —	CONTOUR
— N —	NORMAL WATER ELEVATION
— F —	WATER FLOWLINE
— F —	FENCE LINE
— T —	TREE LINE
— H —	FIRE HYDRANT
— V —	WATER VALVE
— G —	GAS VALVE
— P —	POWER POLE
— A —	GUY ANCHOR
DEMO FEATURES	
— A —	AREA TO BE REMOVED
— P —	EXISTING WETLAND TO BE PROTECTED

- NOTES**
1. CONTRACTOR SHALL VERIFY DEPTHS OF ALL EXISTING ON-SITE UTILITIES PRIOR TO CONSTRUCTION TO CONFIRM THERE IS NOT ANY CONFLICTS WITH OTHER UTILITIES, STORM SEWERS OR STREETS. CONFLICTS AFTER CONSTRUCTION BEGINS ARE SOLELY THE CONTRACTOR'S RESPONSIBILITY.
  2. THIS SURVEY REFLECTS ABOVE GROUND INDICATIONS OF UTILITIES AND INFORMATION AVAILABLE FROM UTILITY COMPANIES. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED, ALTHOUGH HE DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM THE INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES.
  3. ALL EXISTING OFF-SITE DRAIN TILES THAT ARE ENCOUNTERED SHALL BE TIED INTO THE PROPOSED STORM SYSTEM (WHERE APPLICABLE) WITH A POSITIVE OUTFLOW.

BENCHMARK DATA	
ORIGINATING BENCHMARK	
BENCHMARK ELEVATIONS FOR THIS PROJECT WERE DERIVED USING THE NATIONAL GEODETIC SURVEY ONLINE POSITIONING USER SERVICE (O.P.U.S.) AND ARE REFERENCED TO THE NAVD 88 DATUM.	
BM 430 CHISELED "X" ON NORTHWEST BOLT OF A FIRE HYDRANT, .354' EAST OF HURRICANE ROAD AND AT THE SOUTH ENTRANCE TO GOLF ACADEMY. ELEV.=762.85'	

APPROVAL PENDING/NOT FOR CONSTRUCTION

**STOEPPELWERTH**

ALWAYS ON

7965 East 106th Street, Fishers, IN 46038-2905  
phone: 317.846.5905 fax: 317.846.5942

EXISTING CONDITIONS / DEMO PLAN

WINTERFIELD SECTION 3

FRANKLIN

DRAWN BY: KJ/M/GEM  
CHECKED BY: KRG  
SHEET NO.

**C102**

6 & A FOR NO. 100405FOR-S3

THIS DRAWING IS NOT INTENDED TO BE REPRESENTED AS A RETRACEMENT OR SURVEY OR A SURVEYOR LOCATION REPORT.

DATE: \_\_\_\_\_

MARK: \_\_\_\_\_

REVISIONS: \_\_\_\_\_

BY: \_\_\_\_\_

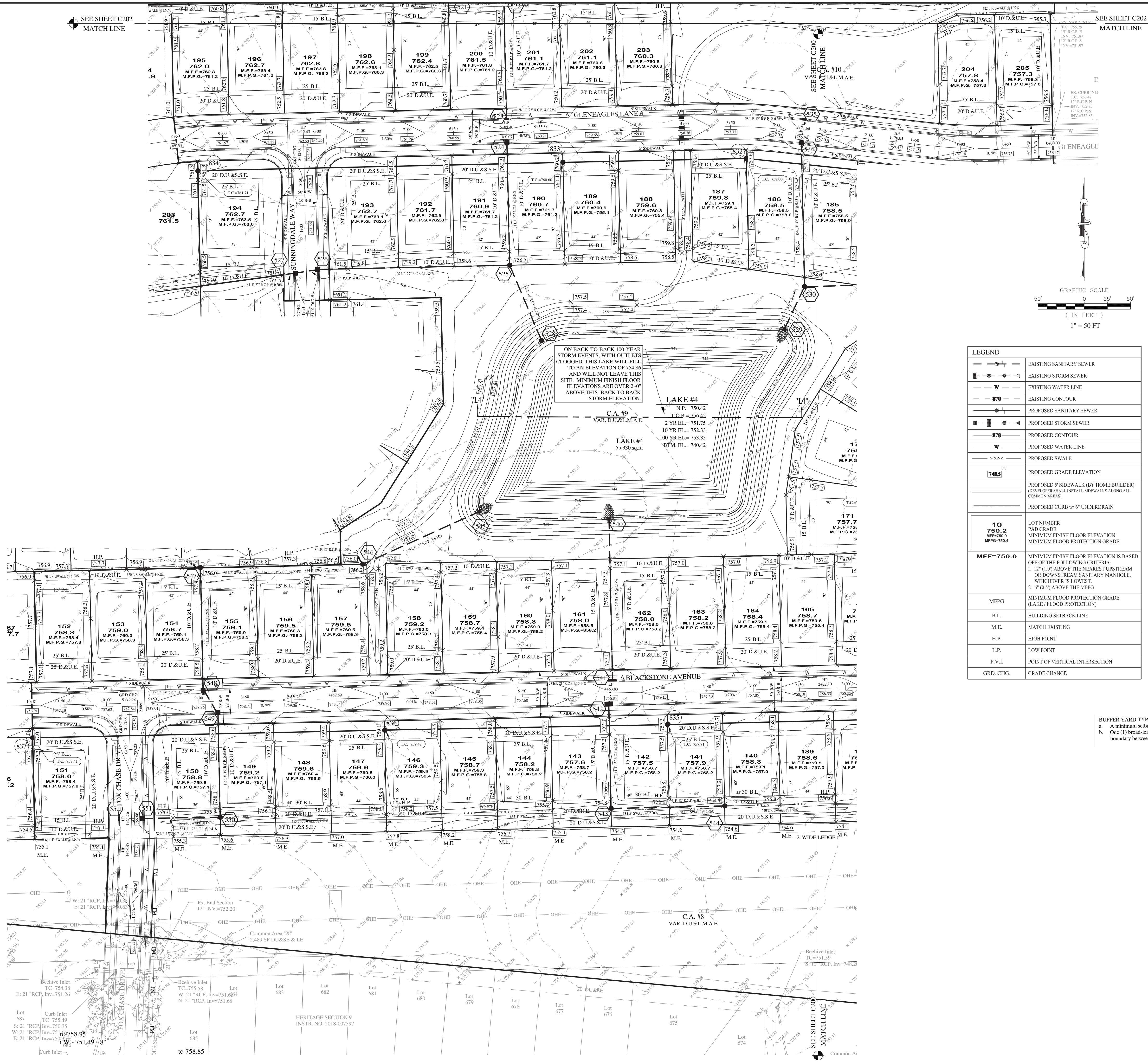
SEAL: KENNY MITCHELL, REGISTERED PROFESSIONAL ENGINEER, No. PE1200386, STATE OF INDIANA

CERTIFIED: 07/11/24









**BENCHMARK DATA**

ORIGINATING BENCHMARK

BENCHMARK ELEVATIONS FOR THIS PROJECT WERE DERIVED USING THE NATIONAL GEODETIC SURVEY ONLINE POSITIONING USER SERVICE (O.P.U.S.) AND ARE REFERENCED TO THE NAVD'83 DATUM.

TBM #30  
CHISELED "X" ON NORTHWEST BOLT OF A FIRE HYDRANT, .35" EAST OF HURRICANE ROAD AND AT THE SOUTH ENTRANCE TO GOLF ACADEMY.

ELEV.=762.85'

**UTILITY CROSSINGS**

CONTRACTOR SHALL VERIFY DEPTHS OF ALL EXISTING ONSITE UTILITIES PRIOR TO CONSTRUCTION TO CONFIRM THERE IS NOT ANY CONFLICTS WITH OTHER UTILITIES, STORM SEWERS OR STREETS. CONFLICTS AFTER CONSTRUCTION BEGINS ARE SOLELY THE CONTRACTOR'S RESPONSIBILITY.

**EARTHWORK NOTES**

1. EXCAVATION  
A. EXCAVATED MATERIAL THAT IS SUITABLE MAY BE USED FOR FILLS. ALL UNSUITABLE MATERIAL AND ALL SURPLUS EXCAVATED MATERIAL NOT REQUIRED SHALL BE REMOVED FROM THE SITE.  
B. REMOVE AND PLACE ANY ADDITIONAL FILL MATERIAL FROM OFFSITE AS MAY BE NECESSARY TO PRODUCE THE GRADES REQUIRED ON PLANS. FILL OBTAINED FROM OFFSITE SHALL BE OF QUALITY AS SPECIFIED FOR FILLS HEREIN AND THE SOURCE APPROVED BY THE DEVELOPER. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR FOR ANY COSTS FOR FILL NEEDED.
2. REMOVAL OF TREES  
A. ALL TREES AND STUMPS SHALL BE REMOVED FROM AREAS TO BE OCCUPIED BY A ROAD SURFACE OR STRUCTURE AREA. TREES AND STUMPS SHALL NOT BE BURIED ON SITE.
3. PROTECTION OF TREES  
A. THE CONTRACTOR SHALL, AT THE DIRECTION OF THE DEVELOPER, ENDEAVOR TO SAVE AND PROTECT TREES OF VALUE AND WORTH WHICH DO NOT IMPAIR CONSTRUCTION OF IMPROVEMENTS AS DESIGNED.  
B. IN THE EVENT CUT OR FILL EXCEEDS 0.5 FEET OVER THE ROOT AREA, THE DEVELOPER SHALL BE CONSULTED WITH RESPECT TO PROTECTIVE MEASURE TO BE TAKEN, IF ANY, TO PRESERVE SUCH TREES.
4. REMOVAL OF TOPSOIL  
A. ALL TOPSOIL SHALL BE REMOVED FROM ALL AREAS BENEATH FUTURE PAVEMENTS OR BUILDING. TOPSOIL REMOVAL SHALL BE TO A MINIMUM DEPTH OF 6 INCHES OR TO THE DEPTH INDICATED IN THE GEOTECHNICAL REPORT PROVIDED BY THE DEVELOPER TO BE EXCAVATED OR FILLED. TOPSOIL SHOULD BE STORED AT A LOCATION WHERE IT WILL NOT INTERFERE WITH CONSTRUCTION OPERATIONS. THE TOPSOIL SHALL BE FREE OF DEBRIS AND STONES.
5. UTILITIES  
A. RULES AND REGULATION GOVERNING THE RESPECTIVE UTILITY SHALL BE OBSERVED IN EXECUTING ALL WORK UNDER THIS SECTION.  
B. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE THE LOCATION OF EXISTING UNDERGROUND UTILITIES 2 WORKING DAYS PRIOR TO COMMENCING WORK. FOR UTILITY LOCATIONS TO BE MARKED CALL TOLL FREE 811.
6. SITE GRADING  
A. THE CONTRACTOR SHALL DO ALL CUTTING, FILLING, COMPACTING OF FILLS AND ROUGH GRADING REQUIRED TO BRING ENTIRE PROJECT AREA TO SUBGRADE AS SHOWN ON THE DRAWING.  
B. THE TOLERANCE FOR PAVED AREAS SHALL NOT EXCEED 0.05 FEET ABOVE ESTABLISHED SUBGRADE. ALL OTHER AREAS SHALL NOT EXCEED 0.05 FEET PLUS OR MINUS THE ESTABLISHED GRADE. PROVIDE ROUNDINGS AT TOP AND BOTTOM OF BANKS AND OTHER BREAKS IN GRADE.  
C. THE ENGINEER SHALL BE NOTIFIED WHEN THE CONTRACTOR HAS REACHED THE TOLERANCE AS STATED ABOVE, SO THAT FIELD MEASUREMENTS AND SPOT ELEVATIONS CAN BE VERIFIED BY THE ENGINEER. THE CONTRACTOR SHALL NOT REMOVE EQUIPMENT FROM THE SITE UNTIL THE ENGINEER HAS VERIFIED THAT THE JOB MEETS THE ABOVE TOLERANCE.  
D. MINIMUM ACCEPTABLE GRADE OF SWALES WITHOUT SUBSURFACE DRAIN IS 1.00% IN ACCORDANCE WITH SECTION 6.19 E.2.4 OF THE SCO. SWALES WITH LESS THAN 1.00% SLOPE SHALL REQUIRE A CONCRETE SWALE. EARTHEN SWALES LESS THAN 1.00% WILL NOT BE ALLOWED.

BUFFER YARD TYPE 1 REQUIRED ADJACENT TO A (AGRICULTURE) ZONING DISTRICT  
a. A minimum setback of 10 feet in addition to the yard setback otherwise required by this Ordinance.  
b. One (1) broad-leaf deciduous canopy tree must be planted in the buffer yard for every 30 feet of boundary between the subject and adjoining properties.

LAKE #4 DATA	
SURFACE AREA AT 750.42 (NORMAL POOL)	55,330.24 sf
SURFACE AREA AT 740.42 (10' DEPTH)	21,701.82 sf
PERCENTAGE OF NORMAL POOL	39.22%

**APPROVAL PENDING/NOT FOR CONSTRUCTION**

**STOEPPELWERTH**

**ALWAYS ON**

7965 East 106th Street, Fishers, IN 46038-2905  
phone: 317.846.5905 fax: 317.846.5942

**JOHNSON COUNTY, INDIANA**

**FRANKLIN**

**SITE DEVELOPMENT PLAN**

**WINTERFIELD**

**SECTION 3**

**C201**

100405FOR-S3

Drawn by: KJ/M/GEM  
Checked by: KR/G  
Sheet No: C201

By: \_\_\_\_\_  
Date: \_\_\_\_\_  
Revisions: \_\_\_\_\_





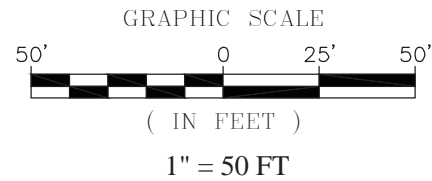
- A. EXCAVATION  
1. EXCAVATED MATERIAL THAT IS SUITABLE MAY BE USED FOR FILLS. ALL UNSUITABLE MATERIAL AND ALL SURPLUS EXCAVATED MATERIAL NOT REQUIRED SHALL BE REMOVED FROM THE SITE.
- B. PROVIDE AND PLACE ANY ADDITIONAL FILL MATERIAL FROM OFFSITE AS MAY BE NECESSARY TO PRODUCE THE GRADE REQUIRED ON PLANS. FILL OBTAINED FROM OFFSITE SHALL BE OF QUALITY AS SPECIFIED FOR FILLS HEREIN AND THE SOURCE APPROVED BY THE DEVELOPER. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR FOR ANY COSTS FOR FILL NEEDED.
2. REMOVAL OF TREES  
A. ALL TREES AND STUMPS SHALL BE REMOVED FROM AREAS TO BE EXCAVATED BY A ROAD SURFACE OR STRUCTURE AREA. TREES AND STUMPS SHALL NOT BE BURIED ON SITE.
3. PROTECTION OF TREES  
A. THE CONTRACTOR SHALL, AT THE DIRECTION OF THE DEVELOPER, ENDEAVOR TO SAVE AND PROTECT TREES OF VALUE AND WORTH WHICH DO NOT IMPAIR CONSTRUCTION OF IMPROVEMENTS AS DESIGNED.  
B. IF ANY CUT OR FILL IS MORE THAN 5 FEET OVER THE ROOT AREA, THE DEVELOPER SHALL BE CONSULTED WITH RESPECT TO PROTECTIVE MEASURE TO BE TAKEN, IF ANY, TO PROTECT SUCH TREES.
4. REMOVAL OF TOPSOIL  
A. ALL TOPSOIL SHALL BE REMOVED FROM ALL AREAS BENEATH FUTURE PAVEMENTS OR BUILDING, TOPSOIL REMOVED SHALL BE TO A MINIMUM DEPTH OF 6 INCHES OR TO THE DEPTH INDICATED IN THE GEOTECHNICAL REPORT PROVIDED BY THE DEVELOPER TO BE EXCAVATED OR FILLED. TOPSOIL SHOULD BE STORED AT A LOCATION WHERE IT WILL NOT BE INTERFERED WITH BY CONSTRUCTION OPERATIONS. THE TOPSOIL SHALL BE FREE OF DEBRIS AND STONES.
5. UTILITY LOCATIONS  
A. RULES AND REGULATION GOVERNING THE RESPECTIVE UTILITY SHALL BE OBSERVED IN EXECUTING ALL WORK UNDER THIS SECTION.  
B. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE THE LOCATION OF EXISTING UNDERGROUND UTILITIES 2 WORKING DAYS PRIOR TO COMMENCING WORK. FOR UTILITY LOCATIONS TO BE MARKED CALL TOLL FREE 811.
6. SITE GRADING  
A. THE CONTRACTOR SHALL NOT CUT, CUTTING, FILLING, OR CONTACTING OF FILLS AND ROUGH GRADING REQUIRED TO BRING ENTIRE PROJECT AREA TO SUBGRADE AS SHOWN ON THE DRAWING.  
B. THE SUBSURFACE FOR PAVED AREAS SHALL NOT EXCEED 0.05 FEET ABOVE ESTABLISHED SUBGRADE. ALL OTHER AREAS SHALL NOT EXCEED 0.05 FEET PLUS OR MINUS THE ESTABLISHED GRADE. PROVIDE ROUNDINGS AT TOP AND BOTTOM OF BANKS AND SLOPES TO MEET THE FOLLOWING:  
C. THE ENGINEER SHALL BE NOTIFIED WHEN THE CONTRACTOR HAS REACHED THE TOLERANCE AS STATED ABOVE, SO THAT FIELD MEASUREMENTS AND SPOT ELEVATIONS CAN BE VERIFIED BY THE ENGINEER.  
D. REMOVE EQUIPMENT FROM THE SITE UNTIL THE ENGINEER HAS VERIFIED THAT THE JOB MEETS THE ABOVE TOLERANCE.  
E. MINIMUM ACCEPTABLE GRADE OF SWALES WITHOUT SUB-SURFACE DRAIN IS 1.0%. IN ACCORDANCE WITH SECTION 6.9.9.2.4 OF THE SCD, SWALES WITH LESS THAN 1.0% GRADE SHALL REQUIRE A SUB-SURFACE DRAIN. EARTHEN SWALES LESS THAN 1.0% WILL NOT BE ALLOWED.

**BUFFER YARD TYPE I REQUIRED ADJACENT TO A (AGRICULTURE) ZONING DISTRICT**

- A minimum setback of 10 feet in addition to the yard setback otherwise required by this Ordinance.
- One (1) broad-leaf deciduous canopy tree must be planted in the buffer yard for every 30 feet of boundary between the subject and adjoining properties.

CONTRACTOR SHALL VERIFY DEPTHS OF ALL EXISTING ONSITE UTILITIES PRIOR TO CONSTRUCTION TO CONFIRM THERE IS NOT ANY CONFLICTS WITH OTHER UTILITIES, STORM SEWERS OR STREETS. CONFLICTS AFTER CONSTRUCTION BEGINS ARE SOLELY THE CONTRACTOR'S RESPONSIBILITY.

CONSTRUCTION OF THE PROPOSED AMENITIES (POOL, POOL HOUSE, AND ASSOCIATED PARKING LOT) SHALL START DURING SUBDIVISION/HOME CONSTRUCTION OF SECTION 1 & 2 AND SHALL BE COMPLETED PRIOR TO RECORDING THE SECONDARY PLAT OF SECTION 3.



LEGEND	
	EXISTING SANITARY SEWER
	EXISTING STORM SEWER
	EXISTING WATER LINE
	EXISTING CONTOUR
	PROPOSED SANITARY SEWER
	PROPOSED STORM SEWER
	PROPOSED CONTOUR
	PROPOSED WATER LINE
	PROPOSED SWALE
	PROPOSED GRADE ELEVATION
	PROPOSED 5' SIDEWALK (BY HOME BUILDER) (DEVELOPER SHALL INSTALL SIDEWALKS ALONG ALL COMMON AREAS)
	PROPOSED CURB W/ 6" UNDERDRAIN
	LOT NUMBER PAD GRADE MINIMUM FINISH FLOOR ELEVATION MINIMUM FLOOD PROTECTION GRADE
<b>MFP=750.0</b>	MINIMUM FINISH FLOOR ELEVATION IS BASED OFF OF THE FOLLOWING CRITERIA: 1. 12" (1') ABOVE THE NEAREST UPSTREAM OR DOWNSTREAM SANITARY MANHOLE, WHICHEVER IS LOWEST. 2. 6" (0.5') ABOVE THE MFPG
MFPG	MINIMUM FLOOD PROTECTION GRADE (LAKE / FLOOD PROTECTION)
B.L.	BUILDING SETBACK LINE
M.E.	MATCH EXISTING
H.P.	HIGH POINT
L.P.	LOW POINT
P.V.I.	POINT OF VERTICAL INTERSECTION
GRD. CHG.	GRADE CHANGE

<b>BENCHMARK DATA</b>
ORIGINATING BENCHMARK
BENCHMARK ELEVATIONS FOR THIS PROJECT WERE DERIVED USING THE NATIONAL GEODETIC SURVEY ONLINE POSITIONING USER SERVICE (O.P.U.S.) AND ARE REFERENCED TO THE NAVD '88 DATUM.
TBM #30
LOCATED "X" ON NORTHWEST BOLT OF A FIRE HYDRANT, 35' EAST OF HURRICANE ROAD AND AT THE SOUTH ENTRANCE TO GOLF ACADEMY.
ELEV = 762.85'

THIS DRAWING IS NOT INTENDED TO BE REPRESENTED AS A RETRACEMENT OR ORIGINAL BOUNDARY SURVEY, A ROUTE SURVEY OR A SURVEYOR LOCATION REPORT.

CERTIFIED: 07/11/24

APPROVAL PENDING/NOT FOR CONSTRUCTION

ALWAYS ON

7965 East 106th Street, Fishers, IN 46038-2500  
phone: 317.849.5935 fax: 317.849.5942

## SITE DEVELOPMENT PLAN

# INTERFEL

JOHNSON COUNTY, INDIANA

DRAWN BY: KJJM/GEM	CHECKED BY: KRG
SHEET NO. <b>C202</b>	
S & A JOB NO. 100405FOR-S3	

C202  
S & A JOB NO.  
100405FOR-S3





1. EXCAVATION
  - A. EXCAVATED MATERIAL THAT IS SUITABLE MAY BE USED FOR FILL. ALL UNSUITABLE MATERIAL AND ALL SURPLUS EXCAVATED MATERIAL NOT REQUIRED SHALL BE REMOVED FROM THE SITE.
  - B. PROVIDE AND PLACE ANY ADDITIONAL FILL MATERIAL FROM OFFSITE AS MAY BE NECESSARY TO PRODUCE THE GRAD REQUIRED ON PLANS. FILL OBTAINED FROM OFFSITE SHALL BE OF QUALITY AS SPECIFIED FOR FILL HEREIN AND THE SOURCE APPROVED BY THE DEVELOPER. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR FOR ANY COSTS FOR FILL NEEDED.
2. REMOVAL OF TREES
  - A. ALL TREES AND STUMPS SHALL BE REMOVED FROM AREAS TO BE FILLED BY A ROAD SURFACE OR STRUCTURE. THE TREES AND STUMPS SHALL NOT BE BURIED ON SITE.
3. PROTECTION OF TREES
  - A. THE CONTRACTOR SHALL, AT THE DIRECTION OF THE DEVELOPER, ENDEAVOR TO SAVE AND PROTECT TREES OF VALUE AND WORTH WHICH DO NOT IMPAIR CONSTRUCTION OF IMPROVEMENTS AS DESIGNED.
  - B. IN ANY EVENT CUT OR REMOVAL OF TREES MORE THAN 10 FEET IN DIAMETER SHALL BE CONSULTED WITH THE DEVELOPER. THE DEVELOPER SHALL BE CONSULTED WITH RESPECT TO A PROTECTIVE MEASURE TO BE TAKEN, IF ANY, TO PRESERVE SUCH TREES.
4. REMOVAL OF TOPSOIL
  - A. ALL TOPSOIL SHALL BE REMOVED FROM ALL AREAS BENEATH FUTURE PAVEMENTS OR BUILDING. TOPSOIL REMOVED SHALL BE TO A MINIMUM DEPTH OF 4 INCHES OR TO THE DEPTH INDICATED IN THE GEOTECHNICAL REPORT PROVIDED BY THE DEVELOPER TO BE EXCAVATED OR FILLED. TOPSOIL SHALL BE STORED AT A LOCATION WHERE IT WILL NOT BE SUBJECT TO EROSION OR POLLUTION OPERATIONS. THE TOPSOIL SHALL BE FREE OF DEBRIS AND STONES.
5. UTILITIES
  - A. RULES AND REGULATION GOVERNING THE RESPECTIVE UTILITY SHALL BE OBSERVED IN EXECUTING ALL WORK UNDER THIS SECTION.
  - B. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE THE LOCATION OF EXISTING UNDERGROUND UTILITIES 2 WORKING DAYS PRIOR TO COMMENCING WORK. FOR UTILITY LOCATIONS TO BE MARKED CALL TOLL FREE 811.
6. SITE GRADING
  - A. THE CONTRACTOR SHALL DO ALL CUTTING, FILLING, GRADING, AND FINISHING OF FILLS AND ROUGH GRADING REQUIRED TO BRING ENTIRE PROJECT AREA TO SUBGRADE AS SHOWN ON THE DRAWING.
  - B. THE TOLERANCE FOR PAVED AREAS SHALL NOT EXCEED 0.05 FEET ABOVE ESTABLISHED SUBGRADE. ALL OTHER AREAS SHALL NOT EXCEED 0.05 FEET PLUS OR MINUS THE ESTABLISHED GRADE. PROVIDE ROUNDINGS AT TOP AND BOTTOM OF SLOPE BANKS TO BE 1:1 HORIZONTAL TO 1 VERTICAL.
  - C. THE ENGINEER SHALL BE NOTIFIED WHEN THE CONTRACTOR HAS REACHED THE TOLERANCE AS STATED ABOVE, SO THAT FIELD MEASUREMENTS AND SPOT ELEVATIONS CAN BE OBTAINED BY THE ENGINEER. THE CONTRACTOR SHALL NOT REMOVE EQUIPMENT FROM THE SITE UNTIL THE ENGINEER HAS VERIFIED THAT THE JOB MEETS THE ABOVE TOLERANCE.
  - D. MINIMUM ACCEPTABLE GRADE OF SWALES WITHOUT SUB-SURFACE DRAIN IS 1.00%. IN ACCORDANCE WITH SECTION 6.191.2.4 OF THE SCO, SWALES WITH LESS THAN 1.00% SLOPE SHALL BE CONSIDERED AS EARTHEN SWALES LESS THAN 1.00% WILL NOT BE ALLOWED.

**BUFFER YARD TYPE 1 REQUIRED ADJACENT TO A (AGRICULTURE) ZONING DISTRICT**

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- One (1) broad-leaf deciduous canopy tree must be planted in the buffer yard for every 30 feet of boundary between the subject and adjoining properties.

LEGEND	
	EXISTING SANITARY SEWER
	EXISTING STORM SEWER
	EXISTING WATER LINE
	EXISTING CONTOUR
	PROPOSED SANITARY SEWER
	PROPOSED STORM SEWER
	PROPOSED CONTOUR
	PROPOSED WATER LINE
	PROPOSED SWALE
	PROPOSED GRADE ELEVATION
	PROPOSED 5' SIDEWALK (BY HOME BUILDER) (DEVELOPER SHALL INSTALL SIDEWALKS ALONG ALL COMMON AREAS)
	PROPOSED CURB W/ 6' UNDERDRAIN
	LOT NUMBER
	PAD GRADE
	MINIMUM FINISH FLOOR ELEVATION
	MINIMUM FLOOD PROTECTION GRADE
	MINIMUM FINISH FLOOR ELEVATION IS BASED ON THE FOLLOWING CRITERIA: 1. 12' (1.0') ABOVE THE NEAREST UPSTREAM OR DOWNSTREAM SANITARY MANHOLE, WHICHEVER IS LOWEST. 2. 6' (0.5') ABOVE THE MFGP
	MINIMUM FLOOD PROTECTION GRADE (LAKE / FLOOD PROTECTION)
	MFGP
	B.L. BUILDING SETBACK LINE
	M.E. MATCH EXISTING
	H.P. HIGH POINT
	L.P. LOW POINT
	P.V.I. POINT OF VERTICAL INTERSECTION
	GRD. CHG. GRADE CHANGE

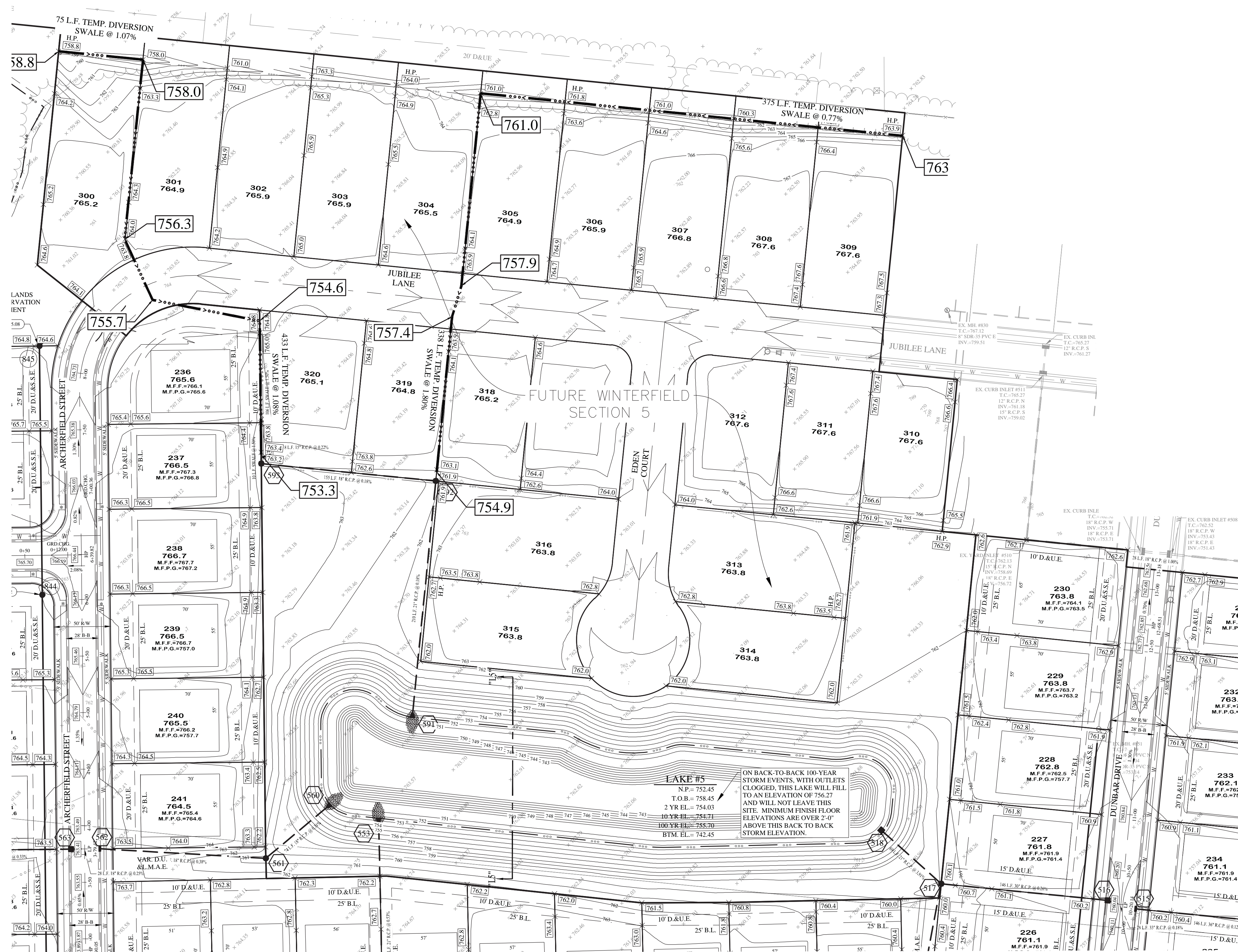
<b>BENCHMARK DATA</b>
ORIGINATING BENCHMARK
BENCHMARK ELEVATIONS FOR THIS PROJECT WERE DERIVED USING THE NATIONAL GEODETIC SURVEY ONLINE POSITIONING USER SERVICE (O.P.U.S.) AND ARE REFERENCED TO THE NAVD '83 DATUM.
TBM #30
LOCATED "X" ON NORTHWEST BOLT OF A FIRE HYDRANT, 35' EAST OF HURRICANE ROAD AND AT THE SOUTH ENTRANCE TO GOLF ACADEMY.
ELEV = 762.85'

<b>UTILITY CROSSINGS</b>
CONTRACTOR SHALL VERIFY DEPTHS OF ALL EXISTING ONSITE UTILITIES PRIOR TO CONSTRUCTION TO CONFIRM THERE IS NOT ANY CONFLICTS WITH OTHER UTILITIES, STORM SEWERS OR STREETS. CONFLICTS AFTER CONSTRUCTION BEGINS ARE SOLELY THE CONTRACTOR'S RESPONSIBILITY.

NOTE  
CONSTRUCTION OF THE PROPOSED AMENITIES (POOL, PO  
HOUSE, AND ASSOCIATED PARKING LOT) SHALL START  
DURING SUBDIVISION/HOME CONSTRUCTION OF SECTION  
2 AND SHALL BE COMPLETED PRIOR TO RECORDING THE  
SECONDARY PLAT OF SECTION 3.







1. EXCAVATION
  - A. EXCAVATED MATERIAL THAT IS SUITABLE MAY BE USED FOR FILL. ALL UNSUITABLE MATERIAL AND ALL SURPLUS EXCAVATED MATERIAL NOT REQUIRED SHALL BE REMOVED FROM THE SITE.
  - B. PROVIDE AND PLACE ANY ADDITIONAL FILL MATERIAL FROM OFFSITE AS MAY BE NECESSARY TO PRODUCE THE GRAD REQUIRED ON PLANS. FILL OBTAINED FROM OFFSITE SHALL BE OF QUALITY AS SPECIFIED FOR FILL HEREIN AND THE SOURCE APPROVED BY THE DEVELOPER. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR FOR ANY COSTS FOR FILL NEEDED.
2. REMOVAL OF TREES
  - A. ALL TREES AND STUMPS SHALL BE REMOVED FROM AREAS TO BE UTILIZED BY A ROAD SURFACE OR STRUCTURE. TREES AND STUMPS SHALL NOT BE BURIED ON SITE.
3. PROTECTION OF TREES
  - A. THE CONTRACTOR SHALL, AT THE DIRECTION OF THE DEVELOPER, ENDEAVOR TO SAVE AND PROTECT TREES OF VALUE AND WORTH WHICH DO NOT IMPAIR CONSTRUCTION OF IMPROVEMENTS AS DESIGNED.
  - B. IN EVENT CUT OR REMOVAL OF TREES IS REQUIRED, THE DEVELOPER SHALL BE CONSULTED WITH RESPECT TO THE PROTECTIVE MEASURE TO BE TAKEN, IF ANY, TO PRESERVE SUCH TREES.
4. REMOVAL OF TOPSOIL
  - A. ALL TOPSOIL SHALL BE REMOVED FROM ALL AREAS BENEATH FUTURE PAVEMENTS OR BUILDING. TOPSOIL REMOVED SHALL BE TO A MINIMUM DEPTH OF 4 INCHES OR TO THE DEPTH INDICATED IN THE GEOTECHNICAL REPORT PROVIDED BY THE DEVELOPER TO BE EXCAVATED OR FILLED. TOPSOIL SHALL BE STORED AT A LOCATION WHERE IT WILL NOT BE SUBJECT TO EROSION OR OTHER OPERATIONS. THE TOPSOIL SHALL BE FREE OF DEBRIS AND STONES.
5. UTILITIES
  - A. RULES AND REGULATION GOVERNING THE RESPECTIVE UTILITY SHALL BE OBSERVED IN EXECUTING ALL WORK UNDER THIS SECTION.
  - B. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE THE LOCATION OF EXISTING UNDERGROUND UTILITIES 2 WORKING DAYS PRIOR TO COMMENCING WORK. FOR UTILITY LOCATIONS TO BE MARKED CALL TOLL FREE 811.
6. SITE GRADING
  - A. THE CONTRACTOR SHALL DO ALL CUTTING, FILLING, GRADING OF CUTS AND ROUGH GRADING REQUIRED TO BRING ENTIRE PROJECT AREA TO SUBGRADE AS SHOWN ON THE DRAWING.
  - B. THE TOLERANCE FOR PAVED AREAS SHALL NOT EXCEED 0.05 FEET ABOVE ESTABLISHED SUBGRADE. ALL OTHER AREAS SHALL NOT EXCEED 0.05 FEET PLUS OR MINUS THE ESTABLISHED GRADE. PROVIDE ROUNDINGS AT TOP AND BOTTOM OF BANKS. PROVIDE ROUNDINGS IN DRAINAGE CHANNELS.
  - C. THE ENGINEER SHALL BE NOTIFIED WHEN THE CONTRACTOR HAS REACHED THE TOLERANCE AS STATED ABOVE, SO THAT FIELD MEASUREMENTS AND SPOT ELEVATIONS CAN BE OBTAINED BY THE ENGINEER. THE CONTRACTOR SHALL NOT REMOVE EQUIPMENT FROM THE SITE UNTIL THE ENGINEER HAS VERIFIED THAT THE JOB MEETS THE ABOVE TOLERANCE.
  - D. MINIMUM ACCEPTABLE GRADE OF SWALES WITHOUT SUB-SURFACE DRAIN IS 1.00%. IN ACCORDANCE WITH SECTION 6.191.2.4 OF THE SCO, SWALES WITH LESS THAN 1.00% SHALL BE REJECTED. SWALES WITH LESS THAN 1.00% SHALL BE REJECTED. SWALES LESS THAN 1.00% WILL NOT BE ALLOWED.

LEGEND	
	EXISTING SANITARY SEWER
	EXISTING STORM SEWER
	EXISTING WATER LINE
	EXISTING CONTOUR
	PROPOSED SANITARY SEWER
	PROPOSED STORM SEWER
	PROPOSED CONTOUR
	PROPOSED WATER LINE
	PROPOSED SWALE
	PROPOSED GRADE ELEVATION
	PROPOSED 5' SIDEWALK (BY HOME BUILDER) (DEVELOPER SHALL INSTALL SIDEWALKS ALONG ALL COMMON AREAS)
	PROPOSED CURB w/ 6' UNDERDRAIN

<b>10</b> <b>750.2</b> <b>MFG=750.2</b> <b>MFG=750.4</b>	LOT NUMBER
	PAD GRADE
<b>MFG=750.0</b>	MINIMUM FINISH FLOOR ELEVATION
	MINIMUM FLOOD PROTECTION GRADE
MINIMUM FINISH FLOOR ELEVATION IS BASED ON ONE OF THE FOLLOWING CRITERIA: 1. 12" (1.0') ABOVE THE NEAREST UPSTREAM OR DOWNSTREAM SANITARY MANHOLE, WHICHEVER IS LOWEST. 2. 6" (0.5') ABOVE THE MFGG	
MFGG	MINIMUM FLOOD PROTECTION GRADE (LAKE / FLOOD PROTECTION)
B.L.	BUILDING SETBACK LINE
M.E.	MATCH EXISTING
H.P.	HIGH POINT
L.P.	LOW POINT
P.V.I.	POINT OF VERTICAL INTERSECTION
GRD. CHG.	GRADE CHANGE

<b>BENCHMARK DATA</b>
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**NOTE**

CONSTRUCTION OF THE PROPOSED AMENITIES (POOL, POOL HOUSE, AND ASSOCIATED PARKING LOT) SHALL START DURING SUBDIVISION/HOME CONSTRUCTION OF SECTION 1 & 2 AND SHALL BE COMPLETED PRIOR TO RECORDING THE SECONDARY PLAT OF SECTION 3.

LAKE #5 DATA	
SURFACE AREA AT 752.45 (NORMAL POOL)	44,097.55 sq
SURFACE AREA AT 742.45 (10' DEPTH)	13,058.30 sq
PERCENTAGE OF NORMAL POOL	29.61%

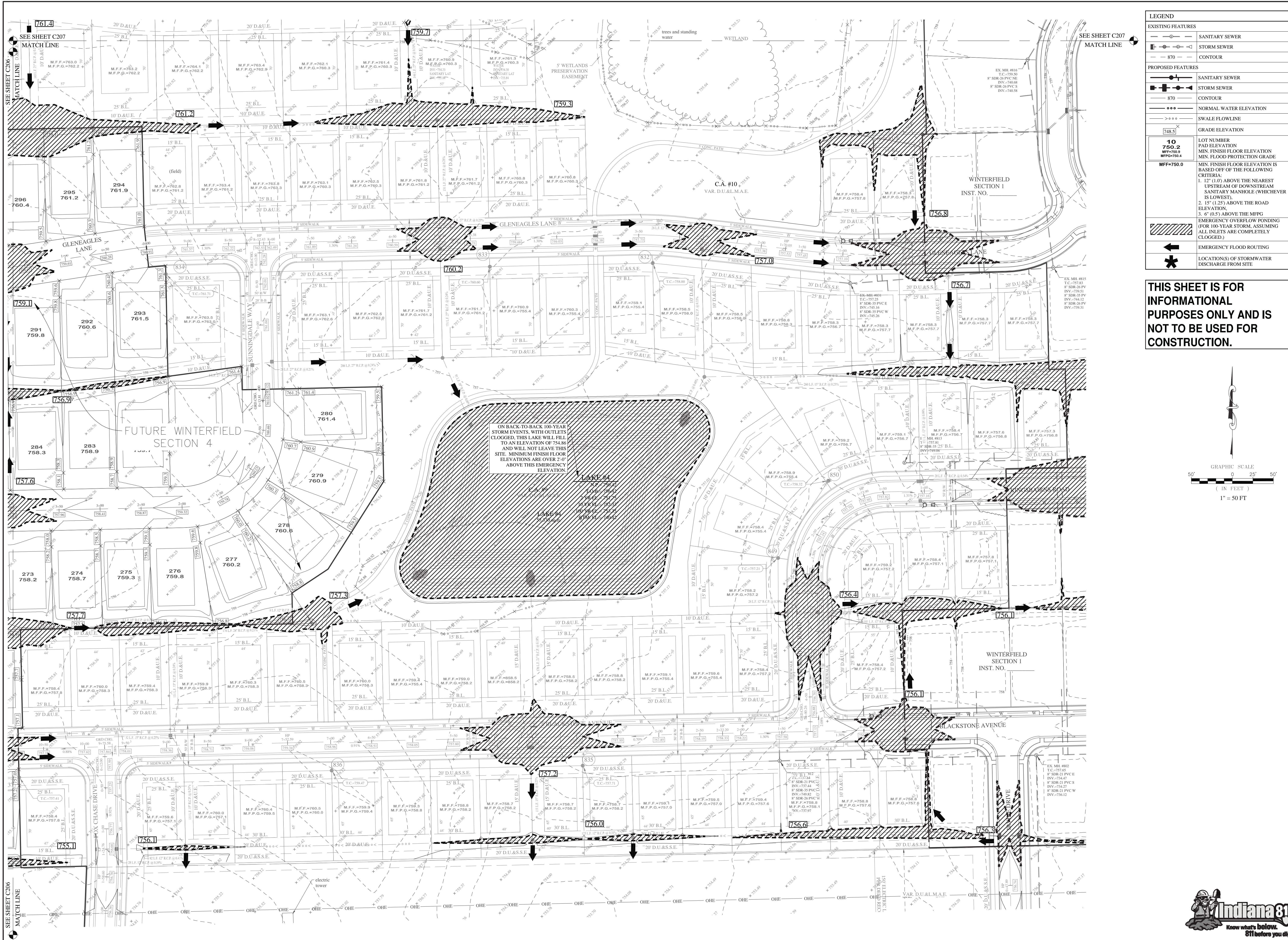
**BUFFER YARD TYPE 1 REQUIRED ADJACENT TO A (AGRICULTURE) ZONING DISTRICT**

- A minimum setback of 10 feet in addition to the yard setback otherwise required by this Ordinance.
- One (1) broad-leaf deciduous canopy tree must be planted in the buffer yard for every 30 feet of boundary between the subject and adjoining properties.

<p>OFFSITE SITE DEVELOPMENT PLAN</p> <p>WINTERFIELD SECTION 3</p> <p>JOHNSON COUNTY, INDIANA</p> <p>FRANKLIN</p>	<p>DRAWN BY: KJM/GEM</p> <p>CHECKED BY: KRK</p> <p>SHEET NO</p> <p><b>C204</b></p> <p>9 4 4 4 2010</p> <p>J00405FOR.S3</p>	<p>APPROVAL PENDING/NOT FOR CONSTRUCTION</p> <p><b>STOEPPELWERTH</b></p> <p>ALWAYS ON</p> <p>7965 East 104th Street, Fishers, IN 46038-2505 phone: 317.849.2505 fax: 317.849.5942</p> <p></p>	<p>THIS DRAWING IS NOT INTENDED TO BE USED FOR ANY OTHER PURPOSE THAN THE ORIGINAL BOUNDARY SURVEY, ROUTE SURVEY OR A SURVEYOR LOCATION REPORT.</p> <p>CERTIFIED: 07/11/24</p> <p></p>	<p>SEAL</p> <p>REGISTERED SURVEYOR</p> <p>No. PE112003386</p> <p>STATE OF INDIANA</p> <p>PERSONAL ENGINEER</p>	<p>DATE</p> <p>BY</p> <p>REVISIONS</p>
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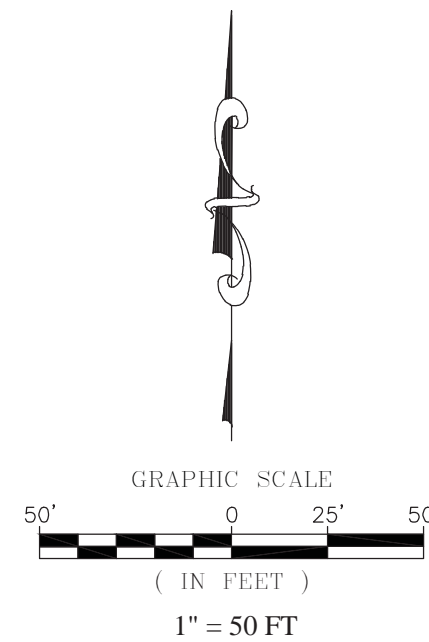






LEGEND	
EXISTING FEATURES	
	SANITARY SEWER
	STORM SEWER
	CONTOUR
	NORMAL WATER ELEVATION
	SWALE FLOWLINE
	GRADE ELEVATION
PROPOSED FEATURES	
	SANITARY SEWER
	STORM SEWER
	CONTOUR
	NORMAL WATER ELEVATION
	SWALE FLOWLINE
	GRADE ELEVATION
	LOT NUMBER
	PAD ELEVATION
	MIN. FINISH FLOOR ELEVATION
	MIN. FLOOD PROTECTION GRADE
	MIN. FINISH FLOOR ELEVATION IS BASED OFF OF THE FOLLOWING CRITERIA:
	EMERGENCY OVERFLOW PONDING (FOR 100-YEAR STORM, ASSUMING ALL INLETS ARE COMPLETELY CLOGGED.)
	EMERGENCY FLOOD ROUTING
	LOCATION(S) OF STORMWATER DISCHARGE FROM SITE

THIS SHEET IS FOR INFORMATIONAL PURPOSES ONLY AND IS NOT TO BE USED FOR CONSTRUCTION.



APPROVAL PENDING/NOT FOR CONSTRUCTION

STOEPPELWERTH

EMERGENCY FLOOD ROUTE PLAN

WINTERFIELD SECTION 3

JOHNSON COUNTY, INDIANA

FRANKLIN

ALWAYS ON

7905 East 100th Street, Fishers, IN 46038-2905

phone: 317.845.5905 fax: 317.845.5942

NO. PE1200386

STATE OF INDIANA

PROFESSIONAL ENGINEER

CERTIFIED: 07/11/24

BY: [Signature]

DRAWN BY: KJM/GEM

CHECKED BY: KRG



SHEET NO. C205

100405FOR-S3

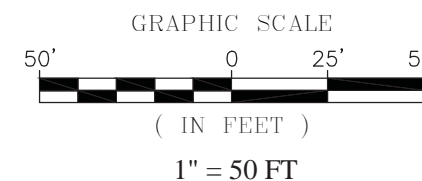




SEE SHEET C20  
MATCH LINE

<p><b>10</b> <b>750.2</b> MFF=750.9 MFF=750.4</p>	<p>LOT NUMBER PAD ELEVATION MIN. FINISH FLOOR ELEVATION MIN. PROTECTION GRADE MIN. FINISH FLOOR ELEVATION IS BASED OFF OF THE FOLLOWING CRITERIA:</p>
<p>MFF=750.0</p>	<ol style="list-style-type: none"> <li>1. 12" (1'0") ABOVE THE NEAREST UPSTREAM OF DOWNSIDE SANITARY MANHOLE (WHICHEVER IS LOWEST),</li> <li>2. 15" (1'25") ABOVE THE ROAD ELEVATION,</li> <li>3. 6" (0'5") ABOVE THE MFFPG</li> </ol>
	<p>EMERGENCY OVERFLOW PONDING (FOR 100-YEAR STORM, ASSUMING ALL INLETS ARE COMPLETELY CLOGGED).</p>
	<p>EMERGENCY FLOOD ROUTING  LOCATION(S) OF STORMWATER DISCHARGE FROM SITE</p>

**THIS SHEET IS FOR  
INFORMATIONAL  
PURPOSES ONLY AND IS  
NOT TO BE USED FOR  
CONSTRUCTION.**



APPROVAL PENDING/NOT FOR CONSTRUCTION

PROVAL PENDING/NOT FOR CONSTRUCTION  
**STOPPELWERTH**

ENDING/NOT FOR CO  
**EPP**  
ALWAYS ON

# EMERGENCY FLOOD ROUTE PLAN

WINTERFIELD  
SECTION 3

FRANKLIN

JOHNSON COUNTY, INDIANA

THIS DRAWING IS NOT INTENDED TO BE REPRESENTED AS A RETRACEMENT OR ORIGINAL BOUNDARY SURVEY, A ROUTE SURVEY OR A SURVEYOR LOCATION REPORT.

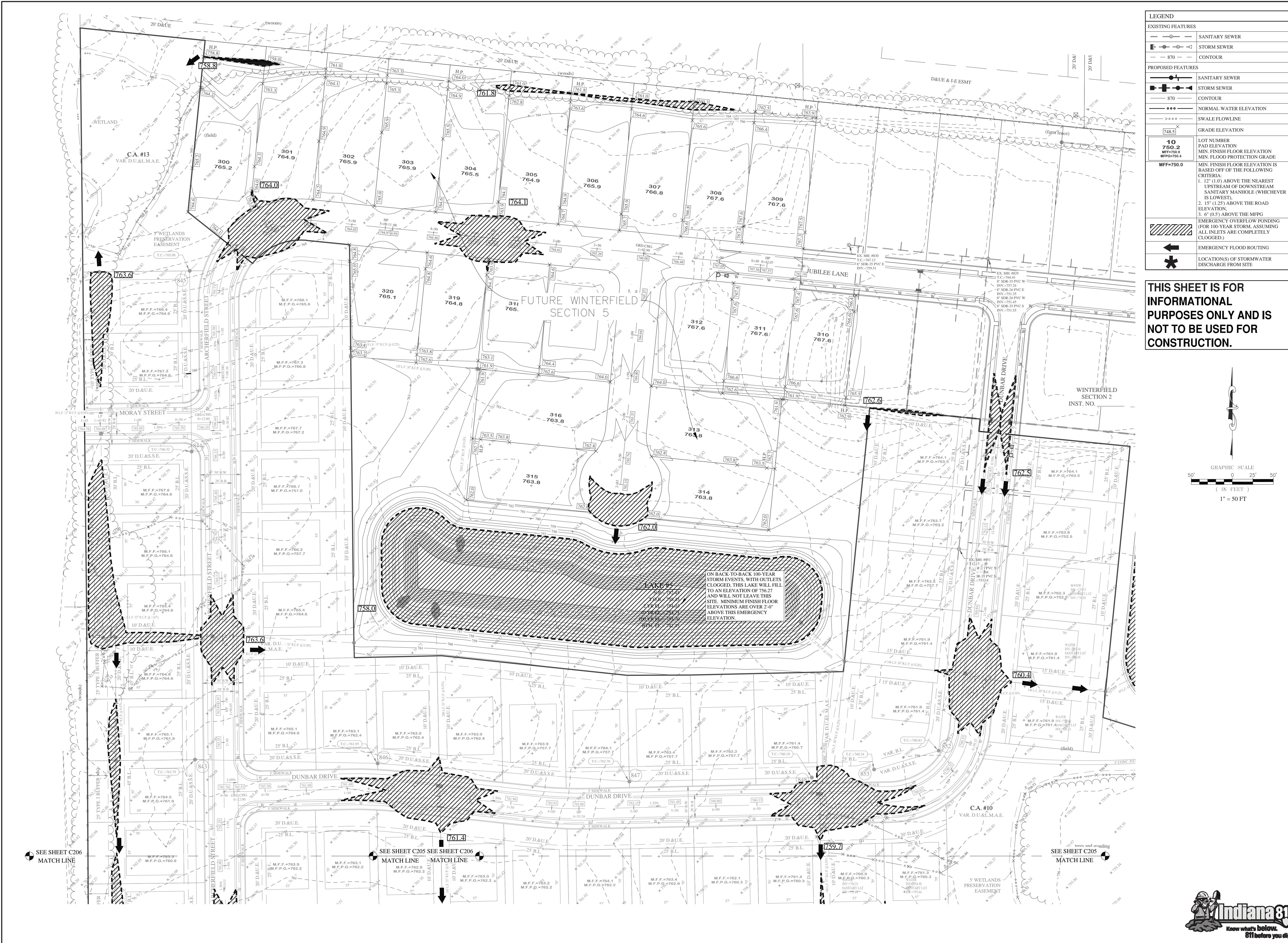
CERTIFIED: 07/11/24

REVISER PER TAC COMMENTS	BY	KJIM/GEE
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01/31/24	DATE
	MO/DA/Y

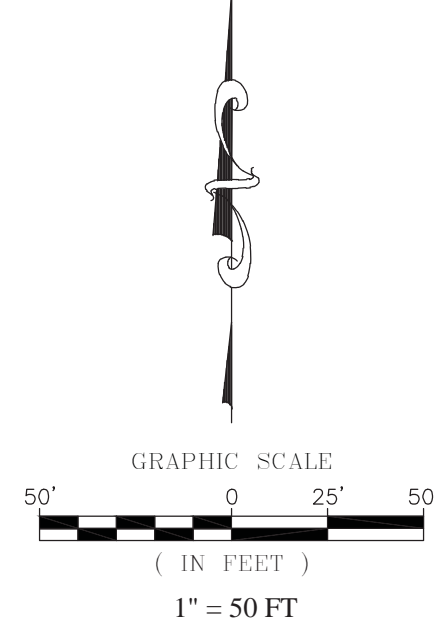






LEGEND	
EXISTING FEATURES	
	SANITARY SEWER
	STORM SEWER
	CONTOUR
	NORMAL WATER ELEVATION
	SWALE FLOWLINE
	GRADE ELEVATION
	EMERGENCY FLOOD ROUTING
PROPOSED FEATURES	
	SANITARY SEWER
	STORM SEWER
	CONTOUR
	NORMAL WATER ELEVATION
	SWALE FLOWLINE
	GRADE ELEVATION
	EMERGENCY FLOOD ROUTING

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APPROVAL PENDING/NOT FOR CONSTRUCTION

STOEPPELWERTH

ALWAYS ON

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phone: 317.845.5905 fax: 317.845.5942

EMERGENCY FLOOD ROUTE PLAN

WINTERFIELD SECTION 3

JOHNSON COUNTY, INDIANA

FRANKLIN

INDIANA 811

Know what's below. 811 before you dig.

Drawn By: KJM/GEM

Checked By: KRK

SHEET NO. C207

6 & 8 FOR NO. 100405FOR-S3

BY: KINGEM

REVISED PER TAC COMMENTS

DATE: 01/31/24

MARK

THIS DRAWING IS NOT INTENDED TO BE REPRESENTED AS A RETRACEMENT OR SURVEY OR A SURVEYOR LOCATION REPORT.

CERTIFIED: 07/11/24

Professional Engineer

No. PE1200386

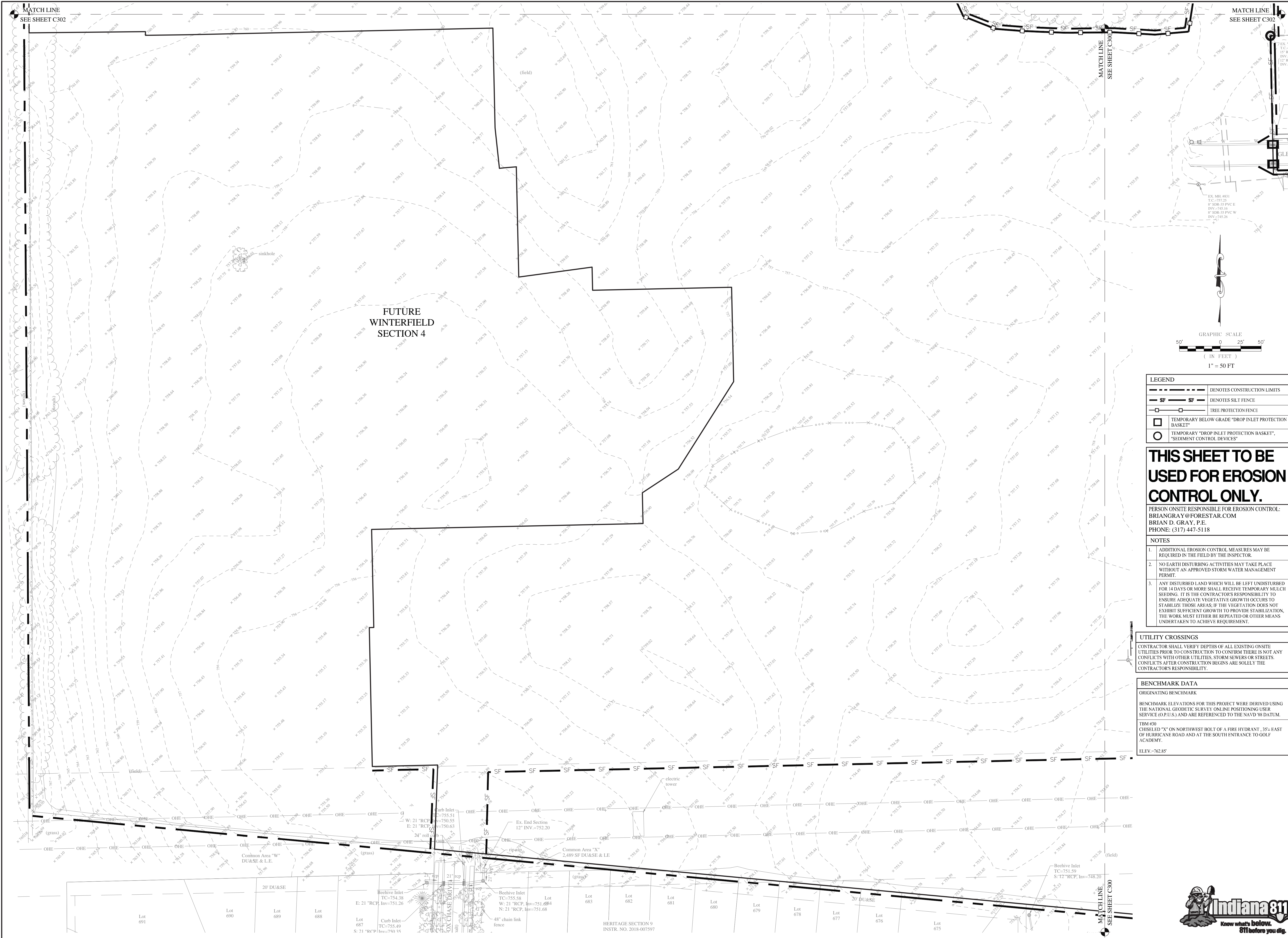
STATE OF INDIANA







File Name: S:\100405FOR-S3\DWG\C300 - Erosion Control Plan.dwg - C301  
June 28, 2024 12:11:56 PM / kmitchell  
June 28, 2024 12:11:56 PM / Kenny Mitchell  
Plotted / By:



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STOEPPELWERTH

ALWAYS ON

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phone: 317.845.5905 fax: 317.845.5942

INITIAL STORM WATER POLLUTION PREV. PLAN

WINTERFIELD SECTION 3

FRANKLIN

JOHNSON COUNTY, INDIANA

REVISIONS

DATE

MARK

BY

THIS DRAWING IS NOT INTENDED TO BE REPRESENTED AS A RETRACEMENT OR SURVEY OR A SURVEYOR LOCATION REPORT.

THIS SHEET TO BE USED FOR EROSION CONTROL ONLY.

PERSON ONSITE RESPONSIBLE FOR EROSION CONTROL: BRIAN D. GRAY, P.E. PHONE: (317) 447-5118

NOTES

UTILITY CROSSINGS

BENCHMARK DATA

INDIANA 811

LEGEND

--- DENOTES CONSTRUCTION LIMITS

--- DENOTES SILT FENCE

--- TREE PROTECTION FENCE

--- TEMPORARY BELOW GRADE "DROP INLET PROTECTION BASKET"

--- TEMPORARY "DROP INLET PROTECTION BASKET", "SEDIMENT CONTROL DEVICES"

GRAPHIC SCALE

1" = 50 FT

50' 0 25' 50'

( IN FEET )

1. ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUIRED IN THE FIELD BY THE INSPECTOR.

2. NO EARTH DISTURBING ACTIVITIES MAY TAKE PLACE WITHOUT AN APPROVED STORM WATER MANAGEMENT PERMIT.

3. ANY DISTURBED LAND WHICH WILL BE LEFT UNDISTURBED FOR 14 DAYS OR MORE SHALL RECEIVE TEMPORARY MULCH SEEDING. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE ADOQUATE VEGETATIVE GROWTH OCCURS TO STABILIZE THOSE AREAS; IF THE VEGETATION DOES NOT EXHIBIT SUFFICIENT GROWTH TO PROVIDE STABILIZATION, THE WORK MUST EITHER BE REPEATED OR OTHER MEANS UNDERTAKEN TO ACHIEVE REQUIREMENT.

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TBM #30 CHISELED "X" ON NORTHWEST BOLT OF A FIRE HYDRANT, 35' EAST OF HURRICANE ROAD AND AT THE SOUTH ENTRANCE TO GOLF ACADEMY.

ELEV.=762.85'

INDIANA 811

Know what's below.

811 before you dig.

C301

S.E.A. FORM NO. 100405FOR-S3







PERSON ONSITE RESPONSIBLE FOR EROSION CONTROL:  
BRIANGRAY@FORESTAR.COM  
BRIAN D. GRAY, P.E.  
PHONE: (317) 447-5118


ORIGINATING BENCHMARK







BENCHMARK ELEVATIONS FOR THIS PROJECT WERE DERIVED USING THE NATIONAL GEODETIC SURVEY ONLINE POSITIONING USER SERVICE (O.P.U.S.) AND ARE REFERENCED TO THE NAVD '88 DATUM.

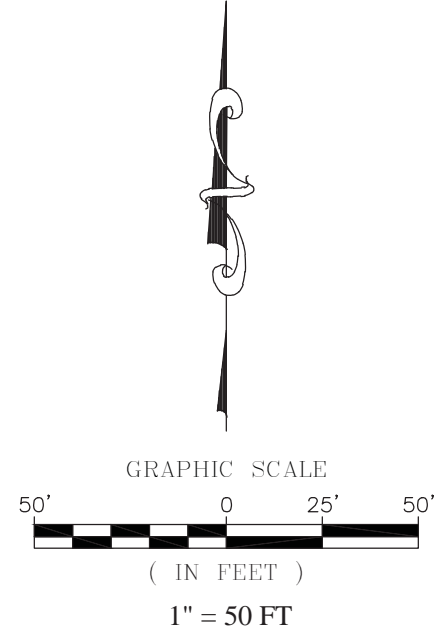
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ELEV. = 762.85'

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LEGEND	
	DENOTES CONSTRUCTION LIMITS
	DENOTES SILT FENCE
	TREE PROTECTION FENCE
	TEMPORARY BELOW GRADE "DROP INLET PROTECTION BASKET"
	TEMPORARY "DROP INLET PROTECTION BASKET", "SEDIMENT CONTROL DEVICES"
	ROCK HORSE SHOE DAM


[illegible]

APPROVAL PENDING/NOT FOR CONSTRUCTION

**STOEPPEL WERTH**

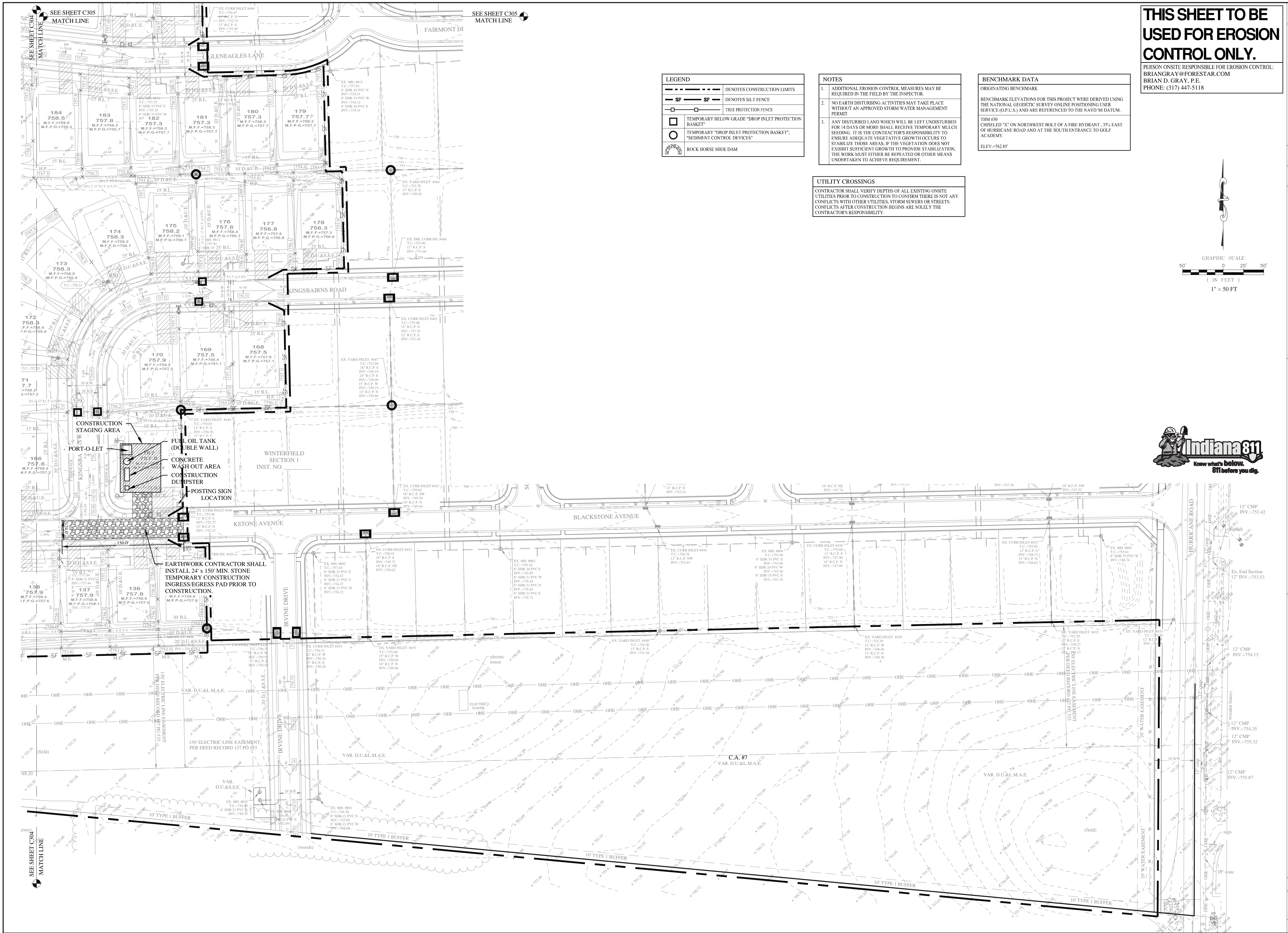
ALWAYS ON

7965 East 106th Street, Fishers, IN 46038-2905  
phone: 317.849.5935 fax: 317.849.5942

TEMP. STORM WATER POLLUTION PREV. PLAN	
<p>WINTERFIELD SECTION 3</p> <p>JOHNSON COUNTY, INDIANA</p>	

DRAWN BY: KJJM/GEM	CHECKED BY: KRG
SHEET NO. <b>C303</b>	
S & A JOB NO. 100405FOR-S3	

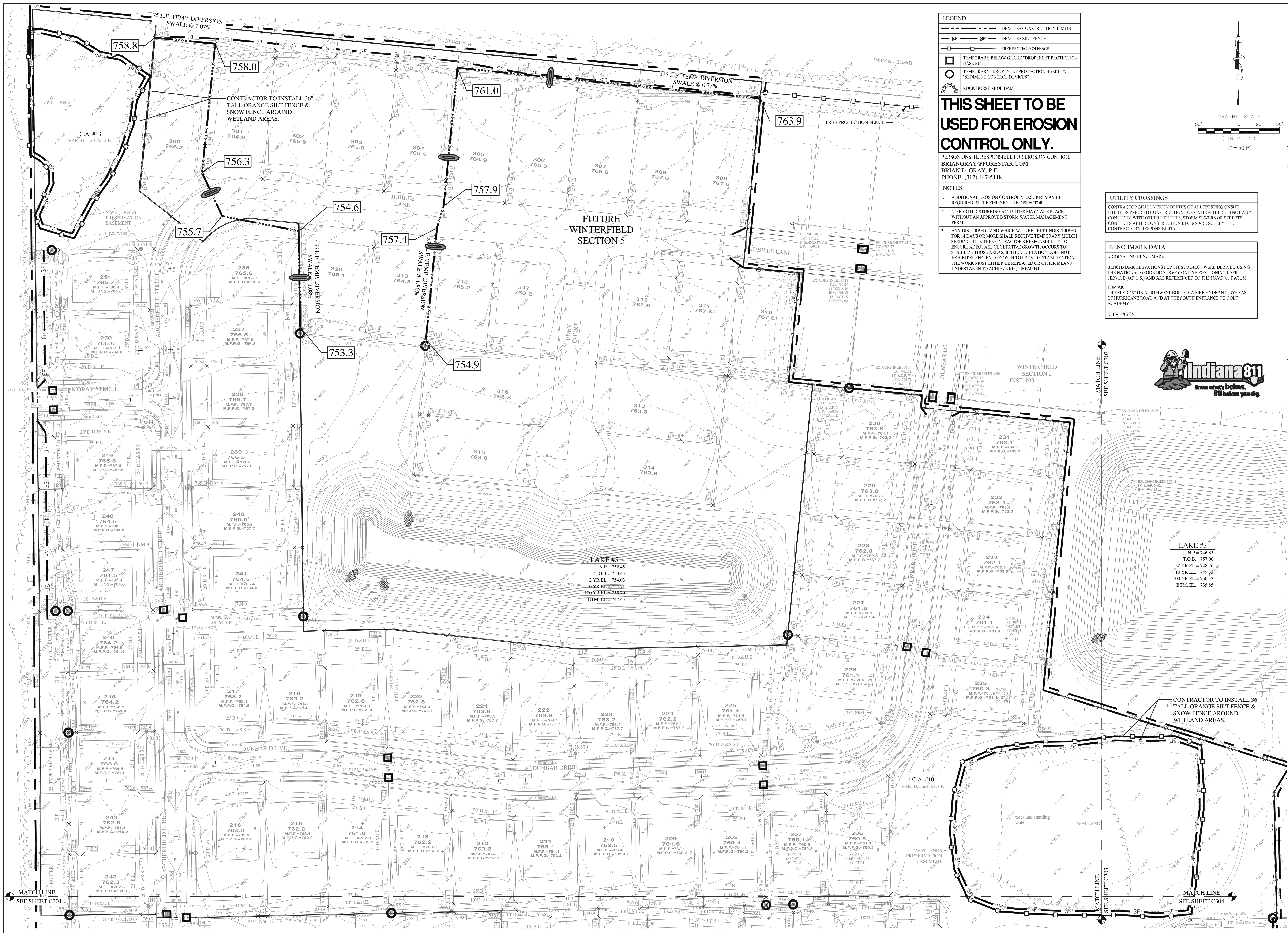
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Modified / By: June 26, 2024 1:21:06 PM / kmitchell  
Plotted / By: June 28, 2024 12:12:22 PM / Kenny Mitchell









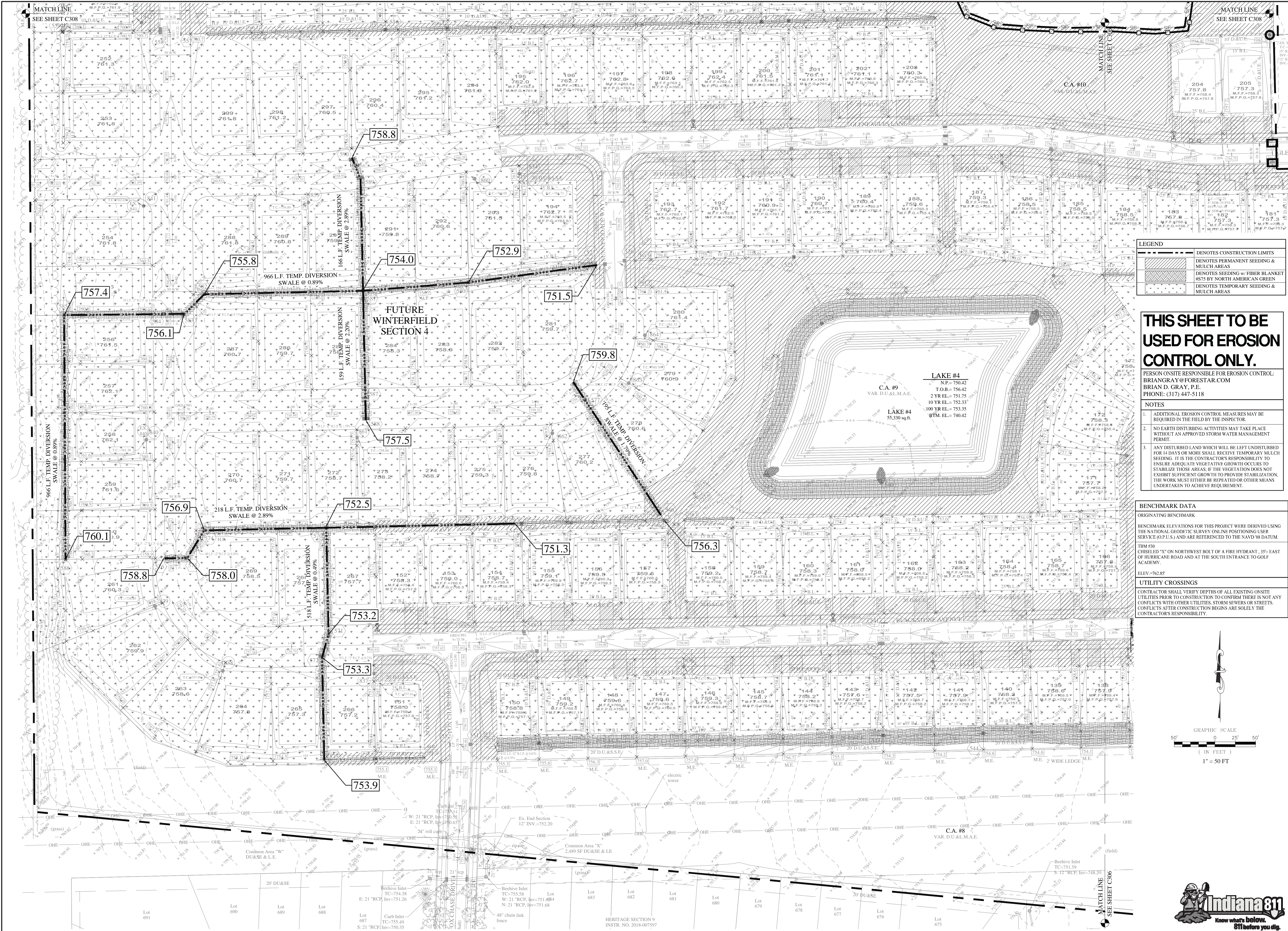


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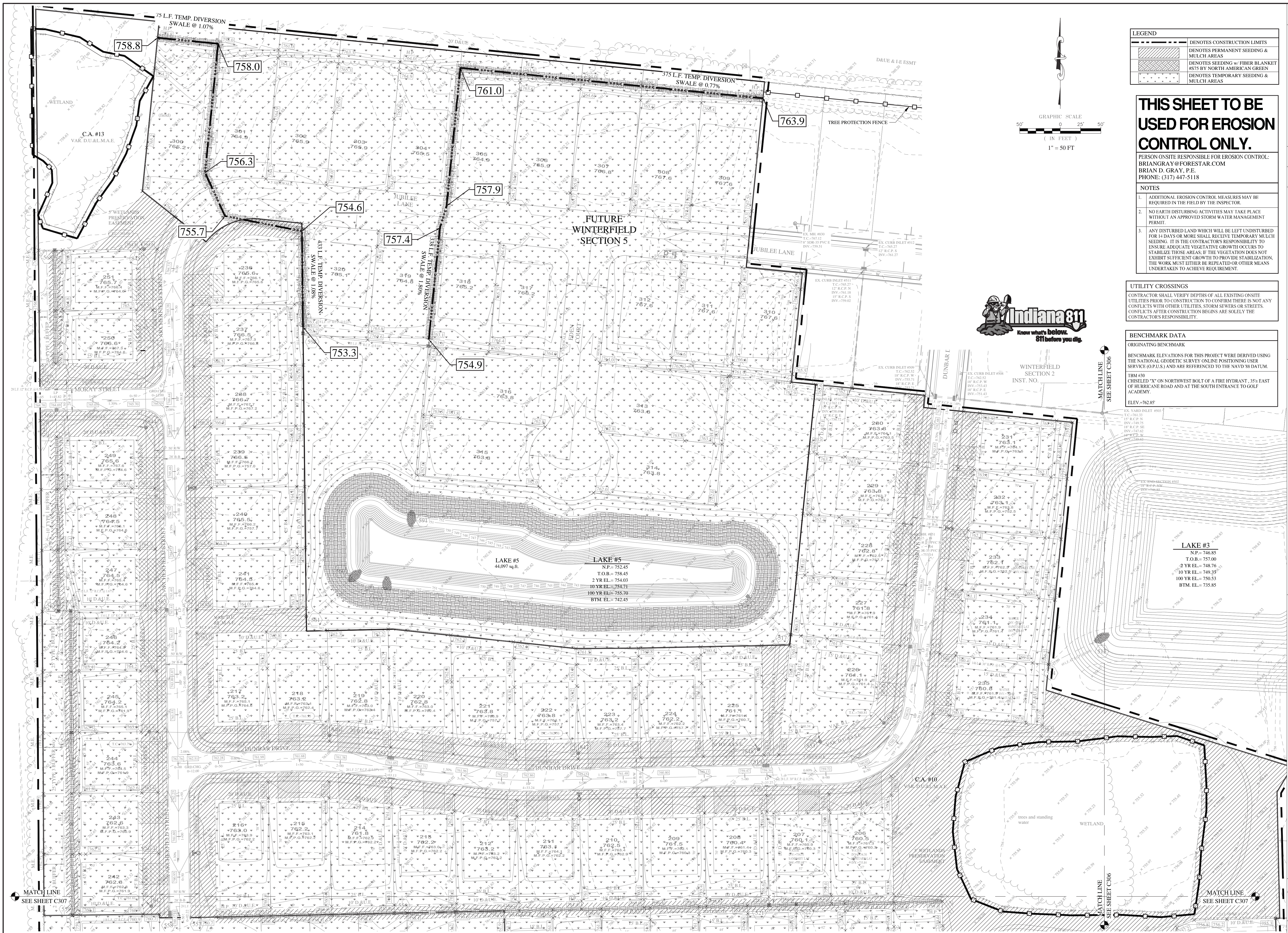






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Modified / By: June 26, 2024 1:21:06 PM / kmitchell  
Plotted / By: June 28, 2024 12:13:46 PM / Kenny Mitchell



# THIS SHEET TO BE USED FOR EROSION CONTROL ONLY.

PROJECT NAME  
WINTERFIELD, SECTION 1

SITE NAME  
The area scheduled for construction is known as "Winterfield, Section 3" (hereinafter referred to as the "Project").

PROJECT LOCATION  
The property is located on the west side of Hurricane Road approximately 0.5 miles south of Hurricane Road and East C.R. 300 N.

OWNER'S INFORMATION  
Forestar (USA) Real Estate Group  
9292 North Meridian Street, Ste. 211  
Indianapolis, Indiana 46260  
Phone: (317) 447-5118  
Contact Person: Brian Gray, P.E.

OPERATOR'S INFORMATION  
Forestar (USA) Real Estate Group  
9292 North Meridian Street, Ste. 211  
Indianapolis, Indiana 46260  
Phone: (317) 447-5118  
Contact Person: Brian Gray, P.E.

NOTICE OF INTENT  
All parties defined as owners or operators must submit a Notice of Intent (NOI) at least 48 hours prior to commencement of on-site construction activities. Submittal of the NOI is not prohibited; however, authorization under the construction general permit is only for discharges that occur after permit coverage is granted. Unpermitted discharges may be subject to enforcement actions by the EPA. For the purposes of this permit, an operator is defined as any party meeting either of the following requirements:

- The party has operational control over construction plans and specifications, including the ability to make modifications to those plans and specifications.
- The party has day-to-day operational control of those activities at a project that are necessary to ensure compliance with a stormwater pollution prevention plan for the site or other permit conditions.

## CONSTRUCTION PLAN - GENERAL PLAN COMPONENTS (SECTION A)

### A1 - INDEX OF THE LOCATION OF REQUIRED PLAN ELEMENTS IN THE CONSTRUCTION PLAN:

C300-C302 - Initial Storm Water Pollution Prev. Plan  
C303-C305 - Temporary Storm Water Pollution Prev. Plan  
C306-C308 - Permanent Storm Water Pollution Prev. Plan  
C309 - C314 - Storm Water Pollution Prevention Plan Specs.

A2 - A VICINITY MAP DEPICTING THE PROJECT SITE LOCATION IN RELATIONSHIP TO RECOGNIZABLE LOCAL LANDMARKS, TOWNS, AND MAJOR ROADS:  
See C001 - Cover Sheet for a vicinity map.

A3 - NARRATIVE OF THE NATURE AND PURPOSE OF THE PROJECT:  
This project includes the construction of 117 lots and 6 common areas which consists of approximately 49,190 acres. Construction will include pad grades for homes, associated roadways, landscaping, drainage infrastructure, which includes connections to existing systems (sanitary sewer, storm sewer, and water main).

A4 - LATITUDE AND LONGITUDE TO THE NEAREST FIFTEEN (15) SECONDS:  
Latitude is 39° 30' 55" N  
Longitude is 86° 02' 10" W

A5 - LEGAL DESCRIPTION OF THE PROJECT SITE:  
A part of the Northwest and Southwest Quarter of Section 1, Township 12 North, Range 04 East of the Second Principal Meridian, Franklin IN, Johnson County, Indiana.  
See the Final Plan for the full legal description.

A6 - 11 x 17-INCH PLAT SHOWING BUILDING LOT NUMBERS/BOUNDARIES AND ROAD LAYOUT/NAMES:  
See Appendix B in the O & M Manual for an 11" x 17" copy of the Final Plan.

A7 - BOUNDARIES OF THE ONE HUNDRED (100) YEAR FLOODPLAINS, FLOODWAY FRINGES, AND FLOODWAYS:  
No portion of this site is located within a Special Flood Hazard Area (Zone AE). This information was obtained from Flood Insurance Rate Map (FIRM) Panel 1808100143E for Johnson County, Indiana dated January 29, 2021.  
See C001 - Cover Sheet for a FIRM map panel showing boundaries of the 100-year floodplains, floodway fringes, and floodways.

A8 - LAND USE OF ALL ADJACENT PROPERTIES:  
North: Residential  
East: Commercial  
South: Residential/Agricultural  
West: Agricultural

A9 - IDENTIFICATION OF A U.S. EPA APPROVED OR ESTABLISHED TMDL:  
There is no established TMDL for this site.

A10 - NAME(S) OF THE RECEIVING WATER(S):  
The overall site outlets through proposed Lakes and ultimately Hurricane Creek.

A11 - IDENTIFICATION OF DISCHARGES TO A WATER ON THE CURRENT 303(D) LIST OF IMPAIRED WATERS AND THE POLLUTANT(S) FOR WHICH IT IS IMPAIRED:  
The overall site outlets to Hurricane Creek. Hurricane Creek is included in the 303(d) listing of impaired waters. The cited impairment is E. coli.

A12 - SOILS MAP OF THE PREDOMINATE SOIL TYPES:  
See Sheet C001 - Cover Sheet and Sheet C310 - Storm Water Pollution Prevention Plan Specs. for soil map and predominate soil types (as obtained from the NRCS Web Soil Survey).

A13 - IDENTIFICATION AND LOCATION OF ALL KNOWN WETLANDS, LAKES, AND WATER COURSES ON OR ADJACENT TO THE PROJECT SITE (CONSTRUCTION PLAN, EXISTING SITE LAYOUT):  
Existing lakes and water courses adjacent to this site include Lakes #1, #2, and #3 to the north and east and Hurricane Creek to the east.

A14 - IDENTIFICATION OF ANY OTHER STATE OR FEDERAL WATER QUALITY PERMITS OR AUTHORIZATIONS THAT ARE REQUIRED FOR CONSTRUCTION ACTIVITIES:  
IDEM Construction Stormwater General Permit.

A15 - IDENTIFICATION AND DELINEATION OF EXISTING COVER, INCLUDING NATURAL BUFFERS:  
The existing site consists of grass and trees.

A16 - EXISTING SITE TOPOGRAPHY AT AN INTERVAL APPROPRIATE TO INDICATE DRAINAGE PATTERNS:  
See Sheets C100-C103 - Topographical Survey / Demo Plan for existing site topography.

A17 - LOCATION(S) WHERE RUN-OFF ENTERS THE PROJECT SITE:  
See EX-3 - Existing Basin Map in Appendix G of the Drainage Report for location(s) where run-off enters the project site.

A18 - LOCATION(S) WHERE RUN-OFF DISCHARGES FROM THE PROJECT SITE PRIOR TO LAND DISTURBANCE:  
See EX-3 - Existing Basin Map in Appendix G of the Drainage Report for location(s) where run-off discharges from the project site prior to land disturbance.

A19 - LOCATION OF ALL EXISTING STRUCTURES ON THE PROJECT SITE:  
See Sheets C100 - C103 - Topographical Survey / Demo Plan for existing structure locations on the project site.

A20 - EXISTING PERMANENT RETENTION OR DETENTION FACILITIES, INCLUDING MANMADE WETLANDS, DESIGNED FOR THE PURPOSE OF STORMWATER MANAGEMENT:  
See PR-1 - PR-2 - Pond Routing Basin Map in Appendix G of the Drainage Report for location(s) of existing permanent retention or detention facilities, including manmade wetlands, designed for the purpose of stormwater management.

A21 - LOCATIONS WHERE STORMWATER MAY BE DIRECTLY DISCHARGED INTO GROUND WATER, SUCH AS ABANDONED WELLS, SINKHOLES, OR KARST FEATURES:  
There are no known locations where stormwater may be directly discharged into ground water on this site.

A22 - SIZE OF THE PROJECT AREA EXPRESSED IN ACRES:  
Total project area (in acres): 49.190 (Section 3), 24.204 (Offsite Future Sections)

A23 - TOTAL EXPECTED LAND DISTURBANCE EXPRESSED IN ACRES:  
Total expected area of land disturbance (in acres): 70.000

A24 - PROPOSED FINAL TOPOGRAPHY:  
See Sheet C200-C204 - Site Development Plan for proposed site topography.

A25 - LOCATIONS AND APPROXIMATE BOUNDARIES OF ALL DISTURBED AREAS:  
See Sheets C200-C204 - Site Development Plan and Sheets C300-C308 - Storm Water Pollution Prev. Plans for location(s) and approximate boundaries of disturbances.

A26 - LOCATIONS, SIZE, AND DIMENSIONS OF ALL STORMWATER DRAINAGE SYSTEM SUCH AS CULVERTS, STORMWATER SEWER, AND CONVEYANCE CHANNELS:  
See Sheets C200-C204 - Site Development Plan and Sheets C600-C605 - Storm Sewer Plan & Profiles for location(s) and sizes of stormwater drainage systems.  
See Sheets C801A-C801B - Construction Specifications & Details for details of stormwater structures and swales.

A27 - LOCATIONS OF SPECIFIC POINTS WHERE STORMWATER AND NON-STORMWATER DISCHARGES WILL LEAVE THE PROJECT SITE:  
See Sheet C200-C204 - Site Development Plan, Sheet C303-C305 - Temporary Storm Water Pollution Prev. Plan, and Sheets C600 - C605 - Storm Sewer Plan & Profiles for location(s) where stormwater and non-stormwater discharges will leave the site.

A28 - LOCATION OF ALL PROPOSED SITE IMPROVEMENTS, INCLUDING ROADS, UTILITIES, LOT DELINEATION AND IDENTIFICATION, PROPOSED STRUCTURES, AND COMMON AREAS:  
See Sheet C200-C204 - Site Development Plan for the location(s) of all proposed site improvements.

A29 - LOCATION OF ALL ON-SITE AND OFF-SITE SOIL STOCKPILES AND BORROW AREAS:  
There will be no soil stockpiles areas on this project.

A30 - CONSTRUCTION SUPPORT ACTIVITIES THAT ARE EXPECTED TO BE PART OF THE PROJECT:  
See Sheets C300 & C303 - Storm Water Pollution Prev. Plans for the location(s) of the construction staging area.  
See Sheet C310 - Storm Water Pollution Prevention Plan Specs. for the construction staging area detail.

A31 - LOCATION OF ANY IN-STREAM ACTIVITIES THAT ARE PLANNED FOR THE PROJECT INCLUDING, BUT NOT LIMITED TO, STREAM CROSSINGS AND PUMP AROUNDS:  
There are no planned in-stream activities for this project.

## STORMWATER POLLUTION PREVENTION - CONSTRUCTION COMPONENT (SECTION B)

### B1 - DESCRIPTION OF THE POTENTIAL POLLUTANT GENERATING SOURCES AND POLLUTANTS, INCLUDING ALL POTENTIAL NON-STORMWATER DISCHARGES:

The following potential pollutant sources may be associated with construction activities on site:  
Material storage areas (more specifically described below), construction waste material, fuel storage areas and fueling stations, exposed soils, leaking vehicles and equipment, sanitary waste from temporary toilet facilities, litter, windblown dust, soil tracking off site from construction equipment, water from concrete washout.

The following construction materials will be staged or stored on site at various points during development of the site:  
Structural fill, road base, concrete drainage pipe, concrete curbs, precast concrete manholes.

Measures and/or operational activities for minimizing the discharge of pollutants during construction are described in the rest of this section. Those measures and/or activities for post-construction are described in Section C.

### B2 - STABLE CONSTRUCTION ENTRANCE LOCATIONS AND SPECIFICATIONS:

See Sheets C300 & C303 - Storm Water Pollution Prev. Plans for the location(s) of the construction entrance(s).  
See Sheets C310 - Storm Water Pollution Prevention Plan Specs. for construction entrance details and specifications.

### B3 - SPECIFICATIONS FOR TEMPORARY AND PERMANENT STABILIZATION:

See Sheet C303-C305 - Temporary Storm Water Pollution Prev. Plan for temporary surface stabilization methods.  
See Sheet C306-C308 - Permanent Storm Water Pollution Prev. Plan for permanent surface stabilization methods.  
See Sheets C310-C314 - Storm Water Pollution Prevention Plan Specs. for surface stabilization specifications, application rates for soil amendments and see mixtures, application rate and anchoring method for mulch, and erosion control blanket installation specifications.

### B4 - SEDIMENT CONTROL MEASURES FOR CONCENTRATED FLOW AREAS:

Erosion control blanket will be used in swales.  
Sheet flow areas will be protected by seed and mulch or hydroseeding.  
Erosion control blanket will be installed on sloped areas where the slope exceeds 3:1 (horizontal to vertical).  
Silt fencing will be utilized to minimize runoff from construction areas.  
See Sheets C300-C308 - Storm Water Pollution Prev. Plans for location(s) and method(s) of sediment control measures for concentrated flow areas.  
See Sheets C310-C314 - Storm Water Pollution Prevention Plan Specs. for sediment control measures for concentrated flow area specifications.

### B5 - SEDIMENT CONTROL MEASURES FOR SHEET FLOW AREAS:

Sheet flow areas will be protected by seed and mulch or hydroseeding.  
Erosion control blanket will be installed on sloped areas where the slope exceeds 3:1 (horizontal to vertical).  
Silt fencing will be utilized to minimize runoff from construction areas.  
See Sheets C300-C308 - Storm Water Pollution Prev. Plans for location(s) and method(s) of sediment control measures for sheet flow areas.  
See Sheets C310-C314 - Storm Water Pollution Prevention Plan Specs. for sediment control measures for sheet flow area specifications.

### B6 - RUN-OFF CONTROL MEASURES:

No direct run-off control measures are required for this project.

### B7 - STORMWATER OUTLET PROTECTION LOCATION AND SPECIFICATIONS:

Rip-rap revetment will be used at each of the stormwater outlets where not connecting into existing manholes.  
See Sheet C303-C305 - Temporary Storm Water Pollution Prev. Plan for location(s) of stormwater outlet protection.  
See Sheet C801B - Construction Specifications & Details for details of stormwater outlet protection.

### B8 - GRADE STABILIZATION STRUCTURE LOCATIONS AND SPECIFICATIONS:

Erosion control blanket will be utilized as grade stabilization structures.  
See Sheet C306-C308 - Permanent Storm Water Pollution Prev. Plan for location(s) of grade stabilization structures.  
See Sheets C311-C312 - Storm Water Pollution Prevention Plan Specs. for grade stabilization structure specifications.

### B9 - DEWATERING APPLICATIONS AND MANAGEMENT METHODS:

See Sheet C310 - Storm Water Pollution Prevention Plan Specs. for dewatering detail and requirements.

### B10 - MEASURES UTILIZED FOR WORK WITHIN WATERBODIES:

There will be no work within waterbodies for this project.

### B11 - MAINTENANCE GUIDELINES FOR EACH PROPOSED STORMWATER QUALITY MEASURE:

Inspection Schedule/Reporting  
The project site owner and/or designated representative(s) shall refer to Section 3.6 - Performance Standards - Monitoring and Project Management Requirements of the IDEM Construction Stormwater General Permit for minimum requirements for self-monitoring inspections. Additional measures are listed below.

#### Stone entrance

- Inspect entrance pad and sediment disposal area weekly and after storm events or heavy use.
  - 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 basin.
  - Repair any broken road pavement immediately.
- #### Silt Fence
- 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 cleanout.
  - After the contributing drainage area has been stabilized, remove the fence and sediment deposits, bring the disturbed area to grade, and stabilize.

#### Topsoil Stockpile

- Determine depth and suitability of topsoil at the site. (For help, contact the local SWCD office to obtain a County Soil Survey Report, or consult with a Soil Scientist.)
- Prior to stripping topsoil, install any site-specific downslope practices needed to control runoff and sedimentation.
- Remove the soil material no deeper than what the County Soil Survey describes as "surface soil" (i.e., A or Ap horizon).
- Stockpile the material in accessible locations that neither interfere with other construction activities nor block natural drainage; and install silt fences or other barriers to trap sediment. (Several small piles around the construction site are usually more efficient and easier to contain than one large pile.)
- If soil is stockpiled for more than six (6) months, it should be temporarily seeded or covered with a tarp surrounded by a sediment barrier.

#### Temporary Diversions

- Inspect weekly and following each storm event.
- Remove sediment from the channel and reinforce the ridge as needed.
- Check the outlets and make necessary repairs immediately.
- Remove sediment from traps when they are 50% full.
- When the work area has been stabilized, remove the ridge, fill the channel to blend with the natural ground, remove temporary slope drains, and stabilize all disturbed areas.

#### Rock Dam

- Inspect the rock dam and basin following each storm event.
- Remove sediment when it accumulates to half the design volume (marked by stake).
- Check the dam and abutments for erosion, piping, and rock displacement, and repair immediately if the basin does not drain between storms, replace the stone on the upstream face of dam if the basin drains to rapidly following a storm (less than 6 hrs.), and add DDOT CA No. 5 gravel on the upstream face of the dam.
- Once the contributing drainage area has been permanently stabilized, remove water and sediment from the basin, remove the dam, disposing of the rock in designated disposal areas, smooth the site to blend the surrounding area, stabilize.

#### Temporary Seeding

- Inspect periodically after planting to see that vegetative stands are adequately established; reseed if necessary.
- Check for erosion damage after storm events and repair, reseed and mulch if necessary.
- Topdress fall seeded wheat or ryegrass seedings with 50 lbs./acre of nitrogen in February or March if nitrogen deficiency is apparent.

#### Permanent Seeding

- Inspect periodically, especially storm events, until the stand is successfully established.
- Characteristics of a successful stand include vigorous dark green or bluish-green seedlings; uniform density with nurse plants, legumes, and grasses well intermingled; green leaves; and the perennials remaining green throughout the summer, at least at the plant base.
- Plan to add fertilizer the following season according to soil test recommendations.
- Repair damaged, bare, or sparse or patchy, by filling any gullies, re-fertilizing, over- or re-seeding and mulching after re-preparing the seedbed.
- If vegetation fails to grow, consider soil testing to determine acidity or nutrient deficiency problems. (Contact the SWCD or cooperative extension office for assistance.)
- If additional fertilization is needed to get a satisfactory stand, do so according to soil test recommendations.

#### Erosion Control Matting

- 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.

#### Inlet Protection

- Inspect frequently for damage by vehicular traffic, and repair if needed.
- Inspect after each storm event.
- Remove sediment (do not flush with water) when it reaches half the height of the barrier.
- Deposit removed sediment where it will not enter storm drains.
- When the contributing drainage areas have been stabilized, remove inlet protection.

### B12 - PLANNED CONSTRUCTION SEQUENCE THAT DESCRIBES THE IMPLEMENTATION OF STORMWATER QUALITY MEASURES IN RELATION TO LAND DISTURBANCE:

- The Contractor shall schedule a Pre-construction meeting with the City of Franklin prior to any construction on the site being started. The Contractor and/or Developer shall notify IDEM and the City of Franklin 48 hours prior to start of construction.
- Following the required pre-construction meeting the Contractor shall install the "posting information" card. The posting information card is the location where a copy of the approved IDEM Construction Stormwater General Permit, Approved SWPP Plan, signed O&M Manual and Maintenance Logs are to be located. The Contractor shall proceed to construct the construction entrance after all posting requirements have been met.
- See Sheets C300 & C303 - Storm Water Pollution Prev. Plans for the location(s) of the construction entrance(s) and the posting information card. See Sheets C312-C313 - Storm Water Pollution Prevention Plan Specs. for construction entrance details and specifications.
- Immediately following the installation of the construction entrance, the Contractor shall construct the maintenance and refueling area and concrete washout.
- See Sheet C310 - Storm Water Pollution Prevention Plan Specs. for maintenance and refueling area details and specifications.  
See Sheets C313-C314 - Storm Water Pollution Prevention Plan Specs. for concrete washout details and specifications.
- Prior to any earth moving, the Contractor shall install all silt fence.
- See Sheet C300-C302 - Initial Storm Water Pollution Prev. Plan for location(s) of silt fence.  
See Sheets C313 - Storm Water Pollution Prevention Plan Specs. for silt fence specifications.
- The Contractor shall protect existing curb inlets with drop inlet protection baskets and end section inlets with rock horseshoe dams.
- See Sheet C300-C302 - Initial Storm Water Pollution Prev. Plan for location(s) of drop inlet protection baskets and rock horseshoe dams.  
See Sheet C310 - Storm Water Pollution Prevention Plan Specs. for rock horseshoe dam detail.  
See Sheets C312-C313 - Storm Water Pollution Prevention Plan Specs. for drop inlet protection basket specifications.
- When the "existing" site/construction limits are completely protected, the Contractor shall begin stripping the existing topsoil within the construction limits and utilize in two successive stages.
- The Contractor shall install the proposed storm sewers and cut the proposed swales. Swales shall be stabilized with an erosion control blanket immediately following their construction.  
See Sheet C200-C204 - Site Development Plan and Sheets C600 - C605 - Storm Sewer Plan & Profiles for location(s) of proposed storm sewer and swales(s).

PERSON ONSITE RESPONSIBLE FOR EROSION CONTROL:  
FORESTAR (USA) REAL ESTATE GROUP  
BRIAN GRAY  
PHONE: (317) 447-5118

- See Sheet C311-C312 - Storm Water Pollution Prevention Plan Specs. for erosion control blanket specifications.
- All inlets shall be protected with drop inlet baskets immediately following their installation.
- See Sheets C303-C305 - Temporary Storm Water Pollution Prev. Plan for location(s) of drop inlet baskets.
- The Contractor shall continue to grade the remainder of the site.
- See Sheets C200-C204 - Site Development Plan for proposed site topography.
- The Contractor shall excavate around the existing sanitary manhole(s) and expose the proposed connection point(s) for the proposed sanitary sewer.
- See Sheet C200-C204 - Site Development Plan and Sheets C500 - C504 - Sanitary Sewer Plan & Profiles for location(s) of proposed sanitary sewer connection(s).
- The proposed onsite storm sewer and sanitary sewer shall be installed concurrently with each other when crossings are encountered.
- See Sheet C200-C204 - Site Development Plan, Sheets C500 - C504 - Sanitary Sewer Plan & Profiles, and Sheets C600 - C605 - Storm Sewer Plan & Profiles for location(s) of proposed storm & sanitary sewer.
- The Contractor shall install water main.
- See Sheet C200-C204 - Site Development Plan and Sheets C700 - C706 - Water Plan for location(s) of proposed water main.
- The Contractor shall prepare the sub-grade for the proposed road system. If time stabilization is the method chosen, dust shall be kept to a minimum. Dust shall be removed from the construction vehicles prior to leaving the site.
- See Sheet C200-C204 - Site Development Plan and Sheets C400 - C404 - Street Plan & Profiles for proposed road layout.
- The Contractor shall construct the proposed road.
- See Sheet C802B - Construction Specifications & Details for proposed road cross-section(s) and special provision for lime modification.
- The Contractor shall install all concrete curb.
- See Sheet C200-C204 - Site Development Plan for proposed concrete curb layout.
- See Sheet C802B - Construction Specifications & Details for proposed concrete curb detail(s).
- The Contractor shall have all other appropriate utilities installed. It is ultimately the responsibility of the Contractor to ensure that the trench area is sealed and mulch/stabilized following the installation of each utility.
- See Sheet C306-C308 - Permanent Storm Water Pollution Prev. Plan for location(s) of seeding and mulch.
- See Sheets C310-C311 - Storm Water Pollution Prevention Plan Specs. for seeding and mulch specifications.
- The Contractor shall install all asphalt pavement.
- See Sheet C200-C204 - Site Development Plan and Sheets C400-C404 - Street Plan & Profiles for proposed road layout.
- See Sheet C802B - Construction Specifications & Details for proposed road cross-section(s).
- The Contractor shall install the proposed erosion control blanket in the remaining swales.
- See Sheet C200-C204 - Site Development Plan for location(s) of swales(s).
- See Sheet C306-C308 - Permanent Storm Water Pollution Prev. Plan for location(s) of erosion control blanket.
- See Sheet C310-C311 - Storm Water Pollution Prevention Plan Specs. for erosion control blanket specifications.
- The Contractor shall permanent seed all areas between the back of curb and the constructed pads, and any remaining areas.
- See Sheet C306-C308 - Permanent Storm Water Pollution Prev. Plan for location(s) of permanent seeding.
- See Sheet C310-C311 - Storm Water Pollution Prevention Plan Specs. for application rates for soil amendments and see mixtures.
- The Contractor shall schedule a site inspection with the City of Franklin to ensure that the site is stabilized. After the Inspector approves the site conditions, the Contractor shall remove all temporary erosion control practices.
- The post-construction erosion control practices then become the responsibility of the Developer of this project.
- The Developer of this project shall continue to monitor this site for good housekeeping on the post-construction BMP's until a NOT is filed with IDEM.

B13 - PROVISIONS FOR EROSION AND SEDIMENT CONTROL ON INDIVIDUAL RESIDENTIAL BUILDING LOTS REGULATED UNDER THE PROPOSED PROJECT:  
See Sheet C310 - Storm Water Pollution Prevention Plan Specs. for erosion and sediment control on individual residential building lots for detail and specifications.

B14 - MATERIAL HANDLING AND SPILL PREVENTION AND SPILL RESPONSE PLAN MEETING THE REQUIREMENTS IN 327 IAC 2-6.1:  
Material Handling and Spill Prevention  
Discharge of hazardous substances or oil into stormwater is subject to reporting requirements. In the event of a spill of a hazardous substance, the operator is required to notify the National Response Center (1-800-424-8802) to properly report the spill. In addition, the operator shall submit a written description of the release (including the type and amount of material released, the date of the release, the circumstances of the release, and the steps to be taken to prevent future spills) to the local MS-4.  
Compliance of the site with the General Construction Permit remains the responsibility of all operators that have submitted an NOI until such time as they have submitted a Notice of Termination (NOT). The permittee's authorization to discharge under the General Construction Permit terminates at midnight of the day the NOT is signed.

All permittees must submit an NOI within thirty (30) days after one or more of the following conditions have been met:

- Final stabilization has been achieved on all portions of the site for which the permittee was responsible.
- Another operator/permittee has assumed control over all areas of the site that have not been finally stabilized.
- In residential construction operations, temporary stabilization has been completed and the residence has been transferred to the homeowner.

#### Spill Response Directions

In the event of small spills, please contact the construction supervisor. In the event of spills that require removal of soils or other materials, please contact the construction supervisor, developer, County Surveyor's Office and the local fire department.

In the event of spills that have potential groundwater or surface water contamination, please contact the construction supervisor, developer, County Surveyor's Office, local fire department and IDEM.

#### Alert Procedures for Spills

- Any personnel observing a spill will immediately initiate the following procedure:
  - Dial "911" from any telephone.
  - Notify the appropriate emergency personnel.
- The emergency coordinator will then take the following actions:
  - Barriade the area, allowing no vehicles to enter or exit the spill zone.
  - Notify the IDEM Office of Land Quality Emergency Response (317) 233-7745 or (888) 233-7745
  - Notify the EPA National Response Center at the contact number listed below, providing the following information:
    - Location of the spill
    - Time of the observation of the spill
    - Identity of the material(s) spilled
    - Probable source of the spill
    - Probable time of the spill
    - Volume and duration of the spill
    - Current and anticipated movement of the spill
    - Current weather conditions
    - Personnel at the scene of the spill
    - Action(s) initiated by personnel
  - Notify the following agencies at the contact numbers listed below: local fire department, local police department, local soil & water conservation district, local department of public works or stormwater/MS4 department.
  - Notify waste recovery contractor, maintenance personnel, and/or other contracted personnel as necessary for spill cleanup.
  - Coordinate and monitor cleanup until the situation has been stabilized and all spills have been eliminated.
  - Cooperate with the IDEM Office of Land Quality Emergency Response or procedures and reports involved with the spill event.

Contact Numbers	
Emergency Response	911
Franklin Police Department	(317) 736-2670
Franklin Fire Department	(317) 736-3650
IDEM Office of Land Quality Emergency Response	(317) 233-7745 or (888) 233-7745
EPA National Response Center	(800) 424-8802
Johnson County Soil & Water Conservation District	(317) 736-9540
Indiana Department of Natural Resources	(317) 477-8773
Johnson County Surveyor's Office	(317) 346-4341
Forestar (USA) Real Estate Group	(317) 447-5118

#### Cleanup Parameters

- The Owner shall be kept continually informed during cleanup. Listings of qualified contractors and available vacuum trucks, tank pumps, available absorbent materials and cleanup supplies, and other necessary equipment shall be maintained and readily accessible for cleanup operations.
- All maintenance personnel shall be made aware of methods for spill prevention and the procedures outlined within this plan. Personnel shall be informed of updates to procedures and guidelines related to spill prevention, cleanup operations, and/or changes to this plan.
- In the event of a live endangering spill event, live-saving operations shall be carried out by local police and fire department officials.
- The disposal of materials, especially spill cleanup operations, is subject to the approval and guidelines of IDEM.
- Flushing of spilled materials, or spill-related materials, with water is not permitted without the authorization of IDEM.

### B15 - MATERIAL HANDLING AND STORAGE PROCEDURES ASSOCIATED WITH CONSTRUCTION ACTIVITY: Solid Waste Disposal

No solid material, including building materials, is permitted to be discharged to surface waters or buried on site. All solid waste materials, including disposable materials incidental to the construction activity, must be collected in containers or closed dumpsters. The collection containers must be emptied periodically and the collected material hauled to a landfill permitted by the State and/or appropriate local municipality to accept the waste for disposal. A foreman or supervisor should be designated in writing to oversee, enforce, and instruct construction workers on proper solid waste procedures.

#### Hazardous Waste

Whenever possible, minimize the use of hazardous materials and generation of hazardous wastes. All hazardous waste materials will be disposed in the manner specified by federal, state, or local regulations or by the manufacturer.  
Use containment berms in fueling and maintenance areas and where potential for spills is high.  
A foreman or supervisor should be designated in writing to oversee, enforce, and instruct construction workers on proper hazardous waste procedures. The location of any hazardous waste storage areas should be indicated on the stormwater pollution prevention plan by the operator following on-site location of the facility.

#### Dust Control/Off-site Vehicle Tracking

During construction, water trucks should be used, as needed, by each contractor or subcontractor to reduce dust. After construction, the site should be stabilized to reduce dust.  
Construction traffic should enter and exit the site at a Construction Entrance with a rock pad or equivalent device. The purpose of the rock pad is to minimize the amount of soil and mud that is tracked into existing streets. If sediment escapes the construction site, off-site accumulations of sediment must be removed at a frequency sufficient to minimize offsite impacts.

#### Sanitary/Septic

Contractors and subcontractors must comply with all state and local sanitary sewer, portable toilet, or septic system regulations. Sanitary facilities shall be provided at the site by each contractor or subcontractor throughout construction activities. The sanitary facilities should be utilized by all construction personnel and be serviced regularly. All expenses associated with providing sanitary facilities are the responsibility of the contractors and subcontractors. The location of any sanitary facilities should be indicated on the stormwater pollution prevention plan by the operator following on-site location of said facilities.

#### Water Source

Water used to establish and maintain grass, to control dust, and for other construction purposes must originate from a public water supply or private well approved by the State or local health department.

#### Equipment Fueling and Storage Areas

Equipment fueling, maintenance, and cleaning should only be completed in protected areas (i.e., bermed area). Leaking equipment and maintenance fluids will be collected and not allowed to discharge into soil where they will be washed away during a rain event. Equipment washdown (except for wheel washes) should take place within an area surrounded by a berm. The use of detergents is prohibited.

#### Hazardous Material Storage

Chemicals, paints, solvents, fertilizers, and other toxic or hazardous materials should be stored in their original containers (if original container is not reusable, store the products in clearly labeled, waterproof containers). Except during application, the containers should be kept in trucks or in bermed areas within covered storage facilities. Runoff containing such materials shall be collected, removed from the site, and disposed of in accordance with the federal, state, and local regulations.

As may be required by federal, state, or local regulations, the Contractor should have a Hazardous Materials Management Plan and/or Hazardous Materials Spill Prevention Program in place. A foreman or supervisor should be designated in writing to oversee, enforce, and instruct construction workers on proper hazardous materials storage and handling procedures. The location of any hazardous material storage areas should be indicated on the stormwater pollution prevention plan by the operator following on-site location of the storage areas.

## STORMWATER POLLUTION PREVENTION - POST-CONSTRUCTION COMPONENT (SECTION C)

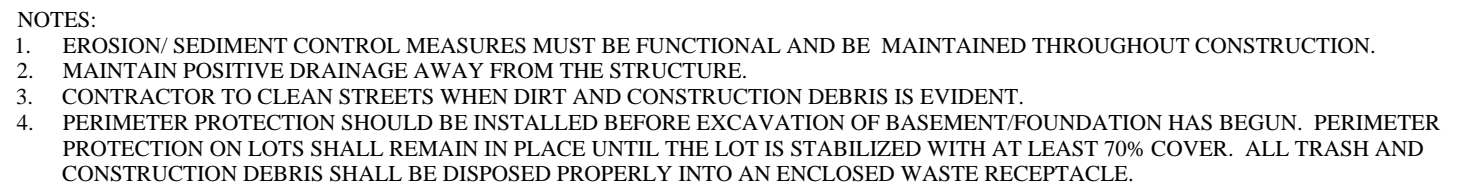
### C1 - DESCRIPTION OF POLLUTANTS AND THEIR SOURCES ASSOCIATED WITH THE PROPOSED LAND USE:

The proposed land use will consist of single-family residential homes. The pollutants and sources of each pollutant normally expected from these types of land uses are listed below:

Pollutant Source:	Passenger vehicles, delivery vehicles, and trucks
Type of Pollutant:	Oil, gasoline, diesel



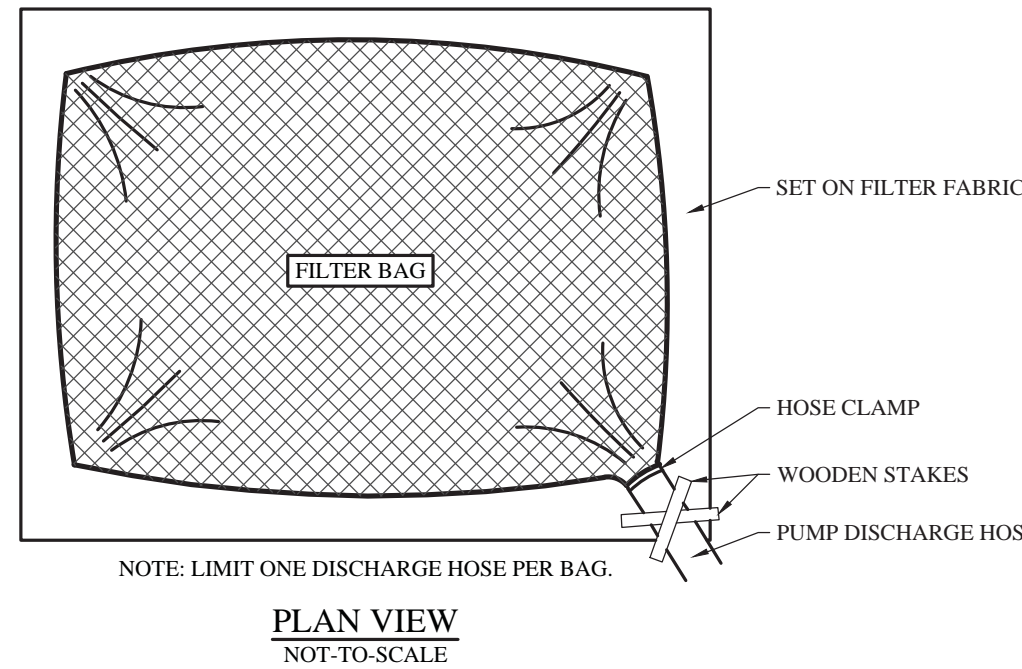
PERSON ONSITE RESPONSIBLE FOR EROSION CONTROL:  
FORESTAR (USA) REAL ESTATE GROUP  
BRIAN GRAY  
PHONE: (317) 447-5118



STORM WATER POLLUTION &amp; PREVENTION NOTES:

- A. ALL STORM WATER QUALITY MEASURES, INCLUDING EROSION AND SEDIMENT CONTROL, NECESSARY TO COMPLY WITH THIS ORDER, MUST BE INSTALLED AND MAINTAINED PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION ACTIVITIES.
- B. PROVISIONS FOR EROSION AND SEDIMENT CONTROL ON INDIVIDUAL BUILDING LOTS REGULATED UNDER THE ORIGINAL PERMIT OF A PROJECT SITE OWNER MUST INCLUDE THE FOLLOWING REQUIREMENTS:
- B.1. THE PERMIT HOLDER SHALL BE RESPONSIBLE FOR THE DESIGN AND CONSTRUCTION OF EROSION AND SEDIMENT CONTROL MEASURES. THE PERMIT HOLDER, ACTING AS THE AGENT OF THE PROJECT SITE OWNER, SHALL BE RESPONSIBLE FOR EROSION AND SEDIMENT CONTROL REQUIREMENTS ASSOCIATED WITH ACTIVITIES ON INDIVIDUAL LOTS.
- B.2. INSTALLATION AND MAINTENANCE OF A STABLE CONSTRUCTION SITE ACCESS.
- B.3. INSTALLATION AND MAINTENANCE OF APPROPRIATE PERIMETER EROSION AND SEDIMENT CONTROL MEASURES PRIOR TO LAND DISTURBANCE.
- B.4. SEDIMENT DISCHARGE AND TRACKING FROM EACH LOT MUST BE MINIMIZED THROUGHOUT THE LAND DISTURBING ACTIVITIES ON THE LOT UNTIL PERMANENT STABILIZATION HAS BEEN ACHIEVED.
- B.5. CLEAN-UP OF SEDIMENT MUST BE REDISTRIBUTED OR DISPOSED OF IN A MANNER THAT IS IN COMPLIANCE WITH ALL APPLICABLE STATUTES AND RULES.
- B.6. ADJACENT LOTS DISTURBED BY AN INDIVIDUAL LOT OPERATOR MUST BE REPAIRED AND STABILIZED WITH TEMPORARY OR PERMANENT SURFACE STABILIZATION.
- B.7. FOR INDIVIDUAL RESIDENTIAL LOTS, FINAL STABILIZATION MEETING THE CRITERIA IN SECTION 7.(b)(2)(c) ON THIS RULE WILL BE CONSIDERED MET BY THE INDIVIDUAL LOT OPERATOR.
- B.7.A. COMPLETES FINAL STABILIZATION; OR  
HAS INSTALLED APPROPRIATE EROSION AND SEDIMENT CONTROL MEASURES FOR AN INDIVIDUAL LOT PRIOR TO THE COMPLETION OF THE STABILIZATION OF THE LOT AND HAS INFORMED THE HOMEOWNER OF THE REQUIREMENTS AND BENEFITS OF FINAL STABILIZATION. 7.(b)(2)(c) FINAL STABILIZATION OF A PROJECT SITE IS ACHIEVED WHEN:
- B.7.1.A. ALL LAND DISTURBING ACTIVITIES HAVE BEEN COMPLETED AND A UNIFORM FOR EXAMPLE, EVENLY DISTRIBUTED, WITH LARGE BARE PATCHES OF PERENNIAL VEGETATIVE COVER WITHIN A CIRCULAR SEVEN PERCENT (70%) HAS BEEN ESTABLISHED ON ALL UNDISTURBED AREAS AND AREAS NOT COVERED BY PERMANENT STRUCTURES, OR EQUIVALENT PERMANENT STABILIZATION MEASURES HAVE BEEN EMPLOYED; AND
- B.7.1.B. CONSTRUCTION PROJECTS ON LAND USED FOR AGRICULTURAL PURPOSES ARE RETURNED TO ITS PRECONSTRUCTION CONDITION. DISTURBED AREAS NOT PREVIOUSLY USED FOR AGRICULTURAL PRODUCTION, SUCH AS FILTER STRIPS AND AREAS THAT ARE NOT BEING RETURNED TO THEIR PRECONSTRUCTION AGRICULTURAL USE, MEET THE FINAL STABILIZATION REQUIREMENTS IN CLAUSE (A).
- B.8. THE PERMIT HOLDER MUST BE REQUIRED TO CONDUCT AN ONSET RAIN EVENT FOR EVERY MEASURABLE RAIN FALL EVENT OF 5" OR GREATER. THESE MUST BE FILED FOR A MINIMUM OF THREE YEARS.

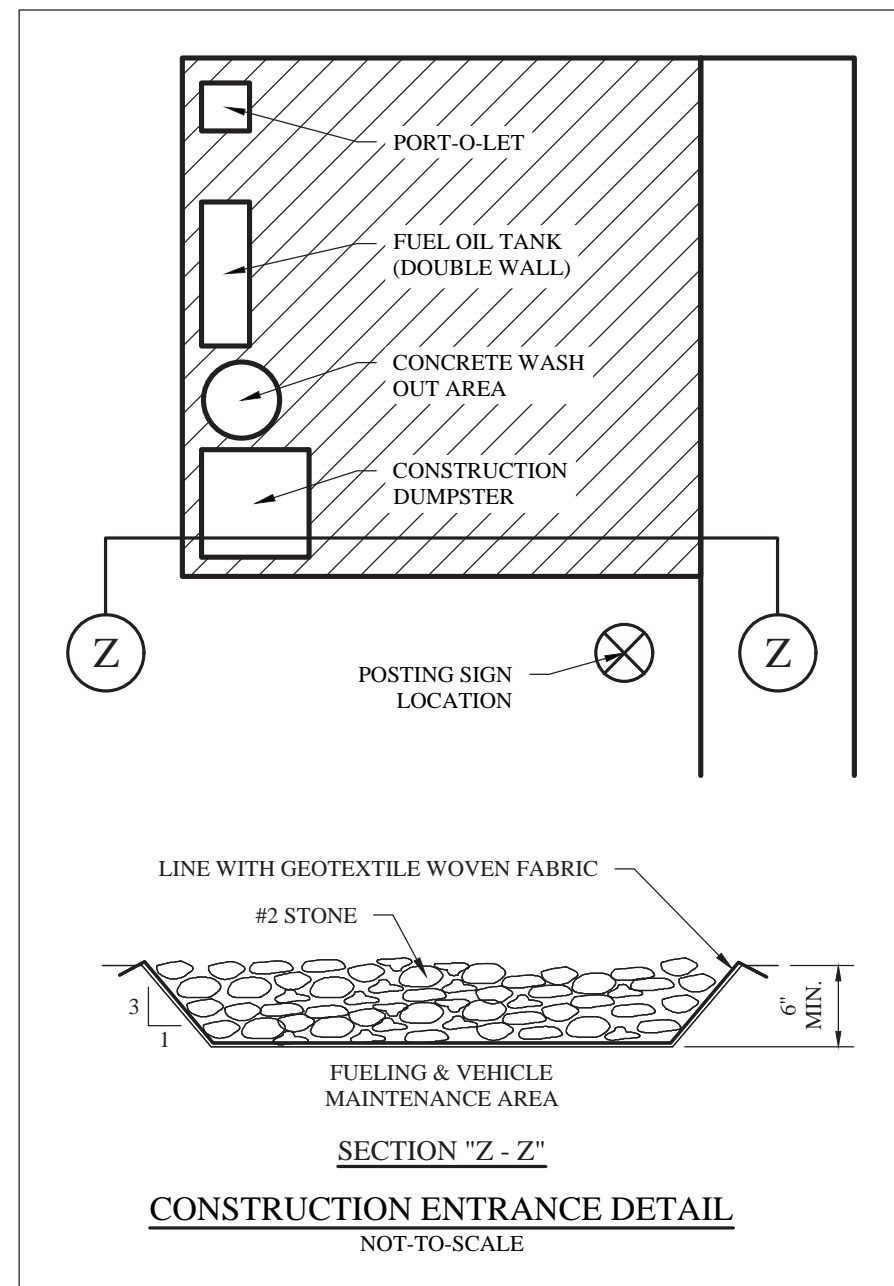
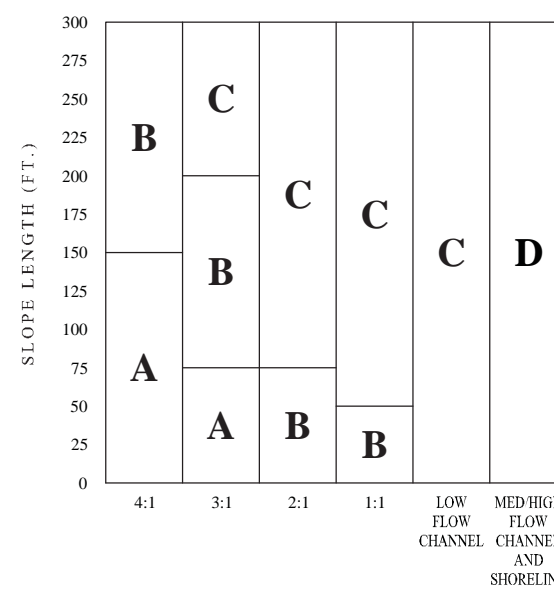
EROSION CONTROL NOTES		
EROSION CONTROL MEASURE	INSTALLATION SEQUENCE	MAINTENANCE
STONE ENTRANCE	PRIOR TO CLEANING AND GRADING	<ul style="list-style-type: none"> <li>INSPECT ENTRANCE PAD AND SEDIMENT DISPOSAL AREA WEEKLY AND AFTER STORM EVENTS OR HEAVY USE.</li> <li>RESHAPE PAD AS NEEDED FOR DRAINAGE AND RUNOFF CONTROL.</li> <li>TOPDRESS WITH CLEAN STONE AS NEEDED.</li> <li>IMMEDIATELY REMOVE MUD AND SEDIMENT TRACKED OR WASHED ONTO PUBLIC ROADS BY BRUSHING OR SWEEPING. FLUSHING SHOULD NOT BE USED IF THE WATER IS CONVEYED INTO A SEDIMENT TRAP OR BASIN.</li> <li>REPAIR ANY BROKEN ROAD PAVEMENT IMMEDIATELY.</li> </ul>
SILT FENCE	PRIOR TO CLEANING AND GRADING	<ul style="list-style-type: none"> <li>INSPECT THE SILT FENCE PERIODICALLY AND AFTER EACH STORM EVENT.</li> <li>IF FENCE FABRIC TENS, STARTS TO DECOMPOSE, OR IN ANY WAY BECOMES INEFFECTIVE, REPLACE THE AFFECTED PORTION IMMEDIATELY.</li> <li>REMOVE DEPOSITED SEDIMENT WHEN IT REACHES HALF THE HEIGHT OF THE FENCE AT ITS LOWEST POINT OR IS CAUSING THE FABRIC TO BULGE.</li> <li>TAKE CARE TO AVOID UNDERMINING THE FENCE DURING CLEANOUT.</li> <li>AFTER THE CONTRIBUTING DRAINAGE AREA HAS BEEN STABILIZED, REMOVE THE FENCE AND SEDIMENT DEPOSITS, BRING THE DISTURBED AREA TO GRADE, AND STABILIZE.</li> </ul>
TOPSOIL STOCKPILE	PRIOR TO CLEANING AND GRADING	<ul style="list-style-type: none"> <li>DETERMINE DEPTH AND SUITABILITY OF TOPSOIL AT THE SITE.</li> <li>IF NECESSARY, CONTACT YOUR LOCAL SWCD OFFICE TO OBTAIN A COUNTY SOIL SURVEY REPORT OR CONSULT WITH A SOIL SCIENTIST.</li> <li>PROCEED TO STRIPPING TOPSOIL. INSTALL ANY SITE-SPECIFIC DOWNSLOPE PRACTICES NEEDED TO CONTROL RUNOFF AND SEDIMENTATION.</li> <li>REMOVE THE SOIL MATERIAL NO DEEPER THAN WHAT THE COUNTY SOIL SURVEY DESCRIBES AS "SURFACE SOIL" (I.E., A OR AP HORIZON).</li> <li>STOCKPILE THE MATERIAL IN ACCESSIBLE LOCATIONS THAT NEITHER INTERFERE WITH OTHER CONSTRUCTION ACTIVITIES NOR ROCK, NATURAL DRAINAGE, AND INST. ALL SILT FENCES OR OTHER BARRIERS TO TRAP SEDIMENT (SEE EXHIBIT 10-8).</li> <li>SEVERAL SMALL PILLS AROUND THE CONSTRUCTION SITE ARE USUALLY MORE EFFICIENT AND EASIER TO CONTAIN THAN ONE LARGE PILE.</li> <li>IF SOIL IS STOCKPILED FOR MORE THAN 6 MO., IT SHOULD BE TEMPORARILY SEEDED OR COVERED WITH A TARP OR SURROUNDED BY A SEDIMENT BARRIER.</li> </ul>
TEMPORARY DIVERSIONS	AFTER ROUGH GRADING	<ul style="list-style-type: none"> <li>INSPECT WEEKLY AND FOLLOWING EACH STORM EVENT.</li> <li>REMOVE SEDIMENT FROM THE CHANNEL AND REINFORCE THE RIDGE AS NEEDED.</li> <li>CHECK THE OUTLETS AND MAKE NECESSARY REPAIRS IMMEDIATELY.</li> <li>REMOVE SEDIMENT FROM TRAPS WHEN THEY ARE 50% FULL.</li> <li>OTHER THE WORK AREA HAS BEEN STABILIZED, REMOVE THE RIDGE, FILL THE CHANNEL TO BLEND WITH THE NATURAL GROUND, REMOVE TEMPORARY SLOPE DRAINS, AND STABILIZE ALL DISTURBED AREAS.</li> </ul>
ROCK DAM	AFTER ROUGH GRADING	<ul style="list-style-type: none"> <li>REMOVE THE ROCK DAM AND BASIN FOLLOWING EACH STORM EVENT.</li> <li>REMOVE SEDIMENT WHEN IT ACCUMULATES TO THE DESIGN VOLUME (MARKED BY STAKE).</li> <li>CHECK THE DAM AND ADJUSTMENTS FOR EROSION, PIPING, AND ROCK DISPLACEMENT, AND REPAIR IMMEDIATELY IF THE BASIN DOES NOT DRAIN BEHIND STORMS, REPAIR THE STONE ON THE UPSTREAM FACE OF THE DAM IF THE BASIN DRAINS TO RAPIDLY FOLLOWING A STORM (LESS THAN 4 HRS.). ADD INPUT CANO. 5 GRAVEL ON THE UPSTREAM FACE OF THE DAM.</li> <li>ONCE THE CONTRIBUTING DRAINAGE AREA HAS BEEN PERMANENTLY STABILIZED, <ul style="list-style-type: none"> <li>a. REMOVE WATER AND SEDIMENT FROM THE BASIN.</li> <li>b. REMOVE THE DAM, DISPOSING OF THE ROCK IN DESIGNATED DISPOSAL AREAS.</li> <li>c. RESTORE THE SITE TO BLEND THE SURROUNDING AREA.</li> <li>d. STABILIZE.</li> </ul> </li> </ul>
TEMPORARY SEEDING	AFTER ROUGH GRADING	<ul style="list-style-type: none"> <li>INSPECT PERIODICALLY AFTER PLANTING TO SEE THAT VEGETATIVE STANDS ARE ADEQUATELY ESTABLISHED. RE-SEED IF NECESSARY.</li> <li>CHECK FOR EROSION DAMAGE AFTER STORM EVENTS AND REPAIR, RESEED AND MULCH IF NECESSARY.</li> <li>TOPDRESS SMALL SEEDER WHEAT OR RYE SEEDINGS WITH 50 LB./ACRE OF NITROGEN IN FEBRUARY OR MARCH IF NITROGEN DEFICIENCY IS APPARENT (EXHIBIT 311-B SHOWS ONLY WHEAT/RYE PLANT SEEDS).</li> </ul>
PERMANENT SEEDING	AFTER FINISH GRADING	<ul style="list-style-type: none"> <li>INSPECT PERIODICALLY, ESPECIALLY STORM EVENTS, UNTIL THE STAND IS SUCCESSFULLY ESTABLISHED.</li> <li>(CHARACTERISTICS OF A SUCCESSFUL STAND INCLUDE: VIGOROUS DARK GREEN OR BLuish-GREEN SEEDLINGS; UNIFORM DENSITY WITH NEARLY EQUAL, GREEN, AND INTERMEDIATELY GREEN LEAVES; AND THE PERCENTAGE REMAINING GREEN THROUGHOUT THE SUMMER, AT LEAST AT THE PLANT BASE.)</li> <li>DO NOT ADD FERTILIZER THE FOLLOWING SEASON OR ACCORDING TO SOIL TEST RECOMMENDATIONS.</li> <li>REPAIR DAMAGED, BARE, OR SPARSE OR PATCHY, BY FILLING ANY GULLIES, RE-FERTILIZING, OVER-OR RE-SEEDING AND MULCHING, AFTER PRE-PREPARED THE SEEDING.</li> <li>IF VEGETATION FAILS TO GROW, CONSIDER SOIL TESTING TO DETERMINE ACIDITY OR NUTRIENT DEFICIENCY PROBLEMS.</li> <li>CONTACT YOUR SWCD OR COOPERATIVE EXTENSION OFFICE FOR ASSISTANCE.</li> <li>IF ADDITIONAL FERTILIZATION IS NEEDED TO GET A SATISFACTORY STAND, DO SO ACCORDING TO SOIL TEST RECOMMENDATIONS.</li> </ul>
EROSION CONTROL MATTING	AFTER FINISH GRADING	<ul style="list-style-type: none"> <li>DURING VEGETATIVE ESTABLISHMENT, INSPECT AFTER STORM EVENTS FOR ANY EROSION BELOW THE BLANKET.</li> <li>IF ANY AREA SHOWS EROSION, PULL BACK THAT PORTION OF THE BLANKET COVERING IT, ADD SOIL, RE-SEED THE AREA, AND RE-INSTALL AND STAPLE THE MATTING.</li> <li>AFTER VEGETATIVE ESTABLISHMENT, CHECK THE TREATED AREA PERIODICALLY.</li> </ul>
INLET PROTECTION	AFTER EACH INLET IS PLACED	<ul style="list-style-type: none"> <li>INSPECT FREQUENTLY FOR DAMAGE BY VEHICULAR TRAFFIC, AND REPAIR IF NEEDED.</li> <li>INSPECT AFTER EACH STORM EVENT.</li> <li>REMOVE SEDIMENT (BUT NOT BY FLUSHING WHEN IT REACHES HALF THE HEIGHT OF THE BARRIER.</li> <li>PERMANENTLY REMOVED SEDIMENT WHERE IT WILL NOT ENTER STORM DRAINS.</li> </ul>
REMOVAL OF INLET PROTECTION	AFTER ALL AREAS DRAINING TO THESE AREAS ARE STABILIZED	N/A
REMOVAL OF SILT FENCE	AFTER ALL AREAS DRAINING TO THESE AREAS ARE STABILIZED	N/A



NOTES:

1. TO BE USED WHEN PUMPING DIRTY WATER.
2. ANY DISCHARGE OF CONTAMINATED WATER DUE TO DEWATERING SHALL OUTLET THROUGH EXISTING VEGETATION OR FILTER BAGS THAT WILL NOT ADVERSELY IMPACT STORM WATER QUALITY.

STAPLE PATTERNS APPLY TO ALL NORTH AMERICAN GREEN EROSION CONTROL BLANKETS. STAPLE PATTERNS WILL VARY DEPENDING UPON SLOPE LENGTH, SLOPE GRADE, SOIL TYPE, AND AVERAGE ANNUAL RAINFALL.



### SOILS LEGEND

Map Unit: Br - Brookston silty clay loam, 0 to 2 percent slopes

The Brookston component makes up 95 percent of the map unit. Slopes are 0 to 2 percent. This component is on till plains on till plains. The parent material consists of loess over loamy till. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is poorly drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches (or restricted depth) is moderate. Shrink-swell potential is moderate. This soil is not flooded. It is frequently ponded. A seasonal zone of water saturation is at 6 inches during January, February, March, April, May, December. Organic matter content in the surface horizon is about 4 percent. This component is in the F111AY007IN Till Depression Flatwood ecological site. Nonirrigated land capability classification is 2w. This soil meets hydric criteria.

Map Unit: CrA - Crosby silt loam, fine-loamy subsoil, 0 to 2 percent slopes

The Crosby component makes up 95 percent of the map unit. Slopes are 0 to 2 percent. This component is on wisconsin water-lain moraines and till plains. The parent material consists of silty material and loess over loamy till. Depth to a root restrictive layer, dense material, is 24 to 40 inches. The natural drainage class is somewhat poorly drained. Water movement in the most restrictive layer is low. Available water to a depth of 60 inches (or restricted depth) is moderate. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 6 inches during January, February, March, December. Organic matter content in the surface horizon is about 3 percent. This component is in the F111AY008BN Wet Till Ridge ecological site. Nonirrigated land capability classification is 2w. This soil does not meet hydric criteria. The calcium carbonate equivalent within 40 inches, typically, does not exceed 30 percent.

Map Unit: MnB2 - Miami silt loam, 2 to 6 percent slopes, eroded

The Miami, eroded component makes up 85 percent of the map unit. Slopes are 2 to 6 percent. This component is on till plains, till plains. The parent material consists of loess over loamy clay. Depth to root restrictive layer, densic material, is 24 to 40 inches. The natural drainage class is moderately well drained. Water movement in the most restrictive layer is low. Available water at a depth of 60 inches (or restricted depth) is moderate. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 30 inches during January, February, March, April, December. Organic matter content in the surface horizon is about 2 percent. This component is in the F111AY009N Till Ridge ecological site. Nonirrigated land capability classification is 2e. This soil does not meet hydric criteria. The calcium carbonate equivalent within 40 inches, typically, does not exceed 33 percent.

Map Unit: MnC2 - Miami silt loam, 6 to 12 percent slopes, eroded

The Miami, cored material makes up 85 percent of the map unit. Slopes are 6 to 12 percent. This component is on — Error in Excess on —. The parent material consists of loess over loamy till. Depth to a root restrictive layer, densic material, is 31 to 47 inches. The natural drainage class is moderately well drained. Water movement in the most restrictive layer is low. Available water to a depth of 60 inches (or restricted depth) is moderate. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 30 inches during January, February, March, April, December. Organic matter content in the surface horizon is about 2 percent. This component is in the F1114Y009N1 Till Ridge ecological site. Nonirrigated land capability classification is 3e. This soil does not meet hydro criteria. The calcium carbonate equivalent within 40 inches, typically, does not exceed 30 percent.

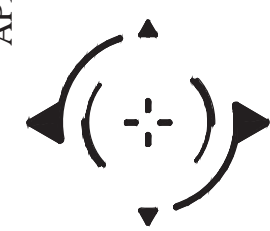
Map Unit: MtC3 - Miami clay loam, 6 to 12 percent slopes, severely eroded

The Miami, severely eroded component makes up 97 percent of the map unit. Stipes are 6 to 12 percent. This component is on till plains, till plains. The parent material consists of loamy till. Depth to a root restrictive layer, dense material, is 20 to 40 inches. The natural drainage class is moderately well drained. Water movement in the most restrictive layer is low. Available water to a depth of 60 inches (or restricted depth) is low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 30 inches during January, February, March, April, December. Organic matter content in the surface horizon is about 2 percent. This component is in the F1114IA009IN11 Till Ridge ecological site. Nonirrigated land capability classification is 4c. This soil does not meet hydric criteria. The calcium carbonate equivalent within 40 inches, typically, does not exceed 33 percent.

[illegible]

APPROVAL PENDING/NOT FOR CONSTRUCTION  
STOEPPELWERTH

**ALWAYS ON**  
7965 East 106th Street, Fishers, IN 46038-2505  
phone: 317.849.5935 fax: 317.849.5942



STORM WATER POLLUTION PREV. PLAN DETAILS

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WINTERFIELD  
SECTION 3

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FRANKLIN  
JOHNSON COUNTY, INDIANA

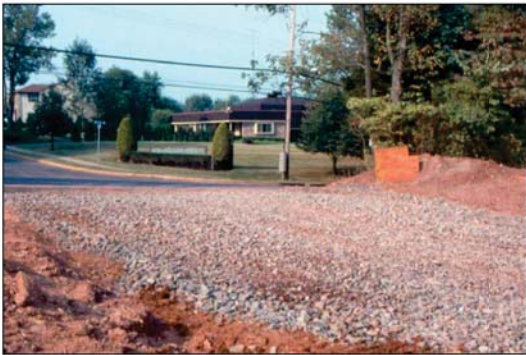
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#### SITE ACCESS & PREPARATION

##### Temporary Construction Ingress/Egress Pad (Large Sites—Two Acres or Larger)



A temporary construction ingress/egress pad is a sediment control measure consisting of a stabilized aggregate pad with geotextile underlayment that is used at any point where construction traffic will be traversing between a large construction site and adjoining public right-of-way, street, alley, sidewalk, or parking areas.

##### Purpose

To provide ingress/egress to a construction site and minimize tracking of mud and sediment onto public roadways.

##### Specifications

###### Location

- Avoid locating on steep slopes or at curves in public roads.

###### Dimensions

- Width – 20 feet minimum or full width of entrance/exit roadway, whichever is greater.
- Length – 150 feet minimum (length can be shorter for small sites).
- Thickness – eight inches minimum.

###### Washing Facility (optional)

- Level area with three inch, or larger, washed aggregate or install a commercial wash rack.
- Divert waste water to a sediment trap or basin.

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#### TEMPORARY CONSTRUCTION INGRESS/EGRESS PAD (LARGE SITES—TWO ACRES OR LARGER)

##### Materials

- One to two and one-half inch diameter washed aggregate [Indiana Department of Transportation Course Aggregate No. 2 (see Appendix D)].
- One-half to one and one-half inch diameter washed aggregate [INDOT CA No. 53 (see Appendix D)].
- Geotextile fabric underlayment (see Appendix C) (used as a separation layer to prevent intermixing of aggregate and the underlying soil material and to provide greater bearing strength when encountering wet conditions or soils with a seasonal high water table limitation).

##### Installation

1. Remove all vegetation and other objectionable material from the foundation area.
2. Grade foundation and crown for positive drainage. If the slope of the construction entrance is toward a public road and exceeds two percent, construct an eight inch high diversion ridge with a ratio of 3-to-1 side slopes across the foundation area about 15 feet from the entrance to divert runoff away from the road (see Temporary Construction Ingress/Egress Pad Cross-Section View Worksheet).
3. Install a culvert pipe under the pad if needed to maintain proper public road drainage.
4. If wet conditions are anticipated, place geotextile fabric on the graded foundation to improve stability.
5. Place aggregate (INDOT CA No. 2) to the dimensions and grade shown in the construction plans, leaving the surface smooth and sloped for drainage.
6. Top-dress the first 50 feet adjacent to the public roadway with two to three inches of washed aggregate (INDOT CA No. 53) (optional, used primarily where the purpose of the pad is to keep soil to adhere to vehicle tires).
7. Where possible, divert all storm water runoff and drainage from the ingress/egress pad to a sediment trap or basin.

##### Maintenance

- Inspect daily.
- Reshape pad as needed for drainage and runoff control.
- Top dress with clean aggregate as needed.
- Immediately remove mud and sediment tracked or washed onto public roads.
- Flushing should only be used if the water can be conveyed into a sediment trap or basin.

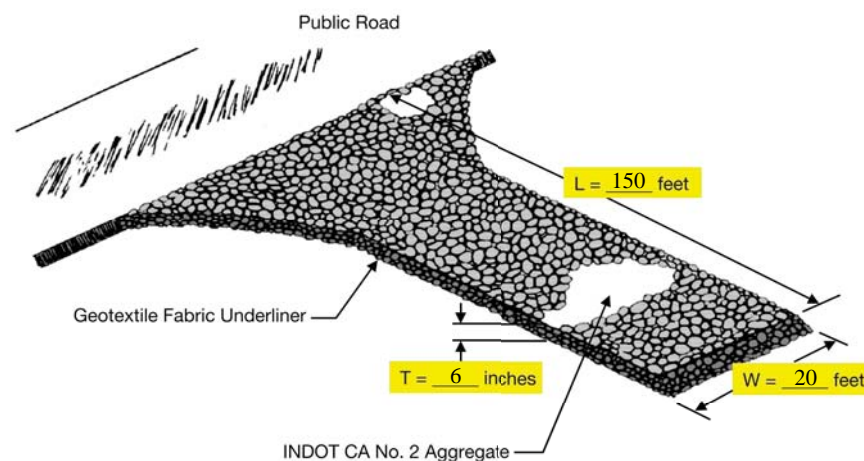
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#### TEMPORARY CONSTRUCTION INGRESS/EGRESS PAD (LARGE SITES—TWO ACRES OR LARGER)

##### Temporary Construction Ingress/Egress Pad Plan View Worksheet (large sites—two acres or larger)



L = Ingress/Egress Pad Length  
W = Ingress/Egress Pad Width  
T = Aggregate Thickness

(Note: For minimum dimensions, see the "Specifications" section of this measure.)

Source: Adapted from North Carolina Erosion and Sediment Control Planning and Design Manual, 1993

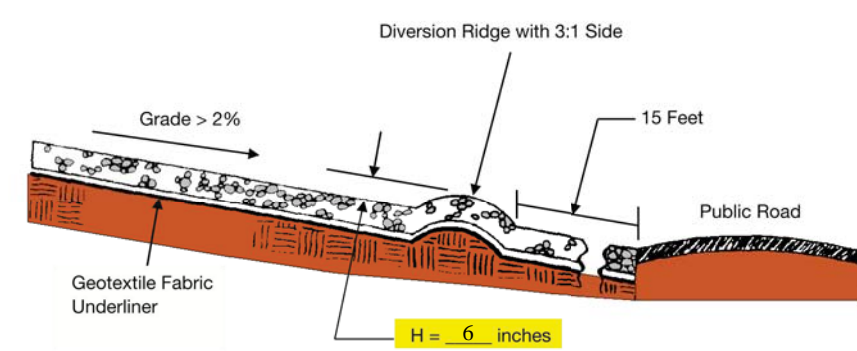
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#### TEMPORARY CONSTRUCTION INGRESS/EGRESS PAD (LARGE SITES—TWO ACRES OR LARGER)

##### Temporary Construction Ingress/Egress Pad Cross-Section View Worksheet (large sites two acres or larger)



Source: Adapted from North Carolina Erosion and Sediment Control Planning and Design Manual, 1993

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#### SURFACE STABILIZATION

##### Temporary Seeding



Temporary seeding involves the establishment of rapid growing annual grasses or small grains to stabilize disturbed areas until such time as a permanent, nonerosive cover can be established.

##### Purpose

- To provide vegetative cover where permanent seeding is not desirable or practical.
- To reduce erosion and sedimentation damage by stabilizing disturbed areas.
- To reduce problems associated with mud or dust from unvegetated soil surfaces during construction.
- To reduce sediment-laden storm water runoff from being transported to downstream areas.
- To improve visual aesthetics of construction areas.

##### Specifications

###### Seeded Preparation

Grade and apply soil amendments.

###### Seeding Frequency

Seed rough graded areas daily while soil is still loose and moist.

###### Density of Vegetative Cover

Eighty percent or greater over the soil surface.

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#### TEMPORARY SEEDING

##### Materials

- Soil Amendments – Select materials and rates as determined by a soil test (contact your county soil and water conservation district or cooperative extension office for assistance and soil information, including available soil testing services) or 400 to 600 pounds of 12-12-12 analysis fertilizer, or equivalent. Consider the use of reduced phosphorus application where soil tests indicate adequate phosphorus levels in the soil profile.
- Seed – Select appropriate plant species seed or seed mixtures on the basis of quick germination, growth, and time of year to be seeded (see Table 1).
- Mulch –
  - Straw, hay, wood fiber, etc. (to protect seedbed, retain moisture, and encourage plant growth).
  - Anchored to prevent removal by wind or water or covered with manufactured erosion control blankets.

Table 1. Temporary Seeding Specifications

Seed Species <sup>1</sup>	Rate per Acre	Planting Depth	Optimum Dates <sup>2</sup>
Wheat or Rye	150 lbs.	1 to 1½ inches	Sept. 15 – Oct. 30
Spring Oats	100 lbs.	1 inch	March 1 – April 15
Annual Ryegrass	40 lbs.	½ inch	March 1 – May 1
German Millet	40 lbs.	1 to 2 inches	May 1 – June 1
Sudangrass	35 lbs.	1 to 2 inches	May 1 – July 30
Buckwheat	60 lbs.	1 to 2 inches	April 15 – June 1
Corn (broadcast)	300 lbs.	1 to 2 inches	May 11 – Aug. 10
Sorghum	35 lbs.	1 to 2 inches	May 1 – July 15

<sup>1</sup>Perennial species may be used as a temporary cover, especially if the area to be seeded will remain idle for more than one year (see **Permanent Seeding** on page 38).

<sup>2</sup>Seeding done outside the optimum seeding dates increases the chances of seeding failure. Dates may be extended or shortened based on the location of the project site within the state.

Notes:  
Mulch alone is an acceptable temporary cover and may be used in lieu of temporary seeding, provided that it is appropriately anchored.

A high potential for fertilizer, seed, and mulch to wash exists on steep banks, cuts, and in channels and areas of concentrated flow.

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#### TEMPORARY SEEDING

##### Application

###### Seedbed Preparation

1. Test soil to determine pH and nutrient levels.
2. Apply soil amendments as recommended by the soil test. If testing is not done, apply 400 to 600 pounds per acre of 12-12-12 analysis fertilizer, or equivalent.
3. Work the soil amendments into the upper two to four inches of the soil with a disk or rake operated across the slope.

###### Seeding

1. Select a seed species or an appropriate seed mixture and application rate from Table 1.
2. Apply seed uniformly with a drill or cultipacker seeder or by broadcasting. Plant or cover seed to the depth shown in Table 1.

###### Notes:

1. If drilling or broadcasting the seed, ensure good seed-to-soil contact by firming the seedbed with a roller or cultipacker after completing seeding operations.
2. Daily seeding when the soil is moist is usually most effective.
3. If seeding is done with a hydroseeder, fertilizer and mulch can be applied with the seed in a slurry mixture.

3. Apply mulch (see **Mulching** on page 55 or **Compost Mulching** on page 59) and anchor it in place.

##### Maintenance

- Inspect within 24 hours of each rain event and at least once every seven calendar days.
- Check for erosion or movement of mulch and repair immediately.
- Monitor for erosion damage and adequate cover (80 percent density); reseed, fertilize, and apply mulch where necessary.
- If nitrogen deficiency is apparent, top-dress fall seeded wheat or rye seeding with 50 pounds per acre of nitrogen in February or March.

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#### SURFACE STABILIZATION

##### Permanent Seeding



Permanent seeding involves the establishment of a permanent vegetative cover to protect soils from erosive forces.

##### Purpose

- To provide permanent vegetative cover and improve visual aesthetics of a project site.
- To reduce erosion and sedimentation damage by stabilizing disturbed areas.
- To reduce problems associated with mud or dust from unvegetated soil surfaces.
- To reduce sediment-laden storm water runoff from being transported to downstream areas.

##### Specifications

###### Seedbed Preparation

Grade and apply soil amendments.

###### Seeding Frequency

Seed final graded areas daily while soil is still loose and moist.

###### Density of Vegetative Cover

Ninety percent or greater over the soil surface.

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#### PERMANENT SEEDING

##### Materials

- Soil Amendments – Select materials and rates as determined by a soil test (contact your county soil and water conservation district or cooperative extension office for assistance and soil information, including available soil testing services) or 400 to 600 pounds of 12-12-12 analysis fertilizer, or equivalent. Consider the use of reduced phosphorus application where soil tests indicate adequate phosphorus levels in the soil profile.
- Seed – Select an appropriate plant species seed or seed mixture on the basis of soil type, soil pH, region of the state, time of year, and intended land use of the area to be seeded (see Table 1).
- Mulch –
  - Straw, hay, wood fiber, etc. (to protect seedbed, retain moisture, and encourage plant growth).
  - Anchored to prevent removal by wind or water or covered with premanufactured erosion control blankets.

##### Application

###### Site Preparation

1. Grade the site to achieve positive drainage.
2. Add topsoil (see **Topsoil Salvage and Utilization** on page 25) or compost mulch (see **Compost Mulching** on page 59) to achieve needed depth for establishment of vegetation. (Compost material may be added to improve soil moisture holding capacity, soil friability, and nutrient availability.)
3. Till the soil to obtain a uniform seedbed. Use a disk or rake, operated across the slope, to work the soil amendments into the upper two to four inches of the soil.

###### Seedbed Preparation

1. Test soil to determine pH and nutrient levels.
2. Apply soil amendments as recommended by the soil test and work into the upper two to four inches of soil. If testing is not done, apply 400 to 600 pounds per acre of 12-12-12 analysis fertilizer, or equivalent.
3. Till the soil to obtain a uniform seedbed. Use a disk or rake, operated across the slope, to work the soil amendments into the upper two to four inches of the soil.

###### Seeding

Optimum seeding dates are March 1 to May 10 and August 10 to September 30. Permanent seeding done between May 10 and August 10 may need to be irrigated. Seeding outside or beyond optimum seeding dates is still possible with the understanding that reseeding or overseeding may be required if adequate surface

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#### PERMANENT SEEDING

cover is not achieved. Reseeding or overseeding can be easily accomplished if the soil surface remains well protected with mulch.

1. Select a seeding mixture and rate from Table 1. Select seed mixture based on site conditions, soil pH, intended land use, and expected level of maintenance.
2. Apply seed uniformly with a drill or cultipacker seeder (see Figure 1) or by broadcasting (see Figure 2). Plant or cover the seed to a depth of one-fourth to one-half inch. If drilling or broadcasting the seed, ensure good seed-to-soil contact by firming the seedbed with a roller or cultipacker after completing seeding operations. (If seeding is done with a hydroseeder (see Figure 3), fertilizer and mulch can be applied with the seed in a slurry mixture.)
3. Mulch all seeded areas (see **Mulching** on page 55 and **Compost Mulching** on page 59) and use appropriate methods to anchor the mulch in place. Consider using erosion control blankets on sloping areas and conveyance channels (see **Erosion Control Blanket** on page 63).

##### Maintenance

- Inspect within 24 hours of each rain event and at least once every seven calendar days until the vegetation is successfully established.
- Characteristics of a successful stand include vigorous dark green or bluish-green seedlings with a uniform vegetative cover density of 90 percent or more.
- Check for erosion or movement of mulch.
- Repair damaged, bare, gullied, or sparsely vegetated areas and then fertilize, reseed, and apply and anchor mulch.
- If plant cover is sparse or patchy, evaluate the plant materials chosen, soil fertility, moisture condition, and mulch application; repair affected areas either by overseeding or preparing a new seedbed and reseeding. Apply and anchor mulch on the newly seeded areas.
- If vegetation fails to grow, consider soil testing to determine soil pH or nutrient deficiency problems. (Contact your soil and water conservation district or cooperative extension office for assistance.)
- If additional fertilization is needed to get a satisfactory stand, do so according to soil test recommendations.
- Add fertilizer the following growing season. Fertilize according to soil test recommendations.
- Fertilize turf areas annually. Apply fertilizer in a split application. For cool-season grasses, apply one-half of the fertilizer in late spring and one-half in early fall. For warm-season grasses, apply one-third in early spring, one-third in late spring, and the remaining one-third in middle summer.

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#### PERMANENT SEEDING

Table 1. Permanent Seeding Recommendations

This table provides several seed mixture options. Additional seed mixtures are available commercially. When selecting a mixture, consider intended land use and site conditions, including soil properties (e.g., soil pH and drainage), slope aspect, and the tolerance of each species to shade and drought.

##### Open Low-Maintenance Areas (remaining idle more than six months)

Seed Mixtures	Rate per Acre Pure Live Seed	Optimum Soil pH
1. Perennial ryegrass - white clover <sup>1</sup>	70 lbs. 2 lbs.	5.6 to 7.0
2. Perennial ryegrass - tall fescue <sup>2</sup>	70 lbs. 50 lbs.	5.6 to 7.0
3. Tall fescue <sup>2</sup> - white clover <sup>1</sup>	70 lbs. 2 lbs.	5.5 to 7.5

##### Steep Banks and Cuts, Low-Maintenance Areas (not mowed)

Seed Mixtures	Rate per Acre Pure Live Seed	Optimum Soil pH
1. Smooth brome grass - red clover <sup>1</sup>	35 lbs. 50 lbs.	5.5 to 7.0
2. Tall fescue <sup>2</sup> - white clover <sup>1</sup>	50 lbs. 2 lbs.	5.5 to 7.5
3. Tall fescue <sup>2</sup> - red clover <sup>1</sup>	50 lbs. 20 lbs.	5.5 to 7.5
4. Orchard grass - red clover <sup>1</sup> - white clover <sup>1</sup>	30 lbs. 20 lbs. 2 lbs.	5.6 to 7.0
5. Crownvetch <sup>1</sup> - tall fescue <sup>2</sup>	12 lbs. 30 lbs.	5.6 to 7.0

##### Lawns and High-Maintenance Areas

Seed Mixtures	Rate per Acre Pure Live Seed	Optimum Soil pH
1. Bluegrass	140 lbs.	5.5 to 7.0
2. Perennial ryegrass (turf type)	60 lbs. 90 lbs.	5.6 to 7.0
3. Tall fescue (turf type) <sup>2</sup> - bluegrass	170 lbs. 30 lbs.	5.6 to 7.5

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#### PERMANENT SEEDING

##### Channels and Areas of Concentrated Flow

Seed Mixtures	Rate per Acre Pure Live Seed	Optimum Soil pH
1. Perennial ryegrass - white <sup>1</sup>	150 lbs. 2 lbs.	5.5 to 7.0
2. Kentucky bluegrass - smooth bromegrass - switchgrass - timothy - perennial ryegrass - white clover <sup>2</sup>	20 lbs. 10 lbs. 3 lbs. 4 lbs. 10 lbs. 2 lbs.	5.5 to 7.5
3. Tall fescue <sup>2</sup> - white clover <sup>1</sup>	150 lbs. 2 lbs.	5.5 to 7.5
4. Tall fescue <sup>2</sup> - perennial ryegrass - Kentucky bluegrass	150 lbs. 20 lbs. 20 lbs.	5.5 to 7.5

<sup>1</sup> For best results: (a) legume seed should be inoculated; (b) seeding mixtures containing legumes should preferably be spring-seeded, although the grass may be fall-seeded and the legume frost-seeded (see **Dormant Seeding and Frost Seeding** on page 41); and (c) if legumes are fall-seeded, do so in early fall.

<sup>2</sup> Tall fescue provides little cover for, and may be toxic to some species of wildlife. The Indiana Department of Natural Resources recognizes the need for additional research on alternatives such as buffalograss, orchardgrass, smooth bromegrass, and switchgrass. This research, in conjunction with demonstration areas, should focus on erosion control characteristics, wildlife toxicity, turf durability, and drought resistance.

##### Notes:

1. An oat or wheat companion or nurse crop may be used with any of the above permanent seeding mixtures, at the following rates:
  - (a) spring oats – one-fourth to three-fourths bushel per acre
  - (b) wheat – no more than one-half bushel per acre
2. A high potential for fertilizer, seed, and mulch to wash exists on steep banks, cuts, and in channels and areas of concentrated flow.

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#### PERMANENT SEEDING

Figure 1: Cultipacker Seeder



Figure 2: Broadcast Seeding



Figure 3: Hydroseeding



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#### SURFACE STABILIZATION

##### Dormant Seeding & Frost Seeding



**Dormant seeding** is a temporary or permanent seeding application at a time when soil temperatures are too low for germination to occur (less than 50°F).

**Frost seeding** is a temporary or permanent seeding application in late winter when soils are in the freeze-thaw stage. (This measure can be used to repair or enhance areas having thin or declining vegetative cover or to revegetate an area.)

##### Purpose

- To provide early germination and soil stabilization in the spring.
- To reduce sediment-laden storm water runoff from being transported to downstream areas.
- To improve the visual aesthetics of the construction area.
- To repair or enhance previous seeding.

##### Specifications

###### Seedbed Preparation

Grade and apply soil amendments as recommended by a soil test (incorporate soil amendments into soil prior to soil freezing).

###### Density of Vegetative Cover

Eighty percent or greater over the soil surface.

##### Materials

- Soil Amendments – Select materials and rates as determined by a soil test (contact your county soil and water conservation district or cooperative extension office for assistance and soil information, including available soil testing services) or 200 to 300 pounds of 12-12-12 analysis fertilizer, or equivalent. Consider the use of reduced phosphorus application where soil tests indicate adequate phosphorus levels in the soil profile.

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#### DORMANT SEEDING & FROST SEEDING

- Seed – Select an appropriate plant species seed or seed mixture on the basis of soil type, soil pH, region of the state, time of year, and intended land use of the area to be seeded (see Table 1 or Table 2).
- Mulch –
  - Straw, hay, wood fiber, compost, etc. (to protect seedbed, retain moisture, and encourage plant growth).
  - Anchored to prevent removal by wind or water or covered with premanufactured erosion control blankets.

##### Application

(see Tables 1 and 2)

###### Site Preparation

1. Grade the site to achieve positive drainage.
2. Add topsoil (see **Topsoil Salvage and Utilization** on page 25) to achieve needed depth for establishment of vegetation.

###### Dormant Seeding

Site preparation, seedbed preparation and mulching can be done months ahead of actual seeding or if the existing ground cover is adequate, seeding can be done directly into it.

1. Test soil to determine pH and nutrient levels.
2. Broadcast soil amendments as recommended by a soil test and work into the upper two to four inches of soil. If testing was not done, apply 200 to 300 pounds per acre of 12-12-12 analysis fertilizer, or equivalent.
3. Apply and anchor mulch (



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DORMANT SEEDING & FROST SEEDING

2. Broadcast soil amendments as recommended by a soil test and work into the upper two to four inches of soil before it freezes. If testing was not done, apply 200 to 300 pounds per acre of 12-12-12 analysis fertilizer, or equivalent.
3. Select an appropriate seed species or mixture from Table 1 for temporary seeding or Table 2 for permanent seeding. Broadcast the seed on the seedbed or into the existing ground cover at the rate shown. (Seed areas when the soil is frozen. Do not work the seed into the soil.)

Maintenance

- Inspect at least once every seven calendar days.
- Check for erosion or movement of mulch.
- Check for inadequate cover (less than 80 percent density over the soil surface); reseed and mulch in mid to late April if necessary. For best results, reseed within the recommended dates shown in Temporary Seeding on page 31 and Permanent Seeding on page 15.
- Apply 200 to 300 pounds per acre of 12-12-12 analysis fertilizer, or equivalent, between April 15 and May 10 or during periods of vigorous growth.
- Fertilize turf areas annually. Apply fertilizer in a split application. For cool-season grasses, apply one-half of the fertilizer in late spring and one-half in early fall. For warm-season grasses, apply one-third in early spring, one-third in late spring, and the remaining one-third in middle summer.

Table 1. Temporary Dormant or Frost Seeding Recommendations

Seed Species	Rate per Acre
Wheat or rye	150 lbs.
Spring oats	150 lbs.
Annual ryegrass	60 lbs.

Table 2 provides several seeding options. Additional seed mixtures are available commercially. When selecting a mixture, consider site conditions, including soil properties (e.g., soil pH and drainage), slope aspect, and the tolerance of each species to shade and drought.

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MULCHING

Maintenance

- Inspect within 24 hours of each rain event and at least once every seven calendar days.
- Check for erosion or movement of mulch; repair damaged areas, reseed, apply new mulch and anchor the mulch in place.
- Continue inspections until vegetation is firmly established.
- If erosion is severe or recurring, use erosion control blankets or other more substantial stabilization methods to protect the area.

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ROCK CHECK DAM

Overflow Areas

Stabilized to reduce scour/erosion along sides and below the dam.

Filter Medium

- Placed on up-slope side of dam.
  - Height – to base of overflow weir notch.
- Materials**
- Geotextile fabric (8 ounce or heavier; nonwoven).
  - Indiana Department of Transportation Revetment riprap (see Appendix D) for dam.
  - INDOT CA No. 5 aggregate (see Appendix D) for use as filter medium (Aggregate must be well-graded).

**Note:** INDOT CA No. 8 aggregate is acceptable if No. 5 aggregate is not available. The use of No. 8 aggregate may result in more frequent overtopping of the structure and will increase the frequency of structure maintenance.

Installation

- Lay out the location of the check dam.
- Excavate a cutoff trench into the channel bottom and ditch banks, extending it a minimum of 18 inches beyond the top of the ditch bank.
- Install and anchor filter fabric in the channel and cutoff trench.
- Place riprap in the cutoff trench and channel to the lines and dimensions shown in the construction plans. The center of each dam must be at least nine inches lower than the uppermost points of contact between the riprap dam and channel banks (see Rock Check Dam Worksheet on page 101).
- Extend the riprap at least 18 inches beyond the top of the channel banks to keep overflow water from eroding areas adjacent to the channel banks before it re-enters the channel.
- Place filter medium (INDOT CA No. 5 aggregate) on the up-slope side of the dam. Place filter medium over the entire face of the dam up to the base of the overflow weir notch.
- Stabilize the channel above the uppermost dam.
- Install an erosion-resistant lining in the channel below the lowermost dam. The lining should extend a minimum distance of six feet below the dam.

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DORMANT SEEDING & FROST SEEDING

Table 2. Permanent Dormant or Frost Seeding Recommendations

Open Low-Maintenance Areas (remaining idle more than six months)

Seed Mixtures	Rate per Acre Pure Live Seed	Optimum Soil pH
1. Perennial ryegrass - white clover <sup>1</sup>	75 lbs. 3 lbs.	5.6 to 7.0
2. Kentucky bluegrass - smooth bromegrass - switchgrass - timothy - perennial ryegrass - white clover <sup>1</sup>	30 lbs. 15 lbs. 5 lbs. 6 lbs. 15 lbs. 3 lbs.	5.6 to 7.5
3. Perennial ryegrass - tall fescue <sup>2</sup>	45 lbs. 3 lbs.	5.6 to 7.0
4. Tall fescue <sup>2</sup> - white clover <sup>1</sup>	75 lbs. 3 lbs.	5.5 to 7.5

Steep Banks and Cuts, Low-Maintenance Areas (not mowed)

Seed Mixtures	Rate per Acre Pure Live Seed	Optimum Soil pH
1. Smooth bromegrass - red clover <sup>1</sup>	50 lbs. 30 lbs.	5.5 to 7.5
2. Tall fescue <sup>2</sup> - white clover <sup>1</sup>	75 lbs. 3 lbs.	5.5 to 7.5
3. Tall fescue <sup>2</sup> - red clover	75 lbs. 30 lbs.	5.5 to 7.5
4. Orchardgrass - red clover <sup>1</sup> - white clover <sup>1</sup>	45 lbs. 30 lbs. 3 lbs.	5.6 to 7.0
5. Crownvetch <sup>1</sup> - tall fescue	18 lbs. 45 lbs.	5.6 to 7.0

Lawns and High-Maintenance Areas

Seed Mixtures	Rate per Acre Pure Live Seed	Optimum Soil pH
1. Bluegrass	210 lbs.	5.5 to 7.0
2. Perennial ryegrass (turf type) - bluegrass	90 lbs. 135 lbs.	5.6 to 7.0
3. Tall fescue (turf type) <sup>2</sup> - bluegrass	250 lbs. 45 lbs.	5.6 to 7.5

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SURFACE STABILIZATION

Erosion Control Blanket



*An erosion control blanket is a biodegradable, organic or synthetic mulch incorporated with a biodegradable, photodegradable, or permanent polypropylene, natural fiber, or similar netting material. It is an alternative to mulch on slopes and in concentrated flow channels.*

Purpose

- To prevent erosion by protecting the soil from rainfall impact, overland water flow, concentrated runoff, or wind.
- To provide temporary surface stabilization.
- To anchor mulch in critical areas, including slopes and concentrated flow conveying systems.
- To reduce soil crusting.
- To conserve soil moisture and increase seed germination and seedling growth.

Specifications

Effective Life

The functional life of an erosion control blanket is dependent on the materials used.

Anchoring

Staples, pins or stakes used to prevent movement or displacement of blanket. (Follow manufacturer's recommendations for specific applications.)

Materials

- Organic (straw, excelsior, woven paper, coconut fiber, etc.) or synthetic mulch incorporated with a polypropylene, natural fiber or similar netting material. (The netting may be biodegradable, photodegradable or permanent.)

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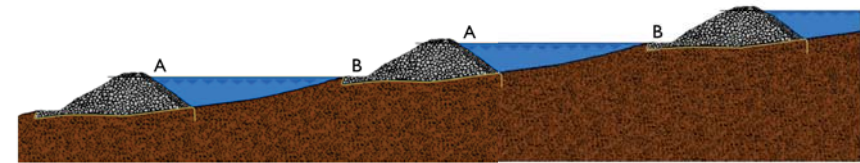
ROCK CHECK DAM

9. Additional sediment storage can be provided by excavating a small sediment trap on the upstream side of the check dam.

Maintenance

- Inspect within 24 hours of each rain event and at least once every seven calendar days.
- If significant erosion occurs between dams, install an erosion-resistant lining in that portion of the channel.
- Remove accumulated sediment when it reaches one-half the height of the dam to maintain channel capacity, allow drainage through the dam, and prevent large flow from displacing sediment.
- Add riprap and aggregate as needed to maintain design height and cross section of the dams.
- When dams are no longer needed, remove the riprap and aggregate and stabilize the channel, using an erosion-resistant lining if necessary. (Riprap and aggregate from the dam may be removed or utilized to stabilize the channel.)

Exhibit 1



A = Crest of Dam  
B = Toe of Dam

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DORMANT SEEDING & FROST SEEDING

Channels and Areas of Concentrated Flow

Seed Mixtures	Rate per Acre Pure Live Seed	Optimum Soil pH
1. Perennial ryegrass - white clover <sup>1</sup>	225 lbs. 3 lbs.	5.6 to 7.0
2. Kentucky bluegrass - smooth bromegrass - switchgrass - timothy - perennial ryegrass - white clover <sup>1</sup>	30 lbs. 15 lbs. 5 lbs. 6 lbs. 15 lbs. 3 lbs.	5.5 to 7.5
3. Tall fescue <sup>2</sup> - white clover <sup>1</sup>	225 lbs. 3 lbs.	5.5 to 7.5
4. Tall fescue <sup>2</sup> - perennial ryegrass - Kentucky bluegrass	225 lbs. 30 lbs. 30 lbs.	5.5 to 7.5

<sup>1</sup> For best results: (a) legume seed should be inoculated; (b) seeding mixtures containing legumes should preferably be spring-seeded; although the grass may be fall-seeded and the legume frost-seeded; and (c) if legumes are fall-seeded, do so in early fall.

<sup>2</sup> Tall fescue provides little cover for, and may be toxic to some species of wildlife. The Indiana Department of Natural Resources recognizes the need for additional research on alternatives such as buffalograss, orchardgrass, smooth bromegrass, and switchgrass. This research, in conjunction with demonstration areas, should focus on erosion control characteristics, wildlife toxicity, turf durability, and drought resistance.

**Notes:**

- If using mixtures other than those listed in this table, increase seeding rates by 50 percent over the conventional seeding rates.
- A high potential for fertilizer, seed, and mulch to wash exists on steep banks, cuts, and in channels and areas of concentrated flow.

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EROSION CONTROL BLANKET

**Note:** Some erosion control blanket nettings may pose a threat to certain species of wildlife if they become entangled in the netting matrix.

- Six to 12-inch staples, pins, or stakes.

Installation

- Select the type and weight of erosion control blanket to fit the site conditions (e.g., slope, channel, flow velocity) per the manufacturer's specifications.
- Prepare the seedbed, add soil amendments, and permanently seed (see Permanent Seeding on page 35) the area immediately following seedbed preparation.
- Lay erosion control blankets on the seeded area so that they are in continuous contact with the soil with each up-slope or up-stream blanket overlapping the down-slope or down-stream blanket by at least eight inches, or follow manufacturer's recommendations.
- Tuck the uppermost edge of the upper blankets into a check slot (slit trench), backfill with soil and tamp down. In certain applications, the manufacturer may require additional check slots at specific locations down slope from the uppermost edge of the upper blankets.
- Anchor the blankets in place by driving staples, pins, or stakes through the blanket and into the underlying soil. Follow an anchoring pattern appropriate for the site conditions and as recommended by the manufacturer.

Maintenance

- Inspect within 24 hours of each rain event and at least once every seven calendar days.
- Check for erosion or displacement of the blanket.
- If any area shows erosion, pull back that portion of the blanket covering the eroded area, add soil and tamp, reseed the area, replace and staple the blanket.

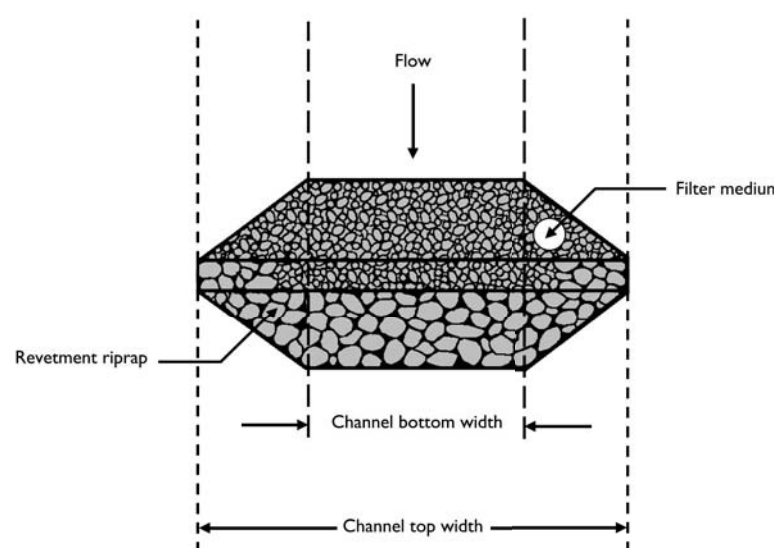
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ROCK CHECK DAM

Exhibit 2



SURFACE STABILIZATION

Mulching



*Mulching is the application of plant residues/ materials to enhance and protect vegetative establishment and minimize erosion potential.*

Purpose

- To prevent erosion by protecting the soil from wind and water impact.
- To provide temporary surface stabilization.
- To prevent soil from crusting.
- To conserve soil moisture, moderate soil temperature, and promote seed germination and seedling growth.

**Note:** This measure should not be used in storm water runoff channels or areas where concentrated flow is attempted.

Specifications

Materials

Table 1. Mulch Specifications

Material <sup>1</sup>	Rate per Acre	Comments
Straw or hay	2 tons	Should be dry, free of undesirable seeds. Spread by hand or machine. Must be crimped or anchored (see Table 2).
Wood fiber or cellulose	1 ton	Apply with a hydraulic mulch machine and use with tackling agent.

<sup>1</sup> Mulching is not recommended in concentrated flows. Consider erosion control blankets or other stabilization methods.

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SURFACE STABILIZATION

Riprap Slope Protection



*Riprap slope protection is an erosion control measure consisting of geotextile fabric and stone riprap that is placed on an unvegetated slope to protect the soil from erosive forces.*

Purpose

To protect slopes or similar areas subject to erosion by water.

Specifications

Slope

A ratio of 2:1 or flatter (designed by a qualified individual/professional engineer; slopes exceeding 2:1 may require additional design considerations).

Minimum Thickness

Two times the designed  $d_{50}$  (see Appendix A – Glossary) stone diameter plus the depth of the bedding material.

Materials

- Riprap
  - Hard, angular, and weather resistant.
  - Specific gravity of at least 2.5.
  - Size and gradation that will withstand velocities of storm water discharge flow design.
- Well-graded mixture of stone with 50 percent of the stone pieces, by weight, larger than the designed  $d_{50}$  size.
- Largest pieces should not exceed two times the designed  $d_{50}$  and no more than 15 percent of the pieces (by weight) should be less than three inches.

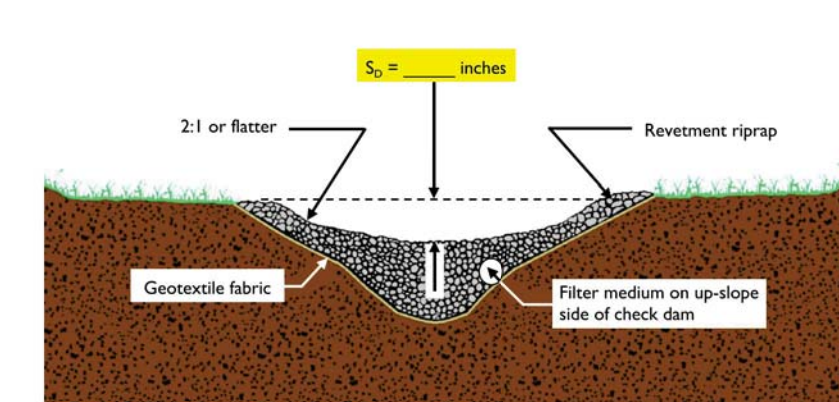
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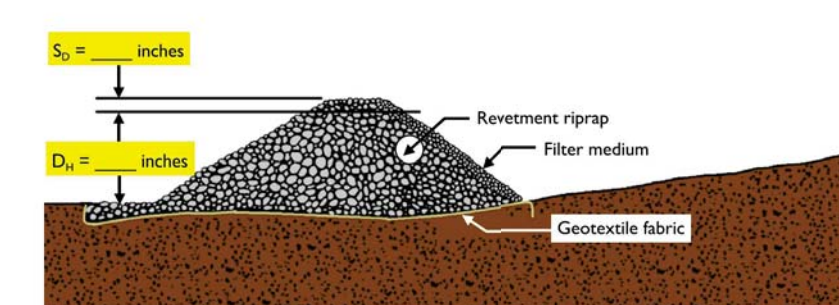
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ROCK CHECK DAM

Rock Check Dam Worksheet



**NOTE:** For minimum dimensions see the "Specifications" section of this measure.



**NOTE:** For minimum dimensions see the "Specifications" section of this measure.

Source: Adapted from North Carolina Erosion and Sediment Control Planning and Design Manual, 1983

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MULCHING

Coverage

The mulch should have a uniform density of at least 75 percent over the soil surface.

Anchoring

Table 2. Mulch Anchoring Methods

Anchoring Method <sup>1</sup>	How to Apply
Mulch anchoring tool or farm disk (dull, serrated, and blades set straight)	Crimp or punch the straw or hay two to four inches into the soil. Operate machinery on the contour of the slope.
Cleating with dozer tracks	Operate dozer up and down slope to prevent formation of rills by dozer cleats.
Wood hydromulch fibers	Apply according to manufacturer's recommendations.
Synthetic tackifiers, binders, or soil stabilizers	Apply according to manufacturer's recommendations.
Netting (synthetic or biodegradable material)	Install netting immediately after applying mulch. Anchor netting with staples. Edges of netting strips should overlap with each up-slope strip overlapping four to six inches over the adjacent down-slope strip. Best suited to slope applications. In most instances, installation details are site specific, so manufacturer's recommendations should be followed.

<sup>1</sup> All forms of mulch must be anchored to prevent displacement by wind and/or water.

Application

- Apply mulch at the recommended rate shown in Table 1.
- Spread the mulch material uniformly by hand, hayfork, mulch blower, or hydraulic mulch machine. After spreading, no more than 25 percent of the ground should be visible.
- Anchor straw or hay mulch immediately after application. The mulch can be anchored using one of the methods listed below:
  - Crimp with a mulch anchoring tool, a weighted farm disk with dull serrated blades set straight, or track cleats of a bulldozer.
  - Apply hydraulic mulch with short cellulose fibers.
  - Apply a liquid tackifier, or
  - Cover with netting secured by staples.

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RUNOFF CONTROL

Rock Check Dam



*A rock check dam is a series of runoff control structures, consisting of geotextile fabric and aggregate, placed across drainage channels to slow storm water runoff. This measure may also provide limited effectiveness as a sediment control measure.*

Purpose

- To reduce erosion in a drainage channel by slowing velocity of flow. (Check dams are commonly used (a) in channels that are eroding, but where permanent stabilization is impractical due to their short period of usefulness, and (b) in eroding channels where construction delays or weather conditions prevent timely installation of erosion-resistant linings.)
- To reduce flow velocities in a drainage channel.

**Note:** Do not use check dams in perennial streams.

Specifications

Contributing Drainage Area

Two acres maximum.

Riprap Check Dam

- Dam height.
  - Two feet maximum.
  - center of the dam at least nine inches lower than the points of contact between the uppermost points of the riprap dam and channel banks.
- Side slope – ratio of 2:1 or flatter.
- Spacing – toe of the upstream dam at same elevation as overflow weir of the downstream dam.

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TEMPORARY DROP INLET PROTECTION

Geotextile Fabric Drop Inlet Protection



*Geotextile fabric drop inlet protection is a temporary sediment control measure consisting of a temporary geotextile fabric barrier placed around a storm drain drop inlet.*

Purpose

To capture sediment at the entrance to a storm drain inlet, allowing full use of the storm drain system during the construction period.

**Note:** This measure is not recommended for paved surfaces due to inability to entrench the fabric and lack of an anchoring system.

Specifications

**Note:** Alternative support systems may be substituted for hardwood posts and cross braces.

Contributing Drainage Area

One acre maximum.

Effective Life

Six months (maximum).

Capacity

Runoff from a two-year frequency, 24-hour storm event entering a storm drain without bypass flow.

Geotextile Structure

- Height – 12 to 18 inches, measured from top of storm drain inlet.
- Post spacing – 36-inch maximum spacing between posts.
- Frame support – bracing to strengthen integrity of the structure. (Structure must withstand 1½-foot head of water and sediment without collapsing or undercutting.)

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THIS DRAWING IS NOT INTENDED TO BE REPRESENTED AS A RETRACEMENT OR USED FOR ANY PURPOSES OUTSIDE OF SURVEY OR A SURVEYOR LOCATION REPORT.

CERTIFIED: 07/11/24

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REVISIONS

DATE

MARK

BY

APPROVAL: PENDING/NOT FOR CONSTRUCTION

STOEPPELWERTH

WINTERFIELD SECTION 3

JOHNSON COUNTY, INDIANA

FRANKLIN

STORM WATER POLLUTION PREV. PLAN DETAILS

DRAWN BY: KJ/M/GEM  
CHECKED BY: KRG

SHEET NO. C312

E.R.A. JOB NO. 100405FOR-S3

Know what's below. 511 before you dig.



GEOTEXTILE FABRIC DROP INLET PROTECTION

Materials

- Support posts
  - 2 x 2 inch or 2 x 4 inch hardwood posts
  - Three feet length, minimum.
- 1 x 2 inch or 1 x 3 inch hardwood cross bracing lumber.
- Lathe.
- Staples or nails.
- Geotextile fabric

Table 1. Geotextile Fabric Specifications

Physical Property	Woven	Non-Woven
Filtering Efficiency	85%	85%
UV Resistance (Inhibitors and stabilizers to ensure six month minimum life at temperatures of 0° to 120° F)	70%	85%
Tensile Strength at 20% Elongation: Standard Strength Extra Strength	30 lbs./linear inch 50 lbs./linear inch	50 lbs./linear inch 70 lbs./linear inch
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.

Installation

(see Exhibits 1 and 2)

- Dig an eight-inch deep, four-inch wide trench around the perimeter of the inlet.
- If using pre-assembled geotextile fabric and posts, drive the posts into the soil, tightly stretching the geotextile fabric between posts as each is driven. (Posts must be placed on the inlet side of the anchor trench with the geotextile fabric on the side of the trench farthest from the inlet.)

Note: If assembling the geotextile fabric and posts on-site, drive the posts into the soil and then secure the geotextile fabric to the posts by placing a piece of lathe over the fabric and fastening it to the post (stretching the fabric between posts as it is fastened).

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INSERT (BASKET) CURB INLET PROTECTION

Location

- At curb inlets on paved roads and parking lots.
- Down grade from construction activities (e.g., individual home sites).

Materials

- Metal frame or basket with a top width and length such that the frame fits into the inlet. (The frame is supported by the structural integrity of the storm sewer.)
- The metal frame or geotextile should be designed with a bypass to allow storm water to flow into the storm sewer system during excessive storm events.
- The system should be designed for ease of maintenance.
- Geotextile fabric.

Table 1. Geotextile Fabric Specifications

Physical Property	Woven	Non-Woven
Filtering Efficiency	85%	85%
UV Resistance (Inhibitors and stabilizers to ensure six month minimum life at temperatures of 0°F to 120° F)	70%	85%
Tensile Strength at 20% Elongation: Standard Strength Extra Strength	30 lbs./linear inch 50 lbs./linear inch	50 lbs./linear inch 70 lbs./linear inch
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.

Installation

- Remove the storm sewer grate and place the frame into the grate opening.
- Place geotextile fabric into the frame and secure according to the manufacturer's recommendations.
- Replace the storm sewer grate.

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- Drive the support posts at least 18 inches into the ground, tightly stretching the fabric between the posts as each is driven into the soil. A minimum of 12 inches of the filter fabric should extend into the trench. (If it is necessary to join the ends of two fences, use the wrap joint method shown in Exhibit 3.)
- Lay the lower four inches of filter fabric on the bottom of the trench and extend it toward the up-slope side of the trench.
- Backfill the trench with soil material and compact it in place.

Note: If the silt fence is being constructed on-site, attach the filter fabric to the support posts (refer to Tables 1 and 2 for spacing and geotextile specifications) and attach wooden lathe to secure the fabric to the posts. Allow for at least 12 inches of fabric below ground level. Complete the silt fence installation, following steps 1 through 6 above.

Maintenance

- Inspect within 24 hours of a rain event and at least once every seven calendar days.
- If fence fabric tears, starts to decompose, or in any way becomes ineffective, replace the affected portion immediately. Note: All repairs should meet specifications as outlined within this measure.
- Remove deposited sediment when it is causing the filter fabric to bulge or when it reaches one-half the height of the fence at its lowest point. When contributing drainage area has been stabilized, remove the fence and sediment deposits, grade the site to blend with the surrounding area, and stabilize.

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GEOTEXTILE FABRIC DROP INLET PROTECTION

- Use the wrap joint method when joining posts (see Silt Fence on page 215).
- Place the bottom 12 inches of geotextile fabric into the eight-inch deep trench, laying the remaining four inches in the bottom of the trench and extending away from the inlet.
- Backfill the trench with soil material and compact it in place.
- Brace the posts by nailing braces into each corner post or utilize rigid panels to support fabric.

Note: In situations where storm water may bypass the structure, either:

- Set the top of the geotextile fabric filter at least six inches lower than the ground elevation on the down-slope side of the storm drain inlet.
- Build a temporary dike, compacted to six inches higher than the fabric, on the down-slope side of the storm drain inlet, AND/OR
- Use in conjunction with excavated drop inlet protection (see Excavated Drop Inlet Protection on page 145).

Maintenance

- Inspect daily.
- Inspect geotextile fabric and make needed repairs immediately.
- Remove sediment from pool area to provide storage for the next storm event. Avoid damaging or undercutting fabric during sediment removal.
- When contributing drainage area has been stabilized, remove sediment, properly dispose of all construction material, grade area to the elevation of the storm drain inlet top, then stabilize immediately.

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INSERT (BASKET) CURB INLET PROTECTION

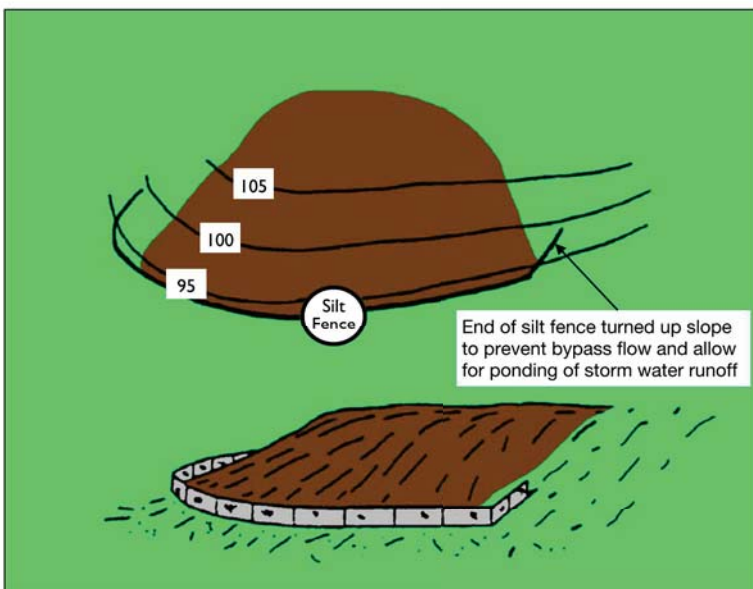
Maintenance

- Inspect daily.
- Remove accumulated sediment and debris after each storm event. Deposit sediment in an area where it will not re-enter the paved area or storm drains.
- Replace or clean geotextile fabric as needed.
- When the contributing drainage area has been stabilized, remove inlet protection.

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SILT FENCE

Exhibit 1

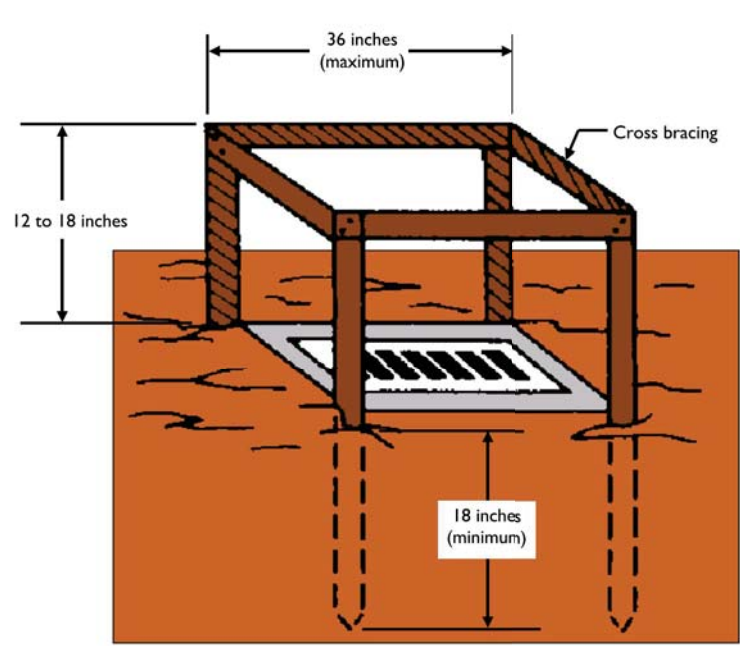


Source: Adapted from Commonwealth of Pennsylvania Erosion and Sediment Pollution Control Manual, 1990

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GEOTEXTILE FABRIC DROP INLET PROTECTION

Exhibit 1



Source: Adapted from North Carolina Erosion and Sediment Control Planning and Design Manual, 1993

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SEDIMENT BARRIERS & FILTERS

Silt Fence



A silt fence is a temporary barrier of entrenched geotextile fabric stretched across and attached to supporting posts and installed on the contour to intercept and treat sediment-laden storm water runoff from small, unvegetated drainage areas.

Purpose

To trap sediment from small, disturbed areas by reducing the velocity of sheet flow. Silt fences capture sediment by ponding water to allow deposition, not by filtration.

Note: Silt fence is not recommended for use as a diversion and should not be used across a stream, channel, ditch, swale, or anywhere that concentrated flow is anticipated.

Specifications

Drainage Area

- Limited to one-quarter acre per 100 linear feet of fence.
- Further restricted by slope steepness (see Table 1).

Effective Life

Six months (maximum).

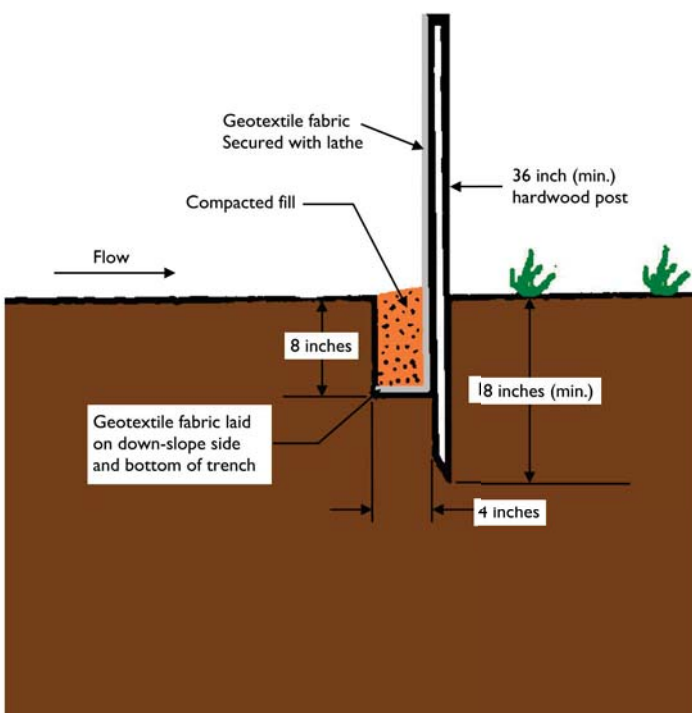
Location

- Installed parallel to the slope contour.
- Minimum of 10 feet beyond the toe of the slope to provide a broad, shallow sediment pool.
- Accessible for maintenance (removal of sediment and silt fence repair).

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SILT FENCE

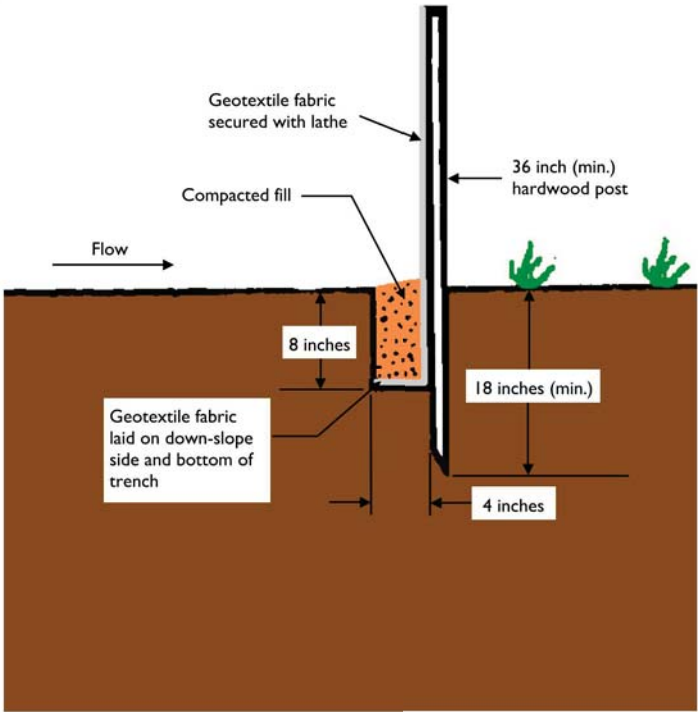
Exhibit 2



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GEOTEXTILE FABRIC DROP INLET PROTECTION

Exhibit 2



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SILT FENCE

Spacing

Table 1. Slope Steepness Restrictions

Percent Slope		Maximum Distance
< 2%	< 50:1	100 feet
2% – 5%	50:1 to 20:1	75 feet
5% – 10% <sup>1</sup>	20:1 to 10:1	50 feet
10% – 20% <sup>1</sup>	10:1 to 5:1	25 feet
> 20% <sup>1</sup>	> 5:1	15 feet

<sup>1</sup> Consider other alternatives.  
Note: Multiple rows of silt fence are not recommended on the same slope.

Trench

- Depth – eight inches minimum.
- Width – four inches minimum.
- After installing fence, backfill with soil material and compact (to bury and anchor the lower portion of the fence fabric).

Note: An alternative to trenching is to use mechanical equipment to plow in the silt fence.

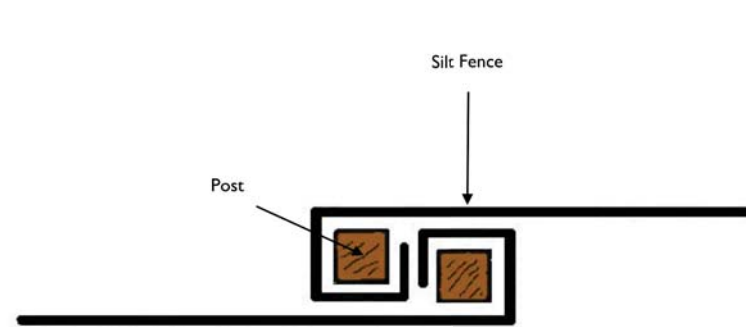
Materials and Silt Fence Specifications

- Fabric – woven or non-woven geotextile fabric meeting specified minimums outlined in Table 2.

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SILT FENCE

Exhibit 3



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TEMPORARY CURB & PAVED AREA INLET PROTECTION

Insert (Basket) Curb Inlet Protection

Insert (basket) curb inlet protection is a temporary sediment control measure consisting of a metal frame or basket that is used to support a geotextile fabric. The system is installed under the storm sewer grate.



Purpose

To minimize sediment from entering the storm sewer system while allowing runoff to enter the storm sewer system in the event of excessive storm events. This measure traps sediment associated with small storm events below the grade of the paved area. This measure does not place an obstruction in the street to trap sediment and is especially conducive to stages of construction when the public has access to the project site.

Note: This measure should be used in conjunction with other sediment control measures.

Specifications

Contributing Drainage Area:

One-quarter acre maximum.

Capacity

Runoff from a two-year frequency, 24-hour storm event entering a storm drain without bypass flow.

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SILT FENCE

Table 2. Geotextile Fabric Specifications for Silt Fence (minimum)

Physical Property	Woven Geotextile Fabric	Non-Woven Geotextile Fabric
Filtering efficiency	85%	85%
Textile strength at 20% elongation: Standard strength Extra strength	30 lbs. per linear inch 50 lbs. per linear inch	50 lbs. per linear inch 70 lbs. per linear inch
Slurry flow rate	0.3 gal./min./square feet	4.5 gal./min./square feet
Water flow rate	15 gal./min./square feet	220 gal./min./square feet
UV resistance	70%	85%
Post spacing	7 feet	5 feet

Note: Silt fences can be purchased commercially.

- Height – a minimum of 18 inches above ground level (30 inches maximum).
- Reinforcement – fabric securely fastened to posts with wood lathe.
- Support Posts
  - 2 x 2 inch hardwood posts. Steel fence posts may be substituted for hardwood posts (steel posts should have projections for fastening fabric).
  - Spacing
    - Eight feet maximum if fence is supported by wire mesh fencing.
    - Six feet maximum for extra-strength fabric without wire backing.

Installation

Prefabricated silt fence (see Exhibits 1, 2, and 3)

- Lay out the location of the fence so that it is parallel to the contour of the slope and at least 10 feet beyond the toe of the slope to provide a sediment storage area. Turn the ends of the fence up slope such that the point of contact between the ground and the bottom of the fence and terminates at a higher elevation than the top of the fence at its lowest point (see Exhibit 1).
- Excavate an eight-inch deep by four-inch wide trench along the entire length of the fence line (see Exhibit 2). Installation by plowing is also acceptable.
- Install the silt fence with the filter fabric located on the up-slope side of the excavated trench and the support posts on the down-slope side of the trench.

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SITE MANAGEMENT MEASURES

Concrete Washout



Purpose

Concrete washout systems are implemented to reduce the discharge of pollutants that are associated with concrete washout waste through consolidation of solids and retention of liquids. Uncured concrete and associated liquids are highly alkaline which may leach into the soil and contaminate ground water or discharge to a waterbody or wetland which can elevate the pH and be harmful to aquatic life. Performing concrete washout in designated areas and into specifically designed systems reduces the impact concrete washout will have on the environment.

Specifications

Site Management

- Complete construction/installation of the system and have washout locations operational prior to concrete delivery.
- Do not wash out concrete trucks or equipment into storm drains, wetlands, streams, rivers, creeks, ditches, or streets.
- Never wash out into a storm sewer drainage system. These systems are typically connected to a natural conveyance system.
- Where necessary, provide stable ingress and egress (see Temporary Construction Ingress/Egress Pad on page 17).
- It is recommended that washout systems be restricted to washing concrete from mixer and pump trucks and not used to dispose of excess concrete or

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STOEPPELWERTH  
ALWAYS ON  
7965 East 106th Street, Fishers, IN 46038-2905  
phone: 317.846.5905 fax: 317.846.5942  
REGISTERED PROFESSIONAL ENGINEER  
No. PE1200386  
STATE OF INDIANA  
CERTIFIED: 07/11/24  
BY: [Signature]

STORM WATER POLLUTION PREV. PLAN DETAILS  
WINTERFIELD SECTION 3  
JOHNSON COUNTY, INDIANA  
FRANKLIN  
DRAWN BY: KJ/M/GEM  
CHECKED BY: KR/G  
SHEET NO. C313  
E.R.A. JOB NO. 100405FOR-S3





CONCRETE WASHOUT

- residual loads due to potential to exceed the design capacity of the washout system. Small amounts of excess or residual concrete (not washout water) may be disposed of in areas that will not result in flow to an area that is to be protected.
  - Install systems at strategic locations that are convenient and in close proximity to work areas and in sufficient number to accommodate the demand for disposal.
  - Install signage identifying the location of concrete washout systems.
- Location
- Locate concrete washout systems at least 50 feet from any creeks, wetlands, ditches, kant features, or storm drains/inadequate conveyance systems.
  - To the extent practical, locate concrete washout systems in relatively flat areas that have established vegetative cover and do not receive runoff from adjacent land areas.
  - Locate in areas that provide easy access for concrete trucks and other construction equipment.
  - Locate away from other construction traffic to reduce the potential for damage to the system.
- General Design Considerations
- The structure or system shall be designed to contain the anticipated washout water associated with construction activities.
  - The system shall be designed, to the extent practical, to eliminate runoff from entering the washout system.
  - Runoff from a rainstorm or snowmelt should not carry wastes away from the washout location.
  - Washout will not impact future land uses (i.e., open spaces, landscaped areas, home sites, parks).
  - Washout systems/containment measures may also be utilized on smaller individual building sites. The design and size of the system can be adjusted to accommodate the expected capacity.
- Prefabricated Washout Systems/Containers
- Self-contained sturdy containment systems that are delivered to a site and located at strategic locations for concrete disposal.

CONCRETE WASHOUT

- These systems are manufactured to resist damage from construction equipment and protect against leaks or spills.
  - Manufacturer or supplier provides the containers. The project site manager maintains the system or the supplier provides complete service that includes maintenance and disposal.
  - Units are often available with or without ramps. Units with ramps lend themselves to accommodate pump trucks.
  - Maintain according to the manufacturer's recommendations.
- Designed and Installed Units
- These units are designed and installed on site. They tend to be less reliable than prefabricated systems and are often prone to failure. Concrete washout systems can be constructed above or below grade. It is not uncommon to have a system that is partly below grade with an additional containment structure above grade.
- Washout systems shall utilize a pit or bermed area designed and maintained at a capacity to contain all liquid and concrete waste generated by washout operations.
  - The volume of the system must also be designed to contain runoff that drains to the system and rainfall that enters the system for a two-year frequency, 24-hour storm event.
- Below Grade System
- A washout system installed below grade should be a minimum of ten feet wide by ten feet long, but sized to contain all liquid and waste that is expected to be generated between scheduled cleanup periods. The size of the pit may be limited by the size of polyethylene available. The polyethylene lining should be of adequate size to extend over the entire excavation.
  - Include a minimum 12-inch freeboard to reasonably ensure that the structure will not overtop during a rain event.
  - Line the pit with ten millimeter polyethylene lining to control seepage.
  - The bottom of excavated pit should be above the seasonal high water table.
- Above Grade System
- A system designed and built above grade should be a minimum of ten feet wide by ten feet long, but sized to contain all liquid and waste that is expected to be generated between scheduled cleanup periods. The size of the containment system may be limited by the size of

CONCRETE WASHOUT

- polyethylene available. The polyethylene lining should be of adequate size to extend over the berm or containment system.
  - The system design may utilize an earthen berm, straw bales, sandbags, or other acceptable barriers that will maintain its shape and integrity and support the polyethylene lining.
  - Include a minimum four-inch freeboard as part of the design.
- Washout Procedures
- Do not leave excess mud in the chutes or hopper after the pour. Every effort should be made to empty the chutes and hopper at the pour. The less material left in the chutes and hopper, the quicker and easier the cleanup. Small amounts of excess concrete (not washout water) may be disposed of in areas that will not result in flow to an area that is to be protected.
  - At the washout location, scrape as much material from the chutes as possible before washing them. Use non-water cleaning methods to minimize the chance for waste to flow off site.
  - Remove as much mud as possible when washing out.
  - Stop washing out in an area if you observe water running off the designated area or if the containment system is leaking or overflowing and ineffective.
  - Do not back flush equipment at the project site. Back flushing should be restricted to the plant as it generates large volumes of waste that more than likely will exceed the capacity of most washout systems. If an emergency arises, back flush should only be performed with the permission of an on-site manager for the project.
  - Do not use additives with wash water. Do not use solvents or acids that may be used at the target plant.
- Materials
- Minimum of ten millimeter polyethylene sheeting that is free of holes, tears, and other defects. The sheeting selected should be of an appropriate size to fit the washout system without seams or overlap of the lining (**designed and installed systems**).
  - Signage.
  - Orange safety fencing or equivalent.
  - Straw bales, sandbags (bags should be ultraviolet-stabilized geotextile fabric), soil material, or other appropriate materials that can be used to construct a containment system (**above grade systems**).

CONCRETE WASHOUT

- Metal pins or staples at a minimum of six inches in length, sandbags, or alternative fastener to secure polyethylene lining to the containment system.
  - Non-collapsing and non-water holding cover for use during rain events (optional).
- Installation
- Prefabricated Washout Systems/Containers
- Install and locate according to the manufacturer's recommendations.
- Designed and Installed Systems
- Utilize and follow the design in the storm water pollution prevention plan to install the system.
  - Dependent upon the type of system, either excavate the pit or install the containment system.
  - A base shall be constructed and prepared that is free of rocks and other debris that may cause tears or punctures in the polyethylene lining.
  - Install the polyethylene lining. For excavated systems, the lining should extend over the entire excavation. The lining for bermed systems should be installed over the pooling area with enough material to extend the lining over the berm or containment system. The lining should be secured with pins, staples, or other fasteners.
  - Place flags, safety fencing, or equivalent to provide a barrier to construction equipment and other traffic.
  - Place a non-collapsing, non-water holding cover over the washout facility prior to a predicted rainfall event to prevent accumulation of water and possible overflow of the system (optional).
  - Install signage that identifies concrete washout areas.
  - Post signs directing contractors and suppliers to designated locations.
  - Where necessary, provide stable ingress and egress (see **Temporary Construction Ingress/Egress Pad** on page 17) or alternative approach pad for concrete washout systems.

CONCRETE WASHOUT

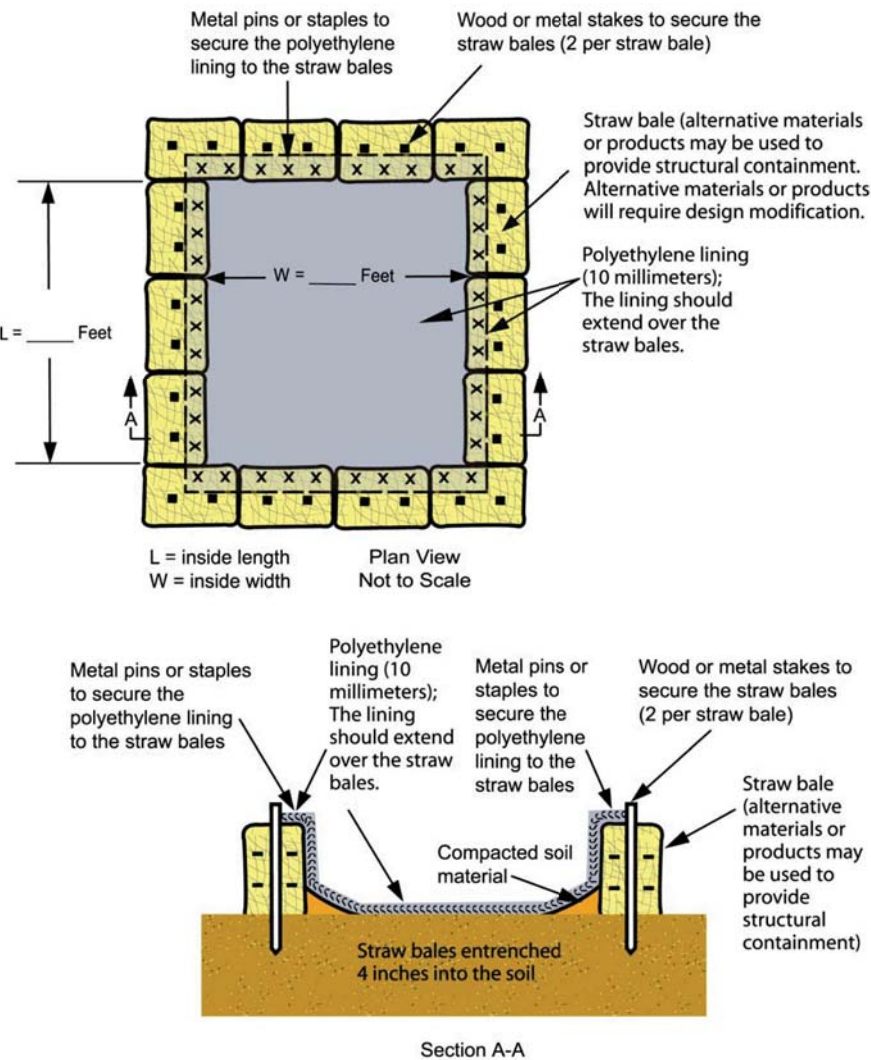
- Maintenance
- Inspect daily and after each storm event.
  - Inspect the integrity of the overall structure including, where applicable, the containment system.
  - Inspect the system for leaks, spills, and tracking of soil by equipment.
  - Inspect the polyethylene lining for failure, including tears and punctures.
  - Once concrete wastes harden, remove and dispose of the material.
  - Excess concrete should be removed when the washout system reaches 50 percent of the design capacity. Use of the system should be discontinued until appropriate measures can be initiated to clean the structure. Prefabricated systems should also utilize this criterion, unless the manufacturer has alternate specifications.
  - Upon removal of the solids, inspect the structure. Repair the structure as needed or construct a new system.
  - Dispose of all concrete in a legal manner. Reuse the material on site, recycle, or haul the material to an approved construction/demolition landfill site. Recycling of material is encouraged. The waste material can be used for multiple applications including but not limited to roadbeds and building. The availability for recycling should be checked locally.
  - The plastic liner should be replaced after every cleaning; the removal of material will usually damage the lining.
  - The concrete washout system should be repaired or enlarged as necessary to maintain capacity for concrete waste.
  - Concrete washout systems are designed to promote evaporation. However, if the liquids do not evaporate and the system is near capacity it may be necessary to vacuum or remove the liquids and dispose of them in an acceptable method. Disposal may be allowed at the local sanitary sewer authority provided their National Pollutant Discharge Elimination System permits allow for acceptance of this material. Another option would be to utilize a secondary containment system or basin for further deviating.
  - Prefabricated units are often pumped and the company supplying the unit provides this service.
  - Inspect construction activities on a regular basis to ensure suppliers, contractors, and others are utilizing designated washout areas. If concrete waste is being disposed of improperly, identify the violators and take appropriate action.

CONCRETE WASHOUT

- When concrete washout systems are no longer required, the concrete washout systems shall be closed. Dispose of all hardened concrete and other materials used to construct the system.
- Holes, depressions and other land disturbances associated with the system should be backfilled, graded, and stabilized.

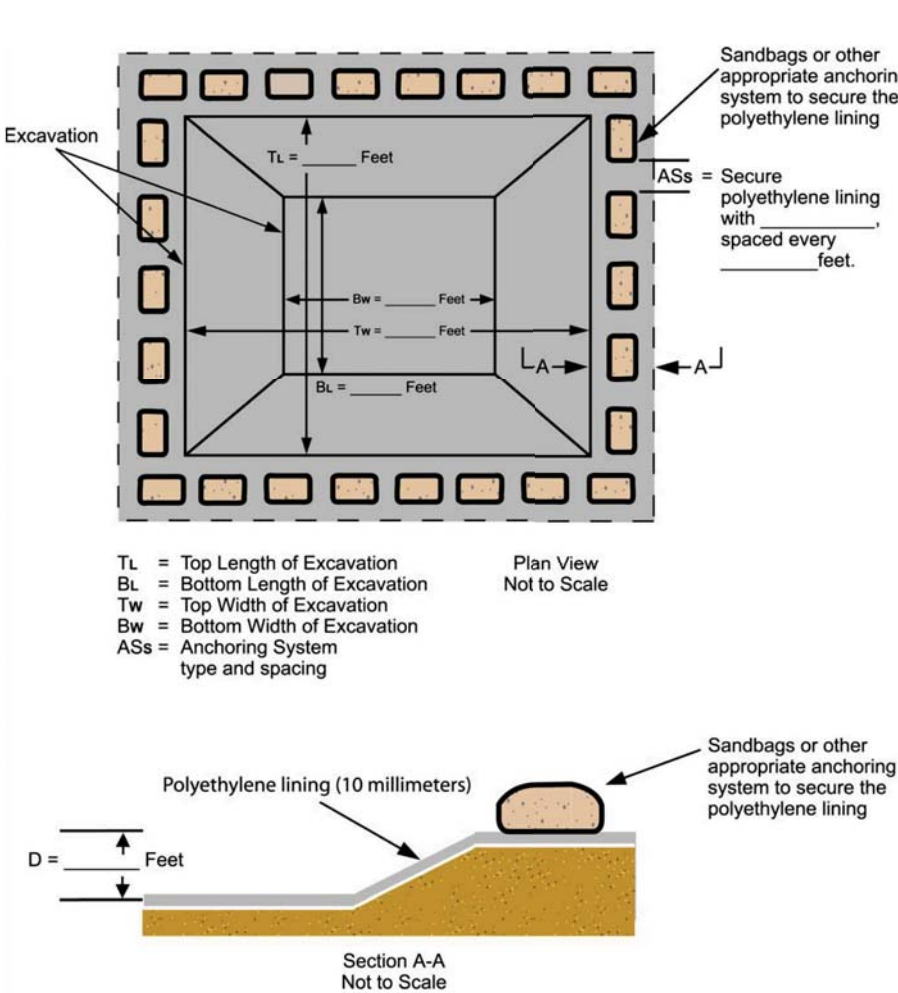
CONCRETE WASHOUT

Concrete Washout (Above Grade System) Worksheet



CONCRETE WASHOUT

Concrete Washout (Below Grade System) Worksheet







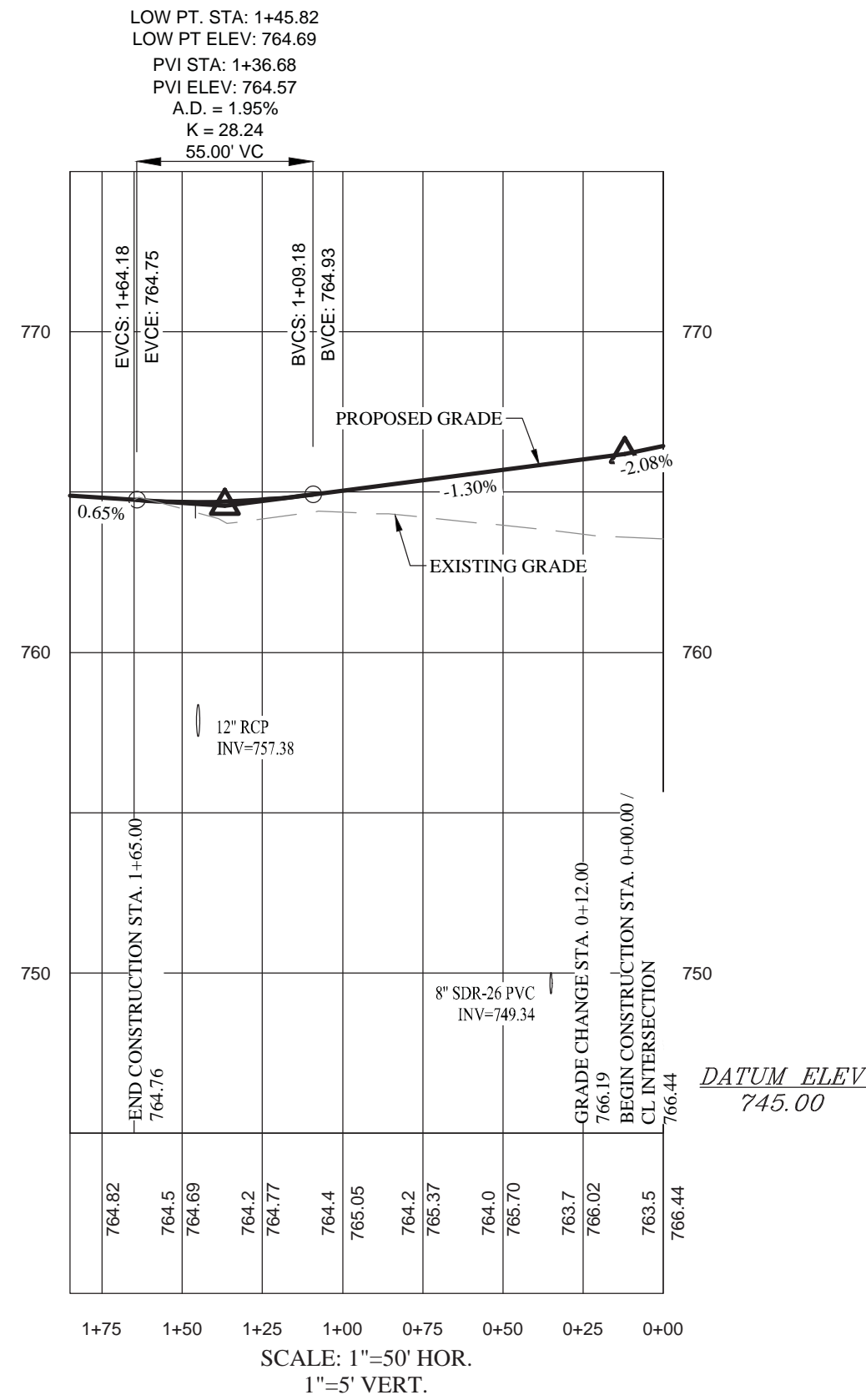
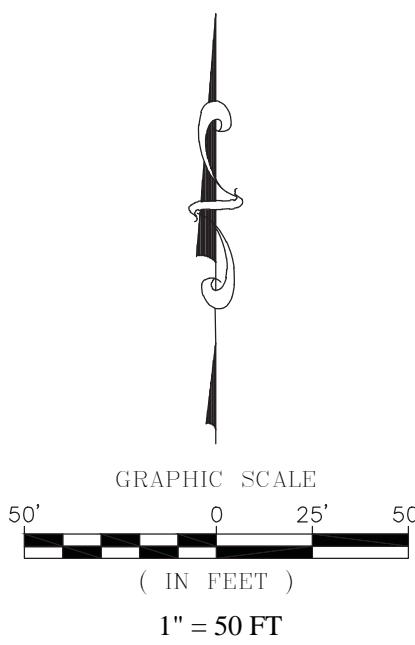






# MORAY STREET

(LOCAL STREET)



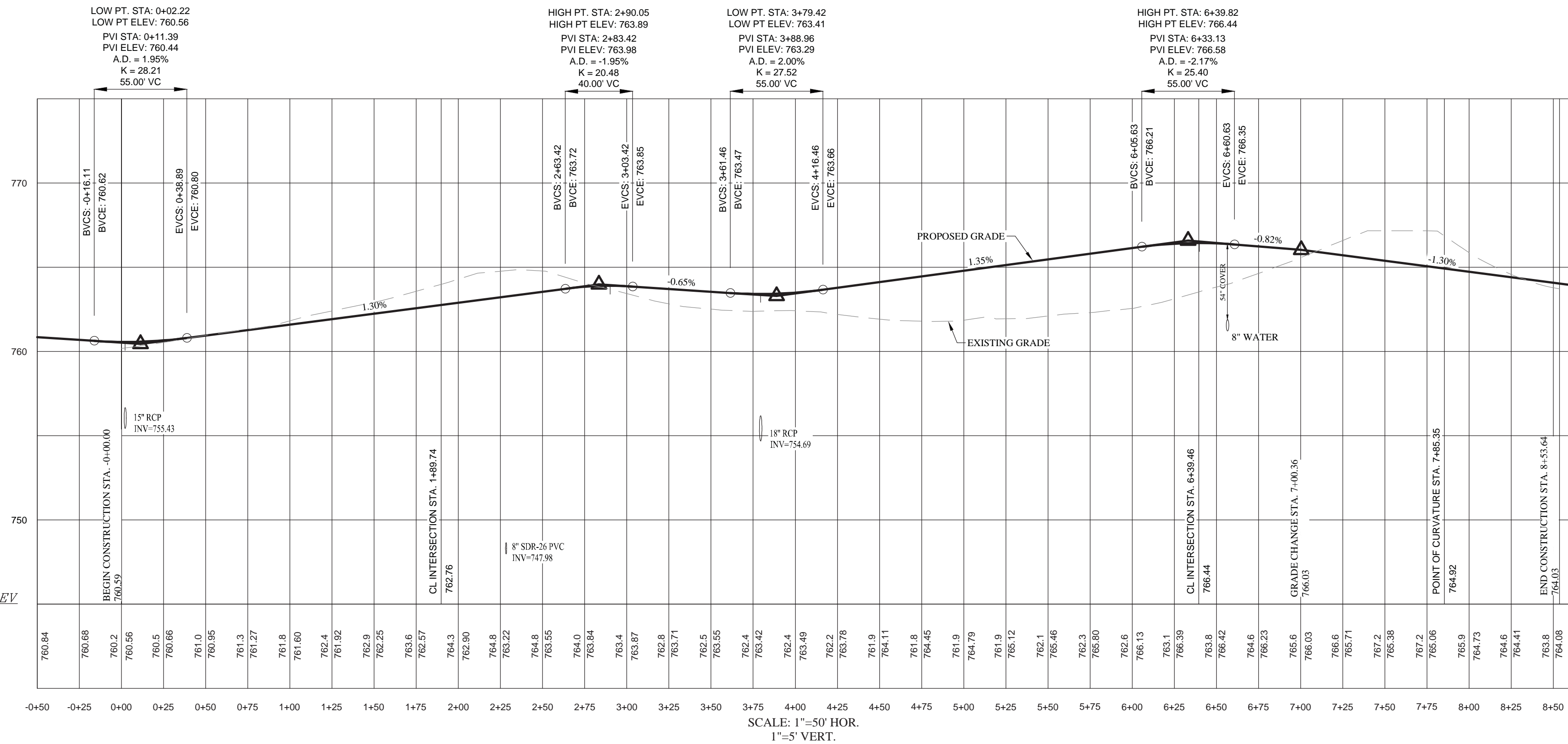
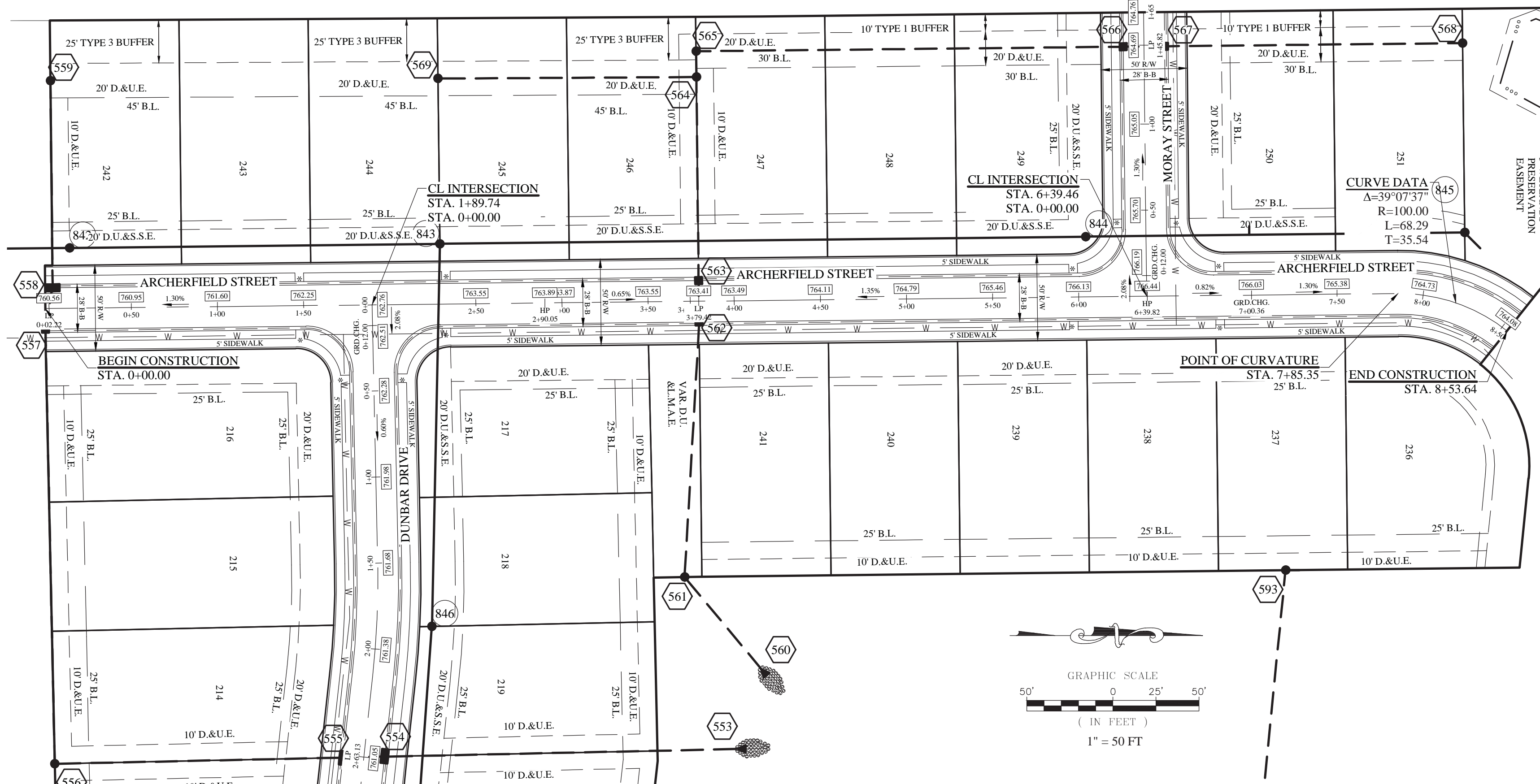
LEGEND	
	EXISTING SANITARY SEWER
	EXISTING STORM SEWER
	PROPOSED SANITARY SEWER
	PROPOSED STORM SEWER
	PROPOSED WATER LINE

LEGEND	
BVCS	BEGIN VERTICAL CURVE STATION
BVCE	BEGIN VERTICAL CURVE ELEVATION
EVCS	END VERTICAL CURVE STATION
EVCE	END VERTICAL CURVE ELEVATION
AD	GRADE CHANGE
PVI	POINT OF VERTICAL INTERSECTION
VC	VERTICAL CURVE

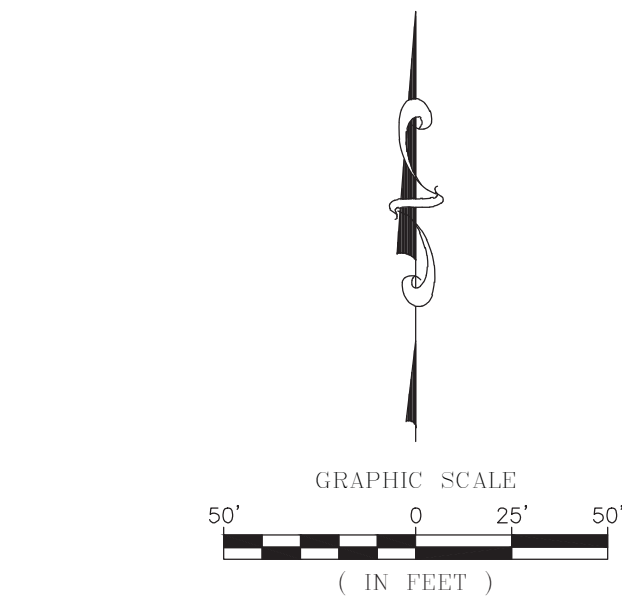
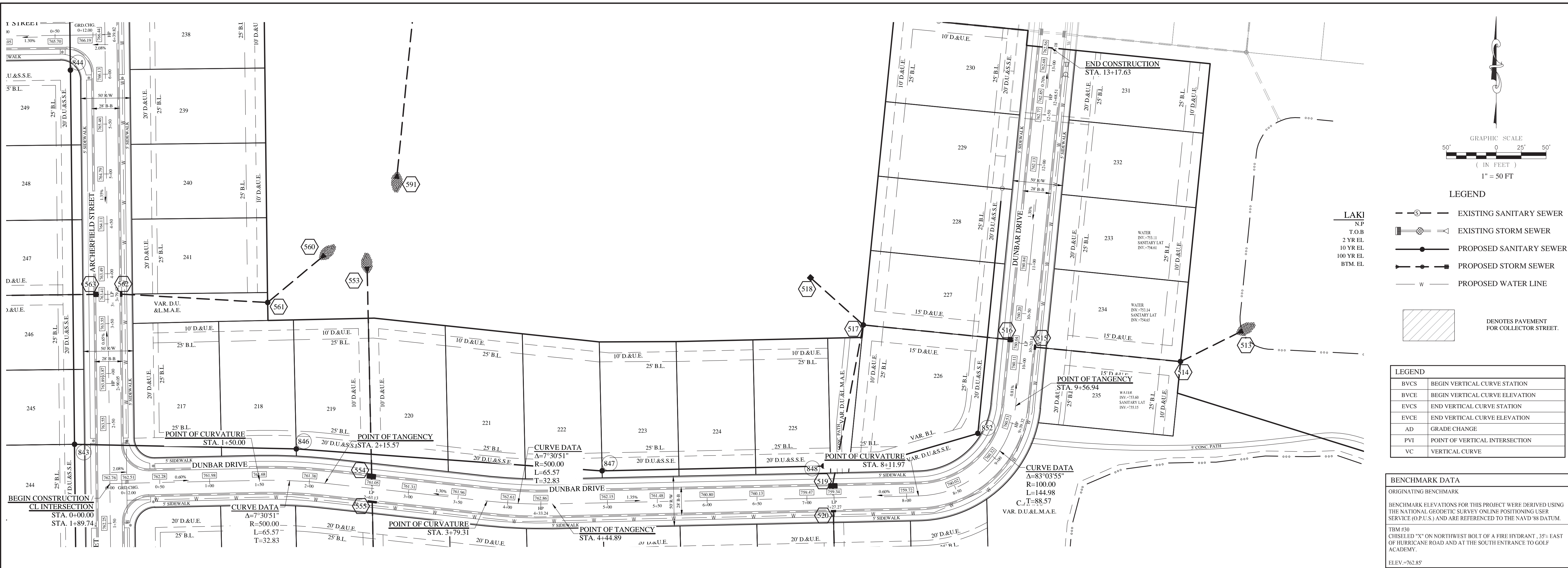
BENCHMARK DATA	
ORIGINATING BENCHMARK	
BENCHMARK ELEVATIONS FOR THIS PROJECT WERE DERIVED USING THE NATIONAL GEODETIC SURVEY ONLINE POSITIONING USER SERVICE (O.P.U.S.) AND ARE REFERENCED TO THE NAVD 83 DATUM.	
BENCHMARK #30 CHISELED "X" ON NORTHWEST BOLT OF A FIRE HYDRANT, 35% EAST OF HURRICANE ROAD AND AT THE SOUTH ENTRANCE TO GOLF ACADEMY.	
ELEV = 762.85'	

# ARCHERFIELD STREET

(LOCAL STREET)







- LEGEND
- EXISTING SANITARY SEWER
  - EXISTING STORM SEWER
  - PROPOSED SANITARY SEWER
  - PROPOSED STORM SEWER
  - PROPOSED WATER LINE
- Denotes Pavement for Collector Street.

LEGEND

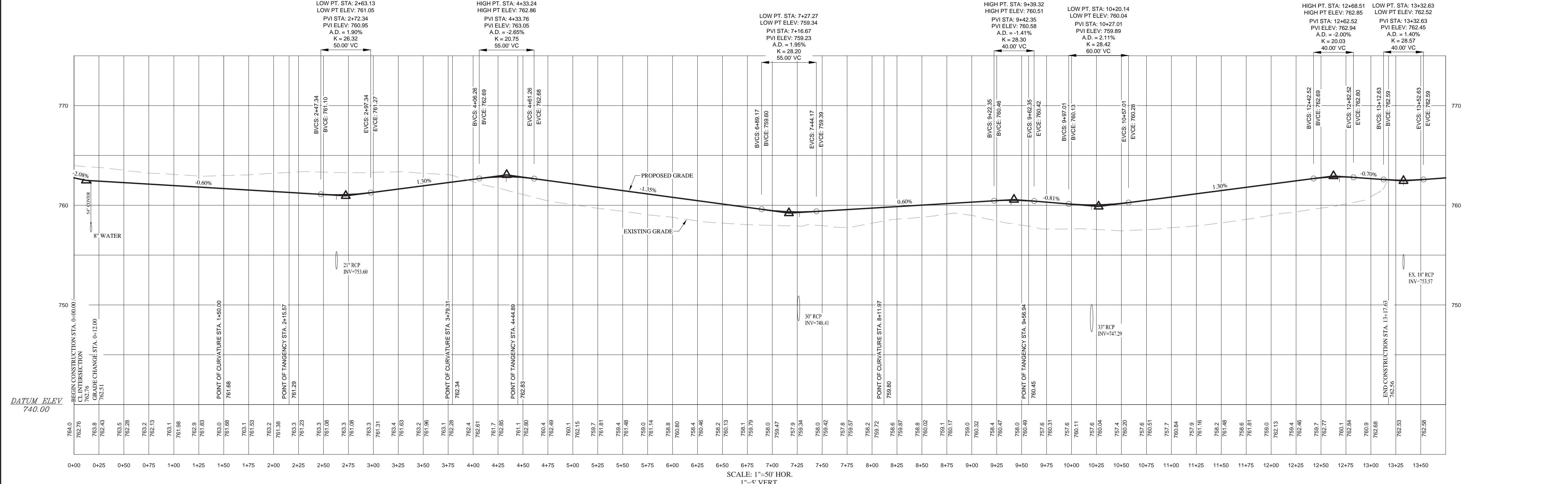
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BVCE	BEGIN VERTICAL CURVE ELEVATION
EVCS	END VERTICAL CURVE STATION
EVCE	END VERTICAL CURVE ELEVATION
AD	GRADE CHANGE
PVI	POINT OF VERTICAL INTERSECTION
VC	VERTICAL CURVE

BENCHMARK DATA

ORIGINATING BENCHMARK

BENCHMARK ELEVATIONS FOR THIS PROJECT WERE DERIVED USING THE NATIONAL GEODETIC SURVEY ONLINE POSITIONING USER SERVICE (O.P.U.S.) AND ARE REFERRED TO THE NAVD'88 DATUM.

TBM #30  
CURBED "X" ON NORTHWEST BOLT OF A FIRE HYDRANT, 35' EAST OF HURRICANE ROAD AND AT THE SOUTH ENTRANCE TO GOLF ACADEMY.  
ELEV.=762.85'



# DUNBAR DRIVE

(LOCAL STREET)



APPROVAL PENDING/NOT FOR CONSTRUCTION

**STOEPPELWERTH**

ALWAYS ON

7965 East 106th Street, Fishers, IN 46038-2905  
phone: 317.846.5905 fax: 317.846.5942

STREET PLAN & PROFILES

WINTERFIELD

SECTION 3

FRANKLIN

JOHNSON COUNTY, INDIANA

DRAWN BY: KJ/M/GEM

CHECKED BY: KR

SHEET NO.

**C403**

S & R A FORM NO. 100405FOR-S3

THIS DRAWING IS NOT INTENDED TO BE REPRESENTED AS A RETRACTION OR A REVISION OF ANY PREVIOUS SURVEY OR A SURVEYOR LOCATION REPORT.

CERTIFIED: 07/11/24

REVISIONS

DATE

MARK

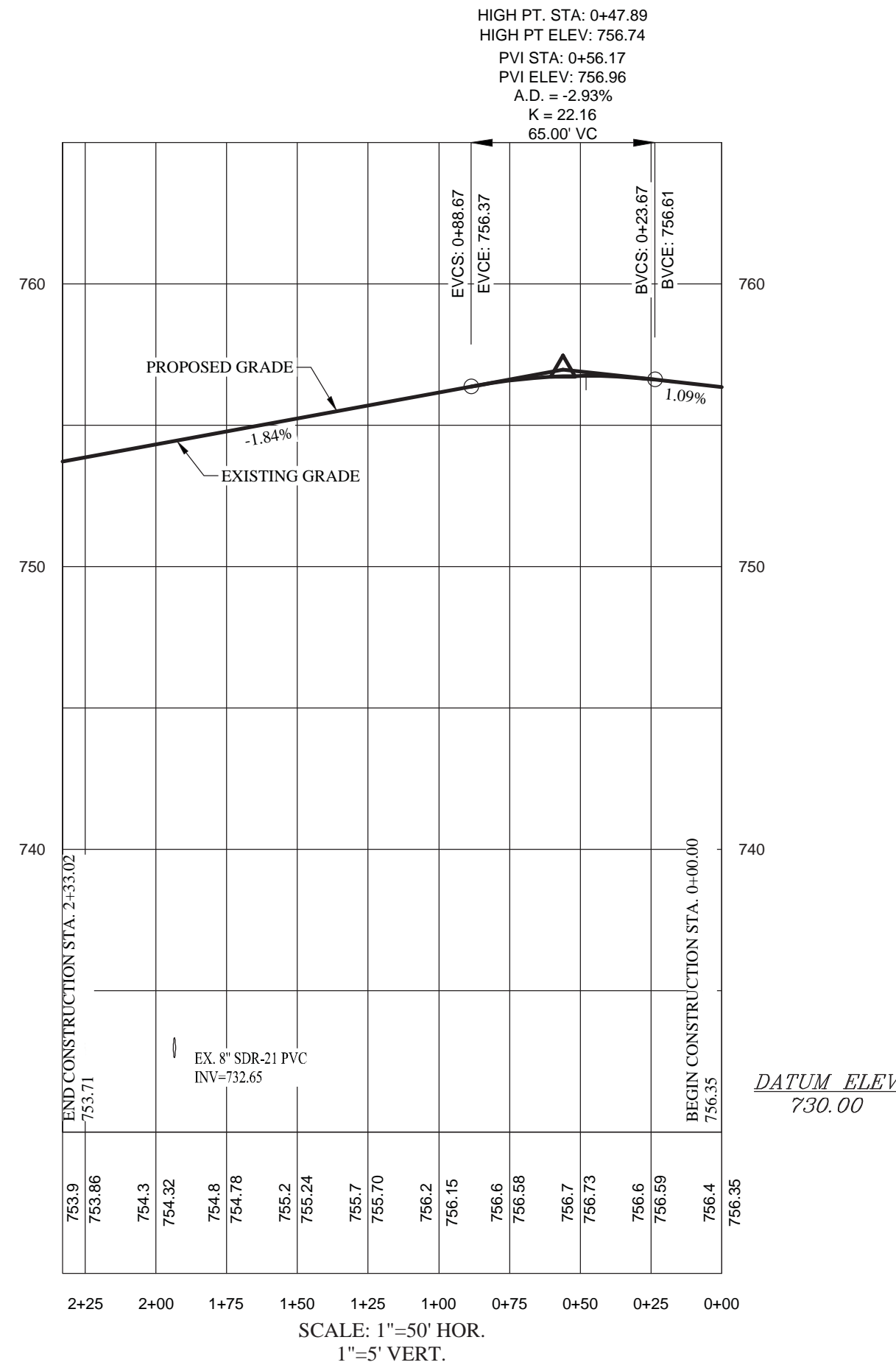
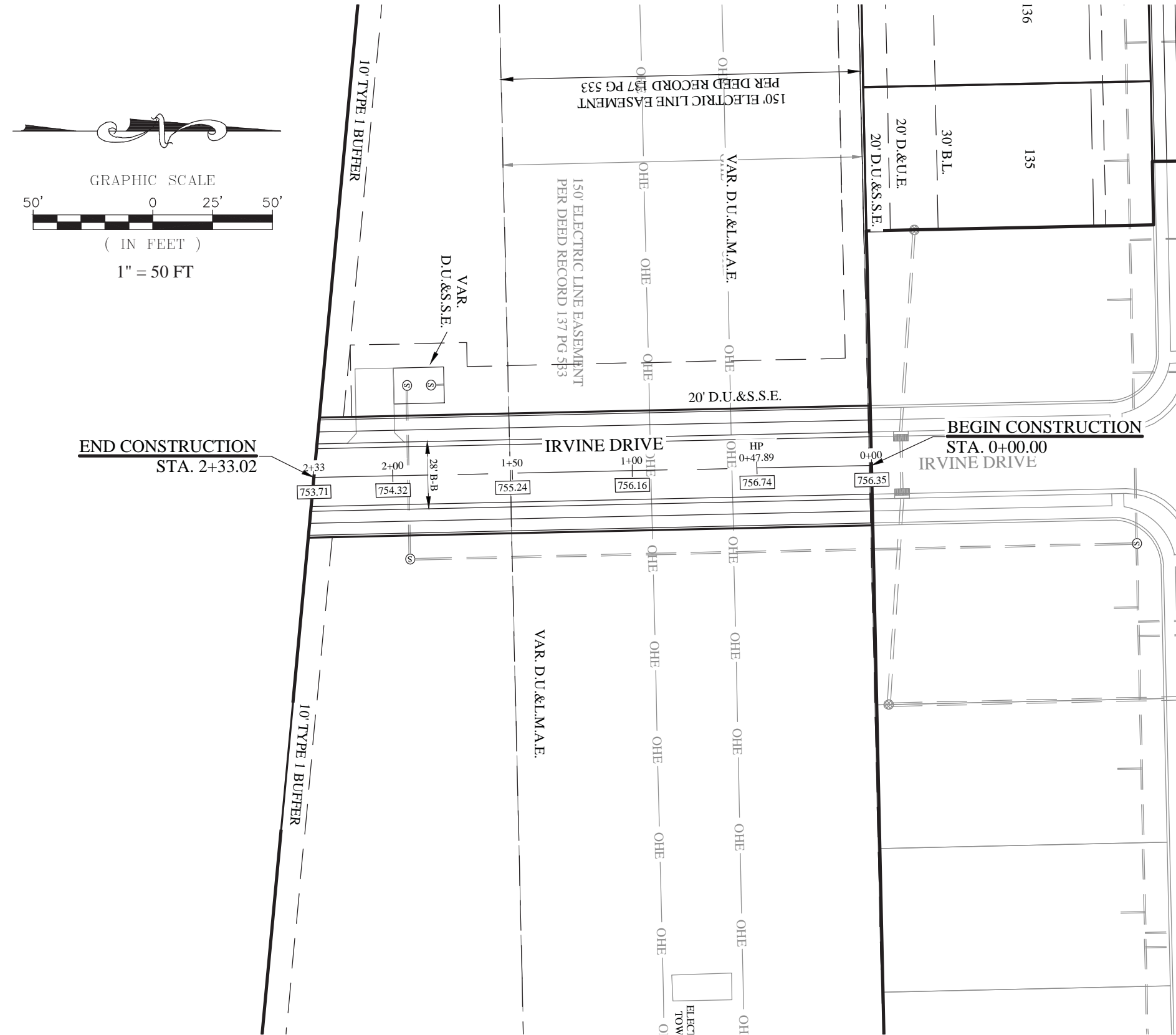
BY



- LEGEND
- EXISTING SANITARY SEWER
  - EXISTING STORM SEWER
  - PROPOSED SANITARY SEWER
  - PROPOSED STORM SEWER
  - PROPOSED WATER LINE

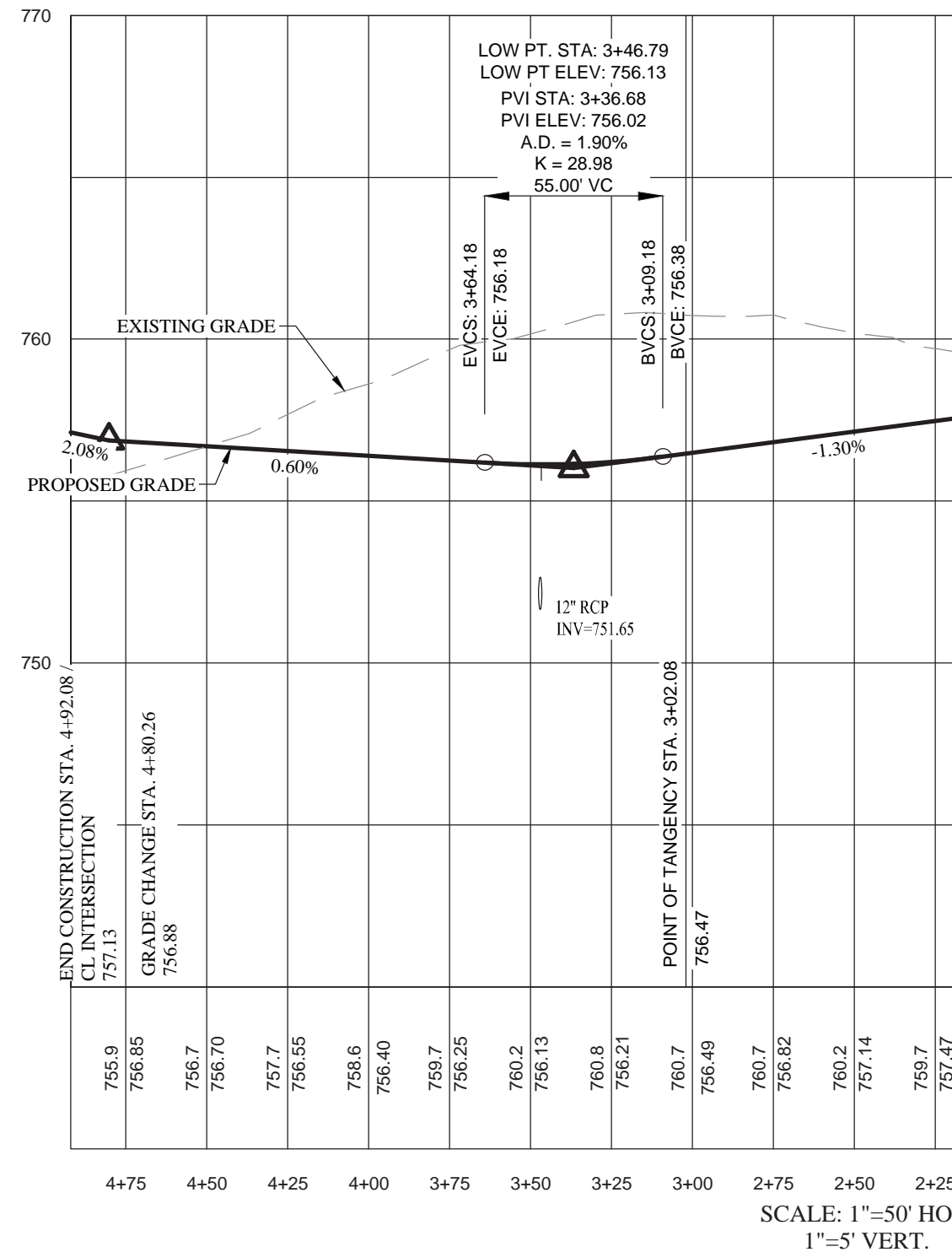
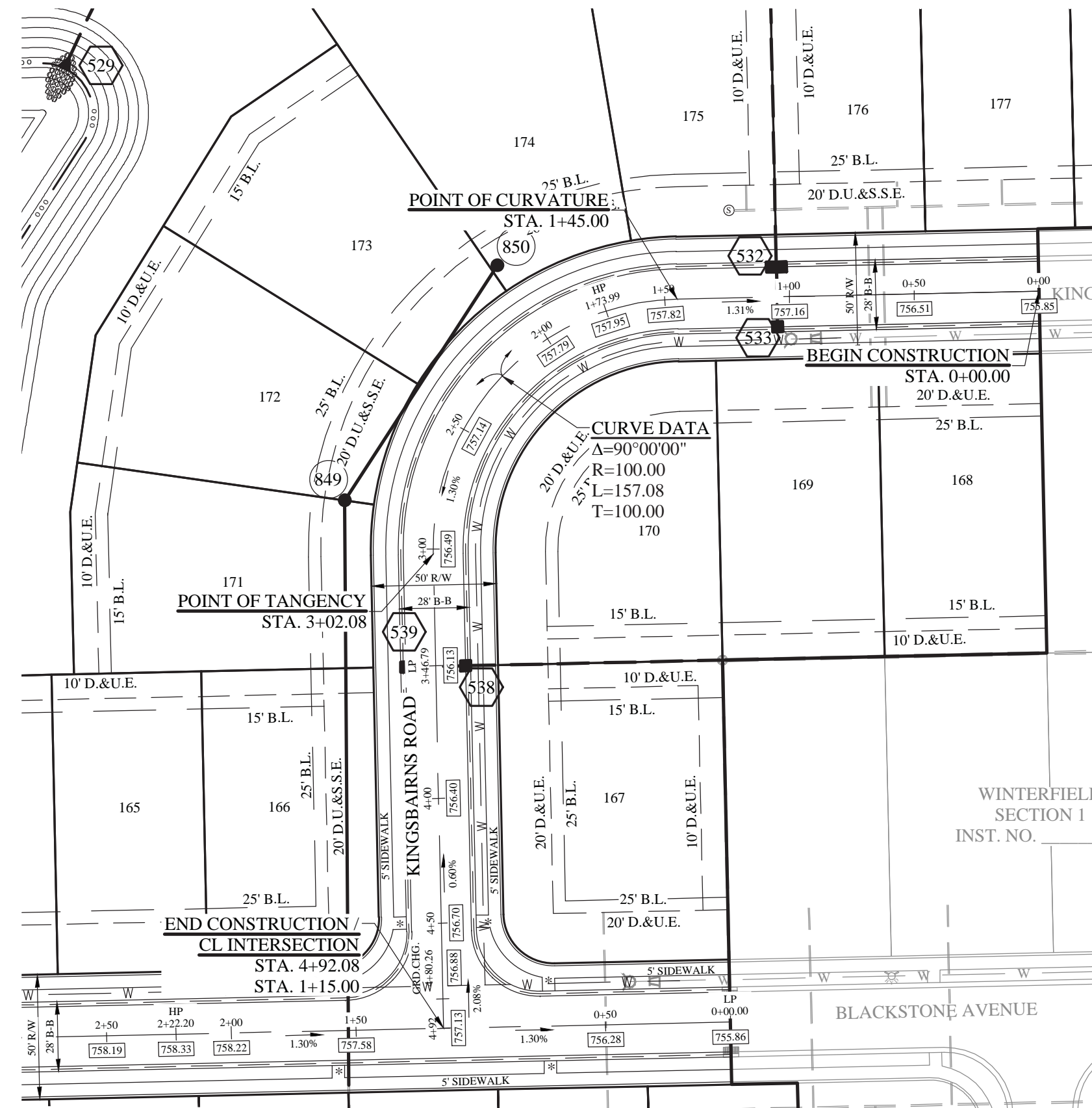
LEGEND	
BVCS	BEGIN VERTICAL CURVE STATION
BVCE	BEGIN VERTICAL CURVE ELEVATION
EVCS	END VERTICAL CURVE STATION
EVCE	END VERTICAL CURVE ELEVATION
AD	GRADE CHANGE
PVI	POINT OF VERTICAL INTERSECTION
VC	VERTICAL CURVE

BENCHMARK DATA	
ORIGINATING BENCHMARK	
BENCHMARK ELEVATIONS FOR THIS PROJECT WERE DERIVED USING THE NATIONAL GEODETIC SURVEY ONLINE POSITIONING USER SERVICE (O.P.U.S.) AND ARE REFERENCED TO THE NAVD '88 DATUM.	
TBM #30 CHISELED "X" ON NORTHWEST BOLT OF A FIRE HYDRANT, 35° EAST OF HURRICANE ROAD AND AT THE SOUTH ENTRANCE TO GOLF ACADEMY.	
ELEV = 762.85'	



## IRVINE DRIVE

(LOCAL STREET)



## KINGSBAIR ROAD

(LOCAL STREET)



STREET PLAN & PROFILES  
WINTERFIELD  
SECTION 3

JOHNSON COUNTY, INDIANA  
FRANKLIN

APPROVAL, PENDING/NOT FOR CONSTRUCTION

STOEPPELWERTH

ALWAYS ON

7965 East 106th Street, Fishers, IN 46038-2905  
phone: 317.846.5905 fax: 317.846.5942

DRAWN BY:  
KJMJ/GEM

CHECKED BY:  
KRG

SHEET NO.

C404

S.E.A. JOB NO.  
100405FOR-S3

THIS DRAWING IS NOT INTENDED TO BE REPRESENTED AS A RETRACEMENT OR SURVEY OR A SURVEYOR LOCATION REPORT.

CERTIFIED: 07/11/24

PROFESSIONAL ENGINEER

STATE OF INDIANA

PE#1200386

BRAD MILLER

REGISTERED

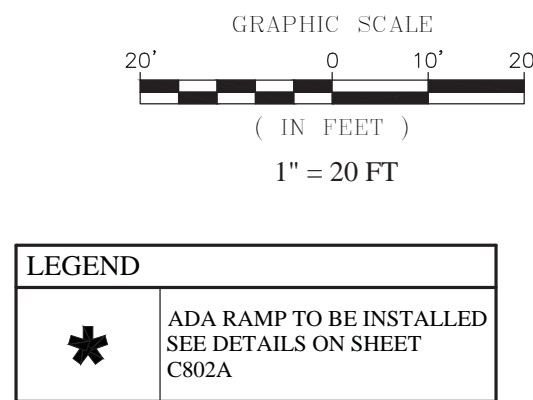
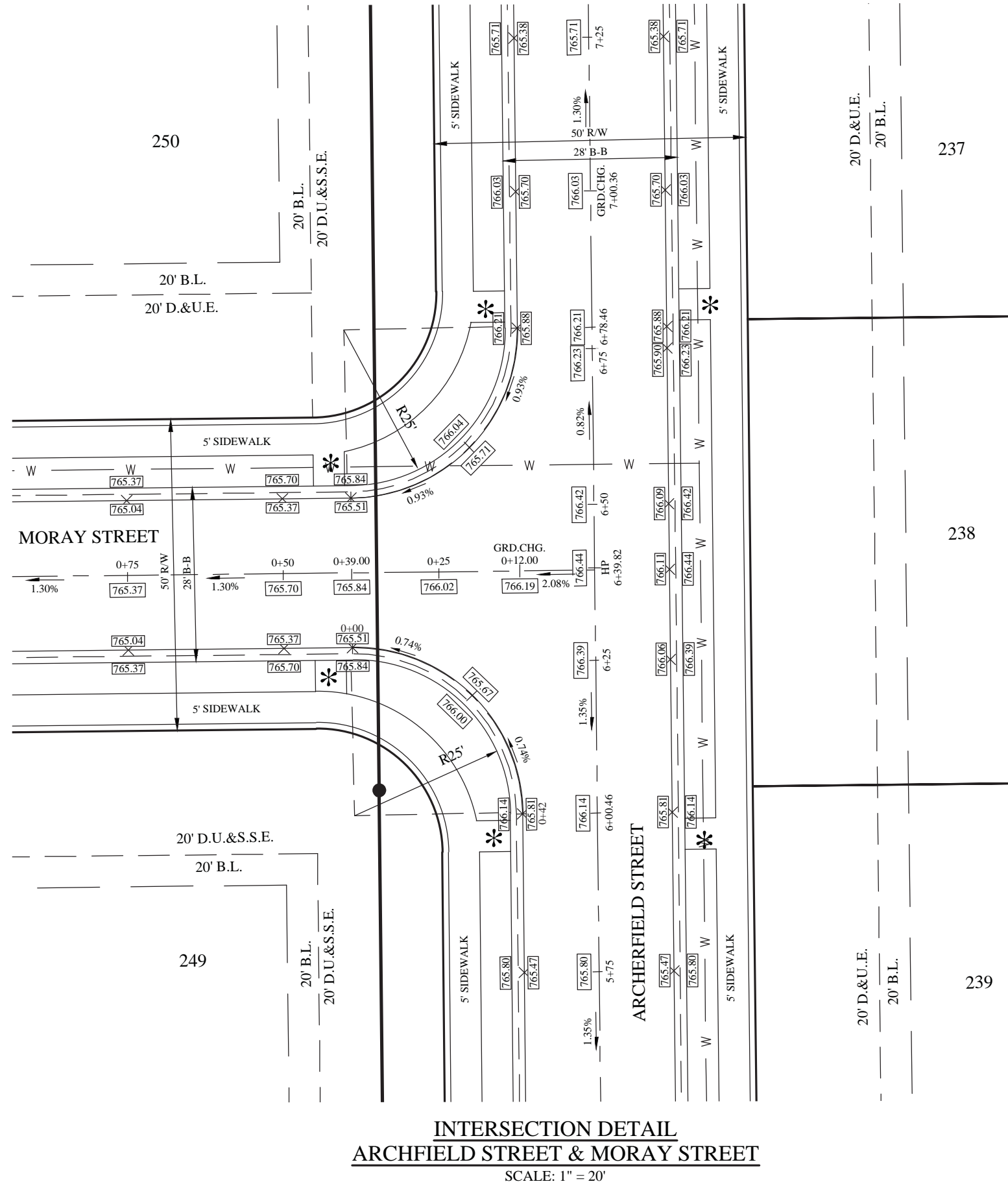
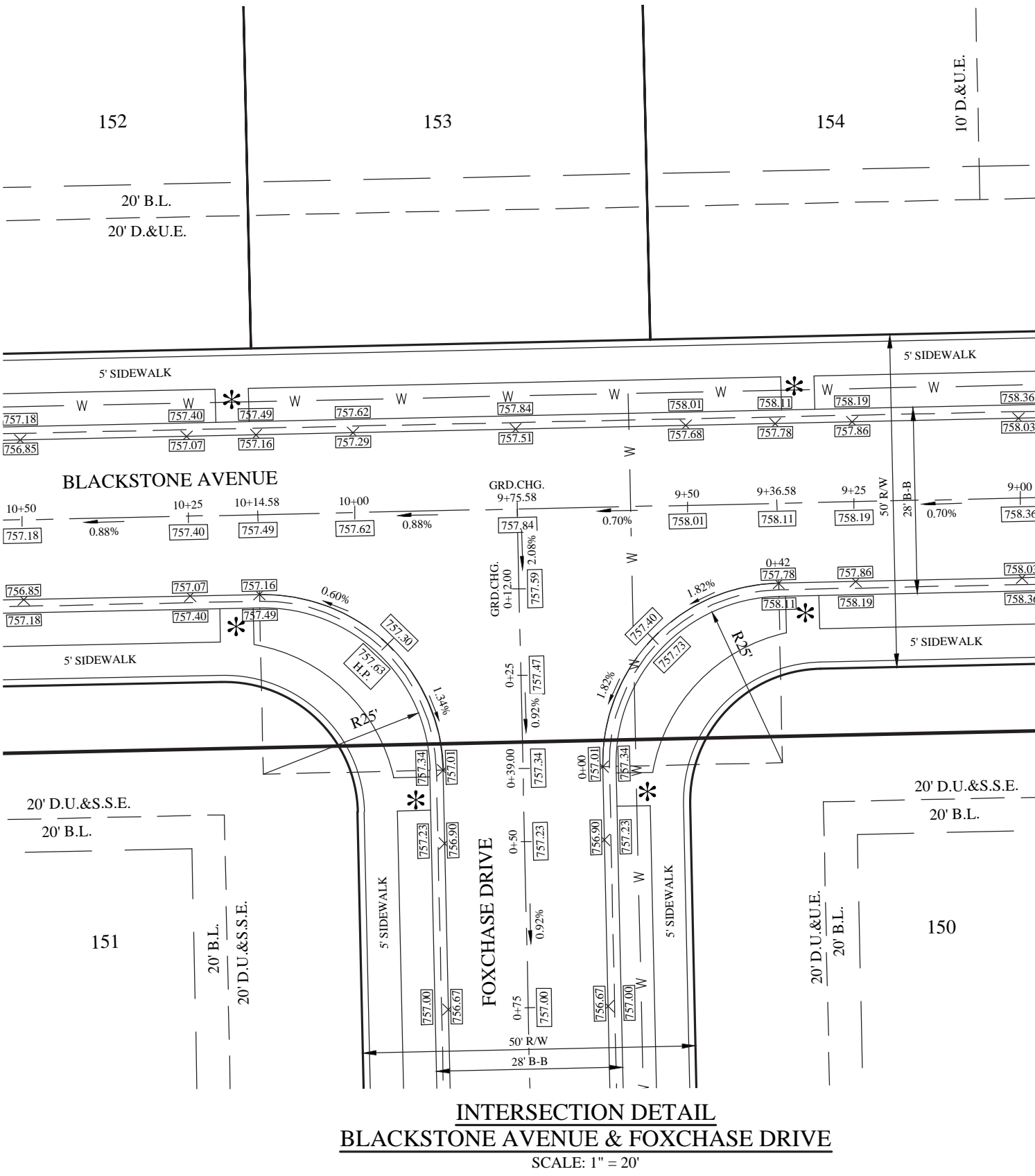
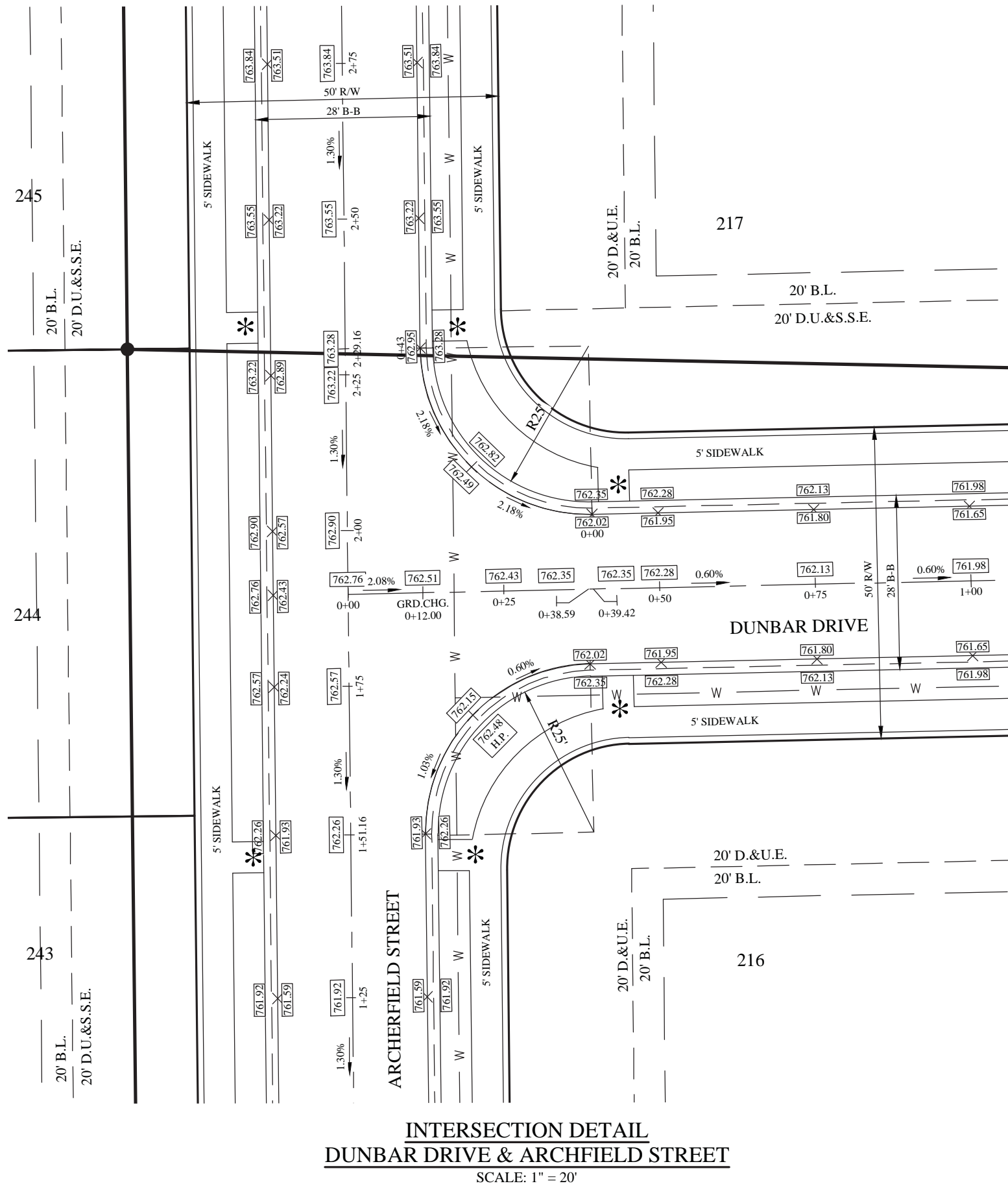
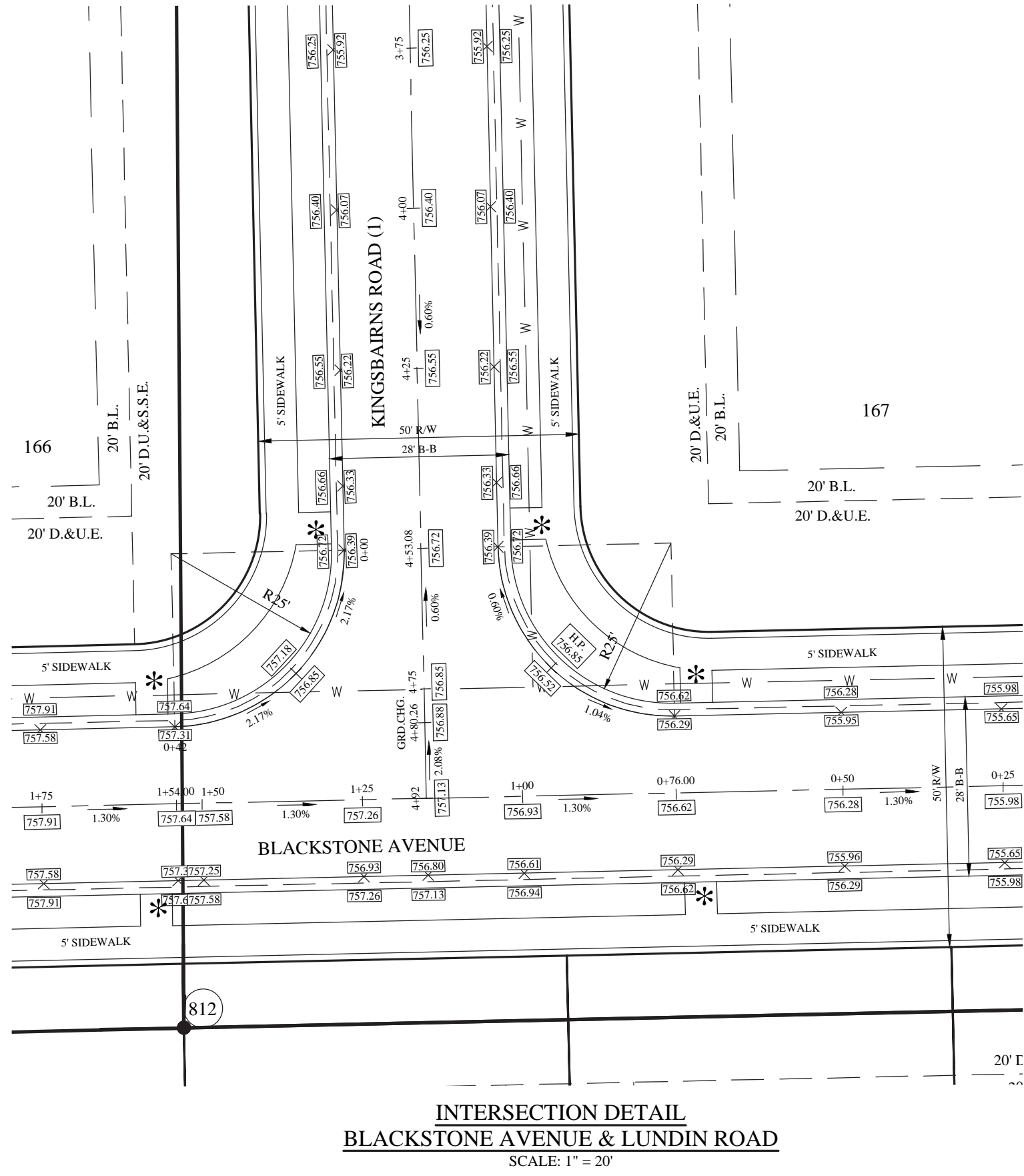
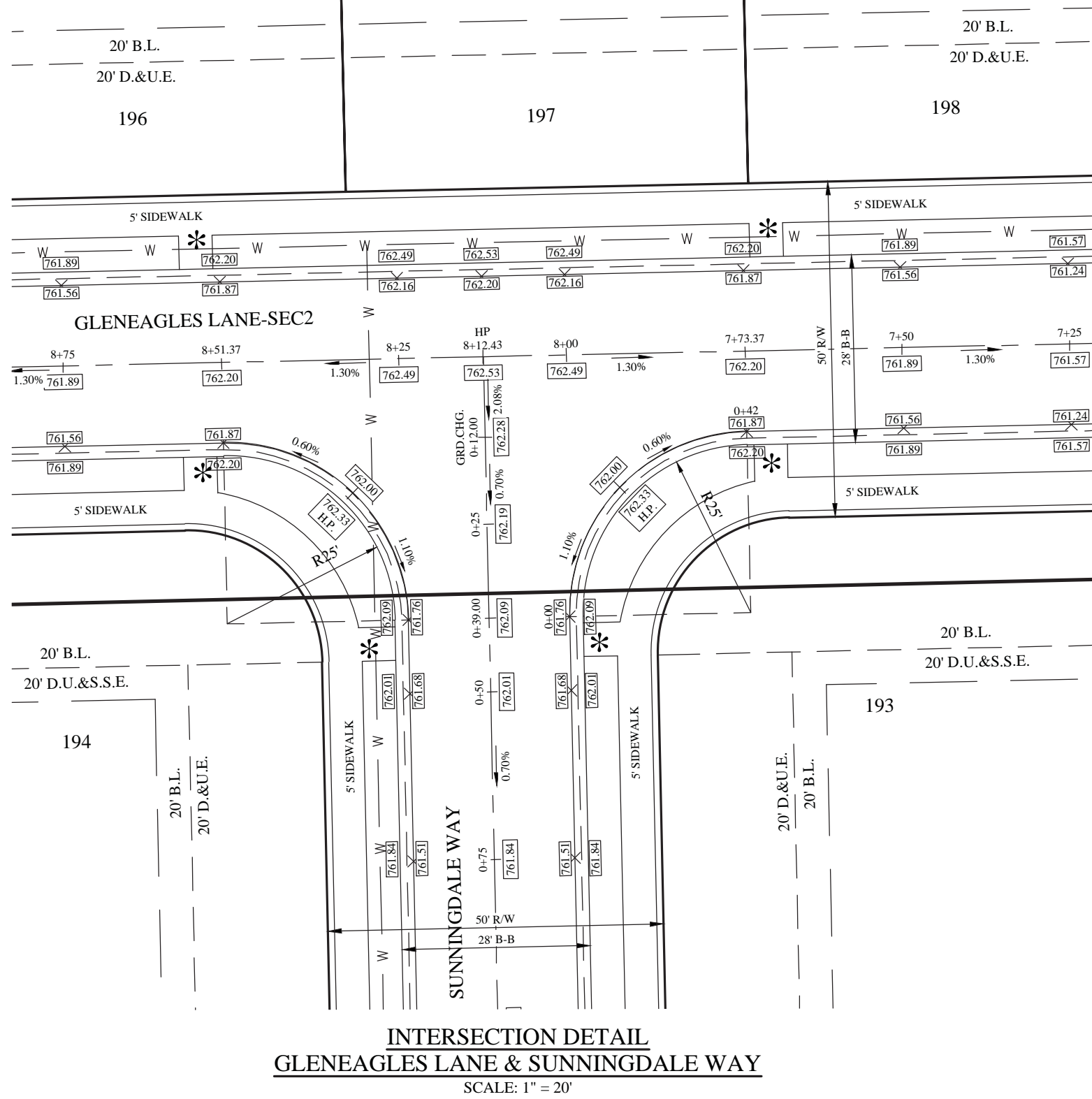
REVISIONS

DATE

MARK

BY





APPROVAL: PENDING/NOT FOR CONSTRUCTION

**STOEPPELWERTH**

ALWAYS ON

7965 East 106th Street, Fishers, IN 46038-2905  
phone: 317.846.5905 fax: 317.846.5942

INTERSECTION DETAILS

WINTERFIELD

SECTION 3

JOHNSON COUNTY, INDIANA

FRANKLIN

DRAWN BY: KJ/M/GEM

CHECKED BY: KRG

SHEET NO.

C405

S & R FOR NO. 100405FOR-S3

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SEAN MILLER, P.E.  
REGISTERED PROFESSIONAL ENGINEER  
No. PE1200386  
STATE OF INDIANA

CERTIFIED: 07/11/24

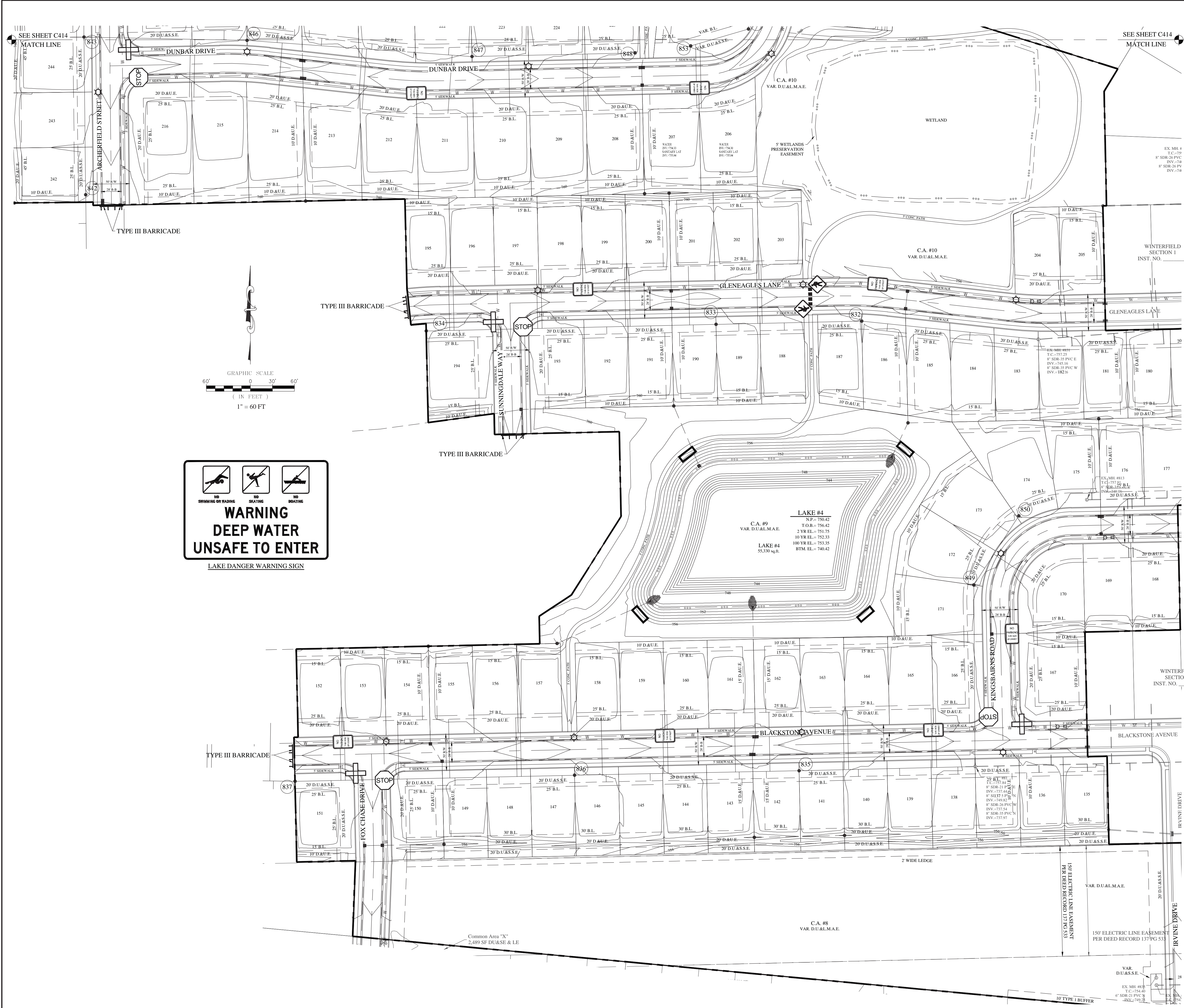
REVISIONS

DATE

MARK

BY





LEGEND		
	STREET NAME SIGN (D3-1)	5
	STOP SIGN (R1-1)	5
	"NO PARKING THIS SIDE OF STREET" (R7-1 MOD - SEE DETAIL, THIS SHEET)	11
	PEDESTRIAN TRAFFIC (W11-2)	2
	TYPE III BARRICADE	6
	STREET LIGHT	15
	LAKE DANGER WARNING SIGN	4

- NOTES**
- ALL TRAFFIC CONTROL SIGNS SHALL CONFORM TO CHAPTER 2 OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), CURRENT REVISION.
  - ALL STREET LIGHTING SHALL CONFORM TO JOHNSON COUNTY REMC GUIDELINES AND STANDARDS.
  - FIGURES FOR THIS SUBDIVISION SHALL BE "DECORATIVE STREET LIGHT - TRADITIONAL" USING 51 WATT LED BULBS.
  - ALL STREET SIGNS SHALL CONFORM TO CURRENT CITY STANDARDS (WHITE BACKGROUND, BLACK LETTERING, CITY SEAL INSTALLED WITH SPACER).
  - SEE SHEET C416 FOR SIGN DETAILS.

BENCHMARK DATA	
ORIGINATING BENCHMARK	
BENCHMARK ELEVATIONS FOR THIS PROJECT WERE DERIVED USING THE NATIONAL GEODETTIC SURVEY ONLINE POSITIONING USER SERVICE (O.P.U.S.) AND ARE REFERENCED TO THE NAVD 83 DATUM.	
BENCH MARK #30 CHISELED "X" ON NORTHWEST BOLT OF A FIRE HYDRANT, 35'± EAST OF HURRICANE ROAD AND AT THE SOUTH ENTRANCE TO GOLF ACADEMY.	
ELEV. -762.85'	

UTILITY CROSSINGS	
CONTRACTOR SHALL VERIFY DEPTHS OF ALL EXISTING ON-SITE UTILITIES PRIOR TO CONSTRUCTION TO CONFIRM THERE IS NOT ANY CONFLICTS WITH OTHER UTILITIES, STORM SEWERS OR STREETS. CONFLICTS AFTER CONSTRUCTION BEGINS ARE SOLELY THE CONTRACTOR'S RESPONSIBILITY.	

**CITY OF FRANKLIN SUBDIVISION CONTROL ORDINANCE SECTION 6.13 STREET SIGN STANDARDS**

- A. GENERAL STREET SIGN REQUIREMENTS:**  
STREET SIGNS, INCLUDING STREET NAME SIGNS, STOP SIGNS, "NO-PARKING" SIGNS, AND ALL OTHER APPROPRIATE REGULATORY SIGNS, SHALL BE INSTALLED BY THE SUBDIVIDER AT ALL LOCATIONS SPECIFIED ON THE APPROVED CONSTRUCTION PLANS AND OTHERWISE AS REQUIRED BY THE CITY ENGINEER.
- B. STREET SIGN INSTALLATION:**  
ALL STREET SIGNS SHALL BE INSTALLED PRIOR TO THE ACCEPTANCE OF THE SUBDIVISION'S STREETS BY THE BOARD OF PUBLIC WORKS & SAFETY.
- 1. TEMPORARY SIGNS:**  
THE SUBDIVIDER SHALL BE RESPONSIBLE FOR THE INSTALLATION AND MAINTENANCE OF TEMPORARY STREET AND TRAFFIC CONTROL SIGNS UNTIL THE PERMANENT SIGNS ARE INSTALLED AND ACCEPTED BY THE BOARD OF PUBLIC WORKS & SAFETY.
- 2. PERMITS:**  
AT HIS/HER DISCRETION, THE PLANNING DIRECTOR MAY WITHHOLD THE ISSUANCE OF IMPROVEMENT LOCATION PERMITS, INCLUDING THOSE FOR MODEL HOMES AND SPECULATIVE STRUCTURES, UNTIL APPROPRIATE PERMANENT OR TEMPORARY STREET SIGNS HAVE BEEN INSTALLED.
- C. STREET SIGN STANDARDS:**  
ALL STREET SIGN AND POST TYPES AND LOCATIONS SHALL CONFORM TO THE UNIFORM MANUAL OF TRAFFIC CONTROL DEVICES, APPLICABLE INDOT STANDARDS AND SPECIFICATIONS, THE REQUIREMENTS OF THE CITY ENGINEER, THE SPECIFICATIONS OF THE BOARD OF PUBLIC WORKS AND SAFETY, AND THE FOLLOWING:
- 1. SIGNPOSTS:**  
EACH SIGNPOST SHALL CONSIST OF A 2 INCH GALVANIZED TYPE A POST, 12 FEET LONG WITH A MINIMUM OF 3 FEET BELOW GRADE.
- a. STREET NAME SIGNPOST LOCATIONS:**  
STREET NAME SIGN POSTS SHALL BE LOCATED WITHIN THE STREET RIGHT-OF-WAY, NO CLOSER THAN 4 FEET FROM THE EDGE OF THE TRAVELED PORTION OF THE STREET.
- b. STOP SIGN SIGNPOST LOCATIONS:**  
STOP SIGN SIGNPOSTS SHALL BE LOCATED SO THAT THE EDGE OF THE SIGN IS A MINIMUM OF 2 FEET FROM THE EDGE OF THE TRAVELED PORTION OF THE STREET.
- c. SPEED LIMIT AND INFORMATIONAL SIGNPOST LOCATIONS:**  
SPEED LIMIT AND INFORMATION SIGN SIGNPOSTS SHALL BE LOCATED SO THAT THE EDGE OF THE SIGN IS A MINIMUM OF 2 FEET FROM THE BACK EDGE OF THE CURB (OR SHOULDER IF NO CURB IS PRESENT).
- d. SIDEWALK OBSTRUCTION PROHIBITED:**  
IN NO INSTANCE SHALL ANY SIGNPOST BE LOCATED IN OR OBSTRUCTING A SIDEWALK.
- 2. STREET NAME SIGNS:**  
EACH STREET NAME SIGN SHALL BE MADE OF WHITE REFLECTORIZED, DOUBLE-BLADE METAL WITH CITY SEAL AND SPACER AND 4 INCH OR LARGER BLACK LETTERS MOUNTED AT THE TOP OF THE POST WITH THE STREET NAME LABELED ON BOTH SIDES.
- 3. STOP SIGNS:**  
EACH STOP SIGN SHALL BE A MINIMUM OF 30 INCHES IN WIDTH AND HAVE A HIGH-INTENSITY FINISH. THERE SHALL BE A MINIMUM OF 7 FEET FROM THE TOP OF THE ADJACENT CURB TO THE BOTTOM OF THE SIGN.
- 4. SPEED LIMIT AND INFORMATION SIGNS:**  
SPEED LIMIT AND OTHER INFORMATION SIGNS SHALL BE A 24 INCH BY 30 INCH VERTICAL RECTANGLE WITH A HIGH-INTENSITY FINISH.



APPROVAL PENDING/NOT FOR CONSTRUCTION

**STOEPPELWERTH**

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STREET SIGN PLAN

WINTERFIELD SECTION 3

JOHNSON COUNTY, INDIANA

DRAWN BY: KJ/M/GEM  
CHECKED BY: KRK  
SHEET NO.

**C406**  
S & R FOR NO. 100405FOR-S3