HARMONY
SECTION ONE
CONSTRUCTION PLANS

SECTION 16, T18N, R3E
WASHINGTON TOWNSHIP
HAMILTON COUNTY, WESTFIELD, INDIANA

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

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C108	Storm Water Pollution Prevention Plan
C109–C111	Emergency Flood Routing/Ponding Plan
C201–C205	Street Plan & Profile
C301–C303	Street Entrance & Intersection Detail
C401–C405	Sanitary Sewer Plan & Profile
C501	Sanitary Force Main Plan & Profile
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C801–C805	General Site Details
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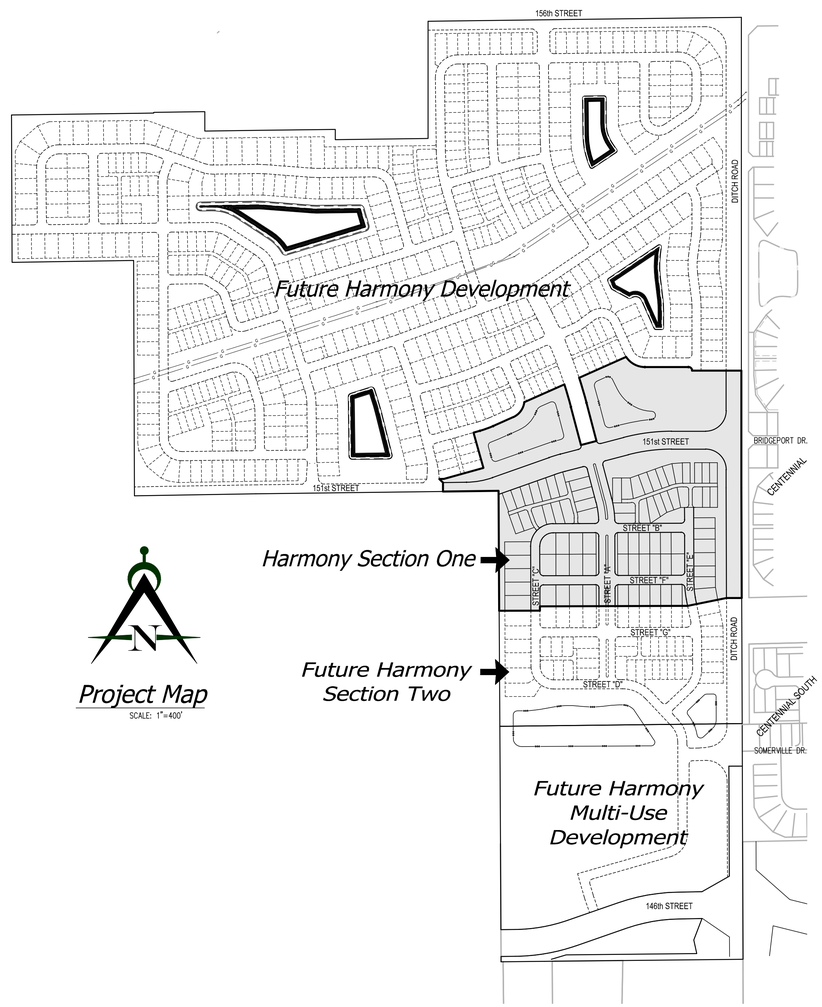
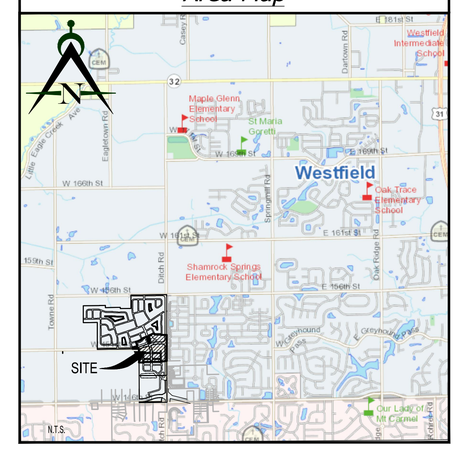
	Final Plat
	Overall ALTA Survey



Project Map
SCALE: 1"=400'

Area Map



Developer:

Estridge Development Management, LLC
12965 Old Meridian Street
Carmel, IN 46032
317-669-6209
Contact: Bryan Stumpf
Email: BryanStumpf@estridge.net

Engineer:

Innovative Engineering & Consulting, Inc.
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REVISIONS:

PREPARED FOR:
Estridge Development Management, LLC
12965 Old Meridian Street
Carmel, IN 46032
317-669-6209

Harmony Section One
Single Family Subdivision
Westfield, Indiana

PRELIMINARY
PENDING
AGENCY
APPROVAL

DATE:

DATE:	DRAWN BY: kwk
ISSUED:	CHECKED BY:
JOB NUMBER: 14102	
SHEET # C100	

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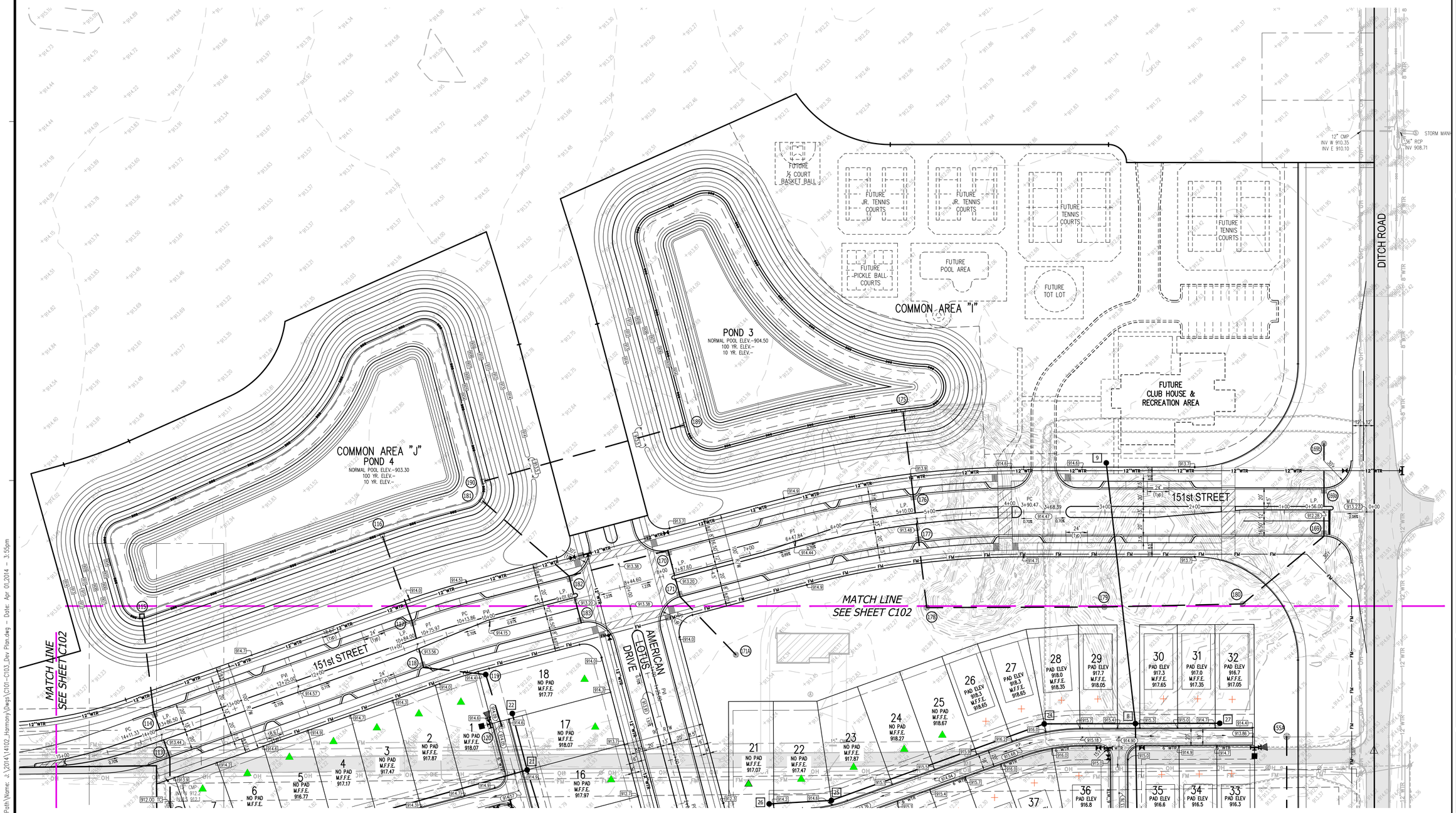
GRAPHIC SCALE
50' 0 25' 50'
(IN FEET)
1 inch = 50 ft.

ZONED: PUD – ORDINANCE 12-14
83 LOTS
DENSITY: 2.06 UNITS/AC.
TOTAL ACRES: 40.24 ac.±
PROVIDED OPEN SPACE: 15.14 ac.±

	Lot Size	Sec. 1	Sec. 2	Total
M	42'x90'Mews	15	0	15
+	42'x 90'	3	6	9
▲	50'x 110'	23	21	44
■	60'x 120'	25	13	38
●	75'x 120'	17	10	27
	Total	83	50	133

LEGEND

- Existing Storm Sewer
- New Storm Sewer
- Existing Sanitary Sewer
- New Sanitary Sewer
- W — New Water Main
- New Fire Hydrant
- Existing Contour
- Flow Arrow
- Swale Flowline
- W — New Water Main
- G — Existing Underground Gas Main
- W — Existing Water Main
- T — Existing Underground Fiber Optic Line
- Existing Flowline
- OH — Existing Overhead Utilities
- Existing Utility Pole



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Harmony Section One Single Family Subdivision

Westfield, Indiana

Development Plan

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- Existing Overhead Utilities
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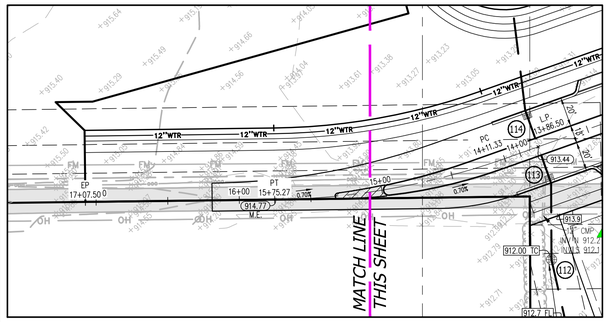

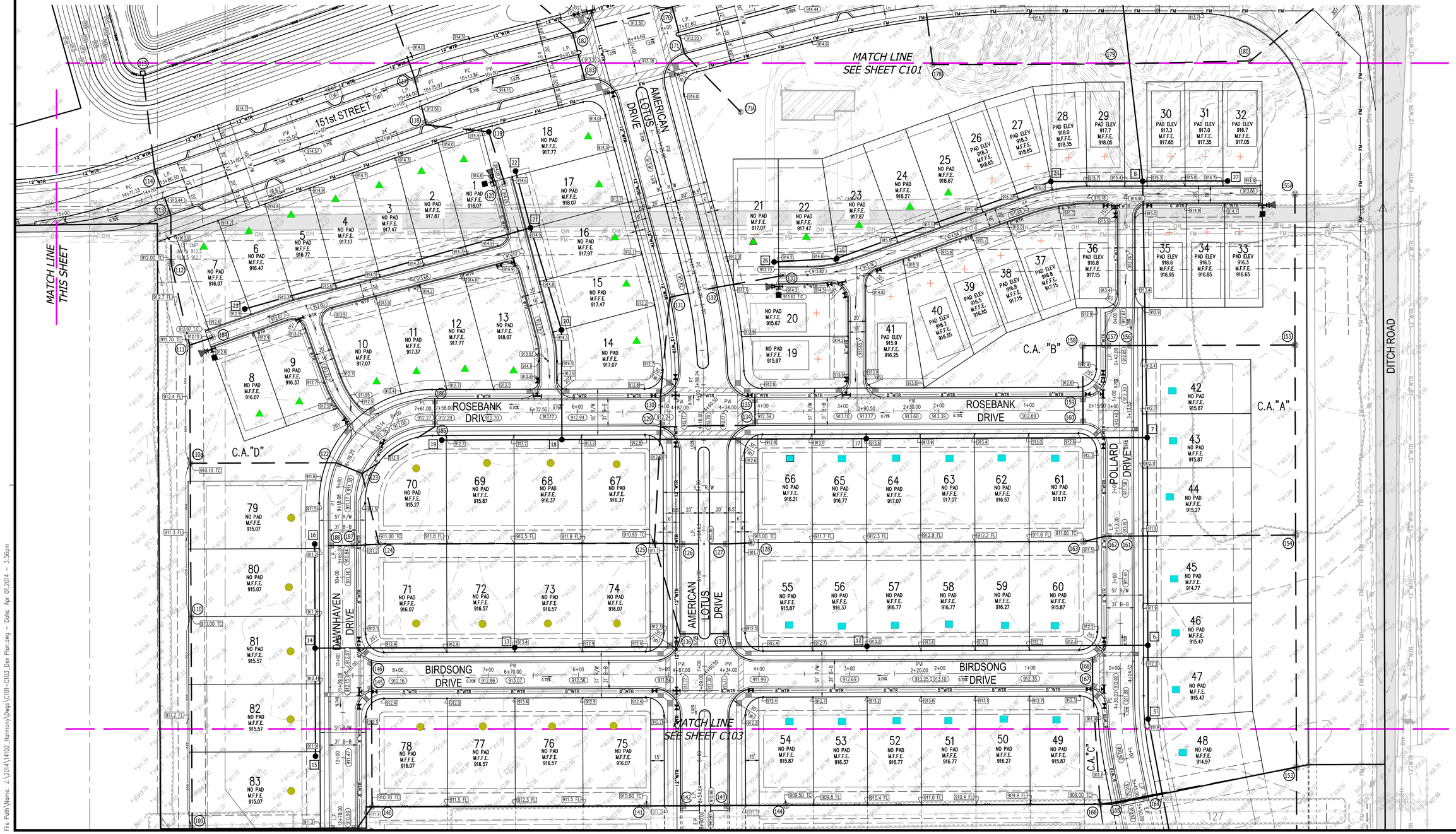

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Know what's below. Call before you dig.

BIRDSONG DRIVE
DAWNHAVEN DRIVE
FARMHOUSE DRIVE
AMERICANA DRIVE
LOTUS DRIVE
WATERLEAF DRIVE
POLLARD DRIVE
C.A."C"
C.A."N"
PORTYARD DRIVE
DITCH ROAD
MATCH LINE SEE SHEET C102
SECTION ONE
SECTION TWO
COMMON AREA "P"
COMMON AREA "Q"
POND 2
NORMAL POOL ELEV.=898.00
100 YR. ELEV.=909.5
10 YR. ELEV.=
COMMON AREA "O"
POND 1
NORMAL POOL ELEV.=903.00
100 YR. ELEV.=909.5
10 YR. ELEV.=
18" CMP (E) INV. = 898.59 (UNKNOWN CONNECTION)
SANITARY T.C. ELEV. 12" PVC (UNKNOWN CONNECTION)
STORM SEWER T.C. ELEV. 8" RCP (
12" CMP
12" CMP

GRAPHIC SCALE
50' 0 25' 50'
(IN FEET)
1 inch = 50 ft.

LEGEND

- Existing Storm Sewer
- New Storm Sewer
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●	75'x 120'	17	10	27
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Carmel, IN 46032
317-669-6209

Harmony Section One Single Family Subdivision

Westfield, Indiana

Development Plan

PRELIMINARY PENDING AGENCY APPROVAL

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SHEET # C103

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THE CONTRACTOR, OWNER AND/OR THEIR DESIGNATED AGENTS SHALL ASSUME FULL RESPONSIBILITY FOR ENSURING SITE CONSTRUCTION ON THIS PROJECT IS COMPLETED IN FULL CONFORMANCE WITH THE REQUIREMENTS OF 327 IAC 15-5 (RULE 5).

CONSTRUCTION TIMETABLE

BEGIN EROSION CONTROL PRACTICE INSTALLATION:
PROJECT CONSTRUCTION START DATE:
MASS EARTHWORK COMPLETION DATE:

PROJECT NARRATIVE

BUILD FIRST PHASE OF A SINGLE FAMILY SUBDIVISION CONSISTING OF 80 LOTS

EROSION CONTROL NOTES

1. INSTALL SILT FENCE PERIMETER SEDIMENT CONTROL BARRIER PRIOR TO BEGINNING ON-SITE EARTH MOVING ACTIVITIES.
2. INSPECT PERIMETER SILT FENCE PERIODICALLY AND AFTER EACH RAINFALL AND REPAIR AND REPLACE AS REQUIRED. SEDIMENT DEPOSITS TO BE REMOVED WHEN AT A MAXIMUM OF ONE-THIRD OF FENCE HEIGHT.
3. SILT FENCE PERIMETER SEDIMENT BARRIER TO REMAIN IN PLACE UNTIL SUCH TIME AS ALL DISTURBED AREAS OF SITE HAVE BEEN STABILIZED.
4. TRACKING OF SEDIMENT ONTO ABUTTING ROAD SYSTEM SHALL BE PREVENTED TO THE GREATEST EXTENT POSSIBLE. VEHICLES SHALL BE CLEANED OF MUD AND DEBRIS AS REQUIRED TO PREVENT TRACKING. MUD AND DEBRIS WHICH IS TRACKED ONTO THE ROAD SYSTEM SHALL BE REMOVED BY SCRAPING AND/OR SWEEPING AND PLACED IN A PROTECTED AREA.
5. ANY DISTURBED AREA THAT IS PLANNED TO BE LEFT UNCHANGED FOR MORE THAN 15 DAYS IS TO BE TEMPORARY SEEDED AND MULCHED.
6. NO SEDIMENT BARRIERS ARE TO BE REMOVED UNTIL ALL UPSTREAM AREAS HAVE BEEN STABILIZED.
7. ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUIRED BY STATE, COUNTY OR CITY OFFICIALS IF FIELD CONDITIONS WARRANT.
8. ALL EROSION CONTROL PRACTICES SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE INDR INDIANA STORM WATER QUALITY MANUAL AND THE SCS FIELD OFFICE TECHNICAL GUIDE.
9. ALL SOIL REMOVED FROM THE SITE IS TO BE TAKEN TO A PERMITTED SITE WITH ADEQUATE EROSION CONTROL MEASURES IN PLACE.

EROSION CONTROL SEQUENCE

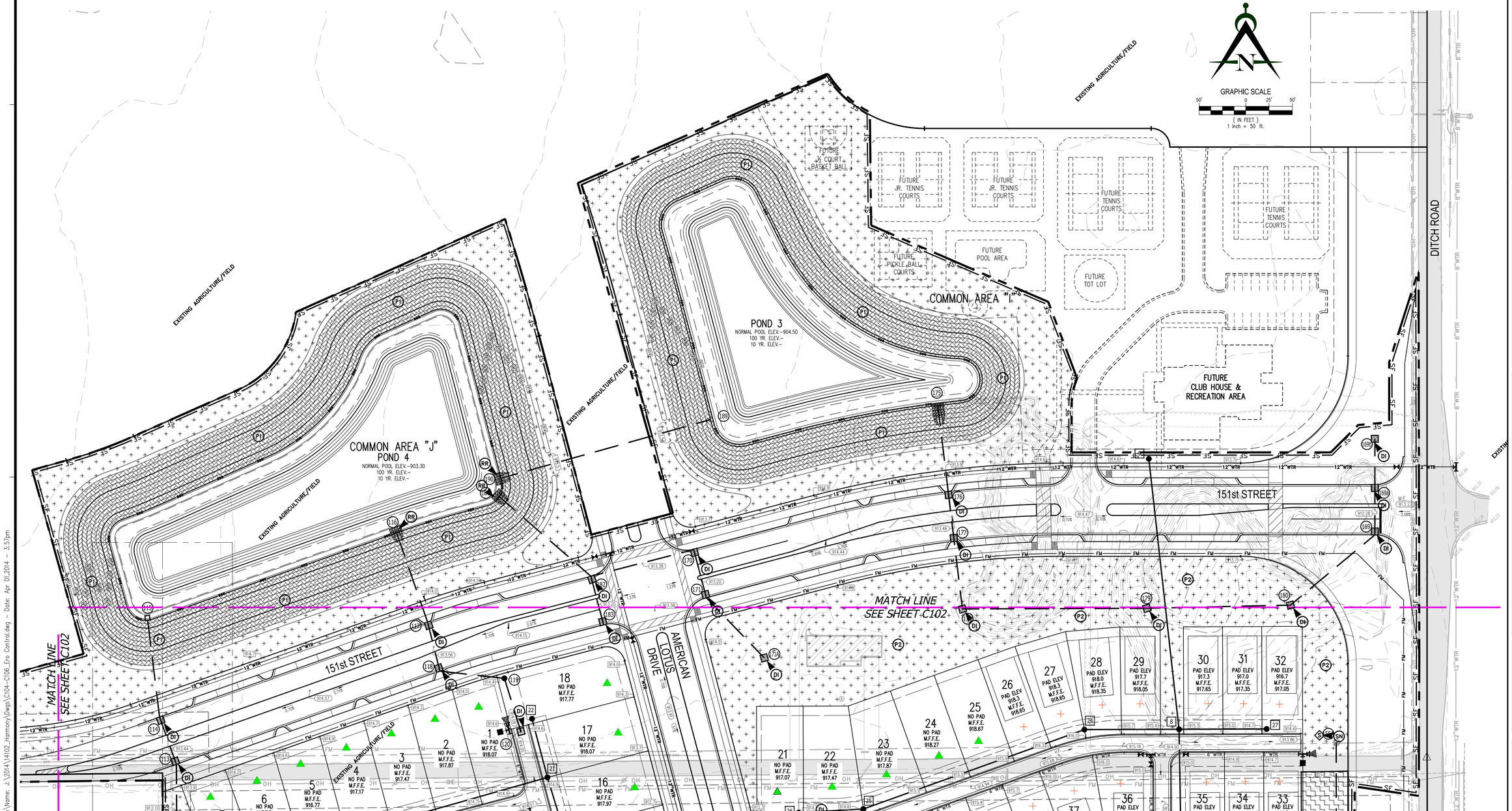
1. INSTALL TEMPORARY CONSTRUCTION ENTRANCE.
2. POST CONTRACTOR AND OWNER INFORMATION AT SITE ENTRANCE.
3. CONTACT IDEM AT (317) 233-1864 & BOONE COUNTY SOIL AND WATER CONSERVATION SERVICE & THE TOWN OF WHITESTOWN FORTY-EIGHT HOURS PRIOR TO THE BEGINNING OF CONSTRUCTION.
4. CALL THE INDIANA UNDERGROUND PLANT PROTECTION SYSTEMS, INC. AT 811 OR 1-800-382-5544 TO CHECK THE LOCATION OF EXISTING UTILITIES. THEY SHOULD BE NOTIFIED TWO WORKING DAYS BEFORE CONSTRUCTION TAKES PLACE.
5. INSTALL PERIMETER SILT FENCE PROTECTION.
6. BEGIN MASS EARTH WORK. CONSTRUCT POND AND ROAD SUBGRADE.
7. INSTALL STORM SEWER & DRAINAGE SWALES AS DEPICTED ON THE APPROVED CONSTRUCTION PLANS . INSTALL SEDIMENT CONTROL BARRIERS AND EROSION CONTROL BLANKETS PER THIS PLAN AND DETAIL SHEETS.
8. COMPLETE ROAD IMPROVEMENTS AND ROUGH GRADING OF THE REMAINING SITE.
9. FINISH GRADE REMAINDER OF SITE.
10. INSTALL PERMANENT AND TEMPORARY SEEDING PER THIS PLAN AND SEASONAL SOIL PROTECTION CHART.
11. GENERAL CONTRACTOR SHALL TEMPORARY SEED AND MULCH ANY DISTURBED AREA THAT IS PLANNED TO REMAIN UNCHANGED FOR A PERIOD OF MORE THAT 15 DAYS.

EROSION CONTROL LEGEND

CONSTRUCTION LIMITS	
ROCK DONUT BARRIER TRAP	RD
SILT FENCE SEDIMENT BARRIER (Nutec 3 NWS-6 OR EQUAL)	SF
CONCRETE WASHOUT	CW
PERMANENT SEEDING WITH EROSION CONTROL BLANKETS (NORTH AMERICAN GREEN SC-150 OR EQUAL)	P1
PERMANENT SEEDING WITH STRAW MULCH AT 1.5-2 TONS/ACRE	P2
TEMPORARY SEED WITH ANNUAL RYE GRASS	P3
RIP RAP STONE	RR
DROP INLET PROTECTION	DI
TEMPORARY CONSTRUCTION DRIVE	CD
NOTIFICATION SIGN	NS

LEGEND

- Existing Storm Sewer
- New Storm Sewer
- Existing Sanitary Sewer
- Existing Contour
- New Pavement Grade
- All Other Finish Grades
- Swale Grade (E)
- Storm Structure Number
- Flow Arrow
- Swale Flowline
- Existing Trees
- Existing Gas Main
- Existing Telephone
- Existing Water Main
- Existing Flowline
- Existing Overhead Utilities
- Existing Fire Hydrant
- Existing Water Valve
- Utility & Drainage Esmt.
- Building Setback Line



REVISIONS:

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PREPARED FOR:
Estridge
Estridge Development Management, LLC
12965 Old Meridian Street
Carmel, IN 46032
317-669-6209

Harmony Section One Single Family Subdivision

Westfield, Indiana

Erosion Control Plan

PRELIMINARY PENDING AGENCY APPROVAL

DATE:

DATE:	DRAWN BY: kwk
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JOB NUMBER: 14102	
SHEET # C104	

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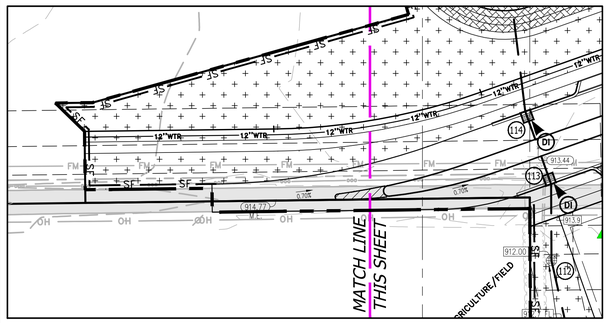

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GRAPHIC SCALE
50' 0 25' 50'
(IN FEET)
1 inch = 50 ft.

EROSION CONTROL NOTES

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EROSION CONTROL LEGEND

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	DROP INLET PROTECTION	DI
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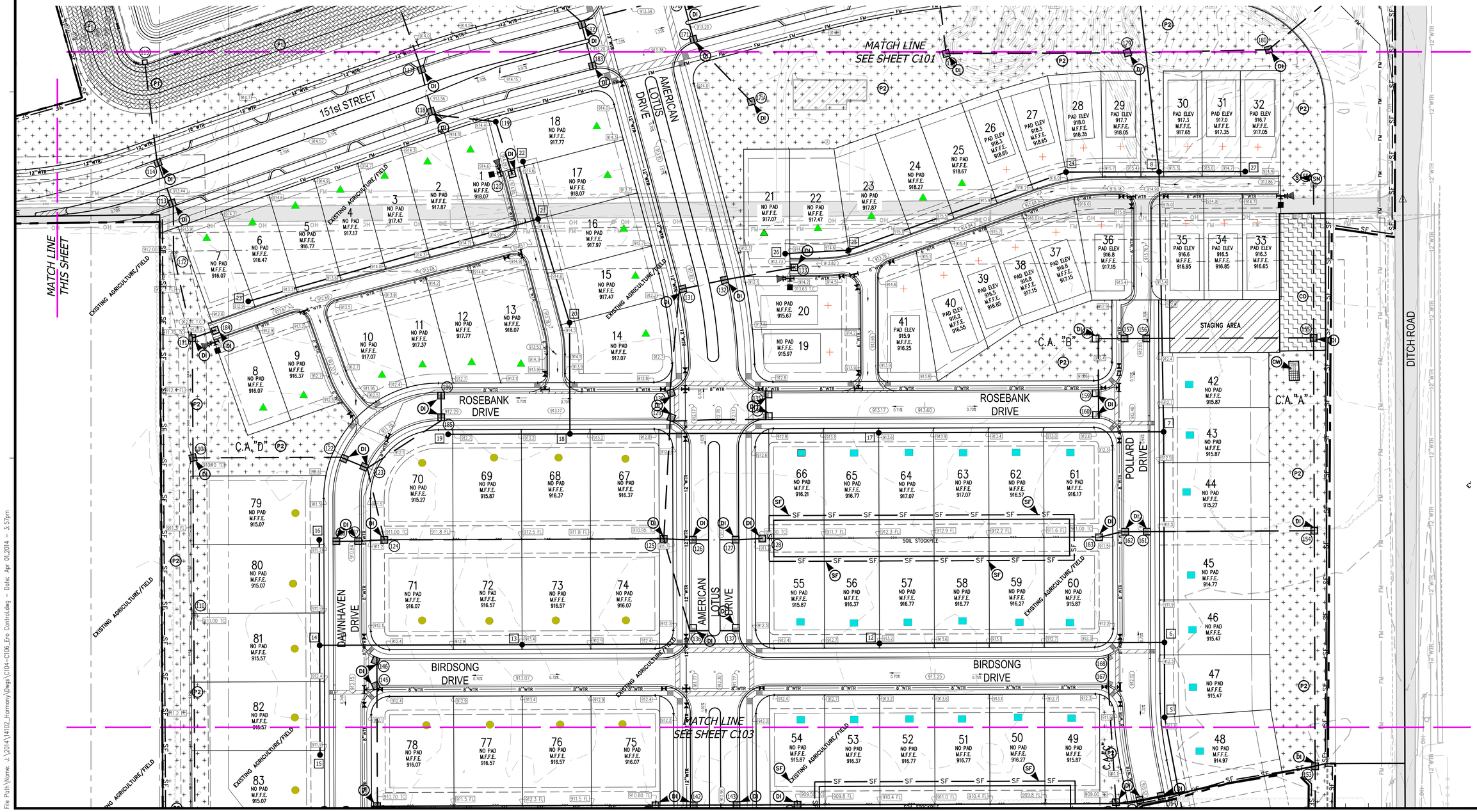

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Harmony Section One
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GENERAL NOTE

THE PROVIDED CONSTRUCTION SEQUENCE IS INTENDED AS A GENERAL GUIDELINE ONLY; THE ACTUAL CONSTRUCTION SEQUENCE MAY BE VARIED BY THE CONTRACTOR AS REQUIRED BY FIELD CONDITIONS, PROVIDED FULL CONFORMANCE WITH THE INTENT OF 327 IAC 15-5 (RULE 5), GENERAL PERMIT FOR CONSTRUCTION ACTIVITY STORM WATER RUNOFF CONTROL, IS ACHIEVED. CONTRACTOR SHALL NOTIFY INNOVATIVE ENGINEERING & CONSULTING, INC., BOONE COUNTY SURVEYOR'S OFFICE AND THE TOWN OF WHITESTOWN PLANNING STAFF PRIOR TO ANY CHANGES IN THE GENERAL CONSTRUCTION SEQUENCE.

THE CONTRACTOR, OWNER AND/OR THEIR DESIGNATED AGENTS SHALL ASSUME FULL RESPONSIBILITY FOR ENSURING SITE CONSTRUCTION ON THIS PROJECT IS COMPLETED IN FULL CONFORMANCE WITH THE REQUIREMENTS OF 327 IAC 15-5 (RULE 5).

EROSION CONTROL NOTES

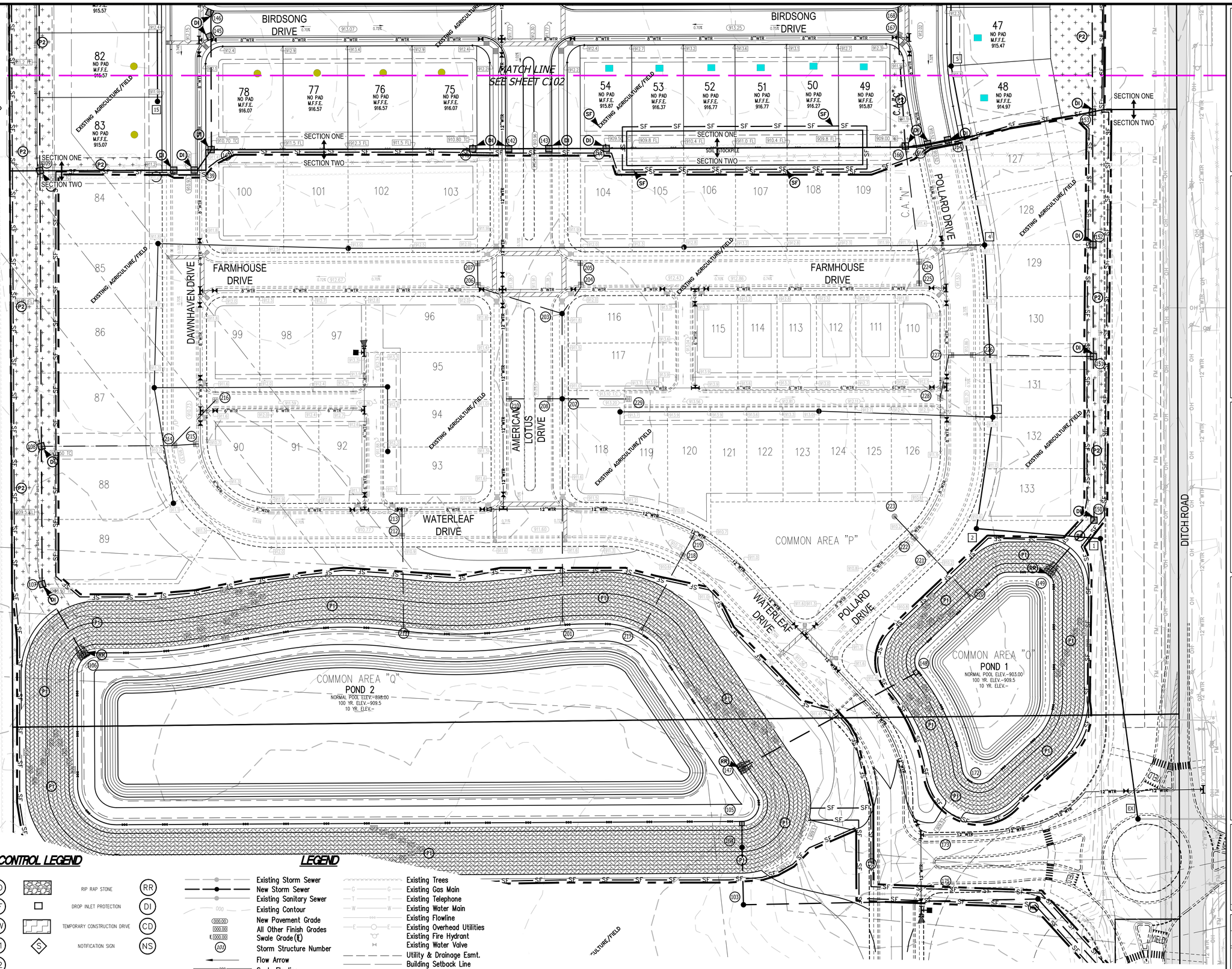
1. INSTALL SILT FENCE PERIMETER SEDIMENT CONTROL BARRIER PRIOR TO BEGINNING ON-SITE EARTH MOVING ACTIVITIES.
2. INSPECT PERIMETER SILT FENCE PERIODICALLY AND AFTER EACH RAINFALL AND REPAIR AND REPLACE AS REQUIRED. SEDIMENT DEPOSITS TO BE REMOVED WHEN AT A MAXIMUM OF ONE-THIRD OF FENCE HEIGHT.
3. SILT FENCE PERIMETER SEDIMENT BARRIER TO REMAIN IN PLACE UNTIL SUCH TIME AS ALL DISTURBED AREAS OF SITE HAVE BEEN STABILIZED.
4. TRACKING OF SEDIMENT ONTO ABUTTING ROAD SYSTEM SHALL BE PREVENTED TO THE GREATEST EXTENT POSSIBLE. VEHICLES SHALL BE CLEANED OF MUD AND DEBRIS AS REQUIRED TO PREVENT TRACKING. MUD AND DEBRIS WHICH IS TRACKED ONTO THE ROAD SYSTEM SHALL BE REMOVED BY SCRAPING AND/OR SWEEPING AND PLACED IN A PROTECTED AREA.
5. ANY DISTURBED AREA THAT IS PLANNED TO BE LEFT UNCHANGED FOR MORE THAN 15 DAYS IS TO BE TEMPORARY SEEDED AND MULCHED.
6. NO SEDIMENT BARRIERS ARE TO BE REMOVED UNTIL ALL UPSTREAM AREAS HAVE BEEN STABILIZED.
7. ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUIRED BY STATE, COUNTY OR CITY OFFICIALS IF FIELD CONDITIONS WARRANT.
8. ALL EROSION CONTROL PRACTICES SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE INDR INDIANA STORM WATER QUALITY MANUAL AND THE SCS FIELD OFFICE TECHNICAL GUIDE.
9. ALL SOIL REMOVED FROM THE SITE IS TO BE TAKEN TO A PERMITTED SITE WITH ADEQUATE EROSION CONTROL MEASURES IN PLACE.

CONSTRUCTION TIMETABLE

BEGIN EROSION CONTROL PRACTICE INSTALLATION:
PROJECT CONSTRUCTION START DATE:
MASS EARTHWORK COMPLETION DATE:

PROJECT NARRATIVE

BUILD FIRST PHASE OF A SINGLE FAMILY SUBDIVISION CONSISTING OF 80 LOTS



EROSION CONTROL LEGEND

	CONSTRUCTION LIMITS				
	ROCK DONUT BARRIER TRAP	RD		RIP RAP STONE	RR
SF	SILT FENCE SEDIMENT BARRIER (Nutec 3 NWS-6 OR EQUAL)	SF		DROP INLET PROTECTION	DI
	CONCRETE WASHOUT	CW		TEMPORARY CONSTRUCTION DRIVE	CD
	PERMANENT SEEDING WITH EROSION CONTROL BLANKETS (NORTH AMERICAN GREEN SC-150 OR EQUAL)	P1	S	NOTIFICATION SIGN	NS
	PERMANENT SEEDING WITH STRAW MULCH AT 1.5-2 TONS/ACRE	P2			
	TEMPORARY SEED WITH ANNUAL RYE GRASS	P3			

LEGEND

Existing Storm Sewer	Existing Trees
New Storm Sewer	Existing Gas Main
Existing Sanitary Sewer	Existing Telephone
Existing Contour	Existing Water Main
New Pavement Grade	Existing Flowline
All Other Finish Grades	Existing Overhead Utilities
Swale Grade (℄)	Existing Fire Hydrant
Storm Structure Number	Existing Water Valve
Flow Arrow	Utility & Drainage Esmt.
Swale Flowline	Building Setback Line

Innovative Engineering & Consulting, Inc.
755 W. Carmel Drive
Suite 207
Carmel, IN 46032
317-669-6236
1-800-866-6922
Fax: 317-574-4238

REVISIONS:

PREPARED FOR:
Estridge
Estridge Development Management, LLC
12965 Old Meridian Street
Carmel, IN 46032
317-669-6209

Harmony Section One
Single Family Subdivision
Westfield, Indiana
Erosion Control Plan

PRELIMINARY PENDING AGENCY APPROVAL

DATE:

DATE:	DRAWN BY: kwk
ISSUED:	CHECKED BY:

JOB NUMBER: 14102

SHEET # C106

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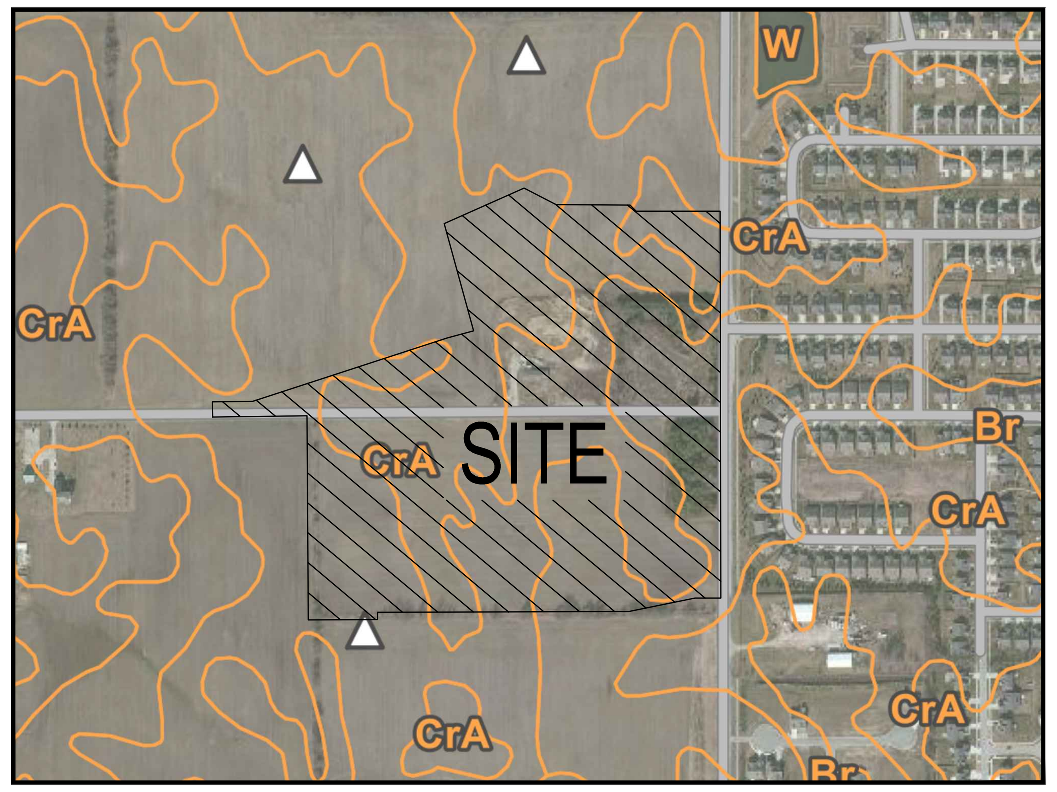
EROSION CONTROL SCHEDULE

EROSION CONTROL MEASURE	INSTALLATION SEQUENCE	✱ MAINTENANCE
STONE ENTRANCE	PRIOR TO CLEARING AND GRADING	AS NEEDED
SILT FENCE	PRIOR TO CLEARING AND GRADING	WEEKLY, AFTER STORM EVENTS AND AS NEEDED
EXISTING INLET PROTECTION	PRIOR TO CLEARING AND GRADING	WEEKLY, AFTER STORM EVENTS AND AS NEEDED
TREE PROTECTION	PRIOR TO CLEARING AND GRADING	WEEKLY, AFTER STORM EVENTS AND AS NEEDED
TEMPORARY DIVERSIONS	ALONG WITH ROUGH GRADING	WEEKLY, AFTER STORM EVENTS AND AS NEEDED
TEMPORARY SEEDING	AFTER ROUGH GRADING	WATER AS NEEDED
PERMANENT SEEDING	AFTER FINISH GRADING	WATER AS NEEDED
EROSION CONTROL MATTING	AFTER FINISH GRADING	WEEKLY, AFTER STORM EVENTS AND AS NEEDED
STRAW BALES	AFTER FINISH GRADING	WEEKLY, AFTER STORM EVENTS AND AS NEEDED
INLET PROTECTION	AFTER EACH INLET IS PLACED	WEEKLY, AFTER STORM EVENTS AND AS NEEDED
SEED, SOD & LANDSCAPE AROUND UNITS FINISHED	AFTER FINISHED GRADING AROUND FINISHED UNITS	WATER AS NEEDED
REMOVAL OF STRAW BALES	AFTER ALL AREAS DRAINING TO THESE AREAS ARE STABILIZED	N/A
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

✱ – SEE CHART FOR MAINTENANCE REQUIREMENTS



SOILS MAP

SOIL DESCRIPTIONS:

Bs BROOKSTON SILTY CLAY LOAM

SOME OF THIS SOIL IS IN LARGE TRACTS WITHIN WHICH ARE IRREGULARLY SHAPED ISLAND LIKE AREAS OF LIGHTER COLORED SOILS, AND SOME OF IT IS IN DRAINAGE WAYS AND SMALL DEPRESSIONS SURROUNDED BY LIGHTER COLORED SOILS. THE CONTENT OF ORGANIC MATTER IS HIGH IN THIS SOIL. WETNESS IS THE MAIN LIMITATION THAT AFFECTS USE AND MANAGEMENT.

CrA CROSBY SILT LOAM, 0 TO 3% SLOPES

THIS SOIL IS IN LARGE CONTINUOS AREAS OR SMALL TO LARGE ISLAND LIKE AREAS THAT ARE INTERMINGLED WITH OR SURROUNDED BY POORLY DRAINED SOILS. THE AREAS ARE COMMONLY 10 TO 40 ACRES IN SIZE AND ARE IRREGULAR IN SHAPE. PERMEABILITY IS SLOW IN THIS SOIL. RUNOFF IS SLOW. WHERE SLOPES ARE OVER 2 PERCENT, EROSION IS A HAZARD. WETNESS IS THE MAIN LIMITATION IN USE AND MANAGEMENT.

MmB2 MIAMI SILT LOAM 0 TO 6% SLOPES

THIS SOIL IS IN TRACTS BETWEEN NEARLY LEVEL SOILS OF UPLANDS AND STEEPER SOILS ADJACENT TO OUTWASH PLAINS AND BOTTOM LANDS. ALSO ON SIDES OF NATURAL DRAINAGE WAYS AND IN ISLAND LIKE AREAS AT SLIGHTLY HIGHER ELEVATION SURROUNDED BY SOMEWHAT POORLY DRAINED SOILS. RUNOFF IS MEDIUM; ORGANIC MATTER IS MODERATE. FURTHER EROSION IS A HAZARD IN USE AND MANAGEMENT.

	SOIL CONDITION Wet	Norm	Dry	Shade Tolerance	Close Mowing to 2–3 1/2inches	Tromping Tolerance	Fertility Needs	Winter Hardiness	Flooding Tolerance (days)	Mature Height (inches)	Emergence Time (days)	Salt Tolerance Gen.	Soil	Spray
Creeping Red Fescue Festuca rubra	2	1	2	1	1	1	Med.	1	20–25	12–18	7–21			S
Kentucky Bluegrass Poa pratinsis	2	1	2	1	1	1	Med.	1	25–35	12–18	10–20			MT
Tall Fescue Festuca L arundinacea	2	1	1	1	1	1	Low	1	24–35	24–36	5–14		T	
Perennial Ryegrass Lolium perenne	2	1	2	–	1	2	Med–High	2	15–20	12–18	5–10		MT	
Crownvetch Coronilla varia	–	1	1	2	–	–	Low	1	5–10	24	14–21	T		
Red Clover Trifolium pratense	–	1	–	2	–	–	Med.	1	7–10	18	5–10	S	S	

Ranking:
1 Good
2 Medium
– Not tolerant

Salt Tolerance (to both soil salts & spray):
T = Tolerance
MT = Medium Tolerance
S = Slight Tolerance

FIGURE 5–4

Seedbed Preparation

Apply lime to raise the pH to the level needed for species being seeded. Apply 23 pounds of 12–12–12 analysis fertilizer (or equivalent) per 1000 sq. ft. (approximately 1000 pounds per acre) or fertilize according to test. Application of 150 lbs. of ammonium nitrate on areas low in organic matter and fertility will greatly enhance vegetative growth.

Work the fertilizer and lime into the soil to a depth of 2–3 inches with a harrow, disk or rake operated across the slope as much as possible.

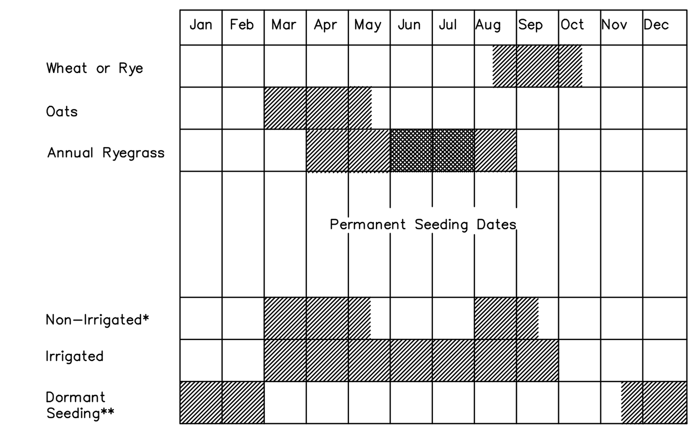
Seeding

Select a seed mixture based on projected use of the area (Figure 5–2), while considering best seeding dates. See Figure 5–3 this sheet. If tolerances are a problem, such as salt tolerance of seedings adjacent to streets and highways, see Figure 5–4 this sheet before final selection.

Figure 5–2: Permanent Seed Mixtures

Species	Seeding Rate lbs/acre	lbs/1000 sq. ft.	Suitable pH	Site Suitability* Droughty	well Drained	Wet
Level and Sloping, Open Areas						
1. Tall Fescue	35	.8	5.5–8.3	2	1	2
2. Tall Fescue / Red Clover**	25 / 5	.6 / .12	5.5–8.3		1	
3. Kentucky Bluegrass / Creeping Red Fescue	15 / 15	.4 / .4	5.5–7.5	2	1	
Steep Banks and Cuts						
4. Tall Fescue / Kentucky Bluegrass	15 / 25	.4 / .6	5.8–7.5	2	1	2
5. Tall Fescue / Emerald Crownvetch**	35 / 10	.8 / .25	5.5–8.3	2	1	
Lawns and High Maintenance Areas						
6. Kentucky Bluegrass / Creeping Red Fescue	40 / 40	.9 / .9	5.8–7.5	2	1	
7. Perennial Ryegrass (Turf Type)	170	4.0	5.0–7.5		1	
8. Tall Fescue	170	4.0	5.5–8.3	2	1	2

* 1 – Preferred 2 – Will Tolerate ** Inoculate with specific Inoculants.



Irrigation needed during this period. To control erosion at times other than in the shaded areas, use mulch.

* Late summer seeding dates may be extended 5 days if mulch is applied.

** Increase seeding application by 50%.

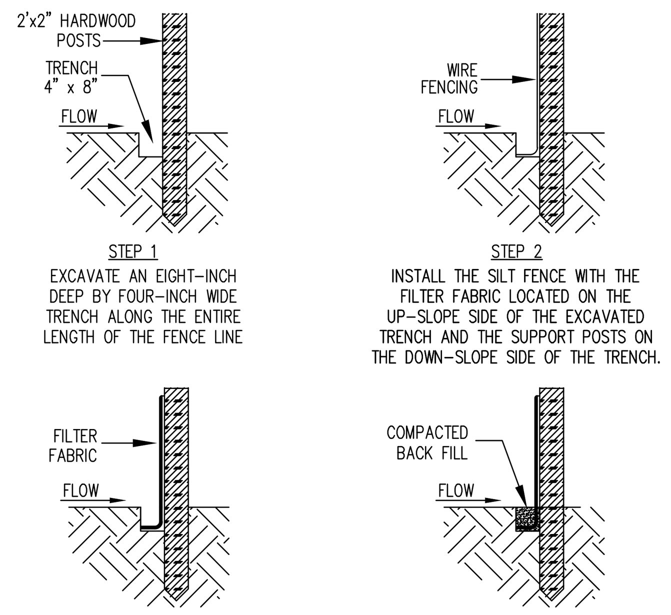
FIGURE 5–3

Temporary Seedings

Kind of Seed	1000 Sq. Ft.	Acre	Remarks
Wheat or Rye	3.5 lbs.	2 bu.	Cover seed 1" to 1 1/2" deep
Spring Oats	2.3 lbs.	3 bu.	Cover seed 1" deep
Annual Ryegrass	1 lb.	40 lbs.	Cover seed 1/4" deep*

* Not necessary where mulch is applied.

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



STEP 1
EXCAVATE AN EIGHT–INCH DEEP BY FOUR–INCH WIDE TRENCH ALONG THE ENTIRE LENGTH OF THE FENCE LINE

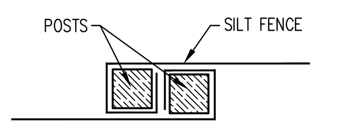
STEP 2
INSTALL THE SILT FENCE WITH THE FILTER FABRIC LOCATED ON THE UP–SLOPE SIDE OF THE EXCAVATED TRENCH AND THE SUPPORT POSTS ON THE DOWN–SLOPE SIDE OF THE TRENCH.

STEP 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.

STEP 4
BACKFILL THE TRENCH WITH SOIL MATERIAL AND COMPACT IT IN PLACE.

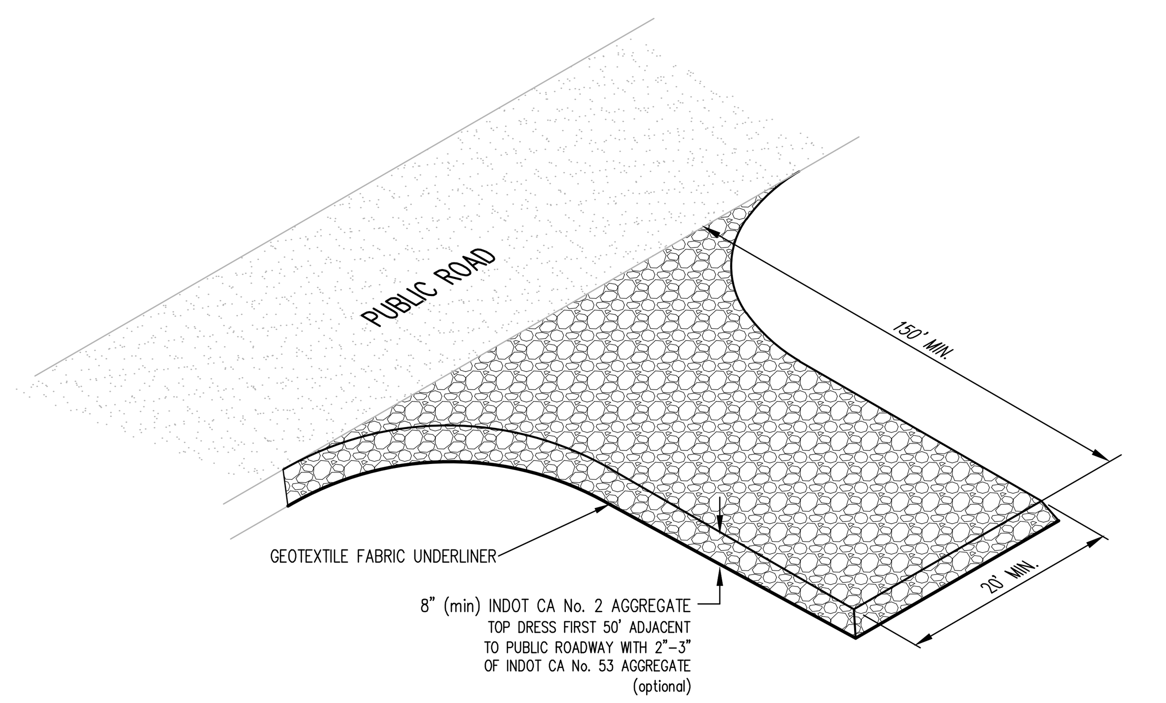
NOTE:
1. 2"x2" HARDWOOD SUPPORT POSTS SPACED 8 FT APART IF FENCE IS SUPPORTED BY WIRE; 6 FT APART IF EXTRA–STRENGTH FABRIC IS USED WITHOUT SUPPORT WIRE.
2. SUPPORT WIRE TO BE USED IF RECOMMENDED BY MANUFACTURER.
3. STEEL FENCE POST MAY BE SUBSTITUTED FOR HARDWOOD POSTS (STEEL POST SHOULD HAVE PROJECTIONS FOR FASTENING FABRIC).

SILT FENCE INSTALLATION DETAIL
N.T.S.

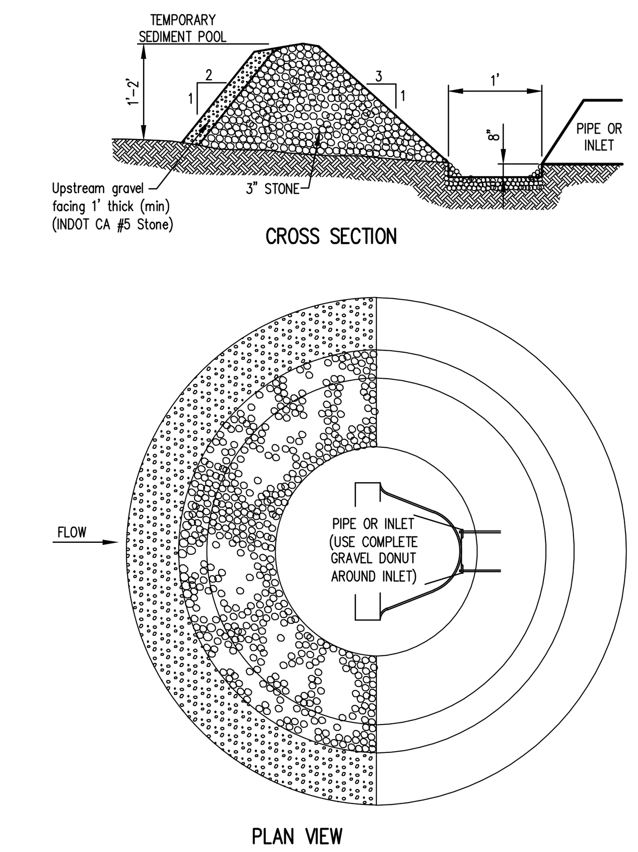


WRAP JOINT METHOD TO JOIN THE ENDS OF TWO SILT FENCES

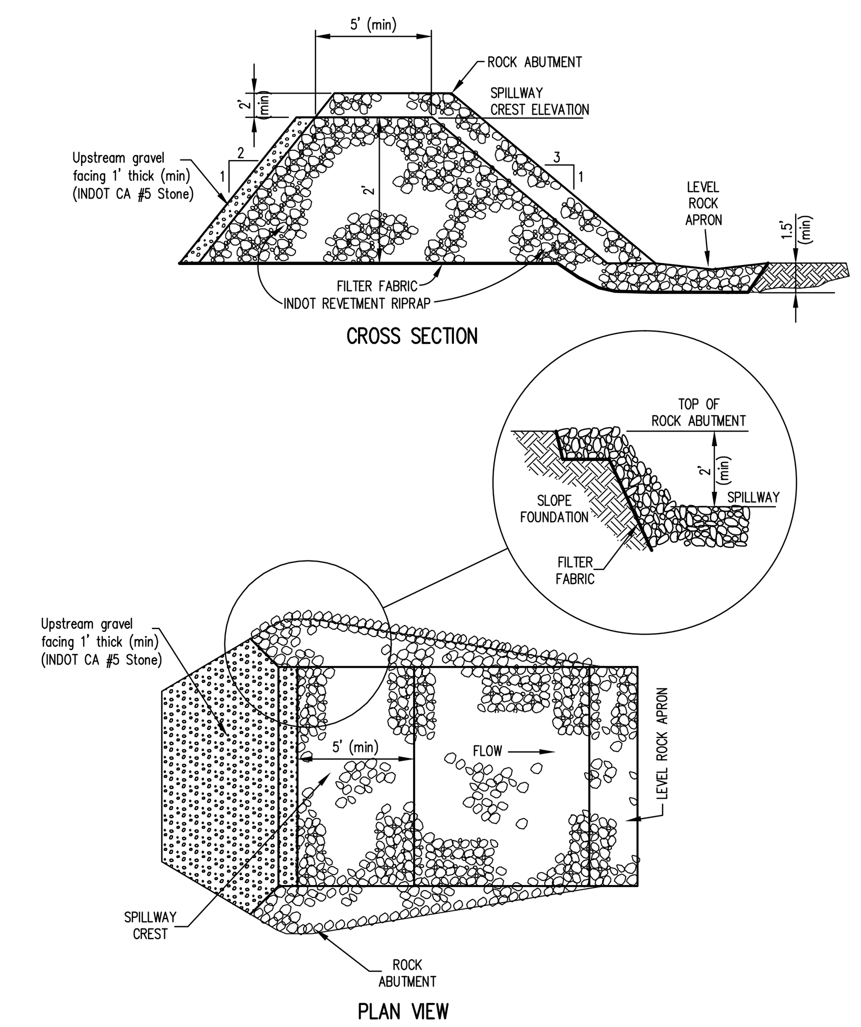
SILT FENCE JOINT DETAIL
NTS



TEMPORARY GRAVEL CONSTRUCTION ENTRANCE
NTS



ROCK DONUT BARRIER TRAP
NTS

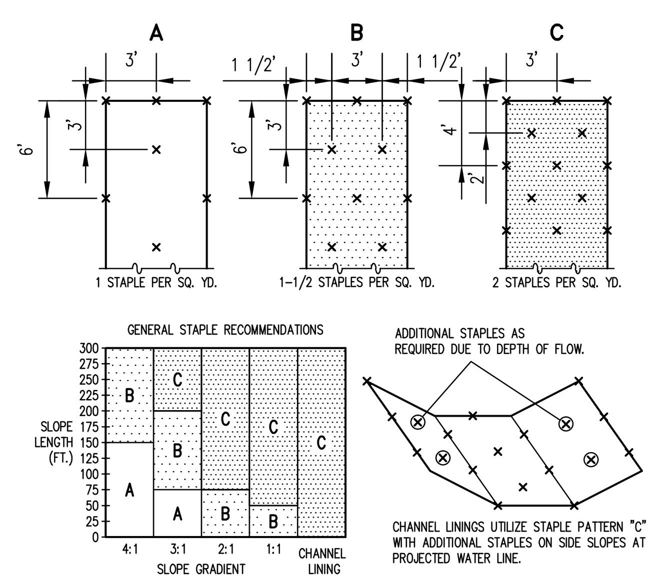


ROCK DAM DETAIL
NTS

N.O.I & CONTACT INFORMATION SIGN REQUIREMENTS

N.O.I. INFORMATION AND CONTACT SHEET MUST PROVIDE THE FOLLOWING INFORMATION.
1. A COMPLETE COPY OF THE N.O.I. LETTER
2. N.P.E.D.S. PERMIT NUMBER (IF APPLICABLE)
3. PROJECT NAME
4. PROJECT DEVELOPER CONTACT INFORMATION
a. ADDRESS
b. PHONE NUMBER
c. EMAIL ADDRESS (IF AVAILABLE)
(THIS INFORMATION MAY BE SUBSTITUTED WITH THE CONTACT INFORMATION OF A LOCAL CONTACT PERSON)
5. LOCATION OF CONSTRUCTION PLAN IF NOT ON SITE.

ALL OF THIS INFORMATION MUST BE LEGIBLY POSTED IN A LOCATION THAT IS ACCESSIBLE TO THE PUBLIC.



STAPLE PATTERNS APPLY TO ALL NORTH AMERICAN EROSION CONTROL BLANKETS. STAPLE PATTERNS MAY VARY DEPENDING UPON SOIL TYPE AND AVERAGE ANNUAL RAINFALL.

AT SLOPE LENGTHS GREATER THAN 300 FEET OR WHERE DRAINAGE OVER LARGE AREAS IS DIRECTED ONTO THE BLANKETS, STAPLE PATTERN "C" SHOULD BE UTILIZED.

1 THE EDGES OF THE BLANKET SHOULD BE BUTTED AGAINST EACH OTHER, THE EDGES OF THE SCC225 SHOULD BE OVERLAPPED 2".

2 ON SLOPE APPLICATIONS, THE TOP OF THE BLANKET SHOULD BE "SLOTTED IN" ABOVE THE BREAK OF THE SLOPE OR AT A MINIMUM, STAPLED IN PLACE WITH STAPLES 6" APART ON THE END OF THE BLANKET.

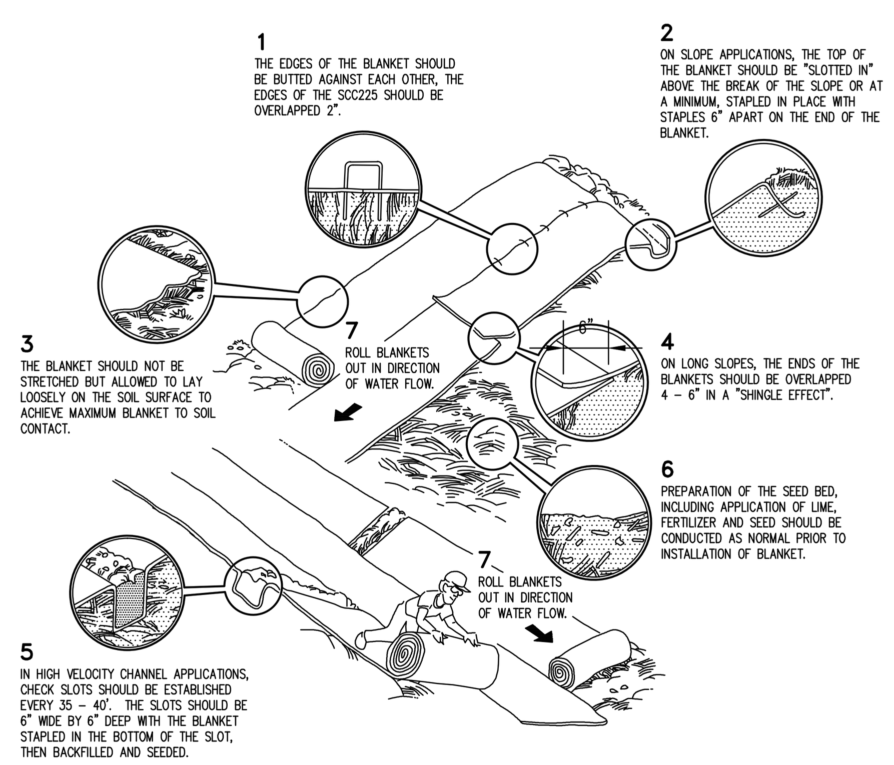
3 THE BLANKET SHOULD NOT BE STRETCHED BUT ALLOWED TO LAY LOOSELY ON THE SOIL SURFACE TO ACHIEVE MAXIMUM BLANKET TO SOIL CONTACT.

4 ON LONG SLOPES, THE ENDS OF THE BLANKETS SHOULD BE OVERLAPPED 4 – 6" IN A "SHINGLE EFFECT".

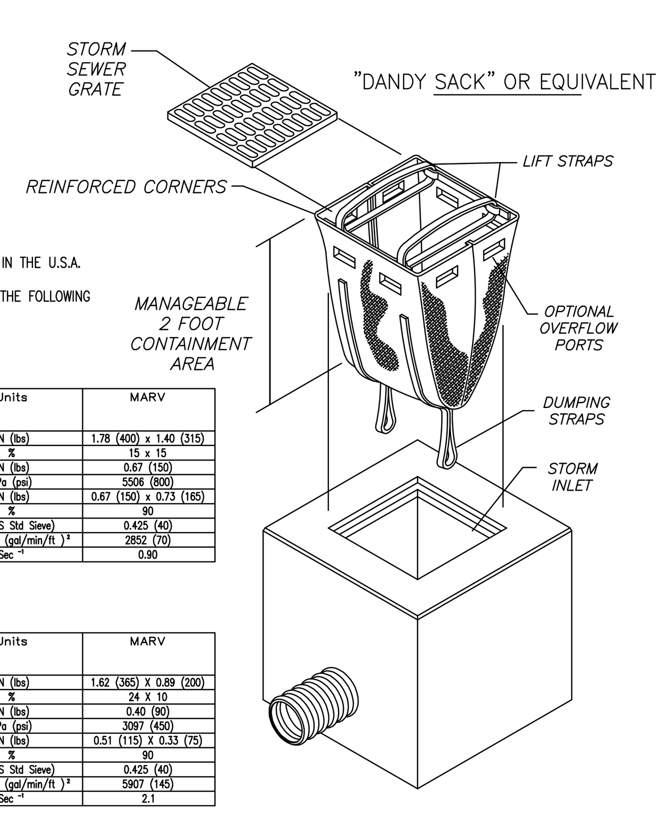
5 IN HIGH VELOCITY CHANNEL APPLICATIONS, CHECK SLOTS SHOULD BE ESTABLISHED EVERY 35 – 40'. THE SLOTS SHOULD BE 6" WIDE BY 6" DEEP WITH THE BLANKET STAPLED IN THE BOTTOM OF THE SLOT, THEN BACKFILLED AND SEEDED.

6 PREPARATION OF THE SEED BED, INCLUDING APPLICATION OF LIME, FERTILIZER AND SEED SHOULD BE CONDUCTED AS NORMAL PRIOR TO INSTALLATION OF BLANKET.

7 ROLL BLANKETS OUT IN DIRECTION OF WATER FLOW.



EROSION BLANKET INSTALLATION



DANDY SACK SPECIFICATIONS

NOTE: THE DANDY SACK WILL BE MANUFACTURED IN THE U.S.A. FROM A WOVEN MONOFILAMENT FABRIC THAT MEETS OR EXCEEDS THE FOLLOWING SPECIFICATIONS:

REGULAR FLOW DANDY SACK (BLACK)

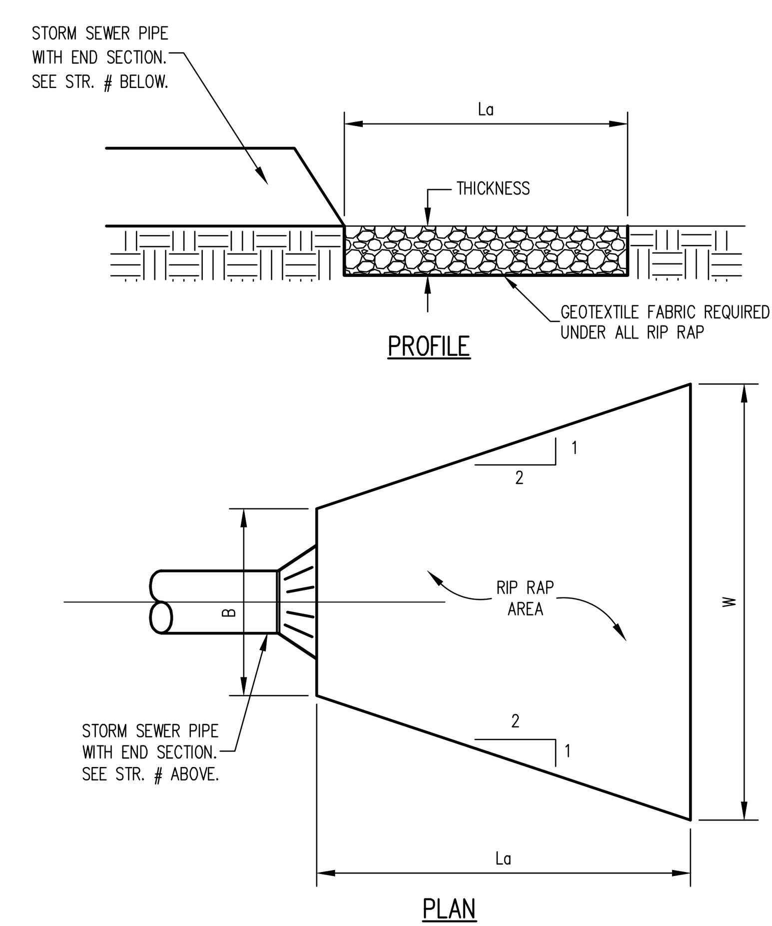
Mechanical Properties	Test Method	Units	MARV
Grab Tensile Strength	ASTM D 4632	kN (lbs)	1.78 (400) x 1.40 (315)
Grab Tensile Elongation	ASTM D 4632	%	15 x 15
Puncture Strength	ASTM D 4833	kN (lbs)	0.67 (150)
Mullen Burst Strength	ASTM D 3786	kPa (psi)	5506 (800)
Trapezoid Tear Strength	ASTM D 4533	kN (lbs)	0.67 (150) x 0.73 (165)
UV Resistance	ASTM D 4355	%	90
Apparent Opening Size	ASTM D 4751	Mm (US Std Sieve)	0.425 (40)
Flow Rate	ASTM D 4491	1/min/m² (gal/min/ft²)	2852 (70)
Permittivity	ASTM D 4491	Sec⁻¹	0.90

HI–FLOW DANDY SACK™ (SAFETY ORANGE)

Mechanical Properties	Test Method	Units	MARV
Grab Tensile Strength	ASTM D 4632	kN (lbs)	1.62 (365) X 0.89 (200)
Grab Tensile Elongation	ASTM D 4632	%	24 X 10
Puncture Strength	ASTM D 4833	kN (lbs)	0.40 (90)
Mullen Burst Strength	ASTM D 3786	kPa (psi)	3097 (450)
Trapezoid Tear Strength	ASTM D 4533	kN (lbs)	0.51 (115) X 0.33 (75)
UV Resistance	ASTM D 4355	%	90
Apparent Opening Size	ASTM D 4751	Mm (US Std Sieve)	0.425 (40)
Flow Rate	ASTM D 4491	1/min/m² (gal/min/ft²)	5907 (145)
Permittivity	ASTM D 4491	Sec⁻¹	2.1

*Note: All Dandy Sacks™ can be ordered with our optional oil absorbent pillows

DROP INLET PROTECTION



RIP RAP DETAIL
SCALE: NONE

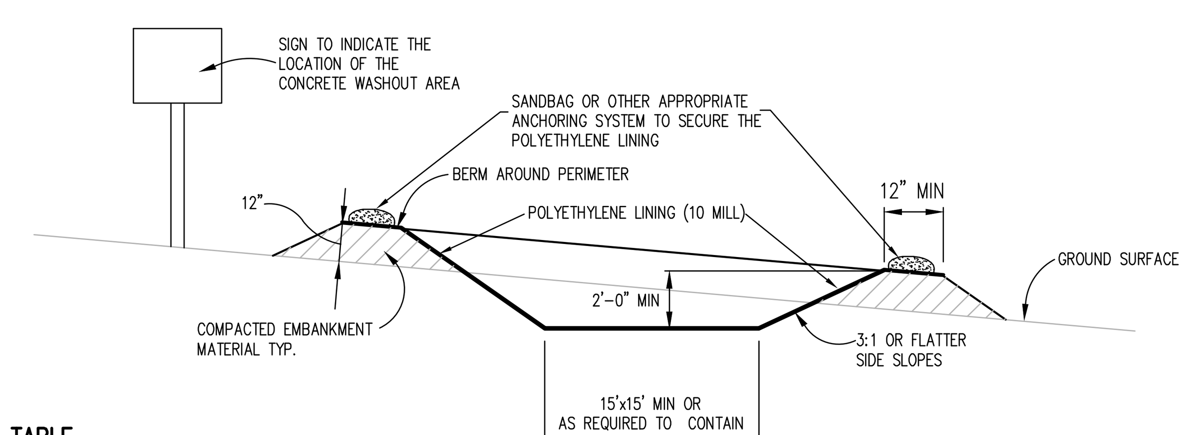
STR #	B	La	W	THICKNESS	d_{50}
301	–	–	–	–	–

RIP–RAP GRADATION TABLE

SIZE OF STONE	% OF TOTAL WEIGHT LARGER THAN GIVEN SIZE
3K	0
2K	20
K	50
0.1K	90

WHERE K = d_{50}

NOTE: DEPTH OF RIP RAP SHALL NOT BE LESS THAN 2 x d_{50}



NOTES:
1. CONCRETE WASHOUT AREA SHALL BE INSTALLED PRIOR TO ANY CONCRETE PLACEMENT ON SITE AND LINED WITH POLYETHYLENE LINER.
2. SIGNS SHALL BE PLACED AT THE CONSTRUCTION ENTRANCE, AT THE WASHOUT AREA, AND ELSEWHERE AS NECESSARY TO CLEARLY INDICATE THE LOCATION OF THE CONCRETE WASHOUT AREA TO OPERATORS OF CONCRETE TRUCKS AND PUMP RIGS.
3. THE CONCRETE WASHOUT AREA SHALL BE REPAIRED AND ENLARGED OR CLEANED OUT AS NECESSARY TO MAINTAIN CAPACITY FOR WASTED CONCRETE.
4. AT THE END OF CONSTRUCTION, ALL CONCRETE SHALL BE REMOVED FROM THE SITE AND DISPOSED OF AT AN APPROVED WASTE SITE.
5. WHEN THE CONCRETE WASHOUT ARE IS REMOVED, THE DISTURBED AREA SHALL BE SEEDED AND MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE INSPECTOR.

CONCRETE WASHOUT DETAIL

Innovative Engineering & Consulting, Inc.
755 W. Carmel Drive
Suite 207
Carmel, IN 46032
317-660-4236
1-800-866-6922
Fax: 317-574-4238

REVISIONS:

PREPARED FOR:
Estridge
Estridge Development Management, LLC
12965 Old Meridian Street
Carmel, IN 46032
317-669-6209

Harmony Section One
Single Family Subdivision
Westfield, Indiana

Erosion Control Details and Specifications

PRELIMINARY PENDING AGENCY APPROVAL

DATE:

DATE: | DRAWN BY: kwk
ISSUED: | CHECKED BY:

JOB NUMBER: 14102

SHEET # C107

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ASSESSMENT OF CONSTRUCTION PLAN ELEMENTS (Section A)

A1 INDEX SHOWING LOCATIONS OF REQUIRED PLAN ELEMENTS
SEE EROSION CONTROL PLAN SHEET

A2 11"X17" PLAT OF BUILDING LOT NUMBERS/BOUNDARIES AND ROADS
INCLUDED WITH SUBMITTAL

A3 NATURE AND PURPOSE OF PROJECT
BUILD FIRST PHASE OF A SINGLE FAMILY SUBDIVISION CONSISTING OF 80 LOTS

A4 PROJECT SITE VICINITY MAP
SEE PLAN SET TITLE PAGE

A5 LEGAL DESCRIPTION OF PROJECT SITE
PROJECT LATITUDE: N. 40°00'25"
PROJECT LONGITUDE: W. 86°11'00"
LEGAL – SEE PLAT

A6 LOTS AND PROPOSED SITE IMPROVEMENTS
DEVELOPMENT PLAN SHEETS

A7 HYDROLOGIC UNIT CODE (14 DIGIT)
05120201120070

A8 STATE OR FEDERAL WATER QUALITY PERMITS
N/A

A9 POINTS OF STORM WATER DISCHARGE FROM SITE
SITE WILL DISCHARGE INTO AN EXISTING 48" STORM PIPE AND EAST THRU THE EXISTING SUBDIVISION AND INTO.....

A10 ADJACENT WETLANDS, LAKES AND WATER COURSES
?

A11 RECEIVING WATERS
?

A12 POTENTIAL DISCHARGES TO GROUND WATER
NONE

A13 FLOOD PLAINS, FLOOD WAY AND FLOOD WAY FRINGES
THE SITE IS LOCATED IN FLOOD AREA "X" PER COMMUNITY PANELS
18057C0115F; EFFECTIVE FEBRUARY 19, 2003 & 18057C0120F; EFFECTIVE DATE FEBRUARY 19, 2003

A14 PRE-CONSTRUCTION/POST-CONSTRUCTION PEAK DISCHARGE
10–YEAR, PRE–DEVELOPED PEAK DISCHARGE = ---- cfs, 10 YEAR POST–DEVELOPED PEAK DISCHARGE = ---- cfs,
100–YEAR POST–DEVELOPED PEAK DISCHARGE = ---- cfs

A15 ADJACENT LAND USE

NORTH	–	AGRICULTURE/FUTURE RESIDENTIAL
SOUTH	–	AGRICULTURE
EAST	–	RESIDENTIAL
WEST	–	AGRICULTURE

A16 CONSTRUCTION LIMITS
SEE EROSION CONTROL PLAN SHEET

A17 EXISTING VEGETATIVE COVER
THE SITE HAS BEEN USED AS AGRICULTURE ROW CROPS AND PASTURE.
SEE EROSION CONTROL PLAN SHEET

A18 SOILS MAP AND SOIL DESCRIPTIONS
SEE EROSION CONTROL DETAIL SHEET

A19 PROPOSED STORM WATER SYSTEMS
SEE DEVELOPMENT PLAN SHEETS & STORM SEWER PLAN AND PROFILES SHEETS

A20 OFF-SITE CONSTRUCTION ACTIVITIES
CONSTRUCTION OF STORM SEWER PIPING TO POND 3 WILL BE CONSTRUCTED. THIS CONSTRUCTION WILL OCCUR WITHIN THE LIMITS OF THE MAPLE GROVE SUBDIVISION.

A21 PROPOSED SOIL STOCKPILES
SOILS TO BE STOCK PILED AS SHOWN ON THE EROSION CONTROL PHASE PLAN. SOIL MAY BE REMOVED FROM SITE AND TAKEN TO A PERMITTED SITE.

A22 SITE TOPOGRAPHY
SEE EROSION PLAN SHEET

A23 FINAL SITE TOPOGRAPHY
SEE DEVELOPMENT PLAN SHEET

ASSESSMENT OF STORM WATER POLLUTION PREVENTION PLAN CONSTRUCTION COMPONENT (SECTION B)

B1 POTENTIAL POLLUTANT SOURCES ASSOCIATED WITH CONSTRUCTION ACTIVITIES
THE MATERIALS AND SUBSTANCES LISTED BELOW ARE EXPECTED ON–SITE.

BIOLOGICAL SOLID WASTE
TRAP IN CONTAINERS, CLEANED REGULARLY, AND DISPOSED OF ACCORDING TO LOCAL, COUNTY, STATE AND FEDERAL REGULATIONS OR OTHER PUBLIC AGENCY. SCHEDULE WASTE COLLECTION MORE FREQUENTLY TO PREVENT CONTAINERS FROM OVERFILLING. UNTREATED, RAW SEWAGE OR SEPTAGE SHOULD NEVER BE DISCHARGED OR BURIED ONSITE.

ADHESIVES
STORE IN APPROVED CONTAINERS, AND DISPOSE OF ACCORDING TO LOCAL, COUNTY, STATE AND FEDERAL REGULATIONS OR OTHER PUBLIC AGENCY.

AEROSOL SPRAY PRODUCTS
STORE IN APPROVED CONTAINERS, AND DISPOSE OF ACCORDING TO LOCAL, COUNTY, STATE AND FEDERAL REGULATIONS OR OTHER PUBLIC AGENCY.

PAINTS, THINNERS AND SOLVENTS
ENSURE THAT CONTAINERS HAVE LIDS SO THAT THEY CAN BE COVERED BEFORE PERIODS OF RAIN, AND KEEP CONTAINERS IN DRY, COVERED AREA WHENEVER POSSIBLE.

BATTERIES
STORE ONSITE IN DRY COVERED AREA AND DISPOSE OF PER MANUFACTURER'S RECOMMENDATIONS IN CONJUNCTION WITH STATE, LOCAL AND FEDERAL REGULATIONS.

REGULATED PCB MATERIAL
STORE IN APPROVED CONTAINERS, AND DISPOSE OF ACCORDING TO LOCAL, COUNTY, STATE AND FEDERAL REGULATIONS OR OTHER PUBLIC AGENCY.

MOTOR OIL
STORE PETROLEUM PRODUCTS FOR VEHICLES IN COVERED AREAS WITH LEAK–PROOF HEAVY DUTY PLASTIC LINER ON THE GROUND WITH DIKES IN PLACE TO CONTAIN AND SPILLS. IMMEDIATELY CONTAIN AND CLEAN UP ANY SPILLS WITH ABSORBENT MATERIALS. MOTOR OIL SHOULD BE CHANGED IN A DESIGNATED AREA WITH A METAL CATCH PAN OF 4'X4'X8" MINIMUM AND PROPERLY DISPOSED OF.

ANTIFREEZE
STORE IN APPROVED CONTAINERS, AND DISPOSE OF ACCORDING TO LOCAL, COUNTY, STATE AND FEDERAL REGULATIONS OR OTHER PUBLIC AGENCY.

FUEL
STORE FUEL FOR VEHICLES IN COVERED AREAS WITH LEAK–PROOF HEAVY DUTY PLASTIC ON THE GROUND WITH DIKES IN PLACE TO CONTAIN AND SPILLS. IMMEDIATELY CONTAIN AND CLEAN UP ANY SPILLS WITH ABSORBENT MATERIALS.

BRAKE FLUIDS
STORE IN APPROVED CONTAINERS, AND DISPOSE OF ACCORDING TO LOCAL, COUNTY, STATE AND FEDERAL REGULATIONS OR OTHER PUBLIC AGENCY.

HYDRAULIC
FLUIDS STORE IN APPROVED CONTAINERS, AND DISPOSE OF ACCORDING TO LOCAL, COUNTY, STATE AND FEDERAL REGULATIONS OR OTHER PUBLIC AGENCY.

RUBBLE-ASPHALT/CONCRETE
DISPOSE OF IN PROPER CONTAINERS AND RECYCLE PER LOCAL, COUNTY, STATE AND FEDERAL REGULATIONS.

LAND CLEARING DEBRIS
RECYCLE APPROPRIATELY IN APPROPRIATELY MARKED CONTAINERS AND SCHEDULE REGULAR PICKUP BEFORE OVERFILLING OCCURS.

SOIL AMENDMENTS
ALL SOIL AMENDMENTS INCLUDING LIME USED AS STRUCTURAL SOIL MODIFICATION ARE TO BE APPLIED IN A MANNER AND AMOUNT AS DIRECTED BY GEOTECHNICAL ENGINEER. ALL AMENDMENTS ARE TO BE STORED IN THEIR ORIGINAL MANUFACTURE CONTAINER PRIOR TO USE. NO AMENDMENTS ARE TO BE STORED ON SITE IF NOT IN THEIR ORIGINAL CONTAINER. AMENDMENT TRANSPORTED IN BULK ARE TO BE USED THE SAME DAY THEY ARE DELIVERED TO THE SITE. NO AMENDMENTS ARE TO BE EXPOSED TO RAIN OR EXCESSIVE WIND PRIOR TO PLACEMENT.

B1 POTENTIAL POLLUTANT SOURCES ASSOCIATED WITH CONSTRUCTION ACTIVITIES (CONTINUED FROM PREVIOUS COLUMN)

WASTE
ALL WASTE MATERIALS WILL BE COLLECTED AND STORED IN A SECURELY LIDDED APPROVED CONTAINER. ALL TRASH AND NON–RECYCLABLE MATERIALS SHALL BE DEPOSITED IN THE DUMPSTER DAILY. THE DUMPSTER SHOULD BE EMPTIED PERIODICALLY AND NOT ALLOWED TO OVERFILL. DO NOT THROW TRASH ON GROUND OR BURY MATERIALS ON SITE.

UNUSED BUILDING MATERIALS
ALL WASTE MATERIALS WILL BE COLLECTED AND STORED IN A SECURELY LIDDED APPROVED CONTAINER. ALL RECYCLABLE MATERIALS SHALL BE DEPOSITED IN THE DUMPSTER DAILY. THE DUMPSTER SHOULD EMPTIED PERIODICALLY AND NOT ALLOWED TO OVERFILL. DO NOT BURY MATERIALS ON SITE.

CONCRETE (MASONRY) WASHOUT
CONCRETE WASHOUT AREAS SHOULD BERMED, SELF CONTAINED AREA APPROXIMATELY 10'X10'X3' IN A PLACE TO CONTAIN THE CONCRETE, BUT ALLOW THE WATER TO INFILTRATE THE GROUND. DRIED MATERIAL SHALL BE REMOVED AND DISPOSED OF PROPERLY. THE CONCRETE WASHOUT AREA SHALL BE PLACED AWAY FROM STORM WATER STRUCTURES AND WATER BODIES. SEE DETAIL.

FERTILIZERS/PESTICIDES/DETERGENTS
FERTILIZERS AND PESTICIDES WILL BE APPLIED ONLY IN THE MINIMUM AMOUNTS RECOMMENDED BY THE MANUFACTURER. ONCE APPLIED, FERTILIZER WILL BE WORKED INTO THE SOIL TO LIMIT THE EXPOSURE TIME TO STORM WATER. STORAGE WILL BE IN A COVERED SHED. THE CONTENTS OF ANY PARTIALLY USED BAG OF FERTILIZER WILL BE TRANSFERRED TO A SEALABLE PLASTIC BIN TO AVOID SPILLS. THE ORIGINAL LABEL AND SAFETY INFORMATION WILL BE RETAINED. STORAGE AREAS SHALL BE BERMED TO CONTAIN SPILL FROM RUNNING INTO GROUNDWATER OR STORM SYSTEM.

B2 SEQUENCE OF EROSION CONTROL MEASURES IMPLEMENTATION (SEE NOTED SEQUENCES ON EROSION CONTROL PLAN SHEET)

INITIAL SETUP
· NOTIFY SWCD AGENT, LOCAL JURISDICTION AND IDEM 48 HOURS IN ADVANCE OF BEGINNING WORK.

· POST A NOTICE OF THE PROJECT IN A PUBLICLY ACCESSIBLE LOCATION NEAR THE PROJECT FIELD OFFICE. THE NOTICE WILL INCLUDE A COPY OF THE COMPLETED NOI LETTER, THE NPDES PERMIT NUMBER, AND NAME, COMPANY NAME, AND TELEPHONE NUMBER OF PROJECT CONTACT PERSON.

· ALL EROSION CONTROL PRACTICES WILL BE INSTALLED UNDER THE GUIDANCE OF A PROFESSIONAL EXPERIENCED IN EROSION CONTROL. ALL OTHER NON–ENGINEERED EROSION CONTROL MEASURES INVOLVING VEGETATION WILL BE INSTALLED ACCORDING TO THE SPECIFICATIONS AND CRITERIA AS SET FORTH IN THIS EROSION CONTROL PLAN.

· EROSION CONTROL PRACTICES WILL BE IMPLEMENTED ON ALL DISTURBED AREAS WITHIN THE PROJECT SITE AND MAINTAINED IN WORKING ORDER BY THE CONTRACTOR.

· FLAG OR DENOTE ALL CONSTRUCTION LIMITS.

· CALL FOR AN UNDERGROUND LOCATE TO VERIFY LOCATION OF EXISTING UTILITIES.

· RETAIN EXISTING VEGETATION WHEREVER POSSIBLE.

· IDENTIFY AND PROTECT ALL EXISTING VEGETATION DESIGNATED TO REMAIN.

· INSTALL EROSION CONTROL MEASURES AND SILT FENCE.

· INSTALL CONSTRUCTION ENTRANCE AND PROVIDE TEMPORARY SEEDING.

· INSTALL TEMPORARY SEEDING IN ALL PERMISSIBLE AREAS.

· INFORM ALL GENERAL CONTRACTORS, CONSTRUCTION MANAGEMENT FIRMS, GRADING OR EXCAVATING CONTRACTORS, AND ALL OTHER CONTRACTORS WITH PRIMARY OVERSIGHT ON INDIVIDUAL BUILDING LOTS OF THE TERMS AND CONDITIONS OF THE STORM WATER RULE 5, AND THE CONDITIONS AND STANDARDS OF THIS EROSION CONTROL PLAN, SCHEDULE FOR IMPLEMENTATION, AND THE CONSTRUCTION SITE EROSION CONTROL PLAN REPORT.

CONSTRUCTION
· BEGIN TOPSOIL REMOVAL.

· ALL STOCKPILED TOPSOIL TO BE SALVAGED SHALL BE PERIMETER PROTECTED. RUNOFF FROM STOCKPILES WILL BE FILTERED THROUGH SILT FENCES AND/OR STRAW BALES AND THE SEDIMENT BASIN. STOCKPILES SHALL NOT INTERFERE WITH NATURAL DRAINAGE. THE STOCKPILES SHALL BE REDISTRIBUTED OVER THE SITE AND FINAL GRADED IMMEDIATELY PRIOR TO SEEDING.

· INSTALL ADDITIONAL SILT FENCES OR OTHER SUCH MECHANISM AS REQUIRED.

· IMPLEMENT SELF–MONITORING PROGRAM.

· BEGIN SEEDING AND MULCHING PROGRAM (TEMPORARY SEED ALL DISTURBED AREAS).

·INSTALL STORM AND SANITARY FACILITIES.

· INSTALL INLET PROTECTION AS STORM INLETS ARE COMPLETED.

· COMPLETE PARKING LOTS, ROADWAYS AND CURBS. NO LIME USED AS SOIL TREATMENT IS TO BE STORED ON SITE.

· FINAL GRADE AND LANDSCAPE.

· ALL AREAS WHICH CAN BE REGRADED TO A FINAL STATE SHALL BE REVEGETATED WITH AN APPROVED SEED MIXTURE AND FERTILIZED AT THE RATES INDICATED PER FIGURE 5–2 THROUGH FIGURE 5–4 ON SHEET C6.1.

· AFTER CONSTRUCTION AND FINAL GRADING, LANDSCAPE AND PERMANENTLY STABILIZE ALL DISTURBED SITES, INCLUDING BORROW AND DISPOSAL AREAS. ALSO REMOVE TEMPORARY RUNOFF CONTROL STRUCTURES AND ANY UNSTABLE SEDIMENT AROUND THEM, AND VEGETATE THOSE AREAS.

B3 STABLE CONSTRUCTION ENTRANCE LOCATION AND SPECIFICATION
CONSTRUCTION DRIVE TO BE CONSTRUCTED PER APPLICABLE DETIALS

B4 SEDIMENT CONTROL MEASURES FOR SHEET FLOW AREAS
SILT FENCE; SEE EROSION CONTROL PLAN SHEET FOR LOCATIONS; SEE SHEETS C104–C106 FOR INSTALLATION DETAILS.

B5 CONTROL MEASURES FOR CONCENTRATED FLOW AREAS
EROSION CONTROL BLANKETS; SEE SHEET C104–C106.

B6 INLET PROTECTION MEASURE LOCATIONS AND SPECIFICATIONS
DANDY SACK SEDIMENT BARRIERS

B7 RUNOFF CONTROL MEASURES
THE PROPOSED PONDS WILL BE USED TO CONTROL RUNOFF

B8 STORM WATER OUTLET PROTECTION SPECIFICATIONS
RIP RAP STONE END SECTION TREATMENT

B9 GRADE STABILIZATION STRUCTURES
N/A

B10 CONSTRUCTION DETAILS FOR STORM WATER MEASURES
THE STORM WATER RUNOFF WILL BE TREATED FOR WATER QUALITY IN POND 1.

B11 TEMPORARY SURFACE STABILIZATION METHODS

- ALL CONSTRUCTION METHODS AND MATERIALS MUST CONFORM TO CURRENT STANDARDS AND SPECIFICATIONS OF THE FEDERAL, STATE, COUNTY, CITY OR LOCAL REQUIREMENTS, WHICHEVER HAS JURISDICTION.
- LAND ALTERATION WHICH STRIPS THE LAND OF VEGETATION, INCLUDING REGRADING, SHALL BE DONE IN A WAY THAT WILL MINIMIZE EROSION.
- THIS PLAN SHALL NOT BE CONSIDERED ALL INCLUSIVE AS THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PREVENT SOIL SEDIMENT FROM LEAVING THE SITE. ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES WILL BE INSTALLED IF DEEMED NECESSARY BY ON–SITE INSPECTION.
- SEDIMENT LADEN WATER SHALL BE DETAINED BY EROSION CONTROL PRACTICES AS NEEDED TO MINIMIZE SEDIMENTATION IN THE RECEIVING STREAM. NO STORM WATER SHALL BE DISCHARGED FROM THE SITE IN A MANNER THAT CAUSES EROSION AT THE POINT OF DISCHARGE.
- WASTES AND UNUSED BUILDING MATERIALS SHALL NOT BE ALLOWED TO BE CARRIED FROM THE SITE BY STORM WATER RUNOFF. PROPER DISPOSAL OF ALL WASTES AND UNUSED BUILDING MATERIALS IS REQUIRED.
- SEDIMENT BEING TRACED ONTO PUBLIC OR PRIVATE ROADWAYS SHALL BE MINIMIZED. CLEARING OF ACCUMULATED SEDIMENT SHALL NOT INCLUDE FLUSHING WITH WATER. CLEARED SEDIMENT SHALL BE RETURNED TO THE SITE FOR DISPOSAL.
- SOIL WHICH HAS ACCUMULATED NEXT TO EROSION CONTROL DEVICES SHALL BE COLLECTED AND REDISTRIBUTED ON SITE AFTER EACH RAINFALL EVENT, AND AT LEAST ONCE A WEEK.
- IF INSTALLATION OF STORM DRAINAGE SYSTEM SHOULD BE INTERRUPTED BY WEATHER OR NIGHTFALL, THE PIPE ENDS SHALL BE COVERED WITH FILTER FABRIC.
- ALL EXISTING STRUCTURES, FENCING, TREES AND ETC., WITHIN CONSTRUCTION AREA SHALL BE REMOVED AND DISPOSED OF OFF SITE. BURNING IS <u>NOT</u> ALLOWED ONSITE.

B11 TEMPORARY SURFACE STABILIZATION METHODS (CONTINUED)

SCHEDULE OF EARTHWORK ACTIVITIES:

A) THE DURATION OF TIME WHICH AN AREA REMAINS EXPOSED SHALL BE KEPT TO A PRACTICAL MINIMUM. THE AREA SHALL BE STABILIZED SOON AS POSSIBLE. TEMPORARY VEGETATION OR MULCHING SHALL BE USED TO PROTECT EXPOSED AREAS IF PERMANENT VEGETATION CANNOT BE SEEDED WITHIN 14 DAYS OR ACTIVITY CEASES FOR MORE THAN 15 DAYS OR AS DIRECTED BY THE ENGINEER.

B) TOPSOIL REPLACEMENT SHALL TAKE PLACE FROM MARCH 1 TO OCTOBER 31. STOCKPILE TOPSOIL AT ALL OTHER TIME OF THE YEAR. PERMANENT AND FINAL VEGETATION AND STRUCTURAL EROSION CONTROL DEVICES SHALL BE INSTALLED WITHIN SEVEN (7) DAYS AFTER FINAL GRADING OR AS SOON AS POSSIBLE.

TEMPORARY SEEDING SHALL UTILIZE SEED SPECIES, APPLICATION RATES, AND DATES SET FORTH IN FIGURE 5–2 THROUGH FIGURE 5–4 ON SHEET C6.1.

B12 PERMANENT SURFACE STABILIZATION METHODS

- AT THE PROPER TIME, WITH APPROVAL FROM THE OWNER, AND ONLY AFTER NOTIFYING THE SWCD AGENT, THE CONTRACTOR SHALL DISMANTLE THE REMAINING EROSION CONTROL ELEMENTS ONLY AS REQUIRED TO FINISH ALL GRADING. CONTRACTOR SHALL NOTIFY THE SWCD IN ADVANCE AND ARRANGE FOR THE LANDSCAPING CONTRACTOR TO FOLLOW UP IMMEDIATELY WITH REVEGETATION OF THE REMAINING AREAS.
- CONTRACTOR SHALL REMOVE ANY UNSUITABLE MATERIAL FROM THE SITE LEFT FROM THE EROSION CONTROL MEASURES.
- ANY BARE DISTURBED AREAS WILL BE GRADED, SEEDED AND MULCHED OR OTHERWISE REVEGETATED OR STABILIZED, AS PER THE EROSION CONTROL PLAN. PERMANENT SEEDING WILL BE ACCORDING TO THE SEED SPECIES, RATES AND DATES FIGURE 5–2 THROUGH FIGURE 5–4 ON SHEET C6.1.
- FINAL STABILIZATION WILL BE CONSIDERED ACHIEVED WHEN PERENNIAL VEGETATIVE COVER HAS A DENSITY OF SEVENTY PERCENT (70%) ON ALL UNPAVED AREAS OR AN EQUIVALENT PERMANENT STABILIZATION MEASURE HAS BEEN UTILIZED. IMPLEMENTATION AND MAINTENANCE WILL BE ACCORDING TO SECTIONS C2 AND C5 BELOW.

B13 MATERIAL HANDLING AND SPILL PREVENTION PLAN

THE PROPER MANAGEMENT AND DISPOSAL OF WASTES SHOULD BE PRACTICED ON SITE AT ALL TIMES TO REDUCE POLLUTION STORM WATER RUNOFF. HAZARDOUS WASTE SHOULD ALWAYS BE DISPOSED OF THROUGH A DESIGNATED HAZARDOUS WASTE MANAGEMENT OR RECYCLING FACILITY. HAZARDOUS WASTE SHOULD NOT BE DISPOSED OF WITH ORDINARY GARBAGE, OR POURED INTO THE SANITARY SEWER SYSTEM OR ONTO THE GROUND.

DESIGNATE A WASTE COLLECTION AREA ON–SITE THAT DOES NOT RECEIVE A SUBSTANTIAL AMOUNT OF RUNOFF FROM UPLAND AREAS AND DOES NOT DRAIN DIRECTLY INTO A WATER BODY.

KEEP PRODUCTS IN ORIGINAL CONTAINERS UNLESS THEY ARE NOT RE–SEALABLE, THEN ORIGINAL LABEL AND MATERIAL SAFETY DATA WILL BE RETAINED. IF A PRODUCT DOES NOT HAVE ITS ORIGINAL LABEL, LABEL IT YOURSELF IF YOU ARE SURE OF CONTENTS. MAKE SURE PRODUCTS ARE PROPERLY SEALED TO PREVENT LEAKS AND SPILLS AND STORED IN A WEATHER PROOF SELF CONTAINED AREA AWAY FROM HEAT, SPARKS AND FLAMES.

A PROGRAM FOR RECYCLING OR DISPOSAL OF MATERIALS ASSOCIATED WITH OR FROM THE PROJECT SITE SHALL BE ESTABLISHED. ALL RECYCLING CONTAINERS WILL BE CLEARLY LABELED.

ALL CONSTRUCTION ACTIVITIES TO BE MONITORED AND MAINTAINED BY THE CONTRACTOR. AS EACH NEW SUBCONTRACTOR COMES ON–SITE, THE CONTRACTOR WILL CONDUCT AND DOCUMENT A MEETING TO ENSURE AWARENESS OF THE POLLUTANT PREVENTION PROGRAM. GUIDELINES FOR PROPER HANDLING, STORAGE AND DISPOSAL OF CONSTRUCTION SITE WASTES SHOULD BE POSTED IN STORAGE AND USE AREAS AND WORKERS SHOULD BE TRAINED IN THESE PRACTICES TO ENSURE EVERYONE IS KNOWLEDGEABLE ENOUGH TO PARTICIPATE.

IN AN EMERGENCY, THE CONTRACTOR WILL CALL 911. IN THE EVENT OF A SPILL THAT POSES NO IMMEDIATE THREAT, THE CONTRACTOR WILL CONTACT THE LOCAL FIRE DEPARTMENT AND IDEM EMERGENCY RESPONSE AT (888) 233–7745 WITHIN 24 HOURS OF THE SPILL. EMERGENCY PHONE NUMBERS AND PROCEDURES SHALL BE PROMINENTLY DISPLAYED AT THE WORK SITE WHERE SPILLS MAY OCCUR, SUCH AS STAGING/REFUELING AREAS.

LOCAL FIRE DEPARTMENT	EMERGENCY	NON EMERGENCY
WESTFIEL FIRE DEPARTMENT	911	--

CLEAN UP SPILLS IMMEDIATELY. FOR HAZARDOUS MATERIALS FOLLOW CLEANUP INSTRUCTIONS ON THE PACKAGE. USE ABSORBENT MATERIAL SUCH AS SAWDUST OR KITTY LITTER TO CONTAIN THE SPILL. PROPER SAFETY MATERIALS SHOULD BE STORED ON SITE IN CASE OF ACCIDENT OR SPILL WHICH SHOULD INCLUDE BUT NOT LIMITED TO BROOMS, DUST PANS, MOPS, RAGS, GLOVES, GOGGLES, AND PLASTIC AND METAL TRASH CONTAINERS SPECIFICALLY FOR THAT PURPOSE. SPILL AREAS SHOULD BE WELL VENTILATED.

DURING THE DEMOLITION PHASE OF CONSTRUCTION, PROVIDE EXTRA CONTAINERS AND SCHEDULE MORE FREQUENT PICKUPS FOR RECYCLABLES AND GARBAGE. COLLECT, REMOVE, AND DISPOSE OR ALL CONSTRUCTION SITE WASTES AT AUTHORIZED DISPOSAL AREAS. CONTACT LOCAL ENVIRONMENTAL AGENCY TO IDENTIFY DISPOSAL SITES OR AUTHORIZED CONTRACTORS.

CONSTRUCTION VEHICLES SHOULD BE INSPECTED FOR LEAKS DAILY AND REPAIRED IMMEDIATELY IN A SELF CONTAINED AREA DESIGNATED FOR VEHICLE MAINTENANCE AND REPAIR. THE VEHICLE MAINTENANCE AREA SHOULD BE CONDUCTED ON AN AREA THAT IS TO BECOME FUTURE PAVEMENT. THIS AREA WILL BE DESIGNED TO MINIMIZE CONTACT BETWEEN EQUIPMENT ACTIVITIES AND RAINFALL OR RUNOFF. SPILLS MUST BE CLEANED UP AND MATERIALS DISPOSED OF IMMEDIATELY.

CONTAINERS OR EQUIPMENT THAT MAY MALFUNCTION AND CAUSE LEAKS OR SPILLS SHOULD BE IDENTIFIED THROUGH REGULAR INSPECTION AND STORAGE OF USE AREAS. EQUIPMENT AND CONTAINERS SHOULD BE INSPECTED REGULARLY FOR LEAKS, CORROSION, SUPPORT OR FOUNDATION FAILURE, OR ANY OTHER SIGNS OF DETERIORATION AND SHOULD BE TESTED FOR SOUNDNESS. ANY FOUND TO BE DEFECTIVE SHOULD BE REPAIRED OR REPLACED IMMEDIATELY.

B14 MONITORING AND MAINTENANCE GUIDELINES

A TRAINED INDIVIDUAL SHALL PERFORM A WRITTEN EVALUATION OF THE PROJECT SITE:
BY THE END OF THE NEXT DAY FOLLOWING EACH 1/2 INCH STORM EVENT;
A MINIMUM OF ONE (1) TIME PER WEEK.

THE EVALUATION WILL: ADDRESS THE MAINTENANCE OF EXISTING EROSION CONTROL MEASURES TO ENSURE PROPER FUNCTIONING; AND IDENTIFY ANY ADDITIONAL MEASURES NECESSARY TO MEET THE REQUIREMENTS OF THE EROSION CONTROL PLAN.

WRITTEN EVALUATION REPORTS INCLUDE:
THE NAME OF THE INDIVIDUAL PERFORMING THE EVALUATION; THE DATE OF THE EVALUATION; PROBLEMS IDENTIFIED AT THE PROJECT SITE; AND DETAILS OR CORRECTIVE ACTIONS RECOMMENDED AND COMPLETED.

ALL WRITTEN EVALUATION REPORTS FOR THE PROJECT SITE WILL BE MAINTAINED BY THE CONSTRUCTION SUPERINTENDENT THROUGHOUT THE TERM OF THE PROJECT CONSTRUCTION AND MADE AVAILABLE TO THE SWCD OR OTHER INSPECTING AUTHORITY WITHIN 48 HOURS OF A REQUEST.

MAINTENANCE OF SPECIFIC EROSION CONTROL MEASURES SHALL BE ACCORDING TO THE LOCAL JURISDICTIONAL AGENCY.

CONCRETE WASHOUT BASIN MAINTENANCE
1. INSPECT DAILY AND AFTER EACH STORM EVENT.
2. INSPECT THE INTEGRITY OF THE OVERALL STRUCTURE INCLUDING, WHERE APPLICABLE, THE CONTAINMENT SYSTEM.
3. INSPECT THE SYSTEM FOR LEAKS, SPILLS, AND TRACKING OF SOIL BY EQUIPMENT.
4. INSPECT THE POLYETHYLENE LINING FOR FAILURE, INCLUDING TEARS AND PUNCTURES.
5. ONCE CONCRETE WASTES HARDEN, REMOVE AND DISPOSE OF THE MATERIAL.
6. 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.
7. UPON REMOVAL OF THE SOLIDS, INSPECT THE STRUCTURE. REPAIR THE STRUCTURE AS NEEDED OR CONSTRUCT A NEW SYSTEM.
8. 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.
9. THE PLASTIC LINER SHOULD BE REPLACED AFTER EVERY CLEANING; THE REMOVAL OF MATERIAL WILL USUALLY DAMAGE THE LINING.
10. THE CONCRETE WASHOUT SYSTEM SHOULD BE REPAIRED OR ENLARGED AS NECESSARY TO MAINTAIN CAPACITY FOR CONCRETE WASTE.
11. 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 DEWATERING.
12. PREFABRICATED UNITS ARE OFTEN PUMPED AND THE COMPANY SUPPLYING THE UNIT PROVIDES THIS SERVICE.
13. 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.
14. 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.
15. HOLES, DEPRESSIONS AND OTHER LAND DISTURBANCES ASSOCIATED WITH THE SYSTEM SHOULD BE BACKFILLED, GRADED, AND STABILIZED.

GRAVEL CONSTRUCTION DRIVE MAINTENANCE
1. INSPECT DAILY AND AFTER EACH STORM EVENT AND IMMEDIATELY REPAIR SIGNS OF EROSION.
2. RESHAPE AS NEEDED FOR DRAINAGE AND RUNOFF CONTROL.
3. TOP DRESS WITH CLEAN AGGREGATE AS NEEDED.
4. IMMEDIATELY REMOVE MUD AND SEDIMENT TRACKED OR WASHED ONTO PUBLIC ROADS.
5. FLUSHING SHOULD ONLY BE USED IF THE WATER CAN BE CONVEYED INTO A SEDIMENT TRAP OR BASIN.

GRASS–LINED CHANNELS MAINTENANCE
1. INSPECT WITHIN 24 HOURS OF EACH RAIN EVENT AND AT LEAST ONCE EVERY SEVEN CALENDAR DAYS.
2. CHECK CHANNEL OUTLET AND ROAD CROSSINGS FOR BLOCKAGE, SEDIMENT, BANK INSTABILITY, AND PIPING OR SCOUR HOLES; REMOVE ANY BLOCKAGE, AND MAKE REPAIRS IMMEDIATELY.
3. REMOVE SIGNIFICANT SEDIMENT AND DEBRIS FROM CHANNEL TO MAINTAIN DESIGN CROSS SECTION AND CHANNEL GRADE AND TO PREVENT SPOT EROSION.

MULCHING MAINTENANCE
1. INSPECT WITHIN 24 HOURS OF EACH RAIN EVENT AND AT LEAST ONCE EVERY SEVEN CALENDAR DAYS.
2. CHECK FOR EROSION OR MOVEMENT OF MULCH; REPAIR DAMAGED AREAS, RESEED, APPLY NEW MULCH AND ANCHOR THE MULCH IN PLACE.
3. CONTINUE INSPECTIONS UNTIL VEGETATION IS FIRMLY ESTABLISHED.
4. IF EROSION IS SEVERE OR RECURRING, USE EROSION CONTROL BLANKETS OR OTHER MORE SUBSTANTIAL STABILIZATION METHODS TO PROTECT THE AREA.

SILT FENCE MAINTENANCE
1. INSPECT WITHIN 24 HOURS OF A RAIN EVENT AND AT LEAST ONCE EVERY SEVEN CALENDAR DAYS.
2. 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.
3. 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.

TEMPORARY SEEDING MAINTENANCE
1. SEEDED AREAS WILL BE INSPECTED WITHIN 24 HOURS OF EACH RAINFALL EVENT AND AT LEAST ONCE EVERY SEVEN CALENDAR DAYS TO ENSURE THAT A GOOD STAND IS MAINTAINED.
2. CHECK FOR EROSION OR MOVEMENT OF MUCH AND REPAIR IMMEDIATELY.
3. MONITOR FOR EROSION DAMAGE AND ADEQUATE COVER (80% DENSITY): RESEED, FERTILIZE, AND APPLY MULCH WHERE NECESSARY.
4. IF NITROGEN DEFICIENCY IS APPARENT, TOP–DRESS FALL SEEDED WHEAT OR RYE SEEDING WITH 50 POUNDS PER ACRE OF NITROGEN IN FEBRUARY OR MARCH.

PERMANENT SEEDING MAINTENANCE
1. INSPECT WITHIN 24 HOURS OF EACH RAIN EVENT AND AT LEAST ONCE EVERY SEVEN CALENDAR DAYS UNTIL THE VEGETATION IS SUCCESSFULLY ESTABLISHED.
2. CHARACTERISTICS OF A SUCCESSFUL STAND INCLUDE VIGOROUS DARK GREEN OR BLUISHGREEN SEEDLINGS WITH A UNIFORM VEGETATIVE COVER DENSITY OF 90 PERCENT OR MORE.
3. CHECK FOR EROSION OR MOVEMENT OF MULCH.
4. REPAIR DAMAGED, BARE, GULLIED, OR SPARSELY VEGETATED AREAS AND THEN FERTILIZE, RESEED, AND APPLY AND ANCHOR MULCH.
5. 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.
6. 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.)
7. IF ADDITIONAL FERTILIZATION IS NEEDED TO GET A SATISFACTORY STAND, DO SO ACCORDING TO SOIL TEST RECOMMENDATIONS.
8. ADD FERTILIZER THE FOLLOWING GROWING SEASON. FERTILIZE ACCORDING TO SOIL TEST RECOMMENDATIONS.
9. FERTILIZE TURF AREAS ANNUALLY. APPLY FERTILIZER IN A SPLIT APPLICATION. FOR COOL–SEASON GRASSES, APPLY ONE–HALF OF THE FERTILIZER IN LATE SPRING AND ONEHALF 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.

ROCK DONUT SEDIMENT BARRIER MAINTENANCE
1. INSPECT WITHIN 24 HOURS OF EACH RAIN EVENT AND AT LEAST ONCE EVERY SEVEN CALENDAR DAYS.
2. IF SIGNIFICANT EROSION OCCURS BETWEEN DAMS, INSTALL AN EROSION–RESISTANT LINER IN THAT PORTION OF THE CHANNEL.
3. 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.
4. ADD RIPRAP AND AGGREGATE AS NEEDED TO MAINTAIN DESIGN HEIGHT AND CROSS SECTION OF THE DAMS.
5. 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.)

STRAW BALE SEDIMENT BARRIER MAINTENANCE
1. INSPECT WEEKLY AND AFTER EVERY STORM EVENT.
2. CHECK THE BARRIER FOR PIPING, STONE MOVEMENT OR OTHER SIGNS OF EROSION.
3. WHEN THE ENTIRE CONTRIBUTING DRAINAGE AREA HAS BEEN STABILIZED REMOVE THE WATER AND SEDIMENT THEN RETURN THE AREA TO ITS ORIGINAL CONTOURS OR AS DIRECTED BY THE EROSION CONTROL PLAN.
4. PERMANENTLY STABILIZED PER THE APPROVED EROSION CONTROL PLAN.

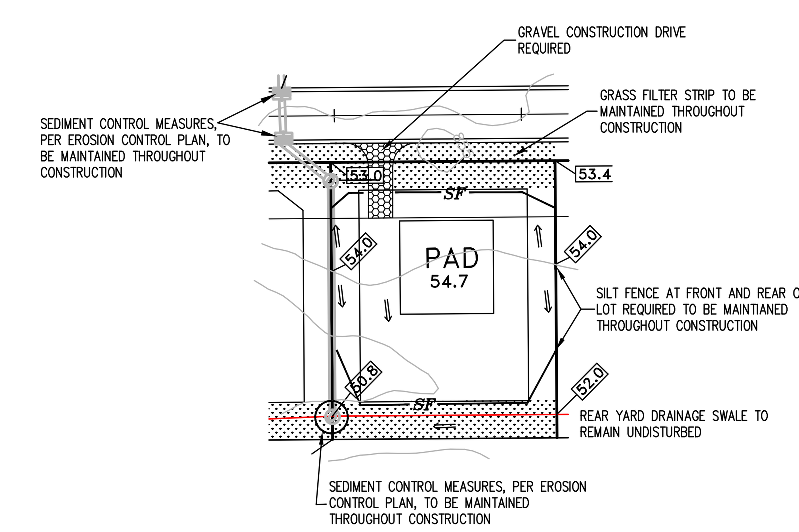
EROSION CONTROL BLANKET MAINTENANCE
1. INSPECT WITHIN 24 HOURS OF A RAIN EVENT AND AT LEAST ONCE EVERY SEVEN CALENDAR DAYS.
2. CHECK FOR EROSION OR DISPLACEMENT OF THE BLANKET.
3. IF ANY AREA SHOWS EROSION, PULL BACK THAT PORTION OF THE BLANKET COVERING THE ERODED AREA, ADD SOIL AND TAMP, RESEED THE AREA, REPLACE AND STAPLE THE BLANKET.

TEMPORARY DIVERSION SWALE MAINTENANCE
1. INSPECT WITHIN 24 HOURS OF EACH RAIN EVENT AND AT LEAST ONCE EVERY SEVEN CALENDAR DAYS.
2. REMOVE SEDIMENT FROM CHANNEL TO MAINTAIN POSITIVE GRADE.
3. CHECK OUTLETS AND MAKE NECESSARY REPAIRS IMMEDIATELY.
4. ADJUST RIDGE HEIGHT TO PREVENT OVERTOPPING.

ENERGY DISSIPATER (OUTLET PROTECTION) MAINTENANCE
1. INSPECT WITHIN 24 HOURS OF A RAIN EVENT AND AT LEAST ONCE EVERY SEVEN CALENDAR DAYS.
2. INSPECT FOR STONE DISPLACEMENT; REPLACE STONES ENSURING PLACEMENT AT FINISHED GRADE.
3. CHECK FOR EROSION OR SCOURING AROUND SIDES OF THE APRON; REPAIR IMMEDIATELY.
4. CHECK FOR PIPING OR UNDERCUTTING; REPAIR IMMEDIATELY.

TEMPORARY CURB & PAVED AREA INLET PROTECTION (INSERT BASKET)
1. INSPECT DAILY.
2. 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.
3. REPLACE OR CLEAN GEOTEXTILE FABRIC AS NEEDED.
4. WHEN THE CONTRIBUTING DRAINAGE AREA HAS BEEN STABILIZED, REMOVE INLET PROTECTION.

B15 EROSION AND SEDIMENT CONTROL SPECIFICATIONS FOR INDIVIDUAL BUILDING LOTS



NOTE:
1. FINISHED GRADES TO BE IN CONFORMANCE WITH SUBDIVISION GRADING PLAN; EXCESS SOIL TO BE DISPOSED OF IN APPROVED FILL AREA.
2. SIDE YARD SWALES TO BE CONSTRUCTED PER SUBDIVISION GRADING PLAN.
3. ALL SEDIMENT TRACKED ONTO PUBLIC ROADWAY TO BE REMOVED BY SCRAPING AT THE END OF EACH WORK DAY.
4. ALL DISTURBED AREAS TO BE PERMANENT SEEDED AFTER FINISH GRADING.
5. SILT FENCING AT FRONT AND REAR OF LOT MAY BE REPLACED WITH TEMPORARY EARTHEN DIVERSION MOUNDS.
6. ALL SEDIMENT CONTROL PRACTICES TO BE MAINTAINED TO ENSURE PROPER FUNCTIONING.
7. SILT FENCE SHALL BE PLACED AT BACK OF CURB WHERE FRONT YARD SLOPE EXCEEDS 5 (HORIZONTAL) TO 1 (VERTICAL).
8. ON–SITE TRASH ENCLOSURE SHALL BE PROVIDED AND ALL TRASH PICKED UP AND DISPOSED OF IN A TIMELY MANOR.

STORM WATER POLLUTION PREVENTION PLAN POST CONSTRUCTION COMPONENT (SECTION C)

C1 DESCRIPTION OF POLLUTANTS AND THEIR SOURCES ASSOCIATED WITH THE PROPOSED LAND USE.
POLLUTANTS THAT WILL BE EXPECTED TO MAKE THEIR WAY INTO THE STORM WATER COLLECTION SYSTEM IN A SIGNIFICANT AMOUNT INCLUDE GRIT FROM THE ROAD SURFACE WEARING, YARD WASTE, PAVEMENT TREATMENTS DURING COLD WEATHER. THE WEARING OF ROADWAY SURFACES WILL RESULT IN SMALL PARTICLES OF PORTLAND CEMENT CONCRETE AND BITUMINOUS CEMENT CONCRETE. ROADWAY TREATMENTS WILL INCLUDE THE USE OF SALT COMPOUNDS AND SAND AS A MEANS OF LIMITING ICE BUILDUP ON PUBLIC ROADS, AS WELL AS PARKING AREAS AND WALKS. EACH WILL NOT ONLY CAUSE POLLUTION IN THE FORM OF SMALL PARTICULATE MATTER BUT EACH WILL ALSO RELEASE SOME CHEMICAL COMPOUNDS INTO THE STORM WATER SYSTEM. GRANULAR SEDIMENTS WILL ALSO BE RELEASED FROM AREAS THAT ARE INTENDED TO BE TURF, BUT DUE TO WEARING THE VEGETATIVE COVER HAS BEEN DAMAGED OR DESTROYED.

C2 SEQUENCE DESCRIBING STORM WATER QUALITY MEASURE IMPLEMENTATION
STORMWATER TREATMENT WILL BE PERFORMED BY USING POND 1 AS A SEDIMENT BASIN.

C3 DESCRIPTION OF PROPOSED POST CONSTRUCTION STORM WATER QUALITY MEASURE.
STORMWATER TREATMENT WILL BE PERFORMED BY USING POND 1 AS A SEDIMENT BASIN.

C4 CONSTRUCTION DETAILS AND SPECIFICATIONS
STORMWATER TREATMENT WILL BE PERFORMED BY USING POND 1 SEDIMENT BASIN. REFER TO THE ACCOMPANYING DRAINAGE MANUAL FOR BMP CALCULATIONS. CONSTRUCTION DETAILS ARE PROVIDED ON PLAN SHEET C801.

C5 MAINTENANCE GUIDELINES FOR STORM WATER MEASURES
POND 1 WILL BE DREDGED TO ORIGINAL ELEVATIONS EVERY 7 YEARS, IN ACCORDANCE WITH THE ACCOMPANYING OPERATIONS AND MAINTENANCE MANUAL (O&M MANUAL.) AFTER CONSTRUCTION STORM WATER TREATMENT UNITS ARE TO BE CLEANED IN ACCORDANCE WITH THE APPROVED OPERATIONS MANUAL. CLEANING TO BE DIRECTED TO THE HAMILTON COUNTY DRAINAGE BOARD.

ESTIMATED START: ---
ESTIMATED COMPLETION OF SITE DEVELOPMENT: ---

CONTACT PERSON:
BRYAN STUMPH
ESTRIDGE DEVELOPMENT MANAGEMENT, LP
12965 OLD MERIDIAN STREET
CARMEL, IN 46032
317–669–6209

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REVISIONS:

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Carmel, IN 46032
317-669-6209

Harmony Section One
Single Family Subdivision
Westfield, Indiana
Stormwater Pollution Prevention Plan

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SHEET # C108

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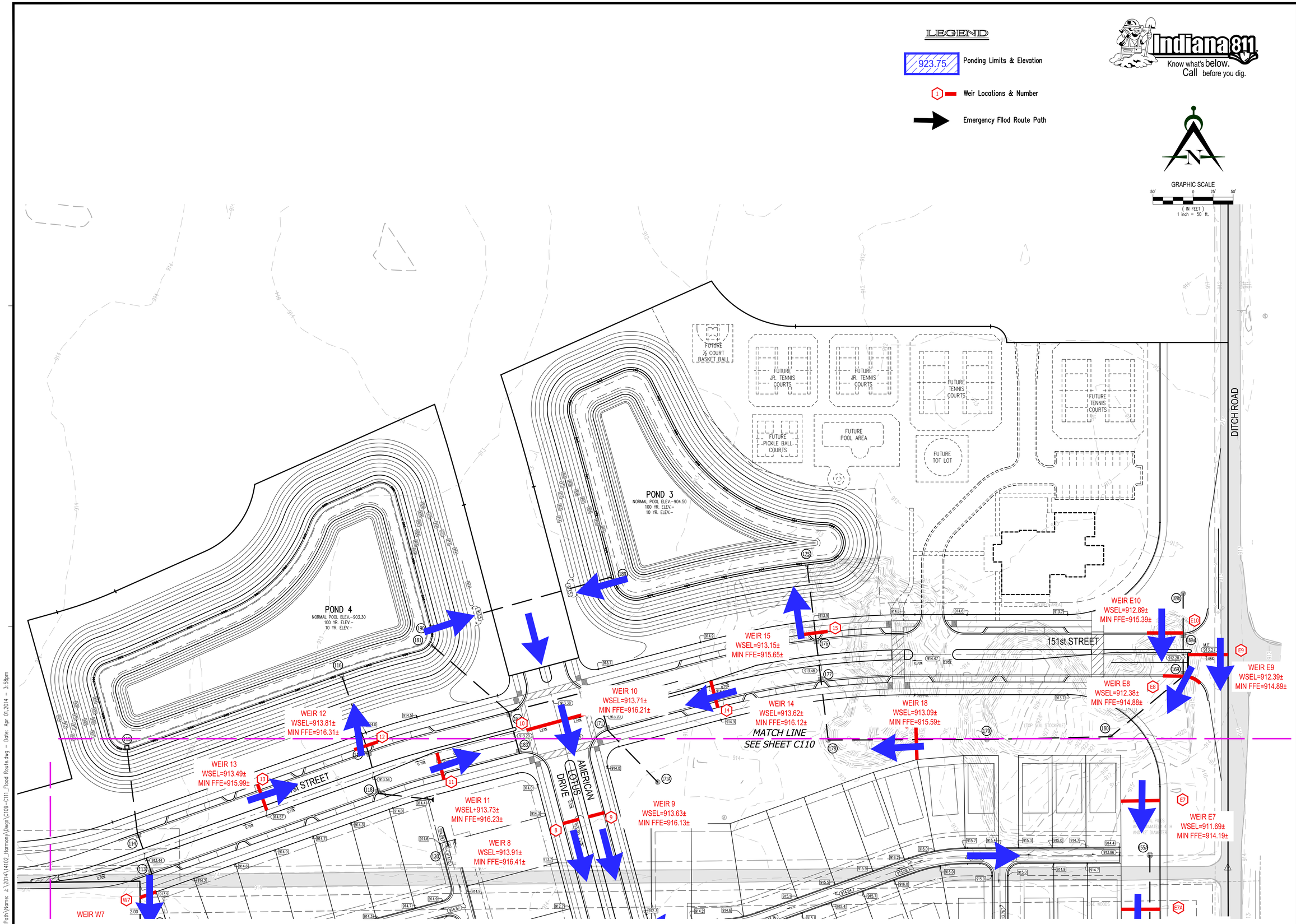

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Harmony Section One
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Westfield, Indiana
Emergencey Flood Routing Plan

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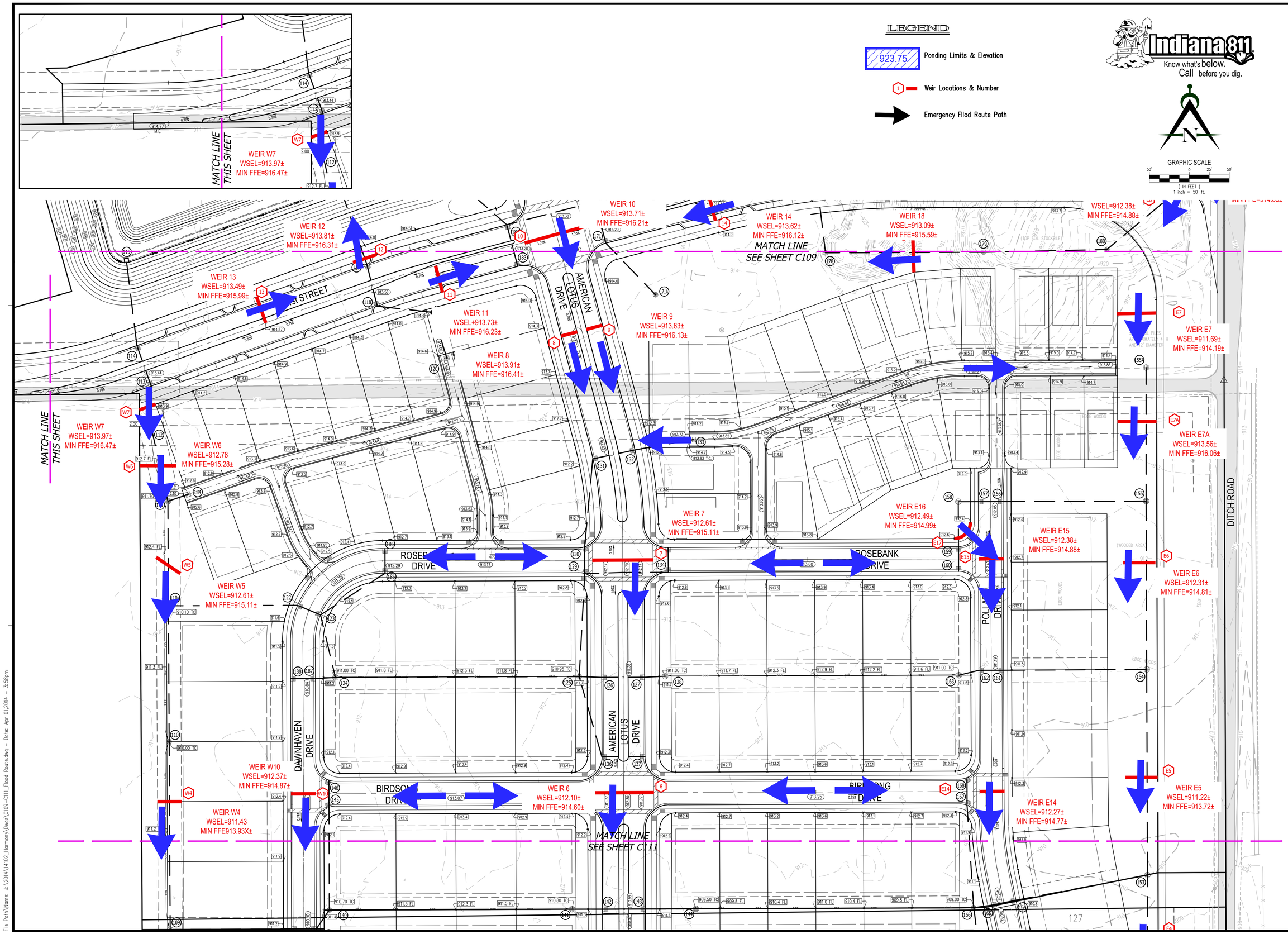

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Harmony Section One Single Family Subdivision

Westfield, Indiana

Emergencey Flood Routing Plan

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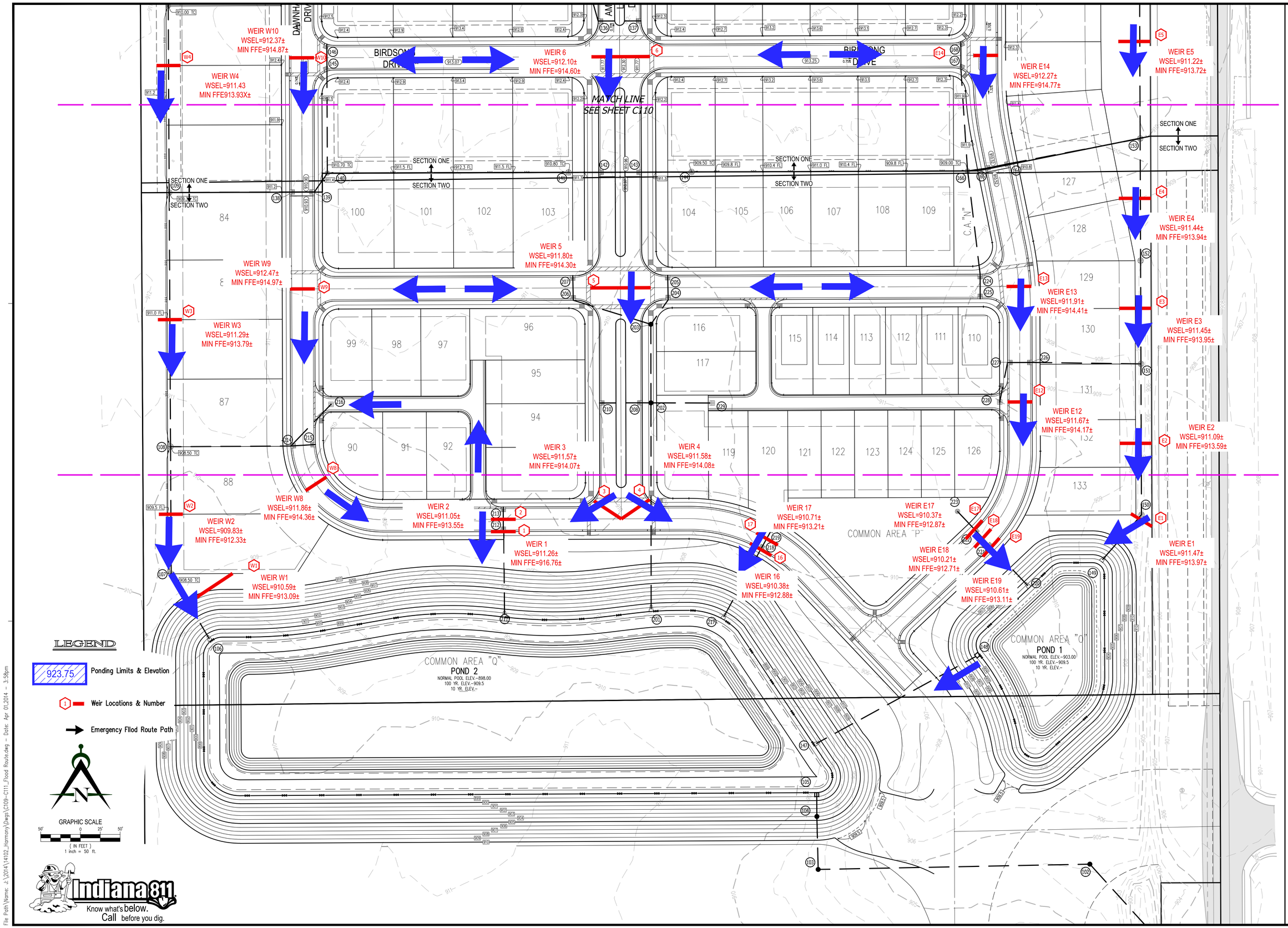

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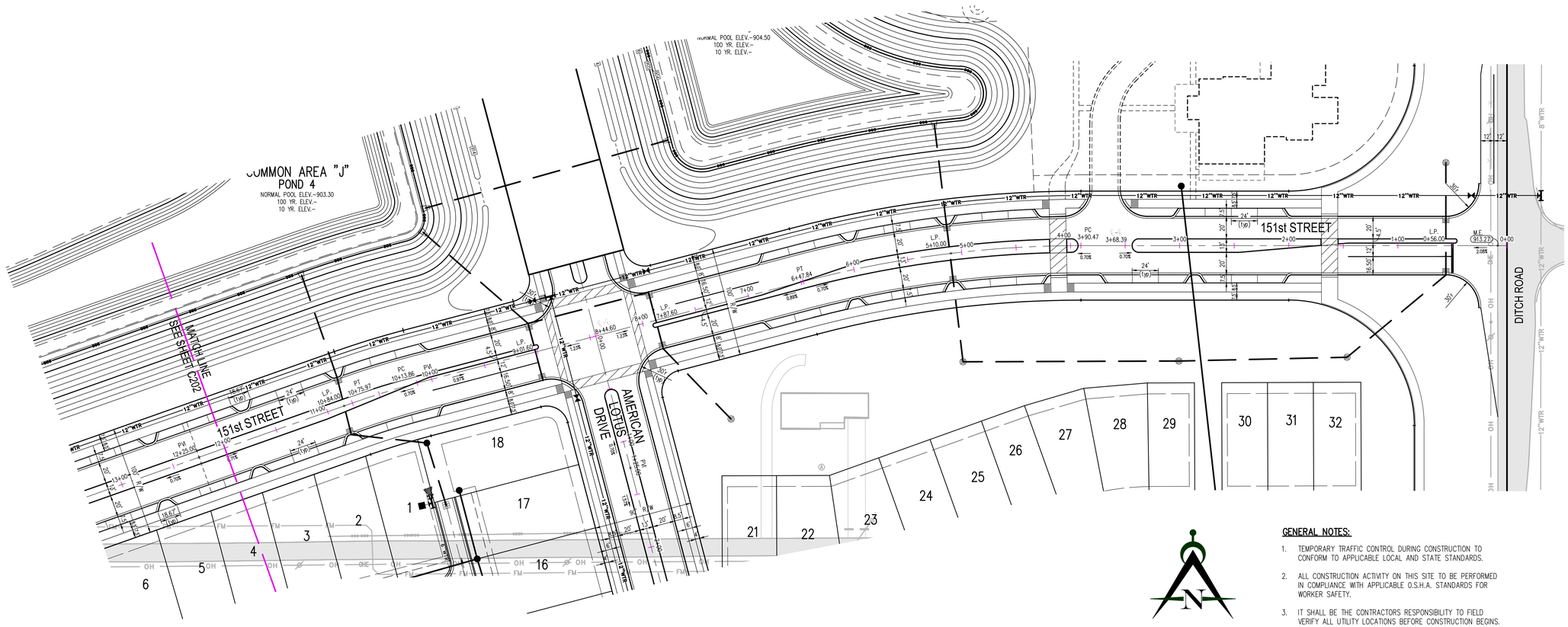

GENERAL NOTES:

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3. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO FIELD VERIFY ALL UTILITY LOCATIONS BEFORE CONSTRUCTION BEGINS.
4. CONTRACTORS SHALL MINIMIZE DAMAGE TO EXISTING TREES.
5. SEE SHEET C301 FOR INTERSECTION GRADING DETAILS.

SCALE:
HORZ. 1" = 50'
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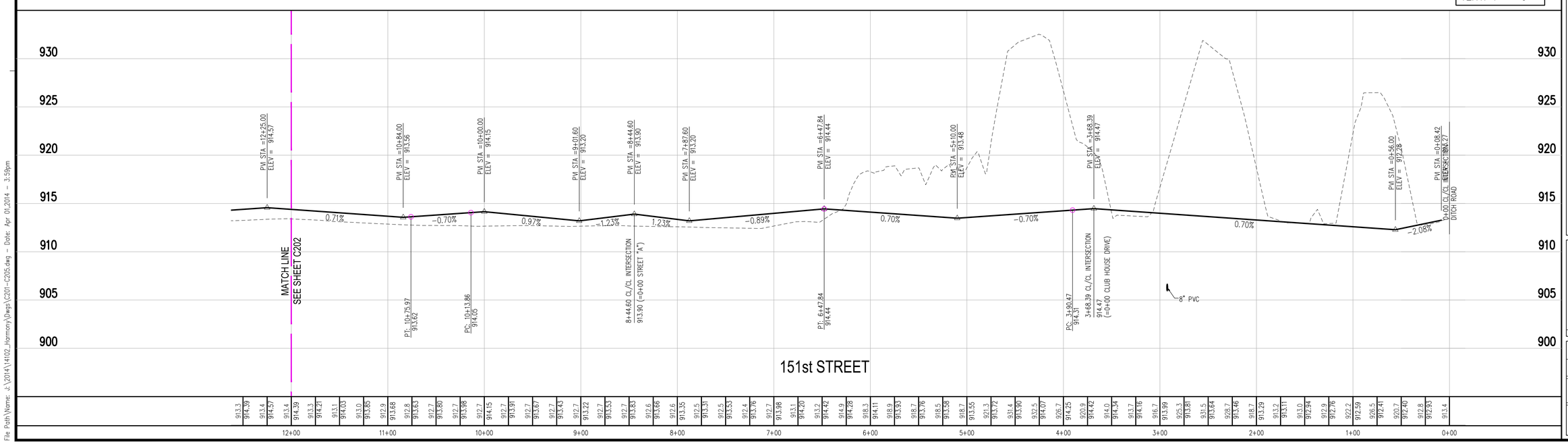

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Harmony Section One
Single Family Subdivision
Westfield, Indiana
Street Plan & Profile

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SHEET # C201

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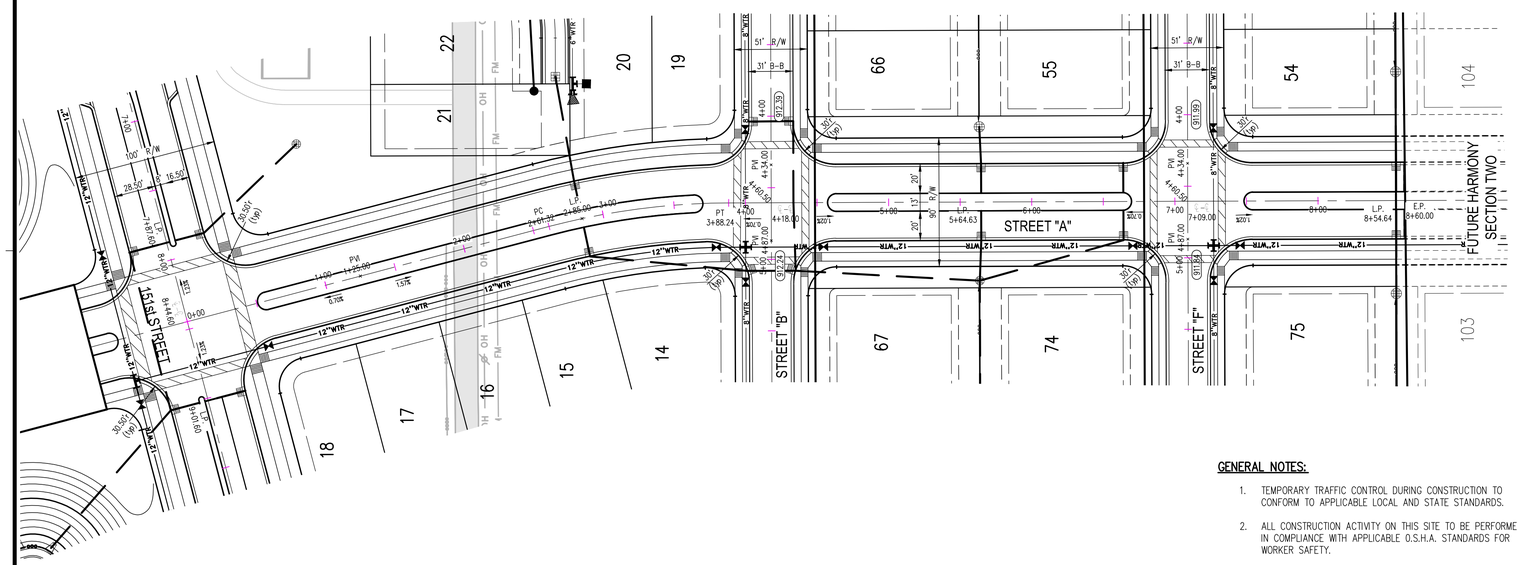

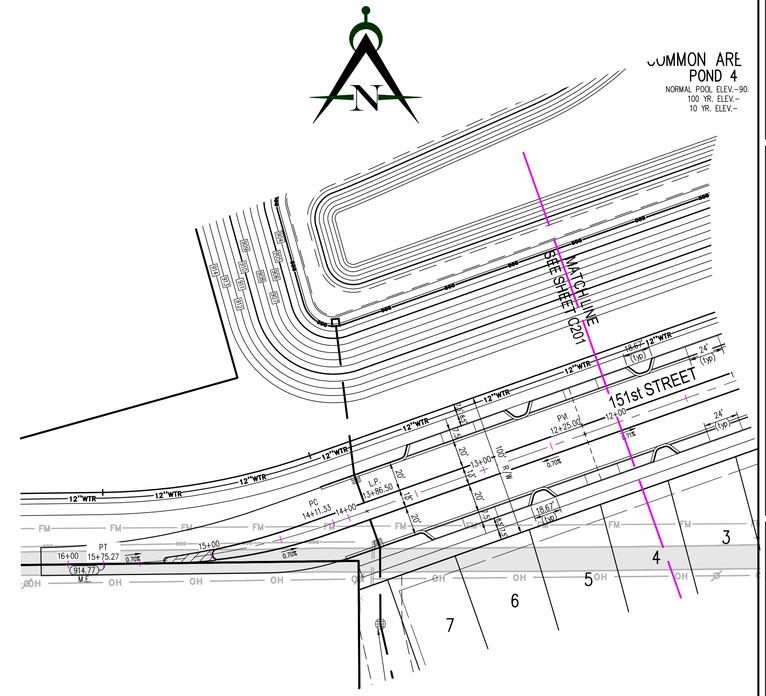

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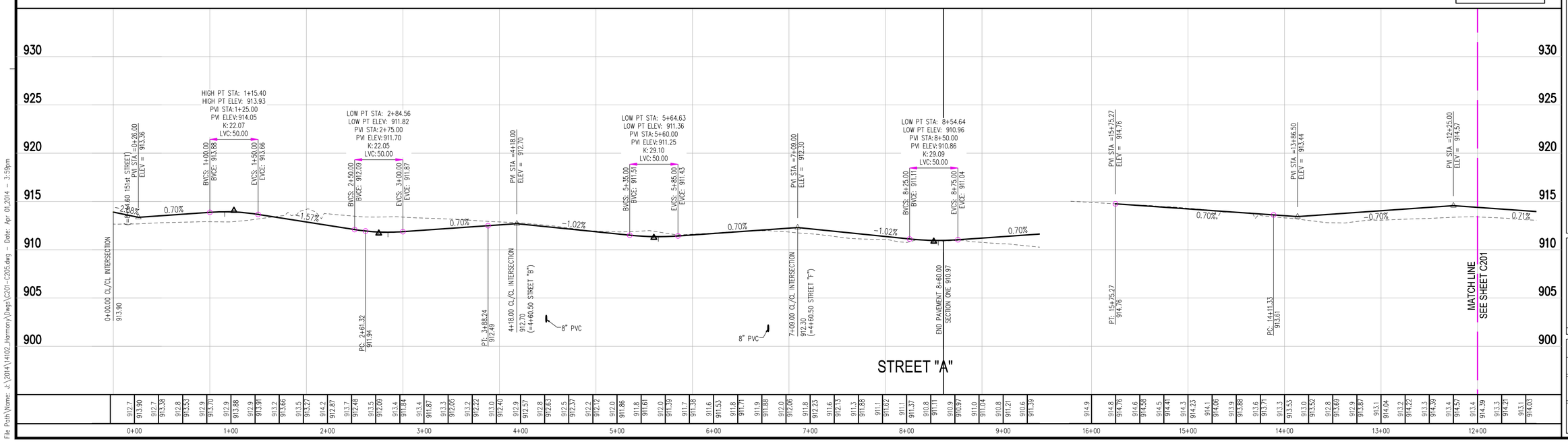

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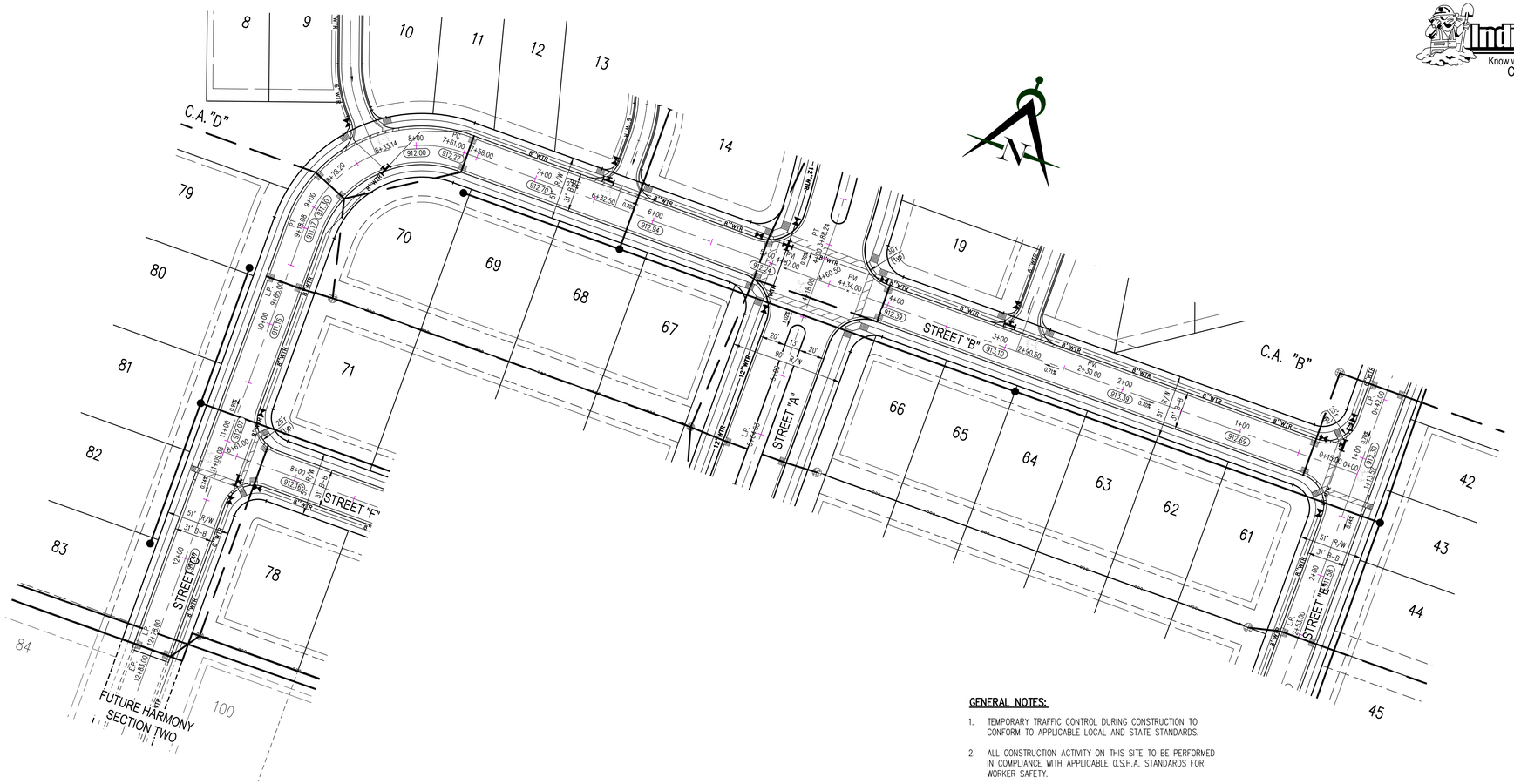

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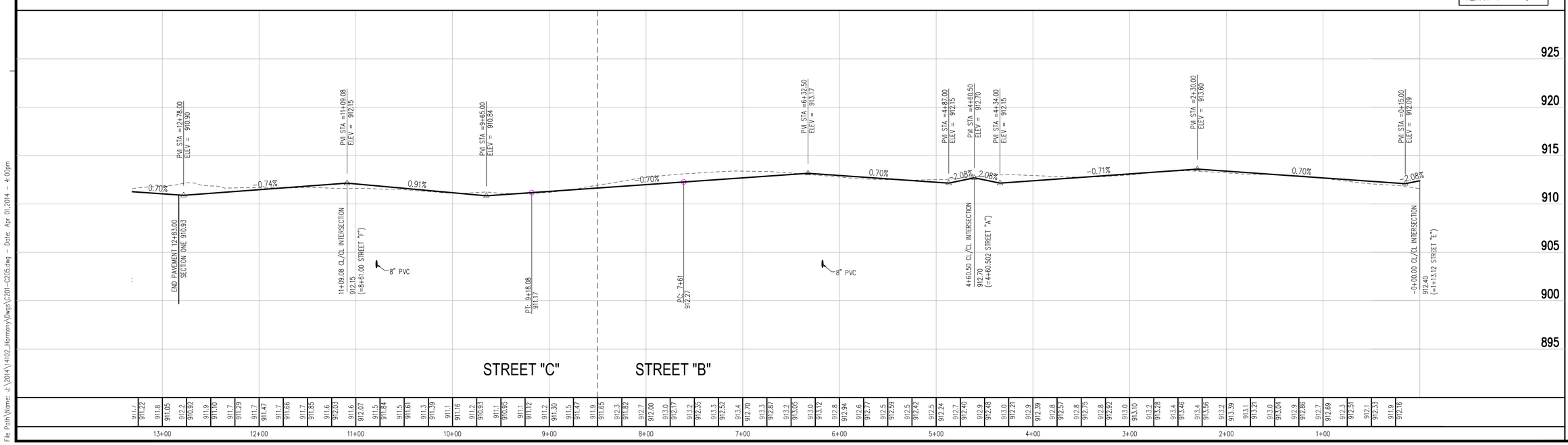

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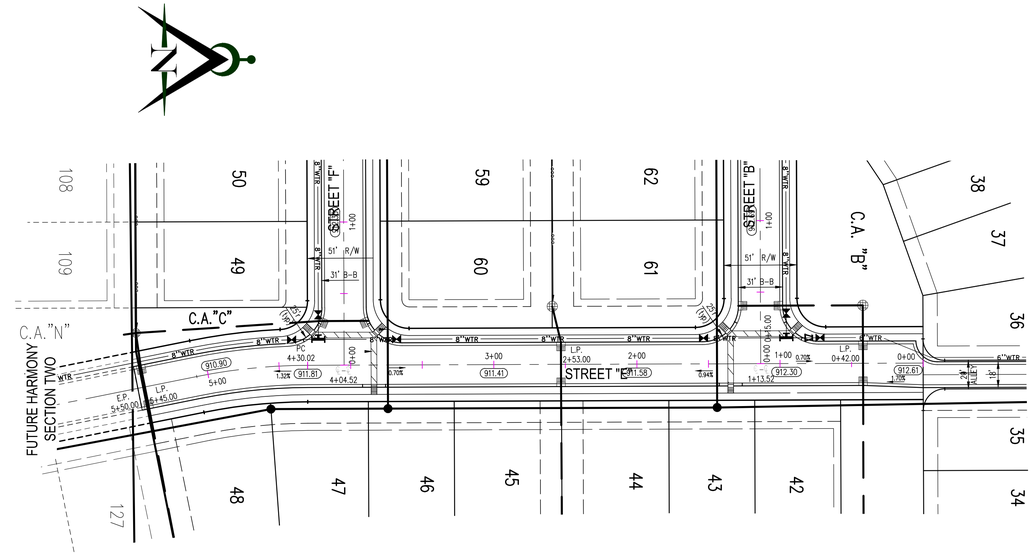

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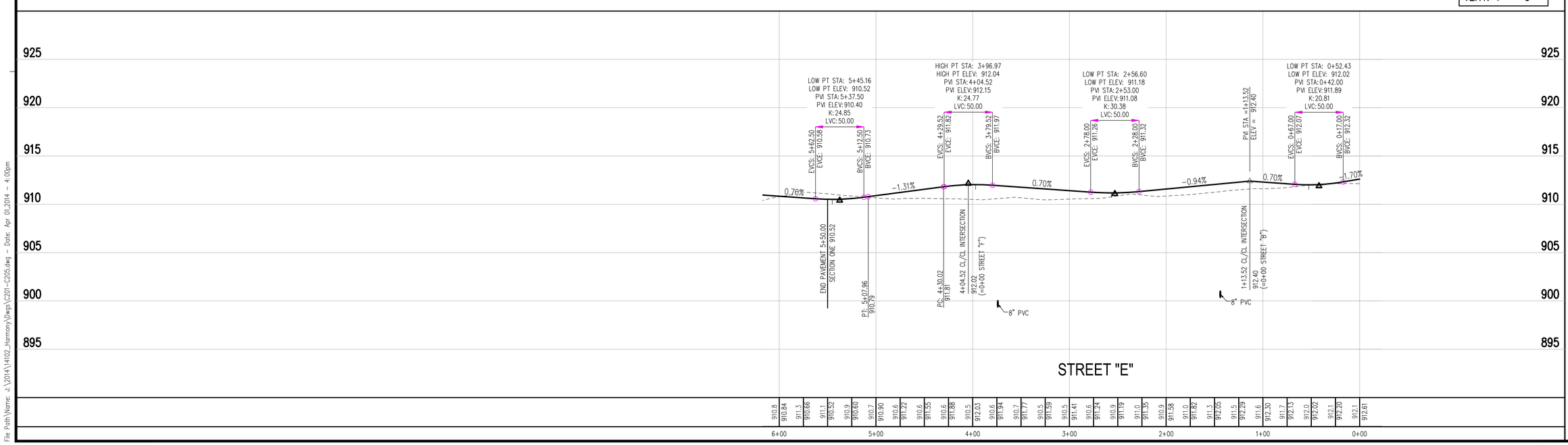

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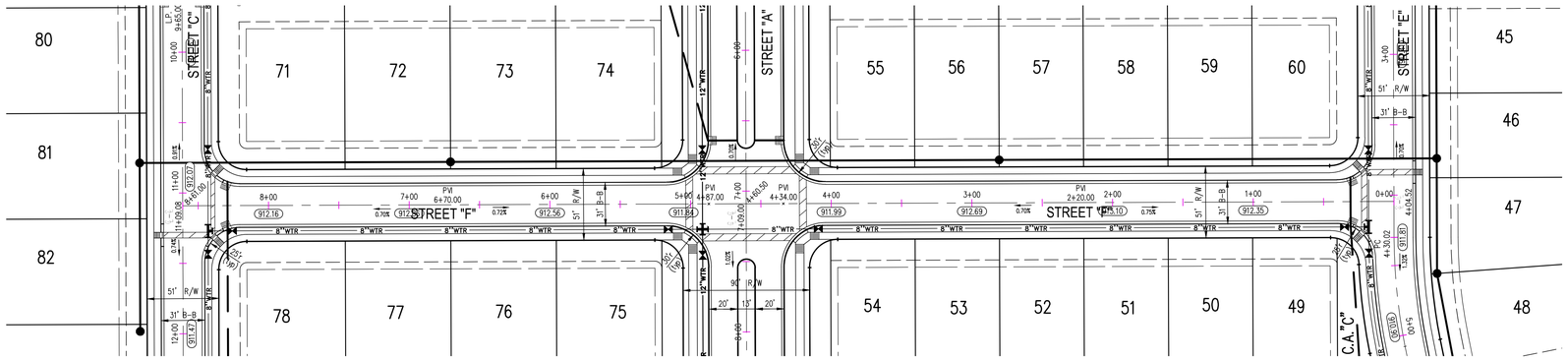

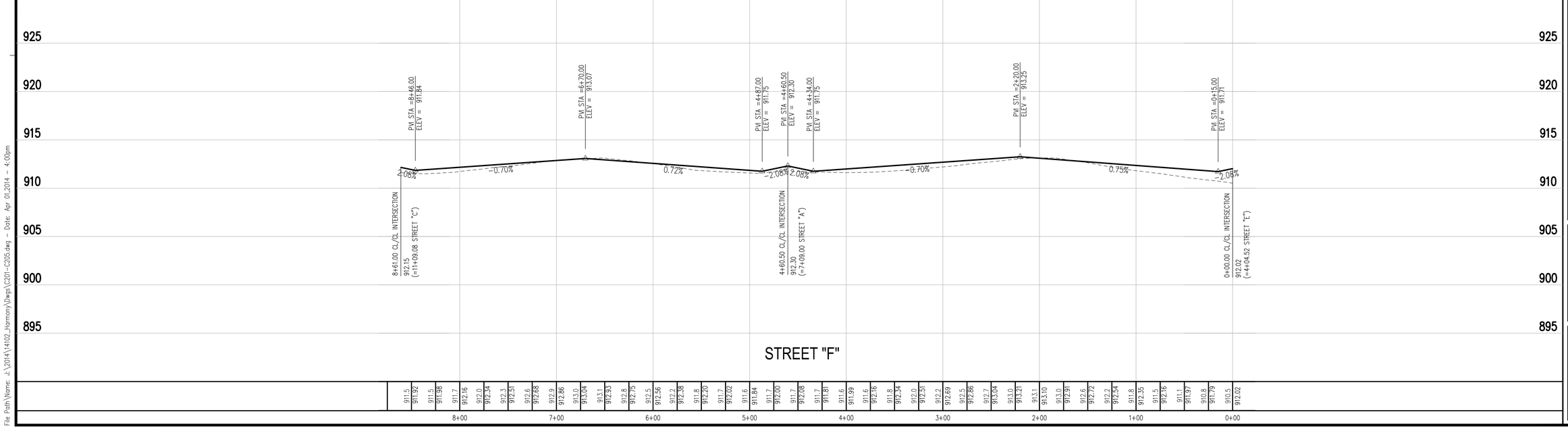

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GENERAL NOTES

1. IT SHALL BE THE RESPONSIBILITY OF EACH SUBCONTRACTOR TO VERIFY ALL EXISTING UTILITIES AND CONDITIONS THAT PERTAIN TO THEIR PHASE OF WORK PRIOR TO START OF WORK. IT SHALL ALSO BE THE RESPONSIBILITY OF EACH SUBCONTRACTOR TO CONTACT THE OWNERS OF THE UTILITIES FOR PROPER STAKE LOCATIONS PRIOR TO START OF WORK.
2. IF ANY CHANGES, OMISSIONS OR ERRORS ARE FOUND ON THESE PLANS OR IN THE FIELD THE SUBCONTRACTOR SHALL NOTIFY, IN WRITING, THE OWNER AND ENGINEER BEFORE WORK IS STARTED OR RESUMED.
3. ALL CONSTRUCTION ACTIVITY ON THIS SITE TO PERFORMED IN COMPLIANCE WITH ALL APPLICABLE O.S.H.A. STANDARDS FOR WORKER SAFETY.
4. ALL CONSTRUCTION INSIDE PUBLIC RIGHT-OF-WAY SHALL BE PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS OF THE INDIANA DEPARTMENT OF TRANSPORTATION (INDOT) FOR CONSTRUCTION INCLUDING MATERIALS, METHODS OF CONSTRUCTION, AND TRAFFIC CONTROL.
5. MAINTENANCE OF TRAFFIC DEVICES ARE TO CONFORM TO INDIANA DEPT. OF TRANSPORTATION STANDARD SPECIFICATIONS, (LATEST EDITION). FOR MORE DETAIL SEE INDIANA DEPT. OF TRANSPORTATION STANDARD DRAWINGS.
6. ALL TRAFFIC CONTROL METHODS AND PROCEDURES AND LAYOUT, AS DETERMINED BY THE CONTRACTOR, SHALL BE IN COMPLIANCE WITH LOCAL REQUIREMENTS AND THE INDIANA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS, LATEST EDITION.
7. THE CONTRACTOR SHALL FURNISH, INSTALL AND MAINTAIN IN PROPER WORKING ORDER, ALL CONSTRUCTION SIGNS, LIGHTS, CHANNELIZING DEVICES AND OTHER TRAFFIC CONTROL EQUIPMENT AS MAY BE REQUIRED TO FULLY MAINTAIN, AS NEARLY AS POSSIBLE, NORMAL TRAFFIC WITHIN THE CONSTRUCTION AREA. CONSTRUCTION SIGNS SHALL REMAIN IN PLACE UNTIL ALL ROAD CONSTRUCTION IS COMPLETE.
8. THE CONSTRUCTION WILL CONSIST OF MAINTAINING A STEADY EASTBOUND LANE ALONG SR 334. CHANNELIZING DEVICES SHALL BE PLACED NOT MORE TWO FEET FROM THE EDGE OF SHOULDER. SIGNS SHALL BE POSTED AT EACH END OF THE WORK ZONE. UPON COMPLETION OF THE PROJECT, CHANNELIZING DEVICES SHALL BE REMOVED.
9. DURING NON-CONSTRUCTION HOURS, ALL LANES OF SR 334 WILL BE OPENED FOR PUBLIC USE. THIS WILL REQUIRE THAT THE CHANNELIZING DEVICES BE MOVE TO THE EDGE OF PAVEMENT ALONG THE SOUTH EDGE OF SR 334.
10. ALL DRIVES ENTRANCES ALONG SR 334 SHALL REMAIN OPEN DURING CONSTRUCTION. DO NOT PLACE SIGNS IN DRIVES OR STREETS.
12. REPAIR OR REPLACE ANY EXISTING PAVEMENT MARKINGS THAT ARE DAMAGED OR DESTROYED DURING CONSTRUCTION.
13. THE POSTED SPEED LIMIT FOR SR 334 IS 45 M.P.H.
14. ALL DISTURBED R/W IS TO BE PERMANENTLY SEEDED AND COVERED WITH EROSION CONTROL BLANKETS.

LEGEND

- Existing Storm Sewer
- New Storm Sewer
- 000 — Existing Contour
- × 922.1 — Existing Spot Elevation
- (000.00) — New Pavement Grade
- 000.00 — All Other Finish Grades
- M.E. — Match Existing Grades
- (000.00)TC — Top of Curb Grade
- (000.00)GUT — Curb Gutter Grade
- Surface Flow Arrow
- Existing Underground Gas Main
- UT — Existing Underground Telephone
- WTR — Existing Water Main
- UE — Existing Underground Electric
- Existing Flowline
- Existing Overhead Utilities

GRAPHIC SCALE
30' 0 15' 30'
(IN FEET)
1 inch = 30 ft.

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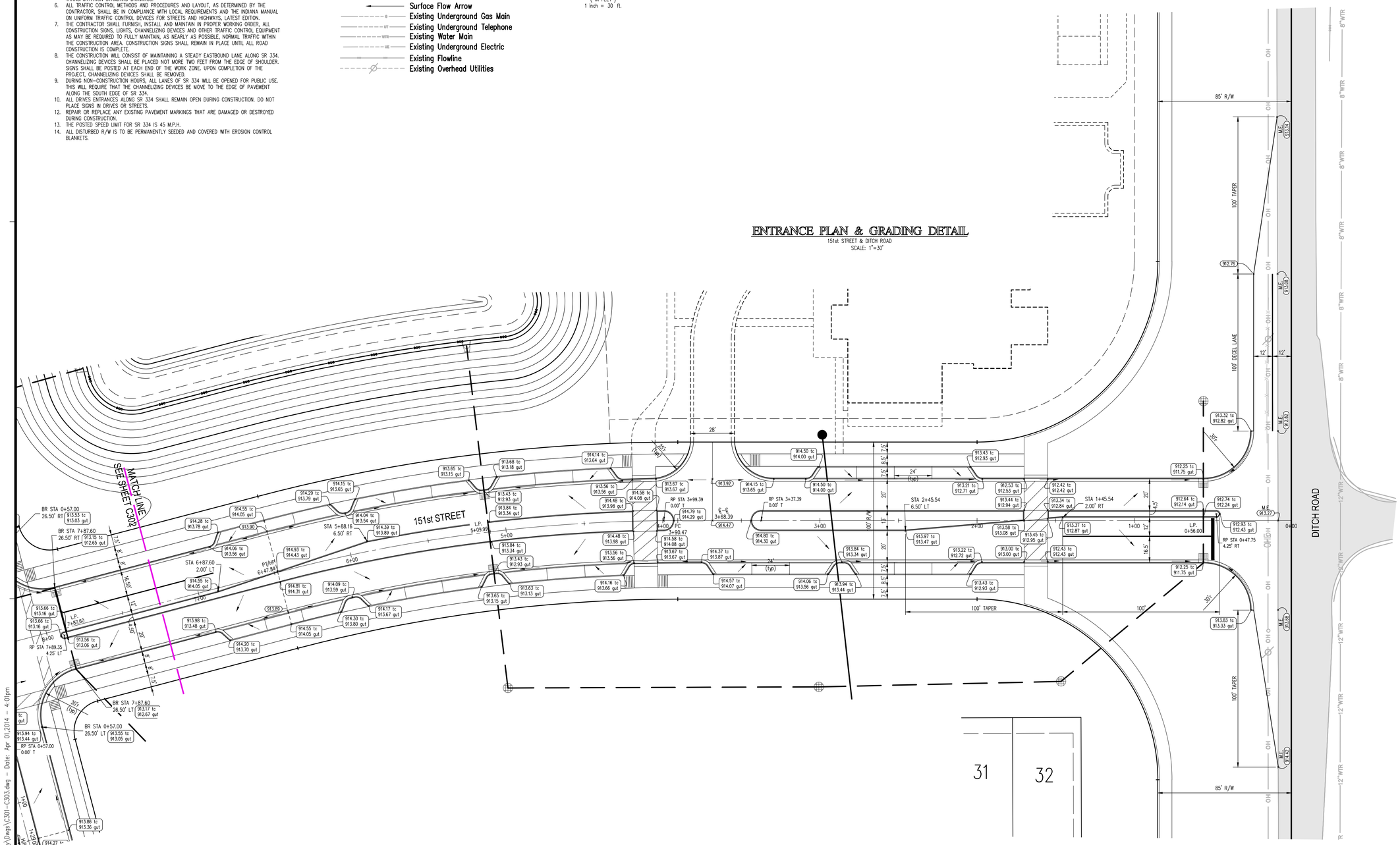
ENTRANCE PLAN & GRADING DETAIL

151st STREET & DITCH ROAD
SCALE: 1"=30'



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REVISIONS:

PREPARED FOR:
Estridge
Estridge Development Management, LLC
12965 Old Meridian Street
Carmel, IN 46032
317-669-6209

Harmony Section One
Single Family Subdivision
Westfield, Indiana
Street Detail

PRELIMINARY PENDING AGENCY APPROVAL

DATE:

DATE:	DRAWN BY: kwk
ISSUED:	CHECKED BY:

JOB NUMBER: 14102

SHEET # C301

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GENERAL NOTES

1. IT SHALL BE THE RESPONSIBILITY OF EACH SUBCONTRACTOR TO VERIFY ALL EXISTING UTILITIES AND CONDITIONS THAT PERTAIN TO THEIR PHASE OF WORK PRIOR TO START OF WORK. IT SHALL ALSO BE THE RESPONSIBILITY OF EACH SUBCONTRACTOR TO CONTACT THE OWNERS OF THE UTILITIES FOR PROPER STAKE LOCATIONS PRIOR TO START OF WORK.
2. IF ANY CHANGES, OMISSIONS OR ERRORS ARE FOUND ON THESE PLANS OR IN THE FIELD THE SUBCONTRACTOR SHALL NOTIFY, IN WRITING, THE OWNER AND ENGINEER BEFORE WORK IS STARTED OR RESUMED.
3. ALL CONSTRUCTION ACTIVITY ON THIS SITE TO PERFORMED IN COMPLIANCE WITH ALL APPLICABLE O.S.H.A. STANDARDS FOR WORKER SAFETY.
4. ALL CONSTRUCTION INSIDE PUBLIC RIGHT-OF-WAY SHALL BE PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS OF THE INDIANA DEPARTMENT OF TRANSPORTATION (INDOT) FOR CONSTRUCTION INCLUDING MATERIALS, METHODS OF CONSTRUCTION, AND TRAFFIC CONTROL.
5. MAINTENANCE OF TRAFFIC DEVICES ARE TO CONFORM TO INDIANA DEPT. OF TRANSPORTATION STANDARD SPECIFICATIONS, (LATEST EDITION). FOR MORE DETAIL SEE INDIANA DEPT. OF TRANSPORTATION STANDARD DRAWINGS.
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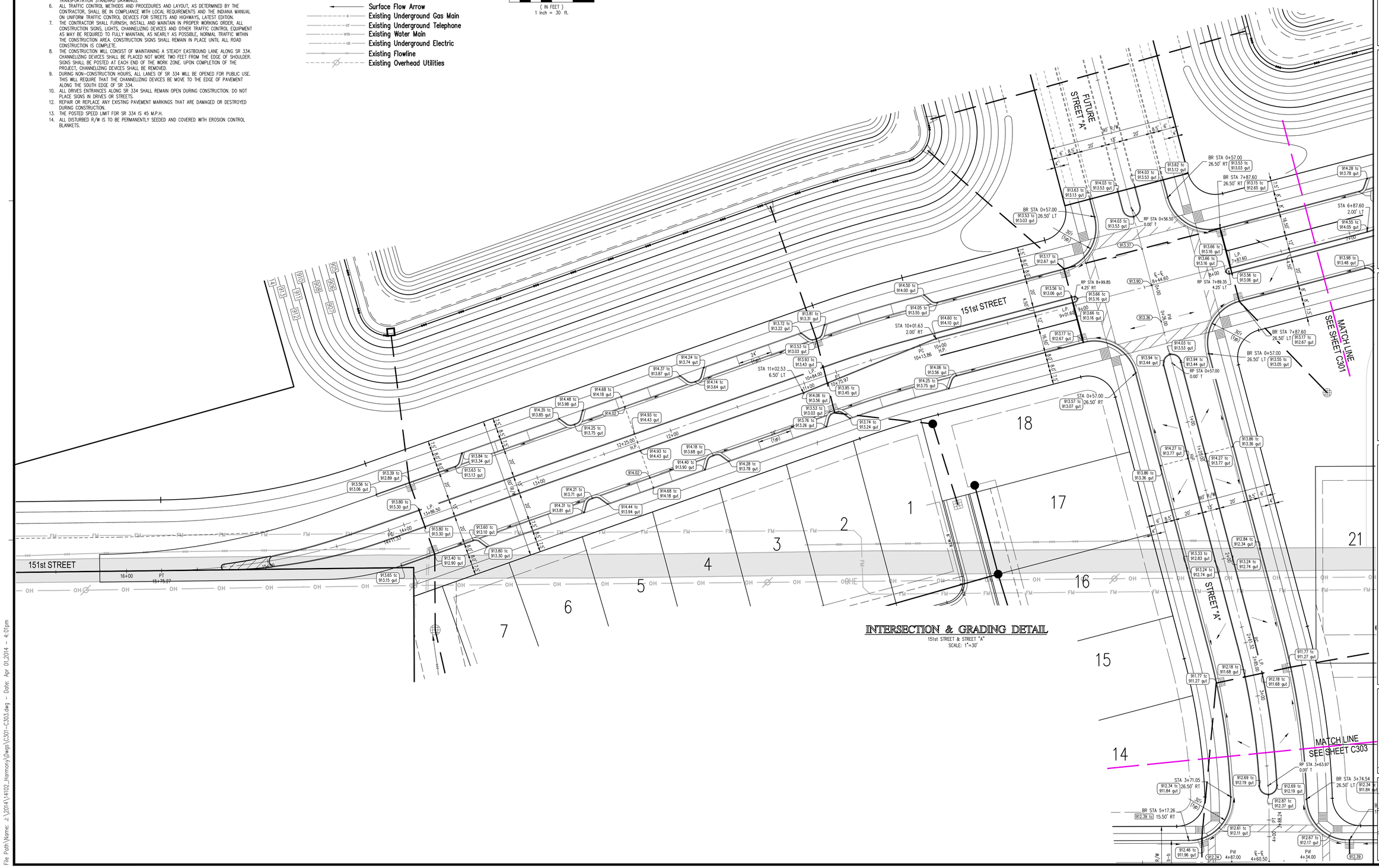
- UE — Existing Underground Electric
- Existing Flowline
- Existing Overhead Utilities

N

GRAPHIC SCALE

30' 0 15' 30'

(IN FEET)
1 inch = 30 ft.



INTERSECTION & GRADING DETAIL

151st STREET & STREET "A"
SCALE: 1"=30'

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REVISIONS:

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Estridge Development Management, LLC
12965 Old Meridian Street
Carmel, IN 46032
317-669-6209

Harmony Section One
Single Family Subdivision
Westfield, Indiana

Street Detail

PRELIMINARY
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APPROVAL

DATE:

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JOB NUMBER: 14102	
SHEET # C302	

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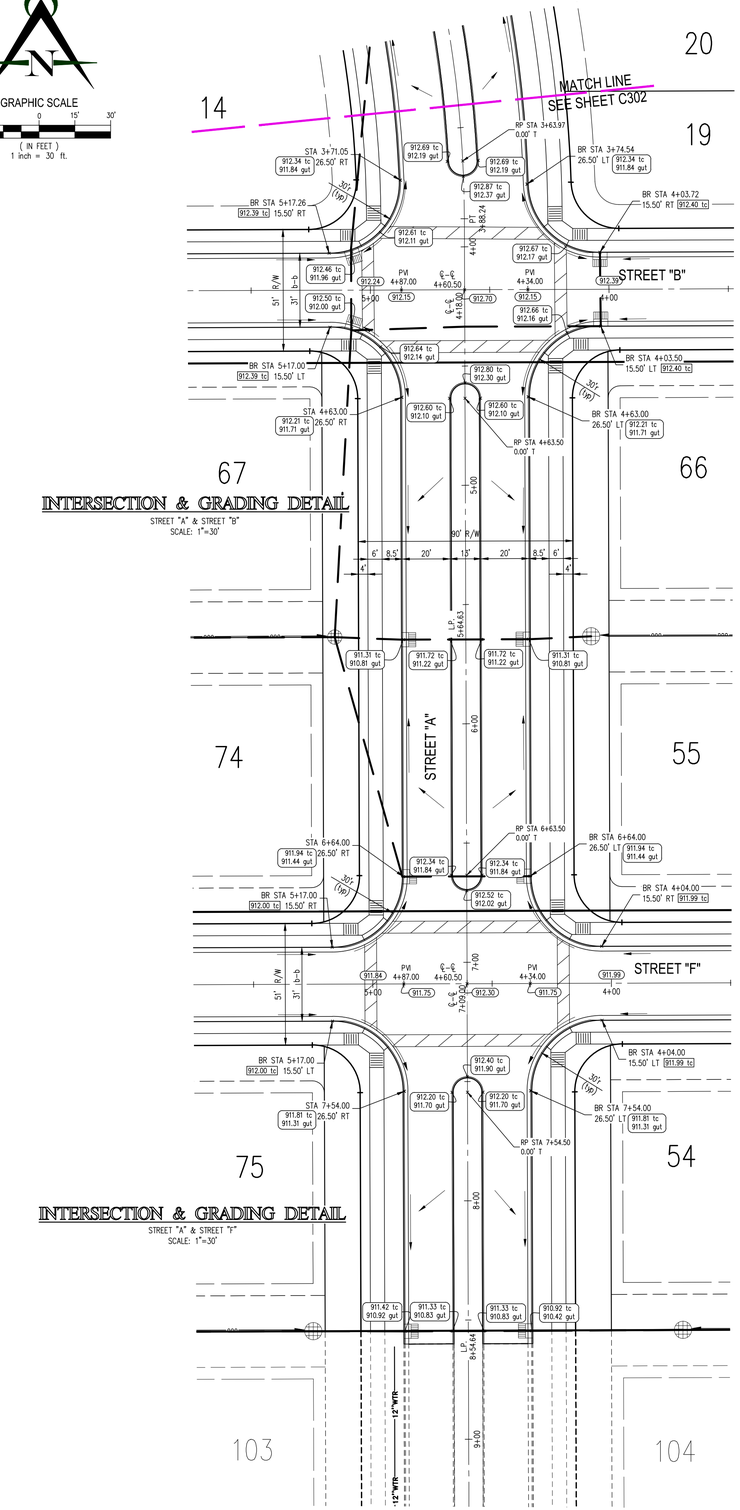
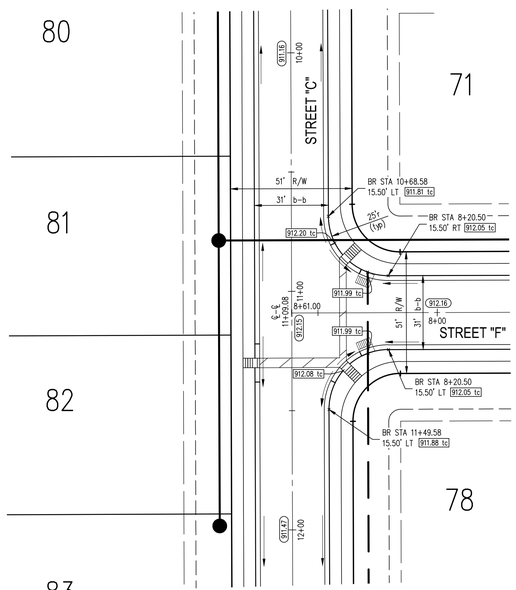
- Existing Contour
- Existing Spot Elevation
- New Pavement Grade
- All Other Finish Grades
- Match Existing Grades
- Top of Curb Grade
- Curb Gutter Grade
- Surface Flow Arrow
- Existing Underground Gas Main
- Existing Underground Telephone
- Existing Water Main
- Existing Underground Electric
- Existing Flowline
- Existing Overhead Utilities

GRAPHIC SCALE
(IN FEET)
1 inch = 30 ft.

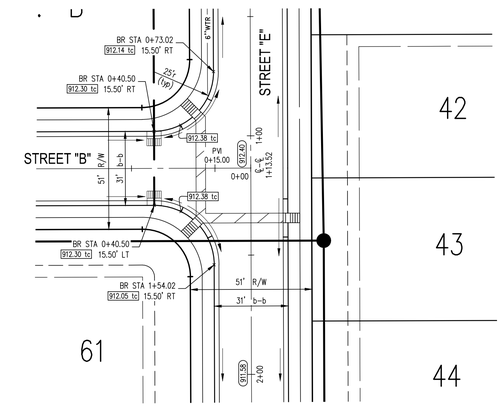


INTERSECTION & GRADING DETAIL
STREET "A" & STREET "B"
SCALE: 1"=30'

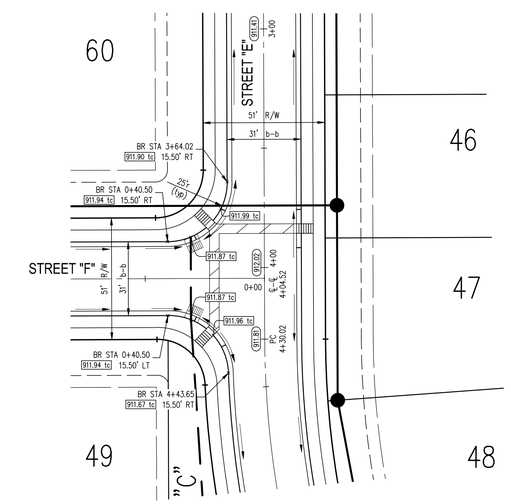
INTERSECTION & GRADING DETAIL
STREET "A" & STREET "F"
SCALE: 1"=30'



INTERSECTION DETAIL
STREET "C" & STREET "F"
SCALE: 1"=30'



INTERSECTION DETAIL
STREET "E" & STREET "B"
SCALE: 1"=30'



INTERSECTION DETAIL
STREET "E" & STREET "F"
SCALE: 1"=30'

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REVISIONS:

PREPARED FOR:
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Estridge Development Management, LLC
12965 Old Meridian Street
Carmel, IN 46032
317-669-6209

Harmony Section One
Single Family Subdivision
Westfield, Indiana
Street Detail

PRELIMINARY
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DATE:

DATE:	DRAWN BY: kwk
ISSUED:	CHECKED BY:

JOB NUMBER: 14102

SHEET # C303

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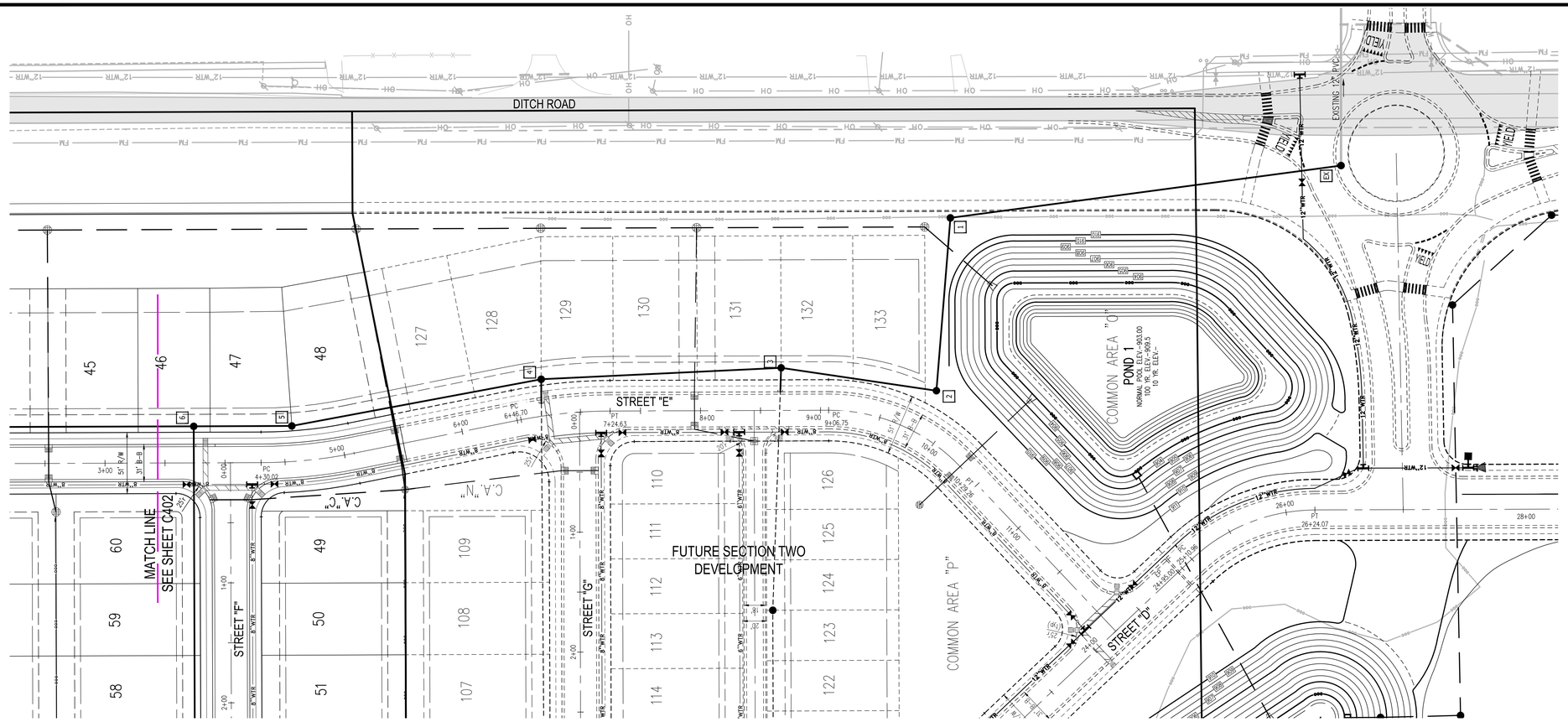

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GENERAL NOTES:

1. WYES AND LATERALS TO BE 6" PIPE UNLESS OTHERWISE NOTED.
2. ALL WYE CONNECTIONS SHALL HAVE A MINIMUM OF FIVE OF A FIVE FOOT LATERAL EXTENSION CONNECTED TO THE WYE. THE END OF THE LATERAL SHALL BE CAPPED AND MARKED WITH AN ABOVE GROUND MARKER.
3. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO FIELD VERIFY ALL UTILITY LOCATIONS PRIOR TO BEGINNING CONSTRUCTION.
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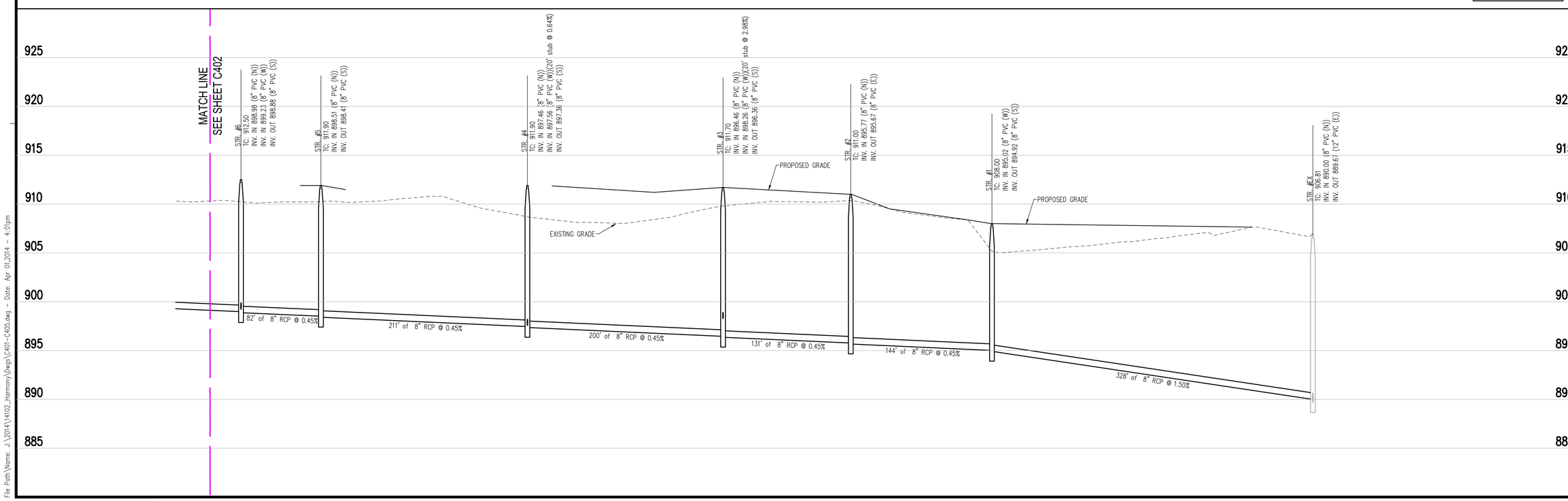
INDICATES #8 STONE BACKFILL

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



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317-669-6209

Harmony Section One
Single Family Subdivision
Westfield, Indiana

Sanitary Sewer Plan & Profile

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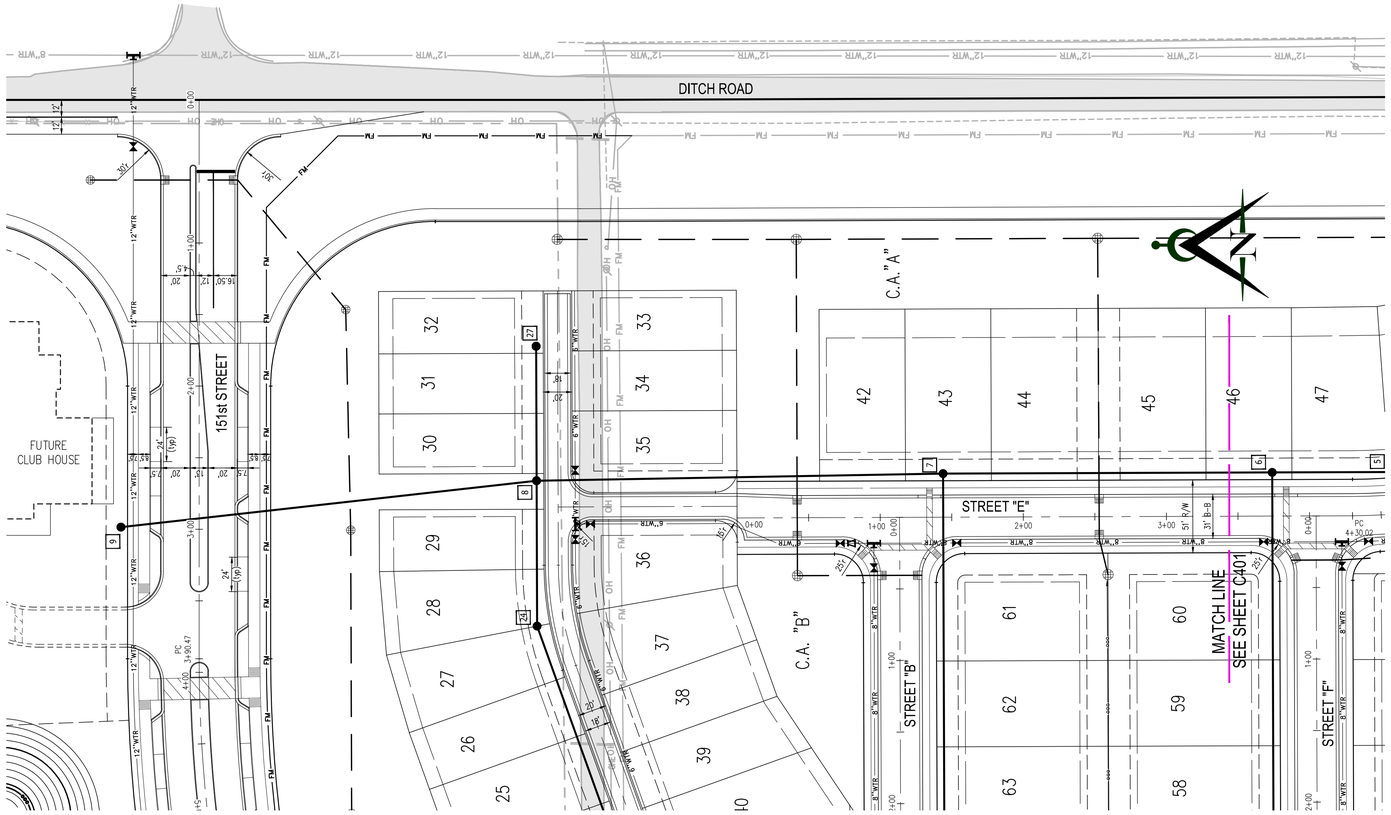

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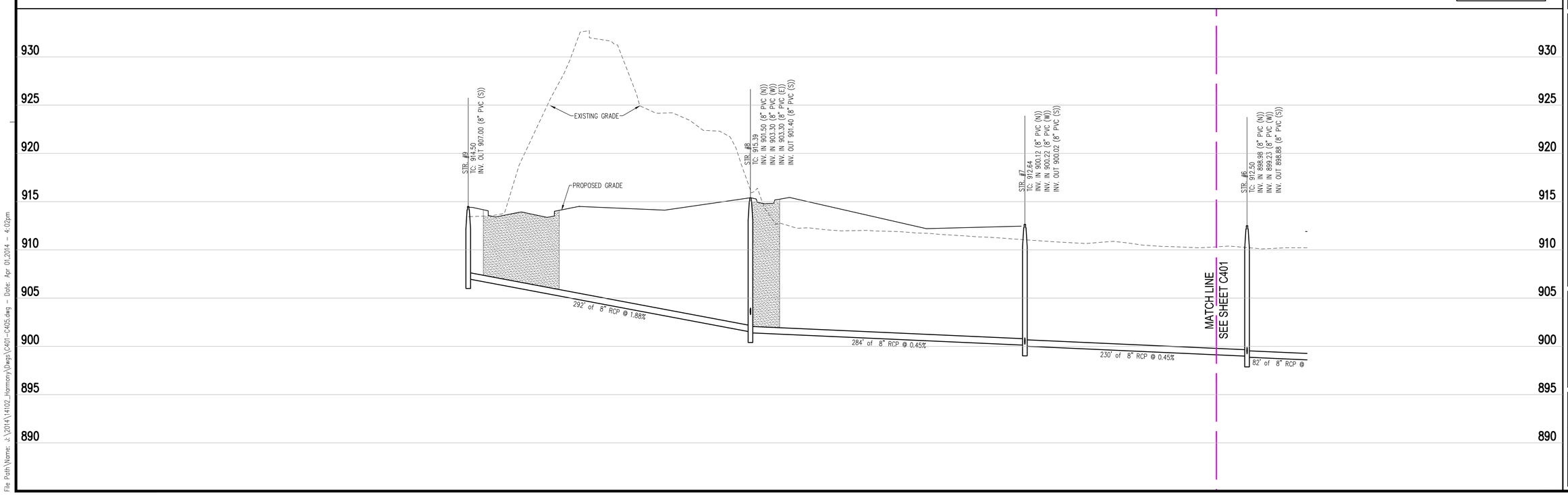

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JOB NUMBER: 14102

SHEET # C402

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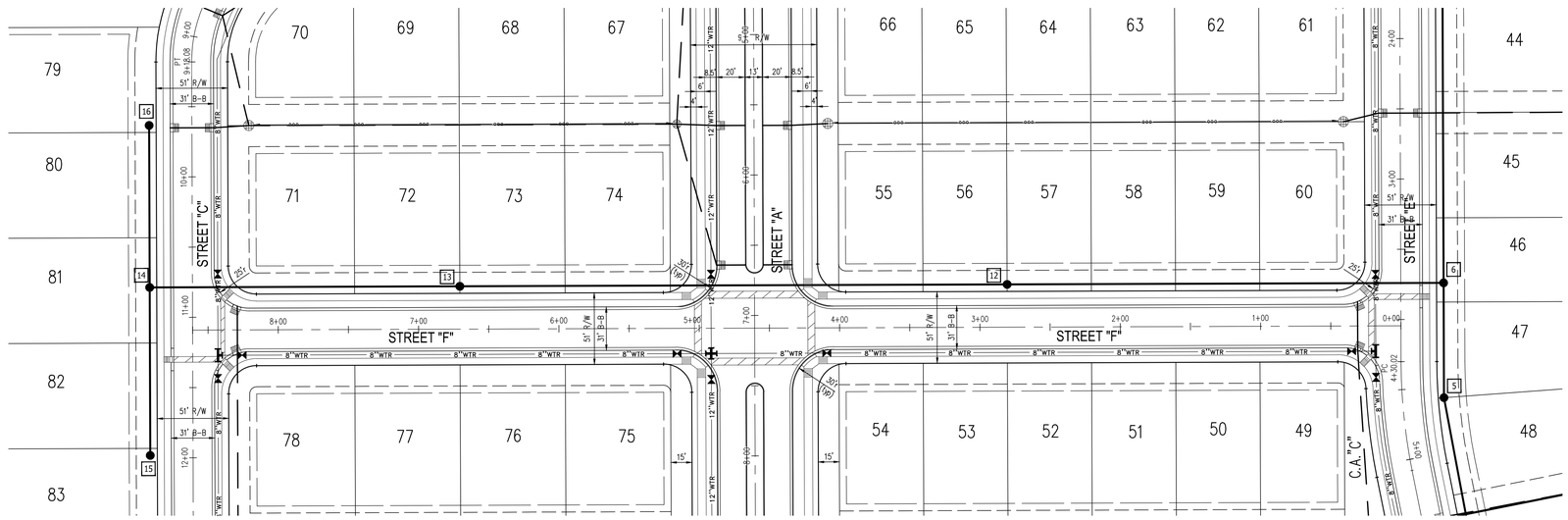

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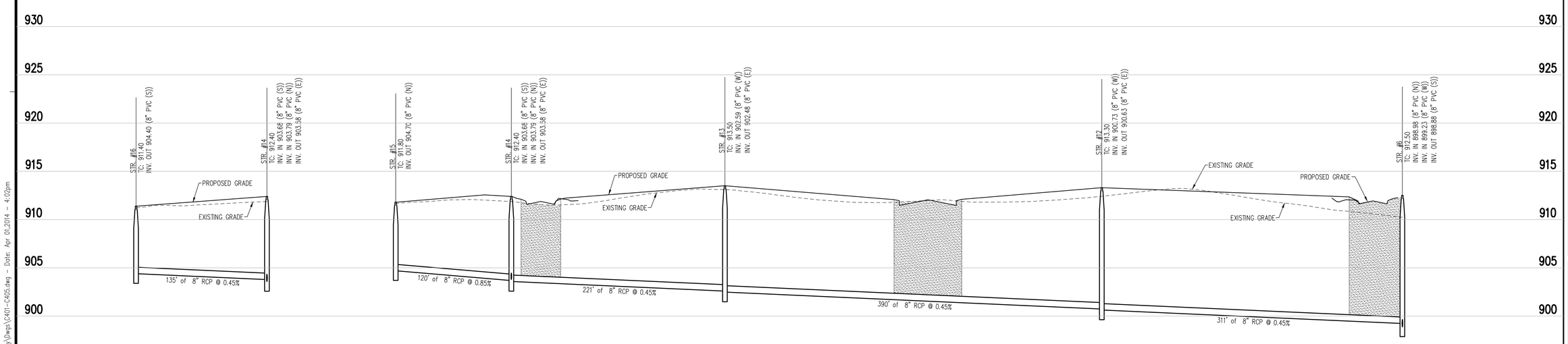

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SHEET # C403

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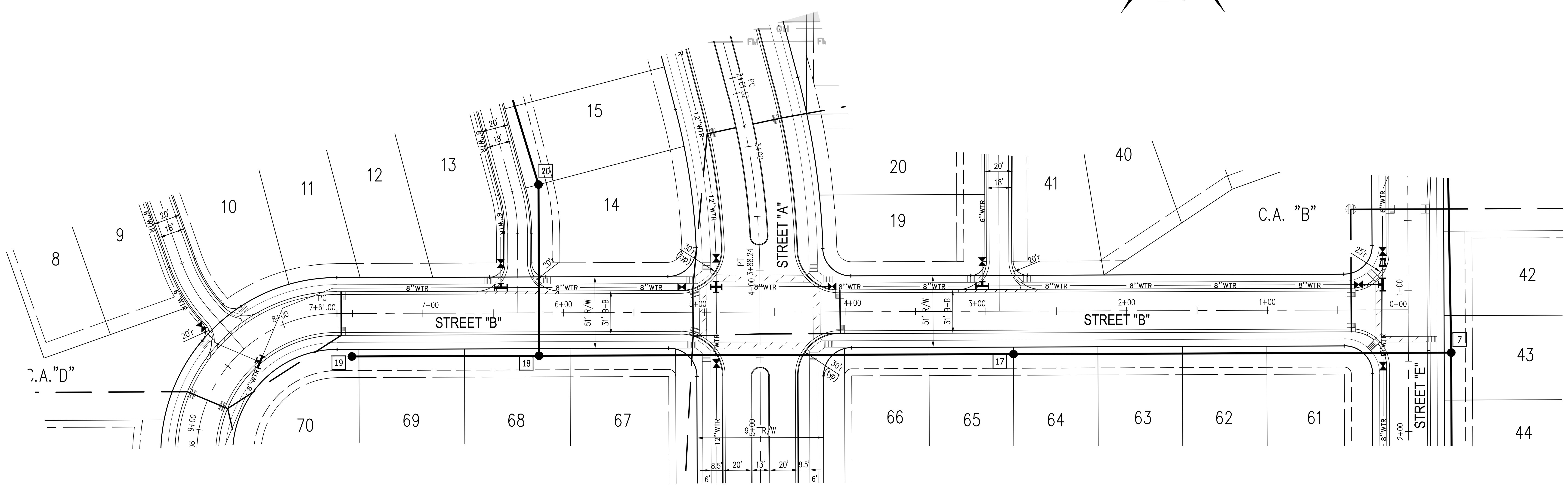

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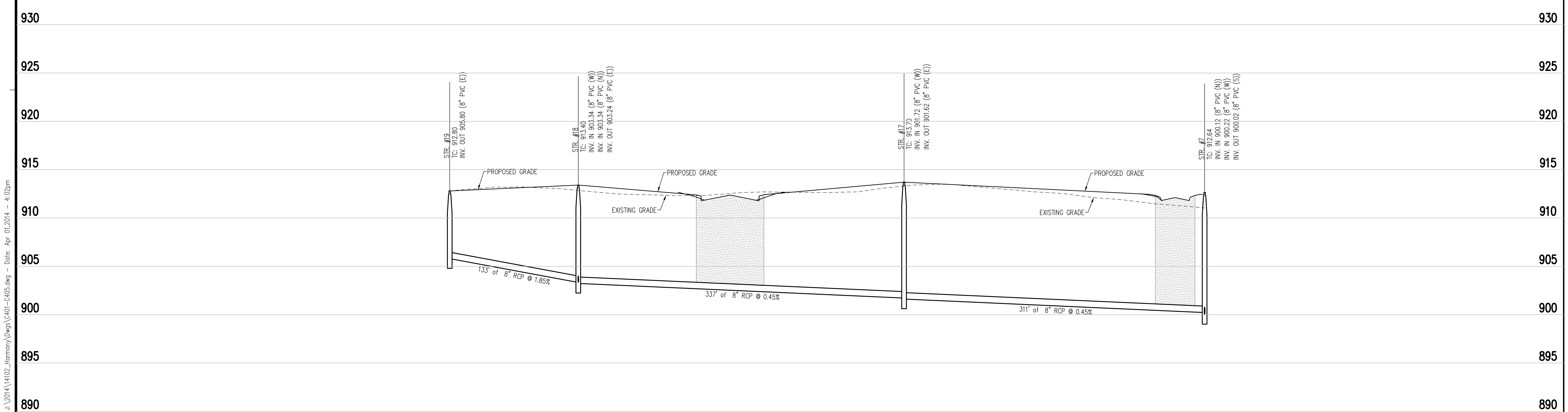

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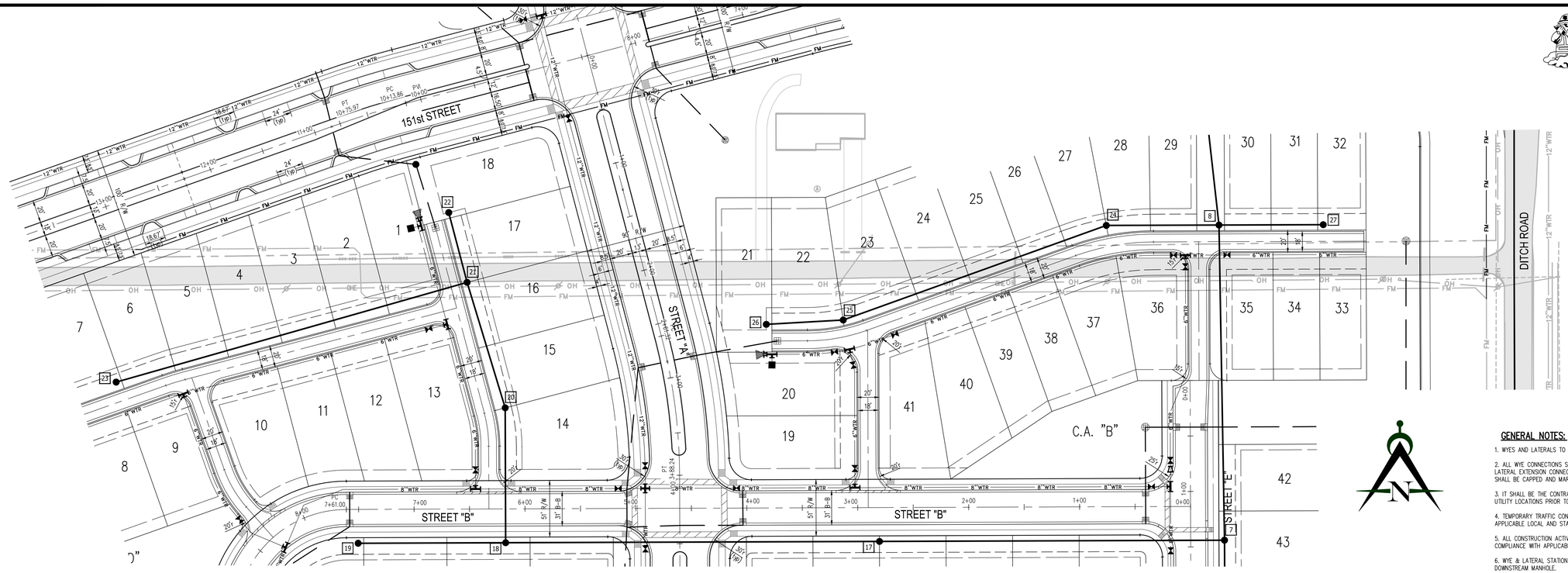

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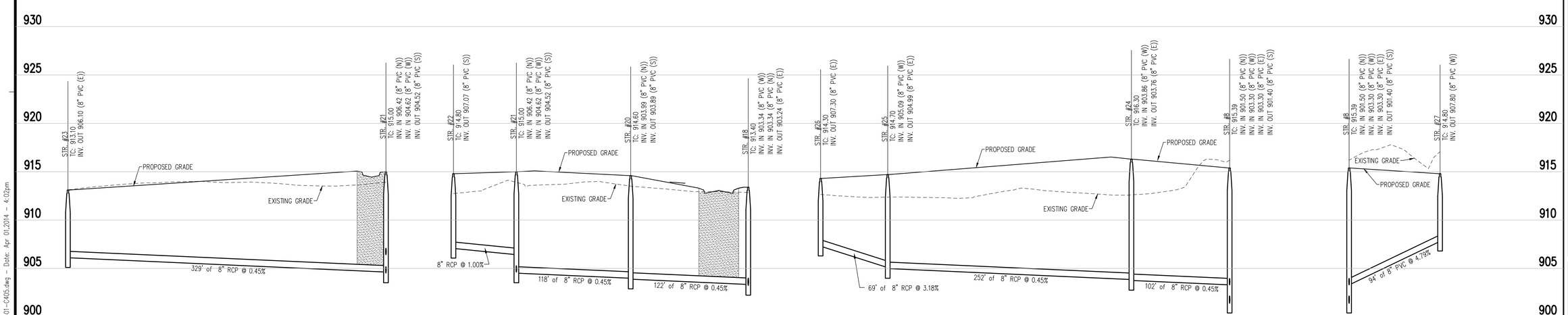

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317-669-6209

Harmony Section One
Single Family Subdivision
Westfield, Indiana

Sanitary Sewer Plan & Profile

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JOB NUMBER: 14102

SHEET # C405

File Path\Name: J:\2014\14102_Harmony\Dwgs\C401-C405.dwg - Date: Apr 01,2014 - 4:02pm

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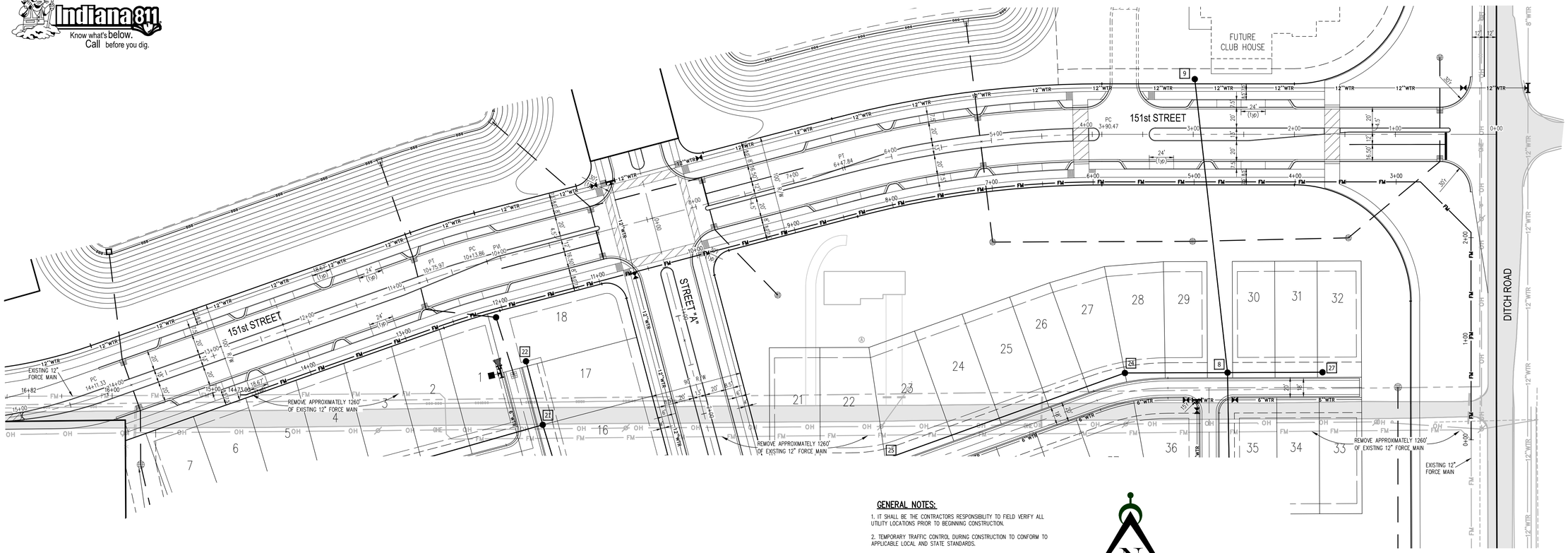


GENERAL NOTES:

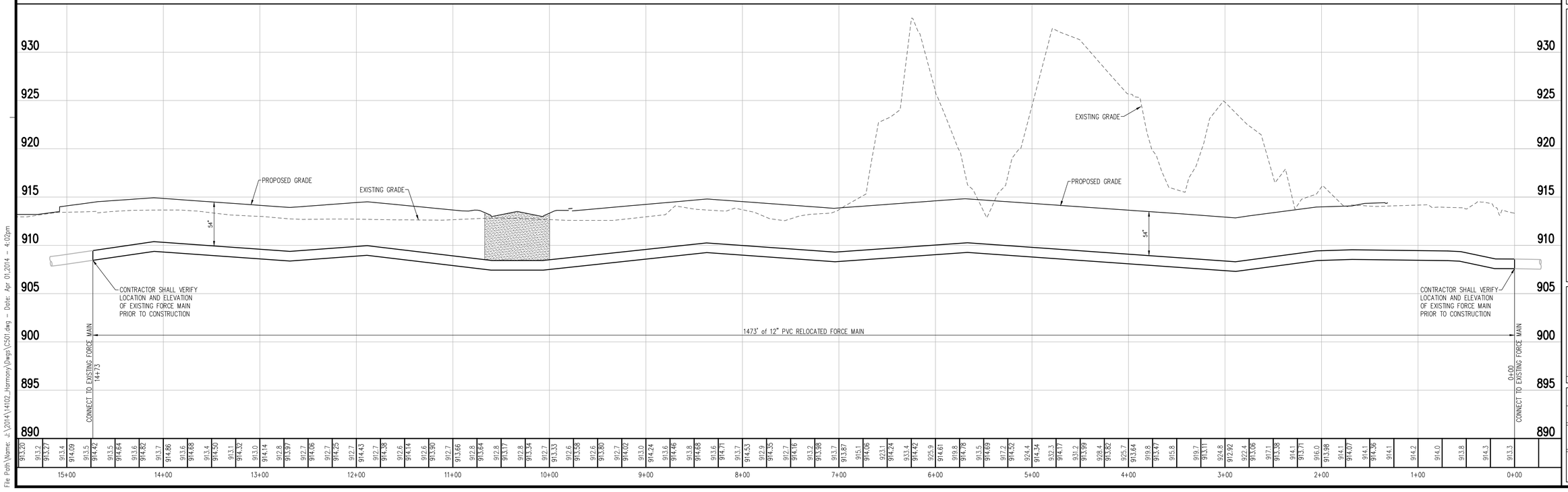
1. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO FIELD VERIFY ALL UTILITY LOCATIONS PRIOR TO BEGINNING CONSTRUCTION.

2. TEMPORARY TRAFFIC CONTROL DURING CONSTRUCTION TO CONFORM TO APPLICABLE LOCAL AND STATE STANDARDS.

3. ALL CONSTRUCTION ACTIVITY ON THIS SITE TO BE PERFORMED IN COMPLIANCE WITH APPLICABLE O.S.H.A. STANDARDS FOR WORKER SAFETY.

INDICATES #8 STONE BACKFILL

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



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SHEET # C501

File Path\Name: J:\2014\14102_Harmony\Dwgs\C501.dwg – Date: Apr 01,2014 – 4:02pm

NOTE:
1. PIPE LENGTHS INCLUDE FLARED END SECTIONS

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3. STORM SEWER CASTINGS MAY BE REPLACE WITH ENGINEER APPROVED EQUAL.

4. ALL STORM SEWER TO BE INSTALLED PER WESTFIELD STORMWATER TECHNICAL STANDARDS.

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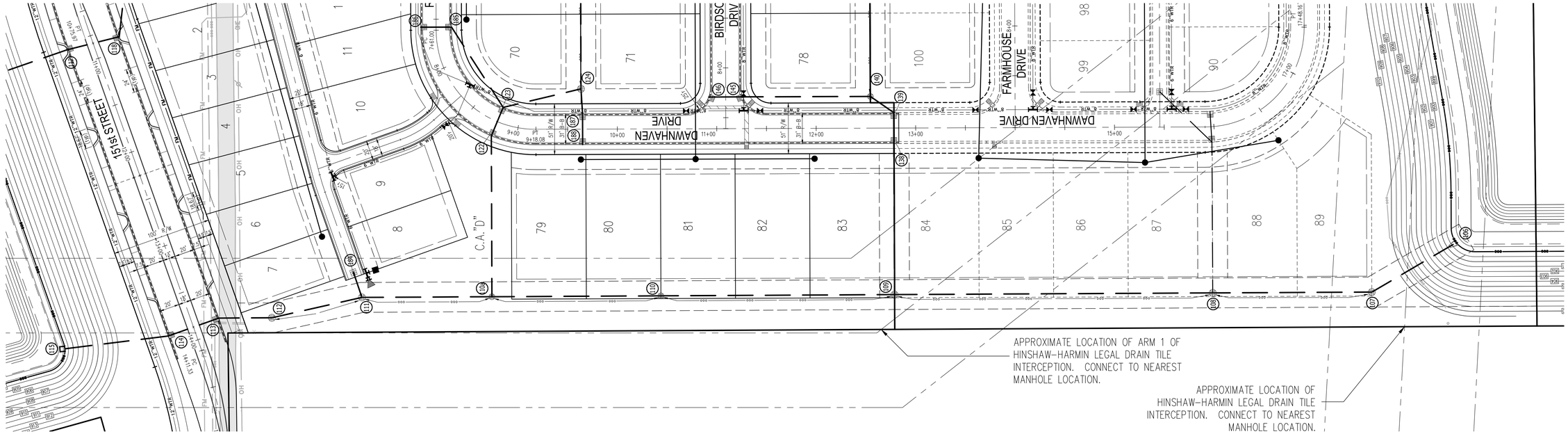
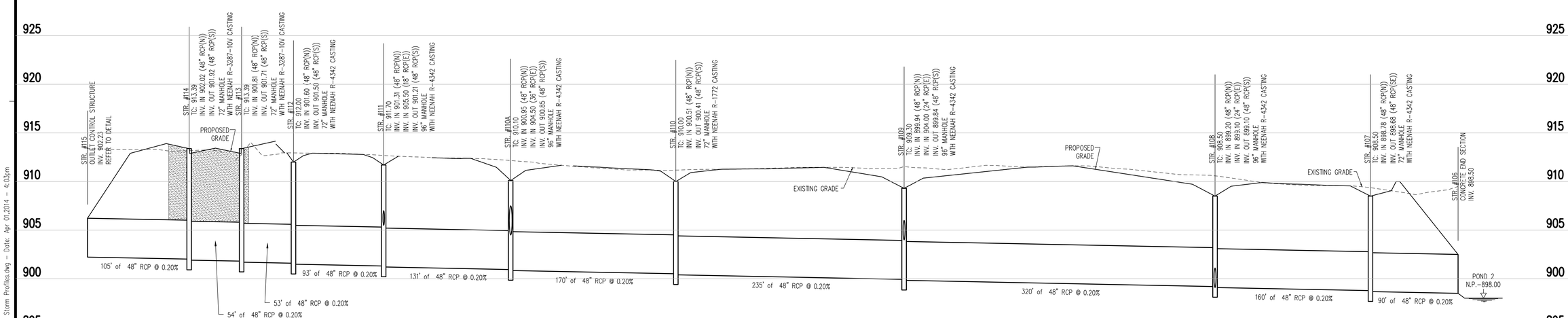


INDICATES #8 STONE BACKFILL PER WESTFIELD STANDARDS

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



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SHEET # C601	

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NOTE:
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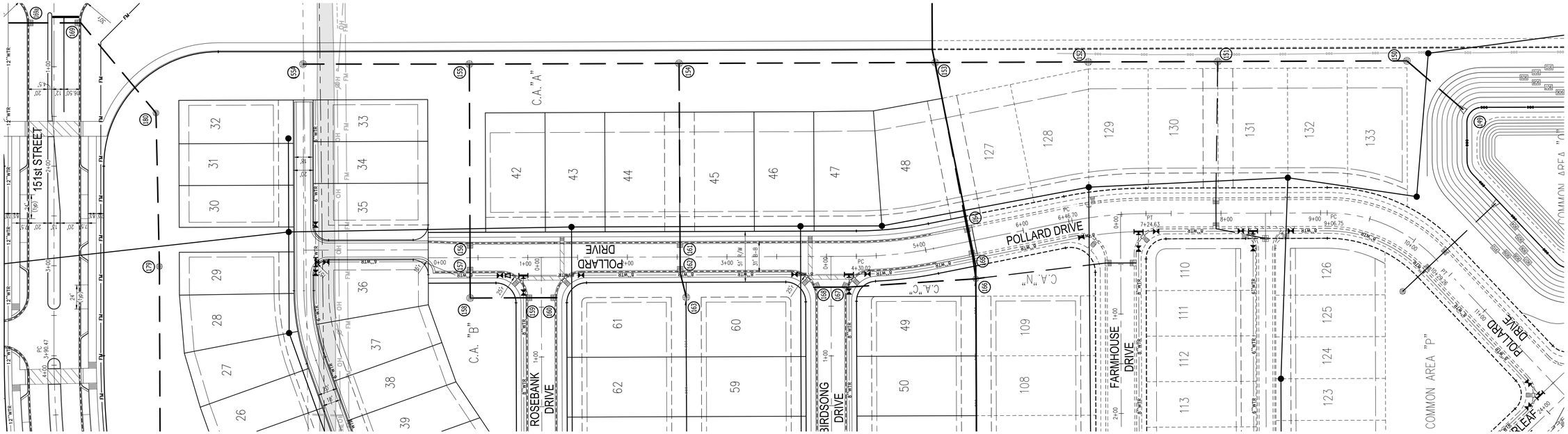
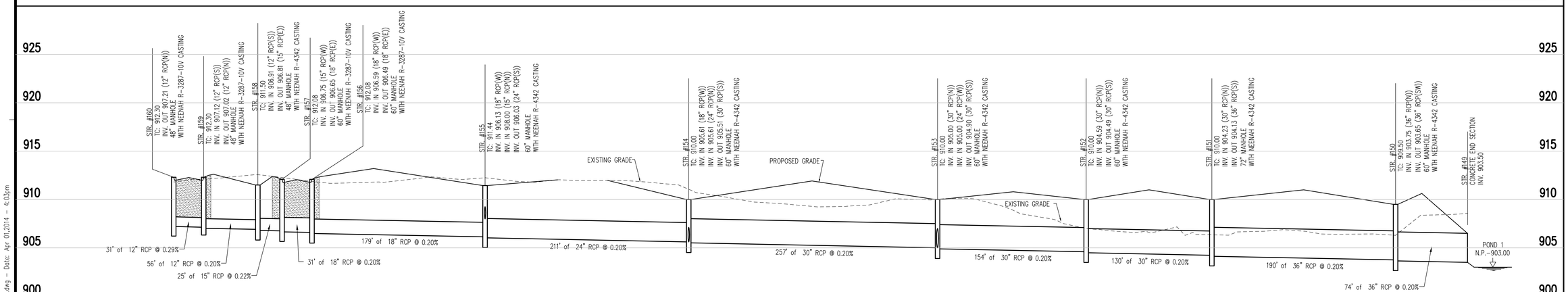


INDICATES #8 STONE BACKFILL PER WESTFIELD STANDARDS

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



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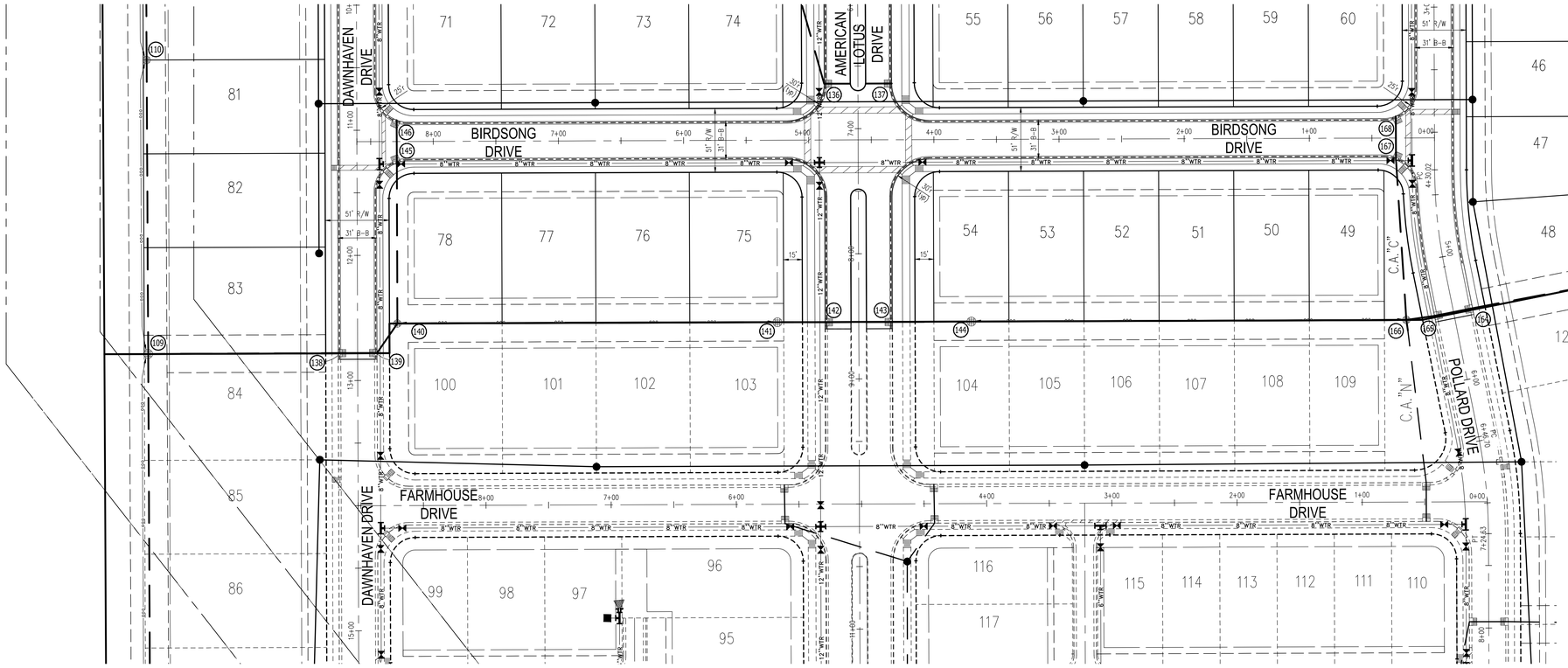
SHEET # C602

File Path\Name: J:\2014\14102_Harmony\Dwgs\C601 Storm Profiles.dwg – Date: Apr 01,2014 – 4:03pm



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INDICATES #8 STONE BACKFILL PER WESTFIELD STANDARDS

SCALE:
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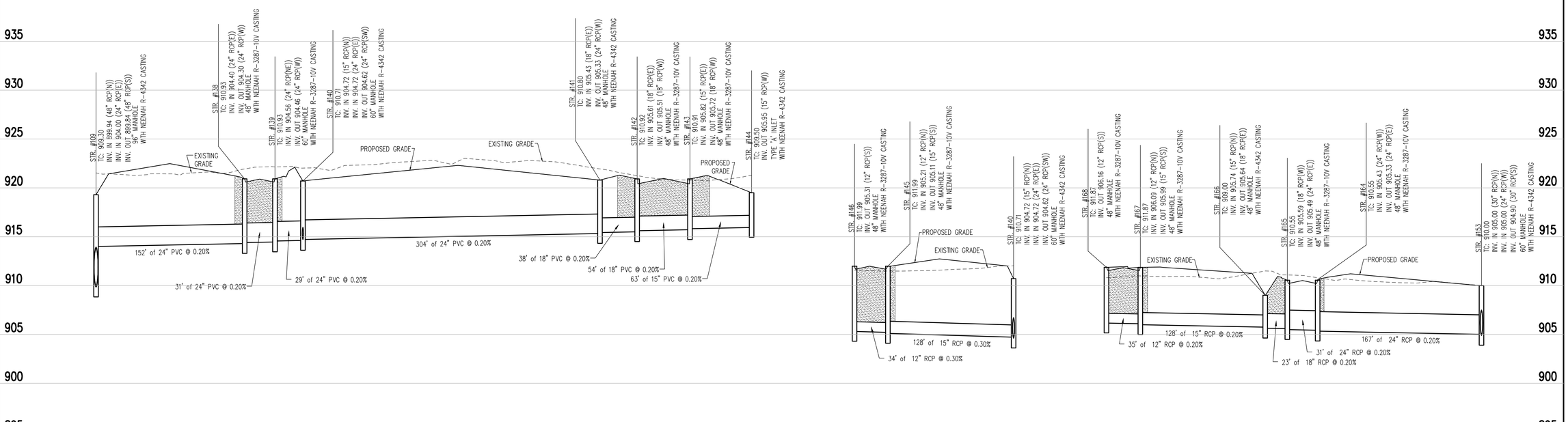
VERT. 1" = 5'



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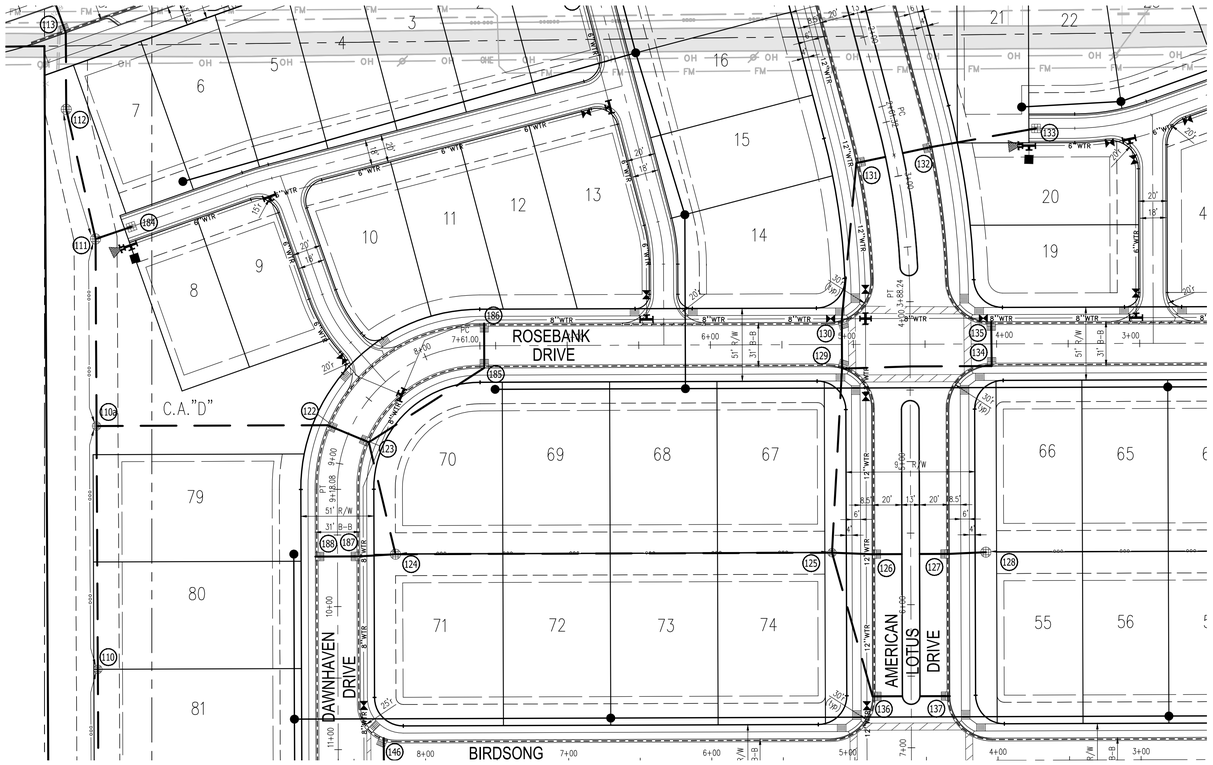
SHEET # C603

File Path\Name: J:\2014\14102_Harmony\Dwgs\C601 Storm Profiles.dwg – Date: Apr 01,2014 – 4:03pm



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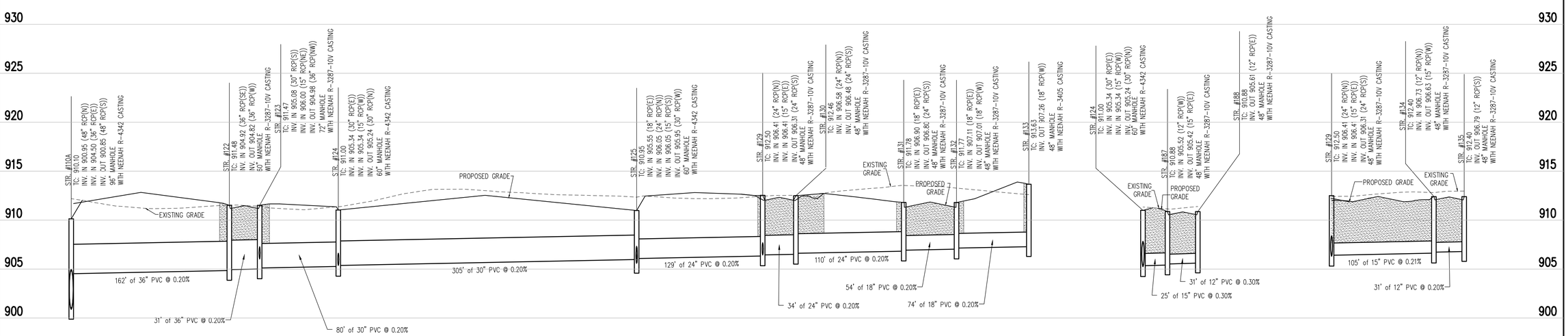

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SHEET # C604	

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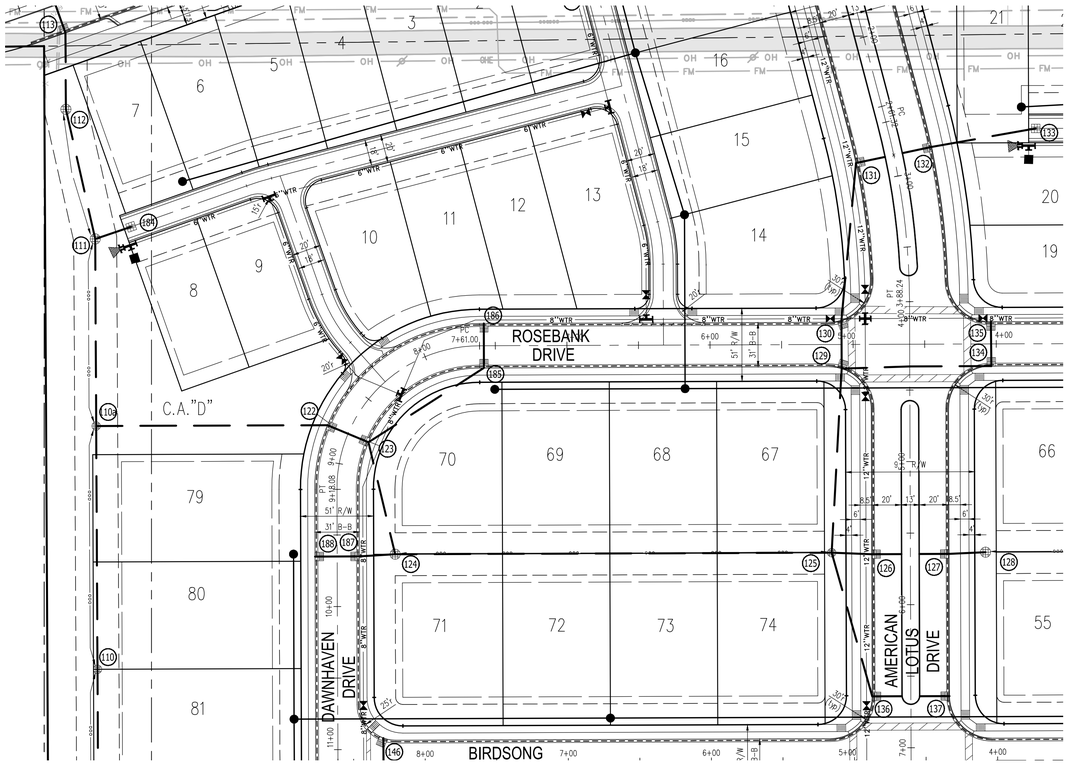

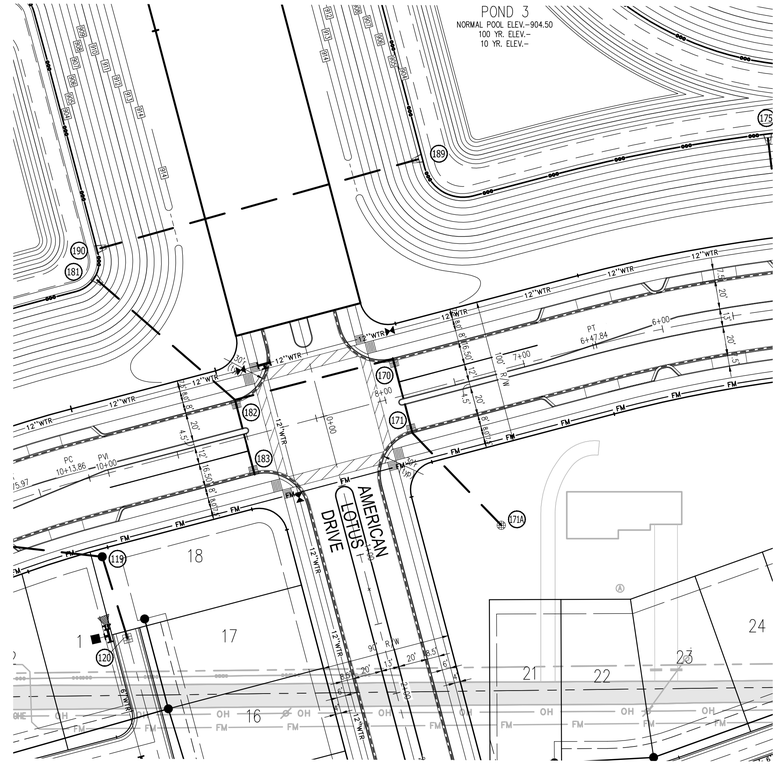

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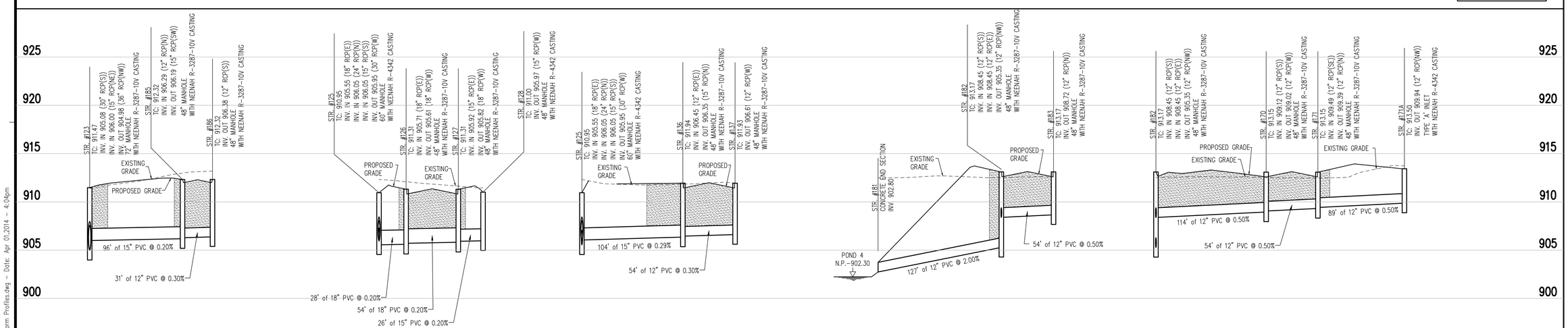

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SHEET # C605	

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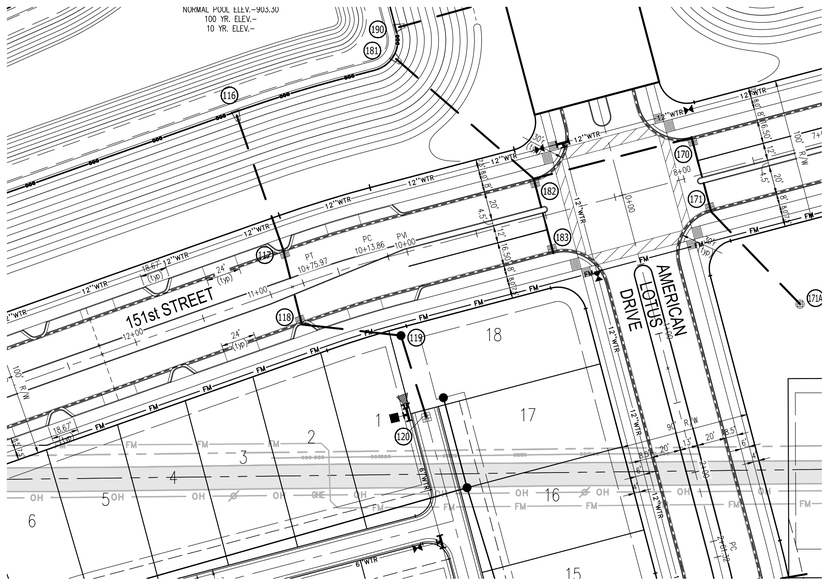

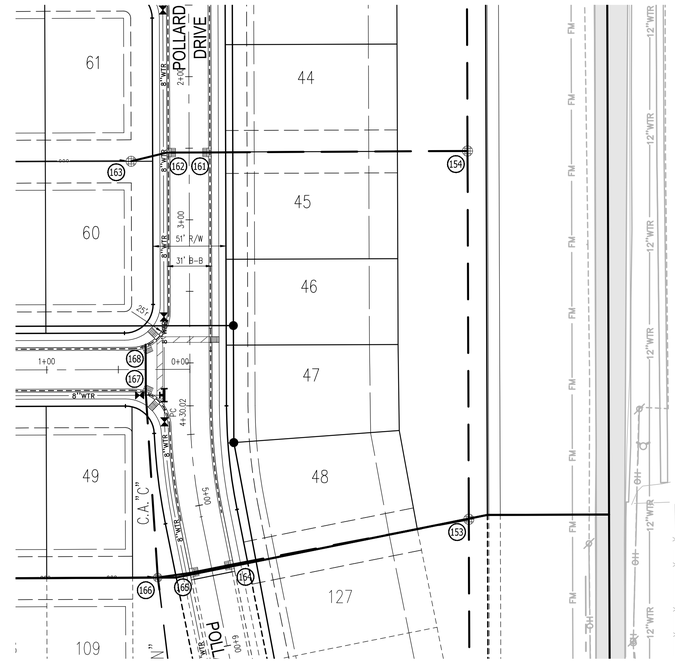

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INDICATES #8 STONE BACKFILL PER WESTFIELD STANDARDS

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

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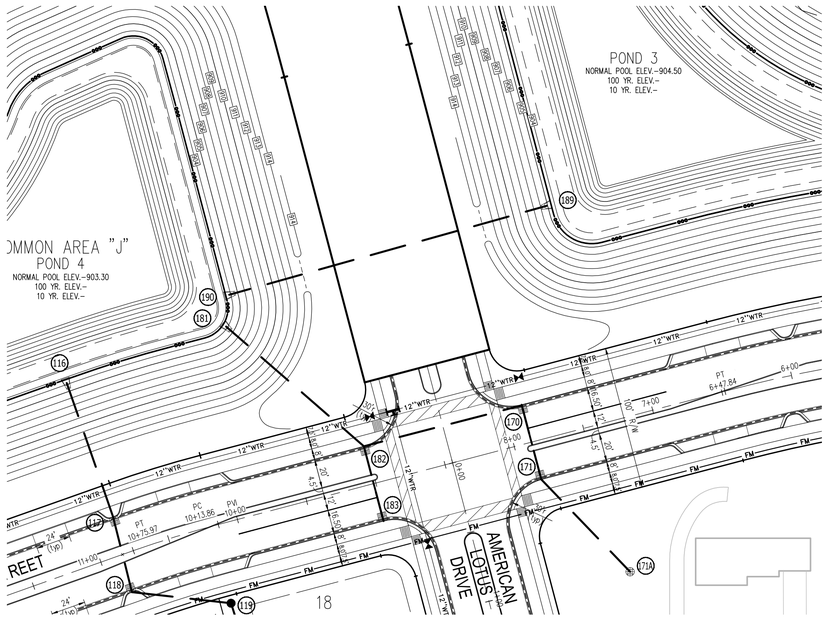
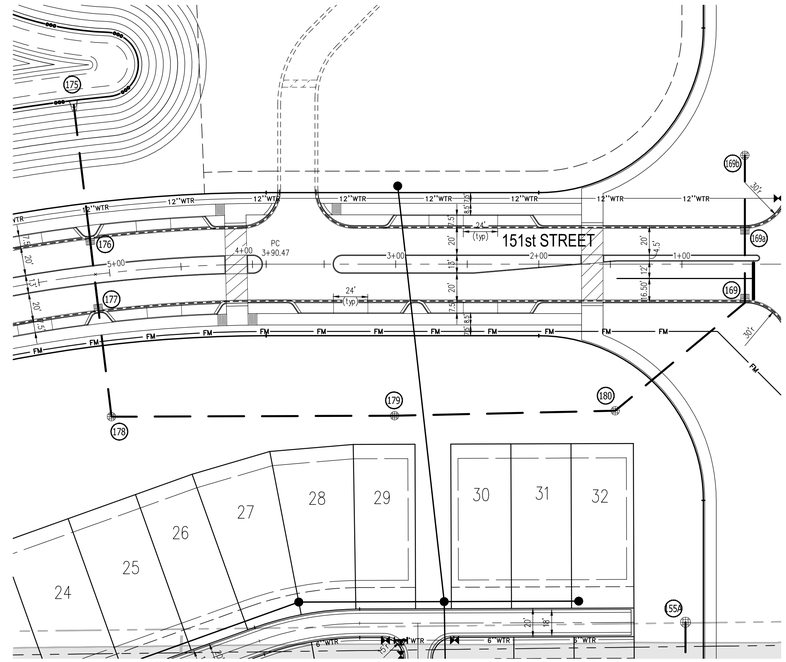
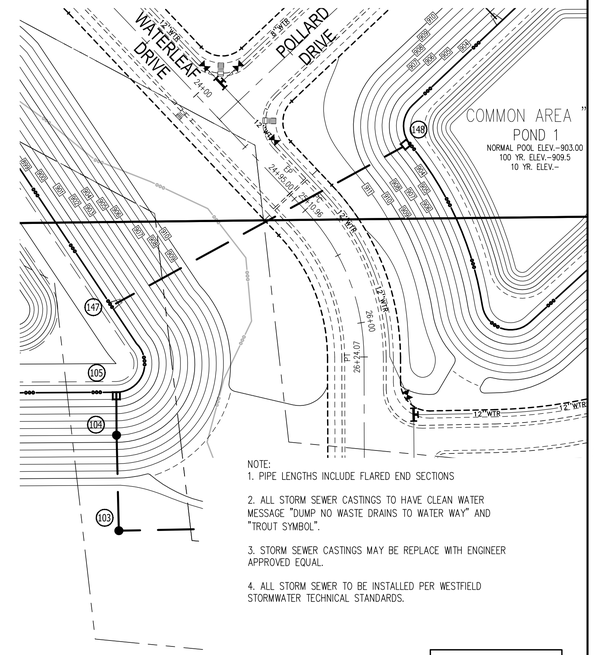
SHEET # C606

File Path\Name: J:\2014\14102_Harmony\Dwgs\C601 Storm Profiles.dwg - Date: Apr 01,2014 - 4:04pm







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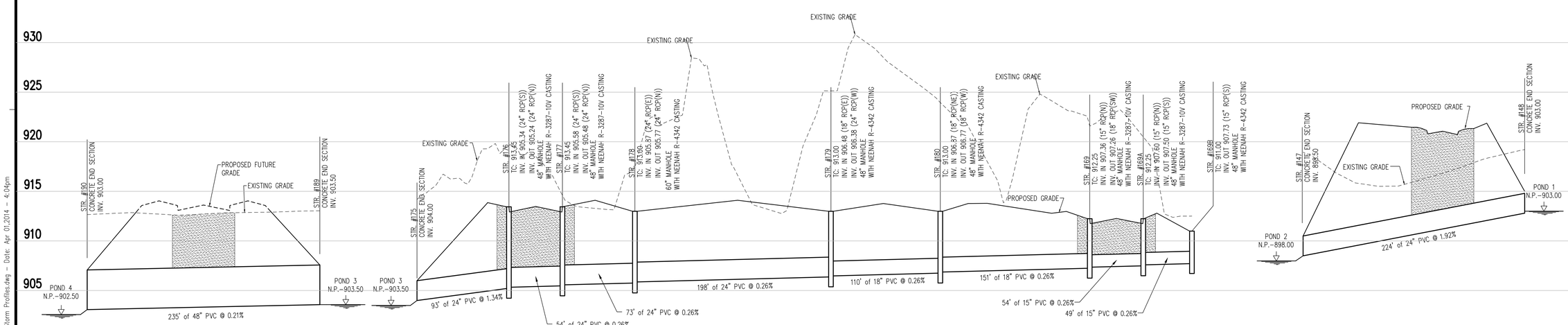

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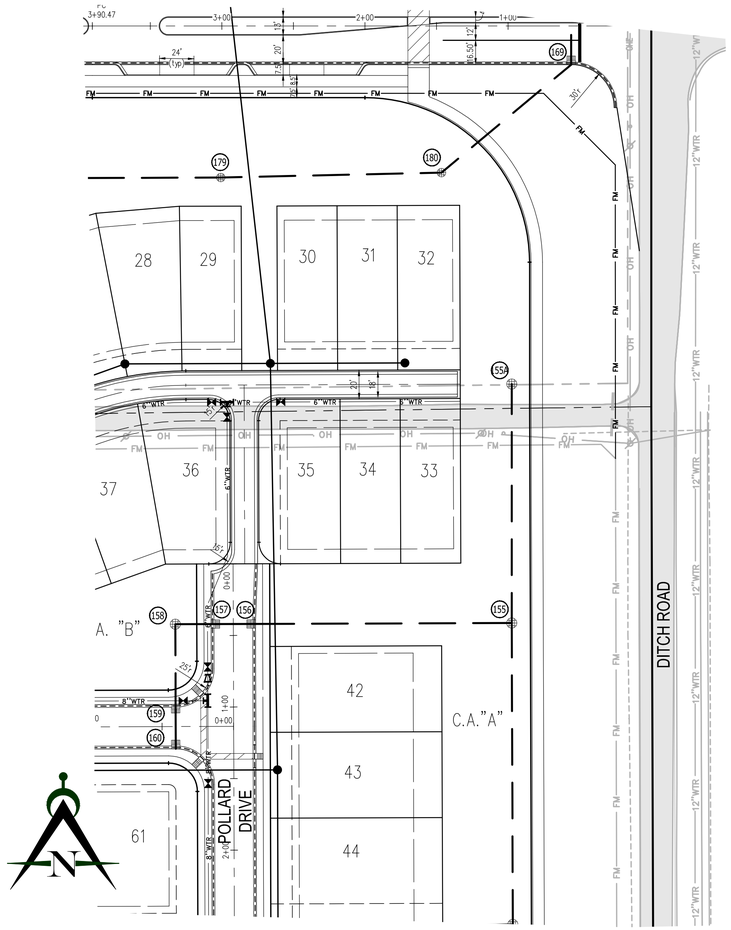

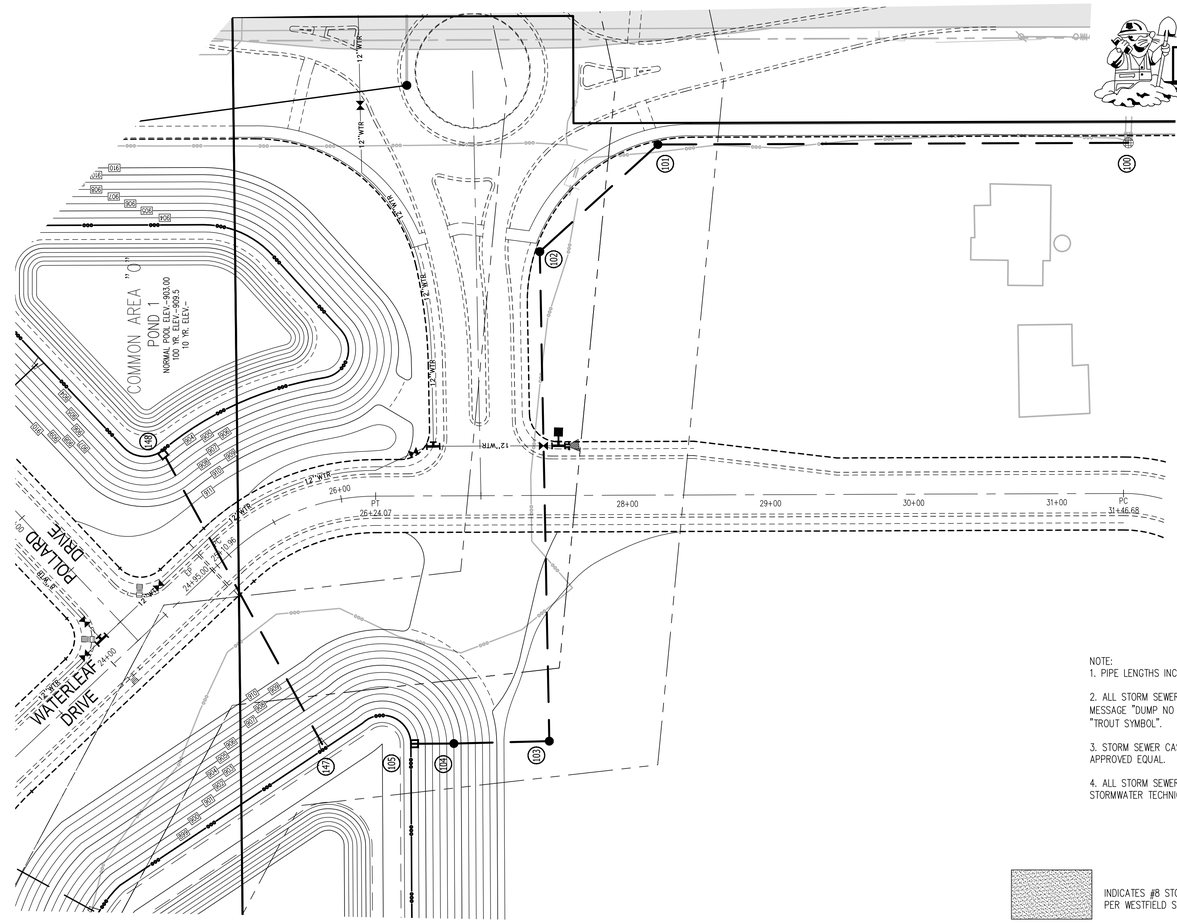

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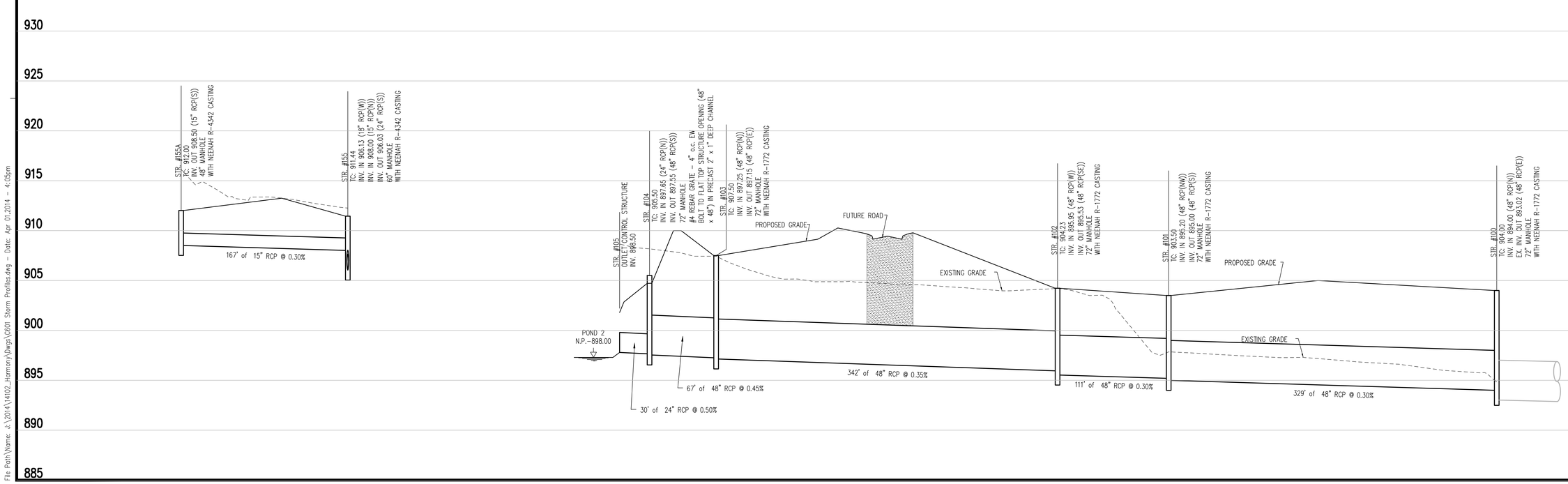

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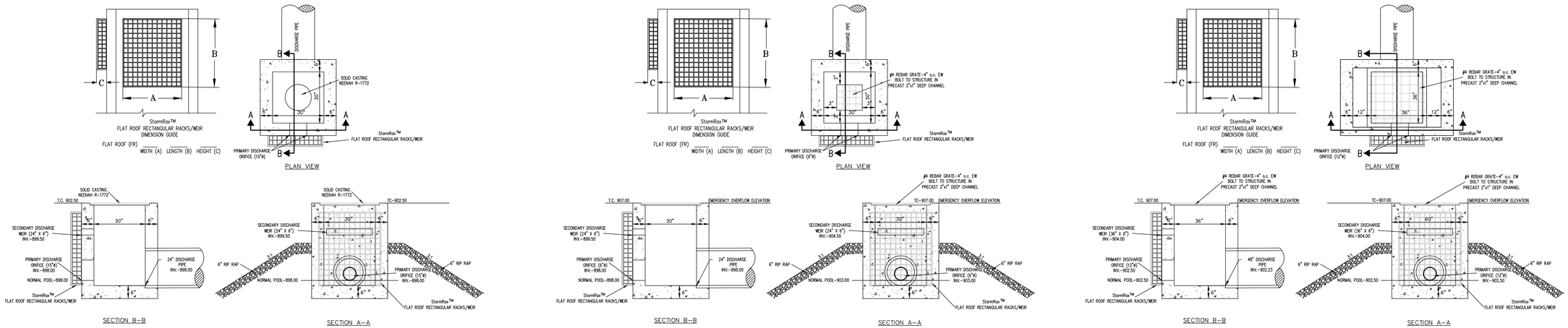


POND 2 OUTLET STRUCTURE (X / C801)

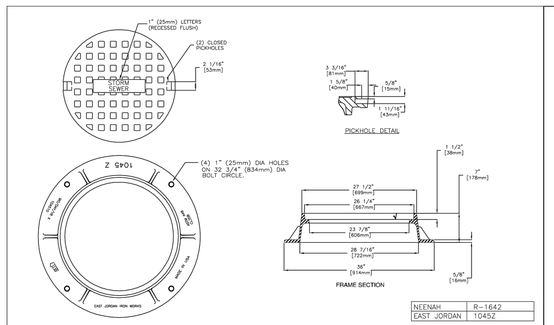
N.T.S.

POND 1 OUTLET STRUCTURE (X / C801)

N.T.S.

POND 4 OUTLET STRUCTURE (X / C801)

N.T.S.



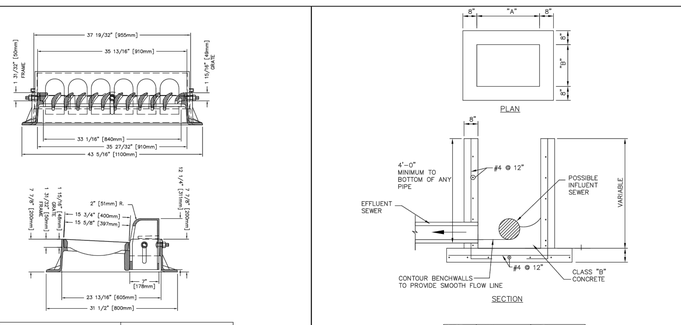
NEENAH	R-1642
EAST JORDAN	1045Z

MANHOLE SOLID LID CASTING

TOWN OF WESTFIELD, INDIANA

Renée Lynn Huff 2/23/07 DATE

FIGURE ST-7



* OR APROVED BY WESTFIELD PUBLIC WORKS DEPARTMENT

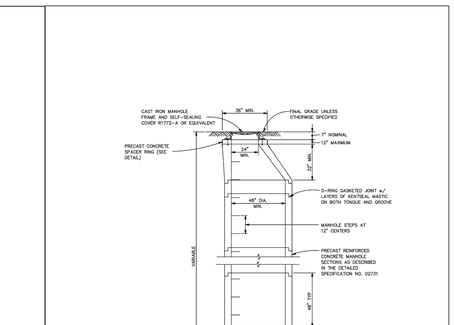
** STORM SEWER CASTINGS MANHOLE COVERS, BEEHIVE INLETS, CURB INLETS OR OTHER APPROVED CASTING SHALL HAVE THE FOLLOWING PHRASES CAST IN RECESSED LETTERS TWO (2) INCHES IN HEIGHT:
A. "STORM SEWER"
B. "DRAINS TO RIVER" OR "DRAINS TO WATERWAY"
C. "DUMP NO WASTE"
D. OTHER PHRASES SHALL REQUIRE APPROVAL OF THE WESTFIELD PUBLIC WORKS DEPARTMENT.

CHAIR BACK CURB INLET CASTING

TOWN OF WESTFIELD, INDIANA

Renée Lynn Huff 4/10/06 DATE

FIGURE ST-8



CAST	"A"	"B"
TYPE 1	36"(0.91m)	24"(0.61m)
TYPE 2	24"(0.61m)	22"(0.56m)
TYPE 3	22"(0.56m)	20"(0.51m)

NOTE:
1. THESE DIMENSIONS ARE ALSO APPLICABLE TO TYPE "CA" CATCH BASINS. (See figure ST-13)
2. PRECAST INLETS AND CATCH BASINS SHALL BE CONSIDERED AN ACCEPTABLE ALTERNATE IF APPROVED BY THE WESTFIELD PUBLIC WORKS DEPARTMENT

INLET STRUCTURE TYPE 1A

TOWN OF WESTFIELD, INDIANA

Renée Lynn Huff 4/10/06 DATE

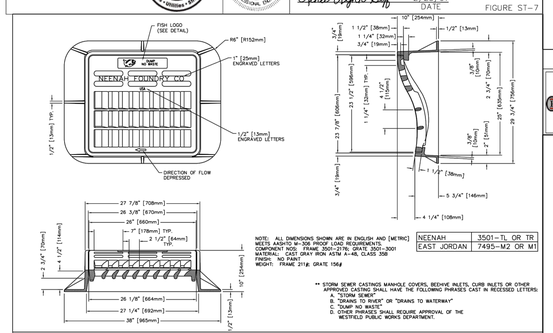
FIGURE ST-11

STANDARD STORM MANHOLE DETAIL

TOWN OF WESTFIELD, INDIANA

Renée Lynn Huff 4/10/06 DATE

FIGURE ST-1



NOTE: ALL DIMENSIONS SHOWN ARE IN ENGLISH AND [METRIC] UNITS AND ARE NOT A 100 PROOF LIVE REQUIREMENT.
COMPONENT NOS: FRAME 3501-TL; GRATE 3501-M2; 3501-M1
MATERIAL: CAST GRAY IRON ASTM A-48, CLASS 35B
FINISH: NO PAINT
WEIGHT: FRAME 291#; GRATE 156#

NEENAH	3501-TL OR TR
EAST JORDAN	7495-M2 OR M1

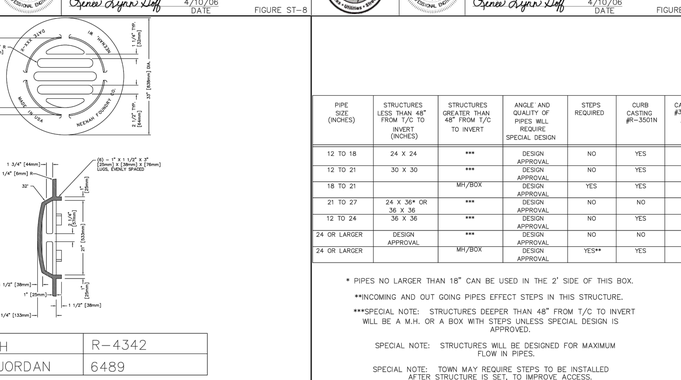
** STORM SEWER CASTINGS MANHOLE COVERS, BEEHIVE INLETS, CURB INLETS OR OTHER APPROVED CASTING SHALL HAVE THE FOLLOWING PHRASES CAST IN RECESSED LETTERS:
A. "STORM SEWER"
B. "DRAINS TO RIVER" OR "DRAINS TO WATERWAY"
C. "DUMP NO WASTE"
D. OTHER PHRASES SHALL REQUIRE APPROVAL OF THE WESTFIELD PUBLIC WORKS DEPARTMENT.

ROLLED CURB INLET CASTING

TOWN OF WESTFIELD, INDIANA

Renée Lynn Huff 4/10/06 DATE

FIGURE ST-9



* OR APROVED BY WESTFIELD PUBLIC WORKS DEPARTMENT

** STORM SEWER CASTINGS MANHOLE COVERS, BEEHIVE INLETS, CURB INLETS OR OTHER APPROVED CASTING SHALL HAVE THE FOLLOWING PHRASES CAST IN RECESSED LETTERS TWO (2) INCHES IN HEIGHT:
A. "STORM SEWER"
B. "DRAINS TO RIVER" OR "DRAINS TO WATERWAY"
C. "DUMP NO WASTE"
D. OTHER PHRASES SHALL REQUIRE APPROVAL OF THE WESTFIELD PUBLIC WORKS DEPARTMENT.

BEEHIVE CURB INLET CASTING

TOWN OF WESTFIELD, INDIANA

Renée Lynn Huff 4/10/06 DATE

FIGURE ST-10

PIPE SIZE (INCHES)	STRUCTURES LESS THAN 48" FROM T/C TO INVERT (INCHES)	STRUCTURES GREATER THAN 48" FROM T/C TO INVERT	ANGLE AND QUALITY OF PIPES WILL REQUIRE SPECIAL DESIGN	STEPS REQUIRED	CURB CASTING #R-3501N	CASTING #3501 TL & TR
12 TO 18	24 X 24	***	DESIGN APPROVAL	NO	YES	YES
12 TO 21	30 X 30	***	DESIGN APPROVAL	NO	YES	YES
18 TO 21		MH/BOX	DESIGN APPROVAL	YES	YES	YES
21 TO 27	24 X 36* OR 36 X 36	***	DESIGN APPROVAL	NO	NO	YES
12 TO 24	36 X 36	***	DESIGN APPROVAL	NO	YES	YES
24 OR LARGER	DESIGN APPROVAL	***	DESIGN APPROVAL	NO	NO	YES
24 OR LARGER		MH/BOX	DESIGN APPROVAL	YES**	YES	YES

* PIPES NO LARGER THAN 18" CAN BE USED IN THE 2' SIDE OF THIS BOX.

**INCOMING AND OUT GOING PIPES EFFECT STEPS IN THIS STRUCTURE.

***SPECIAL NOTE: STRUCTURES DEEPER THAN 48" FROM T/C TO INVERT WILL BE A M.H. OR A BOX WITH STEPS UNLESS SPECIAL DESIGN IS APPROVED.

SPECIAL NOTE: STRUCTURES WILL BE DESIGNED FOR MAXIMUM FLOW IN PIPES.

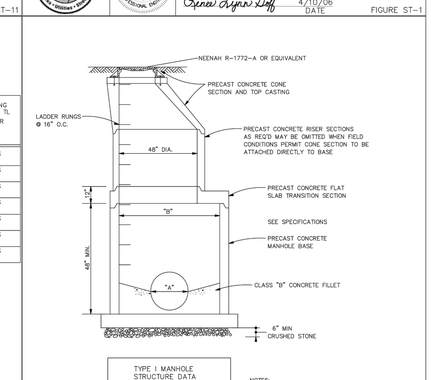
SPECIAL NOTE: TOWN MAY REQUIRE STEPS TO BE INSTALLED AFTER STRUCTURE IS SET, TO IMPROVE ACCESS.

STORM STRUCTURE SIZING TABLE

TOWN OF WESTFIELD, INDIANA

Renée Lynn Huff 4/10/06 DATE

FIGURE ST-15



TYPE I MANHOLE STRUCTURE DATA		
PIPE DIA. "A"	INTERSECTING ANGLE	PIPE DIA. "B"
30"	0° TO 44°	30"
30"	44° TO 90°	30"
36"	0° TO 44°	36"
36"	44° TO 90°	36"

NOTES:
1. SEE STANDARD STORM SEWER MANHOLE DETAIL FOR OTHER DETAIL & DIMENSIONS
2. RISER & CONE SECTIONS SHALL BE AS SHOWN ON STANDARD STORM SEWER MANHOLE DETAIL

TYPE 1 STORM SEWER MANHOLE DETAIL

TOWN OF WESTFIELD, INDIANA

Renée Lynn Huff 4/10/06 DATE

FIGURE ST-2

FOR SPECIFICATION STANDARDS, PLEASE REFER TO THE FOLLOWING:
STORMWATER: TOWN OF WESTFIELD STORMWATER TECHNICAL STANDARDS MANUAL; APRIL 2006 EDITION.

DESIGN STANDARDS: TOWN OF WESTFIELD DEPARTMENT OF PUBLIC WORKS UTILITY AND INFRASTRUCTURE CONSTRUCTION STANDARDS AND SPECIFICATIONS FOR:
- PAVING AND SURFACING
- WATER MAINS
- STORM SEWER
- SANITARY SEWER
- FORCE MAIN
- SUBMERSIBLE LIFT STATION

OCTOBER 2006 EDITION

SPECIFICATIONS REFERENCE

Innovative Engineering & Consulting, Inc.
755 W. Carmel Drive
Suite 207
Carmel, IN 46032
317-669-4236
1-800-866-6922
Fax: 317-574-4238

REVISIONS:

PREPARED FOR:

Estridge Development Management, LLC
12965 Old Meridian Street
Carmel, IN 46032
317-669-6209

Harmony Section One
Single Family Subdivision
Westfield, Indiana
Storm Sewer Details

PRELIMINARY PENDING AGENCY APPROVAL

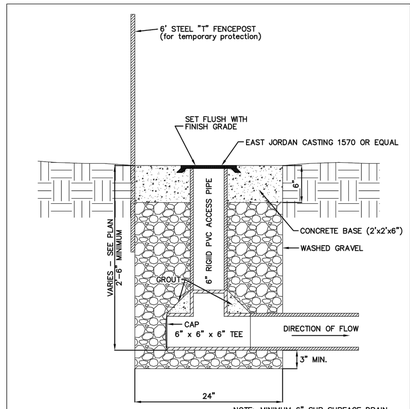
DATE:

DATE:	DRAWN BY:
ISSUED:	CHECKED BY:

JOB NUMBER: 14102

SHEET # C801

File Path\Name: s:\2014\14102_Harmony\Dwgs\C801 Details.dwg — Date: Apr 01,2014 - 4:05pm



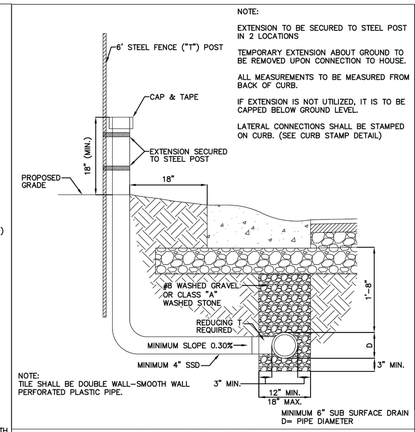
NOTE: MINIMUM 6" SUB SURFACE DRAIN D= PIPE DIAMETER

NOTE: TILE SHALL BE DOUBLE WALL SMOOTH WALL PERFORATED HDPE PIPE.

SUBSURFACE DRAIN (SSD) RISER DETAIL

TOWN OF WESTFIELD, INDIANA

4/10/06 DATE FIGURE ST-37



NOTE:
TILE SHALL BE DOUBLE WALL-SMOOTH WALL PERFORATED PLASTIC PIPE.

NOTE:

EXTENSION TO BE SECURED TO STEEL POST IN 2 LOCATIONS

TEMPORARY EXTENSION ABOUT GROUND TO BE REMOVED UPON CONNECTION TO HOUSE.

ALL MEASUREMENTS TO BE MEASURED FROM BACK OF CURB.

IF EXTENSION IS NOT UTILIZED, IT IS TO BE CAPPED BELOW GROUND LEVEL.

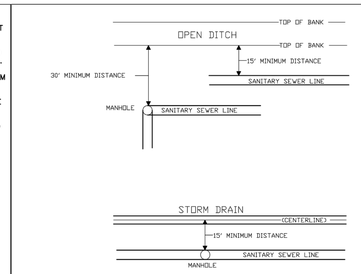
LATERAL CONNECTIONS SHALL BE STAMPED ON CURB. (SEE CURB STAMP DETAIL)

MINIMUM 6" SUB SURFACE DRAIN D= PIPE DIAMETER

TYPICAL SSD LATERAL TO INDIVIDUAL LOTS ALONG STREETS

TOWN OF WESTFIELD, INDIANA

4/10/06 DATE FIGURE ST-35



A SANITARY SEWER MANHOLE CANNOT BE LOCATED ANY CLOSER THAN 30 FEET FROM THE TOP OF BANK OF AN OPEN DITCH, OR 15 FEET FROM THE CENTERLINE OF A REGULATED DRAIN TILE.

THE ACTUAL SANITARY SEWER PIPE CANNOT BE LOCATED ANY CLOSER THAN 15 FEET FROM THE THE TOP OF BANK OF AN OPEN DITCH, OR FROM THE CENTERLINE OF A REGULATED DRAIN TILE.

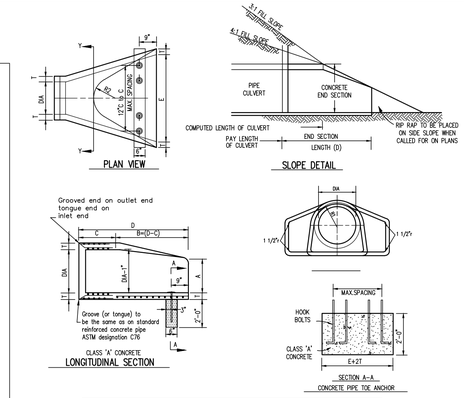
DEEPER INSTALLATIONS OF SANITARY SEWERS MAY REQUIRE GREATER DISTANCE BETWEEN DRAIN AND SANITARY SEWER MANHOLE OR PIPE.

(DRAWING NOT TO SCALE)

STANDARD FOR SANITARY SEWERS BEING CONSTRUCTED ADJACENT TO AN OPEN DRAIN & PARALLEL TO STORM DRAINS

TOWN OF WESTFIELD, INDIANA

4/10/06 DATE FIGURE ST-20

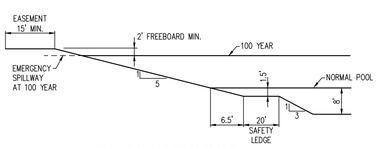


DIMENSIONS OF CONCRETE END SECTIONS FOR ROUND PIPE									
DIA	T (MIN)	A *	C *	D *	E *	K	R_1	R_2	APPROX. WEIGHT
12"	2"	5"	4'-3"	6'-2"	2'-0"	1.3	10 1/8"	9"	800
15"	2 1/4"	7"	4'-0"	6'-3"	2'-6"	1.5	12 1/2"	11"	1,100
18"	2 1/2"	11"	4'-1"	6'-2"	3'-0"	1.8	15 1/2"	12"	1,300
21"	2 3/4"	11"	3'-6"	6'-3"	3'-6"	2.1	16 1/8"	13"	1,500
24"	3"	1'-0"	2'-8"	6'-3"	4'-0"	2.3	16 3/16"	14"	1,800
27"	3 1/4"	1'-1"	2'-5"	6'-3"	4'-6"	2.6	18 1/2"	14 1/2"	2,100
30"	3 1/2"	1'-2"	1'-10"	6'-3"	5'-0"	2.9	18 3/16"	15"	2,400
33"	3 3/4"	1'-3"	3'-6"	8'-3"	5'-6"	3.1	18 1/2"	17 1/2"	4,100
36"	4"	1'-5"	3'-1"	8'-3"	6'-0"	3.4	23 3/4"	20"	4,200

* TOLERENCE +/- 1"

PRECAST CONCRETE END SECTION

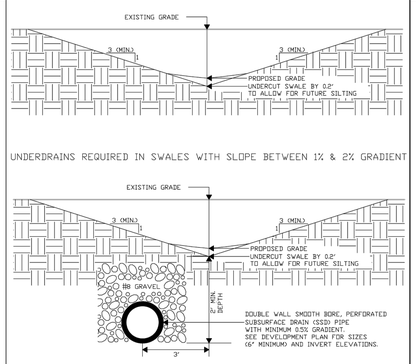
NTS



USE OUTLET OPTION 3 (SEE FIGURE ST-28)

LAKE CROSS SECTION POND 2

NTS



UNDERDRAINS REQUIRED IN SWALES WITH SLOPE BETWEEN 1% & 2% GRADIENT

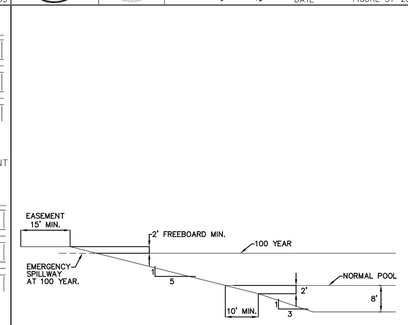
MINIMUM CHANNEL SLOPE 1% GRADIENT

(DRAWING NOT TO SCALE)

TYPICAL SWALE DETAIL

TOWN OF WESTFIELD, INDIANA

4/10/06 DATE FIGURE ST-43



POND 1

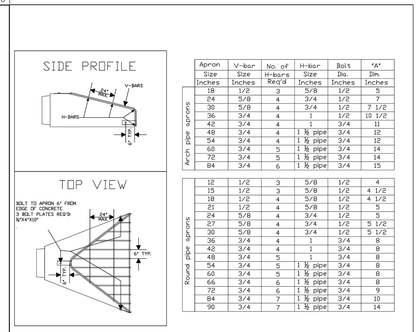
USE OUTLET OPTION 3 (SEE FIGURE ST-28)

(DRAWING NOT TO SCALE)

LAKE CROSS SECTIONS: OPTION 3

TOWN OF WESTFIELD, INDIANA

4/10/06 DATE FIGURE ST-25



Apron	Size Inches	V-bar Size Inches	H-bars No. of Req'd	H-bar Size Inches	Bolt Dia. Inches	"A" Dim. Inches
Arch pipe aprons	18	1/2	3	5/8	1/2	5
	24	5/8	4	3/4	1/2	7
	30	5/8	4	3/4	1/2	7 1/2
	36	3/4	4	1	1/2	10 1/2
	42	3/4	4	1	3/4	11
	48	3/4	4	1 ½ pipe	3/4	12
	54	3/4	4	1 ½ pipe	3/4	12
	60	3/4	5	1 ½ pipe	3/4	14
	72	3/4	5	1 ½ pipe	3/4	14
	84	3/4	6	1 ½ pipe	3/4	15
Round pipe aprons	12	1/2	3	5/8	1/2	4
	15	1/2	3	5/8	1/2	4 1/2
	18	1/2	4	5/8	1/2	4 1/2
	21	1/2	4	5/8	1/2	5
	24	5/8	4	3/4	1/2	5
	27	5/8	4	3/4	1/2	5 1/2
	30	5/8	4	3/4	1/2	5 1/2
	36	3/4	4	1	3/4	8
	42	3/4	4	1	3/4	8
	48	3/4	5	1	3/4	8
	54	3/4	5	1 ½ pipe	3/4	8
	60	3/4	5	1 ½ pipe	3/4	8
	66	3/4	6	1 ½ pipe	3/4	8
	72	3/4	6	1 ½ pipe	3/4	9
	84	3/4	7	1 ½ pipe	3/4	10
	90	3/4	7	1 ½ pipe	3/4	14

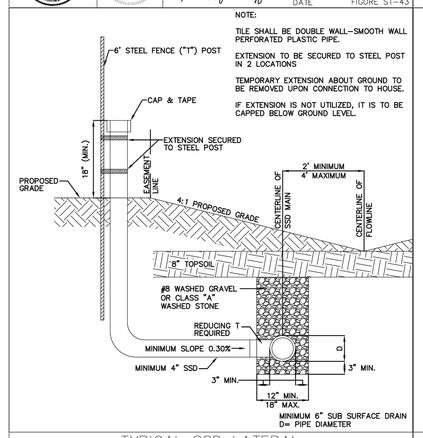
NOTES:
1. BARS & PLATES ARE HOT-ROLLED STEEL.
2. BARS, PLATES, & PIPIE ARE FINISHED WITH 2 COATS OF ALUMINUM PAINT.
3. BOLTS ARE GALVINIZED
4. NO REBAR THROUGH PIPES WILL BE ALLOWED
5. DEBRIS GUARD SHALL BE REMOVABLE

(DRAWING NOT TO SCALE)

DEBRIS GUARD

TOWN OF WESTFIELD, INDIANA

4/10/06 DATE FIGURE ST-29



NOTE:

TILE SHALL BE DOUBLE WALL-SMOOTH WALL PERFORATED PLASTIC PIPE.

EXTENSION TO BE SECURED TO STEEL POST IN 2 LOCATIONS

TEMPORARY EXTENSION ABOUT GROUND TO BE REMOVED UPON CONNECTION TO HOUSE.

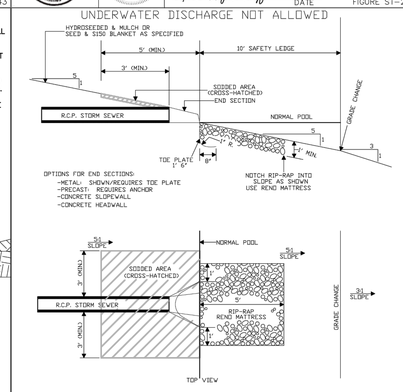
IF EXTENSION IS NOT UTILIZED, IT IS TO BE CAPPED BELOW GROUND LEVEL.

MINIMUM 6" SUB SURFACE DRAIN D= PIPE DIAMETER

TYPICAL SSD LATERAL TO INDIVIDUAL LOTS IN REAR YARD

TOWN OF WESTFIELD, INDIANA

4/10/06 DATE FIGURE ST-36

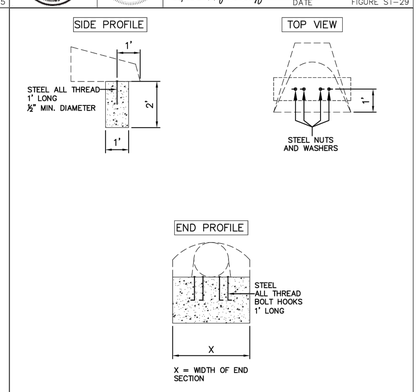


(DRAWING NOT TO SCALE)

LAKE OUTLET DETAIL FOR LAKE CROSS-SECTION OPTION 3

TOWN OF WESTFIELD, INDIANA

4/10/06 DATE FIGURE ST-28



ALLTHREAD SPACING TO BE TWO PER FOOT
EX: 12" END SECTION = 2 ALLTHREAD
24" END SECTION = 4 ALLTHREAD

ANCHOR FOR CONCRETE END SECTIONS

TOWN OF WESTFIELD, INDIANA

4/10/06 DATE FIGURE ST-30

Innovative Engineering & Consulting, Inc.
755 W. Carmel Drive
Suite 207
Carmel, IN 46032
317-691-4236
1-800-866-6922
Fax: 317-574-4238

REVISIONS:

PREPARED FOR:

Estridge Development Management, LLC
12965 Old Meridian Street
Carmel, IN 46032
317-669-6209

Harmony Section One
Single Family Subdivision
Westfield, Indiana
Storm Sewer Details

PRELIMINARY
PENDING
AGENCY
APPROVAL

DATE:

DATE:	DRAWN BY:
ISSUED:	CHECKED BY:

JOB NUMBER: 14102

SHEET # C802

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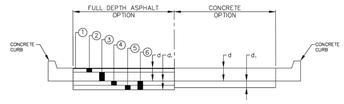


LOCAL STREETS

	ASPHALT (d=d₁=6"+9"=15")	ASPHALT ALTERNATIVE (d=d₁=4"+ 8"=14")	CONCRETE (d=d =6" + 8"=12")
1	1" SURFACE #11 OR #12	1" SURFACE #11 OR #12	d=5 1/2" CONCRETE ON...
2	5" BINDER #9	4" BINDER #9	d =4" COMP. AGGR. (SNS 53)
3	4" BASE #50	N.A.	
4	N.A.	N.A.	
5	N.A.	6" COMP. AGGR. (SIZE No. 53)	
6	8" COMP. AGGR. (SIZE No. 53)	12" LIME TREATED * SUBBASE	

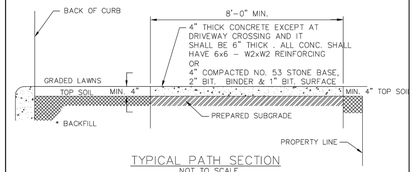
* LIME MODIFICATION SHALL BE BETWEEN 3% AND 6% BY WEIGHT WITH THE SOIL TEMPERATURE 45° OR ABOVE MEASURED 4"(100mm) BELOW THE SUBGRADE SURFACE WITH THE AIR TEMPERATURE RISING. ALL IN ACCORDANCE WITH THE LATEST AMENDED VERSION OF THE INDIANA DEPARTMENT OF TRANSPORTATION'S SPECIAL PROVISION FOR LIME MODIFICATION.

NOTE: * DEPTH OF CONCRETE GUTTER SHALL EQUAL DEPTH OF CONCRETE PAVEMENT.

TYPICAL PAVEMENT SECTIONS

TOWN OF WESTFIELD, INDIANA

10/9/06 DATE FIGURE P-1



TYPICAL PATH SECTION

NOT TO SCALE

* THE SPACE BEHIND THE CURB SHALL BE FILLED WITH SUITABLE MATERIAL TO THE REQUIRED ELEVATION AND COMPACTED IN LAYERS NOT TO EXCEED 6" IN DEPTH.

SUBGRADE UNDER ALL CURBS, SIDEWALKS, PATHS AND DRIVES SHALL BE COMPACTED IN ACCORDANCE WITH I.N.D.O.T. SPECIFICATIONS.

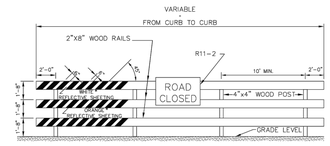
SEE SECTION 02502 (STANDARDS FOR ROADWAY CONSTRUCTION) FOR DETAILED DISCRIPTION OF BICYCLE/JOGGING PATH CONSTRUCTION

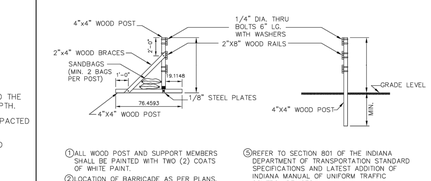
BICYCLE/JOGGING PATH DETAIL

TOWN OF WESTFIELD, INDIANA

10/9/06 DATE FIGURE P-16

RESIDENTIAL STREETS ONLY





① ALL WOOD POST AND SUPPORT MEMBERS SHALL BE PAINTED WITH TWO (2) COATS OF WHITE PAINT.

② LOCATION OF BARRICADE AS PER PLANS.

③ REFLECTIVE SHEETING TO BE IN ACCORDANCE WITH I.N.D.O.T. STANDARD SPECIFICATIONS.

④ REFER TO SECTION 801 OF THE INDIANA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS AND LATEST ADDITION OF INDIANA MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.

⑤ WHEN THE PROPOSED EXTENSION OF THE STREET IS TO BE: a) LESS THAN TWO (2) YEARS USE THE SANDBAGS ON POSTS b) GREATER THAN TWO (2) YEARS USE THE GROUND POSTS.

STANDARD BARRICADE

TOWN OF WESTFIELD, INDIANA

10/9/06 DATE FIGURE P-14

GENERAL NOTES:

① These dimensions are based on a 6 in. curb height. They shall be proportionally adjusted for other curb heights.

② Where site inflexibility precludes construction to the width shown, such width may be decreased to a minimum of 3'-0.

③ The bottom edge of the curb ramp shall be flush with the edge of adjacent pavement and gutter line.

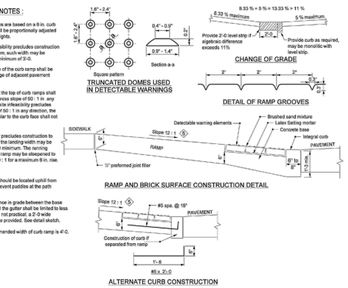
④ Landing areas at the top of curb ramps shall have maximum cross slope of 50 : 1 in any direction. When site inflexibility precludes construction to 50 : 1 in any direction, the slope perpendicular to the curb face shall not exceed 50 : 1.

⑤ If site inflexibility precludes construction to the width shown, the landing width may be decreased to 3'-0 minimum. The narrow slope of the curb ramp may be steepened to a maximum of 10 : 1 for a maximum 6 in. rise.

6. Drainage inlets should be located uphill from curb ramps to prevent puddles at the path of travel.

7. Elevation difference in grade between the base of curb ramp and the gutter shall be limited to less than 15%. If it is not practical, a 2'-0 wide level strip shall be provided. See detail sketch.

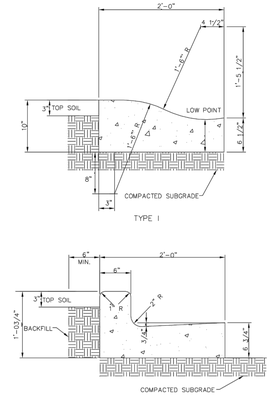
8. Minimum recommended width of curb ramp is 4'-0.



SIDEWALK RAMP FOR HANDICAPPED

TOWN OF WESTFIELD, INDIANA

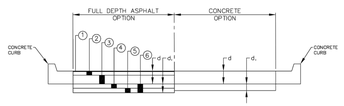
10/9/06 DATE FIGURE P-11



CONCRETE CURB AND GUTTER TYPE I & II

TOWN OF WESTFIELD, INDIANA

10/9/06 DATE FIGURE P-8



COLLECTOR STREETS

	ASPHALT (d=d₁=7"+9"=16")	ASPHALT ALTERNATIVE (d=d₁=7"+18"=25")	CONCRETE
1	1" SURFACE #11 OR #12	1" SURFACE #11 OR #12	d=7" CONCRETE
2	2" BINDER #9	2" BINDER #9	d =6" COMP. AGGR. (SIZE 53)
3	4" BASE #50	4" BASE #50	
4	N.A.	N.A.	
5	N.A.	6" COMP. AGGR. (SIZE No. 53)	
6	9" COMP. AGGR. (SIZE No. 53)	12" LIME TREATED * SUBBASE	

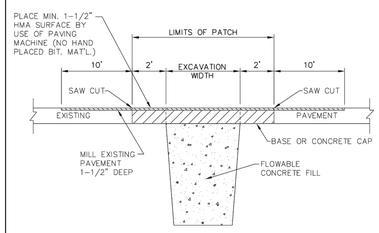
* LIME MODIFICATION SHALL BE BETWEEN 3% AND 6% BY WEIGHT WITH THE SOIL TEMPERATURE 45° OR ABOVE MEASURED 4"(100mm) BELOW THE SUBGRADE SURFACE WITH THE AIR TEMPERATURE RISING. ALL IN ACCORDANCE WITH THE LATEST AMENDED VERSION OF THE INDIANA DEPARTMENT OF TRANSPORTATION'S SPECIAL PROVISION FOR LIME MODIFICATION.

NOTE: * DEPTH OF CONCRETE GUTTER SHALL EQUAL DEPTH OF CONCRETE PAVEMENT.

TYPICAL PAVEMENT SECTIONS

TOWN OF WESTFIELD, INDIANA

10/9/06 DATE FIGURE P-2



GENERAL DETAIL

NOTES:

1. SAW CUT 1/3 PAVEMENT THICKNESS THEN BREAK OUT.

NOT TO SCALE

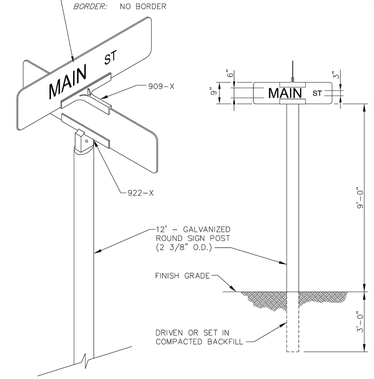
REPAIR CUTS WITHIN PAVEMENT LIMITS

TOWN OF WESTFIELD, INDIANA

10/9/06 DATE FIGURE P-18

SIGN MATERIALS

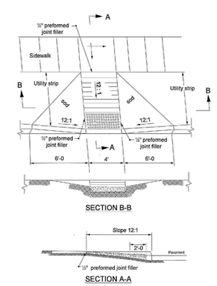
BLANK: 9" EXTRUDED ALUMINUM, 4-HOLE PUNCH FOR YPA HARDWARE
BACKGROUND: HIGH INTENSITY GREEN REFLECTIVE ASTM TYPE III
STREET NAME LETTERS: WHITE REFLECTIVE ASTM TYPE III 6" C OR B SERIES
STREET NAME SUFFIX: WHITE REFLECTIVE ASTM TYPE III 3" C OR B SERIES
BORDER: NO BORDER



STREET SIGN DETAIL

TOWN OF WESTFIELD, INDIANA

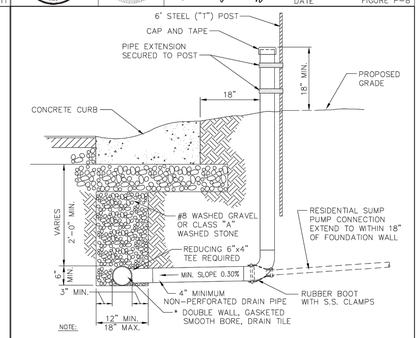
10/9/06 DATE FIGURE P-15



SIDEWALK RAMP FOR HANDICAPPED

TOWN OF WESTFIELD, INDIANA

10/9/06 DATE FIGURE P-11A



NOTE:

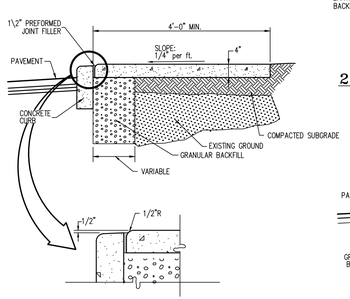
1. PIPE EXTENSION TO BE SECURED TO STEEL POST IN 2 LOCATIONS.
2. TEMPORARY PIPE EXTENSION ABOVE GROUND TO BE REMOVED UPON CONNECTION TO HOUSE.
3. ALL MEASUREMENTS TO BE MEASURED FROM BACK OF CURB.
4. IF PIPE EXTENSION IS NOT UTILIZED, IT IS TO BE CAPPED BELOW GROUND LEVEL.
5. LATERAL LOCATIONS SHALL BE STAMPED ON CURB.
6. MATERIALS AND INSTALLATION SHALL MEET THE INDOT STANDARDS AS SPECIFIED IN SECTION 718 "UNDERDRAINS"
7. SEE STREET DETAILS TO DETERMINE IF TILE IS PERFORATED OR NON PERFORATED.

UNDERDRAIN DETAIL

TOWN OF WESTFIELD, INDIANA

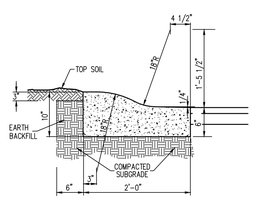
10/9/06 DATE FIGURE P-9

NOTE:
SEE SHEET C804 FOR TYPICAL STREET CROSS SECTIONS



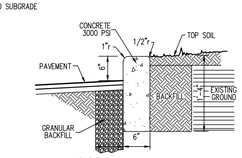
CURB & WALK DETAIL

NTS



2' CONCRETE ROLL CURB WITHOUT GUTTER

NTS



STRAIGHT CONCRETE CURB DETAIL TYPE V

NTS

STOP Sign (R1-1)

R1-1
30" x 30"

YIELD Sign (R1-2)

R1-2
30" x 30" x 30"

ALL WAY
R1-4
18" X 6"

4-WAY
R1-3
12" X 6"

SPEED LIMIT Signs (R2-1)

R2-1
24" x 30"

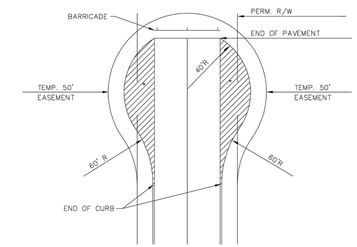
NOTES:

1. SIGNS SHALL BE SINGLE FACED WITH HIGH INTENSITY REFLECTORIZED SHEETING ON 0.080" THICK ALUMINUM SHEET MATERIAL PER INDOT STANDARD SPECIFICATION 912.10.
2. POSTS SHALL BE 11'-0" LONG, 3lb/ft GALVANIZED CHANNEL SIGN POST PER INDOT STANDARD SPECIFICATION 909.14.
3. ALL SIGN SIZES, SHAPES, COLORS AND MATERIAL SHALL MEET THE INDIANA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

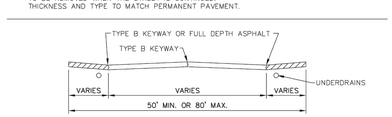
TYPICAL SUBDIVISION REGULATORY SIGNS

TOWN OF WESTFIELD, INDIANA

10/9/06 DATE FIGURE P-15.1



* TO BE REMOVED WHEN THE STREET IS CONTINUED. THICKNESS AND TYPE TO MATCH PERMANENT PAVEMENT.

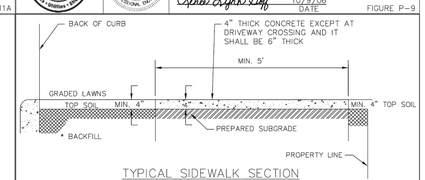


NOT TO SCALE

SUBDIVISION TEMPORARY CUL-DE-SAC

TOWN OF WESTFIELD, INDIANA

10/9/06 DATE FIGURE P-13

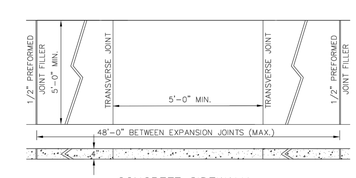


TYPICAL SIDEWALK SECTION

NOT TO SCALE

* THE SPACE BEHIND THE CURB SHALL BE FILLED WITH SUITABLE MATERIAL TO THE REQUIRED ELEVATION AND COMPACTED IN LAYERS NOT TO EXCEED 6" IN DEPTH.

SUBGRADE UNDER ALL CURBS, SIDEWALKS, AND DRIVES SHALL BE COMPACTED IN ACCORDANCE WITH I.N.D.O.T. SPECIFICATIONS.



CONCRETE SIDEWALK

NOT TO SCALE

SIDEWALK DETAILS

TOWN OF WESTFIELD, INDIANA

10/9/06 DATE FIGURE P-10

Innovative Engineering & Consulting, Inc.
755 W. Carmel Drive
Suite 207
Carmel, IN 46032
317-669-4236
1-800-866-6922
Fax: 317-574-4238

REVISIONS:

PREPARED FOR:

Estridge Development Management, LLC
12965 Old Meridian Street
Carmel, IN 46032
317-669-6209

Harmony Section One
Single Family Subdivision
Westfield, Indiana
Street Details

PRELIMINARY PENDING AGENCY APPROVAL

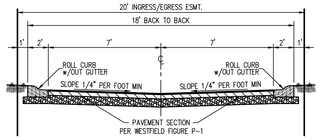
DATE:

DATE:	DRAWN BY:
ISSUED:	CHECKED BY:

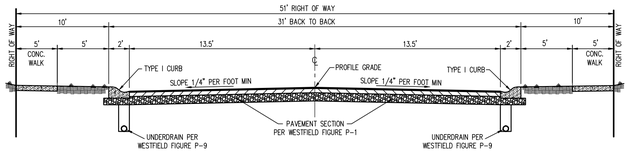
JOB NUMBER: 14102

SHEET # C803

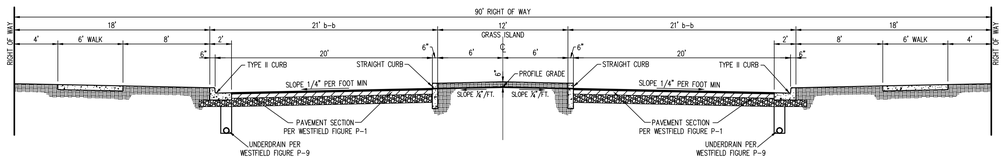
File Path\Name: J:\2014\14102_Harmony\Dwgs\C803 Details.dwg – Date: Apr 01,2014 – 4:05pm



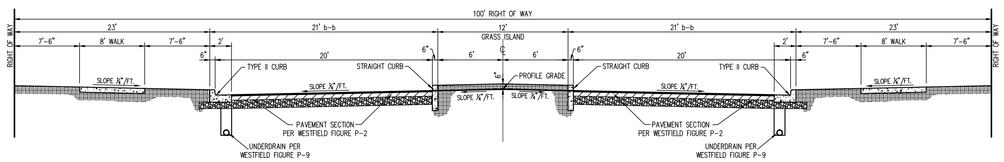
TYPICAL ALLEY SECTION
NTS



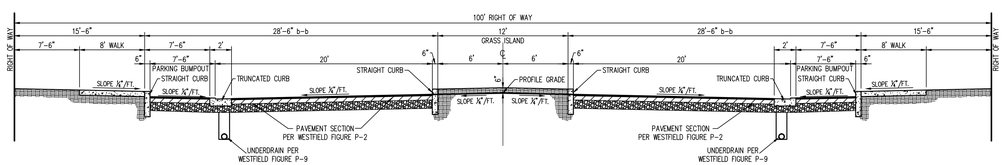
TYPICAL STREET SECTION – LOCAL STREET
NTS



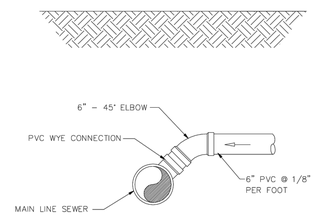
TYPICAL DIVIDED STREET SECTION – LOCAL STREET
NTS



151st STREET SECTION – COLLECTOR STREET
NTS



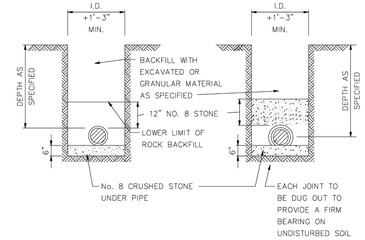
151st STREET SECTION – COLLECTOR STREET w/PARKING BUMPOUTS
NTS



SECTIONAL VIEW

HOUSE/BUILDING SERVICE CONNECTION DETAIL 2

TOWN OF WESTFIELD, INDIANA — 10/9/06 DATE — FIGURE S-11

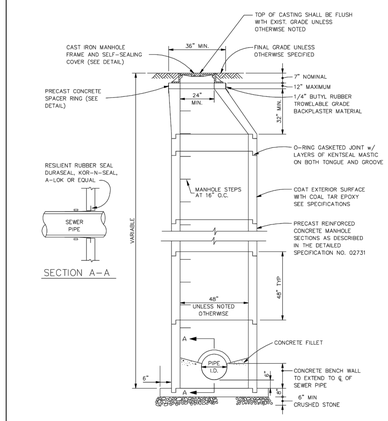


ROCK EXCAVATION — EARTH EXCAVATION

NOTE:
THIS DETAIL SHALL APPLY TO ALL SANITARY SEWER PIPE

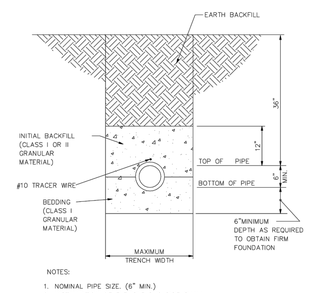
SEWER PIPE BEDDING DETAIL

TOWN OF WESTFIELD, INDIANA — 10/9/06 DATE — FIGURE S-5



STANDARD SANITARY MANHOLE DETAIL

TOWN OF WESTFIELD, INDIANA — 10/9/06 DATE — FIGURE S-1

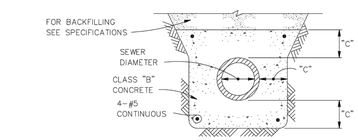


NOTES:

1. NOMINAL PIPE SIZE. (6" MIN.)
2. INSTALLATION OF FLEXIBLE PVC PIPE SHALL BE IN ACCORDANCE WITH SPECIFICATIONS CONTAINED IN ASTM D–2321
3. CLASS I GRANULAR MATERIAL SHALL BE 1/4" TO 1 1/2" GRADED STONE, PER ASTM D2321 (#8 CRUSH STONE)
4. CLASS II GRANULAR MATERIAL SHALL BE COARSE SANDS AND GRAVELS MAX. PARTIAL SIZE OF 3/4"
5. SEE FIGURE S–5 FOR MAIN LINE SEWERS PIPE BEDDING DETAILS.
6. #10 TRACER WIRE TO BE EXTENDED FROM SEWER MAIN TO 6" CLEANOUT RISER

HOUSE/BUILDING SERVICE BEDDING DETAILS

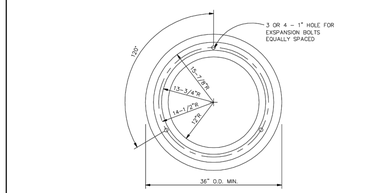
TOWN OF WESTFIELD, INDIANA — 10/9/06 DATE — FIGURE S-12



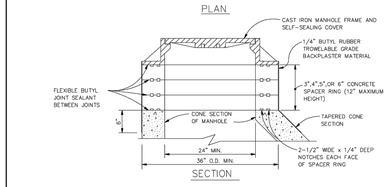
NOTE:
"C" = 6" MINIMUM OR AS INDICATED ON THE PLANS.

CONCRETE ENCASEMENT DETAIL

TOWN OF WESTFIELD, INDIANA — 10/9/06 DATE — FIGURE S-6



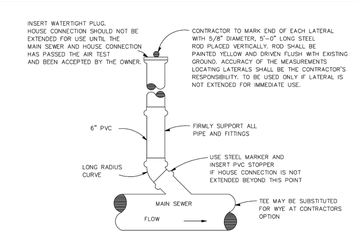
PLAN



SECTION

STANDARD SANITARY MANHOLE SPACER RING DETAIL

TOWN OF WESTFIELD, INDIANA — 10/9/06 DATE — FIGURE S-2



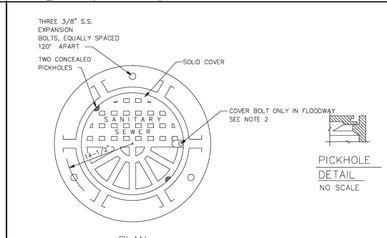
PLAN VIEW

NOTES:

1. WYE BRANCHES OR TEES SHALL BE INSTALLED WHERE DESIRED BY PROPERTY OWNER OR WHERE INDICATED ON THE DRAWINGS. THEY SHALL BE EXTENDED TO PROPERTY LINE OF STREETS OR ALLEYS OR TO DISTANCES AS SHOWN ON THE DESIGN DRAWINGS AND SHALL BE OF 6" PVC SDR 35 UNLESS OTHERWISE SHOWN.
2. DEPTH AT PROPERTY LINE SHALL BE APPROXIMATELY 8'–0" UNLESS SEWER DEPTH IS LESS, IN WHICH EVENT A MINIMUM SLOPE OF 1/8" PER 1'–0" SHALL BE USED.
3. HOUSE SERVICE PIPE SHALL BE PVC SDR 35 CONFORMING TO ASTM D3034 WITH GASKETED JOINTS CONFORMING TO ASTM D3212 UNLESS OTHERWISE INDICATED.
4. HOUSE SERVICE PIPE SHALL BE INSTALLED PER SAME SPECIFICATIONS & DETAIL AS FOR MAIN LINE SEWER.

HOUSE/BUILDING SERVICE CONNECTION DETAIL 1

TOWN OF WESTFIELD, INDIANA — 10/9/06 DATE — FIGURE S-10



NOTES:

1. TOTAL WEIGHT OF FRAME AND LID = 335 lbs (MIN) TYPE 1 SELF SEALING COVER IS NOT BOLTED TO FRAME AND SHALL BE USED UNLESS TYPE 11 IS SPECIFICALLY INDICATED
2. TYPE 11 SELF SEALING COVER IS BOLTED TO FRAME WITH FOUR 1/2" BRONZE HEXAGONAL HEAD COUNTERSUNK BOLTS
3. CASTING SHALL BE CATALOG NO. 1022–2 AS MANUFACTURED BY EAST JORDAN IRON WORKS, INC. OR NEENAH R–1772–C AS MANUFACTURED BY NEENAH FOUNDARY.

STANDARD SANITARY MANHOLE FRAME AND COVER DETAILS

TOWN OF WESTFIELD, INDIANA — 10/9/06 DATE — FIGURE S-3

Innovative Engineering & Consulting, Inc.
755 W. Carmel Drive
Suite 207
Carmel, IN 46032
317-669-4236
1-800-866-6922
Fax: 317-574-4238

REVISIONS:

PREPARED FOR:
Estridge Development Management, LLC
12965 Old Meridian Street
Carmel, IN 46032
317-669-6209

Harmony Section One
Single Family Subdivision
Westfield, Indiana
Sanitary Sewer Details

PRELIMINARY PENDING AGENCY APPROVAL

DATE:

DATE:	DRAWN BY:
ISSUED:	CHECKED BY:

JOB NUMBER: 14102

SHEET # C804

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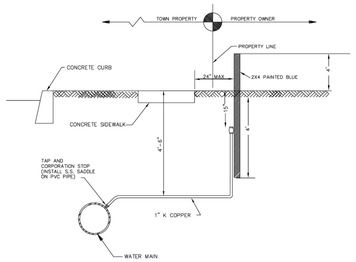


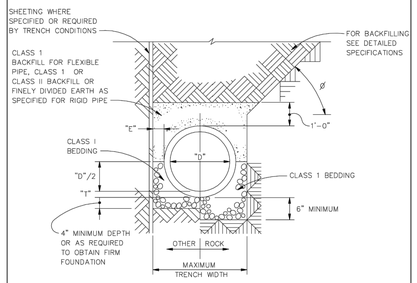
NOTE:
CONTRACTOR SHALL FURNISH AND INSTALL ALL NECESSARY MATERIALS TO PROVIDE A NEW WATER SERVICE. AS SHOWN IN THIS DETAIL

PART NUMBER FOR TERMINATING SERVICE LINE			
PART DESCRIPTION	FORD METER BOX CO.	MUELLER CO.	A.Y. MCDONALD MFG. CO.
SHUT-OFF VALVE	B44-444a (1")	B-25172 (1")	6100Q (1")

DOUBLE WATER SERVICE DETAIL

TOWN OF WESTFIELD, INDIANA

10/9/06 DATE — FIGURE W-11



CLASS I BEDDING
TYPICAL SECTIONS IN FIRM FOUNDATIONS

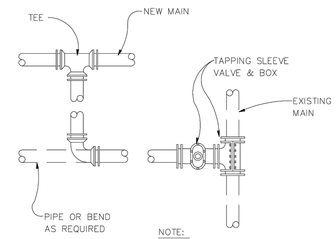
NOTES:

1. SLOPE ANGLE, ** ,SHALL BE LESS THAN THE FRICTION ANGLE OF THE EXCAVATED MATERIAL.
2. "D"= NOMINAL PIPE SIZE.
3. "T"= PIPE WALL THICKNESS.

PVC BEDDING DETAIL

TOWN OF WESTFIELD, INDIANA

10/9/06 DATE — FIGURE W-14



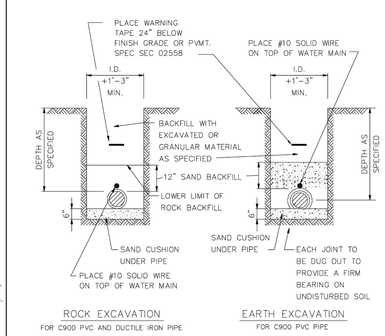
NOTE:

1. BENDS & FITTINGS AS REQUIRED SEE PLAN SHEETS FOR DETAILS
2. SEE FIGURES W-2 & W-3 FOR THRUST BLOCK AND RESTRAINED JOINT DETAILS.

CONNECTION TO EXISTING MAIN

TOWN OF WESTFIELD, INDIANA

10/9/06 DATE — FIGURE W-5



ROCK EXCAVATION
FOR C900 PVC AND DUCTILE IRON PIPE

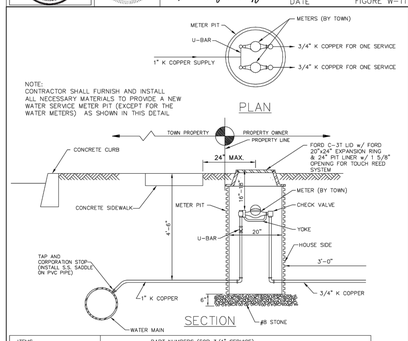
EARTH EXCAVATION
FOR C900 PVC PIPE

NOTE:
DUCTILE IRON PIPE OR HDPE (D11) PIPE DOES NOT REQUIRE SPECIAL BACKFILL UNLESS DIRECTED ON THE PLANS OR REQUIRED BY THE DIRECTOR OR THER DESIGNEE.

WATER MAIN INSTALLATION DETAIL

TOWN OF WESTFIELD, INDIANA

10/9/06 DATE — FIGURE W-1



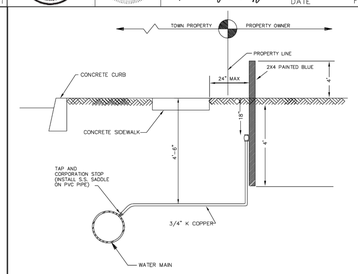
NOTE:
CONTRACTOR SHALL FURNISH AND INSTALL ALL NECESSARY MATERIALS TO PROVIDE A NEW WATER SERVICE METER PIT (EXCEPT FOR THE WATER METERS) AS SHOWN IN THIS DETAIL

ITEMS SUPPLIED & INSTALLED BY CONTRACTOR	PART NUMBERS (FOR 3/4" SERVICE)			
	FORD METER BOX CO.	MUELLER CO.	A.Y. MCDONALD MFG. CO.	VESTAL
YOKE	Y502	H-5020,5/8"	14-2	
ANGLE BALL VALVE	BA91-323W	B-24278	AY46428Y02¾x02	
CHECK VALVE	HA 94-323o	H-14245	12-310-33	
FRAME & COVER	NO. C-37	TYLER MODEL 6150	74M3CT	32-262
U-BAR	UB843-7.5/C14-44Q	H-15363 1x3/4x7.5	OBJQM1x¾x7.5	

3/4" – DUAL WATER METER AND PIT DETAIL (FOR RESIDENTIAL)

TOWN OF WESTFIELD, INDIANA

10/9/06 DATE — FIGURE W-11a



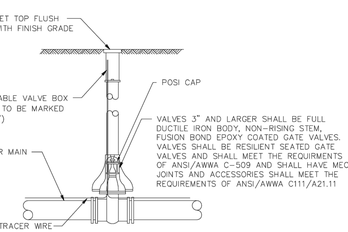
NOTE:
CONTRACTOR SHALL FURNISH AND INSTALL ALL NECESSARY MATERIALS TO PROVIDE A NEW WATER SERVICE. AS SHOWN IN THIS DETAIL

PART NUMBER FOR TERMINATING SERVICE LINE			
PART DESCRIPTION	FORD METER BOX CO.	MUELLER CO.	A.Y. MCDONALD MFG. CO.
ANGLE BALL VALVE	BA94-323-O	B-24273	46428Y0-¾X02

3/4" SINGLE PIT

TOWN OF WESTFIELD, INDIANA

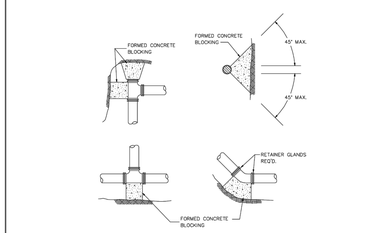
10/9/06 DATE — FIGURE W-8



GATE VALVE AND BOX

TOWN OF WESTFIELD, INDIANA

10/9/06 DATE — FIGURE W-6



SIZE	TEE & PLUG	90° BEND	45° BEND	22-1/2° BEND	11-1/4° BEND
4"	2.0	2.5	1.5	1.0	1.0
6"	4.0	5.5	3.0	1.5	1.0
8"	6.5	9.0	5.0	2.5	1.5
10"	10.0	14.0	7.5	4.0	2.0
12"	14.0	20.0	11.0	5.5	3.0
14"	19.0	27.0	14.5	7.5	4.0
16"	25.0	35.0	19.0	10.0	5.0
18"	31.5	44.5	24.0	12.5	6.5
20"	40.0	54.0	31.0	16.5	7.5
24"	55.5	78.5	42.5	22.0	11.0
30"	86.5	122.0	66.0	34.0	17.0
36"	124.0	175.5	95.0	48.5	24.5
42"	168.0	237.5	128.5	65.5	33.0
48"	212.0	366.0	160.0	85.0	42.0

(AREA IN SQ. FT. REQUIRED FOR CONCRETE THRUST BLOCKING)

NOTE:

THE THRUST BLOCK AREAS ARE BASED ON A SOIL BEARING LOAD OF 2,000 LB./SQ. FT.

GREASE OR PLACE A LAYER OF VISQUEEN ON ALL WATER MAIN SURFACES PRIOR TO PLACEMENT OF CONCRETE

THRUST BLOCK DETAIL

TOWN OF WESTFIELD, INDIANA

10/9/06 DATE — FIGURE W-2

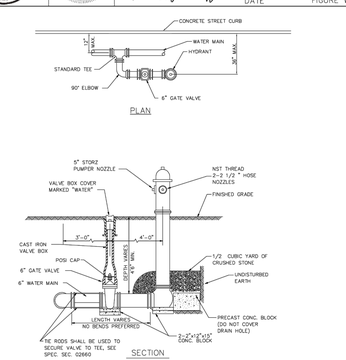
NOTE:
CONTRACTOR SHALL FURNISH AND INSTALL ALL NECESSARY MATERIALS TO PROVIDE A NEW WATER SERVICE METER PIT (EXCEPT FOR THE WATER METER) AS SHOWN IN THIS DETAIL

ITEMS	PART NUMBERS (FOR 3/4" SERVICE)			
	FORD METER BOX CO.	MUELLER CO.	A.Y. MCDONALD MFG. CO.	VESTAL
YOKE	Y502	H-5020,5/8"	14-2	
ANGLE BALL VALVE	BA91-323WQ	B-24273	AY46428Y0¾x02	
CHECK VALVE	HA 94-323	H-14245	12-310-33	
FRAME & COVER	NO. C-3T	TYLER MODEL 6150	74M3CT	32-262

3/4" – WATER METER AND PIT DETAILS (FOR RESIDENTIAL)

TOWN OF WESTFIELD, INDIANA

10/9/06 DATE — FIGURE W-8a



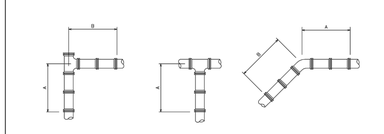
NOTE:

1. HYDRANTS SHALL BE THE MUELLER CENTURION, AS MANUFACTURED BY THE MUELLER CO. OR THE WATEREUS PACER, AS MANUFACTURED BY THE WATEREUS CO.
2. INTEGRAL CAP NUT AND LOWER WASHER SHALL BE EPOXY COATED.
3. SHOE SHALL BE FUSION BONDED EPOXY COATED INSIDE AND OUT.
4. WESTFIELD FIRE HYDRANTS SHALL BE MAB FIRE PROTECTION RED (7068) NOBLESVILLE FIRE HYDRANTS SHALL BE MAB CAUTION YELLOW (7077)

FIRE HYDRANT DETAILS

TOWN OF WESTFIELD, INDIANA

10/9/06 DATE — FIGURE W-7



NOTE:

THE LENGTHS OF PIPE WITH RESTRAINED JOINTS ARE BASED ON A COMPACTED SILTY SOIL SURROUNDING THE PIPE

SIZE	A TEE & PLUG	A 90° BEND	A 45° BEND	A 22-1/2° BEND	A 11-1/4° BEND
4"	12'-0"	17'-0"	10'-0"	6'-0"	3'-0"
6"	16'-0"	22'-0"	13'-0"	8'-0"	4'-0"
8"	19'-0"	27'-0"	16'-0"	9'-0"	5'-0"
10"	23'-0"	32'-0"	19'-0"	11'-0"	6'-0"
12"	26'-0"	36'-0"	21'-0"	12'-0"	7'-0"
14"	29'-0"	41'-0"	24'-0"	14'-0"	8'-0"
16"	32'-0"	45'-0"	26'-0"	15'-0"	8'-0"
20"	39'-0"	54'-0"	29'-0"	18'-0"	9'-0"
24"	41'-0"	58'-0"	34'-0"	19'-0"	10'-0"
30"	50'-0"	70'-0"	40'-0"	22'-0"	12'-0"
36"	58'-0"	82'-0"	46'-0"	26'-0"	14'-0"
42"	66'-0"	93'-0"	52'-0"	29'-0"	15'-0"

(LENGTH IN FEET REQUIRED FOR RESTRAINING JOINTS)

RESTRAINED JOINT DETAILS

TOWN OF WESTFIELD, INDIANA

10/9/06 DATE — FIGURE W-3

Innovative Engineering & Consulting, Inc.
755 W. Carmel Drive Suite 207 Carmel, IN 46032
317-669-4236
1-800-866-6922
Fax: 317-574-4238

REVISIONS:

PREPARED FOR:

Estridge Development Management, LLC
12965 Old Meridian Street
Carmel, IN 46032
317-669-6209

Harmony Section One
Single Family Subdivision
Westfield, Indiana
Water Details

PRELIMINARY PENDING AGENCY APPROVAL

DATE:

DATE:	DRAWN BY:
ISSUED:	CHECKED BY:

JOB NUMBER: 14102

SHEET # C805

File Path\Name: J:\2014\14102_Harmony\Dwgs\C801 Details.dwg – Date: Apr 01,2014 – 4:05pm

Surveyor's Report

1. In accordance with Title 865, Article 1, Chapter 12 of the Indiana Administrative Code ("Rule 12"), the following observations and opinions are submitted regarding the various uncertainties in the locations of the lines and corners established this survey as a result of uncertainties in reference monumentation; in record descriptions and plats; in lines of occupation; and as introduced by random errors in measurement ("Relative Positional Accuracy"). There may be unwritten rights associated with these uncertainties. The client should assume there is an amount of uncertainty along any line equal in magnitude to the discrepancy in the location of the lines of possession from the surveyed lines.

There may be differences of deed dimensions versus measured dimensions along the boundary lines shown hereon and, likewise, there may be found survey markers near, but not precisely at, some boundary corners. In cases where the magnitude of these differences are less than the Relative Positional Accuracy stated below and less than the uncertainty identified for the reference monumentation (discussed below), the differences may be considered insignificant and are shown only for purposes of mathematical closure. Such differences that are greater than the Relative Positional Accuracy and the uncertainty in reference monumentation should be considered worthy of notice and are therefore further discussed below.

This survey and report are based in part upon opinions formed in accordance with an Indiana Land Surveyor's responsibility to conduct a survey in accordance with "law or a precedent" (865 IAC 1-12-11(5), Rules of the Indiana State Board of Registration for Land Surveyors). Since Indiana has no statutes addressing how to resolve boundary lines, a solution based on principles derived from common law precedent must be relied upon as the basis for a boundary resolution.

Unless otherwise noted or depicted hereon, there is no evidence of occupation along the perimeter lines of the subject tract. All survey monuments set or found this survey are flush with existing grade unless otherwise noted.

The Relative Positional Accuracy (due to random errors in measurement) of this survey is within the specifications for an Urban Class Survey (0.07 feet plus 50 ppm) as defined in IAC 865.

PROJECT

The survey was performed at the request of the client to re-certify our previously completed ALTA/ACSM Land Title Survey/Retracement Survey (TSC job #4934.001 dated 09/15/2006) and to update the surveyed parcel to no longer include the Southeast quarter of the Southeast quarter of Section 16, Township 18 North, Range 3 East (originally included in the surveyed ground in the previous survey). The subject tract lies west of Ditch Road in between 146th Street and 156th Street. The following excerpts are taken from the prior survey report.

SECTION CORNERS

The control on which this survey is based is the Indiana Grid NAD 83 East Zone, as established using the Trimble GPS equipment and using reference ties for section corners from the Hamilton County Surveyor's Office.

Section 16, Township 18 North, Range 3 East, in Washington Township in Hamilton County, Indiana:

The Northwest Corner of the Northwest Quarter: A P.K. nail was found, there is, in my opinion, negligible amount of uncertainty associated with the location of corner.

The Northeast Corner of the Northwest Quarter: A Harrison Monument was found stamped "Section Corner", there is, in my opinion, negligible amount of uncertainty associated with the location of corner.

The Northeast Corner of the Northeast Quarter: A Harrison Monument was found stamped "Section Corner", there is, in my opinion, negligible amount of uncertainty associated with the location of corner.

The Northeast Corner of the Southeast Quarter: A Copperweld Monument was found, there is, in my opinion, negligible amount of uncertainty associated with the location of corner.

The Northwest Corner of the Southeast Quarter: A 1/2 inch iron pin was found, there is, in my opinion, negligible amount of uncertainty associated with the location of corner.

The Northwest Corner of the Southwest Quarter: A 3/8 inch iron pin was found 0.3 feet below surface, there is, in my opinion, negligible amount of uncertainty associated with the location of corner.

The Southwest Corner of the Southwest Quarter: A 1 inch iron pin was found, there is, in my opinion, negligible amount of uncertainty associated with the location of corner.

The Southwest corner of the Southeast Quarter: Nothing was found at the surface, said corner was held per location as shown on survey prepared by "Hahn Surveying Group, Inc." dated January 12, 2000 and recorded as Instrument Number 200000001999 in the office of the Hamilton County Recorder's office, there is, in my opinion, negligible amount of uncertainty associated with the location of corner.

The Southeast Corner of the Southeast Quarter: A 1 inch iron pin was found, there is, in my opinion, negligible amount of uncertainty associated with the location of corner.
(Field reconnaissance found an existing Harrison monument flush with the surface of the ground at this location. The location of the Harrison corresponds with the location of the previous 1 inch iron pin. There is, in my opinion, negligible amount of uncertainty associated with the location of the Harrison monument.)

Equidistant splits were then calculated to establish the subsequent Quarter Quarter lines. See Section Detail.

RIGHTS-OF-WAY

All the rights-of-way shown are apparent 16.5 feet half.

RECORD DESCRIPTIONS AND ADJOINERS

The lines and corners of the subject tract were located hereon based on controlling calls contained in the record description for the subject tract. There are no deed gaps or overlaps with adjoiners along the perimeter lines of the subject tract based on controlling calls contained in record land descriptions.

SUBJECT TRACT MONUMENTATION

There were several monuments found around the subject tract, they are found to be within an acceptable amount of uncertainty unless otherwise noted on the survey.

OCCUPATION
(North of 151st Street)
The east line of the subject tract lies generally along the centerline of Ditch Road.
The 723.00 foot call and the 361.50 foot call in the southeast portion of the subject tract lies in a grassy area with no visible lines of occupation.
The south line of the subject tract lies generally along the centerline of 151st Street.
The 1315.85 foot call on the western side of the subject tract lies on and along a field division line.
The 679.24 foot call has a 4 foot woven wire fence that runs along the western portion of said line. The fence lies up to 1.3 feet south of said line.
The western most line of the subject tract lies on and along a field division line.
The northern most line of the subject tract lies generally along the centerline of 156th Street.
The 435.71 foot call has an asphalt drive that crosses the line.
The 279.15 foot call has a gravel/dirt drive that crosses the line.
Just west and south of these last two mentioned lines have remnants of an old campground, with utilities that run in those areas.
There are two gas pipelines that run through the subject tract as shown herein.

(South of 151st Street)
The east line of the subject tract lies generally along the centerline of Ditch Road.
The south line of the subject tract lies generally along the centerline of 146th Street.
The west line of the subject tract lies along a field division line and has a 4 foot woven wire fence that lies from 1.3 feet west up to 1.6 feet east of said west line.
The north line of the subject tract lies from 5.5 feet north up to 9.2 feet north of a 4 foot woven wire fence.

LEGAL DRAIN

There are two portions of legal drains that affect the subject tract and are shown herein.

2. The accuracy of any flood hazard data shown on this report is subject to map scale uncertainty and to any other uncertainty in location or elevation on the referenced Flood Insurance Rate Map. The within described tract of land lies within Flood Hazard Zone X (unshaded) as said tract plots by scale on Community Panel Numbers 18057C0115F, 18057C0120F, 18057C0205F, & 18057C0206F of the Flood Insurance Rate Maps for Hamilton County, Indiana (maps dated February 19, 2003).

3. Ownership information indicated hereon is as identified in County or Township records or on title work provided by others.

4. The subject tract is zoned PUD (Planned Unit Development) per Ordinance 12-14 dated January 24, 2013, recorded as Instrument No. 2013004856 in the Office of the Recorder of Hamilton County.

5. Evidence of source of title for the subject tract was provided in the form of Fidelity National Title Insurance Company commitment no. 13-007534 dated August 12, 2013. Some of the items disclosed in Schedule BII thereof may have been depicted on the survey and are identified by their recording data. Should any additional items need to be depicted on the survey please advise and provide the appropriate documents.

Certificate of Survey
ALTA/ACSM Land Title Survey

To: MREC EH Harmony Westfield LLC; MREC EH Westfield Investments LLC; Fidelity National Title Insurance Company:

This is to certify that this map or plat and the survey on which it is based were made in accordance with the 2011 Minimum Standard Detail Requirements for ALTA/ACSM Land Title Surveys, jointly established and adopted by ALTA and NSPS, and includes Items 1, 2, 3, 4, 6(a), 7(a), 7(b)(1), 8, 9, and 11(a) of Table A thereof.

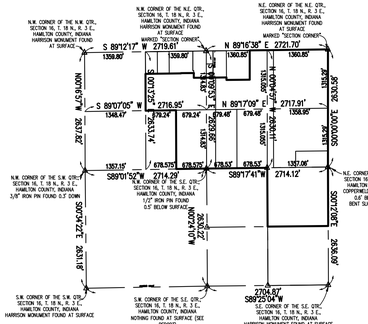
To the best of my knowledge and belief the within plat also represents a survey made under my supervision in accordance with Title 865, Article 1, Chapter 12 of the Indiana Administrative Code. The field work was completed on September 13, 2013.

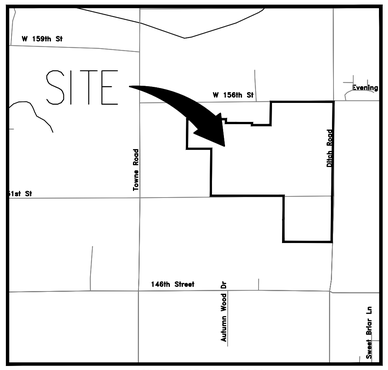
Steven W. Reeves
Registered Land Surveyor #20400005
September 20, 2013

STEVEN W. REEVES
REGISTERED
No. LS20400005
STATE OF INDIANA
LAND SURVEYOR

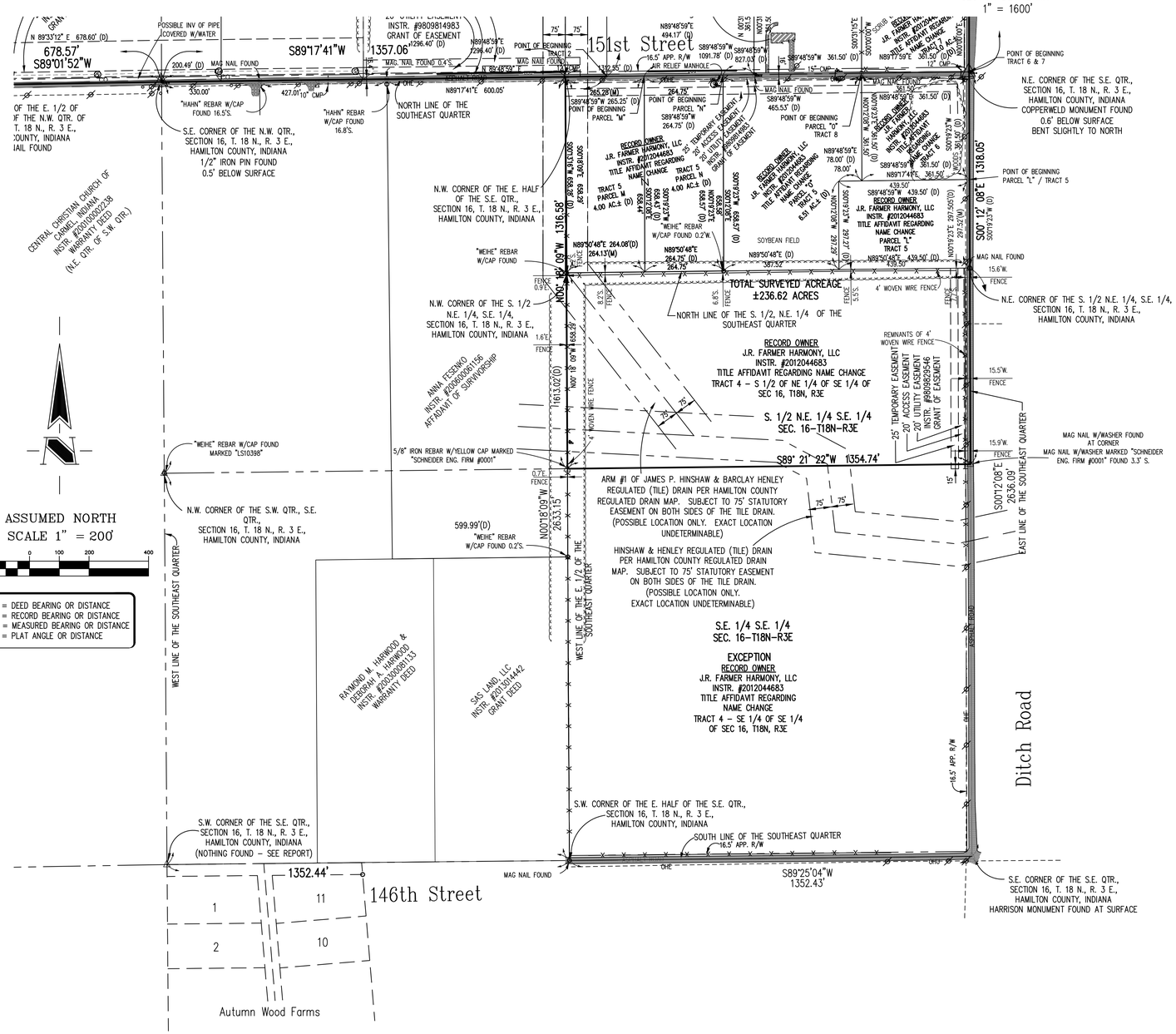
I affirm, under the penalties for perjury, that I have taken reasonable care to redact each Social Security number in this document, unless required by law. Steve Reeves

SECTION 16, T. 18 N., R. 3 E.
HAMILTON COUNTY, INDIANA





VICINITY MAP 1" = 2000'
SECTION DETAIL MAP
1" = 1600'



LEGEND

- INLET OR CATCH BASIN
- SEWER MANHOLE
- TELEPHONE MANHOLE
- ACCESS COVER
- TRAFFIC MANHOLE
- WATER MANHOLE
- MANHOLE
- CLEANOUT
- AREA LIGHT
- UTILITY POLE WITH GUY WIRE
- UTILITY POLE WITH RISER
- FLAG POLE
- TRAFFIC POLE
- UTILITY PEDESTAL
- ELECTRIC METER
- ELECTRIC TRANSFORMER
- CONDITIONING UNIT
- UTILITY VALVE
- HYDRANT
- WELL
- WATER VALVE
- WATER METER
- GAS VALVE
- GAS METER
- SIGNS
- MAILBOX
- TREE, SHRUB
- BENCHMARK
- SOIL BORING
- OVERHEAD UTILITY LINES
- UNDERGROUND TELEVISION
- UNDERGROUND ELECTRIC
- UNDERGROUND TELEPHONE
- UNDERGROUND FIBER OPTIC
- UNDERGROUND FORCE MAIN
- UNDERGROUND GAS LINE
- UNDERGROUND WATER LINE
- SEWER LINE
- UNDERGROUND STORM SEWER
- UNDERGROUND SANITARY SEWER
- EDGE OF WOODS
- FENCE LINE
- FLOW LINE

Schneider

THE SCHNEIDER CORPORATION
Historic Fort Harrison
8901 Otis Avenue
Indianapolis, IN 46216-1037
Telephone: 317.826.7100
Fax: 317.826.7200
www.schneidercorp.com

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

PROJECT INFORMATION:

HARMONY
ALTA/ACSM LAND TITLE SURVEY
BOUNDARY RETRACEMENT SURVEY

151st Street & Ditch Road

CLIENT INFORMATION:

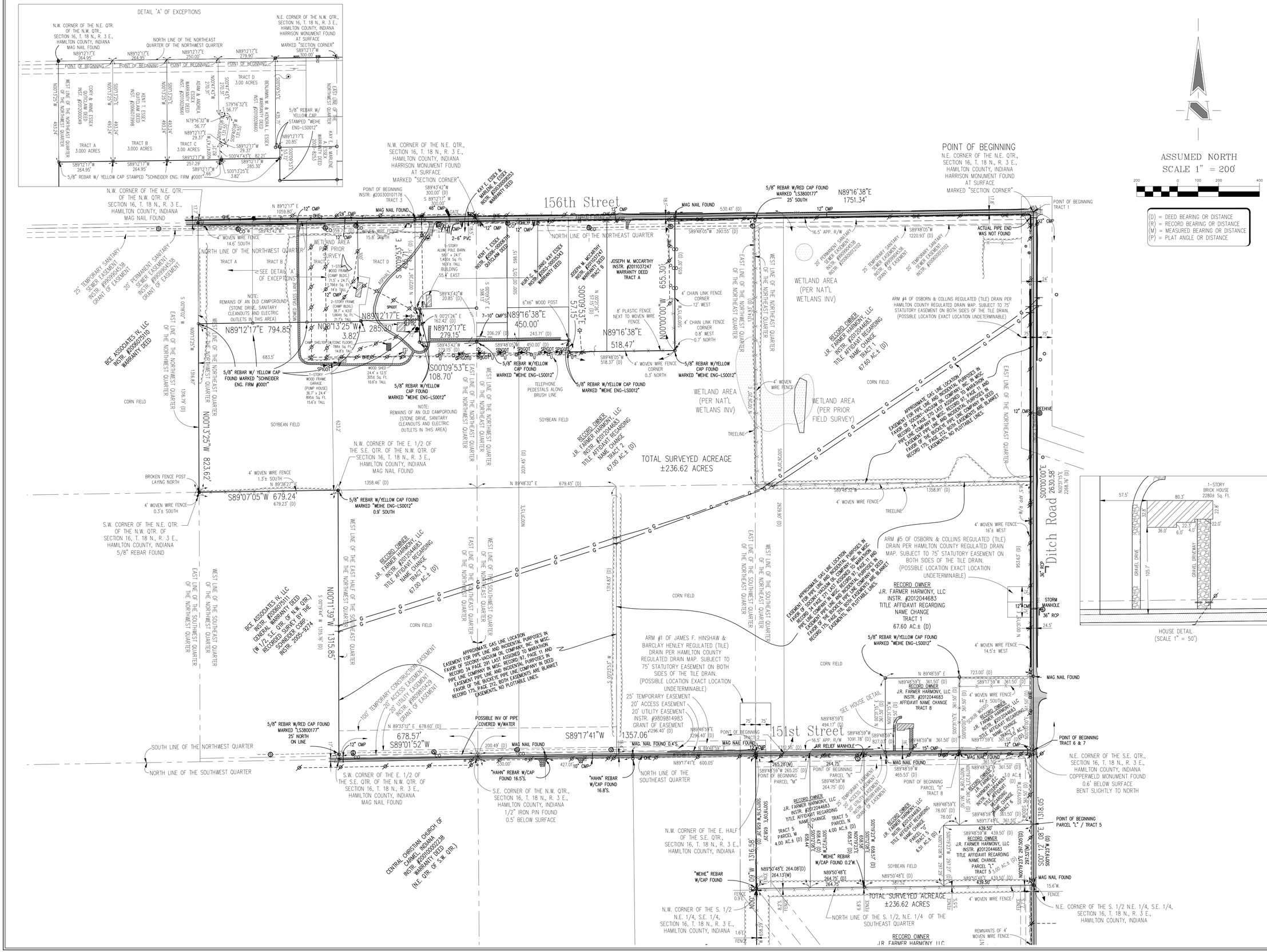
J.R. Farmer Harmony LLC
305 NW 22nd Street, Delray Beach, FL 33444

DATE: 09/20/2013	PROJECT NO.: 4934.002
DRAWN BY: MGJ	CHECKED BY: SWR

REVISIONS:
SWR 10-3-2013 new zoning classification, added certified party list

DRAWING FILES:
T:\4K\4934\002\DWGS\4934002L.dwg
XREF: T:\4K\4934\001\DWGS\AREAMAP.DWG

SHEET NO.: 1
OF 3



LEGEND

- INLET OR CATCH BASIN
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- T — UNDERGROUND TELEPHONE
- FO — UNDERGROUND FIBER OPTIC
- F — UNDERGROUND FORCE MAIN
- G — UNDERGROUND GAS LINE
- W — UNDERGROUND WATER LINE
- S — SEWER LINE
- UNDERGROUND STORM SEWER
- UNDERGROUND SANITARY SEWER
- EDGE OF WOODS
- FENCE LINE
- FLOW LINE

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Geotechnical Services
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Home Builder Services
Interior Design
Land Surveying
Landscape Architecture
Transportation Engineering

PROJECT INFORMATION:

HARMONY
ALTA/ACSM LAND TITLE SURVEY
BOUNDARY RETRACEMENT SURVEY

15ist Street & Ditch Road

CLIENT INFORMATION:

J.R. Farmer Harmony LLC
905 NW 22nd Street, Delray Beach, FL 33444

DATE: 09/20/2013	PROJECT NO.: 4934.002
DRAWN BY: MGJ	CHECKED BY: SWR

REVISIONS:

DRAWING FILES:
T:\4K\4934\002\DWGS\4934002I.dwg
XREF: T:\4K\4934\001\DWGS\AREAMAP.DWG

SHEET NO.: 2 OF 3

Record Legal Description
(from Instrument No. 2012044683)

Tract 1

Part of the Northeast Quarter of Section 16, Township 18 North, Range 3 East of the Second Principal Meridian, situated in Washington Township, Hamilton County, Indiana, being more particularly described as follows:

Beginning at the Northeast corner of the Northeast Quarter of Section 16, Township 18 North, Range 3 East; thence South 89 degrees 48 minutes 05 seconds West (basis of bearings) on and along the North line of said Northeast Quarter 1220.93 feet to the Northeast corner of real estate described in Instrument #200600004508 on file in the Office of the Recorder of Hamilton County, Indiana; thence South 00 degrees 26 minutes 20 seconds West on and along the east line of said real estate 2629.90 feet to a point on the South line of said Northeast Quarter, said point being located 1217.17 feet South 89 degrees 48 minutes 59 seconds West of the Southeast corner of said Northeast Quarter; thence North 89 degrees 48 minutes 59 seconds East on and along the South line of said Northeast Quarter 494.17 feet; thence North 00 degrees 31 minutes 15 seconds East parallel with the East line of said Northeast Quarter 361.50 feet; thence North 89 degrees 48 minutes 59 seconds East parallel with the South line of said Northeast Quarter 723.00 feet to the East line of said Northeast Quarter; thence North 00 degrees 31 minutes 15 seconds East on and along the East line of said Northeast Quarter 2268.76 feet to the point of beginning, containing 67.60 acres, more or less.

Tract 2

Part of the Northeast Quarter of Section 16, Township 18 North. Range 3 East of the Second Principal Meridian, situated in Washington Township, Hamilton County, Indiana, being more particularly described as follows:

Beginning at a point on the south line of the Northeast Quarter of Section 16, Township 18 North, Range 3 East that is 1217.17 feet South 89 degrees 48 minutes 59 seconds West (assumed bearing) measured on said south line from the southeast corner of said Northeast Quarter; thence South 89 degrees 48 minutes 59 seconds West on and along south line 1296.40 feet to the southeast corner of the real estate described in Instrument Number 200400066395 on file in the Office of the Recorder of Hamilton County, Indiana; thence North 00 degrees 31 minutes 15 seconds East on and along the east line of said real estate 2031.45 feet to a point at the northeasterly corner thereof, said point being on a line that is parallel with and 598.13 feet South 00 degrees 21 minutes 26 seconds West of the north line of said Northeast Quarter; thence North 89 degrees 48 minutes 05 seconds East parallel with said north line 243.71 feet; thence South 00 degrees 21 minutes 26 seconds West parallel with the west line of said Northeast Quarter 57.15 feet; thence North 89 degrees 48 minutes 05 seconds East parallel with the North line of said Northeast Quarter 518.37 feet: thence North 00 degrees 31 minutes 15 seconds East parallel with the east line of said Northeast Quarter 655.30 feet to a point on the north line of said Northeast Quarter, said point being South 89 degrees 48 minutes 05 seconds West 1751.34 feet from the northeast corner of said Northeast Quarter; thence North 89 degrees 48 minutes 05 seconds East on the north line of said Northeast Quarter 530.41 feet; thence South 00 degrees 26 minutes 20 seconds West 2629.90 feet to the Point of Beginning, containing 67.00 acres, more or less.

Tract 3

Part of the North Half of Section 16, Township 18 North, Range 3 East of the Second Principal Meridian in Washington Township, Hamilton County, Indiana, being more particularly described as follows:

BEGINNING at a point on the North line of the Northwest Quarter of Section 16, Township 18 North, Range 3 East that is 300.00 feet South 89 degrees 43 minutes 42 seconds West (assumed bearing) measured on said North line from the Northeast corner of said Northwest Quarter; thence South 89 degrees 43 minutes 42 seconds West on said North line 1059.74 feet to the Northwest corner of the Northeast Quarter of said Northwest Quarter; thence South 00 degrees 18 minutes 02 seconds West on the West line of the Northeast Quarter of said Northwest Quarter 1316.79 feet to the Southwest corner of the Northeast Quarter of said Northwest Quarter; thence North 89 degrees 38 minutes 27 seconds East on the South line of the Northeast Quarter of said Northwest Quarter 679.23 feet to the Northwest corner of the East Half of the Southeast Quarter of said Northwest Quarter; thence South 00 degrees 19 minutes 44 seconds West on the West line of said Half Quarter-Quarter Section 1315.76 feet to the Southwest corner thereof; thence North 89 degrees 33 minutes 12 seconds East on the South line of the Northwest Quarter of said Section 16 a distance of 678.60 feet to the Southeast corner of said Northwest Quarter; thence North 89 degrees 48 minutes 59 seconds East on the South line of the Northeast Quarter of said Section 16 a distance of 200.49 feet; thence North 00 degrees 31 minutes 15 seconds East parallel with the East line of said Northeast Quarter 2031.45 feet to a point on a line that is parallel with and 598.13 feet South 00 degrees 21 minutes 26 seconds West of the North line of said Northeast Quarter; thence South 89 degrees 48 minutes 05 seconds West parallel with said North line 206.29 feet to a point on the East line of the Northwest Quarter of said Section 16, that is 598.13 feet South 00 degrees 21 minutes 26 seconds West of the Northeast corner of said Northwest Quarter; thence South 89 degrees 43 minutes 42 seconds West parallel with the North line of said Northwest Quarter 279.15 feet; thence North 00 degrees 21 minutes 26 seconds East parallel with said East line 162.42 feet; thence South 89 degrees 43 minutes 42 seconds West parallel with said North line 20.85 feet; thence North 00 degrees 21 minutes 26 seconds East parallel with said East line 435.71 feet to the place of beginning, containing 67.00 acres, more or less.

EXCEPTING from the above Tract 3 the following four (4) tracts, designated Tracts A, B, C, and D:

Tract A

A part of the Northeast Quarter of the Northwest Quarter of Section 16, Township 18 North, Range 3 East, Washington Township, Hamilton County, Indiana, described as follows:

Commencing at the Northeast corner of the Northeast Quarter of said Northwest Quarter (assumed basis of bearings); thence South 89 degrees 12 minutes 17 seconds West along the north line of said Quarter Quarter a distance of 1094.85 feet to the Point of Beginning; thence South 00 degrees 13 minutes 25 seconds East parallel with the west line of said Quarter Quarter a distance of 493.24 feet; thence South 89 degrees 12 minutes 17 seconds West parallel with said north line a distance of 264.95 feet to said west line; thence North 00 degrees 13 minutes 25 seconds West along said west line a distance of 493.24 feet to the northwest corner of the Northeast Quarter of said Northwest Quarter; thence North 89 degrees 12 minutes 17 seconds East along said north line a distance of 264.95 feet to the Point of Beginning, containing 3.000 acres, more or less.

Tract B

A part of the Northeast Quarter of the Northwest Quarter of Section 16, Township 18 North, Range3 East, Washington Township, Hamilton County, Indiana, described as follows:

Commencing at the Northeast corner of the Northeast Quarter of said Northwest Quarter (assumed basis of bearings); thence South 89 degrees 12 minutes 17 seconds West along the north line of said Quarter Quarter a distance of 829.90 feet to the Point of Beginning; thence South 00 degrees 13 minutes 25 seconds East parallel with the west line of said Quarter Quarter a distance of 493.24 feet; thence South 89 degrees 12 minutes 17 seconds West parallel with said north line a distance of 264.95 feet; thence North 00 degrees 13 minutes 25 seconds West parallel with said west line a distance of 493.24 feet to said north line; thence North 89 degrees
12 minutes 17 seconds East along said north line a distance of 264.95 feet to the Point of Beginning, containing 3.000 acres, more or less.

Tract C

Part of the Northeast Quarter of the Northwest Quarter of Section 16, Township 18 North, Range 3 East, Washington Township, Hamilton County, Indiana, described as follows:

Commencing at the Northeast corner of the Northeast Quarter of said Northwest Quarter Section; thence South 89 degrees 12 minutes 17 seconds West (assumed basis of bearings) along the north line of said Quarter-Quarter Section a distance of 579.90 feet to the Point of Beginning; thence South 00 degrees 47 minutes 43 seconds East a distance of 270.31 feet; thence South 79 degrees 16 minutes 32 seconds East a distance of 56.77 feet; thence South 09 degrees 40 minutes 08 seconds West a distance of 131.55 feet;- thence South 89 degrees 12 minutes 17 seconds West, parallel with said North line, a distance of 29.37 feet; thence South 00 degrees 47 minutes 43 seconds East a distance of 82.21 feet; thence South 89 degrees 12 minutes 17 seconds West, parallel with said North Line a distance of 257.29 feet; thence North 00 degrees 13 minutes 25 seconds West a distance of 493.24 feet to the North line of the Northeast Quarter of said Northwest Quarter Section; thence North 89 degrees 12 minutes 17 seconds East along said North line a distance of 250.00 feet to the Point of Beginning, containing 3.00 acres, more or less.

Tract D

Part of the Northeast Quarter of the Northwest Quarter of Section 16, Township 18 North, Range 3 East, Washington Township, Hamilton County, Indiana, described as follows:

Commencing at the Northeast corner of the Northeast Quarter of said Northwest Quarter Section; thence South 89 degrees 12 minutes 17 seconds West (assumed basis of bearings) along the North Line of said Quarter-Quarter Section a distance of 300.00 feet to the Point of Beginning; thence South 00 degrees 09 minutes 53 seconds East, parallel with the East Line of said Northwest Quarter Section, a distance of 435.71 feet; thence North 89 degrees 12 minutes 17 seconds East, parallel with said North Line, a distance of 20.85 feet; thence South 00 degrees 09 minutes 53 seconds East, parallel with the East Line of said Northwest Quarter Section, a distance of 53.72 feet; thence South 89 degrees 12 minutes 17 seconds West, parallel with said North Line, a distance of 285.30 feet; thence South 00 degrees 13 minutes 25 seconds East a distance of 3.82 feet; thence South 89 degrees 12 minutes 17 seconds West, parallel with said North Line, a distance of 7.66 feet; thence North 00 degrees 47 minutes 43 seconds West a distance of 82.21 feet; thence North 89 degrees 12 minutes 17 seconds East, parallel with said North line a distance of 29.37 feet; thence North 09 degrees 40 minutes 08 seconds East a distance of 131.55 feet; thence North 79 degrees 16 minutes 32 seconds West a distance of 56.77 feet; thence North 00 degrees 47 minutes 43 seconds West a distance of 270.31 feet to the North Line of said Quarter-Quarter Section; thence North 89 degrees 12 minutes 17 seconds East along said North Line a distance of 279.90 feet to the Point of Beginning, containing 3.00 acres, more or less.

Tract 4

The Southeast Quarter of the Southeast Quarter of Section Sixteen (16), Township Eighteen (18) North, Range Three (3) East, in Hamilton County, Indiana.

Also, the South Half of the Northeast Quarter of the Southeast Quarter of Section 16, Township 18 North, Range Three (3) East in Hamilton County, Indiana.

Tract 5
(Parcel "L")

Part of the North Half of the Northeast Quarter of the Southeast Quarter of Section 16, Township 18 North, Range 3 East of the Second Principal Meridian in Washington Township, Hamilton County, Indiana, described as follows:

Beginning at a point on the East line of the Southeast Quarter of Section 16, Township 18 North, Range 3 East of the Second Principal Meridian in Washington Township, Hamilton County, Indiana, that is 361.50 feet measured South 00 degrees 19 minutes 23 seconds West (assumed bearing) on the East line of said Southeast Quarter from the Northeast corner of said Southeast Quarter; thence South 89 degrees 48 minutes 59 seconds West parallel with the North line of said Southeast Quarter 439.50 feet; thence South 00 degrees 19 minutes 23 seconds West parallel with said East line 297.27 feet to the South line of the North Half of the Northeast Quarter of said Southeast Quarter; thence North 89 degrees 50 minutes 48 seconds East on the South line of the North Half of the Northeast Quarter of said Southeast Quarter 439.50 feet to the East line of said Southeast Quarter; thence North 00 degrees 19 minutes 23 seconds East on said East line 297.505 feet to the place of beginning, containing 3.00 acres, more or less.

(Parcel "M")

Part of the North Half of the Northeast Quarter of the Southeast Quarter of Section 16, Township 18 North, Range 3 East of the Second Principal Meridian in Washington Township, Hamilton County, Indiana, described as follows:

Beginning at a point on the North line of the Southeast Quarter of Section 16, Township 18 North, Range 3 East of the Second Principal Meridian in Washington Township, Hamilton County, Indiana, that is 1091.78 feet measured South 89 degrees 48 minutes 59 seconds West (assumed bearing) on the North line of said Southeast Quarter from the Northeast corner of said Southeast Quarter; thence South 89 degrees 48 minutes 59 seconds West on said North line 265.25 feet to the Northwest corner of the Northeast Quarter of said Southeast Quarter; thence South 00 degrees 13 minutes 16 seconds West on the West line of the Northeast Quarter of said Southeast Quarter 658.28 feet to the South line of the North Half of the Northeast Quarter of said Southeast Quarter; thence North 89 degrees 50 minutes 48 seconds East on the South line of said North Half 264.08 feet to a point on a line that is parallel with the East line of said Southeast Quarter and extends Southerly from the place of beginning, thence North 00 degrees 19 minutes 23 seconds East parallel with the East line of said Southeast Quarter 658.43 feet to the place of beginning, containing 4.00 acres, more or less.

(Parcel "N")

Part of the North Half of the Northeast Quarter of the Southeast Quarter of Section 16, Township 18 North, Range 3 East of the Second Principal Meridian in Washington Township, Hamilton County, Indiana, described as follows:

Beginning at a point on the North line of the Southeast Quarter of Section 16, Township 18 North, Range 3 East of the Second Principal Meridian in Washington Township, Hamilton County, Indiana, that is 827.03 feet measured South 89 degrees 48 minutes 59 seconds West (assumed bearing) on the North line of said Southeast Quarter from the Northeast corner of said Southeast Quarter; thence South 89 degrees 48 minutes 59 seconds West on the North line of said Southeast Quarter 264.75 feet; thence South 00 degrees 19 minutes 23 seconds West parallel with the East line of said Southeast Quarter 658.43 feet to the South line of the North Half of the Northeast Quarter of said Southeast Quarter; thence North 89 degrees 50 minutes 48 seconds East on the South line of said North Half 264. 75 feet; thence North 00 degrees 19 minutes 23 seconds East parallel with the East line of said Southeast Quarter 658.57 feet to the place of beginning, containing 4.00 acres, more or less.

(Parcel "O")

Part of the North Half of the Northeast Quarter of the Southeast Quarter of Section 16, Township 18 North, Range 3 East of the Second Principal Meridian in Washington Township, Hamilton County, Indiana, described as follows:

Beginning at a point on the North line of the Southeast Quarter of Section 16, Township 18 North, Range 3 East of the Second Principal Meridian in Washington Township, Hamilton County, Indiana, that is 361.50 feet measured South 89 degrees 48 minutes 59 seconds West (assumed bearing) on the North line of said Southeast Quarter from the Northeast corner of said Southeast Quarter; thence South 89 degrees 48 minutes 59 seconds West on the North line of said Southeast Quarter 465.53 feet; thence South 00 degrees 19 minutes 23 seconds West parallel with the East line of said Southeast Quarter 658.57 feet to the South line of the North Half of the Northeast Quarter of said Southeast Quarter; thence North 89 degrees 50 minutes 48 seconds East on the South line of said North Half 387.52 feet to a point on a line that is parallel with the East line of said Southeast Quarter and 439.50 feet South 89 degrees 48 minutes 59 seconds West of said East line; thence North 00 degrees 19 minutes 23 seconds East parallel with the East line of said Southeast Quarter 297.27 feet to a point on a line that is parallel with the North line of said Southeast Quarter and extends Westerly parallel with said North line from a point of the East line of said Southeast Quarter that is 361.50 feet South of the Northeast Quarter of said Southeast Quarter; thence North 89 degrees 58 minutes 59 seconds East on said line 78.00 feet; thence North 00 degrees 19 minutes 23 seconds East parallel with the East line of said Southeast Quarter 361.50 feet to the place of beginning, containing 6.51 acres, more or less.

Tract 6

Part of the Southeast Quarter of Section 16, Township 18 North, Range 3 East of the Second Principal Meridian in Washington Township, Hamilton County, Indiana, described as follows:

Beginning at the Northeast corner of the Southeast Quarter of Section 16, Township 18 North, Range 3 East, thence South 00 degrees 19 minutes 23 seconds West (assumed bearing) on the East line of the Southeast Quarter 361.50 feet; thence South 89 degrees 48 minutes 59 seconds West parallel with the north line of said Southeast Quarter 361.50 feet; thence North 00 degrees 19 minutes 23 seconds East parallel with the East line of said Southeast Quarter 361.50 feet to the north line of said Southeast Quarter; thence North 89 degrees 48 minutes 59 seconds East on said North line 361.50 feet to the place of beginning, containing 3.00 acres, more or less.

Tract 7

A part of the Northeast Quarter of Section 16, Township 18 North, Range 3 East located in Washington Township, Hamilton County, Indiana, being bounded as follows:

Beginning at the southeast corner (found brass plug with "x") of the Northeast Quarter of Section 16, Township 18 North, Range 3 East; thence North 00 degrees 00 minutes 00 seconds 361.50 feet on and along the east line of said Northeast Quarter; thence South 89 degrees 17 minutes 59 seconds West 361.50 feet parallel with the south line of said Northeast Quarter; thence South 00 degrees 00 minutes 00 seconds 361.50 feet parallel with the east line of said Northeast Quarter to the south line of said Northeast Quarter; thence North 89 degrees 17 minutes 59 seconds East 361.50 feet on and along the south line of said Northeast Quarter to the Point of Beginning. Containing 3.00 acres, more or less.

Tract 8

Part of the Northeast Quarter of Section 16, Township 18 North, Range 3 East of the Second Principal Meridian in Washington Township, Hamilton County, Indiana, described as follows:

Beginning at a point on the South line of the Northeast Quarter of Section 16, Township 18 North, Range 3 East measured 361.50 feet South 89 degrees 48 minutes 59 seconds West (assumed bearing) on the South line of said Northeast Quarter from the Southeast corner of said Northeast Quarter; thence South 89 degrees 48 minutes 59 seconds West on said South line 361.50 feet; thence North 00 degrees 31 minutes 15 seconds West parallel with the East line of said Northeast Quarter 361.50 feet; thence North 89 degrees 48 minutes 59 seconds East parallel with said South line 361.50 feet; thence South 00 degrees 31 minutes 15 seconds East parallel with said East line 361.50 feet to the place of beginning, containing 3.00 acres, more or less.

UTILITIES

Sanitary Sewers
Westfield Utilities
2706 East 171st Street
Westfield, Indiana 46074
317-896-5577

Cable
Insight Cablevision
15229 Stoney Creek Way
Noblesville, Indiana 46060
317-776-0660

Cable
Bright House Networks
3030 Roosevelt Avenue
Indianapolis, Indiana 46218
317-632-2288

Water
Westfield Utilities
2706 East 171st Street
Westfield, Indiana 46074
317-896-5577

Telephone
AT&T
220 North Meridian Street
Indianapolis, Indiana 46204
317-556-4000

Pipeline
Buckeye Pipeline Company LP
9430 West 30th Street
Clermont, Indiana 46229
317-291-3121

Pipeline
Marathon Ashland Pipe Line LLC
9322 West 30th Street
Indianapolis, Indiana 46218
317-291-9460

Gas
Westfield Gas Corp.
606 West Park Street
Westfield, Indiana 46074
317-896-2581

Gas
Vectron Energy Delivery
P.O. Box 1700
Noblesville, Indiana 46061
317-776-5334

Electric
Duke Energy
1000 East Main Street
Plainfield, Indiana 46168
800-521-2232

Utility Hotline: within Indiana 1-800-382-5544 outside Indiana 1-800-428-5200

Note:
The nature, size and location of utilities are per plans and locations provided by the respective utility companies. The above list constitutes some, if not all, of the utility companies which may provide service in the area of, and adjacent to, the subject project, based upon the information available through such plans and locations, and any incidental visual inspection. All utility companies should be notified prior to any excavation for field location of services and verification of size and nature of services.

Title Commitment Notes
Schedule B-II Exceptions
(Commitment #13-007534)
Note: Surveyor's notes shown in italics and underlined.

21. Set-back and use restrictions, possible assessments for maintenance and reconstruction; and all rights of others entitled to the continued uninterrupted flow of the water through Hinshaw-Henley Legal Drain a legal drain. (Indiana Drain Code, I.C. (1981) 36-9-27-33 et seq.) *Legal drain affects property within Southeast and Northeast Quarters of Section 16 and is shown on survey.*

22. Set-back and use restrictions, possible assessments for maintenance and reconstruction; and all rights of others entitled to the continued uninterrupted flow of the water through Osborn & Collins #2 Legal Drain a legal drain. (Indiana Drain Code, I.C. (1981) 36-9-27-33 et seq.) *Legal drain affects northerly part of property along Ditch Road and is shown on survey.*

23. Set-back and use restrictions, possible assessments for maintenance and reconstruction; and all rights of others entitled to the continued uninterrupted flow of the water through John Ortwine Drain a legal drain. (Indiana Drain Code, I.C. (1981) 36-9-27-33 et seq.) *Legal drain does not physically cross property and is not plotted.*

24. Easement for pipe line and incidental purposes in favor of Socony-Vacuum Oil Company, Inc. recorded June 24, 1939 in Miscellaneous Record 34, page 270. Last assigned to Marathon Pipe Line Company by assignment recorded in Miscellaneous Record 97, page 11. *Easement is a blanket easement and not plottable. See note on survey.*

25. Easement for pipe line and incidental purposes in favor of Socony-Vacuum Oil Company, Inc. recorded June 24, 1939 in Miscellaneous Record 34, page 271. Last assigned to Marathon Pipe Line Company by assignment recorded in Miscellaneous Record 97, page 11. *Easement is a blanket easement and not plottable. See note on survey.*

26. Easement for pipe line and incidental purposes in favor of Socony-Vacuum Oil Company, Inc. recorded July 5, 1939 in Miscellaneous Record 34, page 291. Last assigned to Marathon Pipe Line Company by assignment recorded in Miscellaneous Record 97, page 11. *Easement is a blanket easement and not plottable. See note on survey.*

27. Easement for pipe line and incidental purposes in favor of The Buckeye Pipe Line Company recorded August 30, 1962 in Deed Record 175, page 212. *Easement is a blanket easement and not plottable. See note on survey.*

28. Easement for pipe line and incidental purposes in favor of The Buckeye Pipe Line Company recorded August 30, 1962 in Deed Record 175, page 218. *Easement is a blanket easement and not plottable. See note on survey.*

29. Easement for sanitary sewer and/or water utility lines and incidental purposes in favor of Hamilton Western Utilities, Inc. recorded March 3, 1998 as Instrument No. 9809810429. *Easement is shown along 151st Street.*

30. Easement for sanitary sewer and/or water utility lines and incidental purposes in favor of Hamilton Western Utilities, Inc. recorded March 26, 1998 as Instrument No. 9809814983. *Easement is shown along 151st Street.*

31. Easement for sanitary sewer and/or water utility lines and incidental purposes in favor of Hamilton Western Utilities, Inc. recorded June 3, 1998 as Instrument No. 9809829546. *Easement is shown along Ditch Road.*

32. Easement for sanitary sewer and/or water utility lines and incidental purposes in favor of Hamilton Western Utilities, Inc. recorded January 22, 1999 as Instrument No. 9909904538. *Easement is shown along 156th Street.*

33. Easement for sanitary sewer and incidental purposes in favor of Town of Westfield, recorded March 3, 2006 as Instrument No. 2006000012102. *Easement is shown along 156th Street.*

Title Commitment Legal Description
(Commitment No. 13-007534)

Part of the Northeast, Southeast and Northwest Quarters of Section 16, Township 18 North, Range 3 East in Hamilton County, Indiana, more particularly described as follows:

BEGINNING at the northeast corner of said Northeast Quarter; thence South 00 degrees 00 minutes 00 seconds East (assumed basis of bearings) along the east line of said Northeast Quarter 2,630.58 feet to the northeast corner of said Southeast Quarter; thence South 00 degrees 12 minutes 08 seconds East along the east line of said Southeast Quarter 2,636.09 feet to the southeast corner thereof; thence South 89 degrees 25 minutes 04 seconds West along the south line of said Southeast Quarter 1,352.43 feet to the southwest corner of the East Half of said Southeast Quarter; thence North 00 degrees 18 minutes 09 seconds West along the west line of said East Half 2,633.15 feet to the southeast corner of the West Half of said Northeast Quarter; thence South 89 degrees 17 minutes 41 seconds West along the south line of said West Half 1,357.06 feet to the southeast corner of said Northwest Quarter; thence South 89 degrees 01 minute 52 seconds West along the south line of said Northwest Quarter 678.57 feet to the southwest corner of the East Half of the Southeast Quarter of said Northwest Quarter; thence North 00 degrees 11 minutes 39 seconds West along the West line of said East Half 1,315.85 feet to the northwest corner thereof; thence South 89 degrees 07 minutes 05 seconds West along the south line of the Northeast Quarter of said Northwest Quarter 679.24 feet to the southwest corner thereof; thence North 00 degrees 13 minutes 25 seconds West along the west line of the Northeast Quarter of said Northwest Quarter 823.62 feet to a point that is 493.24 feet South 00 degrees 13 minutes 26 seconds East from the northwest corner of the Northeast Quarter of said Northwest Quarter; thence North 89 degrees 12 minutes 17 seconds East parallel with the north line of said Northwest Quarter 794.85 feet; thence North 00 degrees 13 minutes 25 seconds West 3.82 feet; thence North 89 degrees 12 minutes 17 seconds East parallel with the north line of said Northwest Quarter 285.30 feet to an east line of the 119.55-acre tract described in Instrument Number 200300107178, on file in the Office of the Recorder of Hamilton County, Indiana, the following six (6) courses are along the east, south and west lines of said 119.55-acre tract; 1) thence South 00 degrees 09 minutes 53 seconds East 108.70 feet; 2) thence North 89 degrees 12 minutes 17 seconds East 279.15 feet to the west line of said Northeast Quarter; 3) thence North 89 degrees 16 minutes 38 seconds East 450.00 feet; 4) thence South 00 degrees 09 minutes 53 seconds East 57.15 feet; 5) thence North 89 degrees 16 minutes 38 seconds East 518.47 feet; 6) thence North 00 degrees 00 minutes 00 seconds West parallel with the east line of said Northeast Quarter 655.30 feet to a point in the north line of said Northeast Quarter that is 1,751.34 feet west of the northeast corner of said Northeast Quarter; thence North 89 degrees 16 minutes 38 seconds East along said north line 1,751.34 feet to the POINT OF BEGINNING. Containing 277.55 acres, more or less.

EXCEPT THEREFROM the following described real estate:

The Southeast Quarter of the Southeast Quarter of Section 16, Township 18 North, Range 3 East, in Hamilton County, Indiana, more particularly described as follows:

BEGINNING at the Southeast Corner of said Quarter Quarter Section, the following four (4) courses are along the south, west, north, and east lines thereof; (1) thence South 89 degrees 25 minutes 04 seconds West 1352.43 feet; (2) thence North 00 degrees 18 minutes 09 seconds West 1316.57 feet; (3) thence North 89 degrees 21 minutes 22 seconds East 1354.74 feet; (4) thence South 00 degree 12 minutes 08 seconds East 1318.04 feet to the POINT OF BEGINNING; containing 40.933, acres more or less.

Note: The above title description and the historical deeds describe the same real estate except for a 40.933 acre parcel that was not included with this survey.

LEGEND

- INLET OR CATCH BASIN
- SEWER MANHOLE
- TELEPHONE MANHOLE
- ACCESS COVER
- TRAFFIC MANHOLE
- WATER MANHOLE
- MANHOLE
- CLEANOUT
- AREA LIGHT
- UTILITY POLE WITH GUY WIRE
- UTILITY POLE WITH RISER
- FLAG POLE
- TRAFFIC POLE
- UTILITY PEDESTAL
- ELECTRIC METER
- ELECTRIC TRANSFORMER
- CONDITIONING UNIT
- UTILITY VALVE
- HYDRANT
- WELL
- WATER VALVE
- WATER METER
- GAS VALVE
- GAS METER
- SIGNS
- MAILBOX
- TREE, SHRUB
- BENCHMARK
- SOIL BORING
- OVERHEAD UTILITY LINES
- T V — UNDERGROUND TELEVISION
- E — UNDERGROUND ELECTRIC
- T — UNDERGROUND TELEPHONE
- FO — UNDERGROUND FIBER OPTIC
- F — UNDERGROUND FORCE MAIN
- G — UNDERGROUND GAS LINE
- W — UNDERGROUND WATER LINE
- S — SEWER LINE
- UNDERGROUND STORM SEWER
- UNDERGROUND SANITARY SEWER
- EDGE OF WOODS
- X — FENCE LINE
- FLOW LINE

Schneider

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Fax: 317.826.7200
www.schneidercorp.com

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

PROJECT INFORMATION:

HARMONY
ALTA/ACSM LAND TITLE SURVEY
BOUNDARY RETRACEMENT SURVEY

151st Street & Ditch Road

CLIENT INFORMATION:

J.R. Farmer Harmony LLC
305 NW 22nd Street, Delray Beach, FL 33444

DATE: 09/20/2013	PROJECT NO.: 4934.002
DRAWN BY: MGJ	CHECKED BY: SWR

REVISIONS:
SWR 9-27-2013 rev. title description

DRAWING FILES:
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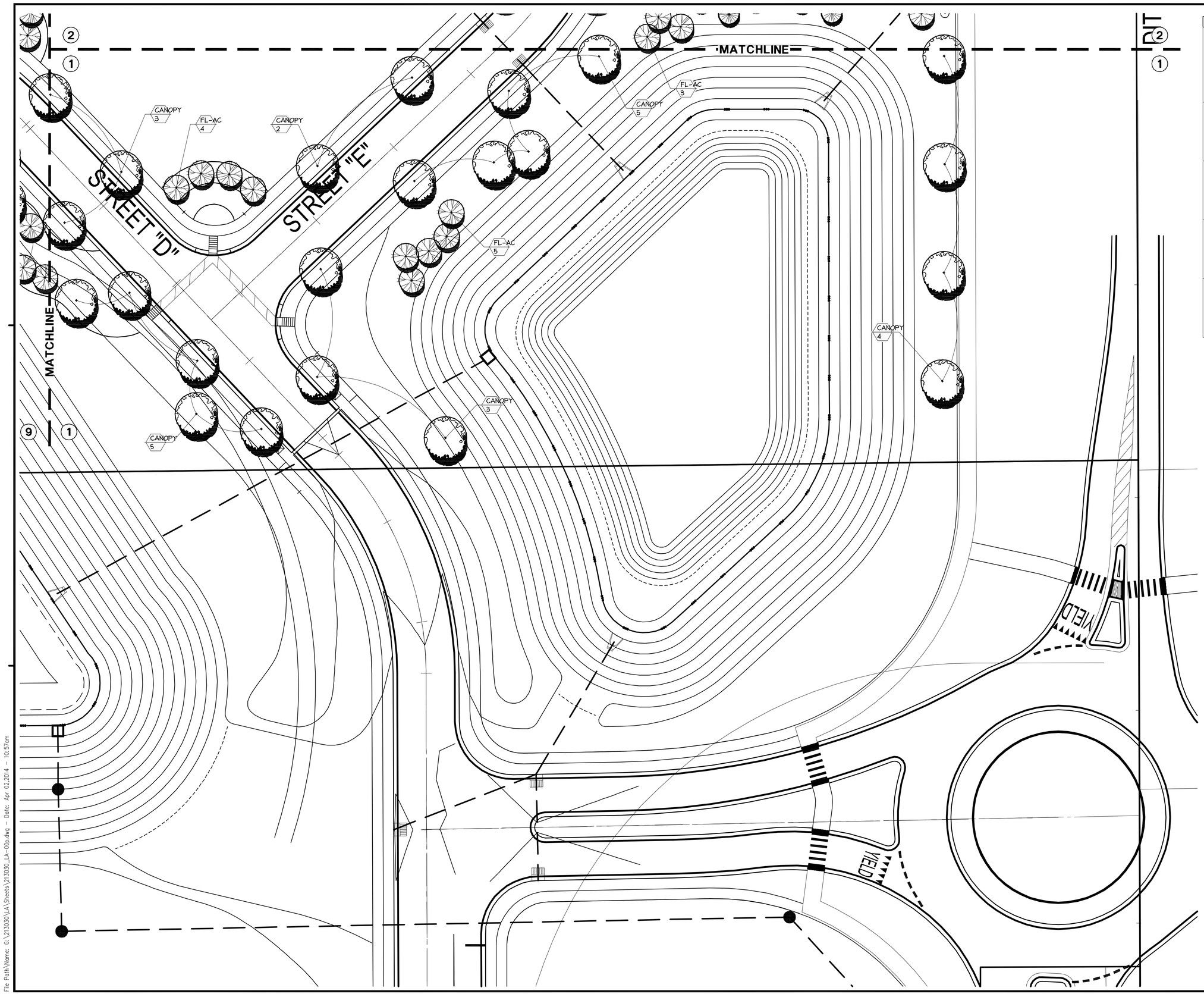
XREF: T:\4K\4934\001\DWGS\AREAMAP.DWG

SHEET NO.: 3
OF 3



LANDSCAPE LEGEND

	CANOPY SHADE TREE 8-10 Ft. Height; 2 In. Caliper (min.) Qty: 419
	FLOWERING ACCENT TREE 6-8 Ft. Height; 2 In. Caliper (min.) Qty: 136
	EVERGREEN TREE 6-8 Ft. Height; Qty: 116
	EVERGREEN ACCENT TREE 5-6 Ft. Height; Qty: 36
	EVERGREEN SHRUB 18 In. Overall Height; Qty: 360

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REVISIONS:
Carmel, IN 46032

PREPARED FOR:
Estridge Development Management, LLC
12965 Old Meridian Street
Carmel, IN 46032
317-669-6209

Harmony Section One
Single Family Subdivision
Westfield, Indiana
LANDSCAPE PLANS

DATE:	DRAWN BY: AWH
ISSUED:	CHECKED BY: GSW
JOB NUMBER: 14102	
SHEET # LA01	

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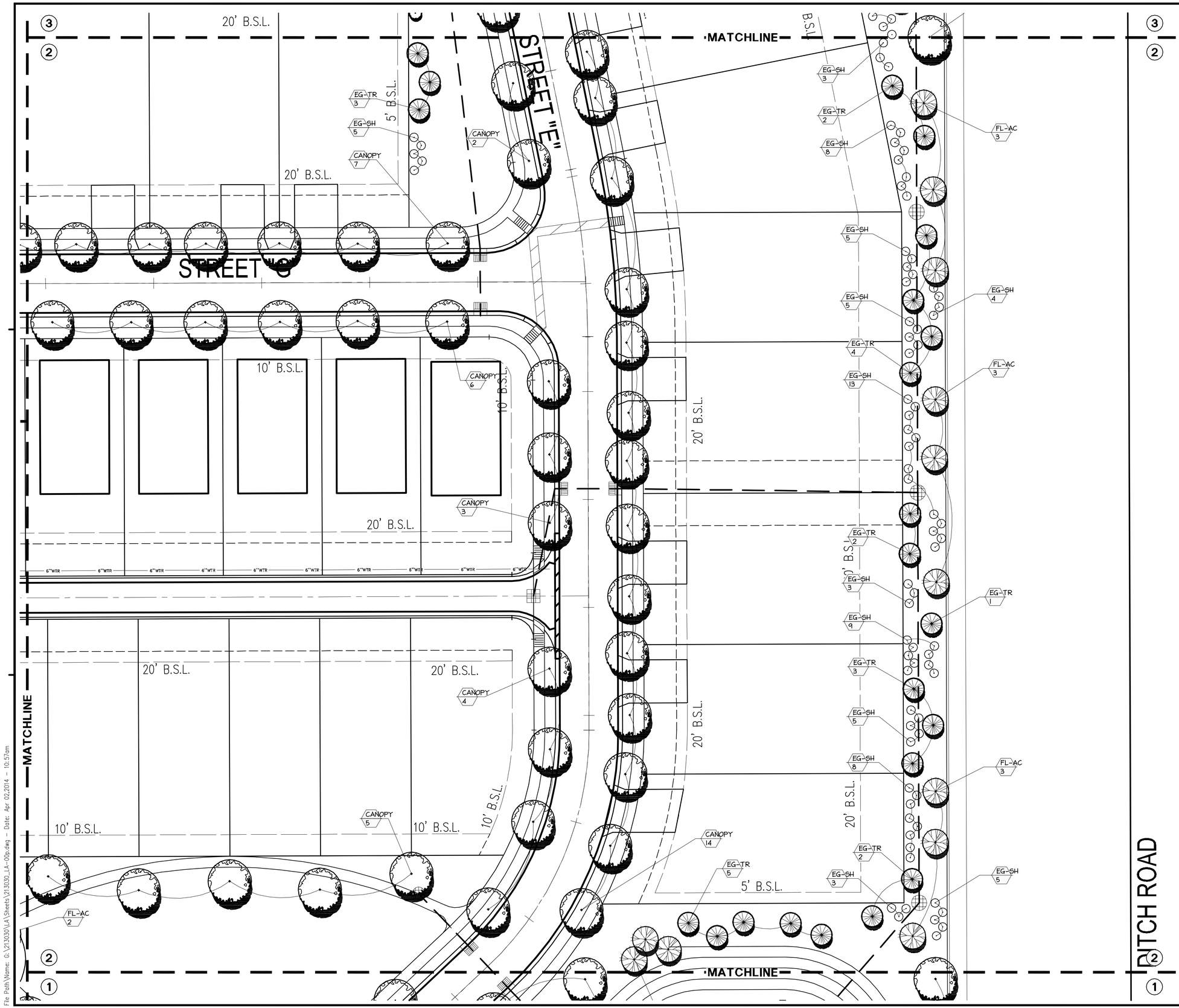

LANDSCAPE LEGEND

	CANOPY SHADE TREE 8-10 Ft. Height; 2 In. Caliper (min.) Qty: 419
	FLOWERING ACCENT TREE 6-8 Ft. Height; 2 In. Caliper (min.) Qty: 136
	EVERGREEN TREE 6-8 Ft. Height; Qty: 116
	EVERGREEN ACCENT TREE 5-6 Ft. Height; Qty: 36
	EVERGREEN SHRUB 18 In. Overall Height; Qty: 360

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REVISIONS:
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PREPARED FOR:
Estridge Development Management, LLC
12965 Old Meridian Street
Carmel, IN 46032
317-669-6209

Harmony Section One
Single Family Subdivision
Westfield, Indiana
LANDSCAPE PLANS

DATE:	DRAWN BY: AWH
ISSUED:	CHECKED BY: GSW
JOB NUMBER: 14102	
SHEET # LA02	

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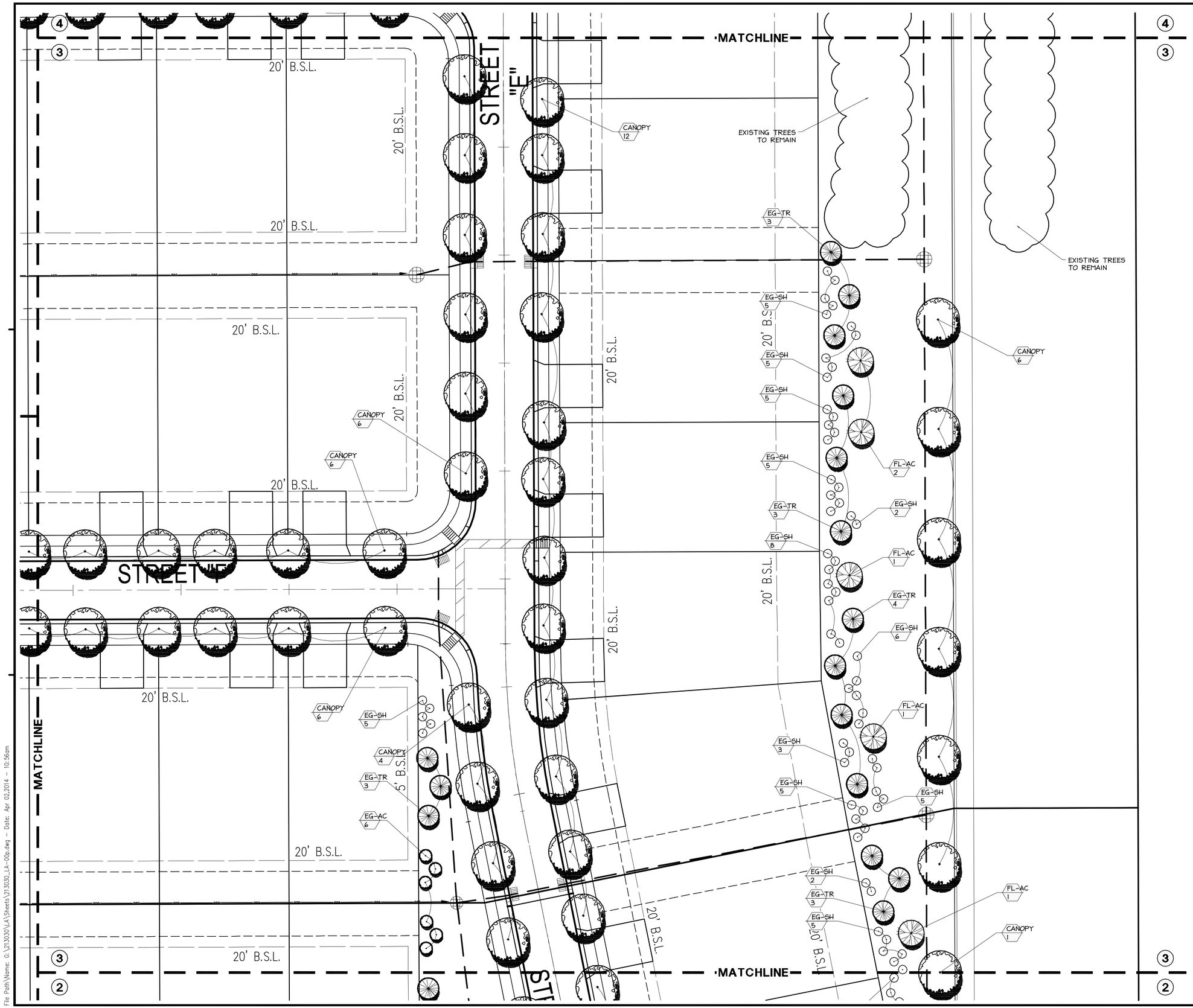

LANDSCAPE LEGEND

	CANOPY SHADE TREE 8-10 Ft. Height; 2 In. Caliper (min.) Qty: 419
	FLOWERING ACCENT TREE 6-8 Ft. Height; 2 In. Caliper (min.) Qty: 136
	EVERGREEN TREE 6-8 Ft. Height; Qty: 116
	EVERGREEN ACCENT TREE 5-6 Ft. Height; Qty: 36
	EVERGREEN SHRUB 18 In. Overall Height; Qty: 360

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REVISIONS:
Carmel, IN 46032

PREPARED FOR:
Estridge Development Management, LLC
12965 Old Meridian Street
Carmel, IN 46032
317-669-6209

Harmony Section One
Single Family Subdivision
Westfield, Indiana
LANDSCAPE PLANS

DATE:	DRAWN BY: AWH
ISSUED:	CHECKED BY: GSW
JOB NUMBER: 14102	
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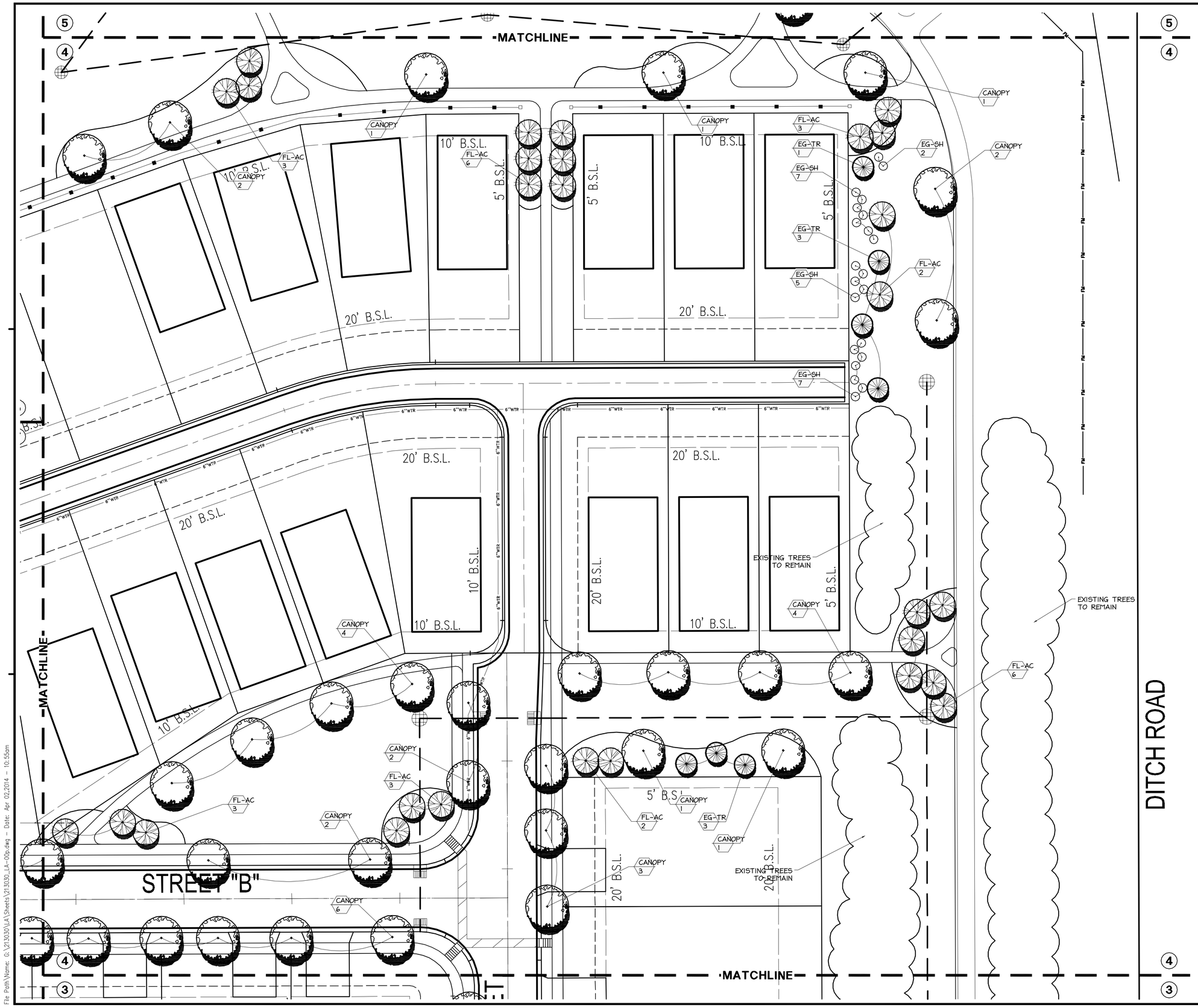

LANDSCAPE LEGEND

	CANOPY SHADE TREE 8-10 Ft. Height; 2 In. Caliper (min.) Qty: 419
	FLOWERING ACCENT TREE 6-8 Ft. Height; 2 In. Caliper (min.) Qty: 136
	EVERGREEN TREE 6-8 Ft. Height; Qty: 116
	EVERGREEN ACCENT TREE 5-6 Ft. Height; Qty: 36
	EVERGREEN SHRUB 18 In. Overall Height; Qty: 360

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REVISIONS:
Carmel, IN 46032

PREPARED FOR:
Estridge Development Management, LLC
12965 Old Meridian Street
Carmel, IN 46032
317-669-6209

Harmony Section One
Single Family Subdivision
Westfield, Indiana
LANDSCAPE PLANS

DATE:	DRAWN BY: AWH
ISSUED:	CHECKED BY: GSW
JOB NUMBER: 14102	
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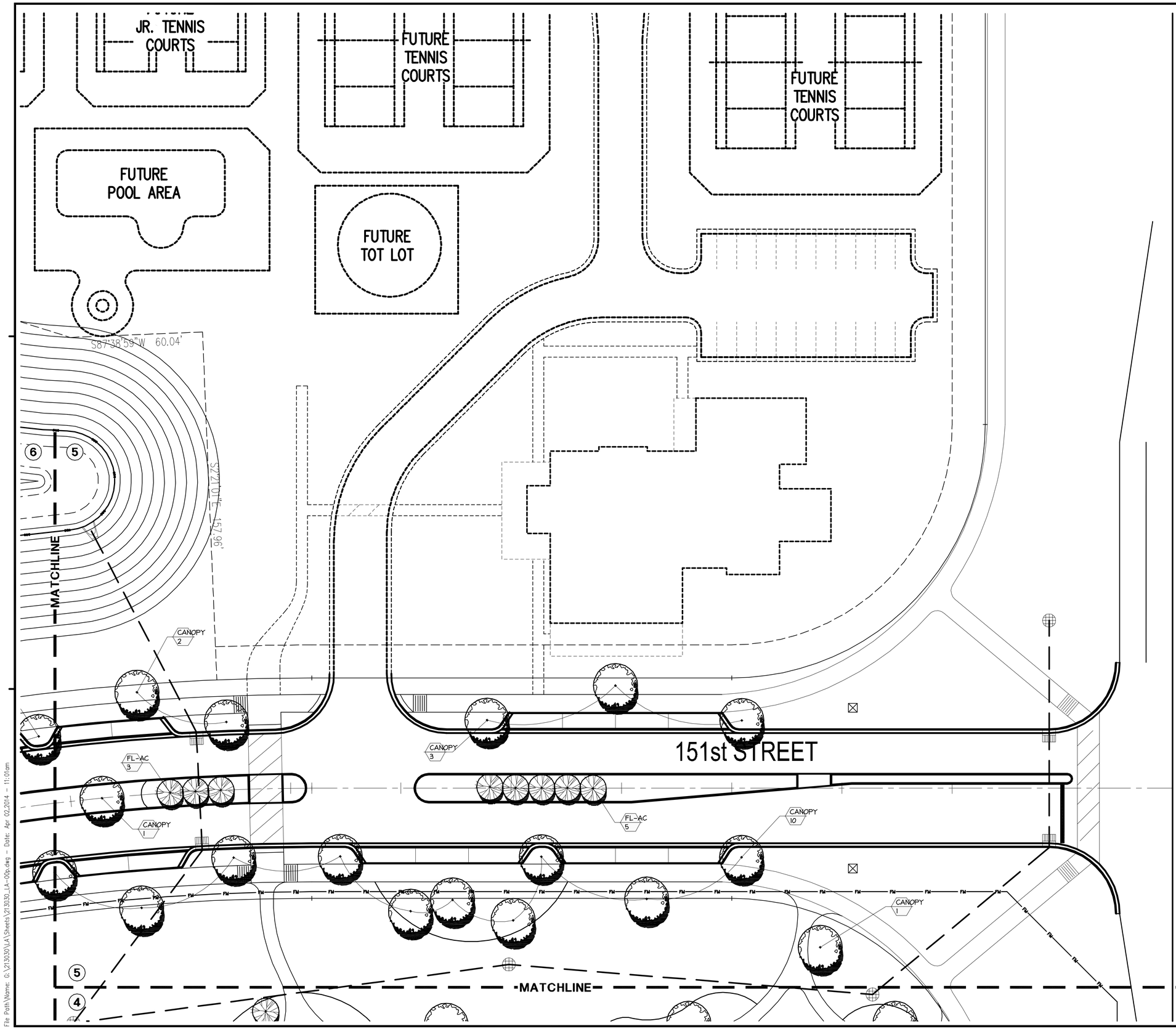

LANDSCAPE LEGEND

	CANOPY SHADE TREE 8-10 Ft. Height; 2 In. Caliper (min.) Qty: 419
	FLOWERING ACCENT TREE 6-8 Ft. Height; 2 In. Caliper (min.) Qty: 136
	EVERGREEN TREE 6-8 Ft. Height; Qty: 116
	EVERGREEN ACCENT TREE 5-6 Ft. Height; Qty: 36
	EVERGREEN SHRUB 18 In. Overall Height; Qty: 360

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REVISIONS:
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PREPARED FOR:
Estridge Development Management, LLC
12965 Old Meridian Street
Carmel, IN 46032
317-669-6209

Harmony Section One
Single Family Subdivision
Westfield, Indiana
LANDSCAPE PLANS

DATE:	DRAWN BY: AWH
ISSUED:	CHECKED BY: GSW
JOB NUMBER: 14102	
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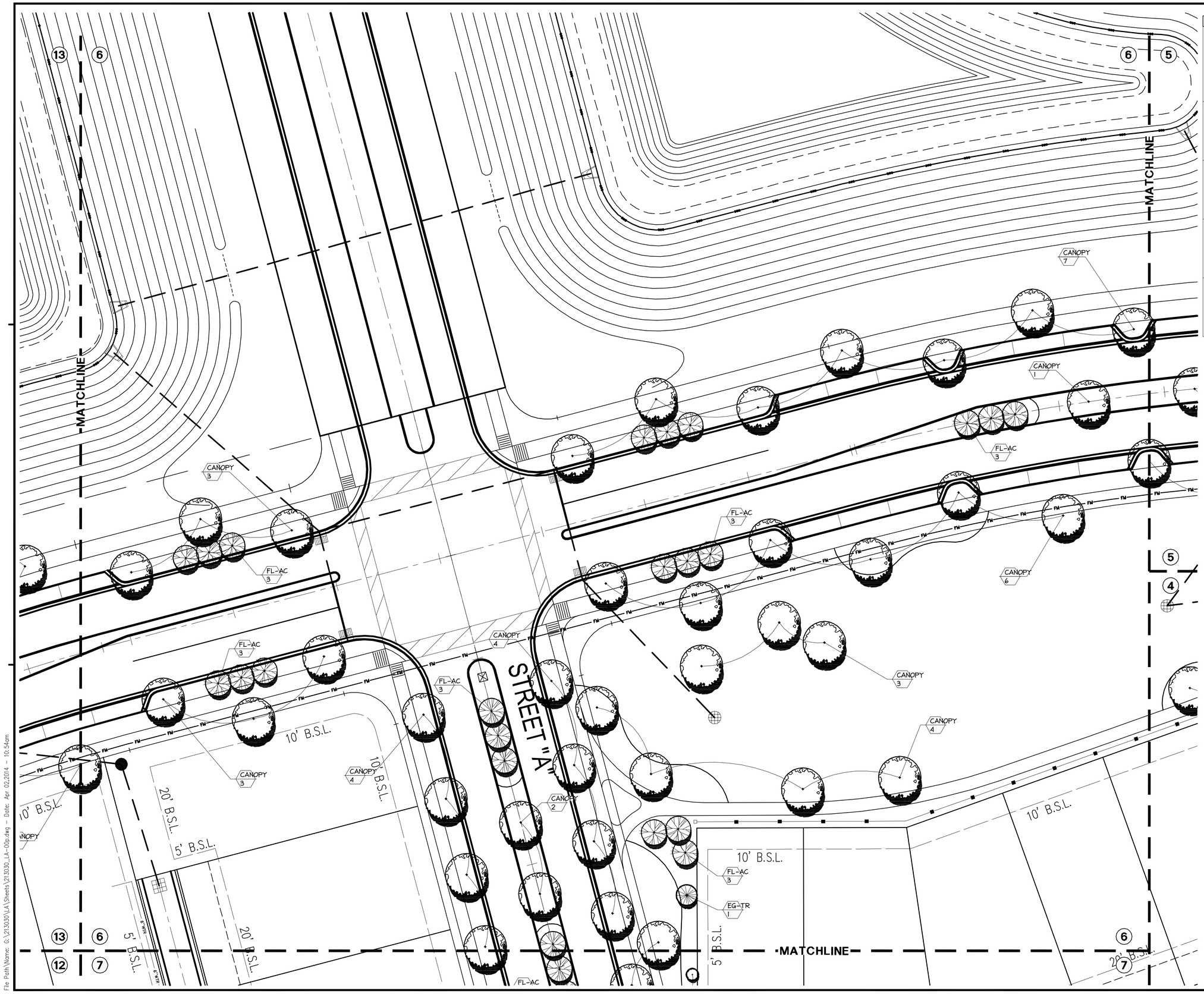

LANDSCAPE LEGEND

	CANOPY SHADE TREE 8-10 Ft. Height; 2 In. Caliper (min.) Qty: 419
	FLOWERING ACCENT TREE 6-8 Ft. Height; 2 In. Caliper (min.) Qty: 136
	EVERGREEN TREE 6-8 Ft. Height; Qty: 116
	EVERGREEN ACCENT TREE 5-6 Ft. Height; Qty: 36
	EVERGREEN SHRUB 18 In. Overall Height; Qty: 360

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12965 Old Meridian Street
Carmel, IN 46032
317-669-6209

Harmony Section One
Single Family Subdivision
Westfield, Indiana
LANDSCAPE PLANS

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SHEET # LA06	

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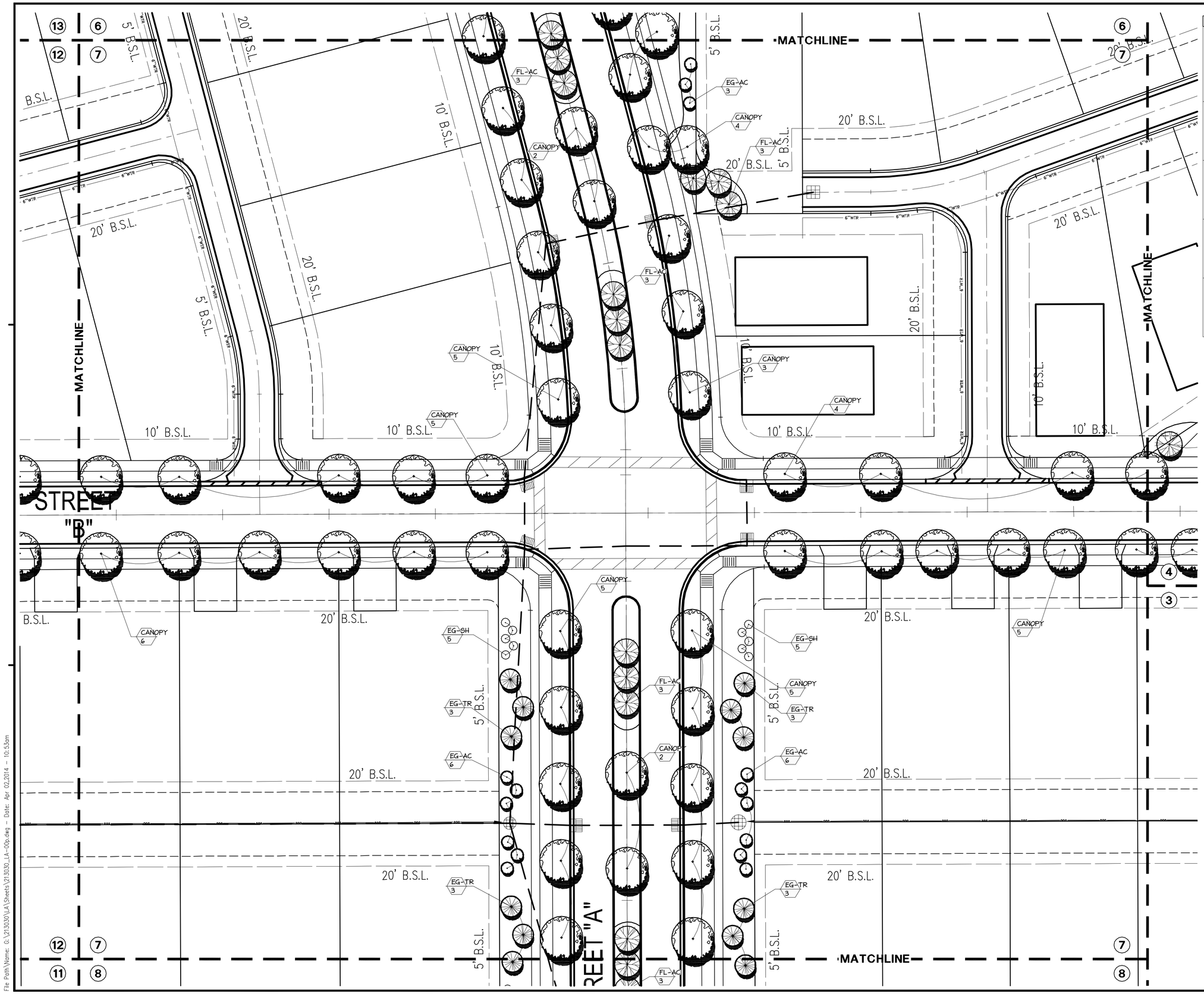

LANDSCAPE LEGEND

	CANOPY SHADE TREE 8–10 Ft. Height; 2 In. Caliper (min.) Qty: 419
	FLOWERING ACCENT TREE 6–8 Ft. Height; 2 In. Caliper (min.) Qty: 136
	EVERGREEN TREE 6–8 Ft. Height; Qty: 116
	EVERGREEN ACCENT TREE 5–6 Ft. Height; Qty: 36
	EVERGREEN SHRUB 18 In. Overall Height; Qty: 360

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SHEET # LA07	

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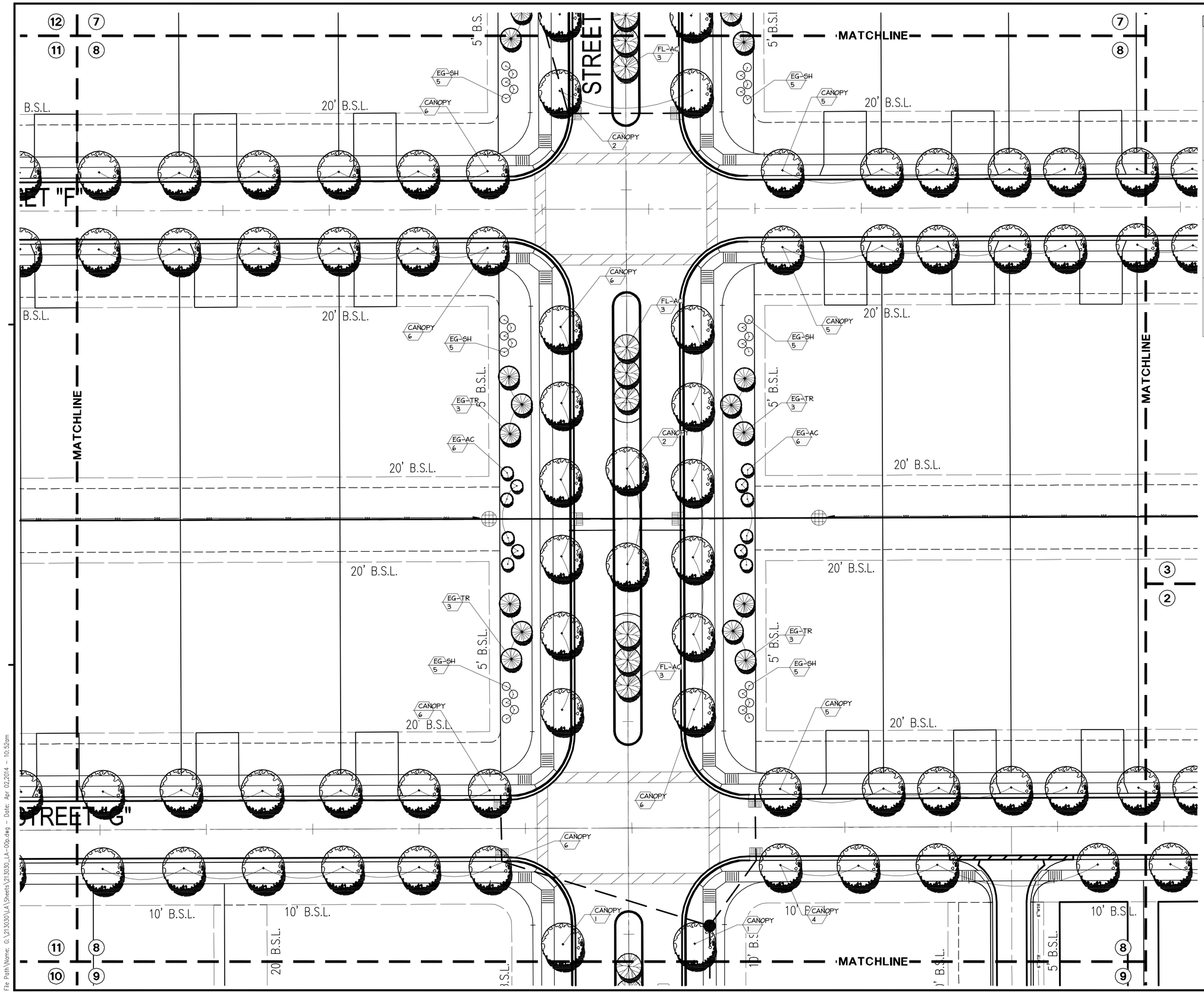

LANDSCAPE LEGEND

	CANOPY SHADE TREE 8-10 Ft. Height; 2 In. Caliper (min.) Qty: 419
	FLOWERING ACCENT TREE 6-8 Ft. Height; 2 In. Caliper (min.) Qty: 136
	EVERGREEN TREE 6-8 Ft. Height; Qty: 116
	EVERGREEN ACCENT TREE 5-6 Ft. Height; Qty: 36
	EVERGREEN SHRUB 18 In. Overall Height; Qty: 360

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SHEET # LA08	

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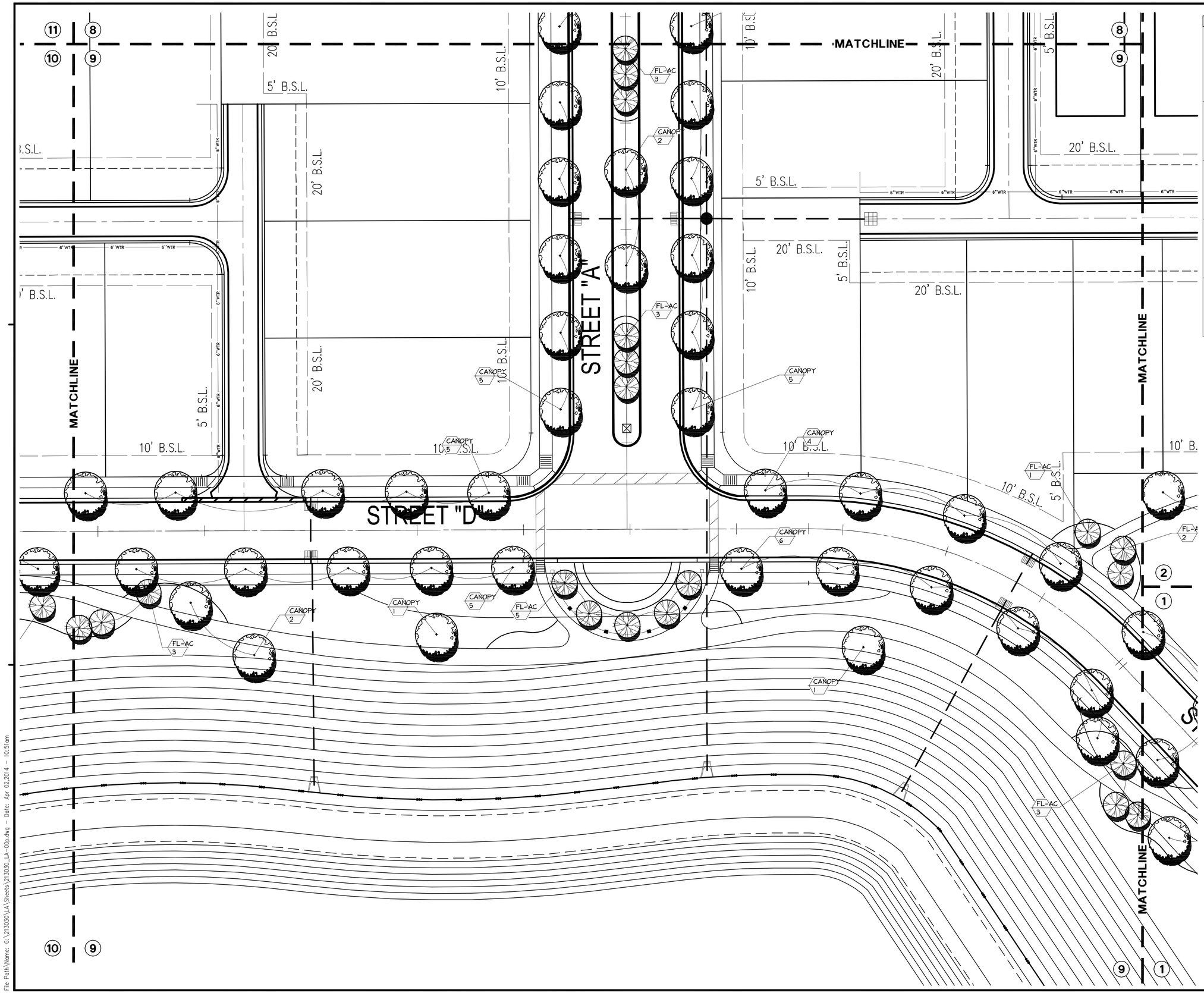

LANDSCAPE LEGEND

CANOPY SHADE TREE 8–10 Ft. Height; 2 In. Caliper (min.) Qty: 419	
FLOWERING ACCENT TREE 6–8 Ft. Height; 2 In. Caliper (min.) Qty: 136	
EVERGREEN TREE 6–8 Ft. Height; Qty: 116	
EVERGREEN ACCENT TREE 5–6 Ft. Height; Qty: 36	
EVERGREEN SHRUB 18 In. Overall Height; Qty: 360	

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SHEET # *LA09*

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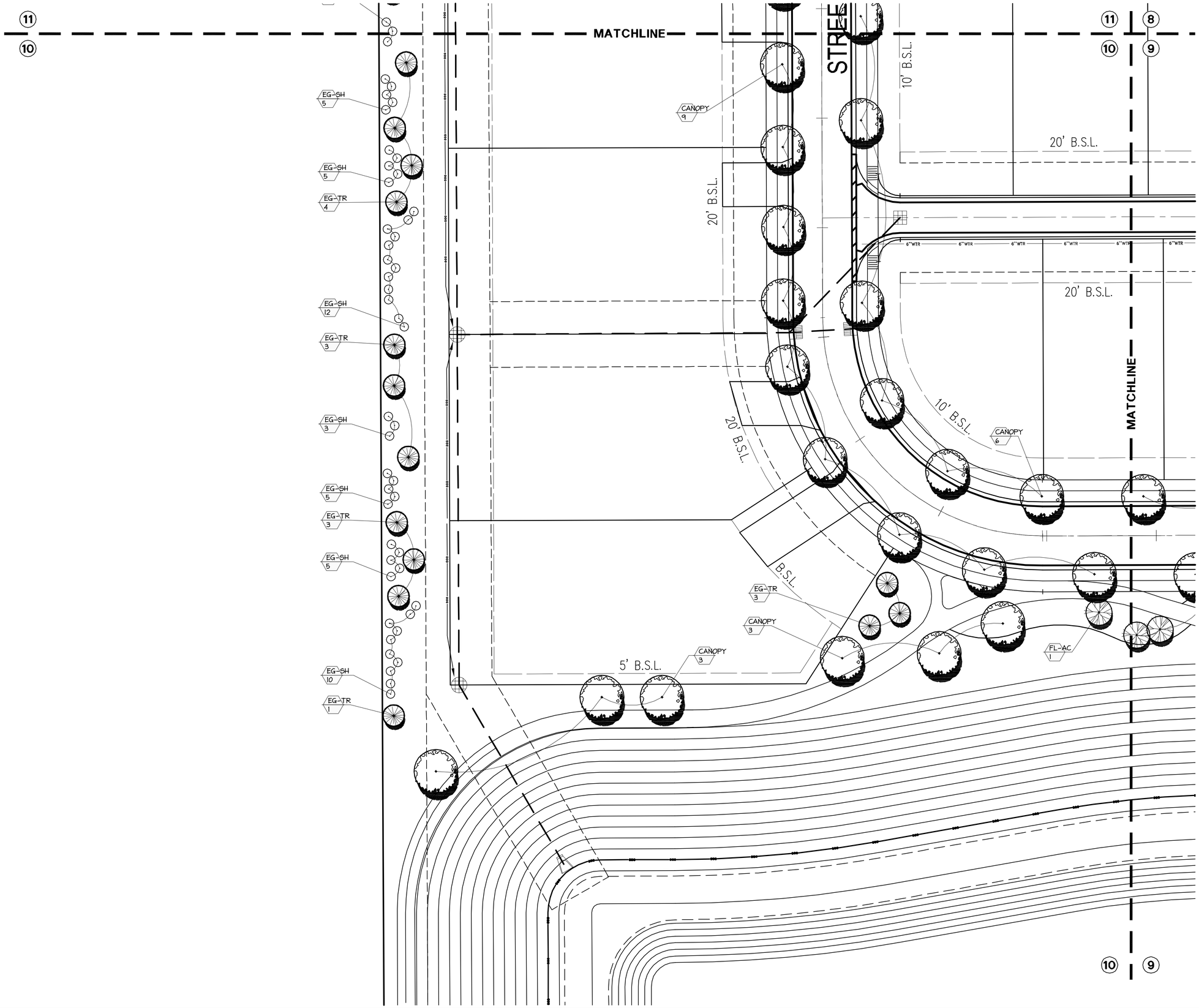

LANDSCAPE LEGEND

	CANOPY SHADE TREE 8-10 Ft. Height; 2 In. Caliper (min.) Qty: 419
	FLOWERING ACCENT TREE 6-8 Ft. Height; 2 In. Caliper (min.) Qty: 136
	EVERGREEN TREE 6-8 Ft. Height; Qty: 116
	EVERGREEN ACCENT TREE 5-6 Ft. Height; Qty: 36
	EVERGREEN SHRUB 18 In. Overall Height; Qty: 360

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SHEET # LA10	

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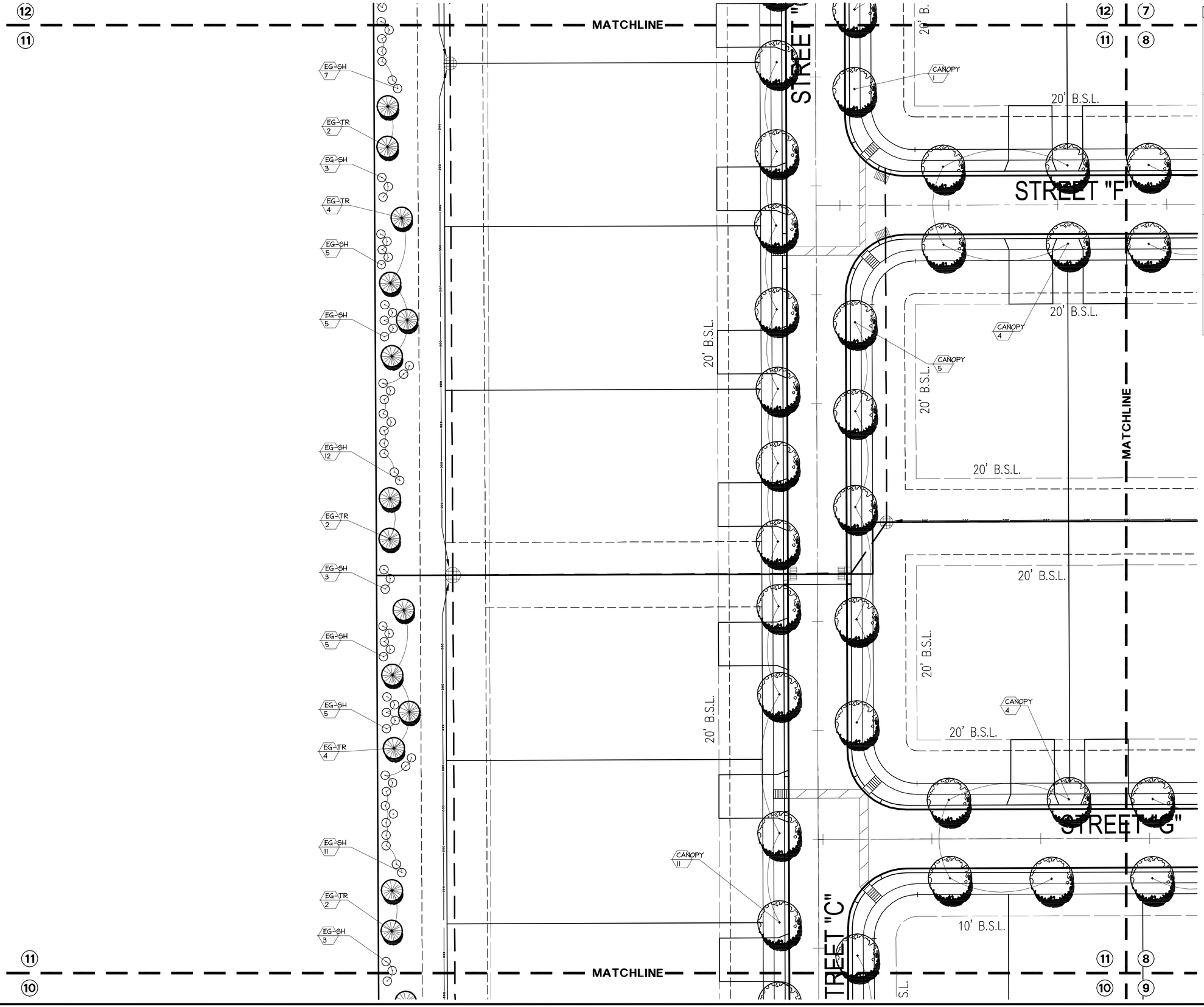

LANDSCAPE LEGEND

	CANOPY SHADE TREE 8-10 Ft. Height; 2 In. Caliper (min.) Qty: 419
	FLOWERING ACCENT TREE 6-8 Ft. Height; 2 In. Caliper (min.) Qty: 136
	EVERGREEN TREE 6-8 Ft. Height; Qty: 116
	EVERGREEN ACCENT TREE 5-6 Ft. Height; Qty: 36
	EVERGREEN SHRUB 18 In. Overall Height; Qty: 360

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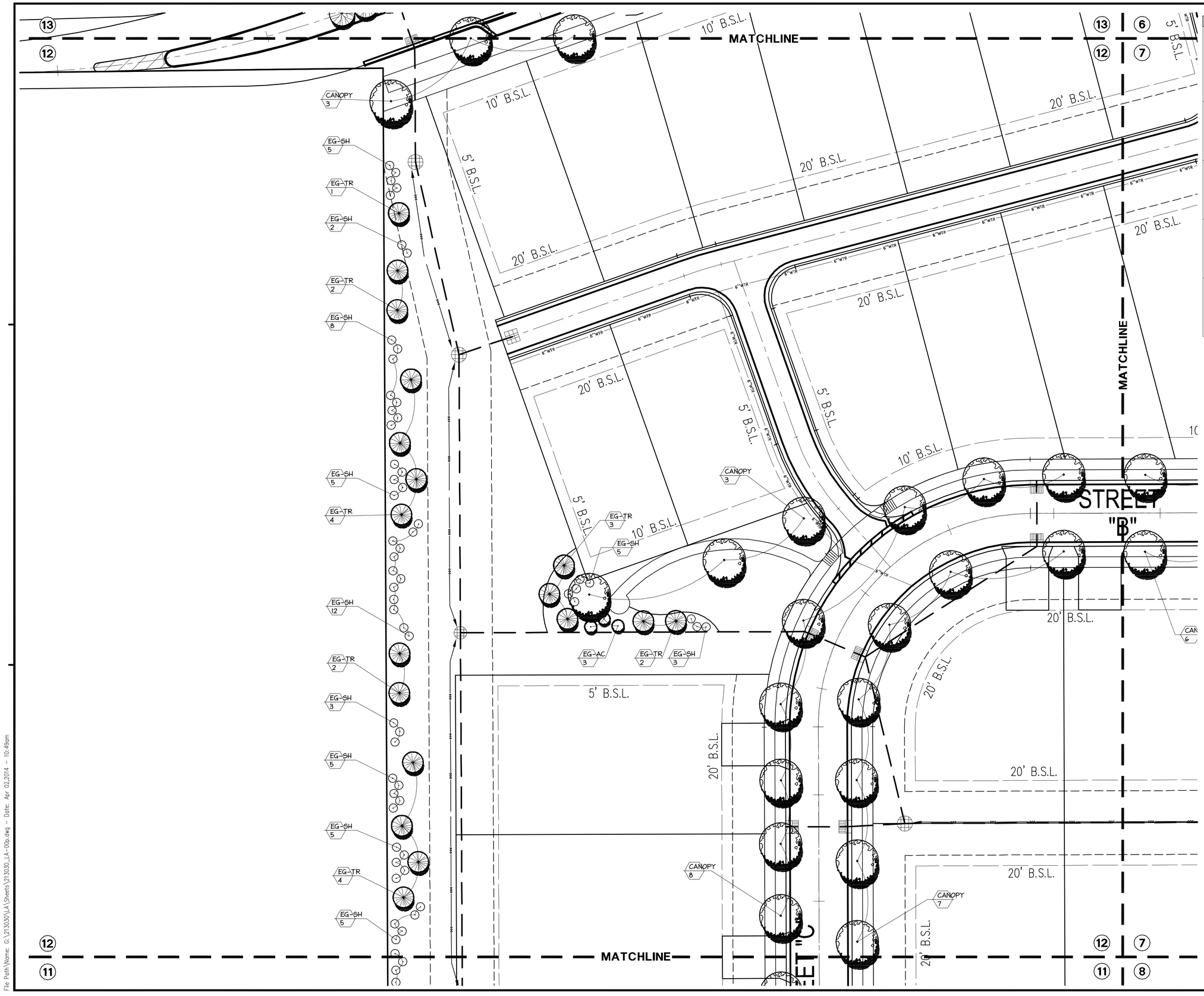

LANDSCAPE LEGEND

	CANOPY SHADE TREE 8-10 Ft. Height; 2 In. Caliper (min.) Qty: 419
	FLOWERING ACCENT TREE 6-8 Ft. Height; 2 In. Caliper (min.) Qty: 136
	EVERGREEN TREE 6-8 Ft. Height; Qty: 116
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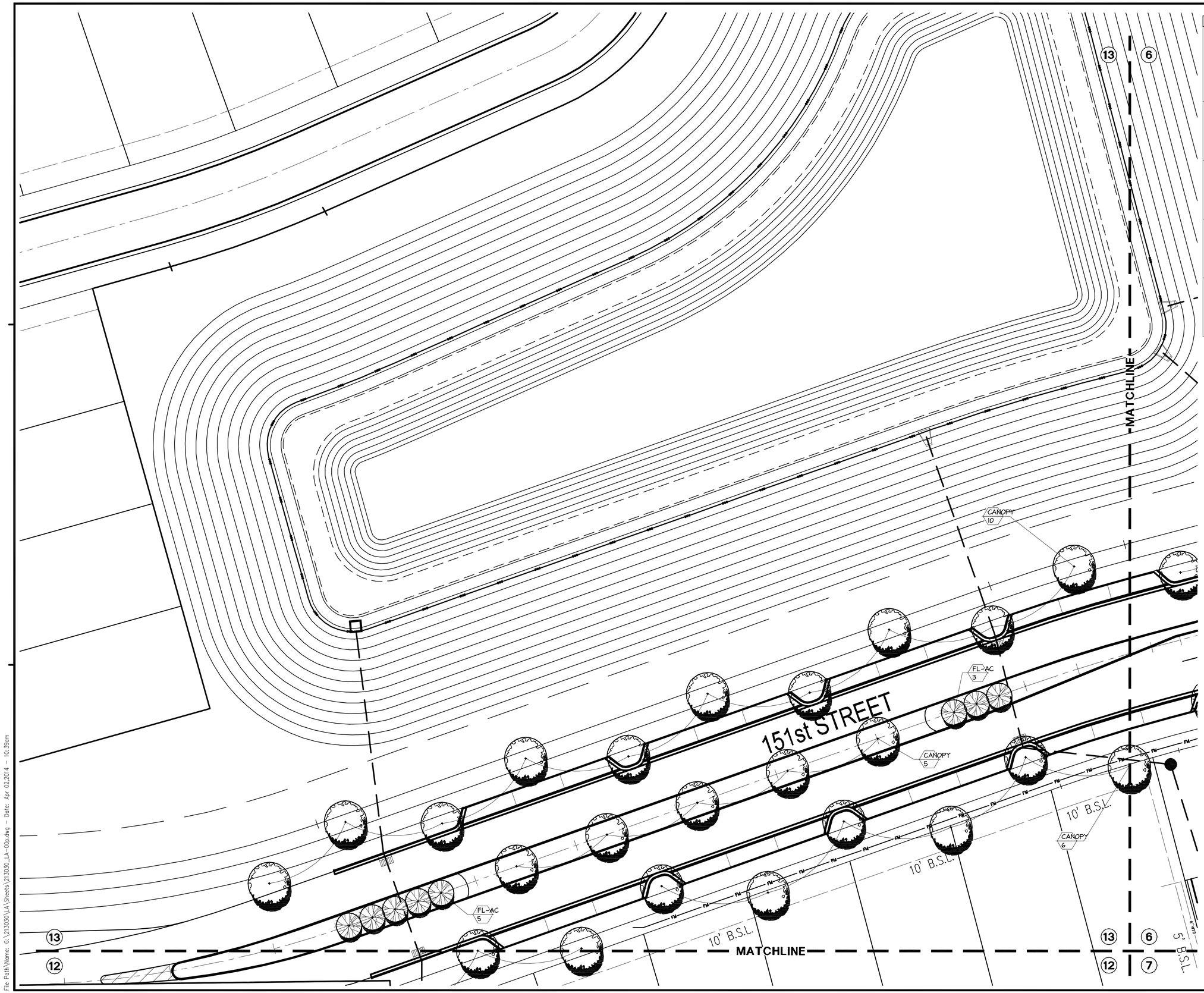

LANDSCAPE LEGEND

	CANOPY SHADE TREE 8-10 Ft. Height; 2 In. Caliper (min.) Qty: 419
	FLOWERING ACCENT TREE 6-8 Ft. Height; 2 In. Caliper (min.) Qty: 136
	EVERGREEN TREE 6-8 Ft. Height; Qty: 116
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	EVERGREEN SHRUB 18 In. Overall Height; Qty: 360

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SHEET # LA13	

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