

FINAL PLANNED UNIT DEVELOPMENT (PUD) PLANS FOR

SILVERBELL POINTE

PART OF SE AND SW 1/4 OF SECTION 28 TOGETHER WITH PART OF THE NE AND NW 1/4 OF SECTION 33, T. 4N., R. 10E.

ORION TOWNSHIP, OAKLAND COUNTY, MICHIGAN

PROPERTY DESCRIPTION:

(Combined parcel as surveyed by PEA Inc.)

Part of the southeast and southwest 1/4 of Section 28, together with part of the northeast and northwest 1/4 of Section 33, Town 4 North, Range 10 East, Orion Township, Oakland County, Michigan being more particularly described as:

Commencing at the South 1/4 corner of said Section 28, thence N00°54'08"E, 1037.64 feet along the north-south 1/4 line of said section to the south line of Silverbell Road (66' wide) and the Point of Beginning; thence along said south line N81°37'08"E, 336.39 feet; thence S00°54'11"W, 1087.57 feet to the east-west 1/4 line of said section; thence along said line S89°44'45"E, 996.50 feet; thence S00°20'21"E, 1319.24 feet to the north line of "Supervisor's Plot of Lakeview Subdivision" as recorded in Liber 53, Page 21, Oakland County Records; thence along said north line, N89°37'34"W, 293.09 feet; thence N00°10'08"W, 119.60 feet; thence the following four courses along the waters edge of Mud Lake, S64°19'49"W, 74.39 feet and N70°02'23"W, 24.20 feet and S81°31'02"W, 81.02 feet and N81°09'09"W, 121.30 feet to the northerly extension of the west line of Lot 12 of said supervisor's plot; thence along said extension, S00°10'08"E, 100.45 feet to the aforementioned north line of said supervisor's plot; thence along said north line, N89°37'34"W, 768.31 feet to a 3/8" iron in a 4" square concrete monument, thence continuing along said north line, N89°55'57"W, 363.34 feet to the east line of Joslyn Road (66' wide) as recorded in Liber 36284, Page 120, Oakland County Records; thence along said east line, 509.14 feet along the arc of a curve to the left having a radius of 1903.83 feet and a chord that bears N05°17'23"W, 507.63 feet to the east line of the Canadian National Rail Road Right-of-Way (50' wide); thence the following two courses along said east line, S80°08'02"E, 396.00 feet and N08°08'02"W, 396.00 feet to the south line of the aforementioned Silverbell Road; thence along said south line, N81°37'14"E, 440.00 feet to the Point of Beginning.

Containing 73.419 acres of land, more or less

LEGAL DESCRIPTION - PROPOSED PARK

(Combined parcel as surveyed by PEA Inc.)

Part of the southeast and southwest 1/4 of Section 28, Town 4 North, Range 10 East, Orion Township, Oakland County, Michigan being more particularly described as:

Commencing at the South 1/4 corner of said Section 28, thence N00°54'08"E, 1037.65 feet along the north-south 1/4 line of said section to the south line of Silverbell Road (66' wide); thence along said south line S81°37'14"W, 204.52 feet to the Point of Beginning; thence S08°08'02"E, 396.00 feet; thence S81°37'14"W, 440.00 feet to the east line of the Canadian National Rail Road Right-of-Way (50' wide); thence along said east line N08°08'02"W, 396.00 feet to the south line of the aforementioned Silverbell Road; thence along said south line, N81°37'14"E, 440.00 feet to the Point of Beginning.

Containing 4.000 acres of land, more or less

LEGAL DESCRIPTION - OVERALL CONDO

(Combined parcel as surveyed by PEA Inc.)

Part of the southeast and southwest 1/4 of Section 28, together with part of the northeast and northwest 1/4 of Section 33, Town 4 North, Range 10 East, Orion Township, Oakland County, Michigan being more particularly described as:

Commencing at the South 1/4 corner of said Section 28, thence N00°54'08"E, 1037.65 feet along the north-south 1/4 line of said section to the south line of Silverbell Road (66' wide) and the Point of Beginning; thence along said south line N81°37'14"E, 336.39 feet; thence S00°54'11"W, 1087.57 feet to the east-west 1/4 line of said section; thence along said line S89°44'45"E, 996.50 feet; thence S00°20'21"E, 1319.24 feet to the north line of "Supervisor's Plot of Lakeview Subdivision" as recorded in Liber 53, Page 21, Oakland County Records; thence along said north line, N89°37'34"W, 293.09 feet; thence N00°10'08"W, 119.60 feet; thence the following four courses along the waters edge of Mud Lake, S64°19'49"W, 74.39 feet and N70°02'23"W, 24.20 feet and S81°31'02"W, 81.02 feet and N81°09'09"W, 121.30 feet to the northerly extension of the west line of Lot 12 of said supervisor's plot; thence along said extension, S00°10'08"E, 100.45 feet to the aforementioned north line of said supervisor's plot; thence along said north line, N89°37'34"W, 768.31 feet to a 3/8" iron in a 4" square concrete monument; thence continuing along said north line, N89°55'57"W, 363.34 feet to the east line of Joslyn Road (66' wide) as recorded in Liber 36284, Page 120, Oakland County Records; thence along said east line, 509.14 feet along the arc of a curve to the left having a radius of 1903.83 feet and a chord that bears N05°17'23"W, 507.63 feet to the east line of the Canadian National Rail Road Right-of-Way (50' wide); thence the following two courses along said east line, S80°08'02"E, 396.00 feet and N08°08'02"W, 396.00 feet to the south line of the aforementioned Silverbell Road; thence along said south line, N81°37'14"E, 440.00 feet to the Point of Beginning.

Containing 68.419 acres of land, more or less

NARRATIVE:

THE SILVERBELL POINTE PLANNED UNIT DEVELOPMENT IS PROPOSED AS SINGLE FAMILY RESIDENTIAL COMMUNITY, WHICH COMPRISES OF APPROXIMATELY 28 ACRES OF THE DEVELOPABLE AREA (74-AC FULL SITE AREA). THE PROPOSED USE WILL BE 46 DETACHED SINGLE-FAMILY, FOR SALE HOMES, ON PRIVATE STREETS.

HOMES WILL BE AT A HIGHER ELEVATION THAN MUD LAKE AND THE SURROUNDING AREAS, CREATING HOMES WITH BEAUTIFUL WATER VIEWS AND OPPORTUNITY FOR WALK-OUT LOWER LEVELS. THESE HOMES WILL BE HIGHLY DESIRABLE GIVEN THEIR HIGHLY WOODED AND SCENIC SETTINGS.

COMPATIBILITY WITH MASTER PLAN & ADJACENT USES:

SILVERBELL POINTE CONFORMS WITH THE TOWNSHIP MASTER PLAN'S FUTURE LAND USE AND FURTHERS THE MASTER PLAN'S IMPLEMENTATION AS THE PROPOSED DENSITY IS IN LINE WITH THE INTENDED FUTURE DENSITY REQUIREMENTS OF UP TO 3 UNITS PER ACRE, AS SILVERBELL POINTE BORDERS MUD LAKE, THE CLUSTER DEVELOPMENT ENCOURAGES THE PRESERVATION OF OPEN SPACE AREAS AND LAKE PRESERVATION.

R.C.O.C. NOTES:

CORRUGATED PLASTIC PIPE MEETING AASHTO M204, TYPE 5 REQUIREMENTS FOR STORM SEWERS FROM 12" TO 24" DIAMETERS, MAY BE USED IN THIS DEVELOPMENT. HOWEVER, PRIOR TO APPROVAL OF THE STORM SYSTEM OR START OF ROAD PAVING, A MANUFACTURER'S CERTIFICATE OF COMPLIANCE WITH THESE REQUIREMENTS SHALL BE SUBMITTED TO THE ROAD COMMISSIONER OF OAKLAND COUNTY. ALSO AT LEAST FIFTY PERCENT OF THE SEWER CARRYING ROAD DRAINAGE, AS SELECTED BY THE ENGINEER, SHALL BE TESTED FOR DEFORMATION BY THE CONTRACTOR USING A NINEPOINT MANDREL. ENGINEER CERTIFICATION THAT THE PIPE HAS PASSED THESE TESTS SHALL BE SUBMITTED TO THE ROAD COMMISSIONER FOR OAKLAND COUNTY.

ALL SIDEWALKS, SIDEWALK RAMPS AND CURB OPENINGS SHALL BE IN ACCORDANCE WITH M.D.O.T. STANDARD PLAN R-28 AND A.D.A. REQUIREMENTS. CROSSWALKS THAT HAVE A TRANSVERSE SLOPE NO GREATER THAN 2% WHERE THEY CROSS STREETS. SIDEWALKS THAT CROSS DRIVEWAYS SHALL MAINTAIN CROSS SLOPES NO GREATER THAN 2% WHERE THEY CROSS A DRIVEWAY IN ADDITION TO OTHER AREAS. SIDEWALK CURB RAMPS, CURB OPENINGS, LANDINGS AND TRUNCATED DOMES (DETECTABLE WARNING STRIPS) WILL BE INSPECTED BY THE R.C.O.C. FACILITIES THAT ARE NOT IN COMPLIANCE WITH A.D.A. REQUIREMENTS SHALL BE REMOVED AND REPLACED.

ANY RIGHT-OF-WAY OR EASEMENTS NEEDED TO INSTALL THE PROPOSED IMPROVEMENTS MUST BE OBTAINED PRIOR TO FINAL PLAN APPROVAL/STREET ACCEPTANCE OR CONSTRUCTION, WHICHEVER OCCURS FIRST.

MOOT COVER "C" (WITH TYPE "K" FRAME), "K", "B", "E" REQUIRED WITHIN ROAD RIGHT-OF-WAY. ALSO ALLOWED ARE EJM 7065/NEENAH R-3034-B OR APPROVED EQUAL AND EJM 7300/NEENAH R-3508-A2 OR APPROVED EQUAL.

THE PROPRIETOR SHALL INSURE THAT OPEN DISCHARGE OF SLUMP PUMPS INTO THE ROAD RIGHT-OF-WAY DOES NOT OCCUR.

VERIFICATION OF TOWNSHIP APPROVAL FOR SANITARY SEWER AND WATER MAIN TESTS MUST BE SUBMITTED AND FOUND ACCEPTABLE BY THE R.C.O.C., PRIOR TO ANY CONCRETE PAVING OR ASPHALT BEING PLACED.

PROPER SIGNING IS REQUIRED BEFORE ANY WORK IN R.O.W. IS STARTED.

LANE CLOSURES RESTRICTED TO 9-3 MONDAY - FRIDAY.

MAINTAIN TWO-WAY TRAFFIC AT ALL TIMES.

FLAG PERSON REQUIRED FOR TEMPORARY ONE LANE ROADS.

GENERAL NOTES:

1. SINGLE FAMILY RESIDENTIAL ROADS SHALL BE PRIVATE.

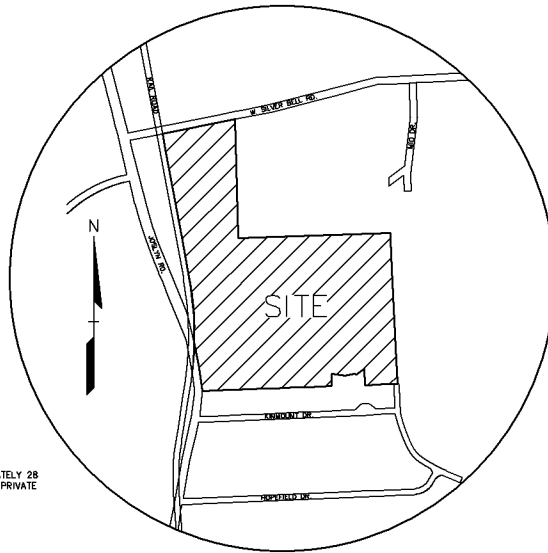
2. ALL WORK WITHIN THE JOSLYN ROAD RIGHT-OF-WAYS SHALL BE PERMITTED BY R.C.O.C.

VARIABLE DENSITY CREDIT CONSIDERATIONS:

A) 20% OPEN SPACE PROVIDED. (15% REQUIRED)

C) ENHANCED SURFACE WATER QUALITY AND GROUND WATER QUALITY.

D) PRESERVE NATURAL FEATURES: 49-ACRES OF THE PROPERTY IS TO BE PRESERVED.



LOCATION MAP
NO SCALE

OWNER/APPLICANT/DEVELOPER:

FRANKLIN RIDGE HOMES, LLC
30180 ORCHARD LAKE ROAD, SUITE 150
FARMINGTON HILLS, MI 48334
CONTACT: DAVID STEUER
PHONE: (248) 790-4481
EMAIL: DAVID@STEUERGROUPO.COM

CIVIL ENGINEER:

PEA, INC.
2430 ROCHESTER CT, SUITE 100
TROY, MI 48063
CONTACT: JOHN B. THOMPSON, PE
PHONE: (248) 689-9090 EXT. 1109
FAX: (248) 689-1044
EMAIL: JTHOMPSON@PEAINC.COM

LANDSCAPE ARCHITECT:

PEA, INC.
45 W. GRAND RIVER AVE, STE. 501
DETROIT, MI 48226
CONTACT: KIM DIETZEL
PHONE: (313) 769-5755
EMAIL: KDIEZEL@PEAINC.COM

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ORION TOWNSHIP STANDARD SANITARY SEWER DETAILS (2 SHEETS)
ORION TOWNSHIP STANDARD WATER MAIN DETAILS (3 SHEETS)
OAKLAND COUNTY SOIL EROSION & SEDIMENTATION DETAIL SHEET
OAKLAND COUNTY STORM DRAIN NOTES & DETAILS

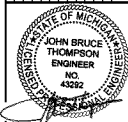
RECEIVED

March 24, 2020

Orion Township
Planning & Zoning

NOT: 3 PROJECTS COVERED BY THIS DEVELOPMENT
NOT: 3 PROJECTS COVERED BY THIS DEVELOPMENT
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NO.	DATE	DESCRIPTION
1	03/11/20	ISSUED FOR PERMIT



CAUTION!
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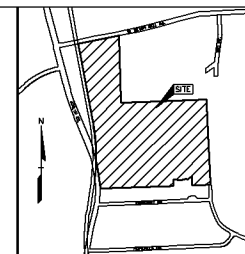
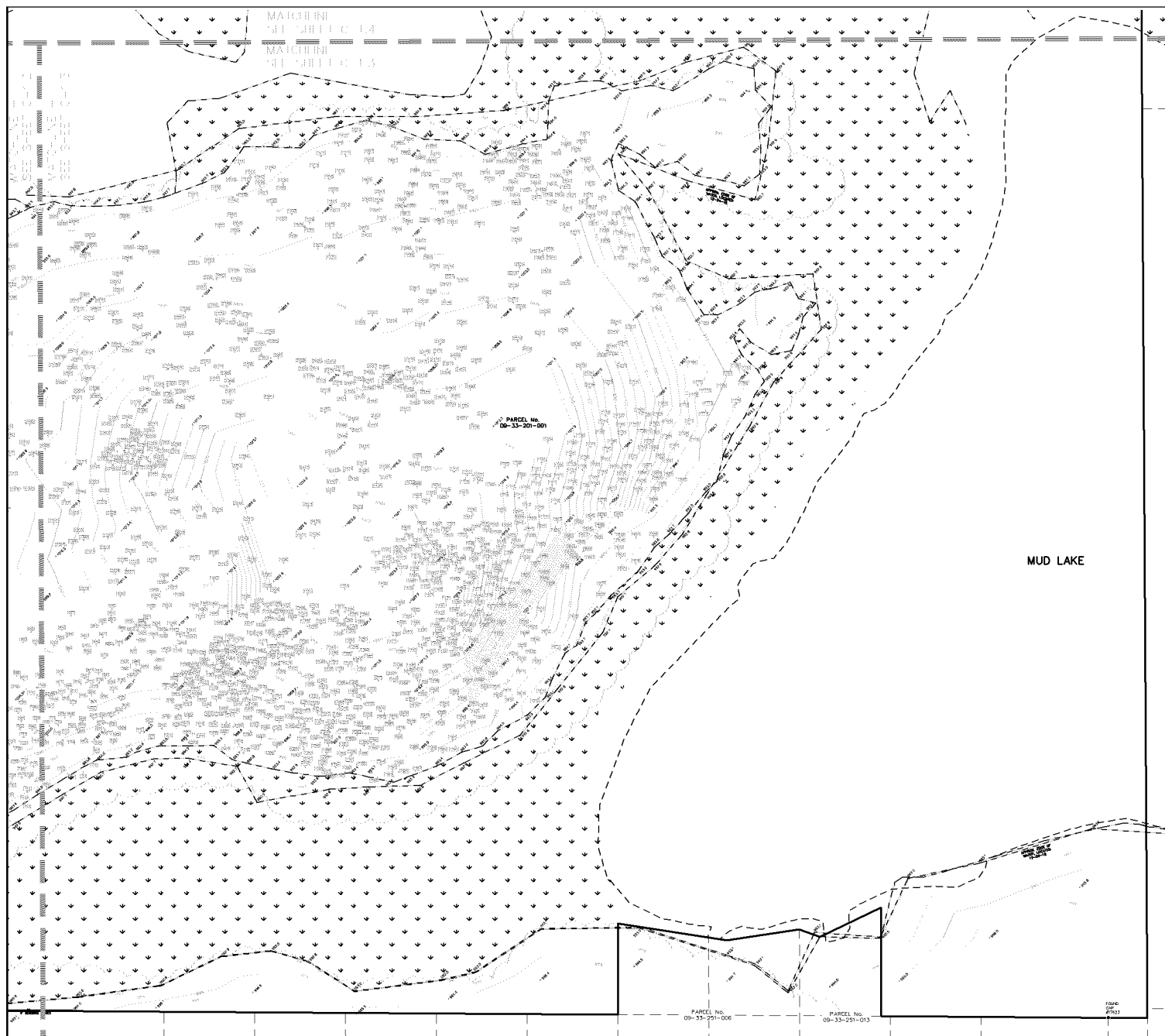
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FRANKLIN RIDGE HOMES, LLC 30180 ORCHARD LAKE ROAD, SUITE 150 FARMINGTON HILLS, MI 48334	ORION TOWNSHIP PLANNING & ZONING	COVER SHEET SILVERBELL POINTE PART OF SECTION 28, T. 4N., R. 10E. OAKLAND COUNTY, MICHIGAN	DES: JBT CHK: JBT APP: JBT
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ORIGINAL ISSUE DATE:
MARCH 11, 2020
PEA JOB NO.: 2019-190
SCALE: N.T.S.
DRAWING NUMBER:
C-0.0



LOCATION MAP - NPT TO SCALE

LEGEND

- LEGEND
- | | | |
|------------------|------------------|---------------------|
| ● IRON FOUND | ● BRASS PLUS SET | ● SEC. CORNER FOUND |
| ⊗ IRON SET | ⊕ MONUMENT FOUND | ● RECORDED |
| ● NAIL FOUND | ⊗ MONUMENT SET | ● MEASURED |
| ● NAIL & CAP SET | | ● CALCULATED |

- | SYMBOL | DESCRIPTION |
|---|---|
|  | ELEC, PHONE OR CABLE TO BUS LINE, POLE IN BUS WAY |
|  | UNDERGROUND CABLE TO BUS POSITION |
|  | TELEPHONE W.A. CABLE, POSITION IN MANHOLE |
|  | ELECTRIC W.A. CABLE, MANHOLE, METER IN MANHOLE |
| | BUS MAN, POLE IN BUS LINE MANHOLE |

- [illegible]

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- Diagram illustrating a street layout. A horizontal line represents a road. Above the road, there is a fence. Below the road, there is a street light. The diagram is labeled with 'ROAD' and 'STREET LIGHT'.

-  CONCRETE
 ASPHALT
 GRAVEL
 SUBGRADE

REFER TO SHEET C-1.1 FOR LEGAL DESCRIPTION.
REFER TO SHEET T-1.0 FOR TREE SURVEY

CAUTION!!
THE LOCATION AND ELEVATION OF EACH RISER AND UNDER-SLURRY PILE IS TO BE DETERMINED BY GRAVING AND NOT ONLY APPROXIMATE. NO GUARANTEES, EFFORTS, WARRANTIES OR REMEDIES AS TO THE COMPLETION OF ANY PROJECT THEREOF. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR DETERMINING THE EXACT PILE LOCATIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.

PLANNING AND DESIGNING THE CONSTRUCTION OF A NEW PROJECT SUBMITTED UNDER THE CONSTRUCTION CONTRACTING ACT, 1991, IS THE FIRST OF THE SEVEN STEPS IN THE CONSTRUCTION CONTRACTING ACT, 1991. THE SECOND STEP IS THE CONSTRUCTION CONTRACTING ACT, 1991. THE THIRD STEP IS THE CONSTRUCTION CONTRACTING ACT, 1991. THE FOURTH STEP IS THE CONSTRUCTION CONTRACTING ACT, 1991. THE FIFTH STEP IS THE CONSTRUCTION CONTRACTING ACT, 1991. THE SIXTH STEP IS THE CONSTRUCTION CONTRACTING ACT, 1991. THE SEVENTH STEP IS THE CONSTRUCTION CONTRACTING ACT, 1991.

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FRANKLIN RIDGE HOMES, LLC
30180 ORCHARD LAKE ROAD, SUITE 150
FARMINGTON HILLS, MICHIGAN 48334

**TOPOGRAPHIC SURVEY - EAST
SILVERBELL POINTE**
UP THE S&E 1/4 OF SEC 10, T14N & N 1/2, R15E, E1/2, J14N, M14E,
ORION TOWNSHIP, OAKLAND COUNTY, MICHIGAN

TMG	DN	THK	SUR	KTR	P.M.	JBT
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DES.	PAR	T
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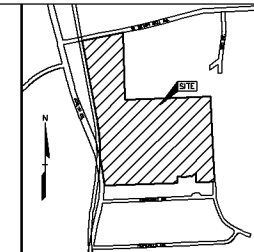
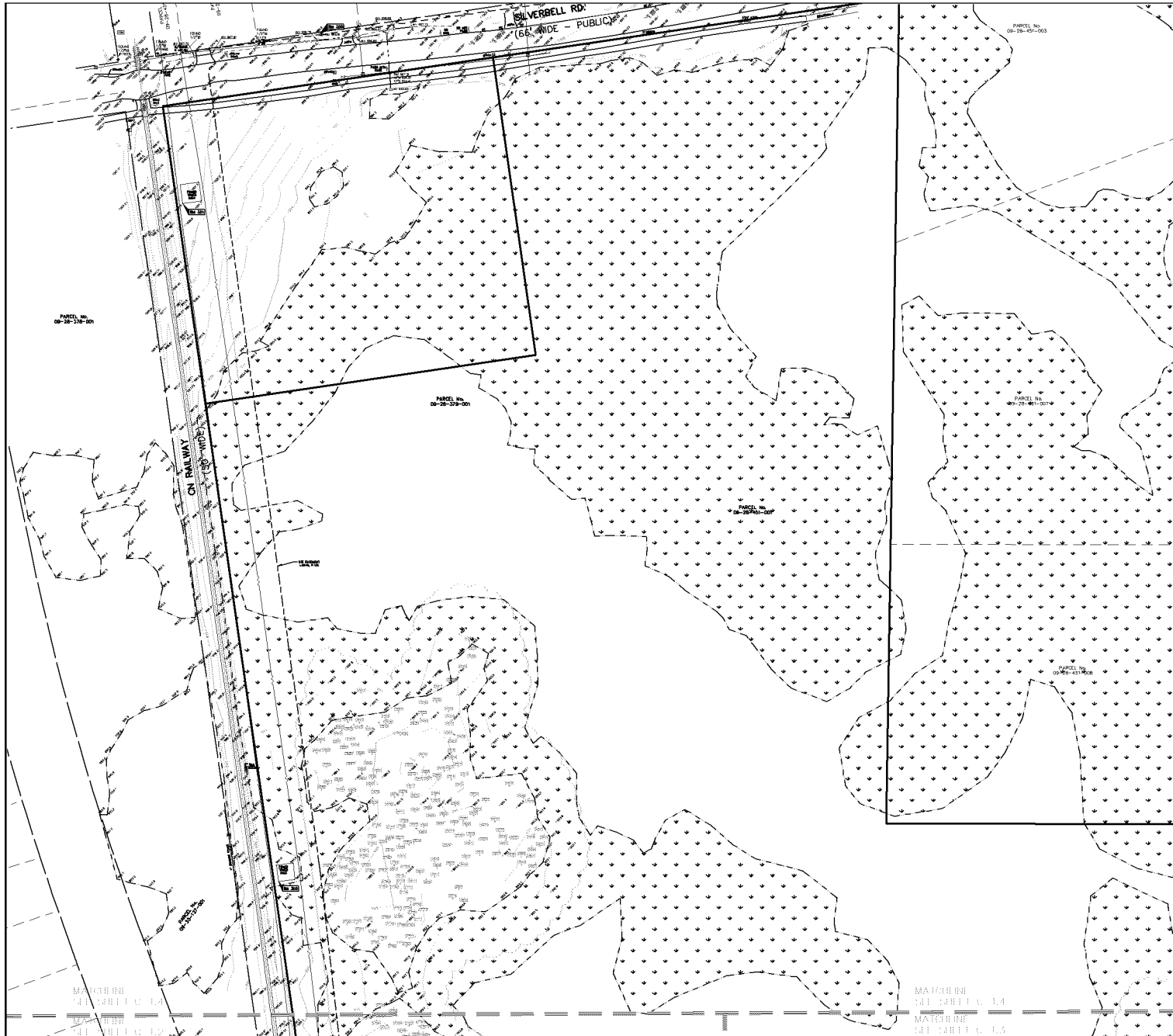
ORIGINAL ISSUE DATE:
MARCH 17, 2020

PEA JOB NO. 2018-150

DRAWING NUMBER:
010

C-1.3

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- LEGEND**
- HIGH ROAD
 - HIGH SET
 - MAIN PAVEMENT
 - MAIN & CAP SET
 - SMALL PLANT SET
 - MINOR PLANT SET
 - CORNER FOUND
 - CORNER FOUND
 - RECOVERED
 - RECOVERED
 - CALCULATED
 - CALCULATED

NOTES

1. ALL POINTS ON MAPS TO BE RUN, LINES, PLOTS & SURVEY ARE TO BE RUN IN THE FIELD, NOT IN THE OFFICE.

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GRAPHIC SCALE

0 30 60 120 240

(IN FEET)

1 inch = 60 ft.

REFER TO SHEET C-1.1 FOR LEGAL DESCRIPTION.
REFER TO SHEET T-1.0 FOR TREE SURVEY

NO.	DATE	REVISIONS
1	03/17/2020	ISSUED FOR PERMIT

CAUTION!

THIS MAP IS A REPRESENTATION OF THE SURVEY DATA AND IS NOT A GUARANTEE OF THE ACCURACY OF THE DATA. THE USER OF THIS MAP IS RESPONSIBLE FOR THE ACCURACY OF THE DATA AND THE RESULTS OF ANY SURVEY CONDUCTED USING THIS MAP.

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TOPOGRAPHIC SURVEY - NORTH SILVERBELL POINTE

PARCEL NO. 09-28-376-101 & 09-28-376-102

PROJECT LOCATION: 09-28-376-101 & 09-28-376-102

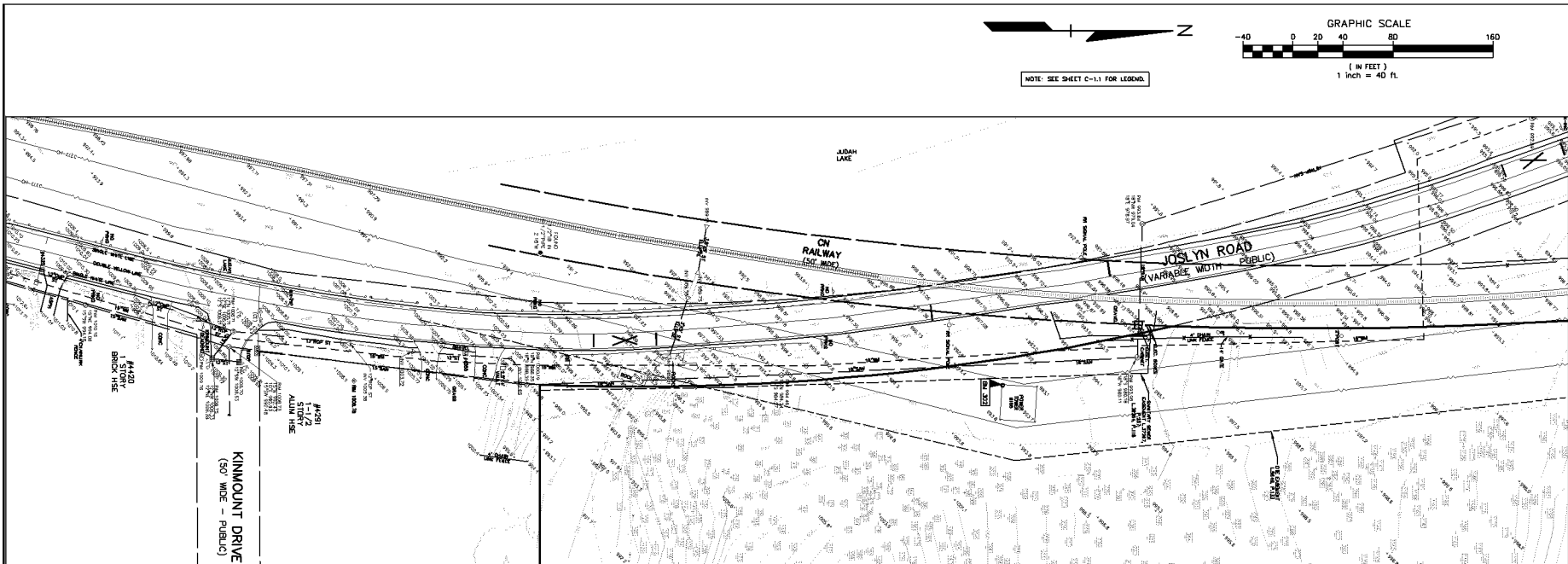
PROJECT NO. 09-28-376-101 & 09-28-376-102

ORIGINAL ISSUE DATE: MARCH 17, 2020

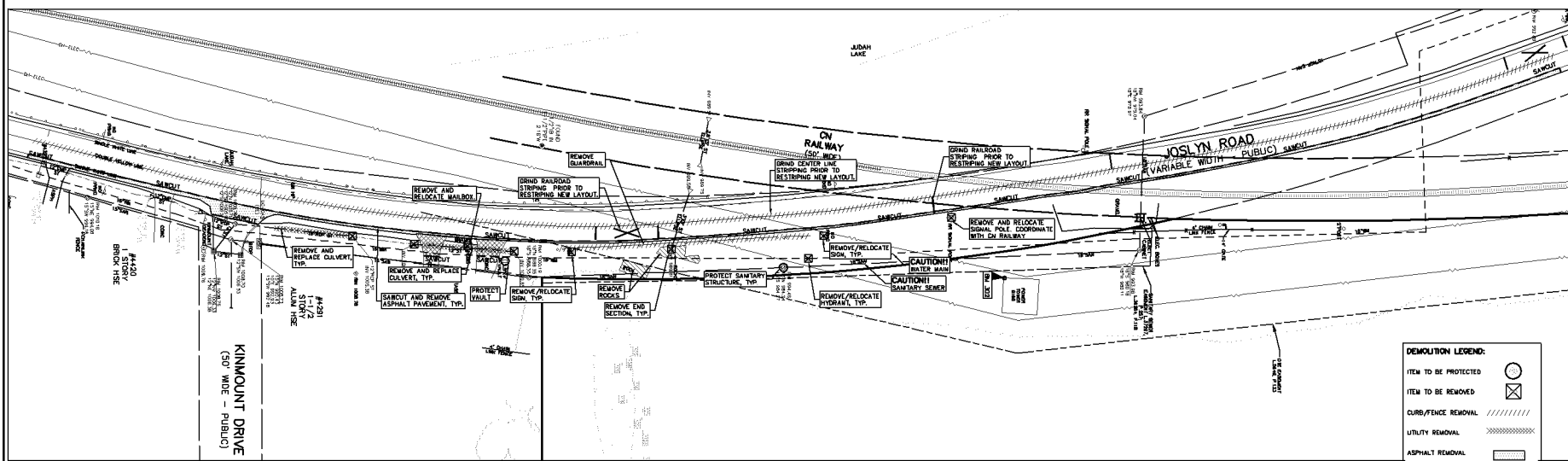
PEA JOB NO. 2019-150

SCALE: 1" = 60'

DRAWING NUMBER: C-1.4



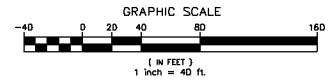
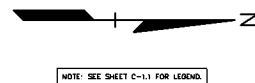
TOPOGRAPHIC SURVEY



DEMOLITION PLAN

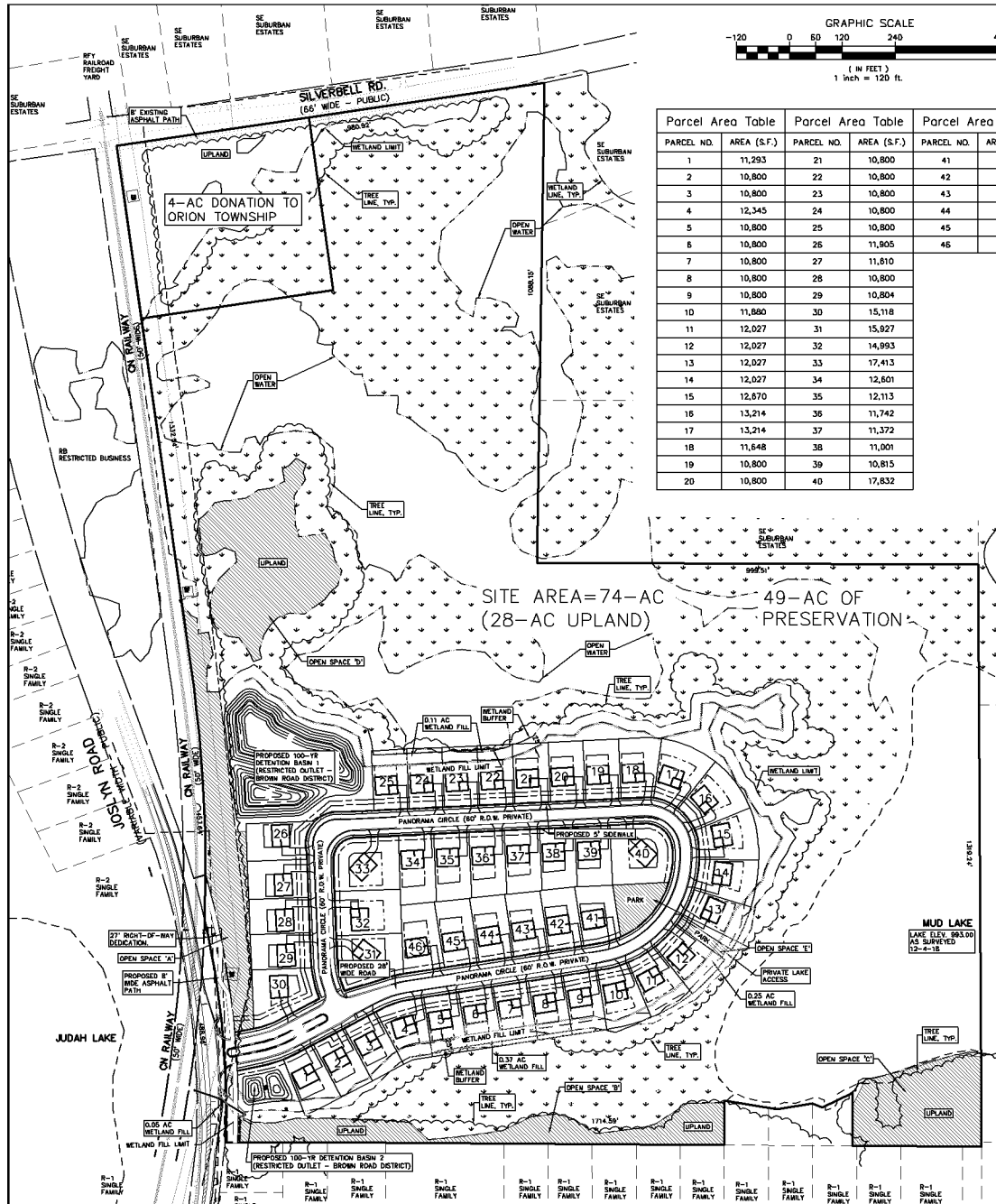
DEMOLITION LEGEND:

ITEM TO BE PROTECTED	
ITEM TO BE REMOVED	
CURB/FENCE REMOVAL	
UTILITY REMOVAL	
ASPHALT REMOVAL	
SARICUT LINE	



NOTE: SEE SHEET C-1.1 FOR LEGEND.

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FRANKLIN RIDGE HOMES, LLC R.O.W. TOPO SURVEY AND DEMO PLAN SILVERBELL POINTE PHASE 1 OF THE 2018-2019 DEVELOPMENT OF THE SILVERBELL POINTE COMMUNITY IN THE TOWNSHIP OF JUDAH, COUNTY OF INDIAN, STATE OF MICHIGAN.	
ORIGINAL ISSUE DATE: MARCH 17, 2020 PEA JOB NO. 2018-150 SCALE: 1" = 40' DRAWING NUMBER: C-1.5	



Parcel No.	Area (S.F.)	Parcel No.	Area (S.F.)	Parcel No.	Area (S.F.)
1	11,293	21	10,800	41	11,050
2	10,800	22	10,800	42	10,960
3	10,800	23	10,800	43	11,285
4	12,345	24	10,800	44	11,570
5	10,800	25	10,800	45	11,675
6	10,800	26	11,905	46	12,913
7	10,800	27	11,610		
8	10,800	28	10,800		
9	10,800	29	10,804		
10	11,880	30	15,118		
11	12,027	31	15,027		
12	12,027	32	14,993		
13	12,027	33	17,413		
14	12,027	34	12,601		
15	12,670	35	12,113		
16	13,214	36	11,742		
17	13,214	37	11,372		
18	11,648	38	11,001		
19	10,800	39	10,815		
20	10,800	40	17,832		

SITE DATA

PROPRIETORS NAME:

FRANKLIN RIDGE HOMES, LLC
30180 ORCHARD LAKE ROAD, SUITE 150
FARMINGTON HILLS, MI 48334
PHONE: 248-790-4481
CONTACT: DAVID STEUER

LEGAL DESCRIPTION:

REFER TO COVER SHEET
TOTAL AREA = 73.42 ACRES
PARK DONATION AREA = 4.00 ACRES
NET PROPERTY AREA = 69.42 ACRES

AREA:

DEVELOPABLE AREA TOTAL = 28 AC
PRESERVATION AREA = 49 AC

EXISTING ZONING:

SE SUBURBAN ESTATES
PUD PLANNED UNIT DEVELOPMENT

DESCRIPTION OF PROPOSED USE: THE SILVERBELL POINTE PLANNED UNIT DEVELOPMENT IS PROPOSED AS A SINGLE FAMILY RESIDENTIAL PROJECT. THE PROPOSED USE WILL BE 46 DETACHED SINGLE-FAMILY, FOR SALE HOMES, ON PRIVATE STREETS.

THE PROPOSED DEVELOPMENT WILL BE COMPLETED BY THE APPLICANT, A MICHIGAN BASED HOME BUILDER. THE APPLICANT HAS COMPLETED AND IS UNDER CONSTRUCTION WITH SEVERAL HIGH QUALITY RESIDENTIAL DEVELOPMENTS IN AND AROUND ORION TOWNSHIP.

HOMES TO BE A BLEND OF RANCH, 1-1/2 STORY AND COLONIAL HOMES RANGING FROM 2000-SF TO 4000-SF. BUILDING MATERIALS SHALL BE A MIX OF BRICK, ASPHALT SHINGLES, PLANK SIDING WITH VARIETY OF COLOR PALETTES AND DURABLE LOW-MAINTENANCE FREE MATERIALS. AT LEAST 50% OF GARAGES WILL BE SIDE ENTRY OR RECESSED.

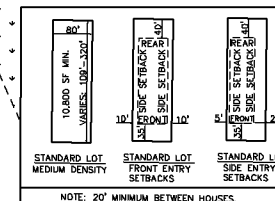
NATURAL FEATURES:

TOPOGRAPHY: THE SITE EXHIBITS ROLLING TOPOGRAPHIC RELIEF WITH A STEEP DROP OFF TO THE WETLAND AREA ASSOCIATED WITH MUD LAKE. WHILE GRADING WILL BE REQUIRED, EXISTING SLOPES SHOULD NOT BE SIGNIFICANT OBSTACLES FOR THE PROPOSED DEVELOPMENT.

WOODLANDS: SIGNIFICANT VEGETATION LIES WITHIN THE CENTRAL PORTIONS OF THE SITE. A WOODLANDS TREE SURVEY IN ACCORDANCE WITH SECTION 27.12 WILL BE SUBMITTED AS REQUIRED. THE APPLICANT WILL COMPLY WITH THE WOODLANDS PRESERVATION REGULATIONS CONTAINED WITHIN THE ZONING ORDINANCE.

WETLANDS: A LARGE WETLAND AREA LIES AROUND THE DEVELOPABLE PROPERTY. WETLAND PERMIT APPLICATIONS WILL BE SUBMITTED TO BOTH THE TOWNSHIP AND THE MDEQ AS REQUIRED. TOTAL WETLAND FILL: ±0.8 AC

SOILS: THE SOILS ON-SITE INCLUDE 14B AND 14C OAKVILLE FINE SAND 0% TO 18% SLOPES, 53A TEDROW LOAMY SAND 0% TO 3% SLOPES, AND 27 HOUGHTON AND ADRIAN MUCKS.



GUARANTEED OPEN SPACE:

PER ORION TOWNSHIP ZONING ORDINANCE
MINIMUM STANDARD OPEN SPACE REQUIRED
RESIDENTIAL USES = 15%

DEVELOPABLE SITE AREA = 28 AC

OPEN SPACE (NIC DETENTION AND WETLANDS)

AREA 'A' ± 1.33 AC
AREA 'B' ± 1.23 AC
AREA 'C' ± 1.19 AC
AREA 'D' ± 1.76 AC
AREA 'E' ± 0.28 AC

TOTAL 5.79 AC
% OPEN SPACE PROVIDED = 20%
OPEN SPACE

OPEN SPACE AREAS A, B, C, AND D WILL BE PASSIVE OPEN SPACE AREAS THAT PROVIDE A NATURAL BUFFER AND OPEN SPACE AREA E WILL BE ACTIVE OPEN SPACE THAT PROVIDES PARK SPACE AND LAKE ACCESS.

	REQUIRED SE	REQUIRED SR	PROPOSED PUD
MIN. LOT AREA	65,340 SF	30,000 SF	10,800 SF
FRONT	40 FT	40 FT	35 FT
SIDE	20 FT	20 FT	5 FT MIN AND 30 FT TOTAL FOR SIDE LOAD GARAGE 30 FT MIN AND 20 FT TOTAL FOR FRONT LOAD GARAGE (20' MIN BETWEEN HOUSES)
REAR	40 FT	40 FT	35 FT
MAX. BLDG. HEIGHT	30 FT	30 FT	30 FT
MIN. FLOOR AREA	1200 SF	1500 SF	1200 SF
MAX. LOT COVERAGE	20%	20%	20%

CAUTION!!

THIS PLAN IS A PRELIMINARY DESIGN AND IS NOT TO BE USED FOR CONSTRUCTION. THE APPLICANT SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES. THE APPLICANT SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES. THE APPLICANT SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES.

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FRANKLIN RIDGE HOMES, LLC

30180 ORCHARD LAKE ROAD, SUITE 150

FARMINGTON HILLS, MICHIGAN 48334

OVERALL SITE PLAN

SILVERBELL POINTE

PHASE 1 OF THE 2430 ROCHESTER COURT DEVELOPMENT, FARMINGTON HILLS, MICHIGAN

PROJECT NO. 2018-150

DATE: 03/17/2020

SCALE: 1" = 120'

DRAWING NUMBER:

ORIGINAL ISSUE DATE

MARCH 17, 2020

PEA JOB NO. 2018-150

SCALE: 1" = 120'

DRAWING NUMBER:

C-2.0

THESE NOTES APPLY TO ALL CONSTRUCTION ACTIVITIES ON THIS PROJECT.

**1. ALL DIMENSIONS SHOWN ARE TO BACK OF CURB, FACE OF SIDEWALK,
OUTSIDE FACE OF BUILDING, PROPERTY LINE, CENTER OF MANHOLE/CATCH
BASIN OR THE INTERIOR OF A STRUCTURE UNLESS OTHERWISE NOTED.**

2. REFER TO SHEET C-10 FOR ON-SITE PAVING DETAILS.

3. REFER TO SHEET C-10 FOR ON-SITE SIDEWALK RAMP DETAILS

4. NO PARKING-FIRE LANE SIGNS SHALL BE POSTED ALONG ALL FIRE LANES AT 100 FOOT INTERVALS OR AS DIRECTED BY THE FIRE OFFICIAL.

5. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH OXFORD TOWNSHIP ORDINANCES AND RESOLUTIONS.

6. THE CONTRACTOR SHALL NOTIFY THE TOWNSHIP ENGINEER AND/OR THE AUTHORITY HAVING JURISDICTION 3 BUSINESS DAYS PRIOR TO THE BEGINNING OF ANY CONSTRUCTION.

7. ANY WORK WITHIN THE STREET OR HIGHWAY RIGHTS-OF-WAY SHALL BE PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS OF THE AGENCIES HAVING JURISDICTION THEREON. WHEN SUCH ACTION IS NECESSARY HAVE BEEN ISSUED FOR THE WORK.

8. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ADJUST THE TOP OF FINISH GRADE TO REFLECT ACTUAL FIELD CONDITIONS INCLUDING BUT NOT LIMITED TO UTILITIES, ELEVATIONS, DRAINAGE, SETBACKS, DRIVEWAYS, DRIVE BELTS ETC., WITHIN GRADED AND NON PAVED AREAS OF THE PLANS. GRADE SHOWN ON THE PLANS ALL SURFACE ADJUSTMENTS SHALL BE MADE BY THE JOB OWNER. THE SLOPE OF ALL GRADING SHALL BE 4% MINIMUM UNLESS OTHERWISE SPECIFIED.



Parcel Area Table		Parcel Area Table		Parcel Area Table	
PARCEL NO.	AREA (S.F.)	PARCEL NO.	AREA (S.F.)	PARCEL NO.	AREA (S.F.)
1	11,293	21	10,800	41	11,050
2	10,800	22	10,800	42	10,960
3	10,800	23	10,800	43	11,285
4	12,345	24	10,800	44	11,570
5	10,800	25	10,800	45	11,875
6	10,800	26	11,905	46	12,913
7	10,800	27	11,610		
8	10,800	28	10,800		
9	10,800	29	10,804		
10	11,880	30	15,118		
11	12,027	31	15,927		
12	12,027	32	14,993		
13	12,027	33	17,413		
14	12,027	34	12,601		
15	12,670	35	12,113		
16	13,214	36	11,742		
17	13,214	37	11,372		
18	11,848	38	11,001		
19	10,800	39	10,615		
20	10,800	40	17,632		

Curve #	Length	Radius	Delta	Chord Direction	Chord Length
C1	75.94	230.00	18.92	S71° 41' 31" W	75.60
C2	337.03	230.00	83.96	S39° 10' 20" W	307.67
C3	141.37	90.00	90.00	S47° 48' 22" E	127.28
C4	124.91	80.00	88.48	N42° 27' 43" E	112.61
C5	102.35	230.00	25.50	N15° 01' 03" W	101.51
C6	64.84	230.00	18.15	S70° 18' 33" W	64.83

SYMBOLS: EROSION CONTROL:
WETLAND FILL LIMIT
REFER TO WETLAND PERMIT XX (IN PROCESS)

[illegible]

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30190 ORCHARD LAKE ROAD, SUITE 150
FARMINGTON HILLS, MICHIGAN 48334

DIMENSION AND PAVING PLAN
SILVERBELL POINTE

PARCEL 10 - THE 3/4 OF SECTION 28 & NE 1/4 SECTION 10, T42N, R10E, W1/2, ORION TOWNSHIP, OAKLAND COUNTY, MICHIGAN

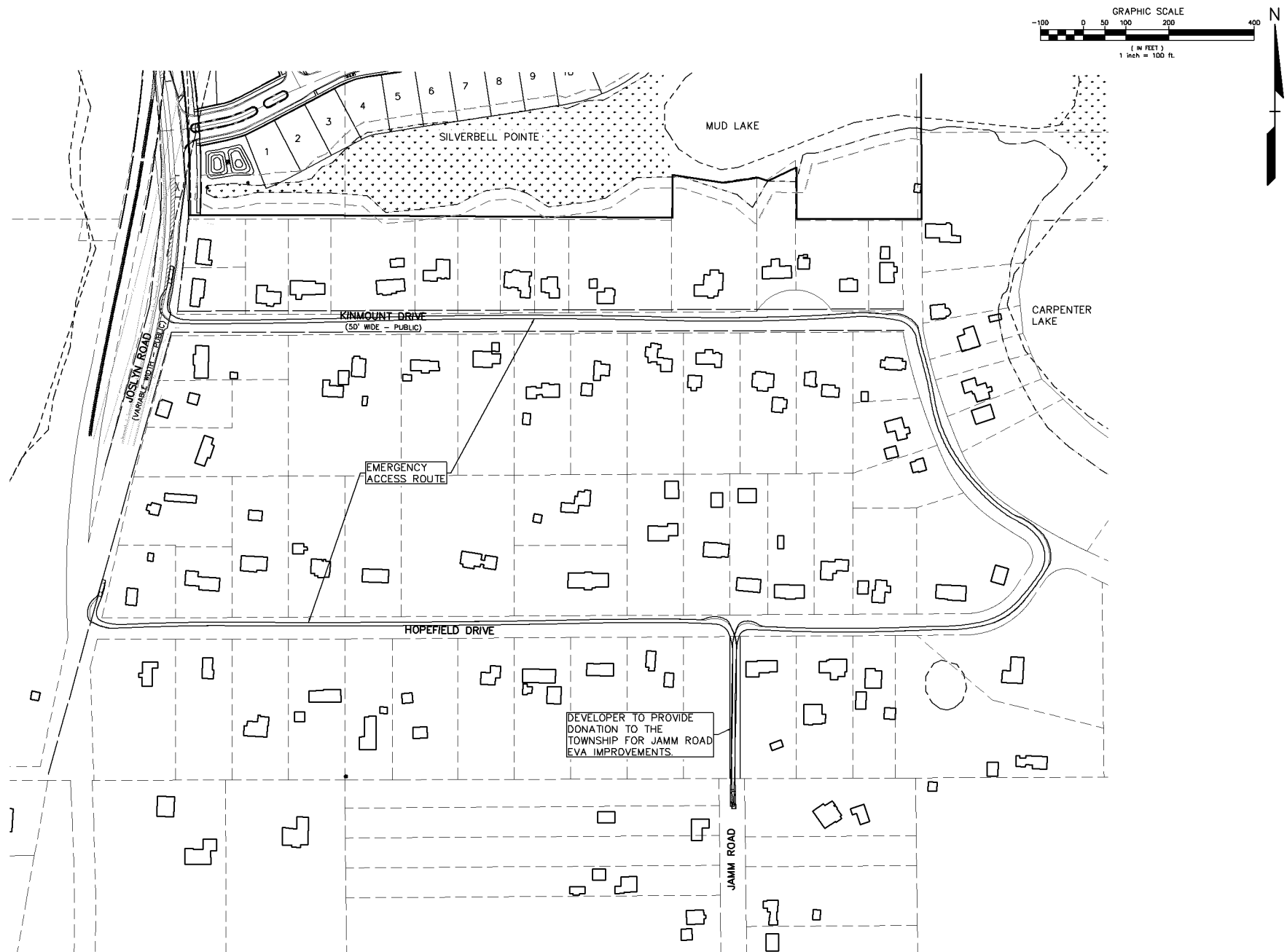
DES	TMK	DN	TMK	SUR	KTR	P.M.	JE
UNAPPROVED DIMENSION AND PAVING PLAN - 10/15/2010 (10/15/2010)							

ORIGINAL ISSUE DATE: MARCH 17, 2020
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SCALE: 1" = 60'

DRAWING NUMBER:
C-2.1

	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216	217	218	219	220	221	222	223	224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239	240	241	242	243	244	245	246	247	248	249	250	251	252	253	254	255	256	257	258	259	260	261	262	263	264	265	266	267	268	269	270	271	272	273	274	275	276	277	278	279	280	281	282	283	284	285	286	287	288	289	290	291	292	293	294	295	296	297	298	299	300	301	302	303	304	305	306	307	308	309	310	311	312	313	314	315	316	317	318	319	320	321	322	323	324	325	326	327	328	329	330	331	332	333	334	335	336	337	338	339	340	341	342	343	344	345	346	347	348	349	350	351	352	353	354	355	356	357	358	359	360	361	362	363	364	365	366	367	368	369	370	371	372	373	374	375	376	377	378	379	380	381	382	383	384	385	386	387	388	389	390	391	392	393	394	395	396	397	398	399	400	401	402	403	404	405	406	407	408	409	410	411	412	413	414	415	416	417	418	419	420	421	422	423	424	425	426	427	428	429	430	431	432	433	434	435	436	437	438	439	440	441	442	443	444	445	446	447	448	449	450	451	452	453	454	455	456	457	458	459	460	461	462	463	464	465	466	467	468	469	470	471	472	473	474	475	476	477	478	479	480	481	482	483	484	485	486	487	488	489	490	491	492	493	494	495	496	497	498	499	500	501	502	503	504	505	506	507	508	509	510	511	512	513	514	515	516	517	518	519	520	521	522	523
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CAUTION!!
 WE LOCK DOWN AND RELOCATE ALL EXISTING AND
 UNDER-CONSTRUCTION UTILITIES BEFORE
 DRIVING AND/OR APPROPRIATING. NO GUARANTEE. IF
 A FAILURE OCCURS OR DAMAGES TO THE
 CONTRACTOR'S OR ANY OTHERS' PROPERTY,
 THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE
 COST OF REMEDIATING THE EXISTING UTILITIES AND
 EXISTING AND UNDER-CONSTRUCTION UTILITIES.

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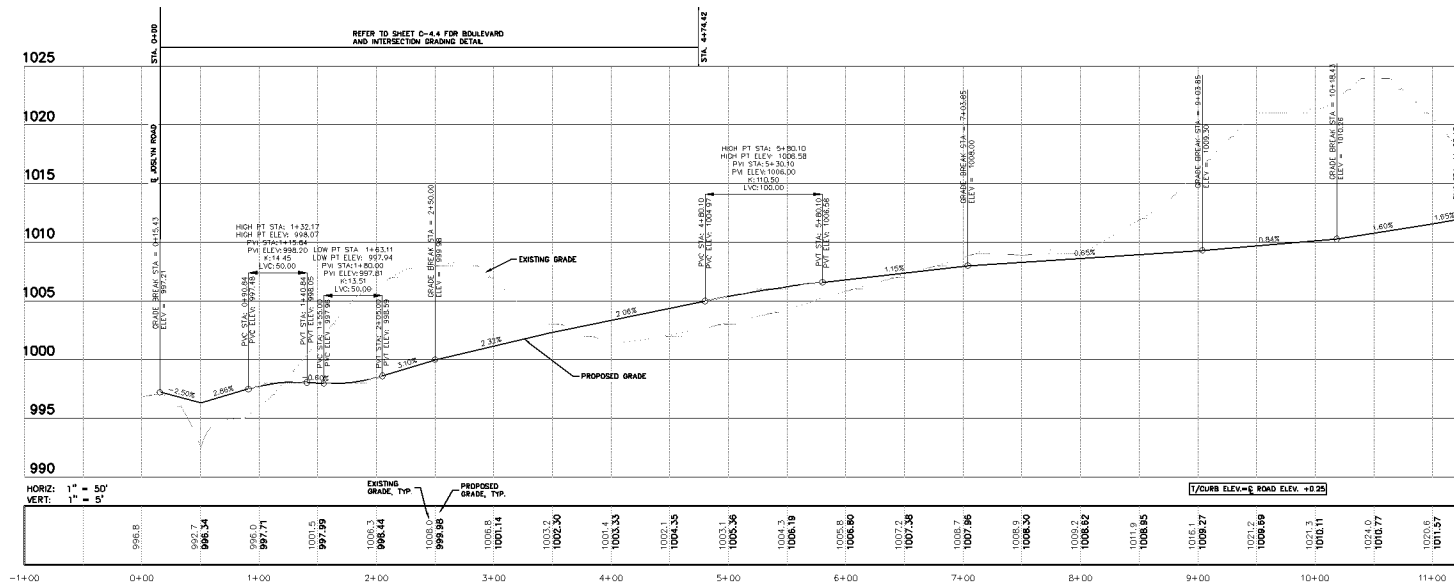
ORIGINAL ISSUE DATE:
MARCH 17, 2020

PEA JOB NO. 2018-150

SCALE: 1" = 100'

DRAWING NUMBER:
C-2.2

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>REF: S:\PROJECTS\2018\2018150\DWG\18150-TOPGRAPH.DWG
>REF: S:\PROJECTS\2018\2018150\DWG\FINAL PUD\18150-BASE-18150.DWG
>REF: S:\PROJECTS\2018\2018150\DWG\FINAL PUD\18150-TBL-18150.DWG
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REVISIONS

CAUTION!!
This drawing is for informational purposes only. It is not to be used for construction or for any other purpose without the approval of the engineer of record. The engineer of record is not responsible for any errors or omissions in this drawing. The user of this drawing is responsible for its proper use and interpretation.

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ROAD PROFILES - STA. 0+00 TO 11+00
SILVERBELLE POINTE
PART 1 OF THE 24 LOTS IN SILVERBELLE POINTE, TOWNSHIP OF GORDON, COUNTY OF MACQUINN, MICHIGAN
SCALE: 1" = 50'
DRAWING NUMBER: C-3.1

ORIGINAL ISSUE DATE
MARCH 17, 2020
PEA JOB NO. 2019-150
SCALE: 1" = 50'
DRAWING NUMBER: C-3.1

THESE NOTES APPLY TO ALL CONSTRUCTION ACTIVITIES ON THIS PROJECT

1. CONTRACTOR TO FIELD VERIFY ALL EXISTING TREES AND BRUSH AND REMOVE ALL THAT ARE NECESSARY TO GRAD E SITE

2. ALL GRADES ARE TO TOP OF PAVEMENT UNLESS OTHERWISE NOTED

3. THE STAGING OF CONSTRUCTION ACTIVITIES SHALL OCCUR ONLY WITHIN THE SITE BOUNDARIES. ALL STAGING SHALL BE CONFINED TO THE SITE. SQUARES SHALL BE BUILT AT THE SOLE RESPONSIBILITY AND RISK OF THE CONTRACTOR

4. ALL SOIL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL MEET THE REQUIREMENTS OF THE CURRENTLY APPLICABLE EROSION CONTROL PERMIT MUST BE SECURED FROM THE COUNTY PRIOR TO CONSTRUCTION

5. SEE ADDITIONAL GRADING AND EARTHWORK NOTES ON DETAIL SHEET C-5.0

6. REFER TO SHEET C-5.0 FOR ALL SOIL EROSION AND SEDIMENTATION CONTROL MEASURES

7. ALL DISTURBED AREAS SHALL BE SEEDED AND MULCHED OR MOUND IN ACCORDANCE WITH THE LANDSCAPE PLAN. PROVIDE A MINIMUM OF 3" OF MULCH OVER ALL AREAS

8. THE CONTRACTOR SHALL NOT EXISTING UNDERGROUND UTILITIES WITHIN AND ADJACENT TO THE SITE. BACKFILL FOR EXISTING UTILITY TRENCHES SHALL BE WITH ANY AVAILABLE MATERIAL. IF NO AVAILABLE MATERIAL IS AVAILABLE OR UNSUITABLE BACKFILL MATERIAL, IN THE OPINION OF THE GEOTECHNICAL ENGINEER, THE CONTRACTOR SHALL PROVIDE A MINIMUM OF 12" OF COMPACTED BUILDING OR PAYMENT SHALL BE COMPLETELY EXCAVATED AND BACKFILLED WITH A MINIMUM OF 12" OF COMPACTED BUILDING OR PAYMENT

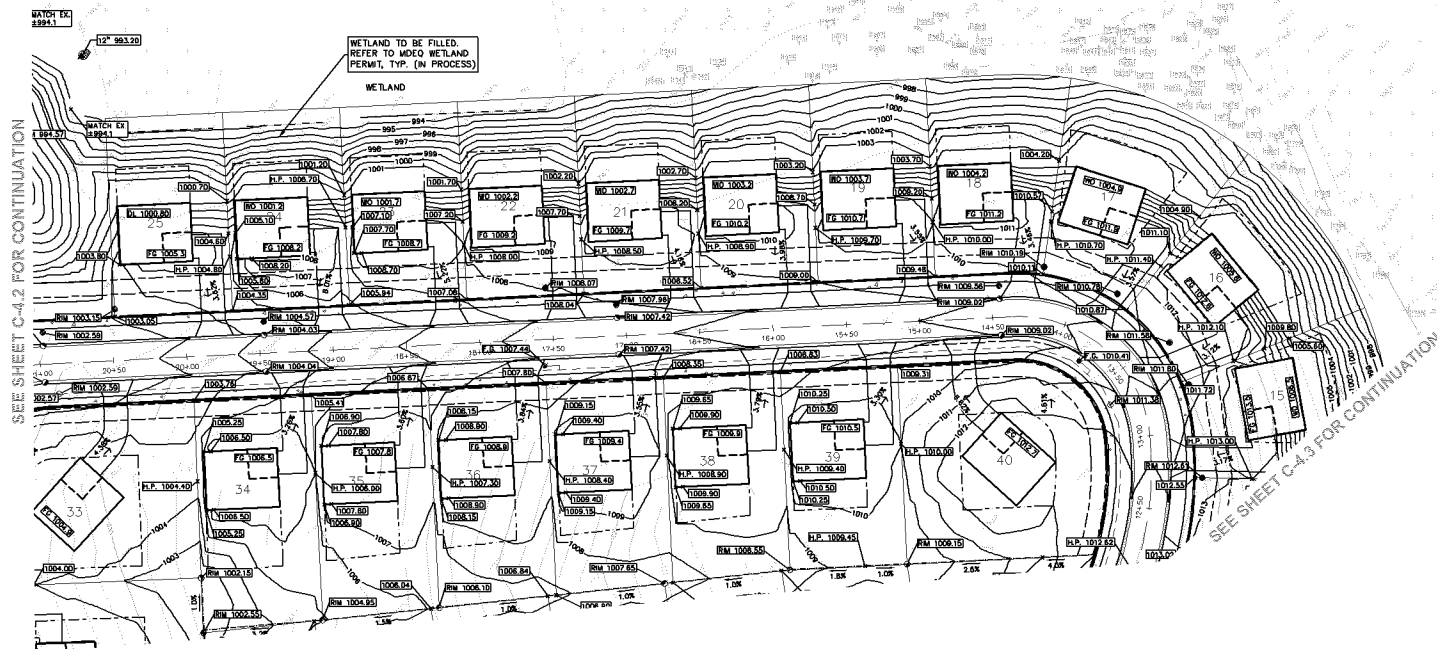
PROPOSED SPOT GRADE ELEVATION. ALL GRADES INDICATED ARE TOP OF PAVEMENT UNLESS OTHERWISE NOTED.

PROPOSED CONTOUR LINE

THE CONTRACTOR SHALL BE RESPONSIBLE FOR IMPORTING OR EXPORTING ALL MATERIALS AS REQUIRED TO PROPERLY GRADE THIS PROJECT TO THE FINISHED ELEVATIONS SHOWN ON THE APPROVED PLANS. THE CONTRACTOR SHALL MAKE THEIR OWN DETERMINATION OF CUT AND FILL QUANTITIES AND ALLOW FOR REMOVAL OF EXCESS OR IMPORTATION OF ADDITIONAL MATERIAL AT NO ADDITIONAL COST TO THE OWNER.

REFER TO SHEETS C-3.1 TO C-3.3 FOR ROAD PROFILES.

DAYLIGHT = DL = 4.5' BELOW FINISH GRADE
WALKOUT = WO = 7' BELOW FINISH GRADE
NOTE: THE LOWEST REAR YARD GRADE
SHALL BE 996.9.

[illegible]

SEE SHEET C-4.2 FOR CONTINUATION

CAUTION!!

WE LOCK PORTS AND EXITS OF DATA AND UNDERSTANDING OF THE INFORMATION GIVEN IS NOT NEARLY APPROPRIATE, AND GUARANTEE A FURTHER APPROVED OR REJECTED TO THE COMPANY'S AND ACCURACY THEREOF. THE CONTRACTORS ARE EXCLUSIVELY RESPONSIBLE FOR DETERMINING THE LOCATION OF ALL LOCATIONS AND EXITS AND PRIOR TO THE START OF CONSTRUCTION.

IN ORDERING AND DESIGNING THE PROJECT OF ME, AND THE ME, SUBMITTED TO THE COMPANY, WE HAVE NOT BEEN USED, REPRODUCED, OR COPIED IN WHOLE OR IN PART, OR USED IN A MANNER OR FOR A PURPOSE OTHER THAN THE PROJECT FOR WHICH ME, AND ALL COMPANY PRODUCTS OF COMPANY AND SUBSIDIARIES.

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FARMINGTON HILLS MICHIGAN 48334

GRADING PLAN - NORTH
SILVERBELL - POINTE

UP THE SE 1/4 OF SEC11UN 28 & NE 1/4 SEC11UN 33, T14N, R11E,
ORION TOWNSHIP, OAKLAND COUNTY, MICHIGAN

DATE: 02-28-19
BY: J. B. JENSEN, PLS
CHECKED: J. B. JENSEN, PLS
DATE: 02-28-19

DATE	BY	CHKD	DATE	DATE	TIME	DATE	TIME	DATE	TIME
02-28-19	J. B. JENSEN, PLS	02-28-19	J. B. JENSEN, PLS	02-28-19	J. B. JENSEN, PLS	02-28-19	J. B. JENSEN, PLS	02-28-19	J. B. JENSEN, PLS

ORIGINAL ISSUE DATE:	MARCH 17, 2020
PEA JOB NO.	2018-150
SCALE:	1" = 40'
DRAWING NUMBER:	

C-4.1

>REF: S:\PROJECTS\2018\2018150\DWG\18150-10PCBASE.DWG
>REF: S:\PROJECTS\2018\2018150\DWG\FINAL PUD\3-BASE-18150.DWG
>REF: S:\PROJECTS\2018\2018150\DWG\FINAL PUD\3-BASE-18150.DWG

NOTE:
DAYLIGHT = DL = 4.5' BELOW FINISH GRADE
WALKOUT = WD = 7' BELOW FINISH GRADE
NOTE: ALL BASEMENT GRADES SHALL BE X
FT ABOVE THE LAKE

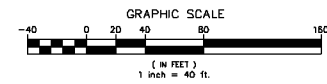
SYMBOLS: GRADING

PROPOSED SPOT GRADE ELEVATION. ALL GRADES INDICATED ARE TOP OF PAVEMENT UNLESS OTHERWISE NOTED.

PROPOSED CONTOUR LINE

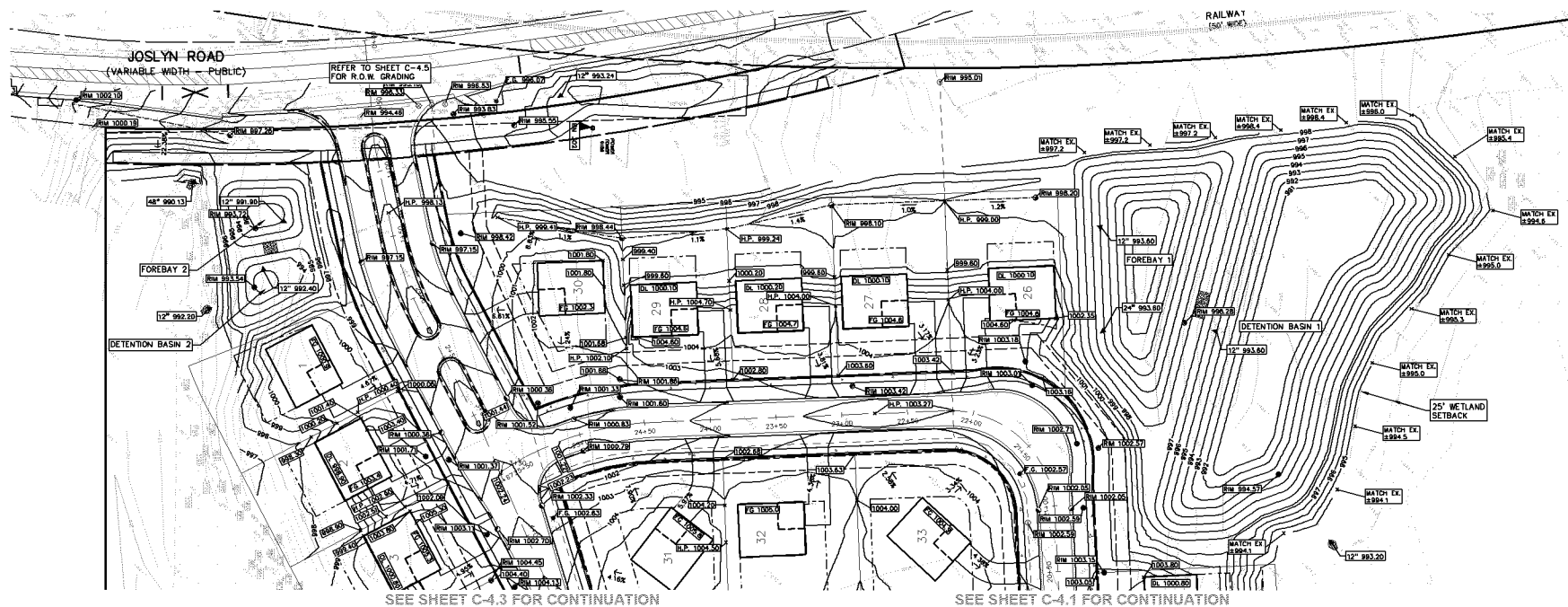
EARTHWORK BALANCING NOTE:

THE CONTRACTOR SHALL BE RESPONSIBLE FOR IMPORTING OR EXPORTING ALL MATERIALS AS REQUIRED TO PROPERLY GRADE THIS PROJECT TO THE FINISHED ELEVATIONS SHOWN ON THE APPROVED PLANS. THE CONTRACTOR SHALL MAKE THEIR OWN DETERMINATION OF CUT AND FILL QUANTITIES AND ALLOW FOR REMOVAL OF EXCESS OR IMPORTATION OF ADDITIONAL MATERIAL AT NO ADDITIONAL COST TO THE OWNER.



LEGEND

- [illegible]



SEE SHEET C-4.3 FOR CONTINUATION

SEE SHEET C-4.1 FOR CONTINUATION

[illegible]

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30180 ORCHARD LAKE ROAD, SUITE 160
FARMINGTON HILLS, MICHIGAN 48334

GRADING PLAN - WEST
SILVERBELL POINT

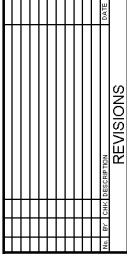
UP THE SE 1/4 OF SECTION 28 & NE 1/4 SECTION 33, T40N, R11E,
ORION TOWNSHIP, OAKLAND COUNTY, MICHIGAN

TAK	DN	THK	SUR.	KTR	P.M.	J
CONTRACT NO. 100 SILVERBELL POINT CONDO - PROJECTING KITCHEN - 4) 9/16/12 - 9/16/12						

ORIGINAL ISSUE DATE:	MARCH 17, 2020
SEA JOB NO.	2018-150
SCALE:	1" = 40'
DRAWING NUMBER:	

C-4.2

\REF: S:\PROJECTS\2018\2018150\DWG\18150-TOPCBA3E.DWG
 \REF: S:\PROJECTS\2018\2018150\DWG\FINAL_PUD\18150-BASE-18150.DWG
 \REF: C:\FRED\PROJECTS\2018\2018150\DWG\18150-TOPCBA3E.DWG
 \REF: C:\FRED\PROJECTS\2018\2018150\DWG\FINAL_PUD\18150-BASE-18150.DWG



SCALE: 1"=20'



C-4.4

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>REF: S:\PROJECTS\2018\2018150\DWG\18150-TOPGRAPH.DWG
>REF: S:\PROJECTS\2018\2018150\DWG\FINAL PUD\18150-BASE-18150.DWG
>REF: S:\PROJECTS\2018\2018150\DWG\FINAL PUD\18150-TBL-18150.DWG
```


CORRUGATED PLASTIC PIPE MEET AASHTO M294, TYPE 5 REQUIREMENTS FOR STORM SEWERS FROM 12" TO 24" DIAMETERS, MAY BE USED IN THIS DEVELOPMENT. HOWEVER, PRIOR TO APPROVAL OF THE STORM SYSTEM OR START OF ROAD PAVING A MANUFACTURER'S CERTIFICATE OF COMPLIANCE WITH THESE REQUIREMENTS SHALL BE SUBMITTED TO THE ROAD COMMISSION OF OAKLAND COUNTY. ALSO, THE CONTRACTOR SHALL PROVIDE AN INSPECTION REPORT AND DEFORMATION RECORD AS SELECTED BY THE ROAD COMMISSION. DEFORMATION BY THE CONTRACTOR USING A NIPPOINT MANDEL. ENGINEER CERTIFICATION THAT THE PIPE HAS PASSED THESE TESTS SHALL BE SUBMITTED TO THE ROAD COMMISSION FOR OAKLAND COUNTY.

SIDEWALKS, SIDEWALKS AND CURB OPENINGS SHALL BE ACCORDING TO D.D.S.TANDARD PLAN R-26 AND A.D.A. STANDARD. CROSS SLOPES SHALL BE MAINTAINED ON ALL CROSSED SLOPES AND WHERE THEY CROSS STREETS. SIDEWALKS THAT CROSS DRIVEWAYS SHALL MAINTAIN CROSS SLOPES NO GREATER THAN 2% WHERE THEY CROSS A DRIVEWAY IN ADDITION TO OTHER REQUIREMENTS. SIDEWALKS SHALL BE CONSTRUCTED TO REMAIN IN COMPLIANCE WITH A.D.A. REQUIREMENTS AND BE INSPECTED BY THE R.C.O.C.'S FACILITIES THAT ARE NOT IN COMPLIANCE WITH A.D.A. REQUIREMENTS SHALL BE REMOVED AND REPLACED.

MDOT COVER "C" (WITH TYPE "K" FRAME), "K", "B", "E" REQUIRED WITHIN ROAD RIGHT-OF-WAY. ALSO ALLOWED ARE EJV 70B5/NEENAH R-3034-B OR APPROVED EQUAL AND EJV 7300/NEENAH R-3508-A2 OR APPROVED EQUAL.

THE PROPRIETOR SHALL INSURE THAT OPEN DISCHARGE OF SUMP PUMPS INTO THE ROAD RIGHT-OF-WAY DOES NOT OCCUR.

VERIFICATION OF TOWNSHIP APPROVAL FOR SANITARY SEWER AND WATER MAIN TESTS MUST BE SUBMITTED AND FOUND ACCEPTABLE BY THE R.C.O.C., PRIOR TO ANY CONCRETE PAVING OR ASPHALT BEING PLACED.

PROPER SIGNING IS REQUIRED BEFORE ANY WORK IN R.O.W. IS STARTED.

LANE CLOSURES RESTRICTED TO 9-3 MONDAY - FRIDAY.

MAINTAIN TWO-WAY TRAFFIC AT ALL TIMES.

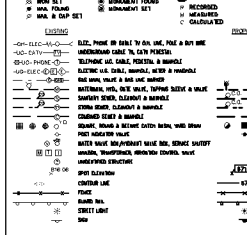
FLAG PERSON REQUIRED FOR TEMPORARY ONE LANE ROADS.

THESE NOTES APPLY TO ALL CONSTRUCTION ACTIVITIES ON THIS PROJECT

1. CONTRACTOR TO FIELD VERIFY ALL EXISTING TREES AND BRUSH AND REMOVE ALL REMAINS OF THEM TO BE SHOWN ON SITE.
2. ALL GRASSES ARE TO TOP OF PAYMENT UNLESS OTHERWISE NOTED.
3. THE STARTING OF CONSTRUCTION ACTIVITIES SHALL OCCUR ONLY WITHIN THE SITE BOUNDARIES; ANY CONSTRUCTION ACTIVITIES OUTSIDE OF THE SITE BOUNDARIES WILL BE AT THE RISK OF THE CONTRACTOR.
4. ALL SOIL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL MEET THE REQUIREMENTS OF OAKLAND COUNTY, AN EQUALLY STRONG PERMIT MUST BE OBTAINED PRIOR TO CONSTRUCTION.
5. SET ADDITIONAL GRADING AND LANDMARK NOTES ON DETAIL SHEET C-5.0
6. REFER TO SHEET C-5.0 FOR ALL SOIL EROSION AND SEDIMENTATION CONTROL MEASURES AND NOTES.
7. ACCORDANCE WITH THE LANDSCAPE PLAN, PROVIDE A MINIMUM OF 3" OF MULCH UNDER ALL TREES SHOWN.
8. THE CONTRACTOR SHALL NOT EXCEED UNDERSIDE LIMBING UTILITY WITHTHIN AND ADJACENT TO THE SITE. BACKFILL FOR EXISTING UTILITY TRENCHES SHALL BE REFINISHED TO ORIGINAL FINISH GRADE OR BETTER. ALL EXISTING UTILITIES TO BE REMOVED OR UNSUITABLE BACKFILL MATERIAL IN THE COMPANY OF THE ECONOMICITY OF THE PROJECT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPOSED BUILDING OR PAVEMENT SHALL BE COMPLETELY EXCAVATED AND BACKFILLED TO ORIGINAL FINISH GRADE OR BETTER.

BRASS PLUG SET
1/2" x 1/4" x 1/4" x 1/4"

SEC. CORNER FOUNG



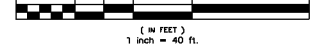
PROPOSED SPOT GRADE ELEVATION. ALL GR...

INDICATED ARE TOP OF PAYEMENT UNLESS OTHERWISE NOTED.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR

ALL MATERIALS AS REQUIRED TO PROPERLY GRADE THIS PROJECT TO THE FINISHED ELEVATIONS SHOWN ON THE APPROVED PLANS. THE CONTRACTOR SHALL MAKE THEIR OWN DETERMINATION OF CUT AND FILL QUANTITIES AND ALLOW FOR REMOVAL OF EXCESS OR IMPORTATION OF ADDITIONAL MATERIAL AT NO ADDITIONAL COST TO THE OWNER.

0 20 40 80 160



SIDEWALK RAMP TYPE B'

CURB DROP ONLY

REFER TO LATEST M.D.O.T. R-28 STANDARD RAMP
AND DETECTABLE WARNING DETAILS



CAUTION!

THE LOCKING AND UNLOCKING OF THE DOOR AND UNLOCKING OF THE LOCKS ON THE DOOR MUST BE DONE BY AN AUTHORIZED PERSON. THE LOCKS ARE NOT TO BE USED FOR ANY OTHER PURPOSES. THE LOCKS ARE NOT TO BE USED FOR ANY OTHER PURPOSES. THE LOCKS ARE NOT TO BE USED FOR ANY OTHER PURPOSES.

THE LOCKING AND UNLOCKING OF THE DOOR AND UNLOCKING OF THE LOCKS ON THE DOOR MUST BE DONE BY AN AUTHORIZED PERSON. THE LOCKS ARE NOT TO BE USED FOR ANY OTHER PURPOSES. THE LOCKS ARE NOT TO BE USED FOR ANY OTHER PURPOSES.

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SILVERBELLE POINT
PARCEL OF THE SW 1/4 OF SEC.17 UN.28 & NE 1/4 SEC.15 UN.35 T14N R7E
LION STATION, OAKLAND COUNTY, MICHIGAN

	DES.	TWK.	DWN.	PNTK.	CHRG.	SURFACER	MATERIAL	P.M.	JBT
2016-2017-2018-2019-2020	10	1	1	1	1	1	1	1	1

ORIGINAL ISSUE DATE:
MARCH 17, 2020

PEA JOB NO. 2018-150

SCALE: 1" = 40'

DRAWING NUMBER:
C-4.5

1. THE SLO EROSION CONTROLS WILL BE MAINTAINED WEEKLY AND AFTER EVERY STORM EVENT BY:

-
- The graph displays the daily number of COVID-19 cases in Serbia. The x-axis is labeled 'Time' and ranges from March 1, 2020, to May 1, 2020. The y-axis is labeled 'Number of cases' and ranges from 0 to 10,000. The data shows a significant rise in cases starting in mid-March, reaching a peak of approximately 10,000 cases in early April, followed by a steady decline to around 2,000 cases by May 1, 2020.

START DAY	END DAY	
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SILT FENCE	4350 LF
LOW POINT INLET FILTER	22 EA.
RYOB INLET FILTER	13 EA.
TEMPORARY CONSTRUCTION ACCESS DRIVE	1 EA.



— ■ — (SJ-2) SILT FENCE

- REFER TO O.C.W.R.C. SOIL EROSION AND SEDIMENTATION

3. ACCORDING TO "SOIL SURVEY OF OAKLAND COUNTY, MICHIGAN" THE

- PROPERTY DESCRIPTION:

(Combined parcel as surveyed by PEA Inc.)

Part of the southeast and southwest 1/4

the south of Section 16, Town 14 North, Range 10 East, Orion Township, Oakland County, Michigan being more particularly described as:

Commencing at the South 1/4 corner of said Section 28, thence N00°54'48", 1037.64 feet along the north-south 1/4 mile of said section to the south line of Silverbrook Road (86' wide) N00°54'48", 336.39 feet; thence S00°00'00", 1087.57 feet to the east-west 1/4 mile of said section; thence along said line S89°44'51", 99.50 feet; thence S00°20'21", 1319.24 feet to the north line of "Superior" Plat of Lakeview Subdivision" as recorded in Liber 53, Page 21, Oakland County Records; thence along said line S00°00'00", 1087.57 feet to the east-west 1/4 mile of said section; thence the following four courses along the waters edge of Mud Lake, S64°09'49", 74.39 feet and N70°02'23", 24.20 feet and S81°33'02", 81.02 feet and N61°09'09", 121.30 feet to the northern extension of the west line of Lot 12 of said superior's plat; thence along said line S00°00'00", 1087.57 feet to the east-west 1/4 mile of said section; thence along said line, N89°37'34", 76.83 feet to a 3/8" iron in a 4" square concrete monument; thence continuing along said north line, N89°50'57", 353.34 feet to the east-west line of Road (86' wide) as recorded in Liber 53, Page 122, Oakland County Records; thence along said line S00°00'00", 509.14 feet to the point of curve to the left having a radius of 900.83 feet and a chord that bears N05°17'23", 507.63 feet to the east line of the Canadian National Rail Road Right-of-Way (50' wide); thence the following four courses along said north line, N00°00'00", 1087.57 feet and S00°00'00", 1087.57 feet and S00°00'00", 1087.57 feet and S00°00'00", 1087.57 feet to the south line of said section; thence along said south line, N61°37'17", 1037.64 feet to the south 1/4 corner of said Section 28.

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SEQUENCE OF CONSTRUCTION

1. SEE DALLAS COUNTY W.R.D. SOIL EROSION AND SEDIMENTATION CONTROL DETAILS SHEET FOR ALL SOIL DISTURBED AREAS. REPAIR ALL EROSION DAMAGE.
2. INSTALL SALT FENCE & INSTALL INLET FILTERS ON EXISTING STORM SEWER STRUCTURES, ACCORDING TO PLANS.
3. INSTALL TEMPORARY CRUSHED LIMESTONE AGGREGATE ACCESS DRIVE AT ALL CONSTRUCTION DISTURBED AREAS. (50/24"VS) 8"MINIMUM OF 1"-3" CRUSHED AGGREGATE (NO FINES).
4. REMOVE CURB, PAVEMENT, TREES, ETC. AS DIRECTED ON THE DEMOLITION PLAN.
5. STRIP AND STOCKPILE TOPSOIL FOR RESTORATION REQUIREMENTS.
6. REMOVE ALL EXCESS, UNDESIRABLE MATERIALS OFF SITE IN A LEGAL MANNER, NO BURN OR BURY PITS ALLOWED.
7. UNDESIRABLE MATERIALS CANNOT BE, BUT ARE NOT NECESSARILY LIMITED TO THE FOLLOWING: CONCRETE, BRICKS, BRUSH, STUMPS, LIMBS, LIMBS, UNDESIRABLE DEBRIS OR TRASH.
8. WASTE GRADE THE SITE IN ACCORDANCE WITH THE PLANS.
9. INSTALL SEED, MULCH AND EROSION CONTROL, BLANKETS AS SHOWN ON THE PLAN WITHIN 5 DAYS OF COMPLETION OF WASTE GRADING OR WHICHEVER DISTURBED AREAS WILL REMAIN UNCOVERED FOR 30 DAYS OR MORE. TOPSOIL WILL BE LAYERED ON AFTER VEGETATION IS ESTABLISHED.
10. COMPLETE ROUGH GRADING OF SITE AND INSTALL UTILITIES. PLACE INLET FILTERS AT ALL INLETS AND CATCH BASINS, AS SHOWN.
11. CLEAN AND PAVE SITE AS PROPOSED TO DRAIN TO STORM SEWER SYSTEM. REPAIR INLET FILTERS AS REQUIRED.
12. APPLY TOPSOIL, SEED AND MULCH/STRIP TO ALL DISTURBED AREAS. UPON COMPLETION OF GRADING, THE CONTRACTOR SHALL STOP CONSTRUCTION ACTIVITIES IN ORDER TO MINIMIZE THE EXPOSURE OF UNSTABILIZED AREAS.
13. CLEAN PAVEMENT AND STORM SEWERS. REMOVE SALT FENCE, AND INLET FILTERS ONCE VEGETATION HAS BEEN ESTABLISHED.
14. CLEAN DETENTION BASIN AND OVERTFLOW SPILLWAYS AND REPAIR RPPR AS NECESSARY.
15. ALL DIRT AND MUD TRACKED ONTO PUBLIC ROADS SHALL BE REMOVED DAILY.
16. STREET CATCH BASINS TO BE PERIODICALLY CLEANED AND FILTER CLOTH CHANGED AND MAINTAINED.

CAUTION!

NEVER ALLOW THE EXHAUSTION OF BATTERY OR OVERHEATING OF THE MOTOR TO OCCUR. ALWAYS STOP THE PUMP IMMEDIATELY IF THE MOTOR OVERHEATS OR THE BATTERY OVERHEATS OR THE PUMP OVERHEATS. ALWAYS STOP THE PUMP IMMEDIATELY IF THE MOTOR OVERHEATS OR THE BATTERY OVERHEATS OR THE PUMP OVERHEATS. ALWAYS STOP THE PUMP IMMEDIATELY IF THE MOTOR OVERHEATS OR THE BATTERY OVERHEATS OR THE PUMP OVERHEATS.

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PART I

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ORIGINAL ISSUE DATE:
MARCH 17, 2020

PEA JOB NO. 2018-150

SCALE: 1" = 60'

DRAWING NUMBER:

050

C-5.0

CROSSING	CROSSING PIPE 1	CROSSING PIPE 2	Clearance	NOTES
1	8" SAN T/P= 987.84	8" WM B/P= 984.78	6.95	
2	15" ST B/P= 995.19	8" WM T/P= 993.89	1.50	DIP WATER MAIN
3	12" ST B/P= 995.19	8" SAN T/P= 996.30	1.40	
4	12" ST T/P= 996.69	8" WM B/P= 996.19	1.50	
5	24" ST B/P= 993.30	8" SAN T/P= 991.99	1.51	
6	12" ST B/P= 992.33	8" SAN T/P= 993.80	6.53	
7	8" SAN T/P= 993.87	8" WM B/P= 990.63	6.97	
8	48" ST B/P= 998.47	8" SAN T/P= 998.91	2.56	
9	12" ST B/P= 992.76	8" SAN T/P= 993.03	9.74	
10	12" ST B/P= 993.01	10" WM T/P= 987.56	5.45	
11	12" ST B/P= 993.70	8" SAN T/P= 987.72	5.98	
12	12" ST B/P= 992.27	8" WM T/P= 990.77	1.50	DIP WATER MAIN
13	12" ST B/P= 993.99	8" WM T/P= 992.49	1.50	DIP WATER MAIN
14	8" SAN T/P= 991.37	8" WM T/P= 997.30	3.93	
15	24" ST B/P= 993.74	8" WM T/P= 992.24	1.50	DIP WATER MAIN
16	48" ST B/P= 998.42	10" WM T/P= 998.14	3.28	
17	12" ST B/P= 999.03	10" WM T/P= 995.22	0.91	

SANITARY SEWER BASIS OF DESIGN

(Unit Factors Based on Oakland County Unit Assignment Factors)
Residential Dwelling

INITIAL DESIGN	Number of Lots	46.0
	REU	46.0
	Population (P) (2.44 PCPE/REU)	112 People
	Average Flow (150 GPCPD)	11,300 G.P.D.
		0.817 C.F.S.
	P (100%)	6.112
	Peak Flow (G.P.D.)	47,374 G.P.D.
	Peak Flow (C.F.S.)	0.673 C.F.S.

ULTIMATE DESIGN	Number of Lots	46.0
	REU	46.0
	Population (P) (2.44 PCPE/REU)	112 People
	Average Flow (150 GPCPD)	11,300 G.P.D.
		0.817 C.F.S.
	P (100%)	6.112
	Peak Flow (G.P.D.)	47,374 G.P.D.
	Peak Flow (C.F.S.)	0.673 C.F.S.

WATER MAIN BASIS OF DESIGN

(Unit Factors Based on Oakland County Unit Assignment Factors)
Residential Dwelling

INITIAL DESIGN	Number of Lots	46.0
	REU	46.0
	Population (P) (2.44 PCPE/REU)	112 People
	Average Flow (150 GPCPD)	11,300 G.P.D.
		0.817 C.F.S.
	P (100%)	6.112
	Peak Flow (G.P.D.)	47,374 G.P.D.
	Peak Flow (C.F.S.)	0.673 C.F.S.

ULTIMATE DESIGN	Number of Lots	46.0
	REU	46.0
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		0.817 C.F.S.
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	Peak Flow (C.F.S.)	0.673 C.F.S.

SANITARY SEWER QUANTITIES:

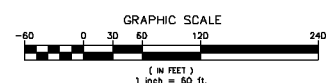
8" PVC TRUSS PIPE	2572 LF
4" DIA. MANHOLE	21 EA.

WATER MAIN QUANTITIES:

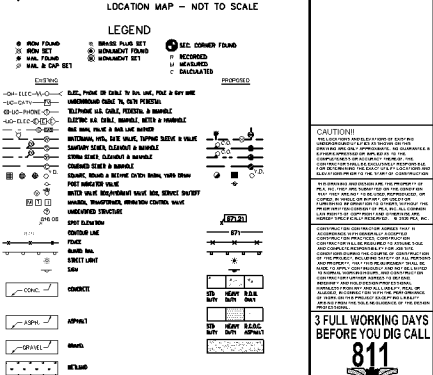
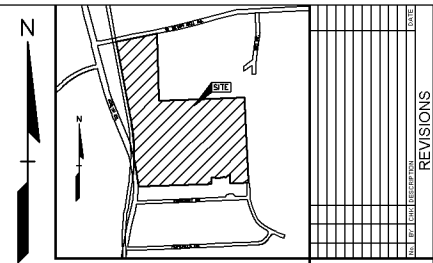
8" D.I.W. CLASS 54	243 LF
8" GATE VALVE AND WELL	8 EA.
HYDRANT ASSEMBLY	8 EA.
RELOCATE HYDRANT	1 EA.

STORM SEWER QUANTITIES:

8" HDPE UNDERDRAIN	918 LF
12" RCP CL-V PIPE	3227 LF
10" RCP CL-V PIPE	367 LF
18" RCP CL-V PIPE	218 LF
24" RCP CL-V PIPE	268 LF
48" RCP CL-V PIPE	48 LF
12" CONC. END SECTION W/ BAR GRATE	9 EA.
24" CONC. END SECTION W/ BAR GRATE	1 EA.
4" DIA. CATCH BASIN	34 EA.
4" DIA. MANHOLE	17 EA.



NOTE:
CONTRACTOR TO VERIFY ALL QUANTITIES. ANY
DEVIATIONS TO THE PLAN QUANTITIES SHALL
BE BROUGHT TO THE ATTENTION OF PEA, INC.
FOR VERIFICATION, PRIOR TO BIDDING.



GENERAL UTILITY NOTES

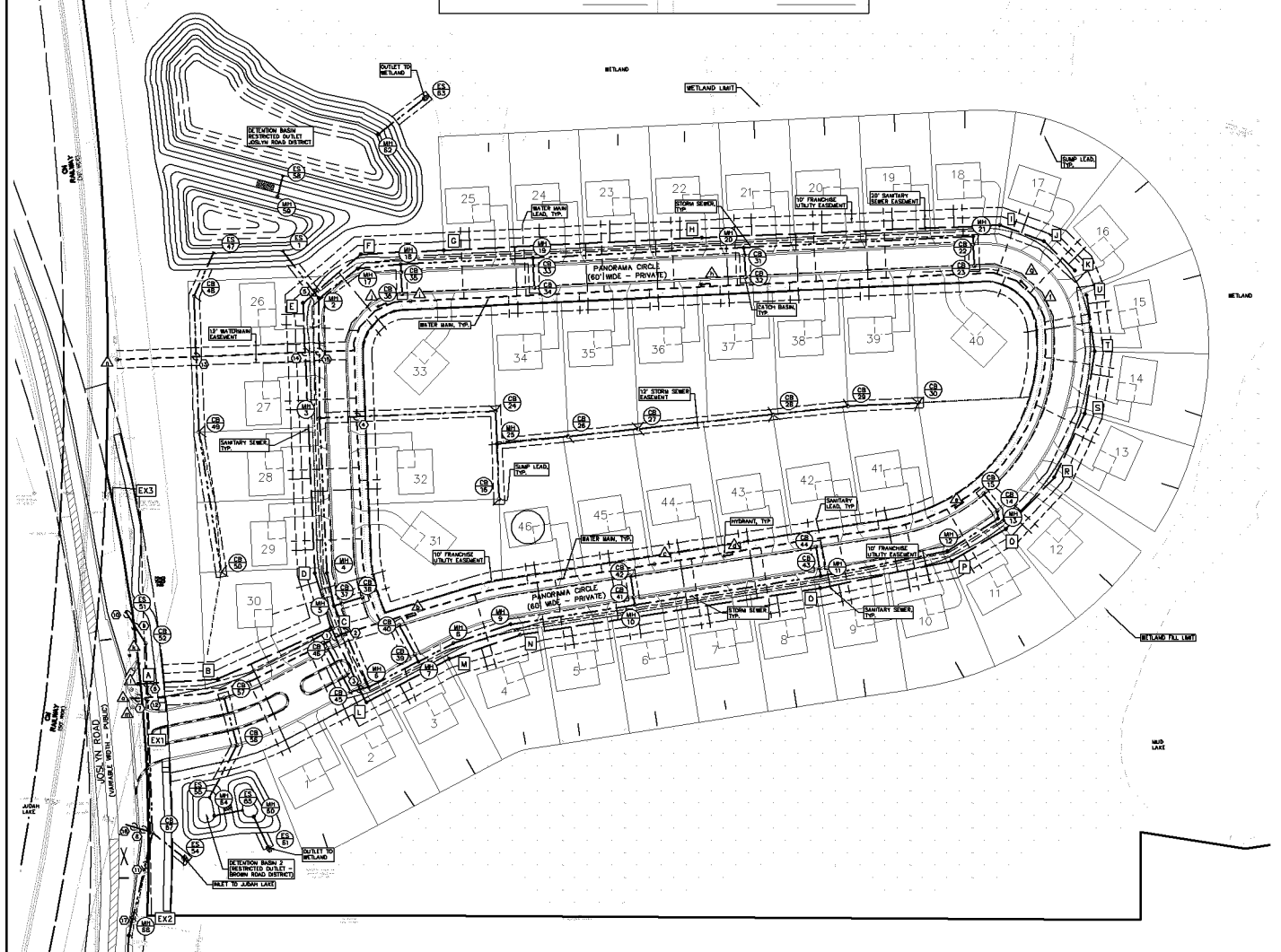
- ALL UTILITY LINES, STRUCTURES AND TRENCHES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE STANDARDS AND REQUIREMENTS OF ORION TOWNSHIP.
- NO PHYSICAL CONNECTION TO THE EXISTING WATER MAIN CAN BE MADE UNTIL ALL NEW WATER MAIN PASSES PRESSURE AND BACTERIOLOGICAL TESTS TO THE SATISFACTION OF THE TOWNSHIP.
- REFER TO DETAIL SHEETS C-10.0 FOR ADDITIONAL UTILITY DETAILS AND NOTES.
- ALL WATER MAIN AND FITTINGS (3" DIAMETER AND LARGER) SHALL BE DUCTILE IRON, CLASS 54.
- WATER MAIN SERVICE LEADS SHALL BE TYPE "X" ANNEALED SEAMLESS COPPER WITH FLARED FITTINGS, UNLESS OTHERWISE NOTED.
- ALL WATER MAIN SHALL BE PROVIDED WITH 5.5' OF COVER UNLESS OTHERWISE NOTED.
- ALL FIRE HYDRANTS SHALL BE LHM #500 MODEL #250 PER TOWNSHIP STANDARDS.
- ALL HYDRANTS TO BE A MINIMUM OF 5' FROM BACK OF CURB, TYP.
- ALL NECESSARY FITTINGS, THRUST BLOCKS, RESTRAINING GLANDS, BLOW OFFS, ETC. FOR WATER MAIN ARE CONSIDERED INCIDENTAL TO THIS PROJECT. THE CONTRACTOR SHALL INSTALL THESE ITEMS AS NECESSARY AND AS REQUIRED BY ORION TOWNSHIP.
- THE WATER MAIN CONTRACTOR SHALL NOTIFY THE INSPECTION SECTION OF THE DETROIT WATER AND SEWER DEPARTMENT AT (313) 433-4882 AT LEAST THREE WORKING DAYS IN ADVANCE OF STARTING CONSTRUCTION.
- ALL SANITARY SEWER 8" OR LARGER SHALL BE P.V.C. TRUSS PIPE (ASTM D2080) AND FITTINGS, WITH ELASTOMERIC GASKET JOINTS PER ASTM D3212 UNLESS OTHERWISE NOTED.
- ALL SANITARY SEWER LEADS SHALL BE POLYVINYL CHLORIDE (PVC) SDR 35.5 PIPE AND FITTINGS. ALL JOINTS TO BE ELASTOMERIC GASKET JOINTS PER ASTM D3212 UNLESS OTHERWISE NOTED.
- SANITARY LEADS SHALL BE PROVIDED WITH CLEANOUTS EVERY 100 FEET AND AT EVERY BEND AS SHOWN. ALL CLEANOUTS TO BE PROVIDED WITH E.I.W. #1500 BOX OR EQUAL.
- ALL STORM SEWER 12" DIAMETER OR LARGER SHALL BE REINFORCED CONCRETE PIPE (RCP) C-70 CLASS IV WITH MODIFIED TOWNSHIP AND GROOVE JOINT WITH RUBBER GASKETS UNLESS SPECIFIED OTHERWISE (ASTM C-443).
- ALL STORM SEWER LEADS SHALL BE PVC SCHEDULE 40 WITH GULF JOINTS UNLESS OTHERWISE NOTED.
- PIPE LENGTHS ARE GIVEN FROM CENTER OF STRUCTURE AND TO END OF FLARED END SECTION UNLESS OTHERWISE NOTED.
- THE ORION TOWNSHIP STANDARD DETAIL SHEETS ARE INCORPORATED INTO AND MADE A PART OF THESE PLANS. CONTRACTOR TO REFER TO THE ORION TOWNSHIP STANDARD DETAIL SHEETS FOR ALL STRUCTURE, PIPE MATERIALS, BEDDING, TESTING, ETC. NOTES AND DETAILS.

PUBLIC UTILITY EASEMENTS

ALL SANITARY SEWERS 12" AND LARGER IN DIAMETER ARE TO BE PUBLIC AND SHALL BE LOCATED IN A 20' WIDE EASEMENT. ALL WATER MAIN SHALL BE LOCATED IN A 20' WIDE EASEMENT.

STORM SEWER FRAME & COVER NOTES

- CATCH BASIN/MANHOLE WITHIN CURB
USE MDOOT TYPE "C" COVER WITH MDOOT "X" FRAME
- CATCH BASIN/MANHOLE WITHIN GRASS AREAS
USE E.I.W. #1000 WITH TYPE "D" BECHME COVER
- MANHOLE
USE MDOOT TYPE "B" COVER



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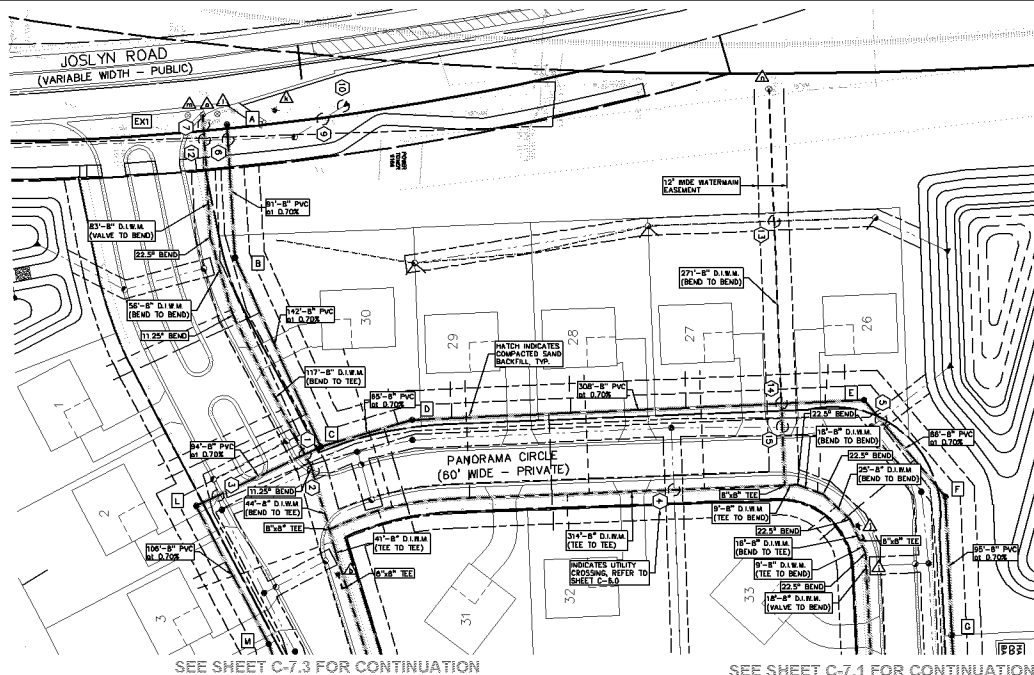
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FARMINGTON HILLS, MICHIGAN 48334
OVERALL UTILITY PLAN
SILVERBELLE POINTE
PHASE 1 OF THE 24 LOTS IN SILVERBELLE POINTE, PHASE 1, LOT 1, H.T.E.
ORION TOWNSHIP, ORION AND COUNTY, MICHIGAN
PROJECT NO. 2018-150
DATE: 03/17/2020

ORIGINAL ISSUE DATE:
MARCH 17, 2020
PEA JOB NO. 2018-150
SCALE: 1" = 60'
DRAWING NUMBER:

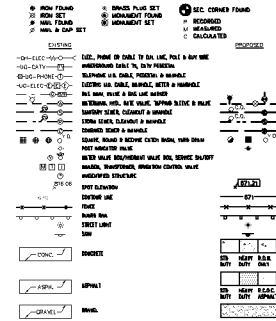
C-6.0



SAND BACKFILL NOTE:
ALL UTILITIES UNDER PAYEMENT OR WITHIN 3' OF THE EDGE OF
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PAYEMENT) SHALL HAVE M.D.C.T. CLASS II GRANULAR BACKFILL
COMPACTED TO 95% MAX. DRY DENSITY (ASTM D-1557).

NOTE
SEE 9
NOTES

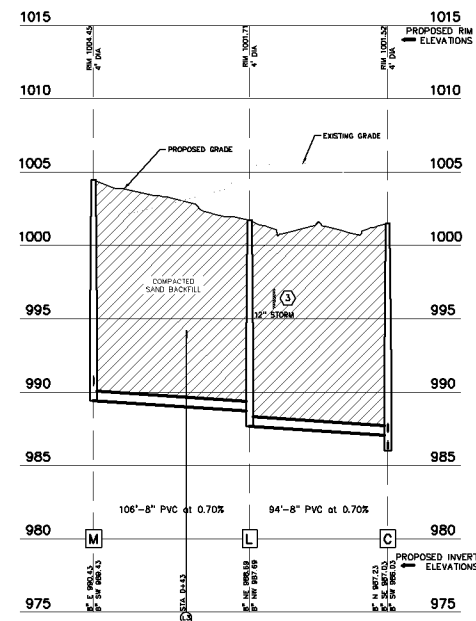
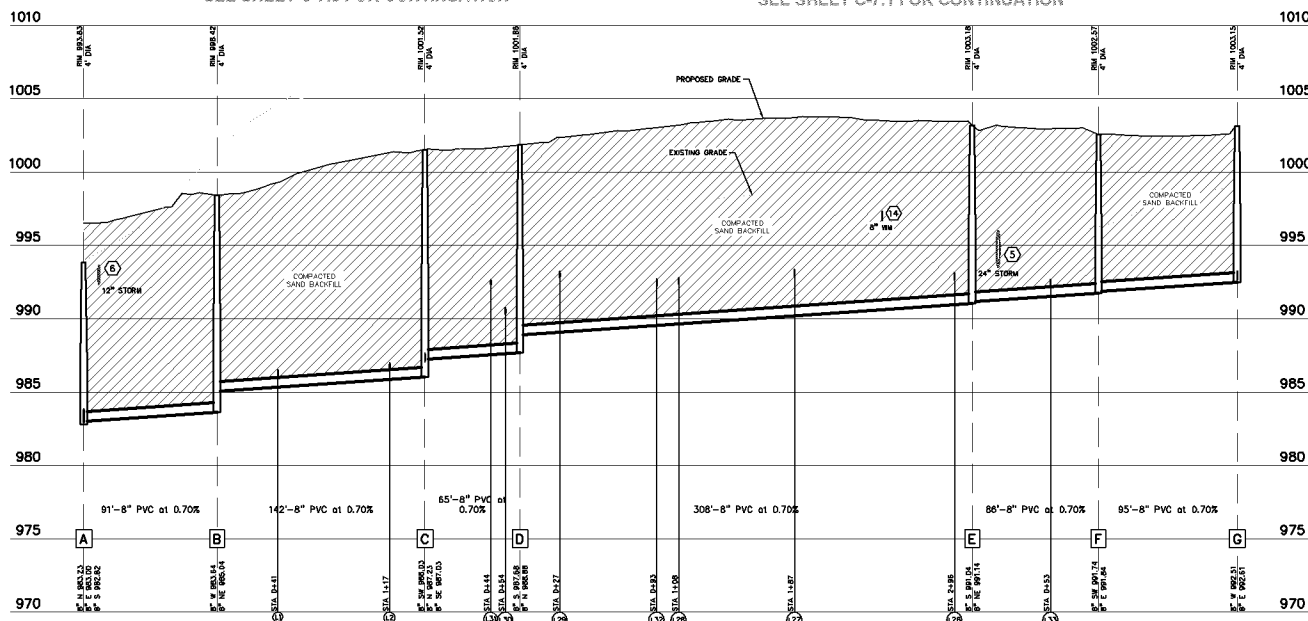
LEGEND



SANITARY STRUCTURES	
A	$MH = (+6^{\circ} \text{ D.})$ $FM = 983.83$ $S^{\circ} E = 983.00$ $S^{\circ} E = 983.50$ $S^{\circ} N = 983.23$
B	$MH = (+6^{\circ} \text{ D.})$ $FM = 998.42$ $S^{\circ} NE = 998.04$ $S^{\circ} N = 983.64$
C	$MH = (+6^{\circ} \text{ D.})$ $FM = 991.52$ $S^{\circ} N = 987.23$ $S^{\circ} E = 987.03$ $S^{\circ} SW = 985.03$
D	$FM = 1003.86$ $S^{\circ} E = 987.00$ $S^{\circ} S = 987.68$
E	$FM = 983.18$ $S^{\circ} NE = 991.14$ $S^{\circ} S = 987.04$
F	$FM = 1002.57$ $S^{\circ} E = 981.94$ $S^{\circ} SW = 981.74$
G	$FM = 1003.15$ $S^{\circ} E = 992.01$ $S^{\circ} N = 989.51$
L	$MH = (+6^{\circ} \text{ D.})$ $FM = 987.71$ $S^{\circ} NE = 985.59$ $S^{\circ} NW = 987.89$
M	$FM = 1004.45$ $S^{\circ} E = 980.43$ $S^{\circ} E = 981.73$

HYDRANTS	
b	HYDRANT ASSEMBLY F.Q. = 1002.63
i	HYDRANT ASSEMBLY F.Q. = 1002.57
k	HYDRANT ASSEMBLY F.Q. = 998.07
WATER MAIN STRUCTURES	
a	GV IN WELL RIM = 993.16
i	GV IN WELL RIM = 1002.59
l	GV IN WELL RIM = 996.53
m	GV IN WELL RIM = 996.33
n	GV IN WELL RIM = 996.01

SANITARY SEWER LEADS									
Line #	Sanitary Sewer Main Lead In at least	Lead Invert at Main (Feet)	Lead Length (LF)	Lead Slope (%)	Lead Dia. (in)	House F. (Feet)	Riser at Main (Ft)	Stub Invert at Entry	Riser at Stub (Ft)
L-1	905.33	906.39	110	3.56%	6	1000.90		999.99	
L-2	905.89	906.53	106	5.56%	6	1003.40		992.40	
L-3	908.99	909.69	25	2.57%	6	1003.30	4	994.30	
L-6	900.95	901.62	25	3.01%	6	1004.60	1	993.60	
L-7	900.19	900.96	25	2.56%	6	1003.60	1	992.60	
L-8	908.64	909.31	25	5.55%	6	1004.70	2	993.70	
L-9	909.07	909.74	25	3.44%	6	1004.60	3	995.60	
L-10	901.61	908.28	25	4.07%	6	1002.30	2	991.30	
L-11	907.51	908.21	78	3.33%	6	1005.60	4	994.60	
L-12	909.63	909.30	78	2.27%	6	1005.00	4	994.00	
L-13	907.51	902.18	85	2.03%	6	1004.90	3	993.90	

[illegible]

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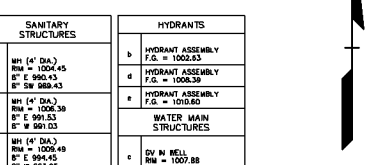
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30180 ORCHARD LAKE ROAD, SUITE 150
FARMINGTON HILLS, MICHIGAN 48334

**SANITARY AND WATER MAIN PLAN - WEST
SILVERBELL POINTE**

PART 1 OF THE SET FOR THE 20' WIDE CONCRETED DRIVE IN SECTION 33, TOWN OF
ORION TOWNSHIP, OAKLAND COUNTY, MICHIGAN

DES	TMK	DN	DR	CON	CMK	CON	KTR	PM	JBT
PROJECT NO. 2018-005, 2018-006, 2018-007, 2018-008, 2018-009, 2018-010, 2018-011, 2018-012, 2018-013, 2018-014, 2018-015, 2018-016, 2018-017, 2018-018, 2018-019, 2018-020, 2018-021, 2018-022, 2018-023, 2018-024, 2018-025, 2018-026, 2018-027, 2018-028, 2018-029, 2018-030, 2018-031, 2018-032, 2018-033, 2018-034, 2018-035, 2018-036, 2018-037, 2018-038, 2018-039, 2018-040, 2018-041, 2018-042, 2018-043, 2018-044, 2018-045, 2018-046, 2018-047, 2018-048, 2018-049, 2018-050, 2018-051, 2018-052, 2018-053, 2018-054, 2018-055, 2018-056, 2018-057, 2018-058, 2018-059, 2018-060, 2018-061, 2018-062, 2018-063, 2018-064, 2018-065, 2018-066, 2018-067, 2018-068, 2018-069, 2018-070, 2018-071, 2018-072, 2018-073, 2018-074, 2018-075, 2018-076, 2018-077, 2018-078, 2018-079, 2018-080, 2018-081, 2018-082, 2018-083, 2018-084, 2018-085, 2018-086, 2018-087, 2018-088, 2018-089, 2018-090, 2018-091, 2018-092, 2018-093, 2018-094, 2018-095, 2018-096, 2018-097, 2018-098, 2018-099, 2018-100, 2018-101, 2018-102, 2018-103, 2018-104, 2018-105, 2018-106, 2018-107, 2018-108, 2018-109, 2018-110, 2018-111, 2018-112, 2018-113, 2018-114, 2018-115, 2018-116, 2018-117, 2018-118, 2018-119, 2018-120, 2018-121, 2018-122, 2018-123, 2018-124, 2018-125, 2018-126, 2018-127, 2018-128, 2018-129, 2018-130, 2018-131, 2018-132, 2018-133, 2018-134, 2018-135, 2018-136, 2018-137, 2018-138, 2018-139, 2018-140, 2018-141, 2018-142, 2018-143, 2018-144, 2018-145, 2018-146, 2018-147, 2018-148, 2018-149, 2018-150, 2018-151, 2018-152, 2018-153, 2018-154, 2018-155, 2018-156, 2018-157, 2018-158, 2018-159, 2018-160, 2018-161, 2018-162, 2018-163, 2018-164, 2018-165, 2018-166, 2018-167, 2018-168, 2018-169, 2018-170, 2018-171, 2018-172, 2018-173, 2018-174, 2018-175, 2018-176, 2018-177, 2018-178, 2018-179, 2018-180, 2018-181, 2018-182, 2018-183, 2018-184, 2018-185, 2018-186, 2018-187, 2018-188, 2018-189, 2018-190, 2018-191, 2018-192, 2018-193, 2018-194, 2018-195, 2018-196, 2018-197, 2018-198, 2018-199, 2018-200, 2018-201, 2018-202, 2018-203, 2018-204, 2018-205, 2018-206, 2018-207, 2018-208, 2018-209, 2018-210, 2018-211, 2018-212, 2018-213, 2018-214, 2018-215, 2018-216, 2018-217, 2018-218, 2018-219, 2018-220, 2018-221, 2018-222, 2018-223, 2018-224, 2018-225, 2018-226, 2018-227, 2018-228, 2018-229, 2018-230, 2018-231, 2018-232, 2018-233, 2018-234, 2018-235, 2018-236, 2018-237, 2018-238, 2018-239, 2018-240, 2018-241, 2018-242, 2018-243, 2018-244, 2018-245, 2018-246, 2018-247, 2018-248, 2018-249, 2018-250, 2018-251, 2018-252, 2018-253, 2018-254, 2018-255, 2018-256, 2018-257, 2018-258, 2018-259, 2018-260, 2018-261, 2018-262, 2018-263, 2018-264, 2018-265, 2018-266, 2018-267, 2018-268, 2018-269, 2018-270, 2018-271, 2018-272, 2018-273, 2018-274, 2018-275, 2018-276, 2018-277, 2018-278, 2018-279, 2018-280, 2018-281, 2018-282, 2018-283, 2018-284, 2018-285, 2018-286, 2018-287, 2018-288, 2018-289, 2018-290, 2018-291, 2018-292, 2018-293, 2018-294, 2018-295, 2018-296, 2018-297, 2018-298, 2018-299, 2018-300, 2018-301, 2018-302, 2018-303, 2018-304, 2018-305, 2018-306, 2018-307, 2018-308, 2018-309, 2018-310, 2018-311, 2018-312, 2018-313, 2018-314, 2018-315, 2018-316, 2018-317, 2018-318, 2018-319, 2018-320, 2018-321, 2018-322, 2018-323, 2018-324, 2018-325, 2018-326, 2018-327, 2018-328, 2018-329, 2018-330, 2018-331, 2018-332, 2018-333, 2018-334, 2018-335, 2018-336, 2018-337, 2018-338, 2018-339, 2018-340, 2018-341, 2018-342, 2018-343, 2018-344, 2018-345, 2018-346, 2018-347, 2018-348, 2018-349, 2018-350, 2018-351, 2018-352, 2018-353, 2018-354, 2018-355, 2018-356, 2018-357, 2018-358, 2018-359, 2018-360, 2018-361, 2018-362, 2018-363, 2018-364, 2018-365, 2018-366, 2018-367, 2018-368, 2018-369, 2018-370, 2018-371, 2018-372, 2018-373, 2018-374, 2018-375, 2018-376, 2018-377, 2018-378, 2018-379, 2018-380, 2018-381, 2018-382, 2018-383, 2018-384, 2018-385, 2018-386, 2018-387, 2018-388, 2018-389, 2018-390, 2018-391, 2018-392, 2									

ORIGINAL ISSUE DATE: MARCH 17, 2020
PEA JOB NO. 2018-150
SCALE: 1" = 40'
DRAWING NUMBER: C-7.2



HYDRANTS	
b	HYDRANT ASSEMBLY F.G. = 1002.53
d	HYDRANT ASSEMBLY F.G. = 1008.39
e	HYDRANT ASSEMBLY F.G. = 1010.60
WATER MAIN STRUCTURES	
c	CV IN RELL P.M. = 1007.88

NOTE:
SEE SHEET C-6.0 FOR UTI
NOTES

SAND BACKFILL NOTE:
ALL UTILITIES UNDER PAVED
PAVEMENT (OR WITHIN THE
PAVEMENT) SHALL HAVE W/BE
COMPACTED TO 95% MAX.

SAND BACKFILL NOTE:
ALL UTILITIES UNDER PAVEMENT OR WITHIN 3' OF THE EDGE OF PAVEMENT (OR WITHIN THE 45° LINE OF INFLUENCE OF PAVEMENT) SHALL HAVE M.D.O.T. CLASS II GRANULAR BACKFILL COMPACTED TO 95% MAX. DRY DENSITY (ASTM D-1557).

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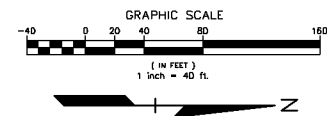
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FARMINGTON HILLS, MICHIGAN 48334

**ANITARY AND WATER MAIN PLAN - SOUTH
SILVERBELL POINTE**

PART 1 OF THE 38 1/4 OF SECTION 28 & N 1/4 SECTION 33, T14N, R11E
ORION TOWNSHIP, OAKLAND COUNTY, MICHIGAN

ES.	TMC	DN	TWK	SUR	KTR	P.M.	JBT
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ORIGINAL ISSUE DATE:	MARCH 17, 2020
PEA JOB NO.	2018-150
SCALE:	1" = 40'
DRAWING NUMBER:	C-7.3



STORM STRUCTURES		STORM STRUCTURES		END SECTIONS	
MH 2	(4' DIA./2" SLUMP) RM = 1000.37 12" NE 993.82 24" W 994.37 24" NW 993.77	CH 49	(4' DIA./2" SLUMP) RM = 999.10 12" S 994.55 12" S 994.55 12" S 994.55	1	END SECTION 24" N93.80
MH 3	(4' DIA./2" SLUMP) RM = 1000.54 12" E 994.55 12" S 994.55 24" W 994.15	CH 50	(4' DIA./2" SLUMP) RM = 998.44 12" N 992.27 12" N 992.27	47	END SECTION 12" N93.80
MH 4	(4' DIA./2" SLUMP) RM = 1000.60 12" S 994.60 12" S 994.60 12" S 994.60	CH 52	(4' DIA./2" SLUMP) RM = 995.50 12" N 992.66 12" S 992.66	51	END SECTION 12" N93.24
MH 5	(4' DIA./2" SLUMP) RM = 1000.63 12" E 995.68 12" E 995.68 12" N 995.06	CH 56	(4' DIA./2" SLUMP) RM = 997.15 12" N 992.21 12" N 992.21	54	END SECTION 48" N90.13
MH 6	(4' DIA./2" SLUMP) RM = 1000.37 12" NE 995.82 12" W 995.82 12" NW 995.82	CH 57	(4' DIA./2" SLUMP) RM = 997.15 12" N 992.46 12" N 992.46	58	END SECTION 12" N92.20
CH 37	(4' DIA./2" SLUMP) RM = 1000.51 12" E 995.50 12" W 995.50 12" W 995.50	MH 58	(4' DIA./2" SLUMP) RM = 998.28 12" S 992.71 12" S 992.71	62	END SECTION 12" N92.71
CH 37	(4' DIA./2" SLUMP) RM = 1000.51 12" E 995.50 12" W 995.50 12" W 995.50	MH 60	(4' DIA./2" SLUMP) RM = 993.54 12" E 993.38 12" E 993.38	63	END SECTION 48" N95.58
CH 37	(4' DIA./2" SLUMP) RM = 1000.51 12" E 995.50 12" W 995.50 12" W 995.50	MH 82	(4' DIA./2" SLUMP) RM = 994.57 12" E 993.40 12" E 993.40	68	END SECTION 12" N93.40
CH 45	(4' DIA./2" SLUMP) RM = 1000.36 12" W 995.91 12" E 995.91	MH 84	(4' DIA./2" SLUMP) RM = 993.72 12" E 993.55 12" E 993.55		
CH 46	(4' DIA./2" SLUMP) RM = 1000.36 12" E 995.91 12" E 995.91				
CH 48	(4' DIA./2" SLUMP) RM = 996.82 12" E 993.85 12" E 993.85				

NOTE:
SEE SHEET C-8.0 FOR UTILITY NOTES AND QUANTITIES.

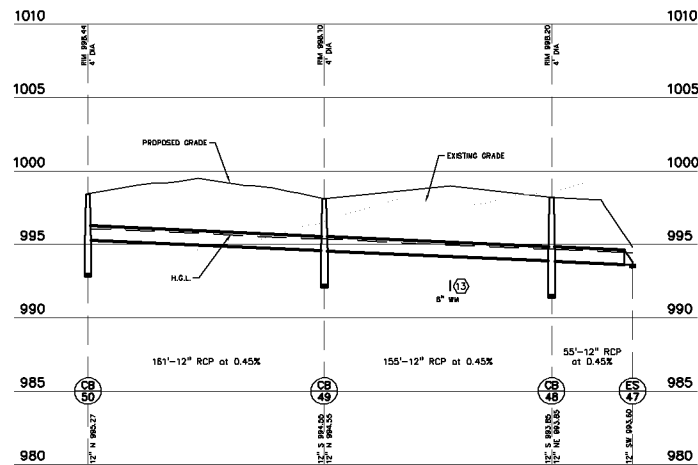
STORM SEWER FRAME & COVER NOTES

CATCH BASIN/INLET WITHIN CURB
USE MDOT TYPE 'C' COVER WITH MDOT 'X' FRAME

CATCH BASIN/INLET WITHIN GRASS AREAS
USE E.I.L.W. #1040 WITH TYPE '02' BEEHIVE COVER

MANHOLE
USE MDOT TYPE 'B' COVER

SAND BACKFILL NOTE:
ALL UTILITIES UNDER PAVEMENT OR WITHIN 3' OF THE EDGE OF PAVEMENT (OR WITHIN THE 45° LINE OF INFLUENCE OF PAVEMENT) SHALL HAVE M.D.O.T. CLASS # GRANULAR BACKFILL CONDUCTED TO ONE MAX. DRY DENSITY (ASTM D-1557).



HORIZ: 1" = 40'
VERT: 1" = 4'

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>REF: S:\PROJECTS\2018\2018150\DWG\18150- TOPCBASE.DWG
>REF: S:\PROJECTS\2018\2018150\DWG\FINAL PLOT\1- BASE- 18150.DWG
>REF: S:\PROJECTS\2018\2018150\DWG\18150- TOPCBASE.DWG
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CAUTION!!
WELDING FUMES AND EXHAUST GASES ARE DANGEROUS TO HEALTH AND MAY BE IRRITANT, TOXIC, OR FLAMMABLE. ALWAYS WEAR APPROPRIATE PPE. ALWAYS USE PROPER WELDING TECHNIQUES TO MINIMIZE EXPOSURE TO WELDING FUMES AND EXHAUST GASES. ALWAYS WEAR APPROPRIATE PPE. ALWAYS USE PROPER WELDING TECHNIQUES TO MINIMIZE EXPOSURE TO WELDING FUMES AND EXHAUST GASES. ALWAYS WEAR APPROPRIATE PPE. ALWAYS USE PROPER WELDING TECHNIQUES TO MINIMIZE EXPOSURE TO WELDING FUMES AND EXHAUST GASES.

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FARMINGTON HILLS, MICHIGAN 46334

STORM SEWER PLAN - WEST SILVERBELL POINT

PART OF THE S&T OF SECTION 23 & NE 1/4 SECTION 35, T19N, R1E, OREGON TOWNSHIP, OKLAHOMA COUNTY, MICHIGAN

DIST.	T1Mk	S1	T2K	SUR.	KTR	P.M.	J
SECTION 23-35-23-35	DN	DN	DN	DN	DN	DN	DN

ORIGINAL ISSUE DATE: MARCH 17, 2020
PEA JOB NO. 2018-150

SCALE: 1" = 40'

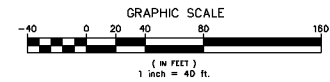
DRAWING NUMBER:
C-8.2

NOTE:
SEE SHEET C-8.0 FOR UTILITY NOTES FOR QUANTITIES.

STORM SEWER FRAME & COVER NOTES

CATCH BASIN/INLET WITHIN CURB
USE MDT TYPE 'C' COVER WITH MDT 'X' FRAME
CATCH BASIN/INLET WITHIN GRASS AREAS
USE E.J.M. #1040 WITH TYPE '102' BEEHIVE COVER
MANHOLE
USE MDT TYPE 'W' COVER

SAND BACKFILL NOTE:
ALL UTILITIES UNDER PAVEMENT OR WITHIN 3' OF THE EDGE OF PAVEMENT OR WITHIN THE 45° LINE OF INFLUENCE OF PAVEMENT SHALL HAVE M.D.O.T. CLASS II GRANULAR BACKFILL COMPACTED TO 95% MAX. DRY DENSITY (ASTM D-1557).



REVISIONS

DATE
BY
CHKD
DESCRIP

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FRANKLIN RIDGE HOMES, LLC
FARMINGTON HILLS, MICHIGAN 48334
STORM SEWER PLAN - CENTER SILVERBELLE POINTE
PANEL 1 OF THE 25 PANELS
CITY OF TOWNSHIP, OAKLAND COUNTY, MICHIGAN
PROJECT NO. 2018-150
DATE: 03/17/2020

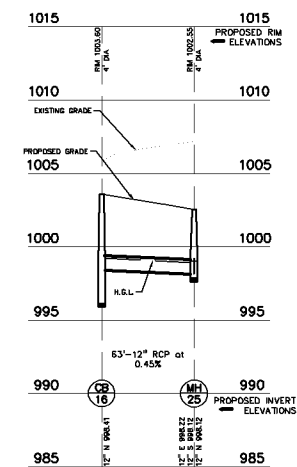
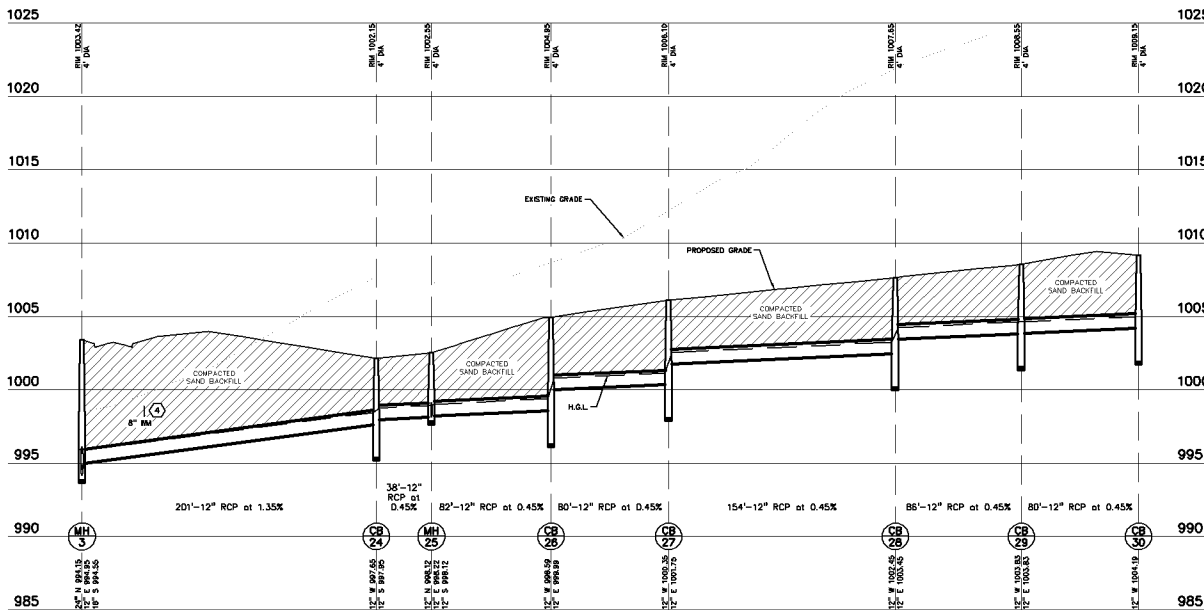
ORIGINAL ISSUE DATE: MARCH 17, 2020
PEA JOB NO. 2018-150
SCALE: 1" = 40'
DRAWING NUMBER: C-8.4

STORM STRUCTURES	
MH 3	(4' DIA./12' SLAMP) RM = 1003.42 12" E 994.50 12" S 994.55 24" W 994.15
MH 5	(4' DIA./12' SLAMP) RM = 1003.33 12" E 995.06 12" S 995.10 12" W 995.08
CB 16	(4' DIA./12' SLAMP) RM = 1003.40 12" E 995.41 12" S 995.41
CB 24	(4' DIA./12' SLAMP) RM = 1003.15 12" E 997.85 12" S 997.85
MH 25	(4' DIA./12' SLAMP) RM = 1003.35 12" E 998.22 12" S 998.12 12" W 998.12
CB 26	(4' DIA./12' SLAMP) RM = 1003.95 12" E 998.99 12" S 998.99 12" W 998.99
CB 27	(4' DIA./12' SLAMP) RM = 1003.10 12" E 1003.75 12" S 1003.35
CB 28	(4' DIA./12' SLAMP) RM = 1003.45 12" E 1003.45 12" S 1002.45
CB 29	(4' DIA./12' SLAMP) RM = 1003.53 12" E 1003.83 12" S 1003.83
CB 30	(4' DIA./12' SLAMP) RM = 1003.19 12" E 998.19 12" S 998.19
CB 37	(4' DIA./12' SLAMP) RM = 1003.33 12" E 995.50 12" S 995.50
CB 38	(4' DIA./12' SLAMP) RM = 1003.59 12" E 995.59 12" S 995.82

SEE SHEET C-8.1 FOR CONTINUATION

SEE SHEET C-8.1 FOR CONTINUATION

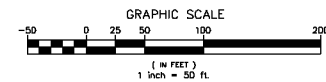
SEE SHEET C-8.3 FOR CONTINUATION



HORIZ: 1" = 40'
VERT: 1" = 4'

SHEET: 5 PROJECT: 2018-150 (STORM SEWER PLAN - CENTER SILVERBELLE POINTE)
SHEET: 5 PROJECT: 2018-150 (STORM SEWER PLAN - CENTER SILVERBELLE POINTE)
SHEET: 5 PROJECT: 2018-150 (STORM SEWER PLAN - CENTER SILVERBELLE POINTE)

REFER TO SHEET C-8.5 FOR DETENTION CALCULATIONS.



N

REVISIONS

CAUTION!
This drawing is a preliminary design and is not to be used for construction. It is the responsibility of the user to verify all dimensions and locations. The user is advised to consult the engineer for any questions or clarifications. The user is also advised to consult the local authorities for any permits or regulations that may apply to this project.

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FRANKLIN RIDGE HOMES, LLC
FARMINGTON HILLS, MICHIGAN 48334
DRAINAGE AREA PLAN
SILVERBELLE POINTE
SHEET 1 OF 1
PROJECT: 2018-150
DATE: 03/17/2020
DRAWN BY: J. B. BROWN
CHECKED BY: J. B. BROWN
APPROVED BY: J. B. BROWN

ORIGINAL ISSUE DATE:
MARCH 17, 2020

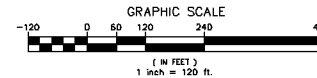
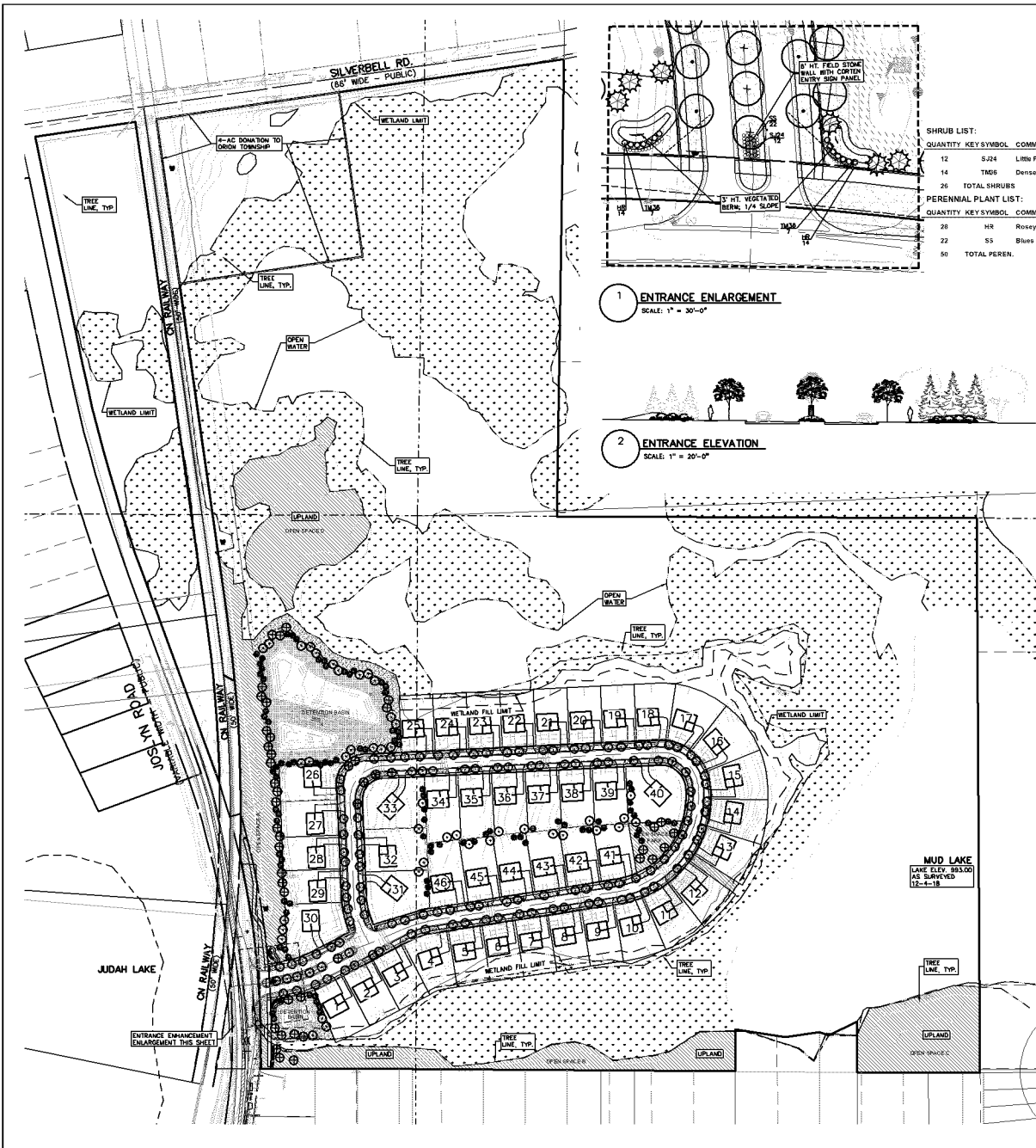
PEA JOB NO. 2018-150

SCALE: 1" = 50'

DRAWING NUMBER:

C-9.0

SHEET: S PROJECT: 2018-150 SHEET: 09 OF 10
SHEET: S PROJECT: 2018-150 SHEET: 09 OF 10
SHEET: S PROJECT: 2018-150 SHEET: 09 OF 10



- KEY:**
- = STREET TREES
 - = OPEN SPACE TREES
 - = REPLACEMENT TREES
 - = OPEN SPACE AREA
 - = NON-BRANDED SEED LAWN
 - = STORMWATER SEED MIX
 - = ECONOMY PRAIRIE SEED MIX

SHRUB LIST:

QUANTITY	KEY SYMBOL	COMMON NAME	SCIENTIFIC NAME	SIZE	SPEC.
12	SJ24	Little Princess Japanese Spirea	<i>Spiraea japonica 'Little Princess'</i>	24" Ht.	B&B
14	TMS6	Dense Yew	<i>Taxus x media 'Densiformis'</i>	36" Ht.	B&B
26		TOTAL SHRUBS			

PERENNIAL PLANT LIST:

QUANTITY	KEY SYMBOL	COMMON NAME	SCIENTIFIC NAME	SIZE	SPEC.
28	HR	Rosey Returns Daylily	<i>Hemerocallis 'Rosey Returns'</i>	Cont.	B&B
22	SS	Blues Little Bluestem	<i>Schizachyrium scoparium 'The Blues'</i>	Cont.	B&B
50		TOTAL PEREN.			

1 ENTRANCE ENLARGEMENT
SCALE: 1" = 30'-0"

2 ENTRANCE ELEVATION
SCALE: 1" = 20'-0"

Stormwater Seed Mix
CARDINO 574-58-2412
cardino@plantnurseries.com

Botanical Name	Common Name
<i>Perennial Grasses/Sedges/Rushes:</i>	
<i>Polypogon monspeliensis</i>	River Bulrush
<i>Carex cristata</i>	Crested Oat Sedge
<i>Carex lurida</i>	Butcherbush Sedge
<i>Carex lasiocarpa</i>	Brown Fox Sedge
<i>Elymus virginicus</i>	Virginia Wild Rye
<i>Olycya striata</i>	Fowl Mania Grass
<i>Juncus effusus</i>	Common Rush
<i>Leptocarpus</i>	Rice Cut Grass
<i>Panicum virgatum</i>	Switch Grass
<i>Schizanthus tuberosus</i>	Sulphur Bulrush
<i>Scirpus atrovirens</i>	Dark Green Rush
<i>Scirpus cyperinus</i>	Wood Grass

Temporary Cover:	Common Cat
<i>Avena sativa</i>	Annual Rye
<i>Lolium multiflorum</i>	Annual Rye

Economy Prairie Seed Mix
CARDINO 574-58-2412
cardino@plantnurseries.com

Botanical Name	Common Name
<i>Perennial Grasses/Sedges/Rushes:</i>	
<i>Andropogon gerardii</i>	Big Bluestem
<i>Bouteloua curtipendula</i>	Side Oats Grama
<i>Cenchrus</i>	Prairie Sedge Mix
<i>Elymus canadensis</i>	Canada Wild Rye
<i>Panicum virgatum</i>	Switch Grass
<i>Schizanthus tuberosus</i>	Little Blue Bluestem
<i>Sorghastrum nutans</i>	Indian Grass

Temporary Cover:	Common Cat
<i>Avena sativa</i>	Annual Rye
<i>Lolium multiflorum</i>	Annual Rye

LANDSCAPE CALCULATIONS:

SINGLE FAMILY - STREET TREES
2 TREES PER LOT: 40 LOTS = 80 TREES
1 TREE/ 50 LF OF ROADWAY WITHOUT LOT FRONTAGE, 543 LF OF ROAD FRONTAGE/ 50 = 11 TREES, 92 + 11 = 103 TREES REQUIRED: 103
TREES PROVIDED: 103

OPEN SPACE (W/ DETENTION, WETLANDS TO REMAIN)
SSA OF TOTAL USABLE SPACE ON SITE REQUIRED AS OPEN SPACE: 28 ACRES ± 2 = 5.8 ACRES
AREA "A" = 1.33 AC
AREA "B" = 1.23 AC
AREA "C" = 1.19 AC
AREA "D" = 1.76 AC
AREA "E" = 28 AC
TOTAL: 5.75 ACRES (250,213 SF) = 30.8% OF TOTAL AREA
1 TREE REQUIRED PER 5,000 SF = 87 TREES REQUIRED
87 TREES PROVIDED

TREE REPLACEMENT
REQUIRED: 1 TO 1 REPLACEMENT FOR WOODLAND TREES (ABOVE 4" AND NIE TREES WITHIN BUILDING ENVELOPE, ROADS, R.D.W. BANKS, UTILITIES, RETENTION/DETENTION BASINS AND DRIVEWAYS)
REPLACE TOTAL DBH OF REMOVED LANDMARK TREES
REPLACE 115 TREES AT 4" OR 8" Ht. AND 180 TREES (BY OPEN SPACE TREES AND 111 STREET TREES)
REMAINDER OF 80 TREES TO BE PAID INTO TREE FUND.

GENERAL PLANTING NOTES:

1. LANDSCAPE CONTRACTOR SHALL VISIT SITE, INSPECT EXISTING SITE CONDITIONS AND REVIEW PROPOSED PLANTING AND RELATED WORK. IN CASE OF DISCREPANCY BETWEEN PLAN AND PLANT LIST, PLAN SHALL GOVERN QUANTITIES. CONTACT LANDSCAPE ARCHITECT WITH ANY CONCERNS.
2. CONTRACTOR SHALL VERIFY LOCATIONS OF ALL ON SITE UTILITIES PRIOR TO BEGINNING CONSTRUCTION ON ANY PHASE OF WORK. ELECTRIC, GAS, TELEPHONE, CABLE TELEVISION MAY BE LOCATED BY CALLING MISS 800-482-7777. ANY DAMAGE OR INTERRUPTION OF SERVICES SHALL BE THE RESPONSIBILITY OF CONTRACTOR. CONTRACTOR SHALL COORDINATE ALL RELATED ACTIVITIES WITH OTHER TRADES ON THE JOB AND SHALL REPORT ANY UNEXPECTED JOBS OR CONDITIONS TO OWNER'S REPRESENTATIVE PRIOR TO COMMENCING.
3. ALL PLANT MATERIAL TO BE PREPARED BY LANDSCAPE STOCK AND SHALL SATISFY AMERICAN ASSOCIATION OF NURSERYMEN STANDARDS FOR NURSERY STOCK. ALL LANDSCAPE MATERIAL SHALL BE NORTHERN GROWN, NO. 1 GRADE.
4. CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL QUANTITIES SHOWN ON LANDSCAPE PLAN PRIOR TO BEGINNING THE WORK.
5. THE OWNER'S REPRESENTATIVE RESERVES THE RIGHT TO REJECT ANY PLANT MATERIAL NOT MEETING SPECIFICATIONS.
6. ALL SINGLE STEM SHADE TREES TO HAVE STRAIGHT TRUNKS AND SYMMETRICAL CROWNS.
7. ALL SINGLE TRUNK SHADE TREES TO HAVE A CENTRAL LEADER. TREES WITH FORKED OR IRREGULAR TRUNKS WILL NOT BE ACCEPTED.
8. ALL MULTI STEM TREES SHALL BE HEAVILY BRANCHED AND HAVE SYMMETRICAL CROWNS. ONE 30" DBH TREE OR THOSE WITH THIN OR OPEN CROWNS SHALL NOT BE ACCEPTED.
9. ALL EVERGREEN TREES SHALL BE HEAVILY BRANCHED AND FULL TO THE GROUND, SYMMETRICAL IN SHAPE AND BE SHAPED FOR THE LAST FIVE GROWING SEASONS.
10. ALL TREES TO HAVE CLAY OR CLAY LOAM BALLS, TREES WITH SAND BALLS WILL BE REJECTED.
11. NO MACHINERY IS TO BE USED WITHIN THE DRIP LINE OF EXISTING TREES. HAND BRUSH ALL NEW AREAS WITHIN THE DRIP LINE OF EXISTING TREES.
12. ALL TREE LOCATIONS SHALL BE STAKED BY LANDSCAPE CONTRACTOR AND ARE SUBJECT TO THE APPROVAL OF THE LANDSCAPE ARCHITECT PRIOR TO INSTALLATION OF THE PLANT MATERIAL.
13. IT IS MANDATORY THAT POSITIVE DRAINAGE IS PROVIDED AWAY FROM ALL BUILDINGS.
14. ALL PLANTING BEDS SHALL RECEIVE 3" SHREDED HAYMULCH. HAYMULCH WITH PINE NEEDLES SHALL NOT BE ACCEPTED. SHREDED PALLET AND DIED MULCH WILL NOT BE ACCEPTED.
15. ALL LANDSCAPED AREAS SHALL RECEIVE 3" COMPACTED TOPSOIL.
16. SEE SPECIFICATIONS FOR ADDITIONAL COMMENTS, REQUIREMENTS, PLANTING PROCEDURES AND WARRANTY STANDARDS.
17. FOR NON-LAWN SEED MIX AREAS, AS NOTED ON PLAN, SEEDS SHALL BE SOAKED IN WATER FOR IMMEDIATE CONTROL.

REVISIONS

NO.	DATE	DESCRIPTION
1	12-4-18	ISSUED FOR PERMITS

REVISIONS

PEA, Inc.

2400 Rochester Ct. Ste. 100
Troy, MI 48063-9872
T: 248-689-9040
F: 248-689-1044
www.peainc.com

PEA, Inc.

2400 Rochester Ct. Ste. 100
Troy, MI 48063-9872
T: 248-689-9040
F: 248-689-1044
www.peainc.com

FRANKLIN RIDGE HOMES, LLC

3030 ORCHARD LANE, SUITE 505
FARMINGTON, CT 06030-4554

LANDSCAPE PLAN
SILVERBELL POINT
PART OF TOWN OF FARMINGTON, CONNECTICUT

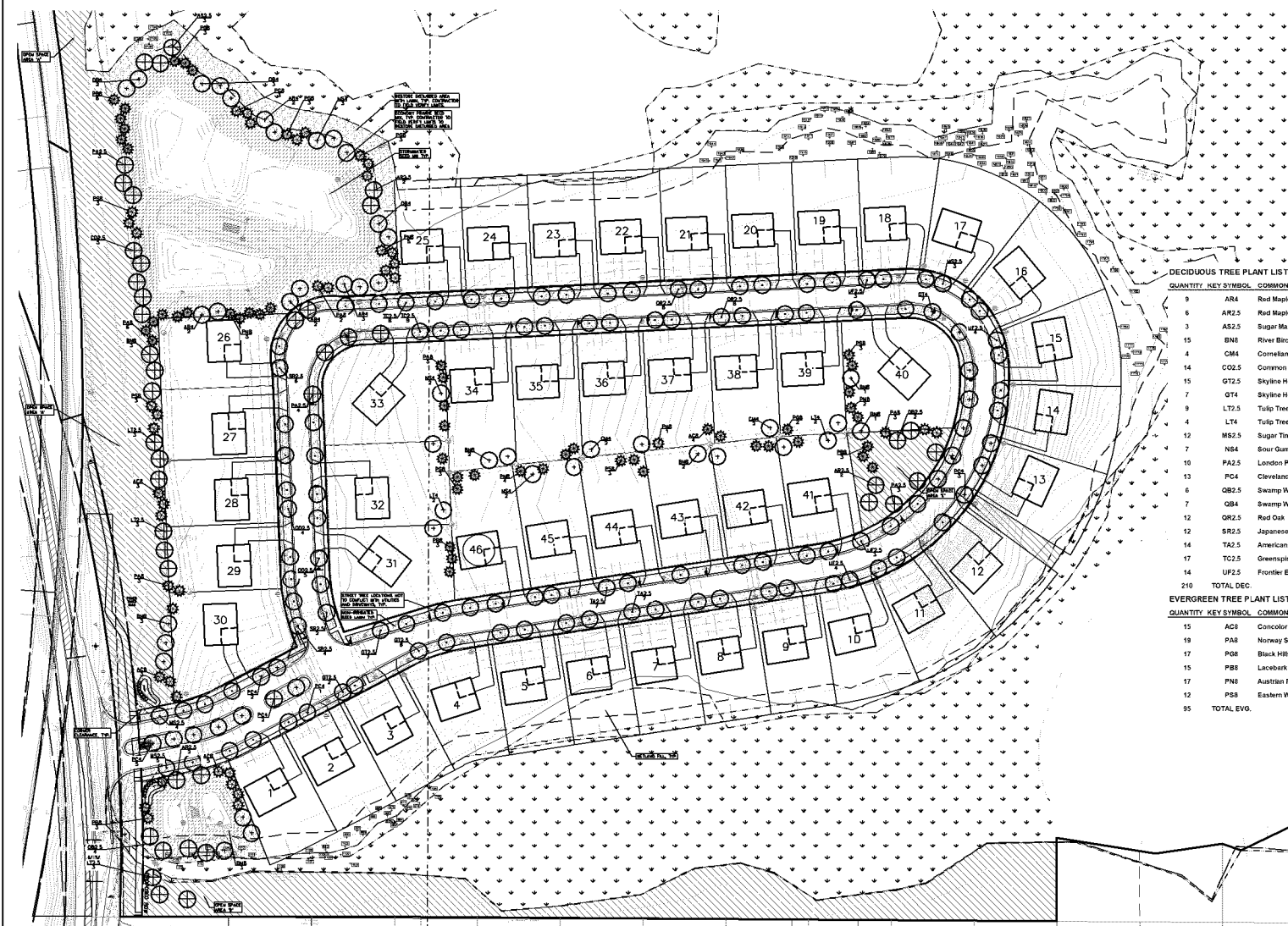
ORIGINAL ISSUE DATE:
MARCH 17, 2020

PEA JOB NO. 2019-150

SCALE: 1" = 120'

DRAWING NUMBER:
L-1.0

DESIGNED BY: J. ALLEN
CHECKED BY: J. ALLEN
DATE: 12-4-18



-  = STREET TREES
-  = OPEN SPACE TREES
-  = REPLACEMENT TREES
-  = OPEN SPACE AREA
-  = NON-IRRIGATED SEED LAWN
-  = STORM WATER SEED MIX
BY CARDNO 674-806-2472
PROVIDE EROSION MATON SLOPES
-  = ECONOMY PRAIRIE SEED MIX
BY CARDNO 674-806-2472
PROVIDE EROSION MATON SLOPES

QUANTITY	KEY SYMBOL	COMMON NAME	SCIENTIFIC NAME	SIZE	SPEC
9	AR4	Red Maple	<i>Acer rubrum</i>	4" Cal.	BAR
6	AR2.5	Red Maple	<i>Acer rubrum</i>	2.5" Cal.	BAR
3	AS2.5	Sugar Maple	<i>Acer saccharum</i> 'Green Mountain'	2.5" Cal.	BAR
15	BN8	River Birch	<i>Betula nigra</i>	8" Ht.	BAR
4	CM4	Cornelian Cherry Dogwood	<i>Cornus mas</i>	4" Cal.	BAR
14	CO2.5	Common Hackberry	<i>Celtis occidentalis</i>	2.5" Cal.	BAR
15	GT2.5	Skyline Honeylocust	<i>Gleditzia inaequalis</i> 'Skyline'	2.5" Cal.	BAR
7	GT4	Skyline Honeylocust	<i>Gleditzia inaequalis</i> 'Skyline'	4" Cal.	BAR
9	LT2.5	Tulip Tree	<i>Liriodendron tulipifera</i>	2.5" Cal.	BAR
4	LT4	Tulip Tree	<i>Liriodendron tulipifera</i>	4" Cal.	BAR
12	MS2.5	Sugar Tune Crab	<i>Malus Sugar Tyme</i>	2.5" Cal.	BAR
7	NS4	Sour Gum	<i>Nyssa sylvatica</i>	4" Cal.	BAR
10	PA2	Linden Parrotree	<i>Platanus x acerifolia</i>	2.5" Cal.	BAR
6	PC4	Cleveland Select Pear	<i>Pyrus calleryana</i> 'Cleveland Select'	4" Cal.	BAR
6	QB2.5	Swamp White Oak	<i>Quercus bicolor</i>	2.5" Cal.	BAR
7	QB4	Swamp White Oak	<i>Quercus bicolor</i>	4" Cal.	BAR
12	QR2.5	Red Oak	<i>Quercus rubra</i>	2.5" Cal.	BAR
12	SR2.5	Japanese Tree Lilac	<i>Syringa reticulata</i>	2.5" Cal.	BAR
14	TA2.5	American Linden	<i>Tilia americana</i>	2.5" Cal.	BAR
17	TC2.5	Greenspire Linden	<i>Tilia cordata</i> 'Greenspire'	2.5" Cal.	BAR
14	UF2.5	Frontier Elm	<i>Ulmus</i> 'Frontier'	2.5" Cal.	BAR

QUANTITY	KEY SYMBOL	COMMON NAME	SCIENTIFIC NAME	SIZE	SPEC
15	AC8	Concolor Fir	<i>Abies concolor</i>	8' Ht.	B&B
PA8		Norway Spruce	<i>Picea abies</i>	8' Ht.	B&B
17	P08	Black Hills Spruce	<i>Picea glauca</i> 'Densata'	8' Ht.	B&B
15	PBE	Lacebark Pine	<i>Pinus bungeana</i>	8' Ht.	B&B
17	PN8	Austrian Pine	<i>Pinus nigra</i>	8' Ht.	D&B
12	PS8	Eastern White pine	<i>Pinus strobus</i>	8' Ht.	B&B
95	TOTAL EVO.				



811
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LANDSCAPE PLAN

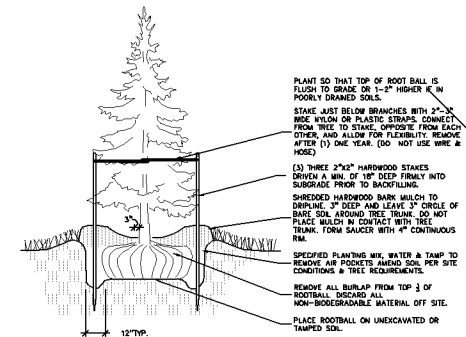
SILVERBELL POINTE

PART OF THE SE 1/4 OF SECTION 28 AND NE 1/4 SECTION 33, TOWN, R1
ORION TOWNSHIP, OAKLAND COUNTY, MICHIGAN

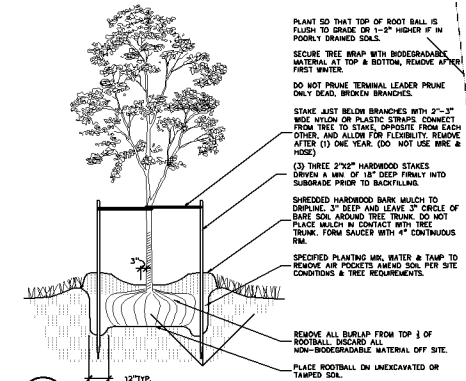
EA JOB NO. 2018-160

SCALE: 1" = 60'

RAWING NUMBER:
L-1.1



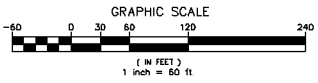
2 EVERGREEN TREE PLANTING DETAIL
SCALE: 1" = 3'-0"



1 DECIDUOUS TREE PLANTING DETAIL
SCALE: 1" = 3'-0"

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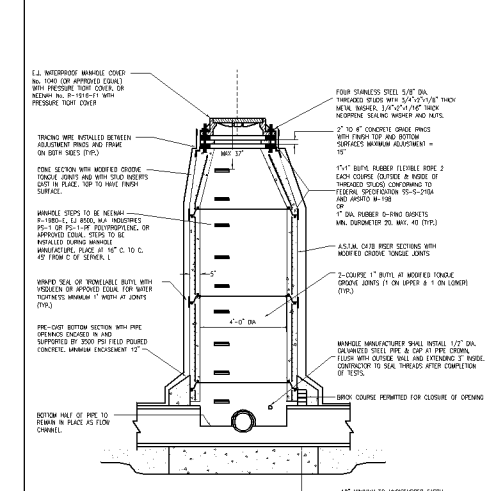
		REVISIONS NO. REV. DATE DESCRIPTION	
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		PEA, Inc. 2400 Rochester Ct. Ste. 100 Troy, MI 48063-1872 T: 248.688.9040 F: 248.688.1044 www.pea-inc.com	
FRANKLIN RIDGE HOMES, LLC 30180 ORCHARD LAKE ROAD, SUITE 150 FARMINGTON HILLS, MICHIGAN 48334		LANDSCAPE DETAILS SILVERBELL POINT PART OF THE SUBDIVISION OF LANDS IN SILVERBELL POINT, MICHIGAN	
ORIGINAL ISSUE DATE: MARCH 17, 2018		PEA JOB NO. 2018-150 SCALE: 1" = 60' DRAWING NUMBER: L-1.2	



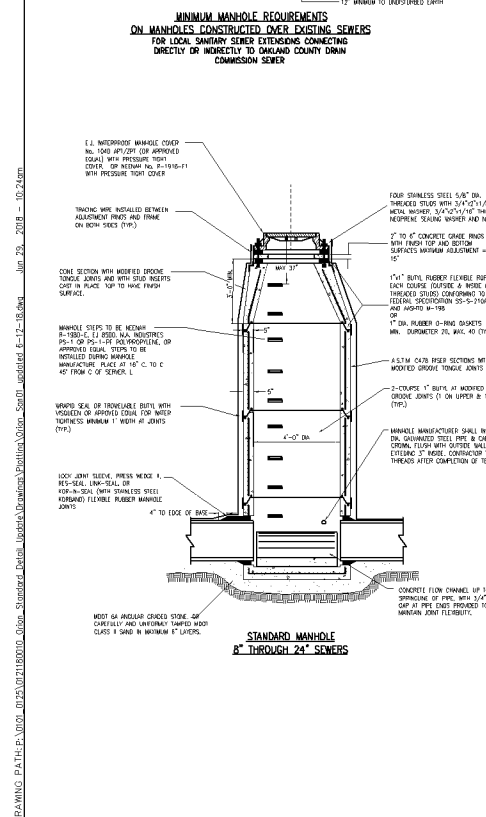
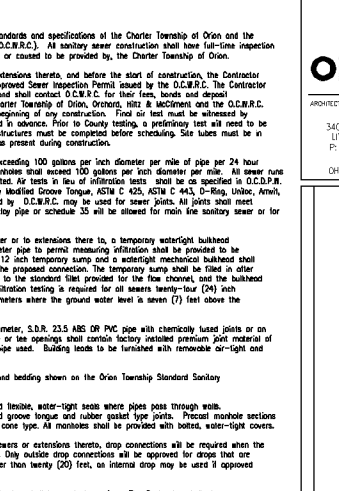
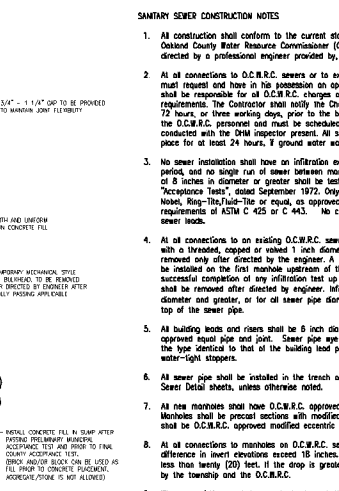
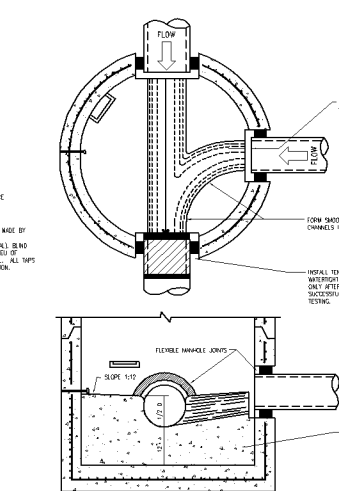
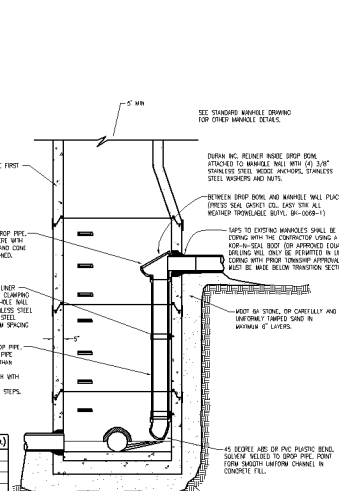
KEY:

- EXISTING TREES TO REMAIN WITH TREE PROTECTION FENCE
- EXISTING TREES TO BE REMOVED

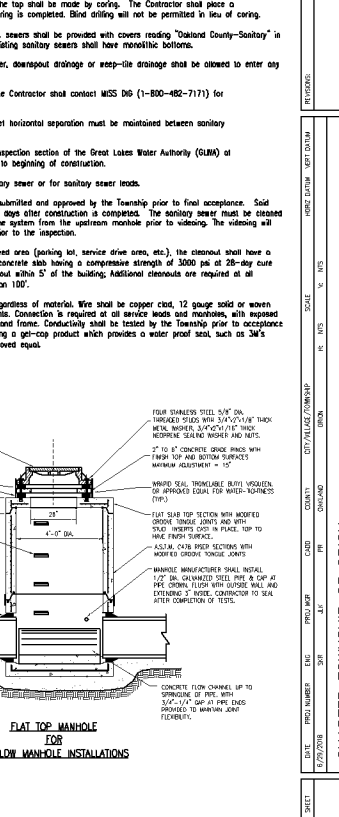
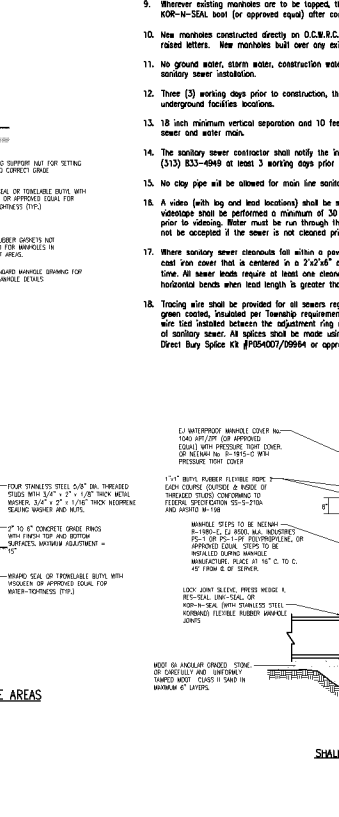
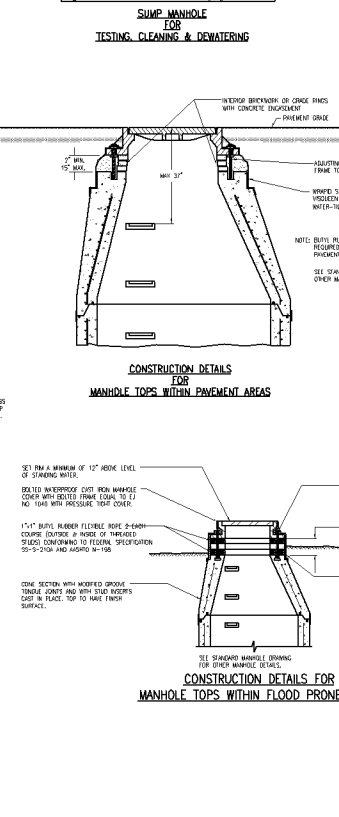
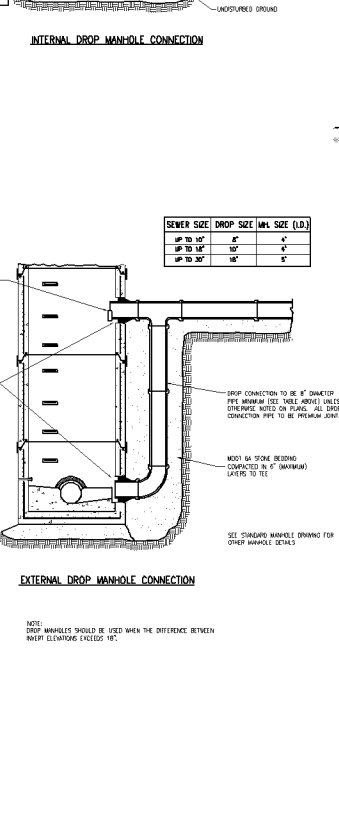
REVISIONS	
NO.	DATE
1	03/17/2020
JANET L. TONK LANDSCAPE ARCHITECT	
CAUTION! THE INFORMATION ON THIS PLAN IS BASED ON THE DATA PROVIDED BY THE CLIENT. THE LANDSCAPE ARCHITECT HAS NOT CONDUCTED A FIELD SURVEY TO VERIFY THE DATA. THE LANDSCAPE ARCHITECT IS NOT RESPONSIBLE FOR ANY ERRORS OR OMISSIONS IN THE DATA. THE LANDSCAPE ARCHITECT IS NOT RESPONSIBLE FOR ANY CONSTRUCTION DEFECTS OR DAMAGE TO EXISTING CONDITIONS. THE LANDSCAPE ARCHITECT IS NOT RESPONSIBLE FOR ANY VIOLATIONS OF ANY APPLICABLE LAWS, RULES, OR REGULATIONS. THE LANDSCAPE ARCHITECT IS NOT RESPONSIBLE FOR ANY INADEQUACIES IN THE DESIGN OR CONSTRUCTION OF THE PROJECT. THE LANDSCAPE ARCHITECT IS NOT RESPONSIBLE FOR ANY INADEQUACIES IN THE DESIGN OR CONSTRUCTION OF THE PROJECT.	
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FRANKLIN RIDGE HOMES, LLC 30180 ORCHARD LANE ROAD, SUITE 100 TROY, MI 48065-1872	TOTAL RIDE
TREE PRESERVATION PLAN SILVERBELL POINTE PART OF TOWN OF SILVERBELL, TOWN OF SILVERBELL, TOWN OF SILVERBELL	TOTAL RIDE
DES: ALE UN KAU SUR JCH P.M. 202	TOTAL RIDE
ORIGINAL ISSUE DATE: MARCH 17, 2020	
PEA JOB NO. 2019-150	
SCALE: T = 60'	
DRAWING NUMBER: T-1.1	



SEWER SIZE	DROP SIZE (IN. SIZE)	IN. SIZE (I.D.)
UP TO 12"	8"	8"
UP TO 18"	12"	12"
UP TO 24"	18"	18"
UP TO 30"	24"	24"



SEWER SIZE	DROP SIZE (IN. SIZE)	IN. SIZE (I.D.)
UP TO 12"	8"	8"
UP TO 18"	12"	12"
UP TO 24"	18"	18"
UP TO 30"	24"	24"



- SANITARY SEWER CONSTRUCTION NOTES**
- All construction shall conform to the current standards and specifications of the Charter Township of Orion and the Oakland County Water Resource Commission (O.C.W.R.C.). All sanitary sewer construction shall have full-time inspection directed by a professional engineer provided by, or caused to be provided by, the Charter Township of Orion.
 - All connections to O.C.W.R.C. sewers or to extensions thereto, and before the start of construction, the Contractor must request and have in his possession an approved Sewer Inspection Permit issued by the O.C.W.R.C. The Contractor shall be responsible for all O.C.W.R.C. charges and shall contact O.C.W.R.C. for their fees, loads and disposal requirements. The Contractor shall notify the Charter Township of Orion, Orrick, Hartz and McMillen and the O.C.W.R.C. 72 hours or three working days, prior to the beginning of any construction. Find air must be witnessed by the O.C.W.R.C. personnel and must be scheduled in advance. Prior to County testing, a preliminary test will need to be conducted with the OMI inspector present. All structures must be completed before scheduling. Site labels must be in place for at least 24 hours. 1 ground water was present during construction.
 - No sewer installation shall have an infiltration exceeding 100 gallons per inch diameter per mile of pipe per 24 hour period, and no single run of sewer between manholes shall exceed 120 yards per inch diameter per mile. All sewer runs of 8 inches in diameter or greater shall be tested. Air tests in lieu of infiltration tests shall be as specified in O.C.W.R.C. Acceptance Tests, dated September 1972. Only Modified Groove Tongue, ASTM C 425, ASTM C 443, O-Ring, Uniseal, Anuli, Hoses, Ring-Through-Tie or equal, as approved by O.C.W.R.C. may be used for sewer joints. All joints shall meet requirements of ASTM C 425 or C 443. No clay pipe or schedule 35 will be allowed for main line sanitary sewer or for street inlets.
 - All connections to an existing O.C.W.R.C. sewer or to extensions thereto, a temporary water-tight bulkhead with a threaded, capped or vented 1 inch diameter pipe to permit measuring infiltration shall be provided to be removed only after directed by the engineer. A 12 inch temporary sump and a water-tight mechanical bulkhead shall be installed on the first manhole upstream of the proposed connection. The temporary sump shall be filled in after successful completion of any infiltration test up to the standard sheet provided for the flow channel, and the bulkhead shall be removed after directed by engineer. Infiltration testing is required for all sewers twenty-four (24) inch diameter and greater, or for all sewer pipe diameters above the ground water level in seven (7) feet above the top of the sewer pipe.
 - All building loads and risers shall be 8 inch diameter, S.D.R. 23.5 ABS OR PVC pipe with chemically fused joints or on approved equal pipe joint. Sewer pipe size and line openings shall comply with standard mechanical bulkhead material of the type identical to that of the building load pipe used. Building loads to be furnished with removable air-tight and water-tight stoppers.
 - All sewer pipe shall be installed in the trench and bedding shown on the Orion Township Standard Sanitary Sewer Detail sheets, unless otherwise noted.
 - All new manholes shall have O.C.W.R.C. approved flexible, water-tight seals where pipes pass through walls. Manholes shall be precast sections with modified groove tongue and rubber gasket joint type. Precast manhole sections shall be O.C.W.R.C. approved modified eccentric cone type. All manholes shall be provided with bottom, water-tight covers.
 - All connections to manholes on O.C.W.R.C. sewers or extensions thereto, drop connections will be required when the difference in invert elevations exceed 18 inches. Only outside drop connections will be approved for drops that are less than twenty (20) feet. If the drop is greater than twenty (20) feet, an internal drop may be used if approved by the Township and the O.C.W.R.C.
 - Whenever existing manholes are to be topped, the top shall be made by coving. The Contractor shall place a KOR-N-SEAL ROOF (or approved equal) after coving is completed. Blind drilling will not be permitted in lieu of coving.
 - New manholes constructed directly on O.C.W.R.C. sewers shall be provided with covers reading "Oakland County-Sanitary" in raised letters. New manholes built over any existing sanitary sewers shall have manhole bottoms.
 - No ground water, storm water, construction water, downspout drainage or keep-dry drainage shall be allowed to enter any sanitary sewer installation.
 - Three (3) working days prior to construction, the Contractor shall contact MISS D6 (1-800-482-7171) for underground facilities locations.
 - 18 inch minimum vertical separation and 10 feet horizontal separation must be maintained between sanitary sewer and water main.
 - The sanitary sewer contractor shall notify the inspection section of the Great Lakes Water Authority (GLWA) at (313) 833-4949 at least 3 working days prior to beginning of construction.
 - No clay pipe will be allowed for main line sanitary sewer or for sanitary sewer leads.
 - A video (with log and lead location) shall be submitted and approved by the Township prior to final acceptance. Said videotape shall be performed a minimum of 30 days after construction is completed. The sanitary sewer must be cleaned prior to videotaping. Water must be run through the system from the waterline manhole prior to videotaping. The videotaping will not be accepted if the sewer is not cleaned prior to the inspection.
 - Where sanitary sewer cleanouts fall within a paved area (parking lot, service drive, etc.), the cleanout shall have a cast iron cover that is contained in a 2'x2'x6" concrete slab having a compressive strength of minimum psi at 28-day cure time. All sewer leads require at least one cleanout within 5' of the building. Additional cleanouts are required at all horizontal bends when lead length is greater than 100'.
 - Trenching wire shall be provided for all sewers regardless of material. Wire shall be copper clad, 12 gauge solid or woven green coated, insulated per Township requirements. Connection is required at all service leads and manholes, with exposed wire lead installed between the adjacent flag and frame. Conductivity shall be tested by the Township prior to acceptance of sanitary sewer. All splices shall be made using a gel-coat product which provides a water proof seal, such as 3M's Direct Bury Splice Kit #P054007/09984 or approved equal.



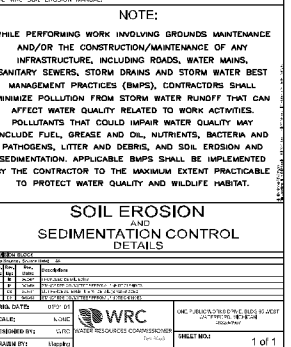
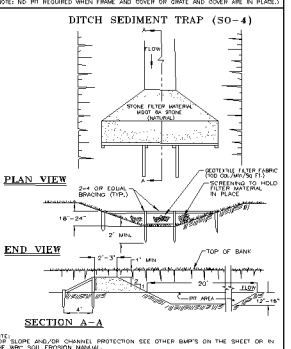
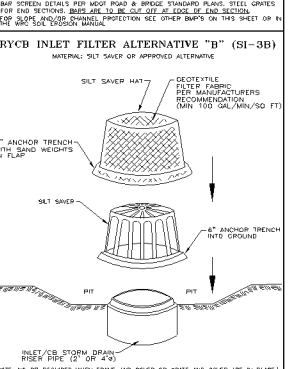
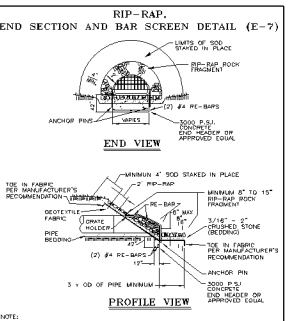
OHM
ARCHITECTS ENGINEERS PLANNERS
34000 FLYWORTH RD
LYONIA, MI 48150
P. (734) 522-6711
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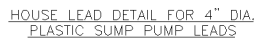
DATE: 07-20-2019 09:00:00
BY: jason
CHECKED: jason
DESIGNED: jason
DRAWN: jason
SCALE: 1/8" = 1'-0"
SHEET: 1 OF 2

CHARTER TOWNSHIP OF ORION
SANITARY SEWER STANDARD DETAILS

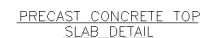
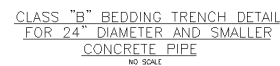
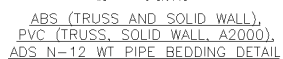
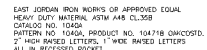








1. Type and class of albat shall be as specified on plans.
2. Class "T" bedding shall be used throughout, unless otherwise specified on the plan.
3. All end sections 18" and larger shall be provided with a 1/2" bar screen unless otherwise specified.
4. Standard rip-rap shall be 6"-18" fragmented rock, heavy rip-rap shall be 16"-24" fragmented rock. (No Broken Concrete)
5. **MANHOLE REQUIREMENTS:**
 - a. All new catch basins, inlets, and manholes are to be manufactured to ASTM C-478 specifications.
 - b. All new catch basins, inlets, and manholes shall have WMC or equivalent flexible water-tight joints where pipe joins through. Manholes shall be of precast sections with modified gasketed, and rubber gasket joints. All manhole sections shall be WMC approved modified ecentric cone type.
 - c. Taps through manhole joints or cone sections are prohibited unless otherwise specified.
 - d. Manhole joints to be plastic coated inside meeting the requirements in ASTM D 7146, Type R, Resin 4310M, M. Industries P.S.I. Polyphosphoric, for exterior repair. Section 100000 indicated manhole manufacture Place at 16" centers 45" from centerline of sewer.
 - e. Cone section with modified gasket tongue joints and with solid inserts. Section 100000. Top to be 16" centers 45" from centerline of sewer.
 - f. ASTM C-478 rib section with modified gasket tongue joints.
 - g. Res-seal, Res-seal, press wedge R, or non-press seal bolt (with stainless steel inserts) flexible water-tight joints.
 - h. The inside joints of manholes, catch basins, and pipes runs over 42" and larger in diameter shall be pointed up with mortar upon completion of backfilling.



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