

PRELIMINARY SITE PLANS FOR
CAMBRIDGE KNOLL
 165 & 185 E. AVON ROAD
 CITY OF ROCHESTER HILLS, OAKLAND COUNTY, MICHIGAN

OWNER/APPLICANT/DEVELOPER:

WOLVERINE BUILDING COMPANY
 14955 TECHNOLOGY DRIVE
 SHELBY TOWNSHIP, MICHIGAN 48315
 CONTACT: MARK GESUALE
 PHONE: (586) 421-5729
 FAX: (586) 421-5742
 EMAIL: MARK@WOLVERINEBUILDINGCOMPANY.COM

CIVIL ENGINEER:

PEA, INC.
 2430 ROCHESTER CT, SUITE 100
 TROY, MI 48083
 CONTACT: JOHN B. THOMPSON, PE
 PHONE: (248) 689-9090 EXT. 1109
 FAX: (248) 689-1044
 EMAIL: JTHOMPSON@PEAINC.COM

LANDSCAPE ARCHITECT:

NUNEZDESIGN
 249 PARK ST
 TROY, MI 48083
 CONTACT: RALPH NUNEZ, PLA, CLARB, ASLA
 PHONE: (248) 224-5740
 EMAIL: RALPHNUNEZDESIGN@GMAIL.COM

LEGAL DESCRIPTION
 (Per City of Rochester Hills Online Property Search)

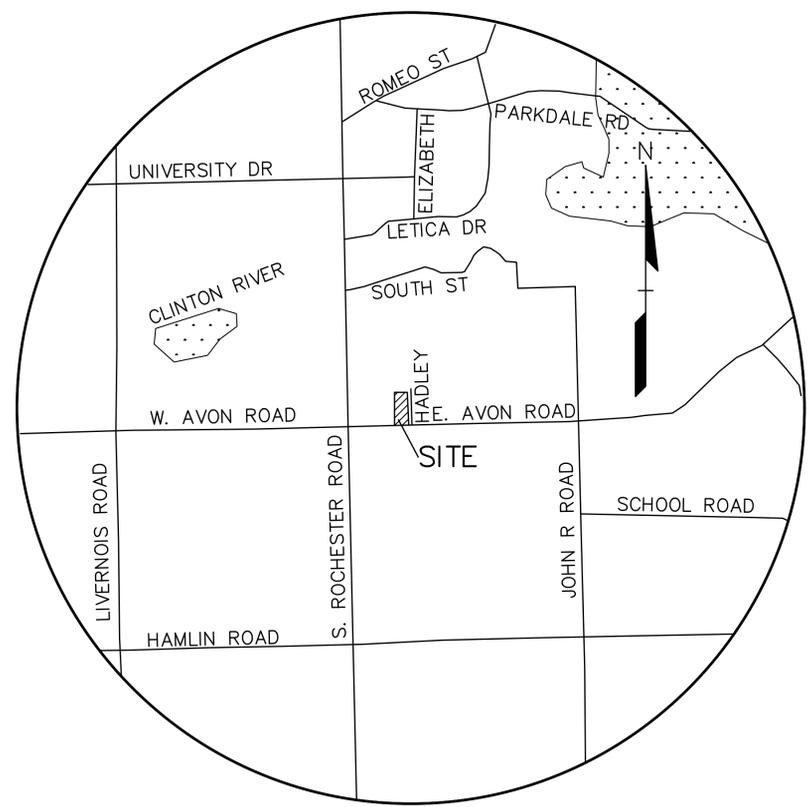
PARCEL NO. 15-14-351-020
 T3N, R11E, SECTION 14 PART OF SOUTHWEST 1/4 BEG AT POINT DISTANT EAST 1065.88 FEET FROM SOUTHWEST SECTION CORNER, THENCE N00°36'45"E 732.25 FEET, THENCE N89°51'00"E 118.80 FEET, THENCE S00°36'45"W 732.56 FEET THENCE WEST 118.80 FEET TO POINT OF BEGINNING.

PARCEL NO. 15-14-351-058
 T3N, R11E, SECTION 14 EAST 148.50 FEET OF WEST 1353 FEET OF SOUTH 732.50 FEET OF SOUTH 1/2 OF SOUTHWEST 1/4, ALSO PART OF SOUTHWEST 1/4 BEG AT PT DIST EAST 1184.68 FEET FROM SOUTHWEST SECTION CORNER, THENCE EAST 19.82 FEET, THENCE N00°19'00"W 732.20 FEET, THENCE S89°51'00"W 8.16 FEET, THENCE S00°35'45"W 732.56 FEET TO POINT OF BEGINNING.

LEGAL DESCRIPTION
 (As surveyed by PEA, Inc.)

COMBINED PARCEL (Parcels 15-14-351-020 & 15-14-351-058)
 A parcel of land located in the Southwest 1/4 of Section 14, Town 3 North, Range 11 East, City of Rochester Hills, Oakland County, Michigan, being more particularly described as:

Commencing at the Southwest corner of said Section 14; thence along the south line of said section, EAST 1065.88 feet to the Point of Beginning;
 thence N00°33'27"E, 732.34 feet to the southerly line of "Heatherwood Village No. 1", as recorded in Liber 172, Page 23;
 thence along said southerly line, N89°52'03"E, 274.67 feet to the westerly line of said subdivision;
 thence along said westerly line, S00°25'05"E, 732.96 feet to the aforementioned south line of said Section 14;
 thence along said south line, WEST 287.15 feet to the Point of Beginning.
 Subject to the rights of the public over the south 33 feet, known as Avon Road.
 Containing 4.725 gross acres of land, more or less and 4.507 net acres of land, more or less.



LOCATION MAP
 1"=2,000'

INDEX OF DRAWINGS:

- P-1 COVER SHEET
- P-2 TOPOGRAPHIC SURVEY
- P-3 PRELIMINARY SITE PLAN
- P-4 PRELIMINARY GRADING PLAN
- P-5 PRELIMINARY UTILITY PLAN
- P-6 PRELIMINARY OPEN SPACE PLAN
- P-7 PRELIMINARY DRAINAGE PLAN
- P-8 PRELIMINARY NOTES AND DETAILS
- P-8.1 PRELIMINARY NOTES AND DETAILS
- P-8.2 PRELIMINARY NOTES AND DETAILS
- T-1.0 EXISTING TREE SURVEY
- T-1.1 TREE IMPACT ANALYSIS
- LA-1.0 LANDSCAPE CONCEPT PLAN
- LA-1.1 LANDSCAPE PLANTING PLAN
- LA-1.1A REPLACEMENT TREE CREDIT PLAN
- LA-1.2 PATHWAY SIGHTLINE, CLEAR ZONE & PLANTING SETBACKS
- LA-1.3 SEEDING PLAN
- LA-1.4 PARKETTE CONCEPT
- LA-1.5 AMENITIES
- LA-2.0 LANDSCAPE PLANTING DETAILS & NOTES
- IR-1.0 IRRIGATION
- IR-1.1 IRRIGATION

| NO. | BY | CHK | DESCRIPTION | DATE |
|-----|----|-----|----------------------------------|----------|
| 1 | JK | JK | PC FINAL SUBMITTAL | 10-02-20 |
| 2 | JK | JK | REV PER RCOG REVIEW DATED 9-5-19 | 8-12-20 |
| 3 | JK | JK | REV PER RCOG REVIEW DATED 9-5-19 | 10-20-20 |
| 4 | JK | JK | REV PER RCOG REVIEW DATED 9-5-19 | 10-20-20 |



CAUTION!
 THE LOCATIONS AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THESE DRAWINGS ARE ONLY APPROXIMATE. NO GUARANTEE IS EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR DETERMINING THE EXACT UTILITY LOCATIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.

THIS DRAWING AND DESIGN ARE THE PROPERTY OF PEA, INC. THEY ARE SUBMITTED ON THE CONDITION THAT THEY ARE NOT TO BE USED, REPRODUCED, OR COPIED IN WHOLE OR IN PART, OR USED FOR FURNISHING INFORMATION TO OTHERS, WITHOUT THE PRIOR WRITTEN CONSENT OF PEA, INC. ALL COMMON LAW RIGHTS OF COPYRIGHT AND OTHERWISE ARE HEREBY SPECIFICALLY RESERVED. © 2019 PEA, INC.

CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERAL ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THE REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS AND CONSTRUCTION CONTRACTOR FURTHER AGREES TO DEFEND, HOLD HARMLESS AND HOLD DESIGN PROFESSIONAL, OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT EXCEPT LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE DESIGN PROFESSIONAL.

3 FULL WORKING DAYS BEFORE YOU DIG CALL

811

Know what's below
 Call before you dig

MISS DIG System, Inc.
 1-800-482-7171 www.missdig.org



PEA, Inc.
 2430 Rochester Ct., Ste. 100
 Troy, MI 48083-1872
 t: 248.689.9090
 f: 248.689.1044
 www.peainc.com

WOLVERINE BUILDING COMPANY
 14955 TECHNOLOGY DRIVE
 SHELBY TOWNSHIP, MICHIGAN 48315

COVER SHEET
CAMBRIDGE KNOLL
 PART OF THE SOUTHWEST 1/4 OF SECTION 14, TOWN 3N, R11E
 CITY OF ROCHESTER HILLS, OAKLAND COUNTY, MICHIGAN

DES: TMK DN: TMK SUR: KTR P: M JBT

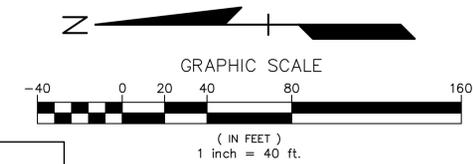
© PROJECTS\2018\2018423\DWG\CONSTRUCTION\V-BASE-18423.DWG
 © PROJECTS\2018\2018423\DWG\CONSTRUCTION\V-TBLK-18423.DWG

ORIGINAL ISSUE DATE:
 AUGUST 6, 2019

PEA JOB NO. 2018-423

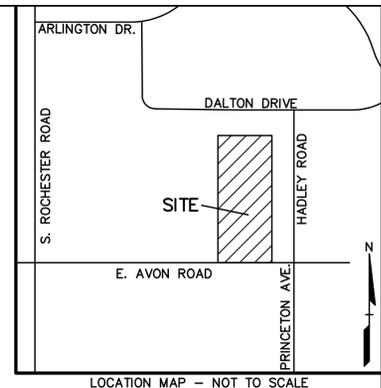
SCALE: N.T.S.

DRAWING NUMBER:



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.

SYMBOLS: GRADING
 PROPOSED SPOT GRADE ELEVATION, ALL GRADES INDICATED ARE TOP OF PAVEMENT UNLESS OTHERWISE NOTED. 828.50
 PROPOSED CONTOUR LINE 828



| NO. | DATE | DESCRIPTION |
|-----|----------|---|
| 1 | 10-02-20 | 1. DSJK, JBT, P.C. FINAL SUBMITTAL |
| 2 | 6-12-20 | 2. TMK, TMK, ROAD SHEET |
| 3 | 1-28-20 | 3. TMK, TMK, REV. PER RCOC REVIEW DATED 9-5-19 |
| 4 | 10-18-19 | 4. TMK, TMK, REV. PER RCOC REVIEW DATED 9-4-19 |
| 5 | 10-18-19 | 5. TMK, TMK, REV. PER RCOC REVIEW DATED 9-4-19 |
| 6 | 10-18-19 | 6. TMK, TMK, REV. PER RCOC REVIEW DATED 9-4-19 |
| 7 | 10-18-19 | 7. TMK, TMK, REV. PER RCOC REVIEW DATED 9-4-19 |
| 8 | 10-18-19 | 8. TMK, TMK, REV. PER RCOC REVIEW DATED 9-4-19 |
| 9 | 10-18-19 | 9. TMK, TMK, REV. PER RCOC REVIEW DATED 9-4-19 |
| 10 | 10-18-19 | 10. TMK, TMK, REV. PER RCOC REVIEW DATED 9-4-19 |
| 11 | 10-18-19 | 11. TMK, TMK, REV. PER RCOC REVIEW DATED 9-4-19 |
| 12 | 10-18-19 | 12. TMK, TMK, REV. PER RCOC REVIEW DATED 9-4-19 |
| 13 | 10-18-19 | 13. TMK, TMK, REV. PER RCOC REVIEW DATED 9-4-19 |
| 14 | 10-18-19 | 14. TMK, TMK, REV. PER RCOC REVIEW DATED 9-4-19 |
| 15 | 10-18-19 | 15. TMK, TMK, REV. PER RCOC REVIEW DATED 9-4-19 |
| 16 | 10-18-19 | 16. TMK, TMK, REV. PER RCOC REVIEW DATED 9-4-19 |
| 17 | 10-18-19 | 17. TMK, TMK, REV. PER RCOC REVIEW DATED 9-4-19 |
| 18 | 10-18-19 | 18. TMK, TMK, REV. PER RCOC REVIEW DATED 9-4-19 |
| 19 | 10-18-19 | 19. TMK, TMK, REV. PER RCOC REVIEW DATED 9-4-19 |
| 20 | 10-18-19 | 20. TMK, TMK, REV. PER RCOC REVIEW DATED 9-4-19 |

REVISIONS

LEGEND

| | | |
|------------------|------------------|---------------------|
| ● IRON FOUND | ⊗ BRASS PLUG SET | ⊙ SEC. CORNER FOUND |
| ⊗ IRON SET | ⊙ MONUMENT FOUND | ⊙ RECORDED |
| ⊙ NAIL FOUND | ⊙ MONUMENT SET | ⊙ MEASURED |
| ⊙ NAIL & CAP SET | | ⊙ CALCULATED |

EXISTING

- OH-ELEC-W-O- ELEC. PHONE OR CABLE TV O.H. LINE, POLE & DUTY RYE
- UG-CATV- TELEPHONE CABLE TV, CATV PEDESTAL
- UG-PHONE- TELEPHONE U.G. CABLE, PEDESTAL & MANHOLE
- UG-ELEC- ELECTRIC U.G. CABLE, MANHOLE, METER & HANDHOLE
- ⊙ GAS MAN, VALVE & GAS LINE MARKER
- ⊙ WATERMAN, HYD. GATE, VALVE, TAPPING SLEEVE & VALVE
- ⊙ SANITARY SEWER, CLEANOUT & MANHOLE
- ⊙ STORM SEWER, CLEANOUT & MANHOLE
- ⊙ COMBINED SEWER & MANHOLE
- ⊙ SQUARE, ROUND & BEEHIVE CATCH BASIN, YARD DRAIN
- ⊙ POST INDICATOR VALVE
- ⊙ WATER VALVE BOX/HYDRANT VALVE BOX, SERVICE SHUTOFF
- ⊙ METER, TRANSFORMER, IRRIGATION CONTROL VALVE
- ⊙ SPOT ELEVATION
- ⊙ 671.21

PROPOSED

- CONTOUR LINE
- FENCE
- STREET LIGHT
- SIGN
- CONCRETE
- ASPHALT

STD DUTY HEAVY R.O.W. DUTY ONLY
 STD DUTY HEAVY DUTY DEEP STRENGTH

CAUTION!
 THE LOCATION AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS DRAWING ARE ONLY APPROXIMATE. NO GUARANTEE IS GIVEN AS TO THE ACCURACY OF THESE DATA. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR DETERMINING THE EXACT UTILITY LOCATIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.

THIS DRAWING AND DESIGN ARE THE PROPERTY OF PEA, INC. THEY ARE LOANED TO THE CONTRACTOR FOR THE PROJECT ONLY AND ARE NOT TO BE REPRODUCED, COPIED, IN WHOLE OR IN PART, OR USED FOR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF PEA, INC. ALL COMMON LAW RIGHTS OF COPYRIGHT AND OTHERWISE ARE HEREBY SPECIFICALLY RESERVED. © 2019 PEA, INC.

CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR WILL BE RESPONSIBLE FOR OBTAINING SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY. THAT THE CONTRACTOR SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS AND CONSTRUCTION CONTRACTOR FURTHER AGREES TO DEFINE, INDICATE AND MAINTAIN DESIGN PROFESSIONAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THE PROJECT EXCEPT LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE DESIGN PROFESSIONAL.

3 FULL WORKING DAYS BEFORE YOU DIG CALL

811

Know what's below
 Call before you dig

MISS Dig System, Inc.
 1-800-482-7171 www.missdig.org



PEA, Inc.
 2430 Rochester Ct., Ste. 100
 Troy, MI 48063-1872
 t: 248.689.9090
 f: 248.689.1044
 www.peainc.com

WOLVERINE BUILDING COMPANY
 4985 TECHNOLOGY DRIVE
 SHELBY TOWNSHIP, MICHIGAN 48315

PRELIMINARY GRADING PLAN
CAMBRIDGE KNOLL
 PART OF THE SOUTHWEST 1/4 OF SECTION 14, TOWNSHIP 11E
 CITY OF ROCHESTER HILLS, OAKLAND COUNTY, MICHIGAN

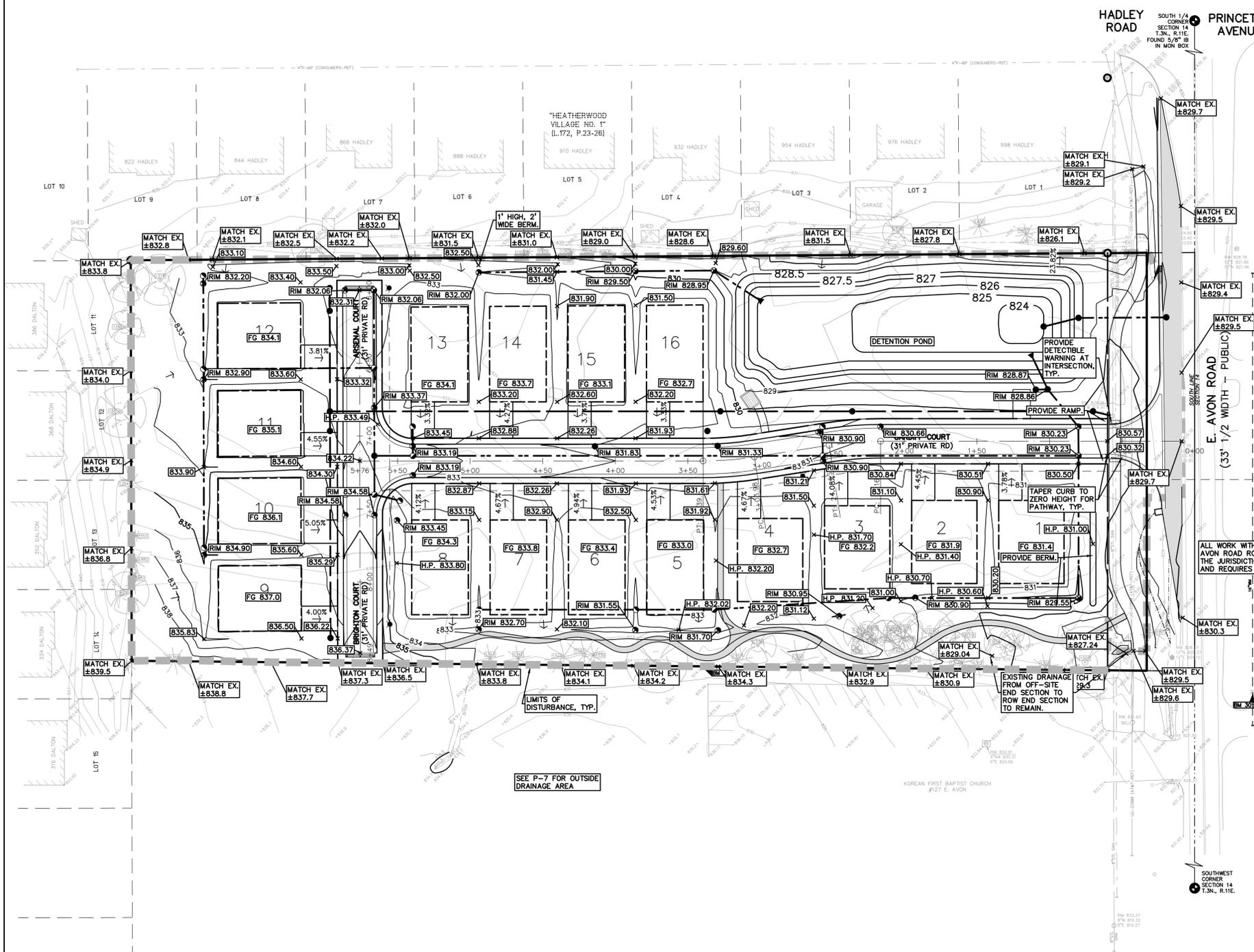
DES. TMK DN. TMK SUR. KTR P.M. JBT
 S:\PROJECTS\2018\2018033\DWG\CONSTRUCTION\BASE-18423.DWG
 S:\PROJECTS\2018\2018033\DWG\CONSTRUCTION\BASE-18423.DWG

ORIGINAL ISSUE DATE:
 AUGUST 6, 2019

PEA JOB NO. 2018-423

SCALE: 1" = 40'

DRAWING NUMBER:
P-4



| TYPE OF SURFACE | AREA (SF) | RUNOFF COEFFICIENT |
|--|-----------|--------------------|
| WATER SURFACE | 14,374 | 1.0 |
| ROOFS | 40,752 | 0.95 |
| PAVEMENT | 30,211 | 0.95 |
| HYDRAULIC SOIL GROUP B: SLOPE 4% TO 8% | 103,260 | 0.30 |

AVERAGE RUNOFF COEFFICIENT: 0.60

PROPOSED SANITARY SEWER BASIS OF DESIGN:
(Unit Factors Based on Oakland County Unit Assignment Factors)

SINGLE FAMILY RESIDENTIAL

Estimated No. of Dwellings: 16
Unit Factor: 1 per dwelling
REU: 16.0
Population (P) (2.44 PEOPLE/EDU): 39.0 People

TOTAL

| REU | 16.0 |
|-------------------------------|---------------|
| Average Flow (100 GPCPD) | 3,904 G.P.D. |
| | 0.006 C.F.S. |
| P (100s) | 0.039 |
| Peaking Factor (PF) | 4.34 |
| PF = (18+sqrt(P))/(4+sqrt(P)) | |
| Peak Flow (G.D.P.) | 16,925 G.P.D. |
| Peak Flow (C.F.S.) | 0.026 C.F.S. |
| 6" Pipe Capacity Provided = | 0.73 C.F.S. |

WATER MAIN BASIS OF DESIGN:
(Unit Factors Based on Oakland County Unit Assignment Factors)

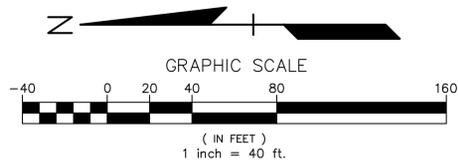
SINGLE FAMILY RESIDENTIAL

Estimated No. of Dwellings: 16
Unit Factor: 1 per dwelling
REU: 16.0
Population (P) (2.44 PEOPLE/EDU): 39.0 People

TOTAL

| REU | 16.0 |
|----------------------------|-----------------|
| Average Flow (150 GPCPD) | 5,856 G.P.D. |
| | 0.009 C.F.S. |
| Design Max. Flow = (2*avg) | 11712.00 G.P.D. |
| | 0.018 C.F.S. |
| | 0.012 M.G.D. |

Building Type =
Required Fire Flow =



LEGEND

EXISTING

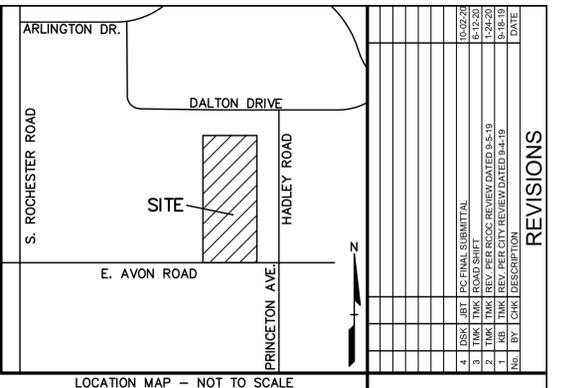
- IRON FOUND
- IRON SET
- NAIL FOUND
- NAIL & CAP SET
- BRASS PLUG SET
- MONUMENT FOUND
- MONUMENT SET

PROPOSED

- SEC. CORNER FOUND
- RECORDED
- MEASURED
- CALCULATED

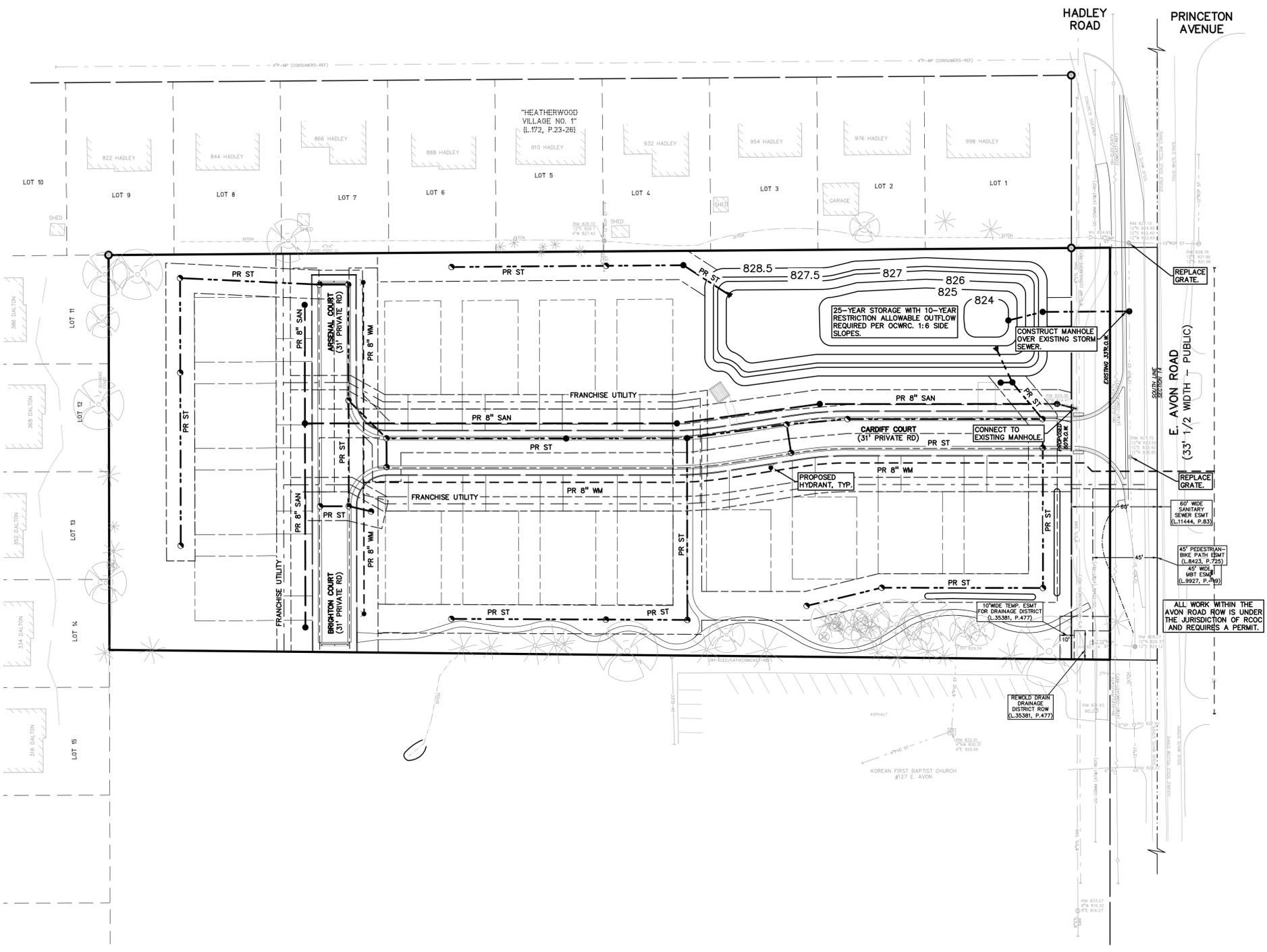
UTILITY SYMBOLS:

- OH-ELEC: OH LINE, POLE & GUY WIRE
- UG-CATV: UNDERGROUND CABLE TV, CATV PEDESTAL
- UG-PHONE: TELEPHONE U.G. CABLE, PEDESTAL & MANHOLE
- UG-ELEC: ELECTRIC U.G. CABLE, MANHOLE, METER & HANDHOLE
- GAS: GAS MAIN, VALVE & GAS LINE MARKER
- WATERMAIN: HYD. GATE VALVE, TAPPING SLEEVE & VALVE
- SANITARY SEWER: CLEANOUT & MANHOLE
- STORM SEWER: CLEANOUT & MANHOLE
- COMBINED SEWER & MANHOLE
- SQUARE, ROUND & BEHNE CATCH BASIN, YARD DRAIN
- POST INDICATOR VALVE
- WATER VALVE BOX/HYDRANT VALVE BOX, SERVICE SHUTOFF
- MAILBOX, TRANSFORMER, IRRIGATION CONTROL VALVE
- SPOT ELEVATION
- CONTOUR LINE
- FENCE
- STREET LIGHT
- SOB
- CONC. CONCRETE
- ASPH. ASPHALT



REVISIONS

| NO. | DATE | DESCRIPTION |
|-----|----------|--|
| 1 | 10/22/20 | 1. DSK JBT POC FINAL SUBMITTAL |
| 2 | 11/24/20 | 2. TMM TMM REV. PER RECOC REVIEW DATED 9-5-19 |
| 3 | 11/24/20 | 3. TMM TMM REV. PER RECOC REVIEW DATED 9-5-19 |
| 4 | 11/24/20 | 4. TMM TMM REV. PER RECOC REVIEW DATED 9-5-19 |
| 5 | 11/24/20 | 5. TMM TMM REV. PER RECOC REVIEW DATED 9-5-19 |
| 6 | 11/24/20 | 6. TMM TMM REV. PER RECOC REVIEW DATED 9-5-19 |
| 7 | 11/24/20 | 7. TMM TMM REV. PER RECOC REVIEW DATED 9-5-19 |
| 8 | 11/24/20 | 8. TMM TMM REV. PER RECOC REVIEW DATED 9-5-19 |
| 9 | 11/24/20 | 9. TMM TMM REV. PER RECOC REVIEW DATED 9-5-19 |
| 10 | 11/24/20 | 10. TMM TMM REV. PER RECOC REVIEW DATED 9-5-19 |
| 11 | 11/24/20 | 11. TMM TMM REV. PER RECOC REVIEW DATED 9-5-19 |
| 12 | 11/24/20 | 12. TMM TMM REV. PER RECOC REVIEW DATED 9-5-19 |
| 13 | 11/24/20 | 13. TMM TMM REV. PER RECOC REVIEW DATED 9-5-19 |
| 14 | 11/24/20 | 14. TMM TMM REV. PER RECOC REVIEW DATED 9-5-19 |
| 15 | 11/24/20 | 15. TMM TMM REV. PER RECOC REVIEW DATED 9-5-19 |
| 16 | 11/24/20 | 16. TMM TMM REV. PER RECOC REVIEW DATED 9-5-19 |
| 17 | 11/24/20 | 17. TMM TMM REV. PER RECOC REVIEW DATED 9-5-19 |
| 18 | 11/24/20 | 18. TMM TMM REV. PER RECOC REVIEW DATED 9-5-19 |
| 19 | 11/24/20 | 19. TMM TMM REV. PER RECOC REVIEW DATED 9-5-19 |
| 20 | 11/24/20 | 20. TMM TMM REV. PER RECOC REVIEW DATED 9-5-19 |



- GENERAL UTILITY NOTES:**
- ALL UTILITY LINES, STRUCTURES AND TRENCHES SHALL BE INSTALLED IN ACCORDANCE WITH THE CITY OF ROCHESTER HILLS STANDARDS AND REQUIREMENTS.
 - NO PHYSICAL CONNECTION TO THE EXISTING WATER MAIN CAN BE MADE UNTIL THE NEW WATER MAIN PASSES ALL PRESSURE AND BACTERIOLOGICAL TESTS.
 - ALL WATER LEADS 2" AND SMALLER SHALL BE TYPE 'K' COPPER.
 - ALL WATER MAINS SHALL BE PROVIDED WITH 6 FEET MINIMUM COVER.
 - ALL STORM LEADS SHALL BE P.V.C. SOLID WALL PIPE, SCHEDULE 40 UNLESS OTHERWISE NOTED. ALL 12" DIAMETER STORM SEWER AND LARGER SHALL BE REINFORCED CONCRETE (RCP) CL-IV, UNLESS OTHERWISE NOTED.
 - ALL 6" SANITARY SEWER LEADS SHALL BE P.V.C. SOLID WALL PIPE, SDR 23.5 W/ RUBBER GASKET JOINTS.
 - BOXES ARE TO BE PROVIDED FOR ALL CLEANOUTS. THE BOXES SHALL BE E.J.I.W. # 1565 OR APPROVED EQUAL.
 - ALL NECESSARY FITTINGS, THRUST BLOCKS, RESTRAINING GLANDS, BLOW OFFS, ETC. FOR WATER LEAD SYSTEM ARE CONSIDERED INCIDENTAL TO THIS PROJECT. THE CONTRACTOR SHALL INSTALL THESE ITEMS AS NECESSARY AND AS REQUIRED BY THE CITY.
 - A SOIL EROSION PERMIT WILL BE REQUIRED FROM THE CITY OF ROCHESTER HILLS.
 - ALL ELECTRIC, TELEPHONE AND CABLE TV SERVICES WILL BE UNDERGROUND.
 - UTILITY EASEMENTS SHALL BE THE FOLLOWING WIDTHS:
STORM EASEMENTS: 20'
SANITARY EASEMENTS: 20'
WATER MAIN EASEMENTS: 20'
FRANCHISE UTILITY EASEMENTS: 10'

STORMWATER DETENTION DESIGN
(PER OAKLAND COUNTY DESIGN METHOD)

Site Drainage Data

| | |
|-----------------------------|-------------------------|
| Contributing Area (A): | 4.33 acre |
| Allowable Discharge (Qa): | 0.87 cfs (=0.2 cfs/ac.) |
| Offsite Drainage Area (Ao): | 6.79 acre |
| Coefficient of Runoff (Cr): | 0.60 |

1-yr Design Storm Calculations Volume Requirement (First Flush)

Vr = 4,320 x A x C = 11,223 cf

25-yr Design Storm Calculations

| | |
|----------------------------------|--------------------------|
| Qo = ((Qa)/(A)(Cr): | 0.33 cfs/acre impervious |
| T = -25 + ((8062.5/Qo))0.5 | 131.31 minutes |
| Vs = (12900(T)/(T+25)) - 40Qo(T) | 9,104 cf/acre impervious |
| Vt = (Vs)(A)(Cr): | 23,652 cf |

Storage Provided in Detention Basin

Required Storage Volume: 23,652
= Vt(100-yr) - Sediment Storage Volume

1-yr Storage Elevation: 826.10
25-yr Storage Elevation: 827.10
Overflow Elevation: 828.10

| Elev. (ft) | Area (sf) | Vol. (cf) | Total Vol. (cf) |
|------------|-----------|-----------|-----------------|
| 824.00 | 763 | 0 | 0 |
| 825.0 | 5,217 | 2,990 | 2,990 |
| 826.0 | 10,275 | 7,746 | 10,736 |
| 827.0 | 13,497 | 11,886 | 22,622 |
| 827.5 | 15,228 | 7,181 | 29,803 |

Total Stormwater Storage Provided

Storage Vol. Provided in Detention Basin: 29,803 cf
Total Stormwater Storage Provided: 29,803 cf

CAUTION!
THE LOCATION AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS DRAWING ARE ONLY APPROXIMATE. NO GUARANTEE IS EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR DETERMINING THE EXACT UTILITY LOCATIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.

THIS DRAWING AND DESIGN ARE THE PROPERTY OF PEA, INC. THEY ARE SUBMITTED ON THE CONDITION THAT THEY ARE NOT TO BE USED, REPRODUCED, OR COPIED IN WHOLE OR IN PART, OR FOR ANY OTHER PURPOSE WITHOUT THE WRITTEN CONSENT OF PEA, INC. ALL COMMON LAW RIGHTS OF COPYRIGHT AND OTHERWISE ARE HEREBY SPECIFICALLY RESERVED. © 2018 PEA, INC.

CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERAL ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR SHALL BE RESPONSIBLE FOR THE SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY, THAT THE REQUIREMENTS SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS AND CONSTRUCTION CONTRACTOR FURTHER AGREES TO DEFEND, INDEMNIFY AND HOLD DESIGN PROFESSIONAL OR ALLEGED IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT EXCEPT LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE DESIGN PROFESSIONAL.

3 FULL WORKING DAYS BEFORE YOU DIG CALL

811
Know what's below
Call before you dig
MISS Dig System, Inc.
1-800-482-7171 www.missdig.org

PEA, Inc.

2430 Rochester Ct., Ste. 100
Troy, MI 48063-1872
t: 248.689.9090
f: 248.689.1044
www.peainc.com

WOLVERINE BUILDING COMPANY
4955 TECHNOLOGY DRIVE
SHELBY TOWNSHIP, MICHIGAN 48315

PRELIMINARY UTILITY PLAN
CAMBRIDGE KNOLL
PART OF THE SOUTHWEST 1/4 OF SECTION 14, TOWNSHIP 17N, RANGE 11E, COUNTY OF ROCHESTER HILLS, OAKLAND COUNTY, MICHIGAN

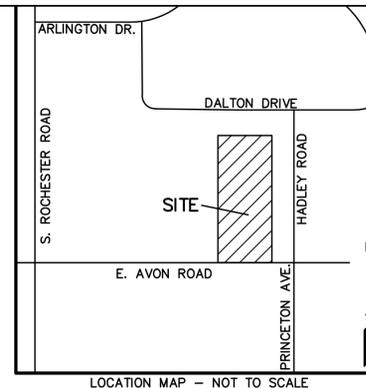
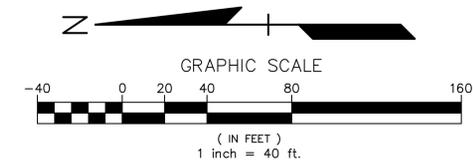
DES: TMM DN. TMM SUR. KTR P.M. JBT
S:\PROJECTS\2018\2018033\DWG\CONSTRUCTION\BASE-18423.DWG

ORIGINAL ISSUE DATE:
AUGUST 6, 2019

PEA JOB NO. 2018-423

SCALE: 1" = 40'

DRAWING NUMBER:
P-5



| NO. | DATE | DESCRIPTION |
|-----|----------|---------------------------|
| 1 | 10-02-20 | 1. PRELIMINARY SUBMITTAL |
| 2 | 10-02-20 | 2. PRELIMINARY SUBMITTAL |
| 3 | 10-02-20 | 3. PRELIMINARY SUBMITTAL |
| 4 | 10-02-20 | 4. PRELIMINARY SUBMITTAL |
| 5 | 10-02-20 | 5. PRELIMINARY SUBMITTAL |
| 6 | 10-02-20 | 6. PRELIMINARY SUBMITTAL |
| 7 | 10-02-20 | 7. PRELIMINARY SUBMITTAL |
| 8 | 10-02-20 | 8. PRELIMINARY SUBMITTAL |
| 9 | 10-02-20 | 9. PRELIMINARY SUBMITTAL |
| 10 | 10-02-20 | 10. PRELIMINARY SUBMITTAL |
| 11 | 10-02-20 | 11. PRELIMINARY SUBMITTAL |
| 12 | 10-02-20 | 12. PRELIMINARY SUBMITTAL |
| 13 | 10-02-20 | 13. PRELIMINARY SUBMITTAL |
| 14 | 10-02-20 | 14. PRELIMINARY SUBMITTAL |
| 15 | 10-02-20 | 15. PRELIMINARY SUBMITTAL |
| 16 | 10-02-20 | 16. PRELIMINARY SUBMITTAL |
| 17 | 10-02-20 | 17. PRELIMINARY SUBMITTAL |
| 18 | 10-02-20 | 18. PRELIMINARY SUBMITTAL |
| 19 | 10-02-20 | 19. PRELIMINARY SUBMITTAL |
| 20 | 10-02-20 | 20. PRELIMINARY SUBMITTAL |

CAUTION!!
THE LOCATIONS AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS DRAWING ARE ONLY APPROXIMATE. NO GUARANTEE IS GIVEN AS TO THE ACCURACY OF THESE LOCATIONS. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR DETERMINING THE EXACT UTILITY LOCATIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.

THIS DRAWING AND DESIGN ARE THE PROPERTY OF PEA, INC. THEY ARE SUBMITTED ON THE CONDITION THAT THEY ARE NOT TO BE USED, REPRODUCED, OR COPIED IN WHOLE OR IN PART, OR USED FOR FURNISHING INFORMATION TO OTHERS, WITHOUT THE PRIOR WRITTEN CONSENT OF PEA, INC. ALL COMMON LAW RIGHTS OF COPYRIGHT AND OTHERWISE ARE HEREBY SPECIFICALLY RESERVED. © 2018 PEA, INC.

CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERAL ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR SHALL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY, THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS AND CONSTRUCTION CONTRACTOR FURTHER AGREES TO DEFEND, INDEMNIFY AND HOLD DESIGN PROFESSIONAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THE PROJECT EXCEPT LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE DESIGN PROFESSIONAL.

3 FULL WORKING DAYS BEFORE YOU DIG CALL

811

Know what's below
Call before you dig

MISS DIG System, Inc.
1-800-482-7171 www.missdig.org



PEA, Inc.
2430 Rochester Ct., Ste. 100
Troy, MI 48063-1872
t: 248.689.9090
f: 248.689.1044
www.peainc.com

WOLVERINE BUILDING COMPANY
4935 TECHNOLOGY DRIVE
SHELBY TOWNSHIP, MICHIGAN 48315

PRELIMINARY OPEN SPACE PLAN
CAMBRIDGE KNOLL
PART OF THE SOUTHWEST 1/4 OF SECTION 14, T30N, R11E
CITY OF ROCHESTER HILLS, OAKLAND COUNTY, MICHIGAN

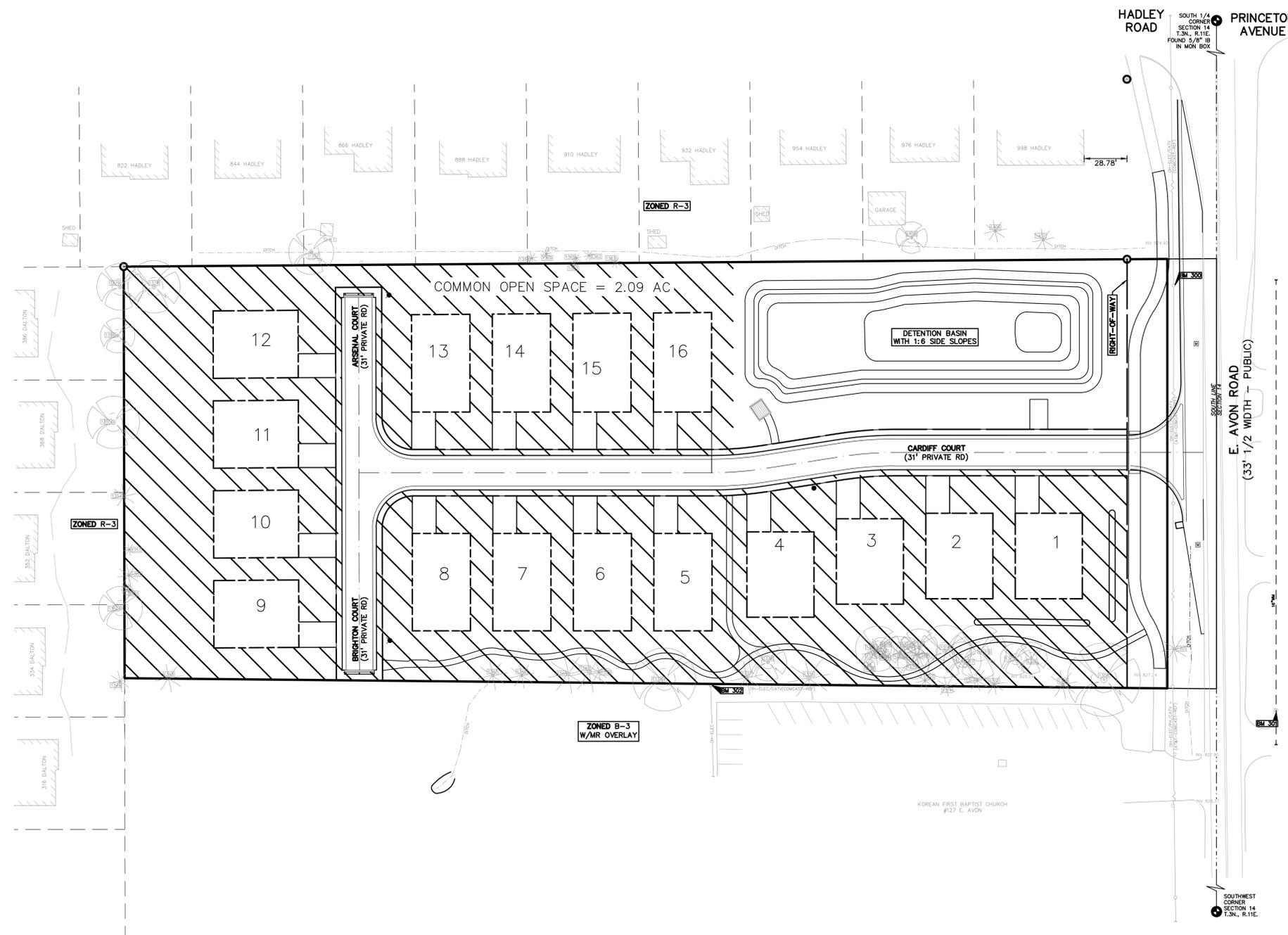
DES. TMK DN. TMK SUR. KTR P.M. JBT

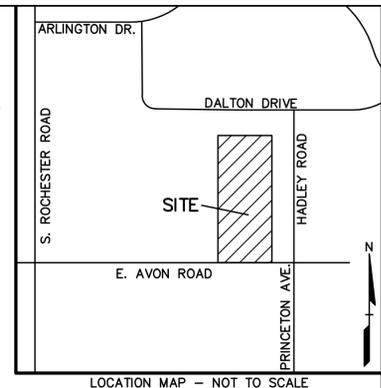
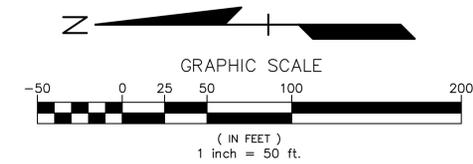
ORIGINAL ISSUE DATE:
AUGUST 6, 2019

PEA JOB NO. 2018-423

SCALE: 1" = 40'

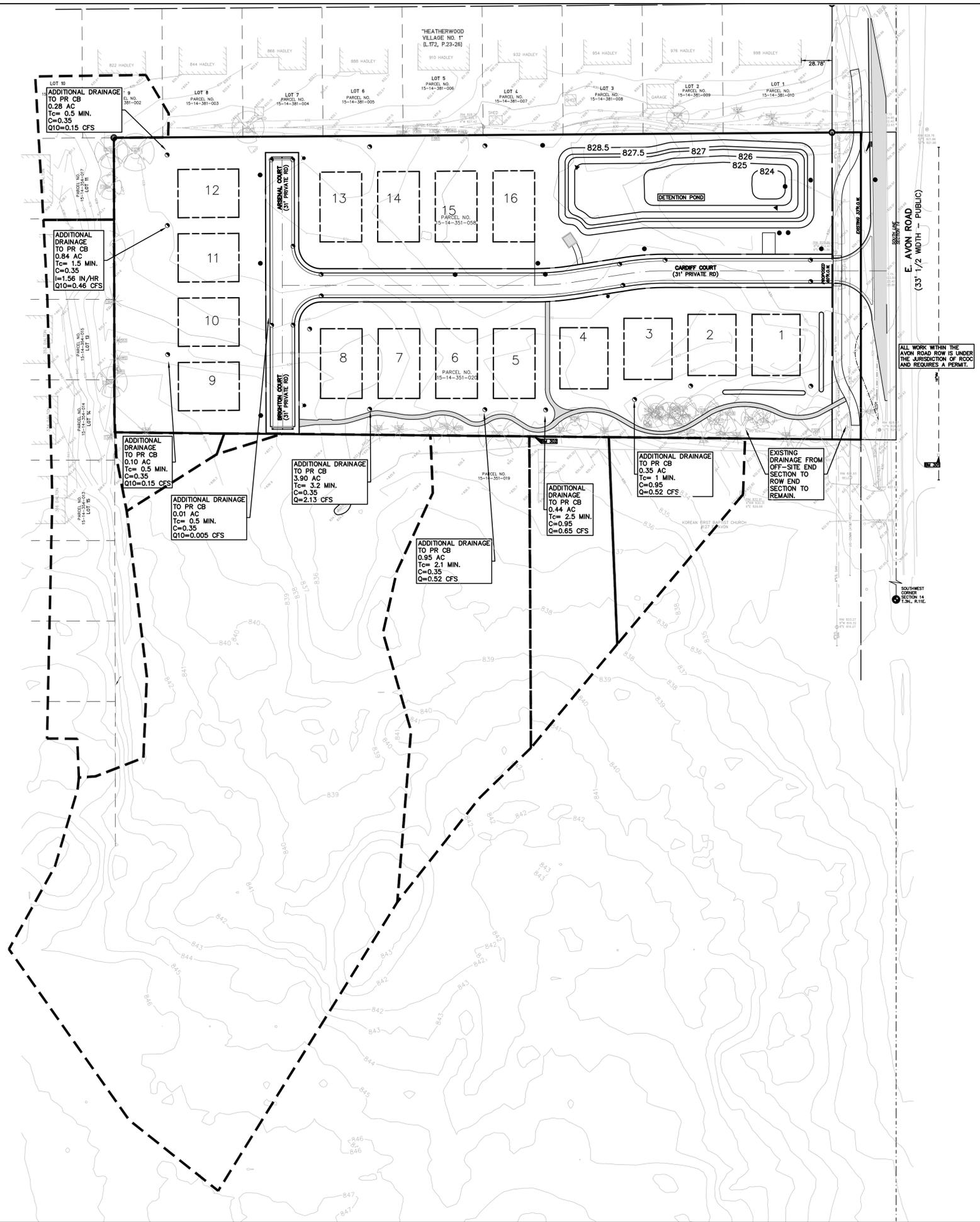
DRAWING NUMBER:
P-6





| NO. | DATE | DESCRIPTION |
|-----|----------|--|
| 1 | 10/02/20 | 1. DESK JBT P.C. FINAL SUBMITTAL |
| 2 | 10/22/20 | 2. T.M.K. T.M.K. REV. PER. REC'D. REVIEW DATED 9-5-19 |
| 3 | 11/02/20 | 3. T.M.K. T.M.K. REV. PER. REC'D. REVIEW DATED 9-5-19 |
| 4 | 11/02/20 | 4. T.M.K. T.M.K. REV. PER. REC'D. REVIEW DATED 9-5-19 |
| 5 | 11/02/20 | 5. T.M.K. T.M.K. REV. PER. REC'D. REVIEW DATED 9-5-19 |
| 6 | 11/02/20 | 6. T.M.K. T.M.K. REV. PER. REC'D. REVIEW DATED 9-5-19 |
| 7 | 11/02/20 | 7. T.M.K. T.M.K. REV. PER. REC'D. REVIEW DATED 9-5-19 |
| 8 | 11/02/20 | 8. T.M.K. T.M.K. REV. PER. REC'D. REVIEW DATED 9-5-19 |
| 9 | 11/02/20 | 9. T.M.K. T.M.K. REV. PER. REC'D. REVIEW DATED 9-5-19 |
| 10 | 11/02/20 | 10. T.M.K. T.M.K. REV. PER. REC'D. REVIEW DATED 9-5-19 |
| 11 | 11/02/20 | 11. T.M.K. T.M.K. REV. PER. REC'D. REVIEW DATED 9-5-19 |
| 12 | 11/02/20 | 12. T.M.K. T.M.K. REV. PER. REC'D. REVIEW DATED 9-5-19 |
| 13 | 11/02/20 | 13. T.M.K. T.M.K. REV. PER. REC'D. REVIEW DATED 9-5-19 |
| 14 | 11/02/20 | 14. T.M.K. T.M.K. REV. PER. REC'D. REVIEW DATED 9-5-19 |
| 15 | 11/02/20 | 15. T.M.K. T.M.K. REV. PER. REC'D. REVIEW DATED 9-5-19 |
| 16 | 11/02/20 | 16. T.M.K. T.M.K. REV. PER. REC'D. REVIEW DATED 9-5-19 |
| 17 | 11/02/20 | 17. T.M.K. T.M.K. REV. PER. REC'D. REVIEW DATED 9-5-19 |
| 18 | 11/02/20 | 18. T.M.K. T.M.K. REV. PER. REC'D. REVIEW DATED 9-5-19 |
| 19 | 11/02/20 | 19. T.M.K. T.M.K. REV. PER. REC'D. REVIEW DATED 9-5-19 |
| 20 | 11/02/20 | 20. T.M.K. T.M.K. REV. PER. REC'D. REVIEW DATED 9-5-19 |

REVISIONS



ALL WORK WITHIN THE AVON ROAD ROW IS UNDER THE JURISDICTION OF RDC AND REQUIRES A PERMIT.

SOUTHWEST CORNER SECTION 14 T3N, R11E.

LEGEND

| | | |
|------------------|------------------|---------------------|
| ● IRON FOUND | ⊗ BRASS PLUG SET | ⊙ SEC. CORNER FOUND |
| ⊗ IRON SET | ⊙ MONUMENT FOUND | ⊙ RECORDED |
| ⊙ NAIL FOUND | ⊙ MONUMENT SET | ⊙ MEASURED |
| ⊙ NAIL & CAP SET | | ⊙ CALCULATED |

EXISTING

- ELEC- WIRE UNDERGROUND CABLE TV, CATV PEDESTAL
- ELEC- TELEPHONE U.G. CABLE, PEDESTAL & MANHOLE
- ELEC- ELECTRIC U.G. CABLE, MANHOLE, METER & HANDHOLE
- ELEC- GAS MAN, VALVE & GAS LINE MARKER
- ELEC- WATERMAN, HYD. GATE VALVE, TAPPING SLEEVE & VALVE
- ELEC- SANITARY SEWER, CLEANOUT & MANHOLE
- ELEC- STORM SEWER, CLEANOUT & MANHOLE
- ELEC- COMBINED SEWER & MANHOLE
- ELEC- SQUARE, ROUND & BEEHIVE CATCH BASIN, YARD DRAIN
- ELEC- POST INDICATOR VALVE
- ELEC- WATER VALVE BOX/HYDRANT VALVE BOX, SERVICE SHUTOFF
- ELEC- METER, TRANSFORMER, IRRIGATION CONTROL VALVE
- ELEC- SPOT ELEVATION
- ELEC- 671
- ELEC- CONTOUR LINE
- ELEC- FENCE
- ELEC- STREET LIGHT
- ELEC- SIGN
- ELEC- CONCRETE
- ELEC- ASPHALT

PROPOSED

- ELEC- 671
- ELEC- STD DUTY
- ELEC- HEAVY DUTY
- ELEC- R.O.W. DUTY ONLY
- ELEC- STD DUTY
- ELEC- HEAVY DUTY
- ELEC- DEEP DUTY
- ELEC- DUTY STRENGTH

CAUTION!
THE LOCATIONS AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS DRAWING ARE ONLY APPROXIMATE. NO GUARANTEE IS GIVEN FOR THE ACCURACY OF THESE DATA. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR DETERMINING THE EXACT UTILITY LOCATIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.

THIS DRAWING AND DESIGN ARE THE PROPERTY OF PEA, INC. THEY ARE LOANED TO THE CONTRACTOR FOR THEIR USE ONLY. NO PART OF THIS DRAWING OR DESIGN SHALL BE REPRODUCED, COPIED, REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, WITHOUT THE WRITTEN CONSENT OF PEA, INC. ALL COMMON LAW RIGHTS OF COPYRIGHT AND OTHERWISE ARE HEREBY SPECIFICALLY RESERVED. © 2019 PEA, INC.

CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERAL ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY. THE CONTRACTOR SHALL BE MADE TO APPLY CONTRACTORS AND NOT BE LIMITED TO NORMAL WORKING HOURS AND CONSTRUCTION CONTRACTOR FURTHER AGREES TO DEFEND, INDEMNIFY AND HOLD DESIGN PROFESSIONAL OR ALLEGED IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT EXCEPT LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE DESIGN PROFESSIONAL.

3 FULL WORKING DAYS BEFORE YOU DIG CALL 811

Know what's below
Call before you dig

MISS Dig System, Inc.
1-800-482-7171 www.missdig.org



PEA, Inc.
2430 Rochester Ct., Ste. 100
Troy, MI 48063-1872
t: 248.689.9090
f: 248.689.1044
www.peainc.com

WOLVERINE BUILDING COMPANY
4935 TECHNOLOGY DRIVE
SHELBY TOWNSHIP, MICHIGAN 48315

PRELIMINARY DRAINAGE PLAN
CAMBRIDGE KNOLL
PART OF THE SOUTHWEST 1/4 OF SECTION 14, T30N, R11E
CITY OF ROCHESTER HILLS, OAKLAND COUNTY, MICHIGAN

DES. T.M.K. DN. T.M.K. SUR. KTR. P.M. JBT

ORIGINAL ISSUE DATE:
AUGUST 6, 2019

PEA JOB NO. 2018-423

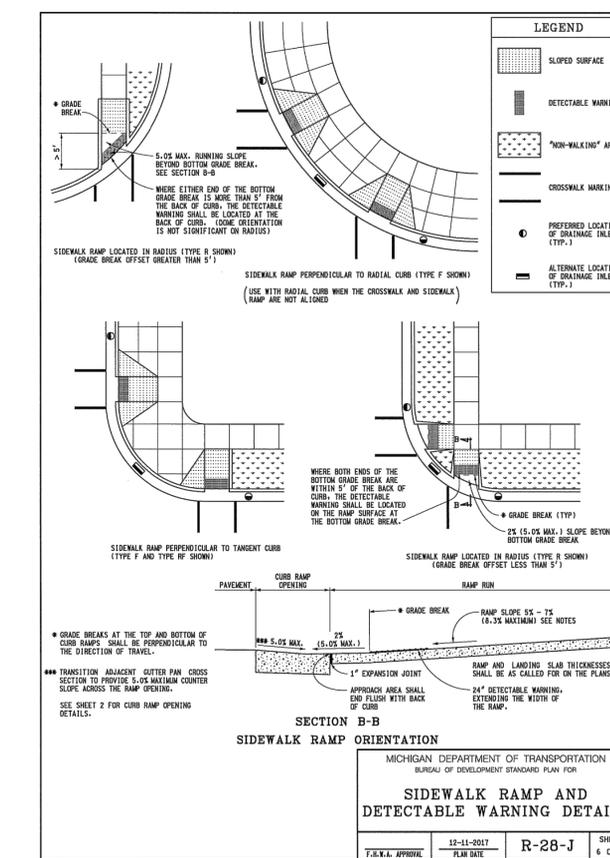
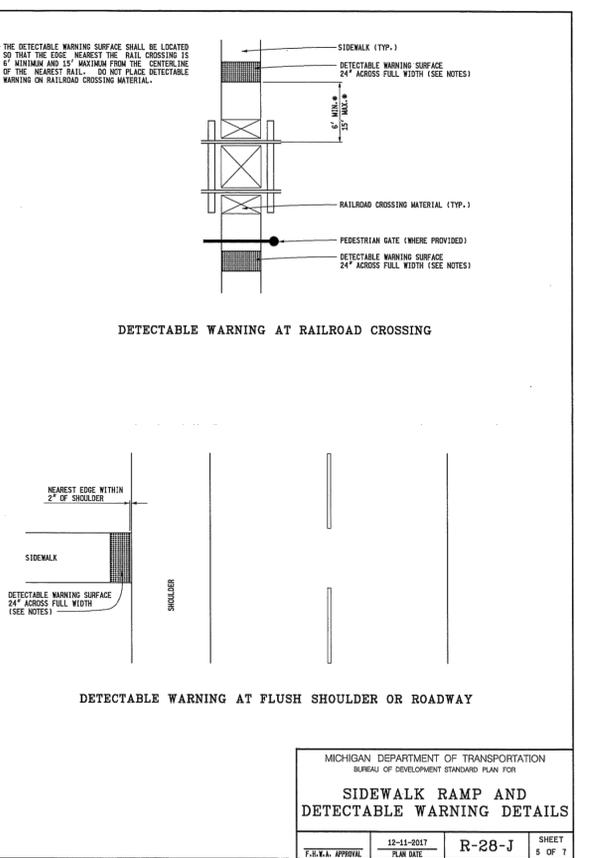
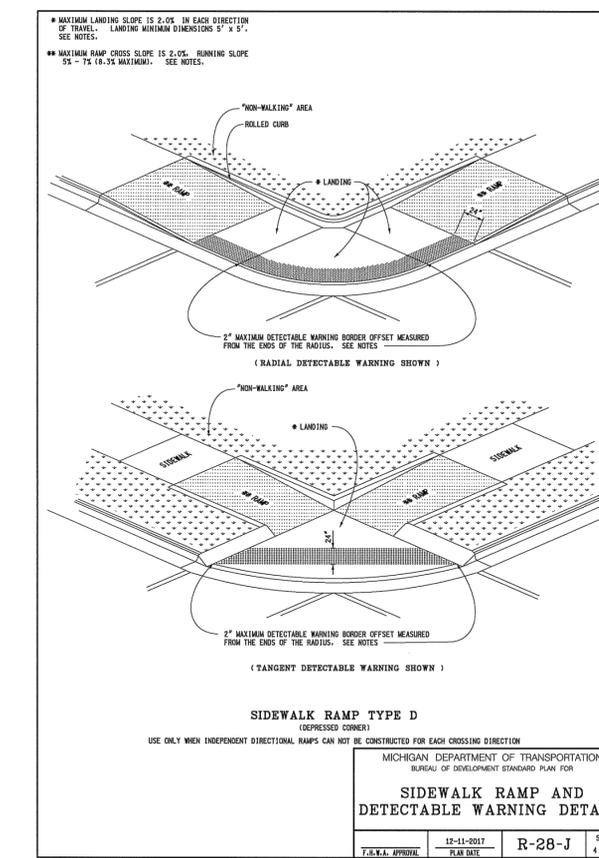
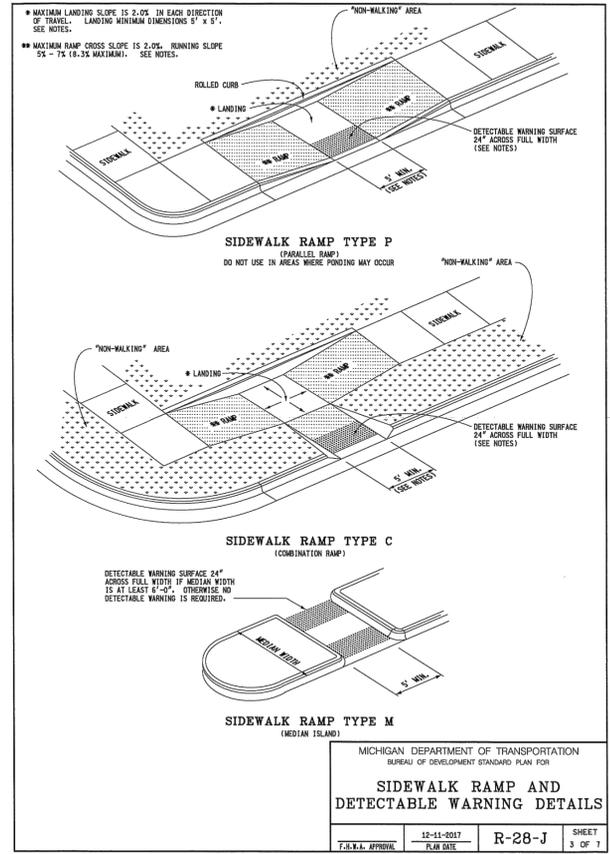
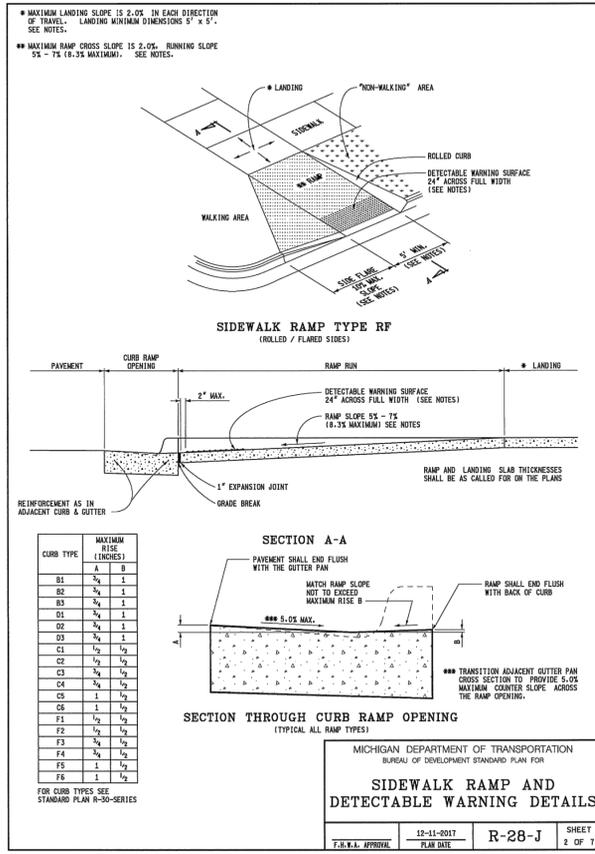
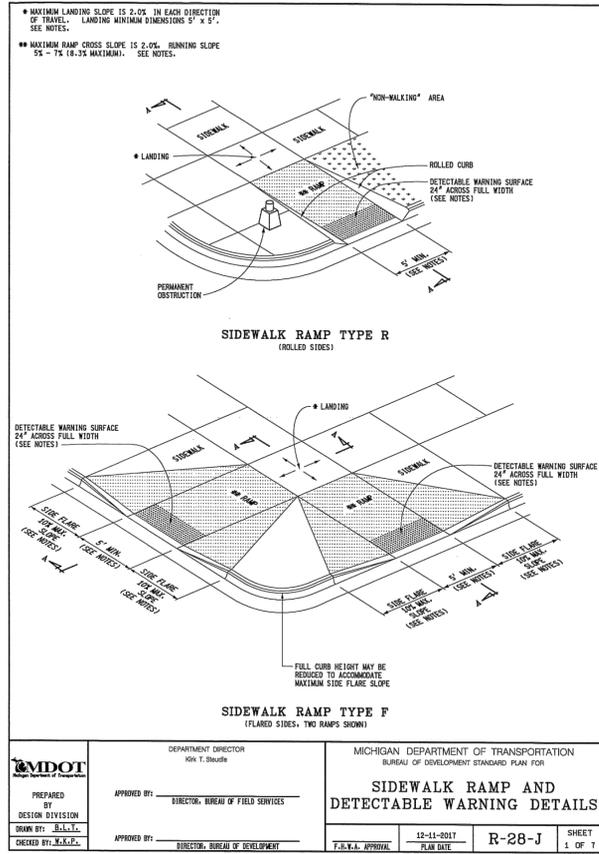
SCALE: 1" = 50'

DRAWING NUMBER:
P-7

NOT FOR CONSTRUCTION

CITY FILE #19-033, SECTION 14

XREF: S:\PROJECTS\2018\2018423\DWG\18423-TOPBASE.DWG
XREF: S:\PROJECTS\2018\2018423\DWG\CONSTRUCTION-V-BASE-18423.DWG
XREF: S:\PROJECTS\2018\2018423\DWG\CONSTRUCTION-V-TBLK-18423.DWG



| NO. | DATE | DESCRIPTION |
|-----|----------|-------------|
| 1 | 10-02-20 | 10-02-20 |
| 2 | 06-12-20 | 06-12-20 |
| 3 | 11-02-20 | 11-02-20 |
| 4 | 08-18-20 | 08-18-20 |
| 5 | 08-18-20 | 08-18-20 |
| 6 | 08-18-20 | 08-18-20 |
| 7 | 08-18-20 | 08-18-20 |
| 8 | 08-18-20 | 08-18-20 |
| 9 | 08-18-20 | 08-18-20 |
| 10 | 08-18-20 | 08-18-20 |
| 11 | 08-18-20 | 08-18-20 |
| 12 | 08-18-20 | 08-18-20 |
| 13 | 08-18-20 | 08-18-20 |
| 14 | 08-18-20 | 08-18-20 |
| 15 | 08-18-20 | 08-18-20 |
| 16 | 08-18-20 | 08-18-20 |
| 17 | 08-18-20 | 08-18-20 |
| 18 | 08-18-20 | 08-18-20 |
| 19 | 08-18-20 | 08-18-20 |
| 20 | 08-18-20 | 08-18-20 |
| 21 | 08-18-20 | 08-18-20 |
| 22 | 08-18-20 | 08-18-20 |
| 23 | 08-18-20 | 08-18-20 |
| 24 | 08-18-20 | 08-18-20 |
| 25 | 08-18-20 | 08-18-20 |
| 26 | 08-18-20 | 08-18-20 |
| 27 | 08-18-20 | 08-18-20 |
| 28 | 08-18-20 | 08-18-20 |
| 29 | 08-18-20 | 08-18-20 |
| 30 | 08-18-20 | 08-18-20 |
| 31 | 08-18-20 | 08-18-20 |
| 32 | 08-18-20 | 08-18-20 |
| 33 | 08-18-20 | 08-18-20 |
| 34 | 08-18-20 | 08-18-20 |
| 35 | 08-18-20 | 08-18-20 |
| 36 | 08-18-20 | 08-18-20 |
| 37 | 08-18-20 | 08-18-20 |
| 38 | 08-18-20 | 08-18-20 |
| 39 | 08-18-20 | 08-18-20 |
| 40 | 08-18-20 | 08-18-20 |
| 41 | 08-18-20 | 08-18-20 |
| 42 | 08-18-20 | 08-18-20 |
| 43 | 08-18-20 | 08-18-20 |
| 44 | 08-18-20 | 08-18-20 |
| 45 | 08-18-20 | 08-18-20 |
| 46 | 08-18-20 | 08-18-20 |
| 47 | 08-18-20 | 08-18-20 |
| 48 | 08-18-20 | 08-18-20 |
| 49 | 08-18-20 | 08-18-20 |
| 50 | 08-18-20 | 08-18-20 |
| 51 | 08-18-20 | 08-18-20 |
| 52 | 08-18-20 | 08-18-20 |
| 53 | 08-18-20 | 08-18-20 |
| 54 | 08-18-20 | 08-18-20 |
| 55 | 08-18-20 | 08-18-20 |
| 56 | 08-18-20 | 08-18-20 |
| 57 | 08-18-20 | 08-18-20 |
| 58 | 08-18-20 | 08-18-20 |
| 59 | 08-18-20 | 08-18-20 |
| 60 | 08-18-20 | 08-18-20 |
| 61 | 08-18-20 | 08-18-20 |
| 62 | 08-18-20 | 08-18-20 |
| 63 | 08-18-20 | 08-18-20 |
| 64 | 08-18-20 | 08-18-20 |
| 65 | 08-18-20 | 08-18-20 |
| 66 | 08-18-20 | 08-18-20 |
| 67 | 08-18-20 | 08-18-20 |
| 68 | 08-18-20 | 08-18-20 |
| 69 | 08-18-20 | 08-18-20 |
| 70 | 08-18-20 | 08-18-20 |
| 71 | 08-18-20 | 08-18-20 |
| 72 | 08-18-20 | 08-18-20 |
| 73 | 08-18-20 | 08-18-20 |
| 74 | 08-18-20 | 08-18-20 |
| 75 | 08-18-20 | 08-18-20 |
| 76 | 08-18-20 | 08-18-20 |
| 77 | 08-18-20 | 08-18-20 |
| 78 | 08-18-20 | 08-18-20 |
| 79 | 08-18-20 | 08-18-20 |
| 80 | 08-18-20 | 08-18-20 |
| 81 | 08-18-20 | 08-18-20 |
| 82 | 08-18-20 | 08-18-20 |
| 83 | 08-18-20 | 08-18-20 |
| 84 | 08-18-20 | 08-18-20 |
| 85 | 08-18-20 | 08-18-20 |
| 86 | 08-18-20 | 08-18-20 |
| 87 | 08-18-20 | 08-18-20 |
| 88 | 08-18-20 | 08-18-20 |
| 89 | 08-18-20 | 08-18-20 |
| 90 | 08-18-20 | 08-18-20 |
| 91 | 08-18-20 | 08-18-20 |
| 92 | 08-18-20 | 08-18-20 |
| 93 | 08-18-20 | 08-18-20 |
| 94 | 08-18-20 | 08-18-20 |
| 95 | 08-18-20 | 08-18-20 |
| 96 | 08-18-20 | 08-18-20 |
| 97 | 08-18-20 | 08-18-20 |
| 98 | 08-18-20 | 08-18-20 |
| 99 | 08-18-20 | 08-18-20 |
| 100 | 08-18-20 | 08-18-20 |

CAUTION!
 THE LOCATION AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS DRAWING ARE ONLY APPROXIMATE. NO GUARANTEE IS EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR DETERMINING THE EXACT UTILITY LOCATIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.

THIS DRAWING AND DESIGN ARE THE PROPERTY OF PEA, INC. THEY ARE SUBMITTED TO THE CONTRACTOR FOR THEIR USE ONLY. NO PART OF THIS DRAWING OR DESIGN IS TO BE REPRODUCED, COPIED, IN WHOLE OR IN PART, OR FOR ANY OTHER PURPOSE WITHOUT THE WRITTEN CONSENT OF PEA, INC. ALL COMPANY LAWS, RULES OF COPYRIGHT AND OTHERWISE ARE HEREBY SPECIFICALLY REFERENCED. © 2018 PEA, INC.

CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERAL ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR SHALL BE RESPONSIBLE FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY. THAT THE REQUIREMENTS SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS AND CONSTRUCTION CONTRACTOR FURTHER AGREES TO DEFINE, INCREASE AND MAINTAIN DESIGN PROFESSIONAL LIABILITY INSURANCE COVERAGE TO COVER ALL CLAIMS OR ALLEGED IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT EXCEPT LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE DESIGN PROFESSIONAL.

3 FULL WORKING DAYS BEFORE YOU DIG CALL
811
 Know what's below
 Call before you dig
 MISS Dig System, Inc.
 1-800-482-7171 www.missdig.org

PEA, Inc.
 2430 Rochester Ct., Ste. 100
 Troy, MI 48063-1872
 t: 248.689.9090
 f: 248.689.1044
 www.peainc.com

WOLVERINE BUILDING COMPANY
 4935 TECHNOLOGY DRIVE
 SHELBY TOWNSHIP, MICHIGAN 48315

PRELIMINARY NOTES AND DETAILS
CAMBRIDGE KNOLL
 PART OF THE SOUTHWEST 1/4 OF SECTION 14, T03N, R11E
 CITY OF ROCHESTER HILLS, OAKLAND COUNTY, MICHIGAN

DES. TMK DN. TMK SUR. KTR P.M. JBT
 (S:\PROJECTS\2018\2018423\DWG\CONSTRUCTION\BASE-18423.DWG)

ORIGINAL ISSUE DATE:
 AUGUST 6, 2019
 PEA JOB NO. 2018-423
 SCALE: 1" = 40'
 DRAWING NUMBER:
P-8.1

