

FIRE DEPARTMENT NOTES:

FIRE LANES SHALL BE CONSPICUOUSLY POSTED ON BOTH SIDES OF THE FIRE LANE, WITH FIRE LANE SIGNS SPACED NOT MORE THAN 100 FEET APART. FIRE LANE SIGNS SHALL READ "NO STOPPING, STANDING, PARKING, FIRE LANE", AND IN CONFORMANCE WITH THE MICHIGAN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. FIRE PREVENTION ORDINANCE CHAPTER 58, SECTION 503

CONSTRUCTION SITES SHALL BE SAFEGUARDED IN ACCORDANCE WITH IFC CHAPTER 14.

OPEN BURNING IS NOT PERMITTED, INCLUDING THE BURNING OF TRASH, DEBRIS, OR LAND CLEARING MATERIALS. OPEN BURNING FOR WARMING OF SAND AND /OR WATER FOR THE PREPARATION OF MORTAR SHALL BE WITHIN CITY OF ROCHESTER HILLS BURN PERMIT GUIDELINES. CONTACT ROCHESTER HILLS FIRE DEPARTMENT FOR PERMIT INFORMATION.

A KNOX KEY SYSTEM SHALL BE INSTALLED AT EACH BUILDING IN A LOCATION APPROVED BY THE FIRE CODE OFFICIAL. ORDERING INFORMATION IS AVAILABLE KNOXBOX.COM.* IFC 2006 SEC. 506

GENERAL NOTES:

- 1. ALL DIMENSIONS SHOWN ARE TO BACK OF CURB, FACE OF SIDEWALK, OUTSIDE FACE OF BUILDING, PROPERTY LINE, CENTER OF MANHOLE/CATCH BASIN OR CENTERLINE OF PIPE UNLESS OTHERWISE NOTED.
- 2. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CITY OF ROCHESTER HILLS CURRENT STANDARDS AND REGULATIONS.
- 3. THE CONTRACTOR SHALL NOTIFY THE CITY ENGINEER AND/OR THE AUTHORITY HAVING JURISDICTION 3 BUSINESS DAYS PRIOR TO THE BEGINNING OF CONSTRUCTION.
- 4. ANY WORK WITHIN THE STREET OR HIGHWAY RIGHT-OF-WAYS SHALL BE PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS OF THE AGENCIES HAVING JURISDICTION AND SHALL NOT BEGIN UNTIL ALL NECESSARY PERMITS HAVE BEEN ISSUED FOR THE WORK.
- 5. ALL SIGNS MUST MEET SECTION 138-8.603 AND CHAPTER 134 OF THE CITY CODE OF ORDINANCES AND BE APPROVED UNDER A SEPARATE PERMIT ISSUED BY THE BUILDING DEPARTMENT.

SIDEWALK RAMP LEGEND:

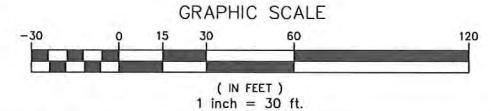
- SIDEWALK RAMP "TYPE RF" (Symbol)
 - SIDEWALK RAMP "TYPE R" (Symbol)
 - SIDEWALK RAMP "TYPE D" (Symbol)
 - SIDEWALK RAMP "TYPE P" (Symbol)
- REFER TO THE LATEST M.D.O.T. R-28 STANDARD RAMP AND DETECTABLE WARNING DETAILS

SIGN LEGEND:

- 'STOP' SIGN (Symbol)
 - 'NO STOPPING STANDING PARKING FIRE LANE' SIGN (Symbol)
 - 'BARRIER FREE PARKING' SIGN (Symbol)
 - 'VAN ACCESSIBLE' SIGN (Symbol)
 - 'CROSSWALK' SIGN (Symbol)
- REFER TO CONSTRUCTION PLANS FOR ADDITIONAL SIGN DETAILS

ACCESSIBLE DOOR LEGEND:

INDICATES ACCESSIBLE ACCESS DOOR. REFER TO ARCHITECTURAL PLANS FOR FURTHER DETAILS.



SITE DATA TABLE:

LAND AREA:		ZONING INFO:	
GROSS =	3.53 ACRES	R-4 ONE FAMILY RESIDENTIAL	
NET (TO PROPOSED R.O.W.) =	2.54 ACRES	FB-2 FLEX BUSINESS OVERLAY	
PROPOSED BUILDING AREA (GROSS):		BUILDING SETBACKS:	
PROPOSED BUILDING AREA =	81,073 S.F.	FRONT (ROCHESTER)	PROVIDED: 16.57'
		SIDE (SOUTH)	PROVIDED: 27.36'
PARKING REQUIRED:		Notes:	
Elderly housing, dependent (including nursing homes and assisted living):	1 SPACE / 0.5 SLEEPING ROOMS	1. All roof and ground mounted mechanical equipment shall be screened from adjacent roads and properties.	
100 SLEEPING ROOMS * 0.5 =	50 SPACES REQUIRED	2. Fire lanes shall be designated by the fire code official, and shall be conspicuously posted on both sides of the fire lane, with fire lane signs spaced not more than 100 feet apart, and in conformance with the MUTCD.	
PARKING PROVIDED:		3. All pedestrian walkways and required access doors shall comply with Michigan Barrier Free Design Criteria.	
PARKING SPACES PROVIDED	57 SPACES (INCLUDING 4 HC SPACES)		



NO.	DATE	BY	DESCRIPTION	DATE
1	11/04/2015	EML	PRELIMINARY PLAN	
2	11/04/2015	EML	REVISIONS	



CAUTION!
THE USER OF THIS DRAWING ASSUMES ALL LIABILITY FOR THE ACCURACY OF THE INFORMATION PROVIDED HEREON. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY INFORMATION FROM THE RECORD DRAWINGS AND FIELD SURVEY. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY INFORMATION FROM THE RECORD DRAWINGS AND FIELD SURVEY. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY INFORMATION FROM THE RECORD DRAWINGS AND FIELD SURVEY.

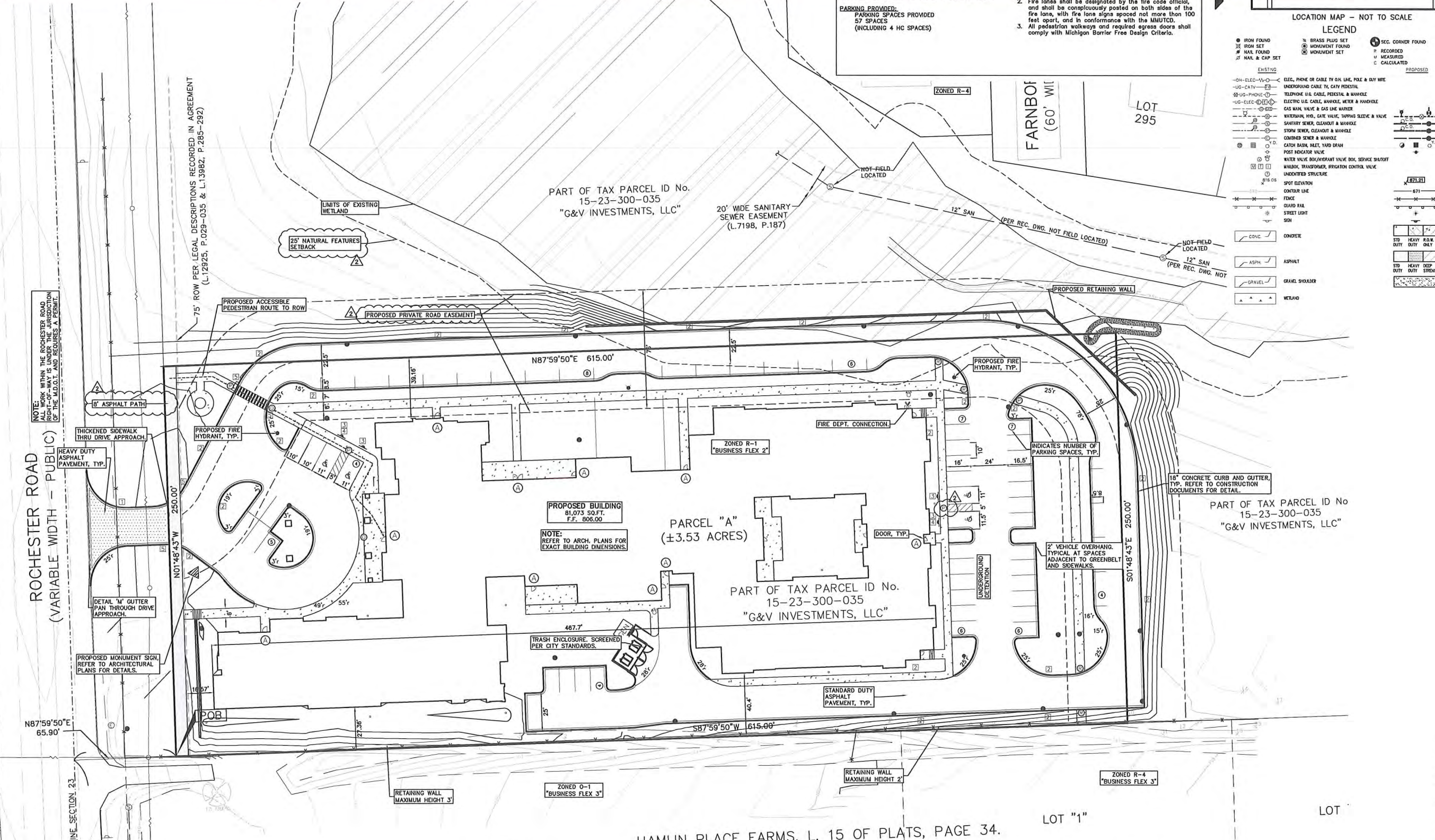
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Troy, MI 48063-1872
t: 248.689.9090
f: 248.689.1044
www.peainc.com

NORTHPOINT DEVELOPMENT
5015 NW CANAL STREET, SUITE 200
RIVERSIDE, MO 64150
PRELIMINARY DIMENSION PLAN
STONECREST AT ROCHESTER HILLS
PART OF THE SW 1/4 SECTION 23, T3N, R11E, E4
CITY OF ROCHESTER HILLS OAKLAND COUNTY, MICHIGAN
DES. ESB DN ESB SUR. JMW P.M. DNH
DATE: 11/04/2015 11:00 AM

ORIGINAL ISSUE DATE: NOVEMBER 4, 2015
PEA JOB NO. 2015-233
SCALE: 1" = 30'
DRAWING NUMBER: C-2.0



HAMLIN PLACE FARMS, L. 15 OF PLATS, PAGE 34.

NOT TO BE USED AS CONSTRUCTION DRAWINGS

5: PROJ.ECTS\2015\2015233\DWG\15233-10POBASE.DWG
5: PROJ.ECTS\2015\2015233\DWG\CONSTRUCTION-X-BASE-15233.DWG
5: PROJ.ECTS\2015\2015233\DWG\CONSTRUCTION-V-TBL-15233.DWG

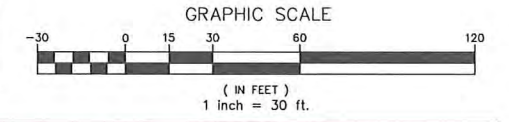
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 FIRE PREVENTION ORDINANCE CHAPTER 58, SECTION 307.6.2 & 307.6.2.3
 A KNOX KEY SYSTEM SHALL BE INSTALLED AT EACH BUILDING IN A LOCATION APPROVED BY THE FIRE CODE OFFICIAL.
 ORDERING INFORMATION IS AVAILABLE KNOXBOX.COM.
 IFC 2008 SEC. 506

GENERAL NOTES:
 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 MAINHOLE/CATCH BASIN OR CENTERLINE OF PIPE UNLESS OTHERWISE NOTED.
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SIDEWALK RAMP LEGEND:
 SIDEWALK RAMP 'TYPE R' (Symbol)
 SIDEWALK RAMP 'TYPE R' (Symbol)
 SIDEWALK RAMP 'TYPE D' (Symbol)
 SIDEWALK RAMP 'TYPE P' (Symbol)
 REFER TO THE LATEST M.D.O.T. R-28 STANDARD RAMP AND DETECTABLE WARNING DETAILS

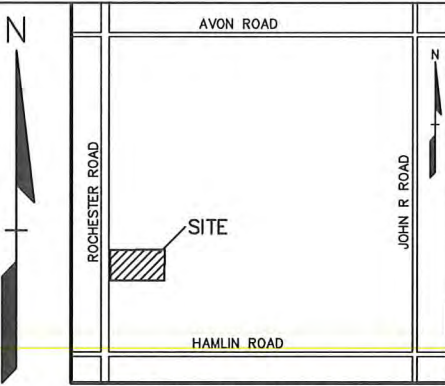
SIGN LEGEND:
 'STOP' SIGN (Symbol)
 'NO STOPPING STANDING PARKING FIRE LANE' SIGN (Symbol)
 'BARRIER FREE PARKING' SIGN (Symbol)
 'VAN ACCESSIBLE' SIGN (Symbol)
 'CROSSWALK' SIGN (Symbol)
 REFER TO LATEST MDOOT R-28 STANDARD DETAILS FOR ADDITIONAL SIGN DETAILS

ACCESSIBLE DOOR LEGEND:
 INDICATES ACCESSIBLE ACCESS DOOR
 REFER TO ARCHITECTURAL PLANS FOR FURTHER DETAILS.



SITE DATA TABLE:

LAND AREA: GROSS = 3.53 ACRES NET (TO PROPOSED R.O.W.) = 2.54 ACRES	ZONING INFO: R-4 ONE FAMILY RESIDENTIAL FB-2 FLEX BUSINESS OVERLAY
PROPOSED BUILDING AREA (GROSS): PROPOSED BUILDING AREA = 81,073 SF.	BUILDING SETBACKS: FRONT (ROCHESTER) SIDE (SOUTH) PROVIDED: 16.57' 27.36'
PARKING REQUIRED: Elderly housing, dependent (including nursing homes and assisted living): 1 SPACE / 0.5 SLEEPING ROOMS 100 SLEEPING ROOMS * 0.5 = 50 SPACES REQUIRED	NOTES: 1. All roof and ground mounted mechanical equipment shall be screened from adjacent roads and properties. 2. Fire lanes shall be designated by the fire code official, and shall be conspicuously posted on both sides of the fire lane, with fire lane signs spaced not more than 100 feet apart, and in conformance with the MMUTCD. 3. All pedestrian walkways and required egress doors shall comply with Michigan Barrier Free Design Criteria.
PARKING PROVIDED: PARKING SPACES PROVIDED 57 SPACES (INCLUDING 4 HC SPACES)	



REVISIONS

NO.	DATE	DESCRIPTION	BY	CHK
1	12/21/15	DATE		
2	12/21/15	DATE		
3	12/21/15	DATE		
4	12/21/15	DATE		
5	12/21/15	DATE		

LEGEND

IRON FOUND	BRASS PLUG SET	SEC. CORNER FOUND
IRON SET	MONUMENT FOUND	RECORDED
NAIL FOUND	MONUMENT SET	MEASURED
NAIL & CAP SET		CALCULATED

EXISTING

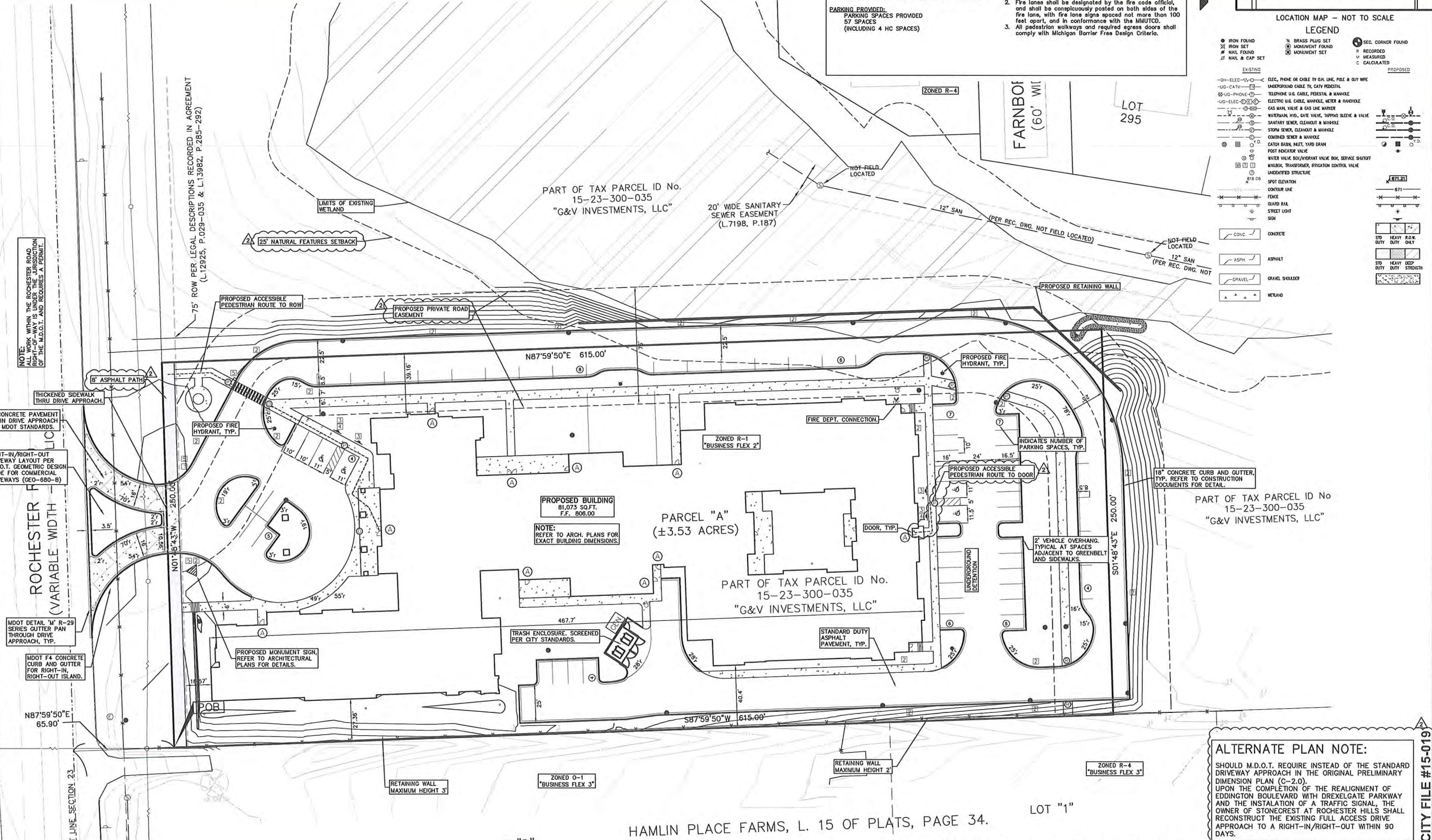
- OH-ELEC-W-V
- UG-CATV
- UG-PHONE
- UG-ELEC
- WATERMAN, HYD. GATE VALVE, TAPPING SLEEVE & VALVE
- SAWNEY SINK, CLEANOUT & MANHOLE
- STONE SINK, CLEANOUT & MANHOLE
- COMBINED SINK & MANHOLE
- CATCH BASIN, RAIN, YARD DRAIN
- POST INDICATOR VALVE
- WATER VALVE BOX/INTEGRAL VALVE BOX SERVICE SHUTOFF
- MANHO, TRANSFORMER, IRRIGATION CONTROL VALVE
- UNIDENTIFIED STRUCTURE
- SPOT ELEVATION
- CONTOUR LINE
- FENCE
- GUARD RAIL
- STREET LIGHT
- SI

PROPOSED

- CONC
- ASPH
- GRAVEL
- WELAND



CAUTION!
 THE USER OF THIS DRAWING AGREES TO HOLD THE ENGINEER HARMLESS FROM AND AGAINST ALL LIABILITY FOR DAMAGES OF ANY KIND, INCLUDING REASONABLE ATTORNEY'S FEES, ARISING FROM THE USE OF THIS DRAWING FOR ANY PURPOSES OTHER THAN THAT AUTHORIZED BY THE CONTRACTOR AND/OR ARCHITECT. THE USER OF THIS DRAWING SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM ALL APPLICABLE AGENCIES AND AUTHORITIES. THE USER OF THIS DRAWING SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM ALL APPLICABLE AGENCIES AND AUTHORITIES. THE USER OF THIS DRAWING SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM ALL APPLICABLE AGENCIES AND AUTHORITIES.



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 f: 248.689.1044
 www.peainc.com

ALTERNATE PLAN NOTE:
 SHOULD M.D.O.T. REQUIRE INSTEAD OF THE STANDARD DRIVEWAY APPROACH IN THE ORIGINAL PRELIMINARY DIMENSION PLAN (C-2.0).
 UPON THE COMPLETION OF THE REALIGNMENT OF EDDINGTON BOULEVARD WITH DREXELGATE PARKWAY AND THE INSTALLATION OF A TRAFFIC SIGNAL, THE OWNER OF STONECREST AT ROCHESTER HILLS SHALL RECONSTRUCT THE EXISTING FULL ACCESS DRIVEWAY APPROACH TO A RIGHT-IN/RIGHT-OUT WITHIN 90 DAYS.

CITY FILE #15-0191

NORTHPOINT DEVELOPMENT
 5015 NW CANAL STREET, SUITE 200
 RIVERSIDE, MO 64150

PRELIMINARY DIMENSION PLAN - ALT
STONECREST AT ROCHESTER HILLS
 PART OF THE SW 1/4 SECTION 23, T.3N., R.11E.,
 CITY OF ROCHESTER HILLS, OAKLAND COUNTY, MICHIGAN

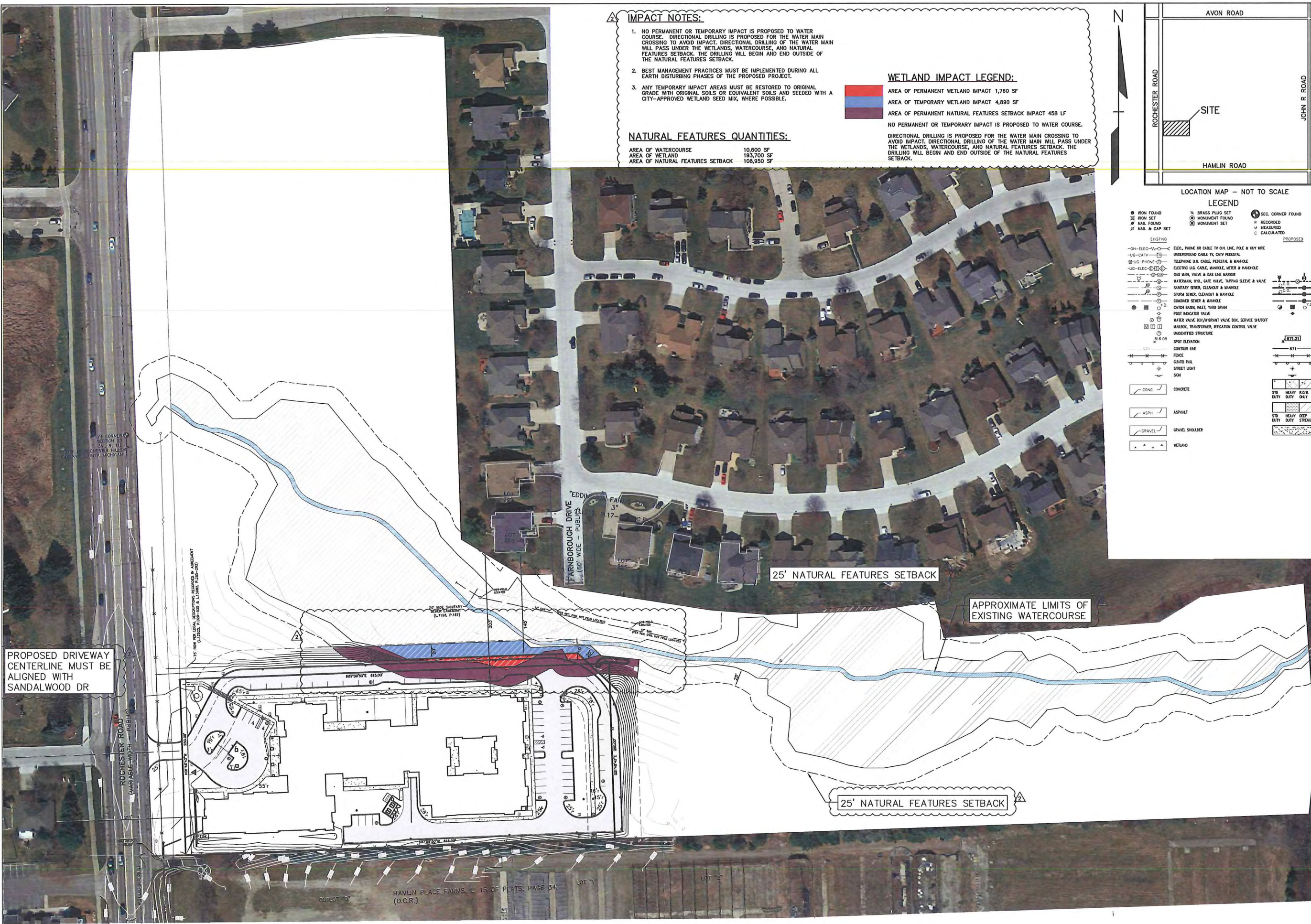
DES: DN, ESB, SUR, JW, P.M. DNH
 DATE: 11/04/15

ORIGINAL ISSUE DATE:
 NOVEMBER 4, 2015

PEA JOB NO. 2015-233

SCALE: 1" = 30'

DRAWING NUMBER:
C-2.0A



IMPACT NOTES:

1. NO PERMANENT OR TEMPORARY IMPACT IS PROPOSED TO WATER COURSE. DIRECTIONAL DRILLING IS PROPOSED FOR THE WATER MAIN CROSSING TO AVOID IMPACT. DIRECTIONAL DRILLING OF THE WATER MAIN WILL PASS UNDER THE WETLANDS, WATERCOURSE, AND NATURAL FEATURES SETBACK. THE DRILLING WILL BEGIN AND END OUTSIDE OF THE NATURAL FEATURES SETBACK.
2. BEST MANAGEMENT PRACTICES MUST BE IMPLEMENTED DURING ALL EARTH DISTURBING PHASES OF THE PROPOSED PROJECT.
3. ANY TEMPORARY IMPACT AREAS MUST BE RESTORED TO ORIGINAL GRADE WITH ORIGINAL SOILS OR EQUIVALENT SOILS AND SEEDED WITH A CITY-APPROVED WETLAND SEED MIX, WHERE POSSIBLE.

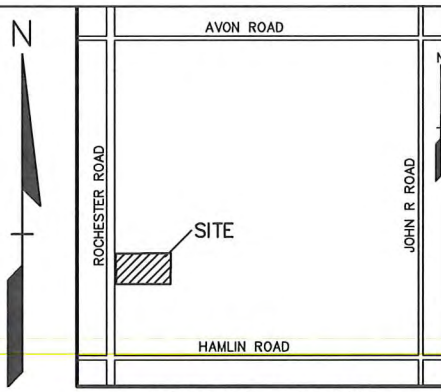
WETLAND IMPACT LEGEND:

- AREA OF PERMANENT WETLAND IMPACT 1,760 SF
- AREA OF TEMPORARY WETLAND IMPACT 4,890 LF
- AREA OF PERMANENT NATURAL FEATURES SETBACK IMPACT 458 LF
- NO PERMANENT OR TEMPORARY IMPACT IS PROPOSED TO WATER COURSE.

NATURAL FEATURES QUANTITIES:

AREA OF WATERCOURSE 10,600 SF
 AREA OF WETLAND 193,700 SF
 AREA OF NATURAL FEATURES SETBACK 108,950 SF

DIRECTIONAL DRILLING IS PROPOSED FOR THE WATER MAIN CROSSING TO AVOID IMPACT. DIRECTIONAL DRILLING OF THE WATER MAIN WILL PASS UNDER THE WETLANDS, WATERCOURSE, AND NATURAL FEATURES SETBACK. THE DRILLING WILL BEGIN AND END OUTSIDE OF THE NATURAL FEATURES SETBACK.



NO.	BY	CHK	DESCRIPTION	DATE
1	ESB	DN	DATE	12/27/15
2	ESB	DN	DATE	12/27/15
3	ESB	DN	DATE	12/27/15
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8	ESB	DN	DATE	12/27/15
9	ESB	DN	DATE	12/27/15
10	ESB	DN	DATE	12/27/15

LOCATION MAP - NOT TO SCALE

LEGEND

EXISTING

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

PROPOSED

- ELEC. PHONE OR CABLE TO SIX LINE, POLE & DUTY WIRE UNDERGROUND CABLE TO CITY RESTRAL
- TELEPHONE U.S. CABLE, FIBERGLASS & MANHOLE
- ELECTRIC U.S. CABLE, MANHOLE, METER & MANHOLE
- GAS MAIN, VALVE & GAS LINE MANHOLE
- WATERMAIN, HDG., GATE VALVE, TAPPING SLAVE & VALVE
- SANITARY SINK, CLEANOUT & MANHOLE
- STORM SINK, CLEANOUT & MANHOLE
- COMBINED SINK & MANHOLE
- CATCH BASIN, REET, YARD DRAIN
- POST INDICATOR VALVE
- WATER VALVE BOX/FRONT VALVE BOX, SERVICE SHUTOFF
- WALKING, TRANSFORMER, IRRIGATION CONTROL VALVE
- UNIDENTIFIED STRUCTURE
- SPOT ELEVATION
- CONTOUR LINE
- FENCE
- GUARD RAIL
- STREET LIGHT
- SOIL
- CONC.
- ASPH.
- GRAVEL
- WETLAND

CAUTION!
 THE EXISTING UTILITIES AND RECORDS OF EXISTING UTILITIES ARE NOT GUARANTEED TO BE ACCURATE. CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO ANY EXCAVATION OR DRILLING. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO EXISTING UTILITIES. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO EXISTING UTILITIES. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO EXISTING UTILITIES.



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 f: 248.689.1044
 www.peainc.com

PROPOSED DRIVEWAY CENTERLINE MUST BE ALIGNED WITH SANDALWOOD DR

25' NATURAL FEATURES SETBACK

APPROXIMATE LIMITS OF EXISTING WATERCOURSE

25' NATURAL FEATURES SETBACK

NOT TO BE USED AS CONSTRUCTION DRAWINGS

REF: S:\PROJ\2015\2015233\DWG\15233-10\POBASE.DWG
 REF: S:\PROJ\2015\2015233\DWG\CONSTRUCTION\X-BASE-15233.DWG
 REF: S:\PROJ\2015\2015233\DWG\CONSTRUCTION\X-TBLK-15233.DWG

CITY FILE #15-019

NORTHPOINT DEVELOPMENT
 5015 NW CANAL STREET, SUITE 200
 RIVERSIDE, MO 64150

OVERALL PLAN
STONECREST AT ROCHESTER HILLS
 PART OF THE SW 1/4 SECTION 23, T.3N, R.11E, E.1
 CITY OF ROCHESTER HILLS OAKLAND COUNTY, MICHIGAN

DES: ESB DN SUR. JW P.M. DINH
 DATE: 11/04/15

ORIGINAL ISSUE DATE:
 NOVEMBER 4, 2015

PEA JOB NO. 2015-233

SCALE: 1" = 30'

DRAWING NUMBER:
C-2.1

FIRE DEPARTMENT NOTES:

FIRE LANES SHALL BE CONSPICUOUSLY POSTED ON BOTH SIDES OF THE FIRE LANE, WITH FIRE LANE SIGNS SPACED NOT MORE THAN 100 FEET APART. FIRE LANE SIGNS SHALL READ "NO STOPPING, STANDING, PARKING, FIRE LANE", AND IN CONFORMANCE WITH THE MICHIGAN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. FIRE PREVENTION ORDINANCE CHAPTER 58, SECTION 503.

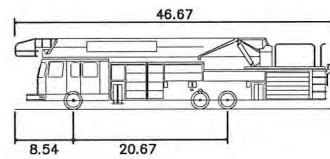
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ORDERING INFORMATION IS AVAILABLE: KNOXBOX.COM.
IFC 2006 SEC. 508



Rochester Hills Fire Truck
Overall Length 46.67ft
Overall Width 8.54ft
Min Wheel Radius 20.67ft

GENERAL NOTES:

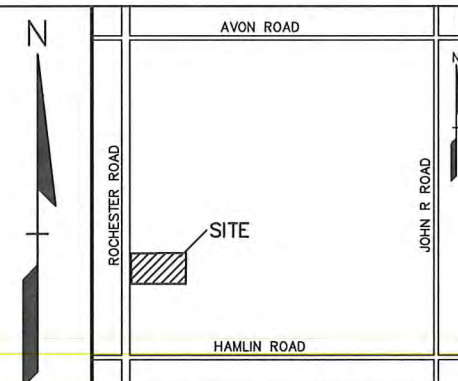
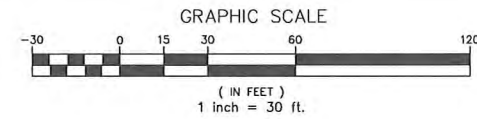
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SIGN LEGEND:

- 'STOP' SIGN
- 'NO STOPPING STANDING PARKING FIRE LANE' SIGN
- 'BARRIER FREE PARKING' SIGN
- 'VAN ACCESSIBLE' SIGN
- 'CROSSWALK' SIGN

REFER TO LATEST MDOT R-28 STANDARD DETAILS FOR ADDITIONAL SIGN DETAILS



REVISIONS

NO.	BY	CHK.	DESCRIPTION	DATE
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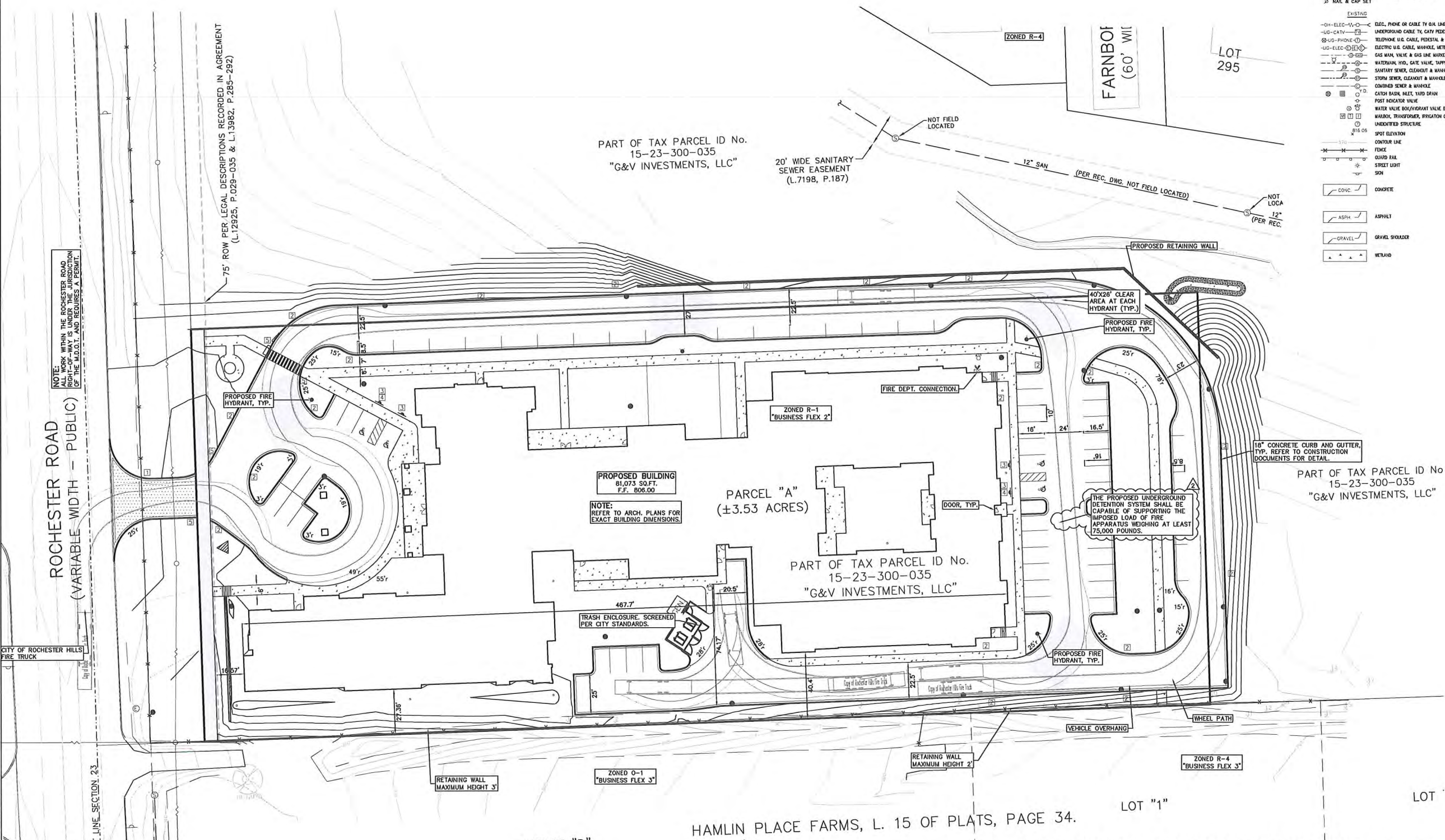


CAUTION!

THE EXISTING UTILITIES SHOWN ON THIS DRAWING ARE BASED ON RECORD DRAWINGS AND FIELD SURVEY. THE CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO CONSTRUCTION. ANY UNEXPECTED UTILITIES SHALL BE STOPPED IMMEDIATELY AND REPORTED TO THE ENGINEER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS FROM THE CITY OF ROCHESTER HILLS AND THE MICHIGAN DEPARTMENT OF TRANSPORTATION (MDOT) PRIOR TO CONSTRUCTION.

LEGEND

EXISTING	PROPOSED
● IRON FOUND	○ BRASS PLUG SET
⊗ IRON SET	⊗ MONUMENT FOUND
⊗ NAIL FOUND	⊗ MONUMENT SET
⊗ NAIL & CAP SET	⊗ RECORDED
	⊗ MEASURED
	⊗ CALCULATED
— OH-ELEC-W-C	— ELEC. PHONE OR CABLE TV OR LINE, POLE & GUY WIRE
— OH-CATV	— UNDERGROUND CABLE TV, CITY FEEDS
— US-PHONE	— TELEPHONE U.G. CABLE, FEEDS & MANHOLE
— UG-ELEC	— ELECTRIC U.G. CABLE, MANHOLE, METER & MANHOLE
— GAS	— GAS MAN. VALVE & GAS LINE WARDER
— WTR	— WATERMAIN, HD. GATE VALVE, TAPPING SLAVE & VALVE
— SAN	— SANITARY SEWER, CLEANOUT & MANHOLE
— STORM	— STORM SEWER, CLEANOUT & MANHOLE
— COIN	— COINTEGR. SENSER & MANHOLE
— CATCH	— CATCH BASIN, BUILT, YARD DRAIN
— POST	— POST INDICATOR VALVE
— VALVE	— WATER VALVE BOX/HYDRANT VALVE BOX, SERVICE SHUTOFF
— MANHOLE	— MANHOLE, TRANSFORMER, REGULATION CONTROL VALVE
— UNIDENTIFIED	— UNIDENTIFIED STRUCTURE
— SPOT	— SPOT ELEVATION
— CONTOUR	— CONTOUR LINE
— FENCE	— FENCE
— GUARD	— GUARD RAIL
— STREET	— STREET LIGHT
— SIGN	— SIGN
— CONC	— CONCRETE
— ASPH	— ASPHALT
— GRAVEL	— GRAVEL SHOULDER
— WETLAND	— WETLAND
— 30	— 30' HEAVY R&E DUTY
— 30	— 30' HEAVY R&E DUTY D&T
— 30	— 30' HEAVY R&E DUTY STRENGTH



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CITY FILE #15-019

NORTHPOINT DEVELOPMENT
5015 NW CANAL STREET, SUITE 200
RIVERSIDE, MO 64150

FIRE PROTECTION PLAN
STONECREST AT ROCHESTER HILLS
PART OF THE SW 1/4 SECTION 23, T.3N., R.11E.,
CITY OF ROCHESTER HILLS OAKLAND COUNTY, MICHIGAN

DES: ESB DN SUR: JW P.M. DNH
DATE: 11/11/15

ORIGINAL ISSUE DATE:
NOVEMBER 4, 2015

PEA JOB NO. 2015-233

SCALE: 1" = 30'

DRAWING NUMBER:
C-2.3

25 YEAR STORM DETENTION DESIGN (OAKLAND COUNTY DESIGN METHOD)

Contributing Area (A): 3.61 AC.
 Allowable Discharge (Qa): 0.72 C.F.S. (= 0.2 CFS/AC.)
 Coefficient of Runoff (Cr): 0.70

Calculation of Required Discharge/Acre

$Q_0 = ((Q_a)/(A))(C_r)$: 0.29
 $T = -25 + ((8062.5/Q_0))0.5$: 142.52

Storage Volume Required:

$V_s = (12900(T)/(T+25)) - 40Q_0(T)$: 9336.99
 $V_t = (V_s)(A)(C_r)$: 23447

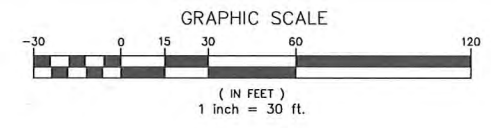
DRAINAGE CALCULATIONS:

ALL DEVELOPED AREA PROPOSED TO DRAIN TO DETENTION SYSTEM HAS BEEN INCLUDED IN THE DESIGN AT A "C" FACTOR OF 0.95 FOR IMPERVIOUS AREAS AND 0.25 FOR LANDSCAPE AREAS.

SANITARY SEWER BASIS OF DESIGN:

(Unit Factors Based on Oakland County Unit Assignment Factors)
 CONVALESCENT AND/OR NURSING HOMES

BEDS	100
Unit Factor	0.3
REU	30.0
Population (P) (3.5 PEOPLE/EDU)	105.0 People
TOTAL	
REU	30.0
105 People	
Average Flow (100 GPCPD)	10,500 G.P.D.
	0.016 C.F.S.
P (1000s)	0.105
Peaking Factor (PF)	4.24
PF = (18+sqrt(P))(4+sqrt(P))	
Peak Flow (G.D.P.)	44,496 G.P.D.
Peak Flow (C.F.S.)	0.069 C.F.S.
8" Pipe Capacity Provided =	0.76 C.F.S.



REVISIONS

NO.	DATE	BY	CHK	DESCRIPTION
1				
2				



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LEGEND

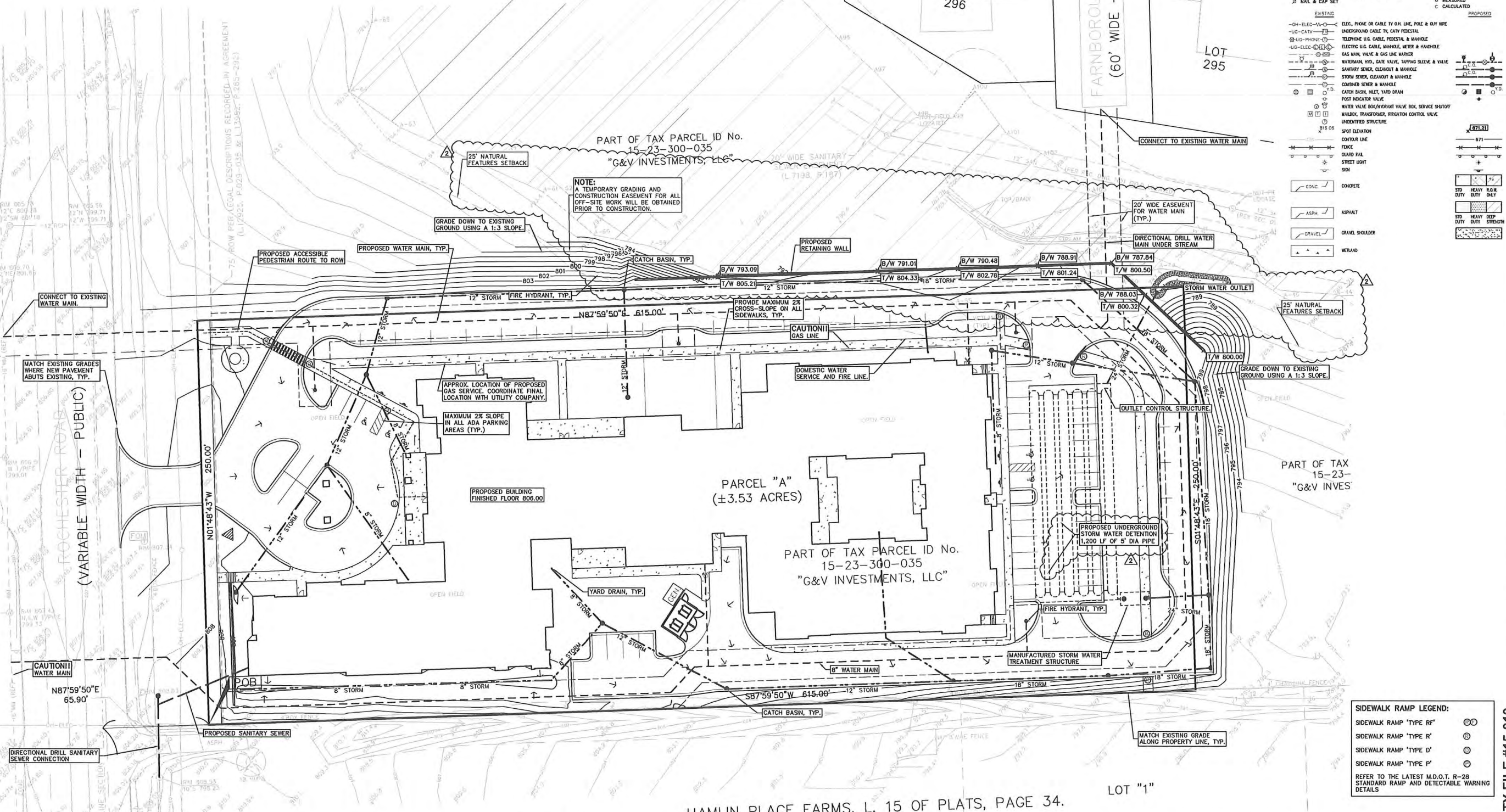
● IRON FOUND	○ BRASS PLUG SET	○ REC. CORNER FOUND
⊕ IRON SET	⊕ MONUMENT FOUND	○ RECORDED
⊕ NAIL FOUND	⊕ MONUMENT SET	○ MEASURED
⊕ NAIL & CAP SET		○ CALCULATED

EXISTING

- 12" STORM
- 18" STORM
- 24" STORM
- 30" STORM
- 36" STORM
- 42" STORM
- 48" STORM
- 54" STORM
- 60" STORM
- 66" STORM
- 72" STORM
- 78" STORM
- 84" STORM
- 90" STORM
- 96" STORM
- 102" STORM
- 108" STORM
- 114" STORM
- 120" STORM
- 126" STORM
- 132" STORM
- 138" STORM
- 144" STORM
- 150" STORM
- 156" STORM
- 162" STORM
- 168" STORM
- 174" STORM
- 180" STORM
- 186" STORM
- 192" STORM
- 198" STORM
- 204" STORM
- 210" STORM
- 216" STORM
- 222" STORM
- 228" STORM
- 234" STORM
- 240" STORM
- 246" STORM
- 252" STORM
- 258" STORM
- 264" STORM
- 270" STORM
- 276" STORM
- 282" STORM
- 288" STORM
- 294" STORM
- 300" STORM

PROPOSED

- 12" STORM
- 18" STORM
- 24" STORM
- 30" STORM
- 36" STORM
- 42" STORM
- 48" STORM
- 54" STORM
- 60" STORM
- 66" STORM
- 72" STORM
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CITY FILE #15-019
NORTHPOINT DEVELOPMENT
 5015 NW CANAL STREET, SUITE 200
 RIVERSIDE, MO 64150
PRELIMINARY GRADING AND UTILITY PLAN
STONECREST AT ROCHESTER HILLS
 PART OF THE SW 1/4 SECTION 24, T4N, R1E, ELY COUNTY, MO
 CITY OF ROCHESTER HILLS, OAKLAND COUNTY, MICHIGAN
 DES: ESB DN, ESB SUR, JMW P.M., DNHT

ORIGINAL ISSUE DATE: NOVEMBER 4, 2015
 PEA JOB NO. 2015-233
 SCALE: 1" = 30'
 DRAWING NUMBER: C-3.0

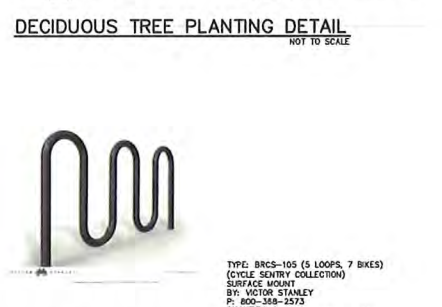
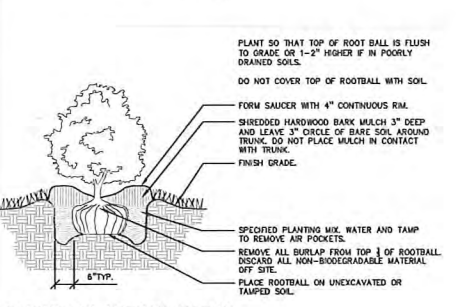
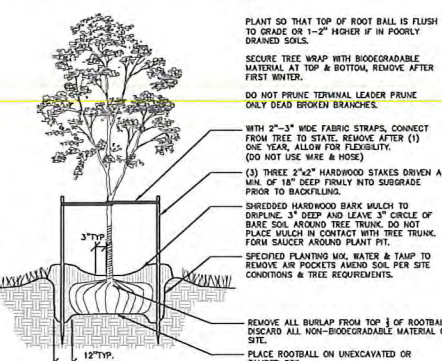
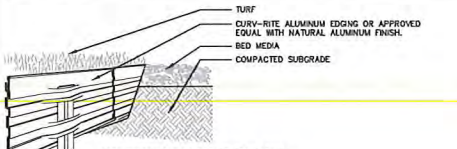
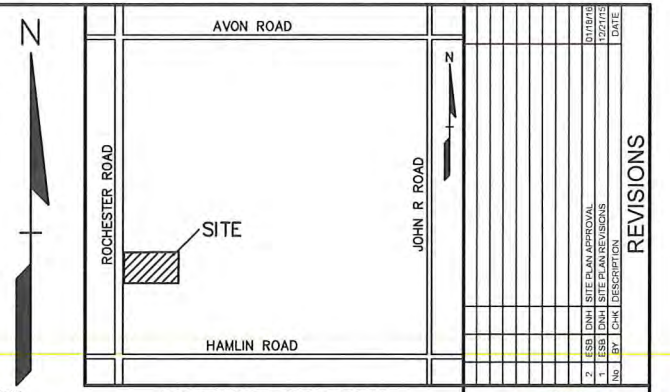
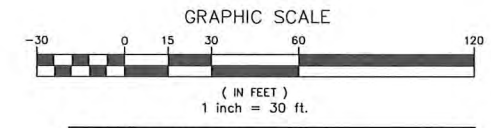
CITY OF ROCHESTER HILLS NOTES:
TREE PLANTING RESTRICTIONS:
 Prior approval is required to plant any tree or shrub on the public right-of-way. All trees and shrubs must be planted at least 10' from the edge of the public road. Shade trees and shrubs must be planted at least 5' from the edge of the public roadway. Evergreen and ornamental trees must be planted at least 10' from the edge of the public roadway. No trees or shrubs may be planted within the triangular area formed at the intersection of any street right-of-way lines at a distance along each line of 25' from their point of intersection. No trees or shrubs may be planted in the triangular area formed at the intersection of any driveway with a public roadway at a distance along each line of 15' from their point of intersection. All trees and shrubs must be planted at least 10' from any fire hydrant. Shade and evergreen trees must be at least 15' away from the nearest overhead wire. Trees must be planted a minimum of 5' from an underground utility, unless the city's Landscape Architect requires a greater distance.

CLOSING COMMENT:
 Prior to the release of the performance bond, the City of Rochester Hills Forestry Division needs to inspect all trees, existing or planted, to identify any that pose a hazard to the safe use of the public right-of-way. Forestry may require the developer to remove, and possibly replace, any such trees.

NOTE: THESE REQUIREMENTS ABOVE ARE INCORPORATED INTO THE PLAN.

PER CITY OF ROCHESTER HILLS MAINTENANCE AGREEMENT:
 Section 138-12-109 Maintenance
 The owner of the property shall be responsible for all maintenance of site landscaping, as follows:

- Landscaping shall be kept in a neat, orderly and healthy growing condition, free from debris and refuse.
- Pruning shall be minimal at the time of installation, only to remove dead or diseased branches. Subsequent pruning shall assure proper maturation of plants to achieve their approved purpose.
- All dead, damaged, or diseased plant material shall be removed immediately and replaced within six (6) months after it dies or at the next planting season, whichever occurs first. For purposes of this Section, the planting season for deciduous plants shall be between March 1 and June 1 and for evergreen plants shall be between March 1 and June 1. Plant material installed to replace dead or diseased material shall be as close as practical to the size of the material it is intended to replace. The City may notify property owners of the need to replace dead, damaged, or diseased material.
- The approved landscape plan shall be considered a permanent record and integral part of the Site Plan. Approval: Unless otherwise approved in accordance with the aforementioned procedures, any removal or replacement of plant material, or non-compliance with the maintenance requirements of this Section, shall be a violation of this Ordinance.
- If protected trees are damaged, a fine shall be issued on an inch-by-inch basis at a monetary rate as defined by the Forestry Department.



BUFFER YARD TYPE B AT SOUTH PROPERTY LINE:
 REQUIRED: 2 DEC. + 1.5 ORN. + 2 EVG. + 4 SHRUBS/100 LF SOUTH; /615 LF = 12 DEC; 9 ORN; 12 EVG; 25 SHRUBS REQ.D
 PROVIDED: = 3 EXISTING DEC; 9 NEW DEC; 9 ORN; 12 EVG; 25 SHRUBS

BUFFER YARD TYPE D AT NORTH AND EAST PROPERTY LINE:
 REQUIRED: 2.5 DEC. + 1.5 ORN. + 5 EVG. + 8 SHRUBS/100 LF NORTH; /615 LF = 15 DEC; 9 ORN; 31 EVER; 49 SHRUBS REQ.D EAST; /250 LF = 6 DEC; 4 ORN; 13 EVER; 20 SHRUBS REQ.D
 PROVIDED: = 12 DEC; 15 ORN; 9 EVG; 44 SHRUBS

ADDITIONAL TREES REQUESTED PER CITY REVIEW COMMENTS:
 ADDITIONAL TREES REQUIRED: 12 DEC; 15 ORN; 9 EVG; 44 SHRUBS
 PROVIDED: = 12 DEC; 15 ORN; 9 EVG; 44 SHRUBS

TREE REPLACEMENT:
 REQUIRED: 5 DEC. TREES TO BE REMOVED (1 IN POOR CONDITION) (3" CAL TREE OR 10" HT EVERGREEN = 2 TREE CREDIT) (NO REPLACEMENT OF DEAD OR POOR CONDITION TREES REQ.D)
 PROVIDED: 2- 3" CAL. DEC. TREES

EVERGREEN PLANT LIST:

QUANTITY	KEY SYMBOL	COMMON NAME	SCIENTIFIC NAME	SIZE	SPEC
12	AC10	Concolor Fir	<i>Abies concolor</i>	10' HL	B&B
17	PA10	Norway Spruce	<i>Picea abies</i>	10' HL	B&B
11	PG10	Black Hills Spruce	<i>Picea glauca 'Densata'</i>	10' HL	B&B
14	TC10	Canadian Hemlock	<i>Tsuga canadensis</i>	10' HL	B&B

SHRUB PLANT LIST:

QUANTITY	KEY SYMBOL	COMMON NAME	SCIENTIFIC NAME	SIZE	SPEC
40	P036	Summerwine Ninebark	<i>Physocarpus opulifolius 'Seward'</i>	36" HL	Cont.
24	RA30	Gro Low Sumac	<i>Rhus aromatica 'Gro-Low'</i>	30" HL	Cont.
49	SAW30	Anthony Waterer Spirea	<i>Spiraea x bum. 'Anthony Waterer'</i>	30" HL	Cont.
12	SS30	Snowmound Spirea	<i>Spiraea nipponica 'Snowmound'</i>	30" HL	Cont.
40	SP30	Miss Kim Lilac	<i>Syringa palata 'Miss Kim'</i>	30" HL	Cont.
25	VD36	Blue Muffin Viburnum	<i>Viburnum dentatum 'Christom'</i>	36" HL	Cont.

LANDSCAPE CALCULATIONS:
 PER CITY OF ROCHESTER HILLS ZONING ORDINANCE

INTERIOR PARKING LOT LANDSCAPE:
 REQUIRED: 5% OF VEHICLE USE AREA, 1 TREE/150 SF
 NOTE: EA. LANDSCAPE ISLAND MUST HAVE 1 TREE MIN.
 50,911 SQ FT x 5% = 2,545 SQ FT
 2,545 SF / 150 SF = 17 TREES

PROVIDED: 5,893 SF LANDSCAPE AREA AND 17 TREES

PERIMETER PARKING LOT LANDSCAPE:
 REQUIRED: 1 DEC TREE / 25 LF
 1 ORN TREE / 35 LF
 CONTINUOUS SHRUB HEDGE ALONG PARKING LOT

**ROCHESTER ROAD: 110 LF / 25 = 4 DEC TREES
 110 LF / 35 = 3 ORN TREES**

**PROVIDED: ROCHESTER ROAD: 4 PROPOSED DEC, 3 ORN TREES
 CONTINUOUS SHRUB ALONG PARKING LOT**

RIGHT OF WAY LANDSCAPING AT ROCHESTER RD:
 REQUIRED: 1 DEC TREE / 35 LF OF RIGHT OF WAY
 1 ORN TREE / 60 LF OF RIGHT OF WAY

ROCHESTER ROAD: 250 LF / 35 LF = 7 DEC & 4 ORN TREES

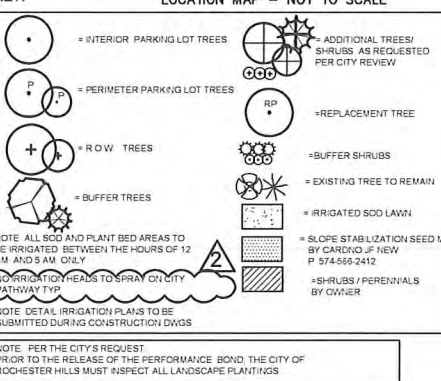
PROVIDED: ROCHESTER ROAD: 7 DEC TREES & 4 ORN TREES

FRONT YARD IN FR DISTRICT - MINOR ST:
 REQUIRED: 5' WIDTH, 3 ORN. TREE + 8 SHRUBS/100 LF

ROCHESTER ROAD: 250 LF / 100 LF = 8 ORN. TREES & 20 SHRUBS

PROVIDED: ROCHESTER ROAD: 8 ORN. TREES & 20 SHRUBS

NOTE: FOR THE REMAINDER OF THE REQUIRED REQUESTED 16 TREES PER CITY REVIEW COMMENT DATED 1.14.18, OWNER SHALL PUT FUNDS INTO THE TREE FUND OR TREE ALTERNATIVE AS DIRECTED BY THE CITY.



NOTE: PER THE CITY'S REQUEST
 PRIOR TO THE RELEASE OF THE PERFORMANCE BOND, THE CITY OF ROCHESTER HILLS MUST INSPECT ALL LANDSCAPE PLANTINGS

TREE PLANT LIST:

QUANTITY	KEY SYMBOL	COMMON NAME	SCIENTIFIC NAME	SIZE	SPEC
2	AR1	Red Sunset Maple	<i>Acer rubrum 'Red Sunset'</i>	8" Cal	B&B
12	AL2	Allegheny Serviceberry	<i>Aamelancheris laevis 'Cunulus'</i>	2" Cal	B&B
3	BN8	River Birch	<i>Betula nigra</i>	8-10" HL	B&B
7	CB2	Columnar European Hornbeam	<i>Carpinus betulus 'Columnaris'</i>	2" Cal	B&B
3	CC2	Eastern Redbud	<i>Cercis canadensis</i>	2" Cal	B&B
3	CM3	Cornelian Cherry Dogwood	<i>Cornus mas</i>	3" Cal	B&B
3	GB3	Ginkgo	<i>Ginkgo biloba - male only</i>	3" Cal	B&B
4	GT3	Skyline Honeylocust	<i>Gleditsia bicolor 'Skyline' Inermis</i>	3" Cal	B&B
5	MS2	Sugar Time Crab	<i>Malus Sugar Tyme'</i>	2" Cal	B&B
2	MS2	Coralburr Crab	<i>Malus Coralburr'</i>	2" Cal	B&B
2	MP2	Pravifire Crab	<i>Malus Pravifire'</i>	2" Cal	B&B
5	PC3	Cleveland Select Pear	<i>Pyrus cathyana 'Cleveland Select'</i>	3" Cal	B&B
2	QB3	Swamp White Oak	<i>Quercus bicolor</i>	3" Cal	B&B
10	OP3	Regal Prince Oak	<i>Quercus robur x bicolor 'Long' (columnar)</i>	3" Cal	B&B
3	OR3	Red Oak	<i>Quercus rubra</i>	3" Cal	B&B
3	SR8	Japanese Tree Lilac	<i>Syringa reticulata</i>	8-10" HL	B&B
3	TA3	Redmond Linden	<i>Tilia americana 'Redmond'</i>	3" Cal	B&B
3	TC3	Greenspire Linden	<i>Tilia cordata 'Greenspire'</i>	3" Cal	B&B
7	UF3	Frontier Elm	<i>Ulmus 'Frontier'</i>	3" Cal	B&B

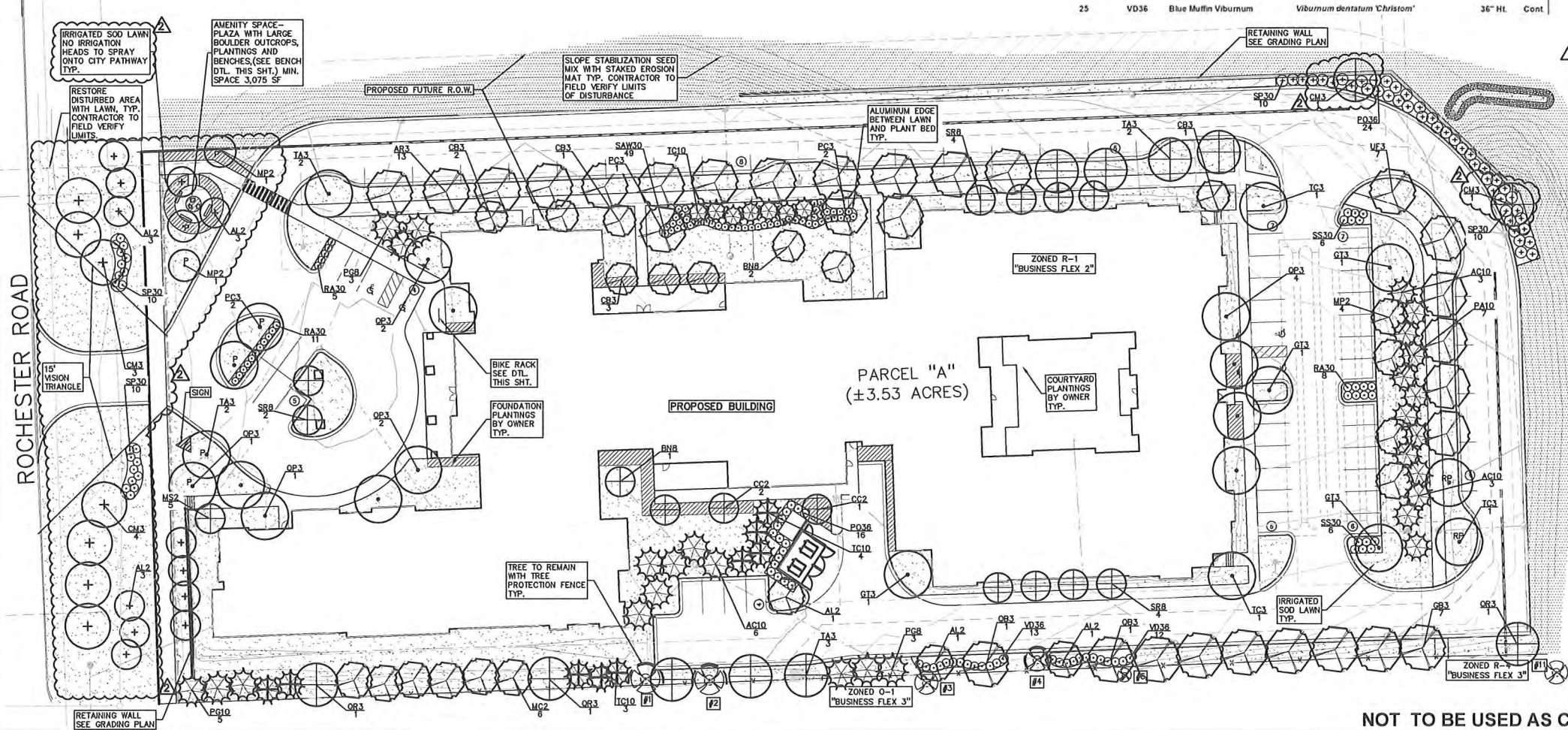
LANDSCAPE

QUANTITY	DESCRIPTION	UNIT PRICE	TOTAL PRICE
139	EA 3" Deciduous and 10'ht Evergreen Trees	\$400.00	\$55,600.00
24	EA Ornamental Trees	\$250.00	\$7,250.00
190	EA Shrubs	\$50.00	\$9,500.00
1,975	S-Y Slope stabilization seed mix	\$2.50	\$4,937.50
5,500	S-Y Sod Lawn	\$14.00	\$77,000.00
1	L-S Irrigation	\$50,000.00	\$50,000.00
466	CY Topsoil (Haul and Spread) for lawn at 3"	\$7.00	\$3,262.00
40	CY Mulch	\$45.00	\$1,800.00
230	CY Plant Mix for Planting Beds	\$30.00	\$6,900.00
600	L.F Metal Edge	\$5.75	\$3,450.00
TOTAL LANDSCAPE			\$165,099.50

DOES NOT INCLUDE FOUNDATION PLANTINGS AND COURTYARD LANDSCAPING

GENERAL PLANTING NOTES:

- 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.
- CONTRACTOR SHALL VERIFY LOCATIONS OF ALL ON SITE UTILITIES PRIOR TO BEGINNING CONSTRUCTION ON HIS/HER PHASE OF WORK. ELECTRIC, GAS, TELEPHONE, CABLE TELEVISION MAY BE LOCATED BY CALLING MISS DIG 1-800-482-7171. ANY DAMAGE OR INTERRUPTION OF SERVICES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. CONTRACTOR SHALL COORDINATE ALL RELATED ACTIVITIES WITH OTHER TRADES ON THE JOB AND SHALL REPORT ANY UNACCEPTABLE JOB CONDITIONS TO OWNER'S REPRESENTATIVE PRIOR TO COMMENCING.
- ALL PLANT MATERIAL TO BE PREMIUM GRADE NURSERY STOCK AND SHALL SATISFY AMERICAN ASSOCIATION OF NURSERYMEN STANDARD FOR NURSERY STOCK. ALL LANDSCAPE MATERIAL SHALL BE NORTHERN GROWN, NO. 1, GRADE.
- CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL QUANTITIES SHOWN ON LANDSCAPE PLAN PRIOR TO PRICING THE WORK.
- THE OWNER'S REPRESENTATIVE RESERVES THE RIGHT TO SELECT ANY PLANT MATERIAL NOT MEETING SPECIFICATIONS.
- ALL SINGLE STEM SHADE TREES TO HAVE STRAIGHT TRUNKS AND SYMMETRICAL CROWNS.
- ALL SINGLE TRUNK SHADE TREES TO HAVE A CENTRAL LEADER. TREES WITH FORKED OR IRREGULAR TRUNKS WILL NOT BE ACCEPTED.
- ALL MULTI STEM TREES SHALL BE HEAVILY BRANCHED AND HAVE SYMMETRICAL CROWNS. ONE SIDED TREES OR THOSE WITH THIN OR OPEN CROWNS SHALL NOT BE ACCEPTED.
- ALL EVERGREEN TREES SHALL BE HEAVILY BRANCHED AND FULL TO THE GROUND, SYMMETRICAL IN SHAPE AND NOT SHEARED FOR THE LAST FIVE GROWING SEASONS.
- ALL TREES TO HAVE CLAY OR CLAY LOAM BALLS, TREES WITH SAND BALLS WILL BE REJECTED.
- NO MACHINERY IS TO BE USED WITHIN THE DRIP LINE OF EXISTING TREES. HAND GRADE ALL LAWN AREAS WITHIN THE DRIP LINE OF EXISTING TREES.
- 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.
- IT IS MANDATORY THAT POSITIVE DRAINAGE IS PROVIDED AWAY FROM ALL BUILDINGS.
- ALL PLANTING BEDS SHALL RECEIVE 3" SHREDED HARDWOOD BARK MULCH, SEE SPECIFICATIONS. SHREDED PALLET AND DIED MULCH WILL NOT BE ACCEPTED.
- ALL LANDSCAPED AREAS SHALL RECEIVE 3" COMPACTED TOPSOIL.
- SEE SPECIFICS FOR ADDITIONAL COMMENTS, REQUIREMENTS, PLANTING PROCEDURES AND WARRANTY STANDARDS.



CAUTION!
 THE LOCATION AND ELEVATIONS OF EXISTING UTILITIES AND UTILITIES AS SHOWN ON THIS DRAWING ARE ONLY APPROXIMATE. NO GUARANTEE IS EITHER EXPRESSED OR IMPLIED AS TO THE CORRECTNESS OR ACCURACY OF THE INFORMATION FOR DETERMINING THE EXACT UTILITY LOCATIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.

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CONSTRUCTION CONTRACTOR AGREES THAT ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES SHALL BE THE CONTRACTOR'S RESPONSIBILITY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL UTILITIES AND FOR THE PROTECTION OF ALL EXISTING TREES AND PLANTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING TREES AND PLANTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING TREES AND PLANTS.

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NORTHPOINT DEVELOPMENT
 5015 N. CANTON STREET SUITE 200
 TROY, MICHIGAN 48063-1419

LANDSCAPE PLAN
STONECREST AT ROCHESTER HILLS
 PARCEL "A" SECTION 2A, T3M, R 1E
 CITY OF ROCHESTER HILLS OAKLAND COUNTY, MICHIGAN

DES: JLE DN JLE SUR JW P.W. DNH
 DATE: 11/15/2015 11:23:43 AM - 11/15/2015 11:23:43 AM

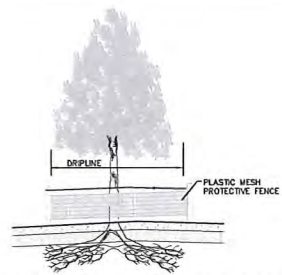
CITY FILE #15-019

ORIGINAL ISSUE DATE:
 NOVEMBER 4, 2015

PEA JOB NO 2015-233

SCALE: 1" = 30'

DRAWING NUMBER:
L-1



TREE PROTECTION FENCE DETAIL
NOT TO SCALE

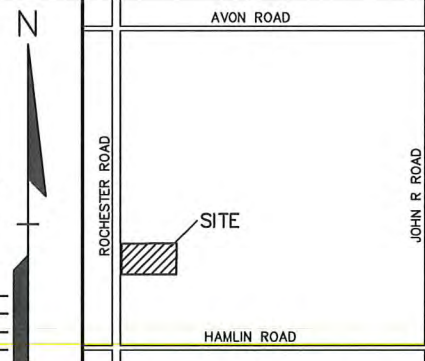
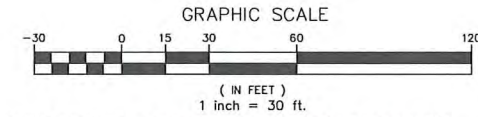
- TREE PROTECTION WILL BE ERRECTED PRIOR TO START OF CONSTRUCTION ACTIVITIES, AND SHALL REMAIN IN PLACE UNTIL CONSTRUCTION IS COMPLETE.
- NO PERSON MAY CONDUCT ANY ACTIVITY WITHIN THE DRIP LINE OF ANY TREE DESIGNATED TO REMAIN, INCLUDING, BUT NOT LIMITED TO PLACING SOLVENTS, BUILDING MATERIAL, CONSTRUCTION EQUIPMENT, OR SOIL DEPOSITS WITHIN DRIP LINES.
- GRADE CHANGES MAY NOT OCCUR WITHIN THE DRIP LINE OF PROTECTED TREES.
- DURING CONSTRUCTION, NO PERSON SHALL ATTACH ANY DEVICE OR WIRE TO ANY REMAINING TREE.
- ALL UTILITY SERVICE REQUEST MUST INCLUDE NOTIFICATION TO THE INSTALLER THAT PROTECTED TREES MUST BE AVOIDED. ALL TRENCHING SHALL OCCUR OUTSIDE OF THE PROTECTIVE FENCING.
- IF TREE PROTECTION CANNOT BE MAINTAINED FOR A TREE THROUGHOUT THE CONSTRUCTION PERIOD, REPLACEMENT OF THAT TREE MAY BE REQUIRED PRIOR TO THE ISSUANCE OF THE CERTIFICATE OF OCCUPANCY.
- REGULATED TREES LOCATED ON ADJACENT PROPERTY THAT MAY BE AFFECTED BY CONSTRUCTION ACTIVITIES MUST BE PROTECTED.

CITY OF ROCHESTER HILLS NOTES:

IMPORTANT: ALL TREES ON ADJACENT PROPERTIES MUST BE PROTECTED. THE TREE PROTECTIVE FENCING MAY BE PLACED ALONG THE ACTUAL PROPERTY LINE IF THE BRANCHES OF THE TREES ON THE ADJACENT PROPERTIES DO NOT OVERHANG ONTO THE SITE BEING DEVELOPED. IF THE BRANCHES OVERHANG ONTO THE AREA OF THE SITE BEING DEVELOPED, THE TREE PROTECTIVE FENCING MUST BE PLACED AT THE ACTUAL DRIP LINE OF THESE TREES. IT SHOULD ALSO BE NOTED THAT THE SILT FENCING MUST BE PLACED ON THE DEVELOPMENT SIDE OF THE TREE PROTECTIVE FENCING. THE SILT FENCING MAY NOT BE PLACED BETWEEN THE TREE BEING PRESERVED AND THE TREE PROTECTIVE FENCING. IF ANY REGULATED TREES ARE MAINTAINED ON THE ADJACENT PROPERTIES, THE DAMAGED TREES WILL BE EITHER REPLACED ON THE OWNER'S PROPERTY ON A NICH FOR INCH BASIS OR A FINE IN THE SUM OF \$122.00 PER CALIPER INCH WILL BE ISSUED AGAINST THE DEVELOPMENT. THIS FINE WILL BE DUE PRIOR TO BUILDING PERMITS BEING ISSUED. IF YOU HAVE ANY QUESTIONS OR NEED ADDITIONAL INFORMATION, CALL THE CITY'S PLANNING DEPARTMENT AT 248-656-4660.

TREE PROTECTION NOTES:

- The tree protection fencing (TPF) shall be erected per the plans approved by the City of Rochester Hills Planning Department. The TPF must be in place and be inspected by the City of Rochester Hills Planning Staff prior to the start of any earthwork or construction operations. It is the developer's responsibility to contact the City Planning Department at 248-656-4660 to schedule a TPF inspection. The TPF shall remain in place throughout the entire construction process or until the City authorizes the removal or issues a final Certificate of Occupancy, whichever occurs first.
- Upon completion of grading and the installation of the infrastructure, a second inspection of the TPF and the trees designated for preservation is required by the City of Rochester Hills Forester prior to the start of any additional construction. It is the developer's responsibility to contact the City Planning Department at 248-656-4660 to schedule this TPF inspection.
- A final inspection by the City of Rochester Hills Planning Staff is required at the end of the warranty and maintenance period. The Landscape Maintenance Bond will not be released until this inspection is complete and all related issues are resolved. It is the developer's responsibility to contact the City Planning Department at 248-656-4660 to schedule this inspection.
- The Tree Conservation Ordinance prohibits any construction or development activities within the drip lines of any regulated trees not approved for removal, including, but not limited to, land clearing, grubbing, trenching, grading or filling; no person shall place any solvents, building material, construction equipment, soil deposits or harmful materials within the drip line limit of trees designated for preservation.
- Proposed grades are to match the existing elevations outside the limits of the TPF. No grading either cut or fill is permitted within the drip line of any tree designated for preservation.
- During the construction process no person shall attach any device or wire/cable/cord/rope to an existing tree designated to be preserved.
- All utility service requests must include notification to the installer that protected trees must be avoided. All trenching shall occur outside the TPF.
- Swales shall be routed to avoid the area within the drip line of the only tree designated for preservation. Swales shall be constructed so as to not direct any additional flow into the drip line of a tree designated for preservation.
- If tree protection cannot be maintained for a tree throughout entire period required, the replacement of that tree will be required on an inch for inch basis prior to the issuance of any Certificate of Occupancy.
- Regulated trees located off-site on adjacent properties that may be affected by construction operations must be protected defined herein.
- The TPF shall consist of four-foot high orange snow fencing to be installed around the drip line of all trees designated to be saved. This fencing shall be supported by six-foot metal T-bar posts five-feet on center and driven a minimum of 24" into the ground. The TPF fencing shall remain upright and secure in place for the required time as specified above.
- Prior to the release of the Performance Bond, the City of Rochester Hills Forestry Division needs to inspect all trees existing or planted, to identify any that pose a hazard to the safe use of the public right-of-way. Forestry may require the developer to remove and possibly replace any such trees.



EXISTING TREE LIST: TO BE REMOVED INDICATED WITH BOLD LINE

TAG NO.	CODE	DBH	COMMON NAME	LATIN NAME	COND	COMMENT
1	EE	14	Siberian Elm	Ulmus pumila	GOOD	
2	BX	10	Box elder	Acer negundo	GOOD	X3
3	BX	8	Box elder	Acer negundo	GOOD	X2
4	BX	7	Box elder	Acer negundo	GOOD	X6
5	BW	9	Black Walnut	Juglans nigra	GOOD	
6	AP	7	Domestic Apple	Malus sylvestris	POOR	X2
7	L	7	American Elm	Ulmus americana	GOOD	
8	NM	9	Norway Maple	Acer platanoides	GOOD	X2
9	BW	14	Black Walnut	Juglans nigra	GOOD	X3
10	BX	12	Box elder	Acer negundo	GOOD	X2
11	BW	12	Black Walnut	Juglans nigra	FAIR	X3
12	BW	12	Black Walnut	Juglans nigra	GOOD	
13	BW	15	Black Walnut	Juglans nigra	GOOD	X2
14	BX	7	Box elder	Acer negundo	FAIR	
15	BW	12	Black Walnut	Juglans nigra	GOOD	
16	BW	11	Black Walnut	Juglans nigra	GOOD	
17	BW	15	Black Walnut	Juglans nigra	GOOD	

KEY:

- ☉ = EXISTING TREES TO REMAIN
- ⊗ = EXISTING TREE TO BE REMOVED
- = TREE PROTECTION FENCE



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

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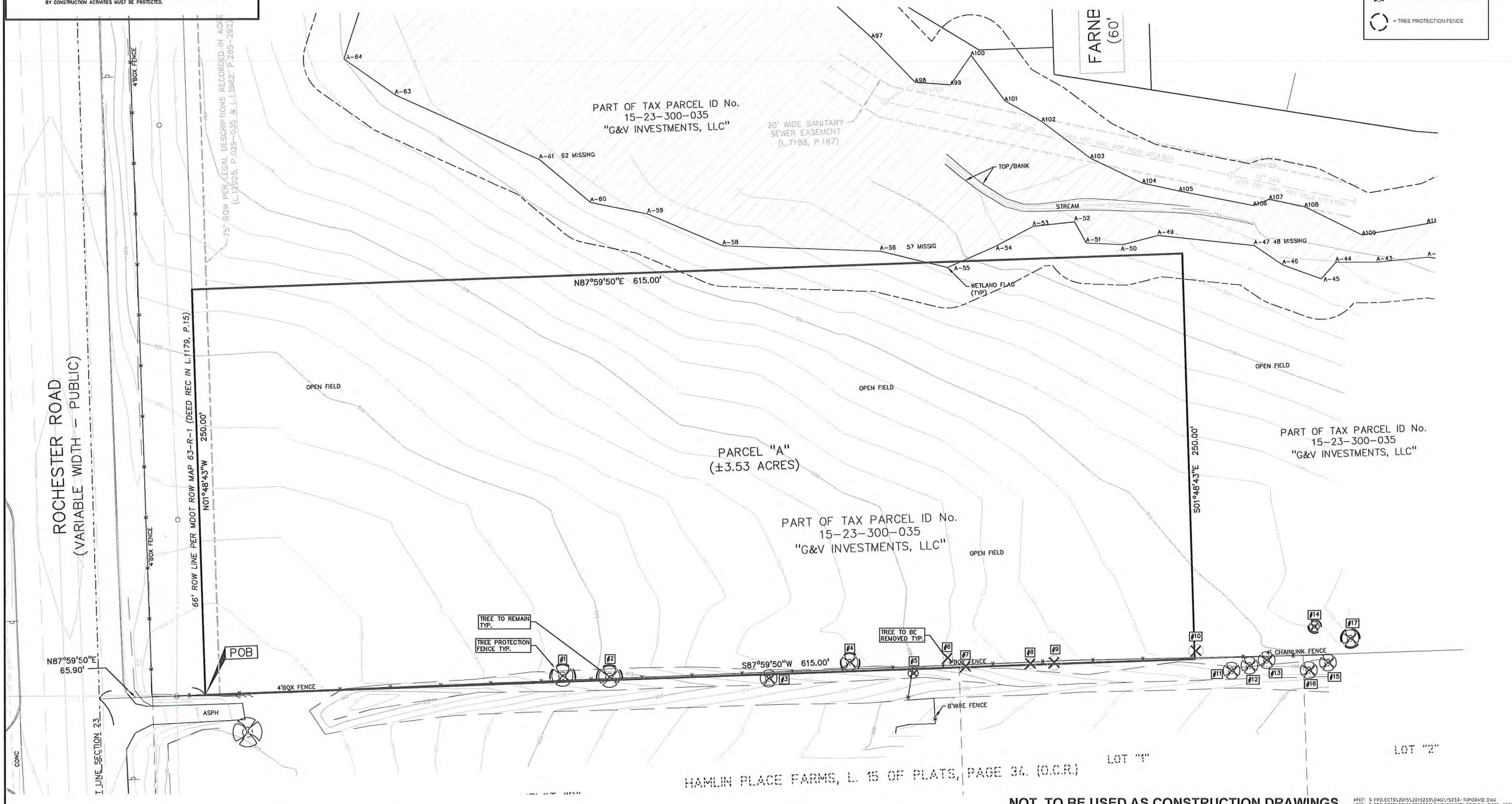
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NORTHPOINT DEVELOPMENT
5015 NW CANAL STREET, SUITE 200
RIVERSIDE, MD 44150

TREE PRESERVATION PLAN
STONECREST AT ROCHESTER HILLS
CITY OF ROCHESTER HILLS, OAKLAND COUNTY, MICHIGAN

DES: JLE DN JLE SUR JW P.M. DNH
E:\PROJECTS\2015\2015233\NORTHPOINT\150233-01-PEE_PRESERVATION_PLAN -150233.dwg

ORIGINAL ISSUE DATE: NOVEMBER 4, 2015
PEA JOB NO. 2015-233
SCALE: 1" = 30'
DRAWING NUMBER: T-1



NOT TO BE USED AS CONSTRUCTION DRAWINGS

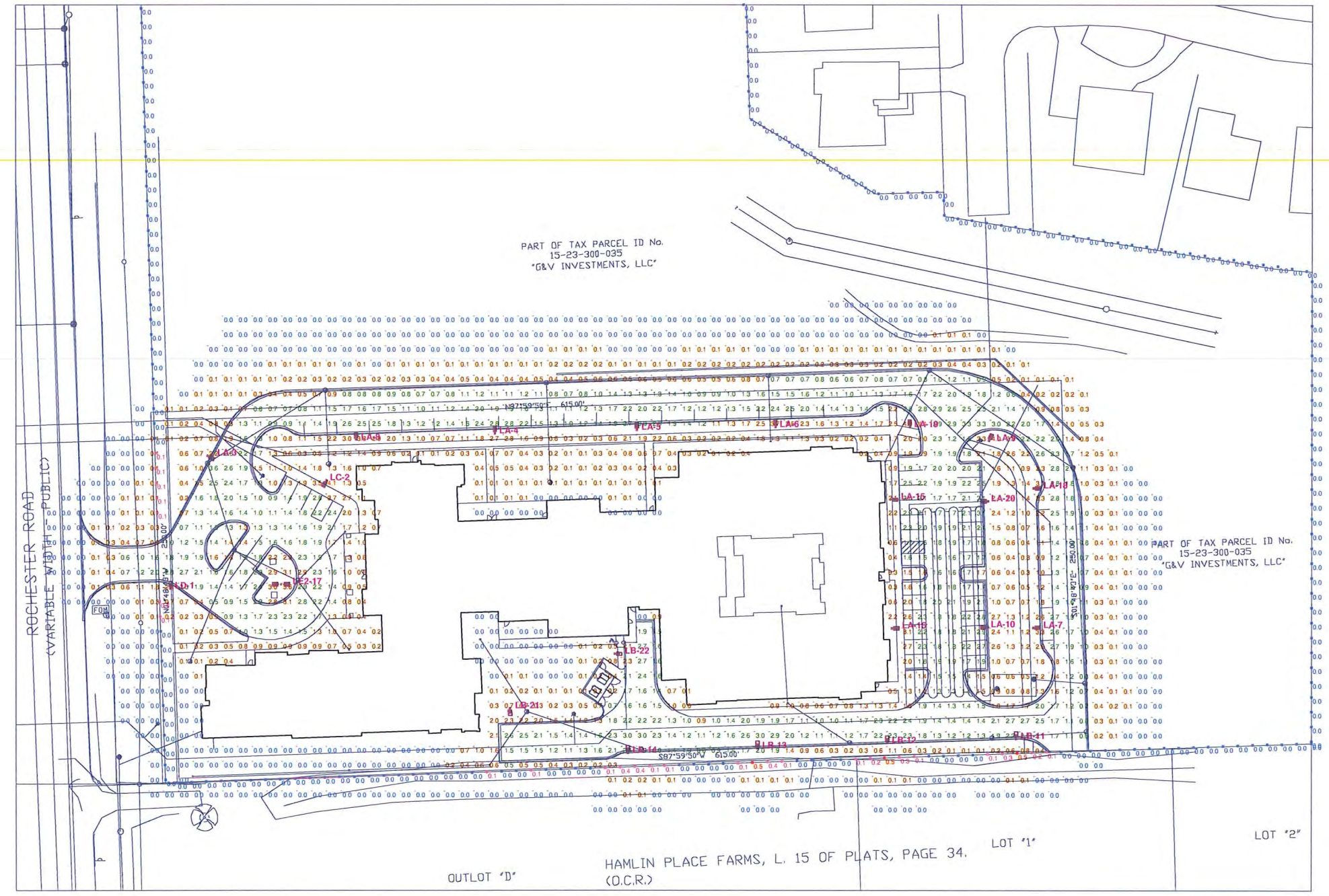
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STONECREST - ROCHESTER HILLS, MICHIGAN

SITE LIGHTING PHOTOMETRIC VALUES
 PREPARED FOR: PEA
 GASSER BUSH ASSOCIATES

Designer
 BW/JAB
Date
 DEC 22 2015
Scale
 AS NOTED
Drawing No.
 #15-45049-V2



LUMINAIRE LOCATIONS						
No.	Label	Location		MH	Orientation	Tilt
		X	Y			
1	LD	5036.1	6176.5	15.0	0.0	0.0
2	LC	5141.7	6249.0	15.0	210.3	0.0
3	LA	5061.4	6265.8	15.0	119.4	0.0
4	LA	5255.8	6280.7	15.0	0.0	0.0
5	LA	5351.5	6283.1	15.0	0.0	0.0
6	LA	5445.4	6285.2	15.0	0.0	0.0
7	LA	5620.6	6150.2	15.0	90.0	0.0
8	LA	5161.6	6276.6	15.0	0.0	0.0
9	LA	5590.6	6276.0	15.0	24.2	0.0
10	LA	5589.9	6150.5	15.0	270.0	0.0
11	LB	5609.3	6075.1	15.0	0.0	0.0
12	LB	5521.6	6072.3	15.0	0.0	0.0
13	LB	5433.7	6068.7	15.0	0.0	0.0
14	LB	5345.7	6065.7	15.0	0.0	0.0
15	LA	5523.8	6236.3	15.0	90.0	0.0
16	LA	5524.8	6149.5	15.0	90.0	0.0
17	LE2	5111.0	6179.2	15.0	90.0	0.0
18	LA	5620.6	6244.0	15.0	90.0	0.0
19	LA	5536.6	6285.2	15.0	0.0	0.0
20	LA	5589.9	6235.2	15.0	270.0	0.0
21	LB	5266.0	6095.6	15.0	176.8	0.0
22	LB	5336.9	6132.4	15.0	91.7	0.0

NOTES
 1. SEE MH COLUMN OF LUMINAIRE LOCATIONS FOR MOUNTING HEIGHTS.
 2. SEE LUMINAIRE SCHEDULE FOR LIGHT LOSS FACTORS.
 3. CALCULATIONS ARE SHOWN IN FOOTCANDLES AT GRADE WITHIN SITE AND AT 5' AFG ALONG PROPERTY LINE.
 THE ENGINEER AND/OR ARCHITECT MUST DETERMINE APPLICABILITY OF THE LAYOUT TO EXISTING / FUTURE FIELD CONDITIONS. THIS LIGHTING LAYOUT REPRESENTS ILLUMINATION LEVELS CALCULATED FROM LABORATORY DATA TAKEN UNDER CONTROLLED CONDITIONS IN ACCORDANCE WITH ILLUMINATING ENGINEERING SOCIETY APPROVED METHODS. ACTUAL PERFORMANCE OF ANY MANUFACTURER'S LUMINAIRE MAY VARY DUE TO VARIATION IN ELECTRICAL VOLTAGE, TOLERANCE IN LAMPS, AND OTHER VARIABLE FIELD CONDITIONS. MOUNTING HEIGHTS INDICATED ARE FROM GRADE AND/OR FLOOR UP.
 THESE LIGHTING CALCULATIONS ARE NOT A SUBSTITUTE FOR INDEPENDENT ENGINEERING ANALYSIS OF LIGHTING SYSTEM SUITABILITY AND SAFETY. THE ENGINEER AND/OR ARCHITECT IS RESPONSIBLE TO REVIEW FOR MICHIGAN ENERGY CODE AND LIGHTING QUALITY COMPLIANCE.

SITE LIGHTING VALUES
 Scale 1" = 40'

STATISTICS						
Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
PARKING & DRIVES - VALUES AT GRADE	+	1.7 fc	4.1 fc	0.5 fc	8.2:1	3.4:1
PROPERTY LINE VALUES 5' AFG	■	0.0 fc	0.5 fc	0.0 fc	N/A	N/A
SITE	+	0.8 fc	4.1 fc	0.0 fc	N/A	N/A

LUMINAIRE SCHEDULE							
Symbol	Label	Qty	Catalog Number	Description	Lamp	File	Lumens LLF Watts
■	LA	13	LITHONIA #DSX0 LED 40C 530 50K T3M MVOLT	DSX0 LED WITH (2) 20 LED LIGHT ENGINE, TYPE T3M OPTIC, 5000K, @ 530mA	LED	DSX0_LED 40 C_530 50K T3 M_MVOLT.ies	Absolute 0.90 68
■	LB	6	LITHONIA #DSX0 LED 40C 530 50K T3M MVOLT HS	DSX0 LED WITH (2) 20 LED LIGHT ENGINE, TYPE T3M OPTIC, 5000K, @ 530mA WITH HOUSE SIDE SHIELD	LED	DSX0_LED 40 C_530 50K T3 M_MVOLT_HS.ies	Absolute 0.90 68
■	LC	1	LITHONIA #DSX0 LED 40C 530 50K T4M MVOLT	DSX0 LED WITH (2) 20 LED LIGHT ENGINE, TYPE T4M OPTIC, 5000K, @ 530mA	LED	DSX0_LED 40 C_530 50K T4 M_MVOLT.ies	Absolute 0.90 68
■	LD	1	LITHONIA #DSX0 LED 40C 530 50K T4M MVOLT HS	DSX0 LED WITH (2) 20 LED LIGHT ENGINE, TYPE T4M OPTIC, 5000K, @ 530mA WITH HOUSE SIDE SHIELD	LED	DSX0_LED 40 C_530 50K T4 M_MVOLT_HS.ies	Absolute 0.90 68
■	LE2	1	LITHONIA #DSX0 LED 40C 530 50K T5W MVOLT	DSX0 LED WITH (2) 20 LED LIGHT ENGINE, TYPE T5W OPTIC, 5000K, @ 530mA	LED	DSX0_LED 40 C_530 50K T5 W_MVOLT.ies	Absolute 0.90 136