

SITE PLAN DRAWINGS FOR

RAYCONNECT INDUSTRIAL BUILDING

2014 BUILDING ADDITION

SECTION 29, TOWNSHIP 3 NORTH, RANGE 11 EAST
ROCHESTER HILLS, OAKLAND COUNTY, MICHIGAN

APPLICANT:

KIRCO MANIX DEVELOPMENT
(ON BEHALF OF RAYCONNECT)
101 W. BIG BEAVER ROAD, SUITE 200
TROY, MI 48064
CONTACT: MARK VIZENA
PHONE: (248) 354-5100
EMAIL: MVIZENA@KIRCOMANIX.COM

PROJECT ARCHITECT:

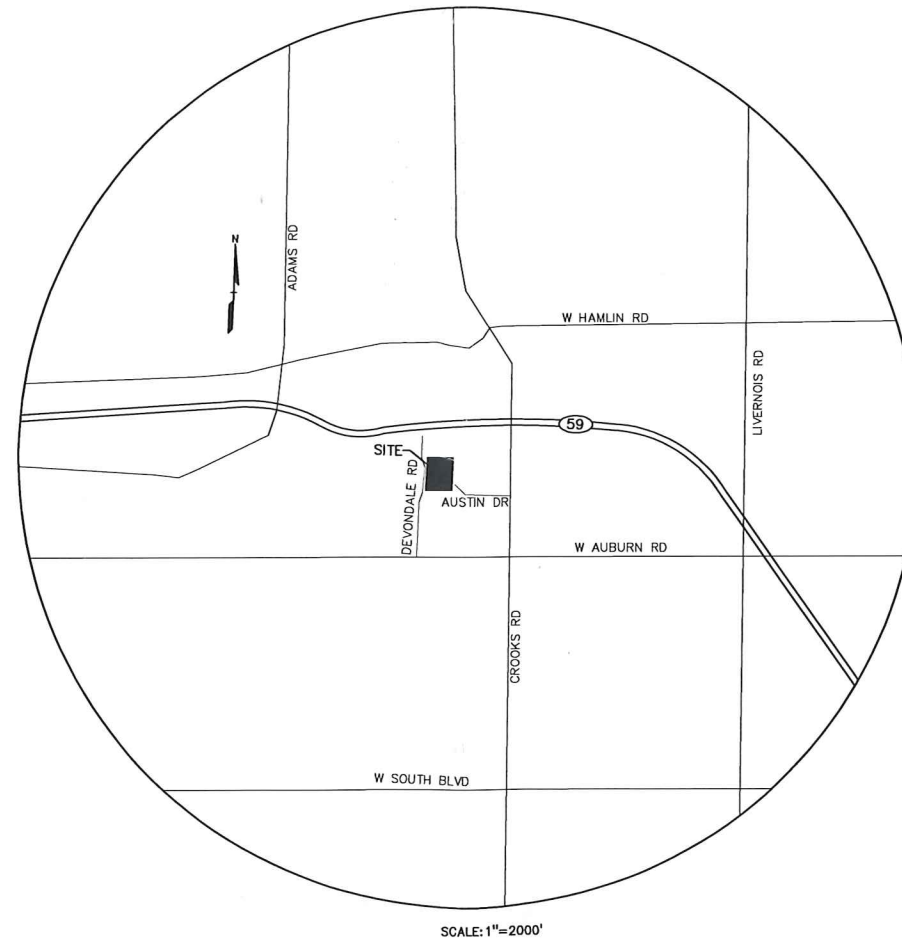
SDA ARCHITECTS, INC.
42490 GARFIELD, SUITE 204
CLINTON TOWNSHIP, MI 48038
CONTACT: ERIC D. SALSWEDDEL, RA
PHONE: (586) 286-9100
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EMAIL: ESALSWEDEL@VISITSDA.COM

LANDSCAPE ARCHITECT:

PROFESSIONAL ENGINEERING ASSOCIATES, INC.
2900 E. GRAND RIVER AVENUE
HOWELL, MI 48843
CONTACT: JANET EVANS, R.L.A.
PHONE: (517) 546-8583
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EMAIL: JEVANS@PEAINC.COM

PROJECT ENGINEER:

PROFESSIONAL ENGINEERING ASSOCIATES, INC.
2430 ROCHESTER COURT, SUITE: 100
TROY, MICHIGAN 48063
CONTACT: RACHEL SMITH, P.E., LEED AP, CFM
PHONE: (248) 689-9090
FAX: (248) 689-1044
EMAIL: RACHEL.SMITH@PEAINC.COM



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- C-1 COVER SHEET
- C-2 EXISTING CONDITIONS PLAN
- C-3 PRELIMINARY SITE PLAN
- C-4 PRELIMINARY GRADING & UTILITY PLAN
- C-5 PRELIMINARY DRAINAGE AREA MAP
- L-1 PRELIMINARY LANDSCAPE PLAN
- PHOTOMETRICS PLAN



| No. | BY | CHK | DESCRIPTION | DATE |
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CAUTION!
THE LOCATION AND ELEVATIONS OF EXISTING UTILITIES SHOWN ON THIS DRAWING ARE BASED ON THE RECORD DRAWINGS AND FIELD SURVEY DATA PROVIDED TO THE ENGINEER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO THE START OF CONSTRUCTION.

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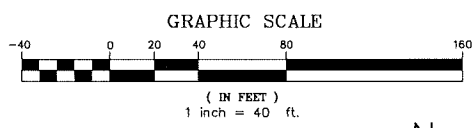
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PROFESSIONAL ENGINEERING ASSOCIATES
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Troy, MI 48063-1872
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Fax: (248) 689-1044
website: www.peainc.com

| | | | |
|---|---------------------------------------|---|------------------|
| KIRCO MANIX 101 W. BIG BEAVER, SUITE 200 TROY, MI 48064 | DES. RLS. DN. RLS. SUR. DEC. P.M. DNH | RAYCONNECT - 2014 ADDITION PART OF SECTION 29, T. 3N, R. 11E, ROCHESTER HILLS, OAKLAND COUNTY, MI | DATE: 12/20/2013 |
|---|---------------------------------------|---|------------------|

| | |
|---------------------------------------|-------------------------------|
| ORIGINAL ISSUE DATE: DEC. 20, 2013 | PEA JOB NO. 2008-089 |
| SCALE: 1" = 40' | DRAWING NUMBER: C-1 |

PRELIMINARY - NOT FOR CONSTRUCTION
CITY FILE #08-002.4



BENCHMARKS:
 BM #300:
 MARKED "X" ON TOP OF ROCK, APPROX. 20'
 NORTH AND 130' EAST OF MAILBOX #2538.
 ELEV. = 822.375'

FLOODPLAIN:
 Subject parcels are in "Areas determined to be outside of the 0.2% annual chance floodplain." (Zone X) per Flood Insurance Rate Map Number 28125C-0393F, Effective September 29, 2006.

ZONING:
 The current zoning classification is I-1 Light Industrial

Required setbacks (per Rochester Hills Zoning Ordinances, Chapter 138, Article VI, Division 13 and Article VI, Division 2)

I-1 Zoning:
 Front Yard: 75 FT; May be reduced to 50FT on internal streets in industrial subdivisions.
 Side Yard: 50 FT Least One, 100 FT Total Two; Reduced to 15FT where there are no windows/openings, in wall paralleling side lot line. 25FT if there are openings.
 Rear Yard: 50 FT
 Maximum Building Height: 2 Stories, 30 FT

LEGAL DESCRIPTION:
 (Per First American Title Insurance Company, Policy No. 473415, Dated Jan. 13, 2010)

PART 1:
 Part of Lot 1, SUPERVISOR'S PLAT NO. 9, according to the plat thereof as recorded in Liber 59 of Plats, page 13, Oakland County Records, described as follows: Beginning at the Southwest corner of said lot 1, thence N01°01'10"E, 125.12 feet along the West line of said Lot 1, also being the centerline of a 60.00 foot wide easement for Roadway; thence N88°31'00"E, 348.61 feet; thence S00°58'05"W, 125.11 feet to a point on the South line of said Lot 1; thence S88°31'00"W, 348.72 feet along said South lot line to the Point of Beginning, EXCEPT the Southern 70.00 feet deed to the City of Rochester Hills by Warranty Deed recorded in Liber 40774, page 102, Oakland County Records.

PART 2:
 Part of Lot 1 and all of Lot 2, SUPERVISOR'S PLAT NO. 9, according to the plat thereof as recorded in Liber 59 of Plats, page 13, Oakland County Records, described as follows: Beginning at the Southwest corner of said Lot 1, thence N01°01'10"E, 125.12 feet along the West line of said Lot 1 to the Point of Beginning of this description; thence the following courses along said West line of said Lot 1, also the centerline of a 60.00 foot wide easement for Roadway: (1) N01°01'10"E, 229.55 feet, and (2) N10°01'20"W, 193.76 feet, and (3) N01°04'48"E, 28.01 feet to the Northwest corner of said Lot 1; thence N87°01'10"E, 801.69 feet along the North line of said Lots 1 and 2, also being the centerline of a 60.00 foot wide easement for Roadway, as plotted; thence S01°35'30"W, 588.87 feet along the East line of said Lot 2; thence S88°31'00"W, 379.48 feet; thence N00°58'05"E, 125.11 feet; thence S88°31'00"W, 348.61 feet to the Point of Beginning, EXCEPT that part of Lot 2 deeded to the City of Rochester Hills by Warranty Deed recorded in Liber 40774, page 102, Oakland County Records, described as follows: Part of Lot 2, SUPERVISOR'S PLAT NO. 9, according to the plat thereof as recorded in Liber 59 of Plats, page 13, Oakland County Records, described as follows: Beginning at the Southwest corner of said Lot 2; thence along the South line of said Lot 2, S88°32'10"W, 379.32 feet (S88°31'00"W, 379.48 feet deed and plot); thence N01°00'54"E, 70.07 feet (N00°58'05"W deed); thence N88°32'10"E, 201.68 feet; thence along a curve to the right 190.93 feet, said curve having a radius of 293.00 feet, a central angle of 37°20'10" and a chord bearing S70°07'06"E, 187.57 feet to a point on the East line of said Lot 2; thence along said East lot line, S01°35'30"W, 1.73 feet (S01°35'30"W deed S02°28'00"E plot) to the Point of Beginning.

PART 1 AND 2 DESCRIBED FOR TAX PURPOSES AS FOLLOWS:
 Lots 1 and 2, SUPERVISOR'S PLAT NO. 9, according to the plat thereof as recorded in Liber 59 of Plats, page 13, Oakland County Records, described as follows: Beginning at the Southwest corner of said Lot 1; thence N03°02'01"W, 354.65 feet; thence N23°06'22"W, 193.48 feet; thence N02°58'23"W, 28.52 feet; thence N3°01'04"E, 801.63; thence S02°28'28"E, 588.59 feet; thence S84°29'00"W, 727.95 feet to the Point of Beginning, EXCEPT the Southern 70.00 feet of Lot 1 and ALSO EXCEPT that part of Lot 2, described as follows: Beginning at the Southwest corner of said Lot 2; thence S88°32'10"W, 379.32 feet; thence N01°00'54"E, 70.07 feet; thence N88°32'10"E, 201.68 feet; thence along a curve to the right, radius of 293.00 feet and a chord bearing S70°07'06"E, 187.57 feet, a distance of 190.93 feet; thence S01°38'45"W, 1.73 to the Point of Beginning.
 TAX ITEM NO. 15-29-452-036

PART 1 AND 2 SURVEYED AS:
 Part of Lots 1 and 2, SUPERVISOR'S PLAT NO. 9, according to the plat thereof as recorded in Liber 59 of Plats, page 13, Oakland County Records, being a part of the West 1/2 of the Southeast 1/4 of Section 29, Township 3 North, Range 11 East, City of Rochester Hills, Oakland County, Michigan, being more particularly described as follows: Commencing at the Southwest corner of said Lot 1 and the centerline of Devondale Road (60 feet wide); thence along said centerline and the westerly line of said Lot 1, N03°02'01"W, 70.07 feet to the point of beginning; thence continuing along said line the following three courses: 1) N03°02'01"W, 284.59 feet and 2) N23°06'22"W, 193.48 feet and 3) N02°58'23"W, 28.52 feet; thence along the North line of said Lot 1 and 2, also being the centerline of a 60 foot wide easement for roadway as plotted, N83°01'04"E, 801.63 to the Northeast corner of Lot 2; thence along the East line of Lot 2, S02°28'28"E, 588.56 feet; thence 190.93 feet along an arc of a curve to the left, having a radius of 293.00 feet and a chord that bears N74°10'18"W, 187.57 feet; thence S84°29'00"W, 550.29 feet to the aforementioned west line of Lot 1 and the Point of Beginning. Containing 8.815 acres of land, more or less.

LEGEND

| | | |
|------------------|---------------------|--------------|
| ● IRON FOUND | ○ BRASS PLUG SET | R RECORDED |
| ⊗ IRON SET | ⊗ MONUMENT FOUND | M MEASURED |
| ⊗ NAIL FOUND | ⊗ MONUMENT SET | C CALCULATED |
| ⊗ NAIL & CAP SET | ⊗ SEC. CORNER FOUND | P PLATTED |
| | | D DEED |

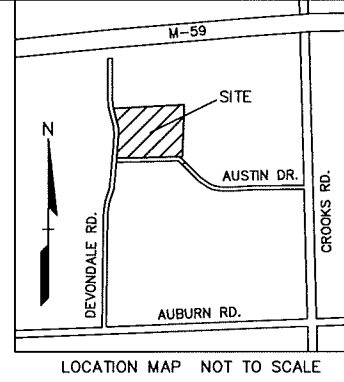
EXISTING

| | |
|------------|---|
| -ELEC-W-C- | ELEC. PHONE OR CABLE TV OR LINE, POLE & QUI WIRE |
| -UG-CATV- | UNDERGROUND CABLE TV, CATV PEDESTAL |
| -UG-PHONE- | TELEPHONE U.S. CABLE, PEDESTAL & MANHOLE |
| -UG-ELEC- | ELECTRIC U.S. CABLE, MANHOLE, METER & MANHOLE |
| -GAS- | GAS MAIN, VALVE & GAS METER |
| -W-MAN- | WATERMAIN, HYD. GATE VALVE, TAPPING SLEEVE & VALVE |
| -S-S- | SANITARY SEWER, CLEANOUT & MANHOLE |
| -S-S- | STORM SEWER, CLEANOUT & MANHOLE |
| ○ | CATCH BASIN |
| ○ | YARD DRAIN (2 DIA. & SMALLER) |
| ○ | WATER VALVE BOX/MONUMENT VALVE BOX, SERVICE SHUTOFF |
| ○ | WATERBOX, TRANSFORMER, FROSTATION CONTROL VALVE |
| ○ | SPOT ELEVATION |
| ○ | CONTOUR LINE |
| --- | FENCE |
| --- | GUARD RAIL |
| --- | STREET LIGHT |
| --- | SOB |
| --- | CONCRETE |
| --- | ASPHALT |

REFERENCE DRAWINGS

| | |
|-------------|---|
| WATER MAIN | "OAKLAND COUNTY WATER SUPPLY & SEWER DISPOSAL SYSTEMS FOR AVOID EXP. EXTENSION NO. 2," JOHNSON & ANDERSON, INC. JOB NO. 3694-20, DATED 5-8-78 |
| | "AS-BUILT SANITARY SEWER & WATER MAIN PLAN, CONVERSE PARK OF ROCH. HILLS" GIFFELS-WEBSTER ENGINEERS, INC. CITY FILE 88-702, DATED JAN. 1987 |
| | "LUCIDUS DRAIN PHASE 2" HUBBELL, ROTH & CLARK, INC. JOB NO. 830275, DATED 10-20-88 |
| | "OAKLAND COUNTY WATER SUPPLY & SEWER DISPOSAL SYSTEMS FOR AVOID EXP. EXTENSION NO. 2," JOHNSON & ANDERSON, INC. JOB NO. 3694-20, DATED 5-8-78 |
| | "AS-BUILT SANITARY SEWER & WATER MAIN PLAN, CONVERSE PARK OF ROCH. HILLS" GIFFELS-WEBSTER ENGINEERS, INC. CITY FILE 88-702, DATED JAN. 1987 |
| STORM SEWER | DETROIT EDISON, U.S. GROUP, RECEIVED 8-30-04 |
| ELECTRIC | PRACTICE (MILERS USE), NO. FACILITIES ON SITE, CONVEY MCCORMICK, RECEIVED 6-27-08 |
| TELEPHONE | ATA/ISBC, CEPHUS CLEVELAND, RECEIVED 8-30-08 |
| GAS | ICE TRANSMISSION, NO. FACILITIES ON SITE, RAYMOND KUOHA, RECEIVED 8-28-08 |
| CATV | CONART, TRACY GARDNER, RECEIVED 6-28-08 |
| OTHER | "ARCHITECTURAL SURVEY" RAYMOND J. DONOVAN & ASSOC. JOB #87040, DATED MARCH 1987 |

PRELIMINARY - NOT FOR CONSTRUCTION
CITY FILE #08-002.4



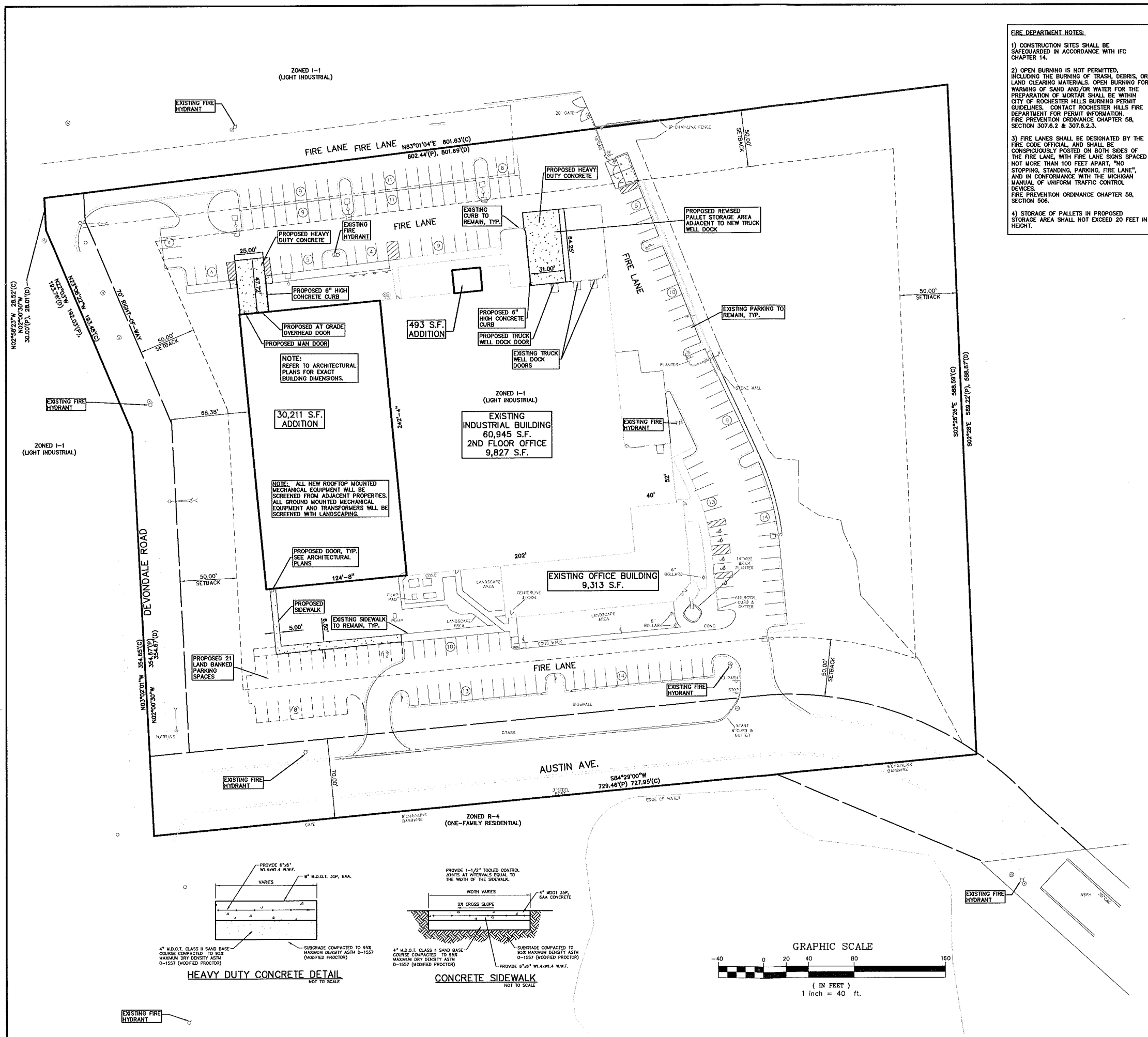
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| DES. | RLS | DN | RLS | SUR | DEC | P.M. | DNH |
| EXISTING CONDITIONS PLAN RAYCONNECT - 2014 ADDITION PART OF SECTION 24.1, P.N. 1, PL. 1 ROCHESTER HILLS, OAKLAND COUNTY, MI KIRCO MANIX 101 W. BIG BEAVER, SUITE 200 TROY, MI 48068 | | | | | | | |
| ORIGINAL ISSUE DATE: DEC. 20, 2013 PEA JOB NO. 2008-088 SCALE: 1" = 40' DRAWING NUMBER: C-2 | | | | | | | |



FIRE DEPARTMENT NOTES:

- 1) CONSTRUCTION SITES SHALL BE SAFEGUARDED IN ACCORDANCE WITH IFC CHAPTER 14.
- 2) 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 BURNING PERMIT GUIDELINES. CONTACT ROCHESTER HILLS FIRE DEPARTMENT FOR PERMIT INFORMATION. FIRE PREVENTION ORDINANCE CHAPTER 58, SECTION 307.8.2 & 307.8.2.3.
- 3) 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, NO STOPPING, STANDING, PARKING, FIRE LANE, AND IN CONFORMANCE WITH THE MICHIGAN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. FIRE PREVENTION ORDINANCE CHAPTER 58, SECTION 606.
- 4) STORAGE OF PALLETS IN PROPOSED STORAGE AREA SHALL NOT EXCEED 20 FEET IN HEIGHT.

SITE DATA TABLE:

ZONING INFORMATION:

1. ZONED: I-1 LIGHT INDUSTRIAL
2. MAX. BUILDING HEIGHT ALLOWED = 3 STOREYS, 42 FEET

IN INDUSTRIAL DISTRICTS, BUILDINGS IN EXCESS OF 300 FEET IN LENGTH ALONG ANY ONE SIDE SHALL RECEIVE THE APPROVAL OF THE PLANNING COMMISSION, WHICH APPROVAL SHALL BE BASED UPON COMPATIBILITY WITH SURROUNDING PROPERTIES AND BUILDINGS IN REASONABLE ATTENDANCE.

3. REQUIRED BUILDING SETBACKS:
 - FRONT YARD = 50'
 - SIDE YARD = 50'
 - REAR YARD = 50'

GROSS ACREAGE = 9.89 ACRES
NET ACREAGE = 8.39 ACRES

BUILDING CONSTRUCTION TYPE = IIB

EXISTING BUILDING AREA:

| | |
|----------------------|-------------|
| INDUSTRIAL WAREHOUSE | 48,104 S.F. |
| OFFICE (1ST FLOOR) | 12,841 S.F. |
| OFFICE (2ND FLOOR) | 9,827 S.F. |
| TOTAL EXISTING | 80,055 S.F. |

PROPOSED BUILDING AREA:

| | |
|----------------------|-------------|
| INDUSTRIAL WAREHOUSE | 15,133 S.F. |
| OFFICE (1ST FLOOR) | 15,571 S.F. |
| TOTAL PROPOSED | 30,704 S.F. |

TOTAL BUILDING AREA = 110,759 S.F.

PARKING REQUIRED (PER CURRENT USAGE):

| | |
|-------------------------------------|---|
| INDUSTRIAL: | |
| 1 SPACE/400 S.F. USABLE FLOOR AREA | 40,472 S.F./400 = 101.18 SPACES |
| WAREHOUSE: | |
| 1 SPACE/1700 S.F. USABLE FLOOR AREA | 28,412 S.F./1700 = 16.71 SPACES |
| 1ST FLOOR OFFICE: | |
| 1 SPACE/300 S.F. USABLE FLOOR AREA | 6,500 S.F./300 = 21.66 SPACES |
| 2ND FLOOR OFFICE: | |
| 1 SPACE/300 S.F. USABLE FLOOR AREA | 4,827 S.F./300 = 16.19 SPACES |
| TOTAL PARKING REQUIRED = | 155.74 (156) SPACES (PER CURRENT USAGE) |

PARKING PROVIDED:

| | |
|------------------------------|---------------------------|
| PARKING SPACES PROVIDED = | 85 SPACES (ORIGINAL) |
| 2010 PARKING SPACES = | 54 SPACES (ADDED IN 2010) |
| 2011 PARKING SPACES = | 29 SPACES (ADDED IN 2011) |
| 2014 PARKING SPACES LOST = | -8 SPACES (PROPOSED) |
| TOTAL PARKING PROVIDED = | 160 SPACES (PROPOSED) |
| FUTURE LAND BANKED PARKING = | 21 FUTURE LAND BANKED |
| TOTAL PARKING AVAILABLE = | 181 SPACES (FUTURE) |

LOADING SPACE REQUIRED:

10'x50' OR 500 S.F. IN AREA MINIMUM

1 SPACE + 1 FOR EACH 20,000 S.F. OVER 20,001 S.F. = 5 SPACES (10'x50')

LOADING SPACE PROVIDED:

= 5 SPACES (MORE THAN 10'x50')

BUILDING SETBACKS:

| | | |
|---------------|---------------|----------------------|
| FRONT (WEST) | REQUIRED: 50' | PROPOSED: 68' MIN. |
| FRONT (SOUTH) | 50' | 88' (EXISTING) |
| SIDE (NORTH) | 50' | 108' MIN. (EXISTING) |
| REAR | 50' | 241' MIN. (EXISTING) |

REVISIONS

| NO. | BY | CHK | DESCRIPTION | DATE |
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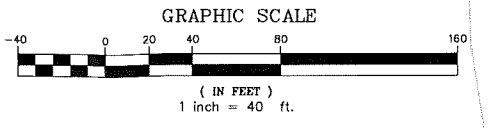
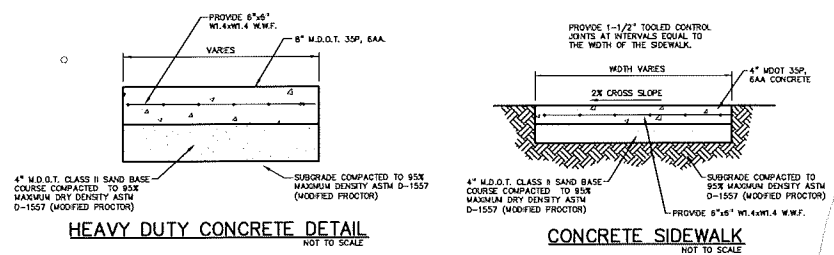
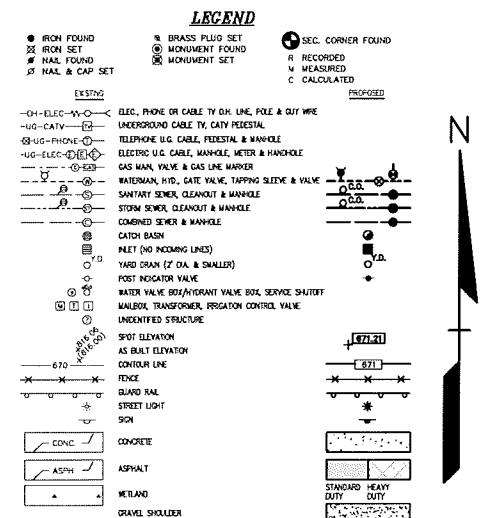
KIRCO MANIX
101 W. BIG BEAVER SUITE 200
TROY, MI 48064

**PRELIMINARY SITE PLAN
RAYCONNECT - 2014 ADDITION
PART OF SECTION 28.1, 3N, 1E, 1E
ROCHESTER HILLS, OAKLAND COUNTY, MI**

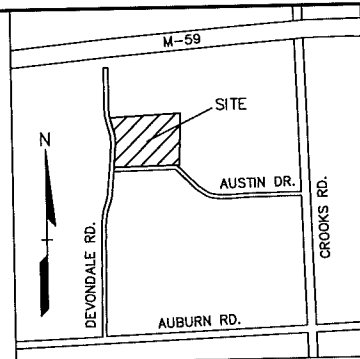
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DATE: 12/20/2013

ORIGINAL ISSUE DATE: DEC. 20, 2013
PEA JOB NO. 2008-089

SCALE: 1" = 40'
DRAWING NUMBER: **C-3**



| NO. | BY | DATE | DESCRIPTION |
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SYMBOLS: GRADING

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

895 PROPOSED CONTOUR LINE

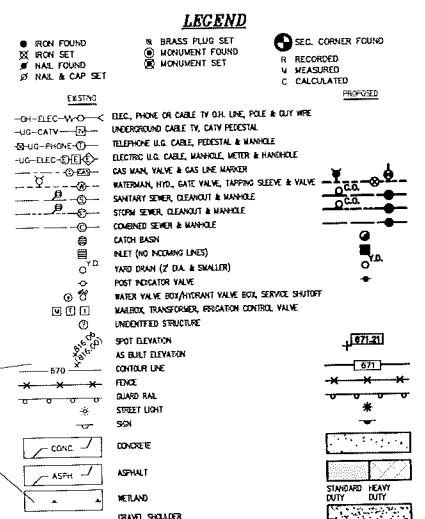
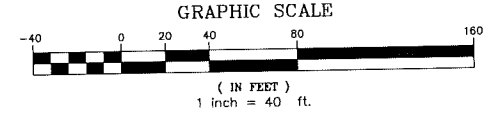
GENERAL GRADING AND EARTHWORK NOTES:

- ALL GRADES ARE TO TOP OF PAVEMENT UNLESS OTHERWISE NOTED. ADD 0.50' TO OBTAIN TOP OF CURB ELEVATION.
- ALL SOIL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL MEET THE REQUIREMENTS OF THE OAKLAND COUNTY DRAIN COMMISSION. AN EROSION CONTROL PERMIT MUST BE SECURED FROM THE COUNTY PRIOR TO CONSTRUCTION.
- ALL EARTHWORK AND GRADING OPERATIONS SHALL BE PERFORMED IN ACCORDANCE WITH THE SOILS INVESTIGATION AND REPORT PREPARED BY PROFESSIONAL ENGINEERING ASSOCIATES, DATED JUNE 26, 2008.
- ALL DISTURBED AREAS SHALL BE SEEDED AND MULCHED OR SOODED IN ACCORDANCE WITH THE LANDSCAPE PLANS. PROVIDE A MINIMUM OF 3" OF TOPSOIL IN THESE AREAS UNLESS OTHERWISE NOTED.

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.

GENERAL UTILITY NOTES:

- ALL UTILITY LINES, STRUCTURES AND TRENCHES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE STANDARDS AND REQUIREMENTS OF THE CITY OF ROCHESTER HILLS.
- ALL SANITARY SEWER LEADS SHALL BE PVC SDR 23.5 PIPE AND FITTINGS. ALL JOINTS TO BE SOLVENT-WELDED JOINTS 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.J.L.W. #1665 BOX OR EQUAL.
- ALL STORM SEWER 12" DIAMETER OR LARGER SHALL BE REINFORCED CONCRETE PIPE (RCP C-76) CLASS IV WITH PREMIUM JOINTS, UNLESS OTHERWISE NOTED.
- ALL STORM SEWER LEADS SHALL BE PVC SCHEDULE 40 WITH GLUED JOINTS UNLESS OTHERWISE NOTED.
- ALL UNDERGROUND DETENTION PIPE SHALL BE ALUMINIZED STEEL TYPE-2 CORRUGATED STEEL PIPE.



DRAWINGS

WATER MAIN: OAKLAND COUNTY WATER SUPPLY & SEWAGE DISPOSAL SYSTEMS FOR AVON TWP. EXTENSION NO. 2, JOHNSON & ANDERSON, INC. JOB NO. 3894-20, DATED 5-8-78

SANITARY SEWER: "AS-BUILT" SANITARY SEWER & WATER MAIN PLAN, COMMERCE PARK OF ROCHESTER HILLS, OFFICE-WEBSITER ENGINEERS, INC. CITY FILE #8-702, DATED JAN 1987

STORM SEWER: "AS-BUILT" SANITARY SEWER & WATER MAIN PLAN, COMMERCE PARK OF ROCHESTER HILLS, JOHNSON & ANDERSON, INC. JOB NO. 3894-20, DATED 5-8-78

ELECTRIC: CITY OF ROCHESTER HILLS, DOW HANNOVER, RECEIVED 6-25-08

TELEPHONE: DETROIT EDISON, ICS GROUP, RECEIVED 6-25-08

OTHER: ITC TRANSMISSION, NO FACILITIES ON SITE, RAYMOND, MINN. RECEIVED 6-26-08

CONCAST, TRACY, ILLINOIS, RECEIVED 6-28-08

"ARCHITECTURAL SURVEY" RAYMOND J. DONNELLY & ASSOC. JOB #61040, DATED MARCH 1987

PRELIMINARY - NOT FOR CONSTRUCTION
CITY FILE #08-002.4

CAUTION!!
THE EXISTING AND PROPOSED GRADING AND EARTHWORK SHOWN ON THESE PLANS IS BASED ON THE INFORMATION PROVIDED TO THE ENGINEER. THE ENGINEER HAS CONDUCTED VISUAL INSPECTIONS AND SURVEYS TO VERIFY THE EXISTING CONDITIONS AND HAS NOT CONDUCTED ANY OTHER INVESTIGATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE EXISTING CONDITIONS AND FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS PRIOR TO CONSTRUCTION.

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KIRCO MANIX
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PRELIMINARY GRADING & UTILITY PLAN
RAYCONNECT - 2014 ADDITION
PART OF SECTION 29, T. 3N., R. 1E.,
ROCHESTER HILLS, OAKLAND COUNTY, MI

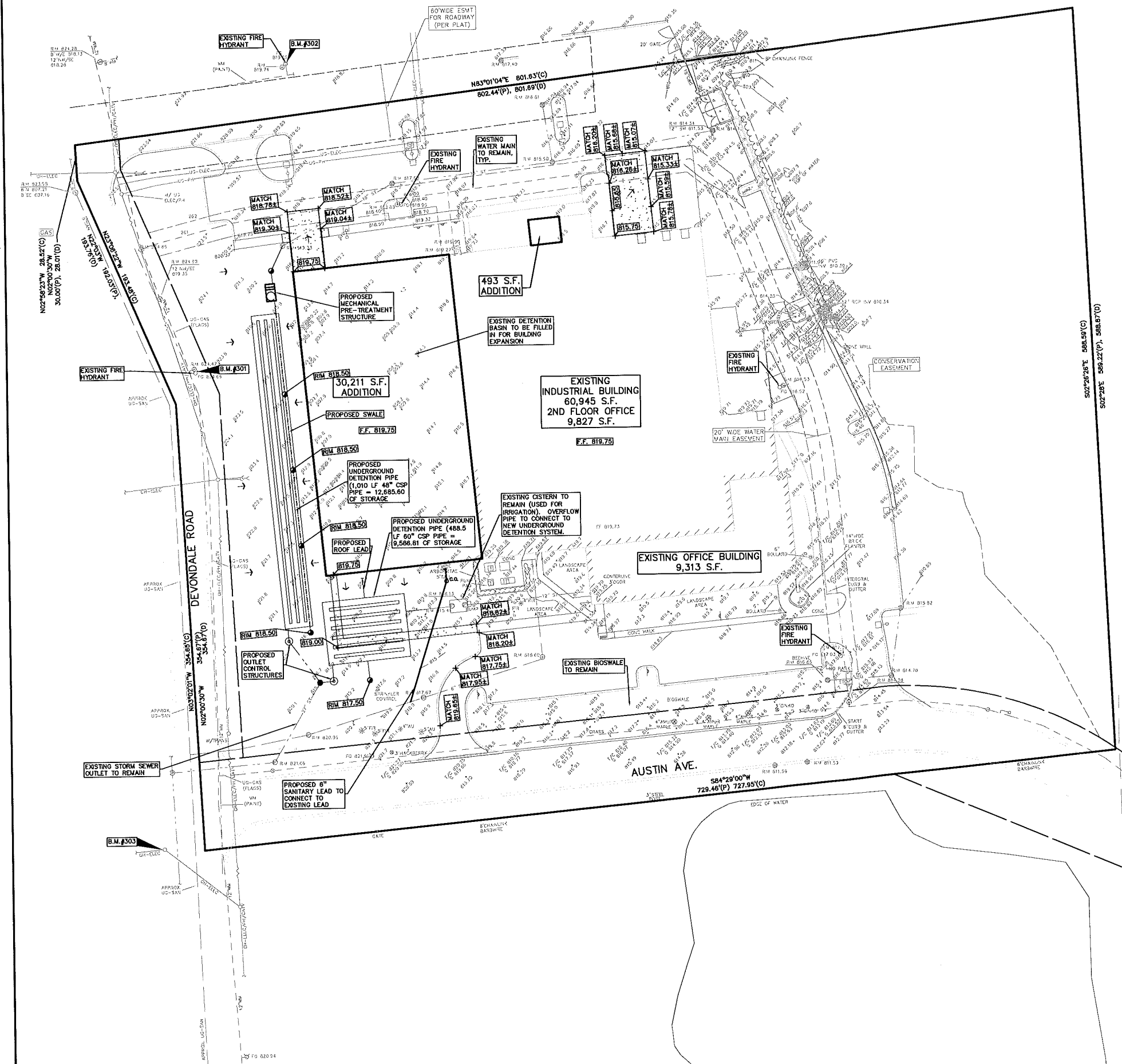
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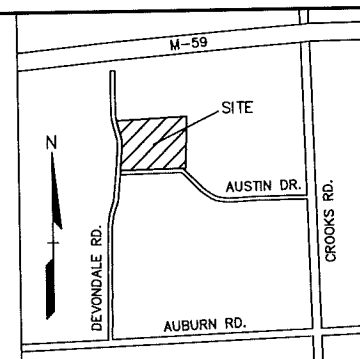
ORIGINAL ISSUE DATE: DEC. 20, 2013

PEA JOB NO. 2008-089

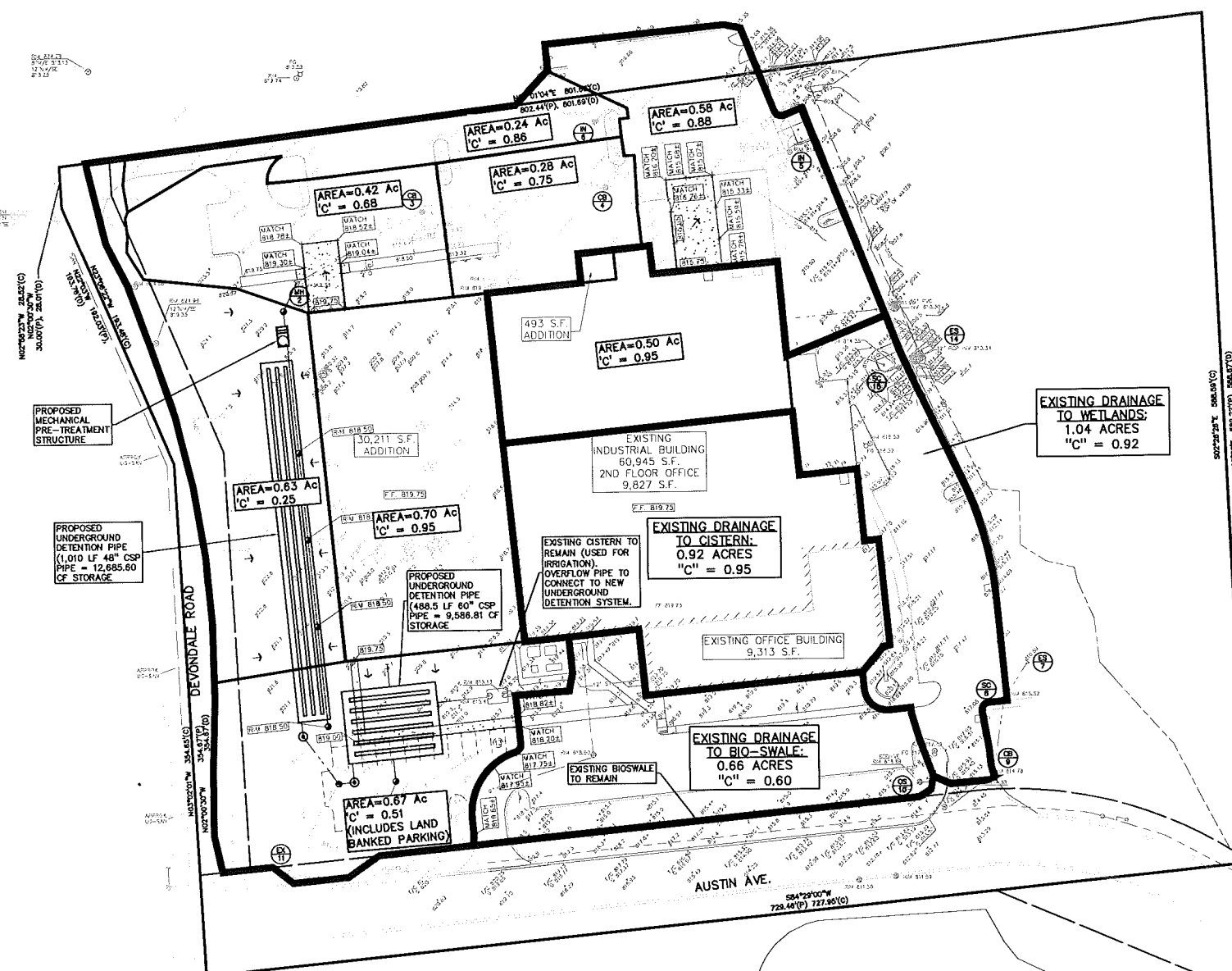
SCALE: 1" = 40'

DRAWING NUMBER:
C-4





| NO. | BY | CHK | DESCRIPTION | DATE |
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EXISTING DRAINAGE TO WETLANDS: 1.04 ACRES "C" = 0.92

EXISTING DRAINAGE TO CISTERN: 0.92 ACRES "C" = 0.95

EXISTING DRAINAGE TO BIO-SWALE: 0.66 ACRES "C" = 0.60

EXISTING CISTERN TO REMAIN (USED FOR IRRIGATION). OVERFLOW PIPE TO CONNECT TO NEW UNDERGROUND DETENTION SYSTEM.

PROPOSED UNDERGROUND DETENTION PIPE (488.5 LF 60" CSP PIPE = 9,586.81 CF STORAGE)

PROPOSED UNDERGROUND DETENTION PIPE (1,010 LF 48" CSP PIPE = 12,665.60 CF STORAGE)

PROPOSED MECHANICAL PRE-TREATMENT STRUCTURE

| AREA | ACRES | WEIGHTED "C" |
|----------|-------|--------------|
| UG DET W | 2.15 | 0.64 |
| UG DET S | 1.37 | 0.74 |
| BIOSWALE | 0.66 | 0.66 |
| WETLANDS | 1.04 | 0.92 |
| CISTERN | 0.92 | 0.95 |
| OVERALL | 6.14 | 0.76 |

STORMWATER DETENTION NOTES:

THE EXISTING SEDIMENTATION BASIN AND DETENTION BASIN WILL BE FILLED IN FOR THE PROPOSED BUILDING EXPANSION. THE DETENTION FOR THAT PORTION OF THE SITE WHICH CURRENTLY DRAINS TO THE BASIN WILL BE REPLACED WITH UNDERGROUND PIPE STORAGE. THE OUTLET FOR THE UNDERGROUND DETENTION SYSTEM WILL BE THE EXISTING OUTLET TO THE STORM SEWER IN AUSTIN DRIVE AT A DETAINED RATE OF 0.2 CFS/ACRE.

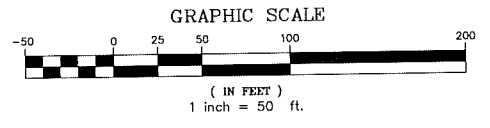
A PORTION OF THE EXISTING ROOF AND THE PARKING AREA ALONG THE EAST SIDE OF THE SITE DRAINS TO THE EXISTING WETLANDS TO REPLACE THE DRAINAGE THAT ORIGINALLY FLOWED TO THE WETLANDS. THIS SYSTEM WILL NOT BE ALTERED FOR THE PROPOSED ADDITION.

THE AREA SOUTH OF THE BUILDING FLOWS TO A BIOSWALE WHICH HAS AN EMERGENCY OVERFLOW ROUTE TO THE WETLANDS TO THE EAST. THIS WILL NOT BE ALTERED FOR THE PROPOSED ADDITION.

THE EXISTING GROUND WATER TABLE IS AT APPROXIMATE ELEVATION 808 TO 810. DUE TO THE SHALLOW GROUND WATER TABLE AND SILTY SOILS ON-SITE, MINIMAL INFILTRATION IS POSSIBLE.

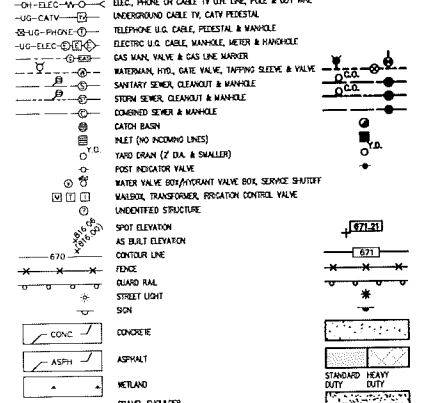
| | | |
|--|-----------|-------------------|
| Contributing Area (A) | 2.15 | Ac |
| Allowable Discharge (Qd) | 0.43 | CFS (=6.2 CFS/AC) |
| Co-efficient of Runoff (C) | 0.64 | |
| Calculation of Required Discharge (Qd) per Acre | | |
| $Q_d = ((Q_d) / (A \times C))$ | 0.51 | |
| $T = 25 + ((8662 \times Q_d) / 0.5)$ | 135.82 | |
| Storage Volume Required: | | |
| $V_s = (1.25 \times Q_d \times (T + 25)) - 40Q_d(T)$ | 9196.91 | |
| $V_t = (V_s) \times (A \times C)$ | 12,654.94 | CF |
| PIPE STORAGE WEST: | | |
| L = | 1010 | ft |
| SCE = | 45 | in |
| C.F.F.T = | 1255 | c.f.m. |
| VOLUME = | 12,656.60 | cf |

| | | |
|--|----------|-------------------|
| Contributing Area (A) | 0.27 | Ac |
| Allowable Discharge (Qd) | 0.27 | CFS (=6.2 CFS/AC) |
| Co-efficient of Runoff (C) | 0.74 | |
| Calculation of Required Discharge (Qd) per Acre | | |
| $Q_d = ((Q_d) / (A \times C))$ | 0.27 | |
| $T = 25 + ((8662 \times Q_d) / 0.5)$ | 147.72 | |
| Storage Volume Required: | | |
| $V_s = (1.25 \times Q_d \times (T + 25)) - 40Q_d(T)$ | 9455.64 | |
| $V_t = (V_s) \times (A \times C)$ | 9,566.06 | CF |
| PIPE STORAGE SOUTH: | | |
| L = | 488.5 | ft |
| SCE = | 60 | in |
| C.F.F.T = | 1362 | c.f.m. |
| VOLUME = | 9,566.81 | cf |



LEGEND

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



DRAWINGS

WATER MAIN "OAKLAND COUNTY WATER SUPPLY & SEWER DISPOSAL SYSTEMS FOR AUSTIN TWP. EXTENSION NO. 2," JOHNSON & ANDERSON, INC. JOB NO. 3894-20, DATED 5-8-78

SANITARY SEWER "AS-BUILT" SANITARY SEWER & WATER MAIN PLAN, COMMERCE PARK OF ROCHESTER HILLS "GIFELS-WEBSTER ENGINEERS, INC. CITY FILE 88-702, DATED JAN. 1987

"LEGENDS GRAN PHASE 2" HUBBELL, ROTH & CLARK, INC. JOB NO. 87132, DATED 10-20-88

"OAKLAND COUNTY WATER SUPPLY & SEWER DISPOSAL SYSTEMS FOR AUSTIN TWP. EXTENSION NO. 2," JOHNSON & ANDERSON, INC. JOB NO. 3894-20, DATED 5-8-78

"OAKLAND COUNTY WATER SUPPLY & SEWER DISPOSAL SYSTEMS FOR AUSTIN TWP. EXTENSION NO. 2," JOHNSON & ANDERSON, INC. CITY FILE 88-702, DATED JAN. 1987

STORM SEWER DETROIT EDISON, LOS GROUP, RECEIVED 6-30-88

ELECTRIC FACILITIES (UNRECORDED) NO FACILITIES ON SITE, CONALE MICROWORK, RECEIVED 6-27-88

TELEPHONE AT&T/BBN, CEPHUS (CLEVELAND), RECEIVED 6-30-88

CONCRETE (UNRECORDED) NO FACILITIES ON SITE, RAYMOND NUCLA, RECEIVED 6-24-88

ASPHALT (UNRECORDED) NO FACILITIES ON SITE, RAYMOND NUCLA, RECEIVED 6-24-88

OTHER "ARCHITECTURAL SURVEY" RAYMOND J. DONOVAN & ASSOC. JOB #7704, DATED MARCH 1987

PRELIMINARY - NOT FOR CONSTRUCTION
CITY FILE #08-002.4

CAUTION!

THE EXISTING AND PROPOSED ELEVATIONS OF EXISTING UNDERGROUND UTILITIES SHOWN ON THIS DRAWING ARE APPROXIMATE. THE EXISTING UTILITIES ARE TO BE RECORDED AND SHOWN ON THE FINAL PLANS. THE EXISTING UTILITIES ARE TO BE RECORDED AND SHOWN ON THE FINAL PLANS. THE EXISTING UTILITIES ARE TO BE RECORDED AND SHOWN ON THE FINAL PLANS.

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PRELIMINARY DRAINAGE AREA MAP
RAYCONNECT - 2014 ADDITION
PART OF SECTION 29 T. 3N., R. 11E,
ROCHESTER HILLS, OAKLAND COUNTY, MI

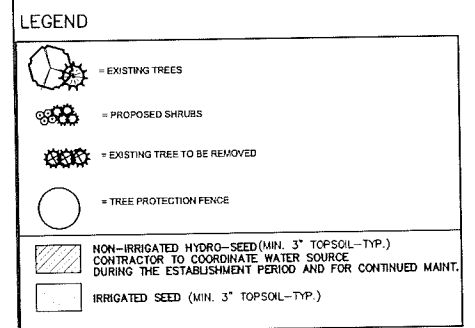
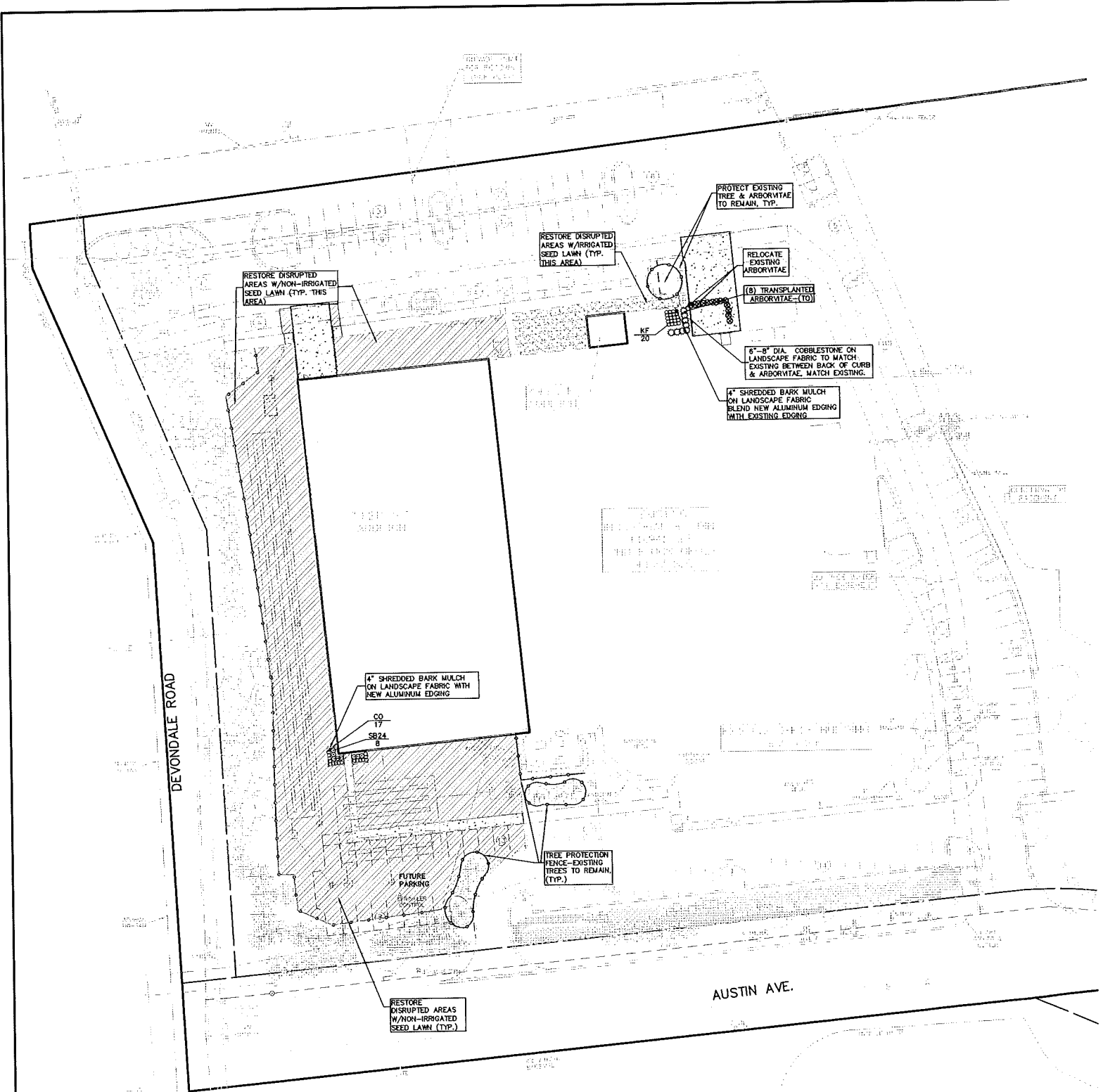
DES. RLS. SUR. DEC. 2013
D.H. 10/20/2013

ORIGINAL ISSUE DATE: DEC. 20, 2013

PEA JOB NO. 2008-089

SCALE: 1" = 50'

DRAWING NUMBER:
C-5



MAINTENANCE/PRESERVATION NOTES:
 ALL LANDSCAPE MATERIAL SHALL BE INSTALLED & MAINTAINED ACCORDING TO ACCEPTABLE NURSERY PROCEDURES.
 THE OWNER OF THE PROPERTY SHALL BE RESPONSIBLE FOR CONTINUED PROPERTY MAINTENANCE OF ALL LANDSCAPE MATERIAL AND SHALL KEEP THEM IN PROPER, NEAT AND ORDERLY APPEARANCE, FREE FROM REFUSE AND DEBRIS AT ALL TIMES. ALL UNHEALTHY OR DEAD PLANT MATERIAL SHALL BE REPLACED WITHIN ONE YEAR, OR THE NEXT PLANTING PERIOD, WHICHEVER COMES FIRST.
PRESERVATION:
 PROVIDE TREE PROTECTION FENCING FOR ALL EXISTING VEGETATION TO BE PRESERVED WITHIN 15 FEET OF CONSTRUCTION.
 SEE DETAIL ON THIS SHEET

PROPOSED NEW PLANT LIST:

| QTY | KEY | SCIENTIFIC NAME | COMMON NAME | SIZE AT INSTALLATION | ROOT | COMMENTS |
|-----|------|-----------------------------------|------------------------|----------------------|-------|----------------------|
| 20 | MF | CALAMAGROSTIS X AC. YARL FODDER | YARL FODDER FEED GRASS | 2 GAL. | CONT. | 1ST O.C. PAL. REJECT |
| 17 | OD | CALAMAGROSTIS X AC. THUNDER | THUNDER FEED GRASS | 3 GAL. | CONT. | 1ST O.C. PAL. REJECT |
| 8 | SB24 | SPIREA X BUNYANIA ANTHONY WATERER | ANTHONY WATERER SPIREA | 24" HT. | CONT. | WALE ONLY |
| 8 | TO | TRANSPLANTED ASPEN | | | | |

PREVIOUSLY 4.25.2011 APPROVED LANDSCAPE REQUIREMENTS PLANTS ALREADY INSTALLED

SITE DATA:

ZONED: I-1 (LIGHT INDUSTRIAL)
 SITE AREA: 8.39 ACRES
 OPEN SPACE: 5.49 ACRES (66%)
 TOTAL PARKING: 122 SPACES
 SPACES REQUIRED:

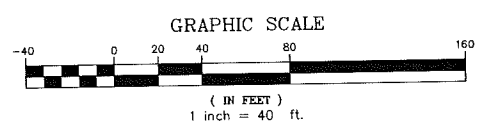
PARKING LOT LANDSCAPING REQUIREMENTS

REQUIRED: 168 SPACES PROVIDED / 10 = 16.8
 16.8 X 150 S.F. = 2520 S.F. OF PARKING ISLANDS
 2520 / 300 S.F. = 8 TREES
 OR 1 TREE PER PARKING ISLAND

PROPOSED: 10 PARKING LOT TREES & 3,452 S.F. OF PARKING ISLANDS

SCREENING REQUIREMENTS

| PROPERTY LINE | SCREENING REQUIREMENT |
|---|--------------------------------------|
| NORTH PROPERTY LINE: I-1 (LIGHT INDUSTRIAL) | NO BUFFER REQUIRED |
| WEST PROPERTY LINE: I-1 (LIGHT INDUSTRIAL) | NO BUFFER REQUIRED |
| SOUTH PROPERTY LINE: R-4 (ONE-FAMILY RESIDENTIAL) | TYPE 'C' BUFFER |
| EAST PROPERTY LINE: I-1 (LIGHT INDUSTRIAL) | NO BUFFER REQUIRED |
| PROPOSED: | |
| NORTH PROPERTY LINE: I-1 (LIGHT INDUSTRIAL) | NO BUFFER REQUIRED |
| WEST PROPERTY LINE: I-1 (LIGHT INDUSTRIAL) | VISUAL SCREENING ALONG DEVONDALE RD. |
| SOUTH PROPERTY LINE: R-4 (ONE-FAMILY RESIDENTIAL) | TYPE 'C' BUFFER |
| EAST PROPERTY LINE: I-1 (LIGHT INDUSTRIAL) | NO BUFFER REQUIRED |



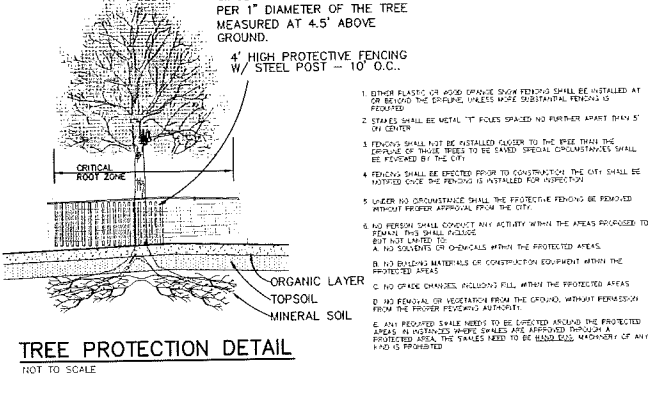
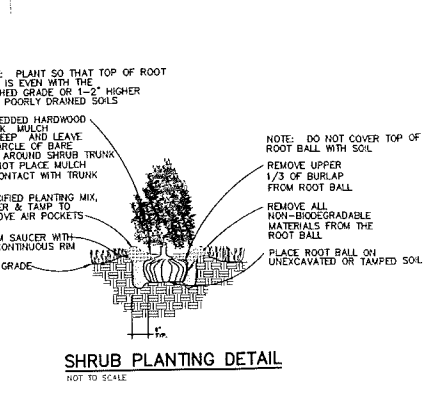
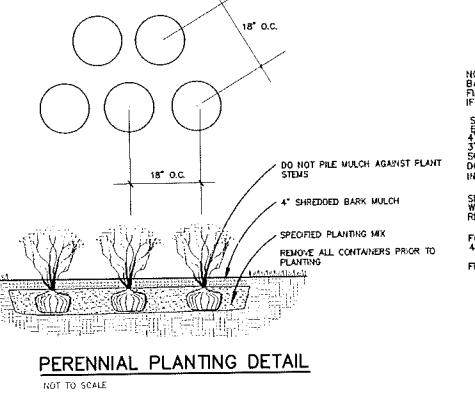
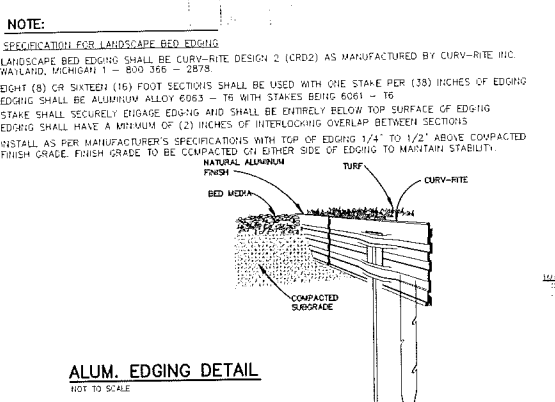
GENERAL PLANTING NOTES:

- 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 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 Green, 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 reject 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 4" shredded hardwood bark mulch, see specifications. Shredded pallette and died mulch will not be accepted.
- All landscape areas shall receive 3" compacted topsoil, from on-site stockpile.

CITY LANDSCAPE NOTES:

- Prior to release of the performance bond the City of Rochester Hills Landscape Architect must inspect all landscape plantings including but not limited to existing trees, replacement trees, buffer plantings and parking lot islands. The right-of-way will be inspected by the Forestry Division to identify any plantings new or existing that pose a hazard to the safe use of the right-of-way. Forestry may require the developer to remove and possibly replace any such trees.
- All trees and shrubs must be planted at least 4' from the edge of a public roadway. Shade trees and shrubs must be planted at least 5' from the edge of a public walkway. Evergreen and ornamental trees must be planted at least 10' from the edge of a public walkway. All trees and shrubs must be planted at least 10' from any fire hydrant. Shade and evergreen trees must be planted at least 15' from the nearest overhead wire and at least 5' from the nearest underground utility.
- No tree or shrub may be planted within the triangular area formed at the intersection of any street right-of-way at a distance of 25' from their point of intersection. No tree or shrub may be planted in the triangular area formed at the intersection of any driveway with a public sidewalk at a distance along each line of 15' from their point of intersection.
- Prior approval is required to plant any tree or shrub in the public right-of-way.
- No substitutions or changes of location or plant types shall be made without the approval of the developer and the City of Rochester Hills Landscape Architect.
- The developer and/or the City of Rochester Hills Landscape Architect shall have the right, at any stage of the installation, to reject any work or material that does not meet the requirements of the plans or specifications.
- Replacement trees may not be planted within the drip line of existing trees.
- Trees must be at least 5' from underground utilities and 15' from overhead utilities.
- Buffer and parking lot trees do not count as replacement trees

NOTES:
 TREE PROTECTION FENCING MUST BE INSTALLED, INSPECTED, AND APPROVED BY THE CITY'S LANDSCAPE ARCHITECT PRIOR TO ISSUANCE OF THE LAND IMPROVEMENT PERMIT FOR THIS DEVELOPMENT.



REVISIONS

| NO. | BY | CHK | DESCRIPTION | DATE |
|-----|----|-----|-------------|------|
| | | | | |

CAUTION!
 THE LOCATION AND ELEVATION OF EXISTING UTILITIES ARE SHOWN ON THIS PLAN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO THE START OF CONSTRUCTION. THE USER OF THIS PLAN ASSUMES ALL LIABILITY FOR ANY DAMAGE TO UTILITIES OR TO THE STATE OF CONSTRUCTION.

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CONTRACTOR CONTRACTOR NOTES:
 IN CONNECTION WITH THE PROVISIONS OF THIS CONTRACT, THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE CITY OF ROCHESTER HILLS AND THE STATE OF MICHIGAN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE CITY OF ROCHESTER HILLS AND THE STATE OF MICHIGAN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE CITY OF ROCHESTER HILLS AND THE STATE OF MICHIGAN.

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 Fax: (248) 689-1044
 website: www.peakinc.com

PROFESSIONAL ENGINEERING ASSOCIATES
 101 W. BIG BEAVER, SUITE 200
 TROY, MI 48064

LANDSCAPE PLAN
RAYCONNECT - 2014 ADDITION
 PART OF SECTION 29, T. 3N., R. 11E.,
 ROCHESTER HILLS, OAKLAND COUNTY, MI

KIRCO MANIX
 101 W. BIG BEAVER, SUITE 200
 TROY, MI 48064

DES. RLS. DN. RLS. SUR. DEC. DNH. P.M.
 DATE: 12/20/13

ORIGINAL ISSUE DATE: DEC. 20, 2013
 PEAK JOB NO. 2008-089
 SCALE: 1"=40'
 DRAWING NUMBER:
L-1

PRELIMINARY - NOT FOR CONSTRUCTION
CITY FILE #08-002.4

LIGHTING FIXTURE SCHEDULE:

- "SA" BUILDING MOUNTED DIE CAST ALUMINUM LIGHT FIXTURE, FULL CUT OFF WALL PACK, 1-175 METAL HALIDE LAMP, FORWARD THROW, UL LISTED FOR OUTDOOR APPLICATION, BRONZE FINISH, 277V, MOUNTED AT 18' ABOVE FINISHED GRADE, COOPER LIGHTING TRIBUTE SERIES #TR-MP-4S-175W-277V-F1-LL- OR APPROVED EQUAL.
- "SB" SURFACE MOUNTED HALF CYLINDER FLUORESCENT LIGHT FIXTURE, DIE-CAST ALUMINUM HOUSING, MEDIUM THROW DISTR., 2-42W TRF LAMPS 277V ELECTRONIC FLUORESCENT BALLAST, BRONZE FINISH, EQUIPPED WITH 277V BUILT-IN CFL COLD WEATHER EMERGENCY BATTERY PACK, INSTALLED ABOVE DOORWAY, 9' ABOVE FINISHED GRADE, MCGRAW-EDISON #ISC-242-CF-277-BZ-F-L-EM140-277 OR APPROVED EQUAL.
- (E) EXISTING TO REMAIN LIGHT FIXTURE.
- (ER) EXISTING RELOCATED LIGHT FIXTURE.

COOPER LIGHTING - LUMARK

The Lumark fixture is the most versatile, handcrafted designed luminaire available in the industry. The fixture is designed for outdoor applications in parking lots, walkways, plazas, and general lighting. It is available in a variety of finishes and lamp types.

TECHNICAL DATA

| | |
|--------------|---------------------------|
| Model | TR |
| Series | TRIBUTE |
| Material | Die Cast Aluminum |
| Finish | BRONZE |
| Mounting | Surface Mount |
| Height | 18' (5.49m) |
| Beam Spread | 120° |
| Light Output | 175W Metal Halide |
| IP Rating | IP65 |
| UL Listing | UL Listed for Outdoor Use |

COMPLIANT

MEET ALL APPLICABLE CODES AND REGULATIONS.

MCGRAW-EDISON

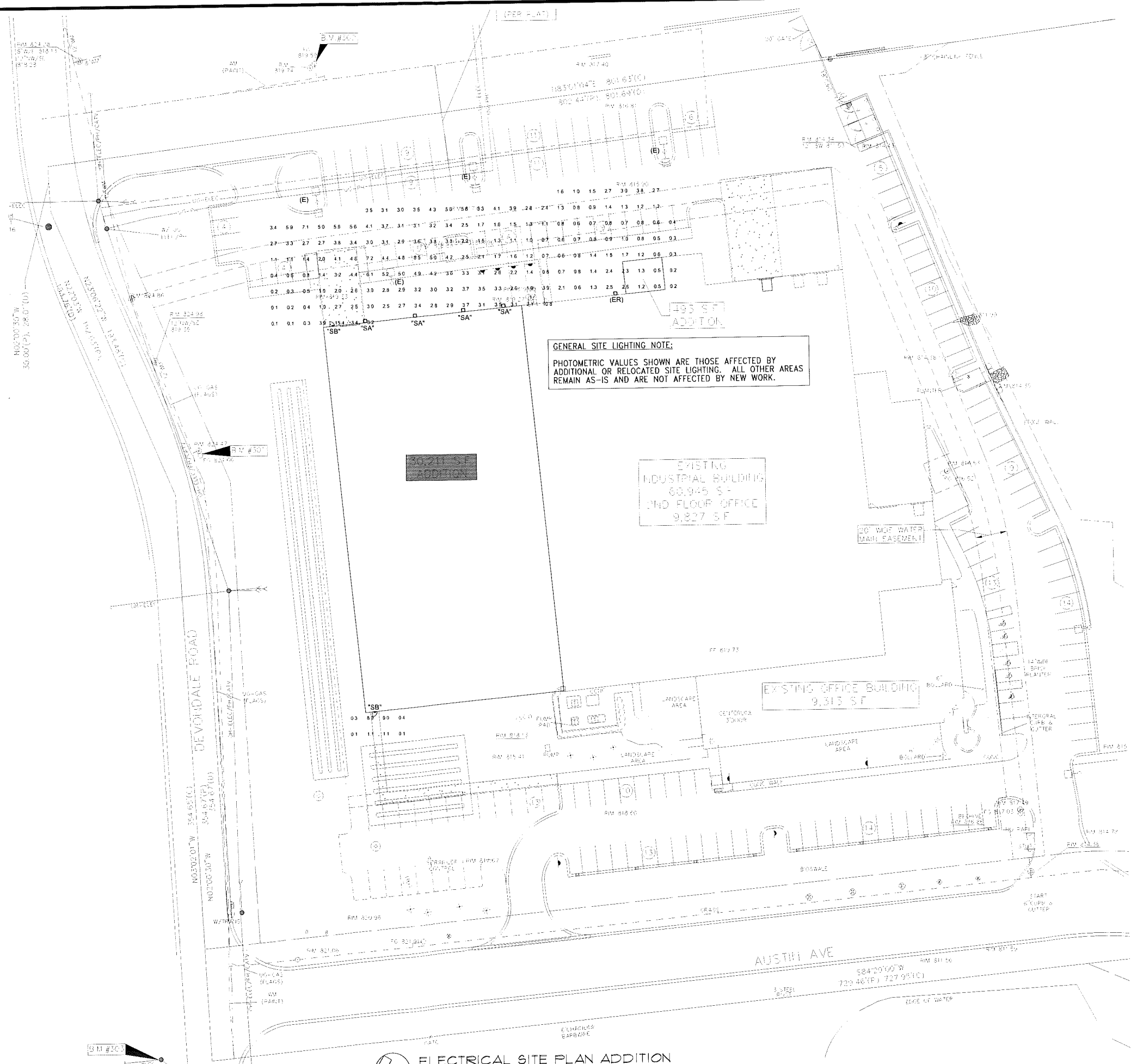
The Impact Elite Cylinder fixture is a handcrafted designed luminaire available in the industry. It is designed for outdoor applications in parking lots, walkways, plazas, and general lighting. It is available in a variety of finishes and lamp types.

TECHNICAL DATA

| | |
|--------------|---------------------------|
| Model | ISC |
| Series | IMPACT ELITE CYLINDER |
| Material | Die Cast Aluminum |
| Finish | BRONZE |
| Mounting | Surface Mount |
| Height | 18' (5.49m) |
| Beam Spread | 120° |
| Light Output | 2x 42W TRF Lamps |
| IP Rating | IP65 |
| UL Listing | UL Listed for Outdoor Use |

COMPLIANT

MEET ALL APPLICABLE CODES AND REGULATIONS.



Project Title
RAYCONNECT SITE LIGHTING EXPANSION
ROCHESTER HILLS, MICHIGAN

Sheet Title
ELECTRICAL SITE LIGHTING ADDITION

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