SITE PLANS FOR

SOUTH OAKS SITH CONDOMINIUM

LOT TABLE:

CITY OF ROCHESTER HILLS, OAKLAND COUNTY, MICHIGAN

GENERAL NOTES:

LOT SIZE

LOT WIDTH

BUILDING HEIGHT

FRONT SETBACK

SIDE SETBACK

REAR SETBACK

MIN. FLOOR AREA

MAX COVERAGE

COUNTY RECORDS.

- ALL CONSTRUCTION TO CONFORM AND COMPLY TO THE CURRENT STANDARDS AND SPECIFICATIONS OF THE CITY OF ROCHESTER HILLS AND OTHER GOVERNMENT AGENCIES.
- NO LOADING/UNLOADING REQUIRED FOR THIS TYPE OF DEVELOPMENT.
- WASTE WATER DISPOSAL TO BE EXTENDED TO THE SITE AND DISCHARGED TO THE CITY ROCHESTER HILLS, OAKLAND COUNTY, MDEQ AND TOWNSHIP APPROVAL.
- WATER SUPPLY TO BE CONNECTED TO THE CITY OF ROCHESTER HILLS PUBLIC WATER SUPPLY
- . TRASH DISPOSAL TO BE RESIDENTIAL COLLECTION.
- COMMISSION TO BE REQUIRED. NO STREET LIGHTING PROPOSED. CARRIAGE LIGHTING ON EACH BUILDING ONLY.
- SIGN DETAILS ARE TO BE PROVIDED TO THE CITY AND APPROVAL GRANTED PRIOR TO
- THE PLACEMENT OF ANY SIGNS. SEE LANDSCAPE PLANS FOR SIGN DETAILS.

LOT CONFIGURATION SCHEDULE:

REQUIRED

9600 SF

80 FT

30 FT

25 FT

35 FT

912 SF

30%

LEGAL DESCRIPTION (TAX I.D. 15-32-376-078).

T3N, R11E, SECTION 32, CITY OF ROCHESTER HILLS, COUNTY OF OAKLAND, STATE OF MICHIGAN AND

DESCRIBED AS FOLLOWS: LOT 10, SUPERVISOR'S PLAT OF MESSMORE FARMS SUBDIVISION, ACCORDING TO THE PLAT THEREOF AS RECORDED IN LIBER 66 OF PLATS, PAGE(S) 16, OAKLAND

20 FT (BOTH)

- CLEAN STONE ENTRANCE DRIVES TO BE CONSTRUCTED AS FIRST PART OF CONSTRUCTION PROVIDE ACESS FOR FIRE DEPARTMENT AND CONSTRUCTION TRAFFIC DURING CONSTRUCTION
- ALL SANITARY AND WATERMAIN WILL BE DEDICATED TO THE CITY OF ROCHESTER HILLS.
- THE WALTON ROAD DITCHLINE
- 12. ALL REQUIREMENTS BY THE FIRE DEPARTMENT PER THE INTERNATIONAL FIRE CODE WILL BE MET 13. BUILDINGS ARE NOT TO EXCEED 35' IN HEIGHT AND/OR 2 1/2 STORIES.
- 14. PROPOSED ROADS ARE TO BE PRIVATE AT NO POINT WILL THIS STREET BE ALLOWED TO BECOME PUBLIC OR TRANSFER OWNERSHIP TO THE CITY.

AVG. PROVIDED

87.2 FT

30 FT

25 FT

35 FT

912 SF

30%

20 FT (BOTH)

9855 SF

ACCORDING TO LOT SIZE VARIATION SECTION 138-5.200 SIDE LOT # SETBACK SETBACK SETBACK

| | 3, 170 31 | 23 | 10 | | 50 |
|---|-----------|-----|-----|-----|-------|
| 3 | 9,515 SF | 25' | 10' | 35' | 90' |
| 4 | 9,560 SF | 25' | 10' | 35' | 90' |
| 5 | 9,605 SF | 25' | 10' | 35' | 90' |
| 6 | 10,547 SF | 25' | 10' | 35' | 96.29 |
| 7 | 10,372 SF | 25' | 10' | 35' | 94.51 |
| 8 | 10,383 SF | 25' | 10' | 35' | 94.52 |
| 9 | 13,473 SF | 25' | 10' | 35' | 75' |

FRONTAGE

- SHEET INDEX
- GENERAL & DIMENSIONAL
- GRADING PLAN (SOUTH) GRADING PLAN (NORTH)
- UTILITY PLAN (SOUTH)
- UTILITY PLAN (NORTH) *WETLAND PLAN*
- TOPOGRAPHIC SURVEY (by Reichert Surveying)

NOTE: WETLAND, FLOODPLAIN AND 25' NATURAL

AND CHANGES ARE ON PAGE S6.

PR RETAINING WALL

N./S. 1/4 LINE SEC. 32

S05°05'06"E R&M 1259.41'R&M

LEUDERS DRAIN (L. 11293 P.557 O.C.R.)

FEATURES SETBACK DETAILED CALCULATIONS

PR 8" SANITARY

IN 20' EASEMENT

EX 25' NATURAL

SETBACK (TYP)

FEATURES -

- LANDSCAPE PLAN (1 OF 4)
- LANDSCAPE PLAN (2 OF 4)
- LANDSCAPE PLAN (3 OF 4)
- L-4 LANDSCAPE PLAN (4 OF 4)

SITE INFORMATION:

EXISTING PROPERTY ZONING: R-4 PROPOSED PROPERTY USE: R-4 LOT SIZE VARIATION

PROPERTY TAX I.D.: #15-32-376-078

- SITE AREA DATA: SITE AREA = 4.84 ACRES
- **DEVELOPMENT AREAS** ROAD R.O.W. AREA= 71,101 SF OR 1.63 ACRES
- TOTAL LOT AREA = 98,551 SF OR 2.26 ACRES DETENTION BASIN AREA = 18,028 SF OR 0.42 SF
- EXISTING SITE WETLAND AREA = 19,281 SF PROPOSED SITE WETLAND AREA = 9.137 SF
- EXISTING 25' NATURAL FEATURE SETBACK AREA = 67,724 SF PROPOSED DISRUPTION 25' WETLAND SETBACK = 22,843 SF
- EXISTING FLOODPLAIN VOLUME REMOVED = 6,773 CF PROPOSED MITIGATED FLOODPLAIN VOLUME = 7,590 SF

ROAD COMMISSION FOR OAKLAND COUNTY

OAKLAND COUNTY WATER RESOURCES COMMISSION

795

PR LOT LINE (TYPICAL)

REQUIRED PERMITS:

ENTRANCE DRIVE

NPDES

TAX I.D. #15-32-376-077

ZONED R-4 #2520 S. BLVD.

SOIL EROSION CONTROL

 $^\prime$ PR RETAINING WALL \prime WITH GUARDRAIL AT -TOP DUE TO HEIGHT

DISRUPTION LINE

EX & PR

↓ FLOODPLAIN ELEV 800.38 Five (5) foot

Applicant has

20' BOX CULVERT

CONNECTION

EX EDGE OF

WETLAND EX 25' NATURAL

SETBACK (TYP)

FEATURES 4

PR FLOODPLAIN

EX FLOODPLAIN

ELEV 800.38

TO BE APPROVED AND EASEMENT-

O BE GRANTED BY WRC (TYPICAL)

ELEV 800.38

oedestrian sidewalks

are required on both

sides of the street.

provided a written

request for Planning

Commission waiver

| BESCHITTON | MOENCIES MITHOWNE REQUIRED |
|--------------------------|---|
| OVERALL CONSTRUCTION | CITY OF ROCHESTER HILLS |
| WETLAND FILLING PERMIT | CITY OF ROCHESTER HILLS MICHIGAN EGLE |
| PRIVATE DRIVE | CITY OF ROCHESTER HILLS |
| WATERMAIN (WATER SUPPLY) | CITY OF ROCHESTER HILLS OAKLAND COUNTY WATER RESOURCES COMMISSION MICHIGAN EGLE |
| SANITARY (PART 41) | CITY OF ROCHESTER HILLS MICHIGAN EGLE |
| STORM WATER DISCHARGE | CITY OF ROCHESTER HILLS |

MICHIGAN EGLE

| ~ | |
|--------------------------|---|
| DESCRIPTION | AGENCIES APPROVAL REQUIRED |
| OVERALL CONSTRUCTION | CITY OF ROCHESTER HILLS |
| WETLAND FILLING PERMIT | CITY OF ROCHESTER HILLS MICHIGAN EGLE |
| PRIVATE DRIVE | CITY OF ROCHESTER HILLS |
| WATERMAIN (WATER SUPPLY) | CITY OF ROCHESTER HILLS OAKLAND COUNTY WATER RESOURCES COMMISSION MICHIGAN EGLE |
| SANITARY (PART 41) | CITY OF ROCHESTER HILLS MICHIGAN EGLE |
| STORM WATER DISCHARGE | CITY OF ROCHESTER HILLS OAKLAND COUNTY WATER RESOURCES COMMISSION |

Site Plan Review

Reviewed for compliance to the City Ordinance, **Building and Fire Codes**

| | 3 | |
|----------------|--|----------|
| Department | Reviewer | Approved |
| Planning | Chris McLeod 248-841-2572 mcleodc@RochesterHills.org | Yes |
| Building | Mark Artinian 248-841-2446 ArtinianM@RochesterHills.org | Yes |
| Engineering | Jason Boughton 248-841-2490 BoughtonJ@RochesterHills.org | Yes |
| Traffic | Keith Depp 248-841-2503 DeppK@RochesterHills.org | No |
| Nat. Resources | Matt Einheuser 248-841-2551 EinheuserM@RochesterHills.org | Yes |
| Fire | Lt. Walter Murphy 248-841-27 MurphyW@RochesterHills.org | 12 Yes |

City of Rochester Hills Planning & Economic Development

Conditions and mark-ups noted throughout the plan set must be addressed prior to final approval.



RMFD2022-0022 PSP2022-0014 **Revision 3**

Planning & Econo

Tamm Ave O Jackson Dr Golf Crest Dr Grace Ave South Blvd V

LOCATION MAP

Provide a legend showing what

PARKING CALCULATIONS

REQUIRED 2 SPACES PER HOME = 18 SPACES

PROVIDED SPACES: LOTS 1 - 6 = 6 SPACES (3 GARAGE, 3 DRIVEWAY)

LOTS 7 - 9 = 4 SPACES (2 GARAGE, 2 DRIVEWAY) 48 SPACES

WATERMAIN STUB -

EASEMENT FOR TURNARQUIND

FEATURES \(\frac{1}{2}\)

LEUDERS DRAIN (L. 11293 P.557 O.C.R.)

THEREFORE, OK.

PR RETAINING WALL

PR TRUCK

TYPICAL)

COMBINATION OF

BOULDERS, SECTIONS OF

SPLIT RAIL FENCE AND

FEATURE PROTECTION

SIGNS FOR NATURAL

the different hatchings are.



CALL MISS DIG 1-800-482-7171

0 3 GE **SOU**

ISSUE DATES SITE PLAN 6/15/2022 CITY SITE PLAN 8/22/2022

CITY SITE PLAN 10/21/2022 CITY SITE PLAN

MICHAEL C **POWELL** 6201027636

DRAWN MCS DESIGNED MCS APPROVED MCP P.E. JOB No. 21-450 SCALE 1"=50'

CITY FILE #22-022 SECTION #32

NOTE: ENTRANCE ONTO SOUTH BOULEVARD MUST MEET REQUIREMENTS OF ROAD COMMISSION FOR OAKLAND COUNTY AND MUST HAVE A ENTRANCE PERMIT FROM RCOC FOR SAID ENTRANCE PRIOR TO ANY WORK IN ROAD RIGHT OF WAY. SITE BM #1 1. ARROW ON HYDRANT ELEV. 803.89 (NAVD88) OFFSITE 68' W OF SW CORNER SUBJECT PROPERTY IN RIGHT OF WAY

IN 20' EASEMENT REQUIRED OFFSITE SANITARY EASEMENT

EX FLOODPLAIN—

EX 25' NATURAL

SETBACK (TYP)

FEATURES -

SITE BM #2 2. SANITARY MANHOLE ELEV. 802.58 (NAVD88)

TO BE APPROVED AND EASEMENT

TO BE GRANTED BY WRC (TYPICAL

72' W OF SE CORNER SUBJECT PROPERTY

IN S. BLVD. RIGHT OF WAY

RAIL FENCE AND

SIGNS FOR NATURAL

FEATURE PROTECTION

NOTE: A CITY FLOOD PLAIN, A CITY WETLAND, EGLE FLOOD PLAIN AND EGLE WETLAND PERMITS AND WRC STORM PERMIT WITH OFFSITE EASEMENTS WILL ALL BE NECESSARY PRIOR TO FINAL SITE PLAN APPROVAL FROM STAFF

PROPRIETOR/DEVELOPER:

THREE OAKS COMMUNITIES, LLC P.O. BOX 8307

STORM OUTLET

PR BLDG SETBACK

PR SANITARY

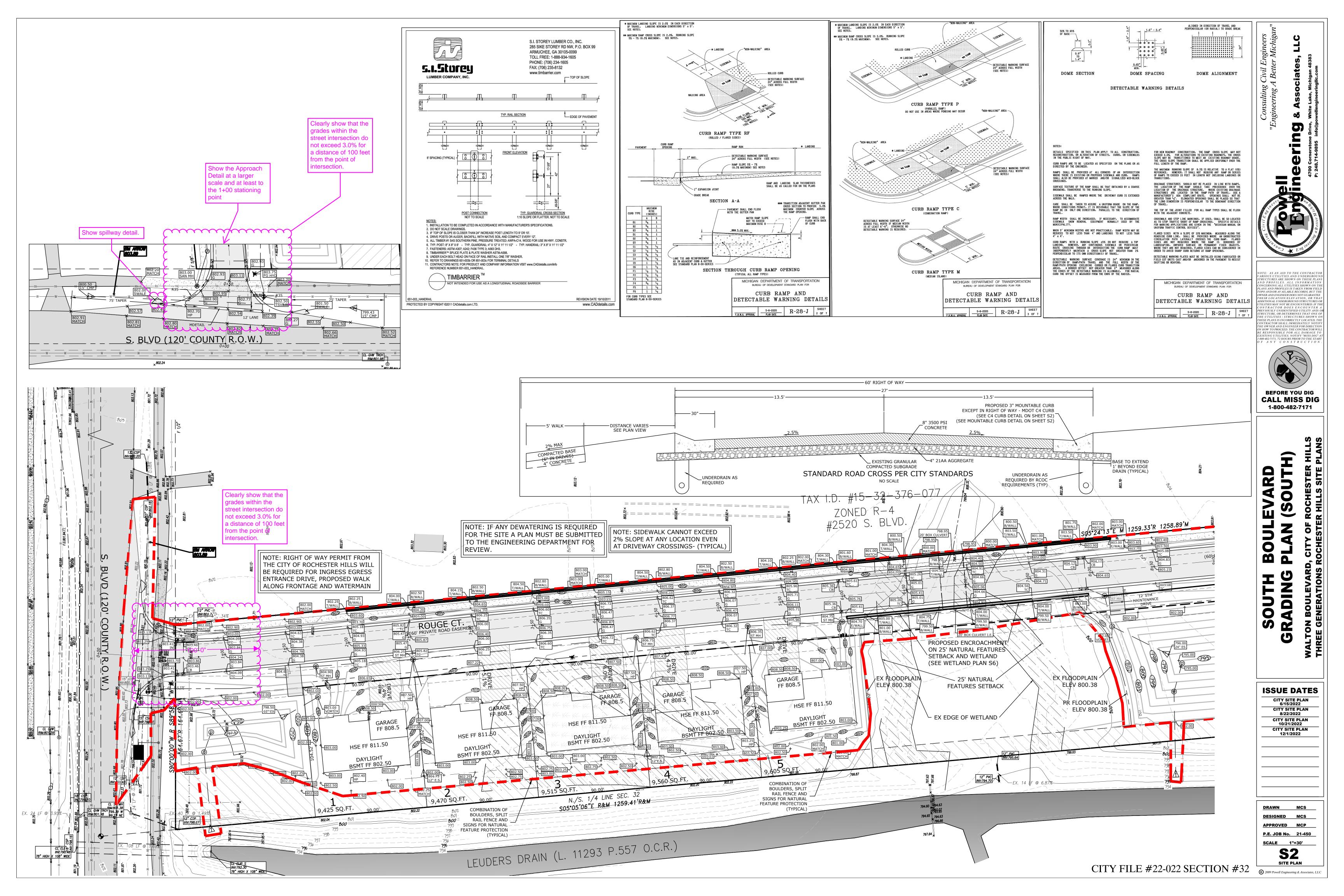
TOPOGRAPHY INFO: ALL TOPOGRAPHIC SURVEY IS SHOWN PER REICHERT SURVEYING

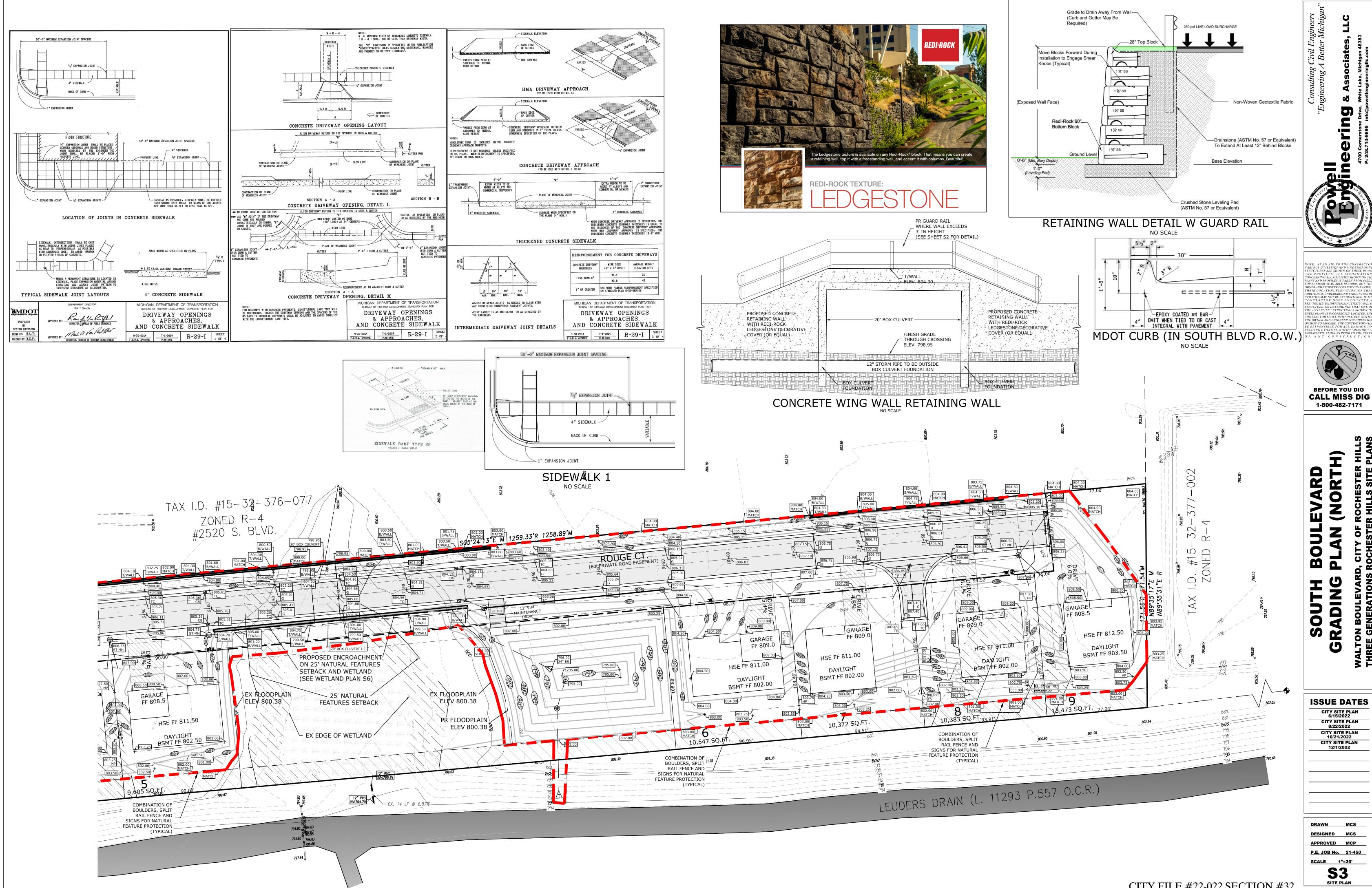
ANN ARBOR, MI 48107-8307 PHONE: (248)703-4653

ENGINEER SEAL

S1

SITE PLAN





GRADING

0

ISSUE DATES CITY SITE PLAN 6/15/2022 CITY SITE PLAN CITY SITE PLAN 10/21/2022 CITY SITE PLAN 12/1/2022

DRAWN MCS APPROVED MCP P.E. JOB No. 21-450 SCALE 1"=30' **S3**

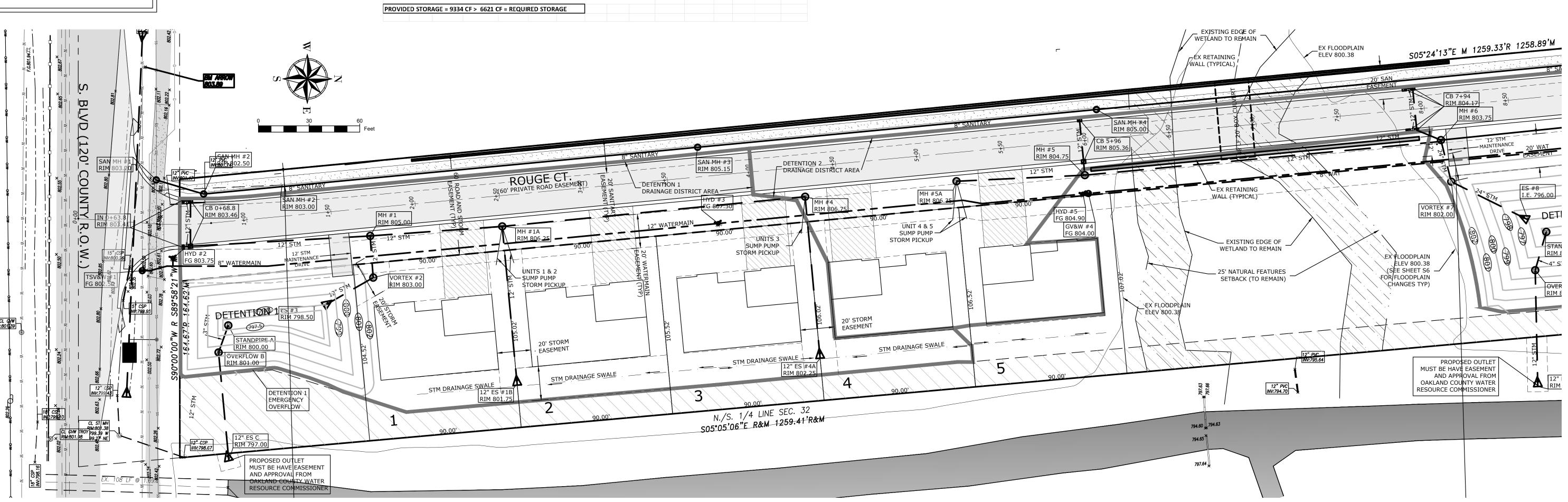
NOTE: ALL HOUSE SUMP PUMPS MUST BE PICKED UP TO GO INTO STORM SYSTEM AS SHOWN.

NOTE: ALL STORM SEWERS TO MEET THE CITY OF ROCHESTER HILLS AND OAKLAND COUNTY WATER RESOURCE COMMISSIONER ENGINEERING REQUIREMENTS.

NOTE: ALL SANITARY TO MEET THE CITY OF ROCHESTER HILLS, OAKLAND COUNTY WATER RESOURCE COMMISSIONER AND MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY. ENGINEERING REQUIREMENTS.

NOTE: ALL WATERMAIN TO MEET THE CITY OF ROCHESTER HILLS AND MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY. ENGINEERING REQUIREMENTS.

| | | | SIC | KIVI WA | TER CALCULA | <u> 110N2 - 21</u> | ORM A | KEA 1 | | | | |
|--------------------------------|---------------|------------------|-------------|-----------|-------------|--------------------|-------|-------|---|------|---------|---|
| DETERMINTATION | OF 'C' FACTO | OR | | | | | | | | | | |
| TOTAL AREA GOIN | G INTO PONE | GROSS & NE | T) | | | = | 1.12 | ACRES | | | | |
| PAVING AREA (WA | LKS, DRIVES, | ROAD) | | | | = | 0.29 | ACRES | @ | 0.95 | = 0.27 | 7 |
| BUILDING AREA | | | | | | = | 0.29 | ACRES | @ | 0.95 | = 0.27 | 7 |
| LAWN AREA | | | | | | = | 0.5 | ACRES | @ | 0.25 | = 0.13 | 3 |
| DETENTION AND V | VETLAND (LC | W WATER ARI | EA) | | | = | 0.03 | ACRES | @ | 1.00 | = 0.03 | _ |
| TOTAL AREA | | | | | | | 1.12 | ACRES | | | 0.70801 | L |
| C avg. = TOTAL C / | TOTAL ACRE | S = | | | | 0.71 | / | 1.12 | = | 0.63 | | |
| TIME OF CONCENT | RATION IN S | WALE | | | | | | | | | | |
| $v = Kx S^{\Lambda}(1/2)$ | | | | | | | | | | | | |
| drain swale (ft) = | 127 | USE K = | 1.2 | | | | | | | | | |
| (13) | | SLOPE = | 1% | | | | | | | | | |
| v = 1.2 x (.01)^(1/ | 2) = | 0.12 | | | | | | | | | | |
| Tt = L/3600v = | 0.2939815 | | 17.64 | min | | | | | | | | |
| | | | 27101 | | | | | | | | | |
| TIME OF CONCENT | | | | | | | | | | | | |
| | ft/sec avera | _ | | | | | | | | | | |
| pipe length (ft) = | 450 | | | | | | | | | | | |
| Tt = L/3600v = | 0.0416667 | hrs = | 2.50 | min | | | | | | | | |
| Tc = 17.64 | + | 2.50 | = | 20.14 | min | | | | | | | |
| | | | | | | | | | | | | |
| 100-YEAR INTENSI | | TION | | <u>.</u> | | | | | | | | |
| | .0p^0.22 | = | 5.39 | in | | | | | | | | |
| (Tc +9.1 | /) ^ U.81 | | | hr | | | | | | | | |
| CHANNEL PROTEC | TION VOLUN | IE CALCULATI | ON: | | | | | | | | | |
| V(cpvc) = 4719 x C | x A = | | | 3341 | cubic feet | | | | | | | |
| CHANNEL PROTEC | TION CONTO | OHER EVER | NDED CALC | II ATIONI | | | | | | | | |
| CHANNEL PROTEC | | OLLED - EXIE | NDED CALCU | | cubic foot | | | | | | | |
| V(ED) = 6897 x C x | 4 = | | | 4883 | cubic feet | | | | | | | |
| 100 YEAR PEAK IN | FLOW CALCU | ILATION: | | | | | | | | | | |
| Q100in = C x I100 | x A = | 3.82 | cfs | | | | | | | | | |
| 100 YEAR ALLOWA | BLE VCDICLI | ITIIRAI PIING |)FF | | | | | | | | | |
| Q(allow) = 0.2 cfs/s | | 0.22 | cfs | | | | | | | | | |
| C(anow) = 0.2 (15) | JUI 6 - | 0.22 | UIJ | | | | | | | | | |
| VARIABLE RELEAS | | | | | | | | | | | | |
| Qvrr = 1.1055 - 0.2 | .06 xLN(A)= 1 | .1055 - 0.206 | x LN(1.2) = | 1.08 | cfs/acre | | | | | | | |
| Q100p = Qvrr x | A = | 1.21 | cfs | | | | | | | | | |
| STORAGE CURVE I | ACTOR CALC | ULATION: | | | | | | | | | | |
| R = 0.206 - 0.15 | | | = | 0.38 | | | | | | | | |
| | | | | 2.00 | | | | | | | | |
| 100-YEAR RUNOFF | | | | | | | | | | | | |
| V100R = 18985 x | C x A = | 13442 | CF | | | | | | | | | |
| 100-YEAR STORAG | E VOLUME C | : ALCULATION: | | | | | | | | | | |
| V100D = V100R x | | 5079 | CF | | | | | | | | | |
| A NAECOLANDON =: | A & AD ED | | | | | | | | | | | |
| A MECHANICAL CH | | . RE OZED IN | | | | | | | | | | |
| PLACE OF A FOREB | AT RAZIN | | | | | | | | | | | |
| | | DETENTION | BASIN 1 | | | | | | | | | |
| | | AREA | VOLUME | ACCUM | | | | | | | | |
| | ELEV | (SQ.FT.) | (CU.FT.) | VOLUME | | | | | | | | |
| | 797.5 | 503 | 0 | 0 | | | | | | | | |
| | 798 | 972 | 368.75 | 368.75 | | | | | | | | |
| | 799 | 2143 | 1558 | 1926 | | | | | | | | |
| | 800 | 3627 | 2885 | 4811 | | | | | | | | |
| | 801 | 5418 | 4523 | 9334 | | | | | | | | |
| FREEBOARD | 802 | 6059 | 5739 | 15072 | | | | | | | | |
| | | | | | | | | | | | | |
| REQUIRED STORAG | | | WING VOLUI | MES | | | | | | | | |
| V(cpvc) = 3341 | | | | | | | | | | | | |
| | CF @ ELEV | 800.02 | | | | | | | | | | |
| V(ED) = 4883 V(100D) = 6621 | | | | | | | | | | | | |



Consulting Civil Engineers "Engineering A Better Michiga ell ineering

NOTE: AS AN AID TO THE CONTRACTOR VARIOUS UTILITIES AND UNDERGROUND STRUCTURES ARE SHOWN ON THESE PLANS AND PROFILES. ALL INFORMATION CONCERNING ALL UTILITIES SHOWN ON THE PLANS AND PROFILES IS TAKEN FROM FIELD TOPO AND/OR AVAILABLE RECORDS, BUT THE OWNER AND ENGINEER DOES NOT GUARANTEE THEIR LOCATION/ELEVATION, OR THAT ADDITIONAL UNDERGROUND STRUCTURES OR UTILITIES MAY NOT BE ENCOUNTERED. IF THE CONTRACTOR DOES ENCOUNTER APREVIOUSLY UNIDENTIFIED UTILITY AND/OI STRUCTURE, OR DETERMINES THAT ONE OF THE UTILITIES; STRUCTURES SHOWN ON THESE PLANS IS INCORRECTLY LOCATED, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE OWNER AND ENGINEER FOR DIRECTION ON HOW TO PROCEED. THE CONTRACTOR WILL BE RESPONSIBLE FOR ALL DAMAGE TO EXISTING UTILITIES. NOTIFY "MISS DIG" A 1-800-482-7171, 72 HOURS PRIOR TO THE STARI OF ANY CONSTRUCTION



BOULEVARD PLAN (SOUTH) WALTON BOULEVARD, CITY OF ROCHESTER THREE GENERATIONS ROCHESTER HILLS SITE SOUTH UTILIT

ISSUE DATES CITY SITE PLAN 6/15/2022 CITY SITE PLAN CITY SITE PLAN 10/21/2022 CITY SITE PLAN 12/1/2022

DRAWN MCS DESIGNED MCS APPROVED MCP P.E. JOB No. 21-450 SCALE 1"=30' **S4**

SITE PLAN © 2009 Powell Engineering & Associates, LLC

| | | | STORM V | VATER CA | LCULATIO | DNS - STC | RM ARE | A 2 | | | |
|-----------------------------|-----------------------------|----------------------|--------------|-----------------|-----------|------------|----------------|--------|--------------|---|-----|
| | TATION OF ' | | | | | | | | | | |
| | A GOING IN | • | | -) | = | | ACRES | | | | |
| PAVING AR BUILDING A | EA (WALKS, | DRIVES, ROA | AD) | | = | | ACRES | @ | 0.95 0.95 | = | 0.6 |
| LAWN ARE | | | | | = | | ACRES ACRES | @ @ | 0.95 | | 0.3 |
| | ` N AND WETL | AND (LOW \ | NATER ARE | A) | = | | ACRES | @ | 1.00 | = | 0.0 |
| TOTAL ARE | | (| | 7 | | | ACRES | | | | 1.2 |
| C avg. = TO | TAL C / TOT | AL ACRES = | | | 1.26 | / | 2.15 | = | 0.59 | | |
| | | | | | | | | | | | |
| | ONCENTRAT | ION IN SWA | LE | | | | | | | | |
| v = K x S^(3 drain swale | | 150 | USE K = | 1.2 | | | | | | | |
| urani sware | (11) – | 130 | SLOPE = | 1% | | | | | | | |
| v = 1.2 x (. | 01)^(1/2) = | = | 0.12 | | | | | | | | |
| Tt = L/3600 | | 0.347222 | hrs = | 20.83 | min | | | | | | |
| TIME OF CO | ONCENTRAT | ION IN PIPE | | | | | | | | | |
| v = | | ft/sec avera | | | | | | | | | |
| pipe length | | 483 | _ | | | | | | | | |
| Tt = L/3600 | v = | 0.044722 | hrs = | 2.68 | min | | | | | | |
| Tc = | 20.83 | + | 2.68 | = | 23.52 | min | USE | 20 | min | | |
| | | | | | | | | | | | |
| 100-YEAR I 100 = | 30.20 | ALCULATIOI p^0.22 | V | | in | | | | | | |
| .100 - | (Tc +9.17) | | = | 5.41 | hr | | | | | | |
| CLIABIBIEL | | | ALCIU ATIC | NAI. | | | | | | | |
| | PROTECTION 719 x C x A = | | ALCULATIO | JN: | 5948 | cubic feet | | | | | |
| | | | | | | cubic reet | | | | | |
| | PROTECTION | | ED - EXTEN | DED CALCU | | 1 | | | | | |
| V(ED) = 689 |)7 x C x A = | | | | 8693 | cubic feet | | | | | |
| 100 YEAR P | EAK INFLOV | V CALCULAT | ION: | | | | | | | | |
| Q100in = C | x I100 x A | = | 6.82 | cfs | | | | | | | |
| 100 YEAR A | LLOWABLE | AGRICULTU | RAL RUNOI | F | | | | | | | |
| Q(allow) = 0 | 0.2 cfs/acre | = | 0.43 | cfs | | | | | | | |
| VARIABLE I | RELEASE RA | TE CALCULA | TION: | | | | | | | | |
| |)55 - 0.206 x | | | LN(2.11) = | | 0.95 | cfs/acre | | | | |
| Q100p = C | vrr x A = | | 2.04 | cfs | | | | | | | |
| STORAGE O | URVE FACT | OR CALCULA | ATION: | | | | | | | | |
| | - 0.15 x | | | = | 0.39 | | | | | | |
| 100 VEAD E | RUNOFF CAL | CULATION: | | | | | | | | | |
| | 3985 x C x | | 23927 | CF | | | | | | | |
| | | | | C.I | | | | | | | |
| | STORAGE VC .00R x R = | LUME CALC | |) _{(C} | | | | | | | |
| A100D - A1 | .UUN X N - | | 9263 | CF | | | | | | | |
| | ICAL CHAME | | USED IN | | | | | | | | |
| PLACE OF A | FOREBAY B | ASIN | | | | | | | | | |
| | | | N BASIN 2 | | | | | | | | |
| | | AREA | VOLUME | ACCUM | | | | | | | |
| | ELEV | (SQ.FT.) | (CU.FT.) | VOLUME | | | | | | | |
| | 796 797 | 980 2015 | 0 1498 | 0 1498 | | | | | | | |
| | 797 | 3348 | 1498 2682 | 1498 4179 | | | | | | | |
| | 799 | 4978 | 4163 | 8342 | | | | | | | |
| | 800 | 6906 | 5942 | 14284 | | | | | | | |
| | 801 | 9136 | 8021 | 22305 | | | | | | | |
| | | 801-802 FF | REEBOARD | | | | | | | | |
| | | | | | | | | | | | |
| | STORAGE M | | | | /IES | | | | | | |
| V(cpvc) = | 5948 | CF @ ELEV | | | | | | | | | |
| V(ED) = | 8693 | CF @ ELEV | | | | | | | | | |
| V(100D) = | 12008 | CF @ ELEV | 799.72 | | | | | | | | |
| | | | | L | UIRED STO | L | | | | | |

HYDRANT FLOW TEST RESULT

WATER CADD FLOW DATA ANALYSIS ON SOUTH BLVD EAST OF WALNUT BROOK DRIVE PRIOR TO THE PRV.

>110 PSI STATIC PRESSURE 4400 GPM MAX DAY DEMAND MEETS REQUIRED FIRE FLOW

FIRE DEPARTMENT NOTES:

- A KNOX KEY SYSTEM SHALL BE INSTALLED IN A LOCATION
 APPROVED BY THE FIRE CODE OFFICIAL. ORDERING
- INFORMATION IS AVAILABLE THROUGH KNOX COMPANY AT 222.KNOXBOX.COM (IFC 2006 SEC. 1028.2).

 2. FIRE LANES SHALL BE DESIGNATED BY THE FIRE CODE OFFICIAL, AND SHALL BE CONSPICUOUSLY POSTED ON BOTH SIDES OF THE FIRE LANE, WITH THE FIRE LANE SIGNS SPACED NOT MORE THAN 100 FEET APART. FIRE LANE SIGNS SHALL READ "NO STOPPING, STANDING, PARKING, FIRE LANE" AND SHALL CONFORM TO THE MICHIGAN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (FIRE PREVENTION ORDINANCE CHAPTER 58,
- SEC 503).
 3. CONSTRUCTION SITES SHALL BE SAFEGUARDED IN
- ACCORDANCE WITH IFC 2006 CHAPTER 14.

 4. OPEN BURNING IS NOT PERMITTED, INCLUDING THE BURNING OF TRASH, DEBRIS, OR LAND CLEARING. OPEN BURNING FOR WARMING AND SAND AND / OR WATER FOR THE PREPARATION OF MORTAR SHALL BE WITHIN THE CITY OF ROCHESTER HILLS BURN PERMIT GUIDELINES FIRE PREVENTION ORDINANCE CHAPTER 58, SECTION 307.6.2 & 307.6.2.3) MORTAR PERMIT CAN BE APPLIED FOR ONLINE AT WWW.ROCHESTERHILLS.ORG/FIRE IN THE
- "FOR YOUR BUSINESS" SECTION.
 5. PROVIDE A "NO PARKING FIRE DEPARTMENT
- CONNECTION" SIGN OVER THE FIRE DEPARTMENT CONNECTION.

 6. FDC'S SHALL NOT BE OBSTRUCTED BY LANDSCAPING,
- PARKING, OR ANY OTHER PERMANENT OR TEMPORARY MATERIALS OR DEVICES.
- 7. IF THE FIRE DEPARTMENT CONNECTION IS NOT LOCATED ON THE STREET FRONT OF THE BUILDING, A WHITE / CLEAR STROBE LIGHT SHALL BE TIED INTO THE FIRE ALARM SYSTEM AND INSTALLED OVER THE FDC.

NOTE: ALL STORM SEWERS TO MEET THE CITY OF ROCHESTER HILLS AND OAKLAND COUNTY WATER RESOURCE COMMISSIONER ENGINEERING REQUIREMENTS.

NOTE: ALL SANITARY TO MEET THE CITY OF ROCHESTER HILLS, OAKLAND COUNTY WATER RESOURCE COMMISSIONER AND MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY. ENGINEERING REQUIREMENTS.

NOTE: ALL WATERMAIN TO MEET THE CITY OF ROCHESTER HILLS AND MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY ENGINEERING REQUIREMENTS.

SANITARY BASIS OF DESIGN

INITIAL & ULTIMATE DESIGN

ESTIMATED INITIAL AND ULTIMATE LOAD = 9 RESIDENTAIL UNITS
P = POPULATION = 2.44 PEOPLE/REU x 9 REU = 22 PP

INITIAL AVERAGE FLOW = 22 PPx 100 GPDPC = 0.0022 MGD = 0.00409 CFS

PEAKING FACTOR 4.0

INITIAL AND ULTIMATE PEAK DESIGN FLOW = $4.0 \times 0.00409 = 0.0164$ CFS

CAPACITY OF 8" SANITARY SEWER @ 0.40% = 0.75 CFS

SEWER CAPACITY = 0.75 CFS > 0.0164 CFS DESIGN FLOW

WATERMAIN BASIS OF DESIGN

INITIAL & ULTIMATE DESIGN

ESTIMATED INITIAL AND ULTIMATE LOAD = 9 RESIDENTIAL UNITS P=POPULATION = 2.44 PEOPLE/REU x 9 REU = 22 PP

INITIAL AVERAGE FLOW = 22 PP x 100 GPDPC = 0.0022 MGD = 0.00409 CFS

PEAKING FACTOR = 2.5

INITIAL AND ULT PEAK DESIGN FLOW = 2.5 x 0.00409 MGD = 0.01125 MGD = 0.0102 CFS

E STITUTE CONTESTION OF STITUTE O

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NOTE: AS AN AID TO THE CONTRACTOR VARIOUS UTILITIES AND UNDERGROUND STRUCTURES ARE SHOWN ON THESE PLANS AND PROFILES. ALL IN FORMATION CONCERNING ALL UTILITIES SHOWN ON THE PLANS AND PROFILES IS TAKEN FROM FIELD TOPO ANDIOR AVAILABLE RECORDS, BUT THE OWNER AND ENGINEER DOES NOT GUARANTEE THEIR LOCATION. PLEVATION, OR THAT ADDITIONAL UNDERGROUND STRUCTURES OR UTILITIES MAY NOT BE ENCOUNTERED. IF THE CONTRACTOR DOES NOT GUARANTEE THEIR LOCATION. PLEVATION, OR THAT APREVIOUSLY UNIDENTIFIED UTILITY AND! OR STRUCTURE, OR DETERMINES THAT ONE OF THE UTILITIES, STRUCTURES SHOWN ON THESE PLANS IS INCORRECTLY LOCATED, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE OWNER AND ENGINEER FOR DIRECTION ON HOW TO PROCEED THE CONTRACTOR WILL BE RESPONSIBLE FOR ALL DAMAGE TO EXISTING UTILITIES. NOTIFY "MISS DIG" AT 1.800-482-7171, 72 HOURS PRIOR TO THE START OF ANY CONSTRUCT OF START



1-800-482-7171

HILLS

HANS

SOUTH BOULEVARD
UTILITY PLAN (NORTH)
WALTON BOULEVARD, CITY OF ROCHESTER H
THREE GENERATIONS ROCHESTER HILLS SITE PL

ISSUE DATES

CITY SITE PLAN
6/15/2022

CITY SITE PLAN
6/15/2022
CITY SITE PLAN
8/22/2022
CITY SITE PLAN
10/21/2022
CITY SITE PLAN
12/1/2022

DRAWN MCS

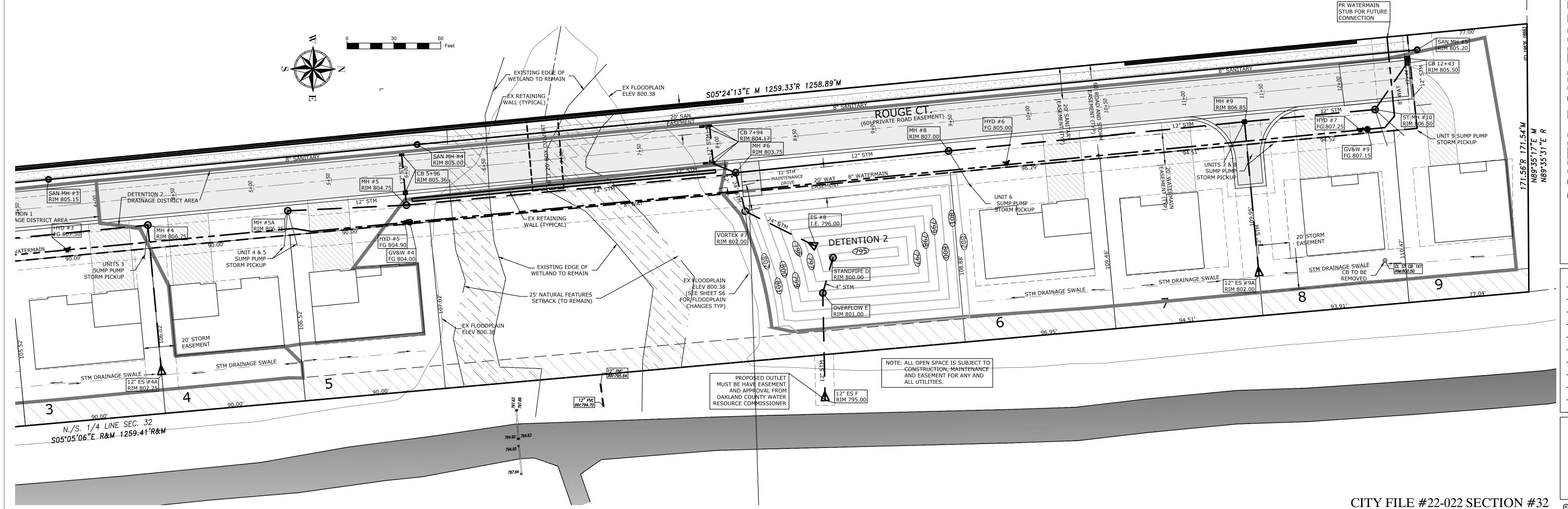
DESIGNED MCS

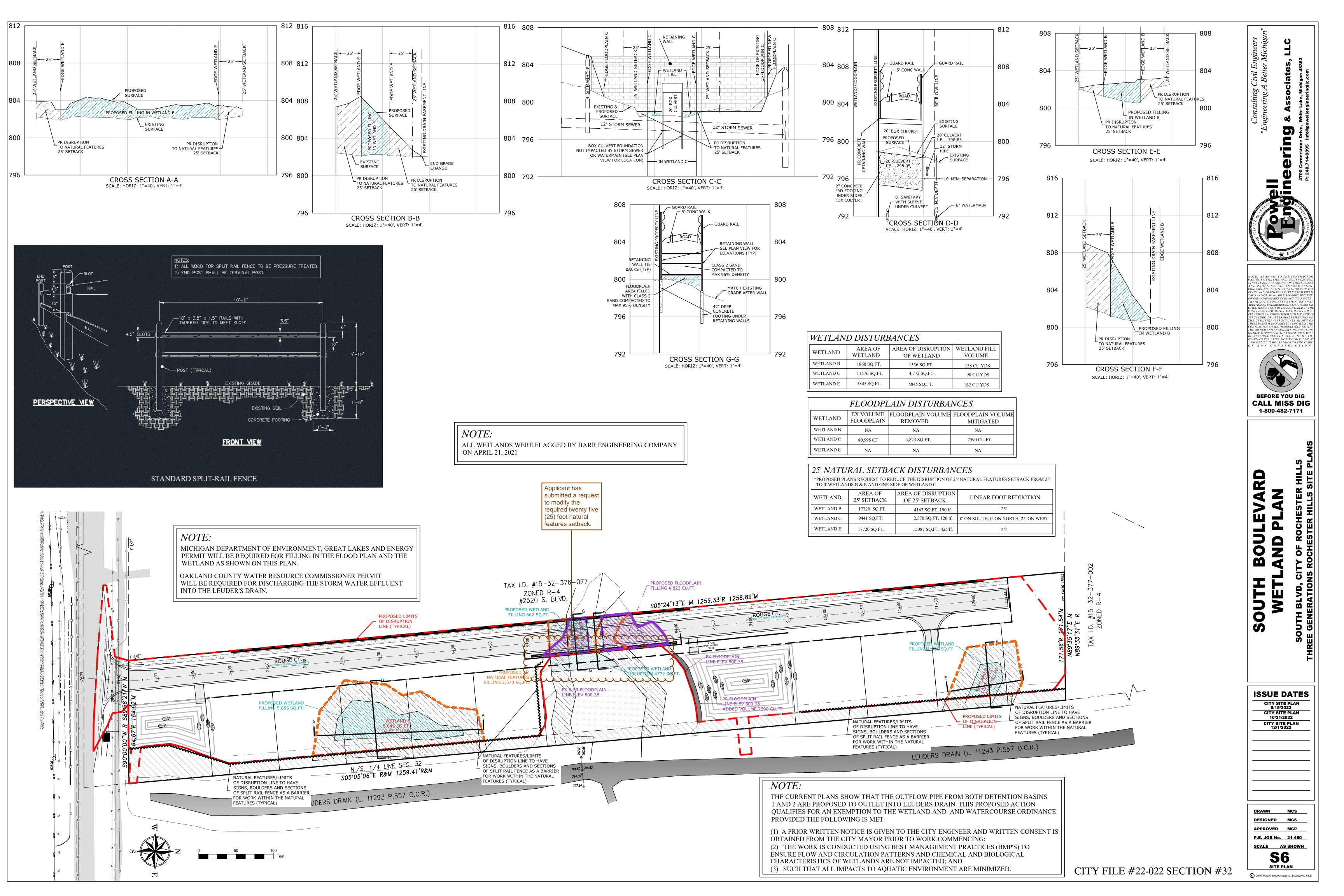
APPROVED MCP

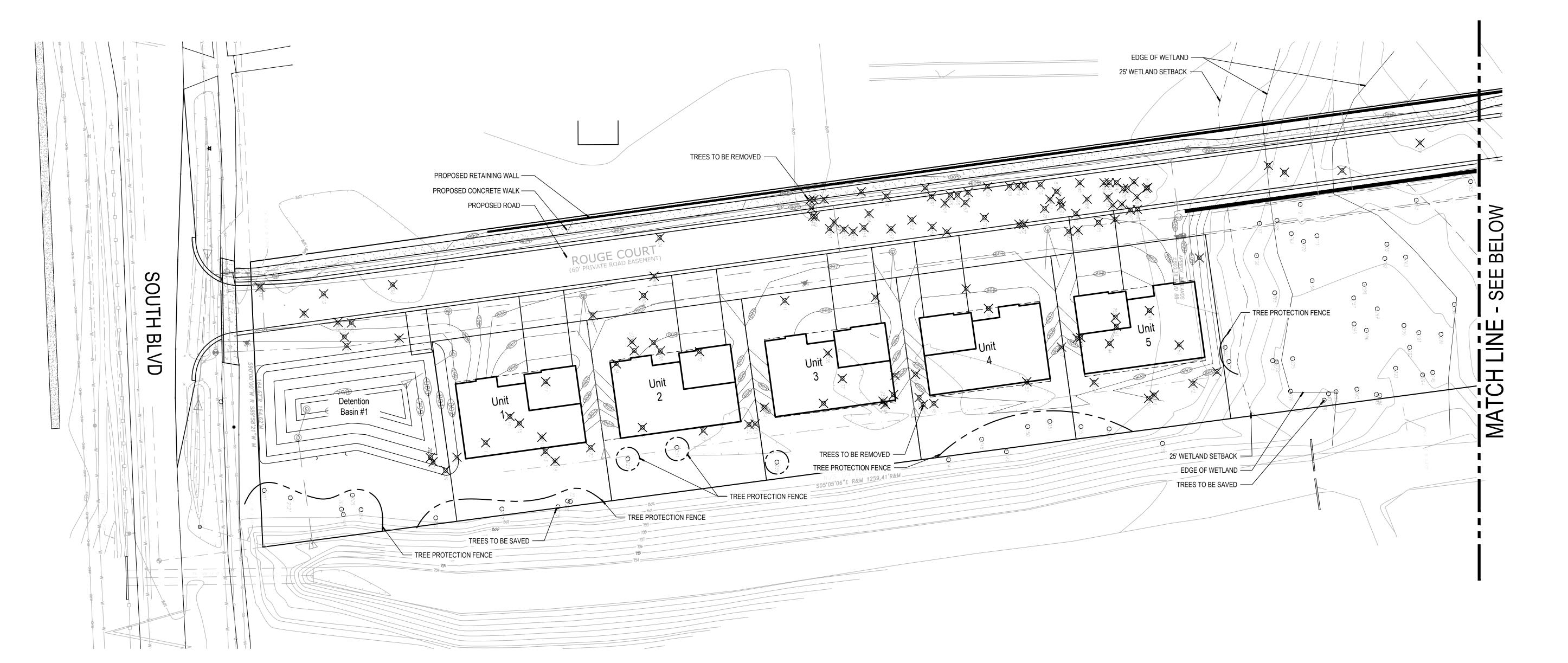
P.E. JOB No. 21-450

SCALE 1"=30'

SECULIARIES SECU







TREES TO BE SAVED —

TREES TO BE REMOVED -

PROPOSED FIELDSTONE

RETAINING WALL, TYPICAL -

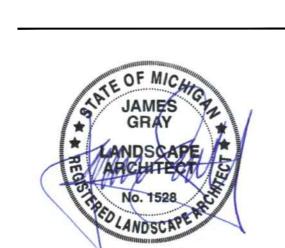


| | Issued For |
|------------|----------------------------|
| 06.09.2022 | Preliminary Review |
| 06.22.2022 | Revision per Owne |
| 08.25.2022 | Revision per Owne |
| 10.27.2022 | Revision per City Comments |
| 12.14.2022 | Revision per City Comments |
| | |

South Oaks W. South Boulevard Rochester Hills, Michigan

Project Sponsor: South Oaks, LLC 1400 E. Michigan Ave, Suite G Saline, MI 48176

Tree Removal & Preservation Plan



| Drawn: | JG |
|------------|-------------|
| Checked: | JG |
| Date: | 05.2022 |
| Scale: | 1" = 30'-0" |

Project Number: 22.012 Sheet Number:

SCALE: 1" = 30'-0"

Tree Protection Note

No person may conduct any construction or development activity within the drip line of any regulated tree not approved for removal, including but not limited to land clearing, grubbing, trenching, grading, or filling, nor shall any person place solvents, building material, construction equipment, soil deposits, or other harmful materials within the drip line unless authorized by the parks and natural resources department.

During construction or development activity, persons shall not attach any device or wire to any regulated tree not approved for removal.

Replacement and relocated trees must be staked, fertilized, and mulched and shall be guaranteed by the tree removal permit holder to exhibit a normal growth cycle for at least one year following planting

Trees Paid into City Tree Fund *The trees identified as being in poor condition are in such a state of decline with some showing signs of disease, it is our belief that these trees will be dead within the next two (2) years

Regulated Trees Surveyed

Remaining Regulated Trees

Trees Required to be Saved

Regulated Trees Saved

Percentage of Trees Saved

Regulated Trees Removed

Regulated Trees Required

Specimen Trees Removed

Specimen Trees Saved

Specimen Trees Credits

Specimen Trees Required

Total Replacements Required

Total Replacements Provided

Tree Exemptions

SEE SHEET L-2 FOR TREE LIST

Tree Mitigation Calculations

256 (326-70)

103 (256 x 40%)

40.63% (104/256)

83 (2,706")

754 (120+634)

70 (building envelop (50), poor condition (20))

120 (1 to 1 replacement ratio less 20 in poor condition*)

634 ((2,706 * 50% = 1,353" / 2 = 677 2" trees - 43 credits)

43 (1 - 2" tree credit per saved tree)

NOTES:

1. 4' HEIGHT ORANGE SNOW FENCE TO BE INSTALLED MIN. 1'
OUTSIDE DRIPLINE OF ALL TREES TO BE SAVED PRIOR TO
ANY LAND CLEARING OR CONSTRUCTION. 2. NO CUTTING, FILLING OR TRESPASSING SHALL OCCUR INSIDE FENCED AREAS WITHOUT PRIOR APPROVAL FROM LANDSCAPE ARCHITECT.

 DRIPLINE OF TREES TO BE SAVED (2) 4' HT. ORANGE SNOW FENCE TO BE INSTALLED MIN.1' OUTSIDE DRIPLINE 3 TRENCH OR CURB

4 CONSTRUCTION AREA (5) STEEL POST EVERY 10' MINIMUM, INSTALL POSTS MINIMUM 2' INTO GROUND

TREE PROTECTION
NOT TO SCALE

TREE PROTECTION FENCE

TREES TO BE SAVED =

TREES TO BE REMOVED -

PROPOSED RETAINING WALL -

PROPOSED CONCRETE WALK —

Detention Basin #2

TREES TO BE REMOVED —

TREE PROTECTION FENCE

25' WETLAND SETBACK

811

Know what's below Call before you dig

MISS DIG System, Inc. www.missdig.net

- PROPOSED RETAINING

PROPOSED ROAD -

TREE PROTECTION FENCE -

TREE PROTECTION FENCE

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| | Issued For: |
|------------|----------------------------|
| 06.09.2022 | Preliminary Review |
| 06.22.2022 | Revision per Owner |
| 08.25.2022 | Revision per Owner |
| 10.27.2022 | Revision per City Comments |
| 12.14.2022 | Revision per City Comments |
| | |

South Oaks
W. South Boulevard
Rochester Hills, Michigan

South Oaks, LLC 1400 E. Michigan Ave, Suite G Saline, MI 48176

Sheet Name:

Tree List

NOT FOR CONSTRUCTION

Seal:



Drawn: JG
Checked: JG
Date: 05.2022
Scale:

Project Number: 22.012

L-2

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| BH (in.) | Common Name | Botanical Name | | Specimen | TCHOTC | Lxempt | Tag No. | DBH (in.) | Common Name | Botanical Name | | andmark R | Remove Exc | | No. DBH (in | • | Common Name | Botanical Name | | andmark Re | move | Exempt | | BH (in.) | Common Name | Botanical Name | | andmark Remov | ve E |
|------------------|------------------------|--------------------------------------|--------------|----------|--------|--------|------------|----------------------|--------------------------------------|------------------------------------|--------------|-----------|-------------|---------------------------------------|-----------------------|-----------|-------------------------------|--------------------------------------|--------------|------------|--------|--------|------------|--------------------|--|--|--------------|---------------|--------|
| 12 App | | Malus ssp. | Good | | | | 300 301 | 28 1 <i>1</i> | White Oak | Quercus alba | Good | Х | | | 194 24,26 195 16 | | sswood | Tilia americana | Good | X | X | Χ | 834 844 | 14 22 | Norway Maple | Acer platanoides | Good | V | X |
| | amental Pear | Pyrus calleryana Malus ssp. | Good Good | | | | 301 | 1 4 18 | Boxelder Elm | Acer negundo Ulmus americana | Poor Poor | | | | 195 16 196 34,30,2 | ` | agbark Hickory sswood | Carya ovata Tilia americana | Good Good | V | X | | 844 845 | 22 16 | Northern Hackberry Northern Hackberry | Celtis occidentalis Celtis occidentalis | Good Good | Х | X |
| 8 App 15 Gree | en Spruce | Picea pungens | Good | | | | 303 | 12 | Elm | Ulmus americana | Poor | | X | | 197 8,6 | | d Maple | Acer rubrum | Good | ^ | X | | 846 | 14 | Northern Hackberry | Celtis occidentalis | Good | | X |
| | en Spruce | Picea pungens | Poor | | | | 306 | 50 | White Oak | Quercus alba | Good | Х | Α | | 198 7 | | d Maple | Acer rubrum | Good | | X | | 847 | 20 | Northern Hackberry | Celtis occidentalis | Good | Χ | X |
| 14,13 Gree | en Spruce | Picea pungens | Good | | | | 308 | 9 | White Oak | Quercus alba | Good | | | 4 | 199 18 | Bass | sswood | Tilia americana | Good | Χ | Χ | | 848 | 10 | Northern Hackberry | Celtis occidentalis | Good | | Χ |
| DEAD | | | | | Χ | X | 313 | 22 | Silver Maple | Acer saccharinum | Good | X | | | 500 12 | Sha | agbark Hickory | Carya ovata | Good | | Χ | | 849 | 16 | Northern Hackberry | Celtis occidentalis | Good | | Χ |
| | ck Walnut | Juglans nigra | Good | X | Χ | | 314 | 54 | White Oak | Quercus alba | Good | X | | | 501 42 | Red | d Oak | Quercus rubra | Good | Χ | Χ | | 850 | 17 | Northern Hackberry | Celtis occidentalis | Good | | Χ |
| | den Willow | Salix alba | Fair | | Х | | 315 316 | 18 | White Oak | Quercus alba | Good | X | X | | 502 22,22,18, | _ | sswood | Tilia americana | Good | X | X | | 851 1 | | Cottonwood | Populus deltoides | Good | | X |
| | te Oak | Quercus alba | Good | | X | V | 315 | 19 17 | White Oak White Oak | Quercus alba Quercus alba | Good Good | Х | X | | 503 28 504 30 | | sswood d Oak | Tilia americana | Good | X | X | | 852 853 | • | Cottonwood | Populus deltoides Populus deltoides | Good Good | | X |
| 10 Elm | tonwood | Ulmus americana Populus deltoides | Good Good | | Х | Х | 317 | 11 | Black Cherry | Prunus serotina | Poor | | х Х | | 505 10,12 | | a Oak sswood | Quercus rubra Tilia americana | Good Poor | Х | X | V | | 10,8 8,24,12,30 | Cottonwood | Populus deltoides Populus deltoides | Good | V | X |
| 24 Elm | | Ulmus americana | Good | × | X | | 319 | 8 | Red Oak | Quercus rubra | Good | | X | | 506 29,11 | | d Oak | Quercus rubra | Good | x | X | ^ | 855 | 14 | Northern Hackberry | Celtis occidentalis | Good | ^ | X |
| | ck Walnut | Juglans nigra | Good | ^ | X | X | 321 | 20,16,28,28,2 | 9 Silver Maple | Acer saccharinum | Good | X | | | 507 13 | | sswood | Tilia americana | Good | Λ | X | | 856 | 6,8 | Northern Hackberry | Celtis occidentalis | Good | | X |
| 7 Elm | | Ulmus americana | Good | | Х | X | 322 | 7 | Apple | Malus ssp. | Poor | | X | X 5 | 508 18 | Bass | sswood | Tilia americana | Good | Χ | X | | 857 | 76 | Basswood | Tilia americana | Good | Χ | Χ |
| 8 Shag | gbark Hickory | Carya ovata | Good | | Χ | Χ | 323 | 9 | Red Oak | Quercus rubra | Good | | Χ | Χ 5 | 509 11 | Nor | rway Maple | Acer platanoides | Good | | Χ | | 858 | 38 | Silver Maple | Acer saccharinum | Good | Χ | Χ |
| 9 Elm | | Ulmus americana | Good | | Χ | X | 324 | 8 | Black Cherry | Prunus serotina | Good | | | | 34,26,2 | 28 Bass | sswood | Tilia americana | Good | Χ | Χ | | 859 | 10 | Northern Hackberry | Celtis occidentalis | Good | | Χ |
| | elder | Acer negundo | Poor | | Χ | X | 325 | 8 20 | Red Oak | Quercus rubra | Good | V | V | | 570 14,7 | | sswood | Tilia americana | Poor | | | | 860 | 21 | Northern Hackberry | Celtis occidentalis | Good | Χ | Χ |
| | elder | Acer negundo | Good | | | | 326 327 | 20 15 | Red Oak Red Oak | Quercus rubra Quercus rubra | Good Fair | Χ | X | | 571 19 | | ver Maple | Acer saccharinum | Good | X | X | | 861 | 18 | Northern Hackberry | Celtis occidentalis | Good | X | X |
| | ck Walnut ck Walnut | Juglans nigra | Good | | | | 328 | 7 | Black Cherry | Prunus serotina | Poor | | × | | 572 13 573 30,24 | | ver Maple | Acer saccharinum | Good | V | X | | 862 863 | 14 1 <i>1</i> | Northern Hackberry Red Maple | Celtis occidentalis Acer rubrum | Fair | | X |
| | ck Walnut | Juglans nigra Juglans nigra | Good Good | v | V | | 329 | 14,11 | Red Oak | Quercus rubra | Poor | | Α | | 574 21 | | sswood | Ulmus americana Tilia americana | Good Good | X V | X | | 864 | 6 | Northern Hackberry | Celtis occidentalis | Good Good | | X Y |
| | ck Willow | Salix nigra | Poor | X | ^ | | 330 | 8 | Red Oak | Quercus rubra | Good | | | _ | 537 18 | _ | agbark Hickory | Carya ovata | Good | × | X | | 865 | 6 | Northern Hackberry | Celtis occidentalis | Good | | X |
| 8 Elm | | Ulmus americana | Good | , | Х | Х | 331 | 7 | Elm | Ulmus americana | Good | | | 6 | 538 17 | | amp White Oak | Quercus bicolor | Good | ^ | X | | 866 | 23 | Northern Hackberry | Celtis occidentalis | Good | Χ | X |
| 7,7 Elm | | Ulmus americana | Good | | Χ | | 332 | 8 | Red Oak | Quercus rubra | Good | | | 6 | 539 8,17 | Sha | agbark Hickory | Carya ovata | Good | | Χ | | 867 | 12 | Northern Hackberry | Celtis occidentalis | Good | | Χ |
| 8 Elm | | Ulmus americana | Good | | Χ | | 334 | 31 | Shagbark Hickory | Carya ovata | Good | X | X | ϵ | 540 16 | Nor | rway Maple | Acer platanoides | Good | | Χ | | 868 | 10 | Boxelder | Acer negundo | Poor | | Χ |
| 8 Elm | | Ulmus americana | Good | | Χ | | 335 336 | 10 | Shagbark Hickory Shagbark Hickory | Carya ovata | Good | | X | | 541 12 | | agbark Hickory | Carya ovata | Good | | Χ | | 869 | 24 | Northern Hackberry | Celtis occidentalis | Good | Χ | Χ |
| 9 Elm | | Ulmus americana | Good | | Х | | 337 | 10 17 16 | White Oak | Carya ovata Quercus alba | Good Good | | X | | 542 18 | | d Maple | Acer rubrum | Good | Χ | Χ | | 870 | 9 | Northern Hackberry | Celtis occidentalis | Good | | X |
| 10,10 Scot | tch Pine | Pinus sylvestris | Fair | | X | Х | 338 | 13 | Basswood | Tilia americana | Good | | X | V | 543 28,28,20, | <i>'</i> | sswood | Tilia americana | Good | X | X | | 871 | 10 | Northern Hackberry | Celtis occidentalis | Poor | V | X |
| | ck Walnut | Ulmus americana Juglans nigra | Good Good | | Х | | 339 | 29 | Basswood | Tilia americana | Good | Х | X | | 544 51 545 7 | | d Oak d Maple | Quercus rubra | Good | Х | X | V | 872 873 | 22 15 | Northern Hackberry Northern Hackberry | Celtis occidentalis Celtis occidentalis | Fair Good | Х | X |
| | tonwood | Populus deltoides | Good | X | X | | 345 | 9 | Elm | Ulmus americana | Good | | | | 546 47 | | d Oak | Acer rubrum Quercus rubra | Poor Good | V | X V | ^ | 874 | 8 | Northern Hackberry | Celtis occidentalis | Good | | Х У |
| 16 Elm | | Ulmus americana | Good | ^ | X | | 346 | 14 | Red Oak | Quercus rubra | Good | | X | V/ | 731 14 | | agbark Hickory | Carya ovata | Good | ^ | X | | 875 | 17 | Northern Hackberry | Celtis occidentalis | Good | | X |
| 9 Elm | | Ulmus americana | Good | | Χ | | 347 | 9 | Red Oak | Quercus rubra | Good | | Χ | | 732 19 | | agbark Hickory | Carya ovata | Good | Х | X | | 876 | 7 | Northern Hackberry | Celtis occidentalis | Good | | Χ |
| 6 Cott | tonwood | Populus deltoides | Good | | | | 348 | 11 | Norway Maple | Acer platanoides | Good | | X | X -7 | 733 14,18,20 | 20 Bass | sswood | Tilia americana | Good | X | Χ | | 877 | 10 | Northern Hackberry | Celtis occidentalis | Good | | Χ |
| 12 Elm | | Ulmus americana | Fair | | Χ | Χ | 349 | 59 10 | Silver Maple | Acer saccharinum | Good | Х | X | | 734 19 | Whi | nite Oak | Quercus alba | Good | X | Χ | | 878 | 20 | Northern Hackberry | Celtis occidentalis | Good | Χ | Χ |
| 11 Elm | | Ulmus americana | Poor | | Х | X | 350 351 | 10 7 | Elm Elm | Ulmus americana Ulmus americana | Good Good | | | | 735 14 | | rway Maple | Acer platanoides | Good | | Χ | | 879 | | Northern Hackberry | Celtis occidentalis | Good | Χ | Χ |
| | Maple | Acer rubrum | Good | Х | X | X | 359 | , 12 | Cottonwood | Populus deltoides | Good | | | | 736 75 | | d Oak | Quercus rubra | Good | Х | X | | 880 | 6 | Red Maple | Acer rubrum | Good | | X |
| | tonwood Maple | Populus deltoides Acer rubrum | Good Good | | X | X | 360 | 12 | Cottonwood | Populus deltoides | Good | | | | 737 6 | | ack Walnut | Juglans nigra | Good | V | X | | 881 882 | 30 16 | Northern Hackberry Northern Hackberry | Celtis occidentalis | Good Good | V | X |
| | tonwood | Populus deltoides | Good | Y | X X | × | 361 | 18 | Cottonwood | Populus deltoides | Good | | | | 738 29 745 16 | | orway Maple agbark Hickory | Acer platanoides Carya ovata | Good Good | Х | X | | 883 | 20 7 | Elm | Celtis occidentalis Ulmus americana | Good | Χ | X |
| 9 Elm | | Ulmus americana | Good | ^ | X | , | 362 | 18 | Cottonwood | Populus deltoides | Good | | X | | 746 8 | | orway Maple | Acer platanoides | Good | | Х | | 884 | 32 | Red Maple | Acer rubrum | Good | X | X |
| 6 Elm | | Ulmus americana | Poor | | X | X | 363 | 10 | Cottonwood | Populus deltoides | Good | | | | 747 30 | | ver Maple | Acer saccharinum | Good | X | X | | 885 | 12 | Northern Hackberry | Celtis occidentalis | Good | Λ | X |
| 9 Red | Maple | Acer rubrum | Good | | Χ | | 364 | 32 | White Oak | Quercus alba | Good | X | X | | 748 82 | | ver Maple | Acer saccharinum | Good | X | X | | 886 | 9 | Northern Hackberry | Celtis occidentalis | Good | | X |
| 29 Cott | tonwood | Populus deltoides | Good | X | Χ | | 365 366 | 26 26 | White Oak White Oak | Quercus alba | Good | X | X | X 7 | 749 32 | Bass | sswood | Tilia americana | Good | Χ | Χ | | 888 | 6 | Northern Hackberry | Celtis occidentalis | Good | | Χ |
| | tonwood | Populus deltoides | Good | Х | Χ | | 367 | 36 28 | White Oak | Quercus alba Quercus alba | Good Poor | X | X | V | 752 32,22,20, | ,24 Silve | ver Maple | Acer saccharinum | Fair | Χ | | | 889 | 12 | Northern Hackberry | Celtis occidentalis | Good | | Χ |
| | ck Walnut | Juglans nigra | Fair | | | | 368 | 86 | White Oak | Quercus alba | Fair | X | ^ | | 753 84 | | ver Maple | Acer saccharinum | Good | X | | | 891 | | Northern Hackberry | Celtis occidentalis | Good | | X |
| 8 Elm | ck Walnut | Ulmus americana | Good | | | | 369 | 59 | Red Oak | Quercus rubra | Good | X | X | V | 754 32 | | d Oak | Quercus rubra | Good | Х | X | | 892 | 26 | Northern Hackberry | Celtis occidentalis | Good | | X |
| | elder | Juglans nigra Acer negundo | Good Fair | | | | 370 | 13 | Norway Maple | Acer platanoides | Good | | X | V | 759 14 760 72 | | orthern Hackberry | Celtis occidentalis | Good | V | Х | | 893 894 | 12 22 | Northern Hackberry Northern Hackberry | Celtis occidentalis Celtis occidentalis | Good Fair | V | X |
| | elder | Acer negundo | Good | | | | 371 | 22 | White Oak | Quercus alba | Good | X | Χ | | 760 72 761 52 | | ver Maple ver Maple | Acer saccharinum Acer saccharinum | Fair Good | X | | | 895 | 18 | Northern Hackberry | Celtis occidentalis | Good | X Y | X Y |
| 19 Elm | | Ulmus americana | Good | | Х | Х | 372 | 26 | Red Oak | Quercus rubra | Good | Χ | Χ | V | 762 36 | | ver Maple ver Maple | Acer saccharinum | Good | × | | | 896 | 7 | Northern Hackberry | Celtis occidentalis | Good | ^ | X |
| 10 Elm | | Ulmus americana | Good | | | | 373 | 9 | Black Cherry | Prunus serotina | Fair | v | X | Y | 763 42 | | ver Maple ver Maple | Acer saccharinum | Good | X | | | 897 | 15 | Northern Hackberry | Celtis occidentalis | Good | | X |
| 12 Boxe | elder | Acer negundo | Poor | | Χ | X | 374 375 | 62 10 | Red Oak Elm | Quercus rubra Ulmus americana | Good | Х | X | X | 764 18 | | d Maple | Acer rubrum | Good | X | | | 898 | 26 | Northern Hackberry | Celtis occidentalis | Fair | Χ | Χ |
| 11 Elm | | Ulmus americana | Fair | | | | 375 376 | 8 | Elm | Ulmus americana Ulmus americana | Good Good | | ^ X | X | 765 94 | Silve | ver Maple | Acer saccharinum | Good | X | | | 899 | 7 | Northern Hackberry | Celtis occidentalis | Good | | Χ |
| 7 Elm | ok Malarit | Ulmus americana | Poor | V | v | | 377 | 9 | Elm | Ulmus americana | Fair | | X | X | 766 11 | | rway Maple | Acer platanoides | Good | | | | 900 | 13 | Northern Hackberry | Celtis occidentalis | Good | | X |
| | ck Walnut ck Walnut | Juglans nigra Juglans nigra | Good | Х | X | V | 378 | 50 | Red Oak | Quercus rubra | Good | Χ | | • | 767 25 | | ver Maple | Acer saccharinum | Good | X | | | 901 | 11 | Northern Hackberry | Celtis occidentalis | Good | | X |
| _ | ck Walnut | Juglans nigra Juglans nigra | Poor Good | | ^ У | ^ | 379 | 18 | White Oak | Quercus alba | Good | Χ | | | 768 42 | | ver Maple | Acer saccharinum | Good | X | | | 902 903 | 9 Q | Northern Hackberry Elm | Celtis occidentalis Ulmus americana | Fair Good | | X |
| | elder | Acer negundo | Fair | Х | X | Х | 380 | 36 | Red Oak | Quercus rubra | Good | Χ | | | 769 29 770 29,34 | | ver Maple ver Maple | Acer saccharinum Acer saccharinum | Good Good | X | | | 903 904 | 6 | Elm | Ulmus americana | Good | | ^ X |
| | er Maple | Acer saccharinum | Good | | X | | 381 | 17 | Red Oak | Quercus rubra | Good | | | | 770 29,34 771 68 | | ver Maple ver Maple | Acer saccharinum | Good | ^ X | | | 1794 | 10 | Silver Maple | Acer saccharinum | Good | | X |
| | elder elder | Acer negundo | Poor | | | | 382 | DEAD | Γlm | I Uma | C | | | | 772 10 | | ver Maple ver Maple | Acer saccharinum | Good | ^ | | | 2115 | | Red Maple | Acer rubrum | Poor | | , • |
| | ck Walnut | Juglans nigra | Good | Χ | | | 383 384 | 13 10 | Elm Norway Manle | Ulmus americana | Good Good | | | | 773 16 | Elm | · | Ulmus americana | Good | | Χ | | 2121 | | Blue Spruce | Picea pungens | Good | | |
| | er Maple | Acer saccharinum | Poor | | | | 384 385 | 1U 15 | Norway Maple White Oak | Acer platanoides Quercus alba | Good Fair | | | | 774 96 | | ver Maple | Acer saccharinum | Good | X | X | | | | | . - | | | |
| | er Maple | Acer saccharinum | Poor | | | | 399 | 24 | Silver Maple | Acer saccharinum | Good | Y | | 7 | 790 65 | | d Oak | Quercus rubra | Good | X | Χ | | | | | | | | |
| 20 Elm | o v Most - | Ulmus americana | Good | | | | 433 | 14 | Norway Maple | Acer platanoides | Good | ^ | | | 791 12 | | xelder | Acer negundo | Good | | Χ | Χ | | | | | | | |
| | er Maple | Acer saccharinum | Good | | | | 434 | 19 | Red Oak | Quercus rubra | Fair | Χ | | | 792 8 | | xelder | Acer negundo | Good | | Χ | Χ | | | | | | | |
| 11 Elm | er Maple | Ulmus americana Acer saccharinum | Poor Good | v | | | 435 | 33 | White Oak | Quercus alba | Good | Χ | Χ | Λ | 793 9 | | xelder | Acer negundo | Fair | | Χ | X | | | | | | | |
| | C. IVIGIJIE | ALLI SULLIIUIIIIUIII | 3000 | ٨ | | | 436 | 34 | White Oak | Quercus alba | Good | Y | V | · · · · · · · · · · · · · · · · · · · | 794 12 | Blac | ack Walnut | Juglans nigra | Fair | | Χ | Χ | | | | | | | |
| | er Maple | Acer saccharinum | Good | V | | | 430 | 5 - | White Oak | Quereus ansa | 0000 | ^ | ^ | ^ | 795 10 | | orthern Hackberry | Celtis occidentalis | Good | | | | | | | | | | |

Ulmus americana

Ulmus americana

Malus floribunda

Tilia americana

Malus ssp.

Malus ssp.

Malus ssp.

Malus ssp.

Juglans nigra

Juglans nigra

Black Walnut

Black Walnut

Quercus alba Ulmus americana Quercus alba Acer saccharinum

Carya ovata

Carya ovata

Quercus rubra

Quercus rubra

Tilia americana

Tilia americana

Tilia americana

Ulmus americana

Tilia americana

Acer rubrum

Acer rubrum

Ulmus americana

Shagbark Hickory

Shagbark Hickory

Shagbark Hickory

Red Oak

Red Oak

Red Maple

Red Maple

Acer saccharinum

Acer saccharinum

Acer saccharinum

Acer saccharinum

Acer saccharinum

Populus deltoides

Acer saccharinum

Acer saccharinum

Acer saccharinum

Acer saccharinum

Fair

Good Good

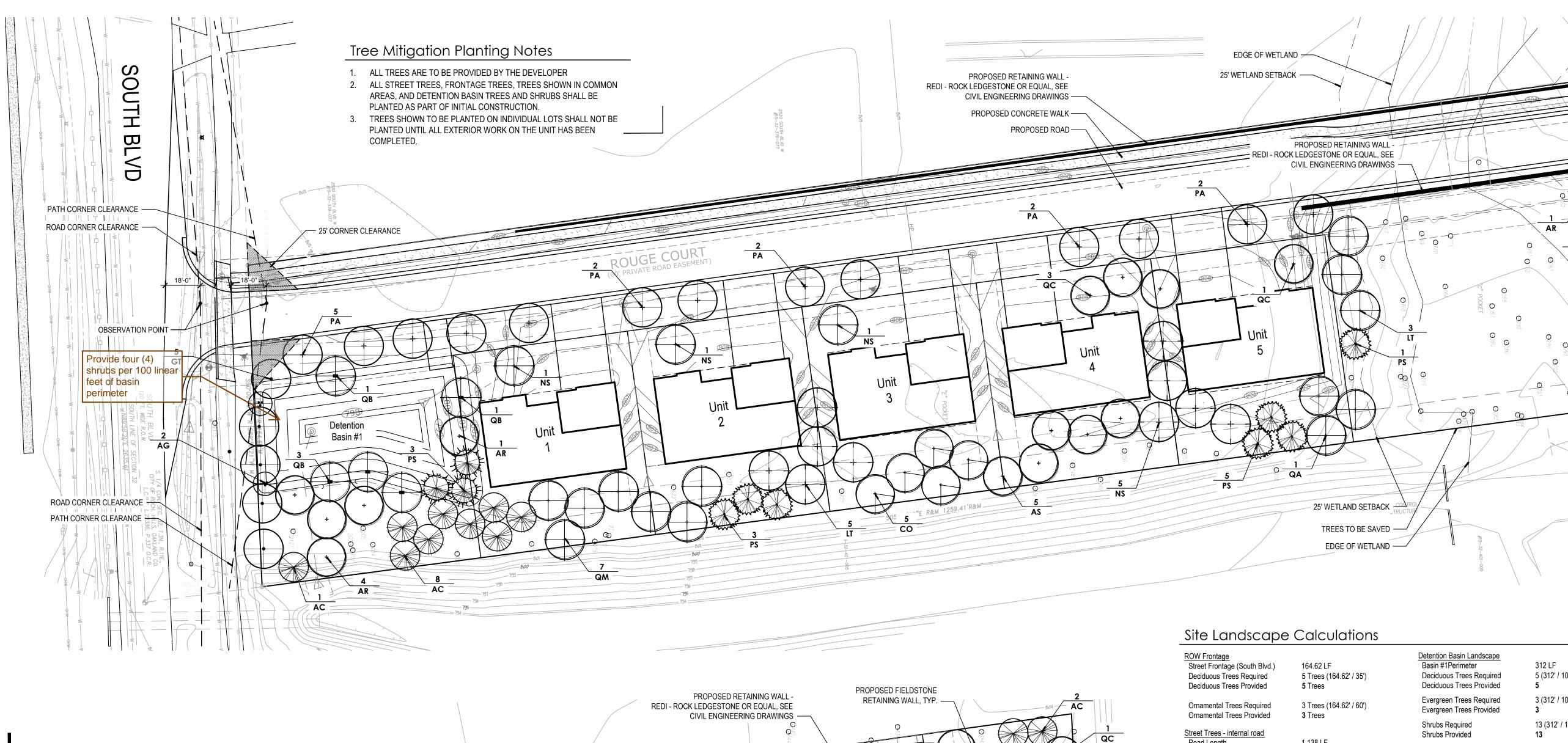
Silver Maple

Silver Maple

Cottonwood

Silver Maple

104



TREES TO BE SAVED -

Prior approval is required to plant any tree or shrub on the public right-of-way. All trees and shrubs must be planted

trees or shrubs may be planted in 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 walkway 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 planted at least 15' from the nearest overhead wire. Trees must be planted at least 5' from any

performance bond, the City of Rochester Hills forestry unit 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,

underground utility, unless the City's landscape architect requires a greater distance. Prior to the release of any

and possibly replace any such trees. The above requirements are incorporated into the plan.

at least 10' from the edge of a public road. Trees must be planted at least 15' from curb or road edge where the

speed limit is more than 35 mph. Shade trees and shrubs must be plant at least 5' from the edge of the public walkway. Evergreen and ornamental trees must be planted at least 10' from the edge of the public walkway. No



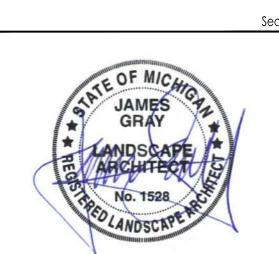
| Issued Fo | |
|---------------------------|------------|
| Preliminary Revie | 06.09.2022 |
| Revision per Owne | 06.22.2022 |
| Revision per Owne | 08.25.2022 |
| Revision per City Commen | 10.27.2022 |
| Revision per City Comment | 12.14.2022 |
| | |

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MA

South Oaks W. South Boulevard Rochester Hills, Michigan

Project Sponsor: South Oaks, LLC 1400 E. Michigan Ave, Suite G Saline, MI 48176



| Drawn: | JG |
|----------|-------------|
| Checked: | JG |
| Date: | 05.2022 |
| Scale: | 1" = 30'-0" |

Project Number: 22.012 Sheet Number:

© 2022 Vert Verde Landscape Architecture, LLC

| ROW Frontage | | Detention Basin Landscape | |
|--|---------------------------------|--|---------------------------------|
| Street Frontage (South Blvd.) | 164.62 LF | Basin #1Perimeter | 312 LF |
| Deciduous Trees Required | 5 Trees (164.62' / 35') | Deciduous Trees Required | 5 (312' / 100')*1.5 |
| Deciduous Trees Provided | 5 Trees | Deciduous Trees Provided | 5 |
| Ornamental Trees Required Ornamental Trees Provided | 3 Trees (164.62' / 60') 3 Trees | Evergreen Trees Required Evergreen Trees Provided | 3 (312' / 100') 3 |
| | | Shrubs Required | 13 (312' / 100')*4 |
| Street Trees - internal road | | Shrubs Provided | 13 |
| Road Length | 1,138 LF | | |
| Deciduous Trees Required | 32 Trees (1,138' / 35') | | |
| Deciduous Trees Provided | 32 Trees | Basin #2 Perimeter | 447 LF |
| | | Deciduous Trees Required | 7 (447' / 100')*1.5 |
| | | Deciduous Trees Provided | 7 |
| NOTE: See Sheet L-4 for Plant S | chedule & Detention Basin | | |
| Shrub Plantings & Seeding Plan | s | Evergreen Trees Required | 5 (447' / 100') |
| | | Evergreen Trees Provided | 5 |
| | | Shrubs Required Shrubs Provided | 18 (447' / 100')*4 18 |
| | | | |

Maintenance Notes

The owner of the property shall be responsible for all maintenance of site landscaping, as follows:

A. Landscaping shall be kept in a neat, orderly and healthy growing condition, free from debris and refuse.

B. 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.

C. All dead, damaged, or diseased plant material shall be removed immediately and replaced within six (6) months after it dies or in 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 from October 1 until the prepared soil becomes frozen. The planting season 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

D. 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 revisions to or removal of plant materials, or non-compliance with the maintenance requirements of this Section 138-12.109 will place the parcel in non-conformity with the approved landscape plan and be a violation of this ordinance.

E. 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.

ADDITIONAL NOTES:

1. Watering of landscape areas shall only occur between the

hours of 12am and 5am

2. Prior to the release of the performance bond, the City of Rochester Hills must inspect all landscape plantings

3. All lawn and landscape areas, including rights of way shall be fully irrigated and compliant with Section 138-12.105

4. Any plant material that is designated to be maintained that dies or in damaged during or as a result of construction shall be replaced in kind with like species and sizes

To assist in maintaining plant materials in a healthy condition, all landscaped areas (including lawns) shall be provided with an automatic, underground, or drip irrigation system, subject to the following:

A. The Planning Department may approve an alternative form of irrigation for a particular site, or may waive this requirement upon determining that underground irrigation is not necessary for the type of proposed plant

B. All automatic irrigation systems shall be designed to minimize water usage, and shall be shut off during water emergencies, periods of protracted rainfall, or water rationing periods.

C. The irrigation requirement may be waived by the reviewing authority if the project incorporates landscaping that will contribute points towards LEED certification or an equivalent rating system.

ordinance, such plantings shall be installed according to accepted good planting procedures and in a sound, workmanlike manner. All plant material shall meet current standards of the American Association of Nurserymen and approved by the American National Standards Institute, Inc. (ANSI 260.1, 1996).

Whenever a landscape planting screen or other plantings are required under this

A. All plant material shall be true to name in conformance to the current edition of Standardized Plant Names established by the American Joint Committee on Horticultural Nomenclature, or other source accepted by the City.

B. All plant material shall be nursery grown in a northern climate; hardy to the climate of Michigan; appropriate for the soil, climatic and environmental conditions; and resistant to disease and insect attack.

C. A minimum four (4) inches of topsoil shall be provided for all lawn areas, ground covers, and planting beds. D. Artificial plant material is prohibited and shall not be used to meet the

requirements of this Article.

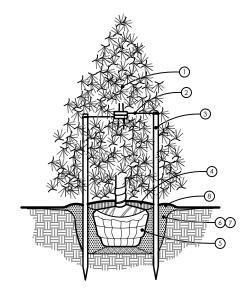
SCALE: 1" = 30'-0"

Know what's below Call before you dig

MISS DG System, Inc. www.missdig.net

Provide four (4) shrubs per 100 linear

eet of basin



DECIDUOUS TREE PLANTING

Seed Mix 'A'

Carex cristatella Crested Oval Sedge
Carex frankli Bristly Cattall Sedge
Carex funida Bottlebrush Sedge
Carex sparganioides v. cephaloidea Rough-Clustered Sedge
Carex vulpinoidea Brown Fox Sedge
Eleocharis ovata Blunt Spike Rush
Elymus virginicus Virginia Wild Ry e
Glyceria striata Fowl Manna Grass
Juncus effusus Common Rush
Juncus torreyi Torrey's Rush
Leersia oryzoides Rice Cut Grass
Panicum virgatum Switch Grass
Scirpus atrovirens Dark Green Rush
Scirpus drovirens Wool Grass
Scirpus fluviatilis River Bulnush
Scirpus validus Great Bulrush

 REMOVE ALL TAGS, STRINGS, PLASTICS, AND ANY OTHER MATERIALS WHICH ARE UNSIGHTLY OR COULD CAUSE GIRDLING. 2 STAKE TREES WITH 2-3" WIDE BELT-LIKE, FABRIC STRAPS ONLY, ARBOR TIE OR APPROVED EGUAL. (CONNECT FROM TREE TO STAKE OPPOSITE FROM EACH OTHER, AND ALLOW FOR SOME "FLEXING") DO NOT USE WIRE OR ROPE THROUGH A HOSE. REMOVE AFTER ONE YEAR.

(3) 2"X2" HARDWOOD STAKES OR EQUIVALENT DRIVEN 6-8" OUTSIDE OF ROOTBALL. REMOVE AFTER ONE YEAR. COVER PLANTING W/ 3" SHREDDED HARDWOOD BARK MULCH. MINIMUM 6' DIAMETER, CONNECT EVERGREEN PLANTINGS WHERE POSSIBLE REMOVE ALL NON-BIODEGRADABLE

8 4" TOPSOIL SAUCER

REMOVE ALL TAGS, STRINGS, PLASTICS, AND ANY OTHER MATERIALS WHICH ARE UNSIGHTLY OR COULD CAUSE GIRDLING.

3 STAKE TREES JUST BELOW FIRST BRANCH W/
2-3" WIDE BELT-LIKE, FABRIC STRAPS ONLY,
ARBOR TIE OR APPROVED EQUAL,
(CONNECT FROM TREE TO STAKE OPPOSITE
FROM EACH OTHER, AND ALLOW FOR
SOME "FELSING"] DO NOT USE WIRE OR
ROPE THROUGH A HOSE. REMOVE AFTER
ONE YEAR.

(8) TREE PIT TO BE 3 TIMES WIDTH OF ROOTBALL

7 PLANT MIX

6 PLANT MIX

3. NEVER CUT OR PRUNE CENTRAL LEADER 4. SET STAKES VERTICAL AND EVENLY SPACED 5. PRUNE ONLY TO REMOVE DEAD OR BROKEN BRANCHES

NOTES:

1. CONTRACTOR TO VERIFY PERCOLATION OF PLANTING PIT PRIOR TO INSTALLATION 2. SET TOP OF ROOTBALL 3" ABOVE FINISH GRADE

REMOVE ALL TAGS, STRINGS, PLASTICS, AND ANY OTHER MATERIALS WHICH ARE UNSIGHTLY OR COULD CAUSE GIRDLING. COVER PLANTING W/ 3" DOUBLE
 SHREDDED HARDWOOD BARK MULCH.
 MINIMUM 6' DIA. LEAVE 3" CIRCLE OF
 BARE SOIL AROUND BASE OF THE STEMS. REMOVE ALL NON-BIODEGRADABLE
MATERIALS FROM THE ROOTBALL. FOLD
DOWN ALL BURLAP AND REMOVE WIRE
BASKET FROM THE TOP 1/3 OF THE

6 4" TOPSOIL SAUCER

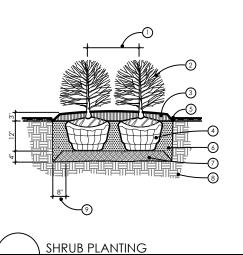
Seed Mix 'B'

Low-Profile Prairie Seed Mix

| 2. | GUY TREES 6" CALIPER AND OVER | Botanical Name | Common Name | |
|---|---|--|--------------------|---|
| 3. | CONTRACTOR TO VERIFY PERCOLATION OF | | | |
| PL. | LANTING PIT PRIOR TO INSTALLATION | Permanent Grasses: | | |
| 4. | SET STAKES VERTICAL AND EVENLY SPACED | Bouteloua curtipendula | Side Oats Grama | |
| - | STANGOD CHING TO BE SET ABOVE FIRST BRANICH | Carex spp. | Prairie Sedge Mix | |
| 5. STAYS OR GUYS TO BE SET ABOVE FIRST BRANCH | | Elymus canadensis | Canada Wild Ry e | |
| | | Koeleria pyramidata | June Grass | |
| | | Panicum virgatum | Switch Grass | |
| | | Schizachyrium scoparium | Little Bluestem | |
| | | Sporobolus heterolepis | Prairie Dropseed | |
| | | | Total | |
| | | | | |
| | | Temporary Cover: | | |
| | | Avena sativa | Common Oat | |
| | | Lolium multiflorum | Annual Ry e | |
| | | | Total | |
| | PLS | | | |
| | Ounces/Acre | | | |
| | | Forbs: | | |
| | | Amorpha canescens | Lead Plant | |
| | 1.00 | Anemone cylindrica | Thimbleweed | |
| | 1.00 | Aquilegia canadensis | Wild Columbine | |
| | 2.00 | Asclepias tuberosa | Butterfly Milkweed | |
| | 2.00 | Aster ericoides | Heath Aster | t |
| | 6.00 | Aster laevis | Smooth Blue Aster | |
| | 0.50 | Control of Control of Control of Control | N F I I I I I | - |

| 5U Y S | S TO BE SET ABOVE FIRST BRANCH | Elymus canadensis | Canada Wild Rye | 1 |
|--------|--------------------------------|---------------------------|--------------------------------|----|
| | | Koeleria pyramidata | June Grass | |
| | | Panicum virgatum | Switch Grass | |
| | | Schizachyrium scoparium | Little Bluestem | 2 |
| | | Sporobolus heterolepis | Prairie Dropseed | |
| | | | Total | 6 |
| | | | | |
| | | Temporary Cover: | | |
| | | Avena sativa | Common Oat | 36 |
| | | Lolium multiflorum | Annual Ry e | 12 |
| | | | Total | 48 |
| | PLS | | | |
| | Ounces Acre | | | |
| | | Forbs: | | |
| | | Amorpha canescens | Lead Plant | |
| | 1.00 | Anemone cylindrica | Thimbleweed | |
| | 1.00 | Aquilegia canadensis | Wild Columbine | |
| | 2.00 | Asclepias tuberosa | Butterfly Milkweed | |
| | 2.00 | Aster ericoides | Heath Aster | |
| | 6.00 | Aster laevis | Smooth Blue Aster | |
| | 0.50 | Aster novae-angliae | New England Aster | |
| | 12.00 1.25 | Baptisia lactea | White Wild Indigo | |
| | 1.00 | Chamaecrista fasciculata | Partridge Pea | |
| | 0.25 | Coreopsis lanceolata | Sand Coreopsis | |
| | 1.00 | Coreopsis palmata | Prairie Coreopsis | |
| | 2.00 | Dalea candidum | White Prairie Clover | |
| | 1.00 | Dalea purpurea | Purple Prairie Clover | |
| | 0.50 | Echinacea purpurea | Broad-Leaved Purple Coneflower | |
| | 0.25 | Eryngium yuccifolium | Rattlesnake Master | |
| | 6.00 | Kuhunia eupatoides | False Bone-Set | |
| | 45.75 | Lespedeza capitata | Round-Head Bush Clover | |
| | | Liatris aspera | Rough Blazing Star | |
| | | Lupinus perennis | Wild Lupine | |
| | 360.00 | Monarda fistulosa | Wild Bergamot | |
| | 116.00 | Parthenium integrifolium | Wild Quinine | |
| | 476.00 | Penstemon digitalis | Fox glove Beard Tongue | |
| | | Physostegia virginiana | False Dragonhead | |
| | | Pycnanthemum virginianum | Common Mountain Mint | |
| | 4.25 | Ratibida pinnata | Y ellow Coneflower | |
| | 1.50 | Rudbeckia hirta | Black-Eyed Susan | |
| | 2.00 3.00 | Rudbeckia subtomentosa | Sweet Black-Eyed Susan | |
| | 1.00 | Silphium integrifolium | Rosin Weed | |
| | 0.50 | Silphium terebinthinaceum | Prairie Dock | |
| | 4.00 | Solidago nemoralis | Old-Field Goldenrod | |
| | 1.00 | Solidago rigida | Stiff Goldenrod | |
| | 1.00 | Tradescantia ohiensis | Common Spiderwort | |
| | | | | |

| TREES | | PLANTINGS | | | | | | | | |
|----------|----------|--------------------------------------|--------------------------------|--------------------|----------------------|------------|--|------------------------|---------|------------------------|
| | | | | | | | | | | |
| OTY | | | | | | | | | | |
| | SYM | BOTANICAL NAME | COMMON NAME | SIZE | SPACING | ROOT | COMMENTS | UNIT | _ | TOTAL |
| 2 | AG | Amalanchier x g. 'Autumn Brilliance' | Autumn Brilliance Serviceberry | 6' ht. | as shown | B&B | Minimum 5 stems | \$ | | 650.00 |
| 5 | GT | Gleditsia t. 'Skyline' | Skyline Honeylocust | 3" cal. | as shown | B&B | Single straight trunk | \$ 450.00 | \$ | 2,250.00 |
| DETE | NTION | I BASIN PLANTINGS | | | | | | | | |
| TREES | | | | | | | | | | |
| QTY | SYM | BOTANICAL NAME | COMMON NAME | SIZE | SPACING | ROOT | COMMENTS | | | |
| 8 | PS | Pinus strobus | Eastern White Pine | 10' ht. | as shown | B&B | Unsheared, branched to ground | \$ 400.00 | \$ | 3,200.00 |
| 12 | QB | Quercus bicolor | Swamp White Oak | 3" cal. | as shown | B&B | Single straight trunk | \$ 450.00 | \$ | 5,400.00 |
| SHRUE | BS | | | | | | | | | |
| 22 | CS | Cornus sericea | Red Osier Dogwood | 36" ht. | as shown | cont. | Well rooted | \$ 50.00 | \$ | 1,100.00 |
| 9 | VL | Viburnum lentago | Nannyberry Viburnum | 30" ht. | as shown | cont. | Well rooted | \$ 50.00 | \$ | 450.00 |
| TREE | MITIG | ATION PLANTINGS | | | | | | | | |
| TREES | | | | | | | | | | |
| QTY | SYM | BOTANICAL NAME | COMMON NAME | SIZE | SPACING | ROOT | COMMENTS | | | |
| 24 | AC | Abies concolor | Concolor Fir | 8' ht. | as shown | B&B | | \$ 400.00 | \$ | 9,600.00 |
| 11 | AR | Acer r. 'October Glory' | October Glory Red Maple | 2" cal. | as shown | B&B | Single straight trunk | \$ 400.00 | \$ | 4,400.00 |
| 10 | AS | Acer s. 'Green Mountain' | Green Mountain Sugar Maple | 2" cal. | as shown | B&B | Single straight trunk | \$ 400.00 | \$ | 4,000.00 |
| 12 | LT | Liriodendron tulipfera | Tulip Tree | 2" cal. | as shown | B&B | Single straight trunk | \$ 400.00 | \$ | 4,800.00 |
| 8 | NS | Nyssa sylvatica | Blackgum | 2" cal. | as shown | B&B | Single straight trunk | \$ 400.00 | \$ | 3,200.00 |
| 16 | PA | Picea abies | Norway Spruce | 8' ht. | as shown | B&B | Unsheared, branched to ground | \$ 400.00 | \$ | 6,400.00 |
| 13 | PS | Pinus strobus | Eastern White Pine | 8' ht. | as shown | B&B | Unsheared, branched to ground | \$ 400.00 | (48) | 5,200.00 |
| 10 15 | QA | Quercus albar | White Oak | 2" cal. | as shown | B&B | Single straight trunk | \$ 400.00 | | 4,000.00 |
| 14 | QC QM | Quercus coccinea Quercus macrocarpa | Scarlet Oak Burr Oak | 2" cal. 2" cal. | as shown as shown | B&B B&B | Single straight trunk Single straight trunk | \$ 400.00 400.00 | \$ | 6,000.00 5,600.00 |
| STREE | ET TRE | FS | | | | | | | | |
| | | <u>LU</u> | | | | | | | | |
| TREES | | | | | | | | | | |
| QTY | SYM | BOTANICAL NAME | COMMON NAME | SIZE | SPACING | ROOT | COMMENTS | | | |
| 32 | PA | Platanus x. acerifolia 'Bloodgood' | Bloodgood London Plane Tree | 2.5" cal. | as shown | B&B | Single straight trunk | \$ 425.00 | \$ | 13,600.00 |
| | | | | | | | Indication action of | | <u></u> | 40.000.00 |
| | | | | | | | Irrigation estimate Landscape Cost Estimate | | \$ | 12,000.00 88,950.00 |



Note Key:

PROPOSED BUILDING ENVELOPE

TREE PIT TO BE THREE TIMES WIDTH OF ROOTBALL

(2) EXISTING SIDEWALK ALONG WALTON BLVD

(3) EXISTING TREES TO REMAIN, SEE SHEET L-1 4) PROPOSED TREES, SEE SHEET L-3

5 PROPOSED SHRUBS

6 NO KEY NOTE

7 LIMITS OF DISTURBANCE, SEE CIVIL ENGINEERING DRAWINGS

2. SET TOP OF ROOTBALL 2" ABOVE FINISH GRADE

4 REMOVE ALL NON-BIODEGRADALBE TWINE FROM ENTIRE ROOTBALL. REMOVE BURLAP FROM TOP 1/2 OF ROOTBALL.

(5) SHOVEL CUT OR METAL EDGE, SEE PLAN

EXCAVATE EXISTING SOIL TO 12" DEPTH,
 REPLACE WITH PLANT MIX

(7) SCARIFY TO 4" DEPTH AND RECOMPACT UNDISTURBED SUBGRADE

MINIMUM 8" BETWEEN ROOTBALL AND EDGE OF PLANTING PIT

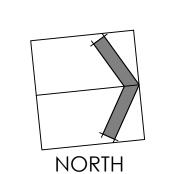
1) SEE PLAN FOR SPACING

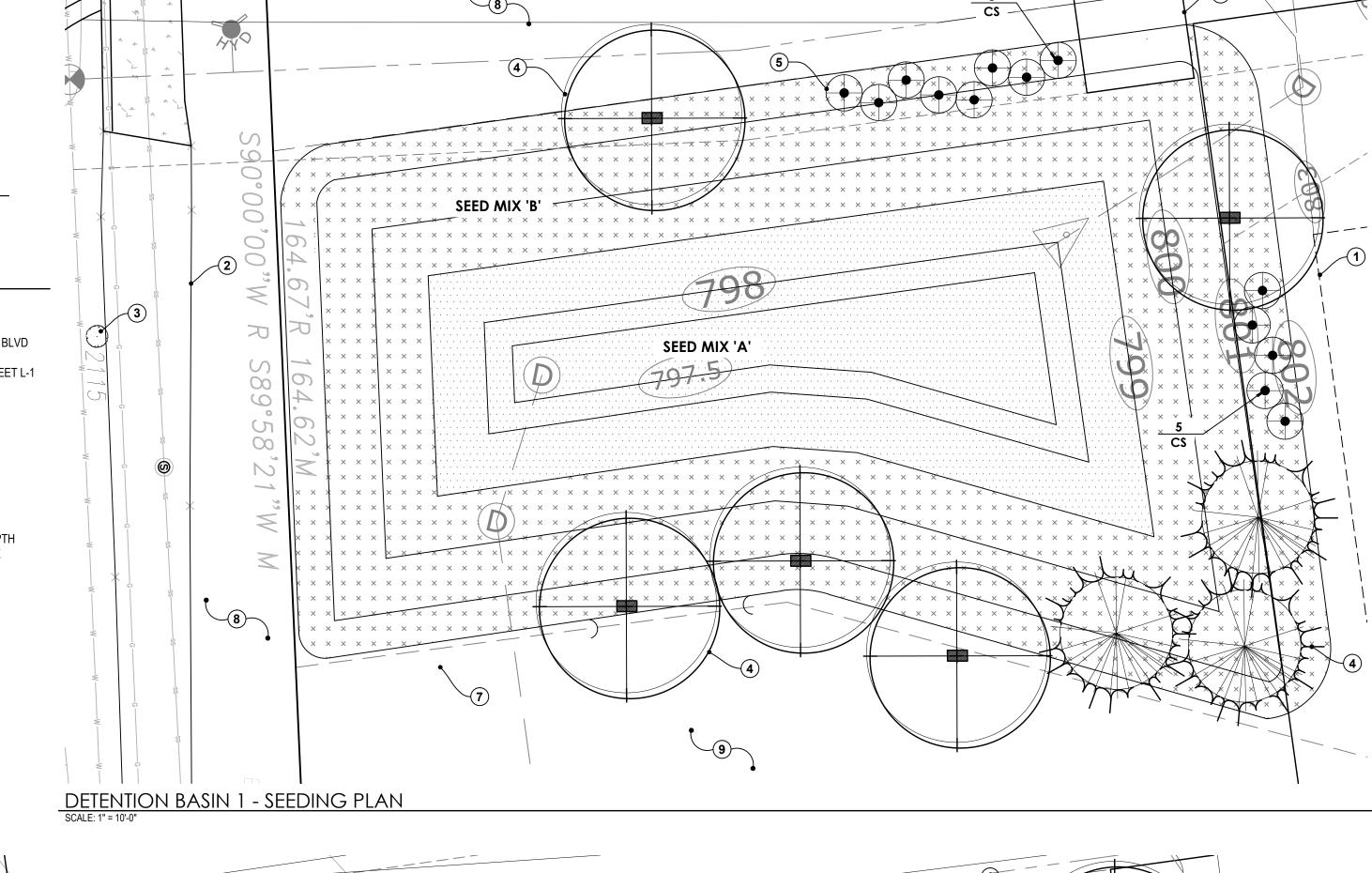
2 SHRUBS, SEE PLANT SCHEDULE 3" DEPTH DOUBLE SHREDDED HARDWOOD MULCH, TYPICAL

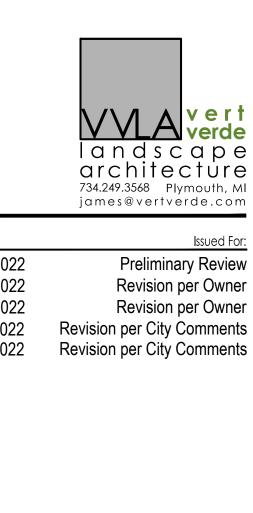
8 SEEDED LAWN OVER MINIMUM 3" DEPTH TOPSOIL TO LIMITS OF DISTURBANCE

9 UNDISTURBED AREA

(10) BASIN ACCESS ROAD, SEE CIVIL





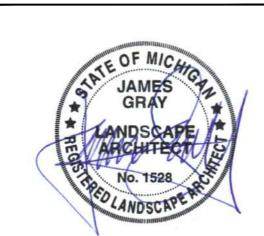


06.09.2022 06.22.2022 Revision per Owner 08.25.2022 Revision per Owner 10.27.2022 Revision per City Comments 12.14.2022 Revision per City Comments

> South Oaks W. South Boulevard Rochester Hills, Michigan

Project Sponsor: South Oaks, LLC 1400 E. Michigan Ave, Suite G Saline, MI 48176

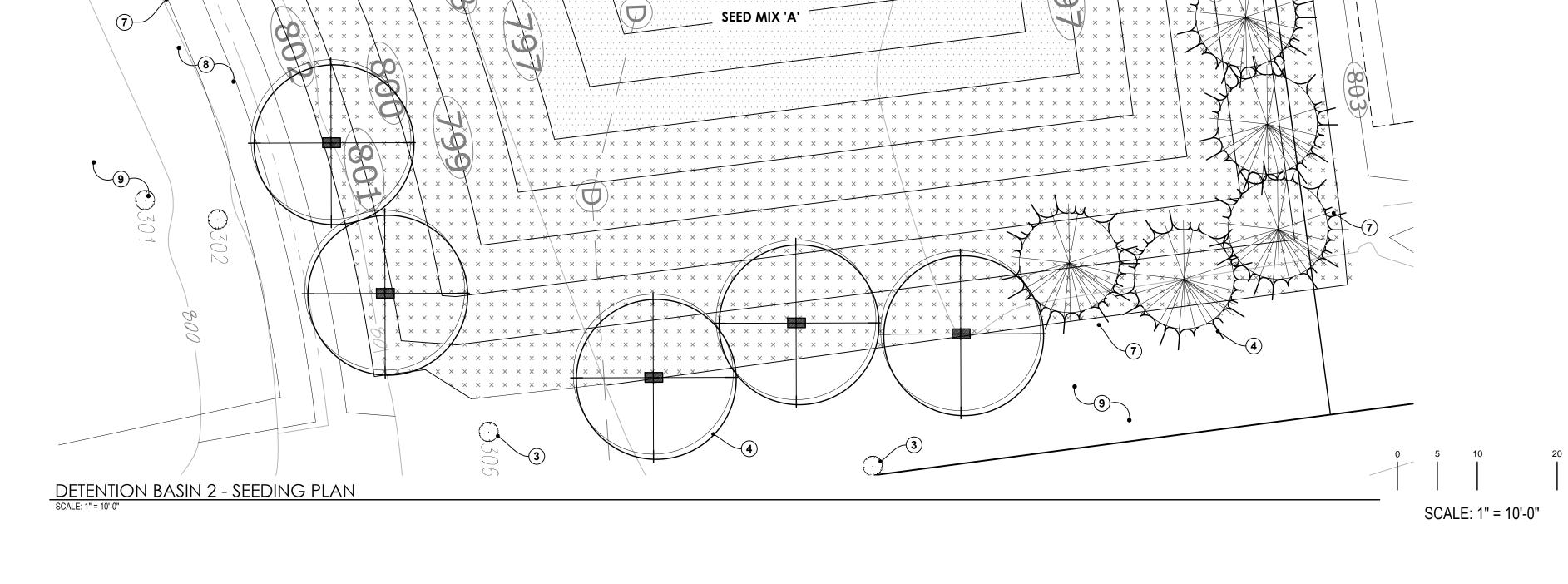
Seeding Plan & Details



| Drawn: | JG | |
|----------|-------------|--|
| Checked: | JG | |
| Date: | 05.2022 | |
| Scale: | 1" = 10'-0" | |

22.012

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FIRE DEPARTMENT

Sean Canto, Fire Chief

From: Vince Foisy
To: Planning Dept.
Date: January 5, 2023

Re: South Oaks Condos - Section #31 - Review #2

APPROVED

The street names submitted on the drawings received from Planning on 01/5/2023 have been reviewed as follows:

The following name(s) is/are Approved:

| Prefi | Street | Suffi |
|-------|--------|-------|
| X | Name | X |
| | Rouge | CT |
| | | |
| | | |
| | | |

The following name(s) is/are Not Approved:

| Prefi | Street | Suffi |
|-------|--------|-------|
| X | Name | X |
| | | |
| | | |
| | | |
| | | |

If you have any further questions please contact me at 248.841.2709

VINCENT B. FOISY
Communication Systems Administrator

cc: File h:\data\

SITE PLAN.pdf Markup Summary

Building Department (2)

Mark Artinian 248-841-2446 ArtinianM@RochesterHills.or Subject: Building Department Author: Mark Artinian Date: 1/2/2023 2:09:37 PM

Status:

Mark Artinian 248-841-2446 ArtinianM@RochesterHills.org

Yes

Subject: Building Department Author: Mark Artinian Date: 1/2/2023 2:10:50 PM

Status:

Yes

Engineering Department (1)

Subject: Engineering Department Author: Jason Boughton

BoughtonJ @ RochesterHills.org

Date: 12/19/2022 12:12:04 PM

Status:

Fire Department (1)

LL Walter Murphy 249-941-2712 Vi MurphyW® RochesterHills.org Subject: Fire Department Author: Lieutenant W. Murphy Date: 12/22/2022 8:31:45 AM

Status:

Group (1)

 \neg



Subject: Group Author: C.McLeod

Date: 12/20/2022 3:31:30 PM

Status:

Received 12/15/2022

City of Rochester Hills Planning & Economic Development

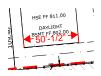
Length Measurement (2)



Subject: Length Measurement Author: Lieutenant W. Murphy Date: 12/22/2022 8:21:31 AM

Status:

321'-6 3/4"



Subject: Length Measurement

Author: C.McLeod **Date:** 1/5/2023 8:46:05 AM

Status:

50'-1/2"

Natural Resouces (1)

Subject: Natural Resouces Author: Matt Einheuser Date: 1/2/2023 2:19:19 PM

Status:

Planning Department (6)



Subject: Planning Department

Author: C.McLeod Date: 1/5/2023 8:19:26 AM

Status:

Five (5) foot pedestrian sidewalks are required on both sides of the street. Applicant has provided a written request for Planning Commission waiver



Subject: Planning Department

Author: C.McLeod **Date:** 1/5/2023 8:23:09 AM

Status:

Applicant has submitted a request to modify the required twenty five (25) foot natural features

setback.



Subject: Planning Department

Author: C.McLeod

Date: 1/5/2023 8:53:01 AM

Status:

Provide four (4) shrubs per 100 linear feet of basin perimeter



Subject: Planning Department

Author: C.McLeod

Date: 1/5/2023 8:53:15 AM

Status:

Provide four (4) shrubs per 100 linear feet of basin

perimeter



Subject: Planning Department

Author: C.McLeod

Date: 1/5/2023 8:53:40 AM

Status:



Subject: Planning Department

Author: C.McLeod

Date: 1/5/2023 8:54:13 AM

Status:

Subject to comments

Site Plan Review (1)



Subject: Site Plan Review Author: macdonaldj Date: 12/15/2022 10:12:52 AM

Status:

Traffic (7)



Subject: Traffic Author: Keith

Date: 12/15/2022 3:26:32 PM

Status:

100'-0"



Subject: Traffic Author: Keith

Date: 12/15/2022 3:56:45 PM

Status:

Show spillway detail.

Subject: Traffic Author: Keith

Date: 12/15/2022 3:58:43 PM

Status:

Provide a legend showing what the different

hatchings are.



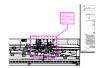
Subject: Traffic Author: Keith

Date: 12/15/2022 4:05:16 PM

Status:

Show the Approach Detail at a larger scale and at

least to the 1+00 stationing point



Subject: Traffic Author: Keith

Date: 12/15/2022 4:03:54 PM

Status:

Clearly show that the grades within the street intersection do not exceed 3.0% for a distance of 100 feet from the point of intersection.



Subject: Traffic Author: Keith

Date: 12/15/2022 4:10:15 PM

Status:

Clearly show that the grades within the street intersection do not exceed 3.0% for a distance of 100 feet from the point of intersection.

Subject: Traffic Author: Keith

Date: 12/15/2022 4:21:42 PM

Status:

Keith Depp 248-841-2503 DeppK@RochesterHills.org