GENOA CHARTER TOWNSHIP PLANNING COMMISSION PUBLIC HEARING JUNE 13, 2022 6:30 P.M. AGENDA

CALL TO ORDER:

PLEDGE OF ALLEGIANCE:

APPROVAL OF AGENDA:

DECLARATION OF CONFLICT OF INTEREST:

CALL TO THE PUBLIC: (Note: The Board reserves the right to not begin new business after 10:00 p.m.)

OLD BUSINESS:

OPEN PUBLIC HEARING # 1...Consideration of a special use application, environmental impact assessment and site plan for an expansion of an existing automobile dealership to expand a parking/vehicle storage lot located at 7100 Grand River Avenue, southeast corner of Grand River Avenue and Hubert Drive. The request is petitioned by Joshua Tauriainen.

- A. Recommendation of Special Use Application.
- B. Recommendation of Environmental Impact Assessment (1-18-22)
- C. Recommedation of Site Plan (5-3-22)

NEW BUSINESS:

OPEN PUBLIC HEARING #2...Consideration of a rezoning application and environmental impact assessment to rezone 20-acres from Rural Residential (RR) to Country Estates (CE) for property located at 5320 Richardson Road on the west side of Richardson Road, south of Brighton Road. The request is petitioned by Andrea Sydor.

- A. Recommendation of Environmental Impact Assessment (5-31-22)
- B. Recommedation of Site Plan (5-31-22)

OPEN PUBLIC HEARING #3...Consideration of an environmental impact assessment and site plan for a proposed renovation and addition to the existing clubhouse located inside the Sylvan Glen Manufactured Housing Park. The park is located at 6600 Grand River Avenue, south side of Grand River, east of Dorr Road. The request is petitioned by Mike Barnett, Sun Communities.

- A. Recommendation of Environmental Impact Assessment (5-3-22)
- B. Disposition of Site Plan (5-26-22)

OPEN PUBLIC HEARING #4...Consideration of an amendment to the master deed and bylaws for Chestnut Springs to allow a detached accessory structure on lot 25. The property in question is located on the east side of Chilson Road, South of Brighton Road along the southern Township boundary with Hamburg Township. The request is petitioned by Chestnut Development LLC.

A. Recommendation of Master Deed and Bylaws amendment

OPEN PUBLIC HEARING #5...Discussion and review of a conceptual site plan for 12 attached condominiums and 102 single family homes for the Summerfield Pointe PUD. The property in question is located on Lawson Drive, north of Grand River Avenue. The request is petitioned by Healy Homes, LLC.

ADMINISTRATIVE BUSINESS:

- Staff Report
- Approval of May 23, 2022 Planning Commission meeting minutes
- Member discussion
- Adjournment



GENOA CHARTER TOWNSHIP **Special Land Use Application**

This application must be accompanied by a site plan review application and the associated submittal requirements. (The Zoning Official may allow a less detailed sketch plan for a change in use.)

APPLICANT NAME & ADDRESS: Mark Shamoun 4505 Forest Edge West Bloombielf Mi 48323 Submit a letter of Authorization from Property Owner if application is signed by Acting Agent.

APPLICANT PHONE: (248)225-3939 EMAIL: mshamoun@yahoo.com

OWNER NAME & ADDRESS: Ray Shamoun 8065 Locklin Commerce Mi

SITE ADDRESS: 7100 Grand River Brighton Mi PARCEL #(s): ID#4711-13-100-039

OWNER PHONE: <u>248</u>)231-2147 EMAIL: rayshamoun@hotmail.com

Location and brief description of site and surroundings: Located at 7100 grand river behind the Brighton Motors car dealership. Undeveloped land approximatley 2 acres

Proposed Use:

The applicant is in need of additional parking for the dealership.

The parcels can be combined or kept seperated upon recomendation of the township.

Describe how your request meets the Zoning Ordinance General Review Standards (section 19.03):

a. Describe how the use will be compatible and in accordance with the goals, objectives, and policies of the Genoa Township Comprehensive Plan and subarea plans, and will promote the Statement of Purpose of the zoning district in which the use is proposed.

This parcel is currently zoned commercial. Additional parking would be little to no impact on the surronding areas

b. Describe how the use will be designed, constructed, operated, and maintained to be compatible with, and not significantly alter, the existing or intended character of the general vicinity.

A paved parking lot with storm management and landscaping will have similar characteristics as surronding business.

c. How will the use be served adequately by essential public facilities and services such as highways, streets, police and fire protection, drainage structures, water and sewage facilities, refuse disposal and schools?

There will be little to no additional public services needed.

d. Will the use involve any uses, activities, processes, or materials potentially detrimental to the natural environment, public health, safety, or welfare by reason of excessive production of traffic, noise, vibration, smoke, fumes, odors, glare, or other such nuisance? If so, how will the impacts be mitigated?

There will not be any impacts.

e. Does the use have specific criteria as listed in the Zoning Ordinance (sections 3.03.02, 7.02.02, & 8.02.02)? If so, describe how the criteria are met.

unknown

I HEREBY CERTIFY THAT ALL INFORMATION AND DATA ATTACHED TO AND MADE PART OF THIS APPLICATION ARE TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE AND BELIEF. I AGREE TO DESIGN, CONSTRUCT AND OPERATE, AND MAINTAIN THESE PREMISES AND THE BUILDINGS, STRUCTURES, AND FACILITIES WHICH ARE GOVERNED BY THIS PERMIT IN ACCORDANCE WITH THE STATED REQUIREMENTS OF THE GENOA TOWNSHIP ZONING ORDINANCE, AND SUCH ADDITIONAL LIMITS AND SAFEGUARDS AS MAY BE MADE A PART OF THIS PERMIT.

| THE UNDERSIGNED Mark Shamoun | STATES THAT THEY ARE THE |
|---|--------------------------|
| FREE OWNER OF THE PROPERTY OF PROPERTIES DESCRIBI | ED ABOVE AND MAKES |
| APPLICATION FOR THIS SPECIAL LAND USE PERMIT. | |

BY: Mark Shamoun

ADDRESS: 4505 Forest Edge West Bloomfield Mi 48323

<u>Contact Information</u> - Review Letters and Correspondence shall be forwarded to the following:

Mark Shamoun

Name

of S2 Construction Management Business Affiliation

at<u>mshamoun@yahoo.com</u> Email

| FEE EXCEEDANCE | AGREEMENT |
|----------------|-----------|
|----------------|-----------|



GENOA CHARTER TOWNSHIP Application for Site Plan Review

TO THE GENOA TOWNSHIP PLANNING COMMISSION AND TOWNSHIP BOARD:

APPLICANT NAME & ADDRESS: JOSHUA TRURIAINEN 25678 ISLAND LAKE DR NOVI, 48374 If applicant is not the owner, a letter of Authorization from Property Owner is needed.

OWNER'S NAME & ADDRESS: JOSHUA TAURIAINEN 25678 ISLAND LAKE DR. NOVI, NI 48374

SITE ADDRESS: 7100 GRAND RIVER, BRIGHTON 4814 PARCEL #(s):__

APPLICANT PHONE: (248) 245-3656 OWNER PHONE: (248) 245-3656

OWNER EMAIL: JOSHUAT \$5\$5 @ GMAIL. COM

LOCATION AND BRIEF DESCRIPTION OF SITE: ______ TIDO GRAND RIVEL, ADTACENT

TO EXISTING BUSINESS, CURLENTLY RAW LAND.

BRIEF STATEMENT OF PROPOSED USE: __IMPROVEMENT WILL BE TO

PARKING LOT FOR EMPLOYEE PARKING AND THE

STORAGE OF INVENTORY

THE FOLLOWING BUILDINGS ARE PROPOSED: NO BUILDINGS TO BE

CONTRUCTED - JUST PARKING LOT. REQUESTINGAN

ALOWANCE TO PARK ON THE LAND PRIOR TO FINAL INSTALL OF

ASPHALT; FINAL ASPHALT WILL BE COMPLETED AFTER FROST LAWS LIFT.

I HEREBY CERTIFY THAT ALL INFORMATION AND DATA ATTACHED TO AND MADE PART OF THIS APPLICATION IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE AND BELIEF.

BY:

ADDRESS: 25678 ISLAND LAKE FD. NOVI, MI 48374

Contact Information - Review Letters and Correspondence shall be forwarded to the following:

1.) MARK SHAMOUN Name

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of 52 CONSTRUCTION MANAGEMENT at M SHAMOUN (@ YAHO, COM Business Affiliation E-mail Address

| FEE EXCEEDANCE AGREEMENT | | | | |
|---|--|--|--|--|
| As stated on the site plan review fee schedule, all site plans are allocated two (2) consultant reviews and one (1) Planning Commission meeting. If additional reviews or meetings are necessary, the applicant will be required to pay the actual incurred costs for the additional reviews. If applicable, additional review fee payment will be required concurrent with submittal to the Township Board. By signing below, applicant indicates agreement and full understanding of this policy. | | | | |
| SIGNATURE: 11/8/2021 | | | | |
| PRINT NAME JOSHNA TAURIAINEN PHONE: (248) 245-3656 | | | | |
| ADDRESS: 25678 ISLANDLAKE OR , NOVI, MI 48374 | | | | |

GENOA CHARTER TOWNSHIP PLANNING COMMISSION PUBLIC HEARING FEBRUARY 14, 2022 6:30 P.M. MINUTES

<u>CALL TO ORDER:</u> Chairman Grajek called the meeting of the Genoa Charter Township Planning Commission to order at 6:30 p.m. Present were Chris Grajek, Jim Mortensen, Marianne McCreary, Eric Rauch, Glynis McBain, Jeff Dhaenens, and Tim Chouinard. Also present was Kelly VanMarter, Community Development Director/Asst. Township Manager, Brian Borden of Safebuilt, and Shelby Byrne of Tetra Tech.

PLEDGE OF ALLEGIANCE: The pledge of allegiance was recited.

APPROVAL OF AGENDA:

Ms. VanMarter stated that "DECLARATION OF CONFLICT OF INTEREST" needs to be added to the agenda.

Moved by Commissioner Dhaenens, seconded by Commissioner McCreary, to approve the agenda with the addition of "DECLARATION OF CONFLICT OF INTEREST". **The motion** carried unanimously.

<u>DECLARATION OF CONFLICT OF INTEREST</u>: Ms. McCreary stated that she does not have a conflict of interest; however, she wanted it to be known that she has done business with Wonderland Marine in the past.

CALL TO THE PUBLIC: The call to the public was made at 6:32 pm.

Mr. Craig Leslie of 5680 Griffith Drive asked the Planning Commission to look at the contrast between the outcome of the gravel pit review and the outcome of the asphalt plant review with the recommendations from this commission to the Board with regard to the discussions regarding the Master Plan. There seems to be a disconnect between how the Planning Commission and the Board are reviewing it. It should be in balance.

Mr. John Palmer of 560 Black Oaks Trails asked why the Township only has industrial zoning and not heavy and light industrial. He is confused how some Townships can avoid heavy industrial, but Genoa is obligated to have industrial uses.

Mr. Tom Reader of 3478 Snowden Lane is an architect and has been before hundreds of Planning Commission meetings. He does not think the asphalt plant request should have been sent to the Township Board. It should not have been recommended for approval by the Planning Commission.

Ms. Dawn Condon of 3466 Snowden Lane watched the Tyrone Township Planning Commission meeting and the request from Capital Asphalt was reviewed there. They did their due diligence,

and this Planning Commission did not. She submitted the information from the Tyrone Township review.

Ms. Christine Wetsel of 390 Natanna Drive asked that if the Planning Commission voted unanimously for an asphalt plant, what other uses will be approved.

The call to the public was closed at 6:44 pm.

OPEN PUBLIC HEARING # 1...Consideration of a special use application, environmental impact assessment and site plan for an expansion of an existing automobile dealership to expand a parking/vehicle storage lot located at 7100 Grand River Avenue, southeast corner of Grand River Avenue and Hubert Drive. The request is petitioned by Joshua Tauriainen.

- A. Recommendation of a Special Use Application
- B. Recommendation of an Environmental Impact Assessment (1-18-22)
- C. Recommendation of a Site Plan (1-3-22)

Mr. Joshua Tauriainen, the applicant, and Mr. Mark Shamoun, the general contractor for the project, were present.

Mr. Borden reviewed his letter dated February 8, 2022.

He noted that this site has had past ordinance violations, so this project is being proposed to address those violations. He added that the violations preceded the current owner. Due to the scope of the project, approval of a revised Special Land Use is required.

- The special land use standards of Section 19.03 are generally met, though the applicant must address any comments raised by the Township Engineer and the Brighton Area Fire Authority.
- Additionally, given the request for a major amendment to an existing special land use and the history of Ordinance violations at this site, he suggests the applicant familiarize themselves with past special land use and site plan approvals and provide the Township with an assurance that they will maintain their expanded operation in accordance with past approvals, as well as any conditions applied to the current request, if approved.
- Most of the use conditions of Ordinance Section 7.02.02(c) are met; however, the applicant must combine the two parcels, and required buffer zones must be provided unless a waiver or alternate buffer is authorized by the Planning Commission.
- Section 14.06.07 requires looped striping for parking spaces; however, the Planning Commissioner can waive this requirement.
- The Planning Commission may approve a four-foot landscaped berm in lieu of a full Buffer Zone A along the south lot line.
- The landscape plan is deficient in terms of shrub plantings around the detention pond, though excess trees are provided.
- Any existing landscaping that is in poor condition should be replaced and brought into compliance with the ordinance.

Commissioner Mortensen questioned if irrigation is required for the landscaping. Ms. VanMarter stated the ordinance requires all landscaping to be irrigated. Mr. Shamoun agrees to irrigate all landscaped areas.

Ms. Byrne reviewed her letter dated February 9, 2022.

- The Petitioner has provided storm sewer calculations, but not all required information is provided. The proposed storm sewer calculations do not include the hydraulic grade line of the proposed system. The proposed pipe slopes do not match the provided invert elevations. With the provided pipe invert elevations, the pipes are below the required minimum slope of 0.32%. The provided calculations should be reviewed to ensure they match the requirements of the Township and Drain Commissioner. The Livingston County Drain Commissioner is in the process of updating their design standards, and the proposed storm improvements should meet those standards.
- The Livingston County Drain Commissioner's updated design standards also include changes to the required detention basin volume.
- All detention basins require a sediment forebay.
- The outlet structure design calculations should be provided.
- Details should be provided on the proposed catch basin design. Proposed catch basins should match Genoa Township's Engineering Standards.
- Mr. Shamoun stated he will meet all requirements noted by Ms. Byrne.

Commissioner Mortensen asked if any of the engineering requirements will affect the plan. Ms. Byrne does not have the details; however, she stated it could change the layout of the parking lot.

The Brighton Area Fire Authority Fire Marshal Rick Boisvert's letter dated February 4, 2022 stated:

• Two-way emergency vehicle access roads shall be a minimum of 26-feet wide. Access roads shall be constructed to be capable of supporting the imposed load of fire apparatus weighing at least 84,000 pounds. The entrance to the new lot has been widened to 26-feet as required; however, the main drive widths have not been revised to accommodate the minimum width requirement. This includes the center drive, the southern drive, and the easternmost drive. The easternmost drive shall be signed as a fire lane every 50-feet along the curb line.

Mr. Shamoun stated he will revise the plans to accommodate this request, noting they may have to eliminate some parking spaces.

Commissioner Rauch questioned the site lighting. He asked for the details of the shielding of the lights. Mr. Shamoun stated they are only in the islands. They are downward directed lamps. Mr. Tauriainen stated they are left on overnight to deter theft; however, if the Township would like them to be off at night, they can accommodate that. Commissioner Rauch wants to ensure that they do not negatively affect the residential properties adjacent to this site.

He also would like to have the trash service pick-up and delivery schedules included in the Impact Assessment. Mr. Tauriainen stated that most of their vehicles are driven onto their site. They have vehicles delivered approximately once a month. Commissioner Rauch requested a clear loading and unloading zone be delineated on the site and in the plans.

Commissioner Dhaenens asked if the detention pond can be placed at the rear of the site so as to help with buffering the site from the adjacent residential properties and help to place the parking closer to the existing building. Mr. Shamoun stated he planned that; however, it was not feasible based on the slope of the property.

The Commission discussed the buffer requirements for the rear property line. Mr. Tauriainen suggested a taller berm with added fencing. Mr. Shamoun agrees with the berm instead of the fence. Commissioner McBain agrees.

Commissioner McCreary reiterated that the current owner and applicant did not own the property when the prior ordinance violations occurred; however, based on Mr. Borden's letter, she would like them to know what those violations were. Ms. VanMarter stated she can provide that information and the original Special Land Use and Site Plan to the applicant.

Chairman Grajek noted that there were two emails received by residents. One from Kristian Smith of 6972 Rink Drive and one from Heather Koons of 6960 Rink Drive. They were concerned about the additional lighting, the additional traffic and the test drives being done on Rink Drive.

The call to the public was made at 7:33 pm.

Mr. Kristian Smith of 6972 Rink Drive thanked the Commission for addressing the issues he noted in his email. He stated that the current owner has done a great job improving and maintaining the site better than previous owners. He stressed his request that test drives do not occur in their neighborhood.

Mr. Adam Nankee of 7025 Lindsey lives directly south of this site. He agrees with Mr. Smith's compliments to the current owner. He wants to ensure that the buffer is sufficient to block the parked cars and that the lights will be shielded toward his property.

Mr. Doug Koons of 6960 Rink Drive is concerned with what could happen to that property if the current owner sells the business. He is questioned if the retention pond will also have standing water.

Mr. Duncan of 6979 Rink Drink is concerned with the test drives that occur on Hubert. He asked if any buffer will be planted on the west side of the site. Mr. Tauriainen showed the site plans noting where the additional trees will be planted.

The call to the public was closed at 7:45 pm.

Commissioner Rauch advised that the retention pond will not always have water in it. He questioned if an additional berm and plantings could be added to the west side of the site to help shield the parking lot from the residents across Hubert. Mr. Shamoun agreed to add the berm and plant evergreens.

Commissioner Rauch thanked the applicant for their willingness to make revisions and be a good neighbor; however, he would like the applicant to revise the Environmental Impact Assessment to include more details of the operations as discussed this evening. Commissioner Chouinard agrees. He would also like to see additional details regarding the parking in the existing parking lot in the front of the site.

Commissioner Rauch noted the following items should be addressed:

- The applicants shall combine the parcels.
- The existing parking lots shall be striped as per the originally approved site plan
- A 4-foot berm shall be added to the south lot line of the site.
- The evergreens along the south lot line will be eight feet high at the time of planting and placed on top of the berm.
- A 2-3-foot berm shall be added to the west lot line of the site.
- The parking spaces shall utilize looped striping.
- Any existing landscaping that is deficient shall be replaced.
- The deficiency of landscaping of the retention pond shall be added.
- All landscape areas shall be irrigated.
- A loading area shall be identified on the front parcel.
- The sight lighting along the south property line shall have physical shields added to the light source to direct all light away from the lot line.
- A right-turn-only sign shall be placed at the exit onto Hubert Road.
- The Environmental Impact Assessment shall contain hours of operation and the hours of trash pickup, will be during business hours.
- The Environmental Impact Assessment shall contain the plan for the lighting, including hours when they will be on.
- The engineer's and Fire Marshal's issues shall be addressed.
- The Environmental Impact Assessment shall state that there will be no vehicles of disrepair stored on the site.

Moved by Commissioner Rauch, seconded by Commissioner Dhaenens, to table Open Public Hearing #1 until the March 14, 2022 Planning Commission meeting. **The motion carried unanimously.**



June 8, 2022

Planning Commission Genoa Township 2911 Dorr Road Brighton, Michigan 48116

| Attention: | Kelly Van Marter, AICP | | |
|------------|--|--|--|
| | Planning Director and Assistant Township Manager | | |
| Subject: | Brighton Motors – Special Land Use and Site Plan Review #3 | | |
| Location: | 7100 Grand River Avenue – southeast corner of Grand River and Hubert Drive | | |
| Zoning: | GCD General Commercial District | | |

Dear Commissioners:

At the Township's request, we have reviewed the revised submittal from Brighton Motors for an expansion of their operation onto the adjacent property south of the existing development (plans dated 5/3/22).

A. Summary

- 1. The special land use standards of Section 19.03 are generally met, though the applicant must address any comments raised by the Township Engineer and/or the Brighton Area Fire Authority.
- 2. To comply with the use conditions of Section 7.02.02(c), the applicant must combine the two parcels.
- 3. The rear yard buffer zone is deficient by 11 evergreen trees; however, the remainder of the site provides more trees than required (by at least 13 trees).
- 4. The discrepancies between the landscape plan and planting table must be corrected.
- 5. The applicant will need to ensure that shielding is provided for the light fixtures at the rear of the site to protect the adjacent residential properties.
- 6. Overall lighting intensity must be reduced to meet Ordinance standards (no more than 10 footcandles).

B. Proposal/Process

The applicant proposes an expansion of the existing automobile dealership, which requires special land use approval in accordance with Sections 7.02 and 19.06 of the Township Zoning Ordinance. The use conditions of Section 7.02.02(c) also apply to the request.

The application forms note that the development area is a separate parcel under common ownership with the existing dealership property. If the project is approved, the parcels must be combined.

Procedurally, the Planning Commission is to review the special land use, site plan, and Environmental Impact Assessment, and put forth recommendations to the Township Board following a public hearing.

Additionally, the existing site conditions do not match the site plan approved in 2004. Specifically, parking areas have been added in front of the building and along the west side that were never part of an approved plan. Furthermore, these areas were not identified as part of the current request.

Options for the applicant include restoring the site to the conditions of the approved plan, or amending the current request to include these areas as part of this project. From a zoning standpoint, the drive aisles and parking spaces meet dimensional standards, though the spaces are not double striped and the easterly space along the front of the building does not abut a curb/sidewalk. There may also be circulation concerns for emergency access.



Aerial view of site and surroundings (looking north)

C. Special Land Use Review

Section 19.03 of the Zoning Ordinance identifies the review criteria for Special Land Use applications as follows:

1. Master Plan. The Township Master Plan identifies the subject site as General Commercial, which is intended for businesses that "serve the requirements of the community at large including Genoa Township, Howell, Brighton, and pass-by traffic along Grand River Avenue." This land use category also references outdoor storage.

The nature and location of the existing business and the proposed expansion, generally reflect the planned character of this area/land use category.

2. Compatibility. Properties fronting Grand River include a variety of commercial, office, and service uses, while the area to the south contains single-family residences.

The primary concern under this criterion is related to the potential impacts upon the residential uses south of the site.

In this instance, traffic concerns should be mitigated since there is no new vehicular access to/from Hubert Drive, and the development will retain use of the existing driveways (1 along Grand River and 1 along Hubert Road towards the intersection with Grand River).

Section 7.02.02(c) includes buffer zone requirements to help protect these residences from adverse impact. Provided these conditions are met, the proposal is generally expected to be compatible with the surrounding area.

3. Public Facilities and Services. Given that the site fronts Grand River and is developed, we anticipate that necessary public facilities and services are already in place.

However, the applicant must address any comments provided by the Township Engineer and/or Brighton Area Fire Authority related to this criterion.

4. Impacts. Similar to comments above, provided the use conditions are met, surrounding properties are not expected to be adversely impacted by the proposal.

5. Mitigation. If further concerns arise as part of the review process, the Township may require additional efforts to mitigate potential adverse impacts.

D. Use Conditions

Automobile dealerships are subject to the use conditions of Section 7.02.02(c), as follows:

1. Sale space for used mobile homes, recreational vehicles and boats may only be carried on in conjunction with a regularly authorized new mobile home, recreational vehicle or boat sales dealership on the same parcel of land.

The development site is adjacent to the existing business. As previously noted, the two parcels under common ownership must combined as part of this project.

2. All outdoor storage areas shall be paved with a permanent, durable and dustless surface and shall be graded and drained to dispose storm water without negatively impact adjacent property. The Township Board, following a recommendation of the Planning Commission and the Township Engineer, may approve a gravel surface for all or part of the display or storage area for low intensity activities, upon a finding that neighboring properties and the environment will not be negatively impacted.

The development area, which is for parking/vehicle storage, will be paved as part of this project.

3. No storage or display of vehicles shall be permitted in any landscape greenbelt area, provided the Township may permit a display pod for an automobile within the greenbelt area where it is integrated into the landscape design.

The revised submittal does not include any vehicle storage within these areas.

4. The site shall include a building of at least five hundred (500) feet of gross floor area for office use in conjunction with the use.

The notes on Sheet SP indicate that the existing building contains an area of 6,296 square feet.

5. All loading and truck maneuvering shall be accommodated on-site.

The development area includes a vehicular connection to the existing developed site, and does not provide direct access to/from Hubert Drive.

6. All outdoor storage area property lines adjacent to a residential district shall provide a buffer zone A as described in Section 12.02. A buffer zone B shall be provided on all other sides. The Planning Commission may approve a six (6) foot high screen wall or fence, or a four (4) foot high landscaped berm as an alternative.

A Buffer Zone A is required along the southerly lot line, while a Buffer Zone B is required along the easterly lot line.

The revised site plan provides more than sufficient widths for both buffer zones. (See review comments on landscape plan below with respect to compliance.)

E. Site Plan Review

1. Dimensional Requirements. Given the nature of the proposal, the only GCD dimensional requirements that apply are parking lot setbacks and impervious surface lot coverage.

Front, side and rear parking setbacks are met, while the northerly setback will not apply upon completion of the parcel combination.

The revised submittal notes an impervious surface lot coverage ratio of 54%, is well within the 75% limitation allowed in the GCD.

2. Pedestrian Circulation. There is an existing public sidewalk along Grand River.

Per Section 12.05 and the Township's Pathway Plan, neither a walk nor path is required along Hubert Drive.

3. Vehicular Circulation. The development area will be accessed by driveway connections to the existing operation. As previously noted, new access to/from Hubert Drive is not proposed.

The proposed layout is suitable for two-way travel throughout.

The applicant must address any comments provided by the Township Engineer and/or the Brighton Area Fire Authority with respect to vehicular circulation.

4. Parking. The submittal notes that the primary purpose for the proposal is to store vehicles in the applicant's inventory, though some of the spaces are intended for employee parking.

As such, we do not believe the maximum parking standard of Section 14.02.06 applies. However, the layout and design are subject to the remaining standards of Article 14.

The lot itself provides the dimensions, paving, and curbing required by Article 14. The revised plan also depicts looped striping.

5. Landscaping. The revised landscape plan has been reviewed for compliance with the standards of Section 12.02, as shown in the following table:

| Standard | Required | Proposed | Notes |
|-------------------|------------------------------|-----------------------------|---------------------------|
| Front yard | ont yard 20' width 20' width | | In compliance |
| greenbelt (total) | 23 canopy trees | 10 existing trees | |
| | | 23 proposed trees | |
| | | 100+ shrubs | |
| Buffer Zone "A" | 50' width | 106' width | Deficient by 11 evergreen |
| (south) | 14 canopy trees | 14 canopy trees | trees |
| | 28 evergreen trees | 17 evergreen trees | |
| | 56 shrubs | 56 shrubs | |
| | 6' wall OR 4' berm | 4' berm | |
| Buffer Zone "B" | 20' width | 20' width | In compliance |
| (east) | 11 canopy trees | 13 existing trees | |
| | 11 evergreen trees | 12 canopy trees | |
| | 43 shrubs | 9 evergreen trees | |
| | 6' wall OR 3' berm | 85 shrubs | |
| | | 4' berm | |
| Parking lot (rear | 9 trees | 9 trees | In compliance |
| yard only) | 890 SF landscaped area | Approx. 1,000 SF landscaped | |
| | | area | |
| Detention Pond | 10 trees | 10 trees | In compliance |
| | 50 shrubs | 106 shrubs | |

The following discrepancies between the landscape plan and plant materials table need to be corrected for consistency: Amur Maple (32 noted; 38 depicted), Colorado Spruce (24 noted; 29 depicted), Medora Juniper (73 noted; 125 provided), and Shirobana Spirea (32 noted; 64 depicted).

Genoa Township Planning Commission Brighton Motors Special Land Use and Site Plan Review #3 Page 5

6. Exterior Lighting. The revised lighting plan depicts 12 new light poles (9 of which have double fixtures) with a fixture mounting height of 20 feet.

Fixture details note the use of downward directed, cut-off LED fixtures. The applicant will need to ensure that shielding is provided for the fixtures at the rear of the site to protect the adjacent residential properties.

The photometric plan identifies a maximum on-site intensity of 22.2 footcandles, which exceeds the Ordinance limit (10 footcandles). Intensities along property lines meet current standards, but the overall lighting intensity needs to be reduced for full compliance.

7. Impact Assessment. The revised submittal did not include a new Impact Assessment.

Based on the document included with the previous submittal, the Assessment noted that the proposed project is not expected to have an adverse impact upon natural features or public services/utilities.

Should you have any questions concerning this matter, please do not hesitate to contact our office.

Respectfully, **SAFEBUILT**

Brian V. Borden, AICP Michigan Planning Manager



June 8, 2022

Ms. Kelly Van Marter Genoa Township 2911 Dorr Road Brighton, MI 48116

Re: Brighton Motors Parking Lot Site Plan Review No. 3

Dear Ms. Van Marter:

Tetra Tech conducted a third review of the proposed Brighton Motors Parking Lot Addition site plan last dated May 3, 2022. The plans were completed by Desine, Inc. on behalf of MLC Motor Cars. The site is on a vacant 2-acre parcel located on the east side of Hubert Road, just west of Harte Drive. The Petitioner is proposing a parking lot that will connect to the existing parking lot on the parcel to the north.

The plans have been revised to include updated storm drainage calculations and a revised site layout and all previous comments have been addressed. We have no further engineering related concern with the proposed development.

Please call or email if you have any questions.

Sincerely,

Gary J. Markstrom, P.E. Vice President

Attachment

by Byene

Shelby Byrne Project Engineer

BRIGHTON AREA FIRE AUTHORITY



615 W. Grand River Ave. Brighton, MI 48116 o: 810-229-6640 f: 810-229-1619

May 25, 2022

Kelly VanMarter Genoa Township 2911 Dorr Road Brighton, MI 48116

RE: Brighton Motors Parking Lot 7100 Grand River Genoa Twp., MI

Dear Kelly:

The Brighton Area Fire Department has reviewed the above-mentioned site plan. The plans were received for review on May 10, 2022 and the drawings are dated May 3, 2022. The project is based on the proposed redevelopment of an existing vacant parcel into additional vehicle parking for an existing automobile dealership The plan review is based on the requirements of the International Fire Code (IFC) 2021 edition.

All previous comments have been revised and are reflected on the latest drawing.

If you have any questions about the comments on this plan review please contact me at 810-229-6640.

Cordially,

Rick Boisvert, FM, CFPS Fire Marshal

cc:Amy Ruthig amy@genoa.org

Livingston County Road Commission

3535 Grand Oaks Drive • Howell, Michigan 48843-8575 Telephone: (517) 546-4250 • Facsimile: (517) 546-9628 Internet Address: www.livingstonroads.org

May 20, 2022

Steve Baibak Desine, Inc. 2183 Pless Drive Brighton, MI 48114

Re: Brighton Motors Parking Expansion, Genoa Township, Section 13 LCRC APP-220009

Dear Mr. Baibak:

The application to work within the county road right-of-way to tap the existing storm sewer in the Herbst Road right-of-way for the Brighton Motors Parking Expansion was received. I have completed the review of the plans, dated May 3, 2022, and offer the following comments.

- 1. The LCRC does not permit private utilities within the road rights-of-ways. Therefore, the storm water discharge pipe will need to terminate outside of the Herbst Road right-of-way.
- 2. Per the LCRC's specifications, the discharge of the storm water into the LCRC rightof-way shall not present an increase in the *rate or volume* of storm water entering the county right-of-way. Calculations of the pre-development discharge rate and volume will need to be shown on the plans along with the post-development rate and volume calculations. Those calculations should verify there is not an increase in the rate of volume of storm water being discharged to the road right-of-way.

Please revise the plans and re-submit in the Oxcart application. If you have any questions, please do not hesitate to contact me.

Sincerely,

Kun Hiller

Kim Hiller, P.E. Utilities and Permits Engineer

Cc: File

Kelly VanMarter, Genoa Township (via email) Ken Recker, Livingston County Drain Commissioner's Office (via email)



2911 Dorr Road Brighton, MI 48116 810.227.5225 810.227.3420 fax genoa.org

NOTICE OF PUBLIC HEARING – JUNE 13, 2022 (SPECIAL USE)

May 27, 2022

To Whom It May Concern:

Please be advised that the Planning Commission of Genoa Charter Township will conduct a public hearing on **Monday, June 13, 2022 commencing at 6:30 p.m**. As required by state law, you are receiving this notice because you have been identified as an owner or occupant of real property within 300 feet of the subject parcels.

The property in question is located at 7100 Grand River Avenue, on the southeast corner of Grand River Avenue and Hubert Drive. The applicant is requesting a special land use permit to expand a parking/vehicle storage lot for an existing automobile dealership. The request is petitioned by Joshua Tauriainen.

You are invited to attend this hearing. Members of the public will be able to speak during the public hearing portions of the meeting. If, prior to the meeting, members of the public have certain questions or wish to provide input on any business that will be addressed at the meeting then such persons may contact the Planning Commissioners through Kelly VanMarter, Township Community Development Director by email to Kelly@genoa.org, or by mail at 2911 Dorr Road, Brighton, Michigan 48116.

Genoa Charter Township will provide necessary reasonable auxiliary aids and services to individuals with disabilities at the meeting/hearing upon seven (7) days' notice to the Township. Individuals with disabilities requiring auxiliary aids or services should contact the Township in writing or by calling at (810) 227-5225.

Sincerely

Kelly VanMarter, Assistant Township Manager / Community Development Director

SUPERVISOR

Bill Rogers

CLERK Paulette A. Skolarus

TREASURER Robin L. Hunt

TRUSTEES

Jean W. Ledford H. James Mortensen Terry Croft Diana Lowe

MANAGER Michael C. Archinal

300 Foot Buffer for Noticing



Special Use Application: Brighton Motors Parking

Address: 7100 Grand River

Parcel: 4711-13-100-039

Meeting Date: February 14, 2022



0 0.01 0.02

0.04



0.06

0.08

Janaury 20, 2022

| From: | Kelly VanMarter |
|----------|--|
| То: | chrisgrajek@comcast.net; Eric Rauch (Eric.d.rauch@gmail.com); Glynis McBain ; Jeff Dhaenens (jeffdha@yahoo.com); Mortensen; msmccreary@comcast.net; Patty Thomas; Tim Chouinard (chouinardcustomhomes@gmail.com) |
| Cc: | Amy Ruthig |
| Subject: | FW: Brighton Motors Parking lot expansion |
| Date: | Monday, February 14, 2022 9:41:47 AM |

Please see below email below regarding the Brighton Motors project on tonight's agenda.

Kelly VanMarter, AICP Assistant Township Manager/Community Development Director

Genoa Charter Township 2911 Dorr Road, Brighton, Michigan 48116 Direct: (810) 588-6900, Phone: (810) 227-5225, Fax: (810) 227-3420 E-mail: <u>kelly@genoa.org</u>, Url: <u>www.genoa.org</u>

From: KRISTIAN SMITH <racecarkris@comcast.net>
Sent: Monday, February 14, 2022 9:30 AM
To: Kelly VanMarter <Kelly@genoa.org>
Subject: Brighton Motors Parking lot expansion

Hi Kelly,

My name is Kristian Smith (6972 Rink Dr.) and I am writing to express my concerns over the expansion of the car dealer (Brighton Motors) per your request to do so.

My concerns about the parking lot expansion are these:

What type of barrier, and how high will it be, will be placed between the lot and the homes adjacent to, and across the street from it? The view from my living room window looks directly at what is now a vacant lot, and I do not wish to see a bunch of junk vehicles that inevitably end up in the back of car lots.

Lights. When they updated the lights after purchasing the lot, it took complaints from myself and other households in Grand Beach Estates, to get them to point the lights downward. The light pollution from the dealer was more than enough to cast shadows in my yard and light up my living room. They have adjusted them since, and it is better, but I am concerned about more lights creating more light pollution in our residential area.

Garbage. This past summer, the dealer had a pile of garbage on a trailer that sat there for weeks. Not a small pile either. I believe there is still a white plastic shelving unit in the lot. We complained about it, :I know my other neighbors did too. We shouldn't have to be subjected to that, hence the need for a barrier of some kind.

Traffic. More cars, more sales, more business. I get it. But please, the amount of "test drives" through our neighborhood is ridiculous. Cars with no plates, cars going too fast. More times than I can count, cars speeding up and down Hubert road. Just over a week ago, a gentleman wearing a suit and tie, roared up and down Hubert on a white quad from the dealer (during a snow storm). I would be against another entrance to the lot just for the fact of keeping traffic on Hubert to a minimum.

Loading and unloading. How many times is a car hauler going to stop on Hubert to load and unload cars? Or use Rink as a turn around point? Our street is crumbling already, lets not make it worse.

I know its progress, its his right to try to build his business. I am just trying to limit the impact it will have on not only my property value, but most importantly, on our way of life in what has been a quiet, old school family neighborhood.

Thanks for listening to my rant, and I look forward to seeing you at the meeting.

Sincerely,

Kristian Smith 6972 Rink Dr. 313-268-3686

Environmental Assessment

For

Brighton Motors 7100 Grand River Brighton, MI 48114

Proposed raw land improvement project

Josh Tauriainen – Owner (248) 245-3656

Mark Shamoun – Project Lead (248) 225-3939

Table of Contents

- I. Project Description Purpose and Need
- II. Primary Beneficiaries and Related Activities
- III. Description of the Project Area
- IV. Environmental Impacts Resource Criteria
 - 1. Surface Water, Water Supply Quality, Groundwater, and Storm Water
 - 2. General Land Use
 - 3. Energy

I. PROPOSED PROJECT DESCRIPTION PURPOSE AND NEED

- This project would propose the improvement of the current raw land located at 7100 Grand River to a fully buffered and engineered parking lot for the use of storing additional inventory and provide employee parking.
- The need for this project is paramount for the success of the current business operating at 7100 Grand River to address the current lack of parking for customers, employees and inventory. This improvement would allow the business to continue operating and maintain a sound business model.

II. PRIMARY BENEFICIARIES AND RELATED ACTIVITIES:

a. The existing business located at 7100 Grand River will be the primary beneficiary of this proposed improvement project as it allows for the continued expansion to maintain viability. The lot use would allow for current employees to maintain employment, current and future customers to have compliant areas to park and allow the business to maintain adequate on-site inventory levels to be profitable.

III. DESCRIPTION OF THE PROPOSED PROJECT AREA:

a. The present use of the area is raw land with no discernable use currently. The area is adjacent to the existing business located at 7100 Grand River. The property is near some residential structures that also back up to existing parking areas for other adjoining businesses in the immediate area. The portions of the raw land that would be improved will contain several buffers and landscaping to both maintain an improved area that is visually presentable and to allow for its incorporation into the surrounding areas with the most beneficial aesthetics.

IV. ENVIRONMENTAL IMPACTS RESOURCE CRITERIA

1. SURFACE WATER, WATER SUPPLY QUALITY, AND GROUNDWATER: <u>Assessment Questions:</u>

- 1. Are there visual or other indications of water quality problems on or near the site? No
- 2. Will the proposal involve discharge of sewage effluent into surface water bodies? No
- 3. Will the proposal involve a substantial increase in impervious surface areas? Yes If so, have runoff control measures been included in the design to insure protection of surface water? Yes

2. GENERAL LAND USE

Assessment Questions:

- 1. Is the proposal consistent with local, regional or state comprehensive plans, policies, ordinances, and goals? Yes
- 2. Does the proposal comply with existing zoning regulations? Yes

3. ENERGY

Assessment Questions:

- 1. Will the proposal require an increase in use of the area's energy resources (electricity, natural gas, coal, or fuel)? Yes Will there be a need for increased capacity of any energy resources supply due to the proposal? No
- 2. Discuss any steps taken by the proposal to conserve energy: LED Lighting efficiency.





LEGAL DESCRIPTION

PARCEL NO. 1:

Part of the Northwest 1/4 of Section 13, Town 2 North, Range 5 East, Genoa Township, Livingston County, Michigan, more particularly described as follows: Commencing at the West 1 /4 corner of said Section 13;

thence along the West line of Section 13 and the centerline of Hubert Read, said line also being the West line of HERBST ESTATES, a subdivision as duly laid out, platted and recorded in Liber 21 of Plats, pages 5, 6 and 7 of the Livingston County Records, N01°59'46"W (SPCS) (recorded as N00°45'20"W) (platted as N02°24'32"E), 647.77 feet to the Northwest comer of said subdivision:

thence continuing along said West Section line and centerline, N01°59'46"W (SPCS) (recorded as N00°45'20"W) 300.00 feet to the POINT OF BEGINNING of the Parcel to be described;

thence continuing along said Section line and centerline N01°59'46"W (SPCS) (recorded as N00°45'20"W) 388.90 feet; thence along the centerline of Grand River Avenue S72°22'56"E (SPCS) (recorded as S71°08'30"E) 294.34 feet; thence S02°15'36"E (SPCS) (recorded as S01°01'10"E) 290.09 feet; thence N88°00'14"E (SPCS) (recorded as S89°14'40"W) 278.61 feet to the Point of Beginning. Tax ID No.: 4711-13-100-038

PARCEL NO. 2:

Part of the Northwest 1/4 of Section 13, Town 2 North, Range 5 East, Genoa Township, Livingston County, Michigan, more particularly described as follows:

Commencing at the West 1 /4 corner of said Section 13; thence along the West line of Section 13 and the centerline of Hubert Road, said line also being the West line of HERBST ESTATES, a recorded in Liber 21 of Plats, pages 5, 6 and 7, Livingston County Records, N01°59'46"W (SPCS) (recorded as N00°45'20"W) (platted as N02°24'32"E), 647.77 feet to the POINT OF BEGINNING of the parcel to be described; thence continuing along said Section line and centerline N01°59'46"W (SPCS) (recorded as N00°45'20"W) 300.00 feet; thence N88°00'14"E (SPCS) (recorded as N89°14'40"E) 278.61 feet; thence S02°15'36"E (SPCS) (recorded as S01°01'10"E) 324.98 feet;

thence along the North line of said HERBST ESTATES, N86°53'41"W (SPCS) (recorded as N85°39'15"W) (platted as N82°29'23"W) 281.23 feet to the Point of Beginning. Tax ID No.: 4711-13-100-039

BENCHMARKS

DATUM BASED ON NGS OPUS SOLUTION REPORT, DATED MARCH 22, 2022 AT 9:37 AM

BENCHMARK #200

TOP OF FLARED END SECTION, LOCATED ON WEST SIDE OF HUBERT ROAD, 320± FEET SOUTH OF GRAND RIVER AND NORTH OF 2ND ENTRANCE TO #7000 GRAND RIVER. ELEVATION = 981.21 (NAVD 88)

BENCHMARK #201 NAIL IN THE WEST SIDE OF WALK, LOCATED $13\pm$ FEET WEST OF #7172 AND E'LY OF DUMPTER AREA.

ELEVATION = 983.73 (NAVD 88)

BENCHMARK #202

MDOT SPIKE IN THE WEST SIDE OF AN UTILITY POLE, LOCATED ON EAST SIDE OF HUBERT ROAD AND ACROSS FROM THE 2ND DRIVE ENTRANCE TO **#**7000.

ELEVATION = 983.88 (NAVD 88)



OWNER/DEVELOPER RJ INVESTMENTS GENOA LLC 7100 GRAND RIVER AVE. **BRIGHTON, MI, 48114**

SITE PLAN FOR **BRIGHTON MOTORS GENOA TOWNSHIP**

A PART OF THE NW 1/4 OF SECTION 13, T 2 N, R 5 E, **GENOA TOWNSHIP, LIVINGSTON COUNTY, MICHIGAN**

CIVIL ENGINEER/LAND SURVEYOR

DESINE INC. 2183 PLESS DRIVE **BRIGHTON, MI. 48114** (810) 227-9533



LOCATION MAP SCALE: 1in. - 2000ft.

SHEET INDEX

EXISTING CONDITIONS & DEMOLITION PLAN EX SITE PLAN SP UT1 UTILITY PLAN **STORM SEWER PROFILES AND CALCULATIONS** UT2 **DETENTION BASIN DETAILS AND CALCULATIONS** UT3 **GRADING PLAN** GR SOIL EROSION CONTROL PLAN SE1 SOIL EROSION NOTES AND DETAILS SE2 LANDSCAPE PLAN, NORTH AREA LANDSCAPE PLAN, SOUTH AREA LA1 LA2 LANDSCAPE NOTES & DETAILS LA3 **GENERAL NOTES & DETAILS** DT1 **STORM SEWER NOTES & DETAILS** DT2

1 of 1 LIGHTING PLAN





(TOLL FREE)

| | SINEINC |
|---|---|
| A | (810) 227-9533 CIVIL ENGINEERS LAND SURVEYORS 2183 PLESS DRIVE |

BRIGHTON, MICHIGAN 48114 REVISED SCALE: N/A

OR VISIT CALL811.COM

PROJECT No.: 224245 DWG NAME: 4245 CO PRINT: MAY 3, 2022



| BRICHTON, ML 48114 2.17 ac. gross | EXISTING BRUSH TO BE REMOVED AU BRUT S | OU OU OU OU OU ST STENST 15' DA. STORIË SEVER ST LAST T' DA. STORIË SEVER ST SA LAST T' DA. STORIË SE ST SA LAST T' DA. ST |
|--------------------------------------|--|--|
| REVISION-DESCRIPTION | BRIGHTON MOTORS PARKING EXPANSIO | ; EZ CON |
| | | |



| REVISION-DESCRIPTION |
|-----------------------------|
| |

PARKING EXPANSION

SITE DATA:

PROJECT AREA: 4.17 ac. (GROSS) CURRENT ZONING: GCD GENERAL BUSINESS AUTOMOBILE SALES PROPOSED USE: GROUND FLOOR AREA: 6,296 sq.ft.

| BUILDING HE | IGHT: | PROPOSED SEE ARCH. PLANS | REQUIRE 35 FEE |
|----------------------|-----------------------|-----------------------------|----------------------------|
| PARKING SETBACKS: | FRONT SIDE REAR | 20.0' 10.0' 10.0' | 20 FT. 10 FT. 10 FT. |

PERCENT OF LOT COVERAGE OF BUILDINGS: 6,296 S.F./146,045 S.F. (NET) = 4.0%

IMPERVIOUS AREA: 1.81 A.C./3.35 A.C. (NET) = 54%

PARKING CALCULATIONS

PARKING REQUIREMENTS: 1 SPACE/800 S.F. GROSS LEASABLE FLOOR AREA, PLUS 2 SPACES PER EACH VEHICLE SALES SERVICE BAY. 1 LOADING SPACE, PLUS 1 SPACE PER EACH ADDITIONAL 20,000 S.F. GFA.

PROPOSED GROSS LEASABLE FLOOR AREA: 5,352 S.F. 5,352 S.F./800 S.F. = 6 SPACES4 SERVICE BAYS X 2 SPACES = 8 SPACES 1 LOADING SPACE (REQUIRED)

15 TOTAL SPACES (REQUIRED)

CALCULATED PARKING: BUILDING SPACES: 13 PARKING SPACES + 1 BARRIER FREE + 1 LOADING

65 SPACES (EXISTING) 107 SPACES (EXPANSION LOT)

SITE PLAN

S2 CONSTRUCTION MANAGEMENT 12596 TEN MILE ROAD SOUTH LYON, MICHIGAN 48178 248-225-3939

CLIENT:

SCALE: 1in. = 20ft. PROJECT No.: 224245 DWG NAME: 4245 SP ISSUED: MAY 3, 2022

| | GRAPHIC SCALE |
|---------------------|--|
| | |
| | |
| | (IN FEET) |
| | 1 INCH = 20 FEET |
| | LECEND |
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| | |
| | = BUILDING LINE |
| | \odot = BOLLARD |
| | STOP = STOP SIGN |
| | SIGN / MONUMENT SIGN |
| | $\triangle 00 = SOIL BORING$ |
| | $\dot{\boldsymbol{x}}$ = LIGHT BASE |
| | E © ₩ 12 17 METERS & BOXES (ELECTRIC METER, GAS METER, WATER METER, PHONE BOX, CATV BOX, MAIL BOX, UTIL. BOX) |
| | AIR CONDITIONER UNIT |
| | (((- ou |
| | ou = OVERHEAD UTILITY LINES (ELECTRIC/PHONE/CABLE) |
| | PH PH PH DPT DPT PH CL EL (PHONE/FIBER OPTIC/ELECTRIC/CABLE TV/MISC UTILITIE |
| | |
| | = DECIDIOUS TRFE W/DENTIFIER |
| | Scale Conferous Tree W/IDENTIFIER |
| | = BUSH / SHRUB |
| | = FENCE (CHAIN LINK UNLESS OTHERWISE STATED) |
| | = EX. EDGE OF GRAVEL |
| | = EX. CONCRETE CURB (UNLESS OTHERWISE STATED) |
| | S 00 = SANITARY SEWER MANHOLE W/IDENTIFIER |
| | SA SA = SANITARY SEWER PIPE |
| | - CLEAN OUT |
| | <i>•RD</i> = ROOF DRAIN |
| | \bigcirc 00 = STORM WATER MANHOLE W/IDENTIFIER |
| | $\blacksquare 00 \oplus 00 = CATCH BASIN W/IDENTIFIER$ |
| | ○ 00 = CONTROL STRUCTURE |
| FXISTING | = FLARED END SECTION |
| | ST ST = STORM WATER DRAINAGE PIPE |
| | $\frac{1}{\sqrt{2}}$ = HIDRANI |
| INVENTORY | \otimes 00 = WATER GATE VALVE WELL / MANHOLE |
| BASIN #A | = WATER VALVE BOX |
| KLY KIM 978.90 | |
| RLY 15" RCP 975.27 | © ⊚ = GAS MANHOLE |
| RLY 15" RCP 975.34 | GV = GAS SHUT OFF |
| BASIN #B | GAS GAS = U/G GAS |
| " RLY RIM 980.07 | |
| RIY 15" RCP 971 80 | AND SOUTH OF STOLELE VALUEN |
| | = EX. 1' CONTOUR |
| RLY 1 5" RCP 971.77 | |
| LY 1 5" RCP 971.77 | = EX. 5' CONTOUR |

| PROPOSED STORM WATER RUN-OFF | | | | | |
|------------------------------|----------|----------|------|---------|------------|
| | 0.90 | 0.90 | 0.20 | (ACRES) | |
| "Area" | Pavement | Building | Lawn | Area | "C" Factor |
| 100 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 101 | 0.20 | 0.00 | 0.07 | 0.27 | 0.72 |
| 102 | 0.21 | 0.00 | 0.02 | 0.23 | 0.84 |
| 110 | 0.21 | 0.00 | 0.16 | 0.37 | 0.60 |
| 111 | 0.20 | 0.00 | 0.01 | 0.21 | 0.87 |
| BASIN | 0.00 | 0.00 | 0.48 | 0.48 | 0.20 |

TOTAL AREA =1.56ACRESRUN-OFF COEFFICIENT =0.57

DATUM BASED ON NGS OPUS SOLUTION REPORT, DATED MARCH 22, 2022 AT 9:37 AM BENCHMARK #200 TOP OF FLARED END SECTION, LOCATED ON WEST SIDE OF HUBERT ROAD, $320\pm$ FEET SOUTH OF GRAND RIVER AND NORTH OF 2ND ENTRANCE TO #7000 GRAND RIVER. ELEVATION = 981.21 (NAVD 88)

BENCHMARK

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MDOT SPIKE IN THE WEST SIDE OF AN UTILITY POLE, LOCATED ON EAST SIDE OF HUBERT ROAD AND ACROSS FROM THE 2ND DRIVE ENTRANCE TO **#**7000. ELEVATION = 983.88 (NAVD 88)

3 WORKING DAYS BEFORE YOU DIG CALL 811 OR 1-800-482-7171 (TOLL FREE) OR VISIT CALL811.COM

SCALE: 1in. = 20ft.

DWG NAME: 4245 UT

PROJECT No.: 224245

ISSUED: MAY 3, 2022

UTILITY PLAN

₽

S2 CONSTRUCTION MANAGEMENT 12596 TEN MILE ROAD SOUTH LYON, MICHIGAN 48178 248-225-3939

CLIENT:

JT¹

| EVISION-DESCRIPTION | BRIGHTON MOTORS | CI |
|---------------------|-------------------|--------|
| | PARKING EXPANSION | ר ג |

| То | Inc. | | Eqv. | Total | Т | I | Q | Qa | Qt | Dia. |
|------|-------|------|------|-------|------|------|--------|-------------|--------------|------|
| /IH# | Acres | | Area | Area | Time | Inch | (CIA) | (Additional | (Total flow) | of |
| CB# | | | 100% | 100% | | Per | | flow) | (100011000) | pipe |
| ES# | "A" | "C" | CA | CA | Min. | Hour | c.f.s. | c.f.s. | c.f.s. | inch |
| 110 | 0.21 | 0.87 | 0.18 | 0.18 | 20.0 | 3.89 | 0.71 | | 0.71 | 12 |
| 101 | 0.37 | 0.60 | 0.22 | 0.40 | 20.4 | 3.85 | 1.55 | | 1.55 | 12 |
| | | | | | | | | | | |
| 101 | 0.23 | 0.84 | 0.19 | 0.19 | 20.0 | 3.89 | 0.75 | | 0.75 | 12 |
| | | | | | | | | | | |
| 100 | 0.27 | 0.72 | 0.19 | 0.79 | 21.0 | 3.80 | 3.01 | | 3.01 | 15 |
| | | | | | | | | | | |
| 201 | 0.33 | 0.20 | 0.07 | 0.07 | 20.0 | 3.89 | 0.26 | | 0.26 | 12 |
| 200 | 0.00 | 0.00 | 0.00 | 0.07 | 20.1 | 3.88 | 0.26 | | 0.26 | 12 |
| | | | | | | | | | | |
| 98 | 0.00 | 0.00 | 0.00 | 0.00 | 20.0 | 3.89 | 0.00 | | 0.00 | 12 |
| | | | | | | | | | | |
| 96 | 0.00 | 0.00 | 0.00 | 0.00 | 20.0 | 3.89 | 0.00 | | 0.00 | 12 |

HDPE n= 0.013

| Slope | Slope | Length | Vel. | Time | Сар | H.G. | Ground Elev. | | Invert El | ev. |
|-------|-------|--------|----------|------|--------|--------|--------------|--------|-----------|--------|
| pipe | H.G. | of | Flow | of | of | Elev. | Upper | Lower | Upper | Lower |
| | | line | full | flow | pipe | upper | end | end | end | end |
| % | % | ft. | ft./sec. | min. | c.f.s. | end | | | | |
| 0.32 | 0.04 | 62 | 2.57 | 0.4 | 2.02 | 980.07 | 981.00 | 981.00 | 978.83 | 978.63 |
| 0.32 | 0.19 | 91 | 2.57 | 0.6 | 2.02 | 980.04 | 981.00 | 981.09 | 978.53 | 978.24 |
| | | | | | | | | | | |
| 0.32 | 0.04 | 62 | 2.57 | 0.4 | 2.02 | 979.90 | 981.15 | 981.09 | 978.44 | 978.24 |
| | | | | | | | | | | |
| 0.25 | 0.22 | 83 | 2.63 | 0.5 | 3.23 | 979.87 | 981.09 | 977.83 | 978.04 | 977.83 |
| | | | | | | | | | | |
| 2.50 | 0.01 | 41 | 7.17 | 0.1 | 5.63 | 983.50 | 983.50 | 984.00 | 983.50 | 982.47 |
| 2.50 | 0.01 | 32 | 7.17 | 0.1 | 5.63 | 979.00 | 984.00 | 978.00 | 978.80 | 978.00 |
| | | | | | | | | | | |
| 1.50 | 0.00 | 13 | 5.56 | 0.0 | 4.36 | 979.00 | 979.68 | 978.00 | 978.20 | 978.00 |
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| 2.00 | 0.00 | 40 | 6.42 | 0.1 | 5.04 | 978.00 | 979.73 | 983.00 | 977.80 | 977.00 |
| | | | | | | 979.69 | Downstream | HWL | | |

3 WORKING DAYS BEFORE YOU DIG CALL 811 OR 1-800-482-7171 (TOLL FREE) OR VISIT CALL811.COM

(810) 227-9533 CIVIL ENGINEERS LAND SURVEYORS 2183 PLESS DRIVE BRIGHTON, MICHIGAN 48114

STORM PROFILES CALCULATIONS

CLIENT:

S2 CONSTRUCTION MANAGEMENT 12596 TEN MILE ROAD SOUTH LYON, MICHIGAN 48178 248-225-3939

SCALE: N/A PROJECT No.: 224245

DWG NAME: 4245 UT

ISSUED: MAY 3, 2022

UT2

| | | | | (5 FAX (5 | 17) 546-612 17) 546-147 | :1 '8 | | |
|---|------------------------------------|----------------------------------|----------------|-----------------------|----------------------------|-----------------------|----------|--|
| | HASTING AND EI "Testing to k | S TESTI VVIRON eep America | NG EN MENTA | GINE L IN | EERS C. | | | |
| | 4841 GOLÉ | CLUB ROAD | HOWELL | ., MI 48 | 843 | | | |
| | REPORT | OF SOIL | BORING | 3 | | | | |
| ESTED FOR: Desine Inc. 2183 Pless Drive | | | RE CL DA | PORT IENT FE | # :711 # :480 :04/ | .5 2 19/22 | | |
| Brighton | MI 48114 | i. | PA | JE | :1 | | | |
| CATION :Soil Boring #1 - S | ee Enclosed I | iagram | 1 | | | | | |
| Soil Description | Depth in | Sample & | Blow Count | N Val | % Water | Natural WT. | Unconfin | ed Strengt |
| Organic Soil and Material | 0.5 | Type | | | | PCF | Str. PSF | Fall Stra |
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| Coarse Brown Sand | 1.5 | | | | | | | |
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| | 9.5 | ISS2 | 5 | 9 | 9.5 | | | 1 |
| | 10.5 | 1 | | | | | | |
| | 11.0 | | | - | | | | |
| | 11.5 | | | | | | | |
| | 12.0 | | | - | | | | |
| | 13.0 | | | | | | | |
| Silty Gray Clay with smal | .1 13.5 | | 8 | | | | | |
| stones | 14.0 | 0.02 | 11 | 00 | 10.0 | | 5000 | |
| Silty Gray Clay with smal stones | 14.5 | 1553 | | 122 | 1 10.0 | | 5000. | |
| | 15.5 | | | | | | | |
| | 16.0 | | | | | | | |
| | 16.5 | | | | | | | |
| | 17.0 | | | - | | | 2 | |
| | 18.0 | | | | | | | |
| | 18.5 | | 12 | | | | | |
| | 19.0 | gg/ | 21 | 125 | Q 4 | | 9000 | |
| | 20.0 | 004 | 24 | 1=2 | 0.4 | | | |
| | 20.5 | | | | | | | |
| | 21.0 | | 1 | | | | | |
| Silty Gray Clay with smal | .1 21.5 | | | | | | | |
| | 22.0 | | | | | | | |
| | 23.0 | | | | | | | |
| Brown Silt | 23.5 | | 11 | | | | | |
| | 24.0 | SS5 | 11 | 21 | 20.6 | | | |
| | 25.0 | | 1 10 | | 50.0 | | | |
| | 25.5 | | | | | | | |
| | 26.0 | | | | | | | |
| | 26.5 | | | - | | | | |
| | 27.5 | - | | - | | | | |
| | 28.0 | | | | | | | |
| Silty Gray Clay with smal | 1 28.5 | | 5 | | | | | |
| | 29.0 | 1000 | 10 | 05 | 10 | | | |
| End Of Soil Boring #1 | 29.5 30.0 | 556 | 12 | 22 | 13.7 | | 5000. | |
| | | 1 | 1 | | | | | |
| Type of Sample, SS and | t Spear | | * ~ | | 1 | and the second second | T = = 2 | and the second sec |

| | | | | (5 FAX (5 | 17) 546-612 17) 546-147 | 11 | | | |
|--|----------------|-----------|----------------|--------------------|------------------------------|----------------------|------------------------|-------------------------|--|
| ŀ | ASTING | S TESTI | NG EN MENT/ | GINE | EERS IC. | | | | |
| | 4841 GOLF | CLUB ROAD | • HOWEL | L, MI 48 | 3843 | | | | |
| | REPORT | OF SOIL | BORIN | IG | | | | | |
| TESTED FOR: Desine Inc. 2183 Pless Drive | | | RE CI DA | PORT IENT TE | " # :71: " # :480 :04, | L6)2 /19/22 | | | |
| Brighton | MI 4811 | 4 | Př | GE | :1 | | | | |
| LOCATION :Soil Boring #2 - See Enclosed Diagram | | | | | | | | | |
| Soil Description | Depth in | Sample | Blow | N Val | % Water | Natural WT. | Unconfine | ed Strength | |
| | Feet | Type | * | | 1 | PCF | Str. PSF | Fail Strain | |
| IIII Organic Soil and Material | 0.5 | | | - | | | | | |
| XXX Coarse Brown Sand | 1.5 | | | - | | | | | |
| | 2.0 | 1 | | - | | | | | |
| | 2.5 | | | | | | | | |
| | 3.0 | | | | | | | | |
| Silty Coarse Brown Sand | 3.5 | | 22 | | | | | | |
| | 4.0 | | 26 | 100 | | | | | |
| | 5.0 | | 29 | 155 | 0.9 | | | | |
| | 5.5 | 1 | | | | | | | |
| | 6.0 | | | | | | | | |
| | 6.5 | | | | | | | | |
| | 7.0 | <u> </u> | ļ | ļ | | | | | |
| Silty Coarse Brown Sand | 7.5 | | | - | | | | | |
| | 8.5 | | 4 | | | | | | |
| | 9.0 | | 5 | 1 | | | | | |
| | 9.5 | SS2 | 6 | 11 | 8.8 | | | | |
| | 10.0 | | | | | | | | |
| | 10.5 | | | | | | | | |
| | 11.0 | | | | | | | | |
| | 12.0 | | | | | | | | |
| | 12.5 | | | - | | | | | |
| | 13.0 | | | | | | | | |
| Silty Gray Clay with small | 13.5 | | 8 | | | | | | |
| stones | 14.0 | 1 | 9 | - | | | - | | |
| Silty Gray Clay with small | 14.5 | SS3 | 9 | 18 | 14.1 | | 3000. | | |
| stones | 15.0 | | | 1 | | | | | |
| | 16.0 | | 1 | 1 | | | | | |
| | 16.5 | | | | | | | | |
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| | 17.5 | | | | | | | | |
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| | 19.5 | SS4 | 28 | 54 | 7.6 | | 8000. | | |
| | 20.0 | | | - | | | | | |
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| Silty Gray Clay with | 21.0 | | | | | | | | |
| stones | 21.5 | | | | | | | | |
| | 22.5 | | | | | | | | |
| | 23.0 | | | | | | | | |
| ዙ Brown Silt | 23.5 | | 8 | | | | | | |
| | 24.0 | | 10 | | | | | | |
| 1971 1971 1971 | 24.5 | SS5 | 11 | 21 | 21.5 | | | | |
| | 25.5 | ~~ | | | | | | | |
| | 26.0 | | | | | | | | |
| 1777 1월년 1월년 | 26.5 | | 1 | | | | | | |
| | 27.0 | | | | | | | | |
| | 27.5 | | | _ | | | | | |
| | 28.0 | | | | | | | | |
| stones | 28.5 | | 11 | | | | | | |
| | 29.5 | SS6 | 14 | 25 | 15.7 | | 4000. | | |
| End Of Soil Boring #2 | 30.0 | | | 1 | | | | | |
| Type of Sample: SS - Split Spo SL - Split Spo | on on With | Liner | * Sta | ndaro pler | d Penet 18" wi | ration T th 140 " | est - Driv Hammer F | ing 2" OD alling 30" | |
| DRILLING METHOD :Trailer Moun | be ted Auge | r | Cou GR | nt ma | ade at WATER | 6" inter | RED AT : | 9'-0" BEG | |
| BACKFILL MATERIAL:Existing Mat | erial | | GR GR | JUND | WATER WATER | AFTER CC AFTER | MFLEATION: | 9'-0" BEG 1 Hour | |

| | REVISION # | DATE | REVISION-DESCRIPTION | REVISION # | DATE | |
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| SIGN: SVB | REVISION # | DATE | REVISION-DESCRIPTION | REVISION # | DATE | |
| SIGN:SVB AFT: OBM | REVISION # | DATE | REVISION-DESCRIPTION | REVISION # | DATE | |
| SIGN:SVB RAFT: OBM IECK: WMP | REVISION # | DATE | REVISION-DESCRIPTION | REVISION # | DATE | |

| | 984- \$02'15'36"E '324.98' (M) | | | | | |
|---|---|--|--------------------------|---------|-----|--|
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| PARKING | EX | IPA | NS | ION |

REVISION-DESCRIPTION

- = EDGE OF METAL = BACK OF CURB

3 WORKING DAYS BEFORE YOU DIG CALL 811 OR 1-800-482-7171 (TOLL FREE) OR VISIT CALL811.COM

GRADING PLAN

CLIENT:

SOUTH LYON, MICHIGAN 48178

248-225-3939

BENCHMARK

BENCHMARK #200

#7000 GRAND RIVER.

BENCHMARK #201

BENCHMARK #202

AREA.

#7000.

ELEVATION = 981.21 (NAVD 88)

ELEVATION = 983.73 (NAVD 88)

ELEVATION = 983.88 (NAVD 88)

DATUM BASED ON NGS OPUS SOLUTION REPORT,

TOP OF FLARED END SECTION, LOCATED ON WEST

SIDE OF HUBERT ROAD, 320± FEET SOUTH OF GRAND RIVER AND NORTH OF 2ND ENTRANCE TO

NAIL IN THE WEST SIDE OF WALK, LOCATED 13 \pm FEET WEST OF #7172 AND E'LY OF DUMPTER

MDOT SPIKE IN THE WEST SIDE OF AN UTILITY POLE, LOCATED ON EAST SIDE OF HUBERT ROAD

AND ACROSS FROM THE 2ND DRIVE ENTRANCE TO

DATED MARCH 22, 2022 AT 9:37 AM

SCALE: 1in. = 20ft. S2 CONSTRUCTION MANAGEMENT 12596 TEN MILE ROAD

PROJECT No.: 224245 DWG NAME: 4245 GR ISSUED: MAY 3, 2022

Map Unit Legend

| Map Unit Symbol | Map Unit Name | Acres in AOI | Percent of AOI |
|-----------------------------|---|--------------|----------------|
| BtA | Boyer-Oshtemo loamy sands, 0 to 2 percent slopes | 0.5 | 7.5% |
| МоА | Wawasee loam, 0 to 2 percent slopes | 2.4 | 36.9% |
| МоВ | Wawasee loam, 2 to 6 percent slopes | 3.6 | 55.6% |
| Totals for Area of Interest | | 6.4 | 100.0% |

LEGAL DESCRIPTION

PARCEL NO. 1:

Part of the Northwest 1/4 of Section 13, Town 2 North, Range 5 East, Genoa Township, Livingston County, Michigan, more particularly described as follows: Commencing at the West 1 /4 corner of said Section 13;

thence along the West line of Section 13 and the centerline of Hubert Read, said line also being the West line of HERBST ESTATES, a subdivision as duly laid out, platted and recorded in Liber 21 of Plats, pages 5, 6 and 7 of the Livingston County Records, N01°59'46"W (SPCS) (recorded as N00°45'20"W) (platted as N02°24'32"E), 647.77 feet to the

Northwest comer of said subdivision; thence continuing along said West Section line and centerline, N01°59'46"W (SPCS) (recorded as

N00°45'20"W) 300.00 feet to the POINT OF BEGINNING of the Parcel to be described;

thence continuing along said Section line and centerline N01°59'46"W (SPCS) (recorded as N00°45'20"W) 388.90 feet; thence along the centerline of Grand River Avenue S72°22'56"E (SPCS) (recorded as S71°08'30"E) 294.34 feet; thence S02°15'36"E (SPCS) (recorded as S01°01'10"E) 290.09 feet;

thence N88°00'14"E (SPCS) (recorded as S89°14'40"W) 278.61 feet to the Point of Beginning. Tax ID No.: 4711-13-100-038

PARCEL NO. 2:

Part of the Northwest 1/4 of Section 13, Town 2 North, Range 5 East, Genoa Township, Livingston County, Michigan, more particularly described as follows:

Commencing at the West 1 /4 corner of said Section 13; thence along the West line of Section 13 and the centerline of Hubert Road, said line also being the West line of HERBST ESTATES, a subdivision as duly laid out, platted and

recorded in Liber 21 of Plats, pages 5, 6 and 7, Livingston County Records, N01°59'46"W (SPCS) (recorded as N00°45'20"W) (platted as N02°24'32"E), 647.77 feet to the POINT OF BEGINNING of the parcel to be described; thence continuing along said Section line and centerline N01°59'46"W (SPCS) (recorded as N00°45'20"W) 300.00 feet;

thence N88°00'14"E (SPCS) (recorded as N89°14'40"E) 278.61 feet; thence S02°15'36"E (SPCS) (recorded as S01°01'10"E) 324.98 feet; thence along the North line of said HERBST ESTATES, N86°53'41"W (SPCS) (recorded as N85°39'15"W) (platted as

N82°29'23"W) 281.23 feet to the Point of Beginning. Tax ID No.: 4711-13-100-039

MAINTENANCE NOTES FOR SOIL EROSION CONTROL MEASURES:

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The Construction Site and all Soil Erosion Control Measures shall be inspected periodically in accordance with the appropriate local municipality/authority and the Michigan EGLE NPDES rules and regulations. At a MINIMUM, inspections shall be performed once a week and within 24 hours following a storm event resulting in 1" of rainfall or greater. Inspections shall be performed throughout the duration of the construction process and until the site is completely stabilized. Following construction, the owner (or its assignee) shall periodically inspect all permanent soil erosion control measures to ensure proper operation.

SEEDING: Newly seeded areas shall be inspected until substantial vegetative growth is obtained. Seeded areas shall be inspected to ensure erosion is not occurring in the seeded area and vegetative growth is promoted. Eroded areas shall be finish graded as necessary to removal erosion channels or gulleys and new seed placed as soon as weather permits.

SILT FENCE: Silt fencing shall be inspected for soil accumulation/clogging, undercutting, overtopping and sagging. Soil accumulation shall be removed from the face of the silt fence each time it reaches half the height of the fence. Removed sediment shall be disposed of in a stable upland site or added to a spoils stockpile. When undercutting occurs, grade out areas of concentrated flow upstream of the silt fence to remove channels and/or gulleys and repair or replace silt fence ensuring proper trenching techniques are utilized. Silt fencing, which sags, falls over or is not staked in shall be repaired or replaced immediately. Silt fencing fabric, which decomposes or becomes ineffective, shall be removed and replaced with new fabric immediately. Silt fencing shall be removed once vegetation is well established and the up-slope area is fully stabilized.

SOD: Newly sodded areas shall be inspected to ensure sod is maturing. Sod shall be inspected for failure, erosion or damage. Slipping or eroding sod on steep slopes shall be immediately repaired or replaced and staked in place. Damaged or failed sod shall be immediately replaced.

SPILLWAYS: Spillways shall be inspected to ensure that erosion is not occurring within and/or around the spillway. The discharge point shall be inspected to ensure that concentrated flows are not causing erosion downstream. Inspect the spillway for cracked concrete, uneven and/or excessive settling and proper function. Repair or replace failing spillways immediately. Address vegetation and/or erosion concerns as soon as weather permits.

STOCKPILES: Temporary and permanent topsoil and spoils stockpiles shall be seeded to promote vegetative growth. Stockpiles shall be inspected to ensure excessive erosion has not occurred. When runoff or wind erosion is evident, reduce the side slopes of the stockpile or stabilize the stockpile with pieces of staked sod laid perpendicular to the slope. When filter fencing is used around a stockpile, the fencing shall be inspected to ensure piping has not occurred under the fencing and to ensure the fencing has not collapsed due to soil slippage or access by construction equipment. Repair or replace damaged fencing immediately. Berms at the base of stockpiles, which become damaged, shall be replaced.

STORM STRUCTURE INLET FILTER: Inlet filters shall be inspected for sediment accumulation, clogging and damage. When stone is used in conjunction with inlet filter fabric, replace the stone each time it becomes clogged with sediment. Clean or replace the inlet filter fabric each time it becomes clogged with sediment. Reinstall or replace fallen filter fabrics immediately. Replace damaged filter fabrics immediately.

| | REVISION # | DATE | REVISION-DESCRIPTION | REVISION # | DATE | |
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| | | GRAPHIC SCAI | .E |
| | | | 20 40 |
| 988 | | (IN FEET) | |
| | | 1 INCH = 20 F | EET |
| | | = PARCEL BOUNDARY | |
| 6 P | | = SETBACK LINE = RIGHT OF WAY | |
| | | <pre></pre> | |
| | | STOP = STOP SIGN = SIGN / MONUMENT SIGN | |
| | | $\triangle 00 = SOIL BORING$ $\Rightarrow = LIGHT BASE$ | |
| | | E G W P ™ MM MO = UTILITY METERS & BOXES (ELECTRIC METER, GAS ME PHONE BOX, CATV BOX, N | TER, WATER METER, MAIL BOX, UTIL. BOX) |
| | | $\square = AIR CONDITIONER UNIT$ $(((- \circ \cup - \bigcirc) = UTILITY POLE W/GUY WIRE)$ | |
| $\mathbf{P} [] $ | | ou = OVERHEAD UTILITY LINES (E | ELECTRIC/PHONE/CABLE) |
| | | UP1 = U/G UTILITY LINES EL CTV UT (PHONE/FIBER OPTIC/ELEC) | TRIC/CABLE TV/MISC UTILITIES) |
| | | = EDGE OF BRUSH LINE = DECIDUOUS TREE W/IDENTIF | IER |
| | 53, () | = CONIFEROUS TREE W/IDENT | IFIER |
| | | = FENCE (CHAIN LINK UNLESS = EX. EDGE OF GRAVEL | G OTHERWISE STATED) |
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| IENT OF VEGETATIVE COVER DATUM BAS SEWARS WITH LOW VELOCITY LL QUANTITIES BY INEXPERIENCED PERSONNEL DATED MAR ARED TOPSOIL BED | ED ON NGS OPUS SOLUTION REPORT, CH 22, 2022 AT 9:37 AM | | |
| IN IS NOT EASILY ESTABLISHED BENCHMARY ELOCITIOS OR HIGH CONCENTRATION FILTRATE SOIL TOP OF FL/ | #200 RED END SECTION, LOCATED ON WEST | | |
| CE, THUS MINIMIZING EROSION GRAND RIVE I TRAFFIC IN ADVERSE WEATHER GRAND RIVE OF PERMANENT BASE CONSTRUCTION OF PAVED AREAS #7000 CRA | BERT ROAD, 320± FEET SOUTH OF R AND NORTH OF 2ND ENTRANCE TO ND RIVER. | | |
| POSTS OR POLES OR PREPARAGED | = 981.21 (NAVD 88) | | |
| NU LUCAIL AS NECESSARY BENCHMARY NAIL IN THI OTEXTILE SACKS A RUNOFF AT CATCH BASIN INLET FFFT WEST | #201 WEST SIDE OF WALK, LOCATED 13± OF #7172 AND E'LY OF DUMPTFR | | INC |
| AREA. ELEVATION | = 983.73 (NAVD 88) | Know what's below. | SINE |
| BENCHMAR | #202 IN THE WEST SIDE OF AN LITHLITY | Gall before you dig. | (810) 227-9533 |
| POLE, LOCA AND ACROS | TED ON EAST SIDE OF HUBERT ROAD S FROM THE 2ND DRIVE ENTRANCE TO | 3 WORKING DAYS BEFORE YOU DIG CALL 811 OR 1-800-482-7171 | CIVIL ENGINEERS LAND SURVEYORS |
| JILI I LINCE #7000. ELEVATION | = 983.88 (NAVD 88) | OR VISIT CALL811.COM | 2183 PLESS DRIVE |
| ROSION & | CLIENT: | SCALE: 1in. = 20ft. | |
| ENTATION | S2 CONSTRUCTION MANAG 12596 TEN MILE ROA | AD DWG NAME: 4245 SE | |
| OL PLAN | SOUTH LYON, MICHIGAN 248-225-3939 | ISSUED: MAY 3, 2022 | 「ビーノ |
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| tedures; is when meeting ex. dich, opronel bottom extending up sides to a depth of 1/2 pipe dia. (1) APRON WIDTH FOR USE IN DITCHES AND SWALES (2) APRON WIDTH FOR USE IN FLAT AREAS WHERE SHEET FLOW DESIRED PROPOSED GRADE FLARED END SECTION - SPLASH BLOCK 12" THICK RIP RAP, USE COBBLE STONE OR CRUSHED LIMESTONE; 6" FLOW FLOW FLOW CUSHICO RIP CALSHED ON PLAN NOT TO SCALE NOTWOVEN GEOTEXTLE FILTER FABRIC, KEYED IN ALL EDGES B OZ, SQ, YD, POLYPROPYLENE WITH 15 LB, PUNCTURE NOTES: 1. GROUT RIP RAP WITH A 6" THICK CEMENT SLURRY FOR SLOPES STEEPER THAN 20%; 5 ON 1. 2. PROVIDE ANIMAL GUARDS ON ALL STORM SEWER 15" DIA. OR GREATER; NICK CEMENT SLURRY FOR SLOPES STEEPER THAN 20%; 5 ON 1. 2. PROVIDE ANIMAL GUARDS ON ALL STORM SEWER 15" DIA. OR GREATER; NICK CEMENT SLURRY FOR SLOPES STEEPER THAN 20%; 5 ON 1. 2. PROVIDE ANIMAL GUARDS ON ALL STORM SEWER 15" DIA. OR GREATER; NICKCEMENT SLURRY FOR SLOPES STEEPER THAN 20%; 5 ON 1. 2. PROVIDE ANIMAL GUARDS ON ALL STORM SEWER 15" DIA. OR GREATER; NICKCEMENT SLURRY FOR SLOPES STEEPER THAN 20%; 5 ON 1. 2. PROVIDE ANIMAL GUARDS ON ALL STORM SEWER 15" DIA. OR GREATER; NICKCEMENT SLURRY FOR SLOPES STEEPER THAN 20%; 5 ON 1. 3. PROVIDE ANIMAL GUARDS ON ALL STORM SEWER 15" DIA. OR GREATER; NICKCEMENT SLURRY FOR SLOPES STEEPER THAN 20%; 5 ON 1. 3. PROVIDE ANIMAL GUARDS ON ALL STORM SEWER 15" DIA. OR GREATER; NICKCEMENT SLURRY FOR SLOPES STEEPER THAN 20%; 5 ON 1. 3. PROVIDE ANIMAL GUARDS ON ALL STORM SEWER 15" DIA. OR GREATER; NICKCEMENT SLURRY FOR SLOPES STEEPER THAN 20%; 5 ON 1. 3. PROVIDE ANIMAL GUARDS ON ALL STORM SEWER 15" DIA. OR GREATER; NICKCEMENT SLURRY FOR SLOPES STEEPER THAN 20%; 5 ON 1. 3. PROVIDE ANIMAL GUARDS ON ALL STORM SEWER 15" DIA. OR GREATER; NICKCEMENT SLURRY FOR SLOPES STEEPER THAN 20%; 5 ON 1. 3. PROVIDE ANIMAL GUARDS ON ALL STORM SEWER 15" DIA. OR GREATER; NICKCEMENT SLURRY FOR SLOPES STEEPER THAN 20%; 5 ON 1. 3. PROVIDE ANIMAL GUARDS ON ALL STORM SEWER 15" DIA. OR GREATER; NICKCEMENT SLOPES STEEPER SLOPES STEEP | 42 UNLESS SHO May be vari | 42 28 DWN OTHERWISE ON PLA ed to match natural | 56 • | | RIP RAP AS SHO | | |
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| GRAVEL OR, SAND CUSHION 3" MIN. NONWOVEN GEOTEXTILE FILTER FABRIC, KEYED IN ALL EDGES 8 OZ./SQ. YD. POLYPROPYLENE WITH 115 LB. PUNCTURE Image: Description of the state of t | | MIN. DIAN | METER OR AS NOTED ON | | | GNADE | |
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REVISION-DESCRIPTION

BRIGHTON MOTORS PARKING EXPANSION

SOIL EROSION CONTROL AND CONSTRUCTION SEQUENCE:

- 1. Obtain all necessary Soil Erosion and Sedimentation Control related permits from the appropriate Local, County and/or State Agencies. Refer to the General Notes on the project plans for additional requirements.
- 2. Prior to commencement of any earth disruption install Silt Fence and Mud Tracking Control Device(s) in accordance with the Soil Erosion and Sedimentation Control Plan.
- 3. Construct Retention/Detention and Sedimentation Basins, including associated spillways, in accordance with the project plans. Finish grade and establish vegetative growth in Retention/Detention and Sedimentation Basins prior to massive earth disruption. Install temporary Soil Erosion Control Measures as necessary to stabilize Retention/Detention and Sedimentation Basins.
- 4. Strip and stockpile topsoil. Perform mass grading and land balancing. Install appropriate Soil Erosion Control Measures in accordance with the Soil Erosion and Sedimentation Control Plan.
- 5. Install proposed underground utilities. (i.e.; storm and sanitary sewer, water main, etc.) Install appropriate Soil Erosion Control Measures in accordance with the Soil Erosion and Sedimentation Control Plan.
- 6. Construct building(s) if required on the project plans. Install appropriate Soil Erosion Control Measures in accordance with the Soil Erosion and Sedimentation Control Plan.
- 7. Construct roadways and/or parking areas. Install appropriate Soil Erosion Control Measures in accordance with the Soil Erosion and Sedimentation Control Plan.
- 8. Finish grade all disturbed areas outside of pavement. Perform final restoration, including placement of topsoil and establishment of vegetative growth outside of pavement.
- 9. Following establishment of sufficient vegetative ground cover and receipt of approval from the Permitting Agency, remove all temporary Soil Erosion Control Measures, clean all storm sewer structures and repair all permanent Soil Erosion Control Measures.

SOIL EROSION AND SEDIMENTATION CONTROL NOTES:

- 1. The Soil Erosion and Sedimentation Control Specifications of the appropriate Local, County and/or State Agencies are a part of this work. Refer to the General Notes on the Project Plans for additional requirements.
- 2. The Soil Erosion and Sedimentation Control (SESC) Permit Holder shall be responsible for compliance with the SESC Permit requirements for the duration of the project and until receipt of final approval from the Permitting Agency. For any site with an earth disturbance area of 1 acre or greater, the SESC Permit Holder shall retain a Certified Storm Water Operator in accordance with the SESC Permit requirements. The Certified Storm Water Operator shall perform routine inspections of the site and the SESC measures and file inspection reports in accordance with the SESC permit requirements. For any site with an earth disturbance area of 5 acres or greater, the SESC Permit Holder shall file a National Pollutant Discharge Elimination System (NPDES) Notice of Coverage Form with the State DEQ prior to any earth disruption.
- 3. The Contractor shall install the appropriate Soil Erosion Control Measures in accordance with the Project Plans prior to massive earth disruption, including but not limited to; silt fence, mud tracking control mats and sediment filters on existing storm sewer structures. Demolition work may be necessary prior to installation of some soil erosion control measures. In such cases, postpone installation of affected soil erosion control measures until immediately following demolition work. Refer to the Project Plans and the Soil Erosion Control and Construction Sequence for additional requirements.
- 4. The Contractor shall schedule work so as to minimize the period of time that an area is exposed and disturbed. The Contractor shall observe the grading limits and limits of disturbance in accordance with the Project Plans. The Contractor shall maintain an undisturbed vegetative buffer around the work when shown on the Project Plans.
- 5. The Contractor shall install and maintain Soil Erosion Control Measures in accordance with the Project Plans during the appropriate phases of construction. The Project Plans show the minimum requirements for Soil Erosion Control Measures. The Contractor shall install additional Soil Erosion Control Measures as necessary due to site conditions and as directed by the Permitting Agency and/or Engineer. The Contractor shall perform routine inspection and maintenance of all Soil Erosion Control Measures to ensure compliance with the permit requirements and proper operation of the Soil Erosion Control Measures.
- 6. The Contractor shall strip and stockpile topsoil from all areas of proposed disturbance. Topsoil stockpiles shall be located in accordance with the Project Plans. Topsoil stockpiles shall be stabilized with vegetative growth (or matted with straw during the non-growing season) to prevent wind and water erosion. A temporary diversion berm and/or silt fence shall encompass all earthen material stockpiles, including but not limited to topsoil, sand and gravel.
- 7. The Contractor shall install Soil Erosion Control Measures associated with the proposed storm sewer system during storm sewer construction. Inlet structure filters shall be installed immediately following completion of each storm inlet structure. Riprap shall be installed immediately following the installation of each flared end section with the following exception: Storm drain outlets that do NOT empty into a Retention, Detention or Sedimentation Basin shall have a temporary 5' wide x 10' long x 3' deep sump installed at the termination of the storm sewer. Upon completion of the stabilization work, the sump area shall be filled and riprap shall be installed in accordance with the Project Plans.
- 8. The Contractor shall install filter stone around the storm basin control structure(s) in accordance with the Project Plans immediately following installation of the control structure(s). The filter stone shall be monitored for sediment build up. The filter stone may need to be cleaned and/or replaced as site conditions require and as directed by the Permitting Agency and/or the Engineer.
- 9. All disturbed areas outside of paved areas shall be restored within 15 days of finish grading Proposed vegetative areas shall be restored with a minimum of 3-inches of topsoil, then seeded and mulched, unless noted otherwise on the Project Plans. During the non-growing season, temporary stabilization shall be provided using straw matting or as directed by the Permitting Agency and/or the Engineer.

Seeding, Fertilizer and Mulch Bare Ground Ratio:

This information is provided as minimum guidance for acceptable application rates. Actual amounts depending on soil conditions and site topography shall be detailed on the construction plans. **Top-Soil** 3 inches in depth.

Grass Seed 210 lbs. per acre. Fertilizer 150 lbs. per acre.

Straw Mulch 3" in depth 1.5 to 2 tons per acre

(All mulch must have a tie down, such as tackifier, net binding, etc.) Hydro-Seeding: Hydro-seeding is not acceptable for slopes exceeding 1%, in such cases; stabilization shall be done with seed and straw mulch with a tackifier.

10. Following complete site restoration and stabilization; sediment shall be removed from all storm sewer structures, paved areas and storm basins. The SESC Permit Holder shall contact the Permitting Agency to request closure of the SESC Permit. For any site with an earth disturbance area of 5 acres or greater, the SESC Permit Holder shall file a NPDES Notice of Termination Form with the State DEO.

MAINTENANCE NOTES FOR SOIL EROSION CONTROL MEASURES:

The Construction Site and all Soil Erosion Control Measures shall be inspected periodically in accordance with the appropriate local municipality/authority and the Michigan EGLE NPDES rules and regulations. At a MINIMUM, inspections shall be performed once a week and within 24 hours following a storm event resulting in 1" of rainfall or greater. Inspections shall be performed throughout the duration of the construction process and until the site is completely stabilized. Following construction, the owner (or its assignee) shall periodically inspect all permanent soil erosion control measures to ensure proper operation.

BASIN PERFORATED STANDPIPES / CONTROL STRUCTURES: Standpipes shall be inspected for soil accumulation, soil caking and mechanical failure/damage. The filter stone around the standpipe shall be removed and replaced each time it becomes clogged with sediment. All mechanical failure/damage shall be repaired immediately.

CATCH BASINS: Catch basins shall be inspected for accumulation of solids and sediment. Solids and sediment shall be removed from the catch basins by vacuum or adductor cleaning. Cleaning should be performed before the catch basin sumps are half

MUD TRACKING CONTROL DEVICE / CONSTRUCTION ACCESS: Mud tracking control devices shall be inspected for significant mud accumulation and to ensure the access is not eroding into public rights of way or drainage features. Add additional layers of stone or remove and replace stone each time the stone becomes covered with mud. All sediment dropped or eroded onto public rights of way shall be removed immediately. Sweeping of the public rights or way and/or paved access route shall be performed as necessary to maintain the access route free of sediment and debris.

DETENTION BASIN (DRY BOTTOM): Dry bottom detention basins shall be inspected to ensure erosion is not occurring along the inlet locations, banks and/or bottom of the basin and for sediment accumulation. Regular maintenance of the basin includes routine mowing of the buffer/filter strip, side slopes and basin floor and removal of litter and debris accumulation. Address vegetation and/or erosion concerns as soon as weather permits. Remove sediment from basin every 5 to 10 years or sooner if sediment accumulation adversely affects the operation of the basin. Sediment that is removed shall be disposed of offsite or at an upland area and stabilized so that it does not re-enter the drainage course.

DETENTION BASIN (WET BOTTOM): Wet bottom detention basins shall be inspected to ensure erosion is not occurring along the inlet locations, banks and/or bottom of the basin and for sediment and/or algae accumulation. Regular maintenance of the basin includes routine mowing of the buffer/filter strip and side slopes and removal of litter and debris accumulation. Address vegetation and/or erosion concerns as soon as weather permits. Remove sediment from basin every 5 to 10 years or sooner if sediment accumulation adversely affects the operation of the basin. Sediment that is removed shall be disposed of offsite or at an upland area and stabilized so that it does not re-enter the drainage course. Excessive algae shall be removed as necessary to prevent odors and to maintain nutrient removal capacity.

RETENTION BASIN: Retention basins shall be inspected to ensure erosion is not occurring along the inlet locations, banks and/or bottom of the basin and for sediment accumulation. Regular maintenance of the basin includes routine mowing of the buffer/filter strip, side slopes and basin floor and removal of litter and debris accumulation. Address vegetation and/or erosion concerns as soon as weather permits. Sediment accumulation shall be removed at least once a year. Sediment shall be removed only when the surface is dry and "mud-cracked". Light equipment must be used to avoid compacting of soils. After removal of sediment, the infiltration area shall be deep tilled to restore infiltration rates. More frequent tilling may be necessary in areas where soils are only marginally permeable. Sediment that is removed shall be disposed of offsite or at an upland area and stabilized so that it does not re-enter the drainage course.

RIPRAP: Inspect riprap immediately following the first rainfall event following installation of the riprap. Continue to perform inspections of the riprap at each periodic site inspection. Riprap shall be inspected to ensure erosion is not occurring within and/or around the riprap. The discharge point shall be inspected to ensure that concentrated flows are not causing erosion downstream. Displaced riprap shall be removed from downstream locations and the riprap beds shall be repaired or replaced. Significant sediment buildup shall be removed from riprap beds. Repair or replace failing or displaced riprap immediately. Address vegetation and/or erosion concerns as soon as weather permits.

SEDIMENTATION BASINS: Sedimentation basins shall be inspected to ensure erosion is not occurring along the inlet locations, banks and/or bottom of the basin and for piping, seepage, sediment accumulation and/or other mechanical damage. Regular maintenance of the basin includes routine mowing of the buffer/filter strip, side slopes and basin floor and removal of litter and debris accumulation. Address vegetation and/or erosion concerns as soon as weather permits. Sediment shall be removed before it accumulates to 50% of the design depth of the basin. Sediment that is removed shall be disposed of offsite or at an upland area and stabilized so that it does not re-enter the drainage course.

SEEDING: Newly seeded areas shall be inspected until substantial vegetative growth is obtained. Seeded areas shall be inspected to ensure erosion is not occurring in the seeded area and vegetative growth is promoted. Eroded areas shall be finish graded as necessary to removal erosion channels or gulleys and new seed placed as soon as weather permits.

SILT FENCE: Silt fencing shall be inspected for soil accumulation/clogging, undercutting, overtopping and sagging. Soil accumulation shall be removed from the face of the silt fence each time it reaches half the height of the fence. Removed sediment shall be disposed of in a stable upland site or added to a spoils stockpile. When undercutting occurs, grade out areas of concentrated flow upstream of the silt fence to remove channels and/or gulleys and repair or replace silt fence ensuring proper trenching techniques are utilized. Silt fencing, which sags, falls over or is not staked in shall be repaired or replaced immediately. Silt fencing fabric, which decomposes or becomes ineffective, shall be removed and replaced with new fabric immediately. Silt fencing shall be removed once vegetation is well established and the up-slope area is fully stabilized.

SOD: Newly sodded areas shall be inspected to ensure sod is maturing. Sod shall be inspected for failure, erosion or damage. Slipping or eroding sod on steep slopes shall be immediately repaired or replaced and staked in place. Damaged or failed sod shall be immediately replaced.

SPILLWAYS: Spillways shall be inspected to ensure that erosion is not occurring within and/or around the spillway. The discharge point shall be inspected to ensure that concentrated flows are not causing erosion downstream. Inspect the spillway for cracked concrete, uneven and/or excessive settling and proper function. Repair or replace failing spillways immediately. Address vegetation and/or erosion concerns as soon as weather permits.

STOCKPILES: Temporary and permanent topsoil and spoils stockpiles shall be seeded to promote vegetative growth. Stockpiles shall be inspected to ensure excessive erosion has not occurred. When runoff or wind erosion is evident, reduce the side slopes of the stockpile or stabilize the stockpile with pieces of staked sod laid perpendicular to the slope. When filter fencing is used around a stockpile, the fencing shall be inspected to ensure piping has not occurred under the fencing and to ensure the fencing has not collapsed due to soil slippage or access by construction equipment. Repair or replace damaged fencing immediately. Berms at the base of stockpiles, which become damaged, shall be replaced.

STORM STRUCTURE INLET FILTER: Inlet filters shall be inspected for sediment accumulation, clogging and damage. When stone is used in conjunction with inlet filter fabric, replace the stone each time it becomes clogged with sediment. Clean or replace the inlet filter fabric each time it becomes clogged with sediment. Reinstall or replace fallen filter fabrics immediately. Replace damaged filter fabrics immediately.

SOIL EROSION & SEDIMENTATION CONTROL NOTES & DETAILS

CLIENT:

S2 CONSTRUCTION MANAGEMENT 12596 TEN MILE ROAD SOUTH LYON, MICHIGAN 48178 248-225-3939

SCALE: 1in. = 20ft. PROJECT No.: 224245 DWG NAME: 4245 SE

SSUED: MAY 3, 2022

| Minimum size | One hundred (100) square feet |
|----------------|--|
| Minimum width | Ten (10) feet; at least half of the islands shall be twenty (20) feet wide in parking |
| | lots with over 200 spaces |
| Required depth | Two (2) feet shorter than adjacent parking space to improve maneuvering |
| Required radii | Minimum ten (10) feet at ends facing main aisles, fifteen (15) feet preferred. |
| | One (1) foot for radii not adjacent to main circulation aisles |
| Planting type | Canopy trees with a mature caliper not over five (5) inches, with a clear area |
| | between the ground and a height of four feet, six inches. |
| Tree location | Located so as not to be damaged by maneuvers or door swing of any surrounding vehicle. |

| | | | | | | | A DE TR | EX. CIDUOUS EES SHRUBS SHD 2 LI 3 EA 3 TW 2 JW 3 EA 3 TW | EX. EVERGREEN TREE TREE TREE | SAD |
|---|--|--|--|----------------------------------|--|------------------|--|--|--|---|
| REQUIRE East Property South propert B | D LANDS Line: Gener ty line: Single Bi | SCAPE (al commerci family residuffer zone B | CALCULATIONS ial dential required | | | 100 | 7 SP | 2 TW 6 TW 1 JW 3 LI SHF | EX. RUBS SHRUBS | 1 EX. EVERGREEN TREE |
| 20 feet wide 6 foot high cont 1 canopy tree, 1 East 324.98 feet of p 11 canopy trees 11 evergreens 44 shrubs south | tinuous wall c l evergreen tre property line = | or 3 foot high ee and 4 shrub = 10.83, round | berm os per each thirty (30) linear feet along the property line, rounded upward led to 11 landscape units |) | | EX. DECIDUOUS | 2 TW | Z EX. SHRUBS Z LI EX. DECIDUOUS | FRONT OF COMPLETE CONPLETE CONPLETE | STRUCTURE ELY PAVED |
| 248.07 feet of p 9 canopy trees 9 evergreens 36 shrubs Street Frontage 20 foot wide 1 canopy tree p 302.94 linear fe 7.57, rounded to | Greenbelt Greenbelt er 40 linear fe eet of frontage o 8 canopy tre | et of frontage | led to 9 landscape units | <i>b</i> | NOTE: PER LCRC CLEAR VISION REQUIREMENTS ALL VEGETATION IN THIS AREA NOT TO EXCEED A HEIGHT OF 18" ABOVE THE ROAD ELEVATION | | 3 TW BP EX. DUS REE 1 TW 3 EX. SHRUBS | IREL 900 3 L1 50 2 EX. SHRUBS 1 TW 981 4 EA 981 1 TW 981 | | |
| Parking Lot Landscaping 1/3 of trees shall be place in the interior of the parking area Remainder must be within 18 feet 101 through 200 spaces: 1 canopy tree and 100 square feet of landscaped area per 12 spaces 109 spaces / 12 = 9.08 = 10 10 canopy trees and 1,000 square feet of landscaping If parking in located in required front yard, hedgerow or 3 foot masonry wall or berm required. Hedgerow shall be 2' tall shrubs, 2.5' off center | | | | | | 3 TW | | | | |
| Parking island standards Minimum size One hundred (100) square feet Minimum width Ten (10) feet; at least half of the islands shall be twenty (20) feet wide in parking lots with over 200 spaces Required depth Two (2) feet shorter than adjacent parking space to improve maneuvering Required radii Minimum ten (10) feet at ends facing main aisles, fifteen (15) feet preferred. One (1) foot for radii not adjacent to main circulation aisles Planting type Planting type Canopy trees with a mature caliper not over five (5) inches, with a clear area between the ground and a height of four feet, six inches. Tree location Located so as not to be damaged by maneuvers or door swing of any surrounding vehicle. Detention basin landscaping I deciduous tree + 10 shrubs per 50 lineal feet of perimeter at top of bank | | | ND RIVER | 00 00 00 00 00 00 | 466 508 100 100 100 100 100 100 100 100 100 1 | | S CS ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ | 5 JW 6" | 5 JW 5 JW | |
| | | | 20; 54 | SA SA | | | SA SA SA | EX. 3 TC W S ST S | 5 EA 3 TW 4 LIF 10 OU 5 10 10 10 10 3 AG 3 AG 3 AG 5 10 4 AG 5 10 4 AG 5 10 5 AG 5 10 5 AG 5 10 5 AG 5 10 5 AG | |
| | | | BENCHMARK DATUM BASED ON NGS OPUS SOLUTION REPORT, DATED MARCH 22, 2022 AT 9:37 AM BENCHMARK #200 TOP OF FLARED END SECTION, LOCATED ON WEST SIDE OF HUBERT ROAD, 320± FEET SOUTH OF GRAND RIVER AND NORTH OF 2ND ENTRANCE TO #7000 GRAND RIVER. ELEVATION = 981.21 (NAVD 88) | / | ACLES | SA SA | PLANTING | G SCHEDULE | 982 | |
| | | | BENCHMARK #201 NAIL IN THE WEST SIDE OF WALK, LOCATED 13± FEET WEST OF #7172 AND E'LY OF DUMPTER AREA. ELEVATION = 983.73 (NAVD 88) BENCHMARK #202 MDOT SPIKE IN THE WEST SIDE OF AN UTILITY POLE, LOCATED ON EAST SIDE OF HUBERT ROAD AND ACROSS FROM THE 2ND DRIVE ENTRANCE TO | | | | QTY SYM 2 AP 8 TC 3 AG 3 MC 2 PP 1 PM SHRUBS | BOTANICAL NAME ACER PLATANOIDES "CRIMSON" TILIA CORDATA "GREENSPIRE" ACER GINNALA MALUS "CORALBURST" PICEA PUNGENS "GLAUCA" PSEUDOTSUGA MANZIESII | COMMON NAME COLUMNAR RED MAPLE LITTLE LEAF LINDEN AMUR MAPLE CORALBURST CRAB COLORADO BLUE SPRUCE DOUGLAS FIR | SIZE 2.5" CAL. 2.5" CAL. 2.5" CAL. 2" CAL. 6 FT. 6 FT. |
| | | ΠΔΤΕ | #7000. ELEVATION = 983.88 (NAVD 88) REVISION-DESCRIPTION | | | RIPTION | QTY SYM 18 MS 6 CS 54 TW 29 LI 41 EA 14 JW 14 SP | BOTANICAL NAME MISCANTHUS SINENSIS PURPURASCENS CORNUS SERICEA 'ISANTI' THUJA OCCIDENTALIS 'WOODWARDII' LIGUSTRUM EUONYMUS ALATUS COMPACTA JUNIPERUS HORIZ. WILTONII SYRINGA MEYERI PALABIN | COMMON NAME MAIDEN GRASS (PERIN.) ANTHONY WATERER SPIREA SHIROBANA SPIRAEA GOLDEN VICARY BURNING BUSH BLUE RUG JUNIPER DWARF KOREAN LILAC | SIZE 24" SPD 2" CAL 24" HT. 24" HT. 24" HT. 18-24" SPD 24" HT. |
| DESIGN:SVB DRAFT: OBM CHECK: WMP | | | | | | | BR PAR | IGHTON MOT King Expan | FORS ISION | LANDSC Nort |



| | REVISION # | DATE | REVISION-DESCRIPTION | REVISION # DATE | |
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| | | | | R A 2' TF 1 1 3 3 3 4 4 F F 1 5 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 | EINFORCED RUBBER HOSE T FIRST BRANCHING " X 2" 8'-0" TREATED STAK REES LESS THAN 3" CAL. ;2 #12 WIRE NEW GALVANIZED REE WRAP TO SECOND BRAN 1/2" X 7 GALV. TURNBUCKL EACH GUY WIRE FOR TREES -2" X 2" X 30" TREATED ST LUSH WITH GRADE " HIGH EARTH SAUCER, TYP. REE AND SHRUB BED TO RE " DEPTH SHREDDED BARK M REMOVE BURLAP & TIES FROM "OP 1/3 OF BALLED TREES A PERENNIAL BED TO RECEIVE I" DEPTH SHREDDED BARK M PREPARED TOPSOIL MIXTURE JNDISTURBED EARTH | E FOR OPPOSITE CHING LES 3" CAL. & OVER FAKES; DRIVE CEIVE ULCH M ND SHRUBS ULCH | CONTRACTOR TO PERCOLATION OF PRIOR TO INSTALL STAKE ALL EVERC 12' AND UNDER GUY ALL EVERGRE AND OVER NEVER CUT CENT PRUNE ONLY TO DEAD OR BROKEN SPRAY EVERGREE ANTI-DESSICANT WINTER SET STAYS OR GU |
|------------|-----------------|--------------|----------|---|---|--|--|
| | | 4" | | | | | SPACING A |
| TYPIC | AL TREE/SH | | | NG SHREDDED I DEPTH TYPI SET TOP OF CORRESPON GRADE — MOUND TO — FINISH GRAI REMOVE CO WALL OF FIN REMOVE ALL BEFORE PLA REMOVE BU FROM TOP — PLANTING M — SCARIFY SO RECOMPACT | BARK MULCH 4" CAL F BALL TO ID WITH FINISH FORM SAUCER DE LLAR AND PUNCTURE BER CONTAINER L METAL CONTAINERS ANTING RLAP AND TWINE 1/3 OF BALL MIXTURE DL TO 4" DEPTH AND | CONTR PRIOR BRANC | ACTOR TO VERIFY NATION OF PLANTIN TO INSTALLATION E ONLY DEAD OR BE CHES |
| | <u>TYPI</u> | CAL SHRUB | PLANTING | | | | |
| | | | | | | | |
| | REVISION # DATE | REVISION-DES | CRIPTION | RE | VISION # DATE | REVIS | SION-DESCRIPTION |
| DRAFT: OBM | | | | | | | |
| CHECK: WMP | | | | | | | |

BRIGHTON MOTORS PARKING EXPANSION

AL EVERGREEN SHRUB PLANTING NOT TO SCALE



CAL EVERGREEN TREE PLANTING NOT TO SCALE





NOT TO SCALE



1. All minimum planting sizes specified on the Project Plans shall be at the time of planting.

2. All landscape materials shall be as specified on the Project Plans or approved equal. Substitutions shall not be made without prior written approval from the Project Engineer and receipt of the Owner's Authorization.

All plant material shall be free of disease and insects and shall conform to the American Standard of Nursery Stock of the American Association of Nurserymen.

4. All landscape plantings shall be planted and maintained in a healthy condition and shall be guaranteed by the Landscape Contractor and/or Supplier for a minimum period of 1 year from the time of planting. Any plantings that die or become diseased during the guarantee period shall be removed and replaced by the Landscape Contractor and/or Supplier at no cost to the Owner.

5. Excavations for container or balled plantings shall be no deeper than the root ball or container and shall be at least twice the diameter of the root ball or container.

6. Excavations for bare root plantings shall be no deeper than the longest roots and shall be at least twice the diameter of the root spread.

7. The sides of planting excavations in heavy and/or wet soils shall be scarified with a fork, pick or shovel to eliminate glazing.

8. Landscape planting backfill shall consist of a prepared mixture of peat moss, composted manure and topsoil or suitable excavated native soil material mixed with the appropriate soil conditioners that are compatible with the native soil and plant species. The type and mixture ratio of soil conditioners shall be in accordance with the Landscape Supplier's recommendations.

9. The Landscape Contractor shall stake and reinforce all trees to prevent wind damage. The Landscape Contractor shall remove all tree reinforcement and stakes upon expiration of the guarantee period.

10. Perennials shall be planted on a 3" minimum bed of prepared peat moss, composted manure and topsoil mixture.

11. Ground cover within landscape beds shall be decorative stone. Decorative stone shall be 2" to 4" diameter washed river rock placed 4" deep.

12. Ground cover within landscape beds shall be placed over a landscape fabric weed barrier. Landscape fabric shall be non-woven, 4 oz. per sq. yd. minimum weight, with UV protection. Landscape fabric shall be installed in strict accordance with the Manufacturer's specifications and recommendations. Landscape fabric shall not be installed over or within 12 inches of perennial plantings.

13. Lawn areas shall be established with 3" minimum depth of prepared topsoil and hydroseed. The Landscape Contractor shall guarantee all lawn areas for a minimum period of 1 year from time of seeding. All lawn areas that do not take root or die during the guarantee period shall be re-hydroseeded as appropriate by the Landscape Contractor at no cost to the Owner. All lawn areas that become diseased during the guarantee period shall be removed and re-hydroseeded as appropriate by the Landscape Contractor at no cost to the Owner.

14. Topsoil shall be a dark, organic, natural surface soil free of clay lumps, peat, muck, subsoil, noxious weeds and other foreign material such as roots, sticks and rocks over 1/2" diameter. Topsoil shall not be frozen or muddy. All earthen areas to receive topsoil shall be finish graded and properly trimmed. Topsoil shall be spread on the prepared areas to a depth of 3 inches. After spreading, any large clods and lumps of topsoil shall be broken up and pulverized. Stones and rocks over 1/2" in diameter, roots, litter and all foreign matter shall be raked up and disposed of by the Landscape Contractor. Seed and mulch shall be placed within 5 days of topsoil placement.

15. Seed mixture for lawn areas shall consist of 10% Kentucky Blue Grass, 20% Perennial Rye Grass, 30% Hard Fescue and 40% Creeping Red Fescue. Hydroseed shall be placed within 5 days of topsoil placement and shall be placed to provide complete and uniform coverage. Fertilizer shall be placed at 80 pounds per acre, hydro mulch at 1,200 pounds per acre and water at 500 gallons per acre unless otherwise specified by the Seed Distributor/Manufacturer. All over spray areas shall be properly cleaned and restored at no expense to the contract.

16. Seed and mulch may be substituted for hydroseed when authorized by the Owner. Seed mixtures shall meet the requirements for lawn areas as outlined above. Seed shall be uniformly applied at a rate of 220 lbs per acre unless otherwise recommended by the seed Distributor/Manufacturer. Seed mixture shall be fertilized. Fertilizer shall be uniformly applied at of 240 pounds per acre of chemical fertilizer nutrients in equal portions (10-10-10) of Nitrogen, Phosphoric Acid and Potash.

17. All seeded areas with a slope less than 1:4 shall be stabilized with straw mulch placed at 2 tons per acre unless otherwise recommended by the seed Distributor/Manufacturer. Erosion control blankets shall be substituted for straw mulch in roadway greenbelts, lawn areas adjacent to heavy traffic, lawn areas subject to high winds, slopes of 1:4 or greater and within ditches, swales and other areas exposed to concentrated overland storm water flow. Erosion control blankets shall consist of 100% straw fiber matrix with photodegradable polypropylene netting and have a 12-month minimum longevity rating. Erosion control blankets shall be pinned with biodegradable pins and shall be installed in accordance with the Manufacturer's recommendations.

18. The Landscape Contractor shall be responsible for watering non-irrigated plantings and sod during dry weather conditions throughout the guarantee period as necessary to promote growth and establishment.



PROJECT No.: 224245

ISSUED: MAY 3, 2022

DWG NAME: 4245 LA

CLIENT:

S2 CONSTRUCTION MANAGEMENT

12596 TEN MILE ROAD

SOUTH LYON, MICHIGAN 48178

248-225-3939



.A3

| BITUMINOUS PAVEMENT C PER PLANS EXISTING ACC SUBGRADE T | QUARE YARD APPLICATION RATE) | BOND COAT (0.10 GALLON PI | | |
|---|------------------------------|------------------------------|-----------------|-----|
| MID | | EXISTING ACCEPTABLE SUBGRADE | * | |
| S. S | U MINOUS | ARD DUTY BI | STAND | |
| RĒ | ECTION | MENT CROSS | PAVE | |
| | MINIMUM COMPACTED THICKNESS | MATERIAL SPECIFICATION | DESCRIPTION | KEY |
| | 1.5" | MDOT 36A | WEARING COURSE | w |
| PAVEMENT S | 1.5" | MDOT 13A | LEVELING COURSE | L |

8"

12"

N/A

BITUMINOUS PAVEMENT NOTES:

AGGREGATE BASE

GRANULAR SUBBASE

GEOGRID

G

1. The construction specifications of the appropriate Local Municipality are a part of this work. Refer to the General Notes, Road and/or Parking Lot Construction Notes and Typical Road and/or Pavement Cross Section details on the project plans for additional requirements.

MDOT 21AA (SEE NOTES 4&7)

MDOT CLASS II (SEE NOTES 4&6)

N/A

- 2. Unsuitable soils found within the 1 on 1 influence zone of the pavement, such as muck, peat, topsoil, marl, silt or other unstable materials shall be excavated and replaced up to the proposed subgrade elevation with MDOT Class III granular material compacted to 95% maximum unit weight, modified proctor.
- 3. Contractor shall proof roll prepared subgrade as directed by Engineer. Unacceptable areas of subgrade shall be undercut and replaced as directed by Engineer.
- 4. Owner/Developer may delay placement of the bituminous wearing course outside of the public road right of way. Repair of the bituminous leveling course may be necessary due to any delay in placement of the bituminous wearing course. Substantial repair to the bituminous leveling course may be necessary if placement of the bituminous wearing course is delayed for more than 12 months after placement of the bituminous leveling course. The bituminous leveling course shall be repaired as directed by Engineer prior to placement of the bituminous wearing course.

DESIGN:SVB DRAFT: OBM CHECK: WMP

| EVISION # | DATE | REVISION-DESCRIPTION |
|-----------|------|----------------------|
| | | |
| | | |
| | | |

REVISION # DATE



SUBGRADE UNDERCUT NOTES:

Areas of pavement subgrade that do not pass a proof roll inspection shall be undercut when directed by the Material Testing Engineer and/or Project Engineer. All undercut work shall be witnessed and field measured by the Material Testing Engineer and/or Project Engineer. Copies of the field notes depicting the field measurements of the undercut areas shall be provided to the General Contractor and/or Earthwork Subcontractor and Owner.

Undercut areas shall be excavated to a depth of 12" below the proposed subgrade elevation using an Excavator or Backhoe with a Smooth Edged Ditching Bucket so as not to scarify the underlying soils. Undercut areas shall remain free of all construction traffic and equipment to avoid rutting and/or tracking of the underlying soils.

Mirafi HP 570 Woven Geotextile Fabric (or approved equal) shall be placed over all undercut areas per the Manufacturer's specifications. Overlap all seams a minimum of 12" unless specified otherwise by the Manufacturer.

4. Backfill the undercut areas with 1" x 3" minimum size crushed angular limestone and cap with 21AA crushed angular limestone up to the proposed subgrade elevation. Crushed concrete material shall NOT be substituted for crushed limestone material. The backfill material shall be spread with a Wide Track Dozer to minimize loading on the underlying soils. Static roll the backfill material with a large smooth drum roller.

5. Construct the appropriate Bituminous or Concrete Pavement Cross Section over the undercut areas per the Project Plans.



CONCRETE CURB NOTES:

- 1. Refer to the project plans for the proposed locations of the specific curb types.
- 2. The construction specifications of the appropriate Local Municipality are a part of this work. Refer to the General Notes and Curb Cross Section Details on the project plans for additional requirements.
- 3. Extend the base and/or subbase material of the appropriate adjacent pavement cross-section horizontally to 1 foot behind the back of curb. Concrete curb shall be constructed on no less than 6" of combined depth of compacted base/subbase material.
- 4. Concrete material shall meet or exceed the specification requirements of the appropriate Local Municipality. If not specified by the Local Municipality, then the concrete material shall be MDOT P1 (I-A) 6.0 sack concrete pavement mixture with a minimum 28 day design compressive strength of 4,000 PSI and 6.5% (+/-1.5%) entrained air. Contractor shall submit concrete mix design and aggregate mechanical analysis report to the Local Municipality and Engineer for review and approval prior to use.
- 5. Install transverse contraction control joints in accordance with the Local Municipality requirements. If not specified by the Local Municipality, then install transverse contraction control joints in curb with 1" minimum depth at 10' on center. Tool joints in fresh concrete or saw cut within 8 hours.
- 6. Install transverse expansion control joints in accordance with the Local Municipality requirements. If not specified by the Local Municipality, then install transverse expansion control joints in curb as follows: 400' maximum on center, at spring points of intersecting streets and within 10' on each side of catch basins. Transverse expansion control joints shall be 1" thick asphalt fiber joint filler matching entire curb cross section.
- 7. Provide 1" asphalt fiber control joint between back of curb and all other concrete structures, such as concrete sidewalks and concrete driveways.
- 8. Curb Contractor shall provide final adjustment of catch basin castings in curb line. Castings shall be tuck pointed to structure water tight with concrete or mortar inside and outside of casting.
- 9. Install curb cuts for all existing and proposed sidewalks and pedestrian ramps in accordance with the American Disabilities Act and the Barrier Free Design requirements of the appropriate Local, County and/or State Agency. Refer to MDOT Standard Plan R-28, latest revision. Install curb cuts for all existing and proposed vehicular ramps and drives as noted on the project plans.

BRIGHTON MOTORS PARKING EXPANSION

| SITE | & |
|-------|---|
| NOTES | A |

GENERAL NOTES:

- 1. Contractor shall perform the work in accordance with the requirements of the appropriate Local, County and State Agencies and all other Government and Regulatory Agencies with jurisdiction over the project. Contractor shall notify the appropriate Agencies in advance of each stage of work in accordance with each Agency's requirements.
- 2. Contractor shall comply with all permit, insurance, licensing and inspection requirements associated with the work. Prior to construction, Contractor and Owner/Developer shall determine who is responsible for obtaining each required permit. Contractor shall verify that the each required permit has been obtained prior to commencement of the stage of work associated with the required permit(s).
- 3. Contractor shall furnish liability insurance and property damage insurance to save harmless the Owner, Developer, Architect, Engineer, Surveyor and Government Agencies for any accident occurring during the construction period. Refer to the appropriate Local, County and State Agencies for additional requirements. Copies of insurance certifications shall be made available to the Owner/Developer.
- 4. Contractor shall conduct and perform work in a safe and competent manner. Contractor shall perform all necessary measures to provide for traffic and pedestrian safety from the start of work and through substantial completion. Contractor shall determine procedures and provide safety equipment such as traffic controls, warning devices, temporary pavement markings and signs as needed. Contractor shall comply with the safety standards of the State Department of Labor, the occupational health standards of the State Department of Health and safety regulations of the appropriate Local, County, State and Federal Agencies. Refer to the safety specifications of the appropriate Regulatory Agencies. The Contractor shall designate a qualified employee with complete job site authority over the work and safety precautions; said designated employee shall be on site at all times during the work.
- 5. Contractor shall coordinate scheduling of all work in the proper sequence, including work by Subcontractors. Additional costs due to improper planning by Contractor or work done out of sequence as determined by standard acceptable construction practices, shall be Contractor's responsibility.
- 6. Contractor shall contact the 811 Underground Public Utility Locating System or other appropriate local underground utility locating Agency, a minimum of three (3) working days prior to construction. Existing utility information on the project plans may be from information disclosed to this firm by the Utility Companies, Local, County or State Agencies, and/or various other sources. No guarantee is given as to the completeness or accuracy thereof. Prior to construction, locations and depths of all existing utilities (in possible conflict with the proposed improvements) shall be verified in the field.
- 7. Contractor shall coordinate scheduling a Pre-Construction Meeting with Engineer prior to commencement of work.
- 8. The Local Municipality, County and/or State in which the project is located may require an Engineer's Certification of construction of the proposed site improvements. Contractor shall verify the certification requirements with Engineer prior to commencement of work. Contractor shall coordinate construction staking, testing, documentation submittal and observation with the appropriate Agency, Surveyor and/or Engineer as required for Engineer's Certification and Government Agency Acceptance. All materials used and work done shall meet or exceed the requirements of certification and acceptance, the contract documents and the material specifications noted on the project plans. Any materials used or work done that does not meet said requirements, contract documents and/or specifications shall be replaced and/or redone at Contractor's expense. The Owner/Developer may wait for test results, certifications and/or Agency reviews prior to accepting work.
- 9. Engineer may provide subsurface soil evaluation results, if available, to Contractor upon request. Subsurface soil evaluation results, soils maps and/or any other documentation does NOT guarantee existing soil conditions or that sufficient, acceptable on-site granular material is available for use as structural fill, pipe bedding, pipe backfill, road subbase or use as any other granular material specified on the project plans. On-site granular material that meets or exceeds the material specifications noted on the project plans may be used as structural fill, pipe bedding, pipe backfill and/or road subbase material. On-site granular material shall be stockpiled and tested as acceptable to the appropriate Agency and/or Engineer prior to use.
- 10. During the performance of their work, Contractor shall be solely responsible for determining soil conditions and appropriate construction methods based on the actual field conditions. Contractor shall furnish, install and maintain sheeting, shoring, bracing and/or other tools and equipment and/or construction techniques as needed for the safety and protection of the workers, pedestrians and vehicular traffic and for protection of adjacent structures and site improvements.
- 11. Contractor shall install temporary and permanent soil erosion and sedimentation control devices at the appropriate stages of construction in accordance with the appropriate regulatory Agencies. Refer to Soil Erosion and Sedimentation Control Plans and Notes on the project plans.
- 12. Structural fill shall be placed as specified on the project plans and within the 1 on 1 influence zone of all structures, paved areas and other areas subject to vehicular traffic. Structural fill shall be placed using the controlled density method (12" maximum lifts, compacted to 95% maximum unit weight, modified proctor). Fill material shall meet or exceed the specifications noted on the project plans or as directed by Engineer when not specified on the project plans.
- 13. All existing monuments, property corners, ground control and benchmarks shall be protected and preserved; and if disturbed by Contractor, shall be restored at Contractor's expense. Contractor shall notify Surveyor of any conflicts between existing monuments, property corners, ground control and/or benchmarks and the proposed site improvements.
- 14. Contractor shall notify Owner/Developer and Engineer immediately upon encountering any field conditions, which are inconsistent with the project plans and/or specifications.
- 15. When noted on the project plans for demolition and/or removal, Contractor shall remove existing structures, building and debris and recycle and/or dispose of in accordance with Local, County, State and Federal regulations.
- 16. Contractor shall remove excess construction materials and debris from site and perform restoration in accordance with the project plans and specifications. Disposing of excess materials and debris shall be performed in accordance with Local, County, State and Federal regulations.
- 17. Construction access to the site shall be located as acceptable to the Owner/Developer and to the appropriate Local, County and/or State Agency with jurisdiction over the road(s) providing access to the site. Construction access shall be maintained and cleaned in accordance with the appropriate Local, County and/or State Agencies and as directed by Owner/Developer and/or Engineer.

18. Contractor shall take necessary precautions to protect all site improvements from heavy equipment and construction procedures. Damage resulting from Contractor actions shall be repaired at Contractor's expense.

| PAV | EMENT | |
|-----|--------------|--|
| ND | DETAILS | |

CLIENT:

S2 CONSTRUCTION MANAGEMENT 12596 TEN MILE ROAD SOUTH LYON, MICHIGAN 48178 248-225-3939

SCALE: N/A PROJECT No.: 224245 DWG NAME: 4245 DT SSUED: MAY 3, 2022







NOTES: 1. ANIMAL GUARD REQUIRED ON ALL FLARED END SECTIONS OF 15" DIAMETER PIPE OR GREATER.

NOT TO SCALE

- 2. CONTRACTOR MAY SUBSTITUTE ALTERNATE GRATING LAYOUT AS APPROVED
- BY OWNER/ENGINEER/AGENCY PRIOR TO INSTALLATION. 3. DETAIL SHOWN FOR RCP FLARED END SECTION, PROVIDE SIMILIAR ANIMAL
- GUARD FOR FLARED END SECTIONS ON CMP, HDPE, AND SLCPP. 4. WELD ALL CONNECTIONS FULL STRENGTH PER AMERICAN WELDING SOCIETY

STANDARDS



BRIGHTON MOTORS PARKING EXPANSION

STORM SEWER NOTES AND DETAILS

-BACK OF CURB ELEVATION -RIM ELEVATION AT GUTTER

STORM SEWER NOTES:

- 1. The storm sewer and stormwater management specifications of the Local Municipality are a part of this work. Refer to the General Notes on the project plans for additional requirements.
- 2. Storm sewer work shall include clearing of vegetation and tree stumps, stripping and stockpiling of topsoil for reuse, excavation of pipe trench, placement of pipe bedding, placement of pipe and structures including castings, connection to existing structures, tuck pointing of structures, backfill of pipe trench, compaction of backfill, finish grading to provide positive drainage to structures, adjustment of castings to match finish grade, topsoil placement, seed & mulch, site cleanup and restoration, and other work as shown on the project plans and specifications.
- 3. Existing and proposed grades shown in profile view, when provided on the project plans, may be in relation to the centerline of road or item other than the centerline of pipe. The pipe lengths and grades shown in profile view on the project plans may not be to scale.
- 4. RCP when shown on the project plans shall be reinforced concrete pipe and shall conform to the specifications for reinforced concrete pipe per ASTM C76. RCP pipe joints shall be bell-and-spigot with rubber gaskets conforming to ASTM C433. Non-gasketed joints shall only be utilized when authorized by the Owner, Engineer AND Municipality. Non-gasketed joints of pipe having a diameter of 30 inches or greater shall be tuck-pointed on the inside with cement mortar after the backfill process is complete. Install reinforced concrete end sections incidental to work. Saw cut pipes to length as needed. When pipe class is not shown on the project plans, provide the following: Pipe cover to proposed grade:

| to 4 feet | Class V |
|----------------------|------------|
| .1 to 10 feet | Class III* |
| 0.1 to 18 feet | Class I |
| 8.1 feet and greater | Class V |
| | |

* Use Class IV under paved surfaces

- 5. CMP when shown on the project plans shall be corrugated metal pipe and shall conform to the specifications for corrugated metal pipe per AASHTO Designation M36. CMP shall be 16-guage steel minimum for 24 inch diameter or smaller and 14-guage steel minimum for 30 inch diameter or greater. Install galvanized steel end sections and connection bands, incidental to work. Connection bands for CMP pipe joints located under paved surfaces shall be gasketed couplers. Saw cut pipes to length as needed.
- 6. HDPE Type S when shown on the project plans shall be high density polyethylene pipe with a smooth interior and shall conform to the specifications for high density polyethylene pipe per AASHTO Designation M252 Type S for pipes of 3" to 10" diameter and per AASHTO Designation M294 Type S for pipes of 12" to 60" diameter. HDPE - Type S pipe joints shall be bell-and-spigot type conforming to ASTM D3212 with rubber gaskets conforming to ASTM F477. Tamp backfill at spring line of HDPE - Type S pipe. Install high density polyethylene end sections incidental to work. Saw cut pipes to length as needed.
- 7. HDPE Type C when shown on the project plans shall be high density polyethylene pipe with a corrugated interior and shall conform to the specifications for high density polyethylene pipe per AASHTO Designation M252 for pipes of 3" to 10" diameter and per AASHTO Designation M294 for pipes of 12" to 60" diameter. HDPE - Type C pipe joints shall be bell-and-spigot type conforming to ASTM D3212 with rubber gaskets conforming to ASTM F477. Tamp backfill at spring line of HDPE - Type C pipe. Install high density polyethylene end sections incidental to work. Saw cut pipes to length as needed.
- 8. CPVC when shown on the project plans shall be corrugated polyvinyl chloride pipe and shall conform to the specifications for corrugated polyvinyl chloride pipe per ASTM F794 and F949. CPVC pipe joints shall be bell-and-spigot type conforming to ASTM D3212 with rubber gaskets conforming to ASTM F477. Tamp backfill at spring line of CPVC pipe. Install high density polyethylene end sections incidental to work. Saw cut pipes to length as needed.
- 9. PVC when shown on the project plans shall be polyvinyl chloride pipe and shall conform to the specifications for polyvinyl chloride pipe per ASTM D2751, maximum SDR of 26. PVC pipe joints shall be bell-and-spigot type conforming to ASTM D3212 with rubber gaskets conforming to ASTM F477 or solvent welded type conforming to ASTM D2564. Tamp backfill at spring line of PVC pipe. Saw cut pipes to length as needed.
- 10. Concrete storm structures shall be pre-cast and shall conform to the specification of pre-cast concrete structures per ASTM C478. Joints of concrete storm structure sections shall be bell-and-spigot with rubber gaskets conforming to ASTM C433. Brick, concrete block or cast in place storm structures may be substituted for pre-cast storm structures ONLY when authorized by the Owner, Engineer AND Municipality; refer to MDOT standard plan R-1, latest revision. Pipe openings in pre-cast structures shall be factory installed. All temporary openings in storm structures shall be tuck-pointed watertight with cement mortar. Refer to MDOT standard plan R-2, latest revision, for alternate on-line storm structure details when pipe exceeds 42 inch diameter.
- 11. Tap existing structures as acceptable to the Engineer and Municipality, incidental to work. All temporary openings in storm structures shall be tuck-pointed watertight with cement mortar.
- 12. Backfill all storm sewer in accordance with the Pipe Trench details provided on the project plans. Provide pipe bedding that meets or exceeds both the specifications of the Pipe Trench details on the project plans and the recommendation of the pipe manufacturer, incidental to work.
- 13. When edge drains and/or under drains are shown on the project plans, connection to storm structures is incidental to work. During storm sewer construction, install first 10 linear feet of edge drain and/or under drain from the storm structures in each specified direction and install temporary cap at end. Complete installation of edge drain following preparation of the subgrade when under paved surface or following finish grade when not under paved surface.
- 14. Install removable plugs in storm sewer stubs as acceptable to Engineer and Municipality, incidental to work. Mark the end of all storm sewer stubs with a 2" x 4" wooden stake extending a minimum of 12" above finish grade, incidental to work.
- 15. Storm structure castings shall be coated with water based asphaltic paint by the manufacturer. Seams and temporary openings between storm structures and castings shall be tuck-pointed water tight with cement mortar. Coordinate correct curb box / hood / "T" back as needed to match curb profile. See casting schedule on project plans for additional requirements.
- 16. Provide 3.5' minimum cover from the top of pipe of all roof drain pipes to the proposed finish grade when site conditions allow. When pipe cover is less than 3.5', install 2" thick by 24" wide Styrofoam insulation centered over the top of pipe at 12" above top of pipe or as required by the Local Municipality.



3 WORKING DAYS

BEFORE YOU DIG

CALL 811 OR 1-800-482-717

(TOLL FREE)

OR VISIT CALL811.COM

SCALE: N/A

PROJECT No.: 224245

ISSUED: MAY 3, 2022

DWG NAME: 4245 DT



S2 CONSTRUCTION MANAGEMENT 12596 TEN MILE ROAD SOUTH LYON, MICHIGAN 48178 248-225-3939

CLIENT:

| Schedule | Schedule | | | | | | | | | | | |
|----------|----------|----------|----------------------|-------------------------------|----------------------------|-----------------------|----------------------|---------|--|--|--|--|
| Symbol | Label | Quantity | Manufacturer | Catalog Number | Description | Lumens Per Lamp | Light Loss Factor | Wattage | | | | |
| | Α | 5 | Lithonia Lighting | DSX2 LED P4 40K TFTM MVOLT | DSX2 LED P4 40K TFTM MVOLT | 33388 | 0.9 | 540 | | | | |
| _ _ | В | 4 | Lithonia Lighting | DSX2 LED P4 40K T5W MVOLT | DSX2 LED P4 40K T5W MVOLT | 34437 | 0.9 | 540 | | | | |
| | С | 3 | Lithonia Lighting | DSX2 LED P4 40K BLC MVOLT | DSX2 LED P4 40K BLC MVOLT | 27374 | 0.9 | 270 | | | | |

| Statistics | | | | | | | | | | |
|---------------|--------|---------|---------|--------|---------|---------|--------|--|--|--|
| Description | Symbol | Avg | Max | Min | Max/Min | Avg/Min | Avg/Ma | | | |
| Back Lot | ж | 5.4 fc | 13.1 fc | 1.5 fc | 8.7:1 | 3.6:1 | 0.4:1 | | | |
| East Row | ж | 10.6 fc | 17.5 fc | 3.8 fc | 4.6:1 | 2.8:1 | 0.6:1 | | | |
| Front Row | Ж | 15.0 fc | 22.2 fc | 7.3 fc | 3.0:1 | 2.1:1 | 0.7:1 | | | |
| Grade | + | 3.2 fc | 22.2 fc | 0.0 fc | N/A | N/A | 0.1:1 | | | |
| Property Line | + | 0.1 fc | 0.4 fc | 0.0 fc | N/A | N/A | 0.3:1 | | | |
| West Row | ж | 12.8 fc | 20.1 fc | 2.3 fc | 8.7:1 | 5.6:1 | 0.6:1 | | | |

General Note

1. SEE SCHEDULE FOR LUMINAIRE MOUNTING HEIGHT.

2. CALCULATIONS ARE SHOWN IN FOOTCANDLES AT: 0' - 0"

3. LIGHTING ALTERNATES REQUIRE NEW PHOTOMETRIC CALCULATION AND RESUBMISSION TO CITY FOR APPROVAL.

THE ENGINEER AND/OR ARCHITECT MUST DETERMINE APPLICABILITY OF THE LAYOUT TO EXISTING / FUTURE FIELD CONDITIONS. THIS LIGHTING LAYOUT REPRESENTS ILLUMINATION LEVELS CALCULATED FROM LABORATORY DATA TAKEN UNDER CONTROLLED CONDITIONS IN ACCORDANCE WITH ILLUMINATING ENGINEERING SOCIETY APPROVED METHODS. ACTUAL PERFORMANCE OF ANY MANUFACTURER'S LUMINAIRE MAY VARY DUE TO VARIATION IN ELECTRICAL VOLTAGE, TOLERANCE IN LAMPS, AND OTHER VARIABLE FIELD CONDITIONS. MOUNTING HEIGHTS INDICATED ARE FROM GRADE AND/OR FLOOR UP.

THESE LIGHTING CALCULATIONS ARE NOT A SUBSTITUTE FOR INDEPENDENT ENGINEERING ANALYSIS OF LIGHTING SYSTEM SUITABILITY AND SAFETY. THE ENGINEER AND/OR ARCHITECT IS RESPONSIBLE TO REVIEW FOR MICHIGAN ENERGY CODE AND LIGHTING QUALITY COMPLIANCE.

UNLESS EXEMPT, PROJECT MUST COMPLY WITH LIGHTING CONTROLS REQUIRMENTS DEFINED IN ASHRAE 90.1 2013. FOR SPECIFIC INFORMATION CONTACT GBA CONTROLS GROUP AT ASG@GASSERBUSH.COM OR 734-266-6705.

FOR ORDERING INQUIRIES CONTACT GASSER BUSH AT QUOTES@GASSERBUSH.COM OR 734-266-6705.

THIS DRAWING WAS GENERATED FROM AN ELECTRONIC IMAGE FOR ESTIMATION PURPOSE ONLY. LAYOUT TO BE VERIFIED IN FIELD BY OTHERS.

MOUNTING HEIGHT IS MEASURED FROM GRADE TO FACE OF FIXTURE. POLE HEIGHT SHOULD BE CALCULATED AS THE MOUNTING HEIGHT LESS BASE HEIGHT.



| Orde | ring Information | | EXAMPLE: DSX2 LE | ED P7 40K T3 | M MVOLT SPA N | LTAIR2 PIRHN DD |
|---|---|--|--|---|---|---|
| DSX2 LE | D | | | | | |
| ieries | LEDs | Color temperature | Distribution | Voltage | Mounting | |
| DSX2 LED | Forward optics P1 P5 P2 P6 P3 P7 P4 P8 Rotated optics ³ P10 P13 P11 P14 P12 | 30K 3000 K 40K 4000 K 50K 5000 K | T1S Type I Short TSVS Type V Very Short T2S Type II Short TSS Type V Short T2M Type II Medium TSM Type V Medium T3S Type II Short TSW Type V Medium T3M Type II Medium TSW Type V Medium T3M Type II Medium BLC Backlight control T4M Type IV Medium LCCO Left corner cutoff TFTM Forward Throw RCCO Right corner cutoff | MVOLT ³ 120 ⁴ 208 ⁴ 240 ⁴ 277 ⁴ 347 ⁴ 480 ⁴ | Shipped included SPA Square pole RPA Round pole WBA Wall bracks SPUMBA Square pole RPUMBA Round pole Shipped separately KMA8 DDBXD U Mast arm n | e mounting mounting t universal mounting adaptor ¹ universal mounting adaptor ¹ nounting bracket adaptor (specify fi |
| iontrol op | itions | | | Other options | Finish | mprofit |
| Shipped NLTAIR2 PIRHN PER PERS PER7 DMG DS | Installed InLight AIR generation 2 enabled ¹ Network, Bi-Level motion/ambient sen NEMA twist-lock receptacle only (no Five-wire receptacle only (no controls Seven-wire receptacle only (no controls Seven-wire receptacle only (no controls D-10V dimming extend out back of he external control (no controls) Dual switching ^{11,24} | ear ⁶ PIRH controls) ⁹ FAO (s) ⁵⁴⁰ eks) ⁵⁴⁰ ousing for | BI-level, motion/ambient sensor, 15-30' mounting height, ambient sensor enable at 5ft " Field Adjustable Output " | Shipped installed HS House-side shi SF Single fuse (12 DF Double fuse (22 L90 Left rotated opt R90 Right rotated o Shipped separately BS Bird spikes ¹⁰ EGS External glare s | eld ¹⁴ DOBXC D0, 277, 347V) ⁴ DNAXI 08, 240, 480V) ⁴ DWHX tics ¹ DOBTX ptics ¹ DBLBX MODATX OWHG shield ¹³ | Dark bronze Black Natural aluminum White Textured dark bronze Textured black Textured natural aluminum XD Textured white |



| | | | | | | | | | | | | MEARS |
|---|--|---|---|--|---|---|--|--|---------------------|---|---|--------------------------------------|
| | GRAND RIVER AVE | Es | | | | | | | | | | |
| | + + 0.0 + 0. | +0.0 | | | | | | | | | | |
| | +0.0 $+0.0$ | 0.0 +0.0 +0.0 +0.0 +0.0 +0.0 +0.0 +0.0 | 0.0 0 + 0 0 + + + 0 0 | | 4 | | | | | | | |
| | $+0.0^{+0.0}$ $+0.0^{+0.0}$ $+0.0^{+0.0}$ $+0.0^{+0.0}$ | +0.0 +0.0 +0.0 +0.0 +0 | 0.0 +0.0 +0.0 +0.0 +0.0 +0.0 +0.0 +0.0 | .0.0+0.0 0.0+0.0 | | | | | | | | |
| | +0.0 $+0.0$ | +0.0 $+0.0$ | 0.0 + 0.0 + 0.0 + 0.1 + 0.1 + 0.1 = 0.1 + 0.1 + 0.1 + 0.1 + 0.1 + 0.1 = 0.1 + 0.1 = 0.1 + 0.1 = 0.1 + 0.1 = 0.1 + 0.1 + 0.1 = 0.1 + 0.1 + 0.1 + 0.1 + 0.1 = 0.1 + 0.1 | $^{+}0.1$ $^{+}$ | $\begin{array}{c} 1 \\ 0.1 \\ + 0.1 \\ + 0.1 \\ + 0.1 \\ - 0.1$ | | | | | | | |
| | $^{+}0.00^{+}0.$ | +0.0 0.1 +0.1 +0 | 1 ⁺ 0.1 ⁺ 0.1 ⁺ 0.1 ⁺ 0.1 | ⁺ 0.1 ⁺ 0.1 ⁺ 0.1 ⁺ 0.1 ⁺ 0 | .1 ⁺ 0.1 ⁺ 0.1 ⁺ 0.1 ⁺ 0.1 | 1+++01 0011-+01 0.1-+02 | | | | | | |
| | +0.0, +0.0 +0.1 +0.1 +0.1 +0.1 | +0.1 +0.1 +0.1 +0.1 +0.1 +0.1 +0.1 +0.1 | + + 0.1 + 0.1 + 0.1 + 0.1 + 0.2 + | $^{+}0.2$ $^{+}0.2$ $^{+}0.2$ $^{+}0.2$ $^{+}0.2$ $^{+}0.2$ $^{+}0.3$ $^{+}0.3$ $^{+}0.3$ $^{+}0.3$ $^{+}0.3$ | $2^{+}0.2^{+}0.2^{+}0.2^{+}0.2^{+}0.2^{+}0.2$ | +0.2 $+0.2$ $+0.2$ $+0.2$ $+0.2$ $+0.3$ | 0.2 +0.2 +0.2 0.1 +0.1 | I∩0₁1 | | / | | |
| | +0.0+0.1 +0.1 +0.1 +0.1 | +0.1 +0.1 +0.2 +0 | 0.2 +0.2 +0.3 +0.3 +0.4 | +0.4 +0.5 +0.5 +0.5 +0.5 | .5 ⁺ 0.5 ⁺ 0.5 ⁺ 0.5 ⁺ 0.4 | +0.4 +0.4 +0.4 | ⁺ 0.4 ⁺ 0.4 ⁺ 0.3 ⁺ 0.2 | 2 +0.9.1 | | | _ | |
| | +0.1+0.1+0.1+0.1+0.1+0.1+0.1+0.1+0.1+0.1 | +0.1 +0.2 +0.2 +0.2 +0.4 +0.4 +0.4 +0.4 +0.4 +0.4 +0.4 +0.4 | $0.3 \stackrel{+}{_{\odot}}0.4 \stackrel{+}{_{\odot}}0.5 \stackrel{+}{_{\odot}}0.5 \stackrel{+}{_{\odot}}0.6 \stackrel{-}{_{\odot}}$ | +0.7 +0.8 +0.8 +0.9 +0 +1.6 +1.7 +1.8 +2.2 +2 | 9 ⁺ 0.9 ⁺ 0.9 ⁺ 0.8 ⁺ 0.7 3 ⁺ 2.2 ⁺ 2.1 ⁺ 1.9 ⁺ 1.9 | +0.7 +0.7 +0.8 +1.6 +1.3 +1.2 | 0.8 ⁺ 0.7 ⁺ 0.4 ⁺ 0.2 +1.3 ⁺ 1.2 ⁺ 0.7 ⁺ 0.2 | $2^{+0.1}$ | | | | |
| | $\begin{bmatrix} 0.1 \\ -0.1 \end{bmatrix}$ $\begin{bmatrix} +0.1 \\ 0.1 \end{bmatrix}$ $\begin{bmatrix} +0.2 \\ -0.2 \end{bmatrix}$ | 2 ⁺ 0.3 ⁺ 0.5 ⁺ 0.7 ⁺ 0 | 8 9.9 ⁺ 1.1 ⁺ 1.4 ⁺ 2.0 ⁺ 2.3 ⁻ | +2.8 +3.4 +3.7 +3.7 +3 | .2 +3.3 +3.7 +3.6 +3.3 | +2.2 +1.6 +1.6 | ⁺ 2.0 ⁺ 2.3 ⁺ 1.5 ⁺ 0.9 | 5 +0.1 | | | | |
| | $\begin{array}{c} + 0.1 \\ 0.1 \\ - 0.1 \end{array} \begin{array}{c} 0.1 \\ + 0.1 \end{array} \begin{array}{c} 0.1 \\ - 0.1 \end{array} \begin{array}{c} 0.2 \\ - 0.1 \end{array}$ | 2 0.4 ⁻ 0.8 ⁻ 1.5 ⁻ 2 2 ⁺ 0.4 ⁺ 0.8 ⁺ 1.4 ⁺ 2 | $\begin{array}{cccccccccccccccccccccccccccccccccccc$ | ⁺ 2.9 ⁺ 4.4 ⁺ 7.6 ⁺ 5.1 ⁺ 3 ⁺ 4.5 ⁺ 6.3 ⁺ 9.9 ⁺ 8.0 ⁺ 7 | .6 ⁺ 3.6 ⁺ 4.9 ⁺ 8.0 ⁺ 4.2 .1 ⁺ 7.4 ⁺ 8.6 ⁺ 11.4 ⁺ 7.4 | 4.9 ⁺ 4.0 ⁺ 4.3 | 3.1 4.1 3.0 1. 5.5 7.2 6.0 2.6 | 5 +0.1 0.1 0.1 0.1 | | | | |
| | +0.1 +0.2 +0.3 | ⁺ 0.5 ⁺ 0.9 ⁺ 1.7 ⁺ 3 | 6.1 ⁺ 9.1 ⁺ 9.2 ⁺ 9.8 | +11.8 10.2 *22.2 20.7 *1 | 6.0 *15.4 *19.2 *21.2 *15. | 7 [*] 9.4 [*] 7.3 [*] 7.3 | 8.8 *10.7 8.9 +3.5 | 3 ^{⊕+} 0.1 ^{0.1} 0.1 ++ | | | | |
| | +0.1 +0.2 +0.2 +0.2 +0.3 +0.8 | 4 0.9 2.2 4.6 8 4 +2.2 +4.4 +6.2 *9 | 0.0 *13.7 *18.0 *140 @7.2 | 15.6 17.3 19.2 18.8 08.5 ^{**} 19.3 ^{**} 18.8 ^{**} 19.7 ^{**} 1 | 7.9 1 8.0 18.1 17.5 14. 9.8 [#] 19.2 [#] 19.4 [#] 16.8 [#] 14. | 0 10.8 8.7 7.8 9 [#] 11.6 [#] 9.0 ^{- #} 8.6 ^{- :} | 9.4 12.8 11.0 6.6 10.4 13.9 12.7 7.5 | 0.2 	 0.1 + 0.2 	 0.1 | | | | |
| | +0.2 $+0.4$ $+0.9$ $+0.2$ $+0.4$ $+0.9$ | 0 + 1.9 + 4.2 + 7.3 * 1 + 0.0 + 4.4 + 7.3 * 1 | 0.4 *13.8 ⁺ 16.0 ⁺ 18.3 ⁺ 18.4 ⁻ | +17.3 +17.7 +16.2 +15.9 +1 | b .8 ⁺ 15.1 ⁺ 14.8 ⁺ 12.7 ⁺ 11. | 3 ⁺ 9.3 ⁺ 7.5 ⁺ 8.1 | C 11.2 *15.9 *15.1 *8.7 | (0) + 0.3 + 0.3 + 0.1 | | | | |
| | $^{+0.3}_{-0.3}$ $^{+0.5}_{-0.5}$ $^{+1.0}_{-1.0}$ |) 2.2 4.4 7.0 9 +2.2 +3.8 +5.5 +7 | .5 13.6 14.5 15.3 15.5 .7 ⁺ 11.4 ⁺ 11.4 ⁺ 12.1 ⁺ 12.4 | ⁺ 11.5 ⁺ 9.7 ⁺ 8.0 ⁺ 7.1 ⁺ 7 | .2 ⁺ 7.0 ⁺ 5.9 ⁺ 4.7 ⁺ 4.2 | 6.5 5.9 7.3 +4.0 +4.3 +5.8 | 10.0 *15.5 *16.4 *9.2 | 2 +0.3 +0.1 +0.1 | | | | |
| | +0.3 +0.5 +1.1 | +2.1 $+3.1$ $+4.5$ $+6$ | 6.8 ⁺ 10.4 ⁺ 10.9 ⁺ 11.6 ⁺ 10.7 ⁻ | +9.3 +7.6 +5.8 +4.7 +4 | $3^{+}3.9^{+}3.3^{+}2.6^{+}2.3$ | +2.3 +2.8 +4.4 | 8.2 *13.2 *11 8 *8.4 | | | | | |
| | 8.3 ⁺ 0.6 ⁺ 1.0 |) ⁺ 2.5 ⁺ 3.7 ⁺ 4.4 ⁺ 7 | | +7.6 +5.0 +3.2 | | 1.3 1.3 3.4 1.3 1.3 1.3 1.4 1.3 1.3 1.5 1.4 | 6.5 *10.9 *11.2 *4.6 | 6 ⁺ 0.3 0.1 | | | | |
| | $^{+0.3}_{-0.6}$ $^{+0.6}_{-1.0}$ $^{+0.5}_{-0.9}$ | +2.4 $+4.2$ $+7.7$ $+1$ | 0.8 19.2 *15.9 ⁺ 15.6 ⁺ 11.5 ⁻ | +7.3 +4.5 +2.6 | | $^{+}0.2$ $^{+}1.0$ $^{+}2.7$ $^{\odot}$ | 5.6 ⁺ 8.5 [*] 9.7 [*] 4.6 | $5^{+}0.6^{+}0.1^{+}0.$ | | | | |
| | $^{+}0.3$ $^{+}0.5$ $^{+}0.9$ | 2.4 ⁺ 3.3 ⁺ 3.8 ⁺ 7 | '.9 *16.0 *10.9 20' +14.3 - | +9.5 +5.9 +3.3 | | () () () () () () () () () () () () () (| 4.6 ⁺ 7.3 [*] 9.1 [*] 4. | | | | | |
| | +0.3 $+0.5$ $+0.9$ $+0.5$ $+0.9$ $+0.5$ $+0.9$ | +2.3 $+2.9$ $+3.2$ $+6+2.1$ $+3.2$ $+3.6$ $+7$ | 5.0 ^{**} 14.4 ^{**} 16.9 ⁺ 17.9 ⁺ 13.9 ⁻ 7.1 ^{**} 15.9 ^{**} 16.9 ⁺ 18.5 ⁺ 14.6 ⁻ | +10.0 +6.4 +3.5 - 0.8 +9.6 +5.9 +3.3 +1.6 | #7100 EXIST | 0.4 ⁺ 0.4 ⁺ 1.4 | 4.6 ⁺ 8.5 [*] 10.0 [*] 4.5 | 5 ⁺ 0.5 +8 + + + * 0.4 + 8 | | | | |
| | +0.3 +0.3 0.3 +0.5 +0.8 | ³ ⁺ 1.8 ⁺ 3.6 ⁺ 6.0 ⁺ 8 | 9.3 <mark>2</mark> 0.1 [*] 17.3 ⁺ 17.1 ⁺ 13.3 ⁻ | *8.2 *4.9 *2 7 = 1.3 | ING BUILDING | ^e +0.3 +1.2 | ⁺ 3.8 ⁺ 7.9 ⁺ 11.6 7.7 | 7 ⁺ 0.4 ^{+0.1} C @ 201 | | | | S LAN COM |
| | $^{+0.3}_{-0.3}^{+0.4}$ | $7^{+}1.7^{+}3.5^{+}6.6^{+}8$ $7^{+}1.6^{+}2.9^{+}3.3^{+}5$ | 9.5 1 9.1 * 16.0 ⁺ 15.1 ⁺ 11.9 ⁻ 9.5 * 12.1 4 *1 @ 20 1 ⁺ 10.7 ⁻ | +7.3 +4.4 +2.3 0.7 +7.0 +4.4 +2.5 +1.1 | | ⁺ 0.3 ⁺ 1.1 ⁺ 0.4 ⁺ 1.2 | ⁺ 3.6 ⁺ 7.8 ⁺ 11.7 ⁺ 7.4 ⁺ 3.5 ⁺ 6.8 ⁺ 9.3 ⁺ 5.4 | + + 0.1 + + 2.0 + 0.1 + 2.0 0.1 | | | | DTOR ITE F SOCI |
| | +0+2 0.3 0.4 0.4 +0.6 | 5 ⁺ 1.3 ⁺ 1.9 ⁺ 2.0 ⁺ 3 | 8.0 * 8.0 * 9.1 ⁺ 10.0 ⁺ 8.1 ⁻ | ⁺ 6.0 ⁺ 4.2 ⁺ 2.6 ⁺ 1.3 | + + | • + 0.6 ⁺ 1.4 | 2.8 ⁺ 4.4 ⁺ 6.0 ⁺ 3.4 | $+^{+}_{1.2}$ $+^{+}_{0.2}$ $+^{+}_{0.2}$ | | | | ON MO RIC S SH AS |
| | 0.2 0.3 0.5 0.2 0.3 0.5 | 5 0.9 1.1 1.4 2 + ⁺ 0.6 ⁺ 0.8 ⁺ 1 0 ⁺ 1 | .1 6.0 6.5 7.5 6.3 .6 4.1 4.0 4.8 4.7 | *4.8 *3.6 *2.7 *1.9 *3.9 *3.2 *2.8 *2.3 *2 | 1.0 1.0 0.9 1 ⁺ 1.9 ⁺ 1.6 ⁺ 1.5 ⁺ 1.4 | 1.0 1.4 +1.3 +1.4 +1.6 | 2.1 3.0 3.5 2.2 1.9 ⁺ 2.2 ⁺ 2.2 ⁺ 1.3 | $\begin{array}{cccccccccccccccccccccccccccccccccccc$ | | | | GHTC METI METI METI CASS |
| | ⁺ 0.2 ⁺ 0.2 ⁺ 0.2 ⁺ 0.4 | + +0.5 +0.6 +0.8 +1 | .2 ⁺ 2.4 [*] 2.8 ⁺ 3.2 ⁺ 3.5 ⁻ | +3.4 +3.3 +3.1 +3.1 +3 +2.5 +2.7 +2.0 +4.4 +4 | .0 ⁺ 2.9 ⁺ 2.6 ⁺ 2.4 ⁺ 2.2 | ⁺ 2.0 ⁺ 2.0 ⁺ 1.9 | 1.9 +1.8 +1.5 +1.0 | $0^{+}0.5^{+}0.2^{+}0.$ | | | | BRI HOTC SSEF /WW. |
| | $0.1_{0.2}^{+}0.2_{0.1}^{+}0.2_{0.1}^{+}0.2_{0.1}^{+}0.3_{0.1}^{+}0.2_{0.1}^{+}0.3$ | 3 0.4 0.6 0.8 1 3 ⁺ 0.4 ⁺ 0.6 ⁺ 0.9 ⁺ 1 | .1 1.8 2.3 2.8 3.2 .3 +1.7 *2.4 +3.1 +3.8 | 3.5 3.7 3.9 4.1 4 +4.3 +4.8 +5.1 +5.4 +5 | 5 + 5.5 + 5.5 + 5.1 + 4.7 | 3.0 2.8 2.4 +4.3 +3.7 +2.9 | 2.0 1.7 1.3 0 2.3 ⁺ 1.8 ⁺ 1.3 ⁺ 0.8 | 0.5 0.3 + 0.5 0.3 - 0.5 0.3 | | | | 4 2 |
| | +0.4 + 0.2 | + 0.3 $+$ 0.5 $+$ 0.9 $+$ 1 | .3 ⁺ 2.0 ⁺ 2.7 ⁺ 3.6 ⁺ 4.8 ⁻ | +5.7 +6.3 +6.8 +7.1 +6 | N8810014 778.51 (M) 9 7.0 7.2 6.9 6.3 5 *8.6 *8.2 *8.2 *7.7 | *5.7 *4.6 *3.5 | 2.7 2.0 $+1.3$ $+0.8$ | 3 + 0.4 + 0.2 + 0.2 + 0.2 | 1 | | | |
| | | 2 ⁺ 0.3 ⁺ 0.5 ⁺ 0.8 ⁺ 1 | 3 2 .1 3 .2 4 .7 6 .2 | *7.8 *10.9 *10.2 *9.0 *9 | .2 *9.1 *9.2 *10.9 *10. | 7 [*] 7.7 [*] 5.9 [*] 4.4 [*] | ^K 3.0 [*] 1.9 ⁺ 1.2 ⁺ 0.7 | $7^{+}0.4^{+}0.3^{+}0.2^{+}0.4^{+}0.3^{+}0.2^{+}0.1^{+}0.3^{+}0.2^{+}0.1^{+}0.$ | 2 | | | |
| | +0.1+++0.1 +0.2 +2+0.1 +0.2 | 2 ⁺ 0.3 ⁺ 0.5 ⁺ 0.8 ⁺ 1 2 ⁺ 0.3 ⁺ 0.5 ⁺ 0.8 ⁺ 1 | .3 *2.1 *3.2 *4.8 *6.3 | *7.5 *10.1 *10.2 *9.1 *9 *7.7 *10.4 *9.9 B *89 2 9 | 2 *9.1 *9.1 *11.1 *11. 3 *9.2 *8.8 *9.4 *9.2 | 3 *7.3 *6.0 *4.5 B @ 20' *7.0 *5.9 *4.6 | *3.0 *2.0 +1.2 +0.7 | 7 + 0.5 + 0.3 + 0.2 = 0.2 3 + 0.5 + 0.3 = 0.2 = 0.2 0.2 = 0.2 = 0.2 | 2 | | | |
| | +0.1 +0.2 | +0.3 +0.5 +0.8 +1 | 4 *2.2 *3.3 *4.4 *5.6 | *6.5 *7.4 *7.9 *8.3 *8 | .2 *8.2 * <u>8.2</u> * <u>7.7</u> * <u>7.1</u> | *6.4 *5.3 *4.0 | × <u>3.1 ×2.2</u> +1.5 +0.9 | $9^{+}0.6^{+}0.4^{+}0.8^{+}0.4^{+}0.8^{+}0.1^{+}0.$ | 2 | | | |
| | $+^{+}_{0.1}0.1$ $+^{+}_{0.2}$ $+^{+}_{0.2}0.2$ $+^{-}_{0.3}0.3$ | 2 +0.4 +0.6 +0.9 +1 +0.4 +0.7 +1.0 +1 | .5 *2.2 *2.9 *3.7 *4.9 * 5 *2.0 *2.6 *3.4 *4.1 | *5.8 *6.4 *6.9 *7.2 *7 *4.6 *5.1 *5.5 *5.9 *6 | .0 *7.0 *7. <u>0 *6.6</u> *6.1 .1 *6.1 * 5.8 *5.4 *4. 9 | * <u>5.4</u> *4.6 *3.6 * <u>4.4</u> *3.9 *3.4 | ^K 2 <u>.8</u> [*] 2.2 ⁺ 1.6 ⁺ 1.7 ^K 2.7 [*] 2.1 ⁺ 1.6 ⁺ 1.7 | $\begin{bmatrix} +0.7 & +0.4 \\ 0.7 & +0.4 \end{bmatrix} \begin{bmatrix} 0.4 & 0.4 \\ 0.1 & 0.1 \end{bmatrix}$ | 3 3 | | | |
| | + ⁺ 0.2 + ⁺ 0.3 | 6 +0.4 +0.7 +1.0 +1 | .5 *2.0 *2.5 *3.1 *3.6 | * <u>39 *4.4 *4.8 *5.</u> 1 *5 | .5 [*] 5.6 [*] 5.2 [*] 4.9 [*] 4.5 | ¥.0 *3.6 *3.2 | [*] 2.7 [*] 2.1 ⁺ 1.6 ⁺ 1.2 | 2 ⁺ 0.8 ⁺ 0.5 ^{0.4} 0.4 | 3 | | | |
| | +0.2 0.3 +0.2 0.3 +0.2 +0.3 | 3 '0.4 '0.7 '1.0 '1 3 ⁺ 0.4 ⁺ 0.6 ⁺ 1.0 ⁺ 1 | .4 <u>1.9</u> <u>2.5</u> <u>3.0</u> <u>3.4</u> <u>4</u> <u>1.9</u> <u>2.4</u> <u>3.0</u> <u>3.6</u> <u>2</u> | ^3.8 ^4.3 ^4.7 ^5.0 ^5 <u>*4.1 *4.6 *5.1 *5.5</u> *5 | .4 ^5.5 ^5.3 ^4.9 ^4.5 .9 *6.0 *5.9 *5.5 *5.2 | 4.1 ³ .7 ³ .3 ⁴ .7 ⁴ .2 ³ .6 | 2.8 2.2 1.7 1.2 2.9 2.3 1.7 1.2 | 2 '0.8 '0.5 '0 2 ⁺ 0.8 ⁺ 0.5 0 | 3 | | | |
| | +0.1 +0.2 | 2 +0.4 +0.6 +0.9 +1 | .3 <u>*1.9 *2.5</u> *3.2 *4.1 * | *4.9 *5.5 *6.2 *6.6 *6 | 8 *6.8 *6.9 *6.8 *6.4 | *5.8 *5.1 *4.1 | ^K 3.1 [*] 2.4 [*] 1.8 ⁺ 1.2 | $2^{+}0.7^{+}0.5^{+}0.$ | 3 | | | |
| | | 2 +0.3 +0.4 +0.7 +1 | .1 *1.7 2.6 *3.9 *5.3 | *6.4 *7.7 *9.3 *8.7 *8 | .9 *9.3 *9.0 *9.0 *10. | <u>6.8</u> 6.0 4.7 4 *8.3 *6.5 *5.4 | 3.6 2.6 1.7 1. 3.8 <u>*2.5</u> *1.6 ⁺ 1.0 | 0.6 	0.4 	0.7 	0.7 	0.7 	0.7 	0.7 	0.7 	0.7 	0.7 | 3 2 2 | | | |
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1 of 1



| APPLICANT NAME: Andrea Sydor | ADDRESS: 5320 Richardson Road |
|---------------------------------|----------------------------------|
| OWNER NAME: Jason & Andrea Syde | or ADDRESS: 5320 Richardson Road |
| PARCEL #(s): 4711-32-100-020 | PRIMARY PHONE: 248, 978 5756 |
| EMAIL 1: asydor12@gmail.com | EMAIL 2: jsydor17@gmail.com |

We, the undersigned, do hereby respectfully make application to and petition the Township Board to amend the Township Zoning Ordinance and change the zoning map of the township of Genoa as hereinafter requested, and in support of this application, the following facts are shown:

A. REQUIRED SUBMITTAL INFORMATION

- 1. A legal description and street address of the subject property, together with a map identifying the subject property in relation to surrounding properties;
- 2. The name, signature and address of the owner of the subject property, a statement of the applicant's interest in the subject property if not the owner in fee simple title, and proof of consent from the property owner;
- 3. It is desired and requested that the foregoing property be rezoned from:





- 4. A site plan illustrating existing conditions on the site and adjacent properties; such as woodlands, wetlands, soil conditions, steep slope, drainage patterns, views, existing buildings, sight distance limitations, relationship to other developed sites. and access points in the vicinity;
- 5. A conceptual plan demonstrating that the site could be developed with representative uses permitted in the requested zoning district meeting requirements for setbacks, wetland buffers access spacing, any requested service drives and other site design factors;
- 6. A written environmental impact assessment, a map of existing site features as described in Article 18 describing site features and anticipated impacts created by the host of uses permitted in the requested zoning district;
- 7. A written description of how the requested rezoning meets Sec. 22.04 "Criteria for Amendment of the Official Zoning Map."
- 8. The property in question shall be staked prior to the Planning Commission Public Hearing.

B. DESCRIBE HOW YOUR REQUESTED RE-ZONING MEETS THE ZONING ORDINANCE CRITERIA FOR AMENDING THE OFFICIAL ZONING MAP:

1. How is the rezoning consistent with the goals, policies and future land use map of the Genoa Township Master Plan, including any subareas or corridor studies. If not consistent, describe how conditions have changed since the Master Plan was adopted?

Applicant wishes to re-zone to CE; Adjacent properties are currently CE

Current property owners wish to build an equestrian-size barn allowable under CE zoning. Parcel in question

is among largest in area which can accommodate a larger barn while maintaining Township Planning and allowable setbacks.

2. Are the site's physical, geological, hydrological and other environmental features suitable for the host of uses permitted in the proposed zoning district?

Yes, the sites physical, geological, hydrological and other environmental features are suitable

for the property owners plans to maintain a larger barn with equestrian animals and hobby farm.

Do you have any evidence that a reasonable return on investment cannot be received by developing the property with one (1) of the uses permitted under the current zoning?
 No, as the current RR zoning restricts barn size to 1200 sq ft whereas under proposed CE zoning the owners could build a suitable barn. Additionally, proposed zoning to CE would allow potential hobby farm growing and storage.

4. How would all the potential uses allowed in the proposed zoning district be compatible with surrounding uses and zoning in terms of views, noise, air quality, the environment, density, traffic impacts, drainage and potential influence on property values?

The proposed CE zoning would be compatible with surrounding property use

in terms of barn and/or hobby farm views, noise and air quality in reference to keeping equestrian animals

and maintaining a hobby farm. No foreseeable impacts to traffic, drainage or property values with the zoning change.

5. Are infrastructure capacity (streets, sanitary sewer, water, and drainage) and services (police and fire protection, etc.) sufficient to accommodate the uses permitted in the requested district?

Yes, there are sufficient infrastructure and services to accommodate the proposed zoning change.

Both the primary and secondary driveways can accomodate any police and/or fire protection.

6. Is there a demonstrated demand in Genoa Township or the surrounding area for the types of uses permitted in the requested zoning district? If yes, explain how this site is better suited for the zoning than others which may be planned or zoned to accommodate the demand.

Property owners are not aware of demand by other land owners in the area however this

site is among others nearby whom already use their land similarly to the proposed zoning change.

The CE zoning district would be more appropriate as it would accommodate all uses the land owners wish that are not presently allowable under RR.

The land was once considered for splitting into smaller parcels but the owners wish for it to remain as 1 large parcel.

The land use under CE would accommodate the owners requests without special permissions under RR zoning.

^{7.} If you have a particular use in mind, is another zoning district more appropriate? Why should the Township re-zone the land rather than amend the list of uses allowed in another zoning district to accommodate your intended use?

8. Describe any deed restrictions which could potentially affect the use of the property. There are no deed restrictions which would affect the use of the property.

| C. AFFIDAVII | C . | AFFIDAVIT |
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The undersigned says that they are the OWNEr (owner, lessee, or other specified interest) involved in this petition and that the foregoing answers and statements herein contained and the information herewith submitted are in all respects true and correct to the best of his/her knowledge and belief.

| BY: Andrea Sydor | | |
|-------------------------------------|--|--|
| ADDRESS: 5320 Richards | son Road, Howell MI 48843 | |
| SIGNATURE | | |
| The following contact should also r | receive review letters and correspondence: | |
| Name: | Email: | |
| Business Affiliation: | | |

FEE EXCEEDANCE AGREEMENT

As stated on the site plan review fee schedule, all site plans are allocated two (2) consultant reviews and one (1) Planning Commission meeting. If additional reviews or meetings are necessary, the applicant will be required to pay the actual incurred costs for the additional reviews. If applicable, additional review fee payment will be required concurrent with submittal to the Township Board. By signing below, applicant indicates agreement and full understanding of this policy.

PROJECT NAME:

PROJECT LOCATON & DESCRIPTION:

Property located 1/4 mile South of Brighton/Richardson Intersection

SIGNATURE:

_____DATE:_____

PRINT NAME: Andrea Sydor PHONE: 248-978-5756

COMPANY NAME & ADDRESS:



Planning Commission Genoa Township 2911 Dorr Road Brighton, Michigan 48116

| Attention: | Kelly Van Marter, AICP | |
|------------|--|--|
| | Assistant Township Manager and Planning Director | |
| Subject: | Proposed rezoning from RR to CE (Review #2) | |
| Location: | Decation: 5320 Richardson Road – west side of Richardson Road, south of Brighton Road | |
| Zoning: | RR Rural Residential District | |

Dear Commissioners:

At the Township's request, we have reviewed the application and revised submittal materials proposing rezoning of a 20-acre site from RR Rural Residential to CE Country Estate.

The stated intent of the proposed rezoning is to prevent further partitioning of the site and to allow for development of a barn and hobby farm.

This proposal has been reviewed in accordance with the applicable provisions of the Genoa Township Zoning Ordinance.

A. SUMMARY

- 1. CE zoning is generally consistent with the rezoning criteria of Section 22.04.
- 2. The request is consistent with the goals of the Township Master Plan.
- 3. The request is anticipated to be compatible with the surrounding area.
- 4. The host of uses permitted in CE are compatible with existing and planned uses in the surrounding area.
- 5. Consideration must be given to any technical comments provided by the Township Engineer, Utilities Director and/or Fire Authority with respect to infrastructure compatibility or capacity.

B. PROCESS

As outlined in Article 22 of the Township Zoning Ordinance, the process to amend the Official Township Zoning Map is as follows:

- 1. The Township Planning Commission holds a public hearing on the rezoning and makes its recommendation to the Township Board;
- 2. The Livingston County Planning Commission reviews the request and makes its recommendation to the Township Board; and
- 3. The Township Board considers these recommendations and takes action to grant or reject the rezoning request.

As a reminder for the Township's consideration, requests for conventional rezoning cannot include conditions.

C. AREA OVERVIEW

The site is located on the west side of Richardson Road, south of Brighton Road. Current zoning, as well as existing and planned land uses in the area are as follows:

| | Existing Land Use |
|-------|---------------------------|
| Site | Existing residence |
| North | Single family residential |
| East | Single family residential |
| South | Wooded/undeveloped |
| West | Wooded/undeveloped |

| | Zoning |
|-------|-----------|
| Site | RR |
| North | RR |
| East | RR |
| South | RR and CE |
| West | CE |

| | Master Plan |
|-------|---|
| Site | Large Lot Rural Residential |
| North | Large Lot Rural Residential |
| East | Large Lot Rural Residential |
| South | Large Lot Rural Residential and Agriculture/Country Estate |
| West | Agriculture/Country Estate |







D. REZONING REVIEW

1. Consistency with the goals, policies and future land use map of the Genoa Township Master Plan, including any subarea or corridor studies. If conditions have changed since the Master Plan was adopted, the consistency with recent development trends in the area.

As depicted above, the Future Land Use Map identifies the site as Large Lot Rural Residential, which is compatible with the current RR zoning. The proposal is not to increase density, but rather to dissuade partitioning of land, preserve the existing estate-sized lot, and allow small-scale agricultural, which are all consistent with the Agriculture/Country Estate classification.

Furthermore, the proposal is consistent with the land use goals of the Master Plan, and may be viewed as an extension of the Agriculture/Country Estate classification planned adjacent to the west and one lot to the south.

2. Compatibility of the site's physical, geological, hydrological and other environmental features with the host of uses permitted in the proposed zoning district.

The site is heavily wooded, particularly to the rear of the property. The proposal for a larger lot zoning designation will further protect these areas. The submittal also notes a small wetland area at the rear of the site that will not be impacted by the proposal.

With the exception of agricultural uses, the host of permitted uses under current RR zoning and proposed CE zoning are nearly identical.

The Commission should consider any technical comments provided by the Township Engineer under this criterion.

3. The ability of the site to be reasonably developed with one (1) of the uses permitted under the current zoning.

As noted above, the RR and CE districts allow a nearly identical host of uses.

The primary differences between the two districts are the minimum lot area required for residential development and allowance for agricultural uses (as proposed).

4. The compatibility of all the potential uses allowed in the proposed zoning district with surrounding uses and zoning in terms of land suitability, impacts on the environment, density, nature of use, traffic impacts, aesthetics, infrastructure and potential influence on property values.

Similar to previous comments, the uses allowed in RR and CE are nearly identical.

Based on existing and planned conditions in the subject area, potential use/development under CE zoning is anticipated to be compatible with surrounding uses, particularly given the size of the lot and the presence of large wooded areas.

5. The capacity of Township infrastructure and services sufficient to accommodate the uses permitted in the requested district without compromising the "health, safety and welfare" of the Township.

Given the nature of the request, we do not anticipate any concerns with infrastructure and services; however, we defer to the Township Engineer, Utilities Director, and/or Brighton Area Fire Authority for any technical comments under this criterion.

6. The apparent demand for the types of uses permitted in the requested zoning district in the Township in relation to the amount of land in the Township currently zoned to accommodate the demand.

This area of the Township contains a mix of RR and CE zoning. The intent behind the request is dissuade partitioning of the 20-acre parcel and to accommodate small-scale agricultural use, both of which are compatible with CE zoning and the rural character of this area.

7. Where a rezoning is reasonable given the above criteria, a determination the requested zoning district is more appropriate than another district or amending the list of permitted or Special Land Uses within a district.

Given the general consistency with zoning in the area, we are of the opinion that CE rezoning is reasonable, and that amending the text of the Zoning Ordinance would not be more appropriate.

8. The request has not previously been submitted within the past one (1) year, unless conditions have changed or new information has been provided.

There has not been a rezoning request for this property in the past year.

Should you have any questions concerning this matter, please do not hesitate to contact our office.

Respectfully, **SAFEBUILT STUDIO**

Brian V. Borden, AICP Planning Manager



Engineer did not have any additional comments regarding the resubmittal received on 5-31-22 for this project.

May 18, 2022

Ms. Kelly Van Marter Genoa Township 2911 Dorr Road Brighton, MI 48116

Re: Sydor Rezoning Rezoning Review No. 1

Dear Ms. Van Marter:

Tetra Tech conducted a review of the proposed Sydor Property rezoning submittal received on May 9, 2022. The application proposes rezoning an existing 20-acre property from rural residential to country estates. The site is located on the west side of Richardson Road, 1/4 mile south of Brighton Road.

The proposed rezoning does not change the overall intended use of the parcel and therefore will not impact any public utilities or traffic conditions. The parcel is served with individual well and septic systems which the Livingston County Health Department reviewed and expressed no concern to the proposed rezoning. Therefore, we have no engineering related concerns to the proposed rezoning.

Sincerely,

Gary J. Markstrom, P.E. Vice President

Byene

Shelby Byrne Project Engineer

BRIGHTON AREA FIRE AUTHORITY



615 W. Grand River Ave. Brighton, MI 48116 o: 810-229-6640 f: 810-229-1619

June 1, 2022

Kelly VanMarter Genoa Township 2911 Dorr Road Brighton, MI 48116

RE: Sydor Rezoning 5320 Richardson Rd. Genoa Twp., MI

Dear Kelly:

The Brighton Area Fire Authority has reviewed the above-mentioned site plan. The application for rezoning was received for review on June 1, 2022. The project is based on the proposed rezoning of a 20-acre parcel from RR (Rural Residential) to CE (Country Estate) to allow the construction of an equestrian barn. The plan review is based on the requirements of the International Fire Code (IFC) 2021 edition.

All comments and recommendations from the previous submittal have been addressed in writing from the property owner.

If you have any questions about the comments on this plan review please contact me at 810-229-6640.

Cordially,

Rick Boisvert, CFPS Fire Marshal

cc:Amy Ruthig amy@genoa.org

| From: | Matt Bolang | |
|--------------|----------------------------------|--|
| То: | Amy Ruthig | |
| Cc: | Aaron Aumock | |
| Subject: | RE: Sydor Rezoning Submittal | |
| Date: | Thursday, May 5, 2022 1:38:51 PM | |
| Attachments: | image002.png | |
| | image003.png | |
| | image004.png | |
| | image005.png | |
| | Site Plan.pdf | |
| | Application.pdf | |
| | Impact Assessment.pdf | |

Amy,

Based on our records, it does not appear that the proposed location of the barn would impact the location of the septic system, reserve area, or water well. If the barn is to contain plumbing, it may be necessary to contact LCHD to connect any wastewater generated to an approved septic system. During the permitting process through the building department, the owner would also be required to apply for a permit from LCHD for review of the accessory structure in more detail.

Thanks, -Matt

Matt Bolang, MSA, REHS Deputy Health Officer Director of Environmental Health Livingston County Health Department 2300 East Grand River

517-552-6870 | <u>www.lchd.org</u>

Howell, MI 48843



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From: Amy Ruthig <amy@genoa.org>
Sent: Thursday, May 5, 2022 9:31 AM
To: Matt Bolang <MBolang@livgov.com>
Subject: [EXT] Sydor Rezoning Submittal

"The e-mail below is from an external source. Please do not open attachments or click links from an unknown or suspicious origin."



2911 Dorr Road Brighton, MI 48116 810.227.5225 810.227.3420 fax genoa.org

NOTICE OF PUBLIC HEARING – JUNE 13, 2022 (REZONING)

May 27, 2022

To Whom It May Concern:

Please be advised that the Planning Commission of Genoa Charter Township will conduct a public hearing on **Monday, June 13, 2022 commencing at 6:30 p.m**. As required by state law, you are receiving this notice because you have been identified as an owner or occupant of real property within 300 feet of the subject parcel.

The property in question is located at 5320 Richardson Road, on the west side of Richardson Road, south of Brighton Road. The applicant is requesting to rezone 20 acres from Rural Residential (RR) to Country Estates (CE) to allow for a hobby farm. The request is petitioned by Andrea Sydor.

You are invited to attend this hearing. Members of the public will be able to speak during the public hearing portions of the meeting. If, prior to the meeting, members of the public have certain questions or wish to provide input on any business that will be addressed at the meeting then such persons may contact the Planning Commissioners through Kelly VanMarter, Township Community Development Director by email to Kelly@genoa.org, or by mail at 2911 Dorr Road, Brighton, Michigan 48116.

Genoa Charter Township will provide necessary reasonable auxiliary aids and services to individuals with disabilities at the meeting/hearing upon seven (7) days' notice to the Township. Individuals with disabilities requiring auxiliary aids or services should contact the Township in writing or by calling at (810) 227-5225.

Sincerely

SUPERVISOR

Bill Rogers

CLERK Paulette A. Skolarus

TREASURER Robin L. Hunt

TRUSTEES

Jean W. Ledford H. James Mortensen Terry Croft Diana Lowe

MANAGER Michael C. Archinal Kelly VanMarter, Assistant Township Manager / Community Development Director

300 Foot Buffer for Noticing



0 0.02 0.04 0.08 0.12 0.16

Rezoning: Jason and Andrea Sydor

Address: 5320 Richardson Road

Parcel: 4711-32-100-020

Meeting Date: June 13, 2022





Impact Assessment for Re-zoning Sydor Property

5320 Richardson Road Genoa Township Livingston County, Michigan

Introduction

The purpose of this Impact Assessment (IA) report is to show the effect that this proposed rezoning has on various factors in the general vicinity of the project. The format used for presentation of this report conforms to the Submittal Requirements For Impact Assessment/Impact Statement guidelines in accordance with Section 13.05 of the published Zoning Ordinance for Genoa Township, Livingston County, Michigan.

Discussion Items

A. Name(s) and address(es) of person(s) responsible for preparation of the impact assessment:

Andrea & Jason Sydor 5320 Richardson Road Howell, MI 48843

B. Description of the site, including existing structures, manmade facilities and natural features, all-inclusive to within 10' of the property boundary.

The 20 acre site is located on the West side of Richardson Road, approximately ¼ mile South of Richardson and Brighton Road Intersection. Parcel number: 4711-32-100-020 currently RR (Rural Residential) proposed CE (Country Estate) zoning.

C. Impact on natural features: A written description of the environmental characteristics of the site prior to development ie. Topography, soils, vegetative cover, drainage streams, creeks or ponds.

The site is gently rolling with areas of open grassy land and dense hardwood with minimal wetlands at the rear (western-most) property.

D. Impact on storm water management: description of soil erosion control measures during construction.

No impact on storm water management or soil erosion control.

E. Impact on surrounding land use: Description of proposed usage and other man made facilities; how it conforms to existing and potential development patterns. Effects of added lighting, noise or air pollution which could negatively impact adjacent properties.

The applicant is proposing re-zoning to facilitate the build of an equestrian barn allowable under CE zoning as well as grow and sell garlic as a hobby farm.

F. Impact on public facilities and services: Description of number of residents, employees, patrons and impact on general services ie schools, police fire.

There will be no impact on public facilities and services, as the density of the property will be preserved under CE.

G. Impact on public utilities: Description of public utilities serving the project ie water, sanitary sewer, and storm drainage system

There will be no impact on public utilities, as the density of the property will be preserved under CE.

H. Storage or handling of any hazardous materials: Descriptions of any hazardous materials used, stored, or disposed of on-site.

The subject property will not be storing or handling any hazardous materials

I. Impact on traffic and pedestrians: Description of traffic volumes to be generated and their effect on the area.

There will be no impact on traffic volumes whatsoever.

J. Special provisions: Deed restrictions, protective covenants etc.

There are no deed restrictions for this property and/or proposed rezoning.

K. Description of all sources:

Genoa Township Zoning Ordinance Genoa Township Master Plan



SITE PLAN 1°=100'





GENOA CHARTER TOWNSHIP Application for Site Plan Review

TO THE GENOA TOWNSHIP PLANNING COMMISSION AND TOWNSHIP BOARD:

APPLICANT NAME & ADDRESS: Mr. Mike Barnett Sun Communities, 2777 Franklin Road Suite 200 Southfield, MI 48034 If applicant is not the owner, a letter of Authorization from Property Owner is needed.

OWNER'S NAME & ADDRESS: ______ Mr. Mike Barnett Sun Communities, 2777 Franklin Road Suite 200 Southfield, MI 48034

SITE ADDRESS: _____6600 Grand River, Brighton, MI 48114 PARCEL #(s): 4711-14-200-004

APPLICANT PHONE: (248) 208-2500 OWNER PHONE: (248) 208-2500

OWNER EMAIL: mbarnett1@suncommunities.com

LOCATION AND BRIEF DESCRIPTION OF SITE: ____

Located on the south side of Grand River between Dorr Rd. and Grand Beach Drive.

Site is the location of an existing clubhouse for Sylvan Glen Estates,

a mobile home community.

BRIEF STATEMENT OF PROPOSED USE: _

Existing clubhouse renovation to include: new pool and deck,

restroom addition and fitness center. Site work to include 10 additional

parking spaces and storm water management system.

THE FOLLOWING BUILDINGS ARE PROPOSED: _

Restroom and fitness center additions totaling 1,090 sf

I HEREBY CERTIFY THAT ALL INFORMATION AND DATA ATTACHED TO AND MADE PART OF THIS APPLICATION IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE AND BELIEF.

BY: Mark Melchi/ AR Brouwer Company

ADDRESS: 2830 Baker Road Suite 100, Dexter, MI 48130

| Contact Information - Review Letters and Correspondence shall be forwarded to the following: | | |
|--|----------------------------------|-----------------------------|
| _{1.)} Mark Melchi | _{of} AR Brouwer Company | at markmelchi@arbrouwer.com |
| Name | Business Affiliation | E-mail Address |

÷.

| FEE EXCEEDANCE AGREEMENT | | |
|---|--------|--------------|
| As stated on the site plan review fee schedule, all site plans are allocated two (2) consultant reviews and one (1) Planning Commission meeting. If additional reviews or meetings are necessary, the applicant will be required to pay the actual incurred costs for the additional reviews. If applicable, additional review fee payment will be required concurrent with submittal to the Township Board. By signing below, applicant indicates agreement and full understanding of this policy. | | |
| SIGNATURE: | DATE: | 05.03.22 |
| PRINT NAME: Mark Melchi | PHONE: | 734.426.9980 |
| ADDRESS: 2830 Baker Road Suite 100, Dexter, MI 48130 | | |
| | | |



Planning Commission Genoa Township 2911 Dorr Road Brighton, Michigan 48116

| Attention: | Kelly Van Marter, AICP |
|------------|---|
| | Planning Director and Assistant Township Manager |
| Subject: | Sylvan Glen Clubhouse – Site Plan Review #2 |
| Location: | 6600 Grand River Avenue- south side of Grand River, east of Dorr Road |
| Zoning: | MHP Manufactured Housing Park District |

Dear Commissioners:

At the Township's request, we have reviewed the request from Sylvan Glen to renovate and expand their existing clubhouse, and construct a pool and deck (revised plans dated 5/25/22).

A. Summary

- 1. The applicant should provide elevation views for the remaining 2 sides of the equipment storage building.
- 2. The elevations are mislabeled on Sheet A301.
- 3. The applicant should be prepared to submit material samples and color samples for the Commission's consideration.
- 4. The applicant must include a typical light pole detail demonstrating that the maximum height requirement is met (20').
- 5. The applicant must address comments provided by the Township Engineer and/or Brighton Area Fire Authority.

B. Proposal/Process

The applicant proposes renovation and expansion of an existing clubhouse building, and construction of a pool, deck surround, trellis, equipment storage building, and additional parking spaces.

Section 4.02 lists community buildings for use by tenants as a permitted use in the MHP.

Procedurally, the Planning Commission is to review the site plan and Environmental Impact Assessment. The Commission has approval authority over the site plan, while the Impact Assessment is subject to review and approval by the Township Board (following a recommendation from the Planning Commission.)

Genoa Township Planning Commission **Sylvan Glen Clubhouse** Site Plan Review #2 Page 2



Aerial view of site and surroundings (looking north)

C. Site Plan Review

- 1. **Dimensional Requirements.** The existing building and proposed project comply with the minimum setbacks and maximum building height for the MHP District.
- **2. Building.** The existing building is comprised of brick, wood siding, and glass, with EIFS and metal accents. The proposed additions are primarily faced with EIFS.

The revised submittal includes drawings for 2 sides of the equipment storage building, which is faced with vertical wood siding. The applicant should provide elevation views of the remaining 2 sides.

Additionally, the elevations on Sheet A301 appear to be mislabeled and there are 2 plan sheets numbered A301.

The applicant should be prepared to submit material samples and color samples for the Commission's consideration as part of this site plan review.

3. Pedestrian Circulation. Per Section 12.05, a 5-foot wide sidewalk is required along Grand River Avenue. The revised submittal includes the required sidewalk along Grand River with a connection to the existing sidewalk immediately east of the site.

Internally, the project includes new sidewalks around the building and along the edge of the proposed parking spaces.

4. Vehicular Circulation. The existing drive aisles on each side of the building are of sufficient width for the established one-way circulation pattern.

The applicant must address any additional comments provided by the Township Engineer and/or the Brighton Area Fire Authority with respect to vehicular circulation.

5. Parking. Based on the parking requirement for a private club, 25 spaces are required by Ordinance. The proposal provides 25 spaces, including the required barrier-free space.

The proposed spaces meet the dimensional requirements of the Ordinance, and the revised submittal includes looped (double striped) spaces for the new parking.

Genoa Township Planning Commission Sylvan Glen Clubhouse Site Plan Review #2 Page 3

- 6. Landscaping. The revised submittal includes a detailed landscape plan for the project, which proposes 12 trees, 155 shrubs, and a variety of ornamental perennials and grasses. Additionally, the existing trees around the project area will be preserved.
- **7.** Exterior Lighting. The revised submittal includes a full lighting plan, which depicts 24 new light poles along the ingress/egress drives. Fixture details note the use of downward directed, cut-off LED fixtures.

Maximum light intensities (both on-site and along property lines) meet Ordinance standards, though the applicant must provide a typical light pole detail to ensure that the maximum height of 20' is met.

8. Impact Assessment. The submittal includes the required Environmental Impact Assessment (dated 5/3/22).

In summary, the Assessment notes that the proposed project is not expected to adversely impact natural features, stormwater, surrounding land, public services/utilities, or traffic and pedestrians.

Should you have any questions concerning this matter, please do not hesitate to contact our office.

Respectfully, SAFEBUILT BiVBL

Brian V. Borden, AICP Michigan Planning Manager



June 8, 2022

Ms. Kelly Van Marter Genoa Township 2911 Dorr Road Brighton, MI 48116

Re: Sylvan Glen Clubhouse Addition Site Plan Review No. 2

Dear Ms. Van Marter:

Tetra Tech conducted a second review of the proposed Sylvan Glen Clubhouse site plan last dated May 25, 2022. The plans were prepared by Monument Engineering Group Associates on behalf of AR Brouwer Company. The site is located on the south side of Grand River Avenue, just west of the Grand River Avenue and Kellogg Road intersection, and is a part of the existing Sylvan Glen Estates. The proposed improvements include a 10,766-square-foot pool area, as well as proposed parking lot and storm sewer improvements at their existing clubhouse building. We offer the following comments:

GENERAL

1. The plans need to be signed and sealed by a professional engineer.

DRAINAGE AND GRADING

1. The Petitioner is proposing swales and a riprap area to control the additional drainage from the site. The riprap area is intended to fill up and overflow across the site drive during a storm event. The storm management for the site should be designed so that overflow stormwater is not being conveyed across the access drive to the site. A culvert will be needed to direct flow to the west side of the existing drive.

We recommend the petitioner address the above comments prior to approval.

Sincerely,

Gary J. Markstrom, P.E. Vice President

Byene

Project Engineer

BRIGHTON AREA FIRE AUTHORITY



615 W. Grand River Ave. Brighton, MI 48116 o: 810-229-6640 f: 810-229-1619

June 3, 2022

Kelly VanMarter Genoa Township 2911 Dorr Road Brighton, MI 48116

RE: Sylvan Glen Clubhouse Renovation 6600 Grand River Genoa Twp., MI

Dear Kelly:

The Brighton Area Fire Department has reviewed the above-mentioned site plan. The plans were received for review on June 1, 2022 and the drawings are dated May 4, 2022 with latest revisions dated May 25, 2022. The project is based on the proposed addition of a new outdoor in-ground swimming pool area and associated building addition of 1,090 square feet. The additions will include a fitness center and restrooms for the pool area. Additional renovation is not proposed for the clubhouse, however, determination of the level of alteration will be left to the building department.

The plan review is based on the requirements of the International Fire Code (IFC) 2021 edition.

All comments and recommendations from the previous submittal have been addressed or acknowledged on the most recent submittal.

Additional comments will be given during the building plan review process (specific to the building plans and occupancy). The applicant is reminded that the fire authority must review the building plans for life safety requirements in conjunction with the Building Department.

If you have any questions about the comments on this plan review please contact me at 810-229-6640.

Cordially,

Rick Boisvert, FM, CFPS Fire Marshal

cc:Amy Ruthig <u>amy@genoa.org</u>

| From: | Matt Bolang | |
|--------------|--|--|
| То: | Amy Ruthig | |
| Cc: | Aaron Aumock; Heather Blair | |
| Subject: | RE: Sylvan Glen Clubhouse Reno Site Plan | |
| Date: | Thursday, May 5, 2022 1:17:05 PM | |
| Attachments: | image002.png | |
| | image003.png | |
| | image004.png | |
| | image005.png | |
| | Sun Sylvan Glen Site Plans Submission 05-04-22.pdf | |
| | Sylvan Glen Impact Assessment 05-03-22.pdf | |
| | Application.pdf | |

Amy,

If approved by the township, the applicant would need to follow the requirements of the State of Michigan to construct a public swimming pool. More information can be found here: https://www.michigan.gov/egle/about/organization/drinking-water-and-environmentalhealth/public-swimming-pools

Since Sylvan Glen operates their owner wastewater treatment and public drinking water, LCHD does not have jurisdiction for the clubhouse renovations.

Thanks, Matt

Matt Bolang, MSA, REHS Deputy Health Officer Director of Environmental Health Livingston County Health Department 2300 East Grand River Howell, MI 48843

517-552-6870 | <u>www.lchd.org</u>



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From: Amy Ruthig <amy@genoa.org>
Sent: Thursday, May 5, 2022 9:37 AM
To: Matt Bolang <MBolang@livgov.com>
Subject: [EXT] Sylvan Glen Clubhouse Reno Site Plan

05.03.22

Impact Assessment Sylvan Glen Estates Clubhouse Addition 6600 Grand River Avenue Genoa Township, Livingston County, MI

Prepared for: Sun Communities, Sylvan Glen Estates 2777 Franklin Road Southfield, MI 48034

A. Name(s) and address(es) of person(s) responsible for preparation of the impact assessment and a brief statement of their qualifications.

Prepared by: AR Brouwer Company 2830 Baker Road, Suite 100 Dexter, MI 48130

AR Brouwer Company is a design-build construction company located in Dexter, MI and is responsible for coordinating the site planning, design, permitting and construction of the facility.

B. Map(s) and written description/analysis of the project site including all existing structures, manmade facilities, and natural features. The analysis shall also include information for areas within 10 feet of the property. An aerial photograph or drawing may be used to delineate these areas.

The site is located on the south side of Grand River Avenue, directly across from Cortland Boulevard, and 650 feet west of Kellogg Road. Existing site features include a clubhouse with parking, and several paved outdoor spaces. The property to the west is vacant, and the property to the east is residential property under the same ownership. See attached aerial map.

C. Impact on natural features: A written description of the environmental characteristics of the site prior to development and following development, i.e., topography, soils, wildlife, woodlands, mature trees (eight-inch caliper or greater), wetlands, drainage, lakes, streams, creeks or ponds. Documentation by a qualified wetland specialist shall be required wherever the Township determines that there is a potential regulated wetland. Reduced copies of the Existing Conditions Map(s) or aerial photographs may accompany written material.

The existing site includes a clubhouse facility surrounded by lawn areas and paved recreation areas. It is encircled by streets that lead into the development. 15 parking spaces are located in front of the building, and there are several mature trees located in the lawn areas.

 D. Impact on stormwater management: Description of measures to control soil erosion and sedimentation during grading and construction operations and until a permanent ground cover is established. Recommendations for such measures may be obtained from the Livingston County Drain Commission at (517) 546-0040. Surface runoff from the disturbed area of the site will be controlled by proper methods set forth by the Livingston County Drain Commissioner, including silt fence and inlet protection as necessary. A storm water management system will be designed to meet the Drain Commissioner's standards.

E. Impact on surrounding land used: Description of the types of proposed uses and other man-made facilities, including any project phasing, and an indication of how the proposed use conforms or conflicts with existing and potential development patterns. A description shall be provided of any increases of light, noise or air pollution which could negatively impact adjacent properties.

The use of the facility as a clubhouse will not change, and a swimming pool and deck will be added for the benefit of the residents. The development will improve the existing condition of the building and grounds and will not negatively impact adjacent properties.

F. Impact on public facilities and services: Describe the number of expected residents, employees, visitors, or patrons, and the anticipated impact on public schools, police protection and fire protection. Letters from the appropriate agencies may be provided, as appropriate.

The clubhouse addition and swimming pool is for the benefit of the residents of Sylvan Glen Estates. The facilities will bring increased visits by the residents to make use of the new pool and fitness center. There will be no impact on schools, police or fire protection.

G. Impact on public utilities: Describe the method to be used to service the development with water and sanitary sewer facilities, the method to be used to control drainage on the site and from the site, including runoff control during periods of construction. For sites serviced with sanitary sewer, calculations for pre- and post development flows shall be provided in comparison with sewer line capacity. Expected sewage rates shall be provided in equivalents to a single family home. Where septic systems are proposed, documentation or permits from the Livingston County Health Department shall be provided.

The building addition will be served by existing sewer and water utilities. The utilities are sized to handle the minor increase in usage created by the new restrooms. Drainage from the site will be handled by a storm water management system approved by the Drain Commissioner, and soil erosion control measures will be in place during the construction period.

H. Storage and handling of any hazardous materials: A description of any hazardous substances expected to be used, stored or disposed of on the site. The information shall describe the type of materials, location within the site and method of containment. Documentation of compliance with federal and state requirements, and a Pollution Incident Prevention Plan (PIPP) shall be submitted, as appropriate.

There will be no hazardous materials onsite.

I. Impact on Traffic and Pedestrians: A description of the traffic volumes to be generated based on national reference documents, such as the most recent edition of the Institute of Transportation Engineers Trip Generation Manual, other published studies or actual counts of similar uses in

Michigan.

Traffic volumes will not be impacted, as the clubhouse and addition serve the existing residents of Sylvan Glen Estates.

J. Special Provisions: General description of any deed restrictions, protective covenants, master deed or association bylaws.

N/A

K. A list of all sources shall be provided.

N/A



Sylvan Glen Estates Clubhouse Renovation Existing Aerial



Sylvan Glen Estates Clubhouse Renovation Existing Survey

LEGAL DESCRIPTION (AS PROVIDED)

(PER: ALTA SURVEY BY: MICHIGAN SURVEYING, INC., JOB NO.: 21-7135, DATED: 4/15/2021) LAND SITUATED IN THE TOWNSHIP OF GENOA IN THE COUNTY OF LIVINGSTON IN THE STATE OF MICHIGAN COMMENCING AT THE WEST 1/4 CORNER OF SECTION 14, TOWN 2 NORTH, RANGE 5 EAST, GENOA TOWNSHIP, LIVINGSTON COUNTY, MICHIGAN; THENCE N 02°16'19" W (RECORDED AS N 00°15'00R W) 142.39 FEET ALONG THE WEST LINE OF SAID SECTION AND THE CENTERLINE OF DORR ROAD FOR A PLACE OF BEGINNING; THENCE CONTINUING N 02°16'19" W (RECORDED AS N 00°15'00" W) 414.81 FEET ALONG SAID SECTION AND CENTERLINE; THENCE N 87°17'00" E (RECORDED AS N 89°18'20" W) 1830.29 FEET; THENCE N 02°01'19" W (RECORDED AS N 00°15'00" E) 518.76 FEET; THENCE S 87°58'41" W (RECORDED AS WEST) 175.00 FEET; THENCE N 02°01'19" W (RECORDED AS NORTH) 482.18 FEET; THENCE N 82°59'37" E (RECORDED AS N 85°14'00" E) 1268. 16 FEET; THENCE N 21°55'21" E (RECORDED AS N 23°47'00" E) 483.63 FEET; THENCE S 68°04'39" E (RECORDED AS S 68°13'00" E) 100 FEET; THENCE N 21°55'21" E (RECORDED AS N 23°47'00" E) 150.00 FEET; THENCE S 68°04'39" E (RECORDED AS S 68°13'00" E) 809.69 FEET; THENCE S 01°52'09" E (RECORDED AS S 01°45' W) 1036.53 FEET ALONG THE EAST LINE OF THE WEST 1/2 OF THE NORTHEAST 1/4 OF SECTION 14 AND THE WESTERLY RIGHT-OF-WAY OF GRAND BEACH DRIVE AS RECORDED IN THE PLAT OF GRAND BEACH, LIBER 2 OF PLATS, PAGE 5, LIVINGSTON COUNTY RECORDS; THENCE S 75°13'02" W 363.41 FEET (RECORDED AS S 75°10' W 369.3 FEET) ALONG THE NORTHERLY RIGHT-OF-WAY OF SAID GRAND BEACH DRIVE; THENCE S 55°53'02" W (RECORDED AS S 59°30' W) 337.00 FEET ALONG THE NORTHWESTERLY RIGHT-OF-WAY OF SAID GRAND BEACH DRIVE; THENCE S 01°26'58" E (RECORDED AS S 02°30' W) 570.86 FEET; THENCE N 87°44'36" E (RECORDED AS S 89°51'33" E) 634.24 FEET; THENCE S 40°52'48" W 811. 70 FEET (RECORDED AS S 42°57' W 815.00 FEET) ALONG THE NORTHWESTERLY LINE OF GRAND BEACH NO. 2 A SUBDIVISION AS RECORDED IN LIBER 11 OF PLATS, PAGE 17, LIVINGSTON COUNTY RECORDS; THENCE S 48°49'14" W (RECORDED AS S 50°57' W) 60.00 FEET ALONG THE NORTHWESTERLY LINE OF SAID GRAND BEACH NO. 2; THENCE S 12°32'58" E (RECORDED AS S 10°16' E) 289.90 FEET ALONG THE WESTERLY LINE OF SAID GRAND BEACH NO. 2; THENCE S 02°18'19" E (RECORDED AS S 00°17' E) 70.63 FEET ALONG THE WESTERLY LINE OF SAID GRAND BEACH NO. 2; THENCE N 88°20'04" E (RECORDED AS S 89"34' E) 571.95 FEET ALONG THE SOUTHERLY LINE OF SAID GRAND BEACH NO. 2; THENCE S 01°49'21" E 1658.06 FEET (RECORDED AS S 00°15'23" E 1657.85 FEET); THENCE S 87°53'31" W 699.42 FEET (RECORDED AS S 89°58'11" W 699.55) ALONG THE SOUTH LINE OF SAID SECTION AND THE CENTERLINE OF HERBST ROAD; THENCE N 02°06'29" W (RECORDED AS N 00°01'49" W) 50.00 FEET; THENCE S 87°53'31" W 125. 19 FEET (RECORDED AS S 89°58'11" W 120.55 FEET); THENCE N 53°28'50" W 1085.80 FEET; THENCE N 02°19'22" W 1007.36 (RECORDED AS N 00°29'14" W 1007.04 FEET); THENCE N 01°37'39" W 922.92 FEET (RECORDED AS N 00°04'19" E 932.50 FEET); THENCE S 87°44'38" W (RECORDED AS 89°30'56" W) 2060.49 FEET ALONG THE EAST -WEST 1/4 LINE OF SAID SECTION; THENCE 211.96 FEET ALONG THE ARC OF A 500.74 FOOT RADIUS CURVE TO THE LEFT, HAVING A CENTRAL ANGLE OF 24°15'11" AND A LONG CHORD WHICH BEARS N 60°07'59" W 210.38 FEET; THENCE N 72°15'35" W 89.26 FEET TO THE PLACE OF BEGINNING.

THE PROPERTY DESCRIBED IN THIS SURVEY IS THE SAME PROPERTY AS DESCRIBED IN THE COMMITMENT FOR TITLE INSURANCE ISSUED BY FIRST AMERICAN TITLE INSURANCE COMPANY; ORDER NO: C000124057; COMMITMENT DATE: MARCH 17, 2021, 8:00 AM.

FILE:P:\Projects\2022\22-093 Sylvan Glen Estates\Dwg\Engineering\22-093_G-1.0_Cover.dwg PLOT DATE:5/26/2022 9:41 AM







POOL DESIGNER

AR BROUWER COMPANY 2830 BAKER ROAD, SUITE 100 DEXTER, MI 48114 POC: JEFF LOVELAND PHONE: 734-426-9980

HOUSE-SEAMAN ARCHITECTS PLLC P.O. BOX 1844 BRIGHTON, MI 48116 POC: KELLY HOUSE-SEAMAN PHONE: 810-531-1902

OWNER

M ARCHITECTS 114 RAYSON ST. SUITE 2C NORTHVILLE, MI 48167 POC: ROBERT MILLER PHONE: 248-349-2708

SUN COMMUNITIES, INC. 24444 FRANKLIN RD, SUITE 200 SOUTHFIELD, MI 48034 POC: MICHAEL BARNETT PHONE: 248-864-0358

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CITY/TOWNSHIP, COUNTY STANDARD DETAILS

| INNOVATIVE GEOSPATIAL & ENGINEERING SOLUTIONS | | | | | | | | |
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| Call MISS DIG 3 full working days before you dig: Michigan's One-Call 1-800-482-7171 | | | | | | | | |
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| COVER SYLVAN GLEN ESTATES SYLVAN GLEN ESTATES CLUBHOUSE & POOL EXPANSION PART OF NE 1/4, SEC 14, TO2N, RO5E BRIGHTON TOWNSHIP, LIVINGSTON COUNTY, MI | | | | | | | | |
| DATE 05/04/2022 05/25/2022 | | | | | | | | |
| PLAN SUBMITTALS/REVISIONS SITE PLAN REVIEW REVISED PER COMMENTS | | | | | | | | |
| ORIGINAL ISSUE DATE: 05/04/2022 | | | | | | | | |
| PROJECT NO: 22-093 | | | | | | | | |
| SCALE: N/A | | | | | | | | |
| FIELD: (BY OTHERS) DRAWN BY: MV DESIGN BY: TDB CHECK BY: AP | | | | | | | | |

AERIAL SOURCE

AERIAL IMAGE PER ESRI/DIGITAL GLOBE DATE: UNKNOWN

SURVEY SOURCE

ALTA SURVEY BY: MICHIGAN SURVEYING, INC., JOB NO.: 21-7135, DATED: 4/15/2021.

FILE:P:\Projects\2022\22-093 Sylvan Glen Estates\Dwg\Engineering\22-093_V-1.0_Overview.dwg PLOT DATE:5/26/2022 9:55 AM



-PROPOSED SIDEWALK

INNOVATIVE GEOSPATIAL & ENGINEERING SOLUTIONS , ing Group Λ GA ο_M . 20 298 VETERANS DRIVE FOWLERVILLE, MICHIGAN 48836 (OFFICE) 517-223-3512 MONUMENTENGINEERING.COM SERVICE DISABLED VETERAN OWNED SMALL BUSINESS (SDVOSB) OPY Allehre Call MISS DIG 3 full working days before you dig Utility Michigan's One-Call Organization 1-800-482-7171 WWW.missdig.org THE LOCATIONS AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOW ON THIS DRAWING ARE ONLY APPROXIMATE NO GUARANTEE IS EITHER EXPRESSED OI IMPLIED AS TO THE COMPLETENESS O ACCURACY THEREOF. THE CONTRACTO SHALL BE EXCLUSIVELY RESPONSIBLE FO DETERMINING THE EXACT UTILITY LOCATION AND ELEVATIONS PRIOR TO THE START C C O N S T R U C T I O N CLIENT : AR BROUWER COMPANY 2830 BAKER ROAD, SUITE 100 BRIGHTON, MI 48130 JEFF LOVELAND ERVIEW) Σ 05E ITY. I, R(<u>N</u> SURVE 0 TOPOGRAP CLU PART OF BRIGHTON ORIGINAL ISSUE DATE: 05/04/2022 PROJECT NO: 22-093 SCALE: 1" = XX'1/2" FIELD: (BY OTHERS) DRAWN BY: MV DESIGN BY: TDB CHECK BY: AP V-1.0





SOILS INFO

SOIL TYPES ARE ACCORDING TO THE USDA SOIL SURVEY WEB SITE (https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm)

MoB: WAWASEE LOAM, 2-6% SLOPES

THREE FULL WORKING DAYS WORKING DAYS BEFORE YOU DIG, CALL THE MISS DIG SYSTEM

MISS DIG SYSTEM

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POGRAPHIC SURVEY GRAND RIVER AVENUE

6600

FIELD BOOK 1123

COPYRIGHT 202

- MoC: WAWASEE LOAM, 6-12% SLOPES
- MoF: MIAMI LOAM, 25-35% SLOPES

BENCHMARKS

DATUM: NAVD88

BENCHMARK A: ARROW ON HYDRANT ELEV = 993.41

BM B: S. COR. OF BLEEDING VALVE ELEV = 998.89
ZONING INFORMATION

THIS ZONING INFORMATION IS TAKEN FROM GENOA TOWNSHIP ZONING ORDINANCE DATED: 03/05/10

| SUBJECT PARCEL ZONING: | SUBJECT | PARCEL | PROP BUIL | OSED DING | MAXIMUN OF BL | 1 HEIGHT JILDING | BUILDIN | G SETBAC | KS (FT) | PARKIN | G SETBACI | KS (FT) |
|------------------------|--------------|-----------------------------------|------------------------|------------------------|------------------|---------------------|--------------|-----------------|-------------------|--------------------|-------------------|-------------------|
| HOUSING PARK | AREA (AC) | WIDTH AT BUILDING SITE (FT) | BLDG A AREA (SF) | BLDG B AREA (SF) | IN STORIES | IN FEET | FRONT (N) | SIDE (S,E,W) | REAR (N,S,E,W) | FRONT (N,S,E,W) | SIDE (N,S,E,W) | REAR (N,S,E,W) |
| REQUIRED | NA | 50 | 5,500 | 5,500 | 1 | 14 | 50 | 35 | 35 | 50 | 35 | 35 |
| PROVIDED | 4.58 | 280 | 300 | 1,086 | 9 | NA | 274 | 123 | NA | 180 | 120 | NA |

ADJACENT ZONING

% OF IMPERVIOUS SURFACES

% OF BUILDINGS AND IMPERVIOUS SURFACES IS NOT

APPLICABLE. PROJECT SITE IS ONLY A PORTION OF THE PROPERTY. % OF IMPERVIOUS SURFACES HOLDS NO WEIGHT

NORTH: (MDR) SOUTH: (NA) EAST: (NA) (OS) WEST:

MEDIUM DENSITY RESIDENTIAL NOT APPLICABLE NOT APPLICABLE OFFICE SERVICE

CONCRETE SIDEWALK SECTION

Applies to:

| 44 A 4 44 44 | - 4" UNREINFORCED CONCRETE |
|--------------|---|
| | - 6" CLASS II SAND COMPACTED TO 95% MAX. DENSITY |
| | - SUBGRADE COMPACTED TO 95% |
| | MAXIMUM DENSITY ASTM D-1557 (MODIFIED PROCTOR) |

STANDARD DUTY **PAVEMENT SECTION**

Applies to:

| 2" MDOT 1100T WEARING COURSE |
|--|
| 2" MDOT 1100L LEVELING COURSE |
| |
| SUBGRADE COMPACTED TO 95% MAXIMUM DENSITY ASTM D–1557 (MODIFIED PROCTOR) |
| - |

CURB AND GUTTER DETAIL - CONCRETE -STANDARD - 24" W 6" H 12" D







FILE:P:\Projects\2022\22-093 Sylvan Glen Estates\Dwg\Engineering\22-093_C-1.0_Dim-Pav.dwg PLOT DATE:5/26/2022 9:42 AM







| DEMOLITION LEGEND | | INNOVATIVE GEOSPATIAL & ENGINEERING SOLUTIONS |
|---|--|---|
| | ABANDON IN PLACE ABANDON LINEAR FEATURE SAWCUT REMOVE LINEAR FEATURE LIMITS OF DISTURBANCE REMOVE OBJECT REMOVE PAVEMENT | 298 VETERANS DRIVE FOWLERVILLE, MICHIGAN 48836 (OFFICE) 517-223-3512 MONUMENTENGINEERING.COM SERVICE DISABLED VETERAN OWNED SMALL BUSINESS (SDVOSB) |
| DEMOLITION NOTES 1. UTILITY OBJECTS SUCH AS GAS METER, TELEPHONE PEDESTAL, UTILITY POLE & REMOVED BY OTHERS IF APPLICABLE. | TRANSFORMER, WIRES ARE TO BE | DRAFT |
| 2. ANY TREES NOT MARKED PER PLAN ARE PRESERVED DURING CONSTRUCTION. | TO BE PROTECTED & | allehpen |

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| | СТІС |
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| | RC |
| | L FO |
| | NO |

Call MISS DIG 3 full working days before you dig

1-800-482-7171

L-OUU-402-7171 WWW.missdig.org THE LOCATIONS AND ELEVATIONS C EXISTING UNDERGOUND UTLIDTES AS SHOW ON THIS DRAWING ARE ONLY APPROXIMAT NO GUARANTEE IS EITHER EXPRESSED C IMPLIED AS TO THE COMPLETENESS C ACCURACY THEREOF. THE CONTRACTC SHALL BE EXCLUSIVELY RESPONSIBLE FC DETERMINING THE EXACT UTILITY LOCATION AND ELEVATIONS PRIOR TO THE START C C O N S T R U C T I O N

AR BROUWER COMPANY

2830 BAKER ROAD, SUITE 100 BRIGHTON, MI 48130 JEFF LOVELAND

Michigan's One-Call

CLIENT :

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Utilit

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ORIGINAL ISSUE DATE: 05/04/2022

PROJECT NO: 22-093

1/2" FIELD: (BY OTHERS)

CD-1.0

SCALE: 1" = 30'

DRAWN BY: MV DESIGN BY: TDB CHECK BY: AP

ON ON

PART IGHT(

R R

UTILITY LEGEND

PROPOSED

FILE:P:\Projects\2022\22-093 Sylvan Glen Estates\Dwg\Engineering\22-093_C-3.0_Util.dwg PLOT DATE:5/26/2022 9:42 AM

 $\triangleright - - - \triangleleft$ - UG-ELEC ------

EXISTING

______S _____S _____S _____SANITARY SEWER, MH, CLEAN OUT GAS GAS UG GAS UG GAS, MH, VALVE, LINE MARKER

UG-ELEC UG ELEC (ELEC, CABLE, FIBER)





| | | | OPERATION | TIME | SCHE | DULE - | - BEGINNING | MON | TH 20 |)21 | 1 | |
|--|-----|----|---------------|------|------|--------|-------------|-----|-------|-----|---------------------------------------|---|
| CONSTRUCTION SEQUENCE | Х | XX | XXX | | XXX | | XXX | | ХХХ | | XXX | |
| CONTRACTOR SHALL INSTALL SILT FENCE AS SHOWN ON APPROVED PLANS. | | | | | | | | | | | | |
| DETENTION BASIN SHALL BE EXCAVATED, TOP SOILED, AND SEEDED IMMEDIATELY AFTER DEMOLITION WORK IS COMPLETED. | | | | | | | | | | | | |
| REMOVE ALL TOPSOIL AND ORGANIC MATTER. TOPSOIL MAY BE STORED ON SITE IN DESIGNATED AREA TO BE USED FOR FUTURE PLANTING AND FILL AREAS. TRUCK REMAINING TOP SOIL OFFSITE AND PROPERLY DISPOSE. | | | | | | | | | | | | |
| ROUGH GRADE AND INSTALL NEW UNDERGROUND UTILITIES. PLACE INLET FILTERS AT PROPOSED CATCH BASINS THROUGHOUT SITE. | | | | | | | | | | | | |
| CONSTRUCT BUILDING(S). | | | | | | | | | | | | 1 |
| FINISH GRADE AROUND BUILDING(S) AND STABILIZE AS SOON AS POSSIBLE. STABILIZE ALL DISTURBED AREAS WITH CLASS A SEED AND MULCH. IN AREAS OF SLOPES OF 1:4 OR STEEPER, CONTRACTOR TO SEED AND INSTALL PEGGED IN PLACE EROSION CONTROL BLANKETS. | | | | | | | | | | | | |
| REPAIR/CLEAN INLET FILTERS AS REQUIRED. | | | | | | | | | | | | / |
| INSTALL FINAL LANDSCAPING PER SEPARATE LANDSCAPE PLAN. | | | | | | | | | | | |]/ |
| STONE AROUND OUTLET STANDPIPE STRUCTURE SHALL BE REFRESHED. | | | | | | | | | | | / | |
| REMOVE TEMPORARY SOIL EROSION MEASURES ONCE SEEDED VEGETATION HAS BEEN ESTABLISHED. CLEAN ALL AFFECTED STORM STRUCTURES AS NECESSARY. | | | | | | | | | | | | |
| OILS INFO | | | | | | | | | | | | |
| IL TYPES ARE ACCORDING TO THE USDA SOIL SURVEY WEB SI tps://websoilsurvey.sc.egoy.usda.goy/App/HomePage.htm) | ITE | | | | | | | | | | / | <i>S</i> |
| | | | | | | | | | | | | Sol. |
| MoB: WAWASEE LOAM, 2-6% SLOPES | | | | | | | | | | / | | ~ ~ · |
| MoC: WAWASEE LOAM, 6-12% SLOPES | | | | | | | | | | / | n n n n n n n n n n n n n n n n n n n | 87.64 ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ |
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BENCHMARKS

DATUM: NAVD88 BENCHMARK A: ARROW ON HYDRANT ELEV = 993.41

BM B: S. COR. OF BLEEDING VALVE ELEV = 998.89

OVERLAND FLOW ROUTE

FILE:P:\Projects\2022\22-093 Sylvan Glen Estates\Dwg\Engineering\22-093_C-7.0_Grad-Sesc.dwg PLOT DATE:5/26/2022 9:42 AM

13 SY RIP-RAP SPILLWAY

SWALE CENTERLINE





8. IF SOIL EROSION/SEDIMENT CONTROL MEASURES ARE INADEQUATE FOR THE SITE. THE PROPER EROSION CONTROL AUTHORITY MUST BE NOTIFIED.

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| 2830 | BAKEK | R | JAD, | SOILF | 100 |
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| BR | IGHTO | N, | MI | 4813 | 0 |
| | JEFF | LC | VEL | AND. | |



C-7.0





SPILLWAY DETAIL - OVERFLOW - RIP RAP - DETENTION POND





OVERLAND FLOW ROUTE

TOP OF SWALE @ 996.00-14 SY OF RIP-RAP

PROPOSED BASIN OUTLET

FILE:P:\Projects\2022\22-093 Sylvan Glen Estates\Dwg\Engineering\22-093_C-9.0_SWM.dwg PLOT DATE:5/26/2022 9:43 AM







- 1. THE PROPOSED DRAINAGE SWALE WILL CAPTURE ALL RUNOFF FROM DRAINAGE AREA 1.
- 2. THE RUNOFF WILL BE DETAINED UNTIL THE WATER LEVEL REACHES ELEVATION 995.50, AT WHICH POINT THE CAPTURED RUNOFF WILL SPILL OUT OF THE SWALE OVER THE RIP-RAP IN THE GENERAL SOUTH-WEST DIRECTION.
- 3. THE SWALE IS SIZED TO DETAIN THE WATER QUALITY VOLUME.
- 4. THE WATER QUALITY VOLUME WAS CALCULATED USING THE AREA OF DRAINAGE AREA 1 ONLY.

SITE INFO

| OVERALL AREA | | 4.58 AC |
|--------------------------|---|-------------|
| CONTRIBUTING AREA (A) | = | 0.25 AC |
| ALLOWABLE DISCHARGE (Qa) | = | 0.20 CFS/AC |
| COMPOUND C | | 0.90 |

COMPOUND RUNOFF COEFFICIENT FOR AREA 1

| | | | CB11- | CB10 |
|---------------|-------------|-----------|---------|--------------|
| | AREA (SF) | AREA (AC) | С | |
| OVERALL | 18639 | 0.43 | | |
| CONTRIBUTING | 18639 | 0.43 | | |
| FLOWING OFF | 0 | 0.00 | | |
| | | | | $A \times C$ |
| EX BUILDING | 1630 | | 0.95 | 1548.5 |
| EX PAVEMENT | 0 | | 0.95 | 0 |
| PR BUILDING | 156 | | 0.95 | 148.2 |
| PR PAVEMENT | 12358 | | 0.95 | 11740.1 |
| WATER | 4495 | | 1.00 | 4495 |
| NATURAL AREAS | 0 | | 0.30 | 0 |
| ΤΟΤΑΙ | _S 18639 | | | 17931.8 |
| | | | | |
| COMPOUND C - | TOTAL A | × C | 17931.8 | 0.96 |
| COMPOUND C = | CONTRIBUTIN | IG AREA | 18639 | |

REQUIRED WATER QUALITY VOLUME

= 817 CF $V_{wq} = \frac{1"}{12"} \times 43560 \times A \times C$

PROPOSED SWALE GEOMETRY





| unting | | | |
|---|--|---|---|
| ipped include A A BA UMBA UMBA ipped separa iA8 DDBXD U | ed Square p Round p Wall bra Square p Round p tely Mast arr (specify | oole mounting ole mounting cket ³ oole universal I ole universal r n mounting bi finish) ¹² | ¹⁰ mounting adaptor ¹¹ mounting adaptor ⁹ racket adaptor |
| | | | |
| | | | |
| led le shield ²³ e (120, 277, 347 se (208, 240, 48 ed optics ² ted optics ² ient operations ¹ ica(n) Act Comp ately Is s ²⁴ lare shield | V) ⁹ OV) ⁹ liant | DDBXD DBLXD DNAXD DWHXD DDBTXD DBLBXD DNATXD DWHGXD | Dark bronze Black Natural aluminum White Textured dark bronze Textured dark bronze Textured natural aluminum Textured white |

 NOTES

 1
 HA not available with P4, P5, P6, P7, P9 and P13.

 2
 P10, P11, P12 or P13 and rotated optics (L90, R90) only available together.

 3
 Any Type 5 distribution with photocell, is not available with WBA.

 4
 Not available with H5.

 5
 MVOLT driver operates on any line voltage from 120-277V (50/60 Hz).

 6
 XVOLT only suitable for use with P3, P5, P6, P7, P9 and P13.

 7
 WOLT works with superscenarios of 270 (and 490)
 DLL127F 1.5 JU Photocell - SSL twist-lock (120-277V) 25 DLL347F 1.5 CUL JU Photocell - SSL twist-lock (347V) ²⁵ MVCLI driver operates on any line vottage trom 12/2/1/ (SU/6U H2).
XVOLT only suitable for use with PJ, PS, PS, PP, PP, PP, PP and P13.
XVOLT works with any vottage between 277 and 480V.
XVOLT works with any vottage between 277 and 480V.
XVOLT works with any vottage between 277 and 480V.
Single fuse (SF) requires 120V, 277 Vo 3747V. Double fuse (DF) requires 208V, 240V or 480V. XVOLT not available with fusing (SF or DF.
Suitable for mounting to round poles between 3.5" and 12" diameter.
Universal mounting brackets intended for retrofit on existing, pre-drilled poles only. 1.5 G vibration load rating per ANCI C136.31. Only usable when pole's drill pattern is NOT Lithonia template #8
Must order fixture with SPA option. Must be ordered as a separate accessory; see Accessories information. For use with 2-3/8" diameter mast arm (not included).
Must be ordered with NLTNR2.For more information on Light At 2 visit this link.
Photocell ordered and shipped as a separate line item from Acuty Brands Controls. See accessories. Shorting cap included.
If ROAM® node required, it must be ordered with PIRH, PIRT, SY, FAO.
Provides 50/50fixture operation via (2) independent drivers. Not available with PER, PERS, PER7, PI, ROY or PIRH-ICXY, FAO.
Reference Controls Option Default setting table on page 4.
Reference Controls Option Default setting table on page 4.
Reference Controls Option Default setting using solution. Also evailable as a separate accessory; see Accessories information.
Must be ordered with BLC, LCCO and RCCO distribution. Also evailable as a separate accessory; see Accessories information.
Must be ordered with BLC, LCCO and RCCO distribution. Also evailable as a separate accessory; see Accessories information.
Must be ordered with BLC, LCCO and RCCO distribution. Also evailable as a separate accessory; see Accessories information.
Must b DLL480F 1.5 CUL JU Photocell - SSL twist-lock (480V) ²⁵ DSHORT SBK U Shorting cap 25 DSX1HS 30C U House-side shield for P1, P2, P3, P4 and P5²³ DSX1HS 40C U House-side shield for P6 and P7²³ DSX1HS 60C U House-side shield for P8, P9, P10, P11 and P12²³ PUMBA DDBXD U* Square and round pole universal mounting bracket (specify finish)²⁶ KMA8 DDBXD U Mast arm mounting bracket adaptor (specify finish) ¹² DSX1EGS (FINISH) U External glare shield For more control options, visit DTL and ROAM online. Options EGS - External Glare Shield Drilling HANDHOLE ORIENTATION C
 Mounting Option
 Drilling Template
 Single

 Head Location
 Side B
 Head Location Drill Nomenclature #8 DM19AS Handhole DSX1 Area Luminaire - EPA Top of Pole Template #8 *Includes luminaire and integral mounting arm. Other tenor 1.75" for aluminum poles 2.75" for other pole types -8 Mounting Type 1.013 DSX1 LED

Ordering Information

Accessories Ordered and shipped separately.

LITHONIA LIGHTING. COMMERCIAL OUTDOOR

One Lithonia Way • Conyers, Georgia 30012 • Phone: 1-800-705-SERV (7378 © 2011-2021 Acuity Brands Lighting, Inc. All rights reserved.



| ы | y; see Accessories i e on page 4. | | | | |
|----|--|---|---|---|---|
| ol | y; see Accessories i e on page 4. | | | | |
| | e on page 4. | nformation. | | | |
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| | 12. | 10 | | | |
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| | | | | | |
| | 2 @ 180 | 2 @ 90 | 3 @ 90 | 3 @120 | 4 @ 90 |
| | AS3-5 280 | AS3-5 290 | AS3-5 390 | AS3-5 320 | AS3-5 490 |
| | AST25-280 | AST25-290 | AST25-390 | AST25-320 | AST25-490 |
| | AST35-280 | AST35-290 | AST35-390 | AST35-320 | ACTOC 400 |
| _ | | 10100 200 | A3133 370 | 10100 010 | AS135-490 |
| | | | 13133 370 | | AS135-490 |
| | | Ł_ | | Y | AS135-490 |
| | 2 @ 180 | 2 @ 90 | 3 @ 90 | 3 @ 120 | AS135-490 |
| | 2 @ 180 Side B & D | 2 @ 90 Side B & C | 3 @ 90 Side B, C & D | 3 @ 120 Round Pole Only | AS135-490 4 @ 90 Side A, B, C & D |
| | 2 @ 180 Side B & D DM28AS | 2 @ 90 Side B & C DM29AS | 3 @ 90 Side B, C & D DM39AS | 3 @ 120 Round Pole Only DM32AS | AST33-490 4 @ 90 Side A, B, C & D DM49AS |
| | 2 @ 180 Side B & D DM28AS | 2 @ 90 Side B & C DM29AS | 3 @ 90 Side B, C & D DM39AS | 3 @ 120 Round Pole Only DM32AS | AST33-490 4 @ 90 Side A, B, C & D DM49AS |
| | 2 @ 180 Side B & D DM28AS | 2 @ 90 Side B & C DM29AS | 3 @ 90 Side B, C & D DM39AS | 3 @ 120 Round Pole Only DM32AS | 4 @ 90 Side A, B, C & D DM49AS |
| | 2 @ 180 Side B & D DM28AS | 2 @ 90 Side B & C DM29AS | 3@90 Side B, C & D DM39AS | 3 @ 120 Round Pole Only DM32AS | 4 @ 90 Side A, B, C & D DM49AS |
| | 2 @ 180 Side B & D DM28AS | 2 @ 90 Side B & C DM29AS | 3 @ 90 Side B, C & D DM39AS | 3 @ 120 Round Pole Only DM32AS | 4 @ 90 DM49AS |
| | 2 @ 180 Side B & D DM28AS | 2 @ 90 Side B & C DM29AS | 3 @ 90 Side B, C & D DM39AS | 3 @ 120 Round Pole Only DM32AS | A \$133-490 |
| , | 2 @ 180 Side B & D DM28AS arms, brackets c 2 @ 180 DM28 | 2 @ 90 Side B & C DM29AS | 3 @ 90 Side B, C & D DM39AS | 3 @ 120 Round Pole Only DM32AS | AS133-490 4 @ 90 Side A, B, C & D DM49AS 4 @ 90 DM49 4 @ 90 DM49 |
| 2 | 2 @ 180 Side B & D DM28AS arms, brackets of 2 @ 180 DM28 2.025 | 2 @ 90 Side B & C DM29AS or other accessorie 2 @ 90 DM29 | 3 @ 90 Side B, C & D DM39AS | 3 @ 120 Round Pole Only DM32AS | A 5133-490 4 @ 90 Side A, B, C & D DM49AS 4 @ 90 DM49 4 @ 90 DM49 3.749 |
| , | 2 @ 180 Side B & D DM28AS arms, brackets of 2 @ 180 DM28 2.025 | 2 @ 90 Side B & C DM29AS Dr other accessorie 2 @ 90 DM29 La 1.945 | 3 @ 90 Side B, C & D DM39AS es are not included 3 @ 90 DM39 | 3 @ 120 Round Pole Only DM32AS d in this EPA data. 3 @ 120 DM32 \$ \$ 2.850 | ASI33-490 4@90 Side A, B, C & D DM49AS 4@90 DM49 4@90 DM49 3.749 |
| | 2 @ 180 Side B & D DM28AS arms, brackets of 2 @ 180 DM28 2.025 Mini | 2 @ 90 Side B & C DM29AS Dr other accessorie 2 @ 90 DM29 La 1.945 | 3 @ 90 Side B, C & D DM39AS es are not included 3 @ 90 DM39 3.038 | 3 @ 120 Round Pole Only DM32AS d in this EPA data. 3 @ 120 DM32 2.850 nsion | A \$133-490 4 @ 90 Side A, B, C & D DM49AS 4 @ 90 DM49 4 @ 90 DM49 3.749 |
| | 2 @ 180 Side B & D DM28AS arms, brackets of 2 @ 180 DM28 2 @ 180 DM28 2 .025 Mini 2-7/8" | 2 @ 90 Side B & C DM29AS | 3 @ 90 Side B, C & D DM39AS es are not included 3 @ 90 DM39 | 3 @ 120 Round Pole Only DM32AS d in this EPA data. 3 @ 120 DM32 2.850 | A \$133-490 4 @ 90 Side A, B, C & D DM49AS 4 @ 90 DM49 4 @ 90 DM49 4 @ 90 DM49 5 3.749 |
| | 2 @ 180 Side B & D DM28AS arms, brackets c 2 @ 180 DM28 2 @ 180 DM28 2 .025 Minit 2-7/8" 3" | 2 @ 90 Side B & C DM29AS | 3 @ 90 Side B, C & D DM39AS es are not included 3 @ 90 DM39 | 3 @ 120 Round Pole Only DM32AS d in this EPA data. 3 @ 120 DM32 2.850 nsion 3" 3" 3.5" | A \$133-490 4 @ 90 Side A, B, C & D DM49AS 4 @ 90 DM49 4 @ 90 DM49 4 @ 90 DM49 3.749 3.5" 4" |

Page 2 of 8

GENERAL NOTES

- ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THE CURRENT STANDARDS AND SPECIFICATIONS OF THE LOCAL MUNICIPALITY, THE LOCAL WATER AND/OR SEWER AUTHORITY. THE COUNTY D.P.W., THE COUNTY DRAIN COMMISSIONER, MICHIGAN DEPARTMENT OF TRANSPORTATION, MICHIGAN DEPARTMENT OF ENVIRONMENT. GREAT LAKES AND ENERGY. THE STATE OF MICHIGAN, AND THE COUNTY ROAD COMMISSION WHERE APPLICABLE.
- RULES, REGULATIONS OR LAWS OF ANY CONTROLLING GOVERNMENTAL AGENCY SHALL GOVERN, WHEN THEY ARE MORE STRINGENT THAN THE REQUIREMENTS OF THESE SPECIFICATIONS.
- SHOULD THE CONTRACTOR ENCOUNTER A CONFLICT BETWEEN THESE PLANS AND SPECIFICATIONS, EITHER AMONG THEMSELVES OR WITH THE REQUIREMENTS OF ANY AND ALL REVIEWING AND PERMIT-ISSUING AGENCIES CONTRACTOR SHALL SEEK CLARIFICATION IN WRITING FROM THE ENGINEER BEFORE COMMENCEMENT OF CONSTRUCTION. FAILURE TO DO SO SHALL BE AT SOLE EXPENSE TO THE CONTRACTOR
- 4. THE CONTRACTOR SHALL PROVIDE ALL MATERIALS, LABOR AND EQUIPMENT TO COMPLETE THE TYPE OF WORK WHICH IS BID, IN ACCORDANCE WITH THE PLANS, SPECIFICATIONS, DETAILS AND TO THE SATISFACTION OF THE OWNER AND OWNER'S REPRESENTATIVE.
- CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS, AND CONTRACTOR FURTHER AGREES TO DEFEND. INDEMNIFY AND HOLD DESIGN PROFESSIONAL HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE WORK ON THIS PROJECT, EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE DESIGN PROFESSIONAL.
- ANY WORK WITHIN STREET OR HIGHWAY RIGHT-OF-WAYS SHALL BE DONE IN ACCORDANCE WITH THE REQUIREMENTS OF THE GOVERNMENTAL AGENCIES HAVING JURISDICTION AND SHALL NOT BEGIN UNTIL PERMITS HAVE BEEN ISSUED BY THESE GOVERNING AUTHORITIES.
- 7. ALL NECESSARY PERMITS, BONDS, INSURANCES, ETC., SHALL BE PAID FOR BY THE CONTRACTOR.
- 8. ALL ELEVATIONS SHOWN ARE BASED ON BENCHMARKS PROVIDED BY THE LOCAL MUNICIPALITY UNLESS OTHERWISE NOTED ON THE DRAWINGS.
- 9. ALL ITEMS OF WORK NOT SPECIFICALLY INDICATED AS PAY ITEMS ON THE DRAWINGS OR IN THE BID PACKAGE SHALL BE CONSIDERED INCIDENTAL ITEMS.
- 10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DUST CONTROL DURING THE PERIODS OF CONSTRUCTION.
- 11. AT LEAST THREE (3) WORKING DAYS PRIOR TO ANY EXCAVATION, THE CONTRACTOR SHALL CONTACT MISS DIG (1-800-482-7171) TO VERIFY THE LOCATION OF ANY EXISTING UNDERGROUND UTILITIES AND SHALL NOTIFY REPRESENTATIVES OF OTHER UTILITIES IN THE VICINITY OF THE WORK.
- 12. ALL PROPERTIES OR FACILITIES IN THE SURROUNDING AREAS, PUBLIC OR PRIVATE, DESTROYED OR OTHERWISE DISTURBED DUE TO CONSTRUCTION, SHALL BE REPLACED AND/OR RESTORED TO THE ORIGINAL CONDITION BY THE CONTRACTOR, AT NO ADDITIONAL COST TO THE OWNER.
- 13. MANHOLE, CATCH BASIN, GATE WELL RIMS AND HYDRANT FINISH GRADE ELEVATIONS MUST BE AS-BUILT AND APPROVED BY THE ENGINEER BEFORE THE CONTRACTOR'S WORK IS CONSIDERED COMPLETE. AGENCY REQUIREMENTS FOR RECORD DRAWINGS ALSO APPLY
- 14. CONTRACTOR SHALL REMOVE AND DISPOSE OF OFF-SITE ANY TREES, BRUSH, STUMPS. TRASH OR OTHER UNWANTED DEBRIS, AT THE OWNER'S DIRECTION, INCLUDING OLD BUILDING FOUNDATIONS AND FLOORS. THE BURNING OR BURYING OF TRASH, STUMPS OR OTHER DEBRIS WILL NOT BE ALLOWED.
- 15. ALL REFERENCES TO M.D.O.T. SPECIFICATIONS REFER TO THE MOST CURRENT STANDARD SPECIFICATIONS FOR CONSTRUCTION.
- 16. ALL CONTRACTORS BIDDING THIS PROJECT SHALL HAVE VISITED THE SITE TO BECOME THOROUGHLY FAMILIAR WITH THE SITE AND THE CONDITIONS IN WHICH THEY WILL BE CONDUCTING THEIR OPERATIONS. ANY VARIANCE FOUND BETWEEN THE PLANS AND EXISTING CONDITIONS SHALL BE REPORTED IMMEDIATELY TO THE DESIGN ENGINEER.
- 17. THE LOCATIONS AND DIMENSIONS SHOWN ON THE PLANS FOR EXISTING UNDERGROUND FACILITIES ARE IN ACCORDANCE WITH AVAILABLE INFORMATION PROVIDED BY THE UTILITY COMPANIES AND GOVERNMENTAL AGENCIES WITHOUT UNCOVERING AND MEASURING. THE DESIGN ENGINEER DOES NOT GUARANTEE THE ACCURACY OF THIS INFORMATION OR THAT ALL EXISTING UNDERGROUND FACILITIES ARE SHOW
- 18. THE OWNER MAY EMPLOY AND PAY FOR THE SERVICES OF AN ENGINEER TO PROVIDE ON-SITE INSPECTION AND VERIFY IN THE FIELD THAT ALL BACKFILL. PAVEMENTS AND CONCRETE CURB AND GUTTER HAVE BEEN PLACED AND COMPACTED IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS. IF, IN THE OPINION OF THE ENGINEER. THE WORK DOES NOT MEET THE TECHNICAL OR DESIGN REQUIREMENTS STIPULATED FOR THE WORK, THE CONTRACTOR SHALL MAKE ALL NECESSARY ADJUSTMENTS AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL MAKE NO DEVIATIONS FROM THE CONTRACT DOCUMENTS WITHOUT SPECIFIC WRITTEN APPROVAL OF THE OWNER.
- 19. ALL EXCAVATED MATERIAL REMOVED FROM THE SANITARY SEWER, STORM SEWER AND WATER MAIN TRENCHES UNDER, THROUGH AND WITHIN 3 FEET OF THE 45° ZONE OF INFLUENCE LINE OF EXISTING OR PROPOSED PAVING, SIDEWALK AREAS AND PER PLANS, NOT SUITABLE FOR BACKFILL, SHALL BE REMOVED FROM THESE AREAS AND DISPOSED OF.
- 20. THE CONTRACTOR SHALL RESTORE TO THEIR PRESENT CONDITIONS ANY PAVEMENT OR PUBLIC RIGHTS-OF-WAY THAT IS DISTURBED BY THE OPERATIONS OF THE CONTRACTOR. ALL RESTORATION WORK IN PUBLIC RIGHTS-OF-WAY SHALL BE PERFORMED TO THE SATISFACTION OF THE GOVERNMENT AGENCIES HAVING JURISDICTION.
- 21. THE CONTRACTOR SHALL PROVIDE ALL NECESSARY BARRICADES, SIGNAGE AND LIGHTS TO PROTECT THE WORK AND SAFELY MAINTAIN TRAFFIC, IN ACCORDANCE WITH LOCAL REQUIREMENTS AND THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (LATEST EDITION).
- 22. O.S.H.A. SAFETY REQUIREMENTS ALL WORK, WORK PRACTICE, AND MATERIALS SHALL COMPLY WITH ALL APPLICABLE LOCAL, STATE AND FEDERAL SAFETY, OCCUPATIONAL, HEALTH AND ENVIRONMENTAL REGULATIONS AND ALSO NFPA AND ANSI CODES AS APPLICABLE. ALL WORK INSIDE A CONFINED SPACE SUCH AS MANHOLES OR UNDERGROUND STRUCTURES SHALL BE COORDINATED WITH UTILITY OWNER AND ALL WORKER SAFETY REQUIREMENTS STRICTLY ENFORCED. LAND SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
- 23. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ARRANGE FOR OR SUPPLY TEMPORARY WATER SERVICE, SANITARY FACILITIES AND ELECTRICITY.
- 24. CONTRACTOR SHALL PROVIDE FOR THE CONTINUOUS OPERATION OF EXISTING FACILITIES WITHOUT INTERRUPTION DURING CONSTRUCTION UNLESS SPECIFICALLY AUTHORIZED OTHERWISE BY THE RESPECTIVE AUTHORITY.
- 25. THE CONTRACTOR SHALL NOTE EXISTING UNDERGROUND UTILITIES IN THE PROJECT PLANS. TRENCH BACKFILL FOR EXISTING UTILITIES SHALL BE EXAMINED CRITICALLY. ANY TRENCH WHICH, IN THE OPINION OF THE SOILS ENGINEER ARE FOUND TO BE SOFT, UNSTABLE, OR UNSUITABLE MATERIAL SHALL BE COMPLETELY EXCAVATED AND BACKFILLED WITH SUITABLE MATERIAL. SAND BACKFILL SHALL BE USED UNDER PAVEMENT OR WITHIN 3 FEET OF THE 45" INFLUENCE LINE OF PAVEMENT OR STRUCTURES.

EROSION CONTROL STANDARDS

- 1. ALL EROSION AND SEDIMENT CONTROL WORK SHALL CONFORM TO STANDARDS AND SPECIFICATIONS OF THE JURISDICTIONAL AGENCY UNDER PART 91 OF ACT 451 OF 1994. AS AMENDED.
- UNDER "MICHIGAN'S PERMIT-BY-RULE FOR CONSTRUCTION ACTIVITIES", PROMULGATED UNDER ACT 245, PUBLIC ACTS OF 1929 AS AMENDED, AN NPDES STORM WATER DISCHARGE COVERAGE PERMIT IS REQUIRED FOR ANY CONSTRUCTION ACTIVITY THAT DISTURBS 1 ACRES OR MORE OF LAND. A CERTIFIED STORM WATER OPERATOR IS REQUIRED FOR THE SUPERVISION AND INSPECTION OF THE SOIL EROSION CONTROL MEASURES AT THE CONSTRUCTION SITE IN ACCORDANCE WITH THE PROVISIONS OF THESE RULES.
- DAILY INSPECTIONS SHALL BE MADE BY CONTRACTOR WHILE WORKING TO DETERMINE THE EFFECTIVENESS OF EROSION AND SEDIMENT CONTROL MEASURES. ANY NECESSARY REPAIRS SHALL BE PERFORMED WITHOUT DELAY. ALL SOIL EROSION CONTROL PROVISIONS SHALL BE PROPERLY MAINTAINED DURING CONSTRUCTION.
- EROSION AND ANY SEDIMENTATION FROM WORK ON THIS SITE SHALL BE CONTAINED ON THE SITE AND NOT ALLOWED TO COLLECT ON ANY OFF-SITE AREAS OR IN WATERWAYS. WATERWAYS INCLUDE BOTH NATURAL AND MAN-MADE OPEN DITCHES, STREAMS, STORM DRAINS, LAKES, AND PONDS.
- CONTRACTOR SHALL APPLY TEMPORARY EROSION AND SEDIMENTATION CONTROL MEASURES WHEN REQUIRED AND AS DIRECTED ON THESE PLANS. CONTRACTOR SHALL REMOVE TEMPORARY MEASURES AS SOON AS PERMANENT STABILIZATION OF SLOPES, DITCHES, AND OTHER EARTH CHANGE AREAS HAVE BEEN COMPLETED.

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EROSION CONTROL STANDARDS CONTINUED

- 6. STAGING THE WORK WILL BE DONE BY THE CONTRACTOR AS DIRECTED IN THESE PLANS AND AS REQUIRED TO ENSURE PROGRESSIVE STABILIZATION OF DISTURBED
- 7. SOIL EROSION CONTROL PRACTICES WILL BE ESTABLISHED IN EARLY STAGES OF CONSTRUCTION BY THE CONTRACTOR. SEDIMENT CONTROL PRACTICES WILL BE APPLIED AS A PERIMETER DEFENSE AGAINST ANY TRANSPORTING OF SILT OFF THE
- 8. DUST SHALL BE CONTROLLED BY WATERING OR BY OTHER APPROVED MEANS THROUGHOUT ALL CONSTRUCTION OPERATIONS.
- 9. ALL WATER FROM DEWATERING OR SURFACE DRAINAGE FROM THE CONSTRUCTION SITE SHALL BE CONTROLLED TO FLIMINATE SEDIMENT CONTAMINATION OF OFF-SITE WATERWAYS OR STORM SEWERS. SUCH MEASURES SHALL BE APPROVED BY THE ENGINEER PRIOR TO ANY DEWATERING OR LAND DISTURBANCE.
- 10. PERMANENT SOIL EROSION CONTROL MEASURES FOR SLOPES, CHANNELS, DITCHES OR ANY DISTURBED LAND AREA SHALL BE COMPLETED WITHIN 5 CALENDAR DAYS AFTER FINAL GRADING OR THE FINAL EARTH CHANGE HAS BEEN COMPLETED. WHEN IT IS NOT POSSIBLE TO PERMANENTLY STABILIZE A DISTURBED AREA AFTER AN EARTH CHANGE HAS BEEN COMPLETED OR WHERE SIGNIFICANT EARTH CHANGE HAS BEEN COMPLETED OR WHERE SIGNIFICANT EARTH CHANGE ACTIVITY CEASES. TEMPORARY SOIL EROSION CONTROL MEASURES SHALL BE IMPLEMENTED WITHIN 3 CALENDAR DAYS. ALL TEMPORARY SOIL EROSION CONTROL MEASURES SHALL BE

MAINTAINED UNTIL PERMANENT SOIL EROSION CONTROL MEASURES ARE IMPLEMENTED AND ESTABLISHED BEFORE A CERTIFICATE OF COMPLIANCE IS ISSUED.













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KNOXBOX[®] 3200

✓ Stores maximum 10 keys. Access cards and small entry

✓ Built Knox-Rugged and secure: UL 1037, UL 1610,

✓ Finished with Knox-Coat[®] to protect four times better

items may also fit in interior compartment but will reduce

The KnoxBox 3200 is the number one high-security key lock box trusted by first responders and property owners. Store up to 10 keys to quickly gain rapid access to commercial properties.

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max key quantity.

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Weather-resistant door gasket

Allows rapid property access



Reduces property damage Prevents forced entry into buildings Minimizes first responder injury

- Compliant to National Fire Code (NFPA, IFC, IBC)
- OPTIONS Knox Tamper Alert connects to building's alarm system
- for extra security Mount types: Recessed and Surface
- ✓ 3 color options: Black, Aluminum, Dark Bronze
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- ✓ Multi-Purpose Switch for use on electrical doors, gates
- and other electrical equipment Recess Mounting Kit for new concrete or masonry construction
- Public Safety Labels
- ✓ Tag-Out Tamper Seals
- 🗸 Key Tags 🗸 Key Rings

ORDERING SPECIFICATIONS

To insure procurement and delivery of the KnoxBox 3200, it is suggested that following specification paragraph is used:

KnoxBox surface/recessed mount with hinged door, with/without UL Listed Knox Tamper Alert. 1/4" plate steel housing, 1/2" thick steel door with interior gasket seal and stainless steel door hinge. Box and lock UL Listed. Lock has 1/8" thick stainless steel dust cover with tamper seal mounting capability.

Exterior Dimensions: Surface Mount Body - 4"H x 5"W x 3-7/8"D Recessed Mount Flange - 7"H x 7"W Lock: UL Listed. Double-action rotating tumblers and hardened

steel pins accessed by a biased cut key. Finish: Knox-Coat proprietary finishing process Color: Black, Dark Bronze or Aluminum

P/N: KnoxBox 3200 (mfr's cat. ID)



MKT-KBSPEC-0019-E

I CE







rapid access for emergency responders to reduce response times, minimize injuries and protect property from forced entry. Today, one revolutionary lock box has grown into a complete system providing

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INNOVATIVE GEOSPATIAL & ENGINEERING SOLUTIONS ing Grou W A 298 VETERANS DRIVE FOWLERVILLE. MICHIGAN 48836 (OFFICE) 517-223-3512 MONUMENTENGINEERING.COI SERVICE DISABLED VETERAN OWNI SMALL BUSINESS (SDVOSB) Allehr Call MISS DIG 3 full working days before you dia Utilit Michigan's One-Call Organization 1-800-482-7171 www.missdig.org WWW.INISSUB.OUB THE LOCATIONS AND ELEVATIONS I EXISTING UNDERGROUND UTILITIES AS SHO ON THIS DRAWING ARE ONLY APPROXIMA' NO GUARANTEE IS EITHER EXPRESSED MPLIED AS TO THE COMPLETENESS ACCURACY THEREOF. THE CONTRACT SHALL BE EXCLUSIVELY RESPONSIBLE F DETERMINING THE EXACT UTILITY LOCATIO AND ELEVATIONS PRIOR TO THE START CONSTRUCTION CLIENT : **AR BROUWER** COMPANY 2830 BAKER ROAD, SUITE BRIGHTON, MI 48130 JEFF LOVELAND ЧĽ NO NO <u>^</u>Ō STATES EXPAN 4, TO2 STON (<u>()</u> **NOIT** NILES Û _____ ה יש –_ μ^Δ,⁴,⁶ VAN JSE Ō ᆸᆸ CLU PART OF ORIGINAL ISSUE DATE: 05/04/2022 PROJECT NO: 22-093 SCALE: N/A 1/2" FIELD: (BY OTHERS) DRAWN BY: MV DESIGN BY: TDB CHECK BY: AP **C-12.0**

GRADING AND EARTHWORK SPECIFICATIONS

- . ALTHOUGH A SUB-SURFACE INVESTIGATION MAY HAVE BEEN MADE BY THE OWNER, THE BIDDER AND ANY SUB-CONTRACTORS SHALL MAKE A PERSONAL INVESTIGATION OF SITE AND EXISTING SURFACE AND SUB-SURFACE CONDITIONS. THE CONTRACTOR IS RESPONSIBLE TO ACQUAINT HIMSELF WITH CONDITIONS OF THE WORK AREA. THE CONTRACTOR IS ADVISED TO DETERMINE THE SUB-SURFACE SOIL CONDITIONS AND GROUND WATER CONDITIONS TO HIS OWN SATISFACTION PRIOR TO BIDDING. NO MODIFICATIONS TO THE UNIT PRICES BID FOR ANY ITEM WILL BE MADE DUE TO VARIABLE SUB-SURFACE CONDITIONS. DEWATERING, IF DETERMINED NECESSARY BY THE CONTRACTOR, BY WELL POINTING OR DEEP WELLS WILL BE INCIDENTAL TO THE INSTALLATION COST OF THE ITEM.
- 2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR HAVING DETERMINED TO HIS SATISFACTION PRIOR TO THE SUBMISSION OF HIS BID THE CONFIRMATION OF THE GROUND, THE CHARACTER AND QUALITY OF THE SUBSTRATA, THE TYPES AND QUANTITIES OF MATERIALS TO BE ENCOUNTERED, THE NATURE OF THE GROUNDWATER CONDITIONS, THE PROSECUTION OF THE WORK, THE GENERAL AND LOCAL CONDITIONS INCLUDING RECENT CLIMATIC CHANGES, THE TIME OF YEAR IN WHICH CONSTRUCTION WILL TAKE PLACE AND ALL OTHER MATTERS WHICH CAN IN ANY WAY AFFECT THE WORK UNDER THIS CONTRACT.
- 3. PRIOR TO COMMENCING THE EXCAVATION THE CONTRACTOR SHALL SUBMIT A PLAN OF HIS PROPOSED OPERATIONS AND TIME SCHEDULE TO THE OWNER & OWNERS REPRESENTATIVE FOR THEIR APPROVAL.
- 4. THE CONTRACTOR SHALL CONSIDER, AND HIS PLAN FOR EXCAVATION SHALL REFLECT, THE EQUIPMENT AND METHODS TO BE EMPLOYED IN THE EXCAVATION AND WHAT METHODS WILL BE USED WHEN WET CONDITIONS ARE ENCOUNTERED REQUIRING GROUNDWATER CONTROL OR OTHER MOISTURE CONDITIONING. THE CONTRACTOR SHALL SUBMIT AN OUTLINE OF HIS EARTHWORK METHODS WHICH SHALL TAKE INTO ACCOUNT THE OVERALL CONSTRUCTION SCHEDULE. THE PRICES ESTABLISHED IN THE PROPOSAL FOR THE WORK TO BE DONE SHALL REFLECT ALL COSTS PERTAINING TO THE WORK. NO CLAIMS FOR EXTRAS BASED ON SUBSTRATA OR GROUNDWATER TABLE CONDITIONS OR MOISTURE CONDITIONING WILL BE ALLOWED.
- 5. THE CONTRACTOR SHALL KEEP INFORMED AND THE OWNER'S REPRESENTATIVE INFORMED AT ALL TIMES AS TO A "FILL SURPLUS OR SHORTAGE" SITUATION. SHORTAGE OR SURPLUS OF SUITABLE MATERIAL AT THE CONCLUSION OF THE GRADING AND EARTHWORK OPERATION SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND HE WILL BE REQUIRED TO SUPPLY THE DEFICIENCY OR DISPOSE OF THE SURPLUS WITHOUT ADDITIONAL COST TO THE OWNER.
- 6. THE CONTRACTOR SHALL REMOVE VEGETATION, DEBRIS, UNSATISFACTORY SOIL MATERIALS, OBSTRUCTIONS, AND OTHER DELETERIOUS MATERIALS FROM GROUND SURFACE PRIOR TO CUT OR FILL OPERATIONS. SUCH MATERIAL SHALL BECOME PROPERTY OF THE CONTRACTOR TO BE DISPOSED OF IN A LEGAL MANNER OFF SITE.
- 7. MATERIALS FOR FILL OR BACKFILL REQUIRED TO GRADE THE SITE AND ACHIEVE DESIGN ELEVATIONS SHALL BE EITHER ON OR OFF-SITE SOILS WHICH ARE FREE OF ORGANIC MATTER AND DEBRIS. NO TOPSOIL SHALL BE USED AS ENGINEERED FILL.
- 8. NO FILL MAY BE PLACED UNTIL THE EXPOSED SURFACES HAVE BEEN APPROVED BY THE GEOTECHNICAL ENGINEER. ALL FILL MATERIALS SHALL BE APPROVED BY THE GEOTECHNICAL ENGINEER PRIOR TO PLACEMENT.
- 9. IF ANY UNKNOWN SUBSURFACE STRUCTURES ARE ENCOUNTERED DURING CONSTRUCTION, THEY SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE OWNER'S REPRESENTATIVE AND DESIGN ENGINEER PRIOR TO PROCEEDING.
- 10. ALL FILL MATERIAL SHALL BE PLACED AND COMPACTED AT THE OPTIMUM MOISTURE CONTENT OR AS DIRECTED BY THE GEOTECHNICAL ENGINEER.
- 11. NO FROZEN MATERIAL SHALL BE USED AS FILL NOR WILL ANY FILL BE PLACED ON A FROZEN BASE.
- 12. NO ROCK OR SIMILAR MATERIAL GREATER THAN 6" DIAMETER SHALL BE PLACED IN THE FILL UNLESS RECOMMENDATIONS FOR SUCH PLACEMENT HAVE BEEN SUBMITTED BY THE GEOTECHNICAL ENGINEER IN ADVANCE AND APPROVED BY THE OWNER AND OWNER'S REPRESENTATIVE.
- 13. COMPACT FILL MATERIAL TO AT LEAST THE FOLLOWING PERCENTAGE OF MAXIMUM DRY DENSITY, AS DETERMINED BY ASTM D-1557 (MODIFIED PROCTOR). NO DEVIATION FROM THESE COMPACTION DENSITIES WILL BE ALLOWED UNLESS SPECIFICALLY RECOMMENDED BY THE GEOTECHNICAL ENGINEER AND APPROVED BY THE OWNER AND OWNER'S REPRESENTATIVE.
- FILL AREAS % OF MAXIMUM DRY DENSITY
- FILL UNDER BUILDING (EXTENDING
 5' BEYOND FOOTINGS AT A SLOPE
 98%

| | OF 1 ON 1) | |
|---|----------------------------------|-------------|
| • | FILL UNDER PAVEMENT OR SIDEWALKS | 95 % |

- FILL PLACED UNDER OR BEHIND 95%
 RETAINING WALLS
- ALL OTHER FILL
- 14. ALL FILL MATERIAL SHALL BE PLACED AND COMPACTED IN LIFTS, THAT WILL NOT EXCEED THE DEPTH IN WHICH THE COMPACTION EQUIPMENT CAN ACHIEVE THE MAXIMUM DENSITY REQUIRED FOR THE ENTIRE DEPTH OF THE MATERIAL PLACED IN THE LIFT.
- 15. ALL AREAS WHERE FILL HAS BEEN PLACED OR THE EXISTING SOILS HAVE BEEN DISTURBED SHALL BE SUBJECT TO COMPACTION TESTING BY THE GEOTECHNICAL ENGINEER AND SHALL BE TO THE SATISFACTION OF THE GEOTECHNICAL ENGINEER, OWNER AND OWNER'S REPRESENTATIVE.
- 16. FILL MATERIAL UNDER PAVEMENTS OR STRUCTURES SHALL BE FREE OF ORGANIC OR DELETERIOUS MATERIALS. IT SHALL BE SUITABLE FOR SUPPORTING PAVEMENTS AND STRUCTURES WITHOUT ADVERSE SHRINKING OR SWELLING.
- 17. FILL MATERIAL IN BERMS AND LANDSCAPE AREAS SHALL BE SUITABLE TO SUPPORT GROWTH OF THE LANDSCAPING MATERIALS (TYPICAL FOR THE LOCAL CLIMATE) AND AS PROPOSED BY THE LANDSCAPE ARCHITECT.
- 18. THE CONTRACTOR IS RESPONSIBLE FOR THE REMOVAL AND DISPOSAL OF, IN A LEGAL MANNER, ANY TREES, BRUSH OR DEBRIS THAT ARE WITHIN THE DESIGNATED CUTTING AND FILLING AREAS TO BRING THE SITE TO PROPOSED GRADES.
- 19. THE CONTRACTOR SHALL STOCKPILE EXCAVATED MATERIAL ONLY IN DESIGNATED AREAS AS DIRECTED BY THE OWNER OR OWNER'S REPRESENTATIVE.
- 20. DURING THE PERFORMANCE OF SITE GRADING OPERATIONS, THE SUBGRADE SHALL BE EXAMINED CRITICALLY, AND ANY AREAS DISCOVERED WHICH, IN THE OPINION OF THE OWNER'S REPRESENTATIVE OR GEOTECHNICAL ENGINEER, ARE SOFT AND UNSTABLE, SHALL BE EXCAVATED TO SUCH DEPTHS AS MAY BE NECESSARY TO INSURE SATISFACTORY SUPPORTING PROPERTIES AS DETERMINED BY THE GEOTECHNICAL ENGINEER. THESE AREAS OF EXCAVATION SHALL BE BACKFILLED IMMEDIATELY AND SHALL BE BROUGHT BACK TO THE ELEVATION OF THE SURROUNDING AREAS WITH APPROVED FILL MATERIAL AND IN ACCORDANCE WITH THE EARTH FILL CONSTRUCTION PROCEDURE.
- 21. NEWLY GRADED AREAS SHALL BE PROTECTED FROM THE ACTION OF THE ELEMENTS. ANY SETTLEMENT, DISPLACEMENT, PONDING OR WASHING OUT THAT MAY OCCUR PRIOR TO COMMENCING THE NEXT PHASE OF CONSTRUCTION SHALL BE REPAIRED, AND GRADES REESTABLISHED TO THE REQUIRED ELEVATIONS AND SLOPES.
- 22. THE FINISHED SUBGRADE SURFACE SHALL BE SHAPED TO INDICATED PROFILES AND SHALL BE REASONABLY SMOOTH AND FREE FROM IRREGULAR SURFACE CHANGES AND SHALL BE NO MORE THAN 1 INCH ABOVE OR BELOW THE INDICATED SUBGRADE ELEVATIONS.
- 23. THE GRADING CONTRACTOR SHALL BACKFILL ALL PARKING LOT PLANTERS AND LAWN AREAS TO WITHIN 2 INCHES OF THE TOP ADJACENT CURB GRADES. THE TOP 4 INCHES MINIMUM SHALL BE TOPSOIL, FREE FROM DEBRIS AND STONES LARGER THAN 1 INCH IN DIAMETER.
- 24. THE CONTRACTOR SHALL PROVIDE ALL NECESSARY PUMPS, DITCHING, WELL POINT SYSTEMS AND OTHER MEANS FOR REMOVING WATER FROM EXCAVATIONS, TRENCHES, SUBGRADES AND OTHER PARTS OF THE WORK. THE CONTRACTOR SHALL CONTINUE DE-WATERING OPERATIONS UNTIL THE WATER HAS BEEN REMOVED ENTIRELY. UPON COMPLETION OF WATER REMOVAL THE CONTRACTOR SHALL TAKE APPROPRIATE ACTION TO DRY THE SOILS, REGRADE TO PROPOSED ELEVATIONS AND COMPACT SOILS TO THE SATISFACTION OF THE GEOTECHNICAL ENGINEER AND OWNER'S REPRESENTATIVE.
- 25. THE CONTRACTOR SHALL DISPOSE OF WATER IN A SAFE AND SANITARY WAY TO PREVENT FLOODING OR INJURY TO PUBLIC OR PRIVATE PROPERTY AND SHALL OBTAIN APPROVAL OF THE LOCAL GOVERNING AUTHORITY BEFORE DISCHARGING RUN-OFF WATER TO THEIR SYSTEM. SEE EROSION CONTROL NOTES FOR ADDITIONAL REQUIREMENTS.
- 26. THE CONTRACTOR SHALL PROVIDE A SMOOTH TRANSITION BETWEEN EXISTING GRADES AND NEW GRADES.

BITUMINOUS PAVING SPECIFICATIONS

REFERENCE SPECIFICATIONS WHERE APPLICABLE TO WORK UNDER THIS SECTION ARE REFERRED TO BY ABBREVIATION AS FOLLOWS:

- A. AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (AASHTO).
- B. THE ASPHALT INSTITUTE (TAI)

SECTION 904. GRADE CSS-1H.

- C. MICHIGAN DEPARTMENT OF TRANSPORTATION/ CURRENT STANDARD SPECIFICATIONS FOR CONSTRUCTION (MDOT)
- D. AMERICAN SOCIETY FOR TESTING MATERIALS (ASTM)
- AGGREGATE BASE COURSE SHALL MEET THE REQUIREMENTS OF SECTION 902 OF
- THE MDOT STANDARD SPECIFICATION FOR CONSTRUCTION AND SHALL CONSIST OF 21AA CRUSHED AGGREGATE. THE USE OF SLAG IS PROHIBITED. 3. TACK COAT SHALL BE EMULSIFIED ASPHALT MEETING REQUIREMENTS OF MDOT
- 4. AGGREGATE SHALL CONSIST OF CRUSHED STONE, CRUSHED GRAVEL, A MIXTURE OF UNCRUSHED GRAVEL WITH EITHER CRUSHED STONE OR CRUSHED GRAVEL, OR OTHER INERT MATERIAL HAVING SIMILAR CHARACTERISTICS. IT SHALL BE COMPOSED OF CLEAN, TOUGH, DURABLE FRAGMENTS FROM AN EXCESS OF FLAT OR ELONGATED PIECES, AND SHALL BE FREE OF ORGANIC MATTER AND DELETERIOUS SUBSTANCES AND MEET THE REQUIREMENTS OF MDOT STANDARD SPECIFICATIONS, SECTION 902, 21AA. CONTRACTOR MAY USE CRUSHED HMA AGGREGATE SCREENED TO MEET THE REQUIREMENTS OF MDOT 21AA MATERIAL.
- 5. FINE AGGREGATE SHALL BE WELL GRADED FROM COARSE TO FINE AND CONSIST OF NATURAL SAND, STONE SCREENINGS, OR A BLEND OF NATURAL SAND AND STONE SCREENINGS. IT SHALL BE COMPOSED OF ROUGH SURFACED AND ANGULAR GRAINS OF QUARTZ OR OTHER HARD DURABLE ROCK AND MEET THE REQUIREMENTS OF MDOT STANDARD SPECIFICATIONS, SECTION 902 FOR CLASS II OR CLASS III GRANULAR MATERIAL. CONTRACTOR MAY USE CRUSHED HMA AGGREGATE SCREENED TO MEET THE REQUIREMENTS OF MDOT CLASS II OR CLASS III MATERIAL.
- 3. ASPHALT CEMENT SHALL COMPLY WITH THE REQUIREMENTS OF MDOT SECTION
- . HOT MIXED ASPHALT (HMA) SHALL COMPLY WITH MDOT SECTION 501 OF STANDARD SPECIFICATIONS FOR CONSTRUCTION.
- 8. BITUMINOUS LEVELING COURSE SHALL BE MDOT HMA, 13A, UNLESS OTHERWISE REQUIRED BY THE MUNICIPALITY OR ROAD AGENCY WITH JURISDICTION.
- 9. BITUMINOUS WEARING COURSE SHALL BE MDOT HMA, 36A UNLESS OTHERWISE REQUIRED BY THE MUNICIPALITY OR ROAD AGENCY WITH JURISDICTION. CONTRACTOR MAY SUBSTITUTE 13A WITH THE APPROVAL OF THE OWNER AND ENGINEER.
- 10. THE CONTRACTOR SHALL SUBMIT, TO THE OWNER, TWO COPIES OF MATERIALS CERTIFICATES SIGNED BY MATERIAL PRODUCER AND CONTRACTOR. CERTIFICATES SHALL STATE THAT EACH MATERIAL ITEM MEETS SPECIFIED REQUIREMENTS.
- 11. THE CONTRACTOR SHALL SUBMIT TO THE GEOTECHNICAL ENGINEER, JOB-MIX FORMULAS FOR EACH REQUIRED ASPHALT AGGREGATE MIXTURE. MIX DESIGNS SHALL BE WITHIN ALLOWABLE TOLERANCES AS SPECIFIED BY MDOT FOR THE PARTICULAR APPLICATION.
- 12. SUBGRADE PREPARATIONS SHALL CONSIST OF THE FINAL MACHINING OF THE SUBGRADE IMMEDIATELY PRIOR TO PLACING THE BITUMINOUS BASE COURSE. THE SUBGRADE SHALL BE COMPACTED PER PLANS AND DETAILS. THE SUBGRADE SHALL BE TRUE TO LINE AND GRADE.
- 13. CRUSHED AGGREGATE BASE COURSE SHALL BE COMPACTED TO A DENSITY EQUAL TO AT LEAST 95 PERCENT OF THE MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D-1557 (MODIFIED PROCTOR).
- 14. BITUMINOUS CONCRETE PAVEMENT CONSTRUCTION METHODS SHALL CONFORM TO APPLICABLE PORTIONS OF SECTION 501 OF THE MDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION.
- 15. THE CONTRACTOR SHALL NOT PLACE THE AGGREGATE BASE COURSE OR THE BITUMINOUS BASE COURSE PRIOR TO THE APPROVAL OF THE SUBGRADE BY THE GEOTECHNICAL ENGINEER.
- 16. EACH LIFT AND COURSE OF BITUMINOUS CONCRETE SHALL BE APPROVED BY THE GEOTECHNICAL ENGINEER, PRIOR TO THE PLACEMENT OF A SUCCEEDING COURSE OR LIFT.
- 17. APPLY BITUMINOUS TACK COATS ONLY WHEN TEMPERATURE HAS NOT BEEN BELOW 35 DEGREES F. FOR 12 HOURS IMMEDIATELY PRIOR TO APPLICATION. CONSTRUCT BITUMINOUS CONCRETE WEARING COURSE ONLY WHEN ATMOSPHERIC TEMPERATURE IS ABOVE 40-DEGREES F AND RISING, AND PROCEEDING COURSE OR LIFT IS CLEAN AND DRY. BASE COURSE MAY BE LAID WHEN TEMPERATURE IS ABOVE 35 DEGREES F. AND RISING AND APPROVED BY THE GEOTECHNICAL ENGINEER.
- 18. THE BITUMINOUS CONCRETE SHALL BE TRANSPORTED FROM THE MIXING PLANT TO THE POINT OF USE IN VEHICLES CONFORMING TO THE REQUIREMENTS OF SECTION 501 OF THE MDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION. DELIVERIES SHALL BE SCHEDULED SO THAT SPREADING AND ROLLING OF ALL BITUMINOUS CONCRETE PREPARED FOR ONE DAY'S RUN CAN BE COMPLETED DURING DAYLIGHT, UNLESS ADEQUATE ARTIFICIAL LIGHTING IS PROVIDED. HAULING OVER FRESHLY PLACED BITUMINOUS MAT SHALL NOT BE PERMITTED UNTIL THE BITUMINOUS CONCRETE HAS BEEN COMPACTED, AS SPECIFIED, AND ALLOWED TO COOL TO ATMOSPHERIC TEMPERATURE.
- 19. UPON ARRIVAL, THE BITUMINOUS CONCRETE SHALL BE SPREAD TO A THICKNESS NOT TO EXCEED 3-INCHES AND TO THE FULL WIDTH BY AN APPROVED BITUMINOUS PAVER. IT SHALL BE STRUCK OFF IN A UNIFORM LAYER OF SUCH DEPTH THAT, WHEN THE WORK IS COMPLETED, IT SHALL HAVE THE REQUIRED THICKNESS AND CONFORM TO THE GRADE AND CONTOUR INDICATED. THE SPEED OF THE PAVER SHALL BE REGULATED TO ELIMINATE PULLING AND TEARING OF THE BITUMINOUS MAT. UNLESS OTHERWISE DIRECTED, PLACEMENT OF THE BITUMINOUS CONCRETE SHALL BEGIN ALONG THE CENTERLINE OF A CROWNED SECTION OR ON THE HIGH SIDE OF AREAS WITH A ONE-WAY SLOPE. THE BITUMINOUS CONCRETE SHALL BE PLACED IN CONSECUTIVE ADJACENT STRIPS HAVING A MINIMUM WIDTH OF 10 FEET, EXCEPT WHERE EDGE LANES REQUIRE LESS WIDTH TO COMPLETE THE AREA. TRANSVERSE JOINTS IN ADJACENT LANES SHALL BE OFFSET A MINIMUM OF 10 FEET. WHERE POSSIBLE, JOINTS SHALL BE LOCATED AT THE LANE EDGES.
- 20. ON AREAS WHERE IRREGULARITIES OR UNAVOIDABLE OBSTACLES MAKE THE USE OF MECHANICAL SPREADING AND FINISHING EQUIPMENT IMPRACTICAL, THE BITUMINOUS CONCRETE MAY BE SPREAD AND RAKED BY HAND TOOLS.
- 21. THE BITUMINOUS CONCRETE SHALL BE PLACED AT A TEMPERATURE OF NOT LESS THAN 250 NOR HIGHER THEN THE RECOMMENDED TEMPERATURE OF THE BINDER PRODUCER OR AS DIRECTED BY THE GEOTECHNICAL ENGINEER.
- 22. THE BITUMINOUS CONCRETE MIXTURE SHALL BE THOROUGHLY AND UNIFORMLY COMPACTED BY ROLLING. THE SURFACE SHALL BE ROLLED WHEN THE BITUMINOUS MAT HAS ATTAINED SUFFICIENT STABILITY SO THAT THE ROLLING DOES NOT CAUSE UNDUE DISPLACEMENT, CRACKING AND SHOVING. THE SEQUENCE OF ROLLING OPERATIONS SHALL BE AT THE DISCRETION OF THE CONTRACTOR.
- 23. THE SPEED OF THE ROLLER SHALL, AT ALL TIMES, BE SUFFICIENTLY SLOW TO AVOID DISPLACEMENT OF THE HOT BITUMINOUS CONCRETE. ANY DISPLACEMENT OCCURRING AS A RESULT OF REVERSING THE DIRECTION OF THE ROLLER, OR FROM ANY OTHER CAUSE, SHALL BE CORRECTED AT ONCE.
- 24. SUFFICIENT ROLLERS SHALL BE FURNISHED TO HANDLE THE OUTPUT OF THE PLANT. ROLLING SHALL CONTINUE UNTIL ALL ROLLER MARKS ARE ELIMINATED, THE SURFACE IS OF UNIFORM TEXTURE AND TRUE TO GRADE AND CROSS-SECTION, AND THE REQUIRED FIELD DENSITY IS OBTAINED.
- 25. TACK COAT SHALL BE APPLIED TO THE SURFACE OF PREVIOUS LIFTS AND COURSES OF BITUMINOUS CONCRETE AND TO SURFACES ABUTTING OR PROJECTING INTO THE BITUMINOUS CONCRETE.
- 26. IMMEDIATELY BEFORE PLACING A SUCCEEDING LIFT OR COURSE OF BITUMINOUS CONCRETE THE PRECEDING LIFT OR COURSE SHALL BE CLEARED OF ANY DEBRIS OR STANDING WATER BY APPROPRIATE METHODS.
- 27. TO PREVENT ADHESION OF THE BITUMINOUS CONCRETE TO THE ROLLER, THE WHEELS SHALL BE KEPT PROPERLY MOISTENED, BUT EXCESSIVE WATER WILL NOT BE PERMITTED.
- 28. IN AREAS NOT ACCESSIBLE TO THE ROLLER, THE BITUMINOUS CONCRETE SHALL BE THOROUGHLY COMPACTED WITH HOT HAND TAMPERS.
- 29. ANY BITUMINOUS CONCRETE THAT BECOMES LOOSE AND BROKEN, MIXED WITH DIRT, OR IN ANY WAY DEFECTIVE SHALL BE REMOVED AND REPLACED WITH FRESH HOT BITUMINOUS CONCRETE AND IMMEDIATELY COMPACTED TO CONFORM TO THE SURROUNDING AREA. THIS WORK SHALL BE DONE AT THE CONTRACTOR'S EXPENSE. SKIN PATCHING SHALL NOT BE ALLOWED.
- 30. THE CONTRACTOR SHALL PROVIDE AT LEAST TWO ROLLERS FOR EACH PAVER OPERATING ON THE WORK. THE CONTRACTOR SHALL USE ADDITIONAL ROLLERS AS REQUIRED TO OBTAIN THE SPECIFIED PAVEMENT DENSITY.

BITUMINOUS PAVING SPECIFICATIONS, CONTINUED

- 31. THE CONTRACTOR SHALL CAREFULLY MAKE JOINTS BETWEEN OLD AND NEW PAVEMENTS, OR BETWEEN SUCCESSIVE DAYS' WORK, TO ENSURE A CONTINUOUS BOND BETWEEN ADJOINING WORK. CONSTRUCT JOINTS TO HAVE THE SAME TEXTURE, DENSITY AND SMOOTHNESS AS OTHER SECTIONS OF THE BITUMINOUS CONCRETE COURSE. THE CONTRACTOR SHALL CLEAN CONTACT SURFACES OF SAND, DIRT, OR OTHER OBJECTIONABLE MATERIAL AND APPLY TACK COAT BEFORE MAKING THE JOINT.
- 32. THE CONTRACTOR SHALL TEST THE FINISHED SURFACE OF EACH BITUMINOUS CONCRETE COURSE FOR SMOOTHNESS, USING A 10 FOOT STRAIGHTEDGE APPLIED PARALLEL WITH AND AT RIGHT ANGLES TO CENTERLINE OF PAVED AREA. SURFACE SHALL NOT BE ACCEPTABLE IF EXCEEDING THE FOLLOWING TOLERANCES FOR SMOOTHNESS.
- A. LEVELING COURSE SURFACE: 1/4 INCH, PLUS OR MINUS 1/4 INCH.
- B. SURFACE COURSE: 1/4 INCH
- 33. THE CONTRACTOR SHALL TEST CROWNED SURFACES WITH A CROWN TEMPLATE, CENTERED AND AT RIGHT ANGLES TO THE CROWN. SURFACES WILL NOT BE ACCEPTABLE IF THE FINISHED CROWN SURFACES VARY MORE THAN 1/4 INCH FROM THE CROWN TEMPLATE.
- 34. AFTER FINAL ROLLING, THE CONTRACTOR SHALL NOT PERMIT VEHICULAR TRAFFIC ON THE BITUMINOUS CONCRETE PAVEMENT UNTIL IT HAS COOLED AND HARDENED, AND IN NO CASE SOONER THAN SIX HOURS OR AS DIRECTED BY THE GEOTECHNICAL ENGINEER.
- 35. THE AGGREGATE BASE MUST EXTEND A MINIMUM OF 1' BEHIND THE BACK-OF-CURB OR BEYOND EDGE OF PAVEMENT WHEN NO CURB IS PROPOSED.

CONCRETE CURB, SIDEWALK AND PAVEMENT SPECIFICATIONS

- 1. THESE SPECIFICATIONS SHALL GOVERN THE CONSTRUCTION OF ALL PAVEMENTS, CURB AND GUTTER, SIDEWALKS, SERVICE WALKS, DRIVEWAY APPROACHES, AND
- LOADING DOCK AREAS, AS INDICATED ON THE DRAWINGS.
 REFERENCE SPECIFICATIONS WHERE APPLICABLE TO WORK UNDER THIS SECTION
- ARE REFERRED BY ABBREVIATION AS FOLLOWS: A. AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION
- OFFICIALS (AASHTO).

3.

- B. AMERICAN CONCRETE INSTITUTE (ACI)C. MICHIGAN DEPARTMENT OF TRANSPORTATION / CURRENT STANDARD
- SPECIFICATIONS FOR CONSTRUCTION (MDOT)
- D. AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)
- THE FINE AGGREGATE SHALL MEET ALL REQUIREMENTS OF SECTION 902 OF OF MDOT SPECIFICATION FOR NO. 2NS NATURAL SAND.
- THE COARSE AGGREGATE SHALL MEET ALL REQUIREMENTS OF SECTION 902 OF M.D.O.T. SPECIFICATIONS FOR 6AA COARSE AGGREGATE.
- 5. THE CONTRACTOR SHALL SUBMIT, TO THE OWNER, TWO COPIES OF MATERIALS CERTIFICATES SIGNED BY MATERIAL PRODUCER AND CONTRACTOR. CERTIFICATES SHALL STATE THAT EACH MATERIAL ITEM MEETS SPECIFIED REQUIREMENTS.
- 5. THE CONTRACTOR SHALL SUBMIT, TO THE GEOTECHNICAL ENGINEER, JOB MIX-FORMULAS FOR EACH REQUIRED CEMENT-AGGREGATE MIXTURE. MIX DESIGNS SHALL BE WITHIN ALLOWABLE TOLERANCES AS SPECIFIED FOR THE PARTICULAR APPLICATION.
- . CONCRETE MIX SHALL BE AIR-ENTRAINED AND PROPORTIONED TO PROVIDE THE FOLLOWING: A. COMPRESSIVE STRENGTH AT 28 DAYS: 3500 PSI MIN., OR AS INDICATED
- ON PLANS.
- B. TOTAL AIR CONTENT BY VOLUME: 5% TO 8%.
- C. SLUMP 3 INCH MAXIMUM, OR AS INDICATED ON PLANS.
- 3. THE CONTRACTOR SHALL AT HIS EXPENSE FURNISH SAMPLES OF FRESH CONCRETE AND PROVIDE SAFE AND SATISFACTORY FACILITIES FOR OBTAINING THE SAMPLES.
- 9. CONSTRUCT CONCRETE CURBING ONLY WHEN GROUND TEMPERATURE IS ABOVE 35 DEGREES F. AND BASE IS DRY.
- 10. ALL CEMENT USED IN CURB CONSTRUCTION SHALL BE PORTLAND CEMENT, TYPE I OR IA ASTM C-150.
- 11. WATER USED IN CONCRETE SHALL MEET THE REQUIREMENTS OF MDOT SECTION 911.
- 12. AIR ENTRAINING ADMIXTURE SHALL BE SELECTED FROM THE MDOT QUALIFIED PRODUCTS LIST.
- 13. ALL READY-MIXED CONCRETE SUPPLIERS MUST BE APPROVED BY THE OWNER AND MEET THE CURRENT REQUIRMENTS OF THE NATIONAL READY MIX CONCRETE ASSOCIATION (NRMCA). IF REQUESTED BY THE OWNER, SUBMIT A WRITTEN DESCRIPTION OF PROPOSED READY-MIXED CONCRETE MANUFACTURER, GIVING QUALIFICATIONS OF PERSONAL, LOCATION OF BATCHING PLANT, LIST OF PROJECTS SIMILAR IN SCOPE OF SPECIFIED WORK, AND OTHER INFORMATION AS MAY BE REQUESTED BY THE OWNER.
- 14. THE CONTRACTOR SHALL SUBMIT A STATEMENT OF PURCHASE FOR READY-MIXED CONCRETE: PRIOR TO ACTUAL DELIVERY OF CONCRETE, SUBMIT TO THE GEOTECHNICAL ENGINEER FOUR COPIES OF STATEMENT OF PURCHASE, GIVING THE DRY WEIGHTS OF CEMENT AND SATURATED SURFACE DRY WEIGHTS OF FINE AND COARSE AGGREGATES AND QUANTITIES, TYPE AND NAME OF ADMIXTURES (IF ANY) AND OF WATER PER CU.YD., THAT WILL BE USED IN THE MANUFACTURE OF THE CONCRETE. THE CONTRACTOR SHALL ALSO FURNISH EVIDENCE SATISFACTORY TO THE GEOTECHNICAL ENGINEER THAT THE MATERIALS TO BE USED AND PROPORTIONS SELECTED WILL PRODUCE CONCRETE OF THE QUALITY SPECIFIED. WHATEVER STRENGTHS ARE OBTAINED, THE QUANTITY OF CEMENT USED SHALL NOT BE LESS THAN THE MINIMUM SPECIFIED.
- 15. READY-MIXED CONCRETE DELIVERY TICKETS: SUBMIT ONE COPY OF EACH DELIVERY TICKET TO THE GEOTECHNICAL ENGINEER AND CONTRACTOR IN ACCORDANCE WITH SECTION 16 OF ASTM C94.
- 16. READY-MIXED CONCRETE SHALL BE BATCHED, MIXED AND TRANSPORTED IN ACCORDANCE WITH ASTM C94, AND COMPLY WITH ACI 304 "RECOMMENDED PRACTICE FOR MEASURING, MIXING, TRANSPORTING AND PLACING CONCRETE," EXCEPT AS OTHERWISE SPECIFIED HEREIN.
- 17. READY-MIXED CONCRETE SHALL BE MIXED AND DELIVERED TO THE POINT OF DISCHARGE AT THE JOB BY MEANS OF A READY MIX CONCRETE TRUCK.
- 18. NO WATER FROM THE TRUCK WATER SYSTEM OR ELSEWHERE SHALL BE ADDED AFTER THE INITIAL INTRODUCTION OF THE MIXING WATER FOR THE BATCH. UNDER NO CIRCUMSTANCES SHALL THE APPROVED MAXIMUM WATER CONTENT BE EXCEEDED NOR SHALL THE SLUMP EXCEED THE MAXIMUM SPECIFIED.
- 19. DISCHARGE OF THE CONCRETE SHALL BE COMPLETED WITHIN 1-1/2 HOURS OR BEFORE THE DRUM HAS REVOLVED 300 REVOLUTIONS, WHICHEVER COMES FIRST, AFTER THE INTRODUCTION OF THE MIXING WATER TO THE CEMENT AND AGGREGATES OR THE INTRODUCTION OF THE CEMENT TO THE AGGREGATES.
- 20. IN HOT WEATHER (AIR TEMPERATURE 80-DEGREES F. AND ABOVE) OR UNDER CONDITIONS CONTRIBUTING TO QUICK STIFFENING OF THE CONCRETE, THE TIME SHALL BE REDUCED TO ONE HOUR.
- 21. CONCRETE DELIVERED IN COLD WEATHER (AIR TEMPERATURE 45-DEGREES F. AND LOWER) SHALL HAVE A TEMPERATURE NOT LESS THAN 60-DEGREES F. AT THE POINT OF DISCHARGE AT THE JOB, AND IN COMPLIANCE WITH ACI 306R "COLD WEATHER CONCRETING". CONCRETE PLACING WILL NOT BE PERMITTED WHEN THE AIR TEMPERATURE IS 35-DEGREES F. OR LOWER.
- 22. CONCRETE DELIVERED UNDER HOT WEATHER CONDITIONS CONTRIBUTING TO QUICK STIFFENING OF CONCRETE, OR IN AIR TEMPERATURE OF 80-DEGREES F. AND OVER, SHALL HAVE A TEMPERATURE BETWEEN 60- AND 80-DEGREES F. AT THE POINT OF DISCHARGE AT THE JOB, AND IN ACCORDANCE WITH ACI 305R "HOT WEATHER CONCRETING."
- 23. IN NO CASE SHALL THE MIXER OR TRUCK BE FLUSHED OUT ONTO THE STREET PAVEMENT, IN A CATCH BASIN OR SEWER MANHOLE, OR IN ANY PUBLIC RIGHT-OF-WAY. SEE SOIL EROSION CONTROL PLAN FOR CONCRETE WASHOUT LOCATION.
- 24. REINFORCEMENT BARS SHALL BE PER MDOT SECTION 905.
- 25. TIE WIRE SHALL BE BLACK, ANNEALED STEEL WIRE, NOT LESS THAN 16 GAUGE.

CONCRETE CURB, SIDEWALK AND PAVEMENT SPECIFICATIONS, CONTINUED

- 26. BAR SUPPORTS SHALL CONFORM TO THE BAR SUPPORT SPECIFICATIONS CONTAINED IN CONCRETE REINFORCING STEEL INSTITUTE'S (CRSI) "MANUAL OF STANDARD PRACTICE." PROVIDE CHAIRS, SPACERS AND OTHER DEVICES SUITABLE FOR PROPER SPACING SUPPORTING AND FASTENING REINFORCING BARS.
- 27. WHEN FORMS ARE USED AND THE CURB RADIUS IS LESS THAN 200 FEET, THE CURVED ALIGNMENT SHALL BE PROVIDED FOR BY EITHER STANDARD STEEL FORMS EQUIPPED WITH FLEXIBLE LINES OR BY FLEXIBLE FORMS. THE FORMS SHALL BE OF THE FULL DEPTH OF THE SECTION. CURB AND GUTTER FORMS SHALL BE SO CONSTRUCTED AS TO PERMIT THE INSIDE OF THE FORMS TO BE SECURELY FASTENED TO THE OUTSIDE FORMS.
- 28. ALL NEW CURB SHALL BE PLACED ONLY ON A PREPARED SUBGRADE, SMOOTH AND LEVELED TO THE GRADES ESTABLISHED BY THE ENGINEER.
- 29. COMPACT AND CUT-TO-GRADE SUBGRADE UNDER FORMS SO THAT FORMS WHEN SET WILL BE UNIFORMLY SUPPORTED FOR THE ENTIRE LENGTH. SECURELY STAKE AND BRACE OR TIE FORMS TO PREVENT LEAKAGE OF MORTAR. BRACING WITH EARTH WILL NOT BE PERMITTED.
- 30. COAT SURFACES OF FORMS TO BE IN CONCRETE WITH A LIGHT CLEAR PARAFFIN OIL OR PARTING COMPOUND WHICH WILL NOT STAIN THE CONCRETE.
- 31. THE INTERIOR SURFACES OF CONCRETE CONVEYING EQUIPMENT SHALL BE MAINTAINED FREE OF HARDENED CONCRETE, DEBRIS, WATER, SNOW, ICE AND OTHER DELETERIOUS MATERIALS.
- 32. CURBING MAY BE CONSTRUCTED EITHER BY USE OF FORMS OR BY A MECHANICAL CURB AND GUTTER PAVER, PROVIDED THE REQUIRED FINISH, AND CROSS-SECTION, AS SHOWN ON DRAWINGS ARE OBTAINED. CONCRETE SHALL BE PLACED TO PROVIDE ONE COURSE MONOLITHIC STRUCTURE WITHOUT THE USE OF MORTAR TOPPING OR SAND-CEMENT DRIER. CONCRETE SHALL BE SPADED OR VIBRATED SUFFICIENTLY TO ENSURE SATISFACTORY CONSOLIDATION.
- 33. PROVIDE REINFORCEMENT FOR CONCRETE CURB AS SHOWN ON THE DRAWINGS. REINFORCEMENT SHALL BE KEPT CLEAN AND FREE FROM OBJECTIONABLE RUST. BENDS OR KINKS IN REINFORCING BARS SHALL BE CORRECTED BEFORE PLACING. ALL REINFORCEMENT SHALL BE ACCURATELY LOCATED IN FORMS AND SECURELY HELD IN PLACE BEFORE AND DURING CONCRETE PLACING, BY SUPPORTS ADEQUATE TO PREVENT DISPLACEMENT DURING THE COURSE OF CONSTRUCTION.
- 34. THE CONCRETE CURB SURFACE SHALL BE STRUCK OFF THE REQUIRED CROSS-SECTION WITH A TEMPLATE. AFTER THE CONCRETE CURB HAS BEEN FLOATED TO AN EVEN SURFACE, THE CONTRACTION JOINT SHALL BE CUT AND ALL SLAB EDGES ROUNDED WITH A 1/2 INCH RADIUS EDGING TOOL THAT WILL FINISH TO A WIDTH OF 2 INCHES. AFTER THE CONCRETE HAS SLIGHTLY SET, A BROOM SHALL BE BRUSHED LIGHTLY ACROSS THE SURFACE PARALLEL TO FORMS SO AS TO IMPART A ROUGH FINISH.
- 35. CONTRACTION JOINTS SHALL BE CUT IN CONCRETE CURBING AT MINIMUM 10' INTERVALS. THE JOINT SHALL CUT 1/4 INCH WIDE BY 1/3 THE DEPTH OF THE CONCRETE CURB SECTION. JOINTS SHALL ALSO BE LOCATED ADJACENT TO CURB DROPS.
- 36. ISOLATION JOINTS SHALL BE PLACED IN CURBING AT TANGENT POINTS IN CURB RETURNS AT INTERSECTIONS, AT BOTH SIDES OF STRUCTURES LOCATED IN THE LINE AND IN RUNS OF CURB AT INTERVALS NOT EXCEEDING 400 FEET. ISOLATION JOINTS SHALL BE 1" THICK PRE-FORMED JOINT FILLER STRIPS. THE STRIPS SHALL EXTEND THE FULL DEPTH OF THE CONCRETE CURB SECTION. ISOLATION JOINTS SHALL BE PLACED IN CURB AT THE END OF EACH DAYS POUR AND WHEN ABUTTING PREVIOUSLY POURED CURB.
- 37. THE CURING COMPOUND SHALL BE A WHITE PARAFIN BASED COMPOUND SELECTED FROM MDOT'S QUALIFIED PRODUCTS LIST APPLIED AT 200 SQ/FT/GAL.
- 38. ALL CONTRACTION JOINTS IN CONCRETE CURB SECTIONS SHALL BE SEALED WITH EITHER HOT POURED JOINT SEALER OR COLD APPLIED JOINT SEALER.
- 39. SLIGHTLY UNDERFILL JOINT GROOVE WITH JOINT SEALER TO PREVENT EXTRUSION OF THE SEALER. REMOVE EXCESS JOINT SEALER MATERIALS AS SOON AFTER SEALING AS POSSIBLE.
- 40. FRESHLY PLACED CONCRETE SHALL BE PROTECTED AS REQUIRED TO MAINTAIN THE TEMPERATURE OF THE CONCRETE AT NOT LESS THAN 50 DEGREES F. NOR MORE THAN 80 DEGREES F. AND IN A MOIST CONDITION CONTINUOUSLY FOR THE PERIOD OF TIME NECESSARY FOR THE CONCRETE TO CURE. CHANGES IN TEMPERATURE OF THE CONCRETE DURING CURING SHALL BE AS UNIFORM AS POSSIBLE AND SHALL NOT EXCEED 5 DEGREES F. IN ANY ONE HOUR, NOR 50 DEGREES F. IN ANY 24 HOUR PERIOD.
- 41. COLD WEATHER PROTECTION: WHEN THE TEMPERATURE OF THE ATMOSPHERE IS 40-DEGREES F. AND BELOW, THE CONCRETE SHALL BE PROTECTED BY HEATING, INSULATION COVERING, OR COMBINATION THEREOF AS REQUIRED TO MAINTAIN THE TEMPERATURE OF THE CONCRETE AT OR ABOVE 50-DEGREES F. AND IN A MOIST CONDITION CONTINUOUSLY FOR THE CONCRETE CURING PERIOD. COLD WEATHER PROTECTION SHALL MEET THE REQUIREMENTS OF ACI 306R "COLD WEATHER CONCRETING".
- 42. HOT WEATHER PROTECTION: WHEN THE TEMPERATURE OF THE ATMOSPHERE IS 90-DEGREES F. AND ABOVE, OR DURING OTHER CLIMATIC CONDITIONS WHICH WILL CAUSE TOO RAPID DRYING OF THE CONCRETE, THE CONCRETE SHALL BE PROTECTED BY WINDBREAKS, SHADING, FOG SPRAYING LIGHT COLORED MOISTURE RETAINING COVERING, OR A COMBINATION OF THEREOF AS REQUIRED TO MAINTAIN THE TEMPERATURE OF THE CONCRETE BELOW 80-DEGREE F. AND IN A MOIST CONDITION CONTINUOUSLY FOR THE CONCRETE CURING PERIOD. HOT WEATHER PROTECTION SHALL MEET THE REQUIREMENTS OF ACI 305R "HOT WEATHER CONCRETING"
- 43. ALL FORMS, RAILS AND STAKES SHALL BE REMOVED WITHIN 24 HOURS AFTER PLACING THE CURB. EXPOSED EDGES OF CONCRETE SHALL BE IMMEDIATELY BACKFILLED OR SPRAYED WITH CURING COMPOUND.
- 44. AFTER COMPLETION OF CONCRETE CURBING IN AN AREA, REMOVE ALL WEATHER PROTECTION MATERIALS, RUBBISH AND DEBRIS RESULTING FROM SPECIFIED WORK, SWEEP CONCRETE CURBS CLEAN, AND SEAL JOINTS.
- 45. ALL CEMENT USED IN SIDEWALK CONSTRUCTION SHALL BE PORTLAND CEMENT, TYPE I OR IA ASTM C-150.
- 46. ALL NEW WALKS AND CONCRETE PAVEMENTS SHALL BE PLACED ONLY ON A PREPARED SUBGRADE, SMOOTHED AND LEVELED TO THE GRADES ESTABLISHED BY THE ENGINEER. IN CLAY SOILS THE SUBGRADE SHALL BE EXCAVATED 2-INCHES BELOW THE SIDEWALK BASE AND FILLED WITH APPROVED SAND MEETING MDOT CLASS II, SAND DESIGNATION.
- 47. CONSTRUCT CONCRETE SURFACE COURSE ONLY WHEN GROUND TEMPERATURE IS ABOVE 35 DEGREES F. AND BASE IS DRY.
- 48. SIDEWALKS SHALL PITCH TOWARD THE STREET OR AWAY FROM BUILDINGS WITH A MAXIMUM CROSS SLOPE OF 1/4-INCH PER FOOT OF WIDTH AND A MINIMUM CROSS SLOPE OF 1/8-INCH PER FOOT OF WIDTH. CROSS SLOPE DIRECTION TRANSITIONS SHALL BE ACCOMPLISHED IN LENGTHS OF 10 FEET OR LESS.
- 49. PRIOR TO PLACING THE CONCRETE, ALL DEBRIS, STONES, DIRT, ETC., SHALL BE REMOVED FROM THE SUBGRADE. THE SUBGRADE SHALL BE MOISTENED WITH WATER IN SUCH A MANNER AS TO THOROUGHLY WET THE MATERIAL WITHOUT FORMING PUDDLES OR POCKETS OF WATER. NO CONCRETE SHALL BE PLACED ON FROZEN SUBGRADE.
- 50. FORMS SHALL BE METAL OR WOOD AND OF AN APPROVED SECTION. THEY SHALL BE STRAIGHT, FREE FROM DISTORTION AND SHALL SHOW NO VERTICAL VARIATION GREATER THAN 1/8-INCH IN 10-FOOT LENGTHS FROM THE TRUE PLANE SURFACE ON THE TOP OF THE FORMS WHEN TESTED WITH A 10-FOOT STRAIGHTEDGE, AND SHALL SHOW NO LATERAL VARIATION GREATER THAN 1/4-INCH IN 10-FEET FROM THE TRUE PLANE SURFACE OF THE LATERAL FACE OF THE FORM WHEN TESTED WITH A 10-FOOT STRAIGHTEDGE. THEY SHALL BE OF THE DEPTH SPECIFIED FOR THE SIDEWALK, OR CONCRETE PAVEMENT PER PLANE AND DETAILS, AND BE SECURELY HELD IN PLACE AND TRUE TO LINE AND GRADE.
- 51. THE CONCRETE SHALL BE DEPOSITED CONTINUOUSLY IN THE FORMS IN SUCH A MANNER AS TO AVOID SEGREGATION AND IT SHALL BE THOROUGHLY TAMPED OR VIBRATED SO THAT THE FORMS ARE ENTIRELY FILLED AND THE CONCRETE THOROUGHLY CONSOLIDATED. THE SLABS SHALL BE PLACED IN SECTIONS OR BLOCKS IN ONE OPERATION AS A MONOLITH.
- 52. THE CONCRETE SURFACE SHALL BE STRUCK OFF TO A PLANE SURFACE WITH A STRAIGHTEDGE. AFTER THE CONCRETE HAS BEEN FLOATED TO AN EVEN SURFACE, THE CONTRACTION JOINT SHALL BE CUT AND ALL SLAB EDGES ROUNDED WITH A 1/2-INCH RADIUS EDGING TOOL THAT WILL FINISH TO A WIDTH OF 2-INCHES. AFTER THE CONCRETE HAS SLIGHTLY SET, A BROOM SHALL BE BRUSHED LIGHTLY ACROSS THE SURFACE AT RIGHT ANGLES TO FORMS SO AS TO IMPART A ROUGH FINISH.
- 53. CONTRACTION JOINTS SHALL BE PLACED AT RIGHT ANGLES TO THE EDGE OF THE SIDEWALK OR CONCRETE PAVEMENT AND PERPENDICULAR TO THE SURFACE AND AT A DEPTH OF AT LEAST 1/4 THE SLAB THICKNESS WITH A MINIMUM DEPTH OF 1-1/4-INCHES FOR SIDEWALKS AND 3-INCHES FOR CONCRETE PAVEMENT SLABS.
- 54. CONTRACTION JOINTS IN SIDEWALKS SHALL BE SPACED AT A MINIMUM OF EVERY 5-FEET IN 4" SIDEWALK, OR 8-FEET IN 6" SIDEWALK, OR AS SHOWN ON THE PLANS.

CONCRETE CURB, SIDEWALK AND PAVEMENT SPECIFICATIONS, CONTINUED

- 55. ISOLATION PAPERS SHALL BE OF THE PRE-MOLDED, NON-EXTRUDING, ASPHALT IMPREGNATED TYPE, NOT LESS THAN 1/2-INCH THICK. THE LENGTH SHALL BE EQUAL TO THE WIDTH OF THE SLAB, AND THE DEPTH EQUAL TO THE THICKNESS OF THE SLAB PLUS 1-INCH.
- 56. ISOLATION JOINTS SHALL BE PLACED AT THE FOLLOWING LOCATION FOR SIDEWALKS AND CONCRETE PAVEMENTS:

WALK.

- A. AT THE BACK OF THE CURB AND FRONT EDGE OF THE SIDEWALKS AND PAVEMENT SLABS ADJACENT TO EACH DRIVEWAY APPROACH AND SERVICE
- B. AT INTERVALS NOT TO EXCEED 50-FEET IN ALL PUBLIC SIDEWALKS.
- C. AT THE BACK OF THE CURB WHERE THE RAMPS EXTEND FROM THE KEY FLAG TO THE PAVEMENT.D. BETWEEN THE KEY FLAG AND THE RAMP IN ALL CASES, EXCEPT WHERE
- DELIVELY THERE ARE EXISTING EXPANSION JOINTS AT THE INTERSECTIONS OF THE SIDEWALKS AND THE KEY FLAG.
 E. AT ANY PLACE WHERE A SIDEWALK OR CONCRETE PAVEMENT ABUTS A
- BUILDING OR FIXED STRUCTURE. F. AT ANY OTHER LOCATIONS INDICATED ON THE PLAN.
- 57. CONTRACTION JOINTS IN THE CONCRETE PAVEMENT WILL BE AS FOLLOWS:
- A. TRANSVERSE JOINTS SHALL BE AT MAXIMUM 10-FOOT INTERVALS OR AS SHOWN ON PLANS AND DETAILS.
- B. LONGITUDINAL JOINTS SHALL BE AT MAXIMUM 12-FOOT INTERVALS OR AS SHOWN ON PLANS AND DETAILS.
- 58. PRIOR TO APPLYING JOINT SEALER, CLEAN JOINT GROOVE OF FOREIGN MATTER AND LOOSE PARTICLES, AND DRY SURFACE.

TRAFFIC LANE AND PARKING LOT MARKING

- 1. PROVIDE ALL MATERIALS, LABOR, EQUIPMENT, AND SERVICES NECESSARY TO COMPLETE ALL TRAFFIC LANE AND PARKING LOT MARKINGS AS INDICATED IN THE CONSTRUCTION DOCUMENTS.
- 2. WORK INCLUDES, BUT NOT LIMITED TO PAINTING OF LETTERS, MARKINGS, STRIPES AND ISLANDS ON THE PAVEMENT SURFACE APPLIED IN ACCORDANCE WITH THIS SPECIFICATION AND AT THE LOCATIONS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.
- 3. THE PAINT SHALL MEET THE REQUIREMENTS OF FEDERAL SPECIFICATION TT-P-115C(3), WITH OR WITHOUT REFLECTORIZED BEADS AS REQUIRED ON THE PLANS.
- 4. COLOR SHALL BE AS SPECIFIED ON THE PLANS OR AS FOLLOWS:
 - A. TRAFFIC LANE STRIPING SHALL BE WHITE OR YELLOW REFLECTORIZED, AS SHOWN ON THE PLANS.
 - B. TRAFFIC MARKING AND CURB FACES SHALL BE WHITE UNLESS NOTED OTHERWISE.
 - C. PARKING LOT STRIPING SHALL BE WHITE, UNLESS NOTED OTHERWISE.
 - D. HANDICAP STALL STRIPING MEETING CURRENT ADA REQUIREMENTS SHALL BE BLUE UNLESS NOTED OTHERWISE.
- 5. THE PAINTING SHALL BE PERFORMED ONLY WHEN THE EXISTING SURFACE IS DRY AND CLEAN, WHEN THE ATMOSPHERIC TEMPERATURE IS ABOVE 40-DEGREES F. AND WHEN THE WEATHER IS NOT EXCESSIVELY WINDY, DUSTY OR FOGGY AND WHEN RAIN IS NOT FORECASTED FOR AT LEAST 2 HOURS AFTER PAINT IS APPLIED.
- 6. ALL EQUIPMENT FOR THE WORK SHALL BE APPROVED BY THE CONTRACTOR AND SHALL INCLUDE THE APPARATUS NECESSARY TO PROPERLY CLEAN THE EXISTING SURFACE, A MECHANICAL MARKING MACHINE, AND SUCH AUXILIARY HAND EQUIPMENT AS MAY BE NECESSARY TO SATISFACTORILY COMPLETE THE JOB.
- 7. THE MECHANICAL MARKER SHALL BE AN APPROVED ATOMIZING SPRAY-TYPE MARKING MACHINE SUITABLE FOR APPLICATION OF TRAFFIC PAINT. IT SHALL PRODUCE AN EVEN AND UNIFORM FILM THICKNESS AT THE REQUIRED COVERAGE AND SHALL BE DESIGNED SO AS TO APPLY MARKINGS OF UNIFORM CROSS-SECTIONS AND CLEAR-CUT EDGES WITHOUT RUNNING OR SPATTERING AND WITHIN THE L LIMITS FOR STRAIGHTNESS SET FORTH HEREIN. WHEN NEEDED, A DISPENSER SHALL BE FURNISHED, WHICH IS PROPERLY DESIGNED FOR ATTACHMENT TO THE MECHANICAL MARKER AND SUITABLE FOR DISPENSING THE REQUIRED QUANTITY OF REFLECTIVE BEADS.
- 8. SUITABLE ADJUSTMENTS SHALL BE PROVIDED ON THE SPRAYER/SPRAYERS OF A MACHINE FOR PAINTING THE WIDTH REQUIRED. MULTIPLE PARALLEL PASSES TO PAINT THE REQUIRED WIDTH WILL NOT BE ALLOWED.
- 9. IMMEDIATELY BEFORE APPLICATION OF THE PAINT, THE EXISTING SURFACE SHALL BE DRY AND ENTIRELY FREE FROM DIRT, GREASE, OIL, ACIDS, DEBRIS, OR OTHER FOREIGN MATTER WHICH WOULD REDUCE THE BOND BETWEEN THE COAT OF PAINT AND THE PAVEMENT. THE SURFACE SHALL BE THOROUGHLY CLEANED BY SWEEPING AND BLOWING AS REQUIRED TO REMOVE ALL DIRT, DEBRIS AND LOOSE MATERIALS. AREAS WHICH CANNOT BE SATISFACTORILY CLEANED BY BROOMING AND BLOWING SHALL BE SCRUBBED AS DIRECTED WITH A WATER SOLUTION OF TRI-SODIUM PHOSPHATE (10% BY WEIGHT) OR AN APPROVED EQUAL SOLUTION. AFTER SCRUBBING, THE SOLUTION SHALL BE RINSED OFF AND THE SURFACE DRIED PRIOR TO PAINTING.
- 10. EXISTING MARKINGS OR STRIPES WHICH ARE TO BE ABANDONED OR REMOVED SHALL BE OBLITERATED OR OBSCURED BY THE BEST METHODS SUITED FOR THE PURPOSE AND TO THE SATISFACTION OF THE OWNER OR OWNER'S REPRESENTATIVE.
- 11. THE CONTRACTOR IS RESPONSIBLE FOR LAYING OUT A SAMPLE SECTION OF STRIPING WHICH IS TO BE APPROVED BY THE OWNER OR OWNERS REPRESENTATIVE AS TO QUALITY BEFORE THE CONTRACTOR MAY PROCEED WITH THE STRIPING. THE CONTRACTOR IS TO INSURE THAT ALL SUBSEQUENT STRIPING MEETS THE QUALITY OF THE APPROVED SAMPLE APPLICATION.
- 12. ON THOSE SECTIONS OF PAVEMENTS WHERE NO PREVIOUSLY APPLIED FIGURES, MARKINGS, OR STRIPES ARE AVAILABLE TO SERVE AS A GUIDE, SUITABLE LAYOUTS AND LINES OF PROPOSED STRIPES SHALL BE SPOTTED IN ADVANCE OF THE PAINT APPLICATION. CONTROL POINTS SHALL BE SPACED AT SUCH INTERVALS AS WILL ENSURE ACCURATE LOCATION OF ALL MARKINGS.
- 13. THE CONTRACTOR SHALL PROVIDE AN EXPERIENCED TECHNICIAN TO SUPERVISE THE LOCATION ALIGNMENT, LAYOUT, DIMENSIONS AND APPLICATION OF THE PAINT.
- 14. MARKINGS SHALL BE APPLIED AT THE LOCATIONS AND TO THE DIMENSIONS AND SPACING INDICATED ON THE PLANS OR AS SPECIFIED. PAINT SHALL NOT BE APPLIED UNTIL THE INDICATED ALIGNMENT IS LAID OUT AND THE CONDITIONS OF THE EXISTING SURFACE HAVE BEEN APPROVED BY THE OWNER OR OWNER'S REPRESENTATIVE.
- 15. THE PAINT SHALL BE MIXED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS BEFORE APPLICATION. THE PAINT SHALL BE THOROUGHLY MIXED AND APPLIED TO THE SURFACE OF THE PAVEMENT WITH THE MARKING MACHINE AT ITS ORIGINAL CONSISTENCY WITHOUT THE ADDITION OF THINNER. IF THE PAINT IS APPLIED BY BRUSH, THE SURFACE SHALL RECEIVE TWO (2) COATS; THE FIRST COAT SHALL BE THOROUGHLY DRY BEFORE THE SECOND COAT IS APPLIED.
- 16. A MINIMUM OF ONE (1) WEEK SHALL ELAPSE BETWEEN APPLICATION OF THE BITUMINOUS SEAL COAT, SLURRY SEAL OR THE PLACEMENT OF THE BITUMINOUS SURFACE COURSE AND THE MARKING OF THE PAVEMENT. THE PAINT SHALL NOT BLEED EXCESSIVELY, CURL, OR DISCOLOR WHEN APPLIED TO BITUMINOUS OR CONCRETE SURFACES. CURING COMPOUND MUST BE REMOVED FOR THE ENTIRE WIDTH OF THE PAINTED STRIPE OR SYMBOL PRIOR TO PAINTING NEW CONCRETE.
- 17. IN THE APPLICATION OF STRAIGHT STRIPES, ANY DEVIATION IN THE EDGES EXCEEDING 1/2-INCH IN 50-FEET SHALL BE OBLITERATED AND THE MARKING CORRECTED. THE WIDTH OF THE MARKINGS SHALL BE AS DESIGNATED WITHIN A TOLERANCE OF 5 PERCENT (5%). ALL PAINTING SHALL BE PERFORMED TO THE SATISFACTION OF THE OWNER OR OWNER'S REPRESENTATIVE BY COMPETENT AND EXPERIENCED EQUIPMENT OPERATORS, LABORERS, AND ARTISANS IN A NEAT AND WORKMANLIKE MANNER.
- 18. PAINT SHALL BE APPLIED UNIFORMLY BY SUITABLE EQUIPMENT AT A RATE OF 0.0094 GAL./S.F. FOR STENCILS AND 0.00313 GAL./FT. FOR STRIPING. PAINT APPLICATION SHALL PRODUCE AN AVERAGE WET FILM THICKNESS OF 0.015-INCHES.
- 19. AFTER APPLICATIONS OF THE PAINT, ALL MARKINGS SHALL BE PROTECTED WHILE THE PAINT IS DRYING. THE FRESH PAINT SHALL BE PROTECTED FROM INJURY OR DAMAGE OF ANY KIND. THE CONTRACTOR SHALL BE DIRECTLY RESPONSIBLE AND SHALL ERECT OR PLACE SUITABLE WARNING SIGNS, FLAGS, OR BARRICADES, PROTECTIVE SCREENS OR COVERINGS AS REQUIRED. ALL SURFACES SHALL BE PROTECTED FROM DISFIGURATION BY SPATTER, SPLASHES, SPILLAGE, DRIPPINGS OF PAINT OR OTHER MATERIAL.





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general landscape notes:

1. LANDSCAPE CONTRACTOR SHALL VISIT THE SITE, INSPECT EXISITING CONDITIONS, REVIEW PROPOSED PLANTINGS AND RELATED WORK. CONTACT THE OWNER AND/OR LANDSCAPE ARCHITECT WITH ANY CONCERNS OR DISCREPANCY BETWEEN THE PLAN, PLANT MATERIAL LIST, AND/OR SITE CONDITIONS.

2. PRIOR TO BEGINNING OF CONSTRUCTION ON ANY WORK, CONTRACTORS SHALL /ERIFY LOCATIONS OF ALL ON SITE UTILITIES, GAS, ELECTRIC, TELEPHONE, CABLE TO BE LOCATED BY CONTACTING MISS DIG 1-800-482-7171. ANY DAMAGE OR INTERRUPTION OF SERVICES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. COORDINATE ALL RELATED WORK ACTIVITIES WITH OTHER TRADES AND REPORT ANY UNACCEPTABLE JOB CONDITIONS TO OWNER PRIOR TO COMMENCING. 3. NUMERICAL VALUES ON THE LANDSCAPE QUANTITIES SPECIFIED ON THE PLAN TAKE PRECEDENCE OVER GRAPHIC REPRESENTATION, VERIFY ANY

CONCERN-DISCREPANCY WITH LANDSCAPE ARCHITECT. 4. ALL CONSTRUCTION AND PLANT MATERIAL LOCATIONS TO BE ADJUSTED ON SITE IF NECESSARY.

5. ALL SUBSTITUTIONS OR DEVIATIONS FROM THE LANDSCAPE PLAN MUST BE APPROVED BY THE CITY OF BRIGHTON AND LANDSCAPE ARCHITECT.

6. ALL LARGE TREES AND EVERGREENS TO BE STAKED, GUYED AND WRAPPED AS DETAILED, SHOWN ON PLAN.

1. PLANT BEDS TO BE DRESSED WITH MIN. 4" OF FINELY DOUBLE SHREDDED HARDBARK MULCH.

8. DIG SHRUB PITS I' LARGER THAN SHRUB ROOT BALLS AND TREE PITS 2' LARGER THAN ROOT BALL. BACK FILL WITH ONE PART TOP SOIL AND ONE PART SOIL FROM EXCAVATED PLANTING HOLE.

9. NATURAL COLOR, FINELY SHREDDED HARDWOOD BARK MULCH REQUIRED FOR ALL PLANTINGS.

10. REMOVE ALL TWINE, WIRE AND BURLAP FROM TREE AND SHRUB EARTH BALLS, AND FROM TREE TRUNKS. 4" THICK BARK MULCH FOR TREES IN 4' DIA. CIRCLE WITH 3" PULLED AWAY FROM TRUNK. 4" THICK BARK MULCH FOR SHRUBS AND 4" THICK BARK MULCH FOR PERENNIALS.

11. PLANT MATERIAL QUALITY & INSTALLATION SHALL BE IN ACCORDANCE WITH THE CURRENT AMERICAN ASSOCIATION OF NURSERYMEN LANDSCAPE STANDARDS. ALL TREE PITS TO BE TESTED FOR PROPER DRAINAGE PRIOR TO TREE PLANTING. PROVIDE APPROPRIATE DRAINAGE SYSTEM AS REQUIRED IF THE TREE PIT DOES NOT DRAIN SUFFICIENTLY.

13. ALL PLANTING AREAS TO BE PREPARED WITH APPROPRIATE SOIL MIXTURES AND FERTILIZER BEFORE PLANT INSTALLATION. 14. PLANT TREES AND SHRUBS GENERALLY NO CLOSER THAN THE FOLLOWING DISTANCES FROM SIDEWALKS, CURBS AND PARKING STALLS: a). SHADE TREES

b). ORNAMENTAL AND EVERGREEN TREES (CRAB, PINE, SPRUCE, ETC.) SHRUBS THAT ARE LESS THAN I FOOT TALL AND WIDE AT MATURITY_

15. NO TREES OR EVERGREENS TO BE INSTALLED OVER ANY PROPOSED OR EXISTING UTILITY LINES AS SHOWN ON THE OVERALL LANDSCAPE PLAN. SEE ENGINEERING PLANS FOR LOCATION AND DETAILS. 16. ALL LAWN AREAS AND LANDSCAPE BEDS TO BE FULLY IRRIGATED WITH AN AUTOMATIC UNDERGROUND SYSTEM. IRRIGATION SYSTEM TO HAVE SEPARATE ZONES FOR LAWN AREAS, PARKING ISLANDS, AND SHRUB BEDS WITH DIFFERENT CONTROL MOISTURE LEVEL ADJUSTMENTS PER ZONE AS REQUIRED. 17. UNLESS NOTED OTHERWISE, LANDSCAPE BEDS ADJACENT TO LAWN TO SPADE EDGE UNLESS NOTED OTHERWISE.

MULCHING WITHIN 24 HOURS AFTER INSTALLATION.

GRADES. PROVIDE POSITIVE

DRAINAGE

19. THE LANDSCAPE CONTRACTOR SHALL GUARANTEE ALL LANDSCAPE PLANT MATERIALS AND IRRIGATION INSTALLATION FOR A PERIOD OF TWO YEARS BEGINNING AFTER THE COMPLETION OF LANDSCAPE INSTALLATION DATE APPROVED BY THE CITY OR LANDSCAPE ARCHITECT. THE CONTRACTOR SHALL REPLACE DURING AND AT THE END OF THE GUARANTEE PERIOD, ANY DEAD OR UNACCEPTABLE PLANTS, AS DETERMINED BY THE CITY OR LANDSCAPE ARCHITECT, WITHOUT COST TO THE OWNER.

"Sylvan Glen Estates Clubhouse" City of Brighton, Michigan



scale: 1" = 2Ø'- Ø"

note:

inless noted otherwise, numerical value on landscape quantities specified on plan take precedence over graphic representation.



perennial planting detail

TOGETHER AS A HEDGE, MAINTAIN HEIGHT AT 48"

18. WATERING OF ALL PLANTS AND TREES TO BE PROVIDED IMMEDIATELY AND

MULCH 2" DEPTH WITH SHREDDED HARDWOOD BARK. NATURAL IN COLOR. LEAVE 3" CIRCLE OF BARE SOIL AT BASE OF TREE TRUNK TO EXPOSE ROOT FLARE MOUND EARTH TO FORM SAUCER.

REMOVE COLLAR OF ALL FIBER POTS. POTS SHALL BE CUT TO PROVIDE FOR ROOT GROWTH. REMOVE ALL NONORGANIC CONTAINERS COMPLETELY.

SCARIFY PLANTING PITSIDES. RECOMPACT BASE OF TO 4" DEPTH.

> shrub planting detail no scale

1. SHRUB SHALL BEAR SAME RELATION TO FINISH GRADE AS IT BORE ORIGINALLY OR SLIGHTLY HIGHER THAN FINISH GRADE UP TO 4" ABOVE GRADE. IF DIRECTED BY LANDSCAPE ARCHITECT FOR HEAVY CLAY SOIL AREAS. 2. PRUNE ONLY DEAD OR BROKEN BRANCHES. 3. REMOVE ALL TAGS, STRING, PLASTICS AND OTHER MATERIALS

> PLANTING MIXTURE: AMEND SOILS PER SITE CONDITIONS AND REQUIREMENTS OF THE PLANT MATERIAL.

SHRUBS PLANTED IN BEDS SHALL HAVE ENTIRE BED MASS EXCAVATED AND BACKFILLED WITH APPROVED PLANT MIX. PLANTS SHALL NOT BE INSTALLED IN INDIVIDUAL HOLES. REMOVE ALL NON-BIODEGRADABLE MATERIALS COMPLETELY FROM THE ROOTBALL, CUT AND REMOVE WIRE BASKET AND BURLAP FROM TOP HALF OF THE ROOTBALL.

plant material list

| uant. LS-1 | botanical name | common name | size | comments |
|---------------|---|-------------------------------------|--------------|------------------|
| | LARGE AND SMALL DECIDUOUS TREES | | | |
| 3 | TILIA AMERICANA 'REDMOND' | REDMOND LINDEN | 2 1/2" BB | |
| 2 | AMELANCHIER CANADENSIS | SHADBLOW SERVICEBERRY | 8' BB | |
| L | ACER P. 'BLOODGOOD' | BLOODGOOD JAPANESE LACE LEAF MAPLE | 8' BB | MULTI-STEM |
| 6 | PICEA GLAUCA 'DENSATA | BLACK HILL SPRUCE | 8' BB | |
| | SHRUBS | | | |
| 9 | BUXUS M. 'GREEN MOUNTAIN' | GREEN MOUNTAIN BOXWOOD | 36" BB | 36" O.C. SPACING |
| 26 | LIGUSTRUM X. 'YACARYI' | GOLDEN VICARY PRIVET | 36" BB | 48" O.C. SPACING |
| 5 | HYDRANGEA 'ANNABELLE' | 'ANNABELLE' HYRANGEA | 30"HIGH CONT | 36" O.C. SPACING |
| 3 | HYDRANGEA 'LINDSEY ANN' | LA DREAMIN HYDRANGEA | 30"HIGH CONT | 36" O.C. SPACING |
| 8 | HYDRANGEA P. 'BULK' | 'QUICK FIRE' HYDRANGEA | 30"HIGH CONT | 36" O.C. SPACING |
| 6 | PHYSOCARPUS OPULIFOLIUS 'SEWARD' | SUMMER WINE NINEBARK | 30"HIGH CONT | 36" O.C. SPACING |
| 38 | VIBURNUM DENTATUM 'SYNNESTVEDT' | CHICAGO LUSTRE ARROWWOOD VIBRUNUM | 30"HIGH CONT | 48" O.C. SPACING |
| 42 | BUXUS S. 'VARDAR VALLEY' | VARDAR VALLEY BOXWOOD | 18" BB | 24" O.C. SPACING |
| 8 | BERBERIS THUNBERGII. 'A, NANAI' | CRIMSON PYGMY BARBERRY | 15"HIGH CONT | 24" O.C. SPACING |
| | PERENNIALS AND GRASSES | | | |
| 28 | CALAMAGROSTIS ACUTIFLORA ' KARL FOERSTER' | KARL FOERSTER FEATER REED GRASS | # 3 CONT | 36" O.C. SPACING |
| 46 | PENNISETUM ALOPECUROIDES ' HAMELN' | DWARF FOUNTAIN GRASS | # 3 CONT | 36" O.C. SPACING |
| 3 | MISCANTHUS SINENSIS ' MORNING LIGHT' | MORNING LIGHT JAPANESE SILVER GRASS | # 3 CONT | 48" O.C. SPACING |
| 4 | SEDUM X. ' NEON' | NEON SEDUM | *1 POT | 16" O.C. SPACING |
| | | | | |





Community Land Planner and registered Landscape Architect 24333 Orchard Lake Rd, Suite G Farmington Hills, MI 48336 ph. (248) 557-5588 fax. (248) 557-5416



client:

SYLVAN GLEN **ESTATES** 6600 Grand River Ave Brighton, Michigan

Ar Brouwer 734-604-8806

project:

SYLVAN GLEN **ESTATES CLUB HOUSE IMPROVEMENT**

project location:

City of Brighton, Michigan 6600 Grand River Ave

sheet title:

CLUBHOUSE LANDSCAPE **IMPROVEMENT PLAN**

job no./issue/revision date: LS22.058.04 SPA 5/2/2022



PLAN VIEW: NOT TO SCALE

GENERAL NOTE

1. SEE SCHEDULE FOR LUMINAIRE MOUNTING HEIGHT. 2. CALCULATIONS ARE SHOWN IN FOOTCANDLES AT: 0' - 0", FOOD SERVICE AREA AT: 2' - 6", TREES SHOWN AT BOTTOM OF LEAVES

3. LIGHTING ALTERNATES REQUIRE NEW PHOTOMETRIC CALCULATION AND RESUBMISSION TO CITY FOR APPROVAL.

- THE ENGINEER AND/OR ARCHITECT MUST DETERMINE APPLICABILITY OF THE LAYOUT TO EXISTING / FUTURE FIELD CONDITIONS. THIS LIGHTING LAYOUT REPRESENTS ILLUMINATION LEVELS CALCULATED FROM LABORATORY DATA TAKEN UNDER CONTROLLED CONDITIONS IN ACCORDANCE WITH ILLUMINATING ENGINEERING SOCIETY APPROVED METHODS. ACTUAL PERFORMANCE OF ANY MANUFACTURER'S LUMINAIRE MAY VARY DUE TO VARIATION IN ELECTRICAL VOLTAGE, TOLERANCE IN LAMPS, AND OTHER VARIABLE FIELD CONDITIONS. MOUNTING HEIGHTS INDICATED ARE FROM GRADE AND/OR FLOOR UP.

THESE LIGHTING CALCULATIONS ARE NOT A SUBSTITUTE FOR INDEPENDENT ENGINEERING ANALYSIS OF LIGHTING SYSTEM SUITABILITY AND SAFETY. THE ENGINEER AND/OR ARCHITECT IS RESPONSIBLE TO REVIEW FOR MICHIGAN ENERGY CODE AND LIGHTING QUALITY COMPLIANCE.

- UNLESS EXEMPT, PROJECT MUST COMPLY WITH LIGHTING CONTROLS REQUIRMENTS DEFINED IN ASHRAE 90.1 2013. FOR SPECIFIC INFORMATION CONTACT GBA CONTROLS GROUP AT ASG@GASSERBUSH.COM OR 734-266-6705. - FOR ORDERING INQUIRIES CONTACT GASSER BUSH AT QUOTES@GASSERBUSH.COM OR 734-266-6705.

- THIS DRAWING WAS GENERATED FROM AN ELECTRONIC IMAGE FOR ESTIMATION PURPOSE ONLY, LAYOUT TO BE VERIFIED IN FIELD BY OTHERS. - MOUNTING HEIGHT IS MEASURED FROM GRADE TO FACE OF FIXTURE. POLE HEIGHT SHOULD BE CALCULATED AS THE MOUNTING HEIGHT LESS BASE HEIGHT. Sylvan Glen Site_V1 #22-75378.AGI Gasser Bush Associates / Applications www.gasserbush.com

| Catalog Number | | | Light Loss Fa | actor | Lumens Per Lar | np Watts |
|------------------------------|--------------------------------|--------|---------------|--------|----------------|--------------|
| DSX1 LED P1 30K T4M MVOLT HS | | 0.900 | | 4910 | 54 | |
| | Statistics | | | | | |
| | Description | Avg fc | Max fc | Min fc | Avg/Min (:1) | Max/Min (:1) |
| | GRASS AREA | 0.28 | 3.3 | 0.0 | N.A. | N.A. |
| | PARKING & ROADWAY CALC 3FT AFF | 1.48 | 3.4 | 0.0 | N.A. | N.A. |
| | PROPERTY LINE CALC 3FT AFF | 0.03 | 1.9 | 0.0 | N.A. | N.A. |

Designer: JC3 Date:5/4/2022

Scale: NOT TO SCALE



Page 1 of 3



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08.30.2021 OWNER REVIEW 05.04.2022 SITE PLAN REVIEW

NOT FOR CONSTRUCTION

ROOFING LEGEND

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| | ROOF DRAIN |
|----------------|-----------------------------|
| ROOF SLOPE | SLOPE DUE TO TAPERED INSUL. |
| s— > | SLOPE DUE TO INSULATION |
| | TAPERED INSULATION |
| | MEMBRANE ROOF SYSTEM |

PARAPET: PRE FORMED METAL COPING

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ROOFING NOTES

SPECIFIED.

- 1. PROVIDE ¼" PER FOOT SLOPE MIN. TYPICAL. SADDLES AND CRICKETS SHALL BE ½" PER FOOT U.N.O.
- 2. REFER TO PLUMBING DRAWINGS FOR ALL ROOF MOUNTED EQUIPMENT.
- 3. MINIMUM ROOF INSULATION THICKNESS SHALL BE 4" U.N.O.
- 4. PROVIDE ROOF MANUFACTURER STANDARD VENT TERMINAL AND PIPE PENETRATION FLASHING DETAILS FOR ROOF TYPE AND WARRANTY

| A R C H I T E C T S I 14 RAYSON STREET SUTE 2C NORTHVILLE MICHIGAN 48167 PHONE 248.349.2708 marchitects.com | | |
|---|------------------------|--|
| PROJECT CLUBHOUSE RENOVATION at Sun Communities Sylvan Glen Estates | <u>12</u> 5 (EX'G.) | |
| PROJECT ADDRESS 6600 Grand River Road Brighten Mishigan | | |
| Brighton, Michigan 48114 (Genoa Township) PROJECT NUMBER | | |
| 21.17 Sheet name | | |
| PROPOSED ROOF PLAN | | |

SHEET NUMBER A151

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NOT FOR CONSTRUCTION

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08.30.2021 OWNER REVIEW 05.04.2022 SITE PLAN REVIEW

ELEVATION KEYNOTES, THIS SHEET:

 $\langle 1 \rangle$ STANDING SEAM METAL ROOF

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- **2** CONTINUOUS METAL COPING PER METAL ROOF MANUFACTURER, COLOR SIMILAR TO PAC-CLAD MATTE BLACK
- $\overline{3}$ SELF-DRAINING EIFS SYSTEM, COLOR = SHERWIN WILLIAMS: SW7556 CREME

Α

- $\overline{4}$ black anodized window frame with clear glass
- $\overline{5}$ EXISTING BRICK TO BE STAINED, COLOR = 60% BLACK
- $\langle 7
 angle$ 1" SMOOTH FIBER CEMENT PANEL, PAINTED SW7674 PEPPERCORN
- $\langle 8 \rangle$ METAL WALL PANELS SIMILAR TO: PAC-CLAD WEATHERED STEEL



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| ELEV | ATION KEYNOTES, THIS SHEET: | | 08.30.2021 05.04.2022 | OWNER REVIEW SITE PLAN REVIEW |
| $\langle 1 \rangle$ | STANDING SEAM METAL ROOF | | | |
| $\langle 2 \rangle$ | CONTINUOUS METAL COPING PER METAL ROOF MANUFACT COLOR SIMILAR TO PAC-CLAD MATTE BLACK | TURER, | | |
| $\langle 3 \rangle$ | SELF-DRAINING EIFS SYSTEM, COLOR = SHERWIN WILLIAM | IS: SW7556 CREME | | |
| $\langle 4 \rangle$ | BLACK ANODIZED WINDOW FRAME WITH CLEAR GLASS | | | |
| $\langle 5 \rangle$ | EXISTING BRICK TO BE STAINED, COLOR = 60% BLACK | | | |
| $\langle 6 \rangle$ | 6" VERTICAL WOOD PLANKING SIMILAR TO: THERMORY WH WITH PRE-OILED FINISH | ITE ASH, COLOR = BROWN | | |
| $\langle 7 \rangle$ | 1" SMOOTH FIBER CEMENT PANEL, PAINTED SW7674 PEPPE | ERCORN | | |













| | ARCHITECTS ARCHITECTS HOUSE-SEAMAN ARCHITECTS, PLLC. Architecture Planning Interior Design P.O. BOX 1844 Brighton, Mi 48116 (PH) 810.531.1902 HOUSE-SEAMAN-ARCHITECTS.COM |
|--|---|
| | Project title SYLVAN GLEN SWIMMING POOL 6600 GRAND RIVER AVE BRIGHTON |
| | Consultant: |
| | NOTIC E E E E E E E E E E E E E E E E E E E |
| | sheet title SWIMMING POOL SECTIONS DO NOT SCALE DRAWINGS USE FIGURED DIMENSIONS ONLY |
| | issued for date PRELIMINARY 02/18/202 REVISED 03/22/202 |
| REFLYMINARY CTION REFLYMINARY CTION SEAL CONSTRUCTION SEAL CONSTRUCTION | DATE : $02/18/2022$ DRAWN : KHS CHECKED : SCALE : AS INDICATED JOB NO : $2021-007$ sheet SP-3.0 |



| VATERLINE TILE | ARCHITECTS ARCHITECTS HOUSE-SEAMAN ARCHITECTS, PLLC. Architecture Planning Interior Design P.O. BOX 1844 Brighton, Mi 48116 (PH) 810.531.1902 HOUSE-SEAMAN-ARCHITECTS.COM |
|---|---|
| DIAMOND BRITE FINISH BOX OUT CONCRETE AROUND EACH SKIMMER 24" FROM CENTER OF EACH SKIMMER (BY DECK CONTR.) R6" (TYP.) | ect title WIMMING POOL ID RIVER AVE |
| SKIMMER DETAIL SCALE® NONE | Consultant: |
| ES WITH # 8 SOLID COPPER WIRE CONDUCTOR BOND ALL METAL OBJECTS WITHIN 5'0" OF THE POOL. CURRENT N.E.C REQUIREMENTS. PROVIDE GFI'S HER EQUIPMENT WITHIN 5'0" OF THE POOL SCHEMATIC | C E URAL AND/OR URAL AND/OR MING IS GIVEN IN USE, IN WHOLE OR IN CHITER OR IN CHITE OR IN |
| A PVC | Sheet title Considence in Novemberging Precipic Party Bred Freed Specific Hereby Specific House-seaman J Copyright |
| 6" 36" MIN P.E.C. WILL STUB OUT 3 FEET OF CONDUIT FROM BACK OF BEAM / E.C. WILL PICK UP FROM THERE. SEE NOTES AND CUT-OUT SHEETS FOR ADDITIONAL INFORMATION. | DO NOT SCALE DRAWINGS USE FIGURED DIMENSIONS ONLY ISSUED for date PRELIMINARY 02/18/2027 REVISED 03/22/2021 |
| T DETAIL | DRAWN : KHS CHECKED : SCALE : AS INDICATED JOB NO : 2021-007 sheet SP-4.0 |



GENOA CHARTER TOWNSHIP Application for Site Plan Review

TO THE GENOA TOWNSHIP PLANNING COMMISSION AND TOWNSHIP BOARD:

| APPLICANT NAME & ADDRESS: Chest | tnut Development, 6253 Grand River, Brighton 48116 |
|--|--|
| If applicant is not the owner, a letter of Aut | horization from Property Owner is needed. |
| OWNER'S NAME & ADDRESS: | ut Development, LLC |
| SITE ADDRESS: Lot 25 Chestnut Spring | PARCEL #(s): 4711-33-401-025 |
| APPLICANT PHONE: (888) 825-142(|) OWNER PHONE: (888) 825-1420 |
| OWNER EMAIL: permits@chestnutdev | .com |
| LOCATION AND BRIEF DESCRIPTION | OF SITE:23.53 acres, zoned LDR |
| SEC 33/34 T2N R5E CHESTNUT SPRING | S SITE CONDOMINIUM UNIT 25 SPLIT/COMBINED |
| ON 04/05/2019 FROM 4711-33-400-003, 4 | 4711-34-300-005; |
| | |
| | |

BRIEF STATEMENT OF PROPOSED USE: _____ Single family residential use See addendum with proposed use to allow for accessory outbuilding on lot 25.

THE FOLLOWING BUILDINGS ARE PROPOSED: Single family home with attached garage

& accessory outbuilding that meets Township Ordinance. Applicant is requesting approval for a pole barr

for this lot in the development due to its size, which is much larger than all other lots. Accessory

structures are permitted for other parcels of this size in the township, and potential purchasers

expect it with a lot of this size. I HEREBY CERTIFY THAT ALL INFORMATION AND DATA ATTACHED TO AND MADE PART OF THIS APPLICATION IS TRUE AND ACCURATE TO THE BEST OF MY **KNOWLEDGE AND BELIEF.**

BY: <u>Steve Gronow</u>, Owner of Chestnut ADDRESS: 6253 Grand River, Brighton MI 48116

<u>Contact Information</u> - Review Letters and Correspondence shall be forwarded to the following:

1.) Kelly Ralko Name of Chestnut Development, LLC

at permits@chestnutdev.com

Business Affiliation

E-mail Address

| FEE EXCEEDANCE | AGREEMENT | |
|---|---------------------|--|
| As stated on the site plan review fee schedule, all site plans are allocated two (2) consultant reviews and one (1) Planning Commission meeting. If additional reviews or meetings are necessary, the applicant will be required to pay the actual incurred costs for the additional reviews. If applicable, additional review fee payment will be required concurrent with submittal to the Township Board. By signing below, applicant indicates agreement and full understanding of this policy. | | |
| signature: Steve Gronow, Owner of Chestnut | DATE: 2/9/22 | |
| PRINT NAME: Steve Gronow, Owner of Chestnut | PHONE: 888-825-1420 | |
| ADDRESS: 6253 Grand River, Brighton MI 48116 | | |
| | | |



Planning Commission Genoa Township 2911 Dorr Road Brighton, Michigan 48116

| Attention: | Kelly Van Marter, AICP |
|------------|---|
| | Planning Director and Assistant Township Manager |
| Subject: | Chestnut Springs Site Condominium Development – Master Deed Amendment (Review #1) |

Dear Commissioners:

At the Township's request, we have reviewed the proposal to amend the master deed for the Chestnut Springs site condominium development.

The project obtained final site condominium approval in 2018 for a 25-unit single-family development along a private road.

Procedurally, condominium documents (master deed and bylaws) are part of the final condominium plan approval. As such, an amendment to these documents is subject to the same review process – review and recommendation by the Planning Commission, with the Township Board having final review/approval authority.

The request at this time, is to amend the master deed such that Unit 25 would be permitted "one accessory building that complies with all necessary Township ordinances and requirements."

The previously approved document included a prohibition on accessory buildings throughout the development.

Though approximately two-thirds of Unit 25 contains wetlands, the upland area remains quite large (8.6 acres) with sufficient area to accommodate a dwelling and an accessory building. Furthermore, we suggest the applicant consider allowing an accessory buildings throughout the development, and question why only one property should be allowed such if Ordinance standards can be met.

Lastly, the application form notes the proposal on Unit 25 for a 40' x 60' pole barn; however, Section 11.04.02 limits the size of such a building to 2,200 square feet.

Should the Township consider favorable action on the amendment to the master deed, the application form should be corrected for consistency with Ordinance requirements.

Should you have any questions concerning this matter, please do not hesitate to contact our office.

Respectfully, **SAFEBUILT**

Brian V. Borden, AICP Michigan Planning Manager

THIRD AMENDMENT TO MASTER DEED OF CHESTNUT SPRINGS SITE CONDOMINIUM

THIS THIRD AMENDMENT TO THE MASTER DEED OF CHESTNUT SPRINGS SITE CONDOMINIUM ("Amendment") is made and executed on this _____ day of March 2022, by Chestnut Development, L.L.C. ("Developer"), a Michigan limited liability company, whose address is 6253 Grand River Ave. #700, Brighton, MI 48114.

RECITALS:

A. Chestnut Site Condominium, Livingston County Condominium Subdivision Plan No. 428 ("Project"), was established as a condominium project under the provisions of Act 59 of the Michigan Public Acts of 1978, as amended ("Act"), by the recording of the Master Deed for the Project, dated the 22nd day of March 2019, on the 28th day of March 2019, in the Livingston County Register of Deeds, associated with Instrument No. 2019R-006816 ("Master Deed"), which Master Deed was amended by the recording of the First Amendment to Master Deed of Chestnut Springs Site Condominium, dated the 4th day of September 2019, on the 11th day of September 2019, in the Livingston County Register of Deeds, associated with Instrument No. 2019R-024194; and further amended by the recording of the Second Amendment to Master Deed of Chestnut Springs Site Condominium, dated the 31st day of January 2022, on the 10th day of February, 2022; and

B. In accordance with Article VII, Section 7.1 of the Master Deed and Article XV, Section 15.1 of the Condominium Bylaws, Developer now desires to amend the Condominium Bylaws for the Chestnut Springs Site Condominium Association attached as Exhibit A to the Master Deed for the purpose of allowing Unit 25 to construct one accessory building within the building envelope of that Unit.

NOW, THEREFORE, Developer does hereby amend the Condominium Bylaws as follows:

1. Amendment to Exhibit A. Section 20.1 of Article XX, Restrictions, of the Condominium Bylaws for the Chestnut Springs Site Condominium Association is amended in its entirely as follows:

Section 20.1 <u>Residential Use.</u> No Unit in the Condominium shall be used for other than single family residence purposes. No structure shall be erected, altered, placed or permitted to remain on any Unit other than one (1) single family dwelling with attached

garage and deck, with the exception of Unit 25 which, in addition to the dwelling, may have one accessory building that complies with all necessary Township ordinances and requirements. The accessory building on Unit 25 shall be no larger than 30x40, have architectural elements matching the house, and be situated in the southern corner of Unit 25. All other accessory structures, storage buildings, detached garages, sheds, tents, shacks, and temporary structures are prohibited and shall not be erected, placed or permitted to remain upon any Unit, unless approved by the Association as further provided in this Master Deed. Temporary buildings may be constructed within a Unit during the construction of a permanent dwelling, provided that the temporary structures shall be removed from the Unit upon enclosure of the dwelling. No old or used structures shall be replaced upon any Unit or anywhere within the Condominium Project. There shall be no oil or gas exploration conducted upon the Condominium Premises, including but not limited to the following activities, mining, drilling, laying or maintaining of pipelines (other than utility pipelines installed to serve residential consumers).

2. **Continuing Effect.** Except as amended and modified by this Amendment, all terms and conditions of the Master Deed and Bylaws, including all remaining Sections of Article XX shall remain in full force and effect.

IN WITNESS WHEREOF, Developer has duly executed this Third Amendment to Master Deed of Chestnut Springs Site Condominium as of the day and year first written above.

CHESTNUT DEVELOPMENT, L.L.C.

By: Steven Gronow Its: Authorized Member

STATE OF MICHIGAN)) ss COUNTY OF LIVINGSTON)

The foregoing instrument was acknowledged before me this _____ day of _____ 2022, by Steven Gronow, the Authorized Member of Chestnut Development, L.L.C., a Michigan limited liability company, on behalf of said company.

> _____, Notary Public State of Michigan, County of _____ My Commission Expires: _____ Acting in the County

DRAFTED BY AND WHEN RECORDED RETURN TO: Catherine A. Riesterer (P40914) COOPER & RIESTERER, PLC 7900 Grand River Road



- Added garage is 30 x 40 (1200 SF)
- Situated in the extreme southern corner of the site
- Architectural elements to match the house (Woodland model)
- The approved PUD* allows ONLY residential use, NO BUSINESS use is permitted (*PUD=Planned Urban Development)
- Site plan attached

The Master deed amendment we are seeking would allow for this added garage, and this unit #25 pays dues to the association for road maintenance, but excludes this unit from services such as landscape care and driveway maintenance as well as snow removal. This makes all the landscape care and snow removal, on this parcel only, the responsibility of the homeowner, the garage is to be used for tractor, lawn equipment, snow removal equipment, etc. normally associated with the maintenance of a 31 acre parcel. Any questions please call Steve at 810-599-5147.

Please check yes or no if you are in agreement with this.

Yes Signature of Homeowner Sary Maijo Witness

No

Date Signed

(4722)of 1

Lot #

5-16-22

Date Signed



- Added garage is 30 x 40 (1200 SF)
- Situated in the extreme southern corner of the site
- Architectural elements to match the house (Woodland model)
- The approved PUD* allows ONLY residential use, NO BUSINESS use is permitted (*PUD=Planned Urban Development)
- Site plan attached

The Master deed amendment we are seeking would allow for this added garage, and this unit #25 pays dues to the association for road maintenance, but excludes this unit from services such as landscape care and driveway maintenance as well as snow removal. This makes all the landscape care and snow removal, on this parcel only, the responsibility of the homeowner, the garage is to be used for tractor, lawn equipment, snow removal equipment, etc. normally associated with the maintenance of a 31 acre parcel. Any questions please call Steve at 810-599-5147.

Please check yes or no if you are in agreement with this.

Yes Signature of Homeowner Witness

No

Lot 2 (4734)

Date Signed

Lot #

5-10-22 **Date Signed**

Tracy Shivers



- Added garage is 30 x 40 (1200 SF)
- Situated in the extreme southern corner of the site
- Architectural elements to match the house (Woodland model)
- The approved PUD* allows ONLY residential use, NO BUSINESS use is permitted (*PUD=Planned Urban Development)
- Site plan attached

The Master deed amendment we are seeking would allow for this added garage, and this unit #25 pays dues to the association for road maintenance, but excludes this unit from services such as landscape care and driveway maintenance as well as snow removal. This makes all the landscape care and snow removal, on this parcel only, the responsibility of the homeowner, the garage is to be used for tractor, lawn equipment, snow removal equipment, etc. normally associated with the maintenance of a 31 acre parcel. Any questions please call Steve at 810-599-5147.

Please check yes or no if you are in agreement with this.

Yes

Signature of Homeowner

Nitness

No

Date Signed

5-10-22 Lot 3 (4740)

Lot #

5-10-22

Date Signed

Mazer



- Added garage is 30 x 40 (1200 SF)
- Situated in the extreme southern corner of the site
- Architectural elements to match the house (Woodland model)
- The approved PUD* allows ONLY residential use, NO BUSINESS use is permitted (*PUD=Planned Urban Development)
- Site plan attached

The Master deed amendment we are seeking would allow for this added garage, and this unit #25 pays dues to the association for road maintenance, but excludes this unit from services such as landscape care and driveway maintenance as well as snow removal. This makes all the landscape care and snow removal, on this parcel only, the responsibility of the homeowner, the garage is to be used for tractor, lawn equipment, snow removal equipment, etc. normally associated with the maintenance of a 31 acre parcel. Any questions please call Steve at 810-599-5147.

Please check yes or no if you are in agreement with this.

Yes

Signature of Homeowner

Witness

No 5/9/2

Lot 4 (4744)

Date Signed

Lot #

Date Signed

Warren Webermin



- Added garage is 30 x 40 (1200 SF)
- Situated in the extreme southern corner of the site
- Architectural elements to match the house (Woodland model)
- The approved PUD* allows ONLY residential use, NO BUSINESS use is permitted (*PUD=Planned Urban Development)
- Site plan attached

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Please check yes or no if you are in agreement with this.

Yes 91100

Signature of Homeowner

Witness

Brenda Reeves

Date Signed

No

5-11-22 Lot 5 (4750)

Lot #

5-11-22

Date Signed

101



- Added garage is 30 x 40 (1200 SF)
- Situated in the extreme southern corner of the site
- Architectural elements to match the house (Woodland model)
- The approved PUD* allows ONLY residential use, NO BUSINESS use is permitted (*PUD=Planned Urban Development)
- Site plan attached

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Please check yes or no if you are in agreement with this.

/es

Signature of Homeowner

Witness

No Lot 6 (4754)

Lot #

5-10-22

Date Signed

Date Signed

Steve Belisle



- Added garage is 30 x 40 (1200 SF)
- Situated in the extreme southern corner of the site
- Architectural elements to match the house (Woodland model)
- The approved PUD* allows ONLY residential use, NO BUSINESS use is permitted (*PUD=Planned Urban Development)
- Site plan attached

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Please check yes or no if you are in agreement with this.

Yes

No

5-11-2R Lot 8 (4766)

Signature of Homeowner

Date Signed

Lot #

Vitness

Date Signed

5-11-22

leff Edwards



- Added garage is 30 x 40 (1200 SF)
- Situated in the extreme southern corner of the site
- Architectural elements to match the house (Woodland model)
- The approved PUD* allows ONLY residential use, NO BUSINESS use is permitted (*PUD=Planned Urban Development)
- Site plan attached

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Please check yes or no if you are in agreement with this.

Signature of Homeowner

aignature of nomeowner

Witness

5-15-22

Lot 9 (4770)

Lot #

Date Signed

No

5115-22

Date Signed

104



- Added garage is 30 x 40 (1200 SF)
- Situated in the extreme southern corner of the site
- Architectural elements to match the house (Woodland model)
- The approved PUD* allows ONLY residential use, NO BUSINESS use is permitted (*PUD=Planned Urban Development)
- Site plan attached

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Please check yes or no if you are in agreement with this.

Yes

Signature of Homeowner ma

Date Signed *らし*ル/2フ

No

Lot 10 (4788)

Lot #

Witness

Date Signed

Mike & Donna Kanopka

105



- Added garage is 30 x 40 (1200 SF)
- Situated in the extreme southern corner of the site
- Architectural elements to match the house (Woodland model)
- The approved PUD* allows ONLY residential use, NO BUSINESS use is permitted (*PUD=Planned Urban Development)
- Site plan attached

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Please check yes or no if you are in agreement with this.

Yes Signature of Homeowner

No

(4794) ot 11

Date Signed

Lot #

Witness

Date Signed

5-11-22

awrence Harper



- Added garage is 30 x 40 (1200 SF)
- Situated in the extreme southern corner of the site
- Architectural elements to match the house (Woodland model)
- The approved PUD* allows ONLY residential use, NO BUSINESS use is permitted (*PUD=Planned Urban Development)
- Site plan attached

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Please check yes or no if you are in agreement with this.

Yes

Signature of Homeowner

Witness

No 5/1/22

(810)

Date Signed

Lot #

5-11-22

Date Signed

homas Potter



- Added garage is 30 x 40 (1200 SF)
- Situated in the extreme southern corner of the site
- Architectural elements to match the house (Woodland model)
- The approved PUD* allows ONLY residential use, NO BUSINESS use is permitted (*PUD=Planned Urban Development)
- Site plan attached

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Please check yes or no if you are in agreement with this.

Yes

No 05-25-2022

Signature of Homeowner Bob Baumgarten Date Signed

Lot #

Lot 14

Witness

Date Signed


- Added garage is 30 x 40 (1200 SF)
- Situated in the extreme southern corner of the site
- Architectural elements to match the house (Woodland model)
- The approved PUD* allows ONLY residential use, NO BUSINESS use is permitted (*PUD=Planned Urban Development)
- Site plan attached

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Please check yes or no if you are in agreement with this.

Yes Signature of Homeowner

Witness

No

5.13.22 Lot 15 (4783)

Date Signed

Lot #

5-13-22

Date Signed

Renaud



- Added garage is 30 x 40 (1200 SF)
- Situated in the extreme southern corner of the site
- Architectural elements to match the house (Woodland model)
- The approved PUD* allows ONLY residential use, NO BUSINESS use is permitted (*PUD=Planned Urban Development)
- Site plan attached •

The Master deed amendment we are seeking would allow for this added garage, and this unit #25 pays dues to the association for road maintenance, but excludes this unit from services such as landscape care and driveway maintenance as well as snow removal. This makes all the landscape care and snow removal, on this parcel only, the responsibility of the homeowner, the garage is to be used for tractor, lawn equipment, snow removal equipment, etc. normally associated with the maintenance of a 31 acre parcel. Any questions please call Steve at 810-599-5147.

Please check yes or no if you are in agreement with this.

Signature of Homeowner

Witness

No

5.11.22 Lot 17 (4767)

Date Signed

Lot #

5-11-22

Date Signed

Gary Turner



- Added garage is 30 x 40 (1200 SF)
- Situated in the extreme southern corner of the site
- Architectural elements to match the house (Woodland model)
- The approved PUD* allows ONLY residential use, NO BUSINESS use is permitted (*PUD=Planned Urban Development)
- Site plan attached

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Please check yes or no if you are in agreement with this.

Yes

No 5-11-2022

Lot 18 (4759)

Signature of Homeowner

Date Signed

Lot #

Witness

Date Signed

Robert Charbonneau



- Added garage is 30 x 40 (1200 SF)
- Situated in the extreme southern corner of the site
- Architectural elements to match the house (Woodland model)
- The approved PUD* allows ONLY residential use, NO BUSINESS use is permitted (*PUD=Planned Urban Development)
- Site plan attached

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Please check yes or no if you are in agreement with this.

Yes

Signature of Homeowner

Witness

Tim Bloch

No

Date Signed

Lot #

19 (4751)

Date Signed



- Added garage is 30 x 40 (1200 SF)
- Situated in the extreme southern corner of the site
- Architectural elements to match the house (Woodland model)
- . The approved PUD* allows ONLY residential use, NO BUSINESS use is permitted (*PUD=Planned Urban Development)
- Site plan attached •

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Please check yes or no if you are in agreement with this.

Signature of Homeowner

No 5-25-22

Date Signed

Lot #

Witness

HRISTOPHER P. LONGE

Date Signed

PhotoScan by Google Photos



- Added garage is 30 x 40 (1200 SF)
- Situated in the extreme southern corner of the site
- Architectural elements to match the house (Woodland model)
- The approved PUD* allows ONLY residential use, NO BUSINESS use is permitted (*PUD=Planned Urban Development)
- Site plan attached

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Please check yes or no if you are in agreement with this.

Yes

Signature of Homeowner

Witness

RANCES E. LONGE

No 5-25-2

Date Signed

2 Lot #

Date Signed

PhotoScan by Google Photos



- Added garage is 30 x 40 (1200 SF)
- Situated in the extreme southern corner of the site
- Architectural elements to match the house (Woodland model)
- The approved PUD* allows ONLY residential use, NO BUSINESS use is permitted (*PUD=Planned Urban Development)
- Site plan attached •

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Please check yes or no if you are in agreement with this.

Signature of Homeowher

No

5/11/2022 Lot 22 (4727)

Date Signed

Lot #

5-11-22

Witness

Date Signed

David Sybert



- Added garage is 30 x 40 (1200 SF)
- Situated in the extreme southern corner of the site
- Architectural elements to match the house (Woodland model)
- The approved PUD* allows ONLY residential use, NO BUSINESS use is permitted (*PUD=Planned Urban Development)
- Site plan attached

The Master deed amendment we are seeking would allow for this added garage, and this unit #25 pays dues to the association for road maintenance, but excludes this unit from services such as landscape care and driveway maintenance as well as snow removal. This makes all the landscape care and snow removal, on this parcel only, the responsibility of the homeowner, the garage is to be used for tractor, lawn equipment, snow removal equipment, etc. normally associated with the maintenance of a 31 acre parcel. Any questions please call Steve at 810-599-5147.

Please check yes or no if you are in agreement with this.

Yes Signature of Homeowner

Witness

No 2020

Date Signed

Lot 23 (4719)

Lot #

Date Signed

lathy Mancini



- Added garage is 30 x 40 (1200 SF)
- Situated in the extreme southern corner of the site
- Architectural elements to match the house (Woodland model)
- The approved PUD* allows ONLY residential use, NO BUSINESS use is permitted (*PUD=Planned Urban Development)
- Site plan attached

The Master deed amendment we are seeking would allow for this added garage, and this unit #25 pays dues to the association for road maintenance, but excludes this unit from services such as landscape care and driveway maintenance as well as snow removal. This makes all the landscape care and snow removal, on this parcel only, the responsibility of the homeowner, the garage is to be used for tractor, lawn equipment, snow removal equipment, etc. normally associated with the maintenance of a 31 acre parcel. Any questions please call Steve at 810-599-5147.

Please check yes or no if you are in agreement with this.

Yes

Signature of Homeowner

MIMICA Witness

No

Date Signed

Date Signed

Lots X, 16, 20, X, 24, 25

Lot #

teve, Gronow

117

GENOA TOWNSHIP APPLICATION FOR CONCEPTUAL SITE PLAN REVIEW

| TO THE GENOA TOWNSHIP PLANNING COMMISSION: |
|---|
| APPLICANT: HCALY HOMES LLC |
| OWNER'S ADDRESS: 3696 SLECTA, COMMERCE, Mich 48382 |
| SITE ADDRESS: LAWSON AND GRANDRIVER |
| TAX CODE NUMBER: 34711-04-400-014-015018 |
| PHONE: 248-921-2102 |
| LAWSON AD NORTH OF GRAND RIVER SUMMERFIC. POINTE. |
| THE PROPERTY IS OWNED DY. HOALOC HOALOC IIC |
| THE PROPERTY IS OWNED BY: MEAN A TOMES LEC |
| BUILD 102 Single Family Homes and 12 attached condor. M STEAD OF 140 ATTACHED COMPOS, |
| THE FOLLOWING BUILDINGS ARE PROPOSED: 102 Single Family HOMES 12 attached Condors |
| |
| I hereby certify that all information and data attached to and made part of this application is true and accurate to the best of my knowledge and belief. |
| BY: Jac Hear |
| ADDRESS: 3696 562014 |
| COMMERCE, Mich 48382 |
| ARCHITECT OR ENGINEER'S SIGNATURE |
| <u>ドレトアドC</u> *AGENT (acting for owner) SIGNATURE |
| *A letter of Authorization from Property Owner is needed. |

| <u>Contact Information</u> - Review I | Letters and Correspondence shall be for | warded to the following: | |
|--|---|------------------------------|---------|
| 1.) PESINC INC Name | of WAYNG PERRY Business Affiliation | at (810) 227-9460 Fax No. | |
| | | WAYNep@desineil | Ve, co. |

Genoa Township Planning Commission April 11, 2022 Approved Minutes

NEW BUSINESS:

OPEN PUBLIC HEARING # 2...Consideration of an amendment to the Summerfield Pointe Planned Unit Development Agreement, preliminary condominium site plan and environmental impact assessment to convert the project from (140-units) attached condominiums to single family detached homes (108-units). The project is located on Lawson Drive, North of Grand River Avenue. The request is petitioned by Healy Homes of Summerfield, LLC.

- A. Recommendation of PUD Agreement Amendment
- B. Recommendation of Environmental Impact Assessment (3-9-22)
- C. Recommendation of Preliminary Site Condominium Plan (3-23-22)

Mr. Fernando Abudeye and Mr. Wayne Perry of Desine, Inc. and Mr. Jack Healy, the developer, were present.

Mr. Abudeye stated they would like to reduce the density of the plan approved in 2002 from 140 units to 108 units as well as change them from attached condominiums to single-family homes.

Mr. Healy stated six of the homes will have the same building materials as the existing attached condominium units they will be abutting.

Mr. Abudeye stated that because they have reduced the density, they will be able to have more common areas, which will be maintained by the homeowner's association.

Mr. Borden reviewed his letter dated April 6, 2022.

- The applicant proposes to construct 108 detached residential units in lieu of the 140 attached units that are included in the approved PUD.
- Dimensional deviations are sought for lot width, lot area, and combination of side yard setbacks. The details of these deviations are as follows:
 - The proposal identifies units ranging in area from 0.14 to 0.25-acres, with a minimum width of 55 feet.
 - The revised plan includes a table noting deviations sought from MDR lot width and area (75' and 10,000 SF, respectively).
 - The applicant also seeks to deviate from the combined side yard setback requirement, though this is stated as a spacing between buildings (14') in the draft PUD Agreement.
 - We request the applicant amend the draft Agreement to reference the combination of side yard setbacks (as opposed to building spacing) for consistency with the MDR requirements.
- The draft PUD Agreement should reference the MDR requirement for combination of side yard setbacks, as opposed to building spacing.
- The applicant must address the Township's comments on the draft PUD Agreement.
- The applicant must address any comments provided by the Township Attorney on the draft condominium documents.
- The guest parking spaces that occupy a portion of proposed Unit 6 should be removed.
- Details are needed as to what restrictions are established by the proposed conservation easement.
- Details of the southeasterly open space must be added to the plans.

Genoa Township Planning Commission April 11, 2022 Approved Minutes

- The Commission should consider comments provided by the Township Engineer and/or Brighton Area Fire Authority.
- There is insufficient information in the private road application to determine whether the Township may allow variation from public roadway standards.
- The submittal does not include a Private Road Maintenance Agreement.
- The required easement width is not provided.
- The dimensional requirements for medians do not appear to be met.
- The plans do not identify any street signs.
- Design details such as AASHTO standards, pavement, curb and gutter, grades, and curves, are subject to review by the Township Engineer.

Ms. Byrne reviewed her letter dated April 4, 2022.

- The general road layout for the proposed Summerfield Pointe development is essentially the same as the previously approved version with multi-family units. There are no engineering related concerns with single-family units as opposed to multi-family units.
- The proposed sidewalk cross section should be revised to show 6 inches of compacted CL II sand per Township standards.
- After final site plan approval, the petitioner will be required to submit private road construction plans to the Township for review and approval.
- After final site plan approval, the petitioner will be required to submit construction plans to MHOG Sewer and Water Authority for review and approval.
- The Livingston County Drain Commissioner has updated their design standards. The petitioner has noted that they are pursuing approval from the Drain Commissioner and evidence of said approval should be provided to the Township prior to final site plan approval.

The Brighton Area Fire Authority Fire Marshal's letter dated April 5, 2022 states that all of his previous comments for Phase I have been addressed.

Commissioner Mortensen is not in favor of the proposed density.

Commissioner Dhaenens stated the development has been attached condominiums for 17 years and it would be very different to put in single-family homes.

Commissioner McCreary asked if the single-family homes will have an association. Mr. Healy stated that they would be included in the association to pay for the roadway and lawn maintenance, but not the outside building maintenance. She would like to see more details as to how this will be handled. Commissioner McBain agrees. She has reviewed the Master Deed and Bylaws and they are not clear due to maintenance of the lawn, the exterior of the buildings, the irrigation, etc.

The call to the public was made at 9:12 pm.

Mr. Gerald Adler of 4726 Summer Ridge asked about the six homes that will be adjacent to the existing condominiums. They will have different rules for pools, swing sets, etc. and they will look different.

Mr. Gary Laundroche of 4689 Summer Ridge represents the Association Board. It is very odd to have single family homes in a condominium development. It would look like an afterthought. The current condominium association is self-managed and has Master Deeds and Bylaws that help them maintain their common standards. Individual homeowners will have a different association's rules and regulations. He cited sections of the Township Ordinance that address condominium associations.

Mr. Peter Garofalo of 4698 Summer Ridge stated the original PUD outlines that the area of Lawson Drive at Grand River was to be widened and it was not done until in 2020. There is no secondary egress, which is required.

Mr. Robert Webb of 4654 Summer Ridge stated the proposed density is not good for the community. If this is approved, Lawson Drive will have more traffic and there will be increased delivery and garbage trucks, etc. He suggested rerouting the roadway so that it does not go down Lawson Drive to Grand River.

Mr. Rick Giummi of 4702 Summer Ridge Drive provided a sketch plan showing where new attached condominium units should be built and they would be all part of the existing association. Any new development would be a different association. The right side of Lawson Drive should look like one development.

Ms. Irene Hursh of 973 Lawson Drive does not want single-family houses across from her home. There would also be construction traffic. There is only one way in and one way out of their subdivision. These single-family homes will increase the traffic on Lawson Drive.

Ms. Ann Streeter of 609 Abbington Court stated that if this development connects to Aster Boulevard, it will cause increased traffic on their road. These new homeowners will need to help pay for the maintenance of their roadways.

Ms. Lori Carroll of 4663 Summer Ridge Drive stated the residents in her community do not want single-family homes.

Mr. Paul Manders of 4712 Summer Ridge Drive stated that if these single-family homes are allowed, it will not look right.

Ms. Liz Hoover of 661 Abbington Court in Hampton Ridge is concerned with the 55-foot-wide lots.

Ms. Karen Dorf of 4697 Summer Ridge Drive does not believe that the building materials will be able to match the materials on the existing buildings. She is against this and hopes the Planning Commission takes into consideration what the condominium residents have said.

Ms. Bobbie Davis of 4655 Summer Ridge Drive has lived there for 16 years. The residents of this community have maintained it. She would like their circle of condominiums to be completed and keep their association separate from a new one.

The call to the public was closed at 9:42 pm.

Commissioner Dhaenens questioned why condominiums are difficult to sell. Mr. Healy stated it is difficult to obtain a mortgage for a condominium. Commissioner Dhaenens understands the need for

affordable housing in this community, but he does not want the continuity of this neighborhood to be broken.

Commissioner McBain knows that different associations can work well together and suggested the applicant propose and present complimentary architectural and building materials; however, she does not believe the single-family homes should be on the same side of Lawson as the existing condominiums. She is not in favor of the density. She agrees that these new residents will be driving down Aster Avenue and that should be addressed.

Mr. Healy stated that the density would be higher if they stayed with the original PUD of 140 units.

Chairman Grajek is not in favor of the size of the lots.

Moved by Commissioner Mortensen, seconded by Commissioner Dhaenens, to recommend to the Township Board denial of the Summerfield Point Estates PUD Agreement Amendment because the lot size and setbacks are not acceptable and do not meet the ordinance in terms of MDR zoning. Moreover, the proposed plan for single-family homes on individual lots is inconsistent with neighboring properties. **The motion carried unanimously.**

Moved by Commissioner Mortensen, seconded by Commissioner Dhaenens, to recommend to the Township Board denial of the Environmental Impact Assessment dated March 9, 2022 because the lot size and setbacks are not acceptable and do not meet the ordinance in terms of MDR zoning. Moreover, the proposed plan for single-family homes on individual lots is inconsistent with neighboring properties. **The motion carried unanimously.**

Moved by Commissioner Mortensen, seconded by Commissioner Dhaenens, to recommend to the Township Board denial of the Preliminary Site Condominium Plan for Summerfield Point Estates dated March 23, 2022 because the lot size and setbacks are not acceptable and do not meet the ordinance in terms of MDR zoning. Moreover, the proposed plan for single-family homes on individual lots is inconsistent with neighboring properties. **The motion carried unanimously.**

Moved by Commissioner Mortensen, seconded by Commissioner Dhaenens, to recommend to the Township Board denial of the private road for Summerfield Point Estates because the lot size and setbacks are not acceptable and do not meet the ordinance in terms of MDR zoning. Moreover, the proposed plan for single-family homes on individual lots is inconsistent with neighboring properties. In addition, there is insufficient information to determine whether the Township may allow variation from public roadway standards, the submittal does not include a Private Road Maintenance Agreement, the required easement width is not provided, the dimensional requirements for medians do not appear to be met, and the plans do not identify any street signs. **The motion carried unanimously.**

OPEN PUBLIC HEARING #3...Consideration of a site plan and environmental impact assessment for 136 apartment units within 17 buildings located north of the intersection of Whitehorse Drive and Arundell Drive. The property is located within the Lorenzen Planned Unit Development and was previously approved for 137 apartment units. The request is petitioned by Elevate Property Partners, LLC.



Planning Commission Genoa Township 2911 Dorr Road Brighton, Michigan 48116

| Attention: | Kelly Van Marter, AICP |
|------------|---|
| | Planning Director and Assistant Township Manager |
| Subject: | Summerfield Pointe Estates – Conceptual Plan Review |
| Location: | Lawson Drive, north of Grand River Avenue |
| Zoning: | MUPUD Mixed Use Planned Unit Development |

Dear Commissioners:

At the Township's request, we have reviewed the submittal from Healy Homes requesting comment on a conceptual plan for further development of Summerfield Pointe Estates (plans dated 5/23/22).

A. Summary

- 1. The conceptual plan submitted is intended for discussion at this time. No action is required of the Commission.
- 2. The approved PUD calls for 140 attached condominium units (beyond what is already constructed).
- 3. The conceptual plan identifies 12 attached condominium units and 102 detached site condominium units in lieu of the approved PUD.
- 4. The detached units range in area from 5,934 to 10,717 square feet, with a minimum lot width of 54.5 feet.
- 5. The smallest lots allowed by conventional zoning are in the MDR District 10,000 square feet and 75' lot width.
- 6. We suggest the applicant prepare a parallel plan based on MDR lot sizes to determine the base density.
- 7. The Commission should consider any comments provided by the Township Engineer and/or Brighton Area Fire Authority.

B. Proposal/Process

The applicant seeks input on a conceptual plan that would amend an approved PUD project.

More specifically, the approved PUD includes 140 attached residential condominium units, while the applicant conceptually seeks to develop 102 detached site condominium units and 12 attached units.

A similar project was requested for formal review by the Planning Commission at their April 2022 meeting; however, each component of that proposal (amended PUD Agreement, preliminary condominium plan, and Environmental Impact Assessment) was recommended for denial.

The current plans are only up for discussion and to provide the applicant with some guidance for a future formal submittal.



Aerial view of site and surroundings (looking east)

C. Conceptual Plan

As previously noted, the approved PUD calls for an additional 140 attached residential condominium units (beyond what is already constructed).

The conceptual plan submitted identifies 12 attached condominium units to complement the existing attached units, and 102 detached site condominium units on the undeveloped land to the north and west.

The plan includes an extension of Lawson Drive, construction of Summer Ridge Drive, and a connection to Aster Boulevard in the neighboring development. Sidewalks are included throughout the development, and appropriate park/open space areas are provided.

The attached units appear to match the existing units in terms of size/design, while the detached units are on site condominium lots ranging in area from 5,934 to 10,717 square feet. The minimum lot width noted is 54.5 feet.

For the sake of comparison, the smallest single-family residential lots allowed in the Township are 10,000 square feet in area with 75-foot lot widths (MDR District). As a side note, the Master Plan Future Land Use Map depicts the property as Medium Density Residential, which is compatible with the MDR zoning district.

We suggest the applicant prepare a parallel plan based on MDR lot sizes to determine the base density. This will help to determine if the 102 units proposed are within reason given the amount of open space being preserved.

Should you have any questions concerning this matter, please do not hesitate to contact our office.

Respectfully, **SAFEBUILT**

Brian V. Borden, AICP Michigan Planning Manager



June 8, 2022

Ms. Kelly Van Marter Genoa Township 2911 Dorr Road Brighton, MI 48116

Re: Summerfield Pointe Amendment Conceptual Site Plan Review No. 1

Dear Ms. Van Marter:

Tetra Tech conducted a review of the proposed conceptual Summerfield Pointe site plan last dated May 23, 2022. The plans were prepared by Desine, Inc. on behalf of Healy Homes at Summerfield LLC. The development is located on 60 acres on the northwest side of the existing Summerfield Pointe development located on Lawson Drive. The Petitioner is proposing 102 single family units and two multi-family buildings with 4 units each. The proposed site includes storm sewer and on-site detention, as well as sanitary sewer and water main improvements. We offer the following comments:

GENERAL

- 1. The general road layout for the proposed Summerfield Pointe development is essentially the same as the previously approved version with multi-family units. We have no engineering related concerns with single family units as opposed to multi-family units.
- 2. After final site plan approval, the Petitioner will be required to submit private road construction plans to the Township for review and approval.
- 3. After final site plan approval, the Petitioner will be required to submit construction plans to MHOG Sewer and Water Authority for review and approval.

DRAINAGE AND GRADING

1. The petitioner should provide storm sewer and detention calculations for the detention basin on the final site plan for review.

We recommend the above comments are addressed prior to final site plan approval.

Sincerely,

Gary J. Markstrom, P.E. Vice President

june

Project Engineer

BRIGHTON AREA FIRE AUTHORITY



615 W. Grand River Ave. Brighton, MI 48116 o: 810-229-6640 f: 810-229-1619

June 6, 2022

Kelly VanMarter Genoa Township 2911 Dorr Road Brighton, MI 48116

RE: Summerfield Pointe Amendment Genoa Twp., MI

Dear Kelly:

The Brighton Area Fire Department has reviewed the above-mentioned site plan. The plans were received for review on March 30, 2022, and the drawings are dated February 23, 2022 with a most recent revision date of May 23, 2022. The project is a site plan based on completion of a previously planned residential development and reconstruction of the roadway leading to the development. The applicant is also requesting a modification from multi-family zoning to 108 single-family residential lots. The plan review is based on the requirements of the International Fire Code (IFC) 2021 edition.

All previous review comments have been addressed on the recent submittal.

Additional comments will be given when a complete submittal is provided. If you have any questions about the comments on this plan review please contact me at 810-229-6640.

Cordially,

Rick Boisvert, FM, CFPS Fire Marshal

REVISED CONCEPTUAL DEVELOPMENT PLAN SUMMERFIELD POINTE ESTATES A PART OF THE SOUTHEAST 1/4 OF SECTION 4

LEGAL DESCRIPTIONS SUBSQUENT TO SURVEY **Reference:** "Summerfield Pointe," a part of the Southeast 1/4 and part of the Northeast 1/4 of Section 4, Town 2 North, Range 5 East, Genoa Township, Livingston County, Michigan, according to the Master Deed thereof, as recorded in Liber 4218, Page 874, Livingston County Records, as amended in Replat No. 1 as recorded in Document

No. 2008R-028520 and *Replat No. 2 as recorded in Document No. 2014R-006883, Livingston County Records, and designated as Livingston County Condominium Subdivision Plan No. 295, and as described in Act 59 of the Public Acts of 1978, as amended.

OVERALL PARCEL 60.73± Acres (Parcels 4711-04-400-013, 014, 015, 016 and "Summerfield Pointe" Replat #2 Combined) Part of the East 1/2 of Section 4, Town 2 North, Range 5 East, Genoa Township, Livingston County, Michigan; described as: **BEGINNING** at the South 1/4 Corner of said Section 4; thence along the North-South 1/4 line of Section 4 to following two courses: 1) N01°35'17"W 1366.11 feet and

2) N02°11'05"W 1525.13 feet (recorded as N01°50'51"E 2890.65 feet) to the center of Section 4:

thence along the East-West 1/4 line of Section 4, N88°53'35"E 1177.52 feet (recorded as S87°40'06"E 1162.17 feet); thence N01°06'25"W (recorded as N02°19'54"E) 16.05 feet; thence S88°08'25"E (recorded as S84°42'06"E) 140.66 feet; thence S10°02'44"W (recorded as S13°29'03"W) 81.90 feet; thence S22°34'43"E 40.64 feet (recorded as

S19°08'24"E 39.61 feet); thence S01°33'04"E 373.67 feet (recorded as S01°53'15"W 374.11 feet); thence S84°41'09"W (recorded as

S88°06'46"W) 683.63 feet; thence S01°59'18"E (recorded as S01°26'28"W) 400.04 feet; thence S02°08'43"E 510.56 feet (recorded as

S01°17'41"W 510.39 feet);

thence N84°03'00"E (recorded as N87°29'24"E) 79.92 feet; thence along a line 10.00 feet West of and parallel to the Westerly line of "Sunrise Park", a subdivision recorded in Liber 2 of Plats, Page 23, Livingston County Records, S01°00'54"E 244.55 feet (recorded as S02°21'39"W 243.95 feet); thence S01°39'07"E 226.89 feet (recorded as S01°45'17"W 227.42 feet); thence N89°34'14"E (recorded as S87°01'22"E) 186.47 feet; thence along the West line of said "Sunrise Park" the following three courses

1) S51°44'32"E (recorded as S48°20'08"E) 240.00 feet,

2) S41°02'02"E 146.55 feet (recorded as S37°37'38"E 146.14 feet) and 3) S01°47'25"E 385.18 feet (recorded as S01°42'54"W 386.00 feet);

thence S88°43'10"W 10.00 feet (recorded as N88°17'06"W 10.00 feet); thence along a line 10 feet West of and parallel to the West line of said "Sunrise Park" the following two courses:

1) S01°43'30"E 241.29 feet (recorded as S1°42'54"W 241.14 feet) and 2) S14°28'55"E 48.77 feet (recorded as S11°13'33"E 48.86 feet);

thence along the South line of said Section 4, as previously surveyed, S86°50'35"W (recorded as N89°43'06"W) 473.99 feet; thence along a line coincident with Lawson Drive the following three courses:

1) N05°38'45'W (recorded as N02°12'21"W) 150.00 feet, 2) S86°50'35"W (recorded as N89°43'06"W) 150.00 feet and

3) S05°38'45"E (recorded as S02°12'21"E) 150.00 feet

thence along the South line of said Section 4, as previously surveyed, S86°50'35"W 546.06 feet (recorded as N89°43'06"W 546.16 feet) to the Point of Beginning. Containing 60.73 acres of land, more or less. Subject to and together with all easements and restrictions affecting title to the above described premises.

PARCEL 4711-04-400-013 22.22± Acres

(Nature Preserve as recorded in Liber 3772, Page 940, Livingston County Records) Part of the East 1/2 of Section 4, Town 2 North, Range 5 East, Genoa Township, Livingston County, Michigan; described as: Commencing at the South 1/4 Corner of said Section 4; thence along the North-South 1/4 line of Section 4 to following two courses:

1) N01°35'17"W (recorded as N01°50'51"E) 1366.11 feet and 2) N02°11'05"W (recorded as N01°50'51"E) 569.39 feet to the PLACE OF BEGINNING and

3) N02°11'05"W (recorded as N01°50'51"E) 955.74 feet to the center of Section 4;

thence along the East-West 1/4 line of Section 4, N88°53'35"E 1177.52 feet (recorded as S87°40'06"E 1162.17 feet); thence N01°06'25"W (recorded as N02°19'54"E) 16.05 feet; thence S88°08'25"E (recorded as S84°42'06"E) 140.66 feet; thence S10°02'44"W (recorded as S13°29'03"W) 81.90 feet; thence S22°34'43"E 40.64 feet (recorded as

S19°08'24"E 39.61 feet); thence S01°33'04"E 373.67 feet (recorded as S01°53'15"W 374.11 feet); thence S84°41'09"W (recorded as S88°06'46"W) 683.63 feet; thence S01°59'18"E (recorded as 01°26'28"W) 400.04 feet; thence

S02°08'43"E (recorded as S01°17'41"W) 132.62 feet; thence along the East line of a Nature Preserve as recorded in

Liber 3772, Page 940, Livingston County Records, the following three courses: 1) S87°51'55"W (recorded as N88°42'19"W) 144.66 feet

2) N54°02'14"W (recorded as N50°36'28"W) 244.39 feet and

3) S82°05'20"W 291.13 feet (recorded as S85°31'06"W 285.32 feet) to the Place of Beginning. Containing 22.22 acres of land, more or less. Subject to and together with all easements and restrictions affecting title to the above

described premises

PARCEL 4711-04-400-014 26.25± Acres (*Part of Possible Expansion/Future Development Area "A")

Part of the East 1/2 of Section 4, Town 2 North, Range 5 East, Genoa Township, Livingston County, Michigan; described as: **BEGINNING** at the South 1/4 Corner of said Section 4;

thence along the North-South 1/4 line of Section 4 to following two courses: 1) N01°35'17"W 1366.11 feet and

2) N02°11'05"W 569.39 feet

(recorded as N01°50'51"E 1936.02 feet)

thence along the East line of a Nature Preserve as recorded in Liber 3772, Page 940, Livingston County Records, the following three courses

1) N82°05'20"E 291.13 feet (recorded as N85°31'06"E 285.32 feet), 2) S54°02'14"E (recorded as S50°36'28"E) 244.39 feet and

3) N87°51'55"E (recorded as S88°42'19"E) 144.66 feet;

thence S02°08'43"E (recorded as S01°17'41"W) 377.94 feet

thence N84°03'00"E (recorded as N87°29'24"E) 79.92 feet;

thence along a line 10.00 feet West of and parallel to the Westerly line of "Sunrise Park", a subdivision recorded in Liber 2 of plats, Page 23, Livingston County Records, S01°00'54"E 244.55 feet (recorded as S02°21'39"W 243.95 feet); thence S01°39'07"E 226.89 feet (recorded as S01°45'17"W 227.42 feet); thence S67°21'52"W 79.51 feet (recorded as S70°51'31"W 80.28 feet); thence S79°55'57"W (recorded as S83°20'15"W) 95.00 feet; thence S03°24'18"E (recorded as S00°00'00"W) 97 26 feet: thence S80°36'56"W (recorded as S84°01'14"W) 77 58 feet: thence S09°28'23"E (recorded as S06°04'05"E) 130.52 feet; thence S78°24'48"E 34.65 feet (recorded as S75°00'30"E 34.93 feet); thence S12°42'26"E 416.34 feet (recorded as S09°16'02"E 416.23 feet); thence Southeasterly 59.62 feet along the arc of a 200.00 foot radius curve to the right, through a central angle of 17°04'52" and having a chord bearing S04°10'00"F (recorded as S00°43'36"E) 59.40 feet; thence S04°22'26"W (recorded as S07°48'50"W) 13.56 feet; thence S80°11'15"W (recorded as S83°37'39"W) 60.77 feet; thence S03°26'24"E (recorded as S00°00'00"W) 34.61 feet; thence along the West line of Lawson Drive, S05°38'45"E (recorded as S02°12'21"E) 150.00 feet; thence along the South line of Section 4, as previously surveyed, S86°50'35"W 546.06 feet (recorded as N89°43'06"W 546.16 feet) to the Point of Beginning. Containing 26.25 acres of land, more or less. Subject to and together with all easements and restrictions affecting title to the above

PARCEL No. 4711-04-400-015 1.13± Acres (*Possible Expansion/Future Development Area "B")

described premises.

Part of the Southeast 1/4 of Section 4, Town 2 North, Range 5 East, Genoa Township, Livingston County, Michigan; described

Commencing at the South 1/4 Corner of said Section 4; thence along the South line of Section 4, as previously surveved. N86°50'35"E 546.06 feet (recorded as S89°43'06"E 546.16 feet); thence along the West line of Lawson Drive, N05°38'45"W (recorded as N02°12'21"W) 150.00 feet: thence N03°26'24"W (recorded as N00°00'00"E) 34.61 feet; thence N80°11'15"E (recorded as N83°37'39"E) 60.77 feet;

thence N04°22'26"E (recorded as N07°48'50"E) 13.56 feet; thence Northwesterly 59.62 feet along the arc of a 200.00 foot radius curve to the left, through a central angle of 17°04'52" and having a chord which bears N04°10'00"W (recorded as N00°43'36"W) 59.40 feet; thence N12°42'26"W (recorded as N09°16'02"W) 159.13 feet; thence N77°18'10"E (recorded as N80°43'58"E) 27.00 feet to the POINT OF BEGINNING; thence N12°42'26"W (recorded as N09°16'02"W) 306.30 feet; thence Northeasterly 30.26 feet along the arc of a 20.00 foot radius curve to the right, through a central angle of 86°41'26" (recorded as 86°41′33") and having a chord bearing N30°27′50"E (recorded as N34°04′44″E) 27.46 feet; thence Southeasterly 201.82 feet along the arc of a 289.00 foot radius curve to the right, through a central angle of 40°00'52" (recorded as 40°00'44") and having a chord bearing S86°00'33"E (recorded as S82°34'07"E) 197.75 feet; thence 23°59'50"W (recorded as S27°26'14"W) 147.43 feet; thence S36°36'45"E (recorded as S33°10'21"E) 58.47 feet; thence S12°42'26"E (recorded as 09°16'02"E) 97.80 feet; thence S77°17'34"W (recorded as S80°43'58"W) 143.83 feet to the Point of Beginning. Containing 1.13 acres of land, more or less. Subject to and together with all easements and restrictions affecting title to the above described premises.

PARCEL No. 4711-04-400-016 1.14± Acres (*Possible Expansion/Future Development Area "C")

Part of the Southeast 1/4 of Section 4, Town 2 North, Range 5 East, Genoa Township, Livingston County, Michigan; described

Commencing at the South 1/4 Corner of Section 4, thence along the South line of Section 4, N86°50'35"E (recorded as S89°43'05"E) 999.68 feet to the POINT OF BEGINNING

thence N48°02'05"W (recorded as N44°35'46"W) 135.18 feet; thence N41°10'45"E (recorded as N44°37'04"E) 9.00 feet; thence N50°03'17"W (recorded as N46°36'58"W) 27.00 feet; thence Northeasterly 123.38 feet along the arc of a 182.00 foot radius curve to the left, through a central angle of 38°50'28" (recorded as 38°50'33") and having a chord bearing N20°31'27"E (recorded as N23°57'46"E) 121.03 feet;

thence S84°58'30"E 227.08 feet (recorded as S81°32'11"E 227.01 feet); thence along a line 10.00 feet West of and parallel to the Westerly line of said "Sunrise Park" the following two courses:

1) S01°43'30"E 151.43 feet (recorded as S01°42'54"W 151.38 feet) and 2) S14°28'55"E 48.77 feet (recorded as S11°13'33"E 48.86 feet):

thence along the South line of Section 4, S86°50'35"W 170.37 feet (recorded as N89°43'06"W 170.47 feet) to the Point of Beginning Containing 1.14 acres of land, more or less. Subject to and together with all easements and restrictions affecting title to the above described premises

ENGINEER/SURVEYOR

DESINE INC. 2183 PLESS DRIVE **BRIGHTON, MICHIGAN 48114** PHONE: (810) 227-9533

T2N, R5E, GENOA TOWNSHIP, LIVINGSTON COUNTY, MICHIGAN



OWNER / DEVELOPER HEALY HOMES AT SUMMERFIELD LLC 3696 SLEETH ROAD COMMERCE TWO, MICHIGAN 48382

LANDSCAPE ARCHITECT

work within reasonable accuracy and precision

and may not accurately depict current site



SHEET INDEX

| SD | SITE DEVELOPMENT PLAN |
|-----|-------------------------------|
| SP1 | DIMENSIONAL SITE PLAN (SOUTH) |
| SP2 | DIMENSIONAL SITE PLAN (NORTH) |



PROJECT No.: 214159

DWG NAME: 4159-CO

PRINT: MAY 23, 2022

REVISED

ALLEN DESIGN 557 CARPENTER NORTHVILLE, MI 48167 PHONE: (248) 467-4668







Create Account

MORTGAGES

Advertiser Disclosure

Q

New condo mortgage rules create barriers for borrowers



Written by Jeff Ostrowski

March 7, 2022 / 4 min read

B Why you can trust Bankrate

While we adhere to strict editorial integrity, this post may contain references to products from our partners. Here's an explanation for how we make money.

(i)

Landing <u>a mortgage on a condominium unit</u> never has been an easy task. It just got more difficult.

In response to the June 2021 collapse of an oceanfront tower near Miami, mortgage giants Fannie Mae and Freddie Mac are rolling out new rules covering condo loans – and critics say the stricter reviews are causing condo sales to fall apart, even in buildings with no structural issues.

Fannie Mae stopped buying loans for condo units in buildings where major repairs have been put off, or where the condo association has been ordered by local authorities to fix unsafe conditions, as of Jan. 1. Freddie Mac enacted similar guidelines Feb. 28.

Current Mortgage Rates for May 19, 2022

Advertiser Disclosure Zip Code **Property Value** Purchase Refinance 60616 Chicago, IL Q S 406.250 Loan Amount -Percent D... Loan Term **Credit Score** \$ 325,000 20 % 30 year fi... 740+ Show more options (+)Lender (i) APR () Rate 🛈 Mo. payment () 15 Year Fixed \$2,303 3.77% NMLS: #240415 3.38% Next * * * * * 0 May 19, 2022 Points: 1.776 Fees: \$8,772 (5) (844) 365-0598

15 Year Fixed NMLS: #3001

3.99% 3.75% \$2.363

132

| ★ ★ ★ ★ € | May 19, 2022 | Points: 1.592 | Y-9 Fees: \$5,174 | Next |
|------------------------------|--------------|---------------|-----------------------------|---------|
| (855) 812-1018 | | | | |
| 15 Year Fixed NMLS: #2289 | 4.15% | 4.13% | \$2,424 | Next |
| ★ ★ ★ ★ ★ ① | May 19, 2022 | Points: 0 | Fees: \$47 | |
| ره.5) (855) 846-7672 | | | | |
| 5 Year Eixed | 4.34% | 4.00% | \$2,404 | |
| NMLS: #1124061 | May 19, 2022 | Points: 1.962 | Fees: \$7,375 | Next |
|) | | | | |
| | | | 1 - 4 of 14 | < > |
| | | | | |

Privacy policy

The new rules are complicated enough that the Community Associations Institute, a trade group for 43,000 homeowners associations and condo associations, has asked Fannie and Freddie to delay the restrictions.

"These rules, imposed so quickly, are creating bottlenecks and chaos," says Dawn Bauman, a senior vice president at the organization. "It's delaying sales in some condos."

Bauman acknowledges that the rules are "well-intentioned." Fannie and Freddie rolled out stricter guidelines after Champlain Towers South, an aging building filled with sleeping residents, crashed to the ground in the middle of the night, killing 98 people. The volunteer members of the condo board had clashed over costly repairs, ultimately postponing work that might have bolstered the building, according to news reports after the tragedy.

A response to 'aging infrastructure'

The Florida collapse illustrated an uncomfortable truth about the nation's condos: Some buildings have been neglected to the point that they're hazardous. Decisions about repairs largely fall to residents serving on their condo boards. They must decide whether to impose hefty assessments on themselves and their neighbors.

What's more, the structural integrity of condos is regulated by a hodgepodge of state and local rules. The Miami-Dade County Commission last week passed an ordinance that will require all condo associations and homeowners associations to publicly disclose financial and structural information.

The new guidelines from Fannie and Freddie also offer a response to the awkward reality that people might be living in rickety structures. "In the aftermath of the collapse of the Champlain Towers South in Surfside, Florida, the risks of residential buildings with aging infrastructure and in need of critical repairs have been brought to the forefront of discussion throughout the nation," Freddie Mac says in its new guidelines.

Because most new mortgages are packaged and sold by these agencies, lenders typically decline to originate loans that Fannie and Freddie won't buy.

How Much Home Can I Afford?

Advertiser Disclosure

| • | Step | 1 of 3 |
|------------------------|---------------|-------------------------|
| ZIP Code of property | | Annual Household Income |
| 60616 | Chicago, IL ♀ | \$ 62,992 |
| Estimated Down Payment | | Loan Term |
| \$ 81,250 | | 30 year fixed 🔻 |
| Credit Score | | × 2 |
| 740+ | | Next Step |
| | \$19 | 95k |
| | - | |
| | | |
| | | |
| 2 | ۰۵ - ۲. | |
| | Median Hom | ne Price in IL: |
| | \$195 | ,300 |
| - | | |

The new rules have perplexed nearly everyone who tries to make sense of them, says Adrian Adams, a Los Angeles attorney who specializes in condo law.

"The questions are confusing," Adams says. "Everybody's like, 'How do we answer these?' There are problems with the questionnaire, and they're significant enough that boards and management companies are declining to fill them out."

New scrutiny for condo mortgages

135

In cases where buildings have shown structural defects, neither Fannie nor Freddie will green-light loans until the necessary repairs have been completed and documented. The agencies' new policies are labeled temporary, but no expiration date has been set.

The most visible piece of the increased oversight is new paperwork required by Fannie and Freddie. Fannie Mae's new eight-page form asks, among other questions, "When was the last building inspection by a licensed architect, licensed engineer, or any other building inspector?"

Freddie Mac, for its part, retired its four-page "Condominium Project Questionnaire – Short Form" and replaced it with a five-page "Condominium Project Questionnaire – Full Form."

Among the technical phrases featured in the updated condo approval guidelines are "critical repairs," "material deficiencies," "significant deferred maintenance" and "routine repairs and maintenance."

The Community Associations Institute's Bauman says the new questionnaires are problematic because they ask volunteer board members to delve into areas far outside their expertise.

What's more, a loan might be rejected not because a condo is unsafe but because a condo association fills out the new form incorrectly.

"Our members report creditworthy borrowers have been denied credit to purchase homes and refinance mortgages in condominium and cooperative projects with no safety, soundness, structural integrity or habitability concerns," the Community Associations Institute wrote in <u>a recent letter</u>.

'A reckoning' for condo associations

There are an estimated 175,000 condo associations in the U.S., according to the Community Associations Institute, making the property type an important part of the housing market. Those associations oversee millions of condo units – some are highvalue penthouses, but many units serve as retirement homes, starter homes and investment properties.

Fannie and Freddie are pushing condo associations that have neglected maintenance to invest in repairs.

"It's a reckoning for sure," says Orest Tomaselli, president of project review at CondoTek. "A lot of purchasers and owners are being denied access to financing because of these new rules through no fault of their own."

As of late February, Fannie Mae had compiled a list of more than 1,000 condo associations ineligible for loans. Florida had the most properties on the list by far, with 413, followed by California with 91.

Not all the properties are banned from agency-backed mortgages because of structural defects. Many aren't eligible for Fannie financing because they're considered condohotels, or because they're in mixed-use buildings with a large percentage of commercial uses, or because their reserves fall below minimum requirements.

As for the buildings on the list because of structural issues, at least several would be unlikely to attract buyers. The Regent Palace in Surfside is 70 years old and was evacuated in 2021, according to Fannie's list and news reports. A condo in Titusville, Florida, appears on Fannie's spreadsheet because it has been condemned. A project in Key West that's on the list has been the subject of extensive news coverage.

What other mortgage options are available to condo buyers?

If Fannie and Freddie won't sign off on your condo loan, there is another option: Some lenders offer a type of mortgage known as a non-warrantable loan. Jeff Lazerson, president of MortgageGrader in Laguna Niguel, California, says the new rules from Fannie and Freddie have sparked "a fast-developing crisis." He has been directing condo buyers to portfolio lenders that offer non-warrantable loans on condos that Fannie Mae and Freddie Mac decline to finance.

These mortgages aren't resold to Fannie and Freddie. Instead, they're held in the portfolio of a lender, or sold to private investors.

Non-warrantable loans carry less stringent underwriting requirements around such issues as non-owner occupancy, condo association reserve levels and presence of short-term rentals. A mortgage broker may be able to find a lender who is willing to hold your condo loan in its portfolio.

"It is an alternative," says Adams, the Los Angeles attorney. "But I don't know how deep it is, how much money is available."

Learn more:

- <u>10 first-time homebuyer loans and programs</u>
- How to choose between a condo, house, townhouse or apartment
- Second home vs. investment property: Different mortgage rates and requirements

FHA to allow 'spot approvals' — a practice it banned almost 10 years ago



Peter Miller

The Mortgage Reports Contributor September 3, 2019 - 4 min read

FHA to bring back a guideline banned in 2010

FHA condo mortgage financing has long been complex and hard to get. The current rules are so restrictive that more than 90% of the nation's 150,000 condo projects do not qualify for FHA-backed mortgages.

But now HUD is simplifying FHA condo mortgage rules.

In October 2019, FHA will again allow "spot approvals" — the practice of approving for FHA financing single units within unapproved condo complexes.

That guideline was erased from FHA rulebooks almost a decade ago.

Ready to finally buy a condo with an FHA loan? Now could be the time.

Check your FHA condo buying eligibility. (May 19th, 2022)

Likely benefits of new rules

The new standards will make FHA condo financing cheaper and more available. HUD estimates that units in an additional 20,000 to 60,000 projects will be eligible for FHA loans once the rules change on October 15th, 2019. We might see other results as well.

- There will be more inventory available for sale with FHA financing. That's financing which generally requires just 3.5% down.
- We're likely to see firmer condo prices as more buyers come into the marketplace.
- The new standard essentially brings back the concept of "spot approvals" for FHA condo loans.

How condos are different than single-family homes

Condos may look like homes, townhouses, and apartments but they're actually different. A home on a plot of land is generally "fee-simple" real estate. You own the house and the land. You can decide such issues as

what color to paint the place; how it should be financed, whether or not to rent, and how it should be financed.

With condominiums, you own a unit and have the right to use common areas. You pay fees to the condominium association, generally known as a *homeowners association* (HOA). Condo associations own the common areas and typically takes care of external maintenance. They also have rules.

An HOA may limit or ban unit rentals. It can decide what exterior colors and materials are allowed. The homeowners association can decide how much is necessary for reserves and special assessments. It can foreclose on your property if HOA fees are not paid. It can be foreclosed if it does not pay mortgage loans on common property or property taxes in general.

Pre-October 15 FHA condo mortgage rules

HUD wants to make sure HOA issues will not drag down condo values, especially the value of units financed with FHA-insured mortgages. As a result, HUD now has 95 pages of condo requirements.

- No more than 10 percent of the units may be owned by one investor or entity, including the developer. There's an exception for nonprofit ownership.
- Many financial documents must be reviewed before the project is FHA certified. This can include the
 budget, bank statements, and current balance sheet.
- Substantial reserves must be maintained. Funds must be on hand for repairs expected during the next five years.
- Dues must be current. Not just for the unit being financed, but the majority of HOA members. "No more than 15 percent of the total units can be in arrears," says HUD.

Someone has to review and certify HOA docs, budgets and records before a condo property can be FHA approved. That review can cost big money. Also, under the current rules, condo projects must be re-certified every two years. That's more money.

Not surprisingly, condo mortgages represent just 2% of all FHA loan volume.

Post-October 15 FHA condo mortgage rules

Starting October 15th things will be different.

"The FHA," said HUD, "will insure mortgages for selected condominium units in projects that are not currently approved."

In other words, FHA will allow you to buy an individual unit within an unapproved condo complex. These used to be called "spot approvals," but that allowance was ended in 2010. It appears that "spot approvals" are back.

New FHA financing will be available for tens of thousands of additional condo projects. More and easier financing should be good for condo prices and ease the burden for both condo buyers and sellers.

Get started on your FHA condo buying approval. (May 19th, 2022)

Single-unit requirements

For condominium projects with 10 or more units, no more than 10% of individual condo units can be FHAinsured. Projects with fewer than 10 units may have no more than two FHA-insured units.

Investor limitations

The program won't work with a project where half the units are not owner-occupied.

FHA concentration

Not more than 50% of the units in an approved project can be financing with FHA-insured mortgages.

Commercial limitations

The commercial/non-residential space within an approved condominium project not exceed 35% of the project's total floor area. Fannie Mae and Freddie Mac also have a 35% standard. The old FHA limit was 25%.

Recertification

The new rules extend the recertification requirement for approved condominium projects from two to three years.

How to benefit from FHA condo mortgage changes

The new rules are likely to result in additional condo sales. With more demand, there will be more pressure to generally raise condo prices. Especially in metro cores with large concentrations of condo projects, the new HUD rule should be good both for buyers and sellers.

For details and specifics speak with mortgage lenders who offer FHA financing.

Apply for an FHA condo loan

141

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New Fannie And Freddie Rules On Condo **Building Infrastructure**

Fannie Mae's rule changes apply to condo and co-op loans purchased on or after Jan. 1, 2022. Freddie Mac's rule changes are effective for mortgages with settlement dates on or after February 28, 2022. The changes are just now beginning to be broadly felt across the condo market. •• • • 1 · ----~ . • 1.1

Faldo's Tips For Older Golfers

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HOT

list of questions needing to be answered with the intent of uncovering any known significant deferred maintenance issues that may impact the safety and structural integrity of the building. The questionnaires to the HOAs also require information about the financial plans for addressing safety and structural integrity issues.

On the surface, this is all well-intended. However, it has HOAs running very scared.

Many Condo and Co-ops Are Refusing To Fill Out The Forms

The HOAs are now receiving these Fannie and Freddie questionnaires every time one of the units in the condo is preparing to close a sale – both new and re-sales. HOAs are fearful that any legal discussion about the building integrity or reserve funds to correct known deficiencies will put them at risk of liability. The liability could spread far and wide to include all HOA stakeholders such as the property management company, board members, inspectors, engineers, and the association membership as a whole.

Failing to answer the agencies thoroughly and completely is almost certain to force lenders to decline a mortgage application. It's not only affecting buyers and sellers of individual units. In some cases, new projects that need to solve design and construction difficulties must fulfill these new deficiencies and financing requirements to obtain funding to complete projects currently underway. However, the immediate effect is being felt most strongly by sellers and buyers of individual units.

Sellers and Buyers are Feeling the Pinch

The rules went into effect as "temporary rules" but are widely expected to become permanent. The result is that the industry will need to quickly learn how to deal with these changes and liabilities or smooth flowing sales in the marketplace will grind to a halt. Right now, the early weeks are seeing many condo associations outright refuse to fill out and submit the loan addendum.

That leaves buyers with two choices. Pay all-cash for the condo or find a lender willing to hold the loan without Fannie or Freddie underwriting. Obviously, most condo buyers don't have the funds to make an all-cash purchase. If they can find a bank, credit union, or private lender willing to hold the loan, it will come with a much higher interest rate. Signed deals are facing this dilemma today and word is spreading fast about how difficult condo loans have become to close.

Buyers that can afford million-and-a-half-dollar penthouses are more likely to be able to pay cash or find alternative financing. However, the guy trying to buy his first \$155,000 home will be hurt the most. These new rules will shut another door on first-time buyers and the newly divorced spouse trying to start over.

Condo sellers will begin feeling the effects very soon and probably even more than first-time buyers. Clearly, the new rules will cut deeply into the pool of potential buyers for their condos. Even if they resort to something as dramatic as seller financing, the value of their units is going to drop dramatically in price.

In short course, HOAs must figure out how to submit the new Fannie and Freddie questionnaires without taking on excessive liabilities. In due course, it probably means that HOAs will have to find ways to generate funds to make needed repairs. Individual owners and future sellers can serve their own best interests by attending HOA meetings to stay up-to-date with information about their HOAs. By participating in meetings, HOA members will become more involved with the overall condition of the association and the buildings they live in.

What knowledge do you have to share about condos and HOAs as a result of the Champlain Towers South catastrophe? Please leave your comments.

Also, our weekly Ask Brian column welcomes questions from readers of all experience levels with residential real estate. Please email your questions, inquiries, or article ideas to

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Comments



April 18, 2022 at 5:33 pm

This just caused a condo sale to fall through that I was trying to buy. And I am still on the hook for appraisal costs and other fees when the HOA is the problem for refusing to answer. I'm trying to look into whether I can get some of this back in small claims court, but I'm guessing not. Investment firms and swoop in and buy as many condos as they want while.peoole like me can't buy a home. This is ridiculous.



This squashed a sale of a townhouse I had and the townhouse is side by side, not stacked like the ones in Miami.



Data & Compliance

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Warrantable & non-warrantable condo mortgage rules updated



Gina Freeman The Mortgage Reports Contributor July 27, 2019 - 7 min read

More mortgages for condo/co-op owners

Buying a condo is a lot like purchasing a "regular" home, but with one big difference — mortgages are tougher to come by.

Lenders impose a different set of rules on you when you buy a condo. They may sometimes increase your interest rate.

The most experienced and professional mortgage lenders can help you navigate the condo financing maze. A mortgage lender who's looking out for your best interest can help you beat the system.

With condos and co-ops, it's not just *your* creditworthiness the lender has to worry about. It must also verify the fiscal and physical health of the entire development into which you're buying.

Fortunately, with the housing market doing well and condo values climbing, mortgage lenders allow looser guidelines — even **low-down payment home loans**.

Expect condominium and housing cooperative financing opportunities to remain high this year.

Verify your new rate (May 19th, 2022)

In this article:

With condos and co-ops, it's not just your creditworthiness the lender has to worry about. It must also verify the fiscal and physical health of the entire development into which you're buying.

- <u>Conforming mortgage rules for condos</u>
- FHA and VA mortgage rules
- <u>Mortgages for non-warrantable condos</u>
- Finding a non-warrantable condo lender

Conforming mortgage rules for condos

The majority of home buyers use "conforming" mortgage financing.

This means that their loan purchased by one of two government-sponsored entities — Fannie Mae or Freddie Mac — and that the loan meets the two group's minimum standards.

Fannie Mae and Freddie Mac use the term "warrantable" to describe condominium projects and properties against which they'll allow a mortgage.

Condo projects and properties which *don't* meet Fannie Mae and Freddie Mac warrantability standards are known as *non-warrantable*.

Non-warrantable condos are more challenging to finance.

Following are rules for condo warrantability:

Fannie Mae condo warrantability

Typically, a condo is considered warrantable if:

- No single entity owns more than the following number of units in the project
 - Projects with 5-20 units: 2 units
 - Projects with 21+ units: 20% of units
- The project consists of just 2-4 units (project review is waived in this case, and, apparently, there is no restriction on how many units a single entity can own, but check with your lender to confirm)
- The unit is a detached condo (shares no walls with other units but is legally classified as a condo)
- For investment properties, at least 50% of the units are owner-occupied or second homes
- For owner-occupied transactions, there is no owner occupancy requirement
- Fewer than 15% of the units are 60 days or more in arrears with their association dues
- The homeowners association (HOA) is not named in any lawsuits
- Commercial space accounts for 35% or less of the total building square footage

Freddie Mac condo warrantability

In our research, there are no material differences between Freddie Mac and Fannie Mae guidelines, except for one. Fannie Mae waives a project review for 2-4 unit condo projects, thereby giving no restriction to how many units a single entity can own.

- Freddie Mac, however, says a single entity can only own one unit in a 2-4 unit project. So, it total, Freddie Mac's single entity ownership limits are as follows:
 - 2-4 unit project: A single entity can own 1 unit
 - 5-20 unit project: A single entity can own 2 units
 - 21 units or more: A single entity can own up to 25% of the units in the project

Non-warrantable features for conventional loans

Common non-warrantable properties include condotels, timeshares, fractional ownership properties, multiunit condos (the condo unit itself is two units), condos in a permanent care/assistance residence, and other projects which require owners to join an organization, such as a golf club.

Manufactured housing projects and other developments which are not legally considered real estate are also excluded from warrantability. These include houseboat and motorhome projects.

A condo in monetary litigation will likely be disqualified from financing by the major agencies.

When buying a condo, ask your real estate agent or lender about the building's warrantability before you go any further.

A warrantable condo typically gets you lower mortgage rates than a non-warrantable condo. Warrantable condos create lower risk for the bank.

Verify your condo buying eligibility (May 19th, 2022)

FHA and VA mortgage rules for condos

VA and FHA home loans are government-backed mortgages. FHA loans are insured by the Federal Housing Administration. **VA loans** are loans guaranteed by the Department of Veterans Affairs.

Both loan types are known for their more flexible lending guidelines than conforming mortgage financing. Loans are available in all 50 states.

The FHA and VA maintain lists of approved communities, but don't despair of the unit you want isn't in a development on those lists. Both agencies have made it easier for condo and co-op associations to get their buildings approved.

In fact, the FHA recently changed its condo approval rules to help more borrowers get qualified.

Some of the new basic requirements for an FHA condo loan now include:

- The borrower must meet "standard" FHA mortgage guidelines
- At least half of a project's unit must be owner-occupied
- In a newly-built project, at least 70% of the units must be sold

In general, if Fannie Mae or Freddie Mac have already approved a building, the FHA and VA will also authorize lending there.

Neither the FHA nor the VA charge borrowers extra to finance a condominium or a co-op. You can get a condo loan with the same FHA or VA mortgage rate as you could a single-family home.

Verify your condo buying eligibility (May 19th, 2022)

Mortgages for non-warrantable condos

Mortgage financing is more of a challenge for buyers of non-warrantable condos. There are fewer available programs for these dwellings.

In general, a condo or co-op unit is considered non-warrantable if:

- The project has yet to be completed
- Its developer has not turned over control of the HOA to the owners
- The community allows short-term rentals
- A single person or entity owns more than 10% of all units
- It's in a project where the majority of units are rented to non-owners

In addition, a condo unit in a project involved in litigation of *any* kind is usually "non-warrantable." This is true whether the community is the plaintiff or the defendant in the suit.

Non-warrantable condo financing is unavailable via Fannie Mae and Freddie Mac, the FHA or the VA. To get a non-warrantable condo mortgage, you'll need to talk with a specialty lender.

Finding a non-warrantable condo lender

When you buy into a condominium community, mortgage lenders apply extra scrutiny to the application — both you and your future HOA must comply with a set of underwriting guidelines.

"This is because you are not the only person responsible for the condition and upkeep of the condo – it's also up to the condo association, which is accountable for **maintaining the exterior** and common areas," says Ginger Wilcox, chief industry officer at Sindeo, a San Francisco-based mortgage marketplace.

"The lender wants to know whether the property is a good risk, and the sales process could be delayed or canceled if the condo association has financial problems or the common property isn't maintained well."

Scarlett Tassone, Vice President and mortgage banker with PrivatePlus Mortgage in Atlanta, says mortgage loan providers each have different rules and stipulations regarding financing for a condo.

"Fannie Mae and Freddie Mac each have a set of requirements that every condo association has to meet – such as the minimum amount of funds the association has in reserves, the amount of tenants past due on their homeowners association fees, the amount of units that are rentals or investment properties, et cetera," says Tassone.

Should you skip a condo in favor of a townhome?

If you are eyeing a townhome instead, securing financing may not be quite as complicated. That's because **townhomes** are treated similarly to single-family residences by lenders.

"With a townhome, the borrower owns the lot and the walls. Although they pay fees to a homeowners association, the HOA is only responsible for neighborhood upkeep and use of neighborhood facilities," says Tassone.

Townhomes are considered "zero lot line" homes. In other words, you share a wall and the line between your lot and your neighbor's is essentially zero.

This type of property may or may not lie within a planned unit development (PUD). Either way, finance underwriting guidelines similar to those for single-family homes apply.

"The underwriting process for fee-simple properties with a homeowners association is currently significantly easier than for condo association properties," notes Gonche.

Size matters for condos and townhomes

However, whether it's a condo or townhome, expect more attention from the lender if the unit is part of a smaller complex/building.

When the lending market is tight, it is often difficult to get loans on complexes with four or fewer units, according to Dana Graham, agent with Berkshire Hathaway Chairman's Circle in Rolling Hills Estates, Calif.

"Lenders often view the risk as high because, if one of the owners gets in trouble and doesn't pay his HOA dues, for example, that represents 25 percent of the owners in a four-unit building."

Get⁻unapproved condos approved

If possible, ask your real estate agent for help in recruiting the HOA/condo association to assist you in getting the property approved for financing. Be sure the association provides all the numbers and paperwork the lender requests.

Recent changes to **condominium guidelines** by Fannie Mae and Freddie Mac have made securing approval easier for HOAs, and many mortgage lenders are equipped to help with the process.

Tassone says to be aware of the cost of condo or association documents. "Most property management companies will not provide any documents free of charge, and the cost of these documents can range from \$200-\$500 or more."

If the property is ultimately not approved by the lender, consider hunting for an approved multifamily property, or one with lower or no association fees.

"Try to be open-minded and find an experienced REALTOR® and lender who can walk you through the process and help you get those new keys," says Gonche.

Lastly, be aware of the financial risks of owning a townhome or condo; these properties may not appreciate as quickly as single-family homes.

Alternative financing for non-warrantable condos and townhomes

While mortgages backed by the FHA, VA, Freddie Mac and Fannie Mae dominate the market, they aren't the only options available.

Non-conforming mortgages are offered by institutions or groups of investors that make their own rules, and some may be willing to finance an unapproved condo, especially if the applicant is very strong and has a substantial down payment.

Smaller local banks can loan on these kinds of projects to support their communities, and other portfolio lenders (those that don't sell their loans and keep them on their own books) may offer mortgages designed especially for unapproved condos.

What are today's condo mortgage rates?

The housing market has recovered from last decade's downturn, and lenders are more willing to lend on condos and co-ops nationwide.

Get today's live mortgage rates now. Your social security number is not required to get started, and all quotes come with access to your live mortgage credit scores.

Freddie Mac

5701.6 New Condominium Projects

Effective 04/03/2021

To be eligible for the New Condominium Projects review type, the Condominium Project must meet the definition of a New Condominium Project.

In addition to the project review and eligibility requirements in <u>Section 5701.2</u>, Mortgages secured by Condominium Units in New Condominium Projects must comply with all of the following requirements:

(a) Project completion requirements

The subject legal phase (or the subject building) and any prior legal phases in which units have been offered for sale are substantially complete. "Substantially complete" indicates that the Common Elements are complete and the units are complete subject to the selection of buyer preference items.

For the purpose of determining project completion under this Section 5701.6, a single building can only have one legal phase regardless of whether the Condominium Project is comprised solely of that single building or multiple buildings. Legal phases are defined by the Project Documents. Construction or marketing phases developed for the convenience of the developer are not necessarily legal phases and are not eligible.

(b) Owner-occupancy requirements for New Condominium Projects

At least 50% of the total units in the project (or at least 50% of the sum of the subject legal phase and prior legal phases) must have been conveyed or must be under contract to purchasers who will occupy the units as their Primary Residences or second homes.

For the purpose of calculating owner-occupancy under this Section 5701.6, a single building can only have one legal phase regardless of whether the Condominium Project is comprised solely of that single building or multiple buildings. Legal phases are defined by the Project Documents. Construction or marketing phases developed for the convenience of the developer are not necessarily legal phases and are not eligible.

(c) Project budget requirement for New Condominium Projects

The project's budget for the current fiscal year must comply with the following:

- 1. The homeowners association's (HOA's) assessments must begin once the developer has ceased to pay operating expenses attributable to the Condominium Project, whether or not all units have been sold. When any unit owner other than the developer pays assessments, the developer must pay the assessments attributable to the unsold units
- 2. The project's budget (or its projected budget if the project has not been turned over to the unit owners) must be consistent with the nature of the project
- 3. Appropriate assessments must be established to manage the project
- 4. There must be appropriate allocations for line items pertinent to the type and status of the Condominium Project
- 5. If the project was recently converted, the developer must have initially funded a working capital fund, through contributions made by the developer and/or purchasers of the Condominium Units, in an amount consistent with the estimated remaining life of the Common Elements
- 6. There must be adequate funding for insurance deductible amounts
- 7. At least 10% of the budget must provide funding for replacement reserves for capital expenditures and deferred maintenance based on the project's age, estimated remaining life and replacement cost of major Common Elements
 - The replacement reserve percentage is determined by dividing (i) the annual budgeted replacement reserve allocation by (ii) the HOA's annual budgeted assessment income (including regular common expense fees)

https://guide.freddiemac.com/app/guide/section/5701.6

Guide Section 5701.6

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Guide Section 5701.6

- The calculation may exclude: (i) special assessment income, (ii) income allocated to or in reserve accounts, (iii) incidental income not relied upon for maintenance, operations or capital improvements and (iv) amounts collected from unit owners (but usually paid individually by them) for items or utilities such as internet access
- 8. If the budget does not provide a replacement reserve of at least 10%, a Seller may rely on either: (i) a reserve study, provided the conditions in Section 5701.6(k) below are met; or (ii) contributions to a working capital fund, provided the conditions in Section 5701.6(l) below are met. These contributions can be in addition to or in lieu of any working capital fund contributions made by the developer in the case of a recently converted project.
- 9. An HOA must not receive more than 10% of its budgeted income from the rental or leasing of commercial parking facilities

(d) Delinquent assessments for New Condominium Projects

No more than 15% of the total number of units in a project are 60 or more days delinquent in the payment of their HOA assessments.

(e) Compliance with laws

The Condominium Project has been created and exists in full compliance with the applicable State law, the requirements of the jurisdiction in which the Condominium Project is located, and with all other applicable laws and regulations governing creation of the Condominium Project.

(f) Limitations on ability to sell/Right of first refusal

Any right of first refusal in the Project Documents will not adversely impact the rights of a mortgagee or its assignee to:

- Foreclose or take title to a Condominium Unit pursuant to the remedies in the Mortgage
- Accept a deed or assignment in lieu of foreclosure in the event of default by a mortgagor, or
- Sell or lease a unit acquired by the mortgagee or its assignee

(g) Conversions

For a Condominium Project that was created by conversion of a building(s) with a prior use the following requirements must be met for the Seller's review and determination of project eligibility:

- For a conversion involving a Non-Gut Rehabilitation of a prior use of the building that was legally created within the past three years, the engineer's report (or functionally equivalent documentation for jurisdictions that do not require an engineer's report) must state that the project is structurally sound, the condition and remaining useful life of the major project components are sufficient to meet the residential needs of the project, and that there is no evidence that any of these conditions have not been met. Major components include the roof, elevators and mechanical systems such as HVAC, plumbing and electricity.
- All rehabilitation work involved in the conversion (Non-Gut Rehabilitation and Gut Rehabilitation) must be completed in a professional manner
- A review of the engineer's report (or functionally equivalent documentation) is not required for conversions involving:
 - A Gut-Rehabilitation, and
 - A Non-Gut Rehabilitation if more than three years have elapsed since the legal creation of the project

(h) Mortgagee consent

- 1. The Project Documents or applicable State law must provide that amendments of a material adverse nature to First Lien mortgagees be agreed to by mortgagees that represent at least 51% of the unit votes (based on one vote for each first Mortgage owned) subject to First Lien Mortgages
- 2. The Project Documents or applicable State law must provide that any action to terminate the legal status of the project or to use insurance proceeds for any purpose other than to rebuild, must be agreed to by First Lien mortgagees that represent at least 51% of the unit votes (based on one vote for each first Mortgage owned) that are subject to First Lien Mortgages
- 3. The Project Documents may allow implied approval to be assumed when the then current mortgagee of record fails to submit a response to any written proposal for an amendment within 60 days after the then current mortgagee of record actually receives proper notice of the proposal, provided the notice was delivered by certified or registered mail, with a "return receipt" requested

https://guide.freddiemac.com/app/guide/section/5701.6

Guide Section 5701.6

(i) Rights of Condominium mortgagees and guarantors

The Project Documents, applicable State law, or any applicable insurance policy must give the mortgagee and guarantor of the Mortgage on any unit in a Condominium Project the right to timely written notice of:

- 1. Any condemnation or casualty loss that affects either a material portion of the Condominium Project or the unit securing its Mortgage
- 2. Any 60-day Delinquency in the payment of assessments or charges owed by the owner of any unit for which it holds the Mortgage
- 3. A lapse, cancelation, or material reduction of any insurance policy maintained by the HOA
- 4. Any proposed action that requires the consent of a specified percentage of mortgagees

(j) First mortgagee's rights confirmed

The Project Documents must not give a Condominium Unit owner or any other party priority over any rights of the first mortgagee of the Condominium Unit pursuant to its Mortgage in the case of payment to the unit owner of proceeds from termination, or insurance proceeds or condemnation awards for losses to or a taking of Condominium Units and/or Common Elements.

(k) Requirements when a Seller relies on a project reserve study for New Condominium Projects

The reserve study must comply with the following requirements:

- 1. The reserve study generally must include:
 - An inventory of major components of the project
 - Financial analysis and evaluation of current reserve fund adequacy, and
 - Proposed annual reserve funding plan
- 2. A reserve study's financial analysis must validate that the project has appropriately allocated the recommended reserve funds to provide the Condominium Project with sufficient financial protection comparable to Freddie Mac's standard budget requirements for replacement reserves
- 3. The reserve study's annual reserve funding plan, which details total costs identified for replacement components, must meet or exceed the study's recommendation and conclusion
- The most current reserve study (or update) must be dated within 36 months of the Seller's determination that a Condominium Project is eligible (see <u>Section 5701.2(a)(2)</u>)
- 5. The reserve study must be prepared by an independent expert skilled in performing such studies (such as a reserve study professional, a construction engineer, a certified public accountant who specializes in reserve studies, or any professional with demonstrated experience and knowledge in completing reserve studies)
- 6. The reserve study must meet or exceed requirements set forth in any applicable state statutes

7. The reserve study must comment favorably on the project's age, estimated remaining life, structural integrity and the replacement of major components

If the Seller relies on a reserve study that meets the requirements of this section, the project's budget must contain appropriate allocations to support the costs identified in the study. The Seller must obtain and retain in the Mortgage file a copy of the reserve study. The Seller must also perform an analysis of the study and retain this analysis in the Mortgage file.

(I) Requirements when a Seller relies on contributions to a working capital fund for New Condominium Projects

The following requirements must be met:

- The Project Documents require the purchaser of a Condominium Unit to pay a non-refundable and non-transferable assessment to a working capital fund which must be established for the periodic maintenance, repair and replacement of the Common Elements
- The assessment must be equal to a minimum of at least two months of the HOA fees attributable to the Condominium Unit and be due and payable at closing
- The developer is in control of the HOA

(m) New Condominium Project sold with excessive Seller contributions

https://guide.freddiemac.com/app/guide/section/5701.6

Guide Section 5701.6

If a builder, developer or property seller offers financing or sale arrangements (such as rent-backs, payments of principal, interest, taxes and insurance) for Condominium Unit Mortgages in a New Condominium Project these contributions must comply with the requirements of <u>Section 5501.5</u>.

(n) New Condominium Projects in Florida

Mortgages secured by attached units in New Condominium Projects in Florida are not eligible, except when approved through the Fannie Mae Project Eligibility Service (PERS) process (refer to <u>Section 5701.9(a)</u> for additional information).

i

Note: If the requirements for New Condominium Projects in this Section 5701.6 are met, then the Seller is not required to comply with the requirements for any of the other project review types in <u>Sections 5701.4</u>, <u>5701.5</u>, <u>5701.7</u> and <u>5701.9</u>.

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4/4



Know All Persons by These Presents: That Adler Enterprises Company, L.L.C., a Michigan Limited Liability Company

whose address is 719 E. Grand River, Brighton, MI 48116

Convey(s) and Warrants(s) to Healy Homes At Summerfield LLC, a Michigan Limited Liability Company whose address is 3696 Sleeth Rd., Commerce Twp., MI 48382

the following described premises situated in the Township of Genoa, County of Livingston and State of Michigan, towit:

Part of the Southeast 1/4 and part of the Northeast 1/4 of Section 4, Town 2 North, Range 5 East, Township of Genoa, Livingston County, Michigan, described as follows: Beginning at the South 1/4 corner of said Section 4; thence along the North-South ¼ line of said Section 4, as previously surveyed and monumented, on the following two (2) courses: 1) North 01 degrees 50 minutes 59 seconds East, 1365.88 feet; 2) North 01 degrees 50 minutes 44 seconds East, 1524.77 feet, to the center of said Section 4; thence along the East-West 1/4 line of said Section 4, as previously surveyed and monumented, South 87 degrees 40 minutes 06 seconds East 1162.17 feet; thence North 02 degrees 19 minutes 54 seconds East, 16.05 feet; thence along an existing chain link fence line, South 84 degrees 42 minutes 06 seconds East, 140.66 feet; thence continuing along an existing chain link fence line, South 13 degrees 29 minutes 03 seconds West 81.90 feet; thence South 19 degrees 08 minutes 24 seconds East 39.61 feet; thence South 01 degrees 53 minutes 15 seconds West 374.11 feet (previously recorded as South) to a found iron pipe; thence along a previously surveyed and monumented line, South 88 degrees 06 minutes 46 seconds West 683.63 feet (previously recorded as South 86 degrees West 686 feet); thence South 01 degrees 26 minutes 28 seconds West 400.04 feet to a found iron rod; thence South 01 degrees 17 minutes 41 seconds West 510.39 feet to a found iron pipe; thence North 87 degrees 29 minutes 24 seconds East 79.92 feet (previously recorded as East 78 feet); thence along a line 10 feet West of and parallel to the West line of SUNRISE PARK, a subdivision as recorded in Liber 2 of Plats on page 23 of the Livingston County Records, South 02 degrees 21 minutes 39 seconds West 243.95 feet; thence South 01 degrees 45 minutes 17 seconds West 227.42 feet to a found iron rod; thence South 87 degrees 01 minutes 22 seconds East 186.47 feet (previously recorded as East 167 feet); thence along the West line of said SUNRISE PARK, South 48 degrees 20 minutes 08 seconds East (previously recorded as South 51 degrees 35 minutes East) 240.00 feet; thence continuing along said West line, South 37 degrees 37 minutes 38 seconds East 146.14 feet (previously recorded as South 37 degrees 34 minutes East 148 feet); thence continuing along said West line, South 01 degrees 42 minutes 54 seconds West, 386.00 feet (previously recorded as South, 434.00 feet); thence North 88 degrees 17 minutes 06 seconds West (previously recorded as West), 10.00 feet; thence along a line 10 feet West of and parallel to the West line of said SUNRISE PARK, South 01 degrees 42 minutes 54 seconds West

| Drafted by: Mark Adler 719 E. Grand River Brighton MI 48116 Assisted by: Metropolitan Title Company | Return To: Jack D. Healy 3696 Sleeth Road Commerce Township MI 48382 | Send Tax Bills To: Jack D. Healy 3696 Sleeth Rd. Commerce Twp. MI 48382 |
|---|---|--|
| Recording Fee: \$21.00 File Number: CM-463577 | State Transfer Tax:\$34,620.00County Transfer Tax:\$5,077.60 | Tax Parcel No.: 11-04-400-001-401-47070 |

(Attached to and becoming a part of Warranty Deed dated: May 23, 2003, between Adler Enterprises Company, L.L.C., a Michigan Limited Liability Company, as Seller(s) and Healy Homes LLC, a Michigan Limited Liability Company, as Purchaser(s).)

(previously recorded as South), 241.14 feet; thence continuing along a line 10 feet West of and parallel to said SUNRISE PARK, South 11 degrees 13 minutes 33 seconds East 48.86 feet; thence along the South line of said Section 4, as monumented, North 89 degrees 43 minutes 06 seconds West 473.99 feet; thence along the East line of Lawson Drive, North 02 degrees 12 minutes 21 seconds West 150.00 feet; thence along the North line of Lawson Drive, North 89 degrees 43 minutes 06 seconds West 150.00 feet; thence along the West line of Lawson Drive, South 02 degrees 12 minutes 21 seconds East 150.00 feet; thence along the South line of said Section 4, as monumented North 89 degrees 43 minutes 06 seconds West 546.16 feet to the point of beginning.

More commonly known as Summerfield Pointe

For the full consideration of: Four Million Six Hundred Sixteen Thousand and 00/100 Dollars (\$4,616,000.00).

Subject to: Building and use restrictions, reservations, and easements of record. A sewer and/or water assessment which the purchaser agrees to assume and pay according to the terms thereof.

If the property conveyed is unplatted, the following applies:

The grantor grants to the grantee the right to make ALL division(s) under section 108 of the land division act, Act No. 288 of the Public Acts of 1967. (If no number is inserted, the right to make divisions stays with the portion of the parent tract retained by the grantor; if all of the parent tract is conveyed, then all division rights are granted.) This property may be located within the vicinity of farmland or a farm operation. Generally accepted agricultural and management practices which may generate noise, dust, odors, and other associated conditions may be used and are protected by the Michigan Right To Farm Act.

Dated this 23rd day of May, 2003.

Witnesses:

State of Michigan County of LIVINGSTON

Notary Public: Yvonne C. Brewer County in Michigan: Oakland Acting In County: Livingston Commission Expires: 10/22/2004

Signed and Sealed: Adler Enterprises Company, L.L.C. By Mark Adler, Member

The foregoing instrument was acknowledged before me this May 23, 2003, by Mark Adler as Member of Adler Enterprises Company, L.L.C., a Michigan Limited Liability Company



File Number: CM-463577

156

Genoa Township Planning Commission May 23, 2022 Unapproved Minutes

GENOA CHARTER TOWNSHIP PLANNING COMMISSION PUBLIC HEARING - SPECIAL MEETING MAY 23, 2022 6:30 P.M. MINUTES

<u>CALL TO ORDER</u>: Chairman Grajek called the special meeting of the Genoa Charter Township Planning Commission to order at 6:37 p.m. Present were Chris Grajek, Jeff Dhaenens, Marianne McCreary, Glynis McBain and Tim Chouinard. Absent was Eric Rauch. Also present was Kelly VanMarter, Community Development Director/Asst. Township Manager.

Chairman Grajek stated that Commissioner and Township Trustee, Jim Mortensen, has resigned from the Planning Commission. He served on the Commission for 26 years. He has been a mentor to all Commissioners and has provided much knowledge and history throughout his tenure.

PLEDGE OF ALLEGIANCE: The pledge of allegiance was recited.

APPROVAL OF AGENDA:

Ms. VanMarter stated that Open Public Hearing #1 originally requested to be postponed until the June meeting; however, they contacted her today and would like to be postponed until the July 11, 2022 meeting.

Moved by Commissioner Dhaenens, seconded by Commissioner Chouinard, to approve the agenda as amended. **The motion carried unanimously**.

DECLARATION OF CONFLICT OF INTEREST: None

CALL TO THE PUBLIC:

The call to the public was made at 6:40 pm.

Mr. Carl Vagnetti is a realtor in Livingston County. He and his partner own a 7.72-acre piece of property on the corner of Brighton and Chilson Roads. He has spoken to the Township Supervisor and Manager regarding how they can develop this property and they suggested he attend tonight's meeting to have this discussion added to the agenda.

Chairman Grajek will have this item added as Item #3 on tonight's agenda.

The call to the public was closed at 6:41 pm.

Genoa Township Planning Commission May 23, 2022 Unapproved Minutes

OPEN PUBLIC HEARING #1... Consideration of a REQUEST TO POSTPONE UNTIL THE

JULY 11, 2022 PLANNING COMMISSION MEETING the proposed project for an amendment to the Saint Joseph Mercy Health Planned Unit Development Agreement, final PUD site plan and environmental impact assessment to construct a proposed 186,157 sq. ft. 4-story hospital addition to an existing medical building. The project is located at 7575 Grand River Avenue, north side of Grand River Avenue and west of Bendix Road. The request is petitioned by Trinity Health-Michigan.

- A. Call to the public
- B. Consider request to postpone to the July 11, 2022 meeting.

The call to the public was made at 6:42 pm.

Dr. Stephen Tait, who has a practice within the building envelope of the hospital, wants to know what the plans will be during construction for ingress and egress. He sees approximately 70 elderly patients a day and he want to make sure they are accommodated.

Ms. VanMarter provided her contact information so Dr. Tait can contact her to view the plans for the hospital.

The call to the public was closed at 6:45 pm.

Moved by Commissioner McCreary, seconded by Commissioner Dhaenens, to postpone Public Hearing #1 until the July 11, 2022 Planning Commission meeting at the applicant's request. **The motion carried unanimously.**

OPEN PUBLIC HEARING # 2... Discussion and consideration of a recommendation to distribute final draft master plan as presented by Giffels Webster.

A. Recommendation to distribute Final Draft Master Plan.

Ms. Jill Bahm and Ms. Sri Komaragiri from Giffels Webster were present.

Ms. Komaragiri reviewed the changes that were made to the plan as a result of the discussion at the previous meeting. The major changes are in the Action Strategies section, specifically:

- Updated action strategies for all goals under three categories (Zoning, Advocacy and Capital Improvement).
- Included information about Lead bodies and supporting partners for each strategy.
- The recommended strategies capture the intent and PC discussion at their April meeting.

Commissioner McCreary asked to amend Item 4.5 under "Advocacy Action Strategies" to include that the Township will work with the surrounding municipalities when addressing the transportation network and coordinating potential road improvements in and around the Township to mitigate traffic congestion from changes in development.

Genoa Township Planning Commission May 23, 2022 Unapproved Minutes

Commissioner McBain wants to ensure that the Master Plan prohibits developers from purchasing residential property and developing it with commercial uses. Ms. Bahm stated this can be accomplished through the zoning ordinance. Commissioner McBain is concerned with uses being requested under the Special Use Ordinance. All Commissioners agree that this is important and should be addressed.

Ms. VanMarter suggested that after the Master Plan is updated, the Planning Commission can review the Special Land Uses in each zoning district to determine if they are appropriate, if they need to be changed or if the conditions and standards need to be amended.

The call to the public was made at 7:22 pm.

Ms. VanMarter advised that a letter was received today regarding the South Latson transition area and how it is absent from the proposed updated Master Plan. She forwarded that letter to the Planning Commission and asked to discuss the possibility of including information on this area in the updated Master Plan. There is a lot of detail in the current Master Plan that can be brought over and included in this plan.

Mr. Carl Hauss of 16880 Hauss Ave, Eastpointe, MI stated he is present tonight on behalf of himself and his client. He has been coming to the Township for 34 years. He was familiar with the previous Master Plan and noted it included the I-96/Latson Road transition area, which extends from Mr. Wyett's property south to Crooked Lake Road. This area holds great potential to be developed in a number of different ways, such as multi-residential, institutional, retail, etc. and the Township has spent a lot of time on planning out this area. He suggested that more detail regarding this transition area be included in the current updated Master Plan.

Mr. Dan Wholihan of 6259 Cunningham Lake Road stated his neighborhood is zoned single family residential but there is State of Michigan-owned land near his neighborhood that is also owned single-family residential. He is concerned that land could be sold and developed that way. He would like that land to be zoned as public land.

Ms. VanMater stated the future land use of this property is consistent with the land surrounding it. She understands Mr. Wholihan's concerns; however, she is not sure if that is the appropriate designation for that property because the types of land uses allowed are very limited and it may not leave a viable use.

The Planning Commission discussed Mr. Hauss' comments and Ms. VanMarter's suggestion of including details of the Latson Road transition area in the current updated Master Plan. Ms. Bahm suggested it be included as an Appendix. The Commissioners agreed that it should be included.

The call to the public was closed at 7:52 pm.

Ms. Bahm reviewed what action is being requested tonight and the next steps.

Moved by Commissioner Dhaenens, seconded by Commissioner Chouinard, to Recommend to the Township Board to distribute the Final Draft Master Plan, with the changes discussed this evening, specifically:.

- Ensure consistency in Introduction with action strategy acronyms
- Amend maps as follows:
 - Clarify the maps to minimize confusion over the adjacent communities.
 - Remove the label "Nixon Road" at Latson/Crooked Lake
 - Add the Latson Road Transition Area to the Growth and Future Land Use maps
- Goal 4 Transportation Strategy 4.5 will specify which are the surrounding communities
- Include information regarding the Latson Road Transition Area in the Appendix. Amend Page 3.8 to include a summary of this area. Emphasize that the priority is to develop at the interchange area along Grand River before extending south.
- Amend Action Items as follows:
 - Add item: Review zoning ordinance to review list of permitted, special land uses and consider whether there are uses that no longer are appropriate or uses that should be added. Consider if any uses could have specific conditions that may make review/approval clearer and more consistent.
 - Add action strategy under Economic Development Prioritize development in the Grand River corridor over other areas of the Township.

The motion carried unanimously.

OPEN PUBLIC HEARING #3.... A request by Carl Vagnetti to discuss the development of property he owns at Brighton and Chilson roads.

Mr. Carl Vagnetti of 7918 Laurel Street owns properties totaling 7.72 acres on the south side of Brighton Road, just before Chilson Road. There is currently a home with a detached garage on one of the lots. He would like to sell the property and change the zoning to ½-acre lot zoning and build 10-12 houses, depending on if they can get sewer access.

Ms. VanMarter stated part of the property is zoned suburban residential, which allows ½ acre lots if sanitary sewer is available. It would be the Township Board's decision to determine if they wanted to extend the sanitary sewer to these properties. She advised Mr. Vagnetti that his first step would be to go before the Township Board to obtain their input regarding expanding the sanitary sewer. She also indicated that a sewer extension or zoning change for less than 1 acre lots would be contrary to the Master Plan as discussed, this evening.

ADMINISTRATIVE BUSINESS:

Staff Report

Ms. VanMarter stated there are four items scheduled for the June 13 Planning Commission meeting.

Approval of the May 9, 2022 Planning Commission meeting minutes

Moved by Commissioner McCreary, seconded by Commissioner Dhaenens, to approve the minutes of the May 9, 2022 Planning Commission Meeting as presented. **The motion carried unanimously.**

Member Discussion

There were no items to discuss this evening.

Adjournment

Moved by Commissioner McCreary, seconded by Commissioner Chouinard, to adjourn the meeting at 8:15 pm. The motion carried unanimously.

Respectfully Submitted,

Patty Thomas, Recording Secretary



CITY OF HOWELL Memorandum

TO: Contiguous Municipal Legislative Body, County Planning, Public Utilities, and Railroad Company

FROM: City of Howell Community Development

DATE: May 26, 2022

RE: NOTICE OF INTENT TO PLAN

In accordance with the Michigan Planning Enabling Act (PA 33 of 2008, as amended), the City of Howell is preparing an updated Master Plan and requests your cooperation and comment on the Plan.

Please be aware that you will be receiving a digital draft of the update for comment upon completion of the City's master planning process. Hard (paper) copies may be provided upon request. At the time the Master Plan update is ready for your review, we will provide a second notice and directions on where to send comments and time limits for doing so.

We thank you for your consideration in this matter. If you have any questions or comments on the City of Howell Master Plan update, please contact the City offices by mail at:

Master Plan Update City Of Howell 611 East Grand River Avenue Howell, MI 48843

Or by email

Masterplan@cityofhowell.org